

Annual Report 2020



Harn Engineering Solutions Public Company Limited



Quality Living Through **Sustainable Engineering**

- Fire Protection & Safety
- Air Conditioning & Sanitary
- Refrigeration
- Digital Printing
- Harn 3DMed

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Investors can learn more information of Company from Form 56-1
on www.set.or.th, www.sec.or.th or the Company's website www.harn.co.th

Vision, Mission and Target

In 2020, HARN continues aiming to promote sustainable growth through its core strategy, reducing profit fluctuation through business diversification, taking into account the interests of stakeholders in all respects, including conducting business with good governance to create long-term value, enhance the

quality of life of stakeholders, and deliver sustainable returns through innovation, technology and strong business structure under good corporate governance responsibilities, in order to achieve the vision, mission, and business goals as follows:

Vision

We are committed to be **a leading sustainable solution provider** of engineering systems in safety, refrigeration and digital printing in Thailand and neighbor countries

Mission



- We will maximize our **customer** satisfaction through high quality products and services, leading technology and excellent business practice.

1



- We believe in our **employees** value and potential and are committed to build a happy, energetic, innovative and dynamic workplace of competent teamwork with integrity, positivity and professional responsibility.

2



- We will make a good investment return to **shareholders** and continually grow our business in a sustainable way.

3



- We will create long term values and enhance quality of life for all our **stakeholders** under prudent management and good corporate governance.

4

Core Values

P	O	S	i	T	i	V	E
Professional Responsibility	Ownership	Sustainable Development	Integrity	Teamwork	Innovation	Value Creation	Excellence
ความรับผิดชอบ อย่างมืออาชีพ	มีความรัก ผูกพัน และเป็น เจ้าขององค์กร	การพัฒนา อย่างยั่งยืน	ความซื่อสัตย์ และยึดมั่น ในความถูกต้อง และเป็นธรรม	ความร่วมมือ ทำงานเป็นทีม	ความคิดริเริ่ม สร้างสรรค์	การสร้าง คุณค่า	การมุ่งมั่นสู่ ความเป็นเลิศ

Target



To support the success of HARN's strategy, the Board of Directors has approved a review of strategy, vision, mission, and business direction in developing organizational and employee capacities with human resource development coupled with the use of innovation and technology. Furthermore, it places importance to environmental, social, and corporate governance to increase operational efficiency to achieve a truly sustainable

corporate goal through 3 main strategies: SMART Business, SMART People, and SMART Environment. The top management has passed the plan to executives and employees at all levels for their acknowledgement and continues to monitor the implementation of strategies to ensure that the set goals are met. The progress shall be reported to the Board of Directors every quarter.

Key Financial Information

		2020 ⁴⁾	2019 ⁴⁾	2018
Operating Results				
Sales and Services Revenues	MB.	1,152.32	1,366.88	1,344.27
Total Revenues	MB.	1,169.43	1,393.97	1,356.02
Costs of Sales and Services	MB.	799.28	948.69	931.23
Gross Profit	MB.	353.04	418.19	413.04
Net Profit/(Loss)	MB.	100.97	149.62	134.36
Total Comprehensive Income	MB.	100.57	147.98	134.36
Financial Position				
Total Assets	MB.	1,657.46	1,596.30	1,548.59
Total Liabilities	MB.	339.83	274.64	281.38
Total Shareholders' Equity	MB.	1,317.02	1,321.66	1,267.21
Financial Ratios				
Return on Equity ¹⁾	%	7.65	11.56	10.83
Return on Assets ²⁾	%	7.72	11.89	11.15
Gross Profit Margin	%	30.64	30.59	30.73
Net Profit Margin ¹⁾	%	8.63	10.73	9.91
Debt to Equity Ratio	Times	0.26	0.21	0.22
Total Assets Turnover Ratio	Times	0.72	0.89	0.90
Stock Data Annual Average				
Par Value per Share	Baht	0.50	0.50	0.50
Book Value	Baht/Share	2.25	2.26	2.17
Dividend per Share ³⁾	Baht/Share	0.13	0.18	0.16
Dividend Payout Ratio	%	76.47	69.23	69.57
Basic Earnings/(Loss) per Share	Baht/Share	0.17	0.26	0.23

Note : ¹⁾ Net profit/(Loss) used in calculation.

²⁾ Earnings before interest and finance costs used in calculation.

³⁾ Not confirmed until the approved by the Annual General Meeting of Shareholders.

⁴⁾ Referring to consolidated financial statement.



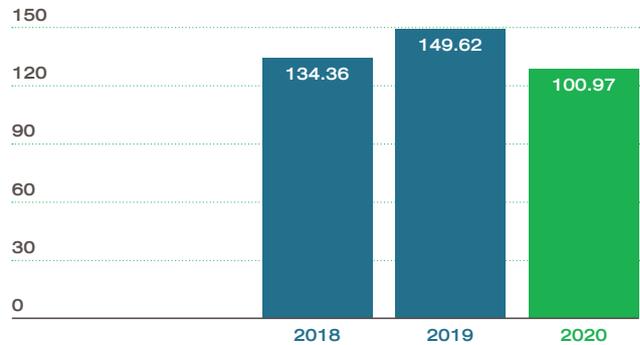
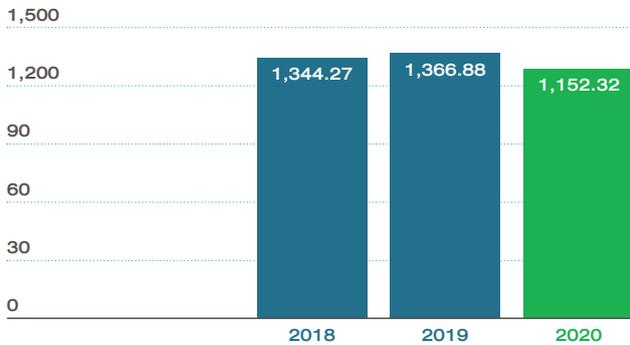
MB.
1,152.32



MB.
100.97

Sales and Services Revenues

Net Profit/(Loss)



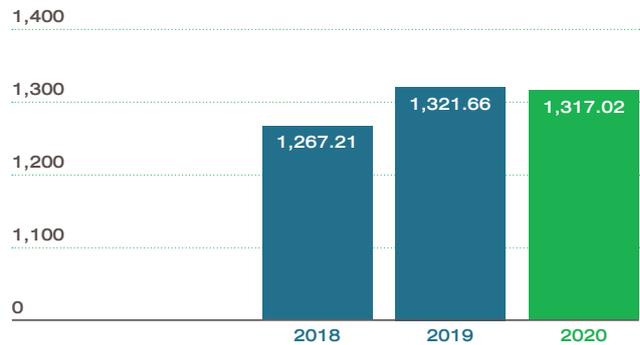
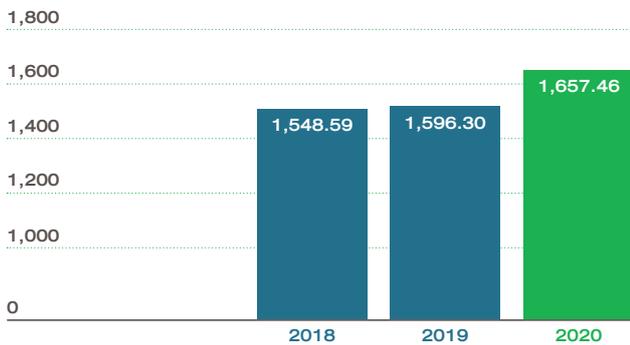
MB.
1,657.46



MB.
1,317.02

Total Assets

Total Shareholders' Equity



%
7.72



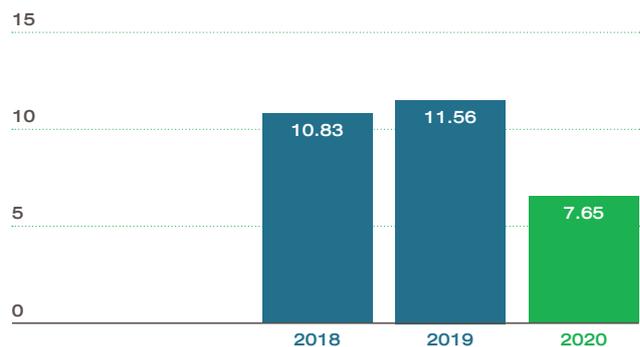
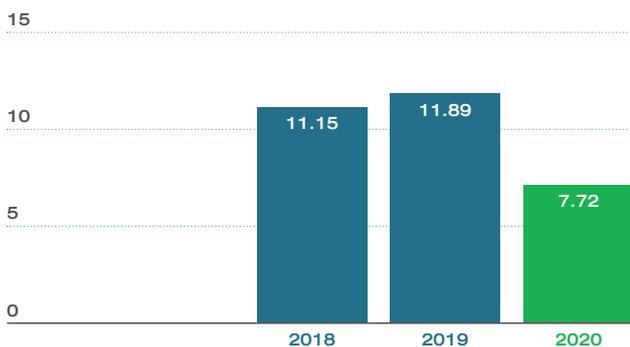
%
7.65

Return on Assets

Return on Equity

Earnings before interest and finance costs used in calculation.

Net profit/(Loss) used in calculation.



Message from the Board of Directors



Mr. Thakol Nunthirapakorn

Chairman of the Board

In the past year, there were many factors that affect the global economy and Thailand. Almost all countries around the world have experienced economic recession, including Thailand. The main problem has been caused by the COVID-19 since the beginning of 2020. Travel is restricted worldwide causing businesses related to tourism receive serious impact resulting in the significant overall economic slowdown. Harn Engineering Solutions Public Company Limited, with the securities abbreviation of “HARN”, distributes products and provides services in several types of engineering system including fire protection system, air-conditioning system, refrigeration system and digital printing system, was affected by the slowdown in the economy as well. Although the company has expanded its businesses and new markets but has not been able to generate enough income since the expansion was in the early stages. This hindered the performance of the company in the past year and thus, not able meet the set goals. However, the Board of Directors and employees are committed to conducting business carefully and concisely so that the performance has not been largely impacted. It can be seen that the company still demonstrates good operating performance with continuous profits and continuing to expand new products to the market with opportunities, such as establishing a subsidiary in Vietnam to expand the digital printing business. In the past year, the company has signed a joint invest agreement in establishing a company that operates digital businesses to prepare for the introduction of digital as part of the business operation. Furthermore, services have been expanded in each business unit, such as a refrigeration assembly plant, and a standardized fire extinguishing agent container has been built in order to generate more service income. The company also remains in a strong financial



Mr. Wirat Sukchai

Chief Executive Officer

position which makes it capable of finding new business opportunities in the future. We ensure that our company can sustain a steady growth.

As for the operation under the good corporate governance policy, the company has consistently given importance to the practice of good corporate governance principles. Has an action with responsibility to all stakeholders fairly. Transparent and can be inspected, which can be seen in a concrete of receiving the highest level of good corporate governance scores (CG Score 5 stars) continuously for 2 years and been certified as a member of the Collective Action Coalition against Corruption. It has prepared a handbook and instituted policy and procedure with objectives declared and process put in place for the employees, trade partners and the public to inspect and inform of any incidents suspicious of corruption. Training and procedure are also provided to ensure commitment to anti-corruption with a view to grow business sustainably with trust from employees, trade partners and investors at large.

On behalf of the Board of Directors, we would like to express our gratitude to the shareholders, customers, trade partners, business partners, as well as the Board members, executives and all staff that has always trusted and supported the operation of the company and please be assured of the dedication and commitment overcome various obstacles of all the Board, management and staff members to jointly drive the development of the Company towards sustainable business growth under good corporate governance for the maximum benefits of all stakeholders and contributes to the development and positively affects the overall economy and society.

Board of Directors

Dr. Thakol Nunthirapakorn

Independent Director (Non-Executive),
Chairman of the Board
and Chairman of the Audit Committee
Age 75 Yrs.



- **Shareholding proportion (As at December 31, 2020) :** - None -
- **Appointment date :** September 5, 2012
(The company was listed on the Stock Exchange of Thailand in 2014, resulting in holding the position continuously.)

• Education :

- Ph.D. (Accounting, MIS, Economics), University of Arkansas, Fayetteville, Arkansas, USA.
- M.B.A. (Quantitative Analysis), Northeast Louisiana University, Monroe, Louisiana, USA.
- B.S. (Finance), West Liberty State University, West Virginia, USA.
- High Vocational Certificate (Finance and Banking), University of the Thai Chamber of Commerce

• Training participation :

Training program of Thai Institute of Directors Association (IOD) :

1. Role of the Chairman Program (RCP), Class 43/2018
2. Anti-Corruption the Practical Guide (ACPG) Class 36/2017
3. Chairman Forum (R-CF), Class 1/2016
4. Directors Certification Program (DCP), Class 228/2016
5. Ethical Leadership Program (ELP), Class 3/2016
6. Audit Committee Program (ACP), Class 8/2005
7. Director Accreditation Program (DAP), Class 8/2004

Other courses :

- P01 : Preliminary to Corporate Sustainability
- S01-S03 : Corporate Sustainability Strategy
- S04 : Sustainability Risk and Materiality Analysis
- S05 : Sustainability Evaluation and Data Management
- Thai economic for 2020
- Internal Audit's Challenge in Value Adding

• Work experience in the 5 preceding years :

Business

- 2019 - Present Directors and Member of the Audit Committee, United Paper Public Company Limited
- 2015 - Present Independent Director, Chairman of the Board of Directors and Chairman of Audit Committee, Harn Engineering Solutions Plc.
- 2002 - Present Independent Director and Chairman of Audit Committee, Ratchthani Leasing Plc.
- 2012 - 2015 Independent Director and Chairman of Audit Committee, Harn Engineering Solutions Plc.

Education

- 2012 - 2015 Dean of Accounting, University of the Thai Chamber of Commerce
- 2005 - 2011 Vice-Rector for Administration, University of the Thai Chamber of Commerce
- Adjunct Professor, University of the Thai Chamber of Commerce
- Director, Development and Establishment Project, University of the Thai Chamber of Commerce New Campus
- Special Instructor, Graduate School, University of the Thai Chamber of Commerce
- Professor of Accounting & Finance, Youngstown State University, Ohio, USA.
- Graduate Council Member, Youngstown State University, Ohio, USA.
- Assistant Professor, College of Business & Industry, Mississippi State University, Mississippi, USA.
- Assistant Professor of Accounting, KSU, Kent, Ohio, USA.

Social

- Director, King Rama III Foundation
- Foundation Director, King Rama III Pranangklaio Hospital
- Honorary Advisor, University of the Thai Chamber of Commerce Alumni Association
- President, University of the Thai Chamber of Commerce Alumni Association
- Advisor, NIDA Alumni Association

• Other Positions

1. Listed Company (2)
 - Ratchthani Leasing Plc.
 - United Paper Plc.
2. Limited Company - None -
3. Other Organizations/Institutions - None -
4. State Enterprise - None -

• Having a Special Interest that is Different from Other Directors

- None -

• Family Relation with Other Directors

- None -

• Dispute in the 10 Preceding Years

- None -

• Participation in administration, staff, employees or consultants who receive a regular salary

- None -

• Being a professional service provider, such as an auditor, legal advisor

- None -

• Significant business relationships that May result in inability to perform duties independently

- None -

Miss Voranuch Supaibulpipat

Independent Director (Non-Executive),
Member of the Audit Committee and
Chairperson of the Nomination
and Remuneration Committee
Age 57 Yrs.



- **Shareholding proportion (As at December 31, 2020) :** - None -
- **Appointment date :** September 5, 2012
(The company was listed on the Stock Exchange of Thailand in 2014, resulting in holding the position continuously.)
- **Education :**
 - MBA, Middle Tennessee State University, USA.
 - BA (Economics), Chulalongkorn University
- **Training participation :**

Training program of Thai Institute of Directors Association (IOD) :

 1. Board Nomination & Compensation Program (BNCP), Class 8/2019
 2. Director Certification Program (DCP), Class 281/2019
 3. Director Accreditation Program (DAP), Class SET/2012

Other courses :

 - Executive Development Program, Thai Listed Companies Association, Class 10
- **Work experience in the 5 preceding years :**
 - 2018 - Present Independent Director, Member of the Audit Committee and Chairperson of the Nomination and Remuneration Committee, Harn Engineering Solutions Plc.
 - 2012 - 2018 Independent Director and Member of the Audit Committee, Harn Engineering Solutions Plc.
 - 1987 - 2018 First Senior Vice President, Tisco Financial Group Plc.
- **Other Positions**
 1. Listed Company - None -
 2. Limited Company - None -
 3. Other Organizations/Institutions - None -
 4. State Enterprise - None -
- **Having a Special Interest that is Different from Other Directors** - None -
- **Family Relation with Other Directors** - None -
- **Dispute in the 10 Preceding Years** - None -
- **Participation in administration, staff, employees or consultants who receive a regular salary** - None -
- **Being a professional service provider, such as an auditor, legal advisor** - None -
- **Significant business relationships that May result in inability to perform duties independently** - None -

Dr. Sothitorn Mallikamas

Independent Director (Non-Executive),
Member of the Audit Committee and
Member of the Nomination
and Remuneration Committee
Age 58 Yrs.



- **Shareholding proportion (As at December 31, 2020) :** - None -
- **Appointment date :** September 5, 2012
(The company was listed on the Stock Exchange of Thailand in 2014, resulting in holding the position continuously.)
- **Education :**
 - PhD (Economics), University of Wisconsin, USA.
 - MA (Economics), University of Wisconsin, USA.
 - BA (Economics), Chulalongkorn University
- **Training participation :**

Training program of Thai Institute of Directors Association (IOD) :

 1. Board Nomination & Compensation Program (BNCP), Class 8/2019
 2. Director Certification Program (DCP), Class 278/2019
 3. Director Accreditation Program (DAP), Class 102/2013

Other courses :

 - Internal Audit's Challenge in Value Adding
- **Work experience in the 5 preceding years :**
 - 2018 - Present Independent Director, Member of the Audit Committee and Member of the Nomination and Remuneration Committee, Harn Engineering Solutions Plc.
 - 2012 - 2020 Chairman of Bachelor of Arts Program in Economics, Chulalongkorn University
 - 2012 - 2018 Independent Director and Member of the Audit Committee, Harn Engineering Solutions Plc.
 - 2006 - 2009 Dean, Faculty of Economics, Chulalongkorn University
 - 2003 - 2006 Deputy Dean, Faculty of Economics, Chulalongkorn University
 - 1999 - 2003 Director, Economics Research Center, Faculty of Economics, Chulalongkorn University
 - 1992 - 1998 Advisor, Phatra Research Institute, Phatra Securities Plc.
 - 1994 - 1995 Advisor, Monetary and Finance Commission, House of Representatives
- **Other Positions**
 1. Listed Company - None -
 2. Limited Company - None -
 3. Other Organizations/Institutions (1)
 - Chulalongkorn University
 4. State Enterprise - None -
- **Having a Special Interest that is Different from Other Directors** - None -
- **Family Relation with Other Directors** - None -
- **Dispute in the 10 Preceding Years** - None -
- **Participation in administration, staff, employees or consultants who receive a regular salary** - None -
- **Being a professional service provider, such as an auditor, legal advisor** - None -
- **Significant business relationships that May result in inability to perform duties independently** - None -

Mr. Wirat Sukchai

Directors (Executive),
Chairman of the Executive Committee,
Chairman of the Risk Management
and Committee and Authorized Director
Age 55 yrs.

**Mr. Thammanoon Tripetchr**

Directors (Executive),
Member of the Executive Committee,
Member of the Risk Management
and Committee and Authorized Director
Age 53 Yrs.



- **Shareholding proportion (As at December 31, 2020)** : 89,178,367 shares (15.26%)
- **Appointment date** : September 5, 2012
(The company was listed on the Stock Exchange of Thailand in 2014, resulting in holding the position continuously.)

- **Education :**

- M.B.A. (E-MBA), National Institute of Development Administration (NIDA)
- B.B.A. (Sales and Marketing), Bangkok University

- **Training participation :**

Training program of Thai Institute of Directors Association (IOD) :

1. How to Develop a Risk Management (HRP) Class 12/2017
2. Successful Formulation & Execution of Strategy (SFE), Class 24/2015
3. Director Certification Program (DCP), Class 204/2015
4. Role of Chairman Program (RCP), Class 36/2015
5. Anti-Corruption for Executive Program (ACEP), Class 14/2015
6. Director Accreditation Program (DAP), Class SET/2012

Other courses :

- Senior Executive Program (CMA), Class 29
- ISO 9001 : 2015 Understanding and Implementation
- 12 Quality Leaders toward Digital Age and AEC Course
- Risk Management of Organization Course
- 4 Super Strategic Ideas Course
- Finance for Non-finance Executive Course
- Marketing 3.0 : Human Spirit Marketing Course
- Vice Excellence Course
- Root Cause Analysis & Corrective Actions Course
- Academic Development and Enhancement 4th Refreshment Program
- In-depth Discussion on Guidelines for Success in Installation Contractor and Distribution Business
- Fire Research, Education, Performance Codes & Investigation Course
- "HYGOOD" Sapphire Fire Suppression System Course
- TQM : Total Quality Management Course
- Inspection of Building Fire Safety System Course

- **Work experience in the 5 preceding years :**

- 2016 - Present Chief Executive Officer and Managing Director: Fire Protection System, Air-conditioning System and Sanitary, Harn Engineering Solutions Plc.
- 2012 - 2016 Managing Director, Harn Engineering Solutions Plc.
- 2002 - 2012 General Manager, Fire Victor Co., Ltd.

- **Other Positions**

1. Listed Company - None -
2. Limited Company - None -
3. Other Organizations/Institutions - None -
4. State Enterprise - None -

- **Conflict of Interest in the company** - None -
- **Family Relation with Other Director** - None -
- **Dispute in the 10 Preceding Years** - None -

- **Shareholding proportion (As at December 31, 2020)** : 21,972,905 shares (3.76%)
- **Appointment date** : November 1, 2016

- **Education :**

- B.B.A. (Management), Assumption University of Thailand

- **Training participation :**

Training program of Thai Institute of Directors Association (IOD) :

1. Director Certification Program (DCP), Class 211/2015
2. Successful Formulation & Execution of Strategy (SFE), Class 24/2015
3. Financial Statements for Directors (FSD), Class 28/2015
4. Director Accreditation Program (DAP), Class 116/2015

Other courses :

- Chief Transformation Officer (CTO)
- P01 : Preliminary to Corporate Sustainability
- S01 : Strategic CSR Management
- S02 : Supply Chain and Stakeholder Engagement
- S03 : Corporate Social Initiatives for Sustainable Development
- ISO 9001 : 2015 Understanding and Implementation
- Safety Officer
- Development of strategic thinking
- Marketing, Sales and Service
- Leadership Skill
- Internal Quality Audit
- After Sales Service Strategy
- Application of KPIs to ISO 9001: 2000
- CRM - Strategy & Technology

- **Work experience in the 5 preceding years :**

- 2020 - Present Director, Aiyaraharn Co., Ltd.
- 2016 - Present Managing Director: Digital Printing System, Harn Engineering Solutions Plc.
- 2015 - 2016 Managing Director, Q II S Co., Ltd.
- 2014 - 2016 Director, Chillmatch Co., Ltd.
- 2010 - 2015 General Manager, Q II S Co., Ltd.
- 2002 - 2010 Sales Manager, Q II S Co., Ltd.
- 2001 - 2002 Sales Manager (Coding & Packaging), Harn Engineering Co., Ltd.

- **Other Positions**

1. Listed Company - None -
2. Limited Company (1) - None -
 - Aiyaraharn Co., Ltd.
3. Other Organizations/Institutions - None -
4. State Enterprise - None -

- **Conflict of Interest in the company** - None -

- **Family Relation with Other Director** - None -

- **Dispute in the 10 Preceding Years** - None -

Dr. Jain Charnnarong

Directors (Non-Executive),
Member of the Executive Committee
and Authorized Director
Age 54 Yrs.



- **Shareholding proportion (As at December 31, 2020)** : 72,319,130 shares (12.37%)
- **Appointment date** : April 28, 2017
- **Education** :
 - Doctoral Philosophy of Mechanical Engineering, Minor in Management, Massachusetts Institute of Technology, Cambridge, USA.
 - Master of Science in Mechanical Engineering, Massachusetts Institute of Technology, Cambridge, USA.
 - Bachelor of Engineering (First Class of Honor), Chulalongkorn University, Thailand
- **Training participation** :

Training program of Thai Institute of Directors Association (IOD) :

 1. How to Develop a Risk Management Plan (HRP), Class 8/2015
 2. Successful Formulation & Execution of Strategy (SFE), Class 23/2015
 3. Family Business Sustainability (FBS), Class 1/2014
 4. Director Certification Program (DCP), Class 173/2013

Training Other :

 - The direction of driving business in accordance with the sustainable development goals
 - Directions and trends of key technologies to Digital Transformation
 - P01 : Preliminary to Corporate Sustainability
 - S01 : Strategic CSR Management
 - S02 : Supply Chain and Stakeholder Engagement
 - S03 : Corporate Social Initiatives for Sustainable Development
 - S04 : Sustainability Risk and Materiality Analysis
 - S05 : Sustainability Evaluation and Data Management
 - S06 : Sustainability Reporting
- **Work experience in the 5 preceding years** :
 - 2020 - Present Director, Aiyaraharn Co., Ltd.
 - 2017 - Present Directors and Member of the Executive Committee, Harn Engineering Solutions Plc.
 - 2017 - Present Director, Jainnopsiri Co., Ltd.
 - 2017 - Present Director, Phraboriban Co., Ltd.
 - 2007 - Present Directors, Harn Engineering Co., Ltd.
 - 2001 - 2014 Founder & CEO, Siam General Aviation Company Limited (SGA)
 - 1999 - 2001 Directors & General Manager, Siam Land Flying Company Limited (SGA)
 - 1998 - 2000 Business Analyst, Siam Commercial Bank Public Company Limited
 - 1997 - 1998 Assist to General Manager, Thai Air Cargo Co., Ltd.
- **Other Positions**
 1. Listed Company - None -
 2. Limited Company (4)
 - Harn Engineering Co., Ltd.
 - Aiyaraharn Co., Ltd.
 - Jainnopsiri Co., Ltd.
 - Phraboriban Co., Ltd.
 3. Other Organizations/Institutions - None -
 4. State Enterprise - None -
- **Conflict of Interest in the company** - None -
- **Family Relation with Other Director** - None -
The younger brother of Mrs. Sirima Iamsakulrat
- **Dispute in the 10 Preceding Years** - None -

Mrs. Sirima Iamsakulrat

Directors (Non-Executive),
Member of the Nomination and
Remuneration Committee
and Authorized Director
Age 58 Yrs.



- **Shareholding proportion (As at December 31, 2020)** : 84,234,151 shares (14.41%)
- **Appointment date** : September 5, 2012
(The company was listed on the Stock Exchange of Thailand in 2014, resulting in holding the position continuously.)
- **Education** :
 - M.B.A., Stanford University, USA.
 - B.Econ. (Economics), Chulalongkorn University
- **Training participation** :

Training program of Thai Institute of Directors Association (IOD) :

 1. Board Nomination & Compensation Program (BNCP), Class 5/2018
 2. Successful Formulation & Execution of Strategy (SFE), Class 24/2015
 3. Director Certification Program (DCP), Class 211/2015
 4. Director Accreditation Program (DAP), Class SET/2012

Training Other :

 - P01 : Preliminary to Corporate Sustainability
 - S01 : Strategic CSR Management
 - S02 : Supply Chain and Stakeholder Engagement
 - S03 : Corporate Social Initiatives for Sustainable Development
 - S04 : Sustainability Risk and Materiality Analysis
 - S05 : Sustainability Evaluation and Data Management
 - S06 : Sustainability Reporting
 - Challenges of internal auditors towards value creation in the current economic climate
- **Work experience in the 5 preceding years** :
 - 2018 - Present Directors and Member of the Nomination and Remuneration Committee, Harn Engineering Solutions Plc.
 - 1989 - Present Member of the Executive Committee, Harn Engineering Co., Ltd.
 - 2017 - Present Director, Jainnopsiri Co., Ltd.
 - 2017 - Present Director, Phraboriban Co., Ltd.
 - 2016 - 2018 Directors and Chairperson of the Executive Committee, Harn Engineering Solutions Plc.
 - 2012 - 2016 Member of the Executive Committee, Harn Engineering Solutions Plc.
 - 2002 - 2016 Member of the Executive Committee, QIIS Co., Ltd.
 - 1989 - 2016 Member of the Executive Committee, Chillmatch Co., Ltd.
 - 2001 - 2012 Member of the Executive Committee, Fire Victor Co., Ltd.
- **Other Positions**
 1. Listed Company - None -
 2. Limited Company (3)
 - Harn Engineering Co., Ltd.
 - Jainnopsiri Co., Ltd.
 - Phraboriban Co., Ltd.
 3. Other Organizations/Institutions - None -
 4. State Enterprise - None -
- **Conflict of Interest in the company** - None -
- **Family Relation with Other Director** - None -
The sister of Dr. Jain Charnnarong
- **Dispute in the 10 Preceding Years** - None -

Mrs. Valeeratn Chuerboonchai

Directors (Non-Executive)

Age 66 Yrs.



- **Shareholding proportion (As at December 31, 2020)** : 7,477,686 shares (1.28%)
- **Appointment date** : September 5, 2012
(The company was listed on the Stock Exchange of Thailand in 2014, resulting in holding the position continuously.)
- **Education** :
 - B.B.A. (Accounting), Assumption University
- **Training participation** :

Training program of Thai Institute of Directors Association (IOD) :

 1. Financial Statements for Directors (FSD), Class 28/2015
 2. Director Certification Program (DCP), Class 205/2015
 3. Anti-Corruption for Executive Program (ACEP), Class 14/2015
 4. Director Accreditation Program (DAP), Class SET/2012

Other courses :

 - 12 Quality Leaders toward Digital Age and AEC Course
 - Risk Management of Organization Course
 - 4 Super Strategic Ideas Course
 - Finance for Non-finance Executive Course
 - The Habits of Highly Effective Working Person Course
 - Marketing 3.0 Human Spirit Marketing Course
 - Insight of Income Tax on Wages and Welfare Course
 - New Accounting Standard and Impact on Business Course
 - Accounting and Finance Data for Executives Course
- **Work experience in the 5 preceding years** :
 - 2018 - Present Directors, Nutrix Plc.
 - 2018 - Present Directors, Harn Engineering Solutions Plc.
 - 2012 - 2018 Directors and Member of the Executive Committee, Harn Engineering Solutions Plc.
 - 2012 - 2017 Assistant Managing Director: Operations, Harn Engineering Solutions Plc.
 - 2007 - 2016 Directors and Member of the Executive Committee, Chillmatch Co., Ltd.
 - 2007 - 2016 Directors and Member of the Executive Committee, QIIS Co., Ltd.
 - 2009 - 2015 Director, Promark Co., Ltd.
 - 2007 - 2012 Finance Director, Fire Victor Co., Ltd.
 - 2004 - 2012 General Manager (Finance and General Administration), Harn Engineering Co., Ltd.
 - 1999 - 2004 Accounting and Finance Manager, Harn Engineering Co., Ltd.
- **Other Positions**
 1. Listed Company - None -
 2. Limited Company/Public Company Limited (1)
 - Nutrix Public Company Limited
 3. Other Organizations/Institutions - None -
 4. State Enterprise - None -
- **Conflict of Interest in the company** - None -
- **Family Relation with Other Director** - None -
- **Dispute in the 10 Preceding Years** - None -

Mr. Parkphum Wongpaitoon

Directors (Non-Executive)

Age 80 Yrs.



- **Shareholding proportion (As at December 31, 2020)** : 4,230,325 shares (0.72%)
- **Appointment date** : September 5, 2012
(The company was listed on the Stock Exchange of Thailand in 2014, resulting in holding the position continuously.)
- **Education** :
 - MSc. (Electrical Engineering), Illinois Institute of Technology, USA.
 - BSc. (Electrical Engineering), University of Illinois, USA.
- **Training participation** :

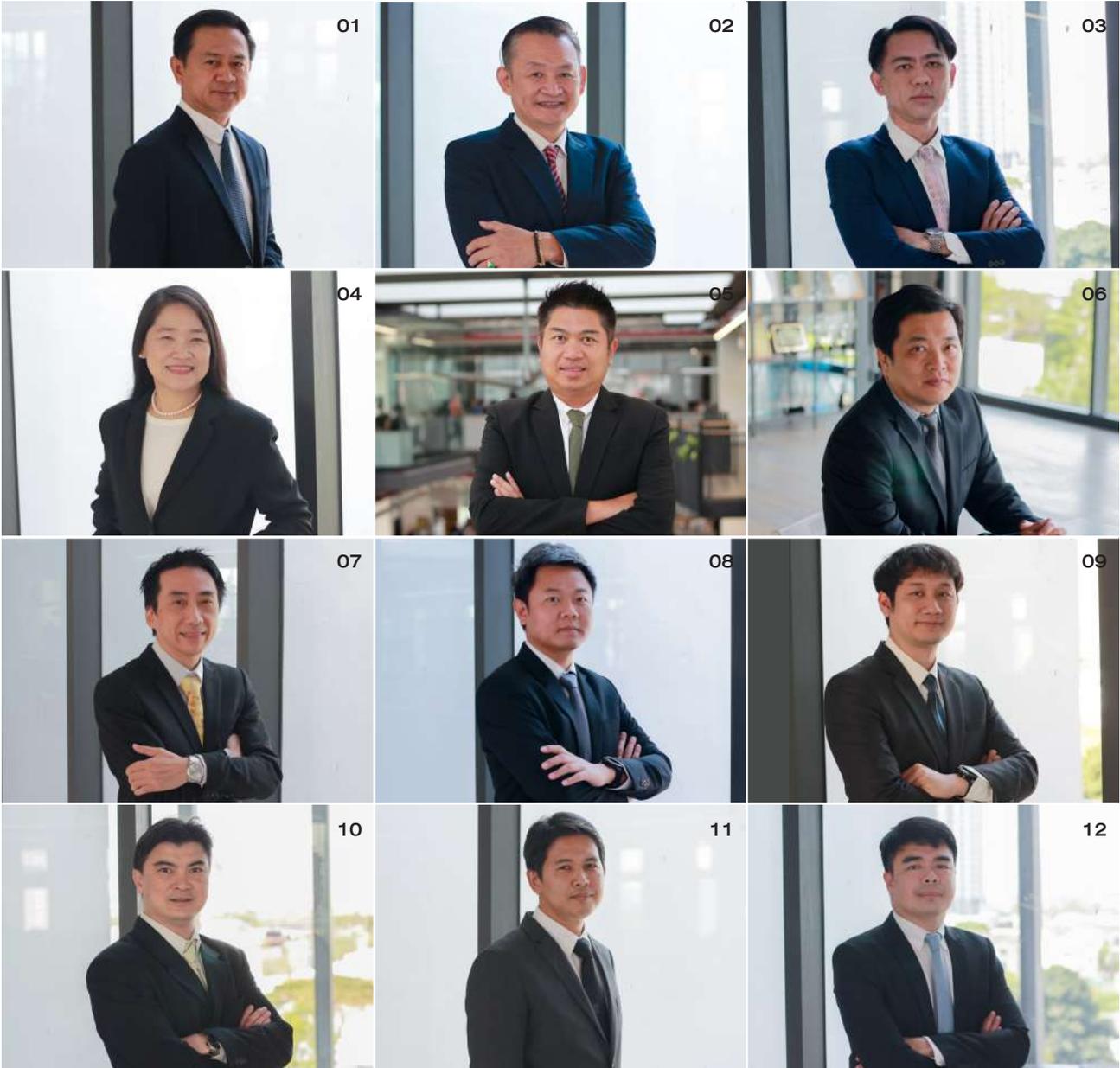
Training program of Thai Institute of Directors Association (IOD) :

 1. Anti-Corruption for Executive Program (ACEP), Class 14/2015
 2. Role of Chairman Program (RCP), Class 36/2015
 3. Director Accreditation Program (DAP), Class 42/2005

Other courses :

 - ISO : 2000 Quality System Management Course
 - Self-Improvement (7-Habits) Course
 - Summary of the New Labor Protection Act B.E. 2551 Course
 - Internal Audit and Control for Efficiency Enhancement Course
 - "Lean" Accounting Course
 - EVA for Executives Course
 - Application of the Balance Scorecard & KPIs Course
- **Work experience in the 5 preceding years** :
 - 2015 - Present Directors, Harn Engineering Solutions Plc.
 - 1999 - 2017 Directors, Harn Engineering Co., Ltd.
 - 2002 - 2016 Directors, QIIS Co., Ltd.
 - 1999 - 2016 Directors, Chillmatch Co., Ltd.
 - 2012 - 2015 Chairman of the Board, Harn Engineering Solutions Plc.
 - 2001 - 2012 Member of the Executive Committee, Fire Victor Co., Ltd.
 - 1998 - 2001 Managing Director, Harn Engineering Group
 - 1992 - 1997 Managing Director, Thailand Carpet Manufacturing Plc.
 - 1985 - 1991 Director and General Manager, Carpet International Thailand Plc.
- **Other Positions**
 1. Listed Company - None -
 2. Limited Company - None -
 3. Other Organizations/Institutions - None -
 4. State Enterprise - None -
- **Conflict of Interest in the company** - None -
- **Family Relation with Other Director** - None -
- **Dispute in the 10 Preceding Years** - None -

Executives and Company Secretary



01 Mr. Wirat Sukchai

Chief Executive Officer and Managing Director: Fire Protection System, Air-conditioning system and sanitary

04 Mrs. Varinkan Teraumranon

Chief Operating Officer and Company Secretary

07 Mr. Suchat Suwatnodom

Project Sales Director (Petrochemical): Fire Protection System, Air-conditioning system and sanitary

10 Mr. Sukit Litikorn

Engineering Support Director: Refrigeration System

02 Mr. Thammanoon Tripetchr

Managing Director: Digital Printing System

05 Mr. Rattanaphan Mukhariwattananon

Sales Director: Fire Protection System, Air-conditioning system and sanitary

08 Mr. Kittiphong Kittimethawenun

Sales Special: Refrigeration System

11 Mr. Withoon Thamee

Sales Director: Digital Printing System

03 Mr. Wisit Wachiralappaitoon

Chief Financial Officer

06 Mr. Pracha Phromphornchai

Project Sales Director: Fire Protection System, Air-conditioning system and sanitary

09 Mr. Vachiravit Akaraseranee

Project Sales Director: Refrigeration System

12 Mr. Pongsawat Penglengpol

Sales Special Products Director: Digital Printing System

General Information

Name	HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED
Symbol	HARN
Registration No.	0107557000217
Stock Market	Mai
Industry Group	Service
Trading Start Date	13 November 2014
Par Price	Baht 0.50
Registered Capital	Baht 292,250,000 (totaling 584,500,000 ordinary shares)
Paid-up Capital	Baht 292,250,000 (totaling 584,500,000 ordinary shares)
Nature of Business	import and distribution of products used in building engineering system, i.e. fire suppression system, air-conditioning system, sanitary system, refrigeration system and digital printing including the provision of consulting, designing services in projects and provision of engineering solutions complete.
Head Office Location	559 Soi Soonvijai 4, Rama 9 Road, Bang Kapi, Huaykwang, Bangkok 10310 Tel. +66 (2) 318-9744 Fax. +66 (2) 318-9744 ext.4000
Soonvijai Warehouse Location	509 Soi Soonvijai 4, Bang Kapi Subdistrict, Huai Khwang District, Bangkok 10310 Tel. +66 (2) 318-9744
Chongsiri Warehouse Location	888/14-16 Moo.21, Bang Phli Yai, Bang Phli, Samut Prakan 10540 Tel. +66 (2) 105-3295
Website	www.harn.co.th
Company Secretary	Mrs. Varinkan Teraumranon Tel. +66 (2) 318-9744 E-mail : varinkan.t@harn.co.th
Investor Relations	Mr. Wirat Sukchai Tel. +66 (2) 318-9744 E-mail : wirat.s@harn.co.th
The Most Responsible Person in Accounting and Finance	Mr. Wisit Wachiralappaitoon Tel. +66 (2) 318-9744, E-mail : wisit.w@harn.co.th
Accounting Supervisor	Miss Ananya Proyngoen Tel. +66 (2) 318-9744, E-mail : ananya.p@harn.co.th
Information of Subsidiary	1. Harn Vietnam Co.,Ltd. 68 Nguyen Hue, Ben Nghe Ward, District 1, Ho Chi Minh City, Vietnam. 2. Aiyara Harn Co., Ltd. 559 Soi Soonvijai 4, Rama 9 Road, Bang Kapi, Huaykwang, Bangkok 10310

Name and Address of Other References

Securities Registrar

The Stock Exchange of Thailand Building
93 Ratchadaphisek Road, Dindaeng,
Dindaeng, Bangkok 10400 Thailand
Tel : +66 (2) 009-9999
Fax : +66 (2) 009-9991
website : www.set.or.th/tsd

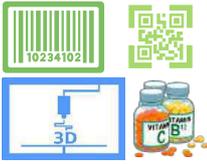
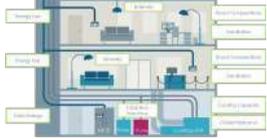
Auditor

Dharmniti Auditing Co., Ltd.
178 Dharmniti Building 6-7th Floor,
Soi Permsap (Pracha Chuen 20), Pracha Chuen Road,
Bangsue, Bangkok, 10800 Thailand
Tel : +66 (2) 596-0500
Fax : +66 (2) 596-0560

Nature of Business

① Description of Products and Services

The Company's products and services can be divided into 5 categories as follows:

<p>FIRE PROTECTION & SAFETY</p>  <p>Fire Suppression Products and Firefighting System Installation Services</p>	<p>AIR-CONDITIONING & SANITARY</p>  <p>Air-Conditioning and Sanitary Products</p>	<p>REFRIGERATION</p>  <p>Refrigeration Products</p>	<p>DIGITAL PRINTING</p>  <p>Digital Printing Products and 3D Medical</p>	<p>Internet of Things</p>  <p>Internet of Things Products</p>
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1) Fire suppression products and firefighting system installation services

Importer and distributor of complete fire protection system equipment To create convenience and safety for consumers



Fire suppression products are part of engineering systems of buildings, small and large factories, power plants, and petrochemical industrial plants, used for prevention, alarming and control of fire and smoke. The products distributed by the Company include valves and fittings that are erected in the fire protection system. Valve is a device used for starting or stopping the flow of water in the fire protection system and is fixed with a pipeline in such system. There are valve for controlling the flow of water, valve for starting or stopping the flow of water during repair and maintenance of the system, valve for preventing reversal of water, and so on. Equipment for fire protection system serves as a component or an auxiliary device applied jointly with the main equipment to allow for complete functioning of the fire protection system, including other firefighting devices such as Fire protection valve, such as Grooved coupling and fitting, Fire hose cabinet including internal equipment, Fire hose, fire extinguisher and sprinkler systems (fire sprinkler head), Flexible sprinkler and fire pump. The Company is the owner of "Guardian" fire extinguishers brand for fire extinguishers.



Firefighting system installation services; The Company also provides consulting, designing and installation services for all types of firefighting systems such as Foam fire protection system, FM-200, NOVEC 1230, CO₂, Inert Gas and Fire Alarm System in both buildings and factories as well as the petrochemical industry and power plants, in which the demand for fire extinguishing system is likely to increase in order to comply with building and factory control laws that requires a renovation on these facilities to be equipped with a standard fire protection system. It has a skillful engineering team to coordinate with customers, introduce the Company's products, and design and offer products and services to customers according to the international fire protection standards, as well as post-installation system test-run service, including fire extinguishing system inspection service in which the installation of fire extinguishing systems, fire valves and equipment will be used together with the equipment involved in various fire extinguishing systems, including foam fire extinguishing system, gas automatic fire extinguishing system, fire alarm system and video fire detection system (VFDS).

2) Air-Conditioning and Sanitary Products

Importer and distributor of complete air conditioning system equipment To create convenience and safety for consumers



Air-conditioning products are devices incorporated to main water-based air-conditioning system of large buildings, used for controlling temperature and air quality at an appropriate level. Meanwhile, sanitary products in the building engineering system include water supply system, water drainage system, ventilation system, etc. The Company distributes products that are devices in air-conditioning and sanitary systems, such as valves which open and close to control and stabilize the flow of cold water to ensure efficient functioning of the air-conditioning system and the sanitary system and are fixed with a pipeline in



such system. In the sanitary and air-conditioning system, there are also other major components or auxiliary devices such as Stop valve, Pressure gauge, Thermometer (device to measure the temperature and water pressure in the system), Flow Switch, Aluminum Filter, Grooved Coupling and Fitting, Pump Room Solutions, Copper pipe and Copper fitting And Refrigerant, In addition to importing and distributing well-known international brands, the company also owns the "Valtec" brand for valves and sanitary and air conditioning products and is the owner of "Koppar" brand for copper pipe products.

3) Refrigeration Products

The leader in refrigeration equipment sales And a leading edge in technology Specialized in refrigeration system design and consulting



Refrigeration products are equipment used in cold storage system or goods transport system for freezing or lowering the temperature of products that require a stable temperature control. In general, a cooling system can lower the temperature to between -30 °C and +25 °C. The Company offers a complete range of refrigeration products, consisting of Compressor, Condenser, Evaporator, Customized evaporator, Inverter, Defrost on Demand (DOD) equipment, including valve

which is an important device in the refrigeration system used for starting or stopping the liquid flow and the cooling pressure. The Company has also designed and produced Condensing units, Danfoss condensing units and Small cooler set for drinks vending machines by integrating all equipment and cooling concepts into one product unit that can be used for prompt installation of a cold storage system or goods transport system.

4) Digital Printing Products and 3D Medical System

The leading provider of engineering solutions. “Digital printing” including 3D printing systems



The company distributes Digital Printing Products and 3D Medical System such as ink jet printing (CIJ-continuous inkjet), laser printer, Thermal Transfer printing and Label Sticker Printing, Digital UV Inkjet, Packaging printer and other packaging equipment, Printing equipment and various types of consumables Including 3D Printer etc. Details are as follows:

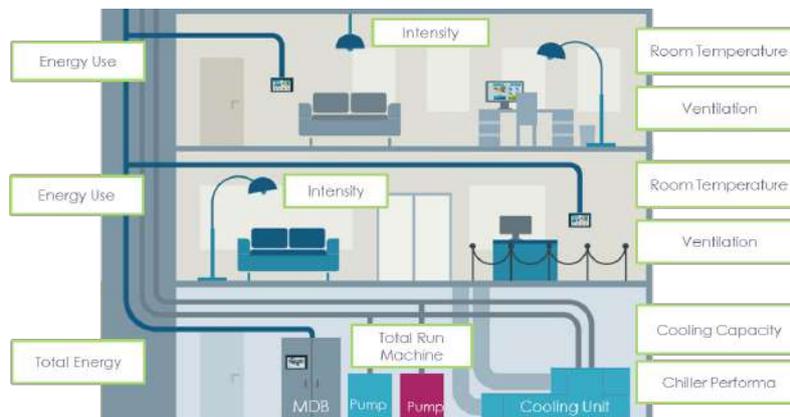
4.1) Digital printing product group for printing of manufacture/ expiry dates and lot number consists of machine for printing texts on packages, feeder, printing equipment, various types of supplies, etc. The Company's products are coding printers for printing manufacture/expiry dates and texts such as lot numbers as well as graphics, barcode, 2D Datamatrix, QR code, prize drawing code numbers on such surfaces as plastic bottle packaging, glass bottle, metal/aluminum can, paper box, glossy paper, plastic envelope, aluminum foil, plastic cup and others. It employs technologies such as inkless laser coding, non-contact inkjet printing, printing with ink ribbon, printing with ink cartridge, etc.

4.2) Digital printing product group for 3D printing, distributes and provides digital file printing service and packaging. For the Thailand 4.0 medical industry, i.e. conversion of MRI/CT scan file into 3D PDF file to have higher quality images that enable users to have comprehensive views of normal and abnormal spots and printing of organ model from MRI/CT scan which can well support medical analysis, research and development with digital technology.

4.3) Digital UV inkjet printing product group for printing of label stickers with digital technology to generate clear, sharp, bright-colored, superior quality texts and images with high speed and at lower cost for label sticker manufacturers.

4.4) After-sales services for all product groups distributed to end-users encompass advice and consultancy for selection of product specifications that meet requirements, installation of the machines, training, and repair and maintenance, as well as insurance, etc.

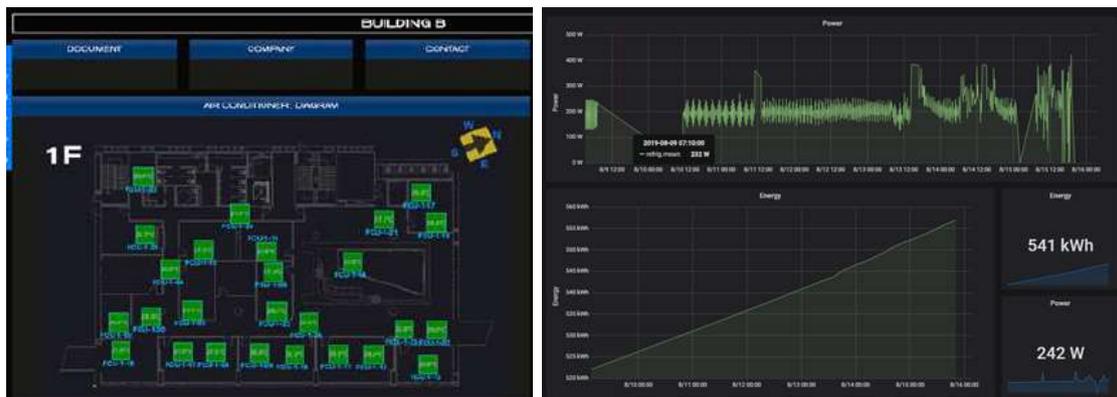
5) Internet of Things Products (IoT) (AiyaraHarn)





Central Monitoring Dashboard

- Centralized monitoring of the basic system operation of the building work.
- Large buildings There will be devices that use high electrical power as an HVAC system.
- Warning malfunction / damage for correction or maintenance.
- Store information on the operation of the system for the retrospective check and generate reports.
- Contains a dashboard required for coordination with people involved in the building system.



Central Monitoring Dashboard HVAC System

- In large buildings There will be devices that use high electrical energy, will be HVAC and air conditioning systems.
- Energy consumption monitoring will lead to more efficient management.
- Notify if the system is using electricity. Exceeded or misused.
- Energy usage report by comparing the working hours of the machines.

② Products Insurance

The Company insures the damages or defectives of products following the insurance conditions of the products that the Company distributes or installs for the customers for 1 year or 6 months for the machines and the spare parts, respectively. The products of the Company had been insured already by the suppliers for at least 1 year and 6 months as well.

For project sales, after completion of installation work, the Company insures the installed products under the conditions for 1 year where the suppliers also insure the products to the Company for 1 year as well and may consider purchasing additional warranty from the seller in case the customer wants a longer warranty.

③ Warehouses and Distributions

The company has three warehouses:

The main warehouse is located at 888/14-16 Moo.21, Bang Phli Yai, Bang Phli, Samut Prakan 10540. The rental area covers 6,374.23 square meters which the company owns the ownership to store valve products and other products in Fire protection system, Air-conditioning system, Sanitary system, Refrigeration system and Digital printing system. This place is also used to assembly equipment's on a made to order basic.

The second warehouse is located at 509, Soi Soonvijai 4, Bang Kapi, Huay Kwang, Bangkok 10310. Is rented from a person related with the company to store products, assembly and maintenance of printers and equipment in digital printing system. This place is also used to assembly equipment's on a made to order basic.

The third warehouse is located at 38/43, Moo 4, Lam Luk Ka Road, Lam Luk Ka, Pathum Thani 12150. This place covers 80 square meters and is rented from an outsider who provides the warehouse service and is not involved with the company. It is used to keep hazardous chemicals that purchased from manufacturer and wait to distribute to customer or use to install the fire protection system for customer.

The company distributes products from warehouses to customers (shipping cost included in product price) by the company' trucks and other delivery trucks hired from the transportation operators outside who are not involved with the company. Now, operators are selected and registered as the approved vendor list (AVL) by our company. We also

have insurance for products kept at warehouses to prevent damage or accident during storing and operating in case of fire, lightning strikes, earthquake, storm, flood, and other accidents in warehouses. Now, the insurance covers assets at the Head Office and products at warehouses. As of 31 December, 2020¹ our company have insurance on product shipping domestically for high value purchasing to prevent loss or damage from accident, during lifting product to the delivery truck and transporting on truck. The company is an only beneficiary and from 2012 until now we never claim damage from a serious accident except for some minor accidents from moving products at warehouses, costing less than 10,000 Baht in each time.

④ Processes of storing products in warehouses and distributing to customers

Processes of receiving products from manufacturers

- When receives an inspection and acceptance note from a purchasing division, a warehouse staff will prepare a bar code and space to store product.
- When product reaches warehouse, the staff will inspect product as specified by the purchasing division, then attach a bar code, and make an acknowledgement receipt.
- The warehouse staff who works for storing products will inspect product type, quality, quantity, bar code, and acknowledgement receipt to check correctness. Then, the staff will store products in warehouse, placing products came first outside and products came later inside for convenience in next distribution, record product stocks and send other details to the relating divisions including the purchasing and accounting divisions.
- In case of incorrect purchasing and product defect/damage, the warehouse staff will report to the purchasing division in order to examine as well as inform manufactures, and/or the insurance company

Processes of withdrawing products to deliver to customers

- A delivery staff makes a picking list and submits to the warehouse staff, and later prepares to deliver products to customers. The staff also check list of customers, product quantity, and delivery place to plan a logistic route and coordinate with the financial division to obtain a delivery document.

- The delivery staff makes a delivery control note to record lists in each logistic route within 9.00 a.m. of every working day. So, the sales division will have data to inform customer about the estimated delivery time.
- In case of emergency delivery or appointment for advanced shipping, the staff will receive a delivery note from salesperson and coordinate with the transportation operators approved by the company. The staff will inform the transportation operators about time to collect products at warehouses, time and route to deliver products to customers and make a delivery control note.
- The delivery staff will submit the delivery documents and delivery control note to the truck driver/ delivery man who will check products type, product quantity, and details as specified in the delivery documents. If it is correct, the truck driver/ delivery man will sign their names as a recipient on a copy. Then, the products will be moved to the delivery truck and distributed along the logistic route. The delivery man will clarify products and submit the shipping documents to customer. The customer signs as a recipient on delivery documents. The staff will take documents including an original invoice and tax invoice back from customer and later return to the delivery staff who compiles all documents and later submit to the financial division to monitor payment complying with financial and accounting regulation.

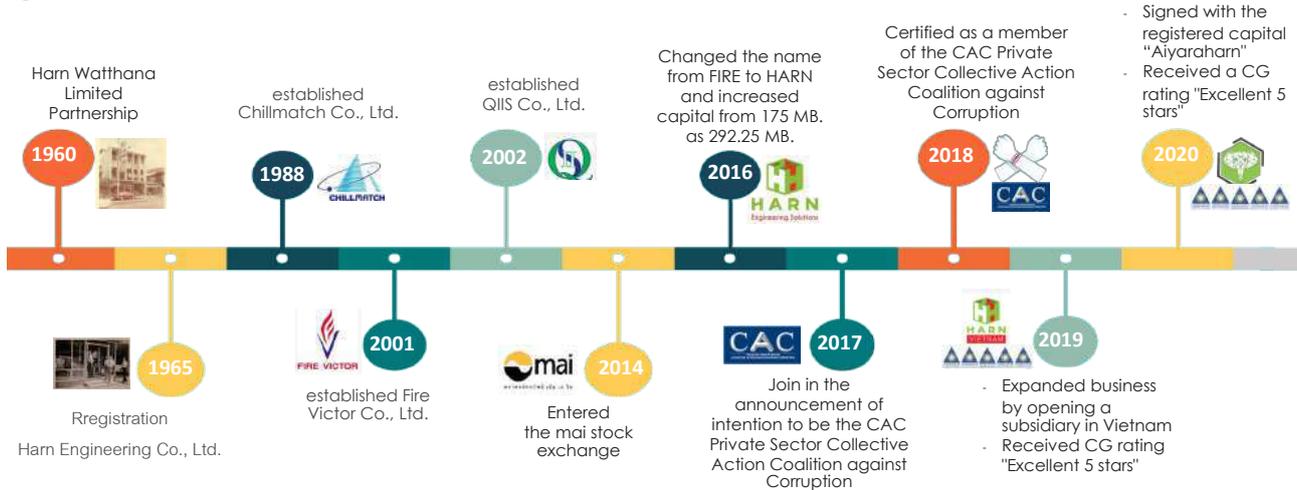
¹ The company will determine a sum assured in each year according to asset values from the latest financial budget before having insurance.

5 Quality and standard of the products

The Company emphasizes on the quality and the standard of the distributed products so that the customers can be confident in the quality and the safety of the products that follows the terms and conditions agreed upon with the Company. The products sold by the Company are mostly certified by the UL (Underwriters Laboratories)² and/or FM (Factory Mutual)³ and/

or BS (British Standard)⁴ and/or TIS (Thai Industrial Standards)⁵ and/or EN (European Standard)⁶ and/or Vds Standard. As for the Company's OEM, these are produced under BS or ASTM International, including all aspects of the Company's operation is certified by the ISO 9001:2015.

6 Significant Changes and Developments



Harn Engineering Solutions Public Company Limited ("Company") (previously known as Fire Victor Public Company Limited) was originally set up as a section of Harn Engineering Company Limited ("Harn"). Later on May 9, 2001, the Company was incorporated as a juristic entity named "Fire Victor Company Limited" ("FIRE" or "the Company") by Charnnarong Group⁷ and Mr. Wirat Sukchai, former executive of Harn overseeing sales of valves and equipment for firefighting system, following a corporate restructuring from family business management to professional management. With an initial registered capital of Baht 1 million, the Company was established to engage in import and distribution of valves and equipment for fire protection system and valves and equipment for sanitary system and air-conditioning system, including fire protection system installation services. On February 21, 2003, July 24, 2006 and October 10, 2012 the Company increased its registered capital to Baht 3

million, Baht 4 million and Baht 65 million respectively, for use as working capital in its business operation.

In November 2016, the Company has changed name from Fire Victor Public Company Limited after entering in a joint invest with Chillmatch Co., Ltd. and QIIS Co., Ltd. The three companies were originally business units of Harn Engineering Co., Ltd., with a long history of being a distributor and consulting, designing engineering systems since 1965, with more than 60 years of experience and reputation. This time, the company is ready to focus on being the leading provider of sustainable solutions of safety engineering systems, cooling system, air conditioning system, and digital printing systems in Thailand and neighboring countries.

² Underwriters Laboratories (UL), safety standards by the Underwriters' Laboratories Inc. (UL), non-profit independent organization from the USA. Responsible in testing and prepares the safety standards and safety insurance of the products.

³ Factory Mutual (FM), responsible in testing protective and fire extinguisher equipment of the insurance group in the USA.

⁴ British Standard (BS), safety standards by the British Standard Institution (BSI)

⁵ Thai Industrial Standards (TIS), industrial standards, products guaranteed by the Thai Industrial Standard Institute.

⁶ VdS Is an independent institution that tests fire prevention and extinguishing equipment That guarantees safety And reliability in the field of fire protection and safety Germany

⁷ The Charnnarong Group consisting of Mrs.Prayoonsri Charnnarong, Mrs.Sirima Iamsakulrut and Mr.Jain Charnnarong

For safety engineering system solutions in 2001, the company started the business of importing and distributing valves, fire extinguishing systems, sanitary equipment, and air conditioning, along with providing fire extinguishing system installation services for projects. Later In 2003, the Company expanded its business by adding Project Sales Division to provide consultation services, designing and installation services of all types of fire protection system such as Automatic sprinkler system, Foam fire protection, Fire alarm systems and Close circuit television system , all of which are to be carried out by a skillful, specialized engineering team, with focus on not so large projects, i.e. small- and medium-sized factories, and in 2005, the Company added carbon dioxide (CO₂) and extinguishing system FM200⁸. Until now, has been added product NOVEC 1230 Fire Suppression System, Inert Gas System, Wet Chemical Fire Suppression System

In 2007, the Company received an Outstanding Distributor Award presented by NIBCO Inc., USA. Currently the company expanded into fire suppression systems for petrochemical industry with security systems.

For more than 60 years the company has experience in providing high quality refrigeration solutions for industrial and agricultural products by a team of engineers with expertise in designing a cooling system that is suitable for product preservation in order to maintain the highest quality, weight and freshness. Since 2002, there have been many energy crises, leading the company to develop its expertise in developing energy-efficient solutions that have been widely accepted.

Currently the company is the leader in refrigeration technology in Thailand and continue to grow progressively.

In terms of digital printing systems, the company started a business about printers and printing equipment, date of manufacture / expiration since 1965, with a commitment conduct a distribution business and provide after-sales service based on speed and quality in order to ensure highest customer satisfaction. Today, the company is the leader in digital printing technology for production lines in Thailand and has gained the trust of leading companies nationwide. In 2015, the company expanded into 3D printing solutions until it was able to drive rapid prototyping and digital manufacturing in education, dentistry, medical and packaging and manufacturing industries. In 2019, the company focuses on being a leader in neighboring countries by registered the establishment of Han Vietnam Company Limited ("subsidiary"), Vietnam, with a registered capital of 800,000,000 Vietnamese dong or approximately 1,057,444 baht, the Company holds 100% of the subsidiary's shares in the registered capital on 30 July 2019.

The Company has implemented international quality. Presently has been awarded ISO 9001:2015 by UKAS (United Kingdom Accreditation Service), UK-based world-class certification body with quality inspection and verification conducted by SGS (Thailand) Company Limited. Certified ISO 9001:2004 since 2006 and migrated ISO 9001:2008 since 2009. Presently migrated certified ISO 9001:2015 in 2017.

Important developments of the Company over the past five years can be summarized as follows:

2020

- The Company joins hands with Ayarafun Group signed a joint invest for digital business development to build IoT Products and Solutions system to operate smart building development service under the name "Ayaraham" on June 24, 2020.
- The company has been listed as one of the 20 companies that Thaipat Institute has selected as the ESG Emerging List of Sustainable Way Companies, based on the environmental, social and governance (ESG) trends of start-up companies or in the process of working that has the opportunity to generate more long-term returns for investors.
- The company was certified with CG Score as having good corporate governance principles for listed companies for the year 2020 at a 5-star "Excellent" rating for the second consecutive year on November 19, 2020.
- Harn Vietnam ("Subsidiary") has successfully sold 1 UV Digital Inkjet label printer and can be installed successfully by a team of Vietnamese engineers without requiring engineers from abroad to support due to the COVID-19 situation that does not allow foreigners to enter the country during that time.
- The company has expanded cooperation with Domino UK Ltd., a manufacturer and distributor of UV Digital Inkjet label printer system, to establish a 120 square meter showroom, set up the printer on the first floor of a new office building. It is expected to be completed in Q1 / 2021, which will be used to support sales, training, and customer visits to the showroom, including online visitation by customers in Thailand and Asean countries. Domino agrees to pay the rental fee and sells machines to the company at a special discount price along with a payment term of up to 1 year or when the device is sold to the customer.

⁸ FM 200 firefighting system is a clean agent fire protection system with UL/FM standard certification for using substances that cause no harm to computers, electronics equipment and human beings, hence being safe for installation in server rooms, data centers and UPS rooms.

