

HARN
Engineering Solutions

Harn Engineering Solutions Public Company Limited

Annual Report 2017



- Fire Protection
- Air Conditioning & Sanitary
- Refrigeration
- Digital Printing

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1

Vision, Mission, Core Value and Target



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.

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.

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

“Quality Living through Sustainable Engineering”

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

Core Value

POSITIVE



Target



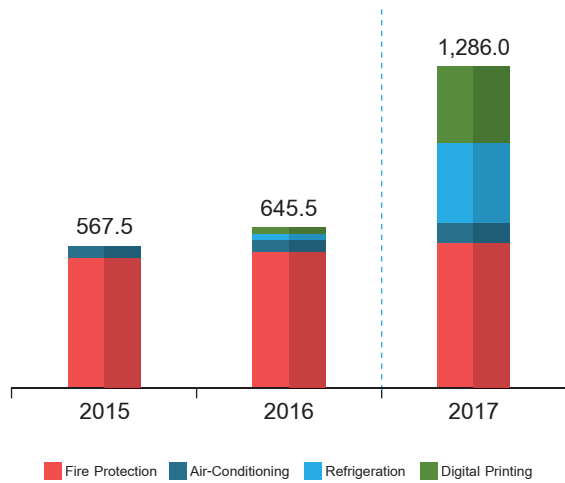
2 Key Financial Information

| | | 2018 | 2017 | 2016 |
|----------------------------------|-------|----------|----------|--------|
| Financial Position | | | | |
| Financial Position | Unit | | | |
| Total Assets | MB. | 1,457.34 | 1,379.85 | 569.01 |
| Total Liabilities | MB. | 242.67 | 242.21 | 117.21 |
| Total Shareholder's Equity | MB. | 1,214.67 | 1,137.64 | 451.80 |
| Operating Results | | | | |
| Revenues from Sales and Services | MB. | 1,285.97 | 645.52 | 567.53 |
| Total Revenues | MB. | 1,300.70 | 662.72 | 582.95 |
| Costs of Sales and Services | MB. | 905.04 | 487.61 | 425.79 |
| Gross Profit | MB. | 380.93 | 157.91 | 141.74 |
| Net Profit | MB. | 129.68 | 40.53 | 46.20 |
| Total Comprehensive Income | MB. | 129.64 | 45.48 | 43.77 |
| Key Financial Ratios | | | | |
| Return on Equity ¹⁾ | % | 11.02 | 5.72 | 9.60 |
| Return on Assets ²⁾ | % | 11.36 | 5.21 | 9.92 |
| Gross Profit Margin | % | 29.62 | 24.46 | 24.98 |
| Net Profit Margin ¹⁾ | % | 9.97 | 6.86 | 7.51 |
| Total Liabilities to Equity | Times | 0.20 | 0.21 | 0.26 |
| Asset Turnover | Times | 0.92 | 0.68 | 1.02 |
| Ordinary Shares | | | | |
| Par Value per Share | Baht | 0.50 | 0.50 | 0.50 |
| Book Value per Share | Baht | 2.08 | 1.95 | 1.29 |
| Dividend per Share | Baht | 0.14 | 0.09 | 0.10 |
| Earnings per Share | Baht | 0.22 | 0.11 | 0.13 |

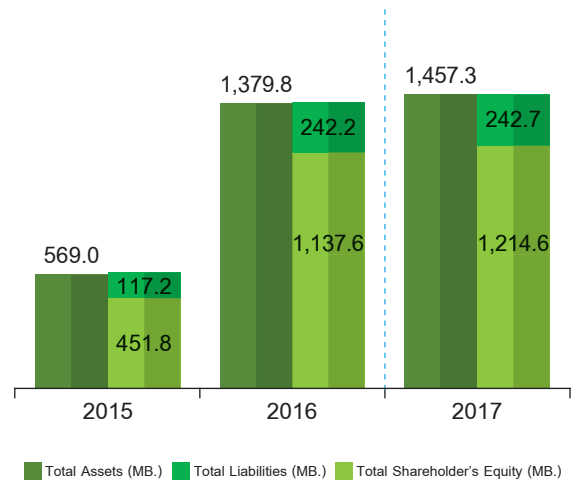
Remark : ¹⁾ comprehensive income used in calculation

²⁾ profit before tax used in calculation

Revenues from Sales and Services (MB.)

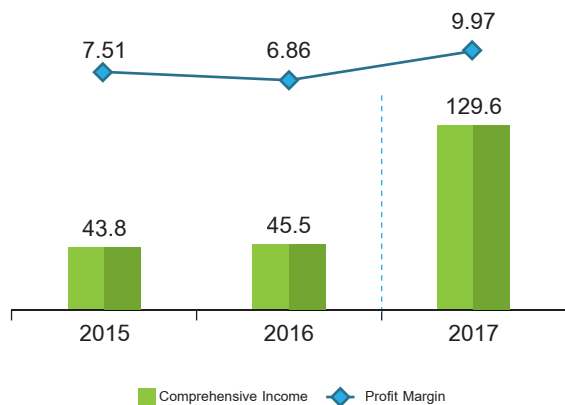


Assets, Liabilities and Shareholder's Equity

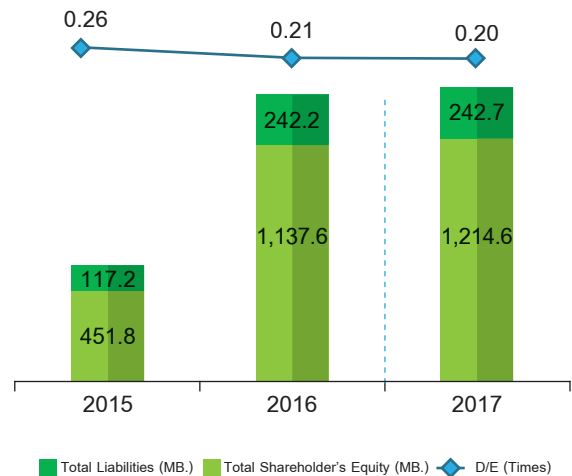


Comprehensive Income (MB.) and Net Profit Margin (%)

(Comprehensive Income used in calculation)

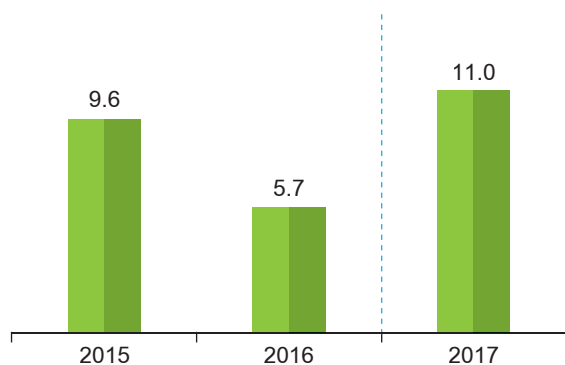


Total Liabilities to Equity (Times) (D/E Ratio)



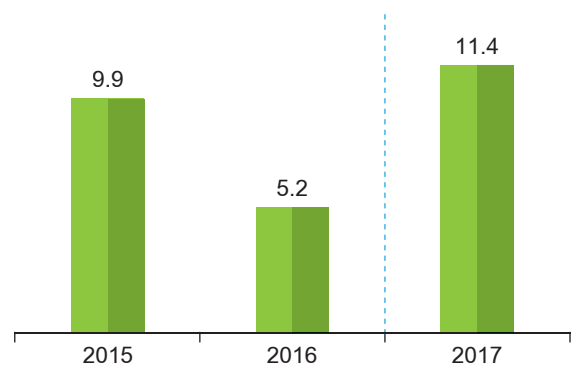
Return on Assets (%) ROE

(Comprehensive Income used in calculation)



Return on Equity (%) ROA

(EBIT used in calculation)



3

Message from the Board of Directors



Mr. Thakol Nunthirapakorn

Chairman of the Board



Mr. Wirat Sukchai

Chief Executive Officer

Our business merger and renaming as Harn Engineering Solutions Public Company Limited (“Harn” or “the Company”) with “HARN” as the stock symbol has been followed by so many advantages. We have an increasing number of business units and more diversified products distribution and engineering system services, covering fire extinguisher system, air-conditioning system, refrigeration system and digital printing system products. In the previous year, although the economy was still in the recovering pace, Harn was able to record an increase in sales and a frog-leap growth of profit. This was attributable to our larger span of business units, which helped relieve dependence on any single business and generate synergy from integrated operation as well as save administrative expenses. Such synergy was reflected in the Company’s operating result in 2017 disclosed to the shareholders and investors as regards our consistent business developments. Moreover, we have planned to expand markets for all of our business units, in which there are new product lines every year, domestically and overseas where there are still ample business opportunities. New innovations will also be developed to generate benefits to our business operation, together with recruitment of additional personnel to accommodate future business expansion. We are confident that

we would be able to further boost our sales and profit amidst the brighter economic prospects looking forward.

In our business operation, we have all along given importance and adhered to good corporate governance principles with accountability for all stakeholders on a fair, transparent and open-to-inspection basis. A concrete reflection of this is that we have earned higher scores in corporate governance assessment. Moreover, we have declared our commitment to and been certified as a member of the Private Sector Collective Action Coalition Against Corruption in a bid to ensure sustainable business growth and trust from employees, trade partners and investors in general.

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 staff who have supported and contributed to the successful operation of the Company. Please be assured of the dedication and commitment 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 the society as well as the country as a whole.

4 Board of Directors



Dr. Thakol Nunthirapakorn

Independent Director, Chairman of the Board and Chairman of the Audit Committee
Age 72 Yrs.

Shareholding proportion : None
(As at December 31, 2017)

Appointment date : September 5, 2012

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

Work experience :

Business

- 2015 - Present Independent Director / Chairman of the Board of Directors / 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.
- (Past) Member of Audit Committee, Thai Public Broadcasting Service (TPBS)
- (Past) Independent Director and Member of Audit Committee, Bangkok Metropolitan Bank Plc.
- (Past) Director, NS Electronics Bangkok (1993) Ltd.

- (Past) Director, D.N. Machinery (1980) Co., Ltd.
- (Past) Chairman of Provident Fund Committee, NS Electronics Bangkok (1993) Ltd.

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.
- (Past) Member of Executive Board, University of the Thai Chamber of Commerce
- (Past) Dean, Faculty of Business Administration, National Institute of Development Administration (NIDA)
- (Past) Expert Director, Member of Administrative Committee, Doctoral Program in Business Administration, JDBA
- (Past) Director, NIDA
- (Past) Director and Member of Audit Committee, University of the Thai Chamber of Commerce
- (Past) Chairman of Academic Rank Consideration Committee, University of the Thai Chamber of Commerce

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
- (Past) President (Founder) of Lions Club Thailand NIDA Campus



Mr. Wirat Sukchai

Directors, Member of the Executive Committee
and Member of the Risk Management Committee
Age 52 yrs.

Shareholding proportion : 87,697,361 shares (15.00%)
(As at December 31, 2017)

Appointment date : September 5, 2012

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 :**
 - 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
 - Amazing Sales Techniques for Diversified Groups of

Customers Course

- Root Cause Analysis & Corrective Actions Course
- Academic Development and Enhancement 4th Refreshment Program
- Techniques for Collection of Business and Legal Debt relating to Civil and Criminal Cases
- 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
- Fire Protection Science and Technology Course
- Inspection of Building Fire Safety System Course

Work experience :

- 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.
- 1997 - 2001 Sales Manager, Harn Engineering Co., Ltd.
- 1995 - 1996 Deputy Sales Manager, Harn Engineering Co., Ltd.



Mr. Wasan Nantakhwang

Directors, Member of the Executive Committee and Member of the Risk Management Committee

Age 51 Yrs.

Shareholding proportion : 28,440,000 shares (4.87%)
(As at December 31, 2017)

Appointment date : November 1, 2016

Education :

- M. Eng. (Faculty of Engineering), King Mongkut's University of Technology North Bangkok
- B.Eng. (Faculty of Engineering), King Mongkut's University of Technology North Bangkok

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 :**
 - IRS SYMPOSIUM AT SCHAUFLE ACADAMY, Germany
 - 8 Habits of Highly Effective People by Stephen R. Covey
 - Commercial refrigeration training : Bitzer, Germany
 - Michael Porter on Strategy
 - Fresh vegetable and fruit preservation technology
 - Energy Saving in Green BD by Inverter
 - Marketing 3.0 Human Spirit Marketing
 - Decoding E - Marketplace
 - Business Planning and Budgeting
 - Law on debt and checks
 - The Power of Focused Execution
 - The Application of The Balanced Scorecard and KPIs
 - Customer Analysis and Loyalty Program

Work experience :

- 2016 - Present Managing Director : Refrigeration System, Harn Engineering Solutions Plc.
- 2015 - 2016 Managing Director, Chillmatch Co., Ltd.
- 2014 - 2016 Directors, QIIS Co., Ltd.
- 2001 - 2015 General Manager, Chillmatch Co., Ltd.
- 2001 - 2001 Sale Manager, Dunham-Bush (Thailand) Co., Ltd.
- 1993 - 2001 Senior Sales Engineer, Carrier (Thailand) Co., Ltd.



Mr. Thammanoon Tripetchr

Directors, Member of the Executive Committee and Member of the Risk Management Committee

Age 50 Yrs.

Shareholding proportion : 20,967,423 shares (3.59%)
(As at December 31, 2017)

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 :**
 - 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 :

- 2016 - Present Managing Director: Digital Printing System, Harn Engineering Solutions Plc.
- 2015 - 2016 Managing Director, QIIS Co., Ltd.
- 2014 - 2016 Directors, Chillmatch Co., Ltd.
- 2010 - 2015 General Manager, QIIS Co., Ltd.
- 2002 - 2010 Sale Manager, QIIS Co., Ltd.
- 2001 - 2002 Sale Manager (The printer packaging), Harn Engineering Co., Ltd.
- 1996 - 2001 Service Manager (The printer packaging), Harn Engineering Co., Ltd.
- 1989 - 1996 Assistant Imports, Harn Engineering Co., Ltd.



Mrs. Sirima Iamsakulrat

Directors and Chairman of
the Executive Committee
Age 55 Yrs.

Shareholding proportion : 68,845,441 shares (11.78%)
(As at December 31, 2017)

Appointment date : September 5, 2012

Education :

- M.B.A., Stanford University, USA.
- B.Econ. (Economics), Chulalongkorn University

Training participation :

- **Training program of Thai Institute of Directors Association (IOD) :**
 1. Successful Formulation & Execution of Strategy (SFE), Class 24/2015
 2. Director Certification Program (DCP), Class 211/2015
 3. Director Accreditation Program (DAP), Class SET/2012
- **Other courses :**
 - P01 : CSR for 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 : CSR Evaluation and Data Management
 - S06 : Sustainability Reporting

Work experience :

- 2016 - Present Directors / Chairperson of the Executive Committee, Harn Engineering Solutions Plc.
- 1989 - Present Member of the Executive Committee, Harn Engineering Co., Ltd.
- 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.



Dr. Jain Charnnarong

Directors and Member of
the Executive Committee
Age 51 Yrs.

Shareholding proportion : 68,515,420 shares (11.72%)
(As at December 31, 2017)

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
- **Other courses :**
 - P01 : CSR for 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 : CSR Evaluation and Data Management
 - S06 : Sustainability Reporting

Work experience :

- 2017 - Present Directors and Member of the Executive Committee, Harn Engineering Solutions Plc.
- 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.
- 1988 - 1997 Lecturer in Mechanical Engineering, Chulalongkorn University



Mrs. Valeeratn Chuerboonchai

Directors and Member of
the Executive Committee
Age 63 Yrs.

Shareholding proportion : 8,276,986 shares (1.42%)
(As at December 31, 2017)

Appointment date : September 5, 2012

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 :

- 2012 - Present 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.
- 1987 - 1999 Accounting and Finance Manager, Carpet International Thailand Plc.
- 1982 - 1987 Accounting and Finance Division Head, Carpet International Thailand Plc.



Mr. Parkphum Wongpaitoon

Directors
Age 77 Yrs.

Shareholding proportion : 4,230,325 shares (0.72%)
(As at December 31, 2017)

Appointment date : September 5, 2012

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 :

- 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.
- 1983 - 1984 Deputy General Manager, ITT (Thailand) Plc.
- 1976 - 1982 Factory Manager, Carpet International Thailand Plc.
- 1973 - 1975 Production Manager, Goodyear (Thailand) Co., Ltd.
- 1966 - 1972 Power Plant Design Engineer, Pioneer Service & Engineering Company and Sarget & Landy, Chicago, Illinois, USA.



Dr. Supot Tiarawut

Independent Director and Chairman
of the Risk Management Committee
Age 51 Yrs.

Shareholding proportion : None
(As at December 31, 2017)

Appointment date : November 1, 2016

Education :

- Doctor of Engineering (Electronic Engineering), The University of Tokyo, Japan
- Master of Engineering (Information and Computer Sciences), Toyohashi University of Technology, Japan
- Bachelor of Engineering (1st Class Honor) (Electrical Engineering) Chulalongkorn University

Training participation :

- Training program of Thai Institute of Directors Association (IOD) :
 1. How to Develop a Risk Management Plan (HRP), Class 12/2017
 2. How to Develop a Risk Management Plan (HRP), Class 8/2015
 3. Director Certification Program (DCP), Class 195/2014
 4. Finance for Non-Finance Directors (FND), Class 20/2005

Work experience :

Business

- 2016 - Present Independent Director and Chairman of the Risk Management Committee, Harn Engineering Solutions Plc.
- 2014 - Present Director, ATP 30 Plc.
- 2012 - Present Director, Blue Phoenix Innovation Co., Ltd.
- 2014 Executive Vice President, Corporate Strategy, Symphony Communications Plc.
- 2007 - 2011 Director, Telecommunication Research and Industrial Development Institute (TRIDI)

- 1995 - 2007 Senior Vice President Corporate Strategy, Senior Vice President Product Development, Secretary of the Executive Committee, Secretary of Risk Management Committee, Vice President Corporate Planning, Vice President Information Technology, TT&T Plc. President, TT&T Subscribers Services Co., Ltd.
- 1995 - 2007 Director, Triple T GlobalNet Company Limited
- 1994 - 1995 Industrial Officer, Office of Industrial Affairs, Royal Thai Embassy, Tokyo, Japan

Education

- Present Project Director CU Transformation, Chulalongkorn University
- 2016 - 2017 Advisor to the President, Chulalongkorn University
- 2014 - 2017 Director, Industrial Liaison Program (ILP), Faculty of Engineering, Chulalongkorn University
- 2012 - 2014 Assistant to the President (IT and Strategy), Chulalongkorn University

Social

- Executive Committee and Secretary-General, Telecommunications Association of Thailand
- Advisor to Sub-Committee on Computer Engineering, Engineering Institute of Thailand
- ICT Sub-Committee, Technology Promotion Association



Dr. Sothitorn Mallikamas

Independent Director and Member
of the Audit Committee
Age 55 Yrs.

Shareholding proportion : None
(As at December 31, 2017)

Appointment date : September 5, 2012

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. Director Accreditation Program (DAP), Class 102/2013

Work experience :

- 2012 - Present Independent Director and Member of the Audit Committee, Harn Engineering Solutions Plc.
- 2012 - Present Chairman, International Economics Program, Chulalongkorn University
- 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



Miss Voranuch Supaibulpipat

Independent Director and Member
of the Audit Committee
Age 54 Yrs.

Shareholding proportion : None
(As at December 31, 2017)

Appointment date : September 5, 2012

Education :

- MBA, Middle Tennessee State University, USA.
- BA (Economics), Chulalongkorn University

Training participation :

- Training program of Thai Institute of Directors Association (IOD) :
1. Director Accreditation Program (DAP), Class SET/2012
- Other courses :
• Executive Development Program, Thai Listed Companies Association, Class 10

Work experience :

- 2012 - Present Independent Director and Member of the Audit Committee, Harn Engineering Solutions Plc.
- 1987 - Present First Senior Vice President, Tisco Financial Group Plc.



5

Executives and Company Secretary



Mr. Wirat Sukchai

Chief Executive Officer and Managing Director :
Fire Protection System, Air-conditioning System and Sanitary
Age 52 yrs.

Shareholding proportion : 87,697,361 shares (15.00%)
(As at December 31, 2017)

Appointment date : September 5, 2012

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 :**
 - 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
 - Amazing Sales Techniques for Diversified Groups of

Customers Course

- Root Cause Analysis & Corrective Actions Course
- Academic Development and Enhancement 4th Refreshment Program
- Techniques for Collection of Business and Legal Debt relating to Civil and Criminal Cases
- 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
- Fire Protection Science and Technology Course
- Inspection of Building Fire Safety System Course

Work experience :

- 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.
- 1997 - 2001 Sales Manager, Harn Engineering Co., Ltd.
- 1995 - 1996 Deputy Sales Manager, Harn Engineering Co., Ltd.



Mr. Wasan Nantakhwang

Managing Director :
Refrigeration System
Age 51 Yrs.

Shareholding proportion : 28,440,000 shares (4.87%)
(As at December 31, 2017)

Appointment date : November 1, 2016

Education :

- M. Eng. (Faculty of Engineering), King Mongkut's University of Technology North Bangkok
- B.Eng. (Faculty of Engineering), King Mongkut's University of Technology North Bangkok

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 :**
 - IRS SYMPOSIUM AT SCHAUFLEER ACADEMY, Germany
 - 8 Habits of Highly Effective People by Stephen R. Covey
 - Commercial refrigeration training : Bitzer, Germany
 - Michael Porter on Strategy
 - Fresh vegetable and fruit preservation technology
 - Energy Saving in Green BD by Inverter
 - Marketing 3.0 Human Spirit Marketing
 - Decoding E - Marketplace
 - Business Planning and Budgeting
 - Law on debt and checks
 - The Power of Focused Execution
 - The Application of The Balanced Scorecard and KPIs
 - Customer Analysis and Loyalty Program

Work experience :

- 2016 - Present Managing Director : Refrigeration System, Harn Engineering Solutions Plc.
- 2015 - 2016 Managing Director, Chillmatch Co., Ltd.
- 2014 - 2016 Directors, QIIS Co., Ltd.
- 2001 - 2015 General Manager, Chillmatch Co., Ltd.
- 2001 - 2001 Sale Manager, Dunham-Bush (Thailand) Co., Ltd.
- 1993 - 2001 Senior Sales Engineer, Carrier (Thailand) Co., Ltd.



Mr. Thammanoon Tripetchr

Managing Director :
Digital Printing System
Age 50 Yrs.

Shareholding proportion : 20,967,423 shares (3.59%)
(As at December 31, 2017)

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 :**
 - 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 :

- 2016 - Present Managing Director: Digital Printing System, Harn Engineering Solutions Plc.
- 2015 - 2016 Managing Director, QIIS Co., Ltd.
- 2014 - 2016 Directors, Chillmatch Co., Ltd.
- 2010 - 2015 General Manager, QIIS Co., Ltd.
- 2002 - 2010 Sale Manager, QIIS Co., Ltd.
- 2001 - 2002 Sale Manager (The printer packaging), Harn Engineering Co., Ltd.
- 1996 - 2001 Service Manager (The printer packaging), Harn Engineering Co., Ltd.
- 1989 - 1996 Assistant Imports, Harn Engineering Co., Ltd.



Mr. Pracha Phromphornchai

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

Age 45 yrs.

Shareholding proportion : 11,241,584 shares (1.92%)
(As at December 31, 2017)

Appointment date : January 1, 2014

Education :

- B.Eng. (Mechanical), King Mongkut's University of Technology Thonburi.

Training participation :

- Other courses :
 - ISO 9001 : 2015 Understanding and Implementation
 - ISO 9000:2000 Introduction & Implementation's training course
 - Industrial Sales's training course
 - "Hygood" Sappphire Fire Suppression System's training.
 - "Victaulic" Grooved System's training.
 - "Potter Electric" Fire Alarm System's training.
 - Aggressive Sales Plan's training course.
 - "Chemguard" Fire Protection System's training (USA)
 - Root Cause Analysis and Corrective action's training course.
 - Vice Excellence's training course.
 - "Siemens" Fire Alarm and Fire Suppression System's training.
 - "Wagner" Air Sampling Smoke Detection (ASD) System's training.
 - Technic of professional job interview's training course.
 - Risk Management of Organization's training course.
 - English for Business Writing's training course

Work experience :

- 2014 - Present Project Sales Director: Fire Protection System, Air-conditioning system and sanitary, Harn Engineering Solutions Plc.
- 2003 - 2013 Project Sales Manager, Fire Victor Co., Ltd.
- 2002 - 2003 Sales Engineer, Tyco International (Thailand) Co., Ltd.
- 2000 - 2002 Sales Engineer, Reacon Equipment Co., Ltd.
- 1998 - 2000 Design Engineer, Harn Engineering Co., Ltd.
- 1996 - 1998 Site Engineer, Harn Engineering Co., Ltd.



Mr. Rattanaphan Mukhariwattananon

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

Age 39 yrs.

Shareholding proportion : 3,236,849 shares (0.55%)
(As at December 31, 2017)

Appointment date : January 1, 2014

Education :

- Executive M.B.A. KU 25, Kasetsart University
- B.Ind.Tech. (Mechanical), Sriprathum university

Training participation :

- Other courses :
 - P01 : CSR for Corporate Sustainability
 - ISO 9001 : 2015 Understanding and Implementation
 - Risk Management Certificate Program, Class 10
 - Sprinkler System Design
 - Warehouse Sprinkler System and Clean Agent Fire Extinguishing Design
 - Fire Pump Design
 - Enterprise Risk Management
 - Service Excellent Improvement
 - Top Sales Management

Work experience :

- 2014 - Present Sales Director: Fire Protection System, Air-conditioning system and sanitary, Harn Engineering Solutions Plc.
- 2008 - 2013 Sales Manager, Fire Victor Co., Ltd.
- 2003 - 2008 Sales Engineer, Fire Victor Co., Ltd.
- 2002 - 2003 Production Supervisor, Subsoontron Co., Ltd.



Mr. Suchat Suwatnodom

Project Sales Director (Petrochemical):
Fire Protection System, Air-conditioning
system and sanitary
Age 44 yrs.

Shareholding proportion : 567,967 shares (0.10%)
(As at December 31, 2017)

Appointment date : March 2, 2015

Education :

- B.Eng. (Industrial), Chiang Mai University

Training participation :

- **Other courses :**
 - ISO 9001 : 2015 Understanding and Implementation
 - Leadership Skill for Job improvement
 - ANSUL Gas suppression Design and training
 - KIDDE-FENWAL Gas suppression Design and Training
 - Professional Selling and Marketing Skills
 - Code of Conduct And business
 - Business Preparation Before AEC

Work experience :

- 2015 - Present Project Sales Director (Petrochemical): Fire Protection System, Air-conditioning system and sanitary, Harn Engineering Solutions Plc.
- 2014 - 2015 Sale Director Trinity Dynamic Co., Ltd.
- 1998 - 2014 Sales Manager, Guardfire Limited
- 1995 - 1998 Sales Engineer, Harn Engineering Co., Ltd.



Mr. Nuntawat Jeerakhom

Sales Director: Refrigeration System
Age 42 yrs.