2019

- The company received the honor from Prof. Dr. Bundhit Eua-arporn, the president of Chulalongkorn University, to join the opening of '3D printing service Harn - Chula' at Chulalongkorn University on 8 January, 2019 as a part of project for community and society. The company was pleased to facilitate faculty and students to access to the 3D printing technology at a price below the market cost.
- The company registered the establishment of Harn Vietnam Company Limited ("an affiliated company") in Vietnam with a registered capital of 800,000,000 Vietnamese dong or about 1,057,444 Thai baht. The company held shares in the affiliated company amounted to 100% of a registered capital on 30 July 2019.
- The company was certified with CG Score on the principles of good corporate governance for the listed companies in 2019, achieving the CG Score of five stars 'excellent' level on 25 October 2019.
- The company held a press conference on the success of project 3D Med the human organ models with the advanced 3D printing technology for effective diagnosis and treatment planning, is a project funded by the National Innovation Agency. (Public Organization) on 17 December 2019. From May 2018 - November 2019, fifty human organ models produced by the company received an average score at 4.49 out of total 5.

2018

- The company was sponsored by the National Innovation Agency (Public Organization) in the project 'HARN 3D Med: creating the human organ models with the advanced 3D printing technology for effective medical diagnosis and treatment planning' in transforming technology into capital on 15 May 2018.
- The Company was certified as a member of the Private Sector Collective Action Coalition against Corruption in the round quarter 3/2018 on November 5, 2018.

2017

- The Company participated in the declaration as a member of the Private Sector Collective Action Coalition Against Corruption (CAC) on March 21, 2017.
- The Company supported International Packaging and Printing Exhibition for Asia (PACKPRINT INTERNATIONAL 2017) at Bangkok International Trade & Exhibition Center (BITEC) during September 20-23, 2017 and received Certificate from Thai Printing Association, Thai Packaging Association, and Messes Dusseldorf Asia.
- The Company participated in the innovation capability promotion scheme for innovative public organizations in the Stock Exchange of Thailand (SET) and Market for Alternative Investment (MAI) and earned Total Innovation Management Awards 2017 on October 6, 2017.
- The Company received ISO 9001:2015 certification from SGS (Thailand) Ltd. on November 23, 2017.
- The Company won the Highest Revenue Growth in Asia-Pacific Awards 2016 from Domino Printing, a leading provider of printing solutions in the UK, for the third straight year for its digital printing business, and licensed as Domino's distributor in Thailand, Myanmar and Cambodia, with business value generated ranking the 4th in Asia following Japan, South Korea and Taiwan.
- The Company was appointed as distributor of kitchen fire suppression system, i.e. Lehavot wet chemical system from Israel.
- The Company was appointed as distributor of EVAPCO evaporative condensers from the USA.
- The Company was appointed as distributor of DANFOSS refrigeration condensing units from Denmark.

2016

- The 1st Extraordinary Meeting of Shareholders on November 1st 2016 is of the opinion to buy and receive the business transfer of Chillmatch Co., Ltd and its subsidiaries under the entire business transfer process and signing in all related contracts. To this, the Company paid for the business transfer with the Company's common stocks from the increased capitals of 234,500,000 stocks at the value of 0.50 Baht per stock. The value of increased capital in common stock was at 2.62 Baht per stock. The Company will issue the common stock for the capital increase at 234,500,000 stocks at 0.5 Baht per stock to the shareholders of Chillmatch Co., Ltd instead of paying with cash.
- November 2, 2016 the listed company had changed the name from Fire Victor Public Company Limited to Harn Engineering Solutions Public Company Limited and changed the Company's assets abbreviation from "FIRE" to "HARN" in the Stock Exchange of Thailand (effective on the November 7, 2016) in order to support the entire business transfer of Chillmatch Co., Ltd and its subsidiaries, following the resolution of the 1st Extraordinary Meeting of Shareholders.

The Company's revenue structure

The company's operates of importing and distributing products in building engineering systems such as Fire protection system, Air-conditioning system, Sanitary system, Refrigeration system and engineering solutions services for digital printing

system. In addition, the company's as provider for installing various system projects such as Foam Fire Protection System, Fire Suppression and Alarm Systems with the company's expert engineering team

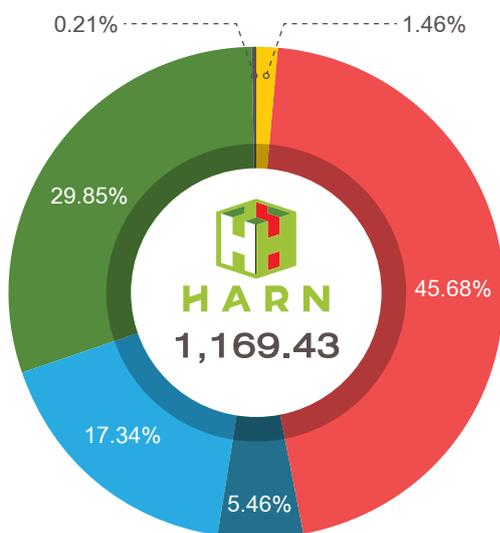
The revenue structure of the company for the year 2018 - 2020 is as follows

Type of Revenue	2020 ¹⁾		2019 ¹⁾		2018	
	MB	%	MB	%	MB	%
Revenues from sales and services						
1. Fire suppression products and firefighting system installation services	534.18	45.68	644.12	46.21	569.59	42.00
2. Air-conditioning and sanitary products	63.82	5.46	81.10	5.82	89.33	6.59
3. Refrigeration products	202.83	17.34	262.00	18.80	320.39	23.63
4. Digital printing products	349.07	29.85	379.66	27.24	364.96	26.91
5. Internet of Think products (Aiyaraharn)	2.43	0.21	-	-	-	-
Total revenues from sales and services	1,152.33	98.54	1,366.88	98.06	1,344.27	99.13
Other revenues ²⁾	17.10	1.46	27.09	1.94	11.75	0.87
Total revenues	1,169.43	100.00	1,393.97	100.00	1,356.02	100.00

Note: ¹⁾ Referring to Harn Engineering Solutions PCL.'s audited consolidated financial statement

²⁾ Other income included gains/losses on investment in mutual funds and marketable securities, interest receivable, dividend income, and foreign exchange gains/losses, Including rental and service income from investment properties etc.

Revenue Structure 2020



Fire suppression products etc.	534.18 MB.
Digital printing products	349.07 MB.
Refrigeration products	202.83 MB.
Air-conditioning products etc.	63.82 MB.
Other revenues	17.10 MB.
Internet of Think products	2.43 MB.

Note: Referring to Harn Engineering Solutions PCL.'s audited consolidated financial statement

Industry Conditions and Competition

① Industry Conditions and Industry Trends

The Company has engaged in import and distribution of Fire Suppression products, Air-conditioning and Sanitary products, Refrigeration products and Digital Printing products for industrial use, as well as provision of consulting, designing and installation services for fire protection systems in projects. Most of its products, which are relevant to building engineering such as fire protection, air-conditioning, sanitary and cooling systems and account for more than 50% of its total sales revenues, are supplied mainly to contractors of building construction projects, government sector projects or factory buildings, including office buildings, condominiums, hospitals, shopping malls, electric trains, industrial plants, cold storages, and so on. As such, the Company's business operation relates directly to the construction industry which grows in tandem with the country's economy, or gross domestic product (GDP), but is prone to more volatility. That is, when the economy begins to recover, construction of various properties will expand at a greater and more rapid pace, but in the wake of economic slowdown it will decelerate faster and in line with the permitted areas of construction in each year. Nevertheless, the Company has the ability to distribute business risks, which is demonstrated by the Refrigeration business and Digital Printing business being correlated to the food and packaging industry, which is different from the fire extinguishing system business and the air-conditioning business.

Thai Economy in the 3rd Quarter of 2020

The Thai economy in the 3rd quarter of 2020 declined by 6.4% continuing from a 12.1% decline in the previous quarter. The government spending and public sector investment, however, expanded and accelerated. Private investments and consumption, and export of goods declined at a slower rate from the previous quarter while export of services declined continuously. In terms of production, the production on construction sector accelerated, while accommodation and food service sector, industrial sector, agricultural sector, transportation and warehouse sector, wholesale and retail sector, reparation sector, electricity and gas sector dropped at a lower rate than the previous sector. After the yield of the season has been adjusted, the Thai economy in the third quarter of 2020 increased by 6.5% from the second quarter of 2020 (QoQ_SA), totaling the first nine months of 2020, the Thai economy dropped 6.7%.

Economy Trends in the Year 2020 - 2021

The trend of the Thai economy in 2020 - 2021; The Thai economy trend of 2020 is expected to decline by 6% where the value of goods exported declined by 7.5%. Private sector consumption and investments declined by 0.9% and 3.2% respectively. Headline inflation rate is at -0.9% and the current account surplus is at 2.8% of GDP. The Thai economy in 2021 is expected to expand between 3.5-4.5% with the support from:

- (1) An improvement in domestic demand.
- (2) Economic recovery and world trade volume.
- (3) Government-driven disbursement under the framework of annual expenditures and economic measures; and
- (4) An unusually low base of expansion in 2020.

In this regard, the value of merchandise exports is expected to expand by 4.2%, private consumption and total investment grew by 2.4% and 6.6% respectively, the average headline inflation was in the range of 0.7 - 1.7% and the current account balance exceeded. 2.6% of GDP.

Thai Economy Trend in 2021

The Thai economy in 2021 is likely to continue to recover from the second half of 2020 due to:

- (1) The success of the domestic epidemic control and additional support from the government's economic administration measures should encourage an increase in the demand in the country.
- (2) Economic recovery and world trade volumes under epidemic situations in many countries that have passed its peak and is expected to have greater control over the epidemic. This will help support the Thai export sector.
- (3) Disbursement under the budget fiscal year 2021 framework and government sector economic driving measures; and
- (4) Effect of adaptation according to an unusually low base of expansion in 2020.

However, there are limitations and risks that may affect the economic recovery in 2021, including the uncertainty of the COVID-19 situation, which in many countries, this can be lengthened and more severe. This will affect the economic recovery, world trade volume, tourism sector, employment conditions, and financial status of the household and business sectors, including risks from drought situation and fluctuations in the world economy and financial system.

Supporting Factors

1) The trend of recovery in domestic demand, which is a result of the success in domestic epidemic controls and prevention, lead to the various epidemic control measures of the government sector were easing until the situation almost returned to normalcy since the 3rd quarter of 2020. This contributed to the continuous recovery in the domestic economic activities and combining with the trend of easing entry into the country for specific groups of tourists such as movie production teams, exhibitor groups with high purchasing power, and special tourist visa (STV) groups, which allows some groups of foreigners to enter the country, under a strict control and quarantine practices, since the end of 2020. It is expected that the number of foreign tourists will begin to increase, especially in the second half of 2021 if more broad international travel is introduced under the condition of successful vaccine discovery and wide adoption of the vaccine. This will be an ongoing support to domestic spending.

2) An improvement in the economy and world trade volume in 2021 was in line with the world economy in the second half of 2020 that was recovering faster than expected due to the relaxation of epidemic control measures along with the implementation of large-scale economic stimulus measures of many major countries such as USA, Eurozone, and China. This was reflected by the industrial and service PMIs in the major economies, which rose to similar levels to the pre-epidemic levels, as well as the retail index that began to expand in August and September 2020. In this regard, it is expected that the epidemic situation in many countries has passed its peak in 2020 and it is possible to control it to a level that does not exceed the country's public health potential and the epidemic can further be controlled through good hygiene practices and Social Distancing, which will result in lesser strict government measures to control outbreaks. Additionally, the business model and consumer behavior that are more flexible and it is expected that the impact on the economy will not be as large as the first wave of 2020.

3) The government's driving forces from disbursement under the budget and economic measures consisted of:

- (1) Disbursement under The annual budget expenditure framework for 2021, in which the base case is expected to have a cumulative disbursement rate for the fiscal year 2021, a total of 94.4% of the total budget, divided into the current and capital

expenditure disbursement rate of 98.0% and 80.0%, respectively. As a result, the full fiscal year 2021 is expected to have a total budget expenditure of 3,103,374 million baht, compared with 2,943,853 million baht in fiscal year 2020, or an increase of 5.4%.

- (2) Expenditure budget for year 2021 is expected to be disbursed at 85% of the total budget, representing the total budget of 519,418 million baht, an increase from 367,916 million baht in fiscal year 2020.
- (3) Disbursement under the loan decree of 1 trillion baht, which is expected to be disbursed in the fiscal year 2021, totaling 403,249 million baht when including the budget from the annual budget expenditures. Annual expenditures and the budget under the Emergency Decree on a loan of 1 trillion baht, totaling the budget of 3,757,017 million baht, compared to 3,467,967 million baht in fiscal year 2020, or representing an expansion of 8.3%.
- (4) Disbursement under state enterprise investment budgets in the fiscal year 2021, especially investments in major infrastructure investment projects, are expected to have a 70% disbursement rate on the approved investment limit. Compared with 64.9 percent in fiscal year 2020; and
- (5) Implementation of other important economic measures such as low-interest loans to assist entrepreneurs under the Decree on providing financial assistance by Bank of Thailand to enterprises affected by the COVID-19, the Portfolio Guarantee Scheme, a special term of the Thai Credit Guarantee Corporation (TCG), as well as measures to stimulate domestic consumption and reduce the cost of living of the people.

- 4) Abnormally low growth in 2020 because of the impact from COVID-19 causing the Thai economy in the second quarter to decline by 12.1%, the record-highest decline. The decline also occurred with other countries around the world and the world economy entered economic recession and dropped to a record low. The growth began to recover with the decline improved to 6.4% in the third quarter. Such conditions will support the economy in 2021 to resume expansion in line with the recovery of domestic demand, export, and manufacturing sectors.

Source: Office of the National Economic and Social Development Council

1.1) Fire Extinguisher, Air-conditioning and Sanitary Business

The market condition of the fire extinguishing and air conditioning system business, in 2020 sales decreased due to the COVID-19 situation causing the main customers group, building contractors, to delay projects, and combining with the effect of the overall economic problems. However, some projects remain on hand, mostly condominiums in Bangkok and vicinity, particularly condominiums along the sky train line and inner Bangkok area, which is still popularly demanded although the demand have slowed down. Office projects, hospital projects, as well as various utilities projects, especially by the government sector, continued to expand and accelerated. It is predicted that the real estate business in Bangkok and its vicinity will continue to decline, but there will be projects on public utilities, industrial plants, power plants, and petrochemicals that are likely to expand further. However, there are some negative factors in terms of credit limits as well as the Bank of Thailand's down payment controls that will require second home buyers and houses worth more than 10 million baht must pay at least 20% down payment. Furthermore, if the situation of the COVID-19 can be managed swiftly, it is expected to help the economy and industries to recover more swiftly as well.

Air Conditioning System and Fire Extinguisher Equipment: The overall image of 2020, the total revenue of both systems reduced from 2019 due to the Covid-19, thus contributed to the delay in the handover of numerous projects. The construction projects of condominiums, hotels and service venues have decreased, leading to a decrease in the demand for fire extinguishing equipment. It is expected that in 2021, work in public utilities sector, hospital group and industrial plant will return to expansion. The company has introduced innovative products to the market, which allowed customers in the building contractor group to install products faster, saving the labor and maintenance costs. This resulted in an increase in the sales of fire extinguishing products and air conditioning systems replacing the reduced revenue in other businesses. However, the monitoring of COVID-19, which affects the industry, should be continued.

Extinguisher System for Industrial Projects: Overall in 2020, sales increased about 15% compared to the previous year due to increased sales of gas fire extinguishing systems and service income, including the progress of the installation of fire protection systems of 4 power plants, which were able to collect better installments according to the progress of the work.

It is expected that in 2021 there will be strong sales growth due to the number of backlogs of 2020 and there is a high chance of many more jobs from bidding. The fire extinguishing system inspection services display favorable growth prospects from the existing customer base in 2020 and the new customers that will increase after the expiration of the warranty period for the projects that the company has installed. The service work is likely to improve year on year.

Extinguisher System for Petrochemical and Power Plant Projects: The overall sales of Petrochemical and Power Plant Projects decreased by 60% from year 2019 due to the extension of the construction period causing a delay in revenue recognition due to the COVID-19. The proportion of sales in the part that the products have not yet been delivered is approximately 50 million baht (40%-50%) and there are still several projects that are in installation period, as well as a number of large projects that are in the process of pursuing the bidding which will begin in 2021. There is a higher opportunity for expansion in 2021 as the petrochemical industry will invest in expanding factories and improving firefighting equipment in the next phase.

1.2) Refrigeration System Business

As for the refrigeration market in 2020, the overall competition in the cooling system business showed high competitions in terms of prices, product quality and the availability of the products for distribution. The product which contributed to the highest sales were namely small, prefabricated condensing units and ready-made cold rooms, as the cost of investment is low, and these products are convenient to install and move around. In the refrigeration market today, there are new players entering competition from both domestically and internationally, which can import cheaper and better-quality products to compete in the market, which intensifies the competition. Expansion projects on the production capacity of various industrial factory operators do not show plans to invest but instead turned to increasing the efficiency of earning from existing resources. The key markets and relevant to the refrigeration business are.

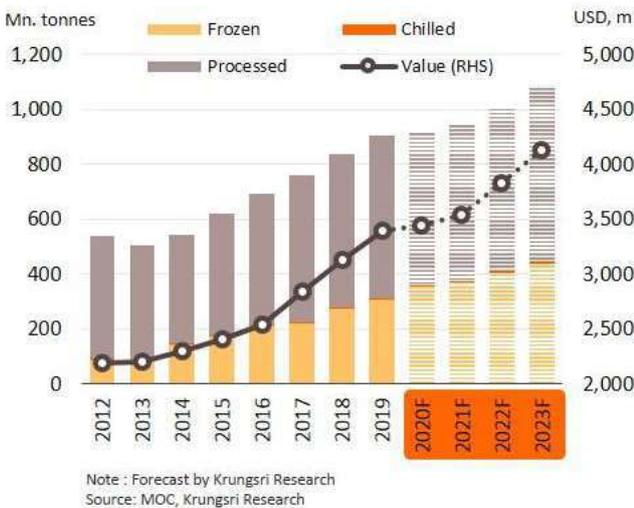
Processed Meat Industry

Thailand's chicken meat production ranks at the 8th highest of the world in 2019 which the production was at 2.36 million tons, represented as 3.3% of all chicken meat produced globally. While chicken meat consumption in the country is at 1.51 million tons or at 63% of the total amount of chicken meat produced, mostly in the form of butchered meat. The rest of the chicken meat production would be used as raw materials

in processed chicken meat industry and frozen chicken meat industry. The key market is the export market where the value of such exported goods ranked no. 1 and no. 5 in the world, respectively. (Source : Trademap 2562)

The amount of chilled, frozen, and processed chicken meat between 2021 - 2023 has a growth tendency at 3 - 5% per year according to the purchasing power that is slowly recovering. The supporting factor for the demand increases on chicken meat domestically is due to the low-fat content in chicken meat and the price is lower than other types of meat. While the growth of export market for chicken meat is due to the strong customer base such as Japan and China, when combined with the confidence of foreigners to the standard of Thailand's chicken production including the Free Trade Agreement (FTA) between Thailand and trading partner countries which contributes to Thailand having the advantage which enhances the competitive edge of this product on the global market.

Figure 18: Thailand Chicken Product Exports Forecast



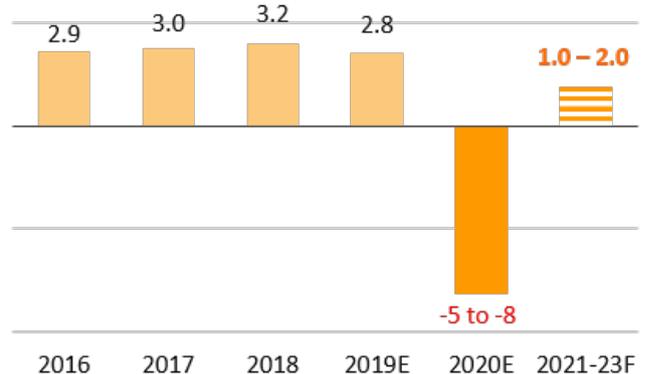
From 2021 to 2023, the global demand for chicken meat is expected to increase by 1.0% per year to 135 million tons from 131 million tons in 2020, partly due to the health-conscious trend that has led to increased demand for chicken meat, because it contains lower fat than pork and beef. The periodic epidemic of bird flu and African swine cholera caused the affected chicken meat producing and exporting countries (such as China, Brazil, Europe, and the US) to delay their economic recovery time. The African swine cholera in China and Vietnam took more than three years for the producers to be able to reach the supply level of the pre-epidemic time. While the production process of Thai chicken products meets international standards and free from contamination of epidemic both from human (Covid-19) and animal disease (HPAI and ASF) and therefore recognized

for its quality. As a result, the demand for imported chicken from Thailand is likely to increase. The Free Trade Agreement (FTA) between Thailand and the trading partner countries also contributes to Thailand having the advantage and increased competitive edge. As in 2019, Thailand has total exports of livestock products to FTA counterparties of 3.3 billion dollar accounted for up to 82% of total livestock exports. The export value of fresh and processed chicken meat under the FTA increased by 15% and 7%, respectively. In the next phase, the Thai Department of Trade Negotiations said it would negotiate the FTA to open additional markets for livestock products such as Turkey, Pakistan, Sri Lanka, UK, and the European Union. Therefore, it is expected that the export value of Thai chicken products will continue to grow.

Retailing business

The overall image of Thai retail trade in 2020 is not optimistic. The contraction rate is approximately 5-8% from the unrealized purchasing power from the widespread impact of the epidemic and the higher household debt burden. This year, the retail business faced a lot of pressure from the government's disease control standards including having to adapt to the epidemic situation that occurred to maintain sales and build confidence for consumers. It is clear that entrepreneurs pay more attention to online sales and promotion of products to boost sales.

Figure 2: Retail Business Growth (% YoY)



Source: Thai Retailer Association
Note: Forecast by Krungsri Research

- **Discount store / Hypermarket:** Hypermarkets and discounts stores that offer a collection of multiple product categories in one place has been greatly affected in the past year. The growth rate declined approximately 6.6% in 2020. Most of the target customers are the middle to lower income groups and the price competition within the business remains fierce. Additionally, it must compete with other retailers such as convenience stores and supermarkets. It is clear

that the number of consumers spending at hypermarkets has reduced due to the spread of Covid-19 resulted in the heavy decline of the revenue of such establishments, due to the measures of limiting the number of people inside the store and the consumers' concern in entering a smaller indoor space, hence using less time to shop.

- **Supermarket:** The supermarket business, where most of the target customers have moderate to high incomes in 2020, shrinks approximately 6.5%, but can still sustain itself, though spending is limited to the product that is essential in daily life only, as consumers continue to purchase necessity products but the spending on luxury products has reduced significantly. As for the necessity products, the sales will remain like the normal situation but the frequency that consumers will come to buy the product is reduced due to concerns about the epidemic and worsening purchasing power. It also has been affected by a significant drop in the number of foreign tourists due to inability to travel causing the sales of souvenir products to disappear.
- **Convenience store / Minimart:** In 2020, it saw a 6.9% decline in purchasing power from a decline in purchasing power among the middle to lower income segments, including the high level of competition both from the opening of competitors in the same area and the supermarkets and hypermarkets that produced its own brand to enter the competition. This contrasts heavily to the declining purchasing power, resulting in this year many convenience store operators refrain from expansion of additional branches in order to save cost.

Compact refrigeration business group

To distribute products to the consumer's hand, and with the advancement of technology, the distribution of products is not limited to general stores only. Vending machines are one of the channels developed from technology, which the automatic kiosk can distribute products to make it easier to reach consumers and able to meet the needs of both consumers and business owners with low investment, lower rental fee and requires less space. It can be easily added into high-priced locations, making it accessible to all areas. It transforms small space into a valuable retail space that can distribute product quickly, conveniently and round the clock.

Many types of products in a vending machine must be stored in a low temperature cabinet so that the products can remain their freshness, thus a small cooler is required to

maintain the product temperature. This is the market opportunity to expand the refrigeration business in the vending machine group, which the trend is currently growing. There are around 21,100 machines presently and it is expected that from now on, the level of expansion will skyrocket from the ability to provide greater convenience. In particular, the payment for the products is not limited to coins or banknotes, but various types of payments are accepted such as QR code, e-wallet, and credit-debit card. Such factor contributes to the expansion of compact refrigeration business into vending machine market as the new market that has a potential to continue growing.

1.3) Digital Printing Business

The main target groups of the Company's digital printing products are industrial factories and end-users. Printing on packages is one of the crucial steps in manufacturing process of industrial plants, encompassing the printing of Date of manufacture / expiration or lot numbers or texts on products and packages before distribution. The target customers also include newly opened factories, factories with production line expansion, and factories needing to replace the existing system and products that have depreciated according to their useful life. The Company currently sells digital printing products to a broad variety of industries since there is demand for such products in all industry sectors. The industries that are major end-users of its products are food and beverages, consumer products, construction, electrical appliances and electronics, etc. Hence, the trend of digital printing products relates closely to the private sector investment index and the industrial factory construction value, which could mirror the overall situation of all industries.

② Competition

Importing and distributing fire extinguisher products: has medium level of competition from existing competitors. This is because the products are concerned with safety; therefore, the equipment must be of good quality with certified international standards and reliable distributors. The core competitors of the Company are companies that distributes the products from overseas in which the numbers are not extremely high due to limited recognition of the brands at the global level. Also, most of the producers have the policy of dealing with only one distributor or appoint few representatives in order to prevent inside competitions between the distributors. However, there are about 4-5 direct competitor who imports fire extinguisher products for the buildings and factories market. In some cases of the business operation, the competitors may become the trade

partners in buying products from the Company as well. When considering the market share of the Company by comparing with the revenue of the 3 main competitors who holds approximately 80% of the market share, the Company owns about 25% of the market share. Our fire protection product sales presumably occupy 10% of total industrial market share of fire protection products in general.

Servicing contract projects, designing, supplying, installing and testing the fire extinguisher system: has few competitors. This is because installing the fire extinguisher system requires specialize skills of design engineer. The main competitors are the group that distributes and contract the fire engineering projects. This business still has the potential to grow since the government had issued the stricter law to prevent fire including the renovation of buildings and factories in accordance with the Thailand Building Control Act B.E. 2535 (1992), resulting in higher demands for goods and services relating to the fire extinguisher system.

Importing and distributing products for sanitary and air conditioning system: in the past year, the competition remains fierce. However, due to the large market size and the large diversity of the Company's products as well as product acceptance by customers, as well as there is an increase in the searches for products in the group of sanitary and air-conditioning system, therefore a continued growth is anticipated with greater distribution channels to the customers. The Company has the advantage of selling various products that are well known in the market and can reach both general customers and contractors equally.

Importing and distributing products for refrigeration system: In 2020, the refrigeration business remains highly competitive due to the decrease of project works and the uncertain economic situation. As a result, various planned cold storage projects are delayed or postponed causing the sales of that product to drop significantly. This reflects the growth of businesses that are related to the refrigeration system, such as the retail business which has been quite affected this year from the shrinking purchasing power, etc. The main competitor of the cooling system business are still companies that distribute refrigeration products and equipment in Thailand, including new product brands from China that are cheaper and with faster delivery. However, the refrigeration business continues to have the advantages in product quality, service availability, and knowledge of sales personnel. These advantages over competitors give competitive edge in terms of introducing

new technology to the market that can meet the requirements of entrepreneurs. Products that the refrigeration business distributes are good quality products and recognized all over the world. The cooling system business continues to accelerate the variety of products in order to be able to provide a complete customer service cycle. In addition, the cooling unit has been produced according to customers' order, designed by experts according to the correct engineering principles to provide customers with high quality products and services, consisting of modern technology that is worth the investment.

Importing and distributing digital printing system: has seen medium level of competition. This is because the customers emphasize more on good after sales services and the readiness of after sales staffs, inventories, and spare parts that the customers need to use regularly. Most of the goods sold are well known brand with high quality and had been appointed to solely be the distributor. The revenue structure can be divided into 3 categories:

- 1) The revenue from selling the machines
- 2) The revenue from selling supplies
- 3) Revenue from spare parts, services, and servicing contracts.

The main competitors are companies that are the distributors of the products from foreign countries which there are not many since the brands that are accepted worldwide are extremely limited. Therefore, the customers in the medium and large size factories will mainly choose the brands with the international standards. When comparing the revenue of the digital printing business with 5 other competitors for the total of 6 companies, representing a total sale of 1,751 million baht, it is discovered that the Company's market share is among the top 3 in the market with approximately 21.83% market share and sales grew 4.86% compared to the total growth of 6 companies at 2.09% (Source: Department of Business Development, sales in 2019).

③ Customers' Characteristics and Target Customers

The Company's main target customers are customers in building construction projects, government sector or industrial plants such as shopping malls, office buildings, condominiums, BTS skytrain projects, underground subway projects, government buildings, factory buildings, cold storage buildings and warehouses, including international contractors from Korea, Japan and USA for large petrochemical and power plants, as examples, that require an installation of building engineering

system such as firefighting system for safety in accordance with building control laws, sanitary and air-conditioning system in buildings or factories, cooling system in cold storage. The Company's clients may be direct clients who hold the ownership of the construction project, or project contractors who purchase the Company's products to install in their projects, as well as stores or distributors of products related to the various systems who purchase the Company's products to resell to project contractors or direct users, in which the Company has always

have a good relationship the mentioned group of clientele. Moreover, there are groups of clients who regularly order the Company's products because of their confidence in the quality and the safety of the products, in which most of them have received international standards certification, combining with excellence service by the sales team who possess great knowledge about the various products. However, in 2019 and 2020, the Company does not have any clients whose spending exceed 30% of total revenue from sales and services.



4 Competitive Strategy

The Company focuses on selling high quality products, offering services to customers with products of quality, the availability of consultation by expert engineers, swift and professional after sales service team under administration policy which enhances product knowledge and expertise in order to provide customers with instantaneous service and create utmost satisfaction with competitive strategy as follows;

- **Selling quality products with recognized standards**

Focus on selling quality products with globally recognized standards where the Company shall select quality products especially building engineering system products such as firefighting system, air-conditioning system, sanitary system and cooling system, including digital printing system products which greatly relate to safety, product storage process and the continuity of production process. Therefore, it is crucial to select good quality products which are certified by international standards and suitable to the customers' needs, well known products which are popular and widely accepted in the market, to build trust, confidence and customer satisfaction continuously.

- **Expand range of dealership**

The Company plans to expand the range of dealership

in building engineering products which include firefighting system, air-conditioning system, sanitary system and cooling system as well as digital printing system where the products will be ordered gradually in order to increase customers' choices whereby the customers' needs will be supported in all groups of product standards. Furthermore, the Company shall increase the number of personnel to be sufficient with the business expansion, especially in the work in firefighting system installation projects and other building engineering system work. The Company wishes to have adequate number engineers to support works in projects which are increasing in amount and value.

- **Offers a variety of products in complete range with sufficient stock to meet the customers' demands without leaving the customers to spend much time waiting for the products**

The company is one of the distributors of complete range of building engineering products by being the leader in business of importing and selling products in firefighting system, cooling system, air-conditioning system and sanitary system including digital printing system, with a large selection of products. Most of the products sold are imported from other countries which takes time in ordering and waiting for the products to be transported into the country. The Company therefore must do a sales projection, make

plans for product orders and keep an appropriate amount of stock in order to have sufficient current products to meet the customers' demands and able to deliver the products to the customer in a timely manner without delay which may damage the sales and the opportunity of a return customer. At the same time, the Company should not hold too many products in stock that it would contribute to a high cost of stock keeping.

- **Organize promotional activities to boost sales**

The Company organizes promotional activities on a regular basis such as participation in trade shows to create awareness and reach the target customers directly. There are product seminars for project designers and clients to create product familiarity for them to choose the products that the Company sells. There are advertisements in the various magazines which relate to the business of the Company as well as sending invitations to project designers to join activities in visiting the factories of producers in foreign countries, who are famous in global market, in order to study the technology and gain new perspectives on the concepts of building industry to elevate the standards of construction in Thailand, which is one of the Company's CSR policies, and building confidence in the products imported by the company to be sold leading to their choosing of the Company's products to be used in the various projects with confidence.

- **Invest in business expansion into Asean countries**

The Company plans to expand the business into Asean countries such as Cambodia and Vietnam, as examples, as these are countries which have high growth rates in the infrastructures and other construction work, by bringing products in which the company is the dealer to sell in the aforementioned countries in similar fashion as the ones sold in Thailand, or hire a local staff to work on marketing activities until the volume of sales reaches a satisfactory level before processing to invest and source the office location along with other necessities in the next phase. In this regard, as the Company is one of the distributors of integrated building engineering products, this results in the Company having the advantage in presenting products and services to the target countries also being able to efficiently administrate the cost of business expansion into the target countries.

⑤ Pricing Policy

The Company's policy on pricing is Cost Plus Pricing whereby the determination of the Company's products selling price must be flexible and suitable to the characteristics of each product, distribution channel, target customers, volume and value of the orders as well as taking in consideration the market price of that product, which in some instance, a discount may be given in accordance with the market conditions and the competition in that moment in order to remain competitive in the market. At the same time, the gross profit margin must be maintained at a level that can support the cost of sales, administration and other operations.

Regarding pricing for project works, the Company mainly determines the service charges in accordance with the customer's budget and the cost of each project where there shall be flexibility in the quotations given in order to compete with other competitors in the market, while at the same time, importance must be given to the quality of service as well as the products and equipment used in the task, in order to build continuous credibility and trust from the customers. Moreover, in offering quotations, the Company must achieve adequate level of gross profit margin to support the cost of sales, administration and other operations.

⑥ Sales and Distribution Channels

The Company sells all products in the country by the Company's Sales & Marketing team which currently there are 165 employees with sales responsibilities divided by each type of product including the sales of project works. The Sales & Marketing team are responsible for customers' contact, attending to the customers' needs and product presentation to the customers as well as continuously coordinating with the producers or business partners to recognize the current customers' demands and future demand trends including the products' detail, trends of products' quantity and price from the producers in the market for the benefit of effective planning, sales and product pricing.

The Company receives advance orders from the customers for most of the products sold where there is a time period to prepare the purchase and delivery to the customers as per the agreement, in which most of the time the customers will inform their specific requirements to the company including the products' standards, the source or the producers, in order for the Company to be able to offer the products as per

the customers' needs along with quotation and other sales conditions. Most of the products distributed are from producers whom the customers trust and in compliance with the standards used in the works of firefighting system, air-conditioning system, cooling system and digital printing system, customers therefore continuously trust in the Company's products. In this regard, the Company's distribution channels are divided into 3 main channels as follows;

- 1) **Distribution through main building contractors or system contractors** The Company sells products to the main construction contractors or system contractors of building projects, government projects or industrial factory projects and cold storage contractors, as examples, in which the contractors shall source the products or install the company's products in the various projects in accordance with the specification that the project designer has outlined. Most of the Company's sales are through this distribution channel or calculated at 54.42% and 53.58% of the total revenue from sales and service in 2019 and 2020 respectively.
- 2) **Distribution through retail or related product suppliers** The Company may not have access to small-sized contractors or customers who are project owners thoroughly, distribution through this channel enables the Company to distribute the products more widely. The sales ratio through this channel is calculated at 6.57% and 6.61% of total revenue from sales and service in 2019 and 2020 respectively. Additionally, in some cases the aforementioned retail or distributor are also the Company's business partner that sells some products to the Company in order to install in a project according to the customers' request or to resell to the contractors who have ordered products from the Company in which the mentioned product may be a product from other producers that the Company does not distribute or is a product that doesn't have such a high demand in the market and the Company does not keep it in stock, for example.
- 3) **Distribution Directly to the End User** is a distribution directly to the owner of the building, industrial factory or general users where it is a sale of digital printing system that includes products and/or service in a form of installation project work on firefighting system and other various engineering system that the Company is equipped the aspect of engineering and manpower, design, installation, inspection and maintenance

service for the firefighting system as well as being distributed to the general retail users, however, the quantity is not significant and the volume of order per transaction is not of high value. The ratio of distribution through this channel is calculated at 39.01% and 39.82% of total revenue from sales and service in 2019 and 2020 respectively.

7 Procurement of Products or Services

7.1) Nature of Product Acquisition

Most of the products sold by the Company, approximately 70%, are ordered from many producers from foreign counties, which most of them are producers of leading products related to firefighting system, sanitary system, air-conditioning system, cooling system products and world class digital printing system products. The Company has a policy which focuses on selling quality products and with standards that match with the customers' requirements with procurement and selection procedure to obtain quality products, certified by various credible departments or institutions.

In ordering products to sell to the customers, the Company has an advance ordering plan in the appropriate quantity, taking into consideration the market trends, the customers' demands in each time period including the inventory quantity in order to prepare sufficient number of products for distribution, reducing the damage from opportunity loss due to lacking product in the inventory or the inability to source the products on time and enough to satisfy the customers' demands. At the same time, the inventory quantity must be controlled to an appropriate level not allowing the products to be left in the inventory for too long until they become a burden to the Company.

There are over 13,000 categories of products sold by the Company under over 60 famous brands. Within this number the company owns 7 brands and 45 brands that the Company has been appointed as a distributor in Thailand for 5 producer's brands including 2 US producers' brands which are Potter Electric and Weiss, 3 German producers' brands which are KUBA DOD, ESK SCHULTZE and DOD defrost on demand, as well as producers from other countries which are DOMINO (UK), KORTHOFAH (Netherlands) and EDM (Japan). In this regard, the Company is the importer and distributor of each product category as follows;

Product group	Manufacturer	Brand country
<ul style="list-style-type: none"> Valves and firefighting equipment which includes piping system equipment, groove coupling, fire extinguish valve, automatic sprinkler, fire hose set, fire line, fire hose rack, portable fire extinguisher, chemicals, firefighting foam, firefighting foam equipment, automatic fire suppression system, smoke detection system, clean fire suppressant system, fire and smoke detection camera, etc. 	<input type="radio"/> POTTER ELECTRIC	<input type="radio"/> USA
	<input type="radio"/> VICTAULIC	<input type="radio"/> USA
	<input type="radio"/> MOYNE ROBERTS	<input type="radio"/> Ireland
	<input type="radio"/> BADGER	<input type="radio"/> USA
	<input type="radio"/> GIACOMINI	<input type="radio"/> Italy
	<input type="radio"/> HYGGOOD	<input type="radio"/> United Kingdom
	<input type="radio"/> 5-ELEM	<input type="radio"/> China
	<input type="radio"/> NIBCO	<input type="radio"/> USA
	<input type="radio"/> CHEMGUARD	<input type="radio"/> USA
	<input type="radio"/> WAGNER	<input type="radio"/> Germany
	<input type="radio"/> SIEMENS	<input type="radio"/> Germany
	<input type="radio"/> SRI	<input type="radio"/> Malaysia
	<input type="radio"/> GKB	<input type="radio"/> Taiwan
<input type="radio"/> RELIABLE	<input type="radio"/> USA	
<ul style="list-style-type: none"> Valves and sanitary system equipment which includes gate valve, butterfly valve, check valve, air vent, strainer, pipe and piping system equipment, pipe connector, pressure and temperature measuring devices, etc. 	<input type="radio"/> WEISS	<input type="radio"/> USA
	<input type="radio"/> VICTAULIC	<input type="radio"/> USA
	<input type="radio"/> HONEYWELL	<input type="radio"/> USA
<ul style="list-style-type: none"> Balancing valve, PIVC 	<input type="radio"/> OVENTROP	<input type="radio"/> Germany
<ul style="list-style-type: none"> Aluminum Filter for filtering dirt and dust in the air. 	<input type="radio"/> RESEARCH PRODUCTS	<input type="radio"/> Belgium
<ul style="list-style-type: none"> Cooling equipment which includes copper pipe and copper pipe connector, cooling agent, compressor, cooling coil, automatic defrost control equipment, energy saving equipment, pressure control device etc. 	<input type="radio"/> KUBA	<input type="radio"/> Germany
	<input type="radio"/> DOD	<input type="radio"/> Germany
	<input type="radio"/> ESK SCHULTZE	<input type="radio"/> Germany
	<input type="radio"/> BITZER	<input type="radio"/> Germany
	<input type="radio"/> ABB	<input type="radio"/> Finland
	<input type="radio"/> DANFOSS	<input type="radio"/> Denmark
	<input type="radio"/> O&F	<input type="radio"/> China
	<input type="radio"/> ZEILABEGG	<input type="radio"/> Germany
	<input type="radio"/> EBM PAPST	<input type="radio"/> Germany
	<input type="radio"/> BVA	<input type="radio"/> China
	<input type="radio"/> 9 LIFE	<input type="radio"/> Taiwan
	<input type="radio"/> NARA	<input type="radio"/> South Korea
	<input type="radio"/> 3Q	<input type="radio"/> Thailand
<input type="radio"/> EVAPCO	<input type="radio"/> USA	
<ul style="list-style-type: none"> Digital printing equipment for packaging system which includes expiry date printer package label printer, workpiece feeder for 3D printing and color sticker label printing including printing equipment and various types of consumables etc. 	<input type="radio"/> Domino	<input type="radio"/> United Kingdom
	<input type="radio"/> Korthofah	<input type="radio"/> Holland
	<input type="radio"/> EDM	<input type="radio"/> Japan
	<input type="radio"/> MSSC	<input type="radio"/> USA
	<input type="radio"/> United RIBtype	<input type="radio"/> USA
	<input type="radio"/> EnvisionTEC	<input type="radio"/> Germany
	<input type="radio"/> Materialise	<input type="radio"/> Belgium

In additional, the Company has developed own product brands in total of 7 brands where the Company is the owner of the brand or the trademark which are;

- 1) "HARN" trademark for the administration of sales, design, installation and service of firefighting system equipment, air-conditioning system and sanitary, administration of sales and the assemble of industrial cooling system equipment, administration of sales, installation and service of machines, equipment, spare parts, consumables of digital printing system on the package, packet, labels including workpiece creation from digital file.
- 2) "VALTEC" trademark for valve products and sanitary system and air-conditioning system products by hiring a manufacturer in China and produce in accordance with BS Standard (currently the UL standard certification has been achieved)
- 3) "SPARK" trademark for fire sprinkler products by hiring a manufacturer in Malaysia and produce in accordance with BS standard.
- 4) "GUARDIAN" trademark for fire extinguisher products which contain dry chemicals by hiring a manufacturer in Thailand. The product has achieved TIS industrial standard certification from Thai Industrial Standards Institute.
- 5) "Blue Ice" trademark for cooling equipment products by hiring a manufacturer in China and produce in accordance with American Society for Testing and Materials (ASTM) standards.
- 6) "Koppar" trademark for copper pipe products by hiring a manufacturer in China and produce in accordance with American Society for Testing and Materials (ASTM) standards.
- 7) "YUKI" trademark for air-conditioner solutions by hiring a manufacturer in China. The product has achieved TIS industrial standard certification from Thai Industrial Standards Institute.

The company selects a manufacturer in order for The company selects a contract manufacturer to produce the Company's branded products by taking into consideration the capability of the manufacturer and the capability of the factory. For each of the brand, the Company chooses to use the same producer who has been a business partner over an extended period, which is a production contract from time-to-time, no long-term production contract is made. In the past, the distribution ratio of products under the Company's own brand is considered small in comparison to the imported products from foreign countries. The sales ratio in 2019 and 2020 is calculated at 5.10% and 4.99% of the total revenue.

In this regard, in 2019 and 2020, the Company did not receive order from any one of the manufacturers exceeding 30% of the total order value.

7.2) Environmental Impacts

- None -

7.3) Undelivered Works

As of December 31, 2020, there were backlog order total about 372.42 million baht (excluding subsidiaries), comprising the installation works of fire protection system, e.g. Installation of fire extinguishing system for gas, installation of fire extinguishing system for power plant, installation of sprinkler, system foam fire protection system and petrochemical system total about 286 million baht, Refrigeration products total about 54.81 million baht and Digital Printing products total about 31.61 million baht. PO have been awarded by customers and wait to be delivered in 2021.

Risk Factors

The Company determines to continuously develop its Risk Management for realizing its business risk complexity and severity from both internal and external factors. In order to ensure sustainable development, it is essential to lay down solid foundation of risk management that will sufficiently prevent and reduce our exposure from the variation of risk factors. The Company has adopted Risk & Control Self-Assessment (RCSA)

to help us analyze the risk factors and identify dominant ones. So on to come up with measures that will not only soften the impact but also prevent them to happen. We have also identified risk indicators to monitor as well as those who are responsible for each individual measure in order to ensure that our business will reach its goals in the direction we have set forth. Our risks can be illustrated as the followings:

Business risks of the company

1. Exchange rate risk

The products distributed by the Company are mainly imported from abroad. Its import volume in 2019 and 2020 made up 72.09% and 72.80% of total volume of product procurement respectively. Tender offer and payment for products are primarily denominated in US dollar, Pound Sterling and Euro currency totally 98.66% and 99.37% respectively of the foreign purchase volume, while most products are almost entirely for local distribution in Thai baht. In some cases, the Company is unable to promptly adjust product prices upward in line with the rising cost and is thus vulnerable to foreign exchange fluctuation, which will further affect its costs of products and gross profits. However, there are agreements for some customers to pay in USD, EUR and GBP.

Well aware of such impact, with the exchange rate management policy as the follow:

- The Company has executed forward contracts with financial institutions to provide hedging against such risk. The contract value covers all existing foreign trade account payables. In addition, the company has opened foreign currency deposit accounts in USD, GBP, EUR, JPY and AUD in order to receive payments from customers in foreign currency. And is another way to reduce exchange rate risk.
- Also continuously monitor the trend in the change of the currency for the purpose of evaluation and to manage the risks from the exchange rate closely.

In 2019 and 2020, the Company bought foreign currency in advance totaling Baht 603.63 million and Baht 432.54 million, or 94.16% and 85.97% of its import volume. Furthermore, the Company managed its exchange rate risk by always keeping abreast of foreign exchange movement, resulting in only not much risk exposure as can be seen from its exchange risk management outcome. In 2019 and 2020 which recorded foreign exchange gains of Baht 4.63 million and Baht 1.94 million, respectively. The Company assessed the risk control at a satisfactory level.

In addition, if foreign exchange rates change to the level that leads to sharp increase in its cost, the Company will revise its selling prices based on market conditions with prior notice thereof to its customers. The Company also keeps a stock of products to accommodate product distribution in advance. Therefore, foreign exchange volatility does not have any significant impact on the revenues and costs of the Company.

2. Risk from loss of distributorship status

The Company is a distributor of Fire Suppression products Air-conditioning and Sanitary products, Refrigeration products, and Digital Printing products with a diverse range of products under world-class brands. The top three brands with highest sales volume altogether made up about 19.50% and 37.87% of its total sales in 2019 and 2020 respectively. As such, a loss of its distributorship right to the significant brands could affect its sales.

Having distributorship authorization is highly essential to the Company's business. There are two types of distribution authorization, i.e. with expiration and without expiration. However, for most of the brands distributed by the Company, it has not yet officially entered into distributorship contract with the brand owners. The Company is thus exposed to risk if its distributorship is revoked or its distributorship contract has been terminated under whatever circumstances, for example, trade partner entering joint invest with another company or trade partner discontinuing business, etc. In whichever case, there may be negative impact on the Company's sales. Since 2011, the Company's brands had never been revoked since being authorized as the distributor. However, in view of our experience in this business and longstanding relationship with brand owners, its distribution coverage of over 60 brands, good service quality, and good relationship with customers, as well as a large customer base of over 5,400 customers, the Company is confident that if it loses distribution authorization of any brand, it will be able to secure alternative brand to satisfy

the market demand. In 2019, the company was appointed as a distributor of one additional brands. The Company has also developed its house brands for some product items to mitigate risk of dependence on other brands.

In addition, throughout the past years, the Company has honored all trade terms and conditions as agreed upon and as trusted for being distributor of the respective brands. This can be witnessed from its continuously rising growth of sales. Coupled with its efficient distribution channels, a strong sales team and distributorship of brands that allows it to achieve ongoing growth of sales, the Company is confident that brand owners will continue to assign the Company as their distributor through the years ahead. The Company assessed the risk control at a satisfactory level.

3. Risk from brand owners implementing marketing by themselves

If a foreign brand owner wishes to operate business in Thailand without dependence on the Company, the Company could risk losing its distribution authorization for any such brand and may otherwise have to compete with that brand owner.

Nonetheless, the Company believes that there is a slim chance for such risk to occur, considering that it is not worthwhile for the brand owner to make such investment and implement the marketing by itself. In the distribution of valves and equipment for fire protection system, air-conditioning system and sanitary system, Refrigeration system, and Digital Printing system, the distributor must be able to offer a broad variety of products and comprehensive solutions to satisfy customers' requirements. Customers prefer convenience in ordering products from the distributor who has all products to completely serve their needs. Over the past years, some brand owners from abroad assigned their subsidiaries to directly operate on their behalf, but they failed, so they have switched back to the original distribution method through distributors. The Company assessed the risk control at a satisfactory level.

4. Human Resource Risk involves the lack of manpower as well as the lack of competency to support the realization of our vision

The Company is aware of the adequacy of manpower which corresponds to the strategic expansion. HARN manages the risk through the following measures:

- The Company has reviewed its organization structure and required human resource plan.
- We have improved our recruiting effectiveness by enhancing the recruiting channels.

- We have identified human resource development plan according to our vision and mission as well as to constantly communicate among executives to ensure successors as needed. All along, we have stimulated our staff and management of the future goals and so they can accelerate self-development.
- Personnel retention through the organization of activities to continually strengthen cordial relationships between employees and HARN, such as New Employee Orientation, Annual Company Tour, New Year's Party and Family Day & Sports Day activities, with an Employee Opinion Survey undertaken annually to use the results and other recommendations for the improvement of work processes and work environment.

In 2020, the evaluation was 76.70%, compared with 74.47% in 2019, Increase 2.23%. The company has analyzed the results and recommendations and assigned the relevant department to make a revised plan in 2021.

In 2020, the resignation of employees decreased from 14.86% in 2019 to 8.00% which was better than the set target, and the rate of recruitment to fill the vacancies was 14.80%, which was lower than the set target due to the Circumstance of COVID-19 hold in recruiting employees. However, the Company has still reviewing to the qualifications and remuneration structure by comparing the remuneration in the labor market of the company at the same level annually.

The Company assesses the results of risk control are at a controlled level, but still not satisfactory. However, in 2021 the Company will put great emphasis to accelerating the implementation of Guidelines for Sustainable Development in the Smart People Dimension.

5. Risk from impairment of goodwill

The Company has to record goodwill from a fair value of the consideration for the purchase and acceptance of entire business transfer of net assets of Chillmatch Co., Ltd. and its subsidiary, which is higher than a fair value of Chillmatch Co., Ltd. and its subsidiary as of the date of issuance of new ordinary shares as a consideration for the said entire business transfer. In this respect, the Executive of Company will conduct an impairment test in every year and set aside an allowance for impairment loss (if any). The Company may therefore be exposed to risk in case the auditor considers that the goodwill is impaired and such impairment will then affect its income statement with regard to net profit, equity and debt to equity ratio as a whole according to the value in use.

The management conducted the impairment test of goodwill consists of Refrigeration Business Unit and Digital Printing Business Unit. The management estimated the expected free cash flow “sometimes called realizable value” of the two business units. Those cash flow are consisted of forecasted sales, cost of goods sold, selling and administrative expenses (depreciation and amortization excluded), income tax, capital budgeting necessary to operate and also the changes in relevant working capital such as accounts receivable, inventory and accounts payable. Those annual free cash flows were discounted into present value to determine the realizable value. The discount rate used is a pre-tax rate that reflects the specific risk of the Company.

The management’ free cash flow valuation based on reasonably business assumptions and most likely possibility according to the current economic circumstances. As the result the realizable value is greater than the carrying amount of the fixed assets used in the operation of the business unit, goodwill and customer relationship. Therefore, there is no indication of impairment of goodwill and other intangible asset obtained for the entire business transfer as of December 31, 2020. However, the customer relationship, the portion the customer don't purchase after entire business transfer there is indication of impairment of goodwill of 3.05 Million Baht. All so, complied the financial reporting standards was audit by the certified public accountant.

6. Risk from corruption

The company is a distributor of valve products, fire extinguishing equipment, sanitary system, air conditioning system, cooling system and digital printing systems which imported from abroad and distributed to private and government sectors. In accordance to these processes may cause corruption just in case the company operates inaccurately such as importing goods, customs clearance, product sales offerings includes auctions sales and / or installation high-value projects. Moreover, the internal processes which may be caused by neglect of non-compliance with the work practices of staffs such as procurement, control of goods or assets, disbursement of various expenses which forms of corruption may be caused by venality paying or being called to pay from government officials and as well disbursement of improper expenses or incorrect accounting records.

- The company has established a Risk Management Committee to assess, analyze and determine to manage business risks including prevent and monitor risks from corruption both at the organization and operation levels. In regards to provide an internal control system and audited from efficient auditors externally including to internal quality monitor according to ISO 9001: 2015 quality standards

- The Company certified as a project member the Thai Private Sector Collective Action Coalition against Corruption (CAC) on November 5, 2018 to demonstrate its commitment to anti-corruption in all forms including the establishment of anti-corruption policies and guidelines communicated to the Board of Directors, executives, staffs at all levels and all relevant stakeholders to be acknowledged in the specified channels and report to the Board of Directors on a quarterly basis.
- Provide complaints channels and reporting clues.

In 2020, the Company assesses this risk control at a satisfactory level and no fraud or unethical offenses were found.

7. Risks the spread of the COVID-19

Due to the situation of the COVID-19 during the last year, broad changes have been caused to the economy and society in Thailand and throughout the world. The demands of goods and services in business sectors delayed the investment in many projects which directly affected the company's income. Moreover, the company had to adjust the way company conduct business by enabling technologies to help core systems allowing work to be performed outside the company anytime and anywhere considering the safety of employees, but still being able to deliver a continuous flow of products and services to customers.

- Designate the practical guidance of COVID-19 to communicate to employees regarding raising awareness of self-care, dealing with high-risk situations, dealing with visitors or visiting customers.
- Establish a working group, namely chief executive and human resource administration department, in order to monitor and assess the situation in the event of an emergency and coordinate with the appropriate authorities.
- Create a guideline for employees to work from home through a virtual private network (VPN) connection to connect across a long physical distance over a network in order to reduce crowding at the workplace and minimize the risks of exposing employees to COVID-19 while traveling to work.

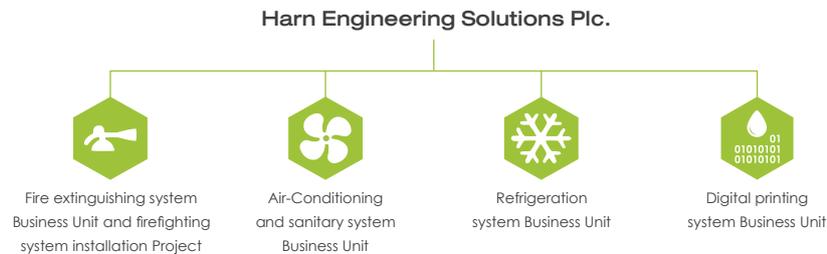
Dealing with new risks emerging in 2020, the company evaluates the risk control to some extent, but it is not quite satisfied because the company's income was impacted by the delay of customers' purchases or project expansion; however, there were no infected employees, which may have had serious impacts on life and safety of employees and their families.

Shareholder structure

The Company became a listed company on the Market for Alternative Investment (mai) has a registered and paid-up capital of Baht 292,250,000 divided into 584,500,000 ordinary shares with a par value of Baht 0.50 per share. Shareholder structure as of December 31, 2020 which is the latest book closing date of the Company is as shown below:

Shareholder	No. of Shareholders	No. of Shares held	%	Juristic person			Individual person		
				shareholders	No. of shares held	%	shareholders	No. of shares held	%
Thai shareholders	3,137	510,583,525	87.35	7	1,450,181	0.25	3,130	509,133,344	87.10
Foreign shareholders	2	73,916,475	12.65	1	73,316,475	12.55	1	600,000	0.10
Total	3,139	584,500,000	100.00	8	74,766,656	12.80	3,131	509,733,344	87.20

Business Structure



The company registered the establishment of Han Vietnam Company Limited (“subsidiary”), Vietnam. With a registered capital of 800,000,000 Vietnamese dong or approximately 1,057,444 baht. The Company holds 100% of the subsidiary’s shares in the registered capital on 30 July 2019.



In 2020, the Company collaborated with Aiyarafun Group by a joint invest agreement signing between Mr. Prasertsak Det-Udom and Mr. Satit Wanitchaikit to operate a business on producing, trading, servicing, and developing of “IOT Products and Solutions” system. The business is to provide services on the development of Smart Building under the name “Aiyaraharn Co., Ltd”, with registered capital at 2,000,000 million baht. The shares that the Company hold in the joint invest represents 65% of the registered capital as of June 24, 2020.



The company has a clear and transparent shareholding structure without cross-holding with major shareholders. And there is no pyramid shareholding structure in the group of companies Therefore does not cause a conflict of interest to

any party the list of the major shareholders of the Company as of 31 December 2020 are as follows: (There are 106,463,101 minor shareholders representing 18.21% of the total shares)

No.	Names of shareholders	No. of shares held	% of total shares
1.	Mr. Wirat Sukchai	89,178,367	15.257
2.	Mrs. Sirima Iamsakulrat	84,234,151	14.411
3.	Nice Noble Limited	73,316,475	12.543
4.	Mr. Jain Charnnarong	72,319,130	12.373
5.	Mr. Chaiwat Taepaisitpong	26,700,000	4.568
6.	Ms. Nopporn Charnnarong	26,407,444	4.518
7.	Mr. Thammanoon Tripetchr	21,972,905	3.759
8.	Ms. Panatda Thongliam	14,832,149	2.538
9.	Mr. Wasan Nantakwang	14,760,500	2.525
10.	Mrs. Nopparat Sukchai	13,000,000	2.224
11.	Mr. Pracha Phromphornchai	11,601,466	1.985
13.	Miss Tarada Tripetchr	7,504,024	1.284
12.	Mrs. Valeeratn Chuerboonchai	7,477,686	1.279
14.	Miss Urairat Hanthaweeapat	6,903,335	1.181
15.	Mr. Parkphum Wongpaitoon	4,230,325	0.724
17.	Mr. Rattanaphan Mukhariwattananon	3,598,942	0.616

Shareholding information board of directors and executives, including related parties and persons with relationship as of December 31, 2020

No.	Names of directors/executives	No. of shares held	% of total shares
Board of Director			
1.	Mr. Thakol Nunthirapakorn (1)*	-	-
2.	Miss Voranuch Supaibulpipat (1)*	-	-
3.	Mr. Sothitorn Mallikamas (1)*	-	-
4.	Mr. Wirat Sukchai Group (2)		
	4.1 Mr. Wirat Sukchai	89,178,367	15.257
	4.2 Mrs. Nopparat Sukchai (spouse)	13,000,000	2.224
5.	Mr. Thammanoon Tripetchr Group (2)		
	5.1 Mr. Thammanoon Tripetchr	21,972,905	3.759
	5.2 Miss Tarada Tripetchr (daughter)	7,504,024	1.284
6.	Mr. Jain Charnnarong Group (2)		
	6.1 Mr. Jain Charnnarong	72,319,130	12.373
	6.2 Mrs. Prayoonsri Charnnarong (mother)	733,900	0.126
7.	Mrs. Sirima Iamsakulrat (1)	84,234,151	14.411

No.	Names of directors/executives	No. of shares held	% of total shares
Board of Director			
8.	Mr.Parkphum Wongpaitoon Group (2)		
	8.1 Mr. Parkphum Wongpaitoon	4,230,325	0.724
	8.2 Mrs. Thiamjan Wongpaitoon (spouse)	21,500	0.004
9.	Mrs. Valeeratn Chuerboonchai (3)		
	9.1 Mrs. Valeeratn Chuerboonchai	7,477,686	1.279
	9.2 Mr. Thanit Sajjaritanun (son)	53,000	0.009
	9.3 Miss Suthida Sajjaritanun (daughter)	40,000	0.007

Note : * Independent Director

No.	Names of directors/executives	No. of shares held	% of total shares
Executives			
1.	Mr. Wisit Wachiralappaitoon (1)	436,532	0.075
2.	Mrs. Varinkan Teraumranon (1)	1,160,353	0.199
3.	Mr.Pracha Phromphornchai Group (2)		
	3.1 Mr. Pracha Phromphornchai	11,601,466	1.985
	3.2 Miss Sukanya Limkhamsuk (spouse)	200,000	0.034
4.	Mr.Rattanaphan Mukhariwattananon Group (2)		
	4.1 Mr. Rattanaphan Mukhariwattananon	3,598,942	0.616
	4.2 Mrs. Rabeab Mukhariwattananon (mother)	140,000	0.024
5.	Mr. Suchat Suwatnodom (1)	237,548	0.041
6.	Mr. Kittiphong Kittimethawenun (1)*	26,508	0.005
7.	Mr. Vachiravit Akaraseranee (1)*	23,383	0.004
8.	Mr. Sukit Litikorn (1)	526,853	0.090
9.	Mr. Withoon Thamee (1)	550,368	0.094
10.	Mr. Pongsawat Penglengpol (1)	8,689	0.002

Note : * Mr. Kittiphong Kittimethawenun was appointed as Sales Director and Mr. Vachiravit Akaraseranee was appointed as Project Sales Director of Refrigeration System Business effective from January 1, 2020

Table summarizing change in shareholding proportion of the Board of Directors and top executives of the Company as of December 31, 2020:

No.	Names of directors/executives	At Date		Increase (Decrease)
		December 31, 2020	December 31, 2019	
Board of Director				
1.	Mr. Thakol Nunthirapakorn *	-	-	-
2.	Mr. Sothitorn Mallikamas *	-	-	-
3.	Miss Voranuch Supaibulpipat *	-	-	-
4.	Mr. Wirat Sukchai	89,178,367	88,583,559	594,808
5.	Mr. Thammanoon Tripetchr	21,972,905	21,573,106	399,799
6.	Mr. Jain Charnnarong	72,319,130	72,319,130	-
7.	Mrs. Sirima Iamsakulrat	84,234,151	84,234,151	-
8.	Mr. Parkphum Wongpaitoon	4,230,325	4,230,325	-
9.	Mrs. Valeeratn Chuerboonchai	7,477,686	8,081,986	(604,300)

Note : * Independent Director

No.	Names of directors/executives	At Date		Increase (Decrease)
		December 31, 2020	December 31, 2019	
Executives				
1.	Mrs. Varinkan Teraumranon	1,160,353	1,050,290	110,0630
2.	Mr. Wisit Wachiralappaitoon	436,532	330,431	106,101
3.	Mr. Pracha Phromphornchai	11,601,466	11,460,688	140,778
4.	Mr. Rattanaphan Mukhariwattananon	3,598,942	3,457,902	141,040
5.	Mr. Suchat Suwatnodom	237,548	483,416	(245,868)
6.	Mr. Kittiphong Kittimethawenun*	26,508	28,133	(1,625)
7.	Mr. Vachiravit Akaraseranee*	23,383	25,496	(2,113)
8.	Mr. Sukit Litikorn	526,853	456,827	70,026
9.	Mr. Withoon Thamee	550,368	487,036	63,332
10.	Mr. Pongsawat Penglengpol	8,689	8,689	-

Note : * Mr. Kittiphong Kittimethawenun was appointed as Sales Director and Mr. Vachiravit Akaraseranee was appointed as Project Sales Director of Refrigeration System Business effective from January 1, 2020

Dividend Policy

The Company has a policy of paying dividend at not less than 40% of net profit after income tax and reserves of all types as required by law and according to the separate financial statements. Dividend payment depends on the Company's cash flow, adequacy of working capital in business operation, investment plan, loan repayment, terms and conditions the agreements binding the Company, legal restrictions, and other circumstances as necessary and appropriate in the future.

The Board of Directors' resolution on dividend payment shall be subject to the approval of the shareholders' meeting, unless it is interim dividend which the Board of Directors shall have the authority to approve from time to time when it considers that the Company has sufficient profit to do so as appropriate. In such case, the interim dividend payment shall be submitted to the next shareholders' meeting for information.

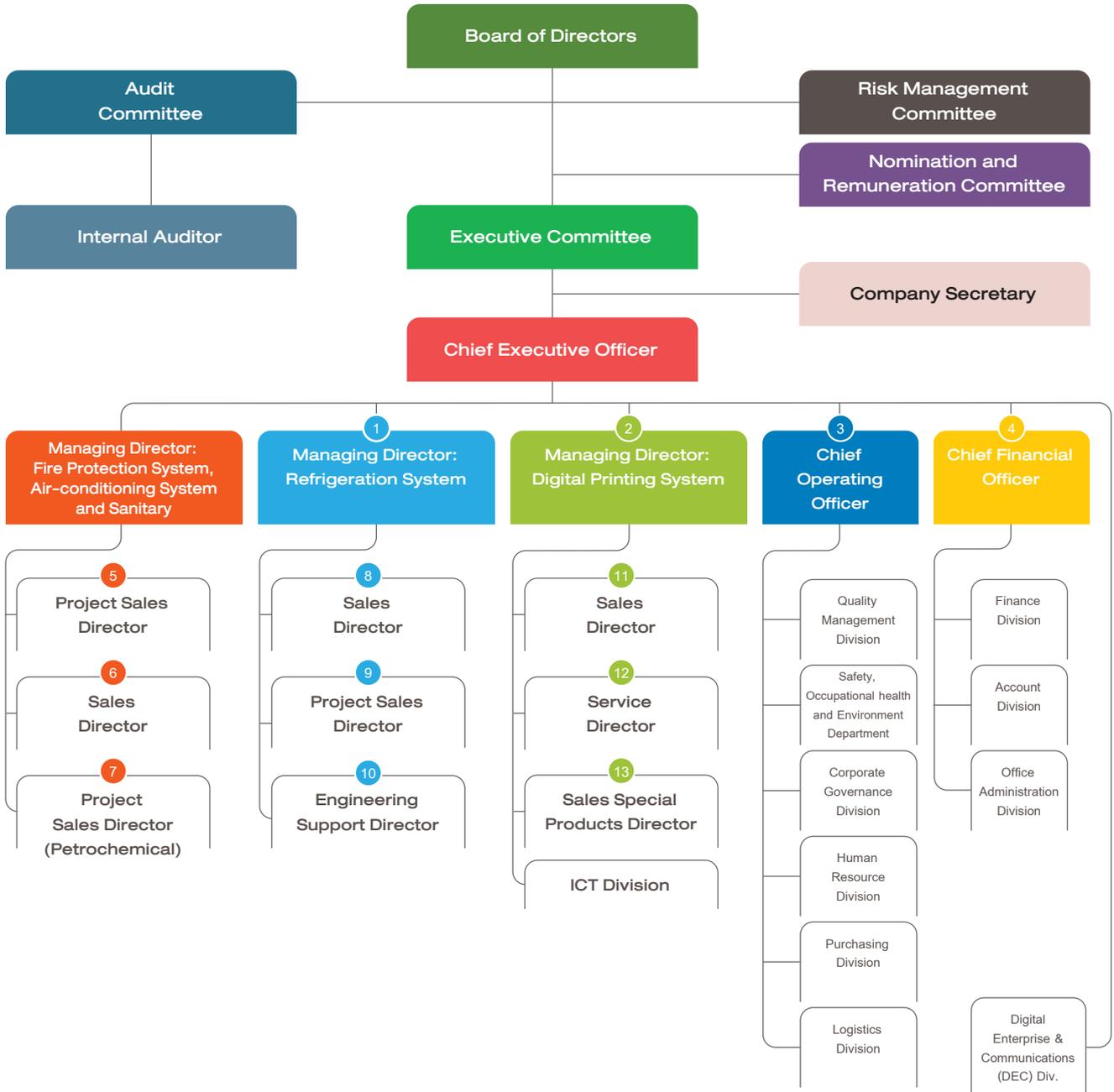
Dividend payment	2020	2019	2018	2017
Interim dividend payment (Baht per share)	-	0.18	-	-
Annual dividend payment (Baht per share)	0.13	-	0.16	0.14
Stock dividend (Baht per share)	-	-	-	-
Earnings per share (Baht)	0.17	0.26	0.23	0.22
Dividend payout ratio (%)	76.47	69.23	69.57	63.64
Par Value (Baht per share)	0.50	0.50	0.50	0.50
Outstanding ordinary shares (Share)	584,500,000	584,500,000	584,500,000	584,500,000

Remark :

- The 2020 dividend payment of Baht 0.13 per share paid being submitted to approval at the 2021 Annual General Meeting of shareholders.
- Ordinary person shareholders may request a tax credit at rate of 20/80 of the dividend payment pursuant to the guidelines set forth in Section 47bis of the Revenue Code.

Management Structure

Organization Chart HARN ENGINEERING SOLUTIONS Public Company Limited



Note : Management no. 1 - 13 is Company executives according to the Notification of the Securities and Exchange

The Management Structure of Harn Engineering Solutions Public Company Limited comprises of

- The Board of Directors
- The four Board-Committees supporting the consideration and important issues as assigned by the Board : the Audit Committee, the Executive Committee, the Nomination and Remuneration Committee and the Risk Management Committee Composed of qualified individuals under Section 68 of the Public Companies Act B.E. 2535 (1992) (as amended) and the Securities and Exchange Act B.E. 2535 (1992) (as amended)
- The management with the Chief Executive Officer as the highest executive of the Company

① Board of Directors

As of December 31, 2020, the Board of Directors is comprised of 9 Director as follows:

- 7 None-Executive Director, 3 of which are Independent Directors
- Two Executive Director, The Chief Executive Officer, one person and one person Managing Director
- The Board of Directors as of December 31, 2020 comprised of:

No.	Name	Position	Appointment date
1.	Dr. Thakol Nunthirapakorn	Independent Director	September 5, 2012
		Chairman of the Board	June 1, 2015
		Chairman of the Audit Committee	September 5, 2012
2.	Dr. Sothitorn Mallikamas	Independent Director	September 5, 2012
		Member of the Audit Committee	September 5, 2012
		Member of the Nomination and Remuneration Committee	December 17, 2018
3..	Miss Voranuch Supaibulpipat	Independent Director	September 5, 2012
		Member of the Audit Committee	September 5, 2012
		Chairperson of the Nomination and Remuneration Committee	December 17, 2018
4.	Mr. Wirat Sukchai ¹⁾	Director	September 5, 2012
		Chairman of the Executive Committee	January 1, 2020
		(Acting) Chairman of the Risk Management Committee	March 1, 2018
		Chief Executive Officer	December 1, 2016
		Managing Director	September 5, 2012
5.	Mr. Thammanoon Tripetchr	Director	November 1, 2016
		Member of the Risk Management Committee	November 11, 2016
		Member of the Executive Committee, Managing Director	December 1, 2016
6.	Dr. Jain Charnnarong	Director	April 28, 2017
		Member of the Executive Committee	March 1, 2017
7.	Mrs. Sirima Iamsakulrat	Director	September 5, 2012
		Member of the Nomination and Remuneration Committee	December 17, 2018
8.	Mr. Parkphum Wongpaitoon	Director	September 5, 2012
9.	Mrs. Valeeratn Chuerboonchai	Director	September 5, 2012

Note : The company was listed on the Stock Exchange of Thailand in 2014, causing the directors to continuously hold positions.

¹⁾ Mr. Wirat Sukchai was appointed as (Acting) Chairman of the Risk Management Committee with effect from 1 January 2020.

Mrs. Varinkan Teraumranon is the Company Secretary.

The Company has 3 Independent Directors which make the Company's Board of Directors shall have at least 3 Independent Directors representing no less than one-third (1/3) of the total number of directors, and shall have at has three Audit Committee members. Each Independent Director and Audit Committee member is able to express opinions freely according to the relevant laws and must have qualifications that completely fulfill the requirements stipulated by the Notification of the Capital Market Supervisory Board No. Thor.Jor. 28/2551 regarding application for and Approval of Offer for Sale of Newly Issued Shares (and the amendments).

Structure of the Board of Directors

1. Has sufficient committees that can take care of operation which comprises of skillful and experienced personnel and capable to work on duty effectively. Number of committees must not be less than five persons according to the law where three or more or not less than one third of total committees must be Independent Director. Independent Directors must be able to comment on management's work freely which may balance votes for further actions as well as re-examine administrative section for the absolute benefits of the company. Also, those three Independent Directors must also take a position of Audit Committee.
2. At least half of committees must reside in Thailand.
3. Number of committees that are management level must not exceed half of total committees in order to balance between two parties.
4. Must have committees that are not management level at least 1 person that is experience in trading engineering products which is a core of the business and at least another 1 person that is experience in Accounting and Finance. Board of Directors determined that company policies must be shared to form body of the Board of Directors including set number of years in position of Board of Directors of individual committee in the Annual Report and on the company's website.

Term of Office of the Board of Directors

1. At each annual general meeting, one-third (1/3) of the directors must retire from office. If the number of directors cannot be divided exactly into the number corresponding to one-third, the directors must retire in the number nearest to one-third (1/3).

The directors to vacate office within the first and second year following company registration shall draw lots. In subsequent years, the directors serving the longest shall resign. A retiring director is eligible for re-election.

2. Committees have term of office as mandated in company's regulations. Committees that retired from the position may be elected as a committee once again with unlimited rights. Qualifications of Independent Directors, set by the Board of Directors, Stipulates a policy that Independent Directors may be in position not for more than 9 consecutive years, counting from the day of the appointment and counting from the day of the company Listed on the stock exchange.
3. In addition to retirement by rotation, a director shall vacate office upon:
 - 3.1 death;
 - 3.2 resignation;
 - 3.3 lack qualifications or possess characteristics that are prohibited under the Public Limited Company Or the law governing securities and stock exchange;
 - 3.4 removal by resolution of the shareholders' meeting;
 - 3.5 removal by order of the court.
4. Any director who wishes to resign from office must tender his resignation to the Company. The resignation shall be effective as from the date on which the resignation reaches the Company.

A resigning director under the first paragraph may also notify the Registrar of his resignation.

5. In case any vacancy occurs in the Board of Directors for reasons other than retirement by rotation, the Board of Directors shall elect a person who has the required qualifications and has no prohibited characteristics under the public limited companies law or the securities and exchange law as a replacement at its upcoming meeting, except if such remaining of the term of office less than 2 months. The replacement director shall hold office only for the remainder of the term of office of the director whom he replaces.

The resolution of the Board of Directors pursuant to the first paragraph must be approved by the votes of not less than three-fourths (3/4) of the number of the remaining directors.

6. In case the entire Board of Directors vacate office, all the vacating directors shall remain in office temporarily to

carry on the business only for a period of time as deemed necessary until the new Board of Directors take office, unless otherwise ordered by the court in the event of directors vacating office at the order of the court.

The vacating directors shall arrange a shareholders' meeting to elect a new Board of Directors within 1 month from the date of vacating office. They shall send a meeting notice to the shareholders at least 14 days prior to the meeting and publicize the notice in a newspaper at least 3 days prior to the meeting date for three consecutive days.

7. The shareholders' meeting may resolve for any director to vacate office before the retirement by rotation with the votes of at least two-thirds (2/3) of the number of the shareholders attending the meeting and having the right to vote.

Authorized Directors as the Company's Signatories

According to the Company's Articles of Association, the number or name of the authorized directors shall be binding on the company. Two (2) directors jointly sign. The meeting of shareholders or the Board of Directors. Has the power to determine the list of authorized directors to bind the company.

Through the Board of Directors at the Meeting No. 3/2020 on Thursday, May 14, 2020, the Board of Directors has approved Directors having authority to sign on behalf of the Company as follow First Group Mr. Wirat Sukchai, Mr. Thammanoon Tripetchr, Second Group Mrs. Sirima Iamsakulrat, Mr. Jain Charnnarong, One of the directors in a group 1 shall jointly sign to sign with one of the directors in group 2, Total is two people.

Role and Responsibility of Chairman of the Board of Directors

The Board of Directors shall elect one of the Board members as Chairman of the Board to supervise and control meetings of the Board and meetings of the shareholders of the Company to ensure efficiency and compliance with relevant rules and regulations and to meet the meeting objectives. (Details of selection / role Duties and responsibilities of the Chairman of the Board Shown in the topic "Corporate Governance" Chapter 3 Strengthen the Board of Directors, item 3.2 (3), page 67)

Role and Responsibility of the Board of Directors

The Board of Directors has a main role in determine policies and overall of the organization, strategic planning and take main action on corporate governance, audit, evaluate business

performance according to plans as well as to operate the business under the law, enforcement, shareholders' direction with ethical and moral under business conduct. Moreover, the Board of Directors manage corporate governance and administer management to reach set goals at maximum benefits to the company, shareholders and stakeholders as follow:

1. Determine corporate vision, policies, strategies, targets, business plans, annual budget, management structure and delegation of authority, as well as corporate governance policy. In the year 2020, the Board of Directors reviewed and approved the strategy and monitor and ensure that the strategy is implemented, the Board of Directors' meetings in every quarter, the Board monitors the performance of the management to be in accordance with the strategy set.
2. Monitor and supervise the performance of the management or any other persons assigned in compliance with the specified policies, plans and budget in an efficient and effective manner, and ensure that the Company's business management is in line with the corporate governance policy.
3. Able to appoint sub-Board of Directors to assist in studies and consider other administrative tasks such as Audit committees, Executive Committees, Nomination and Remuneration Committee Risk Management Committees, Chief Executive Officer and Managing Directors, Including determining the scope of authority of the sub-Board of Directors, Chief Executive Officer and Managing Director the appointed.

In this regard, the authority delegated under the specified scope of power and duties shall not be in the nature that will enable the Executive Committee, Chief Executive Officer, Managing Director and sub-Board of Directors to consider and approve transactions which may have conflict of interest, beneficial interest or any other conflict of interest with the Company or subsidiaries, unless the approval of such transactions is in line with the policy and criteria duly approved by the Board.

The Board's assignment of the Chief Executive Officer, Managing Director or any other person to perform duty on behalf of the Board shall be conducted in writing or clearly recorded as a resolution of the Board meeting in the relevant meeting minutes, with the scope of power and duties of the authorized person clearly specified.

4. Evaluate on a regular basis the performance of the management, and oversee the remuneration payment mechanism for executives and employees to ensure appropriateness.
5. Put in place reliable accounting system, financial reporting and auditing process, and oversee documentation system to facilitate examination of information thereafter.
6. Arrange for the Company's preparation of financial statements that are accurate, exhibiting factual information of its financial status and operating results in the previous accounting period correctly and completely in conformity with the generally accepted accounting principles. The Company's financial statements as of the end of the accounting period must be audited by its auditor before submitting to the shareholders "meeting with report of the Board of Directors" responsibility for the financial reports presented together with report of the auditor in the Annual Report.
7. Ensure the Company has efficient and effective internal control and internal audit systems, comprehensive risk management system and process, effective reporting and monitoring procedure, complaint handling mechanism and actions in case of whistle blowing, and the Company's management process is in line with corporate governance policy.
8. Ensure a clear and transparent process is in place to manage transactions between the Company and related persons to prevent conflict of interest, with correct and adequate disclosure of information and reports to the Board on a regular basis.
9. Ensure continuity in business operation, employee development plan and executive succession plan, and institute effective nomination and succession procedures of directors and senior executives.
10. Consider to approve and/or give opinion on connected transactions, acquisition or disposition of assets, investment and any other businesses of the Company and subsidiaries in accordance with the applicable laws, notifications, requirements, rules and regulations, unless it is prescribed by law to seek approval from the shareholders' meeting.
11. Safeguard and ensure benefits for major and minor shareholders on a fair and equitable basis, and make available to the shareholders and other stakeholders accurate operational highlight reports and financial reports as prescribed by laws. Directors shall, without delay, notify the Company of his beneficial interests in any of the contracts or agreements made with the Company or of increase or decrease in the shareholding in the Company or subsidiaries. Directors with beneficial interest in any transactions made with the directors or persons who may have conflict of interest or beneficial interest or any other conflict of interests with the Company or subsidiaries shall not be entitled to vote on such transactions.
12. The Board of Directors may authorize one or more directors to or any other persons to perform any duties on behalf of the Board, subject to the control and supervision by the Board, or to authorize such person to have power as considered appropriate by the Board and for a specified period of time as the Board may deem

In this regard, such authorization shall not be in the nature that will enable such person to consider and approve transactions in which he or other person may have conflict of interest, beneficial interest or any other conflict of interest in other nature with the Company or subsidiaries, unless the approval of such transactions is in the normal course of business and consistent with general trade conditions or the policy and criteria duly approved by the Board.
13. Appoint company secretary who has appropriate experience and qualifications in performing the roles and responsibilities specified in the Securities and Exchange Act. The Company Secretary is responsible for providing advice on the laws and regulations of which the Board members need to be aware and making arrangements for all activities pertaining to the Board of Directors, as well as coordinating with relevant parties to ensure they follow the resolutions of the Board of Directors. The qualifications and professional experience of the Company Secretary Shown in the topic "Management Structure" no.4 Company Secretary, page 57-58 .
14. Encourages the Company Secretary to continuously undergo training and development of knowledge on legal and accounting areas as well as that on secretarial duties.
15. Create written Corporate Governance Policy of the company and communicate throughout the organization with the common understanding and knowledge to encourage and support all staff to comply to the set policies. Moreover, the Board of Directors should review the policies and comply to at least once a year.

16. Adhere to fair and fair business practices by stipulating Code of Conduct in written, then publish and reinforce to Committees, Management, and all employees, Understand of the ethics and morals that used in the business and set as a practice to show good corporate governance, transparent and ethical organization to stakeholders, respect social and environment through seminars and internal communication. The ethics reflect values and practices that employees should exercise and respect the code of conduct set by the organization in written and able to access publicly. All should strictly comply and follow the guidelines. The Board of Directors must monitor on the Code of Conduct closely.
17. Establish policies and anti-corruption measures in written to ensure that all operations of the organization are under the law related to anti-corruption including communicate to the Board of Directors, management, and employees at all levels including stakeholders and promote as one of the core values of the company. The Board of Directors are responsible to review policies and measurement of anti-corruption annually to correlate with the current business operation, orders, regulations, and the law.
18. Consider the conflict of interest thoroughly, consideration of actions that clearly have conflict of interest and for absolute benefits of the company and stakeholders. The conflict of interest prevents the Board of Directors, management, employees and stakeholders to seek for personal interests that conflict with the organization's interests and avoid all actions that may cause conflict of interest. Nevertheless, stakeholders and relevant parties connect to items considered must be reported to the company in regards to relationship or network of individual where the individual must not play a part of any action.
- The Audit Committee will propose the Board of Directors about connected transactions and conflict of interest which were considered carefully. The company must comply to the rules of The Securities and Exchange Commission, Thailand and Stock Exchange of Thailand strictly in regards to pricing and policies to any party that may has conflict of interest as transaction with third parties.
- In addition, the Board of Directors exercise and control regulation in procedures disclosure of information that may contain conflict of interest thoroughly which specify in financial statement, annual report and annual registration statement (Form 56-1).
19. Arrange internal control which a main algorithm to create confidence to risk management department and able to operate the business effectively. Resources must be allocated accordingly to achieve set goals and protect assets from damage or misconduct. Also, the Board of Directors assist to create credibility in financial statement, look over disclosure of information from employees in accordance to the rules and regulations that protect investment of stockholders. Therefore, the company sets responsibility, authority of administration and management in several topics in written and controls the use of company assets in order to maximize profits. Duties of operating employees and controllers must be separated for balance and audit purposes.
- The Board of Directors delegate the Audit Committee to examine and responsible for reviewing suitability and effectiveness of the internal audit system that administrative section set previously together with forming and reviewing the audit system in both operation, financial report, compliance, rules, policies, supervision of operations and covers risk management and put importance to fire alarm and abnormalities.
- In addition, the Company hired third party that works independently to responsible for audit. Main tasks are to verify and ensure that the company has sufficient internal control and to let the audit works freely. The audit able to examine and balance out. The internal audit must be reported directly to the Audit Committee. Consequently, the company has regular assessment to ensure that the internal audit system planned work effectively where assessment of internal control and review will take place at least once a year and will be stated in the annual report of the company.
20. Set Risk Management Policy throughout the organization. Review and assessment of the Risk Management will take place every quarter of the year.
21. Set the operation system for receive suggestions of any party for complaints and clues or any conflict of interest through website or direct report to the company by inform notices to the Independent Directors or the Internal Audit Committee so that internal examine will take place as per procedures and report to the Board of Directors.

② Board-Committees

The Board appointed Board-Committees to scrutinize and supervise the Company's operations, in accordance to assigned roles and responsibilities. The Board also defined qualifications, terms of office, roles and responsibilities, reporting, and evaluation of each of the Board-Committee's Charter. Additionally, the Board required each Board-Committee to report their progress on a regular basis.

The Audit Committee, as of December 31, 2020, consisted of three Directors as follows:

Name	Position
1. Dr. Thakol Nunthirapakorn	Chairman of the Audit Committee
2. Miss Voranuch Supaibulpipat	Member of the Audit Committee
3. Dr. Sotthithorn Mallikamat	Member of the Audit Committee

Mr. Thakol Nunthirapakorn is the Committee members who have adequate competence and experience in reviewing the reliability of the financial statements, having graduated with a Doctoral degree from Col. Of Bad./Accounting, MIS, Economics, University of Arkansas, U.S.A. and had passed the Director Accreditation Program (DAP) of the 8 year 2004 and Director Certification Program (DCP) of the 228 year 2559. Mr. Wisit Wachiralarpaitoon is the secretary to the Audit Committee.

Structure of the Audit Committee

The Audit committees must comprise of the following:

- Has no more than 1% of voted shares of the company, main company, subsidiary, joint venture, main shareholders, or any delegated person. Hence, shares counted include any relevant parties.
- The Audit committees comprise of at least three qualified independent directors according to the law of public company limited and law of securities and the Stock Exchange of Thailand.
- The Audit Committee is an expert for each given task. At least one committee has experience or solid knowledge in Accounting or Finance and is senior enough to work and audit credibility of financial statement.
- The Board of Directors appoints and choose one audit committee as Chairman of Audit Committees.
- Audit committees appoint a Secretary of the Audit Committees where Chief Financial Officer is the secretary to the audit committee.

2.1 Audit Committee

Appointed by the Board, the Audit Committee consisted of fully qualified members against the SEC and SET Requirements with a minimum of 3 Independent Directors and at least one of whom must be adequately qualified and experienced in reviewing the credibility of financial statements.

Audit Committee's term of office

- The Audit Committees are able to have 3 years term of office and retired Audit Committees are able to be appointed once again. Apart from aforementioned retirement, the Audit Committees may be vacated in case of
 - death;
 - resignation;
 - lacking the qualifications of the audit committee under charter or in accordance with the regulations of the Office of the SEC and the Stock Exchange of Thailand.;
 - retirement from Director position or at the end of term of office as the Board of Director.
- The Audit Committee whom wishes to resign must present a resignation letter to the Chairman of Board of Directors at least 1 month with specified reasons and wait for approval from the Board of Directors. The company will give notice on the resignation with a copy of resignation letter to Stock Exchange of Thailand. In case of the whole Audit Committees Vacated the entire faculty, the Audit Committees must retain in position until the new Audit Committees are appointed and take over.
- In case of other Audit Committees are vacant because of other reasons apart from due term vacated, the Board of Directors must appoint qualified person as the member of Audit Committee within 90 days so that numbers of the Audit Committees are met as regulated. The replacement can remain in position for until due term of office. Hence, the company shall notify the said vacate of office of the audit committee together with the reasons to the Stock Exchange immediately.

Role and Responsibility of Audit Committee

1. Review the Company's financial reporting to ensure its accuracy and adequacy.
2. Review the Company's internal control and internal audit systems to ensure that they are appropriate and effective; consider the independence of the internal audit office throughout consider the internal audit operational framework, annual internal audit plan and budget to ensure that they are consistent with the operational framework and sufficient to support works under the Audit Committee's responsibilities.
3. Review the Company's compliance with the Securities and Exchange Act, the SET's regulations ("Stock Exchange") relevant to the Company's business.
4. Consider, select, Consider, select, nominate, and lay off the appointment of an independent persons to perform the duties of the Company's auditor, and also propose the remuneration of that person, as well as attend the meetings with the auditor and internal auditor at least once a quarter.
5. Consider relevant transactions or those having possible conflict of interest to ensure that they are compliant with all pertinent laws and requirements of the SET, reasonable, and bring utmost benefit to the Company.
6. Consider and evaluate transactions that are at risk of corruption And specify measures / methods for controlling and managing risks Review all the information in the self-assessment on anti-corruption measures.
7. Prepare the Audit Committee's report to be disclosed in the Company's Annual Report, which is signed by the Chairman of the Audit Committee and must comprise of the following information at minimum:
 - Comments on validity and complete which account to credibility of the financial report of the company
 - Comments on sufficiency of internal control system of the company
 - Comments on operation according to the Security Stock Exchange law, regulations of the Stock Exchange or laws concern operation of the firm.
 - Comments on appropriateness of the auditors.
 - Comments on transactions that may have conflict of interest
 - Numbers of meetings of the Audit Committees and attendance of each Audit Committee
- Comments on common notices found from observation and audit
- Report any concern that shareholders and investors should know under the authority of duty and responsibility given by the Board of Directors.
8. Pursue any operations delegated by the Board of Directors and the Audit Committees. On duty, the Audit Committees are responsible to the Board of Directors directly and the Board of Director still responsible for operation of the business and stakeholders.
9. Review and comment on anti-corruption procedures including risk management that may connect to risks from corruption to ensure that operation of the company is transparent, honest, fair, with moral principles, with ethics and respect anti-corruption policies in all means.
10. Accept complaints, clues, take note on corruption activities externally and internally that involve the Board of Directors, management, employees. Examine information and present to the Board of Directors and seek for punishment or ways out according to anti-corruption policies.
11. Summarize and submit the Audit Committee's mission to the Board of Directors for acknowledgement.

The Audit Committee has the power to take the following actions: inviting directors, employees, contract employees to attend the meeting to discuss, clarify or answer any question relating to the Committee's duties and responsibilities; discussing with the Company's expert or consultant; or engaging a third-party consultant or specialist if necessary at the Company's expenses; requesting the Company's employees to submit necessary documents about the Company's operation for auditing or investigation for work accomplishment; assigning any employee or contract employee to within the scope of duties of the Committee for the audit purpose; and taking any action as specified above in relation to subsidiaries as assigned or requested by subsidiaries and as allowed by the scope of their authority and duties.

The Company does not have an internal audit work unit yet. It has thus hired Ultima Advisory Co., Ltd., an external audit agency that is not related to the Company, as its internal auditor to examine and ensure the adequacy and appropriateness of the Company's internal control system.

2.2 Executive Committee

The Board of Directors appoints the Executive Committee by selecting among directors, executives or senior employees, who are competent in managing day-to-day business operations; administering the Company; formulating policy, business plan, budget plan, and management structure; and

inspecting and monitoring operating results of the Company in compliance with the policy determined by the Board.

The Executive Committee, as of December 31, 2020, consisted of the Boards of Directors, Executive or Senior employees of the Company as 5 persons as follows:

No.	Name	Position
1.	Mr. Wirat Sukchai	Chairman of the Executive Committee
2.	Mr. Thammanoon Tripetchr	Member of the Executive Committee
3.	Dr. Jain Charnnarong	Member of the Executive Committee
4.	Mr. Wisit Wachiralappaitoon	Member of the Executive Committee
5.	Mrs. Varinkan Teraumranon	Member of the Executive Committee
		And Secretary to the Executive Committee

Structure of the Executive Committee

Executive Committee must comprise of the following:

1. Selecting directors and/or management that is nominated by the Nomination and Remuneration Committee. Executive Committees are consisted of at least 3 Executive Committees.
2. The Board of Directors select and appoint 1 Executive Committee that is appropriate as Chairman of Executive Committee whom will have term of office equally to the term of office of the Executive Committees.
3. The Executive Committees review and appoint a person that is suitable as a secretary to the Executive Committee in order to deliver meeting minutes and notes.

Executive Committee's term of office

1. The Executive Committees are able to have 3 years term of office and retired Audit Committees are able to be appointed once again. Apart from aforementioned retirement, the Audit Committees may be vacated in case of
 - 1.1 death;
 - 1.2 resignation;
 - 1.3 lacking the qualifications of the audit committee under charter;
 - 1.4 the Board of Directors resolved to vacate the position;
 - 1.5 retirement from Director position or at the end of term of office as the Board of Director / the Company executives.

2. The Executive Committees whom wishes to resign must present a resignation letter to the Chairman of Board of Directors at least 1 month with specified reasons and wait for approval from the Board of Directors, In the case of the executive committee Vacated the entire faculty To the executive committee Who vacates the position, must maintain the position To proceed first until the new board of directors takes office.
3. In case the Executive Committees are vacant, because of other reasons apart from due term of office, the Board of Directors must appoint qualified person as the member of Audit Committee within 90 days so that numbers of the Executive Committees are met as regulated by the Board of Directors. The replacement can remain in position for until due term of office.

Role and Responsibility of Executive Committee

The Executive Committee has power, duties, and responsibilities in administering the Company's day-to-day business and operations in accordance with the Company's objectives, articles of association, policies, rules, provisions, orders, and resolutions of the Board of Directors' and the shareholders' meetings. The Executive Committee shall screen and map out policy, business plan, budget plan, management structure, administrative authority, and criteria in the business operation in line with the economic conditions and propose them to the Board of Directors for consideration and approval and/or consent, as well as inspect and monitor the Company's operational performance in line with the policy set forth.

In summary, the scope of power, duties and responsibilities of the Executive Committee covers:

1. Propose policies, strategies, targets, operation plan, annual budget, incorporate new business unit/ exit business/ merger and acquisition/joint venture, which play a part in administration, financial plan, organizational and administrative structure; and examine and screen the proposals submitted by the management before proposing for the Board of Directors' approval.
2. Oversee the Company's business operation and follow up the results thereof to be in line with the policies, targets, operation plan, targets and budget approved by the Board of Directors or as assigned by the Board of Directors, as well as regularly report the operational performance to the Board meeting.
3. Consider and approve key capital expenditure as specified in the annual budget and assigned by the Board of Directors, or as approved in principle by the Board of Directors.
4. Consider and approve off-budget capital expenditure in an amount not exceeding Baht 10 million. Such transactions, once approved, shall be informed to the Board of Directors.
5. Consider and approve borrowing, acquisition of credit lines, or any credit facilities each in an amount not exceeding Baht 10 million and in a total amount not exceeding Baht 30 million. In case of using the Company's assets as collateral security, approval must be sought from the Board of Directors.
6. Consider to propose payment of an interim dividend or annual dividend before submission for the approval of the Board of Directors and the shareholders' meeting accordingly.
7. Formulate a human resource management policy, and select and appoint persons with suitable qualifications to hold managerial positions from the general manager level upward, with the exception of the position of managing director, as well as transfer, terminate employment, determine remuneration including bonuses and other benefits commensurate to the duties of such managerial positions.
8. Have the power to authorize any person or persons to perform any act under the control of the Executive Committee, or for that person to have power as considered proper by the Executive Committee within the specified timeframe. The Executive Committee may cancel, revoke, withdraw, change or correct the authorized person as appropriate.

The Executive Committee's authorization as such must not be made in a manner of authorization or sub-authorization that enables the authorized person to approve the transaction in which such authorized person or person with possible conflict of interest (as defined in the Notification of the Capital Market Supervisory Board and/or the SET, and/or other relevant agencies) has beneficial interests or may have any other conflict of interest with the Company or its subsidiaries and/or associated companies. The Executive Committee has no power to approve the proceeding of such transaction, and has to propose it to the Board of Directors meeting and/or the shareholders' meeting (as the case may be) for approval, unless it is the approval of a transaction in the normal course of business operation and under normal commercial terms pursuant to the Notification of the Capital Market Supervisory Board and/or the SET, and/or other relevant agencies.
9. Perform any other duties as assigned by the Board of Directors on a case by case basis.

2.3 Risk Management Committee

Appointed by the Board, the Risk Management Committee set to a risk management policy to cover the organization, including the governance the system or risk management process, to reduce the impact arising from various factors to the Company business appropriately.

The Risk Management Committee, as of December 31, 2020, consisted of the Board of Directors, Chief Executive Officer, Managing Director Chief Financial Officer, Chief Operating Officer and Director of Various Departments 12 persons as follows:

Nio.	Name	Position
1.	Mr. Wirat Sukchai ¹⁾	(Acting) Chairman of the Risk Management Committee
2.	Mr.Thammanoon Tripetchr	Member of the Risk Management Committee
3.	Mr. Rattanaphan Mukhariwattananon	Member of the Risk Management Committee
4.	Mr. Pracha Phromphornchai	Member of the Risk Management Committee
5.	Mr. Suchat Suwatnodom	Member of the Risk Management Committee
6.	Mr. Kittiphong Kittimethawenun ²⁾	Member of the Risk Management Committee
7.	Mr. Vachiravit Akaraseranee ³⁾	Member of the Risk Management Committee
8.	Mr. Sukit Litikorn	Member of the Risk Management Committee
9.	Mr. Withoon Thamee	Member of the Risk Management Committee
10.	Mr. Pongsawat Penglengpol	Member of the Risk Management Committee
11.	Mr. Wisit Wachiralappaitoon	Member of the Risk Management Committee
12.	Mrs. Varinkan Teraumranon	Member of the Risk Management Committee and Secretary to Risk Management Committee

Note : ¹⁾ Mr. Wirat Sukchai was appointed as (Acting) Chairman of the Risk Management Committee with effect from 1 January 2020.

²⁾ Mr. Kittiphong Kittimethawenun was appointed as Member of the Risk Management Committee with effect from 1 January 2020.

³⁾ Mr. Vachiravit Akaraseranee was appointed as Member of the Risk Management Committee with effect from 1 January 2020.

Structure of the Risk Management Committee

Consist of Managing Directors, Chief Executive Officer, Managing Directors Chief Financial Officer, Chief Operating Officer and Director of various departments as Risk Management Committees automatically by titles which are appointed by a Chairman of Risk Management Committee whom was appointed by the Board of Directors. The Chief Operating Officer is a secretary to automatically the Risk Management Committee by title.

Risk Management Committee's term of Office

The Risk Management Committee consists of executives from various work units. In case any Committee member resigns during the term of office, Chairman of the Risk Management Committee shall appoint a new member to replace the vacating member and report the same to the upcoming Board of Directors' meeting.

Retirement from the position

Risk Management Committee must immediately be retired when

- due term of office / Chief Executive Officer / Managing Director / Director of Division
- death;
- resignation;
- the Risk Management Committees resolved to vacate the position;
- lacking the qualifications of the audit committee;

Role and Responsibility of Risk Management Committee

1. Consider and screen the overall risk management policy and guidelines of the Company which shall encompass major risk categories, including risks such as financial risks Investment risk And risks that affect the reputation of the business, etc. to be presented to the Board meeting for approval.
2. Put in place risk management strategies and guidelines in line with the determined risk management policy to assess, monitor and control risk to be at appropriate level.
3. Oversee and monitor implementation of the risk management policy under the direction and guidelines approved by the Board.
4. Set risk measurement criteria and risk limit.
5. Determine appropriate measures to manage risks in alignment with the circumstances.
6. Review adequacy of the overall risk management policy and system, and the effectiveness of the system and compliance with the policy in place.
7. Report to the Board on a quarterly basis risk management, implementation and risk status of the Company as well as changes and remedy and improvement actions to comply with the policy and strategy set forth.
8. Appoint Risk Management Working Committee as deemed necessary.

9. Support Risk Management Working Committee in respect of manpower, budget and other resources required in line with the defined scope of responsibilities.
10. Arrange to review the system or assess the effectiveness of risk management at least once a year and disclose it in the annual report of the company and in every period found that The risk level has changed. Which includes giving priority to early warning signals and various unusual items.

2.4 Nomination and Remuneration Committee

Appointed by the Board, the Nomination and Remuneration Committee consisted of at least three Directors, most of whom must be Independent Directors and must not be the Company's executive. All of the members are fully qualified as Directors in accordance with the Nomination and Remuneration Committee Charter.

The Nomination and Remuneration Committee, as of December 31, 2020, consisted of 3 Directors which are 2 Independent Directors and 1 Non-Executive Director as follows:

Nio.	Name	Position
1.	Miss Voranuch Supaibulpipat	Chairperson of the Nomination and Remuneration Committee (Independent)
2.	Dr. Sothitorn Mallikamas	Member of the Nomination and Remuneration Committee (Independent)
3.	Mrs. Sirima Iamsakulrat	Member of the Nomination and Remuneration Committee and Secretary to the Nomination and Remuneration Committee

Structure of the Nomination and Remuneration Committee

1. Nomination and Remuneration Committees comprise of at least 3 the Board of Directors whom are the Independent Director and non-management Director and more than half of the committees must be the Independent Directors.
2. The Board of Directors appoint the Independent Committee as a Chairman of Nomination and Remuneration Committees
3. The Nomination and Remuneration Committees choose and appoint a Secretary of Nomination and Remuneration Committees

Nomination and Remuneration Committee's term of Office

1. The Nomination and Remuneration Committees has 3 years term of office where retired Nomination and Remuneration Committees may be appointed again after the aforementioned causes of retirement. The member of the Nomination and Remuneration Committees must vacate the position when
 - 1.1 death;
 - 1.2 resignation;
 - 1.3 lacking the qualifications of the Nomination and Remuneration Committee under charter;
 - 1.4 the Board of Directors resolved to vacate the position;

- 1.5 retirement from Director position or at the end of term of office as the Board of Director.
2. The Nomination and Remuneration Committee whom wishes to resign must present a resignation letter to the Chairman of Board of Directors at least one month with specified reasons and wait for approval from the Board of Directors. The company will give notice on the resignation with a copy of resignation letter to Stock Exchange of Thailand. In case of the whole Nomination and Remuneration Committee Vacated the entire faculty, the Nomination and Remuneration Committee must retain in position until the new Nomination and Remuneration Committee are appointed and take over.
3. In case of other the Nomination and Remuneration Committee are vacant because of other reasons apart from due term vacated, the Board of Directors must appoint qualified person as the member of the Nomination and Remuneration Committee within 90 days so that numbers of the Nomination and Remuneration Committee are met as regulated. The replacement can remain in position for until due term of office.

Role and Responsibility of the Nomination and Remuneration Committee

1. Nomination

- 1.1 Review composition, qualification of the Board of Directors and sub-board of Directors as a whole and as individual as see fit to size, type, and complexion of the business in both education background, knowledge, skills, expertise, experience, talents related to the business freely according the company policy.
- 1.2 Consider qualification of Chief Executive Officer as see fit to the administration of the company to meet set vision where education background, knowledge, expertise, and business environment must be considered such as tendency of the economic and industry along with competitiveness of the business as a part of the criteria.
- 1.3 Set procedures and criteria to seek employees to meet structure and set qualifications stated in 1.1 and 1.2 by creating Board Skill Matrix to aid in recruiting that relate to business operations and adhere to good corporate governance.
- 1.4 Recruit and select qualified Board of Director as committee in sub-board of Director including high-level management and to present to the Board of Director for approval once the position is vacant.
- 1.5 Administer operation of the business and arrange an orientation, deliver relevant handouts to the new committees.
- 1.6 Create and prepare Succession plan of the Chief Executive Officer to be ready as a part of the succession plan and oversee the smooth transition of the management.
- 1.7 Encourage the company to give opportunity to small shareholders to submit individuals as a committee.

2. Remuneration

- 2.1 Define and prepare policy on remuneration in written and suitable for Directors' responsibility where connect remuneration with the overall performance of the company to motivate and retain skillful, quality, and performed Directors. Details must be reviewed by the Board of Directors before presenting at Annual General Meeting and ask for approval.
- 2.2 Present remuneration plan to the Board of Directors and appointed sub-Board of Directors in both monetary values and other benefits.
- 2.3 Determine measurement of annual performance and consider appropriate compensation rate to the Chairman of the company as well as to present to the Board of Directors for approval.
3. Review charter of the Nomination and Remuneration Committees regularly.
4. Responsible for other duties that delegated by the Board of Directors.

Attendance of the board meeting

In the year 2020, the Whole committee attended the meeting an average of 100% by attending the meeting of the Board of Directors Sub-committee and the General meeting of shareholder are summarized as follows;

Name	Position	Board of Director (8 times)	Audit Committee (4 times)	Executive Committee (12 times)	Nomination and Remuneration Committee (2 times)	Risk Management Committee (4 times)	Annual General Meeting of Shareholders (AGM) (1 times)
1. Dr. Thakol Nunthirapakorn	Independent Director Chairman of the Board Chairman of the Audit Committee	8/8 (100%)	4/4 (100%)	-	-	-	1/1
2. Miss Voranuch Supaibulpipat	Independent Director Member of the Audit Committee Chairperson of the Nomination and Remuneration Committee	8/8 (100%)	4/4 (100%)	-	2/2 (100%)	-	1/1
3. Dr. Sothitorn Mallikamas	Independent Director Member of the Audit Committee Member of the Nomination and Remuneration Committee	8/8 (100%)	4/4 (100%)	-	2/2 (100%)	-	1/1
4. Mr. Wirat Sukchai ¹⁾	Director / Chairman of the Executive Committee / Chairman of the Risk Management Committee / Chief Executive Officer and Managing Director	8/8 (100%)	-	12/12 (100%)	-	4/4 (100%)	1/1
5. Mr. Thammanoon Tripetchr	Director Member of the Risk Management Committee Member of the Executive Committee, Managing Director	8/8 (100%)	-	12/12 (100%)	-	4/4 (100%)	1/1
6. Dr. Jain Charnnarong	Director Member of the Executive Committee	8/8 (100%)	-	11/12 (92%)	-	-	1/1
7. Mrs. Sirima Iamsakulrat	Director Member of the Nomination and Remuneration Committee	8/8 (100%)	-	-	2/2 (100%)	-	1/1
8. Mr. Parkphum Wongpaitoon	Director	8/8 (100%)	-	-	-	-	1/1
9. Mrs. Valeeratn Chuerboonchai	Director	8/8 (100%)	-	-	-	-	1/1
10. Mr. Wisit Wachiralappaatoom	Member of the Executive Committee Member of the Risk Management Committee	-	-	12/12 (100%)	-	4/4 (100%)	1/1
11. Mrs. Varinkan Teraumranon	Member of the Executive Committee Member of the Risk Management Committee	-	-	12/12 (100%)	-	4/4 (100%)	1/1
12. Mr. Pracha Phromphornchai	Member of the Risk Management Committee	-	-	-	-	4/4 (100%)	1/1
13. Mr. Rattanaphan Mukhariwattananon	Member of the Risk Management Committee	-	-	-	-	4/4 (100%)	1/1
14. Mr. Suchat Suwatnodom	Member of the Risk Management Committee	-	-	-	-	4/4 (100%)	1/1
15. Mr. Kittiphong Kittimethawenun ²⁾	Member of the Risk Management Committee	-	-	-	-	3/4 (75%)	1/1
16. Mr. Vachiravit Akaraseranee ³⁾	Member of the Risk Management Committee	-	-	-	-	4/4 (100%)	1/1
17. Mr. Sukit Litikom	Member of the Risk Management Committee	-	-	-	-	3/4 (75%)	N/A
18. Mr. Withoon Thamee	Member of the Risk Management Committee	-	-	-	-	4/4 (100%)	N/A
19. Mr. Pongsawat Penglengpol	Member of the Risk Management Committee	-	-	-	-	3/4 (75%)	1/1

Note : N/A means not attend

¹⁾ Mr. Wirat Sukchai was appointed as (Acting) Chairman of the Risk Management Committee with effect from 1 January 2020.

²⁾ Mr. Kittiphong Kittimethawenun was appointed as Member of the Risk Management Committee with effect from 1 January 2020.

³⁾ Mr. Vachiravit Akaraseranee was appointed as Member of the Risk Management Committee with effect from 1 January 2020.

3 Management

The Company's Management as 31 December, 2020¹⁾ is composed of 12 members as follows:

No.	Name	Position
1.	Mr. Wirat Sukchai	Chief Executive Officer and Managing Director: Fire Protection System, Air-conditioning system and sanitary
2.	Mr. Thammanoon Tripetchr	Managing Director : Digital Printing System
3.	Mrs. Varinkan Teraumranon	Chief Operating Officer
4.	Mr. Wisit Wachiralappaitoon	Chief Financial Officer
5.	Mr. Pracha Phromphornchai	Project Sales Director: Fire Protection System, Air-conditioning system and sanitary
6.	Mr. Rattanaphan Mukhariwattananon	Sales Director: Fire Protection System, Air-conditioning system and sanitary
7.	Mr. Suchat Suwatnodom	Project Sales Director (Petrochemical): Fire Protection System, Air-conditioning system and sanitary
8.	Mr. Kittiphong Kittimethawenun ²⁾	Sales Special: Refrigeration System
9.	Mr. Vachiravit Akaraseranee ³⁾	Project Sales Director: Refrigeration System
10.	Mr. Sukit Litikorn	Engineering Support Director: Refrigeration System
11.	Mr. Withoon Thamee	Sales Director: Digital Printing System
12.	Mr. Pongsawat Penglengpol	Sales Special Products Director: Digital Printing System

Note : ¹⁾ Management no. 1 - 12 is Company executives according to the Notification of the Securities and Exchange

²⁾ Mr. Kittiphong Kittimethawenun was appointed as Sales Special: Refrigeration System with effect from 1 January 2020.

³⁾ Mr. Vachiravit Akaraseranee was appointed as Project Sales Director: Refrigeration System with effect from 1 January 2020.

Role and Responsibility of the Chief Executive Officer

1. Leading the Policy articulation process as well as the business strategies: both short-term and long-term businesses.
2. To Control and monitoring the Company's overall operating results at strategic and policy level
3. To Support and facilitate the Audit committee to be able to effectively oversea the company.
4. Manage Personal Development Projects that support future growth.
5. Monitor, inspect, control and report overall operating results of the Company to the Board on a quarterly basis.
6. Perform any other duties as assigned by the Board and/ or the Audit Committee.
7. Have power to authorize any other person to perform duties on his behalf, and be responsible for any act performed by the authorized person.

Role and Responsibility of the Managing Director

Managing Director shall have the power, duties and responsibilities in managing the business of the Company

as well as concerned matters and business as assigned by the Board of Directors as follows:

1. Oversee the management of overall operations and approval of matters concerning business operation and/ or day-to-day administration of the Company to ensure the best interests of the Company and consistency with the objectives, regulations, rules, orders, resolutions of the Board meeting and annual general meeting of shareholders under applicable laws and the scope of power and responsibilities as assigned by the Board.
2. Work out policies, strategies, targets, business plan and annual budget plan, as well as management structure and delegation of authority within the organization for submission to the Executive Committee for endorsement before seeking approval from the Board.
3. Ensure that the operation or administration of the organization is in line with the approved policies, strategies, targets, business plan and budget plan.
4. Ensure personnel of all work units carry out efficient and effective operation, pursue ongoing organizational and personnel development, and maintain good image of the Company.

5. Have power to appoint, transfer, promote, suspend from work, terminate employment, determine salary or other compensation and gratuity, including determining wage/salary increment and bonus for employees. However, any matters concerning employees in the management level shall be subject to prior consent from the Executive Committee.
6. Have power to issue, amend, add, improve or revoke orders, rules, memorandum or regulations concerning work procedure to ensure compliance with the policy in the best interests of the Company, and maintain work discipline within the organization.
7. Have power to approve investments and expenses in the Company's business operation or any other relevant expenses within the limit set by the Board, comprising approval of acquisition of fixed assets without amount limit, approval of entering into engagement/rent/lease contract of fixed assets without amount limit, etc.
8. Have power to approve payments under contract or agreement as per the approved budget or as approved by the Board meeting or shareholders' meeting without amount limit.
9. Have power to approve procurement, executing contract, and conduct of normal business transactions within the approved budget and without amount limit.
10. Have power to authorize any other person to perform duties on his behalf, and be responsible for any act performed by the authorized person.
11. Perform other duties as assigned by the Executive Committee.
12. Can empower other employees to work instead. It is also responsible for the performance of the attorney at that time.

In this regard, the power the Chief Executive Officer / Managing Director and that of the person authorized by him as deemed appropriate shall exclude the power or granting of power which will permit the Chief Executive Officer / Managing Director or the authorized person to approve transactions which he or related person may have conflict of interest (as defined in the Notification of the Capital Market Supervisory Board and/or the Stock Exchange of Thailand and/or relevant agencies), beneficial interest or any other interest with the Company or subsidiaries and/or associated companies. The Chief Executive Officer / Managing Director shall have no power to approve such

transactions which are subject to the consideration and approval by the Board meeting and/or the shareholders' meeting (as the case may be) in compliance with the Articles of Association of the Company or applicable laws, unless the approval of such transaction is in the normal course of business with the general trade conditions in line with the Notification of the Capital Market Supervisory Board and/or the Stock Exchange of Thailand and/or relevant agencies.

④ Company Secretary

The Board meeting resolved to approve the appointment of Mrs. Varinkan Teraumranon as the Company Secretary since 26 February 2016 in line with the requirements of the Securities and Exchange Act B.E. 2535 (1992) (and the amendments) and to perform duties and responsibilities as follows:

1. Oversee and give preliminary advice to the Board and the executives on the rules, regulations and laws of which the Board and the management must be aware.
2. Supervise the Board activities and be in charge of arranging the Board meeting and the shareholders' meeting keep record of minutes of the Board meeting and the shareholders' meeting, and coordinate with relevant parties to effect and follow up implementation in accordance with the resolutions of such meetings.
3. Prepare and safe keep important documents of the Company including:
 - 3.1 Board register
 - 3.2 Invitation notice to the Board meeting, minutes of the Board meeting and the Annual Reports of the Company
 - 3.3 Invitation notice to the shareholders' meeting and minutes of the shareholders' meeting
4. Safe keep reports on beneficial interests of directors and executives (referring to directors and executives who are duty-bound to report to the Company their beneficial interests and those of related persons).
5. Perform any other tasks and responsibilities prescribed by the Notification of the Capital Market Supervisory Board.

In the year 2020, the Company was not been operated by regulatory agencies, by Information disclosure under material events is the disclosure when there is an event essential to making investment decisions. This is to keep the securities trading in order, liquid, fair, and all investors are equally informed.

Brief history:

Name:	Mrs. Varinkan Teraumranon
Education:	BBA (Accounting), Rajamangala Institute of Technology
Working Experience In the 5 Preceding Years:	<ul style="list-style-type: none"> • 2019 - Present Chief Operating Officer and Company Secretary • 2016 - 2019 Corporate Governance Director and Company Secretary • 2016 - 2017 Assistant Managing Director: Corporate Governance and Company Secretary • 2014 - 2016 Operation Support Director (General Management Group)
Training participation:	<p>Training program of Thai Institute of Directors Association (IOD) :</p> <ul style="list-style-type: none"> • Effective Minute Taking Plan (EMT), Class 36/2016 • Company Reporting Program (CRP), Class 16/2016 • Company Secretary Program (CSP), Class 72/2016 • How to Develop a Risk Management Plan (HRP), Class 8/2015 <p>Other courses :</p> <ul style="list-style-type: none"> • P01 : Preliminary to Corporate Sustainability • S01 : Strategic CSR Management • S02 : Supply Chain and Stakeholder Engagement • S03 : Corporate Social Initiatives for Sustainable Development • S04 : Sustainability Risk and Materiality Analysis • S05 : Sustainability Evaluation and Data Management • S06 : Sustainability Reporting • Organizational Success Assessment through KPI Course • 360° Marketing Communication Techniques Course • Finance for Non-finance Executive Course • Finance for the Boss Course

The Company has mapped out qualifications of Company Secretary as regards age, education, foreign language proficiency, communication skills, interpersonal skills, interpersonal skills, capability in coordinating with internal and external parties, and public relations and enhancement of the Company's good image among external parties. In the event that the Company Secretary vacates office or is unable to perform

duty, the Board shall appoint the new Company Secretary within 90 days from the date on which the existing Company Secretary vacates office or can no longer perform duty, and during the lapse of which, the Board shall assign any one of the directors to perform Company Secretary duty as per the Securities and Exchange Act B.E. 2535 (1992) (and the amendments).

⑤ The person taking the highest responsibility in finance and accounting (CFO) and the person supervising accounting

In order to provide quality financial reporting and supervision to be consistent with the guidelines of the SEC, the company has determined the person who is assigned to be the person taking the highest responsibility in finance and accounting (CFO) and those assigned to be directly responsible for supervising accounting (The person supervising accounting) as follows

5.1 The person taking the highest responsibility in finance and accounting (CFO) Brief history as follows:

Name:	Mr. Wisit Wachiralappaitoon
Education:	<ul style="list-style-type: none"> • B.B.A. (Accounting), Ramkhamhaeng University • LL.B. (Bachelor of Laws Program) Ramkhamhaeng University • Master of Science (Accounting), Thammasat University
Working Experience In the 5 Preceding Years:	<ul style="list-style-type: none"> • 2019 - Present Chief Financial Officer, Harn Engineering Solutions Plc. • 2016 - 2019 Finance Director, Harn Engineering Solutions Plc. • 2012 - 2016 Chief Financial Officer, Hot Pot Plc.
Training participation of Account:	<ul style="list-style-type: none"> • Training for Continuing Professional Knowledge (CPD) for auditors and accountants According to the regulations of the Federation of Accounting Professions. • Executive Accountant Testing Program (Financial Strategy) • Update tax law 2020 and tax issues that corporations should not miss. • Account Management for Listed Company (SET) • Financial Management Strategy To revive the organization and create growth in the New Normal • The New CFO (Crisis Finance Officer) (SET) • Changes in TFRS15, and Draft TFRS9, TFRS16, effective 2019 and 2020 • Prepare Financial Reporting Standard No. 9 Financial Instruments (TFRS 9) and No. 16 Lease Agreement (TFRS 16) • Update corporate income tax Prepare to be ready before submitting the Por Por Ngor Dor 50 of the year 2017 that must be submitted in the year 2018. • The story of fraud and wrong accounting standards of listed companies Class 1/61. • Addressing new revenue recognition criteria according to TFRS 15 for general business (In-House). • Include employee benefits and financial error correction for NPAEs. • The bookkeeper has complied with the law no. 8/2017. • Self-Study CPD Project 3/2517 (PACKAGE: A) • Financial statements. • Manage new revenue recognition criteria according to TFRS 15 for general business, class 2/60. • Issues that should be known in the new financial reporting standards and the new auditor report. • Self-study CPD Project, 4th/2016. • Draft of Financial Reporting Standards, Financial Instrument Group (TFRS 9, TFRS 7 and TAS 32). • Integrated Reporting Version 1. • XBRL The new dimension of financial reporting in the digital age version 1/58. • Using Excel to check account data files, version 2/58.

5.2 The person supervising accounting Brief history as follows:

Name:	Miss Ananya Proyngoen
Education:	<ul style="list-style-type: none"> • B.B.A. (Accounting), Rajamangala Institute of Technology Chakrabongsa Bhuvanarth Campus • Master of Accountancy (M.Acc.), Chulalongkorn University
Working Experience In the 5 Preceding Years:	<ul style="list-style-type: none"> • 2016 - Present Account Manager, Harn Engineering Solutions Plc. • 2014 - 2015 Account Manager, I AM Consulting Co., Ltd. • 2013 - 2014 Accounting Supervisor, Yum Restaurants International
Registration as an accountant according to the announcement of the Department of Business Development	<ul style="list-style-type: none"> • - Yes -
Training participation of Account:	<ul style="list-style-type: none"> • Executive Accountant Testing Program (Financial Strategy) • Accounting problems, assets, liabilities and equity to be correct according to financial reporting standards • Insight Financial Management: Enhance business potential through professional financial management, the Stock Exchange of Thailand. • Penetrating the issue of the new lease agreement (IFRS 16), the Stock Exchange of Thailand. • Impact of new financial reporting standards regarding revenue from contracts made with customers, the Stock Exchange of Thailand. • Prepare for changes in financial reporting standards regarding financial instruments generation 2, the Stock Exchange of Thailand. • Accounting practices for employee benefits According to Thai Accounting Standard No. 19 and its impact on business operations, Dharmaniti Training and Seminar Company Limited. • Internal control according to Trend 2018, Dharmaniti Training and Seminar Company Limited. • Delve into the problem of corporate income tax, Federation of Accounting Professions In the royal patronage. • Techniques for financial statement preparation and financial report analysis. • Caution in account closing, financial statement preparation and income tax filing, Federation of Accounting Professions In the royal patronage. • Accounting for financial instruments generation 1/60. • Overview of the Thai auditing standards, Federation of Accounting Professions In the royal patronage. • Filing financial statements of accountants with e-Filing system. • Techniques for the preparation and submission of Form Bor. Bor. 1 in accordance with the announcement Por.Chor. Por. Ngor. 2/60, Federation of Accounting Professions In the royal patronage. • Penetrating withholding tax issues, Dharmaniti Training and Seminar Company Limited • Accounting for financial instruments, Federation of Accounting Professions In the royal patronage. • Prepare for changes in financial reporting standards, EY Office Co., Ltd. • Standard exemption and reduction of corporate income tax rate Benefits for SME entrepreneurs according to the Emergency Decree, Bangkok Revenue Office 10. • 65 Key Points Income, expenses, correct practice according to accounting standards, Dharmaniti Training and Seminar Company Limited.

Course summary Orientation and Refresh

Course ¹⁾	The person taking the highest responsibility in finance and accounting (CFO)	The person supervising accounting ³⁾
Orientation 12 hour	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Continuously develop accounting knowledge (Refresh) 6 hours per year ²⁾	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Note : ¹⁾ The hours for Orientation and Refresh training is as specified by the SEC.

²⁾ Refresher course that is consistent and beneficial to the company

³⁾ The person supervising accounting is an accountant who has the qualifications and conditions of being an accountant in accordance with the rules prescribed in the Notification of the Department of Business Development.

CPD hours of the highest responsible person in accounting and finance (CFO) year 2020

Year	Training Institute	Course / Activity Details	Number of CPD hours		
			Account	Other	Informal
2020	Federation of Accounting Professions In the royal patronage	Training project to test senior management accountants (Financial Strategy)	6	0	0
2020	Federation of Accounting Professions In the royal patronage	Executive Accountant Testing Program (Financial Strategy)	7:30	0	0
2020	Dharmaniti Training and Seminar Company Limited	Update tax law 2020 and tax issues that corporations should not miss.	0	6	0
2020	The Stock Exchange of Thailand	Account Management for Listed Company (SET)	0	0	5
2020	The Stock Exchange of Thailand	Financial Management Strategy To revive the organization and create growth in the New Normal	0	0	6
2020	The Stock Exchange of Thailand	The New CFO (Crisis Finance Officer)	0	0	9:30
Total Number CPD hours			13:30	6:00	20:30

Number of CPD hours of the accounting supervisor for the year 2020

Year	Course / Activity Details	Number of CPD hours		
		Account	Other	Informal
2020	Training project to test senior management accountants (Financial Strategy)	6	0	0
2020	Executive Accountant Testing Program (Financial Strategy)	1:30	0	0
2020	Accounting problems, assets, liabilities and equity to be correct according to financial reporting standards	7	0	0
2020	Read Newsletter Issue 86	0	0	2
2020	Listen to a lecture on principles of business reorganization laws that creditors and debtors must know (Part 1).	0	0	2
2020	Watch Facebook live on a lecture on the principles of business reorganization law that creditors and debtors must know "Part 1"	0	0	2
2020	Read Newsletter Volume 94 of October 2020	0	0	2
2020	Watch Facebook live on "A lecture on the principles of business reorganization that creditors and debtors must know" Part 2.	0	0	2
2020	Read Tax Magazine / April 2020 / Vol. 39 / No. 463	0	0	2
2020	Read Tax Magazine / September 2020 / Vol. 39 / No. 468	0	0	2
2020	Read Tax Magazine / July 2020 / Vol. 39 / No. 466	0	0	2
2020	Decree Announced in the year 2020 in relation to the corporate income tax calculation for 2020	0	0	2
2020	Read Tax Magazine / November 2020 / Vol. 40 / No. 470	0	0	2
2020	Watch Facebook live on "Accounting Estimate" live	0	0	2
2020	Watch Facebook live on "Discussion Paper Business Combinations - Disclosures, Goodwill and Impairment" live	0	0	1:30
2020	Read Tax Magazine / October 2020 / Vol. 40 / No. 469	0	0	2
2020	Read Tax Magazine / February 2020 / Vol. 39 / No. 461	0	0	2
2020	Hear Facebook Live on COVID-19 Financial Statements, Challenges of Executives, Accountants and Auditors.	0	0	2
Total Number CPD hours		14:30	00:00	29:30

6 Remuneration for Directors and Executives

6.1 Monetary Remuneration

6.1.1 Directors

The 2020 Annual General Meeting of Shareholders held on August 3, 2020 resolved to approve payment of monthly remuneration for the Company's Directors and Board-Committees and meeting allowance Which is reflected from the performance of the company as follows as below:

Position	Monthly remuneration
1. Monthly remuneration : Director / Audit Committee / Risk Management Committee / Nomination and Remuneration Committee	
• Chairman of the Board	30,000 Baht/Month
• Board-Committees	25,000 Baht/Month
• Directors / Independent Director	20,000 Baht/Month
• Directors (3 working day/week)	120,000 Baht/Month
2. Meeting allowances : Director / Audit Committee / Risk Management Committee / Nomination and Remuneration Committee	
• Chairman	15,000 Baht/meeting
• Directors	10,000 Baht/meeting
3. Bonuses for directors of the Board	None
4. Other Remuneration	None

Note : Principles of compensation for the Board of Directors and Board Committees are as follows:

- The Nomination and Remuneration Committee is the person who determines and establishes the principles or policies "Remuneration for Directors" and propose to the Board of Directors for approval to propose to the Annual General Meeting of Shareholders which must comply with the Company's Articles of Association, Chapter 4, regarding the Board of Directors, including various factors related as follows:
 - Duties and responsibilities of each director
 - To be appropriate when compared to other public companies that has the similar operating results and business operations.
 - To be fair and transparent to create incentives to maintain qualified directors as needed
 - To be appropriate for the ability to get paid the compensation from the company
- The Nomination and Remuneration Committee is summaries the annual remuneration and compensation which must not exceed the amount approved by the shareholders' meeting from the previous year and propose to the Board of Directors for approval to report to the shareholders' meeting to acknowledge the amount of money actually paid by considering the following factors:
 - Company performance previous year
 - Determine the appropriate time to pay
 - Details and conditions of payment such as annual remuneration for all directors who remain in office in the event that any director has recently held the position and has not yet completed a service year, annual remuneration will be paid in proportion referring to time appointment since joined.
- Board and Committee members entitled to receipt of Directors' remuneration must not be employees of the Company.
- Board member who also serve in another committee shall receive only one remuneration that pay the highest rate.