Shareholding proportion : 30,526 shares (0.01%)
(As at December 31, 2017)

Appointment date : December 1, 2016

Education :

- Ph.D. Candidate (Management), Siam University
- M.B.A., National Institute of Development Administration (NIDA)
- B.B.A., Sukhothai Thammathirat Open University

Training participation :

- **Training program of Thai Institute of Directors Association (IOD) :**
 - Successful Formulation & Execution of Strategy (SFE), Class 25/2015
- **Other courses :**
 - P01 : CSR for Corporate Sustainability
 - ISO 9001 : 2015 Understanding and Implementation
 - Risk Management Certificate Program, Class 10
 - Financial Analysis for Business Administration
 - Analysis of sales to create competitive advantage
 - Knowledge about the cooling system
 - Techniques for developing 7 thinking systems for success
 - PERSPECTIVE ON AEC FOR THE BOSS
 - Root Cause Analysis and Corrective Actions

Work experience :

- 2015 - Present Sales Director: Refrigeration System, Harn Engineering Solutions Plc.
- 2012 - 2015 Sales Manager, GEA Refrigeration (Thailand) Co., Ltd.
- 2008 - 2012 Sales Manager, Chillmatch Co., Ltd.
- 2001 - 2008 Sales Manager, Carrier (Thailand) Co., Ltd.



Mr. Sukit Litikorn

Engineering Support Director:
Refrigeration System
Age 44 yrs.

Shareholding proportion : 322,004 shares (0.06%)
(As at December 31, 2017)

Appointment date : December 1, 2016

Education :

- D.Eng. (Mechanical), Kasetsart University
- M.Eng. (Mechanical), Chulalongkorn University
- B.Eng. (Mechanical), Kasetsart University

Training participation :

- **Other courses :**
 - ISO 9001 : 2015 Understanding and Implementation
 - Risk Management, Chulalongkorn University
 - Bitzer International Seminar and Training, "Compressor and Application of Refrigeration System", Stuttgart, Germany
 - Risk Management Certificate Program, Class 10
 - Using NLP techniques to manage people and coaches
 - Creative Sales and Marketing Strategies and Prediction
 - Technical knowledge of KUBA products

Work experience :

- 2015 - Present Engineering Support Director: Refrigeration System, Harn Engineering Solutions Plc.
- 2004 - 2015 Engineering Manager / Sales Manager, Chillmatch Co., Ltd.
- 2001 - 2014 Engineer, Chillmatch Co., Ltd.
- 2000 - 2001 Consulting Air Condition Engineer, Project Planning Service Co., Ltd.



Mr. Withoon Thamee

Sales Director: Digital Printing System
Age 39 yrs.

Shareholding proportion : 391,693 shares (0.07%)
(As at December 31, 2017)

Appointment date : December 1, 2016

Education :

- M.B.A. (Management), Ramkhamhaeng University
- B.Eng. (Electrical), Mahanakorn University of Technology

Training participation :

- **Other courses :**
 - ISO 9001 : 2015 Understanding and Implementation
 - Risk Management Certificate Program, Class 10
 - Advance Strategic Planning : ASP Model The 21st Century Strategic Management Tool
 - 6 top management skills
 - Development of strategic thinking.
 - Finance for Non-finance Executive
 - Developing 10 core competencies to reach the top

Work experience :

- 2015 - Present Sales Director: Digital Printing System, Harn Engineering Solutions Plc.
- 2006 - 2015 Director Sales Inkjet (Bangkok-OCG-Country) / Sales Engineer, QIIS Co., Ltd.
- 1999 - 2005 Technician/ Service Engineer/Sales Engineer, B.Grimm Power Co. Ltd.



Mrs. Varinkan Teraumranon

Corporate Governance Director
and Company Secretary
Age 52 Yrs.

Shareholding proportion : 903,610 shares (0.15%)
(As at December 31, 2017)

Appointment date : February 29, 2016

Education :

- BBA (Accounting), Rajamangala Institute of Technology

Training participation :

- Training program of Thai Institute of Directors Association (IOD) :
 1. Effective Minute Taking Plan (EMT), Class 36/2016
 2. Company Reporting Program (CRP), Class 16/2016
 3. Company Secretary Program (CSP), Class 72/2016
 4. How to Develop a Risk Management Plan (HRP), Class 8/2015
- Other courses :
 - P01 : CSR for 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 : CSR Evaluation and Data Management
 - S06 : Sustainability Reporting
 - Organizational Success Assessment through KPI Course
 - ISO 9001 : 2015 Understanding and Implementation
 - 360° Marketing Communication Techniques Course
 - Finance for Non-finance Executive Course
 - Finance for the Boss Course
 - Professional Interview Techniques Course
 - Performance Enhancement with Positive Thinking Course
 - Annual Wage Increment and Employee Compensation Management Course
 - Quality Leaders toward Digital Age and AEC Course

Work experience :

- 2016 - Present Corporate Governance Director and Company Secretary, Harn Engineering Solutions Plc.
- 2016 - 2017 Assistant Managing Director: Corporate Governance and Secretary Company, Harn Engineering Solutions Plc.
- 2014 - 2016 Operation Support Director (General Management Group), Harn Engineering Solutions Plc.
- 2005 - 2013 Chief Policy and Human Resource Planning Officer, Harn Engineering Co., Ltd.
- 1998 - 2004 Executive Assistant, Harn Engineering Co., Ltd.
- 1993 - 1997 Marketing Support Officer, Harn Engineering Co., Ltd.



Mr. Wisit Wachiralappaitoon

Finance Director
Age 43 Yrs.

Shareholding proportion : 154,703 shares (0.03%)
(As at December 31, 2017)

Appointment date : March 16, 2016

Education :

- Master of Science (Accounting), Thammasat University
- B.B.A. (Accounting) and LL.B., Ramkhamhaeng University

Training participation :

- ISO 9001 : 2015 Understanding and Implementation
- Graduate Diploma in Global Entrepreneurship and E-commerce, York College of Information and Technology, Ontario, Canada.

Work experience :

- 2016 - Present Finance Director, Harn Engineering Solutions Plc.
- 2012 - 2016 Chief Financial Officer, Hot Pot Plc.
- 1999 - 2012 Audit Manager, Swot Audit Co., Ltd.
- 1996 - 1998 Accountant, ItalThai Engineering Co., Ltd.

6 General Information

| | |
|-------------------------------------|---|
| Name | HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED |
| Symbol | HARN |
| Registered Capital | Baht 292,250,000 (totaling 584,500,000 ordinary shares) each of Baht 0.50 par value |
| Paid-up Capital | Baht 292,250,000 (totaling 584,500,000 ordinary shares) each of Baht 0.50 par value |
| 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 | 19/20-22 Soi Soonvijai, Rama 9 Road, Bang Kapi Subdistrict, Huai Khwang District, Bangkok 10310 Tel : +66 (2) 203-0868 Fax. +66 (2) 203-0245 |
| Soonvijai Warehouse Location | 503/1, 509 Soi Soonvijai, Rama 9 Road, Bang Kapi Subdistrict, Huai Khwang District, Bangkok 10310 Tel : +66 (2) 719-7285 , +66 (2) 716-9070 Fax. +66 (2) 318-8624 |
| Motorway Warehouse Location | 6, 8 Moo 15 Motorway Frontage Road, Sapan Sung Subdistrict, Sapan Sung District, Bangkok 10240 Tel : +66 (81) 914-2236 , +66 (85) 480-2420 |
| Registration No. | 0107557000217 |
| Website | www.harn.co.th |
| Company Secretary | Mrs. Varinkan Teraumranon Tel : +66 (2) 203-0868 E-mail : varinkan.t@harn.co.th |
| Investor Relations | Mr. Wirat Sukchai Tel : +66 (2) 203-0868 E-mail : wirat.s@harn.co.th |
| Information of Subsidiary | -None- |

Name and Address of Other References

| | |
|-----------------------------|---|
| Securities Registrar | The Stock Exchange of Thailand Building 93 Ratchadaphisek Road, Dindaeng Subdistrict, Dindaeng, Bangkok 10400 Thailand Tel : +66 (2) 009-9000 Fax : +66 (2) 009-9991 website : www.set.or.th/tsd |
| Auditor | Dharmniti Auditing Co.,Ltd 178 Dharmniti Building 6-7 th Floor, Soi Permsap (Pracha Chuen 20), Pracha Chuen Road, Bangsue, Bangkok, 10800 Thailand Tel : +66 (2) 587-8080 Fax : +66 (2) 586-0301 |

For more information, please see our Annual Registration Statement (Form 56-1) which is posted on The Office of the Securities and Exchange Commission's website at www.sec.or.th or visit the Company's website at www.harn.co.th

7 Nature of Business

Description of Products and Services

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

1) Fire suppression products and firefighting system installation services



Fire suppression products are part of building engineering system, 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 in order to allow for complete functioning of the fire protection system, including other firefighting devices such as fire hose cabinet, fire hose, fire extinguisher, etc.

The Company also provides consulting, designing and installation services for all types of firefighting systems. 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.

2) Air-conditioning and sanitary products

Valve Opens and Closes the Water



Grooved Coupling and Fitting



Flow Switch



Liquid Refrigerant



Copper Tube



Pressure Gauge and Thermometer



Aluminum Filter



Air-conditioning products are devices in building engineering system, used for controlling temperature and air quality at an appropriate level. An air-conditioning system can typically control the temperature at 22°C - 25°C. Meanwhile, sanitary products in the building engineering system include water supply system, water drainage system, ventilation system, etc. Air-conditioning and sanitary products distributed by the Company are valves that are used for starting or stopping the flow of liquid and pressure in the air-conditioning 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 copper tube, fitting, flow switch, etc.

3) Refrigeration products



"We are committed to be a leading sustainable solution provider of engineering systems in refrigeration in Thailand and neighbour countries."



4) Digital printing products



“Leading engineering solutions provider.”



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 code, 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 and product design service for various industries such as dental, hearing aid, jewelry, automotive, and so on. Moreover, a new service has been launched to cater to 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.

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.

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)¹ and/or FM (Factory Mutual)² and/or BS (British Standard)³ and/or TIS (Thai Industrial Standards)⁴ and/or EN (European 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.

¹ 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.

² Factory Mutual (FM), responsible in testing protective and fire extinguisher equipment of the insurance group in the USA.

³ British Standard (BS), safety standards by the British Standard Institution (BSI)

⁴ Thai Industrial Standards (TIS), industrial standards, products guaranteed by the Thai Industrial Standard Institute.

Significant Changes and Developments

Harn Engineering Solutions Public Company Limited (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 Group⁵ 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 and July 24, 2006, the Company increased its registered capital to Baht 3 million and Baht 4 million, respectively, for use as working capital in its business operation.

In 2003, the Company expanded its business by adding Project Sales Division to provide consultation, designing and installation services of all types of fire protection system such as automatic sprinkler system, foam fire protection, and fire suppression and alarm systems, 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) extinguishing system and FM200⁶ system into the Company’s product line. In 2007, the Company received an Outstanding Distributor Award presented by NIBCO Inc., USA. The Company received ISO 9001:2015 certification from UKAS (United Kingdom Accreditation Service), a UK-based world-class certification body, with quality inspection and verification conducted by SGS (Thailand) Company Limited.

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

| | |
|------|--|
| 2013 | <ul style="list-style-type: none"> The Company was appointed as a distributor of Air Sampling Detector (ASD), a high-sensitivity smoke detection system of WAGNER, Federal Republic of Germany. The Company was conferred by the Ministry of Industry the honorable mention award for cooperation with Thailand in reducing and phasing out ozone-depleting substances. |
| 2014 | <ul style="list-style-type: none"> The Company was appointed as a distributor of balancing and control valves of OVENTROP, Federal Republic of Germany. March 19, 2014 the Annual General Meeting of Shareholders concluded that the Company will increase its registered capital from 65 million Baht to 130 million Baht by issuing 6,500,000 new common stocks at the value of 10 Baht per stock for the original shareholders at the rate of 1 original stock to 1 new stock at 10 Baht per stock. The money received from the capital increase will be used as cash flows from the business operation in which the Company had already registered for the capital increase to the Department of Business Development, Ministry of Commerce on the April 21, 2014. May 15, 2014 the 1st Extraordinary Meeting of Shareholders approved the change of the Company from company limited to public company limited and the increase of the registered capital of 130 million Baht to 175 million Baht by issuing 45,000,000 new common stocks at the value of 1 Baht per stock for initial public offering (IPO) together with enlisting the Company’s stocks to the Market of Alternative Investments (MAI). |

⁵ The Charnnarong Group consisting of Mrs. Prayoonsri Charnnarong, Mrs. Sirima Iamsakulrut and Mr. Jain Charnnarong

⁶ 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.

| | |
|------|--|
| | <ul style="list-style-type: none"> May 22, 2014 the Company was listed as the public company limited under the name “Fire Victor Public Company Limited” September 19, 2014, 1st Extraordinary Meeting of Shareholders approved the change in the value of the Company from 1 Baht to 0.50 Baht per stock, which increases the registered capital stocks of the Company from 175,000,000 stocks to 350,000,000 stocks and approved the IPO after the change of the stocks’ value, the amount had increased from 45,000,000 stocks to 90,000,000 stocks. The Company had registered the changing of the stocks’ value to the Department of Business Development, Ministry of Commerce on the September 22, 2014. November 13, 2014, the Company became the listed company in the MAI and began trading with 350,000,000 registered stocks. |
| 2015 | <ul style="list-style-type: none"> The Company was appointed as a distributor of SLEX gaseous fire suppression products, Kingdom of Spain. The Company expanded distribution its market to neighboring countries, such as Kingdom of Cambodia. The Company set up a project sales department for petrochemical products to increase distribution channels for full-scale fire protection systems in heavy industrial zones. The Company upgraded its ERP (Enterprise Resource Planning Application) with SAP in specific to manage its business processes by linking all sub systems into one, streamlining the processes, and producing timely and most accurate financial reports to enhance data analysis and decision making. |
| 2016 | <ul style="list-style-type: none"> November 1st 2016 the 1st Extraordinary Meeting of Shareholders 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. |
| 2017 | <ul style="list-style-type: none"> March 21, 2017, the Company participated in the declaration as a member of the Private Sector Collective Action Coalition Against Corruption (CAC). November 23, 2017, the Company received ISO 9001:2015 certification from SGS (Thailand) Ltd. 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. |

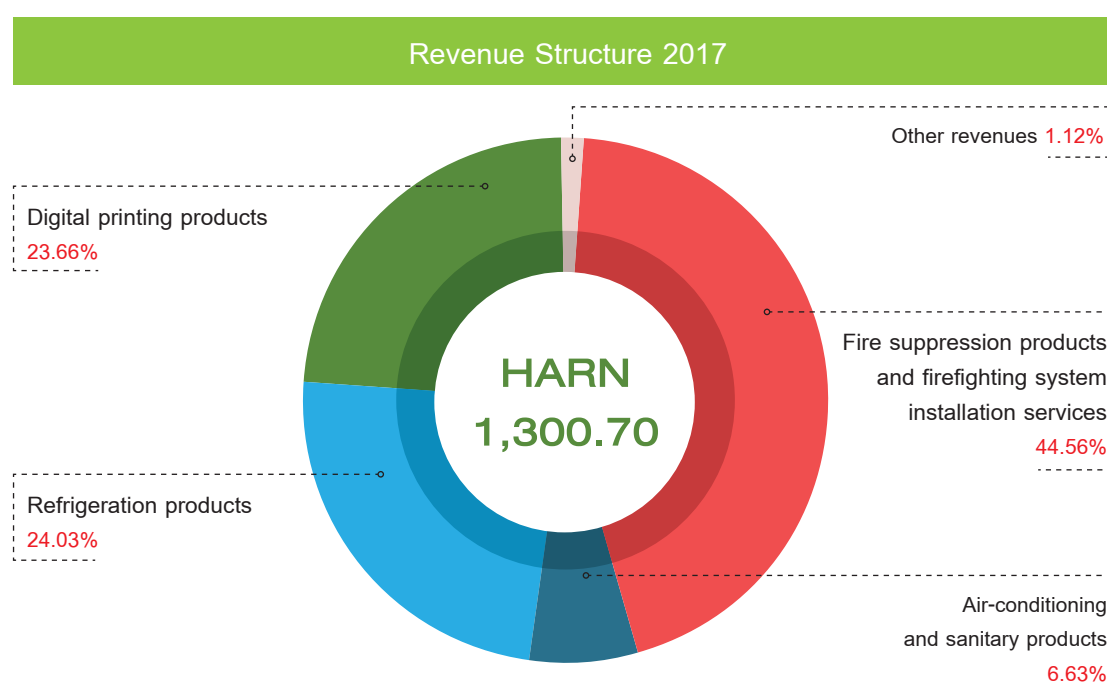


8 The Company's revenue structure

| Type of Revenue | 2016 ¹⁾ | | 2015 | | 2014 | |
|--|--------------------|---------------|---------------|---------------|---------------|---------------|
| | Baht Million | % | Baht Million | % | Baht Million | % |
| Revenues from sales and services | | | | | | |
| 1. Fire suppression products and firefighting system installation services | 579.54 | 44.56 | 546.09 | 82.40 | 525.96 | 90.23 |
| 2. Air-conditioning and sanitary products | 86.18 | 6.63 | 48.53 | 7.32 | 41.58 | 7.13 |
| 3. Refrigeration products | 312.51 | 24.03 | 23.97 | 3.62 | - | - |
| 4. Digital printing products | 307.74 | 23.66 | 26.93 | 4.06 | - | - |
| Total revenues from sales and services | 1,285.97 | 98.88 | 645.52 | 97.40 | 567.54 | 97.36 |
| Other revenues ²⁾ | 14.73 | 1.12 | 17.20 | 2.60 | 15.41 | 2.64 |
| Total revenues | 1,300.70 | 100.00 | 662.72 | 100.00 | 582.95 | 100.00 |

Notes : ¹⁾ Referring to Harn Engineering Solutions PCL.'s audited financial statements

²⁾ Other revenues include gains on foreign exchange, gains on sales of properties, interest income, gains on sales of securities, income from goods and property insurance compensation, and business supporting service revenue etc.



9 Industry and Competition Overview

1. Industry Overview and Competition

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.

The Thai economy is predicted to continue expanding by 3.8% in 2018, which is higher than in the previous forecast attributable to the continued improvement in exports of goods and tourism, the gradual increase and more broad-based distribution of private spending, and ongoing public sector investment. Export growth of goods has been more broad-based across product categories and export destinations as well as improvement across exporting entrepreneurs of all sizes. Exports of goods in 2017 by value were projected to grow by 8% in line with global economic recovery. Exports of electronics products would likely expand in line with the technological cycle, while several products benefited from the relocation of production bases to Thailand. Moreover, export prices would also tend to go up, especially commodity goods, on the back of the hike in crude oil prices. Such export growth would also raise demand for raw materials and intermediate goods, which is anticipated to further push up import value. Meanwhile, exports of services continued expanding in tandem with stronger performance of tourism. The projected number of foreign tourists in 2017 was revised up from 34.9 million to 35.6 million thanks to the following factors: (1) increasing number of Chinese tourists, both group and independent tourists, supported by the opening of new direct flight routes from China to major tourist destinations in Thailand, (2) rising number of ASEAN tourists in line with economic recovery, and (3) reduction and exemption of tourist visa fees. In addition, global economic recovery contributed to a further rise in tourism spending per head. Private consumption would tend to gradually expand in a certain period ahead, supported by improvements in farm income and employment in export-related manufacturing and service sectors, as well as government measures such as the social welfare card project and the 9101 in the Footsteps of His Majesty Project. However, household purchasing power going forward would remain not so strong because employment and labor wages had yet to fully benefit from the export improvement, partly due to economic structural changes and business models that were less reliant on labor, together with elevated level of household debt. Public spending remained an important economic growth driver because budget disbursement for both public consumption and investment was well on track despite some unexpected delay in certain projects such as investment projects of state enterprises. At the same time, government investment was likely to slow down after prior acceleration, while some government agencies were constrained by limited disbursement efficiency. In addition, the promulgation of the Public Procurement and Supplies Management Act B.E. 2560 (2017) might result in a delayed disbursement, during the initial phase, of some state agencies that would now be governed by the new law, particularly local administrations that had not previously operated under this system. Private investment continued to recover but at a slow pace. In the near term, there was some signal of investment improvement

in certain industries, which was consistent with the expansion in private consumption and exports. However, there remained excess production capacity in some businesses as they were waiting for greater clarity in the government's policies especially those regarding infrastructure investment projects.

Source : The Bank of Thailand

Fire Extinguisher Business

Industrial Factories Fire Extinguisher : Higher growth of sales was recorded in 2017 as targeted, with consistent delivery of products for several large projects. Market making for air-conditioning system products, such as controlling valves, grew favorably while market making for copper pipes had just been in the initial period, hence not so high sales volume but on a prospective growth trend in future. Other products in the firefighting system witnessed sales growth, the same as new products. Regarding project sales, new orders were consistently received, such as office building, hospital, hotel, condominium and general office projects, delivery of products for which would gradually be made in 2018.

Air Conditioning System and Fire Extinguisher Equipment : For project installation sales in 2017, there were a number of projects under installation. The Company also had an additional number of projects in pipeline. Sales of fire extinguishing system in 2017 were outstanding with tens of projects now under installation process and a large number of big projects waiting for installation and delivery in 2018. Sales of fire extinguishing system are expected to continue expanding. There was keen competition in the market for highly sensitive fire alarm and smoke detection system in several projects. Fire extinguishing system testing service also grew considerably in the past year from the installation projects, which were likely to expand every year.

Extinguisher System for Petrochemical and Power Plant Projects : The Company's Petrochemical and Power Plant Project Department had a number of projects under installation, and followed up certain large projects for which bidding would start in 2018. There are growth prospects for these projects in 2018 amidst the rising crude oil prices which would stimulate factory expansion and improvement of firefighting system of petrochemical industry looking forward.

Refrigeration System Business

The Company's refrigeration system business expanded continuously in tandem with food industry, especially for food export which had benefited from recovery of agricultural output, major raw material of food industry, after the severe drought in the foregoing year, coupled with the government's promotion positively contributed to the industry growth. There emerged several projects related to refrigeration system, agricultural products and frozen food processing in particular, while frozen and processed chicken industry, especially processed chicken, continued expanding satisfactorily on the back of the continued growth of exports to ASEAN markets. For refrigerated and frozen chicken, Thai entrepreneurs exported to Japan and South Korea in greater volume after lifting of ban on imports from Thailand imposed since bird flu epidemic in 2004. Moreover, global demand for chicken steadily expanded, especially amidst the global economic volatility, as chicken prices were lower than those of other types of meat and solutions of chicken epidemic in other countries had been delayed compared with Thailand.

Supermarket and convenience store business which is retail business was predicted to grow by 3.0-3.5% on the back of the government's spending stimulus measures. Such retail business which is modern trade is predicted to continue expanding, especially in sales of entrepreneurs who are likely to expand branches or renovate existing branches.

Other related markets like processed and ready-to-eat foods continued expanding attributable to the changing consumer behaviors with a shift more toward ready-to-eat or frozen ready-to-eat foods that match urban lifestyle which requires shortened time in preparing foods.

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.

Quarter 3/2017 (3Q/2017) conditions of related industrial sectors and economic outlook for 2018

Manufacturing sector: Manufacturing sector expanded by 4.3%, the highest in 18 quarters, in tandem with the strong expansion in export and the improvement of domestic demand that remarkably accelerated from 1.1% growth in the previous quarter along with the expansion of manufacturing production index.

Wholesale and retail trade sector: Wholesale and retail trade sector accelerated in line with the expansion of household expenditures and the increase in the number of foreign tourists. In 3Q/2017, wholesale and retail trade sector expanded by 6.4%, accelerating from 6.0% growth in the previous quarter.

- Wholesales index grew by 5.8% due to expansion in wholesale volume of non-durable goods (such as food, pharmaceutical and medical goods, perfumery and cosmetics goods) and durable goods (such as household electrical and electronics appliances) while wholesales of other categories declined.
- Retail sales index grew by 8.6% owing to the increase in all categories, mainly driven by retail sale volume of non-durable goods (such as beverages and tobacco products in retail stores), durable goods, department stores, general stores, motor vehicles sale, motor repairing service, automotive fuel sector, and other categories.

The Thai economy in 2018 tends to grow satisfactorily with a gradual acceleration, mainly supported by strong global economic recovery and continued expansion in exports which will further stimulate the manufacturing sector to clearly recover and further enhance overall economic growth. Likewise, total investment is likely to expand at a faster pace contributed by continual improvement of private investment which will be supported by the decrease in excess capacity in several key industries, better economic confidence, as well as accelerating public investment in line with significant progress of key infrastructure investment projects and an increase of capital budget framework. Meanwhile, other major production sectors are likely to continue their favorable growth pace from the previous year. Nevertheless, the contribution from agricultural sector tends to be softened as the growth returns to its normal level, implying that an economic growth would thus rely more on non-agricultural sector. Besides, the global economy and financial system might still be exposed to volatility risk, which thus requires close monitoring and assessment.

Source : Thai Economic Performance in Q3/2017 and Outlook for 2018, Macroeconomic Strategy and Planning Office, NESDB

2. Competition

Importing and distributing fire extinguisher products has medium level of competition. This is because the products are concerned with safety; therefore the equipment must be of good quality with certified international standards. The core competitors of the Company are companies that distributes the products from overseas in which the numbers are not very high, since there are only a limited numbers of products which are accepted worldwide. 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.

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, resulting in higher demands for goods and services relating to the fire extinguisher system.

Importing and distributing products for sanitary and air conditioning system have fierce competition. There are many companies in the market both large and small and with a variety of brands that are widely accepted. However, since the size of the market is large, there are many distributing 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 2016 had faced high level of competition following the growth of the food, food processing and frozen food industries, since Thailand still remains to be the country with high food producing capacity from the fundamental basis of agriculture and fishing and with advance technology under the international standards. The relating businesses that had been growing together are convenience stores which face fiercer competitions. Presently, Seven Eleven still maintain the position of the distributors with the most branches and continue to grow steadily. At the same time, other competitors are finding new strategies to attract customers and have planned to open more branches such as Family Mart, Mini Big C, Tesco Express, etc. However, in the year 2017, it is expected there will be 1-2 new competitors who focuses mainly in opening shops in 3-4 commercial buildings, petrol stations or the 500 square meters convenient stores with the target of operating 100 branches within 2017 and increasing to 1,000 stores in the next 5 years.

There are opportunities for business expansion due to the supporting factors from entering the AEC, which will create regional trade and investment connections, and also follows by the connection between the supply chains, for example, convenience stores in Myanmar which had been growing rapidly in the past 4-5 years since some brands had already been expanded by investors from the modern trade market such as the supermarket and the hypermarket within the country while some other brands had joint ventures with foreign investors such as Singapore, Thailand and Malaysia.

Encourage new trading routes for the transportation of goods, for example, transporting fruits and vegetables from China to Thailand through the R3A in Chiang Rai and all the way to Talad Thai and Iyara Market which will help the growth of the food business, restaurants and the storage and transportation business that has controlled temperature as well.

As for the fishing industry, there are still problems that had been affecting the refrigeration business, both the illegal labor and the IUU fishing from the countries in the European Union which makes it difficult for business owners to invest or expand their productions further.

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 very 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 4 other competitors for the total of 5 companies, it is discovered that the Company's market share is among the top 3 in the market with approximately 23.32% market share (Source: Department of Business Development, sales in 2016).

3. Environmental Impacts

- None -

4. Undelivered Works

As of December 31, 2017, there were backlog order total about 380.92 million, 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 60 million baht and the value of the product in the sales of Fire Suppression products and Air-conditioning products total about 170 million baht, Refrigeration products total about 112.50 million baht and Digital Printing products total about 38.42 million baht were received and delivered in 2018.



10 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:

Operation Risks

1. Exchange rate risk

The products distributed by the Company are mainly imported from abroad. Its import volume in 2016 and 2017 made up 77.49% and 80.24% of total volume of product procurement respectively. Price offer and payment for products are primarily denominated in US dollar, Pond Sterling and Euro currency totally 95.16% of the foreign purchase volume while the 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.

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.
- The Company will consider buying foreign currency in advance according to the total sums of the invoice for each purchase and 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 2016 and 2017, the Company bought foreign currency in advance totaling Baht 255.90 million and 502.00 million, or 54.90% and 75.80% of its import volume. Furthermore, the Company managed its exchange rate risk by always keeping abreast of foreign exchange movement, resulting in only minimal risk exposure as can be seen from its exchange risk management outcome. In 2016 and 2017 which recorded foreign exchange gains of Baht 1.40 million and Baht 5.05 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 36.80% and 28.00% of its total sales in 2016 and 2017 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 venture 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 2,400 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 2017, the company was appointed as a distributor of three 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 man power 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. By the year 2017, the evaluation results. 81%, compared with 65 % in 2016, up from 16% in 2016.

In 2017 the resignation of employees decreased from 18.90% in 2016 to 12.40%, and the rate of recruitment to fill the vacancies was 19%, within the set target. The Company assessed that the risk control was at the acceptable level but not satisfactory; however in 2017 the Company will put great emphasis on the progress of HR Master Plan.

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 auditor 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.

The management conducted the impairment test of goodwill. The goodwill derived from the entire business transfer of Chillmatch Co.,Ltd. and its subsidiary QIIS Co.,Ltd. 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 and also the changes in relevant working capital such as accounts receivable, inventory and accounts payable. Those annually free cash flows were discounted into present value to determine the net realizable value. The discount rate used is a pre-tax rate that reflects the specific risk of the particular business unit.

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 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, 2017. Likewise the overall process complied the financial reporting standards was audit by the certified public accountant.



11 Shareholder structure

The Company 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.

Major shareholders of the Company as of December 31, 2017 are as follows:

| No | Names of shareholders | | No. of shares held | % |
|----|-----------------------|-------------------|--------------------|--------|
| 1 | Mr. Wirat | Sukchai | 87,697,361 | 15.004 |
| 2 | Nice Noble Limited | | 73,316,475 | 12.543 |
| 3 | Mrs. Sirima | Iamsakulrat | 68,845,441 | 11.779 |
| 4 | Mr. Jain | Charnnarong | 68,515,420 | 11.722 |
| 5 | Mr. Wasan | Nantakhwang | 28,440,000 | 4.866 |
| 6 | Miss Nopporn | Charnnarong | 26,429,444 | 4.522 |
| 7 | Mr. Thammanoon | Tripetchr | 20,967,423 | 3.587 |
| 8 | Mr. Chaivat | Taepaisitphongse | 17,900,000 | 3.062 |
| 9 | Miss Panatda | Thongliam | 14,832,149 | 2.538 |
| 10 | Mrs. Noppharat | Sukchai | 13,000,000 | 2.224 |
| 11 | Mr. Pracha | Phromphornchai | 11,241,584 | 1.923 |
| 12 | Mr. Vinyoo | Nana | 10,621,500 | 1.817 |
| 13 | Mrs. Prayoonsri | Charnnarong | 8,341,320 | 1.427 |
| 14 | Mrs. Valeeratn | Chuerboonchai | 8,276,986 | 1.416 |
| 15 | Miss Tarada | Tripetchr | 7,504,024 | 1.284 |
| 16 | Miss. Urairat | Harnthaweeapat | 6,826,940 | 1.168 |
| 17 | Mr. Parkphum | Wongpaitoon | 4,230,325 | 0.724 |
| 18 | Mr. Rattanaphan | Mukhariwattananon | 3,236,849 | 0.554 |
| 19 | Mr. Thanasak | Triranun | 3,201,800 | 0.548 |
| 20 | Mr. Prasert | Akarapongpong | 3,022,000 | 0.517 |

Table summarizing change in shareholding proportion of the Board of Directors and top executives of the Company as of December 31, 2017 :

| No | Names of directors/executives | | December 31, 2017 | December 31, 2016 | Increase (Decrease) |
|-------------------|-------------------------------|------------------------------|----------------------|----------------------|------------------------|
| Board of Director | | | | | |
| 1 | Mr. Thakol | Nunthirapakorn ^{/1} | - | - | - |
| 2 | Mr. Wirat | Sukchai | 87,697,361 | 86,807,809 | 889,552 |
| 3 | Mr. Wasan | Nantakhwang | 28,440,000 | 28,140,000 | 300,000 |
| 4 | Mr. Thammanoon | Tripetchr | 20,967,423 | 20,842,442 | 124,981 |
| 5 | Mrs. Sirima | Iamsakulrat | 68,845,441 | 63,845,441 | 5,000,000 |
| 6 | Mr. Jain | Charnnarong | 68,515,420 | 84,091,640 | (15,576,220) |
| 7 | Mrs. Valeeratn | Chuerboonchai | 8,276,986 | 8,446,518 | (169,532) |
| 8 | Mr. Parkphum | Wongpaitoon | 4,230,325 | 5,410,325 | (1,180,000) |
| 9 | Mr. Supot | Tiarawut ^{/1} | - | - | - |
| 10 | Mr. Sothitorn | Mallikamas ^{/1} | - | - | - |
| 11 | Miss Voranuch | Supaibulpipat ^{/1} | - | - | - |
| Top Executives | | | | | |
| 1 | Mrs. Varinkan | Teraumranon | 903,610 | 1,196,593 | (292,983) |
| 2 | Mr. Wisit | Wachiralappaitoon | 154,703 | 139,646 | 15,057 |

Remark : ^{/1} Independent Director

Shareholder structure by nationality

Shareholder structure as of December 31, 2017 which is the latest book closing date of the Company is as shown below:

| | No. of shareholderz | No. of Shares held | % | Juristic person | | | Individual person | | |
|----------------------|------------------------|-----------------------|---------------|------------------------|-----------------------|--------------|------------------------|-----------------------|--------------|
| | | | | No. of shareholders | No. of shares held | % | No. of shareholders | No. of shares held | % |
| Thai shareholders | 2,448 | 510,583,525 | 87.35 | 7 | 2,259,291 | 0.38 | 2,441 | 508,324,234 | 86.97 |
| Foreign shareholders | 2 | 73,916,475 | 12.65 | 1 | 73,316,475 | 12.55 | 1 | 600,000 | 0.10 |
| Total | 2,450 | 584,500,000 | 100.00 | 8 | 75,575,766 | 12.93 | 2,442 | 508,924,234 | 87.07 |

12 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.

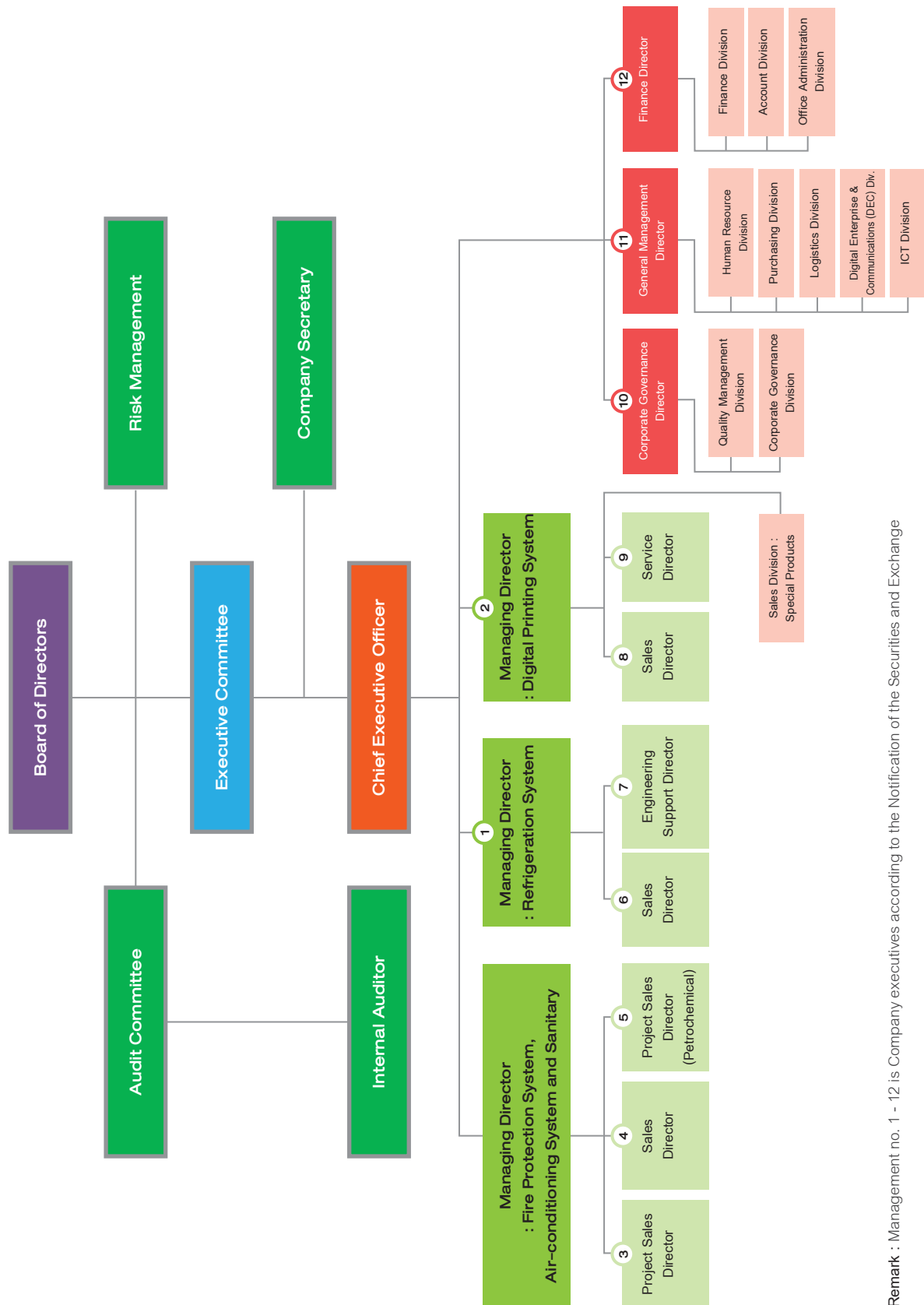
| Dividend payment | 2017 | 2016 | 2015 | 2014 |
|---|-------------|-------------|-------------|-------------|
| Interim dividend payment (Baht per share) | - | - | - | - |
| Annual dividend payment (Baht per share) | 0.14 | 0.09 | 0.10 | 0.15 |
| Stock dividend (Baht per share) | - | - | - | - |
| Earnings per share (Baht) | 0.22 | 0.11 | 0.13 | 0.25 |
| Dividend payout ratio (%) | 63.64 | 81.82 | 76.92 | 60.00 |
| Par Value (Baht per share) | 0.50 | 0.50 | 0.50 | 0.50 |
| Totaling ordinary shares (Share) | 584,500,000 | 584,500,000 | 350,000,000 | 350,000,000 |

Remark :

- The 2017 dividend payment of Baht 0.14 per share paid from net profit of 2017 and retained earnings being submitted to approval at the 2018 Annual General Meeting of shareholders.
- Individual ordinary 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.



Organization Chart HARN ENGINEERING SOLUTIONS Public Company Limited



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

The Management Structure of the company comprises of

1. The Board of Directors
2. The three Board-Committees supporting the consideration and important issues as assigned by the board of Directors : the Audit Committee, the Executive 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)
3. The management with the Chief Executive Officer as the highest executive of the Company

1. Board of Directors

As of December 31, 2017, the Company's Board of Directors is currently composed of ten members as follows :

| No | Name | | Position |
|-----|----------------|------------------------------|---|
| 1. | Mr. Thakol | Nunthirapakorn | Chairman of the Board, Chairman of the Audit Committee, Independent Director |
| 2. | Mr. Wirat | Sukchai | Directors, Member of the Executive Committee, Member of the Risk Management Committee |
| 3. | Mr. Wasan | Nantakwang | Directors, Member of the Executive Committee Member of the Risk Management Committee |
| 4. | Mr. Thammanoon | Tripetchr | Directors, Member of the Executive Committee Member of the Risk Management Committee |
| 5. | Mrs. Sirima | Iamsakulrat | Directors, Chairperson of the Executive Committee |
| 6. | Mr. Jain | Charnnarong ^{1) 2)} | Directors, Member of the Executive Committee |
| 7. | Mrs. Valeeratn | Chuerboonchai | Directors, Member of the Executive Committee |
| 8. | Mr. Parkphum | Wongpaitoon | Directors |
| 9. | Mr. Supot | Tiarawut | Independent Director, Chairman of the Risk Management committee |
| 10. | Mr. Sothitorn | Mallikamas | Independent Director, Member of the Audit Committee |
| 11. | Miss Voranuch | Supaibulpipat | Independent Director, Member of the Audit Committee |

Note : ¹⁾ 2017 Annual General Meeting of Shareholders on April 28, 2017 resolved to appoint Mr. Jain Charnnarong as the Independent Director

²⁾ The Company's Board of Directors at its meeting no. 1/2017 on February 24, 2017 resolved to appoint Mr. Jain Charnnarong as the member of the Executive Committees.

Mrs. Varinkan Teraumranon is the Company Secretary.

The Company has 4 Independent Directors and 3 Audit Committee members which makes the Company's Board of Directors shall have at least three Independent Directors representing no less than one-third of the total number of directors, and shall have at least three Audit Committee members. Each Independent Director and Audit Committee member 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).

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. In 2017, The Company's Board of Directors at the Meeting No. 2/2017 on May 12, 2017, resolved to appoint the authorized directors of the Company as follow First Group Mr. Wirat Sukchai, Mr. Wasan Nantakhwang, Mr. Thammanoon Tripetchr, Second Group Mrs. Sirima Iamsakulrat, Mr. Jain Charnnarong, Mrs. Valeeratn Chuerboonchai, 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.

Term of Office of the Board of Directors

1. At every annual ordinary general meeting of shareholders, one-third (1/3) of the total number of the directors of the Company shall retire by rotation. If the number of directors cannot be equally divided into three, the number of directors closest to one-third (1/3) shall retire.

Directors to vacate office in the first year and the second year after the Company registration shall be decided by drawing lots. For the years thereafter, the directors having been in office the longest shall retire. The vacating directors may be re-elected.

2. Any director wishing to resign from his office shall submit his resignation letter to the Company. Such resignation shall take effect from the date when the resignation letter reaches the Company.

The director resigning pursuant to the above paragraph may also inform the Share Registrar of his resignation.

3. 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, unless the remaining duration of the vacating director's term of office is less than two months. The replacing director shall hold office only for the remaining term of office of the director whom he has replaced.

The resolution of the Board of Directors under the first paragraph shall be supported by the votes of at least three-fourths of the number of the remaining directors.

4. 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 one 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 three days prior to the meeting date for three consecutive days.

5. The shareholders' meeting may resolve for any director to vacate office before the retirement by rotation with the votes of at least three-fourths of the number of the shareholders attending the meeting and having the right to vote.

At every annual general meeting of shareholders, at least one-third of the total number of directors shall retire by rotation. In the event that the number of directors due to retire cannot be divided by three, the number nearest to one-third shall retire. In the first and the second year following the Company's registration, the retirement of directors from office shall be determined by ballot drawing. In the subsequent years, directors having served the longest shall retire. The retired directors may be re-elected.

Role and Duties 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
- For clear segregation of power and responsibilities in determining policies, corporate governance and day-to-day business administration, Chairman of the Board of Directors and Chief Executive Officer shall not be the same person.

Chairman of the Board of Directors is in charge of the following :

1. Call a Board meeting according to the timeframe specified in the Company's Articles of Association or in an urgent or necessary case, perform duty as Chairman of the Board meeting and Chairman of the meeting of shareholders, and set the meeting agenda jointly with Chief Executive Officer.
2. Support and give opportunity for all Board members or all shareholders to participate in the meeting discussion and give comments and opinions independently.
3. Support and encourage all Board members to perform duties with full capabilities within their scope of power, duties and responsibilities, and under good corporate governance principles.
4. Monitor implementation of strategic policies and procedures, and give suggestions and support for business operation of the Management.
5. Monitor and supervise business administration of the Board of Directors and other committees to meet the objectives set forth.
6. Make the casting vote in case of a tie of votes at the meeting of the Board of Directors.

Scope of Power, Duties and Responsibilities of the Board of Directors

The Board of Directors shall have the power, duties and responsibilities in directing the Company's business in accordance with the laws, objectives and the Articles of Association of the Company, as well as rightful resolutions of the shareholders' meeting with honesty, integrity and prudence in the best interests of the Company, the salient points of which are as below :

1. Determine corporate vision, policies, strategies, targets, business plans, annual budget, management structure and delegation of authority, as well as corporate governance policy.
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. Have power to appoint Executive Committee, Chief Executive Officer, Managing Director and Subcommittees as deemed appropriate, and draw up the scope of power and duties of the Executive Committee, Managing Director and Subcommittees so 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 Subcommittees to consider and approve transactions which may have conflict of interest, beneficial interest or any other conflict of interest with the Company or subsidiaries (if any), 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 (if any) 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 (if any). 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. Have power to authorize one or more directors 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 proper. Such power may be cancelled, revoked, changed or amended as the Board may see fit.

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 (if any), 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. The Board of Directors has appointed the 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 are disclosed in the Annual Report and on the website of the Company.
14. The Board of Directors supports and encourages the Company Secretary to continuously undergo training and development of knowledge on legal and accounting areas as well as that on secretarial duties.

2. Supporting Committees

2.1 Audit Committee

The Audit Committee is composed of three 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 :

| Name | | Position |
|-----------------|----------------|---------------------------------|
| Mr. Thakol | Nunthirapakorn | Chairman of the Audit Committee |
| Mr. Sotthithorn | Mallikamat | Member of the Audit Committee |
| Miss Voranuch | Supaibulpipat | 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. currently holds a position of adjunct professor in the University of the Thai Chamber of Commerce and had passed the 8th Director Accreditation Program (DAP) of the year 2004. Mr. Wisit Wachiralarpaitoon is the secretary to the Audit Committee.

Audit Committee's term of office

The Audit Committee has a three-year term of office from the date of appointment. Committee members retiring by rotation may be re-appointed. In case of a vacancy in the Audit Committee for reasons other than retirement by rotation, the Board of Directors shall appoint a fully qualified person as a replacement so that the Committee has the required number of members as specified by the Board. The replacing member will be in office only for the remaining term of the member vacating office.

Scope of power, duties, and responsibilities 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; approve and be responsible for the internal audit; and 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 and other laws relevant to the Company's business.
4. Consider, select, and propose the appointment of an independent party 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. 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 contains the abovementioned information.
7. Summarize and submit the Audit Committee's mission to the Board of Directors for acknowledgement
8. In carrying out the Audit Committee's duties, if it has found or has any suspect that any of the following transactions or acts may have material impact on the Company's financial status and operational performance, the Audit Committee shall report them to the Board of Directors to seek a remedial action within a timeframe it may deem fit:
 - transactions with conflicts of interests,
 - fraud or irregularities or material deficiencies in the internal control system,
 - breach of the securities and exchange law, the stock exchange regulations, and other laws relevant to the Company's business.

If the Board of Directors or its executives fail to arrange for rectification in due course as provided in paragraph 1, any member of the Audit Committee may report the transactions or acts in paragraph 1 to the Securities and Exchange Commission or the Stock Exchange of Thailand.

9. 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 (if any); 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 is composed of five members as follows :

| No | Name | | Position |
|----|----------------|---------------------------------|--|
| 1. | Mrs. Sirima | Iamsakulrat | Chairperson of the Executive Committee |
| 2. | Mr. Wirat | Sukchai | Member of the Executive Committee |
| 3. | Mrs. Valeeratn | Chuerboonchai | Member of the Executive Committee |
| 4. | Mr. Wasan | Nantakhwang | Member of the Executive Committee |
| 5. | Mr. Thammanoon | Tripetchr | Member of the Executive Committee |
| 6. | Mr. Jain | Charnnarong ¹⁾ | Member of the Executive Committee |
| 7. | Mr. Wisit | Wachiralappaitoon ¹⁾ | Member of the Executive Committee |
| 8. | Mrs. Varinkan | Teraumranon ¹⁾ | Member of the Executive Committee And secretary to the Executive Committee |

Note : ¹⁾ Board of Directors resolved to appoint since March 1, 2017

Executive Committee's term of office

The Executive Committee has a three-year term of office from the date of appointment. Committee members retiring by rotation may be re-appointed. In case of a vacancy in the Executive Committee, the Board of Directors shall appoint a qualified person as a replacement.

Scope of Power, Duties and Responsibilities 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, business expansion plan, financial plan, and 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 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.
5. Consider and approve off-budget capital expenditure in an amount not exceeding Baht 10 million and approve expenditure in excess of annual budget by an amount not exceeding Baht 5 million. Such transactions, once approved, shall be informed to the Board of Directors.
6. Consider profit and loss of the Company and proposal for 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

The Company's Risk Management Committee as 31 December, 2016 is composed of 12 members as follows :

| No | Name | | Position |
|-----|-----------------|-------------------|--|
| 1. | Mr. Supot | Tiararwut | Chairman of the Risk Management Committee |
| 2. | Mr. Wirat | Sukchai | Member of the Risk Management Committee |
| 3. | Mr. Wasan | Nantakhwang | Member of the Risk Management Committee |
| 4. | Mr.Thammanoon | Tripetchr | Member of the Risk Management Committee |
| 5. | Mr. Rattanaphan | Mukhariwattananon | Member of the Risk Management Committee |
| 6. | Mr. Pracha | Phromphornchai | Member of the Risk Management Committee |
| 7. | Mr. Suchat | Suwatnodom | Member of the Risk Management Committee |
| 8. | Mr. Nuntawat | Jeerakhom | Member of the Risk Management Committee |
| 9. | Mr. Sukit | Litikorn | Member of the Risk Management Committee |
| 10. | Mr. Withoon | Thamee | 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 |

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.

Scope of Power, Duties and Responsibilities of Risk Management Committee

1. Consider and screen the overall risk management policy and guidelines of the Company which shall encompass major risk categories, i.e. financial risk, investment risk and reputational risk of the Company, 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.

Meeting Attendance of the Board of Directors, Board-committees

Meeting Attendance of the Board of Directors, Audit Committees and Executive Committee as below :

| Name - Surname | | Attendance (Time) | | |
|----------------|---|--------------------|------------------|----------------------|
| | | 2017 | | |
| | | Board of Directors | Audit Committees | Executive Committees |
| 1. | Mr. Takol Nunthirapakorn | 5/5 | 4/4 | |
| 2. | Mr. Wirat Sukchai | 5/5 | | 12/12 |
| 3. | Mr. Wasan Nantakhwang | 5/5 | | 12/12 |
| 4. | Mr. Thammanoon Tripetchr | 5/5 | | 2/12 |
| 5. | Mrs. Sirima Iamsakulrat | 4/5 | | 12/12 |
| 6. | Mr. Jain Charnnarong ^{1) 2)} | 5/5 | | 10/12 |
| 7. | Mrs. Valeeratn Chuerboonchai | 4/5 | | 12/12 |
| 8. | Mr. Parkphum Wongpaitoon | 5/5 | | |
| 9. | Mr. Supot Tiarawut | 5/5 | | |
| 10. | Mr. Sothitorn Mallikamas | 5/5 | 4/4 | |
| 11. | Miss Voranuch Supaibulpipat | 4/5 | 4/4 | |
| 12. | Mr. Wisit Wachiralappaitoon ²⁾ | | | 10/12 |
| 13. | Mrs. Varinkan Teraumranon ²⁾ | | | 10/12 |

Note : ¹⁾ 2017 Annual General Meeting of Shareholders on April 28, 2017 resolved to appoint Mr. Jain Charnnarong as the Independent Director

²⁾ The Company's Board of Directors at its meeting no. 1/2017 on February 24, 2017 resolved to appoint Mr. Jain Charnnarong, Mr. Wisit Wachiralappaitoon and Mrs. Varinkan Teraumranon as the member of the Executive Committees.

3. Management

The Company's management is composed of eleven 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. Wasan | Nantakhwang | Managing Director : Refrigeration System |
| 3. | Mr. Thammanoon | Tripetchr | Managing Director : Digital Printing System |
| 4. | Mr. Pracha | Phromphornchai | Project Sales Director: Fire Protection System, Air-conditioning system and sanitary |
| 5. | Mr. Rattanaphan | Mukhariwattananon | Sales Director: Fire Protection System, Air-conditioning system and sanitary |
| 6. | Mr. Suchat | Suwatnodom | Project Sales Director (Petrochemical): Fire Protection System, Air-conditioning system and sanitary |

| No | Name | | Position |
|-----|---------------|-------------------|---|
| 7. | Mr.Nuntawat | Jeerakhom | Sales Director: Refrigeration System |
| 8. | Mr.Sukit | Litikorn | Engineering Support Director : Refrigeration System |
| 9. | Mr. Withoon | Thamee | Sales Director : Digital Printing System |
| 10. | Mrs. Varinkan | Teraumranon | Corporate Governance Director |
| 11. | Mr. Wisit | Wachiralappaitoon | Finance Director |

Note : Management is Company executives according to the Notification of the Securities and Exchange Commission

Scope of Power, Duties and Responsibilities of 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 oversee 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.

Scope of Power, Duties and Responsibilities of 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.

Mrs. Varinkan Teraumranon had undergone training in Company Secretary Program (CSP), Class 72/2016 in 2016, Company Reporting Program (CRP) Class 16/2016 in 2016 and Effective Minutes Taking (EMT), Class 36/2016 in 2016.

The Company has mapped out qualifications of Company Secretary as regards age, education, foreign language proficiency, communication 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. Remuneration for Directors and Key Executives

5.1 Monetary Remuneration

5.1.1 Directors

The 2017 Annual General Meeting of Shareholders held on April 28, 2017 resolved to approve payment of remuneration for Board members and Audit Committee members as below :

| Remuneration for Board / Committee | 2017 (Year proposed) |
|---|-----------------------|
| 1. Regular Remuneration : Director / Audit Committee / Risk Management Committee | |
| • Chairman of the Board | 30,000 Baht / Month |
| • Chairman of the Audit Committee | 25,000 Baht / Month |
| • Directors / Independent Director | 20,000 Baht / Month |
| • Directors (1 working day/week) | 40,000 Baht / Month |
| • Directors (2.5 working day/week) | 80,000 Baht / Month |
| 2. Meeting allowances for Board and Committee members | |
| • Chairman of the Board | 15,000 Baht / meeting |
| • Chairman of the Audit Committee | 15,000 Baht / meeting |
| • Chairman of the Risk Management Committee | 15,000 Baht / meeting |
| • Director / Audit Committee members | 10,000 Baht / meeting |
| • Risk Management Committee | 10,000 Baht / meeting |
| 3. Bonuses for directors of the Board | None |
| 4. Other Remuneration | None |

Note : 1. Board and Committee members entitled to receipt of Directors' remuneration must not be employees of the Company.
2. Board member who also serve in other committee shall receive only one remuneration that pay the highest rate.