In summary, the 2020 remuneration of 9 Directors for a period of 12 months ending as of December 31, 2020, totals THB 3,585,000 This comprises monthly remuneration for the Company Directors of THB 2,475,000, monthly remuneration for Board-Committees of THB 300,000, and meeting fee of THB 810,000, the resolution of which was passed by the 2020 AGM on August 3, 2020. The remuneration is considered through

the comparison with organizations with equal size in the same industry, as well as the Company performance, achievement, responsibilities of the Board of Directors, and overall business circumstances.

In 2020 and 2019, the company payment of monthly remuneration for the Company's Directors and Board-Committees and meeting allowance as follows as below:

Name	Position	the year 2020						the year 2019					
		Monthly Remuneration	Meeting Fee					Monthly Remuneration	Meeting Fee				
			Board of Director	Audit Committee	Nomination and Remuneration Committee	Executive Committee	Risk Management Committee		Board of Director	Audit Committee	Nomination and Remuneration Committee	Executive Committee	Risk Management Committee
1. Dr. Thakol Nunthirapakorn	Independent Director, Chairman of the Board, Chairman of the Audit Committee	360,000	120,000	60,000	-	-	-	360,000	90,000	60,000	-	-	-
2. Miss Voranuch Supaibulpipat	Independent Director, Member of the Audit Committee, Chairperson of the Nomination and Remuneration Committee	300,000	80,000	40,000	30,000	-	-	280,000	60,000	40,000	45,000	-	-
3. Dr. Solhitorn Mallikamas	Independent Director, Member of the Audit Committee, Member of the Nomination and Remuneration Committee	240,000	80,000	40,000	20,000	-	-	240,000	60,000	40,000	30,000	-	-
4. Mr. Wirat Sukchai	Director, Chairman of the Executive Committee, Chairman of the Risk Management committee, Chief Executive Officer, Managing Director	-	-	-	-	-	-	-	-	-	-	-	-
5. Mr. Thammanoon Tripetchr	Director, Member of the Executive Committee, Member of the Risk Management committee, Managing Director	-	-	-	-	-	-	-	-	-	-	-	-
6. Dr. Jain Charnnarong	Director, Member of the Executive Committee	1,155,000	80,000	-	-	-	-	1,170,000	50,000	-	-	-	-
7. Mrs. Sirima Iamsakurat	Director	240,000	80,000	-	20,000	-	-	240,000	40,000	-	30,000	-	-
8. Mr. Parkphum Wongpaitoon	Director	240,000	80,000	-	-	-	-	240,000	60,000	-	-	-	-
9. Mrs. Valeeratn Chuerboonchai	Director	240,000	80,000	-	-	-	-	240,000	60,000	-	-	-	-
Total		2,775,000	600,000	140,000	70,000	-	-	2,770,000	420,000	140,000	105,000	-	-

6.1.2 Company's Executives

In 2020, the company payment of remuneration for Mr. Wirat Sukchaim, Chief Executive Officer and Mr. Thammanoon Tripetchr, Managing Director of the Company's executives and payment of remuneration for Mr. Prasertsak Det-Udom, Chief Executive Officer of the Aiyaraharn Co.,Ltd. ("subsidiary") as follows as below:

Remuneration	2020		2019	
	No. of executives	Remuneration (Baht)	No. of executives	Remuneration (Baht)
Salary, bonus and other benefits such as Incentive, social security fund, provident fund, EJIP and post-employment benefits	3	11,102,507	2	10,526,329

6.2 Other Remuneration

- Other remuneration of board directors - None -
- Other management remuneration - is shown in Table 6.1.2 above.

⑦ Manpower

7.1 Number of Personnel

As of December 31, 2020 and December 31, 2019, the Company has employees (excluding executives) of 242 person (150 male, 92 female) and 252 person (159 male, 93 female) respectively, categorized by function line as follows:

Operational Line	Number of Employees (persons)	
	As of December 31,2020	As of December 31,2019
Project Sales Group	35	35
Fire Protection, Air Conditioning & Sanitary System Sales Group	28	28
Project Sales Group (Petrochemical)	4	7
Refrigeration System Sales Group	16	14
Engineering Support Group	7	8
Digital Printing System Sales Group	25	27
Service Group	33	32
Special Product Sales Group	15	16
Operating Group	46	51
Financial Group	33	34
Total	242	252

7.2 Employee Compensation

The Company's employees will receive remuneration in both monetary and non-monetary forms. Monetary remuneration includes salary, bonus, overtime pay, brokerage fee, incentives and rewards, as well as other monetary benefits, Non-monetary compensation includes 1) provident fund in 2020 the Company contributed to the fund 4.23 million baht managed by an authorized asset management company to be compliant with the provisions of Provident Fund Act B.E. 2542 (1999) with employee savings rate to go up in line with the increasing years of service of the respective employee. The Company also allows the employees to select or change their investment policy as considered proper for them with acceptable risk level. The employee choice can be made twice a year. 2) Annual staff health check, Group life and health insurance is taken out by

the Company to insure the employees, with coverage amount varied to job position and level of risk associated with nature of job performance. Moreover, 3) the Employee Joint Investment Program (EJIP). The period of May 1, 2020 to April 30, 2025, with a total duration of 5 years for employees and director on the voluntary basis and own the Company, which will be regarded as savings for the employees' long-term financial security. The Company also offers scholarships of both undergraduate and graduate levels, and financial support for in-house and external training programs and seminars and provide 4 flu strains at a special price

In 2020 and 2019, the company payment of remuneration for the Company's employees as follows as below:

Remuneration	2020		2019	
	No. of employees	Remuneration (Million Baht)	No. of employees	Remuneration (Million Baht)
Salary, bonus and other benefits such as Incentive, social security fund, provident fund, EJIP and post-employment benefits	242	167.06	252	170.26

7.3 Major Labor Dispute in the Past 3 Years

- None -

Corporate Governance

① Corporate Governance Policy

HARN has a determination to be an engineering leader in Fire Protection System and Safety, Refrigeration System, and Digital Printing System. To create good business profits, the company realized that in order to succeed, apart from delivering quality products and services, operating business with care to stakeholders is crucial. HARN uses good corporate governance and keeps principle of business conduct, delivers quality administration and employees. This will increase business value and support sustainable growth.

HARN set Corporate Governance Policy and has been practicing since 2013. It is published through the company website, www.harn.co.th, and assigned for review annually. On March 28, 2019, the Board of Directors reviewed the company's policies and principles and set up its clear guidelines on overseeing its subsidiary companies, affiliated companies, human resource management, technological development, and investor relations communication with stakeholders and interested parties. The policies and principles that had been reviewed by the Board were announced and became effective on April 1, 2019.

Corporate Governance Policy that adheres to as an operating framework

1. The Board of Directors, Executives and all employees must perform their duties with determination, commitment and responsibility to the best of their ability for the benefits of the HARN and to uphold the 5 international standard principle of corporate governance (REACT) guidelines of understanding, trust and faith where habitually practice as a corporate culture. which are;
2. The Board of the Directors has a significant role together with the Executives to set the visions, strategies policies and important plans, including establishing the management structures that relates fairly between the Board of Directors, the Executives and the shareholders and to plan the management guidelines and the appropriate business operations including making sure that the accounting system, the financial report and the accounting audit are reliable.



3. The Board of Directors and the Executives must be the leaders in terms of ethics and be an example for working with honesty, fairness, transparently and accountable.
4. The Board of Directors, the Executives and all employees must uphold fairness by treating all stakeholders equally, including keeping watch, control and prevent anyway decisions or actions that may have conflict of interests with relating issues.
5. The Board of Directors must operate with the efficient anti-corruption system to ensure that the management is aware, emphasizes and follows the anti-corruption policies.
6. Compliance with the corporate governance policy of the company HARN is considered an important key performance index in evaluating the business management of the Board of Directors and the Executives and to assess the performance of employees.

The Committee set policies, principles and followed up on practice of good corporate governance in 2020 as summarize as follow:

1, 2

Establish Clear Leadership Role and Responsibilities of the Board and Define Objectives that Promote Sustainable Value Creation

- 1.1 The Board of Director aware of roles and responsibility as a leader of the organization in March 27, 2020, held a meeting to review of policies and corporate governance, code of conduct, charter, nomination and remuneration of directors policy, risk management policy and other administrative policy at the policy level and the necessary management level including the circumstance of COVID-19, and October 2, 2020, the Board set another meeting to review vision, mission, strategies, goals, and direction of business for the next year, at least once a year.
- 1.2 The Board set framework of management according to strategies for the Board of Directors to review 12 times in 2019 and reported progress to the Board quarterly. The Board of Directors presented KPI at organization level and operational to ensure that direction of operating business is competitive sustainably. Moreover, to ensure that business is operated under code of conduct and be aware of stakeholders including able to accept changes which are inevitable.
- 1.3 The Board of Directors ensures that strategies were practiced where the Executive Committees will review business performance monthly and report to the Board of Directors as quarterly. For broadcasting objectives and goals of the business into operational level, management of each department is responsible for this task. It ranges from business level to division, section and to employees through official and unofficial meetings via mandated channels. The purposes and goals complying with and supporting the main goals set by the Board will be implemented, reviewed, and monitored systematically and continually.
- 1.4 Administrative of the Board, Management, and all employees are to follow the law, rules, and policies which delegated to relevant management to review the laws and keep up to changes. This was set as risk in policies, relevant laws and set KPI COR-07 Low Compliance as an index to determine performance of management and other relevant members.
- 1.5 The Board, Management and all employees to aware of their roles and responsibilities to assigned. In 2020, The Board reviewed charter in March 27, 2020 and distributed to all Boards as an operating manual and "Approval Guidelines for Management" have been review regularly to separation of authority to approve transactions according to the management's responsibility and employee all for flexibility of workflow in the company. The separation of tasks of the Board, the Chairman of the Board, and Administrative Section was clearly mentioned. (shown in the topic "Management Structure" the Board of Director on pages 45-47, the Executive Committee on pages 50-51 and the Executive on pages 56-57)

3

Strengthen Board Effectiveness

- 3.1 The Board of Directors, as a representative of the shareholders, are aware of benefits the diversity of the board of directors And sees it as an important factor in increasing the efficiency of decision making and the work of the Board of Directors, therefore, the Board must be knowledgeable, expert, and experienced that would benefit the company. The Board must dedicate to the given tasks, be a leader, have vision, and free to make decision, able to take care system and verify that all operations of the business will take place as usual according to the law, ethics, and has no obligation to administrative of the company. Separation of responsibilities between Executive and The Board must be clear.
- (1) Composed of members with diverse skills, experience and expertise in specialized areas that are beneficial to the Company. The Board shall have at least 1 non-executive director with experience in engineering product trading business, which is the Company's core business, and at least 1 non-executive director with accounting and finance experience. The Board of Directors at current, comprise of several dimensions in terms of gender, age, education background, experience. The company has already reviewed Board Skill Matrix and term of office as The Board of Directors individually every year and can be summarized as follow:

Skills and expertise of the Board of Directors

Core business knowledge	3 people	Risk Management	5 people
Marketing strategy and Competition	3 people	Human Resource Management	4 people
Accounting, Finance	5 people	Social Responsibility and Sustainable Development	5 people
Technology and IT	3 people		

- (2) At present (as at December 31, 2020), the Company's Board of Directors is composed of 9 members, of whom 7 are non-executive directors and committees that are management 2 persons which are Chairman of Board of Director 1 position, Managing Directors 1 positions, and has numbers of committees that are not Independent Committees in a fair ratio of investment of Controlling Shareholders.
- (3) Proportion 3 independent directors out of a total of 9 directors, which accounts for more than one-third (1/3) of the total number of directors. All the independent directors may independently give opinions regarding the performance of the management, hence proper checks and balances in the voting on various matters, and review the operational performance of the management for the optimum benefits of the Company. These 3 independent directors are also Audit Committee members. The number of independent directors and Audit Committee members are in compliance with the requirement of the Office of Securities and Exchange Commission that at least one-third (1/3) of the total number of directors shall be independent directors and 3 of the total number of directors shall sit on Audit Committee. In addition, all independent directors and Audit Committee members shall have the qualifications as prescribed by the Notification of the Capital Market Supervisory Board.
- (4) Pursuant to the Company's articles of association, at each annual general meeting of shareholders, at least one-third (1/3) of the directors shall vacate their office. If the number of directors cannot be divided into 3(three), the number nearest to one-third (1/3) shall retire. The directors to vacate office in the first and second years following the registration of the Company shall be drawn by lots. In the subsequent years, those longest-serving shall vacate office. Directors who retire by such rotation may be re-elected, without limiting the number of times.
- (5) Term of office of the Independent Committee is not more than 9 consecutive years counting from the date of appointment or from the date the company Listed on the stock exchange. Currently, 3 Independent Committees have term of office of 7 years
- ### 3.2 Selecting suitable candidate as The Chairman of Board of Directors
- (1) Currently, Dr.Thakol Nunthirapakorn, a member of Independent Committee is The Chairman of Board of Directors and does not repeat a position of Chief Executive Officer which is Mr.Wirat Sukchai. He has no business relationship or bloodline with the CEO. Therefore, the position is suitable and balanced.
- (2) The company has separated responsibilities between the Board of Directors and Management clearly where the Board decides policies and corporate governance of the management at policy levels while the management takes care of other operations of the organization according to the policies. The Chairman of the Board does not involve in current day to day activities but support and give advice to administrative of management through the Board regularly. The Chief Executive Officer and Managing Directors responsible for managing the company under the given authorities by the Board.
- (3) Roles and Responsibilities of the Chairman of the Board as a leader of the Board of Directors are as follow:
- Calls for the Board meeting according to the policies. In urgent cases, the Chairman of the Board is the head of the meeting and in the Annual General Meeting including determines agenda of the meeting with the Chief Executive Officer.
 - Supports and gives opportunities to all committees or shareholders to be a part of the meeting and supports the committee to be discrete on comments independently.
 - Supports and promotes the Board to serve at full capabilities but under authorities and responsibilities with good corporate governance.
 - Directs and follows up administrative works of the Board effectively and focuses to achieve main objectives and goals of the company.
 - To look after management of the Board of Directors' and Sub-committees' effectively and to achieve set objectives.

- (4) The Board of Directors' appoint Sub-committees' to review specific concerns and review information then present considerations before ask for approval from the Board where set roles and responsibilities in clear and disclose the number of times each director has attended all the meetings during the past year (shown in the topic "Management structure" pages 55), the Board of Directors has prepared a report of the Board of Directors' responsibility for financial reports and every Sub-committees' has produced a report of their performance and disclosed in the Annual Report (shown in the topic "Report of the Committee etc." pages 119-127)

3.3 Recruitment and Selection of the Committees

- (1) The Nomination and Remuneration Committee selects suitable persons and appoints as the Board of the company by submitting qualified names, experience, capabilities and considers the best and skillful person for the company. Consider from Thai Institutes of Directors or other organizations that presents relevant information or other sources approved by the company.

However, if the company Have a new business strategy other than the existing business The selection of directors is necessary to recruit people with qualifications and experience to match the new business that the company Will proceed To propose to the board of directors And / or the shareholders' meeting to approve As the case may be, which is considered as the process of appointing the Company's directors.

- (2) Allowing minority shareholders to propose qualified names according to the law of Securities and The Stock Exchange as per qualifications set by the company in order to be a candidate of the Board, by announcing invitations on the company's website at least 90 days in advance of the shareholders' meeting in 2020, the company announced from October 1, 2020 to December 31, 2020, including news on the website of the SET To allow shareholders to propose names and personal profiles to the company The company set ratio of minimum shares to be qualified prior to the announcement and must have a minimum of 5% voting shares of the company. However, in the year 2020 there was no nominating any person to be appointed as a director and there was no shareholder proposing any meeting agenda at the specific timeline, the Secretary then reported to the Board of Directors.
- (3) In recruiting, education background and experience of that person must be sufficient and aid decision of the Board.
- (4) Nomination and Remuneration Committee will review qualifications and method of recruiting to the board prior to the end of term of office. If the Nomination and Remuneration Committee submit the same Board as a candidate, performance of that individual must be reviewed once again.
- (5) Nomination and Remuneration Committee presents names for approval from the Board in order to consider appropriateness of the candidates as the Board and Independent Director including selection and appointment of the Board according to procedures of the company to the Annual General Meeting for consideration and later appointment, and provide orientation Along with providing documents that are beneficial to the performance of duties to the newly appointed director. However, in the year 2020, no new directors have been selected.
- (6) In 2020, no appointment of the adviser to the Nomination and Remuneration Committee.
- (7) The shareholders' meeting shall elect the directors in accordance with the following criteria and procedure:
- Each shareholder shall have one (1) vote for each share held, the majority votes of the shareholders who attend the meeting and have the right to vote.
 - Each shareholder shall cast all the votes he has to elect one or several directors. In case of electing several directors, each shareholder may not divide his votes and allocate them to all such candidates in portions.
 - The candidates shall be ranked in order descending from the highest number of votes received to the lowest, and shall be appointed as directors in that order until the required number of directors to be elected is met. Where the votes cast for candidates in descending order are tied, the chairman of the meeting shall have a casting vote.
- (8) The Board of Directors' meeting or the shareholders' meeting (as the case may be) is empowered to appoint independent directors to sit on the Board. The Company has a policy to appoint independent directors in the number of at least 1/3 (one-third) of the total number of directors of the Board, or at least 3 Independent Directors. At present, it has a total of 3 independent directors.

- (9) The criteria for selecting and nominating independent directors are based on those for the nomination of directors. An independent director shall have the required qualifications and no prohibited characteristics, just as in the case of a director pursuant to the Public Limited Companies Act, and the securities and exchange law, as well as other relevant notifications, stipulations and/or regulations. He shall have capabilities, specialized expertise, work experience and other required qualifications. Nominations of qualified candidates shall be submitted to the shareholders' meeting for election and appointment as directors. In case of any independent director vacating office before the end of the office term, the Board of Directors may appoint a new independent director with the required qualifications as a replacement. The replacing independent director shall hold office only for the remaining term of office of the independent director whom he has replaced.
- (10) Qualifications of an independent director, according to the definition of an independent director shall be as follows:
- Holding not more than 1% of the total shares with voting rights of the Company, or its principal company, subsidiary company, associated company, major shareholder, or controlling person of the Company, which shall be inclusive of the shares held by any related person thereof;
 - Neither being nor having been an executive director, an employee, a staff member, an adviser who receives a regular salary, or a controlling person of the Company, or its subsidiary company, associated company, subsidiary company at the same level, major shareholder or controlling person of the Company unless the foregoing status has ended for no less than 2 years before the independent director assumes the post of Audit Committee member;
 - Not being a person related by blood or registration under law, such as father, mother, spouse, sibling, or child, including the spouse of a child, of an executive, major shareholder, controlling person or person to be nominated as an executive or a controlling person of the Company or its subsidiary company;
 - Neither holding nor having held a business relationship with the Company, or its principal company, subsidiary company, associated company, major shareholder or controlling person in a manner which may interfere with his/her independent judgment; and neither being nor having been a substantial shareholder or a controlling person of any person having a business relationship with the Company, or its principal company, subsidiary company, associated company, major shareholder or controlling person unless the foregoing relationship has ended for no less than 2 years before the independent director is appointed as an Audit Committee member;
 - Neither being nor having been an auditor of the Company, or its principal company, subsidiary company, associated company, major shareholder or controlling person; and not being a substantial shareholder, controlling person or partner of an audit firm which employs auditors of the Company, principal company, subsidiary company, associated company, major shareholder or controlling person unless the foregoing relationship has ended for no less than 2 years before the independent director is appointed as an Audit Committee member;
 - Neither being nor having been any professional service provider including legal adviser or financial adviser who receives an annual service fee exceeding Baht 2 million from the Company, or its principal company, subsidiary company, associated company, major shareholder or controlling person; and not being a substantial shareholder, controlling person or partner of the professional service provider, unless the foregoing relationship has ended for no less than 2 years before the independent director is appointed as Audit Committee member;
 - Not being a director who has been appointed as a representative of a director of the Company, major shareholder, or shareholder related to the major shareholder of the Company;
 - Not undertaking any business the nature of which is the same as that of the Company or subsidiary company and which, in any material respect, is competitive with the business of the Company or subsidiary company or not being a substantial partner in the partnership, a director who is involved in management, an employee, a staff member, an adviser who receives a regular salary, or a shareholder holding more than 1% of the total shares

with voting rights of a company undertaking any business the nature of which is the same as that of the Company or subsidiary company;

- Not having any characteristics that prohibit the expression of independent opinion towards the Company's business undertakings.
- In this regard, the independent directors shall examine and certify their qualifications and independence at least once a year by presenting together with profile of directors as of year-end for preparation of the Annual Disclosure Statement (Form 56-1) and Annual Report.

3.4 Review of structure and compensation rate of the Board of Directors

- (1) Compensation of the Board is relevant to duties, obligations, experience, accountability and responsibility of individual Board including interests that may receive from individual.
- (2) The Board clearly considers and review policies and rules to compensate the Board, then submit for approval to the Annual General Meeting in each year. The authority to set specific numbers or to deploy as rules will be determined from time to time or may enforce until further notice. The consideration is based on rules of transparency, detectability in the appropriate level, comparable to operating level of the industry, business size and sufficient to motivate the Board to retain the position with quality. Moreover, the company adds more responsibilities to the given Board and appointed as Sub-committees' such as Audit Committee, Risk Management Committee, Executive Committee, for example.
- (3) Compensation of the Committees must not affect employees' benefits where the Committees are one of the employees as well.
- (4) Compensation must not conflict with position of the Independent Committee according to the law of Securities and The Stock Exchange.

3.5 Accountability and Responsibility of the Committees to comply with duties and time management

- (1) The Board set numbers of companies that each Committee able to take which does not exceed 5 registered companies while respect effectiveness of the management and good corporate governance to ensure that the Board dedicate sufficient time for the operation. In 2020, each Board is in position for other register companies as follow:

Board of Directors	Number of other listed companies in which the directors hold positions
Dr. Sothitorn Mallikamas	- none -
Miss Voranuch Supaibulpipat	- none -
Mr. Wirat Sukchai	- none -
Mr. Thammanoon Tripetchr	- none -
Dr. Jain Charnnarong	- none -
Mrs. Sirima Iamsakulrat	- none -
Mr. Parkphum Wongpaitoon	- none -
Mrs. Valeeratn Chuerboonchai	- none -
Dr. Thakol Nunthirapakorn	2 Companies

(shown in the topic "Board of Directors", pages 7-11)

- (2) The Board of Directors has a policy to hold directorship in other companies of directors. According to the regulations of the company that The Board must not own a business or be a part of ordinary partnership or partnership or limited partnership or be a Board of other entities at the same industry or a competitor of the company unless reported to the General Meeting prior to the appointment.
- (3) The Boards have no policy to submit any committees to be a Board of other companies. In case that the Board will take another position as a Board of another business, it must be approved by the Board unless the business is non-profit organization. However, the position must not conflict with laws and rules related to the operation of the company and must not use the position to refer nor to ask for other benefits of other entities. At present, HARN is in the process of establishing a subsidiary to support the expansion of the AEC market in Asia and increase the efficiency of current customer service in the production base in Ho Chi Minh Vietnam.

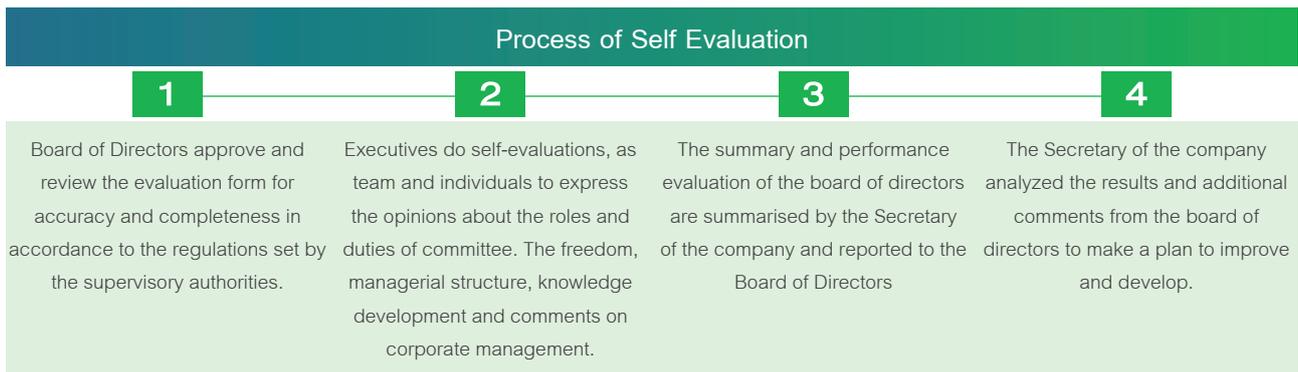
3.6 Determine framework and mechanism for corporate governance of the subsidiaries, joint venture, or important investment

- (1) Determine policies to govern subsidiaries and joint ventures by setting responsibilities of company's representatives Internal control system of the subsidiaries and joint ventures appropriately and concisely to create reports according to the law and relevant regulations and publish financial statement and business results of transactions with relevant parties, acquire or sell assets, other major transactions such as increase of capital, reduce of capital, dissolution of the subsidiaries and joint ventures, for example.

(2) Major joint venture is defined as has ratio of the voting shares between 20 - 50% and invest large amount of sum. In necessary circumstances, the Board must arrange Shareholder's' agreement or other agreement to clarify authority of management and decision, track business operation to use for financial statement of the company according to the standards and timeline. In 2020, the Company collaborated with Aiyarafun Group by a joint venture agreement signing between Mr. Prasertsak Det-Udom and Mr. Satit Wanitchaikit to operate a business on producing, trading, servicing, and developing of "IOT Products and Solutions" system. The business is to provide services on the development of Smart Building under the name "Aiyaraharn Co., Ltd, with registered capital at 2,000,000 million baht. The shares that the Company hold in the joint venture represents 65% of the registered capital as of June 24, 2020.

3.7 Evaluate performance of the Board of Directors' and sub-Committees'

- (1) The Board of Director and Sub-committees' regularly conduct self-assessment on operating performance at least once a year in order for the committee to jointly consider the work and problems for further improvement as follow:
 - Self-Assessment of the whole Board, divided into 4 main evaluation topics
 - Individual Self-Assessment, divided into 3 main evaluation topics
- (2) Process, criteria and results of the evaluation of the committee in group and individual style. Summary of the overall overview for the year 2020 as follows:
 - Process of Self- Assessment of the whole Board and Individual.



- Results of Self- Assessment of the whole Board and Individual.

2020 - Evaluation results

Criteria of Self - Assessment of the whole board	2020 - Evaluation results				
	Board of Director	Audit Committee	Executive Committee	Risk management Committee	Nomination & Remuneration Committee
1 The structure and qualifications of the board <ul style="list-style-type: none"> • The structure and qualifications of the Board of Directors shall be diverse in terms of the directorship and qualifications of each supporting Committee • proportion of the directors 	88%	93%	88%	74%	79%
2 The roles, duties and responsibilities of board of directors <ul style="list-style-type: none"> • Spending adequate time to consider important matters etc. Business's direction, Strategy, Action plan, transactions with conflict of interest, and internal control and risk management systems. 	84%	90%	71%	86%	79%
3 Board Meetings <ul style="list-style-type: none"> • Setting up the dates of the meeting one year ahead • The quality of the documents, the sufficiency of the information for the Directors to make a decision. • Freedom of decision making and the expression of opinions of the directors • Time frame of the meeting 	95%	98%	85%	85%	85%
4 Others <ul style="list-style-type: none"> • Relationship with the board and management team • Self development of the board/Executive, Training 	83%	-	-	-	-
Results	88%	94%	81%	82%	81%

Measurement 90% up Excellent, 80-89% Good, 70-79% Relatively Good, 60-69% Fair, Below 60% Need improve

2020 - Evaluation results

Criteria of Self - Assessment of the individual board

	Board of Director	Audit Committee	Executive Committee	Risk management Committee	Nomination & Remuneration Committee
1 The structure and qualifications of the board	82%	83%	75%	95%	86%
<ul style="list-style-type: none"> • Qualifications Knowledge experience suitable for the business of the company • Assigned duties that are appropriate for the role (Independent / Sub Committee) 					
2 The roles, duties and responsibilities of board of directors	84%	90%	77%	88%	82%
<ul style="list-style-type: none"> • Perform duties efficiently according to the charter law • Time and dedication to perform duties • Control and follow up the operations of the management appropriately • Does not interfere with the management function • Develop and learn all the time 					
3 Board Meetings	91%	89%	81%	82%	83%
<ul style="list-style-type: none"> • Attending the meeting • Showing appropriate comments that are beneficial to the meeting • Studying the information about the meeting in advance • Abstain from attending the meeting or voting in case of having conflict of interests 					
Results	86%	87%	77%	88%	84%

Measurement 90% up Excellent, 80-89% Good, 70-79% Relatively Good, 60-69% Fair, Below 60% Need improve

(3) The self-assessment results of the committee will be used in consideration of the suitability of the board composition.

(4) The board has no outsource consultant to assist in directing and propose the assessment of the Boards' performance

3.8 Individual Board of Directors is knowledgeable and understands duties, characters of the business and the law of business and was strengthen skills and necessary knowledge to be the Board of Directors regularly.

(1) In every new appointment of Director, Company Secretary will create related document and information to the new Committees such as

- Structure of the board, executive and company secretary
- Group structure, organizational structure and major shareholder structure
- Company information and nature of business
- Charter of the board of directors and board-committees
- Schedule of management approval authority
- Remuneration of the board of directors and board-committees
- Meeting of the Board of Directors
- Policy and principles of corporate governance and business ethics
- Role of directors under general law
- Certificate memorandum and the company's articles of association

- Consolidated and separate financial statements

Including arrangement of business characteristics and directions of operation of the company along with to arrange meetings with The Chairman of the Board of Directors and Chief Executive Officer to the new Boards.

In 2020, the company did not appoint new Committees but informed the Committees to be aware of the current environment. The company reviewed policies and rules together with corporate governance policy, anti-corruption manuals that the Boards should know and served as the Board of Directors.

(2) The Committees are fully understand laws, policies, standards, risks, environment relate to operating the business and are aware of current information from the administrative regularly through appropriate channels such as e-mail and Board Meetings.

(3) The Boards of the company support and accommodate training and provide knowledge to relevant parties in corporate governance structure such as Committees and Audit Committees so that improvement can be made regularly. In 2020, the following trainings were arranged for the Committees and high-level Management.

1) Board of Directors	Course
1. Dr. Thakol Nunthirapakorn	<ul style="list-style-type: none"> • Preliminary to Corporate Sustainability (P01) • Corporate Sustainability Strategy (S01-S03) • Sustainability Risk and Materiality Analysis (S04) • Sustainability Evaluation and Data Management (S05) • Thai economic for 2020
2. Mr. Sothitom Mallikamas	• None
3. Miss Voranuch Supaibulpipat	• None
4. Mr. Wirat Sukchai	• None
5. Mr. Thammanoon Tripetchr	• None
6. Mr. Jain Charnnarong	• None
7. Mrs. Sirima Iamsakulrat	• None
8. Mrs. Valeeratn Chuerboonchai	• None
9. Mr. Parkphum Wongpaitoon	• None

2) Management	Course
1. Mr. Wisit Wachiralapaitoon	<ul style="list-style-type: none"> • Training project to test senior management accountants (Financial Strategy) • Update tax law 2020 and tax issues that corporations should not miss • Account Management for Listed Company (SET) • Financial Management Strategy to revive the organization and create growth in the New Normal • The New CFO (Crisis Finance Officer)
2. Mrs. Varinkan Teraumranon	• None
3. Mr. Pracha Phromphornchai	• None
4. Mr. Rattanaphan Mukhariwattananon	• None
5. Mr. Suchat Suwatnodom	• None
6. Mr. Kittiphong Kittimethawenun	• None
7. Mr. Vachiravit Akaraseranee	• None
8. Mr. Sukit Litikorn	• None
9. Mr. Withoon Thamee	• None
10. Mr. Pongsawat Penglengpol	• None

3.9 The Boards will ensure that operations of the Boards run smooth and able to access information as necessary. The Secretary of the company is appointed who is skillful and experience for the tasks of the Boards.

Board of Directors Meeting Sub-committees'

(1) The Boards of Directors' and Sub-committees' determine yearly meeting schedules in advance by November of every year so that the Committees can arrange and be able to attend the meetings. At least 6 meetings must be taken place and may arrange an additional meeting 1 month prior to the Annual General Meeting. Special occasions of meeting may be taken place as seen necessary. However, to pursuit business as usual, in each month, the Executive Meetings will take place. The Executive Committees whom delegated given tasks by the Board of Directors would attend and in every Executive Committees Meeting, the Executive Committees will report the approved topics to the Board of Directors. This is arranged to control and look after operation of Administrative consecutively and at current. However, in the year 2020, there were 8 meetings of the Board of Directors, which includes 1 meeting to consider the strategic plan and 1 meeting to non-executive directors without management. (shown detail of attendance of each meeting are in Item "Management Structure" : Attendance of the board meeting page 55)

(2) The Board Chairman and the Managing Director jointly determine and approve issues to be put on the agenda. Other Board members are also allowed to freely propose issues that they think are beneficial to the Company to be included in the agenda. It is the responsibility of all the directors to consistently attend the Board meeting at least 80% of the total number of meetings held in each year. In 2020, the Board of Directors attended the meeting an average of 100%.

(3) The Company Secretary is in charge of sending the meeting notice together with the meeting agenda and meeting documents to all directors at least 5 business days before the meeting date, so that they will have enough time to study the agenda items, unless in urgent case to protect the interests of the Company, the meeting notice may be sent by other means and the meeting may be scheduled earlier.

The Company Secretary has the duty to attend the Board meeting and prepare the minutes, which will be submitted to the Board Chairman for consideration and signing in certification. The Board Secretary will then present the minutes to the next Board meeting for adoption. The Company Secretary also has the duty to keep meeting information and documents on the 4th floor of the head office, Rama 9 Road for ease of reference.

(4) The Board Chairman shall be chairman of the meeting to proceed with the meeting and allocate sufficient time for each agenda item. All directors are allowed to independently discuss and express their opinions on key issues with the best interests of the shareholders and other stakeholders taken into consideration on a fair basis.

In the meeting, there must be at least half of the total Committees. Therefore, the meeting is considered as quorum.

Resolutions of the meeting shall be passed by majority votes. Each director shall have 1 vote, but the director who has interests in any matter shall not be entitled to attend the meeting and/or vote on such matter. In case of a tie of votes, the chairman of the meeting shall have a casting vote. While the vote is taking place by the Committees, there must be at least two-third (2/3) of the total Committees.

All directors have the right of access to meeting documents and other necessary documents. If the independent directors or members of the Audit Committee have any queries, other directors and the management shall put in efforts in responding to such queries as promptly and completely as possible.

In case the directors disagree with a resolution, they may request the Company Secretary to record the points of their disagreement in the meeting minutes or submit a letter to the Board Chairman to express their disagreement.

- (5) The Board of Directors encourages senior executives or executives concerned to attend the Board meeting as deem necessary and appropriate, to provide the meeting with additional beneficial information and details in the capacity of concerned parties, and to directly acknowledge the relevant policies from the Board for efficient implementation thereafter, as well as to support the Board's decision making and allow the Board members to be acquainted with the executives which will facilitate their consideration of the Company's succession plan afterward.
- (6) The Board of Directors can access additional necessary information from the Managing Director, the Company Secretary, or other executives assigned within the scope of designated policy. In case necessary, the Board may seek independent advice from external advisers or professionals, Expense is paid by the company.

- (7) On October 2, 2020, the non-executive directors held meetings together freely without the attendance by executive directors or management to discuss to the Company's business direction and internal management structure, development of succession plan. The resolutions of the meetings are notified to the Board of Director and management within the same day. Such meetings are chaired by the Board Chairman and the Company Secretary shall serve as secretary to the meeting.

Appointment of the Secretary of the company

- (1) The Board of Directors appoint a Secretary whom is qualified and experienced in secretarial. Main duties and responsibilities are according to the Securities law and The Stock Exchange. The Secretary needs to give lawful advices and advices on enforcements while the Committees must be acknowledged and comply to the overall activities of the board including coordinate enforcement as per resolution of the Boards. The qualification and experience of the Company Secretary as shown in the topic "Management Structure" no.4 Company Secretary, page 57 and the company's website at www.harn.co.th.
- (2) The Boards of Directors support and encourage the Company Secretary to be trained and developed skills continuously in laws, accounting or other secretarial related activities.

4

Ensure Effective CEO and People Management

4.1 Recruitment and development of high-level management which refers to Chief Executive Officer and Board of Directors to be knowledgeable, skillful, experienced to command and perform duties to drive the organization towards goals.

- (1) The company chooses personnel that are knowledgeable, experienced, and skillful for the business as the Chief Executive Officer, the Board of Directors by following rules of resource management and receive approval from the Board of Directors.
- (2) The Nomination and Remuneration Committee will report to the Committees regularly on development and successor plan in order to prepare talents as successors in case the

Chief Executive Officer, the Board of Directors, and high-level of management retire, resign, or unable to retain in duties.

- (3) The Boards has no policy to scrutinize and nominate the Committees to other operations. In case that the management prefer to accept a position as the Board of other companies, approval must be granted by the Board of Directors in exception to a position in non-profit organizations. In this regard, the position must not conflict with the laws and enforcements that relate to the operation of the company and must not use the position as the Board to refer or support other entities.

4.2 Structure of appropriate Nomination and Remuneration

- (1) Nomination and Remuneration Committee sets structure of remuneration and appropriate measurements, then presents to the Boards according to the policy and principles given by the Committees.

Remuneration is varied according to the position such as salary, employee benefits e.g. Officer vehicle, returns that create long-term benefits e.g. LTF, EJIP, insurance plans. Management that received higher responsibilities will consequently receive higher remuneration as seen appropriate to the duties.

Remuneration by performance such as bonus which is determined by KPI set annually by financial operation, results of performance that met long-term business strategies.

- (2) Committees that are non-management evaluate the Chairman of the Board of Director and Managing Directors yearly. The Board of Directors preliminary evaluates performance and the Chairman of the Committees announces the results to the Chairman on of the Boards of Directors and Managing Directors.
- (3) The evaluation is used to determine remuneration of the Chief Executive Officer and Managing Directors by comparing remuneration to the labor market which is competitive enough in the same industry in order to maintain quality management while taking the company and shareholders interest into consideration as well.

4.3 The Boards understand structure of investor relations that may affect to the administrative and to operate the business

- (1) The Boards understand structure of investor relations that may affect control power of the administrative and management by using structure of the Boards which comprises of 3 Independent Director from the total of 9 Board of Directors to balance out. Support good and professional management culture under the corporate governance and other policies strictly.
- (2) The Boards control structure and relationship of stockholders as per (1) not to be obstacles in exercising duties of the Boards such as having appropriate candidates as successors.
- (3) The Boards will look after reveal agreed information that may affect control of the business.

4.4 The Boards administer management and develop employees to have numbers, skills, talents, experience and appropriate motivations.

- (1) The company is fully aware that all employees at any level play a part to drive the organization to meet goals. To maintain skillful employees, all employees will receive learning and development plans yearly both domestic and internal which focus to meet directions and strategies of the company in each year. Nevertheless, employees will receive fair remuneration where the company compared to the labor market and in the same industry yearly and report to the Boards. All employees will be treated equally and employees may ask for recommendation and consultant from top managements at all level who has open-door policy and open minded. The management encourages ideas and courage.

Company's compensation and welfares

	CEO / MD	Director	Employee
Salary Motivate and retain employees with knowledge, capabilities and duties as assigned.	✓	✓	✓
Other Benefits Provident fund / Life & health insurance, Education scholarship)	✓	✓	✓
Performance Bonus Reward for success, achievements referred to the indicators of success assigned in each year.	✓	✓	✓
Incentive Motivate to create sale-performance for progressive growth of the company	–	✓	✓
Remuneration in stocks (EJIP) Allow employees to participate in the ownership of the company and to maintain personnel in the long term to reduce staff turnover.	✓	✓	✓

- (2) To support well-being of the employees, the company arranged short-term and long-term benefits in comparable to other companies in the labor market. The company supports employees to understand finances management with the method of public relations via e-mail "Happy

Money: financial happiness" on July 2020 and August 2020 to see their financial status for sufficient funds for emergency and learn the secrets of manage saving money for the retirement.

5 Nurture Innovation and Responsible Business

5.1 Put importance and support innovation that adds value to the business together with create benefits to customers and stakeholders. Responsible for society and environment.

- (1) To achieve a goal in "a leader of engineering solutions sustainably" The Company studies new technologies to develop product lines that the company sells constantly. Create differentiation and meet customers' needs and relevant parties by using strategies that given by the high-level of management. Send employees to business trips overseas and adapt experience at HARN. Share experience to other employees in the same division and focus to accomplish together with the company. However, In 2020, the Company uses the VDO Conference to communicate with sellers both domestic and abroad on the continuation of learning and development under the Circumstance of COVID-19, makes it impossible to travel abroad. In addition, the company promotes innovation as core value and publish the innovation to the public and a part of social responsibility through the Knowledge Sharing Project, which communicate to stakeholders direct and indirectly.

- (2) Appoint Innovation Committees to promote innovative culture in the company systematically and to lead to new development and innovation that meet customers needs and sustain the business.

- Increase efficiency with Digital Transformation
- New point of views in designs and develop products and services
- Research
- Improve work process
- Cooperate with partners

5.2 Operate business with social responsibility and environment that reflect operation plan to ensure that all units operate with the same objectives, goals, and strategies of the business.

The company puts importance and focuses to create quality of life and safety to the social and environment by being a leader in service "sustainable engineering solutions" In the solutions that the company is a dealer.

- (1) Administrative takes approved strategies from the Board of Directors and distributes goals into assigned divisions and department. Then, report to the Boards monthly.

Company Strategic Directions



SMART Business

- Sales growth
- Business expansion with new products or sales channels
- To be a leader in innovative products and environmentally friendly products
- Develop solutions and complete services / increase product values
- Maintain financial status and operating results to be ready for business expansion
- Create engagement with key customers / partners
- Using information technology and modern management system
- Develop the work system and business management process to excellence continuously
- Good governance within CG Code & CAC



SMART People

- Develop the human resource management to support company's vision and be able to compete
- Create the engagement with employees
- Create knowledge and learning organization



SMART Environment

- Efficient use of resources
- Business processes that reduce environmental impacts
- Promote occupational safety health and environment in all processes

- 5.3 Ensure that the Administrative allocates resources efficiently and efficiency while considering effects to the resource management and value chain to achieve goals and objectives sustainably.
 - 5.4 Arrange plans to develop information technology in organizational level that correlate to the needs of business and ensure that information technology is being used to increase business opportunities and development plans. Administer risks to achieve objectives and main goals of the organization.
- (1) ICT department arranges policies and development plan of information technology in Digital Transformation 2019 -

2021 both software and hardware to match requirements of the company and increase efficiency of the internal process and sufficient resource management to operate the business.

- (2) The Boards administer risk management and information technology risks.
- (3) The Boards set policies and safety and security measurement of the information technology where the ICT creates contingency plans in case of unforeseen circumstances of the information technology and to be reviewed yearly.

Hardware Road map - 2020		Result
1. Hardware Good Performance	Supply laptops to all salespersons while replace the old equipments to be modern.	92.28%
2. Network & Internet stability	Manage the internal network and Link Internet to be efficient with enough speed to use in the whole organization.	
3. Security Safety Management	Manage data security and access data from outside to be efficient, safe and reliable.	
4. Copyright Software	Management of procurement for copyright software in the organization	
5. Hybrid Cloud	Server on Cloud management	
Software Road map - 2020		Result
1. Maintain the ERP system and programs in the company to be stable.	All parties work with flawless while delivering both internal and external works at on time.	94.02%
2. Program development to reduce work process and increase work efficiency	Digital Transformation Project	

6 Strengthen Effective Risk Management and Internal Control

6.1 The Boards governs that the company has risk management and internal control that lead to achievement of the business objectives effectively and to operate under the relevant laws and standards.

Risk Categories					
Strategy	Finance	Operation	Rule / regulation	Corruption	External Factors
3	4	106	1	10	12

The company is able to control the Risk at all acceptable levels

Risk Management

- (1) The Risk Management Boards review Risk Management Policy yearly and cover the organization as a whole. Management at all levels considers and take objectives and goals to review for risks that may affect the organization and operation. Then, report to the Boards quarterly and arrange the reviews and evaluate Risk Management at least once a year. (shown in the topic "Risk Factors" pages 34-36)
- (2) The Risk Management Boards follow up and evaluate effectiveness of the risk management and monitor alarms and unforeseen risks including abnormalities.

Moreover, the Boards consider sufficiency of the internal control and risk management to ensure that the company has effective risk management.

- (3) To ensure that the company operates business according to the law and relevant standards domestically and internally. Therefore, the violation of law and relevant enforcements are also one kind of risks that each department needs to handle and review every month. The index of success is measured by KPI-COR 07 Law Compliance as a part of the evaluation of the relevant departments.
- (4) In managing above risks, the company takes results of internal control and risk management of subsidiaries and joint venture to be taken into consideration.

Internal Control

The Board of Directors recognizes the necessity to have in place efficient internal control mechanism at both managerial and operational levels as it is the key to building confidence by helping minimize business risks and enhance efficient operation through appropriate allocation of resources and achieving the defined goals. In addition, it can help prevent asset leakage, loss or misconduct, and ensure the accuracy and reliability of financial reports, encourage personnel compliance with relevant laws and regulations, and protect the equity investments of shareholders. Hence, the Company has clearly laid down the scope of duties and authority concerning various matters in writing for the management and operation functions, including overseeing the use of the Company's resources toward resource optimization and clearly separating the roles and duties between operation, control and evaluation functions to ensure proper checks and balances.

- (1) The Board of Directors has assigned the Audit Committee to take charge of reviewing the adequacy and efficiency of the internal control system set up by the management, establishing and reviewing the control system on operation, financial reporting and regulatory compliance, and overseeing the operation and risk management. The Board of Directors also looks into any warning signals and unusual transactions.
- (2) The Company has engaged Ultima Advisory Company Limited, an independent external party, as its internal auditor to examine and ensure the adequacy and suitability of the Company's internal control system. To enable the internal auditor to perform duties independently in order to promote proper checks and balances, the internal auditor shall directly report to the Audit Committee. The Company shall constantly monitor the assessment results to be assured of the system efficiency. The assessment on the adequacy of the internal control system and the reviewing process on major systems shall be carried out at least once a year, and the results shall be disclosed in the Company's Annual Report.

6.2 The Boards appoint the Audit Committee that can officiate efficiently and freely.

- (1) The Audit Committee is composed of 3 independent directors, all of whom have full qualifications as stipulated by the SEC and the SET and at least one whom has competence and experience in reviewing the reliability of the financial statements, as named below:



Mr. Thakol Nunthirapakorn is the Chairman of the Audit Committee who have adequate competence and experience in reviewing the reliability of the financial statements, having graduated with a Doctoral degree from Col. Of Bad./Accounting, MIS, Economics, University of Arkansas, U.S.A. currently holds a position of adjunct professor in the University of the Thai Chamber of Commerce and had passed the Director Accreditation Program (DAP), Class 8/2004 and the Director Certification Program (DCP), Class 228/2016.

- (2) The Board specify duties of the Audit Committees in Charter, which in 2020 has reviewed 1 time. (shown in the topic "Management Structure" page 49)

6.3 Monitor, look after, and manage conflict of interests which may occur between Administration and shareholders including to prevent misuse of assets, information and opportunities of the business. Also, transactions that may involve in the business in the misbehave ways.

Conflict of Interests

- (1) The Boards direct and provide information security and mandates policies and producers of confidentiality, integrity and availability of information and manage market sensitive information. Moreover, the Boards make sure that the Committees, top management, employees and any relevant parties such as legal consultants, financial consultants to follow the information security system.
- (2) The company obeys and manage shareholders equally and set direction of management in conflict of interest in transparent, auditable and for consideration between companies and stakeholders. In case of the circumstances, the stakeholders must report to the company immediate and report to the Board Meeting to review that particular issues. The Committees must report the conflict of interest prior to the hearing of that agenda and record in the meeting minutes.
- (3) The company sets direction to prevent the Committees nor management whom may have conflict of interest participate in the approval process where in the vote of the Board of Directors, that particular Committees may not vote on the agenda.

- (4) The company regulates that the Committees and the first 4 managements report conflict of interests to the company by February of every year.
- (5) The Audit Committee shall present to the Board of Directors the related party transactions and transactions with conflict of interest which have already been carefully considered in terms of appropriateness. The Company has strictly followed the guidelines set forth by the Office of Securities and Exchange Commission and the Stock Exchange of Thailand concerning the determination of prices and conditions engaged with persons with conflict of interest just like a transaction made with external parties.
- (2) The Company has put in place disciplinary punishment measures to be taken against those who take advantage of the insider information by disclosing it and causing damage to the Company. The punishments include verbal warning, written warning, probation, termination of employment by firing or disposition, as the case may be, etc.
- (3) Moreover, the Company has informed the Board members and Top 4 executives of their duty to report their holding of the Company securities and penal provisions in accordance with the Securities and Exchange Act B.E. 2535 (1992) and the regulations of the Stock Exchange of Thailand. The directors and Top 4 executives have to report the holding of the Company's securities from the date of their appointment within thirty days, including when there is a change in securities holding within 3 working days from the date of purchase, sale, transfer or acceptance of transfer by themselves, their spouses and underage children to the Office of the SEC and notify the company secretary at least 1 day before purchase, sale, transfer or acceptance of transfer, In which the company secretary reports trade to the board of directors acknowledged every quarter.

Prevention of misuse of information

- (1) The Company strictly controls and monitors the use of inside information to prevent any abusive self- dealing and maintain fairness to all stakeholders. The Company has set written guidelines for keeping inside information and for prevention of the use of inside information for abusive self-dealing, and communicated the guidelines to all staff organization-wide for further practice. Moreover, directors, executives and employees are required not to trade the Company securities and/or to enter into any legal acts using inside and/or confidential information, which may cause the Company direct or indirect damage. In addition, directors, executives and employees in the work units receiving inside information of the Company must not use such information before disclosure to the public and also must not trade the Company securities by themselves, spouses and underage children, either directly or indirectly transaction (such as nominee through a private fund), within thirty day prior to the disclosure of quarterly and yearly financial statements to the public and until the period of 24 hours since disclosure to the public. The Secretary of the company creates schedules that prohibits silent period and submits to the Boards and management every year.

6.4 Prepare policies and clear guidelines of anti-corruption. Then, communicate to all levels including the general public for practical purposes.

- (1) The Boards approved "anti-corruption manual" on May 10, 2018 which is an ISO 9001:2015 certified document and the quality management Committees will examine producers of quality at least once a year to endure that in rules of operations are met according to the relevant laws of anti-corruption. It must be communicated to all Boards, management and employees, subsidiaries, joint ventures, other companies that control and agents (if any), Other related external parties such as partners domestic and international, customers through various channels such as Intranet, Digital Signet TV, Email, employees training to promote as company culture and value in 2020.

1	Asset Misappropriation	Burglary, fraud, obscenity, exploitation of company resources or obscuring evidence as well as the use of information or powers obtained from the performance of the company's duties to do any wrongful acts in all forms in accordance to obtain personal benefits and/or related persons.
2	Falsifying Financial Statements	To refrain from providing information or intentionally giving false information in the company's financial status report
3	Corruption	Any actions whether it is a presentation, promise, request a claim, giving or receiving cash or items instead of cash, property or any other benefit Including all forms of bribery with government officials or any other person both in the public and private sectors directly or indirectly to allow such person to perform or ignore the duty in accordance to obtain or maintain any other unfair business benefits to the company itself or those involved except where the law regulations, local traditions or trade tradition can be done.

Policies on Anti-Corruption

The Board of Director, Management, employees, subsidiaries, joint ventures, and other entities that may have a control over including agents (if any), prohibited or commit or accept any kind of corruption at all means. For direct and indirect benefits to personal and relevant parties neither one is a receiver or a giver or an offer of bribe both monetary and non-monetary to the government or private, and partners that the company exercise business with.

- (1) The company sets directions, procedures, and duties of responsible person including audit and review operations according to “Anti-Corruption Manual” regularly to meet changes of the business, rules, regulations, and the concerned law.

Important Anti-Corruption policies are as follow:

1. Aid of politics
2. Donate to charity and monetary support
3. Gift giving and receiving of assets or other benefits
4. Entertainment
5. Bribe and convenient fees
6. Assets or commissions from sales, trade discounts, agency fees
7. Procurement
8. Trade and investment
9. Financial report
10. Accept cash from customers or other parties
11. Payment to creditor or any parties
12. Loan, lending, creation of obligations
13. Conflict of interest
14. Relevant transactions
15. Save and storage of information on the computer
16. Resource management
17. Communicate policies internally and externally

- (2) The Boards will verify and review policies and Anti-corruption policy annually to meet changes of the business environment, rules, regulations, and the provision of laws, on May 14, 2020, the Boards reviewed the policy and distribute for use in the organization in June 12, 2020 for distributed to use in the Company and communicate with outsiders..

Operation in 2020

- Communicate policies and anti-corruption to all employees which counts as 100% through e-mail, Intranet and Digital Signet.
- Arrange “HARN Anti-Corruption” for employees and new recruits in total of 21 persons and all must pass the test on knowledge and policies of anti-corruption to stands for determination with 100%.

- review information, understanding, and create awareness of corporate governance, anti-corruption measures for the Board of Director total 9 persons, employee and management total 242 persons, which review knowledge and understand and assessment with 100%.
- Provide a risk assessment process from corruption that must cover all concerned departments, report the result to the Risk Management Committees, Audit Committee and the Board of Directors every quarterly.

Guidelines on supervision and supervision to prevent and monitor the risk of corruption

The company offers channels of complaint and clues to cover procedures of complaints, review facts and summarize including protect identity of the whistle-blower, stakeholders that may affect or risks that may receive from the operation of the business and actions of the Boards, Management, and employees relate to business ethics, violation of law and any action that may view as corruption.

- (1) Scope and complaints and whistle-blowing
- Any action that violate or not comply to the laws, rules/corporate governance rules, business ethics including policies, rules, policies of the company
 - Any action that is presumed as corruption or misbehave and to seek for interests that may not earn lawfully by law for personal use and/or other parties such as corruption, steal, fraud for example.
 - Any action that may make employees receive an unfair treatment from operating or seen flaws of internal control and suspect that it may be a corruption or make the company losing its benefits.
- (2) Persons that may give comments and clues
Employees, stakeholders, interests persons, commoners that seen, knew information or may affect from the operation of the business or from administer of the Boards, management, employees or from any action that concern scope of complaints and clues according to (1) above.
- (3) Channels and methods for reporting clues
Employees or others whom has inquiries and seek for advice on anti-corruption policy may contact “Chief Financial Officer” at

 Tel. (66)2 318 9744 ext. 4004

 Send mail by post to Harn Engineering Solutions Public Company Limited, Financial Department Corporate Governance Department 559 Soi Soonvijai 4, Rama 9 Road, Bangkapi, Huaykwang, Bangkok 10310

 Email : wisit.w@harn.co.th

(4) Channels

The person may complain or provide information with details and mark as “confidential” to the Chairman of the Audit Committee which is an Independent Committee through

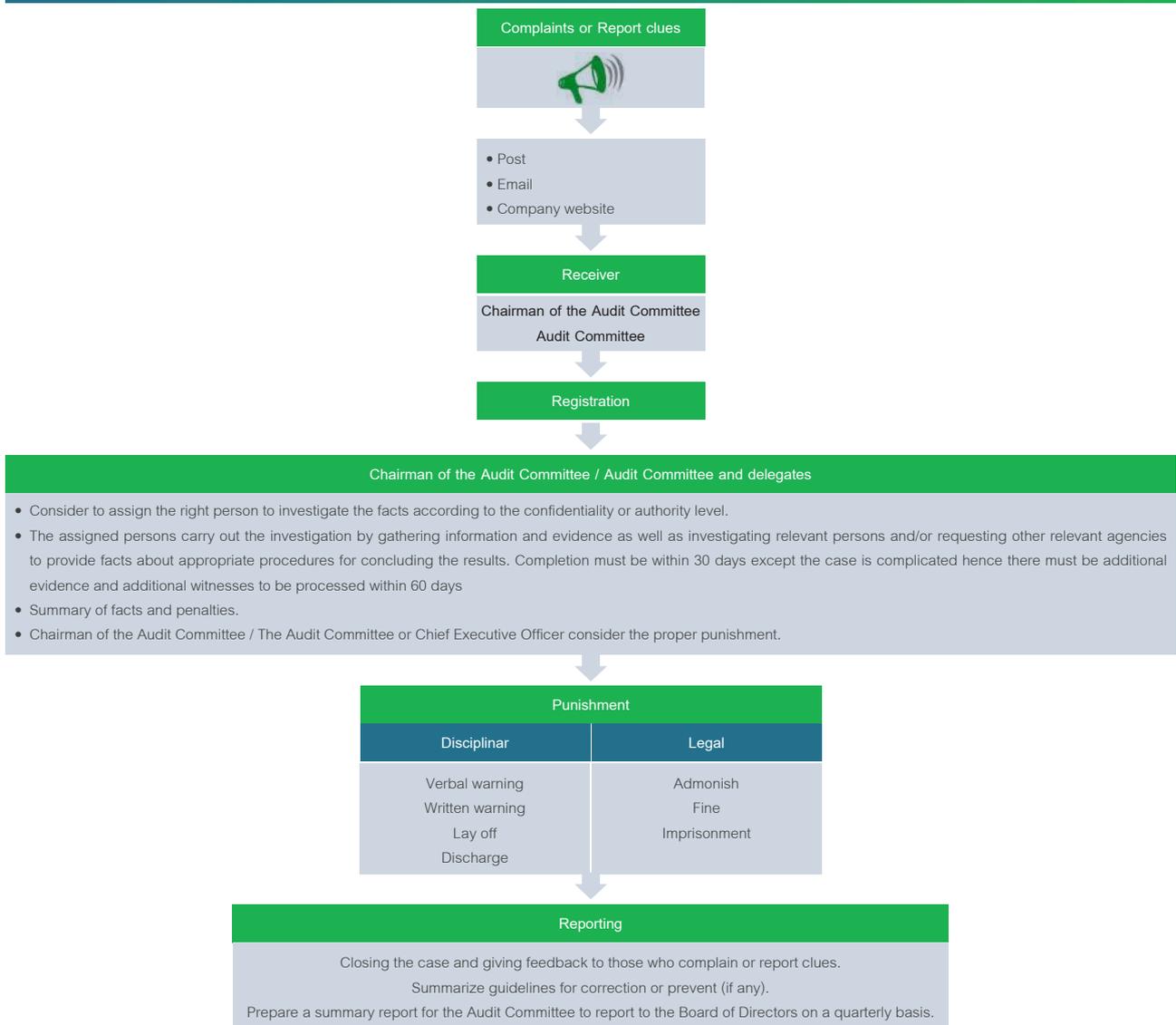
- ✉ To. Chairman of the Audit Committee
Harn Engineering Solutions Public Company Limited
559 Soi Soonvijai 4, Rama 9 Road, Bangkokpi,
Huaykwang, Bangkok 10310
- ✉ Email : chairac@harn.co.th
- 🌐 Website : www.harn.co.th

(5) Measures to protect whistleblowers

In order to protect the rights of the complainants and informants in good faith, the company will proceed as follows:

- Complainant Whistleblower as well as related parties will receive appropriate and fair protection from the company, such as not to demote, punish or negatively affect employees. No job change, job description, workplace, job suspension, intimidation, interfering with job performance, termination of employment, or any other unfair treatment.
- The company will keep the information regarding the complaint confidential. Not disclosed to unrelated parties Except as required by law.
- Related parties that have been informed of the subject or information relating to the complaint Must keep the information confidential And not disclosed to others Except when disclosure is required by law, if disclosure is made intentionally, the company will take disciplinary action, and / or take legal action, as the case may be.

Diagramme of the process of receiving complaints or report clues, investigation, punishment and reporting



Guidelines for monitoring and evaluating the implementation of the anti-corruption policy.

The company determined that it is responsibility and duty of the Boards, management, and employees to be aware and follow policies and corporate governance and business conduct of the company.

The company supports development and understanding to the Boards, management, and employees. Moreover, the company designated all managers to be responsible for and take this matter as important issue to develop employees under supervision to understand and obey the policies and corporate governance and business conduct of the company strictly.

The company will not perform illegal activities or any action that against the policies and principles of corporate governance and business conduct

1. If the Boards management or employees violate the principles or policies stated, they will be punished.
2. If any action that may believe be in violation of the law, rules, regulations and policies of the government, the company will consider passing on to the government for further actions.
3. If employees found a difficulty in decision-making or in operation that concern corporate governance / code of conduct but not stated in this document, the following questions should be raised to self as follow:
 - Is the action against the law?
 - Is the action results in severe conflict of interest?
 - Is the action effects major reputation of the company?
 - Is the action is acceptable and able to disclose to the society?

If found that the answer is a risk to one of the questions above, the employee must take that issue to consult with supervisor in order to assist in reviewing and proceed to the next step.

7

Ensure Disclosure and Financial Integrity

7.1 Manage financial reports and disclosure of information with integrity, accurate, and according to the principles, standards, and procedures.

Create Financial Reports

The Boards is responsible for financial of the company and communication of finance related information stated in the

However, if the employee or general public found any violation of the law and/or corporate governance, business conduct, please write a complaint letter through various channels listed in the complaint policy as follow:

- ✉ To. Chairman of the Audit Committee
Harn Engineering Solutions Public Company Limited
559 Soi Soonvijai 4, Rama 9 Road, Bangkokpi,
Huaykwang, Bangkok 10310
- ✉ Email : chairac@harn.co.th
- 🌐 Website : www.harn.co.th

Code of Conduct

The Board of Directors is committed to carry out the Company's business with integrity and fairness by defining the code of conduct to be adopted among the directors, executives and employees of all levels so that every member within the organization understands the ethical standard which the Company upholds in carrying out its business operation, as well as to set up a practice guideline to reflect corporate intention in conducting its business with transparency and fairness and with responsibility towards all stakeholders, the society and the environment, all of which are done through trainings and various forms of internal communication. Such code of conduct also reflects corporate values and practices adopted by the employees in compliance with the defined ethical standard. The Company has made announcements and informed all members across the organization acknowledge, including disclosure on the website. Which must be understood and strictly followed Both written compliance and following the spirit of honesty.

The Board of Directors Followed up to comply with the said ethics seriously, has reviewed and approved the use of business ethics at the Board of Directors' Meeting No. 2/2020 held on March 27, 2020 to comply with the relevant laws and notice on April 1, 2020 for distributed to use in the Company.

financial report. The financial report is arranged and certified by common accounting standards in Thailand. The company chose to disclose appropriate information and sufficient in the financial report at constant. The Audit Committees will verify quality of the report and internal control including reveal sufficient sensitive information as a notice in the financial report and reports to the Boards.