In 2016 and 2017, The Meeting allowance payment to each director was as tabulated below :

| Name | Position | Meeting Allowance (Baht) | | | | |
|---------------------------------------|---|--------------------------|-----------------|---------------------------|--------------------|-----------------|
| | | 2017 | | | 2016 | |
| | | Board of Directors | Audit Committee | Risk Management Committee | Board of Directors | Audit Committee |
| 1. Mr. Thakol Nunthirapakorn | Chairman of the Board, Chairman of the Audit Committee, Independent Director | 315,000 | 60,000 | - | 305,000 | 105,000 |
| 2. Mr. Wirat Sukchai | Directors, Member of the Executive Committee, Member of the Risk Management Committee | - | - | - | 200,000 | - |
| 3. Mr. Wasan Nantakwang | Directors, Member of the Executive Committee, Member of the Risk Management Committee | - | - | - | 33,333.33 | - |
| 4. Tripetchr Thammanoon | Directors, Member of the Executive Committee, Member of the Risk Management Committee | - | - | - | 33,333.33 | - |
| 5. Mrs. Sirima Iamsakulrat | Directors, Chairperson of the Executive Committee | 360,000 | - | - | 270,000 | - |
| 6. Mr. Jain Charnnarong ¹⁾ | Directors, Member of the Executive Committee | 640,000 | - | - | - | - |
| 7. Mrs. Valeeratn Chuerboonchai | Directors, Member of the Executive Committee | 300,000 | - | - | 200,000 | - |
| 8. Mr. Parkphum Wongpaitoon | Directors | 210,000 | - | - | 270,000 | - |
| 9. Mr. Supot Tiarawut | Independent Director, Chairman of the Risk Management committee | 250,000 | - | 120,000 | 53,333.33 | - |
| 10. Mr. Sothitorn Mallikamas | Independent Director, Member of the Audit Committee | 210,000 | 40,000 | - | 270,000 | 70,000 |
| 11. Miss Voranuch Supaibulpipat | Independent Director, Member of the Audit Committee | 200,000 | 40,000 | - | 270,000 | 70,000 |
| Total | | 2,485,000 | 140,000 | 120,000 | 1,904,999.99 | 245,000 |

Note : ¹⁾ 2017 Annual General Meeting of Shareholders on April 28, 2017 resolved to appoint Mr. Jain Charnnarong as the Independent Director

5.1.2 Key executives

In 2016, and 2017, remuneration payment to top executives was as follows :

| Remuneration | 2017 | | 2016 | |
|---|-------------------|---------------------|-------------------|---------------------|
| | 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 | 12,696,938 | 4 | 8,473,456 |

5.2 Other Remuneration

- Other remuneration of board directors -None -
- Other key management remuneration - is shown in Table 4.1.2 above.

6. Manpower

6.1 Number of Personnel

As of December 31, 2016 and December 31, 2017, the Company has a total of 224 and 236 employees (excluding executives) respectively, categorized by function line as follow s:

| Operational Line | Number of Employees (persons) | |
|---|-------------------------------|------------------------|
| | As of December 31,2017 | As of December 31,2016 |
| Project Sales Group | 34 | 28 |
| Fire Protection, Air Conditioning & Sanitary System : Sales Group | 27 | 26 |
| Project Sales Group (Petrochemical) | 3 | 2 |
| Refrigeration System Sales Group* | 15 | 14 |
| Engineering Support Group* | 3 | 2 |
| Digital Printing System Sales Group* | 26 | 23 |
| Service Group* | 33 | 32 |
| Special Product Sales Group* | 10 | 11 |
| Corporate Governance Group | 7 | 6 |
| General Management Group | 42 | 43 |
| Finance Group | 36 | 37 |
| Total | 236 | 224 |

Note : ¹⁾ Increased from receive the transfer of Business Chillmatch Co., Ltd. and QIIS Co., Ltd. since November 2, 2016.

6.2 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 provident fund 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. 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, the Employee Joint Investment Program (EJIP) has been established to provide the employees with an opportunity to jointly invest in 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.

In 2017, Monetary and non-monetary employee compensation to the employees totaled Baht 155.02 million, compared with Baht 81.91 million in 2016. Due to the transfer of business and employees since November 2, 2019, it is impossible to compare the number of employees and compensation in the same proportion.

6.3 Major Labor Dispute in the Past 3 Years

- None -

6.4 Employee Development Policy

The Company has a policy to regularly develop its employees at all levels to enhance competency, knowledge and capabilities to improve performance outcomes and strengthen the organization to be well equipped in facing business competition. Employees are allowed to self-improve and fully demonstrate their skills for maximum benefits. At FIRE, we encourage employees to learn more through education and training programs to enhance their knowledge, competency and experience to correspond with the direction of organization growth. We offer both in-house and external training courses and programs annually to enhance the skills within the scope of responsibilities of employees at all levels. We also place importance on following up and evaluating the knowledge gained by the employees from those programs, including their ability to apply such knowledge to their work and transfer what they learn to their team members and relevant work units.



14 Corporate Governance

1. Corporate Governance Policy

The Company is determined to be the leader in the sustainable solution service for fire and safety engineering, refrigeration system and digital printing system in Thailand and the neighboring countries, improving the investors' confidence including all of the stakeholders of the Company, increasing the value of the Organization and promote sustainable growth according to the international standard principle of good governance.

The Company had established the corporate governance policy and published it through the Company's website at www.harn.co.th. In August 2017, the Company reviewed the corporate governance policy and code of conduct and combined both issues in one policy to be the framework for various operations as follows :

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 Company and to uphold the 5 international standard principle of corporate governance (REACT) which are :
 - **Responsibility**
Be responsible and perform the duty with the best of the abilities, efficiency and with determination.
 - **Equitable Treatment**
Treat all groups of stakeholders equally and fairly.
 - **Accountability**
Take responsible of one's decision, action and others under one's responsibility. Be able to explain such decisions.
 - **Creation of Long Term Value**
Have a vision to create a long term value for the Organization.
 - **Transparency**
Operate the businesses transparently, accountable and reveal the information to related parties transparently as guidelines with understanding, confidence and faith by practicing routinely, resulting in a good culture of the Organization.
2. The Board of the Directors has a significant role together with the Executives to set the visions, strategies policies and important plans of the Company, 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. Complying with the Company's corporate governance policy 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 all employees.

Based on the assessment of corporate governance in the project. "Corporate Governance Survey of the Thai Listed Companies for the Year 2017", organized by the Thai Institute of Directors Association Supported by the Stock Exchange of Thailand and the Office of the Securities and Exchange Commission, the Company received the total rating of 83, which was rated "very good" or 4 stars. Higher than the average score of listed companies surveyed A total of 620 companies (average score of listed companies is 80).

In 2017, the Company operated in compliance with good corporate governance principles as follows :

Chapter 1 The Rights of Shareholders

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.

Apart from the above basic rights, the Company has undertaken efforts to encourage and facilitate the shareholders' exercise of their rights as follows :

1) Holding of the shareholders' meeting

The Company organizes the annual general meeting of shareholders every year within four 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. In 2015, the Company organized the Meeting of Shareholders as follow :

- 2017 Annual General Meeting of Shareholders on Friday, April 28, 2017 at 14.00 hrs. at Parichart Room, 3rd Floor, Golden Tulip Sovereign Hotel Bangkok, No. 92 Soi Saengcham, Rama 9 Road, Bangkapi Subdistrict, Huay Khwang District, Bangkok 10320, There were 112 shareholders who attended the meeting, 37 of whom in person and 75 by proxy, holding a total of 487,947,916 shares, which represented 83.48% of the total issued shares of the Company.

The meeting was held in conformity with the guidelines of the AGM Checklist issued by the Thai Investors Association to ensure the meeting standard in compliance with corporate governance principles as follows :

- 1.1 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, 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.
- 1.2 The Company sent the invitation notice for the 2017 Annual General Meeting of Shareholders along with supporting documents of the agenda items to the shareholders by post at in advance 25 days prior to the meeting. The Company also posted the notice in both Thai and English on its website, and so notified to the SET through SET information system, at least 36 days prior to the meeting, 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 publicized the invitation notice in Thun Hoon newspaper for three consecutive days at 10 days prior to the meeting from 18 to 20 April 2017 respectively for the shareholders acknowledgement and preparation for the meeting.
- 1.3 The Company allowed the shareholders to provide their opinions, suggestions, and questions prior to 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.
- 1.4 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 forms sent along with the invitation notice in which at least one independent director was proposed as an option for proxy assignment by the shareholders.

2) Proceeding on the shareholders' meeting date

- 2.1 The Company fully facilitated the shareholders' attendance of the meeting and 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 one hour before the meeting began. Also, during the meeting, they were able to register their attendance without losing their rights. The Company assigned its staff to provide assistance and information during the verification of documents and the registration process, with refreshments served to all the shareholders attending the meeting.
- 2.2 The Company 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.
- 2.3 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.
- 2.4 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.
- 2.5 The Board and top management members, and the auditor, as well as the independent legal advisor (if any), attended the meeting. Before the meeting started, the chairman of the meeting asked Mrs. Varinkan Teraumranon, 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.

- 2.6 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.
- 2.7 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.
- 2.8 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, approval of the auditor, dividend payment, capital decrease or increase, imposition or amendment of articles and memorandum of association, approval of special transactions, and so forth.

3) Proceeding after the shareholders' meeting date

- 3.1 The Company disclosed the meeting resolutions together with voting results on the following working day after the meeting in May 2, 2017 as a newsletter to the SET via the SET's electronic listed company information disclosure (ELCID) system and also by posting on the Company's website (www.harn.co.th).
- 3.2 The Company prepared and submitted the minutes of the shareholders' meeting to the SET within 14 days from the meeting date in accordance with the SET's regulation, and posted detailed and complete information of the meeting in conformity with the corporate governance principles comprising the meeting minutes with details of questions raised by the shareholders on each agenda item on its website (www.harn.co.th).

The Company has earned a score of 97 points according to the evaluation of the quality of annual general meetings of shareholders (AGM checklist) of listed companies for 2017 carried out by the Thai Investors Association. The Company will bring into consideration the shareholders' opinions and suggestions in the quality evaluation and keep up its efforts to improve its annual general meeting of shareholders accordingly.

Chapter 2 The Equitable Treatment of Shareholders

The Company has in place a policy of treating all shareholders on an equitable basis, regardless of whether they are major or minor shareholders, or they are executive or non-executive shareholders. The Company has drawn up guidelines on the equitable treatment of shareholders as follows :

1) Provision of information before the shareholders' meeting

- 1.1 The Company notifies the SET of the meeting schedule, and agenda items together with the Board's opinions, which will also be posted on the Company's website (www.harn.co.th) at least 28 days prior to the shareholders' meeting.
- 1.2 Before the beginning of each meeting, the Company Secretary will explain to the shareholders the meeting rules and regulations applicable to the meeting, and vote casting and counting procedures for the agenda items.

2) Protection of minority shareholders' rights

- 2.1 The Company has prescribed clear criteria regarding proposal of agenda items by minority shareholders prior to the shareholders' meeting date to ensure fairness and transparency in considering whether the agenda items proposed by them should be included in the meeting agenda.

Qualifications of the shareholders who are eligible to propose agenda items for the meeting are as stipulated in Section 89/28 of the Securities and Exchange Act stating that one or several shareholders who hold shares and have the right to vote in an aggregate amount of not less than five percent of the total number of the voting rights of the Company; and hold shares consecutively for not less than 12 months from the date of acquisition until the date of proposing the agenda item; as well as hold shares until the date of the respective annual general meeting of shareholders, may submit a written proposal in order to request the board of directors to include such proposal as an agenda item of the shareholders' meeting. The proposal shall indicate the objective and details of the matter as well as supporting information for consideration. The Company had disclosed the rules and procedures on the Company's website under the category "Corporate Governance / Corporate Governance Principles".

The proposals which will be considered as the agenda in the Annual General Meeting of Shareholders, the Independent Directors will consider and present to the Board of Directors for further consideration and resolution to add in as the meeting agenda. The opinion of the Board of Directors is considered absolute.

- 2.2 The Company has prescribed procedures regarding minority shareholders' nomination of qualified candidates to be considered for election of board members 3 - 4 months prior to the shareholders' meeting together with supporting information including the candidates' qualifications and letter of consent from the nominated candidates.

Qualifications of the shareholders who are eligible to nominate qualified candidates for the meeting are as stipulated in Section 89/28 of the Securities and Exchange Act stating that one or several shareholders who hold shares and have the right to vote in an aggregate amount of not less than five percent of the total number of the voting rights of the Company; and hold shares consecutively for not less than 12 months from the date of acquisition until the date of nominating qualified candidates; as well as hold shares until the date of the respective annual general meeting of shareholders, may submit a written proposal in order to nominate qualified candidates to be considered for election of board members.

The individuals whose names are to be proposed for the consideration to be the Company's Directors must have adequate qualifications according to the Public Limited Companies Act, Securities and Exchange Act and including the regulations of the Securities and Exchange Commissions, the Capital market Supervisory Board, the Stock Exchange of Thailand and the Company's regulations, including all other characteristics that the Company requires which are adequate knowledge, expertise and experience that may beneficial or appropriate for the Company's business, good career history, independent, perform the duty of the Director with honesty, ethically and can attend the Board of Directors meeting consistently.

Independent directors will consider and screen the nominated persons for the election of board members and then present the names to the Board of Directors for consideration on whether to propose the nominations to the shareholders' meeting. The Board of Directors' opinion is deemed final.

- 2.3 The Company provides an opportunity for the shareholders to exercise their right to elect each director individually.
- 2.4 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. The shareholders arriving after the meeting has commenced shall also not be deprived of their rights to attend the meeting.

3) Prevention of misuse of information

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.

4) Beneficial interests of directors

- 4.1 The Company adheres to the principle of treating all shareholders on an equitable basis. It sets guidelines for transparent and examinable consideration of and dealing with issues with beneficial interests, especially transactions between the Company and persons with beneficial interests or related persons. In such case, persons with beneficial interests shall have to forthwith report such beneficial interests to the Company. Moreover, at the Board of Directors' meeting, where there is an agenda item on consideration of transaction with beneficial interests, the respective director shall report such beneficial interests at least before consideration of such agenda item, details of which shall be recorded in the meeting minutes.
- 4.2 The Company has set guidelines for not allowing any director or executive with beneficial interests or related to a transaction to participate in considering and deciding on such transaction. At the Board of Directors meeting, a director with beneficial interests in any transaction shall not be entitled to vote on such transaction.

Chapter 3 The Role of 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, the Company conducts its business with the rights 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.

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.

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 not commit any misconduct in dealing with trade partners and/or creditors. In case there is any information indicating occurrence of a dishonest act, the Company will inform the trade partners and/or creditors thereof and jointly seek solution on a fast and fair basis, 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.

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.

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.

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.

Chapter 4 Disclosure and Transparency

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.

The Board of Directors is responsible for the financial statements of the Company and financial information presented in the Annual Report. The financial statements are prepared in accordance with generally accepted accounting standards in Thailand and with regular adoption of appropriate accounting policy and disclosure of adequate information therein. At this time, the Audit Committee will be the reviewer of the financial report and the internal control system, including the sufficient disclosure of vital information in the appendixes of the financial statement and report to the Board of Directors.

1) Disclosure

- 1.1 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.
- 1.2 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.
- 1.3 The Board of Directors reports its responsibility for the financial statements in the Annual Report together with report of the auditor.

- 1.4 The Company prepares management discussion and analysis (MD&A) to support its disclosure of its quarterly financial statements 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.
- 1.5 The Company discloses in the Annual Report audit fee and other service fees for the auditor.
- 1.6 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.
- 1.7 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).

2) Minimum information disclosure on the Company's website

Other than the disclosure of the information according to the regulations and through the SET channel as the annual data entry (Form 56-1) and the annual report, the Company prepared up to date information disclosure in English through other channels regularly such as the Company's website (www.harn.co.th), which consist of the information as follows;

1. Visions and missions of the Company
2. Nature of the Company's Business
3. Names of the Board of Directors and the Executives
4. Financial Statement and financial status report and both current year and the previous year's operation performances.
5. Form 56 - 1 and the annual report which are available for downloads.
6. Information or any documents that the Company had presented to the analyst, the fund managers or the media.
7. Shareholding structures both directly and indirectly.
8. Companies groups' structures including its subsidiaries join ventures and special purpose enterprise / vehicles (SPEs/ SPVs) (if any).
9. Major shareholders both directly and indirectly that holds the stocks from 5% of the total distributed stocks and has the rights to vote.
10. Both direct and indirect shares ownership of the Directors, Major shareholders and High Level Executives.
11. Invitations for the ordinary and extra ordinary general meeting of shareholders.
12. The Company's regulation, memorandum and shareholders' agreement (if any)
13. Company's good corporate governance policy.
14. Risks management policy, including methods of eliminating such risks.
15. Charters or responsibilities, qualifications, terms in the position of the Board of Directors, including matters that must be agreed upon by the Board of Directors.
16. Charters or responsibilities, qualifications, terms in the position of the Audit Committee.
17. Company's Directors and Employees' Ethics
18. Contact numbers or person in charge of the investor relations for example names of the persons or telephone numbers.

3) Investor Relations

The Company's Executives emphasize on the cooperation and the exchange of information and ideas with the shareholders, investors, analysts and the media regularly so that these people may gain access to the Company's information which is accurate, complete, transparent and up to date equally, especially vital information that will affect the price of the assets of the Company and use those information to make an investment decision effectively. The Company has not yet established a work unit to specifically take charge of this task. At present, the Chief Executive Officer is responsible for commuting with investors, shareholders, analysts and relevant public agencies.

In 2017, the Company launched activities to provide information both directly and indirectly as follows :

| | |
|---|--|
|  | <p>Participated in HARN Opportunity Day organized by the Stock Exchange of Thailand to give information to investors in general, altogether 4 sessions, on 9 March 2017, 19 May 2017, 11 September 2017 and 1 December 2017 respectively.</p> |
|  | <p>Released Company Snapshot quarterly to give information to shareholders, analysts and interested investors in general.</p> |
|  | <p>Gave interviews to radio programs, i.e. FM 98.5, Money Shot and Khao Hoon Jor Talat (Stock News and Market Overview)</p> <p>Gave interviews, information and responses to questions and enquiries of analysts, reporters and investors in general, i.e. Siam Commercial Asset Management Co., Ltd. (AMC), Apple Wealth AMC, Globlex AMC, AEC AMC, KTB AMC, Maybank Kim Eng AMC, Country AMC and KTBST AMC, etc.</p> |
|  | <p>Participated in the 4th mai Forum 2017 organized by Market for Alternative Investment (mai) in collaboration with mai Listed Company Association to provide investors with Company information.</p> |

Chapter 5 Responsibilities of the Board of Directors

The Board of Directors has a significant role as representatives of the shareholders. Their duties are to formulate corporate vision, mission, business strategies, and budget plan for the management to achieve its business objectives. Moreover, the Board has a duty to oversee the management's operation to ensure that it is consistent with policies, with fairness and transparency, and being compliant with the laws, regulations, policies and business ethics. The Board of Directors has been appointed by the shareholders through a transparent process. They are persons with knowledge, competence, and experience, with devotion of their time and efforts to the performance of duties in the best interests of the Company. They shall have leadership, vision, independence in decision making, and competence in ensuring that the overall operation is carried out rightfully in line with the laws and code of ethics.

1) Board structure

- 1.1 Composed of members with diverse skills, experience and expertise in specialized areas that are beneficial to the Company. The Board shall have at least one non-executive director with experience in engineering product trading business, which is the Company's core business, and at least one non-executive director with accounting and finance experience. The Board of Directors has disclosed its policy on determination of the Board composition and the term of office of directors in the Annual Report.

- 1.2 Has adequate number of directors for overseeing the business operation of the Company. Each member of the Board has sufficient knowledge, experience and competency in performing their duties efficiently. The Board shall have no fewer than five members and no more than nine members as required by law and at least half of the total number of directors shall be non-executive to ensure proper checks and balances between executive directors and non-executive directors. At present (as at December 31, 2017), the Company's Board of Directors is composed of eleven members, of whom eight are non-executive directors (four of whom are independent directors and audit committee members) and three are executive directors, i.e. one are Chief Executive Officer, two are Managing Directors.
- 1.3 Have four independent directors out of a total of eleven directors, which accounts for more than one-third 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 three 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 of the total number of directors shall be independent directors and three 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.
- 1.4 Shall represent all the shareholders, not any particular group of shareholders.
- 1.5 Which requires the number of directors who are not independent directors to be in fair proportion to the equity of the controlling shareholders.

2) Qualifications of the Board of Directors

- 2.1 The Board of Directors represents the shareholders as a whole, not any particular group of shareholders.
- 2.2 Pursuant to the Company's articles of association, at each annual general meeting of shareholders, at least one-third of the directors shall vacate their office. If the number of directors cannot be divided into three, the number nearest to one-third 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
- 2.3 The office term of each director shall be as specified in the Company's articles of association. Directors who vacate office may be re-elected without any limit in number of times. Regarding the qualifications of independent directorship, the Board has set as a policy to annually review the independence of independent directors who have sit on the Board for nine consecutive years or three consecutive terms.
- 2.4 The Board of Directors has set the number of companies in which each director may hold office to be no more than five listed companies with prudent consideration of the efficiency of directors serving more than one company to ensure that each director can dedicate enough time to performing their duties.

- 2.5 The Board of Directors has a policy on the directorship of its members in other companies in accordance with the Company's articles of association which prohibits the Board members from conducting a business, or being a partner in any ordinary partnership or a partner with unlimited liability in any limited partnership, or being a director of other limited company or public limited company which conducts business of the same nature as that of the Company and business that is in competition with that of the Company unless a prior notice is given to the shareholders' meeting before the passing of the appointment resolution.
- 2.6 The Board of Directors has no policy to appoint any management member to be a director of any company outside the Company's group of companies. In the event that any member would like to do so, a prior consent must be obtained from the Executive Committee unless in case of directorship in non-profit charitable organizations. Nevertheless, such directorship must not be conflicting with the laws and regulations relating to the business operations of the Company and his/her post in the Company must not be used as a reference to support any businesses outside the Company.

3) Segregation of duties and responsibilities between the Board of Directors and the Management

The Board of Directors has clearly separated the power and responsibilities concerning the formulation of corporate governance policy from routine administrative operation. The Chairman of the Board and Managing Director shall be elected by the Board and must not be the same person in order to ensure clear segregation between the role in formulating corporate governance policy and that in routine administrative operation. The Company has clearly segregated the roles and responsibilities of the Board of Directors from the management to ensure proper checks and balances in terms of operation. The Board of Directors shall be responsible for determining the policies and overseeing the operational performance of the management at the policy level whereas the management is in charge of managing the business operation in various areas in line with the policies in place. The Chairman of the Board shall take no part in routine administrative operation but regularly give supports and recommendations concerning the operation carried out by the management via the Managing Director. Meanwhile, the Managing Director shall administer the Company's business operation within the scope of power assigned by the Board of Directors.

4) Roles, Duties and Responsibilities of the Board of Directors

4.1 Duties and Responsibilities of the Board of Directors

The Board of Directors is responsible for considering and giving approval of significant matters concerning the operation of the Company, such as corporate vision, policies, strategies and goals, as well as business plans, annual budget, internal control and risk management. The Board of Directors shall also oversee to ensure that the management has efficiently and effectively followed the policies and plans in place.

Furthermore, the Board of Directors shall be responsible for the Company's financial statements by assigning the Audit Committee to conduct review of financial reports in order to ensure that such financial reports are properly and accurately prepared according to the generally accepted financial standards and that all essential information of the Company is disclosed in a transparent and sufficient manner. There shall be joint meetings between the accounting department and/or the auditor. Financial reports shall be presented to the Audit Committee and the Board of Directors on a quarterly basis. The Board of Directors shall be responsible for the Company's financial statements and financial information (report on the Board of Directors' responsibility towards financial reports) which are disclosed in the Annual Report of the Company.

4.2 Corporate Governance Policy

The Board of Directors has established corporate governance policy in writing and approved such policy at the Board of Directors' Meeting No. 3/2014 held on May 15, 2014. The Board of Directors has communicated with every member within the organization to ensure that they have the accurate and common understanding of such policy and that the policy has been adopted organization-wide. The Board of Directors shall review the policy and compliance with the policy at least once a year. In 2017, the Company had revised the corporate governance policy twice in June and November.

4.3 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 to strictly follow the code of conduct and guideline while the Board of Directors shall be responsible for ensuring strict compliance with such code of conduct.

4.4 Conflict of Interest

The Board of Directors has carefully considered matters concerning conflict of interest. Transactions with possible conflict of interest are considered based on clear guidelines in the best interests of the Company and the shareholders. The Board has put in place a policy which prohibits directors, executives, employees and related persons from seeking personal interests which may contradict the interests of the Company, and that all actions which may lead to conflict of interest shall be avoided. Persons involved with or having beneficial interest in or having connection with the transaction under consideration shall inform the Board of their relationship or involvement with such transaction and they shall not be allowed to take part in any decision making concerning such transaction.

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.

The Board of Directors shall ensure that all requirements concerning the procedure are met and that the disclosure of transactions with conflict of interest is carried out in an accurate and complete manner. Such transactions shall be disclosed in the financial statements, the Annual Disclosure Statement (Form 56-1) and the Annual Report.

4.5 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.

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.

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.

4.6 Risk Management Policy

The Board of Directors has mapped out the risk management policy to be adopted by the entire organization and implemented by the management. Reports must be presented to the Board of Directors on a quarterly basis. System review or assessment of the effectiveness of risk management process must be conducted at least once a year and disclosed in the Company's Annual Report, which shall be updated from time to time especially when changes in the risk level are observed, as well as giving importance to warning signals and unusual transactions.

4.7 The Audit Committee shall give opinions on the adequacy of the internal control and risk management systems, which shall be disclosed in the Company's Annual Report.

4.8 The Board of Directors has set up a clear procedure for whistleblowers or stakeholders who would like to report any suspicious acts either through Company's website or directly contacting with the Company by requiring them to directly report to the Company's independent directors or the Audit Committee so that they can proceed with the inspection process in place and report to the Board of Directors.

5) The Board of Directors' meeting

5.1 5.1 The Company schedules meetings and prepares agenda items in advance and notifies all directors of the meeting schedule so they can arrange their own schedule and attend the meetings.

- 5.2 The Board of Directors holds at least four meetings a year (once every three months). The meeting schedule is set in advance for the entire year. There may be another meeting held one month before the annual general meeting of shareholders, and a special meeting held as deemed necessary. However, for flexibility in business operation of the Company, the Executive Committee will hold a monthly meeting to make decisions as assigned by the Board of Directors. The Executive Committee shall report resolutions of the meetings to the Board meeting so that the Board of Directors can direct, control, and oversee operational performance of the management in a consistent and timely manner.
- 5.3 At every Board meeting, 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 75% of the total number of meetings held in each year.
- 5.4 The Company Secretary is in charge of sending the meeting notice together with the meeting agenda and meeting documents to all directors at least seven 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 for ease of reference in future. All Board members shall normally attend all meetings, except in case necessary, and in such case they shall inform their absence prior to the meeting.

- 5.5 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.