Disclosure

The Board of Directors attaches a high degree of importance on disclosure of accurate, complete, timely and transparent important information, both financial and non-financial, through reliable and easily accessible channels on an equitable basis. The Company has disseminated its information to shareholders, investors and the public through the channel and media of the Stock Exchange of Thailand and on the website of the Company. Its information is also compiled in the Annual Disclosure Statement (Form 56-1) and the Annual Report.

- (1) The Company has disseminated its information to shareholders, investors and the public through the channel and media of the Stock Exchange of Thailand and on the website of the Company. Its information is also compiled in the Annual Disclosure Statement (Form 56-1) and the Annual Report.
- (2) The Company is obliged to disclose information that affects decision making of investors and stakeholders. Information so disclosed, financial and non-financial, shall be accurate, complete, timely, reliable, transparent, not misleading and sufficient for investors to make decision, and shall accord with the criteria of Office of the Securities and Exchange Commission and the Stock Exchange of Thailand, including also other significant information that affects the Company share price.
- (3) The disclosure of financial information will be considered thoroughly with the stated aspects at minimum:

Types of Fees	2020	2019
	Dharmniti Auditing Co., Ltd.	
Audit Fee		
<ul style="list-style-type: none"> • Annual audit fee and quarterly review fee 	1,406,000	1,326,000
<ul style="list-style-type: none"> • Other expenses which cover miscellaneous expenses during work period such as overtime allowance traveling and telephone etc. 	per actual of expenses	per actual of expenses

- The result of the assessment is sufficient for internal control system
 - Comments of the auditors and recommendations relate to the internal control system and recommendations of the auditors through other channels (if any)
 - Comments of the Audit Committees
 - Relevant to main objectives, goals, strategies and policies of the company
- (4) The Company makes available brief reports on corporate governance policy, code of conduct, risk management policy, and social and environmental policy, and results of implementation in compliance with such policies including also non-compliance cases thereof together with reasons (if any) in the Annual Report and on its website.
 - (5) The Company prepares management discussion and analysis (MD&A) to support its disclosure of its quarterly financial statements when changes of Net Income or Net Profit is higher than 20% in the same quarter of last year so that investors access information on changes to the Company's financial status and operating performance in each quarter in addition to figure data in the financial statements.
 - (6) The Company discloses in the Annual Report audit fee and other service fees for the auditor. Which has been approved by the annual general meeting of shareholders for the year 2020.
 - (7) The Company discloses in the Annual Report information on the roles and duties of the Board of Directors and specific Committees, number of meetings held and number of meetings attended by each director in the previous year, as well as opinions in relation to performance of duties and directorship training and development for directors.
 - (8) The Company discloses in the Annual Report policy on payment of remuneration for directors and top executives of the Company that reflects their duties and responsibilities and types and nature of the remuneration, including also remuneration for any directorship on the board of subsidiaries (if any) in Annual Report of the Company.
 - (9) In case of the disclosure of the information concern one of the Committees in particular, that Committee should be aware of and able to reveal identity thoroughly.

7.2 Ensure sufficiency liquidity and solvency

- (1) The Boards ensures that the Executive Committee is the pursuer in liquidity and solvency including the evaluation of risks in finance and potential risks. The report must be made to the Boards regularly and the Executive Committee and Administration should cooperate to solve the problem at urgent in case lack of liquidity or solvency.
- (2) In approval of any transaction or to give opinion to the Shareholder Meeting, the Boards will review and ensure that the transaction will not affect continuity in business, liquidity or solvency.

7.3 Ensure that the business has contingency plans or other mechanisms that able to fix financial crisis with care to stakeholders

- (1) If the business potential is downwards and may unable to pay for debts or at crisis, the Boards will closely monitor and will operate the business with care and follow rules on disclosure of financial information.
- (2) The Boards will give a notice of financial crisis such as lack of continuous investment, low cash flow, etc. to Administration to monitor and report regularly.
- (3) The Boards ensure contingency plans in case of financial crisis with care and fair to stakeholders including debtors and follow up on problem solving with logics. The Administration must report the status regularly.

7.4 Create a report on sustainability as see fit

The company has not prepared a separate sustainability report but can disclose related information on obedience of the law, business conduct, anti-corruption policy, treating employees and stakeholders fairly and respect human rights. Environment

and social responsibility are also in the annual report where topics are listed from the most important matters to HARN's core business and respect standards of the report. The disclosure of operating plans distributed to divisions and results will be reported to the Boards and supervisors monthly and in quarterly to ensure that all operations and plans create values to the company sustainably.

7.5 Monitor the Administration. Appoint a position to look after investor relation and to communicate to shareholders and stakeholders such as investors and analysts appropriately, fairly, and in a timely manner.

The management of the company put importance in meet and greet, information exchange, ideas, opinions to shareholders, investors, analysts, reporters regularly to ensure that the fellows able to access company's information accurately, with integrity, transparency, and up to date especially those sensitive information regards to the stock price of the company. Available information must be shared to make the smart investment.

The company has not appointed the specific department. Currently, Mr. Wirat Sukchai, Chief Executive Officer is a delegated person who understands well in the business, objectives, goals, directions and acts as the investor relation. Channels of communication to investors, shareholders, analysts, related government sectors through are email: wirat.s@harn.co.th or phone (66) 2 318 9744.

In 2020, Executive Director, Chief Executive Officer, Chief Finance Officer of the Company and Chief Executive Officer of Subsidiary, participated in investor relation activities to announce policies and business direction including meet investors through channels and activities as follow:

Disclosure Channels	Purposes	Activities in 2020
Email: wirat.s@harn.co.th Telephone : +66(2) 318-9744	Open opportunity for general investor inquire about the performance opportunities and obstacles In business including important incidents that may affect the operation.	✓
Open to meet and interview in the form of a VDO Conference meeting	Provide opportunities for both domestic and international investors to inquire about strategies, business directions, as well as opportunities and obstacles in the company's business operations from management team	2 times
Listed companies meet investors' (Opportunity Day) founded by The Stock Exchange of Thailand	Quarterly business operation results, business direction with questions and answers from investors, analysers and etc.	4 times
Annual Report and pattern 56-1	Showing the operation results of the company annually	✓
Information dissemination via the company website www.harn.co.th / Investor relations	To be channel for submitting quarterly and annual performance data after the information is disclosed via SET website and other information such as investor relations news, basic information on investment etc.	✓

7.6 Support the use of information technology to distribute information

Apart from distributing information according to the policy and through channels of The Stock Exchange of Thailand; Annual Report (56-1 Form) and Annual Report. The company disclosed information in both Thai and/or English via various channels constantly for example company website (www.harn.co.th), Facebook: harn Engineering Solution Pcl.

8

Ensure Engagement and Communication with Shareholders

8.1 Ensuring that Shareholders are involved in making decisions on important matters of the company

(1) The Company is well aware of and respects the basic rights of shareholders, both as investors and owners of the Company. These rights include the rights to purchase, sell or transfer the securities they hold; to receive profit sharing from the Company; to adequately access information of the Company; to attend the shareholders' meeting; to express opinions; and to make decision on important issues, e.g. dividend payment, appointment or removal of directors, appointment of auditor, approval of significant transactions having impact on the Company's business direction, and amendment of the Company's memorandum and articles of association, etc. The main mentioned agenda that stated in the law or relevant rules and may has significant effects to the operation of the company will be proposed as a Shareholders Meeting through the Annual General Meeting within 4 months from the date ending the Company's fiscal year. However, in an urgent case where a special session is needed to consider and approve matters affecting or involving the interests of the shareholders, and thus requiring the shareholders' approval, the Board of Directors may call an extraordinary general meeting on a case by case basis.

- The 2020 Annual General Meeting of Shareholders on Monday, August 3, 2020 at 14.00 hrs. at parichart room, 3rd floor, golden tulip sovereign hotel bangkok, No. 92 soi saengcham, rama 9 road, bangkapi wubdistrict, huay khwang district, bangkok 10320, There were 155 shareholders who attended the meeting, 31 of whom in person and 124 by proxy, holding a total of 414,525,148 shares, which represented 70.9196% of the total issued shares of the Company.

In 2020, the Annual General Meeting of Shareholders, the Company thoroughly strictly comply with the government regulations prescribing precautionary Measures for Holding the Meeting under the

Circumstance of COVID-19, include was organized in accordance with the AGM Checklist, prepared by the Thai Investors Association (TIA), the Thai Listed Companies Association (TLCA), and Thailand Securities and Exchange Commission (SEC). In 2020, the Company received a full score of 100 points on AGM Checklist reflecting its continual commitment in organizing its AGMs with highest CG standard.

(2) Support and participation of shareholders

- Allowing minority shareholders to propose to add meeting agendas prior to the shareholder meeting date clearly, from 1 October to 31 December 2020, the company disclosed policies on propose meeting agendas in advance such as qualifications of the shareholders, limitations to propose agenda, submission procedures and review of the Boards on the company website, www.harn.co.th \ investor relations \ information for shareholders \ shareholders meeting and announced to the shareholder through the website of SET.
- Allowing minority shareholders to propose as an individual name as a Committee in advance from 1 October to 31 December 2020. Qualifications were published on the company website, www.harn.co.th \ investor relations \ information for shareholders \ shareholders meeting and informed shareholders through the website of SET as another.

However, there was no shareholders proposed agendas and no nominee names as the Committee at that time. The Secretary of the company reported to the Board to be acknowledge already.

(3) The Company has a policy to support and encourage all shareholders, including institutional shareholders, to attend the shareholders' meeting. The Company will prepare and send to the shareholders an invitation notice indicating the venue, date, time, agenda items, supporting information of the agenda items thoroughly and sufficient for the rights

of the shareholders, as well as the opinion of the Board of Directors on each agenda item indicated in the invitation notice, or in the supporting documents so enclosed.

- (4) The Company also distributed the invitation notice along with the 2019 Annual Report, in QR Code format by mail on July 8, 2020, 24 days before the meeting and were sent invitation for the Annual General Meeting on the company website: www.harn.co.th on June 29, 2020 in both Thai and English, 35 days before the meeting, and announced through news channel of the Stock Exchange that the company has already published the above information on the company website so that all shareholders had easy and timely access to the information, hence adequate time to study and consider the information needed in their decision-making.

Moreover, the Company announce the date of AGM newspapers for more than three consecutive days and 10 days prior to the AGM between 22 to 24 July 2020; thus allowed shareholders adequate time to prepare themselves for the meeting.

- (5) The Company allowed the shareholders to provide their opinions, suggestions, and questions until July 24, 2020, 10 days before the meeting under clear criteria set by the Company and notified to the shareholders along with the meeting notice, as well as posted on the Company's website.
- (6) In case the shareholders were unable to attend the meeting, the Company allowed them to assign the Company's designated independent directors or any other persons to attend the meeting on their behalf, by using either one of the proxy "form b" sent along with the invitation notice in which at 2 independent director was proposed as an option for proxy assignment of the shareholders.

8.2 In charge of Annual General Meeting and preparation with transparent, effectiveness and supports rights of shareholders

- (1) The Company fully facilitated the shareholders' attendance of the meeting exercise of their voting rights.
- The meeting venue was arranged to be easily accessible by the shareholders.
 - The shareholders had the opportunity to register their attendance 2 hours before the meeting began. Also, during the meeting, they were able to register their attendance without losing their rights.

- Assigned its staff to provide assistance and information during the verification of documents and the registration process.
 - Prepare sufficient drink water to the shareholders
 - Prepare stamp tax in case the shareholders delegate a personnel
 - Used a barcode system containing each shareholder's reference number in the registration form for the registration and vote casting process to ensure accuracy, convenience and promptness thereof.
- (2) The Company has no policy to add agenda items for the meeting without notifying the shareholders in advance if not necessary, especially agenda items involving important matters on which shareholders should have adequate time to study information before making decisions.
- (3) The Company provided voting cards separately for each agenda item to facilitate the vote casting and counting process. Upon the completion of the vote casting, the votes so casted were counted in combination with those indicated in the proxy forms. The results of the vote count were announced right during the meeting.
- (4) The Company conducted no act in a manner that would limit the shareholders' right to attend the meeting. All the shareholders had the right to attend the meeting any time during the meeting, and were allowed to freely raise questions and give comments or opinions.
- (5) The Board and top management members, and the auditor, as well as the independent legal advisor, attended the meeting (if any). Before the meeting started, the Company Secretary, to explain the meeting procedures, such as opening of the meeting, voting, and counting of votes casted by the shareholders on each agenda item in accordance with the Company's articles of association.
- (6) The Company provides an opportunity for the shareholders to exercise their right to elect each director individually.
- (7) The Company would declare the beneficial interests of the directors in the invitation notice. At the meeting, directors with beneficial interests or involvement in any agenda item would be notified by the chairman of the meeting to the attendees before considering that agenda item. Directors with beneficial interests in any agenda item would not be entitled to be present at the meeting during consideration of that agenda item.

- (8) The Company invited volunteers from the shareholders present at the meeting to witness the vote counting to ensure transparency in the voting process, and allowed the shareholders to enquire about the voting process and method.
- (9) The Company encouraged the shareholders to exercise their rights for protection of their interests by asking questions, giving opinions and suggestions, and casting their votes on important matters that may have impact on the Company, such as appointment or removal of directors, nomination of qualified persons to be independent directors, approve the appointment of auditors and determination of their remuneration, dividend payment, capital decrease or increase, imposition or amendment of articles and memorandum of association, approval of special transactions, and so forth.
- (10) Prepare quality assessment of the Annual General Meeting through a survey by shareholders and to use the data to develop the future meetings with transparency and beneficial to the shareholders.
- (11) Disclose important information of the company around the exhibition area of the Annual General Meeting including a corner for Investor Relations where staffs of HARN stand by and welcome inquiries that the shareholders may have.

8.3 Monitor disclosure of meeting agendas and the Annual Report to the shareholders sufficiently and accurately.

- (1) The Company disclosed the resolution of its AGM along with voting results on August 4, 2020 on the next day of the Annual General Meeting of Shareholders through SET's electronic system and the Company website. Which recording meeting minutes accurately and as see fit to the good corporate governance with the required information below at minimum:

- Names of the Committees and Boards that attended the meeting and ratio of the Committee that attended the meeting and non-attendees.
 - Ways of voting and counting the votes, agreement of the meeting, results of the vote (agree, disagree, N/A), voided ballot of each meeting.
 - Questions and answers in each meeting in details including names and last names of inquirer and respondent.
- (2) The Company prepared minutes of the AGM, through SET's electronic system and published in the Company website www.harn.co.th on August 14, 2020 within 11 days after the meeting, which complies with the regulations of the Stock Exchange of Thailand within 14 days from the date of the AGM.

② Compliance with the Company's principles of corporate governance in 2020

The evaluation of corporate governance of "Findings from the survey of corporate governance of the listed companies in Thailand, 2020" arranged by Thai Institute of Directors and supported and The Stock Exchange of Thailand and The Securities and Exchange Commission, Thailand, found that HARN received an overall of 95 scores which is "excellent" or 5 stars rating. The score was better than in 2019 which was 91 scores and the result of HARN in 2020 was significantly higher than those surveys of the listed companies in Thailand (scored at 83).

The Board of Directors realizes its role and duties and responsibilities as the corporate leader who has to monitor and supervise the Company to ensure sound business administration and create value for business sustainability through business processes. Therefore, review and exercise CG Code 2018 in total of 8 agendas and take recommendations from the above surveys and approved the following issues.

CG Code operation procedure	Justification or Alternative Measure
The Board of Directors should consider appointing the CG Committee.	Delegating the Corporate Governance Department to oversee and present to the Board of Directors for acknowledgment of the implementation at least once a year.
The Boards should consist of more than 50 percent of independent regulatory commission.	At present, the proportion of independent directors is three (3) person from nine (9) person. The proportion of independent directors is 33 percent because the products that the company distributes are various and need to have knowledge in products, markets, competitive conditions and customers' needs.
Sustainability Report	Sustainability reports are not yet operational. But disclosed information related to compliance with laws, ethics, anti-corruption policy, treatment of employees and stakeholders Including fair treatment and respect for human rights including social and environmental responsibility only the importance that affects the main business and reports in the Corporate Governance category, Social & Sustainable caegry in the annual report

Corporate Social Responsibility

HARN Engineering Solutions Public Company Limited (“HARN”), realizes the importance of operating the business based on sustainable development and are aware of the risks and all interested parties involved in the sustainability cycle of the company. The BOD therefore determines HARN’s social

responsibility in the vision, mission, values and established a commitment on sustainability that states “Quality Living through Sustainable Engineering” which will be further developed into long-term sustainable strategy of the HARN.

Quality Living through Sustainable Engineering		
SMART Business	SMART People	SMART Environment
Create good returns to shareholders and expand the business to continue to grow and sustainably	Create a happy, energetic and innovative work environment and is constantly evolving	Control business processes that reduce the environmental impact. Promote safety Occupational health and environment in all
High quality products and services Develop a complete solution and service Add product value through digital technology Excellent business management Using modern IT technology and management	Strengthen and develop personnel to be ready in 3 areas: SMART PRO, competence, SMART Care skills, ready body and mind, SMART Learning, creating readiness to learn digital technology.	Reduce and recycle waste from business processes Correctly dispose of hazardous waste Promote awareness of the environment

Priority and Participation by HARN Stakeholders

The Company respects the rights of all stakeholders, whether they are internal stakeholders like shareholders, executives and employees of the Company, or external stakeholders like creditors, customers, trade partners, competitors, the government sector, the society and the community. The Company is well aware that supports and viewpoints from all stakeholders will benefit the Company’s

business operation and development. Hence, the Company will comply with relevant laws and regulations so as to safeguard the rights of all stakeholders. In addition, operating its business, HARN is aware of the entitlements and expectations of all stakeholders brought into consideration according to the following guidelines:

Shareholders



: The Company has a policy of running its business with honesty, integrity and business ethics and puts best efforts in developing its business, and improving the operating performance to ensure consistent and reasonable returns on the investment of the shareholders and investors on a sustainable basis. The Company adheres to equitable treatment of its shareholders. Its directors, executives and employees are committed to performing duties with honesty and making decisions with transparency, carefulness, prudence and fairness to all shareholders for the maximum benefits of all shareholders. The Company will also present the situation of the Company such as performances, financial status, accounting status and other reports regularly, fully and accurately. The Company will notify all of the shareholders regarding the future trend of the Company both positively and negatively which is on the basis of probability with back up evidences and sufficient reasoning and will not seek for personal gains or benefits for other parties by utilizing the Company’s information that has not been disclosed to the public, or proceed with any action that may cause conflict of interests with the Organization.

Communication channels

- Conference, LINE AD, company announcement, intranet, email

Expectation

- Have fair working conditions. There is an opportunity to grow and progress.
- It is safe and hygienic.
- have suitable welfare

Performance

- Labor problems or complaints equal to 0%
- Compare results with the labor market every year: Central Division In standard Sales and Service Group
- Operational accidents equal to 0%
- The number of employees with the criteria metric is 100%.
- Working satisfaction is 76.05%.

Customers

- : The Company gives high priority to customer satisfaction. It is committed to procuring products with quality commensurate with product price and punctual delivery, and compliance with contracts, agreements or conditions, as well as after-sales service provided by quality teams. It has adopted the ISO 9001:2015 to the organization, and set a quality policy: We will build customer satisfaction with high quality products and services, advanced technology and business management of excellence.

Communication channels	<ul style="list-style-type: none"> • Visits, LINE AD, FB, Website, Seminar
Expectation	<ul style="list-style-type: none"> • Deliver goods and services in accordance with the agreement. • Employees have knowledge and understanding of products / services. Able to provide accurate helpful advice • Obtaining on-time after-sales service
Performance	<ul style="list-style-type: none"> • Product / service complaints were 0.014%. • The average number of employees who received product / service training is 2 hours. • Customer satisfaction is 92%.

Trade partners and/or creditors

- : The Company has a policy to create good relationship with our trade partners and/or creditors and to run the business on the basis of mutual benefits that are fair to all parties. The Company treats all trade partners and/or creditors with due regard to the maximum benefits of the Company, avoids the circumstances that may cause conflict of interest, and complies strictly with the commitment or agreement to achieve mutual benefits. The Company will provide certain guidelines concerning the creditor, especially on purchasing conditions, warranty, payment terms and failure to pay debt on time for the seller during the negotiation process and strictly comply with all conditions with the trade partners and/or creditors. Any inability to fulfill the conditions shall immediately be informed to the trade partners and/or creditors to find a solution and to prevent any harm and encourage trade partners and/or creditor to fight against corruption by agreeing to anti-corruption policies (for new registered sellers).

Communication channels	<ul style="list-style-type: none"> • Visits, websites, e-mails, conferences, seller evaluation
Expectation	<ul style="list-style-type: none"> • are fair. Follow the commercial terms • Stay informed And complete trading policy • Have been aware of the problem and how to fix it honestly.
Performance	<ul style="list-style-type: none"> • Seller evaluation twice a year • Seller evaluation results for 2020 are 98.02% and 95.44%.

Competitors

- : The Company has a policy to treat its competitors with adherence to fair competition rules, without seeking competitor's trade secret by any unfair or inappropriate method. The Company will abide by the competition rules, without any attempt to impair the competitor's reputation through false accusation or accessing the competitor's trade secret in a dishonest manner.

Employees

- : The Company considers its employees as its essential resource that will play an important role in supporting and driving the Company to successful operation. Therefore, the Company has a policy in place to improve the quality of life of all staff members with fair employment conditions, reasonable welfare packages, promising career path, and safe and sanitary work environment. The Company will enforce laws and regulations relating to the employees strictly, provide good working atmosphere and safe for the assets and lives of the employees. Treat the employees gently and with respect to their individualities and human dignity. Reward the employees fairly. Promotion and relocation, including rewards and punishments must be conducted fairly by considering the knowledge, abilities and suitability of each employee as the standard. Emphasize on the skills development of the employees by providing equal opportunities regularly. Avoid any unfair action that may affect the stability of the employees' jobs or threaten and cause stress to the employees mentally. The employees have the rights to appeal in the case that they are not treated fairly according to the system that allows for opinions and suggestions from all levels of employees equally and fairly.

Communication channels

- Shareholder meeting
- Opportunity Day performance conference
- Investor Relations Website

Expectation

- Sustainable business growth
- Continuously receive returns
- Business operations are transparent. Have good corporate governance

Performance

- Developing full range of solutions and services
- Pay a dividend not less than 40%
- CG Score "Excellent" level

Public sector

: The Company runs its business in order to support the country's advancement in accordance with the relevant laws, rules, regulations, as well as customary practice.

Communication channels

- Website www.ham.co.th
- Visiting the staff according to the notification
- Monthly report submission

Expectation

- Comply with all applicable laws, rules, regulations and regulations.
- Operate business responsibly and with transparency.

Performance

- There is no penalty for neglecting to comply with the law.
- Become a affiliate Thailand Private Sector Collective Action Coalition Anti-Corruption (CAC)
- CG Score "Excellent" level

Community, Society and Environment

The Company values the responsibility for the community and the society by strictly following various standards relating to safety, security, sanitation and environment, and with the impact on natural resources and the environment taken into account. The Company has continuously fostered awareness of social and environmental responsibility among the staff at all levels and created activities that will promote the society, the environment and the quality of life of the people. The Company cooperates and controls the strict use of the laws and regulations issued by overseeing departments, emphasizes on the communal and social activities by focusing on the development of the society, community, environment, creativity and the protecting the natural resources.

Guidelines for Sustainable Development of the dimensions of Smart Environment

In the course of business operation, the Company is committed business to fair with Guidelines for management according to moral, ethical administration, creating management credibility. The Company promotes fair competition to motivate innovations and improvement of products and services, which will in turn contribute to economic growth and better standard of living in the long run. In addition, the Company also promotes social responsibility in all stages of business chain, takes responsibility for its actions which may affect the society and the environment, and the effect on other businesses due to its procurement activities, in order to avoid or minimize the negative impact, as well as respects the rights in properties and commits no violation of intellectual property. In so achieving, the Company has established the following guidelines:

1. Promote fair competition

- Undertake the business activities in compliance with the law and competition regulations, and cooperate with the government authorities.
- Establish the procedure and measure preventing the involvement in or conspiracy with the behavior against fair competition.
- Ensure the employees be aware of fair competition and compliance with applicable competition law.
- Promote fair competition and activities, and support anti-monopoly and anti-dumping.
- Pay attention to the Company's social context and not take advantage of natural or social conditions, such as poverty, to unfairly create competitive advantages.

2. Promote social responsibility in value chain

- Integrate social and environmental measures in the measures and procedures for procurement and distribution.
- Encourage other relevant companies to accept and apply the similar policy in order to prevent unfair competition.
- Actively participate in elevating awareness of the principles and issues relating to CSR activities in which the Company takes part.
- Promote fair treatment to one another throughout the value chain, both in terms of costs and benefits of implementing CSR activities; that is to say, improve the capability to achieve the CSR targets in all operations of the value chains including appropriate procurement such as creating guarantee for fair price with adequate lead delivery time and an established trade agreement.

3. Promote respect for the right over property

- Appropriately check to ensure that the Company is legally allowed to use and grant the right to use a certain property.
- Not participate in any activity violating other person's properties, for example, inappropriately using advantageous marketing position, producing fake products, and intellectual property infringement.
- Fairly pay for the use or acquisition of a certain property.

The Company allows for reporting of any possible offence or filing any complaint of any breach of law or ethics through an independent director and a member of Audit Committee. The Company has an established procedure for actions to be taken after getting the report of such issue. The reported matter shall be investigated and then submitted to the Company's Board of Directors.

In addition, the Company also sets a practice guideline for the directors, top executives and employees, including code of ethics and accountability for the stakeholders. The guideline is aimed at creating behavioral standard for the operation of such personnel on an integrity basis. It is also a guideline for the Board members, top executives, and employees organization-wide to be aware and follow. In this regard, the Company has set a process to monitor such performance on a regular basis.

4. Responsibility to Consumers

The Company aims to be the leader in services with the "Sustainable Solutions" of the engineering system by utilizing the knowledge in products selection and innovations which

responds to the customers' demands in order to increase the quality and the safety of the consumers with high quality products, modern technologies, sales and services that are fast, accurate and worth the value. These are the tools which create customer's satisfactions, differentiate the products and increase the ability to compete, including securing the brand loyalty in the long term, gaining value to the Company. The Company always considers investing for the maximum benefits of the consumers as well.

HARN is committed to sharing the engineering knowledge of the company with its customers and the general public by posting contents on Facebook and the company's website to provide society with wider knowledge and deeper insights. Moreover, the company did a project called "Knowledge Sharing" aimed at training interested participants in the South to have the knowledge of how the cooling system works In Surat Thani, Chiang Mai and Bangkok. In 2020 total on 5 times with adherence to the principle "The giver learns and grows" motto.

The Company develops the responsibility to the consumers through the practical process and the staff activities in various departments following the ISO 9001:2015 certification, which is audited by the system on June 29-30, 2020.

With realization of the importance of products that enhance quality of life and safety of consumers, the Company has paid great care and attention to all processes on an end-to-end basis until the goods reach the consumers, as follows



Customer Satisfaction Survey in 2020

The Company has a policy in place to conduct a survey of customer satisfaction on an annual basis so as the company to get feedback on the delivered to customer in various fields:

In 2020 Customers' Survey found that overall score higher than in 2019 except the product, but the Company still has commitment that created customers' satisfaction as per our policy "We will create customer satisfaction by delivering products and high-quality services with advanced technology" The company will analyze customers' comments and recommendation to develop and improve our products and services to meet customers' need sustainably

Customers' Satisfaction	2020	2019	2018
Product (quality, variety of products)	89.73	89.98	88.06
Sale persons (product knowledge, services, problem solving)	92.92	90.30	87.93
Other services (management, providing information, contact channels with the company)	90.47	89.01	86.31
Average Customers' Satisfaction	91.04	89.76	87.43

5. Respect for Human Rights

We want more than a Green Building

Thailand has known and been familiar with Green Building for a while because many buildings and offices in the country have been built with the concept of Green or Eco. So, what is Green Building? The main answer, according to most people's understanding of this question, is probably "energy-efficient buildings which takes into account the use and impact on resources and the environment significantly"

When Harn Engineering Solutions Public Company Limited had a big project to move from the current home to the new home, the Company thus foresaw the direction and future trend in building sustainability for its employees, people, society, environment, and the world in the future, bringing forward the guideline in the business practice of Harn Engineering Solutions PCL. The idea was to create a building with the concept of Green Building by choosing a strong and different certification standard, the DGNB standard (Deutsche Gesellschaft für Nachhaltiges Bauen) from the German Sustainable Building Council instead of the US Leed Standard or Thai TGIB.

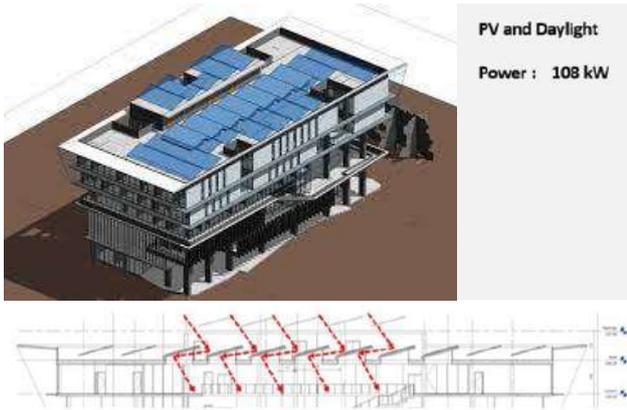
Better Workplace, Better Wellbeing Concept

Dr. Acharawan Jutharat, the architect who designed the new office building of Harn Engineering Solutions Public

Company Limited, explained that Green Building is a building concept that does not affect the natural resources and the environment in terms of the use of construction materials until the operation. She stated that "But for HARN, it is called 'Beyond Eco', it is the contemplation of "Better Workplace, Better Wellbeing", that is being comfortable, how to have a good mental health, emotional health, physical health, the answer is to have a good balance between the environment, natural resources, well-being, and beauty".

The DGNB standard looks at all dimensions holistically, especially on the control of different environments of individuals with different needs (Personal Life Control), which is a new trend where individuals or groups of people can adjust their environment as feel appropriate (Adjustable Personal Life). It is the origin of the Responsive Design, Adaptive Design and Design for Flexibility that goes beyond Eco Design and has become a key factor in better quality of performance and other activities.

The design of HARN's new office buildings was a combination of ideas, such as the 17 Sustainable Development Goals of the United Nations (UN), such as Zero Hunger, to prepare vegetable growing areas to create involvement or the concept of "Better Workplace, Better Wellbeing", where architects choose to plant trees to filter the light, dust and reduce the air temperature from the surrounding area, including the creation of the atmosphere by bringing natural light into the building, but without the heat (Indirect Light). The Skylight at the top floor, which looks like a saw tooth with opacity on the exposed part of the sunlight, then reflected light into the building. The the received light, therefore, is indirect Light that is soft, cool and energy saving both in terms of the cost of air conditioning and the use of artificial lights. Regarding sound, the architects think about Acoustic Feeling which makes the building quiet and soundproof to achieve a good focus on work. Even bringing natural wind into the building which can fill up about 20-30% of fresh air in the building and the air is moving all the time. We also use plants and water to reduce the temperature, that is, there is Harn has a landscape design that uses trees as shades for the buildings. The use of water, when the wind blows through the water it will absorb heat in the air which cools the air before entering the building. These functions are known as the use of nature to integrate the building creation to make the most efficient use of resources.

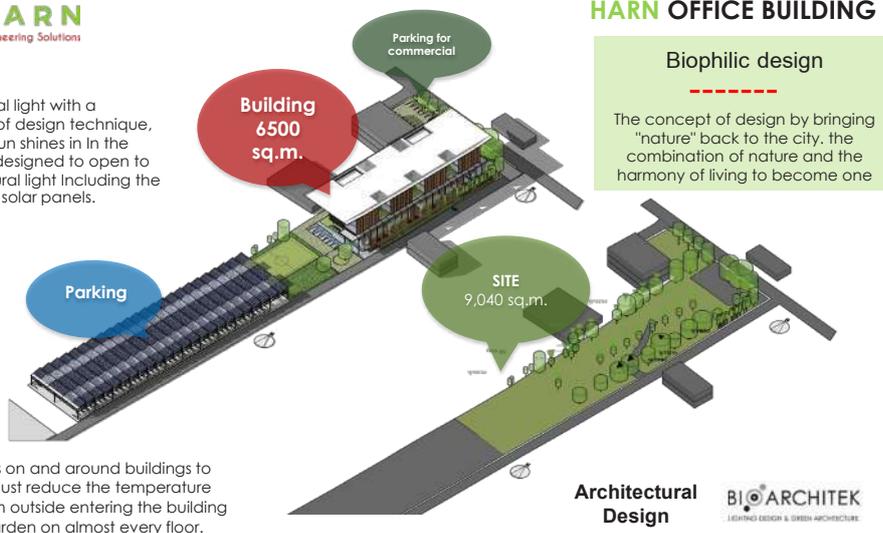


PV and Daylight
Power : 108 kW

The allocation of space inside the building is also important and influences the “Better Workplace, Better Wellbeing” concept as well. Floor 4-5-6 are designed as a central hall with stairs up and down to provide a connecting area for interaction of office workers which leads to working together and followed by the exchange of knowledge. Even zoning of bathrooms, storerooms and rooms that do not require air conditioning, architects also chose to place it in the hot, sunny direction of the west to create good hygiene. It can be said that everything, every element of the building has been through careful thinking as appropriate to the practical use. There is a balance between vision of beauty and considering all dimensions of the environment.



Use of natural light with a sawtooth roof design technique, so that the sun shines in the middle hall designed to open to receive natural light including the rooftop with solar panels.



HARN OFFICE BUILDING

Biophilic design

The concept of design by bringing "nature" back to the city, the combination of nature and the harmony of living to become one

Planting trees on and around buildings to filter light or dust reduce the temperature of hot air from outside entering the building and has a garden on almost every floor.

Architectural Design **BI@ARCHITEK**
LIGHTING DESIGN & GREEN ARCHITECTURE

Intelligent lighting

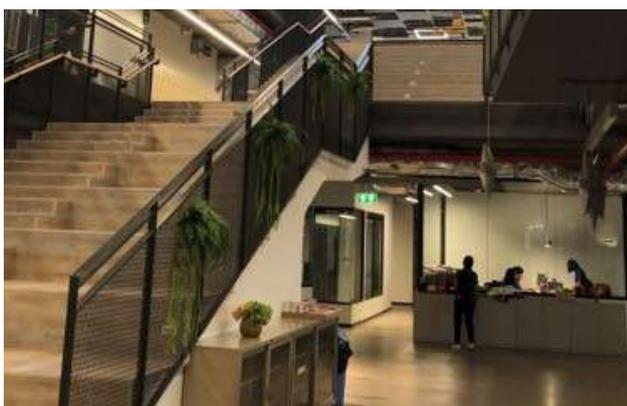
The subject of the indoor lighting system, HARN is one of the top companies of the country that use a PoE (Power over Internet) system, that is, not using a traditional power cable but the internet cable instead which contributes to the intelligence of the lamp.

Typically, the energy used for this lighting is approximately 25% of the total energy required by a building. It is second only to the air conditioning system. Therefore, it is imperative that we pay attention to energy savings in lighting systems.

HARN opted for a PoE Lighting system by Philips (or the current name is Signify) that has a smart system to control brightness. The system will adjust the light from the lamp when we harvest the sunlight from outside entering the building. There is also a motion sensor around the luminaire that will dim the light if no user is found and eventually extinguish the light to save energy. As each lamp is still able to receive and transmit large amounts of data, this allows us to see information about which areas of the office are popular and on the other hand, which area is not as popular. This information helps us manage energy, lighting, food, beverages and other conveniences for our employees.

Intelligent air conditioning system

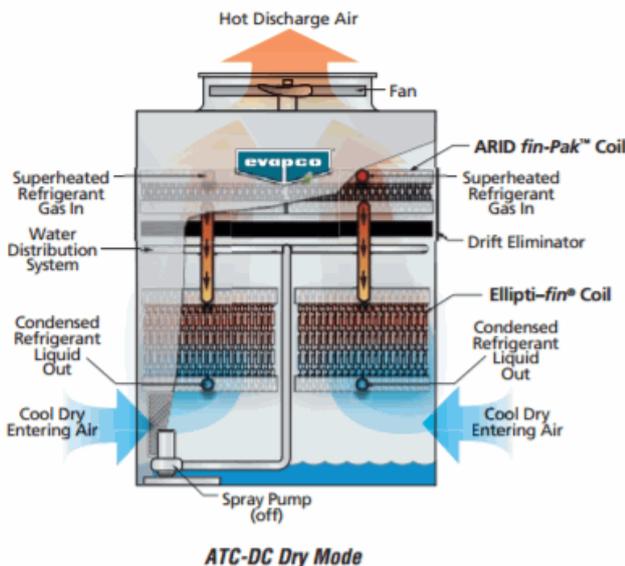
HARN has expertise in cooling system design in order to develop a high efficiency air conditioning system. HARN has designed a chiller by adjusting from a regular large single chiller into three sub-machines to work together according to the generated burden. Each machine always operates at its peak efficiency, and one of the three machines has a frequency system to optimize the cycle.



We will select the number of digesters according to the cooling load, that is, if there is a lot of load, it will power up all 3 machines. But if less, the cycle will gradually reduce the cycle down to two or one machine seamlessly.



In addition, an evaporative condenser is also used, allowing heat to be transferred out of the building in the form of water evaporation instead of blowing hot air out as usual, reducing the heat island, and because the evaporation temperature is several degrees lower than the temperature of dry air. This contributes a cooling tower, such as this one, a significant energy saver.



Communication and information systems

Communication and information technology plays an important role in HARN's new image in facilitating work and daily life.

Identity verification in and out of the office is extremely important and is associated with security. HARN has opted to use Face Recognition instead of Finger Scan to reduce

unnecessary contacts. We also reserve another layer of identity verification with a RFID card using a single card from the entrance to the car park, getting into and out of the office, entering stadiums, using elevators, and requesting printing of documents from copiers, etc.

We opted to use a mobile app to create a meeting room reservation system via mobile phones or via the Internet. We can also request to adjust the indoor temperature as a vote with friends if the temperature feels too hot or too cold.

Alternative energy

The building is equipped with 330 solar panels, each at 0.127 megawatts, to generate electricity from the sun to replace the use electricity of the Metropolitan Electricity Authority. This will reduce energy consumption by up to 170kWh per year, or about 30% of the energy used.



Building and energy management system

HARN chose to learn and establish a building and energy management system by its internal team, together with our affiliates with Internet of Things (IoT) know-how, we aim for energy to be less than 120kWh per square meter per year, which is considered very low for a building in Thailand.

We have assembled a team with expertise in refrigeration systems, air conditioning system, together with the IoT system to control the air conditioning system to save as much energy as possible from the temperature control, temperature customization upon request, adjustment and control the amount of cool air supplied at various points to suit the conditions, the adjustment of the chiller to at the point of maximum efficiency.

We have integrated a dashboard of this building's energy usage displayed on the screen for easy management and external learning.

With all that we intend to learn, we aim to create a future business by using this building as a learning, experimenting and improvement center. This building will become a living laboratory in building the knowledge and capabilities of the HARN team further in the future.

Guidelines for Sustainable Development of the dimensions of Smart People

Since the company conducts a trading business, not only the selection of quality products, but also the existing work systems and services which efficiently meet the changing of customers' demands due to economic conditions, technology or other factors are key to success. The company realizes that employees are crucial to driving the organization towards success and sustainable growth. However, to achieve that goal, the employees need to be smart, good and happy. The significant company missions to drive success as intended are to strengthen and develop employees to be ready in three areas: SMART PRO, the preparedness of competence and skills; SMART Care, the preparedness of physical and mental aspects; and SMART Learning, the preparedness of acquiring digital technology through the human resources administration policy of the company which designates to "be determined to create a working atmosphere to be happy, enthusiastic, with initiative and also the development to be well-rounded employees on the principles of accuracy, justice, positivity and professional responsibility." There are five practical guidelines.

1. Human rights respect

- The Company has guidelines to promote and motivates the practice based on the principle of basic human rights and equality by disregarding the differences between nationalities, race, skin color, sex, language, religions, political or any other beliefs, ethnicity or social background, wealth, birth or social status.
- The Company supports and respects the protection of human rights by regularly inspecting its own business so that it does not involve with activities which violates the human rights, for example, not supporting forced labor, or opposing to child labor.
- The Company respects the opinions of the employees which cover the freedom of opinions that is free from outside influences, obtaining information or ideas from various Medias, including providing the communication to freely listen to the opinions of the stakeholders.

2. Fair treatment of employees

In the year 2020, the company did not violate the laws regarding labor, consumers, employment, trade competition, environment, the practice guidelines are as follows:

- Strictly comply with the laws and regulations which relate to the employees.
- Provide a good working atmosphere that is safe to the lives and assets of the employees.
- Treat the employees gently, respect their individuality and human dignity.
- Fair remunerations for employees.
- The promotion, relocation, including rewards and disciplinary actions are conducted fairly by considering the knowledge, capabilities and suitability of the employees as the standard.
- Emphasizes on the skills development of the employees by providing regular opportunities and equally.
- Avoid any unfair actions which may affect the stability of the employees' jobs or threaten and create stress to the employees.
- Employees have the rights to appeal when they are treated unfairly according to the process and system in place.
- Listen to suggestions and opinions of the employees from all levels equally and fairly.

3. Strengthen and develop employees' capability; support culture and values of company in line with the goals, strategies and direction of business expansion.

4. All executives are responsible for human resource management in accordance with the policy and management guidelines of the company.

5. Enable information technology to develop human resources in various fields.

Performance results for 2020

• Manpower planning and recruiting

In 2020, the spread of the COVID-19 has caused HARN to slow the recruitment of employees as planned in the manpower plan. Recruitment will be performed only for urgent and important positions to the administration, as well as transferring positions if there is an available position in order to lighten the company's burden. However, HARN still maintains its planned employee-to-workforce ratio of 90% and has a turnover rate of 8%.

• **Performance evaluation**

HARN promoted the participation of supervisors and workers to define the goals and Key Performance Indicators (KPIs) altogether which led to the cooperation and good relationship between supervisors and their subordinates. To be successful, it was arranged to conduct the performance appraisal twice a year, dividing the results into three parts as follows:

1. KPI (Assess the performance of the assigned tasks which support the main goal of HARN)
2. API = Appraisal Indicator (Assess work behavior which is consistent with the culture and the values of HARN)
3. ATI = Attendance Indicator (Assess employees discipline at the workplace)

The assessment results will be used for consideration of the annual return and communicated to employees in order to find a mutual solution for improvement between supervisors and employees. In 2020, the assessment was completed at 100% for all employees.

• **Remunerations and Benefits for the Employees**

- HARN established a welfare committee to control and monitor all levels of employees in the organization to allow employees to fully participate in policy-making through the communication channel designated by HARN.

- HARN participated in the wage surveys and HR Benchmark 2020/2021 to reconsider compensation and welfare which would help HARN in attracting and retaining skilled workers, as well as keeping the cost of HARN to be reasonable. Besides the salary, employees will fairly and appropriately receive welfare and other benefits in various forms. (shown in the topic “Management Structure” item 7.2 Employee compensation page 64 and topic “Corporate Governance” Chapter 4 Recruitment and development of senior management and personnel management, item 4.4, page 75)

• **Human Resource Development**

The Company has consistently set to develop personnel at all levels equally, improve their higher performance and prepare them for tough competition. Learning opportunities and training should be provided for them so they can absorb knowledge, develop skills and gain experience that contribute to the growth of the company. Annual training in and outside the company, including business trips aboard, are made available for staff so as to develop their skills. Moreover, HARN puts a great emphasis on following up, assessing, applying gained knowledge to the workplace, sharing it with the team and related sectors.

HARN, has policies to empower and develop its personnel with goals, strategies complying with the way the company is expanding, include the values are used as a framework for training and developing personnel.



Due to the situation of the COVID-19 in 2020, it is unable to fully implement the human resource development plan. However, HARN still realizes the importance of developing the knowledge and necessary skills to perform the job, as well as other activities in order to promote good relationships within the organization. The work plan will be reviewed and updated in line with the changes that have occurred and also choose technology to further develop HARN’s competitiveness.

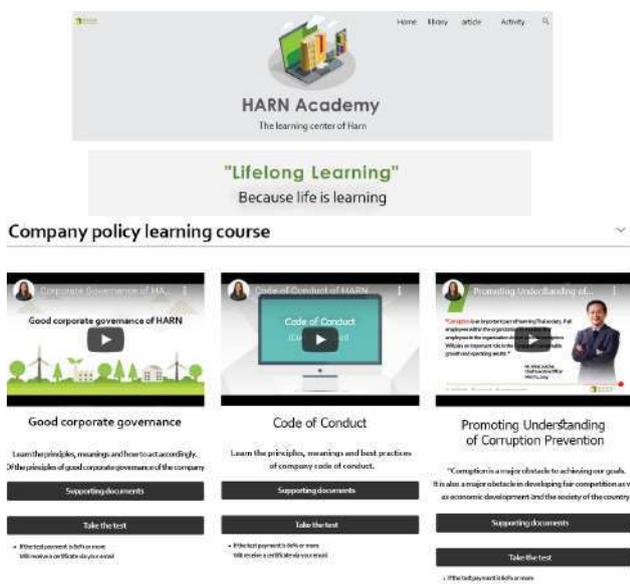
HARN is determined to execute its human resource development plan as soon as its employees start working at the company by providing training focused on knowledge and

basic skills necessary for the workplace. The training is also focused on developing good attitudes and EQ so they can be productive and successful at work. Motivating them to develop their potential is also necessary for their work and personal lives.

Sales and service which are central to the success of the business so training sales and service staff is necessary in order for them to gain knowledge, develop their skills, build a positive attitude, get motivated, develop a good personality, have a service mind, and boost their confidence in presenting company’s products and services to meet the needs of customers. So they can consult, give advice, solve

problems professionally and impress customers with successful management fulfilling the company's vision that says "We will be the leader in providing sustainable solutions ..." HARN also encourage its staff to have business trips and receive training focused on products, working systems and new technology abroad. Knowledge experience gained will be shared with the team and apply to products and services development in the future. In 2020, employee's sales and service are trained on average 3 hours per person.

Training focused on other related fields can help staff to work effectively such as the First Step Becoming a Speaker (HARN the Trainer) to train a speaker in the organization to be able to transfer knowledge and experience in principled and appropriate manners, and to further the Knowledge Management (KM) project and promote such knowledge management in the organization to be able to meet the business goals continuously and sustainably.



In addition, HARN also promoted employee learning through online learning on the website of the organization in the project of "HARN Academy" in which employees are able to learn anytime and anywhere by smartphone, tablet PC and notebook computer. The topics are related to the important policies of the company, personal finance, as well as the understanding on anticorruption in order to provide the understanding of the correct practice and the awareness of importance, roles and duties, which is a significant part of the effective prevention and anticorruption in the organization.

Summary of personnel development workshops in 2020

Summary of personnel development	Unit	2020	2019	2018	2017
The number of total staff	Person	244	254	252	244
The number of training hours	Hour	871	2,762	3,713	4,131
The number of training hours of each staff on average	Hour	3.57	10.87	14.73	16.93
Expenses on internal training	Baht	346,650	1,015,707	1,240,609	1,227,800
Expenses on training abroad	Baht	-	2,400,000	933,117	3,560,000
Score of bonding experience	% Bonding experience	76.70%	74.47%	68.00%	81.00%

Training course	Description	Unit	2020	2019	2018	2017
Basic Training Course	Focused on the fundamental knowledge of the business, its polices, its values, its cultures	% Number of trained staff	95%	17%	45%	100%
		Average of training hour	2.71	6.00	2.40	3.70
Training Course on Preparation for Greatest Strength	Focused on fundamental knowledge that the staff should have to be able to take their responsibilities, achieve their goals and develop an understanding towards the pros and cons of the tasks they are given.	% Number of trained staff	100%	50%	57%	44%
		Average of training hour	4.70	9.31	5.20	4.80
Training Course on How to Work Effectively	To get an insights into the effective way to work, factors affecting you or your work, and a way to adapting to change and increasing management efficiency level	% Number of trained staff	48%	54%	97%	49%
		Average of training hour	3.36	7.26	10.80	7.90
Training Course on Effective Management	Focused on management, learning process, innovation development to be more competitive	% Number of trained staff	0%	16%	12%	8%
		Average of training hour	0.00	6.75	47.60	82.10

- Occupational Health, Safety and Environment Policy**

The Company is concerned about all employees' safety in performance of duties and committed to taking measures to enhance safety standards in accordance with the Occupational Health, Safety and Environment Policy B.E. 2554 (2011). It has established Occupational Health, Safety and Environment Committee which meet monthly to report operation results regarding occupational health, safety and environment, follow up and rectify unsafe working conditions, and review as well as update "Safety Handbook" and work regulations and procedures for use as guidelines for safety in work performance.

During the past year of the COVID-19, HARN has provided notifications and reports on the infection situation closely, as

well as in the case of infected employees. The measures were executed through the announcement of the operation procedure and report of the results to supervisors and other related agencies, foreign travel prohibition, a 14-day self-quarantine for employees or their close relatives after traveling from abroad, as well as the reduction of crowds in the workplace or risks from public transportation. Employees were taking turns going into the office to work and those who work at home are able to work through the systems normally because of the support of technology; for example, working from home through the VPN system, online meeting, and health reports via Google form which can conclude health data and report to executives regularly.

**Number of accidents Classified by characteristics of danger and seriousness
Between January and December 2020**

Types of Accident	Numbers of Accident						Total
	Passed Away	Disability	Compensation of more than 3 days off	Compensation of less than 3 days off	No Day Off	Damage to Assets	
Objects or structures destructive or fell off	-	-	-	-	-	-	-
Being exposed to chemicals	-	-	-	-	-	-	-
Vehicle Accident	-	-	-	-	-	19	19

- Seminars and basic fire drills are held, including the planning and assigning responsible persons so that the practice is carried out correctly and efficiently on Wednesday, December 23, 2020. Illustrates Fire Drill and Evacuation Plan. Assessed by Department of Labor Protection and Welfare as 'Good'
- Annual medical check-up was arranged for employees on Wednesday, February 5, 2020, in which 241 employees undergoing medical examinations, 235 were actually examined, representing 97.51%.



Labor Relations Management

Part of the company's policies is to encourage its staff to participate in various activities so they can have a bonding experience, develop a good attitude towards the company, stay physically and mentally healthy, and have high employee morale, leading to a sustainable growth.

Participation in the TEMCA CHAMPIONS CUP 2020 football tournament



Activities on the occasion of Mother's Day

The company participated in the Happy Money Happy Retirement activity together with the Stock Exchange of Thailand to forward the financial knowledge to employees for the purpose of understanding and realizing the importance of personal financial planning. Employees are able to apply such knowledge in real life in order to build their own future financial security.

[Public relations] Happy Money the secret to making financial happiness: July 2020



- **Communication with employees**

The Company attaches importance to internal communication with employees to acknowledge the policy operational guidelines and various information related to work and understands in the same direction, the company has arranged communication channels with employees according to the importance of the matter to be communicated as follows:

- The annual staff meeting on March 14, 2020, to allow top executives to share vision, mission and corporate strategy in both short and long term for employees at all levels. in order to create an understanding of performance to achieve the same goals, as well as rewarding the employees whose years of experience have passed the criteria for the purpose of raising morale for work performance and being an important power to organizational success.



- Assessment of employees' engagement and work happiness and satisfaction. As the Company believes that career security, good work environment, good health and happiness at work will contribute to enhancement of work efficiency. In 2020, 182 out of the total of 243 employees, representing 74.90%, responded the questionnaire and the result of which was that the Company scored 76.70%.
- LINE Official Account: As a channel for speedy communication in addition to communication email and Internal network system (internet) and the Company website.



- **Human Resource Management and Development with Information Technology**

To provide accurate and complete information on Human Resources, as well as to effectively apply information in many aspects and reduce errors from operations, in 2020 the company has implemented the E-business Plus system for the payroll system, leave, overtime request, medical reimbursement, training, data collection and compensation of employees. On the system, employees are able to promptly make reports anytime and anywhere which can help to reduce the burden of audit and documentation for human resources. Moreover, from the development of assessment through a system instead of paper, training or meeting registration, training evaluation and testing are able to operate through digital technology.

Guidelines for Sustainable Development of the dimensions of Smart Environment

HARN encourages the efficient use of resources in all work processes (CSR in process)

The Company emphasizes on protecting the environment along the demand chains, from the process of products selection which does not harm the natural resources and is environmental friendly, strictly following the laws and regulations instructed by governing bodies, reducing the wastes and leftovers from the operation, save energy in the work place by regulating the use of air conditions, lights and computers by considering the maximum usage in order to lower the costs and

raise the awareness of sustainable energy saving for the good of the community and in response to the energy saving policy of the Government.

The company had revised the training manual used for training staff on safety/work environment and environment. The training for 18 new employees. The test results after the training show 74.29% of success, encouraging the staff to be aware of the right way to dispose waste via communication channels in the company such as email, Application Line Official "HARN" and Digital signage.



Waste separation before throwing away

Blue bucket	Green bucket	Yellow bucket	Red bucket
			
Recycling	Biodegradable	General	Hazardous
Plastic bottles, glass, paper, cans	Vegetable and fruit scraps	Plastic bag, foam box, snack	Envelope Light bulbs, batteries, batteries, aerosol cans

Source: : www.governmentcomplex.com



Danger from phone and battery wreckage !!

<p>chromiumls as carcinogen If inhaled, it may irritate the respiratory system. If touched, it will itch and wound the skin.</p>	<p>arsenic Damage the skin nervous system And digestive system If it gets too much, it can be fatal.</p>
<p>berylliumls as type of carcinogen If inhaled continuously, it is a disease affecting the lungs.</p>	<p>brominels a carcinogen Have a negative effect on the digestive system Affects the nervous system And immunity</p>
<p>lead Causing headache, nausea if accumulated Can cause lead poisoning</p>	



NOTE ! Do not throw away debris, phones and batteries that are not used together with normal garbage in the receiving area of hazardous waste For the relevant departments to be disposed of properly

Source: : www.checkraka.com

The Company realized the importance of reducing use of paper in work process with measures and practices set out. All the above activities were 100% completed in 2020, and set to be regular projects held continuously in the following years as below:

 Reduce	 Reuse	 Recycle
<ol style="list-style-type: none"> 1. Use email to send document eg. Gmail/Outlook 2. Store data via Data Center 3. Use e-meeting 4. Change paper-based surveys to Google Form 5. Reduce giving out handouts of seminars to soft copy via email 6. Implement "One Quality Project" to reduce paper by adjusting the working method, develop using digital systems 	<p>Print on one side printed paper</p>	<p>Placement of separate bins eg. General waste, used paper, bottles & plastics and sell reusable waste from paper, bottles & plastics.</p>

Corporate Social Responsibility after process

Social or Community Development

1. The Company is aware of its role as a good member of the society by supporting all public activities for social and environmental benefits and encourages the employees to join up and organize social activities is a reward for society when there is an opportunity in the right budget.
2. Collection of old desk calendars Handed over to the School for the Blind in Bangkok for use in the production of teaching materials.

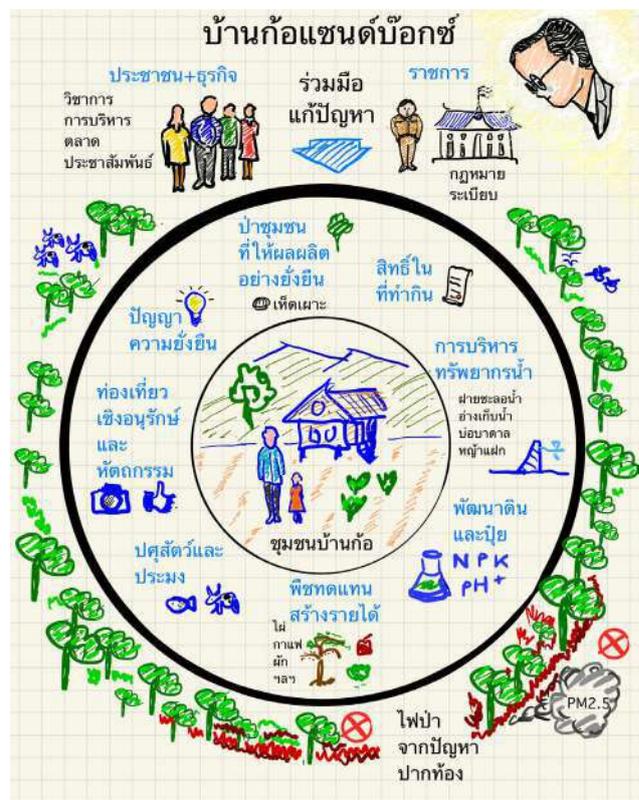


3. Dr. Jain Charnnarong, Director of the Company, has realized the environmental problems regarding PM 2.5 and begun to study the solutions to reduce forest fires and villagers' poverty which is called "Ban Kor Sandbox" to reduce forest fires and villager's poverty. On behalf of the president of Anandamahidol Foundation Scholarship Recipients' Club, he asked for the cooperation from the civic sector to help villagers and government officials in solving

forest fire problems and reducing the villagers' poverty through water and soil resource managing, reforestation, livestock and fishery, travel, and wisdom creation.

Ban Kor (Kor village), Kor sub-district, Li district, Lamphun province is one of the villages which has suffered the most from forest fires in Thailand. Over the past 22 years, the area of Mae Ping National Park which surrounds Ban Kor has been exposed to forest fires up to 20 times which amounts to over 300,000 rai (480 square kilometers) every year.

Even the new plants have been recovered after a few months of forest fires, the microorganisms which cannot be seen with the naked eye were also destroyed, especially fungi. The tree roots of the Dipterocarpaceae Family in the Deciduous Dipterocarp forest are colonized by fungi. Such fungi provide water and nutrients for plants, and in exchange, the plants will photosynthesize and provide sucrose and glucose to the fungi. The symbiotic relationships bring about the abundant trees in the Deciduous Dipterocarp forest, even in dry areas lacking minerals in the soil. When the forest fires often occur, microorganisms and fungi are destroyed, which results in a dwarf forest. Moreover, the fires prevent the soil from holding water, which is why Ban Kor had such a long dry season such that other plants could not be grown, except field corn.



Internal Control and Risk Management

The Company's Board of Directors has assigned the Audit Committee to review the appropriateness and effectiveness of the internal control system put in place by the management to ensure the Company has appropriate and adequate internal control system for monitoring of its business operation to achieve the targets and to accord with the applicable laws and regulations prescribed by the Stock Exchange of Thailand (SET) and the Securities and Exchange Commission (SEC), as well as the internal control framework under the international standards of the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Board has determined to

have the adequacy of the Company's internal control system assessed and reported directly to the Board at least once a year with disclosure thereof made available in the Annual Disclosure Statement (Form 56-1) and the Annual Report (Form 56-2).

The Audit Committee has constantly monitored and reviewed the Company's internal control and risk management systems and considered the internal audit results and the auditor's opinion on the appropriateness and adequacy of the internal control system, the operating results of which shall be reported to the Board on a quarterly basis.

Related Party Transactions

① Necessity and reasonableness of related party transactions

In 2020 the Company entered into a number of significant related party transactions with related parties. The transactions were necessary and reasonable as they were in the normal course of business operations or in support of its business. Transaction prices were determined at market or fair prices applicable to transactions with outside parties. The employee's

benefit receivables, was determined referring to the actuary's valuation reports. So the amount is fair and reasonable.

The Audit Committee has reviewed such related party transactions and considered them necessary, reasonable, and beneficial to the Company.

② Related party transaction approval measure or process

The Board of Directors' meeting no. 3/2014 on May 15, 2014 resolved to establish a policy and process for approving related party transactions between the Company and individuals who have or may have conflict of interest on or beneficial interest in the transaction, such as the major shareholders, directors, executives, persons with controlling power, connected persons, or related persons, etc. The Company will comply with the securities and exchange law, provisions or notifications or stipulations of the Office of the Securities and Exchange Commission, Capital Market Supervisory Board, and the Stock Exchange of Thailand regarding such matters, as well as the regulations regarding disclosure of information on related party transactions according to the Thai Accounting Standards and Thai Financial Reporting Standards set forth by the Federation of Accounting Professions under the Royal Patronage of His Majesty the King. In this regard, persons with conflict of interest or beneficial interest in the transactions shall not be entitled to take part in consideration of or to vote on the transactions.

In case prescribed by law to seek approval of such transactions from the Board of Directors' or the shareholders' meeting, the Company will designate the Audit Committee to attend the meeting to consider and give opinion on the necessity and reasonableness of the transactions.

Making of the related party transactions that are under general commercial conditions and transactions that are not under general commercial conditions shall be subject to the following criteria:

Related party transactions with general commercial conditions

For related party transactions with general commercial conditions done between the Company and persons that have or may have conflict of interest or beneficial interest, at present or in the future, the Company has set a scope for doing such transactions, which has been reviewed and endorsed by the Audit Committee and approved in principle by the Board of Directors. Within such scope, when any of such transactions is to be made, approval may be sought only from the management, subject to the conditions that such transaction shall carry commercial conditions similar to those under which a person of ordinary common sense would do with a general counterparty under the same situation, having the bargaining power without any influence from the status of being directors, executives or persons otherwise on an arm's length basis, and being commercial transaction to be done in general by the Company for business operation, or commercial transaction generally done by a company in the same business to support its own normal business, with fair prices and conditions, and would not result in the transfer of benefits, including the following commercial conditions:

1. Prices and conditions offered to the Company or offered by the Company to persons in general
2. Prices and conditions offered by related persons to persons in general
3. Prices and conditions proven by the Company that companies of similar nature of business would offer to persons in general

However, when there is any transaction made on an arm's length basis as stated above, the management will make decision thereon. After an approval is given, a report on such related party transaction will be prepared and submitted to the Board of Directors for information. In case that the Audit Committee and the Board of Directors find out that such transaction has not been undertaken in compliance with the policy in place, they may jointly discuss to find a solution.

Related party transactions with non-general commercial conditions or other transactions

For related party transaction with non-general commercial conditions or other transactions made between the Company and the persons that have or may have conflict of interest or beneficial interest, at present or in the future, the Company shall present to the Audit Committee to weigh the necessity and reasonableness in making the transaction as well as fairness of the price and conditions by comparing with a third party or

the market price, before presenting to the Board of Directors and/or the shareholders' meeting, as the case may be, for approval. In case that the Audit Committee does not have the specialized knowledge on such transaction, the Company will engage an independent expert or the Company's auditor to provide an opinion on such related party transaction to support the consideration and decision of the meeting of the Audit Committee, the Board of Directors, and/or the shareholders meeting, as the case may be. The Board/Committee members or the shareholders who have conflict of interest or beneficial interest in such transaction shall not be entitled to take part in consideration of or to vote on the transaction.

The Company will disclose the related party transactions made by the Company in the Notes to Financial Statements audited by the Company's auditor in the Annual Report and the Annual Registration Statement (Form 56-1).

③ Policy or tendency of entering into related party transactions in future

The Company expects to continue doing related party transactions from its normal business operation and in support of its normal business operation, i.e. rent of office building space and warehouse building and employee's benefit receivable. Moreover, the Company has no loan or facilities guarantee provided by directors and/or loan security with directors' assets. Any related party transactions existing or those to take place in future will be subject to definite pricing policy with fair market prices and conditions and not resulting in transfer of benefits, and in the best interest of the Company. The Audit Committee shall review and give opinions on the related party transactions with general commercial conditions or in support of the normal business on a quarterly basis.