Resolutions of the meeting shall be passed by majority votes. Each director shall have one 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.

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.

- 5.6 The Board of Directors encourages senior executives or executives concerned to attend the Board meeting as deemed 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.

- 5.7 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, the expenses for which shall be borne by the Company.
- 5.8 The Board designates non-executive directors to have meetings among them as deemed appropriate without the attendance by executive directors or management to discuss problems in relation to the Company's business and other matters of interest. The resolutions of the meetings are notified to the Managing Director, the Chairman of the Executive Committee, and the Board of Directors. Such meetings are chaired by the Board Chairman. If the Board Chairman cannot attend the meeting, a director shall be elected to chair the meeting while the Company Secretary shall serve as secretary to the meeting

6) Remuneration

- 6.1 Remuneration for directors shall be commensurate with their experience, duties, scope of accountability and responsibility together with benefits expected from each director. The Board of Directors has set out clear policy and criteria on director remuneration, which will be proposed to the shareholders' meeting for approval annually. Determination of the remuneration shall be transparent, examinable, and comparable to those of other companies with similar scale in the industry, as well as sufficient to attract and retain capable directors. Additional duties and responsibilities of directors who are appointed as members of supporting committees, such as Audit Committee, etc., are also taken into consideration.
- 6.2 Remuneration for Chief Executive Officer, Managing Director and senior executives shall be in line with the principles and policy set out by the Board of Directors and/or the Executive Committee and for the maximum benefits to the Company. The amount of remuneration, including salary, bonus, and variable pay, shall be appropriate and correspond to performance of each executive. Executives who have additional duties and responsibilities shall receive an increased amount of remuneration to match their larger scope of duties and responsibilities. Moreover, remuneration shall be comparable to those of other companies in the same business to retain capable executives while taking into account benefits to the Company and the shareholders.
- 6.3 All non-executive directors shall assess the performance of the Managing Director annually to accompany the consideration of remuneration for the Managing Director based on criteria and benchmark priorly agreed upon with the Managing Director under concrete criteria including results of financial performance, operational performance toward long-term strategic objective, and executive personnel development. The performance evaluation result shall be subject to the Board of Directors' consideration and approval, which shall accordingly be notified by the Board Chairman to the Managing Director.

7) Development of Directors and Executives

- 7.1 The Board of Directors encourages and facilitates the training of and the provision of knowledge for concerned parties in the corporate governance mechanism including Board members, Audit Committee members, executives and company secretary to ensure ongoing improvement of work performance.
- 7.2 For every new director appointment, the management will provide the new director with documents and information useful for his performance of duty including information on the Company's nature of business and business direction.

- 7.3 The Board of Directors has designated for the Managing Director to regularly report the Board of the personnel development and succession plan. The Managing Director and top executives have to prepare the succession plan to position successors in case they can no longer perform their duties.
- 7.4 The Board of Directors has made available executives development program, the progress of which is to be reported annually by the Managing Director. The development program is taken into account when considering the succession plan.

The Board of Directors has been trained by the Thai Institute of Directors (IOD) as follows :

| Name | | DAP | DCP | SFE | FSD | RCP | ACEP | ACP | FND | ELP | ACPG | HRP |
|----------------|---------------------------|----------|----------|---------|---------|---------|---------|--------|---------|--------|---------|---------|
| Dr. Thakol | Nunthirapakorn | 8/2004 | 228/2016 | | | | | 8/2005 | | 3/2016 | 36/2017 | |
| Mr. Wirat | Sukchai | SET/2012 | 204/2015 | 24/2015 | | 36/2015 | 14/2015 | | | | | 12/2017 |
| Mr. Wasan | Nantakhwang | 116/2015 | 211/2015 | 24/2015 | 28/2015 | | | | | | | |
| Mr. Thammanoon | Tripetchr | 116/2015 | 211/2015 | 24/2015 | 28/2015 | | | | | | | |
| Mrs. Sirima | Iamsakulrat | SET/2012 | 211/2015 | 24/2015 | | | | | | | | |
| Dr. Jain | Charnnarong ¹⁾ | | 173/2013 | 23/2015 | | | | | | | | 8/2015 |
| Mrs. Valeeratn | Chuerboonchai | SET/2012 | 205/2015 | | 28/2015 | | 14/2015 | | | | | |
| Mr. Parkphum | Wongpaitoon | 42/2005 | | | | 36/2015 | 14/2015 | | | | | |
| Dr. Supot | Tiarawut | | 195/2014 | | | | | | 20/2005 | | | 12/2017 |
| Dr. Sothitorn | Mallikamas | 102/2013 | | | | | | | | | | |
| Miss Voranuch | Supaibulpipat | SET/2012 | | | | | | | | | | |

Note : ¹⁾ 2017 Annual General Meeting of Shareholders on 28 April 2017 resolved to appoint Mr. Jain Charnnarong as the Independent Director

8) Self-assessment of the Board

- The Board of Directors and supporting Committees regularly conduct self-assessment on operating performance, on both individual and Board basis, at least once a year in order to jointly consider the outcome and problems to seek corrective measures.
- The Company has worked out the performance evaluation form based on and with adaptation to the guidelines of the Stock Exchange of Thailand to suit the nature and structure of the Board of Directors with the Board of Directors to approve and review such form.
- The Company Secretary shall summarize and analyze the performance evaluation of the Board of Directors and Sub-committee, and report to the Board of Directors.
- The Company Secretary shall use the results and comments from the Board of Directors for developing an improvement plan and proposing the individual director development plan.

8.1 Self-assessment criteria

On Board basis

- The structure and qualifications of the Board of Directors shall be diverse in terms of the directorship, proportion of the directors, and qualifications of each supporting Committee.
- The Board of Directors meeting consists of 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.
- Roles, duties and responsibilities of the Board/Committees shall involve spending adequate time to consider important matters, transactions with conflict of interest, and internal control and risk management systems.
 - Relationship with the management team involves allowing the opportunity for co-discussion and joint participate in problem solving.
 - Self-development of the directors and development of executives shall involve understanding the roles and responsibilities of the directors, having knowledge and understanding of the Company business and surrounding environment which affects the Company business, and succession plan.

On individual basis

- The structure and qualifications of the Board of Directors shall be diverse in terms of the directorship and adequate in terms of performance of duties.
- The meetings of the Board of Directors shall involve meeting attendance, expression of opinion, and study of agenda items in advance.
- Roles, duties and responsibilities of the Board of Directors shall involve independence in expression of opinion, adequacy of participation in the Company's activities, internal control and risk management systems, and disclosure of information.

8.2 Results Assessment

The assessment criteria is that scores are calculated as percentage for each item as follows :

| | | |
|------------------|---|----------------|
| over 90 | = | Excellent |
| >80 - 90 | = | Good |
| >70 - 80 | = | Pretty good |
| >60 - 70 | = | Fair |
| From 60 downward | = | Should improve |

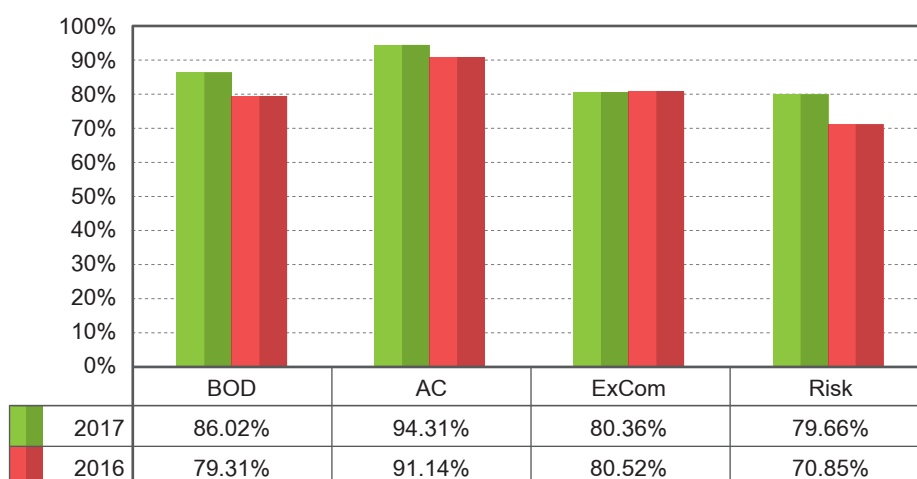
Results of 2017 self-assessment of the Board of Directors as follows :

Results of the Board of Directors' Self-assessment in 2017

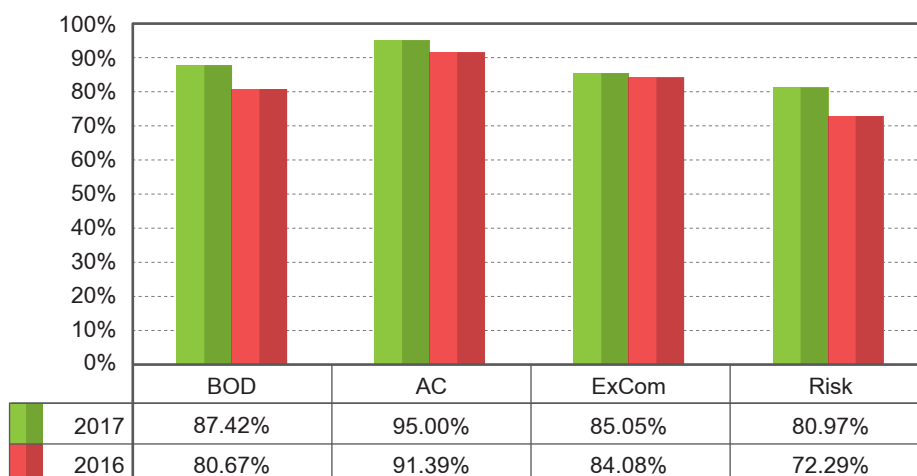
Summary Results of the Self-assessment as Flow :

| Self-assessment of | Individual assessment | Board assessment |
|-------------------------------------|-----------------------|------------------|
| 1. Board of Directors (BOD) | 86.02% | 87.42% |
| 2. Audit Committee (AC) | 94.31% | 95.00% |
| 3. Executive Committee (ExCom) | 80.36% | 85.05% |
| 4. Risk Management Committee (Risk) | 79.66% | 80.97% |

Results of the Board of Directors' Self-assessment (Board) Year 2017



Results of the Board of Directors' Self-assessment (Individual) Year 2017



2. Supporting Committees

Details of the supporting committees as follows :

- **Audit Committee** To accord with the provisions by the Office of the Securities and Exchange Commission and the Stock Exchange of Thailand.
- **Other Supporting Committees** comprising Executive Committee and Risk Management Committee.

The supporting committees perform duties to screen, monitor and supervise specific matters of the Company to assist the Board of Directors in performing duties with maximum efficiency and benefits by submitting such specific issues to the Board for consideration or information.

The supporting committees have the duties and responsibilities as specified in the powers and duties of each supporting committee, with the Chairman of the Board not to be Chairman or member of any supporting committees, to ensure true independence in the supporting committees' performance of duties (Please refer to details in "Management Structure" section).

3. Nomination and Appointment of Directors and Executive

3.1 Nomination and Appointment of Directors

The Company has not yet established Nomination and Remuneration Committee to nominate or select qualified candidates to take office as directors. Therefore, the Board of Directors has assigned the Executive Committee to take charge of nominating candidates. The nomination has to be made in a definite and transparent manner through the process with corporate governance and consideration made based on candidates' educational backgrounds and professional experience, details of which must be adequate to support decision making of the Board and shareholders. The Company's nomination process of directors or executives is undertaken through various channels as below :

Nomination criteria and methodology

1. The Company's major shareholders and/or proxies of major shareholders, competent persons in the relevant function lines, directors, and independent directors jointly nominate list of persons with competence, experience and potential for consideration. Priority is given to candidates that possess the required skills and experience for the Company's business operation. Retail shareholders are also given opportunity to nominate qualified persons pursuant to the law on the securities and exchange and the required qualifications set by the Company to the director nomination and consideration process. The Company will make announcement on its website to invite the shareholders to nominate candidates together with their profiles at least 90 days before the shareholders' meeting date. The minimum shareholding proportion of the shareholders entitled to nominate candidates is set in advance, i.e. having combined shareholding of at least 5% of the total voting rights of the Company.
2. Consideration of qualified persons from Director Pool of the Thai Institute of Directors or other agencies where there is any of such information available.
3. Other channels as deemed appropriate by the Company.

The following qualifications are taken into consideration :

1. Director shall have knowledge, competency and experience beneficial to the business operation; have integrity and business ethics in running business; and dedicate sufficient time to full contribution of his skills and knowledge to the performance of his duties.

2. Director shall have full qualifications and possess no prohibited characteristics pursuant to the Public Limited Companies Act, and the securities and exchange law, as well as have no sign of inappropriateness for being entrusted to manage the business of the public company as specified by the Securities and Exchange Commission ("SEC"). The director shall also be in the director and executive list of the securities-issuing company in accordance with the Notification of the Capital Market Supervisory Board regarding the criteria for recording of the name list of directors and executives of securities-issuing company.
3. Director may not conduct any business of the same nature as and in competition with the Company's business, and not be a partner or director of any juristic entity of the same nature as and in competition with the Company's business, whether for own benefits or for those of others, unless the shareholders' meeting is informed thereof before the resolution to appoint such director is made.

The Executive Committee will then propose the list of qualified candidates to the Board of Directors for endorsement. The selection and appointment of directors shall be made by the method specified in the Company's Articles of Association and subject to the approval of the shareholders' meeting. The majority votes of the shareholders attending the shareholders meeting and having the voting right is required to pass a resolution on this matter, as follows:

1. The shareholders' meeting shall elect the directors in accordance with the following criteria and procedure:
 - 1.1 Each shareholder shall have one (1) vote for each share held.
 - 1.2 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.
 - 1.3 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.

In 2017 the Company had invited the retail shareholders to nominate qualified persons for election as directors of the Company via www.ham.co.th by 31 December 2017 but no one nominated.

3.2 Nomination and Appointment of Independent Directors

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 one-third of the total number of directors of the Board, or at least three independent directors. At present, it has a total of four independent directors.

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.

Qualifications of an independent director shall be as follows :

1. 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;
2. 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;
3. 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;
4. 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;
5. 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;
6. 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;
7. 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;
8. 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;
9. 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.

4. Governance of Subsidiary and Associated Companies

Currently, the Company does not invest in any subsidiary and associated companies. However, as regards future investment, the Company has a policy to invest in related business or business contributing to its core business and having potential and profitability prospects in the long run. In case of investment in a subsidiary company, the Company will control or manage such company just like it is a work unit of the Company, and have representative directors on its board of directors in proportion to the Company's shareholding or as mutually agreed upon. Meanwhile, there will not be so much control by the Company in case of an associated company. Whether to have representative directors on the associated company's board of directors shall be as considered appropriate and as mutually agreed upon. Such representatives shall have appropriate qualifications and experience to manage and closely monitor the subsidiary and associated companies' business operation to ensure achievement of the targets set forth.

5. Use of Inside Information

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 one month prior to the disclosure of quarterly and yearly financial statements and at least 3 business days after the disclosure of such information. The Company will annually prepare and sent by email the table of the directors and the top-4 executives with prohibited shares trading to them for their information.

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.

Moreover, the Company has informed the Board members and 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 executives have to report the holding of the Company's securities by themselves, their spouses and underage children to the Office of the SEC within 30 days from the date of their appointment as the directors and executives, and also when there are any changes thereof, to report to the Company and Office of the SEC within three business days from the buying, selling, transfer, or receipt of such securities, in order to comply with Section 59 of the Securities and Exchange Act B.E. 2535 (1992) and for disclosure to the public.

6. Remuneration for Auditor

In 2016 and 2017, the Company paid audit fee and other relevant service fee as below :

Unit : Baht

| Auditor Remuneration | 2017 | 2016 |
|------------------------------------|-----------|------------|
| Audit fee | 1,200,000 | 1,270,000 |
| Other relevant service fee | - | 1,080,000* |
| Total remuneration for the auditor | 1,200,000 | 2,350,000 |

Note : *Other fees means accounting services fees which relates to the preparations of the consolidate financial statement.

The 2017 Annual General Meeting of Shareholders resolved to set the remuneration for the auditor for 2017 at Baht 1,200,000.

7. Compliance with the Company's principles of corporate governance in 2017

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. It has to ensure there is analysis of business context, stakeholders, internal and external factors, as well as risks that may have impact on the Company's achievement of business targets set forth. In 2017, two directors and Company Secretary studied and participated in presentation session of Creating Sustainable Business Value & CG Code 2017 organized by the Office of the Securities and Exchange Commission in July 2017 so that they understand the principles of conduct and realize the benefits of compliance with CG Code 2017.

At the 3/2017 Board meeting held on August 10, 2017, there was an assessment of the Company's compliance with corporate governance principles and it was found that the Company has met the compliance criteria by 95.90%. As regards the issues of non-compliance, the Company has viewed that such issues are not yet required for its business operation platform at present, such as establishment of Remuneration Committee, Nomination Committee and CG Committee, etc. However, the Board has the intention to adopt all the eight principles of CG Code 2017 to the Company's business operation in 2018.



15 Corporate Social Responsibility

Awakening...Toward Stability and Sustainability

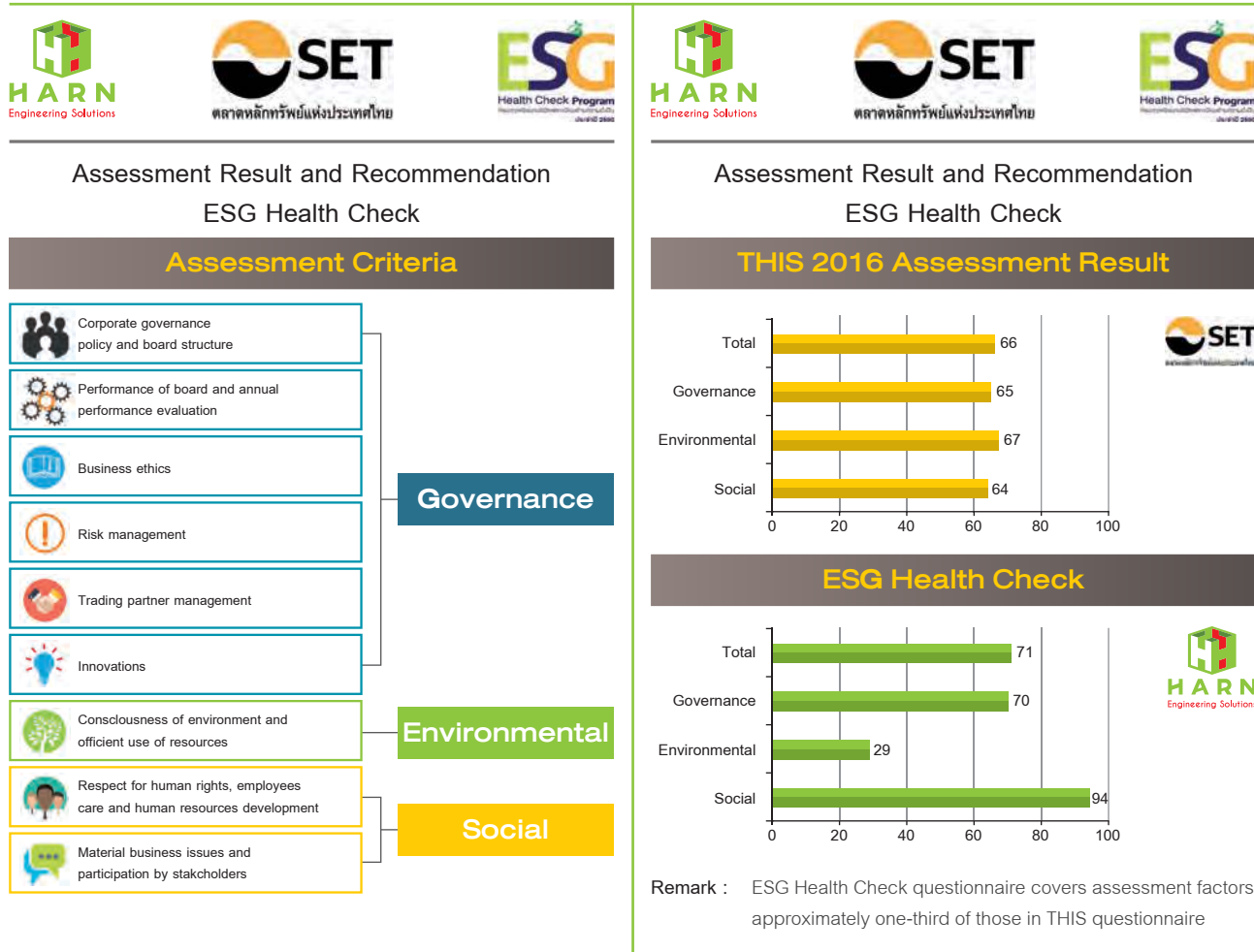
The Company is aware of its corporate social responsibility (CSR), an element that enhances sustainable growth of the business. Therefore, specified its responsibility to the society within the visions, missions, values and goals of the Company as displayed in section 1 and established a commitment on sustainability that states 'Quality living through sustainable engineering' which will be further developed into long-term sustainable strategy.

Quality Living through



Sustainable Engineering

The Company gives importance and commitment to raising the quality of lives and the safety of the society by providing 'Sustainable Solution 1 services for the engineering systems. This is done by experts in products selection and innovations which responds to the demands in order to improve the quality and the safety of the consumers with high quality products and services.



A number of the Company's executives accordingly participated in training courses on social responsibility management for sustainable development and several other related courses. They initiated activities within the organization and with social responsibility issues having material effect on HARN's business operation divided into three groups as below :

Smart Business

- Good corporate governance
- Selection of quality goods
- Innovations

Smart People


- Employees
- Stakeholders

Smart Environment

- Efficient use of resources
- Goods with lessening environmental impact

Priority and Participation by HARN Stakeholders



| Stakeholders | Requirement and Expectation | Primary Standards to Be Observed | Implementation Guidelines |
|---|--|----------------------------------|--|
| Employees  | <ul style="list-style-type: none"> • Receive proper salary/wage and good welfare packages • Be developed in terms of skills/ knowledge, competence and have career advancement prospect • Treat one another with respect • Have access to Company's updated news and information on business direction | Labor law | <ul style="list-style-type: none"> • Enforce Company's regulations and articles of association in compliance with labor law • Review salary/wage structure and welfare packages to be proper and on a par with peers • Have HR potential development plan in place • Build good working environment • Establish internal communication channels and holding of annual town hall meeting |
| | <ul style="list-style-type: none"> • Work in good and safe working environment | Social security regulations | <ul style="list-style-type: none"> • Establish Occupational Health, Safety and Environment work unit |

| Stakeholders | Requirement and Expectation | Primary Standards to Be Observed | Implementation Guidelines |
|--|--|--|---|
| Customers  | <ul style="list-style-type: none"> • Receive quality goods commensurate with price • Receive goods delivered punctually as scheduled • Receive fair and honest services • Receive good after-sale services | Orders/Sale and purchase contracts | <ul style="list-style-type: none"> • Review/Update sale and service system/process from time to time to ensure continued and comprehensive response to customers' demand, and assess customer satisfaction • Provide after-sale services punctually as specified in the contracts |
| Shareholders  | <ul style="list-style-type: none"> • Receive worthwhile return on investment (from dividend) • Enjoy higher stock price • Have timely access to important information | <ul style="list-style-type: none"> • Public company law and securities and exchange law • Good corporate governance principles | <ul style="list-style-type: none"> • Generate profit as targeted and comply with good corporate governance principles • Provide information as required by law |
| Trading partners  | <ul style="list-style-type: none"> • Comply with agreements or contracts • Make punctual payment • Receive consistent orders | Orders / Agent contracts | <ul style="list-style-type: none"> • Set goods order process and implement the process with fairness, and consistently communicate the Company policy • Follow up and assess performance, and give feedback so that work improvement can jointly be worked out |
| Financial institutions  | <ul style="list-style-type: none"> • Comply with contracts or agreements • Make punctual payment | Contracts | Comply with provisions in contracts |
| Community / Society  | <ul style="list-style-type: none"> • Pose no negative impact on or pollution to community/society • Use resources on sufficiency basis and preserve the environment | Respect for human rights | <ul style="list-style-type: none"> • Comply with relevant laws • Build awareness of social responsibility and environmental protection |
| Government  | <ul style="list-style-type: none"> • Comply with various laws • Pay tax accurately and as scheduled | Tax, customs and factory laws, etc. | Comply with relevant laws |

The Company had followed the practices on social responsibilities as follows ;

SMART BUSINESS – Fair business operation

In the course of business operation, the Company is committed to fair and ethical administration, creating management credibility. The fair treatment shall apply to all groups of stakeholders, including shareholders, customers, business partners, and competitors. 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 :

▶ Promote fair competition

1. Undertake the business activities in compliance with the law and competition regulations, and cooperate with the government authorities.
2. Establish the procedure and measure preventing the involvement in or conspiracy with the behavior against fair competition.
3. Ensure the employees be aware of fair competition and compliance with applicable competition law.
4. Promote fair competition and activities, and support anti-monopoly and anti-dumping.
5. 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.

▶ Promote social responsibility in value chain

1. Integrate social and environmental measures in the measures and procedures for procurement and distribution.
2. Encourage other relevant companies to accept and apply the similar policy in order to prevent unfair competition.
3. Actively participate in elevating awareness of the principles and issues relating to CSR activities in which the Company takes part.
4. 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.

▶ Promote respect for the right over property

1. Appropriately check to ensure that the Company is legally allowed to use and grant the right to use a certain property.
2. Not participate in any activity violating other person's properties, for example, inappropriately using advantageous marketing position, producing fake products, and intellectual property infringement.
3. 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.

SMART BUSINESS – 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.

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 of the Company’s system in November 2017 and its quality on January 31, 2018. 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 2017

The Company has a policy in place to conduct a survey of customer satisfaction on an annual basis so as to get feedback on the products delivered to them. The areas covered by the survey are :

- Quality and diversity of goods.
- Selling engineers’ service and competence.
- Comments on general service or others that will enable the Company to develop and improve its services and ensure customer satisfaction on a regular basis.

Result of Customer Satisfaction Survey 2017

| | 2017 | 2016 |
|---|------|------|
| Overall customer satisfaction in percentage (%) | 86 | 80 |

The Company has analyzed and taken into account the survey result and customers' comments and suggestions for ongoing development and improvement of goods and services to best respond to customers' needs.

SMART BUSINESS – Discovering and publishing the innovations to the society and to the stakeholders

In order to achieve the title “Leader in the sustainable solutions services for engineering systems”, the Company dedicates itself to study new technologies for continuous developments by sending employees on international seminars/trainings and bring back the knowledge and experience to further advance the work development, including relaying the experience and train other employees in the same line of work and together strives to success between the employees and the Company. Other than that, the Company also promotes the innovations as part of the Organization's values and to publish these innovations publicly which is considered a part of the obligation to the society by using various communication channels to all stakeholders both directly and indirectly.

► “QMakr Factory” Project

Originated from realization of the necessity of publishing the 3D printing technologies to the society, so that Thailand can develop the potential for competitions in terms of designing and prototype developing, including the development of said technologies to be used medically. The Company has thus launched service to establish 3D printing in educational institutions. The Company had been supported by the Faculty of Engineering, Chulalongkorn University who provided 40 sq.m. space. In addition, FDM (fused deposition modeling) and DLP (Direct Light Projection) services can be started at a lower price than the market. Under the "QMakr Factory" project from May 2016 until now, QMakr Factory has opened opportunity for students in the Design Methodology subject of Mechanical Engineering Department to see the 3D printing process and given them explanation on the process and rationale so that they have basic knowledge and understanding thereof. As robotic parts are produced with 3D printing, students of Computer Science Department can print work piece containing PCB which is a component part of products.

Another important is QMakr Factory also supported in producing various parts for research projects in the Masters and Doctoral degrees for most of the subjects in the Faculty of Engineering, including the Faculty of Medicine, Faculty of Science and also the Faculty of Architecture.

At present, QMakr Factory has more than 250 regular members using the 3D printing machine.



► “QMakr Factory” Activity

On Thursday 16th March 2017 at 9.00am, Her Royal Highness Princess Maha Chakri Sirindhorn presided over the opening ceremony of Chula Expo 2017 “CU@100 - Toward greater innovation for the society” at Chulalongkorn University. HRH Princess

Maha Chakri Sirindhorn was welcomed by Professor Emeritus Khunying Suchada Kiranandana, Chairperson of Chulalongkorn University's Council and Professor Bundhit Eua-arporn, President of the Chulalongkorn University. On this occasion, the management of QMakr Factory had the opportunity to present the report and present 3D printed parts to HRH Princess Maha Chakri Sirindhorn.

Chula Expo 2017 be held from 15-19 March 2017. Many people visit QMakr Factory along this exhibition. Visitor will gain knowledge about 3D printing technology. This technology becomes more practical for many industries, manufacturing production will fundamentally change.

QMakr Factory is a CSR project of Harn Engineering Solutions Public Company Limited. It aims to introduce 3D printing technology into the research and development sector of the university. In order to utilize technology of additive manufacturing (AM) which also known as 3D printing to the society of Thailand. Since 10 months at the Faculty of Engineering Chulalongkorn University, QMakr Factory had delivered 3D printed part for more than 1,000 pieces.



► Innovation potential promotion and development project

The Company has participated in the innovation potential promotion and development project for listed companies of the Stock Exchange of Thailand and Market for Alternatives with the objectives to encourage creating and using innovations as systematic management tool which will in turn help develop employee potential and thus ensure business sustainability. It received Total Innovation Management Awards 2017 on October 6, 2017.



SMART PEOPLE – Respect for Human Rights

The Company conducts its business with respect to the lives and dignity of all humans, promotes all areas of the Company to operate on the basis of dignity and protect the civil liberties including equal treatment for all parties which is the root of management and human resource development. The practice guidelines are as follows ;

1. 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.
2. 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.
3. 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.

SMART PEOPLE – Fair treatment of employees

The Company attaches great importance to its employees, which are important resources of the company. In order to help the company grow sustainably, the Company attaches importance to fair treatment of workers. And set a policy to take care of employees to have a good quality of life. Have fair employment conditions Have reasonable welfare. Have the opportunity to develop progress. It also has a safe and hygienic working environment. It is a mission that is. "We believe in value. And potential employees and strive to create a happy working atmosphere, enthusiasm, initiative. And has continued to develop. To the knowledgeable team. On the principles of righteousness, positive thinking and professional responsibility"

The practice guidelines are as follows ;

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

► Remunerations and Benefits for the Employees

The Company had established the Welfare Committee to take care and be responsible for all levels of employees in the Organization, so that open the opportunity the employees can feel fully participated in terms of setting the policies. Because, the employees are the main force that drives the business growth and maintain its sustainability from the past to the present. Other than the salary that the employees receive, the Company also provides benefits and welfares in various forms fairly and appropriately. All of the benefits in which the Company provides are based on the same standard as the leading public company in the similar industry and the company can afford it.

Currently, the remunerations and benefits provided for the employees are monthly salary, annual bonus according the performance of employees and executives. Clear performance evaluation criteria are put in place, and employees are informed of operating performance targets every year. In addition, the Company has arranged to ensure all employees' well-being, good health and work security. Therefore, various welfare packages have been made available, such as rewards of various types, life insurance and accident, compensation funds, social security funds in accordance with the Department of Labor, provident funds and the Employee Joint Investment Program (EJIP) which allows the employees to buy the Company's stocks and truly become the owner of the business, employee uniforms, funeral allowance and also annual travel trip for the employees to relax and bond between colleagues. The Company also has other benefits which are not required by the law such as the annual employees' health check-ups, medical expenses from sickness or accidents outside of working hours, master's degree study scholarship, and opportunity to go on study tour abroad. All of these benefits are incentives for the employees to work hard professionally, dedicating to the work with knowledge, skills and determination and will result in the best performance.

► 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.

In 2017, no sickness or injury from accidents in relation to employees' work performance was found.

- 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 Monday 25th December 2017.



- Annual medical check-up was arranged for employees on Wednesday, April 5, 2017, in which 212 employees were under the criteria required to undergo the medical check-up and all of whom or 100% actually underwent the check-up.



Human Resource Development

The Company attaches a high degree of importance to human resource development, which is a key success factor for business operation. It has thus established a policy to promote personnel development with adoption of corporate values as the training framework.



The Company implemented its human resource development plan drawn up in 2017 completely and comprehensively covering all staff levels. Besides enhancement of work skills, it has promoted other activities that would build good relationship and unity among employees across the organization.





Seminars and Development

The Company strives to develop and prepare for the human resource development since the employees start working in order to build up the skills, knowledge and emotional quotient. Employees must undergo the course 'EQ: The Art of Emotional Management for Effective Life and Work'. The Company also emphasizes on sales and services which is considered the heart of the business by hosting trainings to develop skills for sales and services staffs to modify the attitudes towards sales, be of serviced mind, be enthusiastic and learn the art of speaking and negotiating which is the key concept. This aims to build self-confidence in presenting goods and services that meet customers' requirements, providing professional advice and solutions to problems for customers, and giving impression to customers in line with the Company's vision : "Be leader in engineering solutions." Therefore, the Company has to consistently explore new technologies that can ensure ongoing development mainly by going on study trips abroad or joining training courses overseas to bring back know-how and experiences that will enable the company to pursue development of its business operation looking forward.



Total average training hours
25 hours / employee / year



Training / Study tour expenses

| | | |
|----------|-----------|------|
| Domestic | 1,227,800 | Baht |
| Overseas | 3,560,000 | Baht |



Total number of employees
undergone Training
240 trainees or 100% of total
number of employees



Male 138
Female 102



► Communication with employees

The Company attaches importance to communication with employees so that they will have access to policies, procedures and information related to work performance so that they work in the same direction. It has made available channels to communicate with employees as prioritized below :

- The annual general meeting of shareholders held on March 4, 2017: To allow top executives to share vision, mission and strategy in each year to employees at all levels.
- 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 2017, 144 out of the total of 238 employees, representing 60.50%, responded the questionnaire and the result of which was that the Company scored 81%, compared with 65% in 2016, or 16% higher.
- LINE Add: As a new channel for speedy communication in addition to communication through email and announcement on internet or the Company website.

LINE@

SMART ENVIRONMENT – Environmental Management

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. 2017, the Company realized the importance of and took steps in minimizing use of paper in work process with measures and practices set out as below :

| Principles | Practice guidelines |
|------------|---|
| RE-DUCE | <ol style="list-style-type: none"> 1. Send email through Gmail/Outlook 2. Use data Center to keep documents and forms |

| Principles | Practice guidelines |
|------------|---|
| RE-DUCE | 3. Hold e-meeting 4. Set printing to economy mode 5. Downsize forms from A4 to A5 6. Change questionnaire from paper to online using Google form 7. Reduce training materials in paper and replace it with online materials |
| RE-USE | Reuse the one-sided used paper. |
| RE-CYCLE | Put in place waste separation bin, e.g. general waste, used paper and bottles/plastic, and add value by selling such waste as paper, bottles and plastic. |

All the above activities were 100% completed in 2017, and set to be regular projects held continuously in the following years

CSR after process

Social or Community Development

The Company is aware of its role as a good member of the society by supporting all public activities of the community and the society that relates to the development of the environment and encourages the employees to join up and organize social activities such as supporting the schools in remote areas, orphanages, disabled facilities to repay the society when opportunity arises with appropriate funding.

- 1 “Give For You” project : To provide educational and sports tools, materials and equipment, and provide lunch to underprivileged school children of Baan Hua Thanon School, Nong Moo Subdistrict, Wiharn Daeng District, Saraburi Province, with activities held on Friday, June 30, 2017 during 10.30-14.00 hrs.





- 2) On the December 19, 2017 The Company has provided 7 sets of refrigeration equipment for the field of mechanical engineering. Department of Mechanical Engineering and Production Systems Sirindhorn International Institute of Technology Thammasat University of Pathum Thani consists of condensing units, coil units and cooling equipment. This project was held for the 4th straight time.

Anti – corruption

Fraud is a wrongful act toward the Company as can be divided into three types below :

- 1) Asset misappropriation is stealing, deception, embezzlement or use of resources of the Company for personal benefits.
- 2) Corruption is any act in form of either offering, promise or commitment, request, demand, giving or accepting any property or asset or any other benefit to/with/from government official or any other person in the public and private sectors, directly or indirectly, so that such person will carry out or abandon carrying out his/her duty for the acquisition or maintaining of any other benefit which is not in the fair course of business undertaking, unless in case permitted by laws, rules, regulations, local custom and tradition, or trade common practice.
- 3) Falsifying financial statements is abandoning of provision of information or intended provision of untrue information in reporting of the Company's financial position.

The Company is aware of the negative effects of corruption, fraud, and taking personal benefits of the organization. It has established an anti-corruption policy and appropriate practice guidelines to prevent corruption and set the course for the Board members, top executives, and employees to follow and to avoid inappropriate practice. Compliance with the established guideline shall be monitored regularly. The guideline shall be revised from time to time in order to suit the changes in business, regulations, requirements, and laws.

The practice guidelines are as follows ;

- 1) Directors, Executives and all employees must strictly follow the anti-corruption policy by not being involved with corruptions both directly or indirectly, including not being ignorant when discovering acts which connect to the corruption relating to the Company.
- 2) Not engaging or supporting any forms of corruptions including controlling the donations, business gifts and the supports of any activities must be done transparently and with no intentions to convince the staffs or the government officials to act inappropriately.

- 3) Establish internal control systems, risks management, including appropriate and effective internal audits in order to prevent undesirable actions.
- 4) Encourage employees, contractors and trading partners to be aware of corruptions which may occur and the anti-corruption policies.
- 5) Educate the Directors, Executives and employees on the topic of anti-corruption in order to promote honesty and responsibility to their works by holding seminars on anti-corruption for the new employees within 90 days from the start of employment.
- 6) Acknowledge the importance of knowledge dissemination and the understanding of others who must follow their duties which are related to the Company, or affected the Company. All actions must be carried out following the anti-corruption policies.
- 7) Arrange for good practices regarding the receiving and giving of gifts, assets or other benefits with the objective of preventing corruptions or unfair treatments to other parties. For the purpose of the efficient and appropriate purchasing process, the receiving of gifts and/or offerings with unusual values from business related parties or from others which may benefit from the actions of the employees must be avoided. This also includes avoiding meals offering from Companies related business parties which may have benefitted from the actions of the employees.
- 8) Prepare communication channels for reporting leads on corruption where employees can report any suspicious activities in the regulated channels announced by the Company with specific details on the crimes, disciplinary actions and may face legal charges if the action is against the law.
- 9) Provide justice and protect the employees who refuse to report the corruptions regarding the Company by following the complainant protection policy when reporting the corruption.

Complaints and Leads Countermeasures

The Company provides channels for complaints, opinions, and suggestions and for giving leads which covers the process of complaints, investigations and summary, including the protection of the informer and relating parties or the stakeholders affected or risk of being affected by the business operation of the Company or from the duty performed by the Directors, the Executives or from the Company's employees relating to the violation of the code of conducts, the laws, including behaviors that may imply corruptions. The Company encourages the informer to complain of give the leads.

However, the informer may notify the leads by specifying in the decampments that the information is 'onfidential', addressing the Chairman of the Audit Committee who is the independent Director through the following channel;

- **Letter - To** Chairman of the Audit Committee
Harn Engineering Solutions Public Company Limited
19/18-19 RCA Block A, Rama 9 Rd.
Bang Kapi, Huay Ma, Bangkok 10310
- **E-Mail** chairac@harn.co.th

The Chairman of the Audit Committee will directly take in the case with the informer not needing to identify themselves if they do not wish to reveal themselves. The informer, the whistleblower will receive appropriate protection from the Company, for example no posts relocation, nature of the work, the place of work, suspension from work, threats, disrupt the work operation, contract termination or any other actions that are not fair to the Company. The Company will keep the information confidential and not disclosing it to unrelated parties unless those required to show by the law.

Relating individuals that acknowledges the story or the information regarding the issue that relates to the complaints must keep the information confidential and not revealing it to other parties unless required to do so by the law. If the employees intend to break the rules and reveal the information, the Company will proceed with the disciplinary actions and/or allow legal actions according to the law, depending on the case

Operational Performance in 2017

On March 21, 2017, the Company declared its participation in the Private Sector Collective Action Coalition (CAC) against Corruption. It has communicated its Anti-Corruption Policy to Board members, management members, employees and business counterparts, and is now in the process of reviewing its internal control system to get prepared for examination by the auditor approved by the Office of the SEC according to the action plan set forth.



16 | 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 and the Securities and Exchange Commission, 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.



17 Related Party Transactions

1. Necessity and reasonableness of related party transactions

In 2017 the Company entered into a number of significant related party transactions with relevant 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 transaction 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 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 according to the Thai Financial Reporting standards ruled by the Federation of Accounting Professions under the Royal Patronage of His Majesty the King.



18 Management Discussion and Analysis (MD&A)

1. Overview of business operations and significant changes

In 2017, the Company recorded a frog-leap revenue growth of almost one-fold of that in the foregoing year attributable to increasing number of business units following the acquisition and acceptance of the transfer of the entire business of Chillmatch Co., Ltd. (CM) and QIIS Co., Ltd. (QIIS) on November 29, 2016 by issuing new ordinary shares in a total amount of 675.36 million Baht to CM at a swap ratio of 0.67 in exchange for net tangible assets of the said two companies worth 340.69 million Baht, resulting in a goodwill of 334.67 million Baht. After the entire business acquisition and asset transfer, the Company changed its name from Fire Victor Plc. to Harn Engineering Solutions Plc., engaging in import, distribution and installation service of building engineering systems, comprising fire suppression, sanitary and air-conditioning systems, design and installation of firefighting systems for such industrial projects as petrochemical and power generation plant projects, and engineering solution services for refrigeration and digital printing systems.

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

2.1 Overview Performance and Profitability of Financial Statements

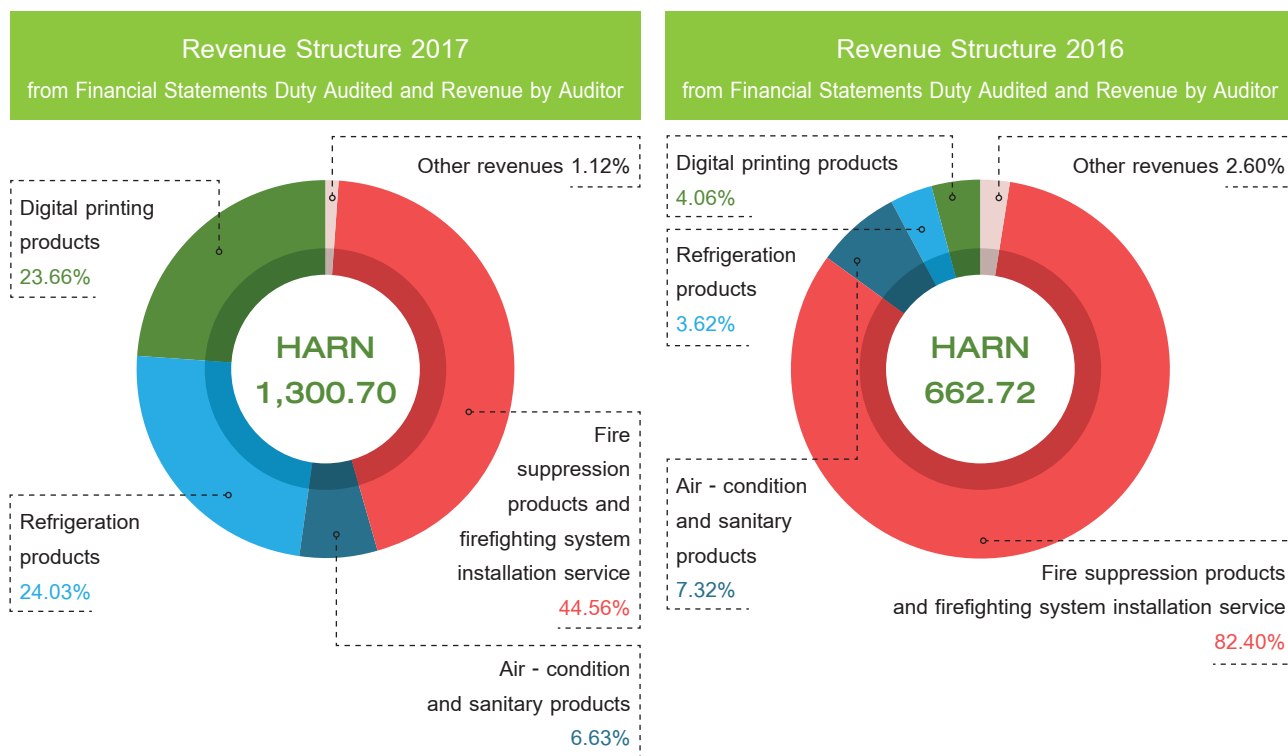
Operating Performance for 2015 - 2017

• Revenues from Sales and Services

| Revenue | For the year ended December 31 | | | | | |
|---|--------------------------------|---------------|---------------|---------------|---------------|---------------|
| | 2017 | | 2016 | | 2015 | |
| | MB | % | MB | % | MB | % |
| Sales and Service Revenue | | | | | | |
| 1. Fire Protection Products and Projects | 579.54 | 44.56 | 546.09 | 82.40 | 525.96 | 90.23 |
| 2. Sanitary and Air-conditioning Products | 86.18 | 6.63 | 48.53 | 7.32 | 41.58 | 7.13 |
| 3. Refrigeration Products | 312.51 | 24.03 | 23.97 | 3.62 | - | - |
| 4. Digital Printing Products | 307.74 | 23.66 | 26.93 | 4.06 | - | - |
| Total Sales and Service Revenue | 1,285.97 | 98.88 | 645.52 | 97.40 | 567.54 | 97.36 |
| Other Income ¹⁾ | 14.73 | 1.12 | 17.20 | 2.60 | 15.41 | 2.64 |
| Total Revenue | 1,300.70 | 100.00 | 662.72 | 100.00 | 582.95 | 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, etc.

The revenue of sales and services from Harn consists of the revenue from selling the fire extinguisher system and industrial projects at 44.56%, the sanitary system and air condition at 6.63%, the refrigeration system at 24.03%, the digital printing system at 23.66% and other income of 1.13% with the total revenue between 2015 and 2017 of 582.95 million Baht, 662.72 million Baht and 1,300.70 million Baht respectively. After the entire business acquisition and asset transfer, Harn mitigated risk of reliance on revenue from fire protection product and project sales from 90.22% in 2015 and 82.40% in 2016 to 44.56% of total revenues in 2017.



• Cost of Sales and Service

| Costs | For the year ended December 31 | | | | | |
|---|--------------------------------|--------------|---------------|--------------|---------------|--------------|
| | 2017 | | 2016 | | 2015 | |
| | MB | % | MB | % | MB | % |
| Cost of Sales and Service | | | | | | |
| 1. Fire Protection Products and Projects | 436.95 | 75.40 | 419.86 | 76.88 | 396.68 | 75.41 |
| 2. Sanitary and Air-conditioning Products | 63.92 | 74.17 | 34.18 | 70.43 | 29.11 | 70.01 |
| 3. Refrigeration Products | 216.28 | 69.21 | 16.50 | 68.84 | - | - |
| 4. Digital Printing Products | 187.89 | 61.05 | 17.07 | 63.39 | - | - |
| Total Cost of Sales and Service | 905.04 | 70.38 | 487.61 | 75.54 | 425.79 | 75.02 |
| Gross Profit | 380.93 | 29.62 | 157.91 | 24.46 | 141.75 | 24.98 |

The significant costs of sales and services are the costs of products and the labor costs for installation. Between the years 2015 - 2017, Harn had the total costs of sales and services of 425.79 million Baht, 487.61 million Baht and 905.04 million Baht respectively. In 2017, the gross profit margin increased from that in 2016 supported by the lowering import cost as a result of the stronger Baht against the US Dollar and Pound Sterling in the year as three-fourths of the imported goods were denominated in such two foreign currencies. Moreover, the Company hedged against foreign exchange risk by entering into forward contracts. Thus, foreign exchange gains went up, as presented in the item of other income.

Selling & Administrative Expenses

| Selling & Administrative Expenses | For the year ended December 31 | | | | | |
|--|--------------------------------|---------------|---------------|---------------|---------------|---------------|
| | 2017 | | 2016 | | 2015 | |
| | MB | % | MB | % | MB | % |
| Selling Expenses | 89.37 | 6.87 | 36.62 | 5.53 | 34.39 | 5.90 |
| Administrative Expenses | 145.16 | 11.16 | 87.75 | 13.24 | 66.15 | 11.35 |
| Total Selling & Administrative Expenses | 234.53 | 18.03 | 124.37 | 18.77 | 100.54 | 17.25 |
| Total Revenue | 1,300.70 | 100.00 | 662.72 | 100.00 | 582.95 | 100.00 |

• Selling Expenses

Harn's selling expense during the year 2015 - 2017 was at 34.39 million Baht, 36.62 million Baht and 89.37 million Baht respectively. In 2017, the ratio of the selling expense was equal to 6.87%, up from 5.53% of total revenues a year earlier. It was mainly due to the increase in salary and remuneration expenses for personnel to accommodate the Company's business expansion on the back of the increase in investments in infrastructure projects of the public and private sectors.

• Administrative Expenses

Harn's administrative expense during the year 2015 - 2017 was at 66.15 million Baht, 87.75 million Baht and 145.16 million Baht respectively. In 2017 the ratio of Harn's administrative expense had increased to 11.16%, down from 13.24% in 2016 and 11.35% in 2015 of total revenues.

Administrative expenses were expenses relating to salary and remuneration for supporting units, executives and directors, rental of office building and warehouse, depreciation and public utilities. In addition, there were non-monetary expenses in relation to amortization of customer relations and depreciation of additional fixed assets arising from fair value appraisal of fixed assets acquired from the entire business acquisition and asset transfer. This was compliant with the provisions of the financial reporting standards whereby such items are regarded as non-cash items.

All expenses relating to the entire business acquisition and asset transfer, comprising financial advisor fee, independent financial advisor fee, due diligence fee, legal advisor fee and appraiser fee, had duly been booked to administrative expenses in fiscal year 2016.

- Net Profit

Harn earns net profit between the years 2015 - 2017 of 43.77 million Baht, 45.48 million Baht and 129.64 million Baht respectively. Harn's gross profit margin was at 7.51%, 6.86% and 9.97% of total revenues in the respective years.

- Earnings Before Interest, Tax, Depreciation and Amortization (EBITDA)

Harn's EBITDA during 2015-2017 was 60.93 million Baht, 57.86 million Baht and 192.06 million Baht respectively, representing 10.45%, 8.73% and 14.77% of total revenues respectively. The EBITDA growth in 2017 of 231.94% compared with the previous year was attributable to the fact that revenues from sales and services of the existing business and those of the new business units acquired and accepted from the business transfer since November 29, 2016 had grown consistently. This was coupled with the Company's efficient management of administrative expenses.

| EBIT and EBITDA | For the year ended December 31 | | | | | |
|--|--------------------------------|--------|--------|--------|--------|--------|
| | 2017 | | 2016 | | 2015 | |
| | MB | % | MB | % | MB | % |
| Earnings Before Tax (EBT) | 161.13 | 12.39 | 50.74 | 7.66 | 56.61 | 9.71 |
| Depreciation and Amortization - normal | 13.79 | 1.06 | 5.52 | 0.83 | 4.32 | 0.74 |
| Depreciation and Amortization - fair value appraisal | 2.24 | 0.17 | 0.28 | 0.04 | - | - |
| Customer Relation Amortization - fair value appraisal | 14.90 | 1.15 | 1.32 | 0.20 | - | - |
| Earnings Before Tax, Depreciation & Amortization (EBTDA) | 192.06 | 14.77 | 57.86 | 8.73 | 60.93 | 10.45 |
| Total Revenue | 1,300.70 | 100.00 | 662.72 | 100.00 | 582.95 | 100.00 |

2.2 Harn's Assets Management Capability

Financial Status Analysis as of December 31, 2015, 2016, 2017

Harn had the total assets as of December 31, between the years 2015 - 2017 of 569.01 million Baht, 1,379.85 million Baht and 1,457.34 million Baht respectively.

As of December 31, 2017 major assets as percentage of total assets comprised cash and temporary investment in a proportion of 16.54%, trade account and other receivables and unbilled receivables 21.00%, inventories 19.99%, property and equipment 10.32%, and goodwill 22.96%, as well as customer relations which are regarded as a type of intangible assets 6.04%. Both goodwill and customer relations had undergone devaluation test according to financial reporting standards. The Board of Directors' meeting no. 4/2017 held on October 18, 2017 resolved to approve the Company's purchase of a land plot of 5-0-90 rai area at a total of 114.95 million Baht located at Dokmai Subdistrict (North Samrong), Prawet District (Phrakhanong), Bangkok, to enhance efficiency in centralized management of warehouse. Transfer of land ownership was completed on October 30, 2017.

As of December 31, 2016 Harn had total assets of 1,379.85 million Baht, a frog-leap growth attributable to the entire business acquisition and asset transfer from CM and QIIS. Major assets consisted of cash and temporary investment of 21.82%, trade account and other receivables and unbilled receivables of 23.08%, inventories of 17.22%, intangible assets acquired

from business acquisition and transfer and undergone devaluation test according to financial reporting standards, i.e. customer relations 7.46% and goodwill 24.25% of total assets. Although the business acquisition and transfer could not include revenues from business operations of CM and QIIS from the beginning of 2016 until the business transfer date, Harn was able to accept the transfer of all the assets from business operations of both companies, such as cash (including deposits placed as collateral security to banks) of 44.33 million Baht, trade account and other receivables of 166.93 million Baht and inventories of 117.21 million Baht, etc. This contributed to its 810.85 million Baht or 142.50% growth in total assets compared with those at year-end 2015.