To enter into related party transactions in future, the Company shall comply with the securities and exchange law, provisions or notifications or stipulations of the Capital Market Supervisory Board and the Stock Exchange of Thailand, and abide by the regulations regarding disclosure of related party transaction information of the Company or Subsidiary according to the Thai Accounting Standards and Thai Financial Reporting Standards by the Federation of Accounting Professions under the Royal Patronage of His Majesty the King.

Management's Discussion and Analysis (MD&A)

① Overview of business operations and significant changes

The end of the year 2019 until present, people around the world have been struggling with the Coronavirus disease 2019 (COVID-19), while the number of infected patients has been increasing every single day. Thailand and countries across the globe have taken measures to handle the pandemic, for example, surveillance, screening and lockdown measures, yet the economic conditions have continuously been in a recession since last year. Moreover, the fluctuation of currency's value affected the interruption in business and industrial sectors, and some businesses even had to close down or change their business models for the sake of maintaining their businesses. As a result, some customers of the Company paid off debts later than the terms and conditions of sale and/or postpone the shipment which causes the Company to have a longer period of inventory turnover, while the allowance for doubtful accounts increased according to the criteria of financial reporting standards from 2.26% in year 2019 to 4.59% in year 2020 of the outstanding receivables. However, the company reviewed, monitored and assessed the situation closely, as well as communicated to staff normally in order to build confidence and be able to alter strategies or make decisions in due time under these unpredictable circumstances.

In mid-2020, the Company has improved the inventory management performance and decreased the operating expense by centralizing the warehouse at one place in the property owned by the Company. Therefore, the investment property has been transferred to land, building and equipment amounting to 74.13 million baht, and it is planned to move to a new head office in early 2021. The new building is an energy-saving building which has been carefully considered in terms of its use and impact on resources and the environment (Green

Building), and the IoT Solution technology system has been used to control the systems in the building (Smart Building) as a modern building. The Company has envisioned the opportunity to create the new business, thus the Company took part in a joint invest with Aiyarafun group and established the company of "Aiyaraharn Co., Ltd." on July 8, 2020. The Company and its joint investor hold 65% and 35% of the issued shares respectively. The Company recognized the total revenues for the year 2020 and the year 2019 in the amount of 1,169.43 million baht and 1,393.97 million baht, respectively, a decrease of 16.11%, but the Company still managed to maintain a similar gross profit margin compared to the previous year, at 30.64% and 30.59%, respectively.

The significant impacts of changes in Thai Financial Reporting Standards (TFRS) in 2020 include TFRS 16: Lease which requires the lessor to record the right of use asset and lease liabilities in the financial statement for those with a lease term of more than 12 months, except leases where the underlying asset has a low value; moreover, to record interest expense and amortization expense for the right-of-use asset by superseded the classification of leases as operating lease and finance lease in accordance with the former standard. As a result, the financial ratio has changed, for example, Debt to Equity Ratio, Return on Asset, and Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA), especially in the first year of implementing this standard. For such changes, the Company recorded the right-of-use asset and lease liability at the end of 2020 amounting to 104.97 million baht, and the debt-to-equity ratio in 2020 increased to 0.26 times compared to 2019, which was 0.21 times.

② Management's Discussion and Analysis from the financial statements of the Company and Subsidiaries.

2.1 Overview Performance and Profitability of Financial Statements of the Company and Subsidiaries.

Operating Performance for 2018 - 2020

- Revenues from Sales and Services

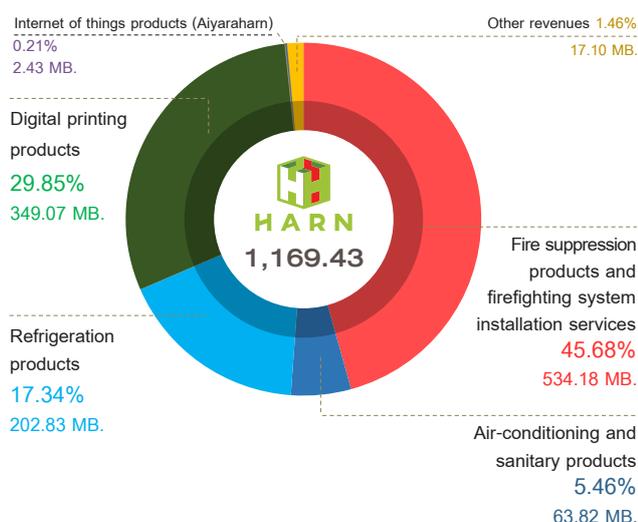
Revenue	For the year ended December 31					
	2020		2019		2018	
	MB	%	MB	%	MB	%
Sales and Services Revenues						
1. Fire Protection Products and Projects	534.18	45.68	644.12	46.21	569.59	42.00
2. Sanitary and Air-conditioning Products	63.82	5.46	81.10	5.82	89.33	6.59
3. Refrigeration Products	202.83	17.34	262.00	18.80	320.39	23.63
4. Digital Printing Products	349.07	29.85	379.66	27.24	364.96	26.91
5. Internet of things Products (Aiyaraharn)	2.43	0.21	-	-	-	-
Total Sales and Services Revenues	1,152.33	98.54	1,366.88	98.07	1,344.27	99.13
Other Income ¹⁾	17.10	1.46	27.09	1.93	11.75	0.87
Total Revenues	1,169.43	100.00	1,393.97	100.00	1,356.02	100.00

Remark : ¹⁾ Other income included gains/losses on investment in mutual funds and marketable securities, interest receivable, dividend income, and foreign exchange gains/losses, including rental and service income from investment properties etc.

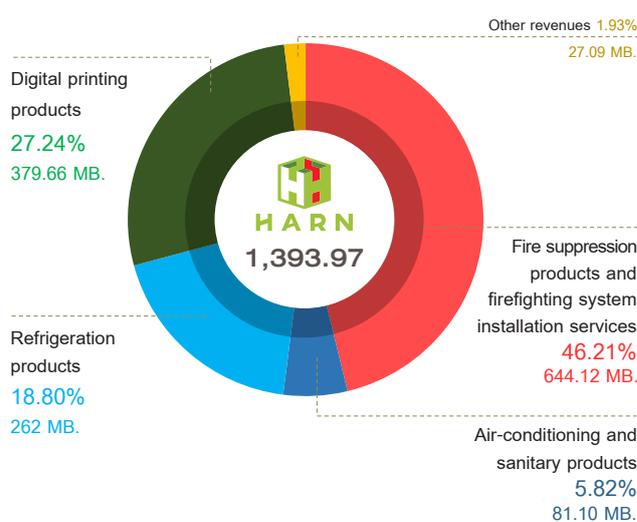
The revenue from sales and services consists of the revenue from Fire Protection Products and Projects at 45.68%, Sanitary and Air-conditioning Products at 5.46%, Refrigeration Products at 17.34%, Digital Printing Products at 29.85%, Internet of Things Products at 0.21% and other income of 1.46% with the total revenue between 2018 - 2020 of 1,356.02 million Baht, 1,393.97 million Baht and 1,169.43 million Baht respectively.

Although the revenue from Fire Protection System and Projects was affected by the coronavirus outbreak situation which caused the decrease of revenue in 2020 to 109.94 million baht, or 17.07% compared to 2019, the Company still has backlog orders with high value and are expected to deliver at significant value by 2021.

Revenue Structure 2020
from Financial Statements Duly Audited
and by Auditor



Revenue Structure 2019
from Financial Statements Duly Audited
and by Auditor



- Cost of Sales and Service

Costs	For the year ended December 31					
	2020		2019		2018	
	MB	%	MB	%	MB	%
Cost of Sales and Services						
1. Fire Protection Products and Projects	397.27	74.37	487.06	75.62	420.57	73.84
2. Sanitary and Air-conditioning Products	43.87	68.74	58.69	72.37	66.95	74.95
3. Refrigeration Products	138.12	68.10	174.11	66.45	220.85	68.93
4. Digital Printing Products	217.95	62.44	228.83	60.27	222.86	61.06
5. Internet of things Products (Aiyaraharn)	2.07	85.19	-	-	-	-
Total Cost of Sales and Services	799.28	69.36	948.69	69.41	931.23	69.27
Gross Profit	353.05	30.64	418.19	30.59	413.04	30.73

The significant costs of sales and services are the costs of products the import cost, transportation cost and including the salary of controlling engineers along with installation team and the contractor's fee for equipment installation, for the year 2018 to 2020 the company had cost of sales and services total

931.23 million Baht, 948.69 million Baht and 799.28 million Baht respectively estimated to be 69.27%, 69.41% and 69.36% of total income from sales and services. The gross profit margin was 30.73%, 30.59% and 30.64% respectively.

Distribution Cost & Administrative Expenses

Expenses	For the year ended December 31					
	2020		2019		2018	
	MB	%	MB	%	MB	%
Distribution Cost & Administrative Expenses						
Distribution Cost	107.33	9.18	117.56	8.43	119.08	8.78
Administrative Expenses	137.29	11.74	140.78	10.10	138.20	10.19
Total distribution Cost & Administrative Expenses	244.62	20.92	258.34	18.53	257.28	18.97
Total Revenues	1,169.43	100.00	1,393.97	100.00	1,356.02	100.00

- Distribution Cost

The Company's Distribution Cost for the year 2018-2020 was at 119.08 million Baht, 117.56 million Baht and 107.33 million Baht respectively, with the rate of 8.78%, 8.43% and 9.18% of total revenue respectively. When comparing 2019 and 2020, the distribution cost ratio which compared to total revenue has increased to 0.75% on the fixed expense, namely salary and benefits of sales persons, depreciation of rental equipment and demonstration equipment.

- Administrative Expenses

The Company's administrative expense for the year 2018 - 2020 was at 138.20 million Baht, 140.78 million Baht and 137.29 million Baht respectively, with the rate of 10.19%, 10.10% and 11.74% of total revenues respectively. Administrative expenses consisted of salary and employee welfare for supporting teams, executives and board of directors, rental of buildings and

warehouses, utility bills, depreciation and various professional fees. There are also non-monetary expenses related to the amortization of customer relationships and additional depreciation resulting from the fair valuation of fixed assets acquired from purchase and entire business transfer. This is in accordance with the requirements of financial reporting standards which is considered as an accounting expense but does not have to pay in cash (Non-Cash Items).

The proportion of administrative expenses when compared with the total revenues in 2020 has increased to 1.64% in 2019 of fixed expense in the same way as distribution cost. The recognition of allowance for doubtful accounts of customers whose repayment periods were extended and amortization of customer relationship increase in accordance with the guidelines of Thai financial reporting standards.

- **Net Profit**

The Company has total net profit of owners of the parent for the years 2018 - 2020 of 134.36 million Baht, 149.62 million Baht and 100.97 million Baht respectively. The Company's net profit margin was at 9.91%, 10.73% and 8.63% with comparison of total revenues in the respective years.

In 2020, the Company has jointly invested by establishing the company of "Aiyaraharn Co., Ltd." and the Company and its joint investor hold 65% and 35% of the total issued shares of such company. The objective of the Company is to improve the system of IoT Products and Solutions through the implementation plan which focuses on the services of smart building solution and initiates the business from the current customer base of the companies in the condominium, high-rise buildings and cold storage group in order to expand the business for more sustainable growth.

In 2019, the Company investment of subsidiary in Vietnam under the name of Harn Vietnam Co., Ltd is to support customers who moved their factories to Vietnam and to extend customers base overseas. However, the subsidiary was still in the beginning processes of searching for new customers as well as operating. They still depended on support from the parent company in terms of working capital and payment guarantee to order products from manufacturers in the UK in order to improve the Company's liquidity.

In the criteria for preparing the consolidated financial statements, there were the eliminations of intercompany

transactions, inventory's profit, intercompany receivable and intercompany payable, as well as investments and shareholders' equity of subsidiary company.

In the criteria for preparing the consolidated financial statements, there were the eliminations of intercompany, inventory's profit, intercompany receivable and intercompany payable, as well as investments and shareholders' equity of subsidiary company.

- **Other comprehensive income (OCI)**

The Company gained the comprehensive income of year 2018- 2020 in the amount of 134.36 million baht, 147.98 million baht and 100.57 million baht, respectively. The Company recognized the exchange differences on translating the financial statements of the Vietnamese subsidiary company net of tax in the year 2020 and 2019 in the amount of 0.40 million baht and 0.05 million baht, respectively.

In 2019, the Company recognized the loss from net actuarial assumptions of employee benefit net of tax of 1.59 million baht, according to the Labour Protection Act which prescribed the additional severance pay rate in case of termination of employment. The maximum severance pay rate was set at 400 days of the employee's latest wage rate for an employee who has worked for 20 consecutive years or more, which increased from 300 days and the amendments in other relevant financial assumptions.

- **Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA)**

EBIT and EBITDA	For the year ended December 31					
	2020		2019		2018	
	MB	%	MB	%	MB	%
Earnings Before Interest and Taxes (EBIT)	125.53	10.73	186.95	13.41	167.51	12.35
Depreciation and Amortization - cost basis	16.34	1.40	15.47	1.11	14.52	1.07
Depreciation and Amortization - fair value appraisal	0.71	0.06	1.25	0.09	1.83	0.13
Customer Relation Amortization - fair value appraisal	17.95	1.53	14.90	1.07	14.90	1.10
Earnings Before Interest, Taxes, Depreciation and Amortization (EBTDA)	160.53	13.73	218.57	15.68	198.76	14.66
Total Revenue	1,169.43	100.00	1,393.97	100.00	1,356.02	100.00

The Company obtained the Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA) in 2018 - 2020 in the amount of 198.76 million baht, 218.57 million baht and 160.53 million baht, respectively, accounting for 14.66%, 15.68% and 13.73% when compared to the total revenue, respectively. In 2020, monetary profit decreased due to the lower revenue from sales and services, while distribution cost and administrative

expenses reduced to a lesser proportion. In addition, the recognition of the allowance for doubtful accounts increased due to the fact that some receivables lacked liquidity and/or paid off debt later than the credit term. However, this was in accordance with the best forecasting in consideration of possible risk which was based on data on previous repayment and independent expert estimates. (More details are shown in the topic of account receivable.)

2.2 The Company's Asset Management Capability the Company and Subsidiaries

Financial Position Analysis as of December 31, 2018, 2019, 2020

The Company had the total assets as of December 31, between the years 2018 - 2020 of 1,548.59 million Baht, 1,596.30 million Baht and 1,657.46 million Baht respectively.

As of December 31, 2020 major assets as percentage of total assets comprised cash and temporary investment in a proportion of 18.89%, trade account, other receivables and other current contract asset of 15.91%, inventories 15.56%, investments property accounted for 9.33% and the goodwill is

20.19% while the customer relationship is considered another intangible asset, accounting for 2.43%, both goodwill and relationships with customers had been tested for impairment in accordance with financial reporting standards annually.

As of December 31, 2019 major assets as percentage of total assets comprised cash and temporary investment in a proportion of 15.76%, trade account, other receivables and other current contract asset of 20.83%, inventories 19.11%, investments property accounted for 14.41% and the goodwill is 20.97% while the customer relationship is considered another intangible asset, accounting for 3.65%, both goodwill and customer relationships had been tested for impairment in accordance with Thai financial reporting standards annually.

Trade Receivable

Trade receivable	As of December 31					
	2020		2019		2018	
	MB	Turn over (days)	MB	Turn over (days)	MB	Turn over (days)
Trade Receivable by Segments						
1. Fire Protection & Sanitary Products and Projects	136.64	84.39	165.65	76.88	139.86	76.79
2. Refrigeration Products	35.53	90.39	61.17	87.83	64.91	77.26
3. Digital Printing Products	46.12	54.62	61.85	57.78	58.34	56.58
4. Internet of things Products (Aiyaraharn)	-	-	-	-	-	-
Total Trade Receivable by Segments	218.29	80.29	288.67	73.68	263.11	71.42

Trade and other current receivables	As of December 31					
	2020		2019		2018	
	MB	%	MB	%	MB	%
Trade and other current receivables						
Trade receivable	218.29	86.97	288.67	89.39	263.11	88.79
Other current receivables	36.05	14.36	34.73	10.75	26.90	9.08
Current contract assets	8.16	3.26	6.84	2.12	11.79	3.98
less Allowance for Doubtful Accounts	(11.51)	(4.59)	(7.29)	(2.26)	(5.48)	(1.85)
Trade Receivable and Other Receivables - Net	250.99	100.00	322.95	100.00	296.32	100.00

As of December 31, 2020 The Company's account receivables can be divided into 4 products groups which are 1) Fire protection, sanitary and air conditioning systems 2) Refrigeration system 3) Digital printing system and 4) Internet of things system with the account receivable turnover, In 2018 - 2020 (excluding other receivables and allowance for doubtful accounts) of 71.42 days, 73.68 days and 80.29 days

respectively and has finance lease receivables due within one year were classified to trade and other current receivables.

The Company had a policy to provide an allowance for doubtful accounts for the estimated losses that may arise from the inability to collect from receivables. TFRS 9: Financial instruments prescribes the businesses to recognize the

expected credit loss by considering the past and present debt repayment history, as well as the future economic situation forecasting that may affect customer debt collection, and hire outside experts to calculate the expected rate of debt collection, and also estimate the allowance for doubtful accounts of the Company. In 2018 - 2020, the Company recorded the allowance for doubtful accounts at the rates of 1.85%, and 2.26% and 4.59% of net trade and other receivables, respectively. In 2020,

the allowance for doubtful accounts has been higher than the previous year since some customers have been affected by the economic situation and lack of liquidity, so they are unable to pay their debts on time. The following is the information on the debt collection of the customer by the value of the payment, term credit and average collection period in three main business units of the Company (excluding information of subsidiary companies).

Accounts Receivable	year 2020			
	Collection Amount (%)	Average Credit Term (days)	Average Collection (days)	Overdue (days)
1. Fire Protection, Sanitary and Air-Condition Products				
Top 20	41.37	53.46	89.82	36.36
Top 50	60.68	54.28	90.89	36.61
Top 100	76.44	52.59	87.55	34.96
Total	100.00	47.53	79.93	32.40
2. Refrigeration Products				
Top 20	67.52	45.09	71.82	26.73
Top 50	87.71	43.65	70.42	26.77
Top 100	95.31	43.09	69.21	26.12
Total	100.00	42.25	67.89	25.64
3. Digital Printing Products				
Top 20	34.97	43.19	60.26	17.07
Top 50	57.26	38.88	58.27	19.39
Top 100	72.58	37.04	55.79	18.75
Total	100.00	34.54	53.56	19.02
Overall Products				
Top 20	28.18	51.47	86.18	34.71
Top 50	42.68	50.98	83.97	32.99
Top 100	57.46	49.24	80.23	30.99
Total	100.00	42.86	70.20	27.34

The information on the repayment period shown above, it can be seen that the number of days of receiving payments are higher than the average of the original credit of all three business units; fire protection sanitation and air conditioning products were 32.40 days above average credit term, refrigeration system products were 25.64 days above average credit term, the

digital printing system product was 19.02 days above average credit term and the overall figure was higher than the average credit term 27.34 days. However, the Company has reviewed the credit limit, term credit and followed up on debt repayment regularly in order to reduce credit risks to be appropriate and competitive.

Inventories

Finished Goods	As of December 31					
	2020		2019		2018	
	MB	Turn over (days)	MB	Turn over (days)	MB	Turn over (days)
1. Fire Protection & Sanitary Products and Projects	132.30	111.57	137.10	91.79	137.40	99.70
2. Refrigeration Products	61.51	165.50	78.61	149.21	63.75	113.58
3. Digital Printing Products	53.29	95.55	70.13	104.44	60.81	82.79
4. Internet of things Products (Aiyaraharn)	-	-	-	-	-	-
Total Finished Goods	247.10	121.69	285.84	105.38	261.96	98.95

Inventories	As of December 31					
	2020		2019		2018	
	MB	%	MB	%	MB	%
Inventories						
Finished Goods	247.10	95.83	285.84	93.71	261.96	86.05
Goods in Transit	40.82	15.83	43.59	14.29	58.62	19.26
<u>Less</u> Allowance for obsolescence and slow moving stocks	(30.07)	(11.66)	(24.39)	(8.00)	(16.14)	(5.30)
Inventories - Net	257.85	100.00	305.04	100.00	304.44	100.00

As of December 31, 2020, The Company had inventories divided into 4 products groups which are 1) Fire protection, sanitary and air conditioning systems 2) Refrigeration system 3) Digital printing system and 4) Internet of things system with the inventory turnover (excluding goods in transit and before allowance for loss on devaluation of inventories) of 2018 - 2020 was 98.95 days, 105.38 days and 121.69 days respectively. In 2020, there is lower inventory turnover. This is because some customers postpone their products delivery and some products have not yet been completed to orders and has ready-for-sale products and services from the backlog orders which have been received from customers and orders in the future.

The company has a policy to allowance for obsoleted goods or slow rotation items by setting two criteria when considering allowance for obsoleted goods or slow rotation, are 1) goods of two or more years old, 2) annual turnover rate less than 20% of the items of units of inventories for two consecutive years, The Company believes that the condition for the allowance for obsoleted goods or slow rotation will be enough conservatism to maintain the inventory value state no higher value than the Net Realizable Value according to the Thai Financial Reporting Standards. However allowance for obsoleted goods or slow rotation is considered low for the year 2018 to 2020 at 5.30%, 8.00% and 11.66% of the net inventory respectively.

Investment property

Property type	Net book value (million baht) As of December 31		
	2020	2019	2018
Land	135.29	172.65	172.65
Factory Buildings	18.35	54.18	55.58
Building Improvement	0.75	2.39	2.65
Tools and equipment	0.21	0.75	0.94
Total investment property - net	154.60	229.97	231.82

According to the Board of Directors meeting No. 5/2018 on 9 November 2018, it was resolved to purchase land with warehouse size of 6-2-00 rai in the amount of 117.00 million baht. The utility space of the warehouse building consisted of three stalls of two-story reinforced concrete building with utility space of 5,690 square meters, as well as the Permit for factory operation (Ror Ngor. 4). Previously, two lessees occupied this land and building. The contract of rent would expire on 30 April 2020 and 15 March 2021 (the lessee extends the lease for an additional year). During 2020, the Company has changed the purpose of owning some of the land and buildings from the original purpose to be used as the Company's warehouse by canceling the contract of the warehouse's rent leased with a third party and another related party. The Company began to use the warehouse in their Company's area from May 2020 and therefore the Company has transferred the investment

property at book value of 74.13 million baht to land, buildings and equipment.

Two parcels of land, buildings and construction were assessed from two independent appraisers by the market price criteria in the valuation of land and depreciated replacement criteria in the valuation of construction. According to the report dated 22 December 2020 and 23 December 2020, the fair value amounted to 159.51 million baht.

The company has income from rental of investment properties for the year ended 31 December 2020 and 2019 in the amount of 6.10 million Baht and 11.30 million Baht respectively and operating expenses in the amount of 0.97 million Baht and 2.57 million Baht respectively. Such decreased rent and expenses were caused by the expiration of the lease of one tenant in April 2020.

Property, Plant and Equipment

Property type	Net book value (million baht) As of December 31		
	2020	2019	2018
Land	37.36	-	-
Buildings and structures	34.44	-	-
Tools and equipment	4.74	2.03	1.18
Furniture and office equipment	11.51	5.70	7.94
Vehicle	10.43	11.97	11.98
Assets for rent and demonstration	8.47	10.97	11.56
Assets under construction	22.63	-	0.02
Total Property, Plant and Equipment	129.58	30.67	32.68
<u>Less</u> impairment allowance	(0.05)	-	-
Property, Plant and equipment - net	129.53	30.67	32.68

As of December 31, 2020, the company has property, plant and equipment - net of 129.53 million baht which increased by transferring from investment property and its objectives of holding from the rent to be a warehouse of the Company with the book value of 74.13 million baht, as well as the in-progress assets which increased from investment in technology equipment systems and furniture of the new headquarters

building. One parcel of land, buildings and construction was assessed by an independent appraiser at the market price criteria in the valuation of land and depreciated replacement criteria in the valuation of construction. According to the report dated 23 December 2020, the fair value amounted to 78.89 million baht (book value as of 31 December 2020 equal to 73.53 million baht).

Goodwill and customers relationship

Property Type	Net book value (million baht) As of December 31		
	2020	2019	2018
Goodwill	334.67	334.67	334.67
Customer relationship	104.31	104.31	104.31
<u>Less</u> accumulated amortization	(63.98)	(46.03)	(31.13)
Customers relationship - Net	40.33	58.28	73.18
Total Goodwill and customer relationship	375.00	392.95	407.85

Goodwill is an intangible asset to the company. It arrives from entire business transfer from Chillmatch Co., Ltd and QIIS Co., Ltd. It is done by issuing shares of 675.36 million baht. The swap ratio is equal 0.67. This is to exchange for net identified assets of both companies at fair prices of 340.69 million baht. This leads to intangible assets being valued at 334.67 million baht. Under the financial reporting standards, Goodwill must be reviewed every year for impairments. To test the impairments of Goodwill in financial statement for the years ending 2020 and 2019, the company has listed value in use from expected future cashflow of cash generating unit (CGU) i.e. refrigeration products and digital printing products. Expected net cashflow in 5 years' time and adjusted in 0% terminal growth rate. Impairment of current value with impaired rate that is risk reflective to cash generating unit. The discount rate for the years ending 2020 and 2019 were 6.12% and 4.47% respectively. Under Capital Asset Pricing Model (CAPM), it is concluded that

there is no impairment in Goodwill. This present current value of net cashflow is excess the intangible assets and non current assets identifiable of those businesses.

Customer relationship are intangible assets, estimated from the business' values of Chillmatch Co., Ltd and QIIS Co., Ltd by the certified appraiser from the list of the Securities and Exchange Commission. As reported on 3 October 2016, the company issued policy to write off customer related intangibles with straight-line method for 7 years, In addition, the company has regularly record total sales and sales portion, and compare total sales of each cash generating unit. This helps in impairments calculation. In conclusion, it is some impairment of customer relationship, for customers who have not continuously made purchases with the Company after the purchase and acceptance of the entire business transfer in the amount of 3.05 million baht, the Company recognizes this impairment as amortization in the Y2020 income statement.

Trade and Other Current Payables

Trade and Other Current Payables	As of December 31					
	2020		2019		2018	
	MB	Turn over (days)	MB	Turn over (days)	MB	Turn over (days)
Trade Payables	93.63	47.80	104.65	44.38	128.37	45.69
Other Payables						
- Accrued Expenses	42.08	n/a	51.32	n/a	47.00	n/a
- Others	31.95	n/a	38.43	n/a	34.81	n/a
Total Trade and Other Current Payables	167.66	47.80	194.40	44.38	210.18	45.69

Cash Conversion Cycle

Description	For the year ended December 31		
	2020	2019	2018
Average collection period (days)	80.29	73.68	71.42
Average sales period (days)	121.69	105.38	98.95
<u>Less</u> Average repayment period (days)	(47.80)	(44.38)	(45.69)
Cash Conversion Cycle (days)	154.18	134.68	124.68

The Company had the cash conversion cycle for the years 2018 - 2020 in the amount of 124.68 days, 134.68 days and 154.18 days, respectively. The overall cash conversion cycle has increased as a result of an increase of the collection period and the inventory period, while the payment period was slightly longer. From the policy of maintaining a relationship with foreign partners by whom the Company was appointed as a distributor of world-famous products, if the Company loses its distribution

of significant branded products, it may cause the long-term revenue of the Company. To maintain the good relationship, it should be initiated from the maintenance of financial credit and still able to bargain prices of products and services. The cost of the product was the most important cost of the trading company which would increase the competitiveness and maintain the profitability of the Company sustainably.

Types of credit limits and interest rates

Types of credit	Facilities (Million Baht)		Interest rates (% per annum)	
	2020	2019	2020	2019
Overdraft	10.00	11.00	MOR, MOR-0.50	MOR
Letter of Credit / Trust Receipt	150.00	160.00	MLR-1, MMR	MLR-1, MMR
Letter of Guarantee	74.00	54.00	1.25 - 2%	1.25 - 2%
Forward Contract	560.00	562.39	-	-
Promissory Note	-	5.00	-	MLR
Total	794.00	792.39		
Forward Contract (Million USD)	7.00	7.00		

In the year 2018 - 2020, The Company's liquidity level is high, as can be seen from the liquidity ratio of 3.48 times, 3.98 times and 4.37 times respectively. This shows that the company is efficient in managing its liquidity and working capital better. The company obtains capital structure that is not of loan from

banks nor financial institutions. Therefore, there is not payable interest and debt to equity ratio is relatively low. The company has short term loan and credit to support the expansion of its businesses and/or to invest in engineering business in the future.

Foreign Exchange Risks

Currency	2020				2019			
	Import Value in Foreign currencies	% Proportion	Forward contract	Proportion	Import Value in Foreign currencies	% Proportion	Forward contract	Proportion
United States Dollar	7,700,239	48.31	6,890,000	89.48	9,659,953	47.23	9,820,000	101.66
Euro	3,064,174	21.78	2,420,000	78.98	4,318,729	23.40	3,840,763	88.93
Pound Sterling	3,632,810	29.27	3,137,000	86.35	4,491,826	28.03	4,070,000	90.61
Yen	7,275,900	0.43	5,061,500	69.57	14,845,600	0.67	10,655,550	71.78
Singapore Dollars	31,580	0.14	800	2.53	600	0.00	1,000	166.67
Other	61,214	0.07	-	-	936,610	0.67	-	-
		100.00				100.00		

Currency	2020			2019		
	Trade account payables As of 31 Dec 2020 (Foreign)	Risk hedging		Trade account payables As of 31 Dec 2019 (Foreign)	Risk hedging	
		Forward contracts outstanding (balance)	% Proportion		Forward contracts outstanding (balance)	% Proportion
United States Dollar	500,370	653,237	130.55	1,345,940	1,236,671	91.88
Singapore Dollars	1,250	-	-	-	-	-
Euro	370,476	191,999	51.82	242,514	263,532	108.67
Pound Sterling	847,666	612,775	72.29	519,138	622,823	119.97
Yen	177,920	-	-	198,050	198,050	100.00
Chinese Yuan	-	-	-	5,554	-	-

Foreign exchange gains and losses

unit : Million Baht

Description	2020	2019
Unrealized gain (loss) on exchange rate	0.33	(0.21)
Realized gain (loss) on exchange rate	1.61	4.84
Total gain (loss) on exchange rate	1.94	4.63

The Company entered into forward contracts with banks, based on consideration of appropriate foreign exchange and delivery period to ensure availability for debt settlement and by keeping abreast of updated information on and analysis of foreign exchange and Baht to decrease currency volatility risk. On average, the Company purchases more than 80% of its futures contracts compared to foreign currency purchases, while most of the sales of products are domestic products in Thai baht currency. It is, sometimes, impractical to adjust the product price in accordance with the increased cost of the product immediately. Therefore, the Company may be affected by the fluctuation of exchange rates which will affect the cost of products and the gross profit of the Company. However, the Company has an agreement for some customers to settle prices in USD, EUR and GBP on the Company's foreign currency deposit accounts. It is considered that the Company protects against exchange rate risks.

As of 31 December 2020, the Company had protected against the risks in currency exchanges of USD, EUR and GBP for its trade payables in foreign currencies, including the purchase orders which cannot be cancelled (Firmed

Commitment) due to the high value of the products, and the Company issued sales orders to customers by agreeing to the terms of payment in Thai baht. The Company has no policy to speculate in currency fluctuations since it is not a core business and does not have enough expertise in forecasting future movements in exchange rates, but it only wants to reduce the exchange rate risk that will affect the inflow and outflow in the future to be in a controlled level. As a result of the aforementioned impacts, the Company recognized foreign exchange gain in the amount of 1.94 million baht in 2020 and 4.63 million baht in 2019.

Moreover, as of the end of 2020, the Company had a USD 1.06 million deposit from a local institution in order to protect the foreign exchange risk of product orders from abroad as well.

2.3 Liquidity and Working Capital

2.3.1 Cash Flows from The Company's Financial Statement

Description	For the year ended December 31		
	2020	2019	2018
Net Cash Flow from Operating Activities	184.43	150.99	163.44
Net Cash Flow from (Used in) Investing Activities	100.10	40.37	(94.26)
Net Cash Flow from (Used in) Financing Activities	(105.25)	(93.52)	(81.83)
Effect of translation adjustment on foreign currency financial statements	(0.31)	(0.05)	-
Net Increase (Decrease) in Cash and Cash Equivalents	178.97	97.79	(12.65)
Cash and Cash Equivalents - B/F	127.10	29.31	41.96
Cash and Cash Equivalents - C/F	306.07	127.10	29.31

Analyzing the Cash Flows Statement for the year ended December 31, 2020

The Company had net cash flows from the business operation in 2020 of 184.43 million baht, an increase 33.44 million Baht when compared to 2019, mainly due to the decrease in net profit 48.74 million baht, Debtors and other debtors (before allowance for doubtful account) decreased by 67.96 million baht and inventories (before allowance for stock obsolescence) decreased by 20.74 million baht. This includes creditors and other creditors decreased by 35.58 million baht. The cash flows that had been received from the investing activities in 2020 of 100.10 million baht, from cash flow from selling mutual funds of 116.89 million baht and cash flow used in buying equipment and intangible assets of 17.57 million baht.

The cash flows used for financing came from the dividend declaration at the rate of 0.18 baht per share, representing 105.21 million baht, an increase of 11.69 million baht from the previous year.

Analyzing the Cash Flows Statement for the year ended December 31, 2019

The Company had net cash flows from the business operation in 2019 of 150.99 million baht, an decrease 12.45 million Baht when compared to 2018, mainly due to the increase in net profit 15.26 million baht, Debtors and other debtors (before allowance for doubtful account) increased by 15.35 million baht and inventories (before allowance for stock obsolescence) increased by 12.39 million baht. This includes creditors and other creditors decreased by 15.98 million baht.

The cash flows that had been received from the investing activities in 2019 of 40.37 million baht, from cash flow from selling mutual funds of 45.74 million baht and cash flow used in buying equipment and intangible assets of 7.24 million baht.

The cash flows used for the financing activities came from the dividend declaration during 2018 at the rate of 0.16 baht per share, representing 93.52 million baht, an increase of 11.69 million baht from the previous year.

2.3.2 Capital Structure from the Financial Statement as of December 31, 2020, 2019, 2018

The Company had the total liabilities on the December 31, between years 2018 - 2020 of 281.38 million baht 274.64 million Baht and 339.83 million Baht, the significant components of the liabilities were account payables and other payables income tax, deferred tax, employment benefits and lease liabilities etc., and other current liabilities without interest-bearing liabilities.

As of 31 December 2020, the company has total liabilities of 339.83 million baht which increased from the year 2019 of 65.19 million baht. Lease liabilities have been increased to 104.97 million baht and trade and other current payables have been decreased to 32.18 million baht.

As of 31 December 2019, the company has total liabilities of 274.64 million baht which decreased from previous year by 6.74 million baht. Creditors decreased by 15.78 million baht and employment benefits increased by 8.84 million baht in accordance to actuarial report in debt calculation hypothesis and changes in regulations.

With The Company's capital structure that does not need to rely on any bank loans this results in The Company having no interest expense, high liquidity and low debt to equity ratio, making the Company able to payout its dividends to shareholders consistently. During 2018 - 2020, the dividends were paid at 0.16 Baht, 0.18 Baht and 0.13 Baht per share, representing the dividend payout ratio per net profit equal to 69.57%, 69.23% and 76.47% respectively, the annual dividend for 2020 is not confirmed until the approved by the Annual General Meeting of Shareholders.

2.3.3 Important ratios as of 31 December 2020, 2019, and 2018

Financial Ratio		2020	2019	2018
Debt to equity (D/E ratio)	times	0.26	0.21	0.22
Return on asset (ROA) ¹⁾	%	7.72	11.89	11.15
Return on Equity (ROE) ²⁾	%	7.65	11.56	10.83

¹⁾ Use EBIT in calculation

²⁾ Use net profit in calculation

The company has low debt to equity ratio. In 2018 - 2020 were 0.22, 0.21 and 0.26 respectively. The returns on asset (ROA) for the years ending 2018 - 2020 were 11.15%, 11.89% and 7.72% respectively and the return on equity for the year 2018 - 2020 were 10.83%, 11.56% and 7.65% respectively. In 2020, the Company recorded right-of-use assets amounting to

104.97 million baht and lease liabilities at the same amount in the financial statements. As a result, there was a slight increase in the debt-to-equity ratio, and the return on assets ratio and return on equity ratio have decreased since the net profit of 2020 has decreased.

Report of the Board of Directors' Responsibility for Financial Reports

Dear Shareholders,

The Board of Directors is responsible for the financial statements of Harn Engineering Solutions Public Company Limited ("Company's") (previously known as Fire Victor Public Company Limited) prepared in accordance with The Thai Accounting Standards and Thai Financial Reporting Standards under Accounting Act, B.E. 2543 (2000) and accounting interpretations and practices enforced by the Federation of Accounting Professions under the Royal Patronage of His Majesty the King, and pursuant to the regulations of the Securities and Exchange Commission regarding preparation and presentation of financial report under the Securities and Exchange Act, taking into consideration appropriate and consistent accounting policies and based on careful judgments and reasonable reporting in the preparation of the financial report, as well as adequate and transparent disclosure of important information in the Notes to Financial Statements according to the Report of Independent Auditor, for the benefits of the shareholders and investors in general.

The Board of Directors has established and maintained good corporate governance and appropriate risk management and internal control systems to assure that the accounting

information is correctly, completely and timely recorded, and adequate to sustain the Company's assets and prevent any fraud or any material act of irregularities.

The Board of Directors has appointed an Audit Committee comprising Independent Directors to oversee and review the reliability and accuracy of the financial reports, the assessment of internal control, risk management and internal audit to ensure efficiency. The Audit Committee's opinions on these issues are included in the Report of the Audit Committee presented in this Annual Report.

The Board of Directors is of the opinion that the internal control and internal audit of the Company can give assurance that the financial statements of Harn Engineering Solutions Public Company Limited and Subsidiary for the year ended December 31, 2020 exhibit its financial position, operating results and cash flows accurately and appropriately in material aspects in accordance with the Thai Accounting Standards and Thai Financial Reporting Standards, and the audit of which has been performed by the Independent Auditor according to the auditing standards with opinion given unconditionally in the Report of Independent Auditor presented in this Annual Report.

Dr. Thakol Nunthirapakorn
Chairman of the Board

Mr. Wirat Sukchai
Chief Executive Officer

Report of the Audit Committee

Dr. Thakol Nunthirapakorn

Chairman of the Audit Committee



Dear Shareholders,

The Board of Directors appointed, the Audit Committee consists of three independent directors as follows:

1. Mr. Thakol Nunthirapakorn
Chairman of Audit Committee
2. Mr. Sothitorn Mallikamas
Member of the Audit Committee
3. Miss Voranuch Supaibulpipat
Member of the Audit Committee

The Audit Committee oversees review of the Company's financial reports to ensure that they are accurate, has appropriate and effective internal control and internal audit, and its business operations are compliant with applicable laws regulations and policy. The Audit Committee is also responsible for proposing to appoint and terminate the external auditor of the Company's, including considering the appointment, transfer and termination of the employment the internal auditors of the Company's, considering the Company's disclosure of information in an accurate and complete manner, and executed Board-assigned and charter duties, which conform to the requirements and best practices for audit committees according to the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET) with Mr. Wisit Wachiralappaitoon as the Secretary of the Audit Committee, perform duties within the scope of duties and responsibilities under the Audit Committee Charter.

In 2019, the Audit Committee held four meetings. The three Committee members attended all the meetings held. Including consultation with the executives, the internal auditor, and the external auditor on relevant issues. Salient points can be concluded here:

1. Reviewed the quarterly and annual financial statements:

Collaborating with the external auditor and relevant members of the executives, the Committee reviewed the quarterly and annual financial statements for the Company's and the consolidated financial statements. It also examined information disclosure and the external auditor's focus on Key Audit Matters (KAMs) indicated in the auditors' report which were audited by Dharmniti Auditing Co., Ltd. To this end, the Committee inquired and reviewed the credibility of estimated figures, the management's assumptions requiring discretion, display of transactions, and the impacts of the Thai Accounting Standards and Thai Financial Reporting Standards as well as the criteria of the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET) as appropriate in the material aspects, and as regards disclosure of information in an adequate, complete and reliable manner and useful for related stakeholders, for further submission to the Board of Directors for approval. The auditor has performed the auditing work and provided unqualified opinions.

2. Review and assessment of the adequacy of the internal control system: The Audit Committee reviewed the internal control system and annual audit plans, executions in accordance with plans, audit outcomes, and follow-ups as well as improvements of significant issues, pushed for the development and upgrading internal audit and proactive work by comments and advices which can be immediately implemented to correct defects. The Audit Committee received an audit report submitted on a quarterly basis by the internal auditors from Ultima Advisory Co., Ltd. to assess the adequacy of the internal control system which would support and drive the Company toward its targets, in terms of both effectiveness and efficiency of the operations and ensure the reliability of the financial reports and the compliance with the relevant regulations and policies of the Company.

3. Review of Connected Transactions: The Audit Committee review connected transactions or those posing potential conflicts of interest with that of the Company's, including disclosure of information thereof in conformity with the relevant announce and regulations of the Office of the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET). The Audit Committee concluded had observed regular business practices, fairness, reasonable manner for the maximum benefit of the Company's and its shareholders. Such transactions had secured the approval of the Board before their execution and were promptly disclosed to SET and that disclosure of information thereof was accurate, complete and adequate in line with the good corporate governance practice.

4. Review of work performance pursuant law: the Audit Committee reviewed the efficiency and effectiveness of management for systematic corporate governance, transparent transaction, as well as legal and related regulations compliance to ensure conformance to normal business conditions, including the whistleblowing process. The Audit Committee did not find any significant issue of non-compliance with the law, rules of the Securities and Exchange Commission (SEC) and regulations of the Stock Exchange of Thailand (SET) and relevant regulatory bodies, and related laws to business operation, Including compliance with the requirements of the company's and the commitment the company with outsiders.

5. Appointment of the External Auditor for 2020 and Approval for Audit Fee: In selecting the external auditor, the Audit Committee considered performance records, experience, audit fees, and compliance with Securities and Exchange Commission (SEC) announcements. The Committee resolved to nominate Mr.Thanawut Piboonsawat, License No.6699 and/or Miss Potjanarat Siripipat, License No.9012 and/or Miss Roongnapha Saengchan, License No.10142 and/or Miss Techinee Pornpenpob, License No.10769, or other auditors approved by the Office of the Securities and Exchange Commission. Assigned by the company as the responsible auditor from Dharmniti Auditing Company Limited for the Board's endorsement to propose in 2020 AGM for shareholders' approval.

In conclusion, the Audit Committee executed its charter duties and responsibilities with diverse expertise, prudence, and freedom, including providing point of views and suggestions, for equal benefits of the stakeholders. The Audit Committee sees that the Company places importance on the business operation that is both effective and efficient, has prepared financial statements that are accurate, reliable, and complete with the essential information, which is in line with the accounting and financial report standards. There are sufficient disclosures of transactions that may lead to conflicts of interests in the reports, as well as a good corporate governance process, internal control process, and risk management, that are implemented adequately at an acceptable level. The internal controls of the Company are efficient and effective, and the Company is compliant with the laws, regulations, policies, and commitments relating to business conduct. The Audit Committee did not find any material irregularities that may affect the Company's financial status. The Company consistently developed and rationalized its work processes to boost quality and to suit the business environment, and additionally, to be compliant with the rules and regulations of the Office of the Securities and Exchange Commission and the Stock Exchange of Thailand, including other laws related to the business operations of the Company.

The Audit Committee noted that 2020 it received excellent cooperation from the Board of Director, the executives, the external auditor, and all relevant units.

Report of the Nomination and Remuneration Committee

Miss Voranuch Supaibulpipat

Chairperson of the Nomination and Remuneration Committee



Dear Shareholders,

The Board of Directors appointed the Nomination and Remuneration Committee, which consists of independent directors and non-executive director not less than three members and more than half of the Committee must be independent directors, to seek for qualified people under process the Company's and criteria for nomination as directors and Chief Executive Officer. The Committee also selects directors to serve in Board-Committees and considers remuneration types and criteria for directors, before proposing for the Board's endorsement and later for the approval of the shareholders, as required by law.

Currently, the Nomination and Remuneration Committee consists of three directors, 2 independent directors and 1 non-executive director as follows:

1. Miss Voranuch Supaibulpipat
Chairperson of the Nomination and Remuneration Committee
(Independent Director)
2. Mr. Sothitorn Mallikamas
Member of the Nomination and Remuneration Committee
(Independent Director)
3. Mrs. Sirima Iamsakulrat
Member of the Nomination and Remuneration Committee

In 2020, the Nomination and Remuneration Committee has fully executed all its charter duties, with two meetings fully attended by all incumbent members, the essence of the execution of duties can be summarized as follows:

1. **Review the nomination and remuneration policy for the directors:** Conduct selection of directors and identify the remuneration including promoting the development of the Board of Directors to ensure the suitability for the duties and responsibilities, consistency with the strategy and connected to the overall performance of the company, including adhering to the principles of good corporate governance to present to the Board of Directors for approval.
2. **Review the nomination plan for directors:** Stipulated the overall qualification structure framework (Skill Matrix) in accordance with good corporate governance principles to cover and comply with the business plan as well as the Company's strategy, including future business trends.
3. **Review the development plan for directors and senior management:** Considered courses related to the development of knowledge and ability to perform their duties that will be able to add useful perspectives to apply to the Company's businesses.
4. **Consider the policy of nomination and remuneration for the Chief Executive Officer:** To set the annual performance appraisal criteria and the criteria for adjusting the compensation rate suitable for the Chief Executive Officer of the Company to propose to the Board of Directors for approval.

5. **Consider succession policy for senior management:** To prepare a continuous plan for succession of position to ensure that the administration can be carried out continuously to propose to the Board of Directors for approval as well as reporting the results of the development and succession to the Board of Directors for consideration.
6. **Nomination and selection of company directors:** Became an independent director to propose to the Board of Directors and the shareholders' meeting for approval in 2021 and after being appointed as an independent director may be assigned by the board to make decisions on the Company's operations.
7. **Review of the 2020 Chief Executive Officer Performance Evaluation Form:** Using the guidelines of the Stock Exchange of Thailand, the evaluation is divided into measures of leadership, strategy, planning, relationship, knowledge and personal characteristics to present to the Board of Directors for consideration to be used to determine the annual compensation of 2021.
8. **Encourage and provide opportunity for shareholders to propose agendas and nominate candidates for the Directors** at least three months before the 2021 annual general meetings of shareholders via online website of the company.

Nomination and Remuneration Committee have used knowledge, ability, caution, and sufficient independence in giving opinions and suggestions for the overall benefit of the Company and for the best interest of shareholders. It also serves to oversee the Board's performance under the good corporate governance system in accordance with the relevant laws and regulations. In 2020, no significant errors that affect the Company and the shareholders have been found. No non-executive directors resigned due to the Company's corporate governance issues, including avoiding methods of harming the Company's reputation.

Report of the Executive Committee

Mr. Wirat Sukchai

Chairman of the Executive Committee



Dear Shareholders,

The Board of Directors appointed the Executive Committee, which consists of director and top-executive of five directors as below:

1. Mr. Wirat Sukchai
Chairman of the Executive Committee and
Chief Executive Officer
2. Mr. Thammanoon Tripetchr
Member of the Executive Committee and
Managing Director
3. Mr. Jain Chamnarong
Member of the Executive Committee
4. Mr. Wisit Wachiralappaatoon
Member of the Executive Committee and
Chief Financial Officer
5. Mrs. Varinkan Teraumranon
Member of the Executive Committee,
Chief Operating Officer and
Company Secretary

For 2020 continued to be a year that Thailand's economy was fluctuated and below expectations as a result of the situation of COVID-19 caused the economy's expansion in a sluggish manner both in public and private investments. Nevertheless, the Company's business operation in 2020 continued growing strongly with good generation of revenue, consistent profits, and continued to gain the trust of customers in implementing their

projects. There were continuous expansion of business and new markets focusing on projects and services that can generate long-term income to achieve stability and sustainability.

The company aims to be the leader in providing sustainable solutions for firefighting and safety engineering systems, cooling system and digital printing systems in Thailand and neighboring countries in order to support the expansion of industries and business opportunities. The Company constantly seeks opportunities to provide customers with new solutions that comes with innovation and new value. Including continuously expanding the service base to new customer groups along with enhancing the quality of service standards in various fields. In addition, strategies are also adjusted to keep up with the changing situations in terms of economy, technology and customer needs in the digital age.

The Executive Committee is in charge of assisting the Board of Directors in consider scrutinize with care, carefully and concise, before proposing for the Board's approval. Allows the company to operate the business very well. Mrs. Varinkan Teraumranon is the secretary to the Board of Directors performing duty within the scope of duties and responsibilities according to the Executive Committee Charter.

In 2020, the Executive Committee held altogether 12 meetings to consider significant issues of the Company, salient points of which were as concluded here:

1. **Map out business plan and strategy:** Consider the company's review the vision, mission and strategy of the company in the past year. To determine the strategy and operation plan of the company. In each business line In accordance with the vision and mission of the company by considering internal and external factors that have an impact Including acceptable opportunities and risks by delegated such plans to executives and employees at all levels in the company to know and monitor the implementation of the company's strategy In order to meet the goals set and report progress according to the strategic plan to the Board of Directors every quarter.
2. **Check and follow the Company's business operation:** Consider checking Track the performance of every business line on a monthly basis. In order to be in accordance with the policy, plan Target set including budgets that have been approved by the board of directors and report the operating results to the Board of Directors every quarter.
3. **Consider the Company's budget and investment projects:** Consider and approve the annual budget and increasing the working capital of a subsidiary company Vietnam as well as investment projects and other matters proposed by management to propose to the board of directors for approval.
4. **To consider the dividend payment for 2020:** Consider, screen and approve the net profit from the operation result of 2019 and the Interim dividend payment for 2020 is set at the rate of 0.18 baht per share to propose to the Board of Directors for approval before submitting to Annual General Meeting of Shareholders for 2020.
5. **Considering the recruitment of executives and department managers upward:** Consider, select, appoint, transfer, terminate employment and determine the structure, authority and framework. Person with appropriate qualifications to hold executive positions at the level of department manager up Except for the position of Chief Executive Officer In 2020, the appointment of the Sales Director and Project Sales Director of Refrigeration System Business to propose to the Board of Directors for approval.
6. **Consider nomination and recruitment of top executives:** Consider and scrutinize the compensation rate policy. Salary structure, bonuses and other benefits Suitable for staff and department manager up Except for the position of Chief Executive Officer and Managing Director.

The Executive Committee have full confidence in the direction of the Company's operations and from the readiness, competence, experience, as well as the clear commitment of the management and employees, the Executive Committee, therefore, agree that in 2020 the company will be able to continuously build strong performance along with being responsible to the society, environment, and all stakeholders, as well as ensuring the Company has in place the operational systems that are in compliance with the law and the code of conduct under the good corporate governance so that the Company will be able to move forward towards success with stability and sustainability.

Report of the Risk Management Committee

Mr. Wirat Sukchai

(Acting) Chairman of the Risk Management Committee



Dear Shareholders,

The Board of Directors appointed and assigned the Chief Executive Officer, Managing Director and director of various departments to act as the Risk Management Committee, with competence, expertise and experience as well as understanding of business operation of consists of twelve directors, which independent directors acting as the chairman of the risk management committee as follows:

1. Mr. Wirat Sukchai
(Acting) Chairman of the Risk Management Committee
2. Mr. Thammanoon Tripetchr
Member of the Risk Management Committee
3. Mr. Pracha Phromphornchai
Member of the Risk Management Committee
4. Mr. Rattanaphan Mukhariwattananon
Member of the Risk Management Committee
5. Mr. Suchat Suwatnodom
Member of the Risk Management Committee
6. Mr. Kittiphong Kittimethawenun
Member of the Risk Management Committee
7. Mr. Vachiravit Akaraseranee
Member of the Risk Management Committee
8. Mr. Sukit Litikorn
Member of the Risk Management Committee

9. Mr. Withoon Thamee
Member of the Risk Management Committee
10. Mr. Pongsawat Penglengpol
Member of the Risk Management Committee
11. Mr. Wisit Wachiralappaitoon
Member of the Risk Management Committee
12. Mrs. Varinkan Teraumranon
Member of the Risk Management Committee

The Risk Management Committee performed duties assigned by the Board of Directors to control, supervise and screen the risk management policy in the aspects that were related to the business operation, including strategic risk, credit risk, marketing risk, liquidity risk, operational risk, and other related business conduct risks. The duties also included providing the efficient and appropriate risk management tools or measurement to reduce the business operation related risks to the acceptable level. The internal and external factors which may impact significantly on the business operation shall also be evaluated. The Risk Management Committee has regularly considered and reviewed the risk management policy and guidelines. Mrs. Varinkan Teraumranon is the secretary to the Risk Management Committee.

In 2020, the Risk Management Committee held altogether 4 meetings to consider issues with salient points as below:

1. Review the risk management policy, including considering and approving the acceptable risk appetite as appropriate for the circumstances of organizational risk, measures to prevent and mitigate risks, risk management effectiveness index, as well as reviewing the risks associated with corruption in accordance with the revised anti-corruption measures framework announced in 2020.
2. Review the corporate risk management plan. Considering the annual risk management plan that the management of all departments have assessed the risks.
3. Set priorities risk issues and identified impacts thereof to determine risk management measures.
4. Supported and developed risk management consistently across the organization.
5. Monitored and reviewed implementation of the risk management plan to ensure compliance with the risk management policy and framework in place. For every period the risk level was found to change, worked with internal auditors to follow up and review risk management in a systematic and efficient manner.
6. To report to the Board of Directors on a quarterly basis regarding the Company's management, operations and risk status and any changes, including actions that need to be corrected in order to comply with the established policies and strategies.

The Risk Management Committee concluded that 2020, the country's economy was slow down due to situation of the COVID-19, both within the country and abroad which had the wide effect on the industrial sectors. Thus, paid closed attention to such factors, closely monitored the economic situation, giving advice at the operational level each party sees signs in advance of truly reducing operational losses. Which considered the company has managed risks in all aspects, for the Company to be able to conduct business properly, efficiently and to successfully achieve the goals under such circumstances and controlled within the acceptable levels, which can result in the stable business and continuous growth.



HARN
Engineering Solutions

Harn Engineering Solutions Public Company Limited and subsidiaries

Report and Financial Statements

for the year ended December 31, 2020

Auditor's Report



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 (ประตูที่ 20) ถนนประชาชื่น แขวงบางซื่อ
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 w w w . d h a r m n i t i . c o . t h

INDEPENDENT AUDITOR'S REPORT

To The Shareholders and Board of Directors of
 Harn Engineering Solutions Public Company Limited

Opinion

I have audited the consolidated financial statements of Harn Engineering Solutions Public Company Limited and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2020, and the consolidated statement of comprehensive income, consolidated statement of changes in shareholders' equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies, and I have audited the separate financial statements of Harn Engineering Solutions Public Company Limited (the Company), which comprise the statement of financial position as at December 31, 2020, and the statement of comprehensive income, statement of changes in shareholders' equity and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In my opinion, the accompanying financial statements present fairly, in all material respects, the consolidated financial position of Harn Engineering Solutions Public Company Limited and its subsidiaries as at December 31, 2020, and its consolidated financial performance and its consolidated cash flows for the year then ended and the separate financial position of Harn Engineering Solutions Public Company Limited as at December 31, 2020, and its financial performance and its cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

Basis for Opinion

I conducted my audit in accordance with Thai Standards on Auditing. My responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report. I am independent of the Group and the Company in accordance with the Federation of Accounting Professions Code of Ethics for Professional Accountants together with the ethical requirements that are relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in my audit of the consolidated financial statements and separate financial statements of the current period. These matters were addressed in the context of my audit of the consolidated financial statements and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

1) Recognition of revenue from sales and service

Risk

The Group and the Company had revenue from sales and service derived from five main business segments which are fire protection and projects, sanitary and air-conditioning systems, cold storage devices digital printing system and building-IoT solutions, for the year ended December 31, 2020 amounting to Baht 1,152.33 million and Baht 1,124.96 million, respectively, which have different terms and pricing conditions, including revenue from services under the fire protection installation project and building-IoT solutions, amounting to Baht 81.17 million and Baht 78.73 million or 7.04% and 7.00% of the Group's and the Company's total revenue from sales and service, respectively. The estimate of a performance obligation under the project agreement has an effect on the revenue that the Group and the Company recognized over time, which it has to recognize by the measuring progress towards complete satisfaction of a performance obligation as at December 31, 2020. I have identified that accuracy and completeness of revenue recognition from sales and service carries significant risk and requires special attention in the audit. The Group and the Company had disclosed its accounting policy of revenue from sales and service recognition and detail of revenue from sales and service in the notes to the financial statement No. 3.16 and 28, respectively.

Risk response by auditor

My audit approach on such matter includes understanding the revenue recognition process and internal control related to the revenue recognition, reviewing the design and implementation of the internal control procedures for such matter, performing the operating effectiveness testing over the internal control procedures around revenue recognition process, and performing substantive testing which consists of examining terms and conditions of the sales and services agreements and examining the related supporting documents of those revenues, examining the supporting documents for the revenue from sales and services transactions that occurred during the year and near the end of the accounting period, examining credit notes issued after the end of the accounting period, and performing analytical review and test of detail relating to the revenue from sales and services.

2) Testing for impairment of goodwill

Risk

The Group and the Company had goodwill of Baht 334.67 million and Baht 334.67 million or 20.19% and 20.24% of total assets as at December 31, 2020, respectively, which is the goodwill arising from the acquisition and transfer of the entire business, which is the cold storage devices segment and digital printing

system segment. The Group and the Company have to test goodwill for impairment annually in accordance with the Thai Financial Reporting Standards. The test of impairment is significant to the audit as the amount has materiality to the financial statements. In addition, the procedure of impairment testing by the management is complex and requires using considerable judgment as well as relying on assumptions, especially the estimates of future cash flows to be received and paid that are expected to generate from the continuing operation of the cash generating unit, and the use of appropriate discount rate in order to discount future cash flow which can change according to the economic conditions and market conditions in the future. The Group and the Company have disclosed goodwill in the notes to the financial statements No. 3.11 which describes the accounting policies and No.16 which describes the amount and key assumptions that may affect the impairment in the future.

Risk response by auditor

In my audit approach, I have considered the reasonableness of the assumptions and methods used by the management in calculating the estimates of future cash flows to be received and paid that are expected to be generated by auditing the supporting evidence which presents the best estimate of the management, especially on the revenue forecast and gross profit and profit from operation of the business segments of the Company, the use of appropriate discount rate to discount future cash flow, as well as testing the calculation of the recovery amount. In addition, I have paid attention on the adequacy of the information disclosure relating to the assumptions which are most sensitive that may affect the testing result of impairment and has significant effect on the measurement of recovery amount of goodwill.

Other Information

Management is responsible for the other information. The other information comprises the information included in the annual report, but does not include the financial statements and my auditor's report thereon. The annual report is expected to be made available to me after the date of this auditor's report.

My opinion on the financial statements does not cover the other information and I will not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

When I read the annual report, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance in order for those charged with governance to correct the misstatement.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements and separate financial statements in accordance with Thai Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements and separate financial statements, management is responsible for assessing the Group's and the Company's ability to continue as a going concern, disclosing, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group and the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's and the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the consolidated financial statements and separate financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Thai Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and separate financial statements.

As part of an audit in accordance with Thai Standards on Auditing, I exercise professional judgment and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and separate financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's and the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's and the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated financial statements and separate financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Group and the Company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements and separate financial statements, including the disclosures, and whether the consolidated financial statements and separate financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, I determine those matters that were of most significance in the audit of the consolidated financial statements and separate financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner responsible for the audit resulting in this independent auditor's report is Mr. Thanawut Piboonsawat.



(Mr. Thanawut Piboonsawat)

Certified Public Accountant

Registration No. 6699

Financial Statement

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HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENT OF FINANCIAL POSITION
AS AT DECEMBER 31, 2020

		<u>ASSETS</u>				
		Baht				
		Consolidated financial statements		Separate financial statements		
		2020	2019	2020	2019	
			(Reclassified Note 36)		(Reclassified Note 36)	
Note						
CURRENT ASSETS						
	Cash and cash equivalents	6	306,074,340	127,099,721	299,318,282	120,123,681
	Temporary investments	11	-	124,477,923	-	124,477,923
	Trade and other current receivables	5, 7	250,986,608	322,952,099	250,372,389	325,955,974
	Current contract assets	8	12,797,613	9,566,298	12,054,033	9,566,298
	Short-term loans to related subsidiary	5, 9	-	-	5,973,480	-
	Inventories	10	257,851,968	305,039,856	254,155,366	302,782,483
	Other current financial assets	11	6,957,944	-	6,957,944	-
	Other current assets		399,582	726,617	342,083	422,726
	TOTAL CURRENT ASSETS		835,068,055	889,862,514	829,173,577	883,329,085
NON-CURRENT ASSETS						
	Other non-current financial assets		-	241,845	-	241,845
	Trade and other non-current receivables	7	11,251,986	7,990,909	11,251,986	7,990,909
	Investment in subsidiaries	12	-	-	2,357,444	1,057,444
	Investment property	13	154,591,332	229,967,576	154,591,332	229,967,576
	Property, plant and equipment	14	129,528,171	30,666,742	129,411,048	30,666,742
	Right-of-use assets	15	104,968,304	-	104,968,304	-
	Goodwill	16	334,672,061	334,672,061	334,672,061	334,672,061
	Customer relationship	17	40,332,654	58,279,813	40,332,654	58,279,813
	Intangible assets	18	18,015,510	20,947,073	18,015,510	20,947,073
	Deferred tax assets	19	3,843,042	-	3,826,408	-
	Other non-current assets		25,186,460	23,668,992	25,186,460	23,668,992
	TOTAL NON-CURRENT ASSETS		822,389,520	706,435,011	824,613,207	707,492,455
	TOTAL ASSETS		1,657,457,575	1,596,297,525	1,653,786,784	1,590,821,540

Notes to the financial statements form an integral part of these financial statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENT OF FINANCIAL POSITION (CONT.)
AS AT DECEMBER 31, 2020

LIABILITIES AND SHAREHOLDERS' EQUITY

	Note	Baht			
		Consolidated financial statements		Separate financial statements	
		2020	2019	2020	2019
			(Reclassified Note 36)		(Reclassified Note 36)
CURRENT LIABILITIES					
Trade and other current payables	5, 20	167,659,996	199,838,320	164,045,038	193,303,574
Current portion of lease liabilities	21	8,918,127	-	8,918,127	-
Corporate income tax payable		11,101,390	21,183,499	11,096,112	21,183,499
Other current provisions		1,750,320	1,455,735	1,750,320	1,455,735
Other current liabilities		1,644,589	1,113,258	1,644,589	1,113,259
TOTAL CURRENT LIABILITIES		191,074,422	223,590,812	187,454,186	217,056,067
NON-CURRENT LIABILITIES					
Lease liabilities	21	96,052,606	-	96,052,606	-
Deferred tax liabilities	19	-	2,166,298	-	2,166,298
Non-current provisions for employee benefit	22	27,765,012	25,513,846	27,684,826	25,513,846
Other non-current liabilities		24,937,360	23,364,196	24,937,360	23,364,196
TOTAL NON-CURRENT LIABILITIES		148,754,978	51,044,340	148,674,792	51,044,340
TOTAL LIABILITIES		339,829,400	274,635,152	336,128,978	268,100,407

Notes to the financial statements form an integral part of these financial statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENT OF FINANCIAL POSITION (CONT.)
AS AT DECEMBER 31, 2020

LIABILITIES AND SHAREHOLDERS' EQUITY (CONT.)