Accounts Receivable

| Accounts Receivable | For the year ended December 31 | | | | | |
|---|--------------------------------|------------------|---------------|------------------|---------------|------------------|
| | 2017 | | 2016 | | 2015 | |
| | MB | Turn over (days) | MB | Turn over (days) | MB | Turn over (days) |
| Accounts Receivable by Segments | | | | | | |
| 1. Fire Protection & Sanitary Products and Projects | 137.36 | 71.80 | 124.54 | 73.03 | 113.41 | 77.49 |
| 2. Refrigeration Products* | 70.72 | 86.57 | 77.51 | 74.95 | - | n/a |
| 3. Digital Printing Products* | 54.81 | 66.48 | 57.28 | 52.52 | - | n/a |
| Total Accounts Receivable by Segments | 262.89 | 74.12 | 259.33 | 68.17 | 113.41 | 77.49 |

*AR turnover calculated as if the sales and service revenues were consolidated the full year of 2016

| Accounts Receivable | For the year ended December 31 | | | | | |
|---------------------------------------|--------------------------------|---------------|---------------|---------------|---------------|---------------|
| | 2017 | | 2016 | | 2015 | |
| | MB | % | MB | % | MB | % |
| Accounts Receivable and Others | | | | | | |
| Accounts Receivable | 262.89 | 95.65 | 259.33 | 94.66 | 113.41 | 93.30 |
| Other Receivable | 16.24 | 5.91 | 20.03 | 7.31 | 11.08 | 9.11 |
| less_ Allowance for Doubtful Accounts | (4.29) | (1.56) | (5.41) | (1.97) | (2.93) | (2.41) |
| Accounts Receivable - Net | 274.84 | 100.00 | 273.95 | 100.00 | 121.56 | 100.00 |

As of December 31, 2017 Harn's account receivables before allowance for doubtful accounts can be divided into 3 products groups which are 1) Fire extinguisher, sanitary and air conditioning systems 2) Refrigeration system 3) Digital printing system with the account receivable turnover of 71.80 days, 86.56 days and 66.47 days respectively and when average out all ratio, the turnover was 77.97 days, an increase from 68.17 days in 2016 and 77.49 days in 2015. The account receivable turnover of the two product groups transferred from the entire business acquisition and transfer toward the end of 2016 was calculated from sales of each product as if the entire business acquisition and transfer had taken place since the beginning of 2016.

Harn has the allowance for doubtful accounts for estimated loss from not being able to collect payment from the debtors, which will be considered in general from past experience and the analysis of the debtors' age including the financial status of the debtors who may have credit risks and compile the information case by case and will write off from the account when the debts cannot be tracked, the lawsuit has ended or cannot enforce the court case following the judge ruling. However, Harn has always paid attention to the process of approving credits strictly which reduced the allowance for doubtful accounts during the year 2015 - 2017 to 2.41%, 1.86% and 1.56% respectively of net trade account and other receivables.

Inventory

| Inventory | For the year ended December 31 | | | | | |
|---|--------------------------------|------------------|---------------|------------------|--------------|------------------|
| | 2017 | | 2016 | | 2015 | |
| | MB | Turn over (days) | MB | Turn over (days) | MB | Turn over (days) |
| Inventory by Segments | | | | | | |
| 1. Fire Protection & Sanitary Products and Projects | 128.94 | 88.58 | 114.18 | 85.31 | 98.06 | 75.73 |
| 2. Refrigeration Products* | 73.70 | 107.25 | 53.39 | 86.35 | - | n/a |
| 3. Digital Printing Products* | 40.29 | 81.89 | 44.02 | 84.58 | - | n/a |
| Total Inventory by Segments | 242.93 | 91.66 | 211.59 | 85.39 | 98.06 | 75.73 |

*INV turnover calculated as if the cost of sales and services were consolidated the full year of 2016

| Inventory | For the year ended December 31 | | | | | |
|--|--------------------------------|---------------|---------------|---------------|---------------|---------------|
| | 2017 | | 2016 | | 2015 | |
| | MB | % | MB | % | MB | % |
| Inventory | | | | | | |
| Finished Goods | 242.93 | 83.40 | 211.59 | 89.06 | 98.06 | 85.78 |
| Goods in Transit | 61.75 | 21.20 | 40.96 | 17.24 | 22.86 | 20.00 |
| <u>Less</u> Allowance for Stock Obsolescence | (13.41) | (4.60) | (14.98) | (6.31) | (6.61) | (5.78) |
| Inventory - Net | 291.27 | 100.00 | 237.57 | 100.00 | 114.31 | 100.00 |

As of December 31, 2017 Harn had inventories divided into 3 products groups which are 1) Fire extinguisher, sanitary and air conditioning systems 2) Refrigeration system 3) Digital printing system with the inventory turnover (excluding goods in transit and before allowance for loss on devaluation of inventories) of 88.58 days, 107.25 days and 81.89 day respectively and when average out all ratio, the turnover in 2017 was 96.89 days, an increase from in 2016 was 85.39 days. Although stock of goods was required to sufficiently serve customers' demand, Harn had considered the opportunity costs, the storage costs and the risks of absorption in all aspects together as well. The inventory turnover for both groups of the products that have recently been acquired from the purchase and transfer of the business toward year-end 2016 had calculated the costs of sales for each product as if the circumstances took place in the beginning of the year. Harn has the allowance for depreciation by assigning 2 policies to be used when considering the allowance for obsolete items which are 1) goods of 2 or more years old, 2) annual

turnover rate less than 20% of the item's inventory for 2 consecutive years, Harn believes that the condition for the allowance for stock obsolescence will be enough conservatism to maintain the inventory value not more than the net realizable value according to the accounting standards. However the allowance for depreciation is considered low for the year 2015 to 2017 at 5.78%, 6.31% and 4.60% of the net inventory, respectively.

Accounts Payable and Others

| Accounts Payable and Others | For the year ended December 31 | | | | | |
|--|--------------------------------|------------------|---------------|------------------|--------------|------------------|
| | 2017 | | 2016 | | 2015 | |
| | MB | Turn over (days) | MB | Turn over (days) | MB | Turn over (days) |
| Accounts Payable and Others | | | | | | |
| Accounts Payable | 109.51 | 40.61 | 104.40 | 51.88 | 69.67 | 58.87 |
| Other Payable | | | | | | |
| • Accrual Expenses | 39.32 | n/a | 43.80 | n/a | 15.75 | n/a |
| • Others | 25.65 | n/a | 23.25 | n/a | 9.89 | n/a |
| Total Accounts Payable and Others | 174.48 | 40.61 | 171.45 | 51.88 | 95.31 | 58.87 |

Harn has the policy to maintain the business relationship with stakeholders such as distributor both domestically and internationally, contractors for equipment installations and other trade partners. The basis of maintaining a good relationship, financial credit is considered to be very important. Other than keeping relationships, Harn can also negotiate the prices of products and services which are the most important costs and will result in sustainable profitability of Harn in the future.

Types of credit limits and interest rates

| Types of credit | Limits (Million Baht) | | Interest rates (% per year) | |
|--------------------------------|-----------------------|---------------|-----------------------------|---------------|
| | 2017 | 2016 | 2017 | 2016 |
| Overdraft | 11.00 | 17.00 | MOR | MOR |
| | | | Fixed deposit | Fixed deposit |
| Letter of Credit / Trust sheet | 160.00 | 231.00 | MLR-1, MMR | MLR-1, MMR |
| Letter of Guarantee | 24.47 | 30.00 | 1.65 - 2% | 2% |
| Forward Contract | 562.39 | 363.39 | | |
| Promissory Note | 5.00 | 15.00 | MLR | MLR |
| Up Country Cheque | - | 3.00 | | |
| Total | 762.86 | 659.39 | | |
| Forward Contract | | | | |
| (Million USD) | 3.00 | 3.00 | | |

Harn's liquidity level is high, as can be seen from the liquidity ratio of 4.19 times and 4.36 time in 2017 and 2016 respectively. In addition, Harn still has enough working capital and credit facilities to import products from foreign countries in the form of overdraft or promissory notes, business guarantees and the risks management relating to foreign exchange currency including the opportunity in acquiring the business relating to other engineering systems in the future.

Foreign Exchange Risks

| Currency | Purchase of goods in 2017 | | Trade account receivables As of 31 Dec 2017 (Foreign currencies) | Risk hedging | |
|----------------------|---------------------------|----------------------|--|-------------------|--------------|
| | Foreign currencies | As % of import value | | Forward contracts | % Proportion |
| United States Dollar | 10,984,629 | 56.63 | 1,428,318 | 1,139,461 | 79.78 |
| Singapore Dollars | 956,686 | 3.60 | 200 | - | - |
| Euro | 2,922,464 | 17.11 | 186,933 | 74,989 | 40.12 |
| Pound sterling | 3,219,863 | 21.42 | 574,723 | 494,614 | 86.06 |
| Yen | 27,386,980 | 1.24 | 8,303,900 | 8,303,900 | 100.00 |

Harn 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 movement trends. However, the Company has no policy to speculate on the Baht volatility. It is because the Company is not a financial institution and has no expertise in the area of currency movement prospects. It only would like to reduce foreign exchange risk to its cash inflow and outflow and contain such risk at the controllable level.

2.3 Liquidity and Working Capital

2.3.1 Cash Flows from Harn's Financial Statement

MB

| Description | As at December 31 | | |
|---|-------------------|-------------|-------------|
| | 2017 | 2016 | 2015 |
| Cash Flow from Operating Activities | 107.14 | 17.49 | 50.31 |
| Cash Flow from (Used in) Investing Activities | (48.44) | 33.58 | 4.71 |
| Cash Flow from (Used in) Financing Activities | (52.61) | (43.39) | (52.5) |
| Net Cash and Cash Equivalents increase | 6.09 | 7.68 | 2.52 |
| Cash and Cash Equivalents - B/F | 35.87 | 28.18 | 25.66 |
| Cash and Cash Equivalents - C/F | 41.96 | 35.86 | 28.18 |

Analyzing the Cash Flows Statement for the year ended December 31, 2017

Harn had net cash flows from the business operation in 2017 of 107.14 million Baht, an increase 89.75 million Baht when compared to 2016, mainly due to net profit of 129.68 million Baht in 2017, a growth of 89.15 million Baht from the previous year. Depreciation and amortization of non-monetary expenses amounted to 30.93 million Baht, up from the foregoing year by 23.81 million Baht. Trade account receivables declined by 13.67 million Baht, compared with the increase by 18.81 million Baht a year earlier. Inventories were kept in higher volume resulting in a decrease in cash flow from operating activities by 56.60 million Baht, which was 42.03 million Baht increase from the previous year.

The cash flows that had been used for the investing activities in 2017 of 48.44 million Baht were mainly caused by purchase of land for construction of warehouse and equipment amounting to 117.26 million Baht, up by 115.63 million Baht from the foregoing year. Meanwhile, cash flow from sales of investments in private funds and fixed-income funds amounted to 68.71 million Baht, a 67.98 million Baht increase from the previous year.

The cash flows that had been used for the financing activities came from the dividends during 2017 of 52.61 million Baht, an increase of 17.61 million Baht when compared with last year

Analyzing the Cash Flows Statement for the year ended December 31, 2016

Harn had net cash flows from operating activities in 2016 of 17.49 million Baht, a 32.92 million Baht decrease when compared to 2015 with the operating profit before the change in assets and operating liabilities of 60.05 million Baht, close to that a year earlier. Receivables from sales of investments in securities at year-end amounted to 2.64 million Baht and retention and unbilled receivables under fire protection system installation contracts rose by 5.90 million Baht. Meanwhile, advance payment for goods and trade account payables went up by 18.46 million Baht. The Company received cash discounts for goods in some cases as offered by the suppliers, hence higher gross profit margin. As a consequence, its net cash flow from operating activities declined compared with the foregoing year.

Cash flow from investing activities in 2016 amounted to 33.69 million Baht, rising by 28.98 million Baht from 2015. It was principally due to cash received by the Company from its entire business acquisition and transfer of CM and QIIS amounting to 40.17 million Baht by issuance of new shares in lieu of cash payment. The Company also paid 7.99 million Baht for equipment and improvement of ERP program.

Cash flow used in financing activities arose from payment of 2016 interim dividend of 35.00 million Baht and repayment of loans transferred from the entire business acquisition and transfer. It was because Harn itself had ample liquidity and thus had no interest burden to be settled to banks or financial institutions. Dividend of 57.30 million Baht the Company received from QIIS before the assets and liabilities transfer was not presented as cash received in investing activities or as other income in the income statement, but presented as deduction from equity price of ordinary shares issued by Harn for the entire business acquisition and transfer (transfer consideration) pursuant to the financial reporting standards.

2.3.2 Capital Structure from the Financial Statement as of December 31, 2017, 2016, 2015

Harn had the total liabilities on the December 31, between 2015 - 2017 of 117.21 million Baht, 242.21 million Baht and 242.66 million Baht respectively. The significant components of the liabilities were account payables and other payables and other current liabilities without interest-bearing liabilities the details as follows;

As of December 31, 2016 Harn's total debts were equal to 242.66 million Baht, an increase from 2015 by 0.45 million Baht, which was considered an insignificant increase. This reflected the Company's ability to maintain its capital structure at an appropriate level.

As of December 31, 2016 Harn's total liabilities were equal to 242.21 million Baht, an increase from 2015 by 125.00 million Baht or 106.65% due to the entire business acquisition and transfer from CM and QIIS. This resulted in Harn receiving debts burden from bank loans (paid back immediately after the entire business acquisition and transfer was completed), account payables, employees' benefits and other accrual expenses.

With Harn's capital structure that does not need to rely on any bank loans, this results in Harn having no interest burden, making the Company able to payout its dividends to shareholders consistently. During 2015 - 2017, the dividends were paid at 0.15 Baht, 0.10 Baht and 0.14 Baht per share respectively, representing payout ratios of 76.92%, 81.82% and 63.64% respectively. The Company had a low debt-to-equity ratio of about 0.20 - 0.26 for the past 3 years respectively.



19 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 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.

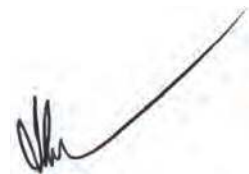
The Board of Directors has established and maintained good corporate governance and appropriate risk management and internal control systems to assure that the accounting information is correctly, completely and timely recorded, and adequate to sustain the Company's assets and prevent any fraud or any 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 for the year ended December 31, 2017 exhibit its financial position, operating results and cash flows accurately and appropriately in material aspects in accordance with the Thai Financial Reporting Standards, and the audit of which has been performed by the Independent Auditor according to the generally accepted auditing standards with opinion given in the Report of Independent Auditor presented in this Annual Report.



Mr. Thakol Nunthirapakorn
Chairman of the Board



Mr. Wirat Sukchai
Chief Executive Officer

20 | Report of the Audit Committee



Dr. Thakol Nunthirapakorn

Chairman of Audit Committee

Dear Shareholders,

The Audit Committee, appointed by the Board of Directors, is composed of three Independent Directors as follows:

1. Mr. Thakol Nunthirapakorn Chairman of Audit Committee
2. Mr. Sothitorn Mallikamas Audit Committee
3. Miss Voranuch Supaibulpipat Audit Committee

The Audit Committee is in charge of review of the Company's financial reports to ensure that they are accurate and have adequate disclosure of information, and that the Company has appropriate and effective internal control and internal audit, and its business operations are compliant with applicable laws and regulations. The Audit Committee is also responsible for selecting and proposing for appointment of the Company's external auditor, considering the Company's disclosure of information in an accurate and complete

manner, and performing duty independently with Mr. Wisit Wachiralappaitoon as the Secretary of the Committee, within the scope of duties and responsibilities prescribed in the Audit Committee Charter.

In 2017, the Audit Committee held four meetings. The three Committee members attended all the meetings held. The Audit Committee discussed and shared opinions with the management, internal auditors, and external auditor on relevant issues. Salient points can be concluded here:

1. **Review of quarterly and yearly financial statements for 2017:** The Audit Committee reviewed the quarterly and annual financial statements, which were reviewed or audited by Dharmniti Auditing Co., Ltd with enquiries made with and explanation sought from the management and the auditor as regards the accuracy, completeness and compliance with the financial reporting standards as well as the criteria of the Securities and Exchange Commission and the Stock Exchange of Thailand as appropriate in the material aspects, and as regards disclosure of information in an adequate, complete and reliable manner, for further submission to the Board of Directors for approval.
2. **Review and assessment of the adequacy of the internal control system:** The Audit Committee reviewed the internal control system and monitored the audit result, with the 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 and consideration of related party transactions or transactions that may have conflict of interests, including disclosure of information thereof in conformity with the relevant laws and regulations of the Stock Exchange of Thailand and the Office of the Securities and Exchange Commission:** The Audit Committee is given the opinion that such transactions were carried out in a reasonable manner for the maximum benefit of the Company, 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 to the securities and exchange law, the regulations of the Office of the Securities and Exchange Commission and the criteria of the Stock Exchange of Thailand, as well as other laws relevant to the Company's business operations, including compliance with the Company's regulations and obligations with third parties:** In this regard, the Audit Committee did not find any significant issue of non-compliance with the law and regulations of the Stock Exchange of Thailand and relevant regulatory bodies.
5. **Selection the appointment of the Company's auditor and determination of audit fee for 2018:** The proposed appointment was proposed for the endorsement by the Board of Directors for proposal to the 2018 Annual General Meeting of Shareholders for consideration and approval. The Audit Committee reviewed the performance and independence of the candidate, and the appropriateness of the remuneration for the auditor,

and considered it proper for the Company to appoint Mr.Peradate Pongsathiansak, License No.4752 and/or Mr.Thanawut Piboonsawat, License No.6699 and/or Miss Sulalit Ardsawang, License No.7517 and/or Miss Wannisa Ngambuathong, License No.6838 and/or Miss Thanyaporn Tangthanopajai, License No.9169 from Dharmniti Auditing Co., Ltd. as the Company's auditor for 2018.

The Audit Committee is given the opinion that, in 2017, the Company maintained good corporate governance and appropriate internal control, prepared the financial statements that exhibited the factual information in material aspects adequately and accurately in compliance with the financial reporting standards, disclosed information in conformity with the relevant laws and regulations, had risk management at an acceptable level, performed in adherence to the relevant laws, rules and regulations as well as obligations, and disclosed related party transactions in an accurate and complete manner. The Audit Committee and the management attached high importance on business operations in line with the good corporate governance. No material irregularities were found that might affect the Company's financial status. The Company consistently developed and rationalized its work processes to boost quality and suit the business environment, as well as to be compliant with the rules and regulations of the Office of the Securities and Exchange Commission and the Stock Exchange of Thailand, and other laws relevant to the business operations of the Company.

21

Report of the Executive Committee



Mrs. Sirima Iamsakulrat
Chairperson of the Executive Committee

Dear Shareholders,

The Company's Executive Committee is composed of eight directors and top executives as appointed by the Board of Directors as below :

| | | |
|-------------------|-------------------|---|
| 1. Mrs. Sirima | Iamsakulrat | Chairperson of the Executive Committee |
| 2. Mr. Wirat | Sukchai | Member of the Executive Committee and Chief Executive Officer |
| 3. Mr. Wasan | Nantakhwang | Member of the Executive Committee and Managing Director |
| 4. Mr. Thammanoon | Tripetchr | Member of the Executive Committee and Managing Director |
| 5. Mrs. Valeeratn | Chuerboonchai | Member of the Executive Committee |
| 6. Mr. Jain | Charnnarong | Member of the Executive Committee |
| 7. Mr. Wisit | Wachiralappaatoom | Member of the Executive Committee and Finance Director |
| 8. Mrs. Varinkan | Teraumranon | Member of the Executive Committee and Company Secretary |

Although Thai economy in 2017 remained volatile with risk exposures in several areas, business opportunities in overall were still seen particularly in real economic sectors such as tourism

related business, public sector investment and business driven by technology 4.0. Therefore, the Company has to accelerate the strengthening of the organization in all respects to ensure continued business operation and expansion towards a sustainable growth. The Executive Committee is in charge of assisting the Board of Directors in considering, screening and scrutinizing significant issues before submission to the Board of Directors for consideration, thus facilitating the Company's business operation. 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 2017, 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:** Drew up the Company's operational plan and strategy for each business function line on a quarterly basis and delegated such plan and strategy to the executives and staff at all levels for their implementation to meet the targets set forth.
- 2. Supervise and monitor the Company's business operation:** Considered, supervised and monitored the operation of each business function line on a monthly basis to ensure the operation came out as planned and as assigned by the Board of Directors.
- 3. Consider the Company's budget and investment projects:** Considered and gave opinions on the Company's annual budget and investment projects as well as other issues proposed by the Management before submission to the Board of Directors' meeting for consideration and approval.
- 4. Determine remuneration policy and executive and staff salary structure** Considered the remuneration policy and personnel salary structure before submission to the Board of Directors' meeting for consideration and approval.
- 5. Consider nomination and recruitment of top executives** Considered the structure and scope of duties and evaluated the performance of top executives before submission to the Board of Directors' meeting for consideration and approval.

The Executive Committee is committed to performing our duties with integrity, prudence and carefulness, being ready to develop the Company's business with full capabilities in the best interests of the Company, the shareholders and all stakeholders, and 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.

22 | Report of the Risk Management Committee



Dr. Supot Tiarawut
Chairman of the Risk Management Committee

Dear Shareholders,

In 2017, the Risk Management Committee performed our duties with full potential to support the Board of Directors and other committees in monitoring the Company's risk management so that the Company will be able to achieve all the business targets set forth, and to build confidence and trust among investors and stakeholders in the business operation of the Company. The Risk Management Committee, appointed by the Board of Directors, is composed of 12 members with competence, expertise and experience as well as understanding of the business operation as follows:

| | | |
|--------------------|-------------------|---|
| 1. Mr. Supot | Tiarawut | Chairman of the Risk Management Committee |
| 2. Mr. Wirat | Sukchai | Member of the Risk Management Committee |
| 3. Mr. Wasan | Nantakhwang | Member of the Risk Management Committee |
| 4. Mr. Thammanoon | Tripetchr | Member of the Risk Management Committee |
| 5. Mr. Pracha | Phromphornchai | Member of the Risk Management Committee |
| 6. Mr. Rattanaphan | Mukhariwattananon | Member of the Risk Management Committee |
| 7. Mr. Suchat | Suwatnodom | Member of the Risk Management Committee |

| | | |
|-------------------|-------------------|---|
| 8. Mr. Nuntawat | Jeerakhom | Member of the Risk Management Committee |
| 9. Mr. Sukit | Litikorn | Member of the Risk Management Committee |
| 10. Mr. Withoon | Thamee | 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 is in charge of formulating and reviewing the Company's risk management framework, policy and procedure to suit the business operation with efficiency and in line with the Company's operational strategy and business plan, as well as supporting and developing efficient and consistent risk management at all levels across the organization in line with international standards to build up corporate risk management culture. Mrs. Varinkan Teraumranon is the secretary to the Risk Management Committee.

In 2017, the Risk Management Committee held altogether four meetings to consider issues with salient points as below :

1. Considered the annual risk management plan based on risk assessment prepared by the executives of all business units.
2. Prioritized risk issues and identified impacts thereof to determine risk management measures.
3. Supported and developed risk management consistently across the organization.
4. Monitored and reviewed implementation of the risk management plan to ensure compliance with the risk management policy and framework in place, with internal auditors to follow up and review risk management in a systematic and efficient manner.

The Risk Management Committee is of the opinion that, in 2017, the Company developed its risk management system to comprehensively cover all risk factors, and had risk management undertaken continuously and in line with the changing circumstances. The Risk Management Committee met regularly to consider urgent and significant risk issues in a timely manner. This led to effectiveness in the risk management of the Company. Moreover, significant organization-level risks were managed efficiently and appropriately and controlled within the acceptable levels.

23 Independent Auditor's Report

To The Shareholders and Board of Directors of
Harn Engineering Solutions Public Company Limited

Opinion

I have audited the financial statements of Harn Engineering Solutions Public Company Limited (the Company), which comprise the statement of financial position as at December 31, 2017, 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 financial position of Harn Engineering Solutions Public Company Limited as at December 31, 2017, 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 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 financial statements of the current period. These matters were addressed in the context of my audit of the 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 Company has revenue from sales and service derived from four main business segments which are fire protection and projects, sanitary and air-conditioning systems, cold storage devices, and digital printing system for the year ended December 31, 2017 amounting to Baht 1,285.96 million which have different terms and pricing conditions, including revenue from services under the fire protection installation project amounting to Baht 88.62 million or 6.89% of the Company's total revenue from sales and service. The estimate of item that involves the service under the project agreement has an effect on the revenue that the Company recognized in the period, which it has to recognize by the percentage of completion method as at December 31, 2017. 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 Company has 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. 3.15 and 24, 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 goodwillRisk

The Company has goodwill of Baht 334.67 million or 22.96% of total assets as at December 31, 2017 which is the goodwill arising from the acquisition and transfer of the entire business of Chillmatch Company Limited which is the cold storage devices segment and Q II S Company Limited which is digital printing system segment. The Company has 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 Company has disclosed goodwill in the notes to the financial statements No. 3.10 which describes the accounting policies and No. 12 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 Matter

The financial statements of Harn Engineering Solutions Public Company Limited for the year ended December 31, 2016, presented herein as comparative information, was audited by another auditor whose report thereon dated February 24, 2017, expressed an unmodified opinion.

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 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 financial statements, management is responsible for assessing 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 Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing 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 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 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 financial statements.