	Note	Baht				
		Consolidated financial statements		Separate financial statements		
		2020	2019	2020	2019	
SHAREHOLDERS' EQUITY						
Share capital						
Authorized share capital						
		584,500,000 ordinary shares of Baht 0.50 each	292,250,000	292,250,000	292,250,000	292,250,000
Issued and paid-up share capital						
		584,500,000 ordinary shares of Baht 0.50 each	292,250,000	292,250,000	292,250,000	292,250,000
	24	Share premium on ordinary shares	776,416,427	776,416,427	776,416,427	776,416,427
Retained earnings						
Appropriated						
	25	Legal reserve	29,225,000	29,225,000	29,225,000	29,225,000
		Unappropriated	219,584,380	223,824,610	219,766,379	224,796,706
		Other components of shareholders' equity	(453,897)	(53,664)	-	-
TOTAL EQUITY ATTRIBUTABLE TO OWNERS OF THE PARENT						
			1,317,021,910	1,321,662,373	1,317,657,806	1,322,688,133
Non-controlling interest						
			606,265	-	-	-
TOTAL SHAREHOLDERS' EQUITY						
			1,317,628,175	1,321,662,373	1,317,657,806	1,322,688,133
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY						
			1,657,457,575	1,596,297,525	1,653,786,784	1,590,788,540

Notes to the financial statements form an integral part of these financial statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENT OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED DECEMBER 31, 2020

	Note	Baht			
		Consolidated financial statements		Separate financial statements	
		2020	2019	2020	2019
Revenues					
Revenues from sales	5	1,014,298,968	1,236,042,819	991,018,544	1,238,746,444
Revenue from rendering of services		138,026,608	130,840,381	133,939,773	130,840,381
Other income	5	17,100,899	27,090,896	16,930,894	27,089,584
Total revenues		1,169,426,475	1,393,974,096	1,141,889,211	1,396,676,409
Expenses					
Cost of sales		680,396,833	827,909,781	659,444,376	830,117,478
Cost of rendering of services		118,879,312	120,782,675	115,297,565	120,782,675
Distribution cost		107,327,727	117,556,045	106,083,849	117,457,878
Administrative expenses	5	137,288,080	140,780,321	136,213,901	140,401,008
Total expenses		1,043,891,952	1,207,028,822	1,017,039,691	1,208,759,039
Profit from operating activities		125,534,523	186,945,274	124,849,520	187,917,370
Finance cost	5	90,655	-	90,655	-
Profit before income tax expenses		125,443,868	186,945,274	124,758,865	187,917,370
Income tax expenses	30	24,568,265	37,325,871	24,579,624	37,325,871
Profit for the year		100,875,603	149,619,403	100,179,241	150,591,499
Other comprehensive income					
Components of other comprehensive income that will be reclassified to profit or loss:					
Exchange differences on translating financial statement		(400,233)	(53,664)	-	-
		(400,233)	(53,664)	-	-
Components of other comprehensive income that will not be reclassified to profit or loss:					
Gains (losses) on re-measurements of defined benefit plans, net of tax	22	-	(1,588,878)	-	(1,588,878)
		-	(1,588,878)	-	(1,588,878)
Other comprehensive income (expense) for the year, net of tax		(400,233)	(1,642,542)	-	(1,588,878)
Total comprehensive income for the year		100,475,370	147,976,861	100,179,241	149,002,621
Profit attributable to					
Owners of the parent		100,969,338	149,619,403	100,179,241	150,591,499
Non-controlling interest		(93,735)	-	-	-
		100,875,603	149,619,403	100,179,241	150,591,499
Total comprehensive income attributable to					
Owners of the parent		100,569,105	147,976,861	100,179,241	149,002,621
Non-controlling interest		(93,735)	-	-	-
		100,475,370	147,976,861	100,179,241	149,002,621
Basic earnings per share					
Profit attributable to owners of the parent		0.17	0.26	0.17	0.26
Weighted average number of ordinary shares (shares)		584,500,000	584,500,000	584,500,000	584,500,000

Notes to the financial statements form an integral part of these financial statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
FOR THE YEAR ENDED DECEMBER 31, 2020

		Baht							
		Consolidated financial statements							
		Equity attributable to owners of the parent				Non-controlling	Total		
		Issued and paid-up share capital	Premium on ordinary shares	Retained earnings		Other components of equity	Total equity attributable to owners of the parent	interest	shareholders' equity
				Appropriated legal reserve	Unappropriated	Exchange differences on translating financial statements			
Note									
	Beginning balance as at January 1, 2019	292,250,000	776,416,427	27,068,831	171,470,190	-	1,267,205,448	-	1,267,205,448
	Appropriated to legal reserve	-	-	2,156,169	(2,156,169)	-	-	-	-
	Dividend	-	-	-	(93,519,936)	-	(93,519,936)	-	(93,519,936)
	Total comprehensive income for the year								
	Profit for the year	-	-	-	149,619,403	-	149,619,403	-	149,619,403
	Other comprehensive income (expense) for the year	-	-	-	(1,588,878)	(53,664)	(1,642,542)	-	(1,642,542)
	Ending balance as at December 31, 2019	292,250,000	776,416,427	29,225,000	223,824,610	(53,664)	1,321,662,373	-	1,321,662,373
	Changes in non-controlling interest								
	Acquisition on investment in subsidiary	-	-	-	-	-	-	700,000	700,000
	Dividend	-	-	-	(105,209,568)	-	(105,209,568)	-	(105,209,568)
	Total comprehensive income for the year								
	Profit for the year	-	-	-	100,969,338	-	100,969,338	(93,735)	100,875,603
	Other comprehensive income (expense) for the year	-	-	-	-	(400,233)	(400,233)	-	(400,233)
	Ending balance as at December 31, 2020	292,250,000	776,416,427	29,225,000	219,584,380	(453,897)	1,317,021,910	606,265	1,317,628,175

Notes to the financial statements form an integral part of these financial statements



HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES

STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY (CONT.)

FOR THE YEAR ENDED DECEMBER 31, 2020

	Baht					
	Separate financial statements					
	Issued and paid-up share capital	Premium on ordinary shares	Retained earnings		Total shareholders' equity	
			Appropriated legal reserve	Unappropriated		
Note						
Beginning balance as at January 1, 2019		292,250,000	776,416,427	27,068,831	171,470,190	1,267,205,448
Appropriated to legal reserve		-	-	2,156,169	(2,156,169)	-
Dividend	26	-	-	-	(93,519,936)	(93,519,936)
Total comprehensive income for the year						
Profit for the year		-	-	-	150,591,499	150,591,499
Other comprehensive income (expense) for the year		-	-	-	(1,588,878)	(1,588,878)
Beginning balance as at December 31, 2019		292,250,000	776,416,427	29,225,000	224,796,706	1,322,688,133
Dividend	26	-	-	-	(105,209,568)	(105,209,568)
Total comprehensive income for the year						
Profit for the year		-	-	-	100,179,241	100,179,241
Ending balance as at December 31, 2020		292,250,000	776,416,427	29,225,000	219,766,379	1,317,657,806

Notes to the financial statements form an integral part of these financial statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENT OF CASH FLOWS
FOR THE YEAR ENDED DECEMBER 31, 2020

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
		(Reclassified Note 36)		(Reclassified Note 36)
Cash flows from operating activities				
Profit for the year	100,875,603	149,619,403	100,179,241	150,591,499
Adjustment to reconcile profit for the year to net cash provided by (used in) operating activities :				
Bad debt and allowance for doubtful account (reversal)	4,253,118	1,811,036	4,250,132	1,811,036
Depreciation and amortization	17,050,943	16,721,518	17,038,325	16,721,518
Amortization of customer relationship	17,947,159	14,901,095	17,947,159	14,901,095
Loss on devaluation of inventories	5,673,101	8,256,642	5,673,101	8,256,642
(Gain) loss on disposals of equipment and right-of-use assets	1,255,393	(662,322)	1,255,393	(662,322)
Unrealized (gain) loss on exchange rate	(333,095)	210,302	(41,531)	210,302
(Gain) loss on disposals of investment	(3,380,909)	(902,711)	(3,380,909)	(902,711)
Unrealized (gain) loss on revaluation of other current financial assets	4,430,330	(1,654,472)	4,430,330	(1,654,472)
Loss on impairment of other non-current financial assets	241,845	-	241,845	-
Loss on impairment of equipments	50,654	-	50,654	-
Interest income	(959,594)	(436,931)	(1,255,502)	(436,931)
Employee's benefit expenses	2,651,166	7,485,849	2,570,980	7,485,849
Finance cost	90,655	-	90,655	-
Income tax expense	24,568,265	37,325,871	24,579,624	37,325,871
Profit from operating before changes in operating assets and liabilities	174,414,634	232,675,280	173,629,497	233,647,376
(Increase) decrease in operating assets				
Trade and other current receivables	67,964,781	(15,351,021)	68,360,442	(18,321,896)
Current contract assets	(3,256,681)	1,855,071	(2,513,101)	1,855,071
Inventories	20,744,512	(12,385,768)	22,183,741	(10,128,394)
Other current assets	327,034	(248,013)	80,643	55,877
Other non-current assets	(1,517,468)	(2,194,489)	(1,517,468)	(2,194,489)

Notes to the financial statements form an integral part of these financial statements



HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENT OF CASH FLOWS (CONT.)
FOR THE YEAR ENDED DECEMBER 31, 2020

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
	(Reclassified Note 36)		(Reclassified Note 36)	
Increase (decrease) in operating liabilities				
Trade and other current payables	(35,575,947)	(15,985,061)	(28,993,514)	(22,518,035)
Other current provisions	294,585	1,071,693	294,585	1,071,693
Other current liabilities	531,330	274,123	531,330	274,123
Non-current provisions for employee benefit	(400,000)	(629,000)	(400,000)	(629,000)
Other non-current liabilities	1,573,164	1,301,694	1,573,164	1,299,923
Cash generated (paid) from operating	225,099,944	190,384,509	233,229,319	184,412,249
Income tax paid	(40,659,717)	(39,388,096)	(40,659,717)	(39,388,096)
Net cash provided by (used in) operating activities	184,440,227	150,996,413	192,569,602	145,024,153
Cash flows from investing activities				
Cash payments for purchase of investment in debt instruments	-	(184,555,615)	-	(184,555,615)
Cash receipts from redemption of investment in debt instruments	116,885,007	230,299,806	116,885,007	230,299,806
Cash payments for short-term loans	-	-	(6,352,000)	-
Cash payment for acquisition of investment in subsidiary	-	-	(1,300,000)	(1,057,444)
Cash payments for purchases of equipment	(16,808,367)	(5,868,717)	(16,679,091)	(5,868,717)
Cash receipts from disposal of equipment	237,573	1,654,429	237,573	1,654,429
Cash payments for purchases of intangible assets	(763,437)	(1,370,553)	(763,437)	(1,370,553)
Interest received	545,145	206,995	545,145	206,995
Net cash provided by (used in) investing activities	100,095,921	40,366,345	92,573,197	39,308,901
Cash flows from financing activities				
Cash payments for lease liabilities	(738,630)	-	(738,630)	-
Cash receipts from investments in subsidiary of non-controlling interest	700,000	-	-	-
Dividend paid	(105,209,568)	(93,519,936)	(105,209,568)	(93,519,936)
Net cash provided by (used in) financing activities	(105,248,198)	(93,519,936)	(105,948,198)	(93,519,936)

Notes to the financial statements form an integral part of these financial statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
STATEMENT OF CASH FLOWS (CONT.)
FOR THE YEAR ENDED DECEMBER 31, 2020

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Net increase (decrease) in cash and cash equivalents	179,287,950	97,842,822	179,194,601	90,813,118
Cash and cash equivalents at beginning of year	127,099,721	29,310,563	120,123,681	29,310,563
Effect of translation adjustment on foreign currency financial statements	(313,331)	(53,664)	-	-
Cash and cash equivalents at end of year	<u>306,074,340</u>	<u>127,099,721</u>	<u>299,318,282</u>	<u>120,123,681</u>

Supplementaly disclosures of cash flows information :

Non-Cash transaction

1) Liabilities incurred from acquisition of equipment and intangible assets

Liabilities incurred from acquisition of equipment

and intangible assets - beginning of year	475,280	426,371	475,280	426,371
Inventories transferred to equipment	(20,770,275)	(3,748,221)	(20,770,275)	(3,748,221)
Equipment transferred to expense	-	(219,646)	-	(219,646)
<u>Add</u> Purchases of equipment and intangible assets	38,550,298	11,036,399	38,421,022	11,036,399
<u>Less</u> Cash payments	(17,571,804)	(7,239,270)	(17,442,528)	(7,239,270)
Liabilities incurred from acquisition of fixed assets and intangible assets - ending of year	<u>683,499</u>	<u>255,633</u>	<u>683,499</u>	<u>255,633</u>

2) Transfer investment property to be used as property, plant and equipment

Increase (decrease) in investment property	74,129,902	-	74,129,902	-
Increase (decrease) in property, plant and equipment	(74,129,902)	-	(74,129,902)	-

Notes to the Financial Statements



HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES
NOTES TO THE FINANCIAL STATEMENTS
DECEMBER 31, 2020

1. GENERAL INFORMATION

(a) Legal status and address of the company group

Company

The Company was registered to be a limited company with the Ministry of Commerce on May 9, 2001.

The Company has changed its status to be public company limited for trading their shares on the Stock Exchange of Thailand on May 22, 2014.

The address of its registered head office are as follows:

Locate at: 559 Soi Soonvijai 4, Rama 9 Road, Bangkok, Huaykwang, Bangkok 10310, Thailand.

Subsidiaries

- 1) Harn Vietnam Company Limited is a company established in Vietnam on July 30, 2019.

The address of the subsidiary's head office is as follows:

5th floor, Vietcomreal Building, 68 Nguyen Hue, Ben Nghe Ward, District 1, Ho Chi Minh City, Vietnam

- 2) Aiyaraharn Company Limited is a company established in Thailand on July 8, 2020.

The address of the subsidiary's head office is as follows:

Locate at: 559 Soi Soonvijai 4, Rama 9 Road, Bangkok, Huaykwang, Bangkok 10310, Thailand.

(b) Nature of the Company's operations

The principal business is involved in wholesaling, retailing, and repairing, renting, leasing, contracting and installation services of fire protection system and fire suppression agent, trading cold storage devices, trading, repairing and renting of printing equipment.

The subsidiary 1 operates the main business related to the selling of printing equipment and subsidiary 2 operates in providing Smart Building Business Solution.

2. BASIS FOR THE PREPARATION OF FINANCIAL STATEMENTS

2.1 Basis for the preparation of financial statements

The financial statements have been prepared in accordance with the accounting standards prescribed by Thai Accounts Act enunciated under the Accounting Profession Act B.E. 2547 by complying with the Thai Financial Reporting Standards. The presentation of the financial statements has been made in compliance with the Notification of the Department of Business Development, the Ministry of Commerce, re : the financial statements presentation for public limited company, issued under the Accounting Act B.E. 2543.

The financial statements have been prepared on a historical cost basis except where otherwise disclosed in the accounting policies.

The financial statements in Thai language are the official statutory financial statement of the Company. The financial statements in English language have been translated from such financial statement in Thai language.

2.2 Basis for the preparation of consolidated financial statements

2.2.1 The consolidated financial statements have included the financial statements of Harn Engineering Solutions Public Company Limited and its subsidiaries as follows;

Company name	Type of business	Percentage of shareholding		Country of establishment
		% of share capital		
		2020	2019	
Direct shareholding				
Harn Vietnam Co., Ltd.	Printing equipment	100.00	100.00	Vietnam
Aiyaraharn Co., Ltd.	Building-IoT Solutions	65.00	-	Thailand

Year 2019

The Company had purchased the investment in Harn Vietnam Co., Ltd. at 100% of total number of shared issued from such company and the Company has consolidated the financial statements in the preparation of consolidated financial statements of the group of the company from July 30, 2019, onwards.

Year 2020

The Company jointly invested in establishing “Aiyaraharn Co., Ltd.” The Company and joint investor hold 65 percent and 35 percent stake of the total shares issued in such company, respectively. Therefore, the Company has consolidated the financial statements of such in the preparation of consolidated financial statements of the group of the company from July 8, 2020 onwards.

- 2.2.2 The Company is deemed to have control over an investee or subsidiary if it has rights, or is exposed, to variable returns from its involvement with the investee, and it has the ability to direct the activities that affect the amount of its returns.
- 2.2.3 Subsidiaries is fully consolidated, being the date on which the Company obtains control, and continue to be consolidated until the date when such control ceases.
- 2.2.4 The financial statements of an overseas subsidiaries is translated into Thai Baht at the closing exchange rate as to assets and liabilities, and at monthly average exchange rates as to revenues and expenses. The resultant differences have been shown under the caption of “Currency translation changes of the financial statements of foreign entity” in shareholders’ equity.
- 2.2.5 The consolidated financial statements are prepared by using uniform accounting policies. So that the transaction and the others event which are the same or the similar circumstances have been used the identical policies to record those transaction.

2.2.6 Material balances and transactions between the Company and its subsidiaries companies have been eliminated from the consolidated financial statements.

2.3 Financial reporting standards that became effective in the current year

During the year, the Company and its subsidiaries have adopted the revised and new financial reporting standards, interpretations and the accounting guidance, which are effective for fiscal years beginning on or after January 1, 2020. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards. Except, the new standard involves changes to key principles, as summarized below:

Financial reporting standards related to financial instruments:

A set of TFRSs related to financial instruments, which consists of five accounting standards and interpretations, as follows:

TFRS 7	Financial Instruments: Disclosures
TFRS 9	Financial Instruments
TAS 32	Financial Instruments: Presentation
TFRIC 16	Hedges of a Net Investment in a Foreign Operation
TFRIC 19	Extinguishing Financial Liabilities with Equity Instruments

These TFRSs related to financial instruments make stipulations relating to the classification of financial instruments and their measurement at fair value or amortized cost (taking into account the type of instrument, the characteristics of the contractual cash flows and the Company's business model), calculation of impairment using the expected credit loss method, and hedge accounting. These include stipulations regarding the presentation and disclosure of financial instruments. When the TFRSs related to financial instruments are effective, some accounting standards, interpretations and guidance which are currently effective is cancelled.

The Company and its subsidiaries have adopted TFRS related to financial instruments the first-time in its financial statements by applying modified retrospective approach of adoption of which the cumulative effect as an adjustment to the retained earnings as at January 1, 2020 and the comparative information was not restated. The cumulative effect of the change is described in Note 4 to the interim financial statements.

TFRS 16 Leases

TFRS 16 Leases supersedes TAS 17 Leases together with related Interpretations. The standard sets out the principles for the recognition, measurement, presentation and disclosure of leases, and requires a lessee to recognize assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is low value.

Accounting by lessors under TFRS 16 is substantially unchanged from TAS 17. Lessors will continue to classify leases as either operating or finance leases using similar principles to those used under TAS 17.

January 1, 2020, the Company and its subsidiaries have adopted TFRSs related to financial instruments and TFRS 16 in its financial statements by applying modified retrospective approach. The impact from the first-time adoption has been disclosed in Note 4 to the financial statements.

2.4 Financial reporting standards that become effective in the future

During the year, the Federation of Accounting Professions issued a notification of the Federation of Accounting Professions and published in the Government Gazette for the conceptual framework of financial reporting (new) and several revised financial reporting standards from the year 2019 by becomes effective for the accounting period beginning on or after January 1, 2021 onwards, which such adjustments are improve/ revise principles the financial reporting is as follows:

Adjustment is reference to the conceptual framework in the financial reporting standards

Several financial reporting standards are reference to “ IASC’ s Framework for the Preparation and Presentation of Financial Statements.” The adjustment of reference project on the conceptual framework in the financial reporting standards has updated reference or partial reference adjustment and other to describe clearly whether each document is reference to “ the conceptual framework” of which year.

Conceptual Framework for Financial Reporting

The conceptual framework for financial reporting consisted of revised definitions of assets and liabilities. Criteria for recognition assets and liabilities in the financial statements. It also includes the following new principles and guidance:

1. Measurement, including factors that must be considered in selecting the valuation criteria
2. Presentation and disclosure which includes when the income and expenses are classified into other comprehensive income.
3. Reporting entities
4. When the assets and liabilities derecognition from the financial statements

In addition, this Conceptual Framework for Financial Reporting clearly clarifies management’s stewardship of the entity’s economic resources, prudence, and measurement uncertainty of financial information.

Definition of Business

Business definition revised in the financial reporting standard No. 3 “ Business Combination” describes more clearly on definition of business. The objective is for the business to establish that such transaction has to be recorded as “ business combination” or “ purchase of assets” or not. Adjustments are as follows:

1. Describe clearly on the consideration of “business”, activity group and acquired assets must include input data factor, key process that at least combined will significantly generate outputs.
2. Eliminate the assessment that the market partner can substitute input factor or missing process and generate further outputs from the standards.

3. Add practice guide and example to support understanding and help the company assess whether the key process is acquired.
4. Narrow down the definition of business and definition of outputs by placing interest in the product and service provided to the customer and eliminate the reference on ability to reduce cost from the standards.
5. Add the intention test as an alternative which allows to make assessment easily whether the activity group and acquired assets are business or not.

Definition of significance

The definition of significance resulted in revising the accounting standard No.1 “Presentation of Financial Statements, Presentation of Financial Statements and Accounting Standards No.8 - Accounting Policy, Change of Accounting Estimates and Error and the revision that resulted in other financial reporting standards.

The adjustment creates better understanding of the definition of significance by

1. For the definition to follow the same direction of the financial reporting standards and conceptual framework to avoid the confusion that may arise from the definition difference.
2. Include the requirements together of the accounting standard No.1 “Presentation of financial statements” in the definition for it to become clearer and describe how the materiality can be clearly applied.
3. Applying existing practice guidance of the definition of the materiality in the same place as the definition.

Reform of swap interest rate

The reform of swap interest rate resulted in the adjustment of the financial reporting standards No. 9 financial instruments and financial reporting standards No.7 financial instrument disclosure. Such adjustment has changed the hedge accounting requirements, especially to reduce the impact arising from the uncertainty as a result of the swap interest rate reform such as interbank offer rates-IBORs. In addition, the adjustment requires the business to provide additional information to investors regarding the relation of hedging directly impacted from any uncertainties.

The management of the Company and its subsidiaries are in the process to assess the impact of these TFRSs to the financial statements in the year when they are adopted.

2.5 Thai Financial Reporting Standard No.16 “Leases”

The Federation of Accounting Professions has revised TFRS 16 lease agreements and published in the Government Gazette on January 27, 2021 with the following revisions.

1. The Rent Concessions related to COVID-19, which is effective from June 1, 2020 with earlier application permitted. The amendment permits lessees, as a practical expedient, not to assess whether rent concessions that occur as a direct consequence of the COVID-19 pandemic and meet specified conditions are lease modifications and, instead, to account for those rent concessions as if they were not lease modifications.

2. Added the requirements for the temporary exception arising from interest rate benchmark reform, which an entity shall apply these amendments for annual reporting periods beginning on or after January 1, 2022 with earlier application permitted.

The management of the Company and its subsidiaries are in the process to assess the impact of these TFRSs to the financial statements in the year when they are adopted.

3. SIGNIFICANT ACCOUNTING POLICIES

3.1 Business combinations

The Company and its subsidiaries applies the acquisition method for all business combinations except for the business combination under common control.

The Company's and its subsidiaries's control are achieved when the Company (1) has power over the investee (2) is exposed, or has rights, to variable returns from its involvement with the investee and (3) has the ability to use its power to affect its returns.

The Company reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

Goodwill is measured as the fair value of the consideration transferred including the recognized amount of any non-controlling interest in the acquiree, less the net recognized amount (generally fair value) of the identifiable assets acquired and liabilities assumed, all measured as of the acquisition date.

Consideration transferred includes the fair values of the assets transferred, liabilities incurred by the Company and its subsidiaries to the previous owners of the acquiree, and equity interests issued by the Company and its subsidiaries. Consideration transferred also includes the fair value of any contingent consideration and share-based payment awards of the acquiree that are replaced mandatorily in the business combination.

A contingent liability of the acquiree is assumed in a business combination only if such a liability represents a present obligation and arises from a past event, and its fair value can be measured reliably.

The Company and its subsidiaries measures any non-controlling interest at its proportionate interest in the identifiable net assets of the acquiree.

Transaction costs that the Company and its subsidiaries incurs in connection with a business combination, such as legal fees, and other professional and consulting fees are expensed as incurred.

3.2 Foreign currencies

Transactions in foreign currencies

Transactions in foreign currencies are translated to Thai Baht at the foreign exchange rates ruling at the dates of the transactions.

Monetary assets and liabilities denominated in foreign currencies at the reporting date are translated to Thai Baht at the foreign exchange rates ruling at that date. Foreign exchange differences arising on translation are recognized as profit or loss in statement of profit or loss and other comprehensive income.

Non-monetary assets and liabilities measured at cost in foreign currencies are translated to Thai Baht using the foreign exchange rates ruling at the dates of the transactions.

3.3 Financial instruments

Applicable from January 1, 2020

Classification and measurement of financial assets

The classification of financial assets depends on the entity's business model for managing the financial assets and the contractual terms of the cash flows.

The Company and its subsidiaries classify its debt instruments in the following categories:

- those to be measured subsequently at fair value (either through other comprehensive income or through profit or loss); and
- those to be measured at amortised cost.

The Company and its subsidiaries reclassify debt instruments when and only when its business model for managing those assets changes.

The equity instruments held must be irrevocably classified to two measurement categories; i) at fair value through profit or loss (FVPL), or ii) at fair value through other comprehensive income (FVOCI) without recycling to profit or loss.

At initial recognition, the Company and its subsidiaries measure a financial asset at its fair value plus or minus, in the case of a financial asset not at FVPL, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVPL are expensed in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether their cash flows are solely payment of principal and interest.

Subsequent measurement of debt instruments depends on the Company and its subsidiaries business model for managing the asset and the cash flow characteristics of the financial assets. There are three measurement categories into which the Company and its subsidiaries classify its debt instruments:

- **Amortized cost:** A financial assets will be measured at amortised cost when the financial asset is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows. In addition, the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. Interest income from these financial assets is included in financial income using the effective interest rate method. Any gain or loss arising on derecognition is recognised directly in profit or loss and presented in other gains/(losses) together with foreign exchange gains and losses. Impairment losses are presented in profit or loss.
- **FVOCI:** A financial assets will be measured at FVOCI when it is held within a business model whose objective is achieved by both collecting contractual cash flows and selling financial assets. In addition, the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment gains or losses, interest income and related foreign exchange gains and losses which are recognised in profit or loss. When the financial asset is derecognised, the cumulative gain or loss previously recognised in other comprehensive income is reclassified from equity to profit or loss and recognised on other gains/(losses). Interest income from these financial assets is included in finance income using the effective interest rate method. Foreign exchange gains and losses are presented in other gains/(losses) and impairment expenses are presented as separate line item in the statement of comprehensive income.
- **FVPL:** Assets that do not meet the criteria for amortised cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL is recognised in profit or loss and presented net within other gains/(losses) in the period in which it arises.

Dividends from such investments continue to be recognised in profit or loss when the Company and its subsidiaries's right to receive payments is established.

Changes in the fair value of financial assets at FVPL are recognised in other gains/(losses) in the statement of income as applicable. Impairment losses (and reversal of impairment losses) on equity investments measured at FVOCI are not reported separately from other changes in fair value.

Classification and measurement of financial liabilities

Financial liabilities measured subsequently at amortized cost. The effective interest method is a method of calculating the amortized cost of a financial liability and of allocating interest expense over the relevant period. Gains and losses are recognized in profit or loss when the liabilities are derecognized as well as through the EIR amortization process. In determining amortized cost, the Group takes into account any discounts or premiums on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance costs in profit or loss.

Recognition and derecognition

The Company and its subsidiaries shall recognize a financial asset or a financial liability in its statement of financial position when, and only when, the Company and its subsidiaries become party to the contractual provisions of the instrument. Regular way purchases and sales of financial assets are recognized on trade-date, the date on which the Company and its subsidiaries commit to purchase or sell the asset. Financial assets are derecognized when the rights to receive cash flows from the financial assets have expired or have been transferred and the Company and its subsidiaries have transferred substantially all the risks and rewards of ownership of the financial assets.

Impairment of financial assets

The Company and its subsidiaries recognized an allowance for expected credit losses on its financial assets measured at amortized cost, without requiring a credit-impaired event to have occurred prior to the recognition. The Group accounts for changes in expected credit losses in stages, with differing methods of determining allowance for credit losses and the effective interest rate applied at each stage. An exception from this approach is that for trade receivables that do not contain a significant financing component, the Company and its subsidiaries apply simplified approach to determine the lifetime expected credit losses.

Applicable prior to January 1, 2020

Temporary investments

Investments held for trading are stated at fair value, with any resultant gain or loss from revaluation recognized in profit or loss.

Investment in debt securities which the Company intent and able to hold investment to maturity. Investment in debt securities is stated at amortization cost net from impairment loss (if any). Interest income is recognized by using the effective interest rate method in statement of comprehensive income. Unit trust is stated at fair value which announced by the fund management company

Cost of investment sold during the year are calculated using the weighted average cost method.

3.4 Derivatives and hedging activities

Applicable from January 1, 2020

Derivatives are initially recognized at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument in hedge accounting, and if so, the nature of the item being hedged. The Company and its subsidiaries designate certain derivatives as either:

- hedges of the fair value of recognised assets or liabilities or unrecognized firm commitments (fair value hedges); or

- hedges of a particular risk associated with the cash flows of recognized assets and liabilities and highly probable forecast transactions (cash flow hedges).

Derivatives that is not applied hedge accounting is classified as an asset or liability when the remaining maturity of the hedged item is more than 12 months; it is classified as a current asset or liability when the remaining maturity of the hedged item is less than 12 months.

Certain derivative instruments do not qualify for hedge accounting. Changes in the fair value of any derivative instrument that does not qualify for hedge accounting are recognised immediately in profit or loss and are included in other gains (losses).

Derivative financial instruments

Derivative financial instruments are used to manage exposure to foreign exchange, interest rate and product price risks arising from operational, financing and investment activities.

The Company and its subsidiary entered into forward foreign exchange contracts in asset and liability management activities to control exposure to fluctuations in foreign exchange rates.

Gains and losses on forward foreign exchange contracts designated as hedges of existing assets and liabilities without using hedge accounting are recognized as income or expense in the statement of profit or loss.

Amounts to be paid and received are offset in the statement of financial position and included in assets or liabilities category in the statement of financial position.

The Company and its subsidiary have no policy to speculate in or engage in the trading of any derivative financial instruments.

3.5 Cash and cash equivalents

Cash and cash equivalents are cash on hand, cash at banks and bank deposits with a maturity date less than 3 months excluded deposits at bank used as collateral and short-term investments with high liquidity.

3.6 Trade and other current receivables / current contract assets

Applicable from January 1, 2020

Trade other current receivables / current contract assets are recognized initially at the amount of consideration that is unconditional unless they contain significant financing components, when they are recognized at its present value.

Trade other current receivables / current contract assets are stated at the amount expected to be collectible, The Company and its subsidiaries apply the TFRS 9 simplified approach to measuring expected credit losses which uses a simplified approach, which requires expected lifetime losses to be recognised from initial recognition of the receivables. To measure the expected credit losses, trade receivables have been grouped based on the days past due. The expected loss rates are based on the payment profiles and the corresponding historical credit losses which are adjusted to reflect the current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables. The Company and its subsidiaries have identified the GDP, the unemployment rate and the consumer price index of the countries in which it sells its goods and services to be the most relevant factors, and accordingly adjusts the historical loss rates based on expected changes in these factors. The impairment losses are recognised in profit or loss within administrative expenses.

Applicable prior to January 1, 2020

Trade and other receivables are stated at their invoice value less allowance for doubtful accounts.

Allowance for doubtful accounts is an estimation of those amounts, which may prove to be uncollectible, based on historical collection experience and review of the current status of existing receivables. Bad debts are written off when incurred.

3.7 Inventories

Inventories are valued at the lower of cost or net realizable value.

Cost of inventories is calculated by weighted average method which comprises all costs of purchases, costs of conversion and other costs incurred in bringing the inventories to their present location and condition. In the case of manufactured inventories, cost includes an appropriate share of overhead based on normal operating capacity.

Net realizable value is the estimated selling price in the ordinary course of business less the costs to make the sale.

An allowance is made for all deteriorated, damaged, obsolete and slow-moving inventories.

3.8 Investments in subsidiaries

Subsidiaries is a company in which the Company has the power to control the financial and operating policies generally accompanying a shareholding of more than one-half of the voting rights.

Investment in subsidiaries is stated at cost net from allowance on impairment (if any). Loss on impairment of investment will be recognized as loss in the statement of comprehensive income.

3.9 Investment property

Investment property is stated at cost less accumulated depreciation and allowance on impairment (if any).

Depreciation is charged as an expense to the statement of profit or loss and other comprehensive income on a straight-line basis over the estimated useful lives of each property. The estimated useful lives are as follows:

	Years
Factory building	40
Building improvements	10
Tool and equipment	5

Depreciation is included in determining income and no depreciation is provided for construction in progress.

3.10 Property, plant and equipment

Recognition and measurement

Land is stated at cost, plant and equipment are stated at cost less accumulated depreciation and allowance on decline in value (if any).

Cost includes expenditure that is directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labor, any other costs directly attributable to bringing the assets to a working condition for their intended use as part of that property plant and equipment.

When parts of an item of plant and equipment have different useful lives, they are accounted for as separate items (major components) of equipment.

Gains or losses on disposal of an item of property plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property plant and equipment, and are recognized net within other income or other expense in the statement of profit or loss and other comprehensive income.

Subsequent costs

The cost of replacing a part of an item of property plant and equipment are recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Company and its subsidiaries, and its cost can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day servicing of equipment are recognized as an expense in statement of profit or loss and other comprehensive income as incurred.

Depreciation

Depreciation is calculated based on the depreciable amount of plant and equipment, which are the cost of an asset, or other amount substituted for cost, less its residual value.

Depreciation is charged as an expense to the statement of profit or loss and other comprehensive income on a straight-line basis over the estimated useful lives of each property. The estimated useful lives are as follows:

	Years
Factory building	40
Building improvements	10
Tool and equipment	5
Furniture and office equipment	5
Vehicles	5 - 7
Assets for rental and demonstration	5

Depreciation is included in determining income and no depreciation is provided for construction in progress.

Depreciation methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate.

3.11 Goodwill

Goodwill that arises upon the acquisition of subsidiaries is included in intangible assets. The measurement of goodwill at initial recognition is described. Subsequent to the initial recognition, goodwill is measured at cost less impairment loss. The Company and its subsidiaries assess an impairment of goodwill annually, without consideration of indication that such goodwill may be impaired.

3.12 Intangible asset

Other intangible assets

Other intangible asset, which are acquired by the Company and its subsidiaries and have finite useful lives, are stated at cost less accumulated amortization and allowance for impairment (if any).

Amortization

Amortization is recognized as an expense in the statement of profit or loss and other comprehensive income on a straight-line basis over the estimated useful lives of intangible asset, other than goodwill, from the date that they are available for use as follows:

	Years
Computer software	5 - 10
Customer relationship	7

Amortization methods, useful lives and residual values are reviewed at each financial year-end and adjusted if appropriate.

3.13 Impairment of assets

The carrying amounts of the Company's and its subsidiaries's assets are reviewed at each the reporting period date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable amount is estimated. For goodwill and customer relationship, the recoverable amount is estimated each year at the same time.

An impairment loss is recognized whenever the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. The impairment loss is recognized as expense in the statements of profit or loss and other comprehensive income unless it reverses a previous revaluation credited to equity and subsequently occurs impairment, in which case it is charged to statement of other comprehensive income.

Calculation of recoverable amount

The recoverable amount is the greater of the assets' fair value less cost to sell or value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For an asset that does not generate cash inflows largely independent of those from other assets, the recoverable amount is determined for the cash-generating unit to which the asset belongs.

Reversals of impairment

An impairment loss in respect of financial assets is reversed if subsequent increase in recoverable amount and the recoverable amount can be related objectively to an event after the impairment loss was recognized as an expense in the statement of profit or loss and other comprehensive income.

An impairment loss in respect of goodwill is not reversed. Impairment losses recognized in prior periods in respect of other non-financial assets are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortization, as if no impairment loss had been recognized.

3.14 Leases

Applicable from January 1, 2020

At inception of a contract, the Company and its subsidiaries assess whether the contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

The Company and its subsidiaries assess the lease term for the non-cancellable period as stipulated in lease contract or the remaining period of active leases at the date of initial application (as at January 1, 2020) together with any period covered by an option to extend the lease if it is reasonably certain to be exercised or any periods covered by an option to terminate the lease if it is reasonably certain not to be exercised by considering the effect of changes in technology and/or the other circumstance relating to the extension of the lease term.

Right-of-use assets-as a lessee

Right-of-use assets are recognized at the commencement date of the lease. Right-of-use assets are stated at cost, less any accumulated depreciation and impairment losses (if any), and adjusted for any remeasurement of lease liabilities (if any). The cost of right-of-use assets includes the amount of lease liabilities recognized, initial direct costs incurred, and lease payments made at or before the commencement date, less any lease incentives received.

The cost of right-of-use assets also includes an estimate of costs to be incurred by the lessee in dismantling and removing the underlying asset, restoring the site on which it is located or restoring the underlying asset to the condition required by the terms and conditions of the lease.

Right-of-use assets are calculated by reference to their costs on a straight-line basis over the shorter of the lease term and the estimated useful lives for each of right-of-use assets.

Lease liabilities

At the commencement date of the lease, lease liabilities are stated at the present value of lease payments to be made over the lease term. The lease payments include fixed payments (including in-substance fixed payments) less any lease incentives receivable (if any) and amount expected to be paid under residual value guarantees. The lease payments also include the exercise price of a purchase option reasonably certain to be exercised by the Company and its subsidiaries and payments of penalties for terminating the lease, if the lease term reflects the Company and its subsidiaries exercising the option to terminate.

In calculating the present value of lease payments, the Company and its subsidiaries use its incremental borrowing rate, which is determined by referring to the government bond yield adjusted with risk premium depending on the lease term, at the lease commencement date if the interest rate implicit in the lease is not readily determinable. After the commencement date, the amount of lease liabilities is increased to reflect the accretion of the interest and reduced for the lease payments made. In addition, the carrying amount of lease liabilities is remeasured if there is a modification, a change in the lease term, a change in the lease payments or a change in the assessment of an option to purchase the underlying asset.

Short-term leases and leases of low-value assets

The Company and its subsidiaries apply the short-term lease recognition exemption to its short-term leases (those leases that have a lease term of 12 months or less from the commencement date and not contain a purchase option). It also applies the lease of low-value assets recognition exemption to leases that are considered of low value. Lease payments on short-term and leases of low-value assets are recognized as expense in profit and loss on a straight-line basis over the lease term.

Applicable prior to January 1, 2020

Operating Lease

Leases not transferring a significant portion of the risks and rewards of ownership to the lessee are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the statements of comprehensive income on a straight-line basis over the period of the lease.

When an operating lease is terminated before the lease period has expired, any payment required to be made to the lessor by way of penalty is recognized as an expense in the period in which termination takes place.

Financial lease

Lease in which substantially all the risks and rewards of ownership other than legal title are transferred to the Company and its subsidiary are accounted for as financial lease. At inception, the fair value of the leased assets is recorded together with the obligation. The leased assets are depreciated using the straight-line method over their estimated useful lives. Interest or finance charge and depreciation are recognized as expenses in the statements of profit or loss and other comprehensive income.

3.15 Employee benefits

Short-term benefits

The Company and its subsidiaries are recognizes salaries, wages, bonus and social security contribution as expenses when incurred.

Post-employment benefits - defined contribution plan

The Company operates a provident fund that is a defined contribution plan. The assets of which are held in a separate trust fund. The provident fund is funded by payments from employees and the Company. Contributions to the provident fund and obligations under contribution plan are charged as an expense to the statement of comprehensive income in the period to which they relate.

Post-employment benefits - defined benefit plan

The employee benefits liabilities for severance payment as the labor law is recognized as an expense over the employee's service period. It is calculated by estimating the amount of future benefit earned by employees in return for service provided to the Company and its subsidiaries in the current and future periods, with such benefit being discounted to determine the present value. The reference point for setting the discount rate is the yield rate of government bonds as at the reporting date. The calculation is performed by actuarial technique using the Projected Unit Credit Method.

When the employee benefits are improved, the portion of the increased benefit relating to past service by employees is recognized in the statement of profit or loss and other comprehensive income on a straight-line basis over the average period until the benefits become vested.

When the actuarial assumptions are changed, the Company and its subsidiaries recognizes all actuarial gains (losses) immediately in other comprehensive income.

3.16 Revenues

Revenue from sale of goods

Revenue from sale of goods is recognized at the point in time when control of the asset is transferred to the customer, generally on delivery of the goods. Revenue is measured at the amount of the consideration received or receivable, excluding value added tax, of goods supplied after deducting returns and discounts.

For sale with warranties to assure that the goods comply with agree-upon specifications, the Company recognized the warranty as provisions, contingent liabilities and contingent assets.

The service-type warranties provided customers with a service in addition to the assurance that the product complies with agree-upon specifications is recognized as revenue over the period in which the service is provided.

Revenue from rendering of services

Revenue from project services is recognized over time in accordance with the measuring progress towards complete satisfaction of a performance obligation, based on the costs incurred to the satisfaction of a performance obligation relative to the total expected costs to the satisfaction of that performance obligation. In some circumstances, the Company and its subsidiaries may not be able to reasonably measure the outcome of a performance obligation, but the Company and its subsidiaries expect to recover the costs incurred in satisfying the performance obligation. In those circumstances, the Company and its subsidiaries shall recognize revenue only to the extent of costs incurred until such time that it can reasonably measure the outcome of the performance obligation.

Revenue from providing maintenance service is recognized over time when services have been rendered considering the straight-line method over the term of the contracts.

Revenue from other service is recognized when services have been rendered.

The recognized revenue which is not yet due per the contracts has been presented as “Accrued service income /Unbilled receivables” in the statement of financial position, which is classified as trade receivables when the Company has right to receive without condition such as upon completion of services and acceptance by the customer.

Revenue from rental

Revenue from rental is recognized over time on a straight-line method over the term of the contracts.

Deferred revenue

The obligation to transfer goods or service to a customer for which the Company and its subsidiaries have received consideration or an amount of consideration is due from the customer is presented as “Deferred revenue” in the statement of financial position, which is classified as other payables under trade and other payable. Deferred revenue will be recognized as revenue when the Company completely perform the obligation stated in the contract.

Interest income and other income

Interest income is recognized in the statements of profit or loss and other comprehensive income on an accrual basis, based on the effective rate method.

Other income is recognized on an accrual basis.

3.17 Expenses

Expenses are recognized in the statement of profit or loss and other comprehensive income on an accrual basis.

3.18 Borrowing costs

Finance costs comprise interest expense on borrowings and contingent consideration.

Borrowing costs that are not directly attributable to the acquisition, construction or production of a qualifying asset are recognized in statement of profit or loss and other comprehensive income using the effective interest method.

3.19 Income tax

Income tax expense for the year comprises current and deferred tax.

Current and deferred tax are recognized as income or expense in the statements of profit or loss and other comprehensive income except to the extent that they relate to a business combination, or items recognized directly in shareholders' equity or in other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognized for the following temporary differences: the initial recognition of goodwill; the initial recognition of assets or liabilities in a transaction in the consolidate financial statement that is not a business combination and that affects neither accounting nor taxable profit or loss; and differences relating to investments in subsidiaries and jointly-controlled entities to the extent that it is probable that they will not reverse in the foreseeable future.

Deferred tax is measured at the tax rates that are expected to be applied to the temporary differences when they reverse, using tax rates enacted or substantively enacted at the reporting date.

In determining the amount of current and deferred tax, the Company takes into account the impact of uncertain tax positions and whether additional taxes and interest may be due. The Company and its subsidiaries believe that its accruals for tax liabilities are adequate for all open tax years based on its assessment of many factors, including interpretations of tax law and prior experience. This assessment relies on estimates and assumptions and may involve a series of judgements about future events. New information may become available that causes the Company and its subsidiaries to change its judgement regarding the adequacy of existing tax liabilities; such changes to tax liabilities will impact tax expense in the period that such a determination is made.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax assets and liabilities, and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realized simultaneously.

A deferred tax asset is recognized to the extent that it is probable that future taxable profits will be available against which the temporary differences can be utilized. Deferred tax assets are reviewed at the end of reporting period date and reduced to the extent that it is no longer probable that the related tax benefit will be realized.

3.20 Basic earnings per share

The calculations of basic earnings per share for the year were based on the profit for the year attributable to equity holders divided by the weighted average number of ordinary shares held by outsiders outstanding during the year. The calculations of diluted earnings per share for the year were based on the weighted average number of ordinary shares on the assumption that all dilutive potential ordinary shares have been converted to ordinary shares.

3.21 Fair value measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Company takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in the financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of TFRS 2 (Revised 2019), leasing transactions that are within the scope of TAS 17 (Revised 2019), and measurements that have some similarities to fair value but are not fair value, such as net realizable value in TAS 2 (Revised 2019) or value in use in TAS 36 (Revised 2019).

In addition, fair value measurements are categorized into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date.
- Level 2 inputs are inputs, other than quoted prices included within Level 1, which are observable for the asset or liability, either directly or indirectly.
- Level 3 inputs are unobservable inputs for the asset or liability.

3.22 Use of management's critical judgements in applying accounting policies

(1) Use of management's critical judgements an applying accounting policies

The preparation of financial statements in conformity with generally accepted accounting principles requires the Company and its subsidiaries are management to exercise judgments in order to determine the accounting policies, estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the end of reporting period and the reported amounts of revenue and expense during the reporting period. Although these estimates are based on management's reasonable consideration of current events, actual results may differ from these estimates.

Critical judgments in applying accounting policies are as follows:

Impairment

The Company and its subsidiaries shall assess the assets balance at the statement of financial position whether there is any indication that an asset may be impaired. If any such indication exists, the Company and its subsidiaries are shall estimate the recoverable amount of the asset.

Allowance for doubtful accounts

Applicable from January 1, 2020

In determining an allowance for doubtful accounts, the management needs to make judgement and estimates the expected credit loss based on the payment profiles and the corresponding historical credit losses which are adjusted to reflect the current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables such as GDP, the unemployment rate and the consumer price index.

Applicable prior to January 1, 2020

In determining an allowance for doubtful accounts, the management needs to make judgement and estimates based upon, among other things, past collection history, aging profile of outstanding debts and the prevailing economic condition.

Allowance for declining in value of inventory

The determination of allowance for declining in the value of inventory, requires management to make judgements and estimates of the loss expected to occur. The allowance for decline in net realizable value is estimated based on the selling price expected in the ordinary course of business less selling expense. The provision for obsolete slow-moving and deteriorated inventory, is estimated based on the approximate useful life of each type of inventory. The allowance for diminution in value of inventory as determined is compared with the original balance in the books of account and the increase or decrease in the allowance for diminution in value of inventory will be recognized as cost of sales and service in profit or loss.

Estimated construction project costs

The Company and its subsidiaries estimates costs of construction projects based on details of the construction work, taking into account the volume and value of construction materials to be used in the project, labour costs and other miscellaneous costs to be incurred to completion of service, taking into account the direction of the movement in these costs. Estimates are reviewed regularly or whenever actual costs differ significantly from the figures used in the original estimates.

Provision for losses on project services contract

Management applies judgement in estimating the loss they expect to be realised on each installation, based on estimates of anticipated costs that take into account the progress of the project and actual costs incurred to date, together with fluctuations in costs of installation materials, labour and the current situation.

Provision for penalty from delay delivery

The Company and its subsidiaries have provision incurred from delay delivery. The management applies judgement in estimating the penalty based on contract rate and the period of delay project work. The Company and its subsidiaries have recorded provision for penalty from delay delivery in the financial statements. However, actual results could differ from the estimates.

Determining the lease term of contracts with renewal and termination options**Applicable from to January 1, 2020**

The Company and its subsidiaries determine the lease term as the non-cancellable term of the lease, together with any period covered by an option to extend the lease if it is reasonably certain to be exercised, or any periods covered by an option to terminate the lease, if it is reasonably certain not to be exercised. The management is required to use judgment in evaluating whether it is reasonably certain whether or not to exercise the option to renew or terminate the lease, considering all relevant factors that create an economic incentive to exercise either the renewal or termination. After the commencement date, the Company and its subsidiaries reassess the lease term if there is a significant event or change in circumstances that is within its control and affects its ability to exercise or not to exercise the option to renew or to terminate.

Investment property/Depreciation

In determining depreciation of investment property, the management is required to make estimates of the useful lives and residual values of the investment property and to review the useful lives and residual values when there are any changes.

In addition, the management is required to review investment property for impairment on a periodical basis and record the impairment loss when it is determined that the recoverable amount is lower than the carrying amount. This requires judgement regarding forecast of future revenues and expenses relating to the assets subject to the review.

In determining the fair value disclosure of investment property, the management used the income approach supported by current and previous valuations by an independent appraiser.

Property, plant and equipment and right-of-use assets/Depreciation

In determining depreciation of plant and equipment and right-of-use assets, the management is required to make estimates of the useful lives and residual values of the plant and equipment and to review the estimated useful lives and residual values when there are any changes.

In addition, the management is required to review property, plant and equipment and right-of-use assets, for impairment on a periodical basis and record the impairment loss when it is determined that the recoverable amount is lower than the carrying amount. This requires judgement regarding forecast of future revenues and expenses relating to the assets subject to the review.

Intangible assets

In recording the initial recognition and measurement of intangible assets as at the acquired date and subsequent impairment testing, the management is required to make estimates of cash flows to be generated by the asset or the cash generating units and to choose a suitable discount rate in order to calculate the present value of those cash flows.

Employee benefit obligations

The present value of the employee benefit obligations depends on a number of factors that are determined on an actuarial basis using a number of assumptions, including the discount rate. Any changes in these assumptions will have an impact on the carrying amount of such obligations.

The Company and its subsidiaries determines the appropriate discount rate at the end of each year. This is the interest rate that should be used to determine the present value of estimated future cash outflows expected to be required to settle the employee benefit obligations. In determining the appropriate discount rate, the Company and its subsidiaries are considers the market yield of government bonds that are denominated in the currency in which the benefits will be paid, and that have terms to maturity approximating the terms of the related obligations. Additional information is disclosed in Note 22.

Deferred tax assets

Deferred tax assets are recognized for deductible temporary differences and unused tax losses to the extent that it is probable that taxable profit will be available against which the temporary differences and losses can be utilized. Significant management judgement is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and level of estimated future taxable profits.

(2) Key sources of estimation uncertainty

Fair value measurements and valuation processes

In estimating the fair value of an asset or liability, the Company and its subsidiaries use market-observable data to the extent it is available. Where Level 1 inputs are not available, the Company and its subsidiaries engage qualified external values to perform the valuation to establish the appropriate valuation techniques and inputs to the model.

Information about valuation techniques and inputs used in determining the fair value of various assets and liabilities are disclosed in Note 33.

4. CUMULATIVE EFFECTS OF CHANGES IN ACCOUNTING POLICIES DUE TO THE ADOPTION OF NEW FINANCIAL REPORTING STANDARDS

As described in Note 2.3 to the interim financial statements, during the current year, the Company and its subsidiaries have adopted TFRS 9 and TFRS 16 using the modified retrospective method of adoption. The cumulative effect of the changes in accounting policies such financial reporting standards is recognized. Therefore, the comparative information was not restated.

The changes in accounting policies due to the adoption of above financial reporting standards, are summarized below.

	Thousand Baht			
	Consolidated financial statements			
	As at December 31, 2019 (Reclassified Note 36)	The impacts of TFRSs related to financial instruments	The impacts of TFRS 16	As at January 1, 2020
Statement of financial position				
Current assets				
Temporary investments	124,478	(124,478)	-	-
Trade and other current receivables	322,952	29	-	322,981
Current contract assets	9,566	(20)	-	9,546
Other current financial asset	-	124,478	-	124,478
Non-current assets				
Trade and other non-current receivables	7,991	(9)	-	7,982
Right-of-use assets	-	-	2,815	2,815
Current liabilities				
Current portion of lease liabilities	-	-	891	891
Non-current liabilities				
Lease liabilities	-	-	1,924	1,924

	Thousand Baht			
	Separate financial statements			
	As at December 31, 2019 (Reclassified Note 36)	The impacts of TFRSs related to financial instruments	The impacts of TFRS 16	As at January 1, 2020
Statement of financial position				
Current assets				
Temporary investments	124,478	(124,478)	-	-
Trade and other current receivables	325,923	29	-	325,952
Current contract assets	9,566	(20)	-	9,546
Other current financial asset	-	124,478	-	124,478
Non-current assets				
Trade and other non-current receivables	7,991	(9)	-	7,982
Right-of-use assets	-	-	2,815	2,815
Current liabilities				
Current portion of lease liabilities	-	-	891	891
Non-current liabilities				
Lease liabilities	-	-	1,924	1,924

4.1 Financial instruments

Classification and measurement

On January 1, 2020 (the date of initial application), the Company and its subsidiaries' management has assessed which business models applied to the financial assets and liabilities held by the Company and its subsidiaries and has classified the financial assets and liabilities as below.

	Thousand Baht		
	Consolidated financial statements		
	FVPL	Amortized cost	Total
Financial assets as at January 1, 2020			
Cash and cash equivalents	-	127,100	127,100
Trade and other current receivables	-	322,981	322,981
Current contract assets	-	9,546	9,546
Other current financial assets	124,478	-	124,478
Other non-current financial assets	242	-	242
Trade and other non-current receivables	-	7,982	7,982
Other non-current assets	-	23,669	23,669
	<u>124,720</u>	<u>491,278</u>	<u>615,998</u>

	Thousand Baht	
	Consolidated financial statements	
	Amortized cost	Total
Financial liabilities as at January 1, 2020		
Trade and other current payables	199,838	199,838
Lease liabilities	2,815	2,815
Other non-current liabilities	23,364	23,364
	<u>226,017</u>	<u>226,017</u>

	Thousand Baht		
	Separate financial statements		
	FVPL	Amortized cost	Total
Financial assets as at January 1, 2020			
Cash and cash equivalents	-	120,124	120,124
Trade and other current receivables	-	325,952	325,952
Current contract assets	-	9,546	9,546
Other current financial assets	124,478	-	124,478
Other non-current financial assets	242	-	242
Trade and other non-current receivables	-	7,982	7,982
Other non-current assets	-	23,669	23,669
	<u>124,720</u>	<u>487,273</u>	<u>611,993</u>

	Thousand Baht	
	Separate financial statements	
	Amortized cost	Total
Financial liabilities as at January 1, 2020		
Trade and other current payables	193,304	193,304
Lease liabilities	2,815	2,815
Other non-current liabilities	23,364	23,364
	<u>219,483</u>	<u>219,483</u>

Impairment of financial assets

The Company and its subsidiaries have trade and other current receivables, lease receivables and current contract assets that are subject to the expected credit loss model. The Company and its subsidiaries have trade receivables, lease receivables and unbilled receivables that are subject to the expected credit loss model.

Trade and other current receivables/ lease receivables/ current contract assets

The Company and its subsidiaries apply the simplified approach to measuring expected credit losses, which use a lifetime expected loss allowance for all trade receivables.

To measure the expected credit losses, trade and other current receivables, lease receivable and current contract assets have been grouped based on shared credit risk characteristics and the days past due. The expected loss rates are based on the historical payment profiles, the corresponding historical credit losses experienced and the impact of potential factor to the expected loss rates.

On that basis, the loss allowance for account receivables was as follows:

	Thousand Baht					
	Consolidated financial statements					
	Not yet due	Up to 3 months	3 - 6 months	6 - 12 months	Over 12 months	Total
As at January 1, 2020						
Trade and other current receivables	204,436	83,902	8,308	5,357	4,136	306,139
Lease receivables	17,729	603	19	-	-	18,351
Current contract assets	9,566	-	-	-	40	9,606
Loss allowance	458	478	702	885	4,176	6,699

	Thousand Baht					
	Separate financial statements					
	Not yet due	Up to 3 months	3 - 6 months	6 - 12 months	Over 12 months	Total
As at January 1, 2020						
Trade and other current receivables	204,252	87,093	8,308	5,357	4,136	309,146
Lease receivables	17,729	603	19	-	-	18,351
Current contract assets	9,566	-	-	-	40	9,606
Loss allowance	458	495	702	885	4,176	6,716

The loss allowance for account receivables as at December 31, 2019 is reconciled to the opening loss allowance for trade receivables as at January 1, 2020 as follow:

	Thousand Baht	
	Consolidated financial statements	Separate financial statements
<u>Loss allowance for trade receivables</u>		
As at December 31, 2019	7,286	7,286
The effect of the adoption of the financial reporting standard No.9	(587)	(570)
Opening loss allowance as at January 1, 2020	<u>6,699</u>	<u>6,716</u>

The adoption of such financial reporting standards insignificant effect on the financial statements of the Company and its subsidiaries. Therefore, the management considered not to adjust such effect on unappropriated retained earnings as at the beginning of the year.

4.2 Leases

These liabilities were measured at the present value of the remaining lease payments, discounted using the Company and its subsidiary's incremental borrowing rates. The Company and its subsidiaries incremental borrowing rates applied to the lease liabilities as at January 1, 2020 was ranged between 6.175 % per annum.

For leases previously classified as finance leases applying TAS 17, the Company and its subsidiaries reclassified the carrying amount of the lease assets and lease liabilities immediately before adoption of TFRS 16 as the carrying amount of the right-of-use assets and the lease liabilities at the date of initial application.

	Thousand Baht	
	Consolidated financial statements	Separate financial statements
Operating lease commitments disclosed as at December 31, 2019	21,804	21,572
<u>Less: Short-term leases recognized on a straight-line basis as expenses</u>	(3,393)	(3,161)
<u>Less: Termination options reasonably certain to be exercised</u>	(12,580)	(12,580)
<u>Less: Contracts reassessed as service agreements</u>	(2,756)	(2,756)
	3,075	3,075
<u>Less: Deferred interest expenses</u>	(260)	(260)
Additional lease liabilities from TFRS 16 adoption	2,815	2,815
Finance lease liabilities as at December 31, 2019	-	-
Lease liabilities recognised as at January 1, 2020	2,815	2,815
Of which are:		
Current lease liabilities	891	891
Non-current lease liabilities	1,924	1,924
	2,815	2,815

The recognized right-of-use assets relate to the following types of assets:

	Thousand Baht	
	Consolidated financial statements	Separate financial statements
As at January 1, 2020		
Building and building improvements	2,815	2,815
Total right-of-use assets	2,815	2,815

5. RELATED PARTY TRANSACTIONS

The Company and its subsidiaries had transactions with related parties. These parties were related through common shareholders and/or directorships or close member of family. The significant transactions with related parties as included in the financial statements are determined at the prices in line occurring in the normal course of business based on the market price in general or the price as stipulated in the agreement if no market price exists.

Types of relationship of related parties were as follows:

Company/Person name	Country/ Nationality	Related	Relationship
Harn Vietnam Co., Ltd.	Vietnam	Subsidiary	Major shareholder
Aiyaraharn Co., Ltd.	Thailand	Subsidiary	Major shareholder
Harn Engineering Co., Ltd.	Thailand	Related company	Directorships and/or common shareholders
Phraboriban Co., Ltd.	Thailand	Related company	Directorships and/or common shareholders

Company/Person name	Country/ Nationality	Related	Relationship
Nutrix Plc.	Thailand	Related company	Directorships and/or common shareholders
Jannopsiri Co., Ltd.	Thailand	Related company	Directorships and/or common shareholders
Throughwave (Thailand) Co.,Ltd.	Thailand	Related company	Close members of the director's family
Mr. Jain Charnnarong	Thai	Related person	Shareholder and close member of the director's family
Mrs. Sirima Iamsakulrat	Thai	Related person	Shareholder and close member of the director's family
Key management personnel	Thai	Related person	Authorized person and responsible in management

Bases of measurement for intercompany revenues and expenses

	Pricing Policy
Sale of goods	Market price
Purchase of goods	Market price
Purchase and sale of equipment and intangible asset	Contractually agreed prices
Other income	Contractually agreed prices
Rental and service expenses	Contractually agreed prices
Compensation to management	As approved by director and / or shareholder
Interest expenses	Market price

Significant agreements with related parties. The Company and its subsidiaries entered into office building rental agreement as follows:

	As at December 31, 2020		
	Lessor	Period	Rate per month (Baht)
Office rental agreement	Mr. Jain Charnnarong	4.4 year	45,947 - 53,100
	Harn Engineering Co., Ltd.	4.7 year	292,105 - 413,916
	Phraboriban Co., Ltd.	3 year	64,080

During the year ended December 31, 2020, there were rental agreements that were cancelled had been shown as follows:

	Lessor	Period	Rate per month
			(Baht)
Warehouse rental agreement	Phraboriban Co., Ltd.	0.7 year	195,490
	Phraboriban Co., Ltd.	3 year	85,410



Balances with the related parties as at December 31, 2020 and 2019 consisted of:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Trade and other current receivables				
Subsidiaries				
Harn Vietnam Co., Ltd.	-	-	295,908	3,238,895
Aiyaraharn Co., Ltd.	-	-	57,933	-
Related company				
Harn Engineering Co., Ltd.	1,845,458	1,852,022	1,845,458	1,852,022
Nutrix Plc.	15,716	-	15,716	-
Jannopsiri Co., Ltd.	118,342	-	118,342	-
	<u>1,979,516</u>	<u>1,852,022</u>	<u>2,333,357</u>	<u>5,090,917</u>
Short-term loans to related parties				
Subsidiary				
Harn Vietnam Co., Ltd.	-	-	5,973,480	-
Payment deposit				
Related company				
Throughwave (Thailand) Co., Ltd.	-	5,229,668	-	5,229,668
Other current payable				
Related company				
Throughwave (Thailand) Co., Ltd.	-	2,988,382	-	2,988,382
Lease liabilities				
Related company				
Phraboriban Co., Ltd.	2,013,542	-	2,013,542	-
Jansopsiri Co., Ltd.	102,425,395	-	102,425,395	-
	<u>104,438,937</u>	<u>-</u>	<u>104,438,937</u>	<u>-</u>

Transactions for the years ended December 31, 2020 and 2019 with related parties were summarized as follows:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Sale of goods				
Subsidiaries				
Harn Vietnam Co., Ltd.	-	-	322,085	3,190,895
Related companies				
Nutrix Plc.	117,384	-	117,384	-
Jannopsiri Co., Ltd.	248,607	-	248,607	-
	<u>365,991</u>	<u>-</u>	<u>688,076</u>	<u>3,190,895</u>

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Other income				
Subsidiaries				
Harn Vietnam Co., Ltd.	-	-	295,908	-
Aiyaraharn Co., Ltd.	-	-	157,933	-
Related company				
Phraboriban Co., Ltd.	28,137	-	28,137	-
	<u>28,137</u>	<u>-</u>	<u>481,978</u>	<u>-</u>
Purchase of equipment				
Related company				
Throughwave (Thailand) Co., Ltd.	-	484,000	-	484,000
Office rental and service expenses				
Related companies				
Harn Engineering Co., Ltd.	1,368,430	5,902,872	1,368,430	5,902,872
Phraboriban Co., Ltd.	1,432,510	3,370,800	1,432,510	3,370,800
Related person				
Mr. Jain Charnmarong	630,047	637,200	630,047	637,200
	<u>3,430,987</u>	<u>9,910,872</u>	<u>3,430,987</u>	<u>9,910,872</u>
Interest expenses from lease liabilities				
Related company				
Phraboriban Co., Ltd.	88,177	-	88,177	-
Directors remuneration				
Directors remuneration	3,585,000	3,955,000	3,585,000	3,955,000
Management benefit expenses				
Short-term employee's benefits	10,790,267	10,184,187	10,490,267	10,184,187
Post-employment benefits	312,240	342,142	310,640	342,142
	<u>14,687,507</u>	<u>14,481,329</u>	<u>14,385,907</u>	<u>14,481,329</u>

Management benefit expenses represents the benefits paid to the Company and its subsidiaries are management and directors such as salaries, related benefit and directors' remuneration, including the benefit paid by other means. The Company and its subsidiaries are management is the persons who are defined under the Securities and Exchange Act. The management is comprised managing director or the managements who have the top position at the management level from the four lists following by the manager level.

6. CASH AND CASH EQUIVALENTS

Cash and cash equivalents were consisted of:

		Consolidated financial statements			
		Foreign currencies		Baht	
		2020	2019	2020	2019
Cash on hand	- Baht			132,676	160,905
Cash at banks					
Current accounts	- Baht			37,480,163	21,491,132
Savings accounts	- Baht			263,247,654	98,471,644
	- Vietnamese Dong	4,035,484,667	5,391,066,665	5,213,847	6,976,040
				<u>306,074,340</u>	<u>127,099,721</u>
		Separate financial statement			
		Baht			
				2020	2019
Cash on hand				102,541	160,905
Cash at banks					
Current accounts				37,480,163	21,491,132
Savings accounts				261,735,578	98,471,644
				<u>299,318,282</u>	<u>120,123,681</u>

7. TRADE AND OTHER CURRENT RECEIVABLES

Trade and other current receivables were consisted of:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019 (Reclassified Note 36)	2020	2019 (Reclassified Note 36)
Trade receivable				
Trade receivables - subsidiaries	-	-	-	3,238,895
Trade receivables - other companies	218,292,058	288,666,770	217,917,270	288,435,152
Total	218,292,058	288,666,770	217,917,270	291,674,047
Less Allowance for doubtful accounts	(11,455,792)	(7,286,049)	(11,454,371)	(7,286,049)
Net	206,836,266	281,380,721	206,462,899	284,387,998
Other receivables				
Other receivables - related parties	1,845,458	1,852,022	2,174,299	1,852,022
Other receivables - other companies	3,585,280	8,853,168	3,540,280	8,853,168
Accrued retentions	15,104,338	9,527,045	15,104,338	9,527,045
Deposit	6,557,432	8,762,613	6,550,384	8,746,087
Prepaid expenses	5,151,224	4,674,077	4,784,669	4,654,201
Accrued income	3,802,728	1,064,831	3,651,638	1,064,831
Total other receivables	36,046,460	34,733,756	35,805,608	34,697,354

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019 (Reclassified Note 36)	2020	2019 (Reclassified Note 36)
Lease receivables				
Lease receivables - printing devices	19,412,311	14,828,531	19,412,311	14,828,531
Less Allowance for doubtful account	(56,443)	-	(56,443)	-
Total	19,355,868	14,828,531	19,355,868	14,828,531
Less due between over 1 year	(11,251,986)	(7,990,909)	(11,251,986)	(7,990,909)
Net	8,103,882	6,837,622	8,103,882	6,837,622
Total trade and other receivables - net	250,986,608	322,952,099	250,372,389	325,922,974

Trade receivables are classified by aging as follows:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Current	141,009,078	187,039,492	140,815,378	186,855,915
Overdue				
Less than 3 months	55,102,089	83,826,501	54,921,001	87,017,355
Over 3 months up to 6 months	14,096,467	8,308,446	14,096,467	8,308,446
Over 6 months up to 12 months	4,670,478	5,356,651	4,670,478	5,356,651
Over 12 months	3,413,946	4,135,680	3,413,946	4,135,680
Total	218,292,058	288,666,770	217,917,270	291,674,047
Less Allowance for doubtful account	(11,455,792)	(7,286,049)	(11,454,371)	(7,286,049)
Trade receivables, net	206,836,266	281,380,721	206,462,899	284,387,998

The minimum lease payments and present value of minimum lease payments which receivable will be paid under the lease agreements as at December 31, 2020 and 2019, are as follows:

	Baht			
	Consolidated financial statements/Separate financial statements			
	2020		2019	
Minimum lease payments	Present value of minimum lease payments	Minimum lease payments	Present value of minimum lease payments	
Collection period				
Within 1 year	10,978,046	8,103,882	8,413,838	6,837,622
Over 1 year but less than 5 years	15,127,108	11,251,986	9,936,769	7,990,909
	26,105,154	19,355,868	18,350,607	14,828,531
Less Deferred interest	(6,749,286)	-	(3,522,076)	-
	19,355,868	19,355,868	14,828,531	14,828,531

The allowance for expected credit losses as at December 31, 2020 was as follows:

	Thousand Baht					Total
	Consolidated financial statements					
	Not yet due	Up to 3 months	3 - 6 months	6 - 12 months	Over 12 months	
As at December 31, 2020						
Trade and other current receivables	155,407	55,798	14,107	4,670	3,414	233,396
Lease receivables	25,948	204	10	-	-	26,162
Current contract assets	12,825	-	-	-	40	12,865
Loss allowance	413	313	4,172	3,101	3,580	11,579

	Thousand Baht					Total
	Separate financial statements					
	Not yet due	Up to 3 months	3 - 6 months	6 - 12 months	Over 12 months	
As at December 31, 2020						
Trade and other current receivables	155,214	55,616	14,107	4,671	3,414	233,022
Lease receivables	25,948	204	10	-	-	26,162
Current contract assets	12,080	-	-	-	40	12,120
Loss allowance	411	312	4,172	3,101	3,580	11,576

8. CURRENT CONTRACT ASSETS

Current contract assets were consisted of:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Current contract assets	12,864,676	9,606,429	12,119,531	9,606,429
Less Allowance for doubtful account	(67,063)	(40,131)	(65,498)	(40,131)
Net	12,797,613	9,566,298	12,054,033	9,566,298

9. SHORT-TERM LOANS TO SUBSIDIARY

Movements of short-term loans to subsidiary for the year ended December 31, 2020 were as follows:

	Separate financial statements	
	USD	Baht
Harn Vietnam Co., Ltd.		
Beginning balance	-	-
Additional during the year	200,000	6,352,000
Deduction during the year	-	-
Conversion of unrealized on exchange rate	-	(378,520)
Ending balance	200,000	5,973,480

As at March 12, 2020, the Company has short-term loans to a subsidiary amounted 200,000 of United States Dollars. The interest rate has been charged at 6.15% per annum in the term of year.

10. INVENTORIES

Inventories were consisted of:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Finished goods	247,098,155	285,842,722	245,120,206	283,585,349
Goods in transit	40,820,856	43,591,076	39,102,203	43,591,076
Total	287,919,011	329,433,798	284,222,409	327,176,425
Less Allowance for loss on devaluation of inventories	(30,067,043)	(24,393,942)	(30,067,043)	(24,393,942)
Net	257,851,968	305,039,856	254,155,366	302,782,483

Decline in value of inventory recognized as cost of goods sold for the years ended December 31, 2020 and 2019 were Baht 5.67 million and Baht 8.27 million, respectively (for the Company's only amounting to Baht 5.67 million and Baht 8.27 million, respectively).

11. OTHER CURRENT FINANCIAL ASSETS

Other current financial assets were consisted of:

	Baht		
	Consolidated financial statements/ Separate financial statements		
	2020		
	Cost value	Unrealized gain (loss) on revaluation of investments	Fair value
Investment in debt instruments			
- Investment in unit trusts	9,625,255	(2,667,311)	6,957,944
Total	9,625,255	(2,667,311)	6,957,944

	Baht		
	Consolidated financial statements/ Separate financial statements		
	2019		
	Cost value	Unrealized gain (loss) on revaluation of investments	Fair value
Investment in debt instruments			
- Investment in Bond Bank of Thailand	59,585,551	35,204	59,620,755
- Investment in unit trusts	63,129,353	1,727,815	64,857,168
Total	122,714,904	1,763,019	124,477,923



12. INVESTMENT IN SUBSIDIARIES

Investment in subsidiaries consisted of:

Subsidiaries	Paid-up capital	Percentage of shareholding (%)		Baht	
		2020	2019	Separate financial statements	
				Cost method	
		2020	2019	2020	2019
Harn Vietnam Co., Ltd.	Vietnamese Dong 800 million	100.00	100.00	1,057,444	1,057,444
Aiyaraharn Co., Ltd.	Baht 2 million	65.00	-	1,300,000	-
Total				2,357,444	1,057,444

The company registered Harn Vietnam Co.,Ltd. “subsidiary” in Vietnam on July 30, 2019 with the registered capital of Vietnamese Dong 800 million (Baht 1.06 million). The company held shares in the subsidiary at 100 percent of the registered capital. The principal business is sale of printing equipment with the objective to enhance competitive capacity and enhance customer service by starting from a business unit “digital printing system” as the first business unit.

On July 8, 2020, The Company joined invest in developing the digital business with Aiyarafun Group by establishment of company under the name “Aiyaraharn Company Limited” with the registered capital of Baht 2 million. The Company and the joint investor in Aiyarafun Group hold the shares in such company at 65 percent and 35 percent of the registered capital, respectively. The establishment of such company was in accordance with the resolution of the Board of Directors’ Meeting No. 4/2020, held on May 14, 2020. The new registered company will have status as the company’s subsidiary. Such investment has an objective to develop IT Products and Solutions system. The operation plan will focus in rendering Smart Building service, in order to extending the existing business of Aiyarafun Group and expending the business for further growth.

13. INVESTMENT PROPERTY

Investment property were consisted of:

	Baht				
	Consolidated financial statements/Separate financial statements				
	Balance	Transactions during the year			Balance
Dec. 31, 2019	Additions	Decrease	Transfer in/out	Dec. 31, 2020	
Cost					
Land	172,645,421	-	-	(37,358,915)	135,286,506
Factory building	55,675,068	-	-	(36,325,512)	19,349,556
Building improvements	2,671,760	-	-	(1,723,333)	948,427
Tool and equipment	957,751	-	-	(607,401)	350,350
Total	231,950,000	-	-	(76,015,161)	155,934,839
Accumulated depreciation					
Factory building	(1,491,024)	(935,327)	-	1,424,415	(1,001,936)
Building improvements	(286,208)	(180,538)	-	270,305	(196,441)
Tool and equipment	(205,192)	(130,477)	-	190,539	(145,130)
Total	(1,982,424)	(1,246,342)	-	1,885,259	(1,343,507)
Investment property-net	229,967,576				154,591,332

	Baht					
	Consolidated financial statements/Separate financial statements					
	Balance	Transactions during the year				Balance
	Dec. 31, 2018	Additions	Decrease	Transfer in/out		Dec. 31, 2019
<u>Cost</u>						
Land	172,645,421	-	-	-	172,645,421	
Factory building	55,675,068	-	-	-	55,675,068	
Building improvements	2,671,760	-	-	-	2,671,760	
Tool and equipment	957,751	-	-	-	957,751	
Total	<u>231,950,000</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>231,950,000</u>	
<u>Accumulated depreciation</u>						
Factory building	(99,147)	(1,391,877)	-	-	(1,491,024)	
Building improvements	(19,032)	(267,176)	-	-	(286,208)	
Tool and equipment	(13,645)	(191,547)	-	-	(205,192)	
Total	<u>(131,824)</u>	<u>(1,850,600)</u>	<u>-</u>	<u>-</u>	<u>(1,982,424)</u>	
Investment property-net	<u>231,818,176</u>				<u>229,967,576</u>	

	Baht			
	Consolidate financial statements		Separate financial statements	
	2020	2019	2020	2019
Depreciation for the year				
- Selling and administrative expenses	<u>1,246,342</u>	<u>1,850,600</u>	<u>1,246,342</u>	<u>1,850,600</u>

During the year 2018, the Company has changed its objective for land holding from previously determined future use to be as held for capital appreciation. Therefore, the Company transferred such owner-occupied land as investment property with the cost at Baht 114.95 million. Moreover, the Company was appraised by an independent appraiser by applying the market price approach in the valuation. According to the report dated September 17, 2018, investment property had its fair value in the amount of Baht 117.04 million.

According to the Board of Directors' Meeting No. 5/2018 held on November 9, 2018, the Board of Directors had a resolution to approve entering into the to buy/to sell land and building agreement for the purpose to use as a single warehouse in the future. Later, the Company has entered into to buy/to sell land and building agreement at the amount of Baht 117.00 million. However, currently such land and building have two renters. The lease agreements end on March 15, 2020 (the lessee can extend the agreement period for another 1 year with the same rate. The lessee shall notify at least the months before the agreement expires) and April 30, 2020. During the year 2020, the Company has changed its objective for land holding for rent to be used as a warehouse. Therefore, the Company transferred such investment property as owner-occupied property with the cost at Baht 74.13 million.

During the year 2020, the Company was appraised by 2 independent appraisers by applying the market price approach for land and the replacement cost approach for building and its construction in the valuation in according to the report, had its fair value in the amount of Baht 159.51 million.

The Company and its subsidiaries had rental incomes of investment property for the year ended December 31, 2020 and 2019 in total amounting of Baht 6,098,772 and Baht 11,300,180, respectively (for the Company's only amounting to 6,098,772 Baht and Baht 11,300,180, respectively) and recognized as operating expenses amounting to Baht 973,699 and Baht 2,567,033, respectively (for the Company's only amounting to Baht 973,699 and Baht 2,567,033, respectively), which was recognized in the statement of comprehensive income.

14. PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment were consisted of:

	Baht						Balance Dec. 31, 2020
	Consolidated financial statements						
	Balance Dec. 31, 2019	Transactions during the year				Balance	
	Additions	Decrease	Transfer in/out	Transfer classified transactions	Exchange difference on transactions financial statements		
Cost							
Land	-	-	-	-	37,358,915	-	37,358,915
Buildings and structures	-	-	-	-	36,325,512	-	36,325,512
Tool and equipment	5,406,733	580,890	(107,038)	2,462,819	607,401	-	8,950,805
Furniture and office equipment	26,682,463	1,126,968	(3,255,943)	6,926,356	1,723,333	(2,372)	33,200,805
Vehicles	24,503,724	834,743	(168,224)	-	-	-	25,170,243
Assets for rent and demonstration	40,071,980	2,810,072	(9,742,429)	-	-	-	33,139,623
Assets in progress	-	32,072,560	(52,982)	(9,389,175)	-	-	22,630,403
Total	96,664,900	37,425,233	(13,326,616)	-	76,015,161	(2,372)	196,776,306
Accumulated depreciation							
Building and structures	-	(456,550)	-	-	(1,424,415)	-	(1,880,965)
Tool and equipment	(3,381,209)	(713,377)	78,834	-	(190,539)	-	(4,206,291)
Furniture and office equipment	(20,981,630)	(3,502,736)	3,058,883	-	(270,305)	464	(21,695,324)
Vehicles	(12,535,942)	(2,322,665)	114,287	-	-	-	(14,744,320)
Assets for rental and demonstration	(29,099,377)	(4,071,734)	8,500,530	-	-	-	(24,670,581)
Total	(65,998,158)	(11,067,062)	11,752,534	-	(1,885,259)	464	(67,197,481)
Less allowance for impairment	-	(50,654)	-	-	-	-	(50,654)
Property, plant and equipment-net	30,666,742						129,578,826

	Baht					Balance Dec. 31, 2020
	Separate financial statements					
	Balance	Transactions during the year			Balance	
	Dec. 31, 2019	Additions	Decrease	Transfer in/out	Transfer classified transactions	
Cost						
Land	-	-	-	-	37,358,915	37,358,915
Buildings and structures	-	-	-	-	36,325,512	36,325,512
Tool and equipment	5,406,733	578,480	(107,038)	2,462,819	607,401	8,948,395
Furniture and office equipment	26,682,463	997,730	(3,255,943)	6,926,356	1,723,333	33,073,939
Vehicles	24,503,724	834,743	(168,224)	-	-	25,170,243
Assets for rent and demonstration	40,071,980	2,810,072	(9,742,429)	-	-	33,139,623
Assets in progress	-	32,072,560	(52,982)	(9,389,175)	-	22,630,403
Total	<u>96,664,900</u>	<u>37,293,585</u>	<u>(13,326,616)</u>	<u>-</u>	<u>76,015,161</u>	<u>196,647,030</u>
Accumulated depreciation						
Buildings and structures	-	(456,550)	-	-	(1,424,415)	(1,880,965)
Tool and equipment	(3,381,209)	(713,291)	78,834	-	(190,539)	(4,206,205)
Furniture and office equipment	(20,981,630)	(3,490,204)	3,058,882	-	(270,305)	(21,683,257)
Vehicles	(12,535,942)	(2,322,665)	114,287	-	-	(14,744,320)
Assets for rental and demonstration	(29,099,377)	(4,071,734)	8,500,530	-	-	(24,670,581)
Total	<u>(65,998,158)</u>	<u>(11,054,444)</u>	<u>11,752,533</u>	<u>-</u>	<u>(1,885,259)</u>	<u>(67,185,328)</u>
Less Equipment allowance	-	(50,654)	-	-	-	(50,654)
Property, plant and equipment-net	<u>30,666,742</u>					<u>129,411,048</u>

	Baht				
	Consolidated financial statements/Separate financial statements				
	Balance	Transactions during the year			Balance
	Dec. 31, 2018	Additions	Decrease	Transfer in/out	Dec. 31, 2019
Cost					
Land	4,180,434	1,307,299	(81,000)	-	5,406,733
Tool and equipment	25,645,470	982,782	(452,219)	506,430	26,682,463
Furniture and office equipment	25,432,035	3,163,849	(4,092,160)	-	24,503,724
Vehicles	37,678,779	3,812,274	(1,438,715)	19,642	40,071,980
Assets in progress	22,430	503,642	-	(526,072)	-
Total	<u>92,959,148</u>	<u>9,769,846</u>	<u>(6,064,094)</u>	<u>-</u>	<u>96,664,900</u>
Accumulated depreciation					
Tool and equipment	(3,005,043)	(457,165)	80,999	-	(3,381,209)
Furniture and office equipment	(17,707,097)	(3,721,711)	447,178	-	(20,981,630)
Vehicles	(13,447,522)	(2,220,282)	3,131,862	-	(12,535,942)
Assets for rental and demonstration	(26,118,741)	(4,172,938)	1,192,302	-	(29,099,377)
Total	<u>(60,278,403)</u>	<u>(10,572,096)</u>	<u>4,852,341</u>	<u>-</u>	<u>(65,998,158)</u>
Property, plant and equipment-net	<u>32,680,745</u>				<u>30,666,742</u>

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Depreciation for the years				
- cost of sale	3,833,232	3,777,903	3,833,145	3,777,903
- Distribution cost and administrative expenses	7,233,830	6,794,193	7,221,299	6,794,193
Total	<u>11,067,062</u>	<u>10,572,096</u>	<u>11,054,444</u>	<u>10,572,096</u>

As at December 31, 2020 and 2019, the Company and its subsidiaries had equipment which were fully depreciated but still in use with the cost price of Baht 36.52 million and Baht 34.60 million, respectively (for the Company's only amounting to Baht 36.52 million and Baht 34.60 million, respectively).

During the year 2020, the Company has transferred investment property to property, plant and equipment with book value of Baht 74.13 million, due to change in holding objective (Note 13).

15. RIGHT-OF-USE ASSETS

The net book value of right-of-use assets and the movement for the year ended December 31, 2020 are presented below.

	Baht
	Consolidated financial statements/ Separate financial statements
Cost	
As at December 31, 2019	-
Effects of the adoption of TFRS16 as at January 1, 2020	2,814,619
As at January 1, 2020	2,814,619
Addition	105,099,557
Write-off	(2,814,619)
As at December 31, 2020	<u>105,099,557</u>
Accumulated depreciation	
As at December 31, 2019	-
Effects of the adoption of TFRS16 as at January 1, 2020	-
As at January 1, 2020	-
Depreciation for the year	(678,541)
Write-off	547,288
As at December 31, 2020	<u>(131,253)</u>

	Baht
	Consolidated financial statements/ Separate financial statements
Net book value	
As at December 31, 2019	-
As at January 1, 2020	2,814,619
As at December 31, 2020	104,968,304

16. GOODWILL

On November 29, 2016, Chillmatch Co., Ltd. and Q II S Co., Ltd. were transferred their entire business into the Company by issuing capital increase shares for Baht 675.36 million to exchange for the identifiable net assets of both companies for Baht 340.69 million, resulting in a goodwill of Baht 334.67 million.

Testing for impairment of goodwill

During the year ended December 31, 2020 and 2019, the Company has tested for impairment of goodwill that arises from the acquisition of Chillmatch Co., Ltd. and Q II S Co., Ltd. which were the subsidiaries under Entire Business Transfer (EBT) process and allocation of Cash Generating Unit (“CGU”) which consists of Refrigeration System Unit and Digital Printing System Unit by comparing the carrying amount of the unit includes the goodwill, with the recoverable amount. The recovery amount was based on its value in use, determined by future cash flows to be generated from the continuing use of the unit. The cash flows were projected over a period of 5 years before a terminal growth rate.

After consideration, management believed that goodwill is not impaired.

The key assumptions used in estimating the value in use are as follows:

Key assumption	Value		Approach used to determine the value
	2020	2019	
- Discount rate	6.12% (Weighted Average Cost of Capital: WACC)	4.47% (Weighted Average Cost of Capital: WACC)	The discount rate which is a pre-tax rate that reflects the specific risk of the particular business unit
- Terminal Value Growth Rate	0%	0%	Appropriate estimated rate

17. CUSTOMER RELATIONSHIP

Customer relationship were consisted of:

	Baht			
	Consolidated financial statements / Separate financial statements			
	Balance Dec. 31, 2019	Transactions during the year		Balance Dec. 31, 2020
		Addition	Decrease	
<u>Cost</u>				
Customer relationship	104,307,663	-	-	104,307,663
<u>Less accumulated amortization</u>	(46,027,850)	(17,947,159)	-	(63,975,009)
Customer relationship - net	58,279,813			40,332,654

	Baht			
	Consolidated financial statements / Separate financial statements			
	Balance	Transactions during the year		Balance
	Dec. 31, 2018	Addition	Decrease	Dec. 31, 2019
Cost				
Customer relationship	104,307,663	-	-	104,307,663
Less accumulated amortization	(31,126,755)	(14,901,095)	-	(46,027,850)
Customer relationship - net	<u>73,180,908</u>			<u>58,279,813</u>

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Depreciation for the years				
- Administrative expenses	<u>17,947,159</u>	<u>14,901,095</u>	<u>17,947,159</u>	<u>14,901,095</u>

18. INTANGIBLE ASSET

Intangible asset were consisted of:

	Baht				
	Consolidated financial statements / Separate financial statements				
	Balance	Transactions during the year			Balance
	Dec. 31, 2019	Addition	Decrease	Transfer In / out	Dec. 31, 2020
Cost					
Software licenses	38,035,264	364,000	(168,298)	1,670,389	39,901,355
Software in progress	906,952	763,437	-	(1,670,389)	-
Total	<u>38,942,216</u>	<u>1,127,437</u>	<u>(168,298)</u>	<u>-</u>	<u>39,901,355</u>
Less Accumulated amortization					
Software licenses	(17,995,143)	(4,058,998)	168,296	-	(21,885,845)
Total	<u>(17,995,143)</u>	<u>(4,058,998)</u>	<u>168,296</u>	<u>-</u>	<u>(21,885,845)</u>
Intangible asset-net	<u>20,947,073</u>				<u>18,015,510</u>

	Baht				
	Consolidated financial statements / Separate financial statements				
	Balance	Transactions during the year			Balance
	Dec. 31, 2018	Addition	Decrease	Transfer In / out	Dec. 31, 2019
Cost					
Software licenses	37,571,664	463,600	-	-	38,035,264
Software in progress	104,000	802,952	-	-	906,952
Total	<u>37,675,664</u>	<u>1,266,552</u>	<u>-</u>	<u>-</u>	<u>38,942,216</u>
Less Accumulated amortization					
Software licenses	(13,696,321)	(4,298,822)	-	-	(17,995,143)
Total	<u>(13,696,321)</u>	<u>(4,298,822)</u>	<u>-</u>	<u>-</u>	<u>(17,995,143)</u>
Intangible asset-net	<u>23,979,343</u>				<u>20,947,073</u>

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Depreciation for the years				
- cost of rendering of services	881,186	832,181	881,186	832,181
- Administrative expenses	3,177,812	3,466,641	3,177,812	3,466,641
Total	4,058,998	4,298,822	4,058,998	4,298,822

As at December 31, 2020 and 2019, the Company and its subsidiaries had intangible assets which were fully depreciated but still in use with the cost price of Baht 3.42 million and Baht 1.96 million, respectively (for the Company's only amounting to Baht 3.42 million and Baht 1.96 million, respectively).

19. DEFERRED TAX ASSETS AND DEFERRED TAX LIABILITIES

Changes in deferred tax assets and deferred tax liabilities for the years ended December 31, 2020 and 2019 were summarized as follows:

	Baht			
	Consolidated financial statements			Balance as at Dec. 31, 2020
	Balance as at Dec. 31, 2019	Income (expenses) during the year		
In profit or loss		In other comprehensive income		
Deferred tax assets:				
Allowance for doubtful accounts	1,465,236	850,623	-	2,315,859
Allowance for devaluation of inventories	4,878,788	1,134,620	-	6,013,408
Allowance for impairment of investment	1,195	48,369	-	49,564
Allowance for impairment of equipment	-	10,131	-	10,131
Lease agreements	-	486	-	486
Non-current provisions for employee benefit	4,732,365	451,546	-	5,183,911
Derivatives liabilities	129,613	(46,236)	-	83,377
Total	11,207,197	2,449,539	-	13,656,736
Deferred tax liabilities:				
Inventories (from fair value adjustment of business combination)	110,138	16,780	-	93,358
Equipment (from fair value adjustment of business combination)	204,113	149,952	-	54,161
Unrealized gain (loss) on temporary investments	650,411	650,411	-	-
Customer relationship (from fair value adjustment of business combination)	11,655,963	3,589,432	-	8,066,531
Depreciation of equipment	188,805	(42,546)	-	231,351
Finance lease assets	564,065	(804,228)	-	1,368,293
Total	13,373,495	3,559,801	-	9,813,694
Deferred tax assets (liabilities) - net	(2,166,298)			3,843,042
Deferred tax income (expenses) - net		6,009,340	-	



	Baht			
	Separate financial statements			
	Balance as at Dec. 31, 2019	Income (expenses) during the year		
	In profit or loss	In other comprehensive income		
Deferred tax assets:				
Allowance for doubtful accounts	1,465,236	850,026	-	2,315,262
Allowance for devaluation of inventories	4,878,788	1,134,620	-	6,013,408
Allowance for impairment of investment	1,195	48,369	-	49,564
Allowance for impairment of equipment	-	10,131	-	10,131
Lease agreements	-	486	-	486
Non-current provisions for employee benefit	4,732,365	435,509	-	5,167,874
Derivatives liabilities	129,613	(46,236)	-	83,377
Total	<u>11,207,197</u>	<u>2,432,905</u>	-	<u>13,640,102</u>
Deferred tax liabilities:				
Inventories (from fair value adjustment of business combination)	110,138	16,780	-	93,358
Equipment (from fair value adjustment of business combination)	204,113	149,952	-	54,161
Unrealized gain (loss) on temporary investments	650,411	650,411	-	-
Customer relationship (from fair value adjustment of business combination)	11,655,963	3,589,432	-	8,066,531
Depreciation of equipment	188,805	(42,546)	-	231,351
Finance lease assets	564,065	(804,228)	-	1,368,293
Total	<u>13,373,495</u>	<u>3,559,801</u>	-	<u>9,813,694</u>
Deferred tax assets (liabilities) - net	<u>(2,166,298)</u>			<u>3,826,408</u>
Deferred tax income (expenses) - net		<u>5,992,706</u>	-	

	Baht				
	Consolidated financial statements/Separate financial statements				
	Balance as at	Income (expenses) during the year			Balance as at
	Dec. 31, 2018	In profit or loss	In other comprehensive income		Dec. 31, 2019
Deferred tax assets:					
Allowance for doubtful accounts	1,115,423	349,813	-	1,465,236	
Allowance for devaluation of inventories	3,227,460	1,651,328	-	4,878,788	
Allowance for impairment of investment	1,195	-	-	1,195	
Non-current provisions for employee benefit	2,866,936	1,468,209	397,220	4,732,365	
Derivatives liabilities	95,029	34,584	-	129,613	
Total	7,306,043	3,503,934	397,220	11,207,197	
Deferred tax liabilities:					
Inventories (from fair value adjustment of business combination)	160,355	50,217	-	110,138	
Equipment (from fair value adjustment of business combination)	466,447	262,334	-	204,113	
Unrealized gain (loss) on temporary investments	257,061	(393,350)	-	650,411	
Customer relationship (from fair value adjustment of business combination)	14,636,181	2,980,218	-	11,655,963	
Depreciation of equipment	206,135	17,330	-	188,805	
Finance lease assets	1,324,826	760,761	-	564,065	
Total	17,051,005	3,677,510	-	13,373,495	
Deferred tax assets (liabilities) - net	<u>(9,744,962)</u>			<u>(2,166,298)</u>	
Deferred tax income (expenses) - net		<u>7,181,444</u>	<u>397,220</u>		



20. TRADE AND OTHER CURRENT PAYABLES

Trade and other current payables were consisted of:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019 (Reclassified Note 36)	2020	2019 (Reclassified Note 36)
Trade payables				
Trade payables - other companies	93,625,735	104,648,825	90,604,594	104,648,825
Other current payables				
Accrued commission expenses	13,891,115	16,746,476	13,891,115	16,746,476
Accrued bonus	13,957,340	18,568,265	13,849,556	18,568,265
Advance from customers for goods and services	20,832,788	34,517,307	20,533,687	28,141,860
Other accrued expenses	14,228,808	16,005,979	14,105,711	15,848,452
Account payable - Revenue department	4,330,726	3,942,216	4,266,891	3,940,444
Other deposit	1,094,940	1,491,920	1,094,940	1,491,920
Other	5,698,544	3,917,332	5,698,544	3,917,332
Total	74,034,261	95,189,495	73,440,444	88,654,749
Total trade and other current payables	167,659,996	199,838,320	164,045,038	193,303,574

21. LEASE LIABILITIES

The carrying amounts of lease liabilities and the movement for the year ended December 31, 2020 are presented below.

	Baht	
	Consolidated financial statements	Separate financial statements
As at December 31, 2019	-	-
Effects of the adoption of TFRS16	2,814,619	2,814,619
As at January 1, 2020	2,814,619	2,814,619
Addition	105,099,557	105,099,557
Accretion of interest	90,655	90,655
Payments	(738,630)	(738,630)
Decrease from contract cancellation	(2,295,468)	(2,295,468)
As at December 31, 2020	104,970,733	104,970,733
Less: current portion	(8,918,127)	(8,918,127)
Lease liabilities - net of current portion	96,052,606	96,052,606

The following are the amounts recognized in profit or loss for the year periods ended December 31, 2020

	Baht	
	Consolidated financial statements	Separate financial statements
Depreciation of right-of-use assets	678,541	678,541
Interest expense on lease liabilities	90,655	90,655
Expense relating to short-term lease	8,987,586	8,836,786
Leases of low-value assets	511,399	508,950
Total	10,268,181	10,114,932

For the year ended December 31, 2020, the Company and its subsidiaries had rental income from investment property in the amount of Baht 10,237,615 (for the Company's only amounting to Baht 10,084,366) and also had non-cash additions to right-of-use assets and lease liabilities of Baht 105,099,557 the Company's only amounting to Baht 105,099,557).

22. NON-CURRENT PROVISIONS FOR EMPLOYEE BENEFIT

Movements of non-current provisions for employee benefit for the years ended December 31, 2020 and 2019 were as follows:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Beginning balance defined benefit obligations	25,513,846	16,670,899	25,513,846	16,670,899
Past service costs and interest				
- change a post-employment plan amendment	-	3,900,264	-	3,900,264
Current service costs and interest	2,651,166	3,585,585	2,570,980	3,585,585
Actuarial (gain) loss	-	1,986,098	-	1,986,098
Benefits paid by the plan	(400,000)	(629,000)	(400,000)	(629,000)
Ending balance defined benefit obligations	<u>27,765,012</u>	<u>25,513,846</u>	<u>27,684,826</u>	<u>25,513,846</u>



The statements of comprehensive income for the years ended December 31, 2020 and 2019 are as follows:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Past service costs	-	3,900,264	-	3,900,264
Current service costs				
Cost of sales	410,182	639,553	379,291	639,553
Distribution cost	852,641	1,685,793	852,641	1,685,793
Administrative expenses	964,055	712,468	914,760	712,468
Interest on obligation	424,288	547,771	424,288	547,771
	2,651,166	3,585,585	2,570,980	3,585,585
Total	2,651,166	7,485,849	2,570,980	7,485,849

Principal actuarial assumptions at the reporting date for the years ended December 31, 2020 and 2019 are as follow:

	Percentage			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Discount rate	1.50 - 1.80	1.50 - 1.80	1.50 - 1.80	1.50 - 1.80
Salary increase rate	4.50	4.50	4.50	4.50
Employee turnover rate	4.78 - 28.65	4.78 - 28.65	4.78 - 28.65	4.78 - 28.65
Mortality rate	Thai	Thai	Thai	Thai
	Mortality	Mortality	Mortality	Mortality
	Ordinary	Ordinary	Ordinary	Ordinary
	Table 2017	Table 2017	Table 2017	Table 2017

Sensitivity analysis

The results of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligations as at December 31, 2020 and 2019 are summarized below:

	2020			
	Consolidated financial statements/Separate financial statements			
	%		Baht	
	increase	decrease	increase	decrease
Discount rate	1	(1)	(2,507,936)	2,929,634
Salary increase rate	1	(1)	2,645,897	(2,292,562)
Turnover rate	20	(20)	(3,346,202)	4,149,202
Mortality rate	20	(20)	(316,605)	321,329

	2019			
	Consolidated financial statements/Separate financial statements			
	%		Baht	
	increase	decrease	increase	decrease
Discount rate	1	(1)	(2,441,549)	2,860,592
Salary increase rate	1	(1)	2,351,558	(2,043,907)
Turnover rate	20	(20)	(2,937,513)	3,609,038
Mortality rate	20	(20)	(284,311)	288,500

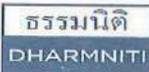
On April 5, 2019, the Labour Protection Act has been enacted in the Royal Gazette. The Labour Protection Act includes a requirement that an employee who is terminated after having been employed by the same employer for an uninterrupted period of 20 years or more, receives severance payment of 400 days of wages at the most recent rate, which is increased from the current maximum rate of 300 days. This Act shall come into force after the expiration of thirty days from the enacted date in the Royal Gazette onwards. This change is considered a post-employment benefits plan amendment. The Company recognized the increase in the employee benefit obligations approximately Baht 3.90 million, resulting in the decrease in profit approximately Baht 3.90 million in profit or loss for the year ended December 31, 2019.

23. THE EMPLOYEE JOINT INVESTMENT PROGRAM (EJIP)

On May 22, 2015, the Securities and Exchange Commission approved the Employee Joint Investment Program (EJIP). The details of the program are as follows;

The period of EJIP	May 1, 2015 to April 30, 2020, with a total duration of 5 years.
Eligible employees under EJIP	The employees has over one year working experience or employees at director on the voluntary basis.
EJIP arrangement	The Company will make deduction from the payroll of eligible employees who voluntarily join the EJIP, at the rate 5% of each month and director at the rate 5-25% of each month. The Company will contribute 100% of the amount contributed by EJIP participants on a monthly basis.
EJIP buying schedule	Monthly basis.
Conditions for holding the securities	During the 1 st year - 2 nd year, cannot sell any shares After the 2 nd year, can sell 25% of accumulated shares After the 3 rd year, can sell 50% of accumulated shares After the 4 th year, can sell 75% of accumulated shares After the 5 th year, can sell all shares
EJIP program manager	Philip Securities (Thailand) Public Company Limited

During the years 2020 and 2019, the Company and its subsidiaries contributed Bah 4.36 million and Baht 4.22 million, respectively (for the Company's only amounting to Baht 4.36 million and Baht 4.22 million, respectively), to the program.



24. PREMIUM ON ORDINARY SHARES

According to the Public Companies Act B.E. 2535, under the provision of section 51, the Company is required to set aside share subscription received in excess of the par value of the shares issued to a reserve account (“premium on ordinary shares”). The premium on ordinary shares is not available for dividend distribution.

25. LEGAL RESERVE

According to the Public Companies Act B.E. 2535, under provision of section 115, the Company is required to set aside a statutory reserve of at least 5 percent of its net profit after deducting accumulated deficit brought forward (if any) until the reserve reaches 10 percent of the registered share capital. The statutory reserve could not be used for dividend payment.

26. APPROPRIATION OF RETAINED EARNINGS

According to the Annual General Meeting of shareholders for the year 2020, held on August 3, 2020, the shareholders approved the appropriation of legal reserve at 5% of annual net profit in the amount of Baht 2.16 million and considered the acknowledgement the interim dividend payment approved by the Board of directors’ meeting No.3/2020 held on April 16, 2020, the directors approved the interim dividend payment at the rate of 0.18 baht per share for the issued and paid-up shares of 584,500,000 shares, amounting to Baht 105,209,568. The dividend was paid on May 15, 2020.

According to the Annual General Meeting of Shareholders No. 1/2019, held on April 25, 2019, the shareholders approved the appropriation of legal reserve at 5% of annual net profit in the amount of Baht 6,717,937 on and approve the dividend payment at the rate of 0.16 baht per share for the issued and paid-up shares of 584,500,000 shares, amounting to Baht 93,519,936. The dividend was paid on May 17, 2019.

27. PROVIDENT FUND

The Company and its employees jointly registered a provident fund scheme under the Provident Fund Act B.E. 2530. The Fund is contributed to by both the employees and the Company. The Fund is managed by UOB Asset Management (Thailand) Company Limited. This Fund is registered under the conditions of Ministry of Finance and the Fund is managed by the approved fund manager.

For the years ended December 31, 2020 and 2019, the Company and its subsidiaries paid contributions to provident fund and recognized as expenses amounting to Baht 4.23 million and Baht 3.82 million, respectively (for the Company’s only amounting to Baht 4.23 million and Baht 3.82 million, respectively).

28. OPERATING SEGMENT

Segment information is presented in respect of the business segments. The primary format in segment information report is based on the management and internal reporting structure.

The Company and its subsidiaries comprises the following main business segments:

- Segment 1 Fire Protection Products and Project
- Segment 2 Sanitary and Air-Conditioning System
- Segment 3 Refrigeration System
- Segment 4 Digital Printing System
- Segment 5 Building-IoT Solutions

Operating segment by business in the consolidated statement of comprehensive income for the ended December 31, 2020 and 2019 were as follows:

	Thousand Baht										
	Consolidated financial statements										
	2020					2019					
	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Total	Segment 1	Segment 2	Segment 3	Segment 4	Total
Revenue from sale of goods	438,907	63,816	202,828	308,747	-	1,014,298	547,642	81,097	262,005	345,299	1,236,043
Revenue from rendering of services	95,275	-	-	40,317	2,435	138,027	96,479	-	-	34,361	130,840
Cost of sale of goods	(313,761)	(43,868)	(138,122)	(184,646)	-	(680,397)	(398,254)	(58,695)	(174,115)	(196,846)	(827,910)
Cost of rendering of services	(83,513)	-	-	(33,294)	(2,072)	(118,879)	(88,807)	-	-	(31,976)	(120,783)
Gross profit	<u>136,908</u>	<u>19,948</u>	<u>64,706</u>	<u>131,124</u>	<u>363</u>	<u>353,049</u>	<u>157,060</u>	<u>22,402</u>	<u>87,890</u>	<u>150,838</u>	<u>418,190</u>
Other income						17,101					27,091
Distribution cost						(107,328)					(117,556)
Administrative expenses						(137,288)					(140,780)
Profit from operation						125,534					186,945
Finance cost						(91)					-
Income tax expense						(24,568)					(37,326)
Profit for the year						100,875					149,619
Other comprehensive income (expense)						(400)					(1,642)
Total comprehensive income for the year						<u>100,475</u>					<u>147,977</u>

Thousand Baht										
Separate financial statements										
	2020					2019				
	Segment 1	Segment 2	Segment 3	Segment 4	Total	Segment 1	Segment 2	Segment 3	Segment 4	Total
Revenue from sale of goods	438,907	63,816	202,828	285,467	991,018	547,642	81,097	262,005	348,002	1,238,746
Revenue from rendering of services	95,275	-	-	38,665	133,940	96,479	-	-	34,361	130,840
Cost of sale of goods	(313,761)	(43,868)	(138,122)	(163,693)	(659,444)	(398,254)	(58,695)	(174,115)	(199,053)	(830,117)
Cost of rendering of services	(83,513)	-	-	(31,784)	(115,297)	(88,807)	-	-	(31,976)	(120,783)
Gross profit	136,908	19,948	64,706	128,655	350,217	157,060	22,402	87,890	151,334	418,686
Other income					16,931					27,089
Distribution cost					(106,084)					(117,457)
Administrative expenses					(136,214)					(140,401)
Profit from operation					124,850					187,917
Finance cost					(91)					-
Income tax expense					(24,580)					(37,326)
Profit for the years					100,179					150,591
Other comprehensive income (expense)					-					(1,589)
Total comprehensive income for the years					100,179					149,002

Operating segment by business in the statement of financial position as at December 31, 2020 and 2019 were as follows:

Thousand Baht											
Consolidated financial statements											
	2020					2019					
	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5	Total	Segment 1	Segment 2	Segment 3	Segment 4	Total
Assets for reportable segments											
Trade receivables - other companies	119,907	16,737	35,533	46,115	-	218,292	144,452	21,196	61,169	61,850	288,667
Inventories	127,853	6,282	58,918	64,799	-	257,852	144,012	9,518	73,452	78,058	305,040
Goodwill	-	-	200,066	134,606	-	334,672	-	-	200,066	134,606	334,672
Customer relationship	-	-	29,318	11,015	-	40,333	-	-	42,092	16,188	58,280
Assets under common use											
- Investment property	-	-	-	-	-	154,591	-	-	-	-	229,967
- Property, plant and equipment	-	-	-	-	-	129,528	-	-	-	-	30,667
- Right-of-use assets	-	-	-	-	-	104,968	-	-	-	-	-
- Intangible assets	-	-	-	-	-	18,016	-	-	-	-	20,947
- Others	-	-	-	-	-	399,206	-	-	-	-	328,057
Total assets for reportable segments											
segments	247,760	23,019	323,835	256,535	-	1,657,458	288,464	30,714	376,779	290,702	1,596,297
Total liabilities for reportable segments											
segments	-	-	-	-	-	339,829	-	-	-	-	274,635

	Thousand Baht									
	Separate financial statements									
	2020					2019				
	Segment 1	Segment 2	Segment 3	Segment 4	Total	Segment 1	Segment 2	Segment 3	Segment 4	Total
Assets for reportable segments										
Trade receivables -										
other companies	119,907	16,737	35,533	45,741	217,918	144,452	21,196	61,169	64,857	291,674
Inventories	127,853	6,282	58,918	61,103	254,156	144,012	9,518	73,452	75,800	302,782
Goodwill	-	-	200,066	134,606	334,672	-	-	200,066	134,606	334,672
Customer relationship	-	-	29,318	11,015	40,333	-	-	42,092	16,188	58,280
Assets under common use										
- Investment property	-	-	-	-	154,591	-	-	-	-	229,967
- Property, plant and equipment	-	-	-	-	129,411	-	-	-	-	30,667
- Right-of-use assets	-	-	-	-	104,968	-	-	-	-	-
- Intangible assets	-	-	-	-	18,016	-	-	-	-	20,947
- Others	-	-	-	-	399,723	-	-	-	-	321,799
Total assets for reportable segments	247,760	23,019	323,835	252,465	1,653,788	288,464	30,714	376,779	291,451	1,590,788
Total liabilities for reportable segments	-	-	-	-	336,129	-	-	-	-	268,100

For the years ended December 31, 2020 and 2019, there was no revenue from sales and service with a single external customers contributed 10% or more to the total revenue.

29. EXPENSE BY NATURE

Expenses by nature for the years ended December 31, 2020 and 2019 consist of the significant expenses were as follows:

	Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Purchases of finished goods	634,274,550	832,948,759	611,319,681	832,899,082
Other changes in finished goods and work in process	47,187,888	1,656,821	48,627,117	1,656,821
Employee expenses	186,127,043	200,061,724	182,988,355	199,950,186
Office rental and service expenses	10,429,235	14,156,410	10,227,436	14,138,804
Depreciation and amortization	34,998,103	31,622,613	34,985,483	31,622,613
Others	130,875,133	126,582,495	128,891,619	128,491,533
Total	1,043,891,952	1,207,028,822	1,017,039,691	1,208,759,039

30. INCOME TAX EXPENSE (TAX INCOME)

30.1 Major components of income tax expense (tax income)

For the years ended December 31, 2020 and 2019 consisted of:

	บาท			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Income tax expense shown in profit or loss :				
Current tax expense:				
Income tax expense for the years	30,577,605	44,507,315	30,572,330	44,507,315
Deferred tax expense (income):				
Changes in temporary differences relating to the original recognition and reversal	(6,009,340)	(7,181,444)	(5,992,706)	(7,181,444)
Total	<u>24,568,265</u>	<u>37,325,871</u>	<u>24,579,624</u>	<u>37,325,871</u>
Income tax relating to components of other comprehensive income:				
Deferred tax expenses (income) relating to Gain (loss) on re-measurements of defined benefits plans	-	(397,219)	-	(397,219)
Total	<u>-</u>	<u>(397,219)</u>	<u>-</u>	<u>(397,219)</u>

30.2 A numerical reconciliation between income tax expense and the product of accounting profit multiplied by the applicable tax rate.

For the years ended December 31, 2020 and 2019, which were summarized as follows:

	บาท			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Accounting profit for the years	125,443,868	186,945,274	124,758,865	187,917,370
The applicable tax rate (%)	20%	20%	20%	20%
Income tax expense at the applicable tax rate	<u>25,088,774</u>	<u>37,389,055</u>	<u>24,951,773</u>	<u>37,583,474</u>
Reconciliation items:				
Tax effect of expenses that are not deductible in determining tax profit:				
- Expenses not allowed as expenses in determining taxable profit	184,927	185,860	122,762	185,860
Addition expenses deductible for tax purpose	(498,287)	(443,463)	(494,911)	(443,463)
Other	(207,149)	194,419	-	-
Total reconciliation items	<u>(520,509)</u>	<u>(63,184)</u>	<u>(372,149)</u>	<u>(257,603)</u>
Total tax expense (income)	<u>24,568,265</u>	<u>37,325,871</u>	<u>24,579,624</u>	<u>37,325,871</u>

30.3 A numerical reconciliation between the average effective tax rate and the applicable tax rate.

For the years ended December 31, 2020 and 2019 were summarized as follows:

	Consolidated financial statements			
	2020		2019	
	Tax amount (Baht)	Tax rate (%)	Tax amount (Baht)	Tax rate (%)
Accounting profit before income tax expense for the years	125,443,868		186,945,274	
Income tax expense at the applicable tax rate	25,088,774	20.00	37,389,055	20.00
Reconciliation items	(520,509)	(0.41)	(63,184)	(0.03)
Income tax expense at the average effective tax rate	24,568,265	19.59	37,325,871	19.97

	Separate financial statements			
	2020		2019	
	Tax amount (Baht)	Tax rate (%)	Tax amount (Baht)	Tax rate (%)
Accounting profit before income tax expense for the years	124,758,865		187,917,370	
Income tax expense at the applicable tax rate	24,951,773	20.00	37,583,474	20.00
Reconciliation items	(372,149)	(0.30)	(257,603)	(0.14)
Income tax expense at the average effective tax rate	24,579,624	19.70	37,325,871	19.86

31. BASIC EARNINGS PER SHARE

Basic earnings per share is calculated by dividing the profit for the years by the weighted average number of ordinary shares in issue during the years.

	Consolidated financial Statements		Separate financial statements	
	2020	2019	2020	2019
Profit for the years of parent company (Baht)	100,969,338	149,619,403	100,179,241	150,591,499
Weighted average number of ordinary shares (Shares)	584,500,000	584,500,000	584,500,000	584,500,000
Basic earnings per share (Baht per share)	0.17	0.26	0.17	0.26

32. COMMITMENTS AND CONTINGENT LIABILITIES

As at December 31, 2020 and 2019, the Company and its subsidiaries had commitments and contingent liabilities as follows :

32.1 As at December 31, 2020 and 2019, the Company and its subsidiaries have letters of guarantee issued by banks for goods and work under system installation service agreement of:

	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Million Baht	21.04	26.98	21.04	26.98
Million US dollars	0.27	0.27	0.27	0.27

32.2 The credit facilities with financial institutions as at December 31, 2020 and 2019 consisted of:

Type of credit	Consolidated financial statements/Separate financial statements			
	Facilities (Million Baht)		Referred interest rate (% per annum)	
	2020	2019	2020	2019
Bank overdrafts	10.00	11.00	MOR, MOR-0.50	MOR
Letter of credit/trust receipt	150.00	160.00	MLR-1, MMR	MLR-1, MMR
Letter of guarantee	74.00	54.00	1.25 - 2%	1.25 - 2%
Forward exchange contracts	560.00	562.39	-	-
Promissory notes	-	5.00	-	MLR
Total	794.00	792.39		
Forward foreign exchange contracts (Million US dollars)	7.00	7.00		

32.3 Minimum lease and service payments are as follows :

Payment periods	Million Baht			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Due not later than 1 year	0.84	10.10	0.81	9.86
Due later than 1 year but not later than 5 years	1.38	11.71	1.37	11.71

During the year, the Company and its subsidiaries recognized right-of-use assets from lease agreements as illustrated in Note 15 to the interim financial statements.

Rental and service expenses for the years ended December 31, 2020 and 2019 are Baht 10.43 million and Baht 14.14 million, respectively (for the Company's only to Baht 10.23 million and Baht 14.14 million, respectively).

32.4 Guarantee

As at January 7, 2020, The Company has guaranteed the product cost to Harn Vietnam Co., Ltd. "subsidiary" in Vietnam under the product sale agreement in the full amount of 472,586 Pound Sterling.

33. FAIR VALUE MEASUREMENT

The Company and its subsidiaries uses the market approach to measure its assets and liabilities that are required to be measured at fair value by relevant TFRS, except that the cost approach or income approach is used when there is no active market or when a quoted market price is not available.

Fair value hierarchy

In applying the above-mentioned valuation techniques, the Company and its subsidiaries endeavors to use relevant observable inputs as much as possible. TFRS 13 Fair Value Measurement establishes a fair value hierarchy categorizing such inputs into three levels as follows:

- Level 1 - Use of quoted market prices in an observable active market for such assets or liabilities
- Level 2 - Use of other observable inputs for such assets or liabilities, whether directly or indirectly
- Level 3 - Use of unobservable inputs such as estimates of future cash flows.

As at December 31, 2020 and 2019, the Company and its subsidiaries had the following financial assets and liabilities that were measured at fair value on which the fair value hierarchy is classified as follows :

	Baht			
	Consolidated financial statements/Separate financial statements			
	2020			
	Level 1	Level 2	Level 3	Total
Financial assets (liabilities) measured at fair value				
Investments in unit trusts	-	6,957,944	-	6,957,944
Foreign currency forward contracts	-	(361,039)	-	(361,039)

	Baht			
	Consolidated financial statements/Separate financial statement			
	2019			
	Level 1	Level 2	Level 3	Total
Financial assets (liabilities) measured at fair value				
Investments in bond	-	59,620,756	-	59,620,756
Investments in unit trusts	-	64,857,167	-	64,857,167
Foreign currency forward contracts	-	135,819	-	135,819

Fair valuation techniques and inputs to Level 2 fair valuation

The fair value of investments in investment units that are not listed on the Stock Exchange of Thailand is determined by using the net asset value per unit as announced by the fund managers.

The fair value of derivatives has been determined by using a discounted future cash flow model and a valuation model technique. Most of the inputs used for the valuation are observable in the relevant market, such as spot rates of foreign currencies, forward rate of the respective currencies, and interest rate yield curves.

During the year, there were no transfers within the fair value hierarchy.

Certain financial assets and financial liabilities is measured at fair value

The following table gives information about how the fair values of these financial assets and financial liabilities are measured at fair value on fair value hierarchy as at December 31, 2020 and 2019.

Financial assets and financial liabilities	Fair value (Babt)		Fair value Hierarchy	Valuation techniques and key inputs for fair value measurement
	Consolidated financial statements/Separate financial statements			
	2020	2019		
Financial assets (liabilities)				
Foreign currency forward contracts	(361,039)	135,819	Level 2	Discounted cash flow The estimated future cash flows is from foreign currency exchange rates (from observable forward exchange rates at the end of the reporting period) and contract forward rates, discounted at a rate that reflects the credit risk of various counterparties.

These financial assets and financial liabilities are presented as a part of other current assets and other current liabilities in the statement of financial position.

Valuation technique for financial instruments not measured at fair value of the Company and its subsidiaries are as follows:

Cash and cash equivalents, trade and other receivables, current portion of financial lease receivable had carrying values approximate their fair values due to the relatively short-term maturity of these financial instruments.

General investment had not significantly different from the carrying values stated in the reporting date.

Trade and other payables, short-term provisions and other current liabilities - the carrying amounts stated in the reporting date of these financial liabilities approximate their fair values because of the short-term period to maturity of these financial instruments.

34. FINANCIAL INSTRUMENTS

Financial risk management policies

The Company and its subsidiaries are exposed to normal business risks from changes in interest rates and currency exchange rates and from non-performance of contractual obligations by counterparties. The Company and its subsidiaries do not hold or use derivative financial instruments for speculative or trading purposes.

Risk management is integral to the whole business of the Company and its subsidiaries. The Company and its subsidiaries have a system of controls in place to create an acceptable balance between the cost of risks occurring and the cost of managing the risks. The management continually monitors the Company and its subsidiaries are risk management process to ensure that an appropriate balance between risk and control is achieved.

Capital management

The Board of Directors' policy is to maintain a strong capital base so as to maintain investor, creditor and market confidence and to sustain future development of the business. The Board monitors the return on capital, which the Company and its subsidiaries define as result from operating activities divided by total shareholders' equity, and also monitors the level of dividends to ordinary shareholders.

Foreign currency risk

The Company and its subsidiaries are exposed to foreign currency risk relating to purchases which are denominated in foreign currencies. The Company and its subsidiaries primarily utilize forward foreign exchange contracts with maturities of less than one year to hedge such financial assets and liabilities denominated in foreign currencies. The forward foreign exchange contracts entered into at the reporting date also relate to anticipated purchases, denominated in foreign currencies, for the subsequent period.

As at December 31, 2020 and 2019, the Company and its subsidiaries have financial liabilities in foreign currencies as follows;

	Foreign Currencies			
	Consolidated financial statements		Separate financial statements	
	2020	2019	2020	2019
Not hedged				
US dollar	-	119,663	-	119,663
EURO	178,477	35,902	178,477	35,902
GBP	234,891	-	234,891	-
SGD	1,250	-	1,250	-

Derivatives

Derivatives are forward foreign exchange contracts used for economic hedging purposes and not as speculative investments. However, derivatives do not meet the hedge accounting criteria, therefore they are classified as 'held for trading' for accounting purposes and are accounted for at fair value through profit or loss. They are presented as current assets or liabilities to the extent they are expected to be realized within 12 months after the end of the reporting period.

As at December 31, 2020, the Company had loss from changes in fair value of derivatives in the amount of Baht 0.36 million.

Net foreign exchange gains (losses)

For the years ended December 31, 2020 and 2019, the aggregate net foreign exchange gains (losses) recognized in profit or loss are as follow:

	Baht			
	Consolidated		Separate	
	financial statements		financial statements	
	2020	2019	2020	2019
Unrealized gain (loss) on exchange rates	333,095	(210,302)	41,531	(210,302)
Gain (loss) on exchange rates				
- Sales	1,604,608	4,843,700	1,296,854	4,843,700
Total net gain (loss) on exchange rate				
recognized in profit before income tax	<u>1,937,703</u>	<u>4,633,398</u>	<u>1,338,385</u>	<u>4,633,398</u>

Credit risk

Credit risk is the potential financial loss resulting from the failure of a customer or a counterparty to settle its financial and contractual obligations to the Company as and when they fall due.

Management has a credit policy in place and the exposure to credit risk is monitored on an ongoing basis. Credit evaluations are performed on all customers requiring credit over a certain amount. At the reporting date, there were no significant concentrations of credit risk. The maximum exposure to credit risk is represented by the carrying amount of each financial asset in the statement of financial position. However, due to the large number of parties comprising the Company and its subsidiaries are customer base, management does not anticipate material losses from its debt collection.

Liquidity risk

The Company and its subsidiaries monitor its liquidity risk and maintains a level of cash and cash equivalents deemed adequate by management to finance the Company's and its subsidiaries's operations and to mitigate the effects of fluctuations in cash flows.

Classification and measurement of financial asset and financial liabilities

On January 1, 2020 (the date of initial application of new financial reporting standards), the Company and its subsidiaries's management have assessed which business models applied to the financial assets and liabilities and have classified the financial assets and liabilities balances as at December 31, 2020 are as follows;

	Baht		
	Consolidated financial statements		
	FVPL	Amortized cost	Total
Financial assets as at December 31, 2020			
Cash and cash equivalents	-	306,074,340	306,074,340
Trade and other current receivables	-	250,986,608	250,986,608
Current contract assets	-	12,797,613	12,797,613
Other current financial assets		-	-
Other non-current financial assets	6,957,944	-	6,957,944
Trade and other non-current receivables	-	11,251,986	11,251,986
Other non-current assets	-	25,186,460	25,186,460
	<u>6,957,944</u>	<u>606,297,007</u>	<u>613,254,951</u>

	Baht	
	Consolidated financial statements	
	Amortized cost	Total
Financial liabilities as at December 31, 2020		
Trade and other current payables	167,659,996	167,659,996
Current portion for lease liabilities	8,918,127	8,918,127
Lease liabilities	96,052,606	96,052,606
Other non-current liabilities	24,937,360	24,937,360
	<u>297,568,089</u>	<u>297,568,089</u>

	Baht		
	Separate financial statements		
	FVPL	Amortized cost	Total
Financial assets as at December 31, 2020			
Cash and cash equivalents	-	299,318,282	299,318,282
Trade and other current receivables	-	250,372,389	250,372,389
Current contract assets	-	12,054,033	12,054,033
Other current financial assets	6,957,944	-	6,957,944
Other non-current financial assets	-	-	-
Trade and other non-current receivables	-	11,251,986	11,251,986
Other non-current assets	-	25,186,460	25,186,460
	<u>6,957,944</u>	<u>598,183,150</u>	<u>605,141,094</u>



	Baht	
	Separate financial statements	
	Amortized cost	Total
Financial liabilities as at December 31, 2020		
Trade and other current payables	164,045,038	164,045,038
Current portion of lease liabilities	8,918,127	8,918,127
Lease liabilities	96,052,606	96,052,606
Other non-current liabilities	24,937,360	24,937,360
	<u>293,953,131</u>	<u>293,953,131</u>

35. RECONCILIATION OF LIABILITIES ARISING FROM FINANCING ACTIVITIES

Changes in the liabilities arising from financing activities for the years ended December 31, 2020 is as follows:

	Baht			
	Consolidated financial statements			
	Balance as at January 1, 2020 (Note 4, 21)	Cash flows Increase (decrease)*	Non-cash transaction Increase	Balance as at December 31, 2020
Lease liabilities	2,814,619	(738,630)	102,894,744	104,970,733
Total	<u>2,814,619</u>	<u>(738,630)</u>	<u>102,894,744</u>	<u>104,970,733</u>

	Baht			
	Separate financial statements			
	Balance as at January 1, 2020 (Note 4, 21)	Cash flows Increase (decrease)*	Non-cash transaction Increase	Balance as at December 31, 2020
Lease liabilities	2,814,619	(738,630)	102,894,744	104,970,733
Total	<u>2,814,619</u>	<u>(738,630)</u>	<u>102,894,744</u>	<u>104,970,733</u>

* Financing cash flows included net proceed and repayment cash transactions in the statements of cash flows.

36. RECLASSIFICATION

Certain amounts in the statement of financial position as at December 31, 2020 have been reclassified to conform to the current year's classification but with no effect to previously reported net income or shareholders' equity. The reclassifications were as follow:

	Thousand Baht					
	Consolidated financial statements			Separate financial statements		
	As previously reported	Reclassified increase (decrease)	As reclassified	As previously reported	Reclassified increase (decrease)	As reclassified
Trade and other current receivables	316,114	6,838	322,952	319,085	6,838	325,923
Current portion of lease receivables	6,838	(6,838)	-	6,838	(6,838)	-
Trade and other non-current receivables	-	7,991	7,991	-	7,991	7,991
Lease receivables	7,991	(7,991)	-	7,991	(7,991)	-
Trade and other current payables	194,404	5,434	199,838	187,871	5,432	193,303
Other current liabilities	6,547	(5,434)	1,113	6,545	(5,432)	1,113

37. EVENT AFTER THE REPORTING PERIOD

Dividend payment

According to the resolution of the Board of Directors' Meeting No. 1/2021 held on February 25, 2021, the Board of Directors approved dividend payment at Baht 0.13 per share for 584,500,000 issued and paid up ordinary shares, in total amount of Baht 75,985,000. The dividend declaration will be proposed to the next Annual General Shareholders' Meeting for approval.

38. CORONAVIRUS DISEASE 2019 PANDEMIC

The Coronavirus disease 2019 pandemic is continuing to evolve, resulting in an economic slowdown and adversely impacting most businesses and industries as a whole. The situation affects the results of operations of the Company and its subsidiaries, recognition and measurement of assets and liabilities in the financial statements. Nevertheless, the management will continue to monitor the ongoing development and regularly assess the financial impact in respect of the valuation of assets, provisions and contingent liabilities.

39. APPROVAL OF FINANCIAL STATEMENTS

These financial statements were authorized for issue by the Board of Directors of the Company on February 25, 2021.



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