As part of an audit in accordance with 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 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 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 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 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 Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

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 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

Dharmniti Auditing Company
Limited Bangkok, Thailand
February 23, 2018

24 Financial Statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED

STATEMENT OF FINANCIAL POSITION

AS AT DECEMBER 31, 2017

ASSETS

| | | Thousand Baht | |
|--|------|---------------|-----------|
| | Note | 2017 | 2016 |
| CURRENT ASSETS | | | |
| Cash and cash equivalents | 6 | 41,956 | 35,866 |
| Temporary investments | 7 | 199,119 | 265,179 |
| Trade and other receivables | 8 | 274,841 | 291,317 |
| Current portion of finance lease receivables | 9 | 8,783 | 10,017 |
| Unbilled receivables | | 1 1,877 | 7,140 |
| Inventories | 10 | 291,266 | 237,566 |
| Other current assets | | 910 | 750 |
| TOTAL CURRENT ASSETS | | 828,752 | 847,835 |
| NON-CURRENT ASSETS | | | |
| General investment | | 242 | 242 |
| Long-term finance lease receivables | 9 | 10,473 | 10,044 |
| Property and equipment | 11 | 150,468 | 41,565 |
| Goodwill | 12 | 334,672 | 334,672 |
| Customer relationship | 13 | 88,082 | 102,983 |
| Intangible assets | 14 | 27,301 | 26,749 |
| Other non-current assets | | 17,352 | 15,761 |
| TOTAL NON-CURRENT ASSETS | | 628,590 | 532,016 |
| TOTAL ASSETS | | 1,457,342 | 1,379,851 |

Notes to the financial statements form an integral part of these statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED
STATEMENT OF FINANCIAL POSITION (CONT.)
AS AT DECEMBER 31, 2017

LIABILITIES AND SHAREHOLDERS' EQUITY

| | | Thousand Baht | |
|--------------------------------|------|---------------|----------|
| | Note | 2017 | 2016 |
| CURRENT LIABILITIES | | | |
| Trade and other payables | 16 | 174,475 | 1 76,566 |
| Income tax payable | | 17,474 | 12,873 |
| Short-term provisions | | - | 168 |
| Other current liabilities | | 5,817 | 4,641 |
| TOTAL CURRENT LIABILITIES | | 197,766 | 194,248 |
| NON-CURRENT LIABILITIES | | | |
| Deferred tax liabilities | 15 | 13,455 | 1 8,957 |
| Employee's benefit obligations | 17 | 14,898 | 13,910 |
| Other non-current liabilities | | 16,547 | 15,097 |
| TOTAL NON-CURRENT LIABILITIES | | 44,900 | 47,964 |
| TOTAL LIABILITIES | | 242,666 | 242,212 |

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED
STATEMENT OF FINANCIAL POSITION (CONT.)
AS AT DECEMBER 31, 2017

LIABILITIES AND SHAREHOLDERS' EQUITY (CONT.)

| | | Thousand Baht | |
|---|------|---------------|-----------|
| | Note | 2017 | 2016 |
| SHAREHOLDERS' EQUITY | | | |
| Share capital | | | |
| Authorized share capital | 19 | | |
| 584,500,000 ordinary shares of Baht 0.50 each | | 292,250 | 292,250 |
| Issued and paid-up share capital | | | |
| 584,500,000 ordinary shares of Baht 0.50 each | | 292,250 | 292,250 |
| Premium on ordinary shares | 20 | 776,416 | 776,416 |
| Retained earnings | | | |
| Appropriated | | | |
| Legal reserve | 21 | 20,351 | 13,867 |
| Unappropriated | | 125,659 | 55,106 |
| TOTAL SHAREHOLDERS' EQUITY | | 1,214,676 | 1,137,639 |
| TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY | | 1,457,342 | 1,379,851 |

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED
STATEMENT OF COMPREHENSIVE INCOME
FOR THE YEAR ENDED DECEMBER 31, 2017

| | | Thousand Baht | |
|---|------|---------------|-------------|
| | Note | 2017 | 2016 |
| Revenues | | | |
| Revenues from sales | | 1,153,919 | 571,469 |
| Revenue from rendering of services | | 132,046 | 74,048 |
| Other income | | 14,736 | 17,206 |
| Total revenues | | 1,300,701 | 662,723 |
| Expenses | | | |
| Cost of sales | | 788,388 | 422,443 |
| Cost of rendering of services | | 116,652 | 65,169 |
| Selling expenses | | 89,369 | 36,618 |
| Administrative expenses | | 145,157 | 87,749 |
| Finance costs | | 1 | 21 |
| Total expenses | | 1,139,567 | 612,000 |
| Profit before income tax expenses | | 161,134 | 50,723 |
| Income tax expenses | | 31,455 | 10,192 |
| Profit for the year | | 129,679 | 40,531 |
| Other comprehensive income | | | |
| Items that will not be reclassified to profit or loss | | | |
| Actuarial gains (losses) on defined employee benefit plans, net of tax | | (37) | 4,951 |
| Other comprehensive income (expense) for the year | | (37) | 4,951 |
| Total comprehensive income for the year | | 129,642 | 45,482 |
| Earnings per share | 27 | | |
| Basic earning per share (Bath per share) | | 0.22 | 0.11 |
| Weighted average number of ordinary shares (shares) | | 584,500,000 | 371,201,370 |

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED
STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY
FOR THE YEAR ENDED DECEMBER 31, 2017

| | | Thousand Baht | | | | |
|------|--|---------------|-------------|-------------------|----------------|---------------|
| | | Issued and | Premium | Retained earnings | | Total |
| | | paid-up | on ordinary | Appropriated | Unappropriated | shareholders' |
| Note | | share capital | shares | legal reserve | | equity |
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Notes to the financial statements form an integral part of these statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED

STATEMENT OF CASH FLOWS

FOR THE YEAR ENDED DECEMBER 31, 2017

| | Thousand Baht | |
|---|---------------|----------|
| | 2017 | 2016 |
| Cash flows from operating activities | | |
| Profit for the year | 129,679 | 40,531 |
| Adjustment to reconcile profit (loss) for the year to net cash provided by (used in) operating activities : | | |
| Bad debt and allowance for doubtful account (reversal) | (1,125) | 2,488 |
| Depreciation and amortization | 16,030 | 5,795 |
| Amortization of customer relationship | 14,901 | 1,325 |
| Loss on devaluation of inventories | (1,566) | 8,370 |
| (Gain) loss on disposals of fixed assets | 351 | 227 |
| Unrealized (gain) loss on exchange rate | 119 | (374) |
| (Gain) loss on disposals of investment | (7,998) | (2,067) |
| Unrealized (gain) loss on revaluation of temporary investments | 5,349 | (7,164) |
| Interest income | (99) | (104) |
| Dividend income | (793) | (395) |
| Employee's benefit expenses | 2,843 | 1,200 |
| Finance costs | 1 | 21 |
| Income tax expense | 31,455 | 10,192 |
| Profit from operating before changes in operating assets and liabilities | 189,147 | 60,045 |
| (Increase) decrease in operating assets | | |
| Trade and other receivables | 17,602 | (24,257) |
| Finance lease receivables | 805 | (456) |
| Unbilled receivables | (4,737) | 5,902 |
| Inventories | (56,604) | (14,577) |
| Other current assets | (160) | 795 |
| Deposit at financial institution used as collateral | - | 5,447 |
| Other non-current assets | (1,591) | (503) |
| Increase (decrease) in operating liabilities | | |
| Trade and other payables | (5,535) | (2,282) |
| Short-term provisions | (168) | 80 |
| Other current liabilities | 1,176 | (4,634) |
| Employee's benefit obligations | (1,901) | (535) |
| Other non-current liabilities | 1,450 | 575 |
| Cash received (paid) from operating | 139,484 | 25,600 |
| Finance costs | (1) | (21) |
| Income tax paid | (32,347) | (8,189) |
| Net cash provided by (used in) operating activities | 107,136 | 17,390 |

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED
STATEMENT OF CASH FLOWS (CONT.)
FOR THE YEAR ENDED DECEMBER 31, 2017

| | Thousand Baht | |
|--|---------------|----------|
| | 2017 | 2016 |
| Cash flows from investing activities | | |
| Cash transfer received from business acquisition | - | 40,166 |
| Cash receipts from temporary investments | 68,709 | 727 |
| Cash payments for purchases of property and equipment | (117,264) | (1,638) |
| Cash receipts from disposal of equipment | 581 | 291 |
| Cash payments for purchases of intangible assets | (1,359) | (6,359) |
| Interest received | 99 | 104 |
| Dividends received | 793 | 395 |
| Net cash provided by (used in) investing activities | (48,441) | 33,686 |
| Cash flows from financing activities | | |
| Cash repayment of short-term loan from financial institution | - | (8,394) |
| Dividend paid | (52,605) | (35,000) |
| Net cash provided by (used in) financing activities | (52,605) | (43,394) |
| Net increase (decrease) in cash and cash equivalents | 6,090 | 7,682 |
| Cash and cash equivalents at beginning of year | 35,866 | 28,184 |
| Cash and cash equivalents at end of year | 41,956 | 35,866 |
| Supplemental disclosures of cash flows information : | | |
| Non-Cash transection | | |
| Liabilities incurred from acquisition of fixed assets | | |
| and intangible assets - beginning of period | | |
| Inventories transferred to fixed asset | 670 | (167) |
| Construction in progress transferred to fixed assets | | |
| from business combination | (6,019) | (867) |
| <u>Add</u> Purchases of fixed assets and intangible assets | 128,017 | 8,361 |
| <u>Less</u> Cash payments | (118,623) | (7,997) |
| Liabilities incurred from acquisition of | | |
| fixed assets and intangible assets - ending of period | 4,045 | (670) |

25 | Notes to the Financial Statements

HARN ENGINEERING SOLUTIONS PUBLIC COMPANY LIMITED

NOTES TO THE FINANCIAL STATEMENTS

DECEMBER 31, 2017

1. GENERAL INFORMATION

(a) Legal status and address

The Company was registered to be a limited company 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 addresses of its registered head office are as follows:

Locate at : 19/20-22 Soi Soonvijai, Rama 9 Road, Bangkapi, 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.

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 The accounting standards are effective in the current year

The Federation of Accounting Professions (FAP) has issued Notifications to mandate the revised accounting standards, financial reporting standards, and interpretations of accounting and financial reporting standards, which are effective for the fiscal year beginning on or after January 1, 2017 are as follows:

| | |
|------------------------|---|
| TAS 1 (revised 2016) | Presentation of Financial Statements |
| TAS 2 (revised 2016) | Inventories |
| TAS 7 (revised 2016) | Statement of Cash Flows |
| TAS 8 (revised 2016) | Accounting Policies, Changes in Accounting Estimates and Errors |
| TAS 10 (revised 2016) | Events After the Reporting Period |
| TAS 11 (revised 2016) | Construction Contracts |
| TAS 12 (revised 2016) | Income Taxes |
| TAS 16 (revised 2016) | Property, Plant and Equipment |
| TAS 17 (revised 2016) | Leases |
| TAS 18 (revised 2016) | Revenue |
| TAS 19 (revised 2016) | Employee Benefits |
| TAS 20 (revised 2016) | Accounting for Government Grants and Disclosure of Government Assistance |
| TAS 21 (revised 2016) | The Effects of Changes in Foreign Exchange Rates |
| TAS 23 (revised 2016) | Borrowing Costs |
| TAS 24 (revised 2016) | Related Party Disclosures |
| TAS 26 (revised 2016) | Accounting and Reporting by Retirement Benefit Plans |
| TAS 27 (revised 2016) | Separate Financial Statements |
| TAS 28 (revised 2016) | Investments in Associates and Joint Ventures |
| TAS 29 (revised 2016) | Financial Reporting in Hyperinflationary Economies |
| TAS 33 (revised 2016) | Earnings Per Share |
| TAS 34 (revised 2016) | Interim Financial Reporting |
| TAS 36 (revised 2016) | Impairment of Assets |
| TAS 37 (revised 2016) | Provisions, Contingent Liabilities and Contingent Assets |
| TAS 38 (revised 2016) | Intangible assets |
| TAS 40 (revised 2016) | Investment Property |
| TAS 41 (revised 2016) | Agriculture |
| TAS 104 (revised 2016) | Accounting for Trouble Debt Restructuring |
| TAS 105 (revised 2016) | Accounting for Investments in Debt and Equity Securities |
| TAS 107 (revised 2016) | Financial Instruments Disclosure and Presentation |
| TFRS 2 (revised 2016) | Share-Based Payment |
| TFRS 3 (revised 2016) | Business Combinations |
| TFRS 4 (revised 2016) | Insurance Contracts |
| TFRS 5 (revised 2016) | Non-current Assets Held for Sale and Discontinued Operations |
| TFRS 6 (revised 2016) | Exploration for and Evaluation of Mineral Resources |
| TFRS 8 (revised 2016) | Operating Segments |
| TFRS 10 (revised 2016) | Consolidated Financial Statements |
| TFRS 11 (revised 2016) | Joint Arrangements |
| TFRS 12 (revised 2016) | Disclosure of Interests in Other Entities |
| TFRS 13 (revised 2016) | Fair Value Measurement |
| TSIC 10 (revised 2016) | Government Assistance - No Specific Relation to OperatingActivities |
| TSIC 15 (revised 2016) | Operating Leases - Incentives |
| TSIC 25 (revised 2016) | Income Taxes - Changes in the Tax Status of an Entity or its Shareholders |

| | |
|-------------------------|--|
| TSIC 27 (revised 2016) | Evaluating the Substance of Transactions Involving the Legal Form of a Lease |
| TSIC 29 (revised 2016) | Service Concession Arrangements: Disclosure |
| TSIC 31 (revised 2016) | Revenue-Barter Transactions Involving Advertising Services |
| TSIC 32 (revised 2016) | Intangible Assets - Web Site Costs |
| TFRIC 1 (revised 2016) | Changes in Existing Decommissioning, Restoration and Similar Liabilities |
| TFRIC 4 (revised 2016) | Determining whether an Arrangement contains a Lease |
| TFRIC 5 (revised 2016) | Right to Interests arising from Decommissioning, Restoration and Environmental Rehabilitation Funds |
| TFRIC 7 (revised 2016) | Applying the Restatement Approach under TAS 29 (revised 2016) Financial Reporting in Hyperinflationary Economics |
| TFRIC 10 (revised 2016) | Interim Financial Reporting and Impairment |
| TFRIC 12 (revised 2016) | Service Concession Arrangements |
| TFRIC 13 (revised 2016) | Customer Loyalty Programmes |
| TFRIC 14 (revised 2016) | TAS 19 (revised 2016)-The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction |
| TFRIC 15 (revised 2016) | Agreements for the Construction of Real Estate |
| TFRIC 17 (revised 2016) | Distributions of Non - cash Assets to Owners |
| TFRIC 18 (revised 2016) | Transfers of Assets from Customers |
| TFRIC 20 (revised 2016) | Stripping Costs in the Production Phase of a Surface Mine |
| TFRIC 21 (revised 2016) | Levies |

The management of the Company evaluated that these revised accounting standards, financial reporting standard, accounting standard interpretations and financial reporting standards interpretations do not have any significant impact on the financial statements in current year.

3. SIGNIFICANT ACCOUNTING POLICIES

3.1 Business combinations

The Company applies the acquisition method for all business combinations except for the business combination under common control.

The Company's control is 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 to the previous owners of the acquiree, and equity interests issued by the Company. 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 measures any non-controlling interest at its proportionate interest in the identifiable net assets of the acquiree.

Transaction costs that the Company 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 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 entered into forward foreign exchange contracts in asset and liability management activities to control exposure to fluctuations in foreign exchange rates. Further details of financial instruments are disclosed in Note 30.

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 and other comprehensive income.

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 has no policy to speculate in or engage in the trading of any derivative financial instruments.

3.4 Hedge accounting

Fair value hedges accounting

Where a derivative financial instrument hedges the changes in fair value of a recognized asset, liability or unrecognized firm commitment, any gain or loss on re-measuring the fair value or foreign currency component of the hedging instrument is recognized as income or expense or in statement of profit or loss and other comprehensive income. The hedged item is also stated at fair value in respect of the risk being hedged.

Hedge accounting is discontinued when the Company revokes the hedging relationship, the hedging instrument expires or is sold, terminated, or exercised, or no longer qualified for hedge accounting. When a forecast transaction is no longer expected to occur, the cumulative gain or loss that was deferred in equity is recognized immediately in profit or loss in the statement of profit or loss and other comprehensive income.

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 Temporary investments

Marketable equity securities held for trading are stated at fair value, with any resultant gain or loss from revaluation recognized in the statement of profit or loss and other comprehensive income.

Costs of investment sold during the year are calculated using the weighted average cost method.

3.7 Trade and other receivables

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.

3.8 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.

3.9 Property and equipment

Recognition and measurement

Equipment are stated at cost less accumulated depreciation and allowance for impairment (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 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 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 |
|-------------------------------------|-------|
| 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 yearend and adjusted if appropriate.

3.10 Goodwill

Goodwill that arises upon the acquisition of subsidiaries is included in intangible assets. The measurement of goodwill at initial recognition is described in Note 3.1. Subsequent to the initial recognition, goodwill is measured at cost less impairment loss. The Company assesses an impairment of goodwill annually, without consideration of indication that such goodwill may be impaired.

3.11 Intangible asset

Other intangible assets

Other intangible asset, which are acquired by the Company 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 yearend and adjusted if appropriate.

3.12 Impairment of assets

The carrying amounts of the Company'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 cashgenerating 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.

3.13 Lease

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 is 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.

3.14 Employee benefits

Short-term benefits

The Company 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 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 recognizes all actuarial gains (losses) immediately in other comprehensive income.

3.15 Revenues

3.15.1 Sale of goods

Revenue excluding value added taxes is arrived at after deduction of trade discounts.

Revenue from sale is recognized in the statement of profit or loss and other comprehensive income when the significant risks and rewards of ownership have been transferred to the buyer. No revenue is recognized if there is continuing management involvement with the goods or there are significant uncertainties regarding recovery of the consideration due, associated costs or the probable return of goods.

3.15.2 Revenues from rendering of service

Revenues from rendering of service are recognized when services are rendered to customers.

3.15.3 Revenue from service contract

Contract revenue includes the initial amount agreed in the contract plus any variations in contract work, claims and incentive payments to the extent that it is probable that they will result in revenue and can be measured reliably. As soon as the outcome of a service contract can be estimated reliably, contract revenue and expenses are recognized in the statement of profit or loss and other comprehensive income in proportion to the stage of completion of the contract.

The stage of completion is assessed by reference to the proportion that contract costs incurred for work performed to date bear to the estimated total contract costs.

When the outcome of a service contract cannot be estimated reliably, revenue contract is recognized only to the extent of contract costs incurred that it is probably will be recoverable.

When it is probable that total contract costs will exceed total contract revenue, the expected loss on a contract shall be recognized in the statement of profit or loss and other comprehensive income.

The completed part of service, which has not yet been delivered for acceptance or for billing, is recorded as unbilled receivables.

3.15.4 Rental income

Rental income under operating leases is recognized in the statement of profit or loss and other comprehensive income on a straight-line basis over the term of the lease. Lease incentives granted are recognized as an integral part of the total rental income. Contingent rentals are recognized as income in the accounting period in which they are earned.

3.15.5 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.

3.16 Expenses

Expenses are recognized in the statement of profit or loss and other comprehensive income on an accrual basis.

3.17 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.

3.18 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 consolidated 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 believes 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 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.

3.19 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.

3.20 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 2016), leasing transactions that are within the scope of TAS 17 (Revised 2016), and measurements that have some similarities to fair value but are not fair value, such as net realizable value in TAS 2 (Revised 2016) or value in use in TAS 36 (Revised 2016).

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.

3.21 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's 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 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 shall estimate the recoverable amount of the asset.

Estimated construction project costs

The Company 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 has 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 has recorded provision for penalty from delay delivery in the financial statements. However, actual results could differ from the estimates.

Classification of leases

In determining whether a lease should be classified as an operating lease or finance lease, the Company's management has to use judgement to determine whether significant risk and rewards of ownership of the leased asset has been transferred, taking into consideration terms and conditions of the arrangement.

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 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's 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 17.

(2) Key sources of estimation uncertainty

Fair value measurements and valuation processes

In estimating the fair value of an asset or liability, the Company uses marketobservable data to the extent it is available. Where Level 1 inputs are not available, the Company engages qualified external valuers 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 29.

4. ACQUISITIONS OF BUSINESSES

On November 2, 2016, the Company increased the registered capital by Baht 117,250,000, from Baht 175,000,000 to Baht 292,250,000 by issuing newly 234,500,000 ordinary shares with the par value of Baht 0.50 per share, at the offering price at fair value of Baht 2.88 per share. It represents the issued and paid-up ordinary shares amount of Baht 117,250,000 and premium on ordinary shares of Baht 558,110,000, total value of Baht 675,360,000. The Company took such increased shares in exchange of the entire business transfer of Chillmatch Co., Ltd. and QIIS Co., Ltd. (see Note 19).

Fair value of the net identifiable assets acquired on the date of acquisition were as follows:

| | Thousand Baht | | |
|--|----------------------|-------------------|----------|
| | Chillmatch Co., Ltd. | Q I I S Co., Ltd. | Total |
| Assets | | | |
| Cash and cash equivalents | 31,326 | 8,840 | 40,166 |
| Trade and other receivables | 76,867 | 69,457 | 146,324 |
| Current portion of finance lease receivables | - | 9,612 | 9,612 |
| Inventories | 66,612 | 50,600 | 117,212 |
| Other current assets | 723 | 650 | 1,373 |
| Deposit at financial institution used as collateral | - | 4,167 | 4,167 |
| General investment | 242 | - | 242 |
| Long-term finance lease receivables | - | 9,993 | 9,993 |
| Equipment | 9,167 | 19,286 | 28,453 |
| Intangible assets | 7,943 | 7,801 | 15,744 |
| Customer relationship | 75,364 | 28,943 | 104,307 |
| Deferred tax assets | 1,657 | 1,682 | 3,339 |
| Other non-current assets | 2,485 | 7,046 | 9,531 |
| (Less) Liabilities | | | |
| Short-term borrowing from a financial institution | - | (8,394) | (8,394) |
| Trade and other payables | (45,510) | (37,313) | (82,823) |
| Income tax payable | (2,541) | (5,776) | (8,317) |
| Other current liabilities | (4,008) | (3,508) | (7,516) |
| Other non-current liabilities | (1,839) | (7,011) | (8,850) |
| Employee benefit obligations | (4,858) | (4,735) | (9,593) |
| Deferred tax liabilities | (16,584) | (7,698) | (24,282) |
| Net identifiable assets and liabilities | 197,046 | 143,642 | 340,688 |
| Consideration paid in exchange of shares(Non-cash items) | 397,112 | 278,248 | 675,360 |
| Goodwill | 200,066 | 134,606 | 334,672 |

5. RELATED PARTY TRANSACTIONS

The Company 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 Engineering Co., Ltd. | Thailand | Related company | Directorships and/or common shareholders |
| Q II S Co., Ltd.* (dissolve in 2016) | Thailand | Subsidiary | Major shareholders |
| Chillmatch Co., Ltd.* (dissolve in 2016) | Thailand | Subsidiary | Major shareholders |
| 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 |
|---|--|
| 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 |

* On November 29, 2016, the Company has entered into an agreement to transfer the business of both companies which are the subsidiaries under the business transfer process (Note 4)

Significant agreements with related parties

The Company entered into office building rental agreement as follows:

| As at December 31, 2017 | | | |
|----------------------------|----------------------------|---------|-----------------------|
| | Lessor | Period | Rate per month (Baht) |
| Office rental agreement | Mr. Jain Charnnarong | 3 years | 53,100 |
| | Harn Engineering Co., Ltd. | 3 years | 498,996 |
| Warehouse rental agreement | Mrs. Sirima Iamsakulrat | 3 years | 280,900 |

Balances with the related parties as at December 31, 2017 and 2016 consisted of :

| | | Thousand Baht | |
|-----------------------------|--|---------------|-------|
| | | 2017 | 2016 |
| Trade and other receivables | | | |
| Harn Engineering Co., Ltd. | | 2,360 | 3,820 |

Transactions for the years ended December 31, JKLM and JKLI with related parties were summarized as follows :

| | | Thousand Baht | |
|---|--|---------------|--------|
| | | 2017 | 2016 |
| Purchase of goods | | | |
| Chillmatch Co., Ltd. | | - | 4 |
| Other income | | | |
| Q II S Co., Ltd. | | - | 2,681 |
| Chillmatch Co., Ltd. | | - | 1,155 |
| | | - | 3,836 |
| Office rental and service expenses | | | |
| Harn Engineering Co., Ltd. | | 5,988 | 5,469 |
| Mr. Jain Charnnarong | | 637 | 451 |
| | | 6,625 | 5,920 |
| Warehouse rental expenses | | | |
| Mrs. Sirima Iamsakulrat | | 3,371 | - |
| Expenses for directors and key management | | | |
| Directors remuneration | | 3,190 | 3,051 |
| Key management's benefit | | | |
| Shot-term employee's benefits | | 12,255 | 8,162 |
| Post-employment benefits | | 442 | 311 |
| | | 15,887 | 11,524 |

Management benefit expenses represents the benefits paid to the Company's management and directors such as salaries, related benefit and directors' remuneration, including the benefit paid by other means. The Company's 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 :

| | | Thousand Baht | |
|--------------------|--------------------|---------------|---------------|
| | | 2017 | 2016 |
| Cash in hand | | 150 | 152 |
| Cash at Banks | - current accounts | 4,117 | 10,459 |
| | - savings accounts | 37,689 | 21,591 |
| Deposit in transit | | - | 2,668 |
| Mutual fund | | - | 996 |
| Total | | 41,956 | 35,866 |

7. TEMPORARY INVESTMENTS

Temporary investments were consisted of :

| | | Thousand Baht | | |
|---|--|-------------------------|--|----------------|
| | | As at December 31, 2017 | | |
| | | Cost value | Unrealized gain (loss) on revaluation of investments | Fair value |
| Trading securities | | | | |
| - Investment units | | 197,304 | 1,815 | 199,119 |
| - Investments in listed securities | | 6 | - | 6 |
| <u>Less</u> Allowance for diminution in value of investment | | (6) | - | (6) |
| Total | | 197,304 | 1,815 | 199,119 |

| | | Thousand Baht | | |
|---|--|-------------------------|--|----------------|
| | | As at December 31, 2016 | | |
| | | Cost value | Unrealized gain (loss) on revaluation of investments | Fair value |
| Trading securities | | | | |
| - Investment units | | 225,540 | 6,316 | 231,856 |
| - Investments in listed securities | | 32,481 | 848 | 33,329 |
| <u>Less</u> Allowance for diminution in value of investment | | (6) | - | (6) |
| Total | | 258,015 | 7,164 | 265,179 |

8. TRADE AND OTHER RECEIVABLES

Trade and other receivables were consisted of :

| Thousand Baht | | |
|---|----------------|----------------|
| | 2017 | 2016 |
| Trade receivable | | |
| Trade receivables - other companies | 262,887 | 259,332 |
| <u>Less</u> Allowance for doubtful accounts | (4,290) | (5,415) |
| Net | 258,597 | 253,917 |
| Other receivables | | |
| Other receivables - related parties | 2,360 | 3,820 |
| Other receivables - other companies | 225 | 3,217 |
| Accrued retentions | 9,150 | 9,678 |
| Deposit of inventories | 1,452 | 17,369 |
| Prepaid expenses | 2,863 | 2,782 |
| Accrued income | 194 | 534 |
| Total other receivables | 16,244 | 37,400 |
| Total trade and other receivables | 274,841 | 291,317 |

Trade receivables are classified by aging as follows :

| Thousand Baht | | |
|--|----------------|----------------|
| | 2017 | 2016 |
| Current | 184,348 | 162,303 |
| Overdue | | |
| Less than 3 months | 69,660 | 88,461 |
| Over 3 months up to 6 months | 4,120 | 560 |
| Over 6 months up to 12 months | 1,065 | 1,792 |
| Over 12 months | 3,694 | 6,216 |
| Total | 262,887 | 259,332 |
| <u>Less</u> Allowance for doubtful account | (4,290) | (5,415) |
| Trade receivables, net | 258,597 | 253,917 |

9. FINANCE LEASE RECEIVABLES

Finance lease receivables were consisted of :

| | Thousand Baht | |
|--|---------------|----------|
| | 2017 | 2016 |
| Finance lease receivables - printing devices | 19,256 | 20,061 |
| <u>Less</u> Current portion | (8,783) | (10,017) |
| Long-term finance lease receivables | 10,473 | 10,044 |

The minimum lease payments and present value of minimum lease payments which receivable will be paid under the financial lease agreements as at December 31, 2017 and 2016, are as follows:

| | Thousand Baht | | | |
|-----------------------------------|------------------------|---|------------------------|---|
| | 2017 | | 2016 | |
| | Minimum lease payments | Present value of minimum lease payments | Minimum lease payments | Present value of minimum lease payments |
| Collection period | | | | |
| Within 1 year | 12,280 | 8,783 | 13,756 | 10,017 |
| Over 1 year but less than 5 years | 14,852 | 10,473 | 15,049 | 10,044 |
| | 27,132 | 19,256 | 28,805 | 20,061 |
| <u>Less</u> Deferred interest | (7,876) | - | (8,744) | - |
| | 19,256 | 19,256 | 20,061 | 20,061 |

10. INVENTORIES

Inventories were consisted of :

| | Thousand Baht | |
|--|---------------|----------|
| | 2017 | 2016 |
| Finished goods | 242,933 | 211,587 |
| Goods in transit | 61,746 | 40,958 |
| Total | 304,679 | 252,545 |
| <u>Less</u> Allowance for loss on devaluation of inventories | (13,413) | (14,979) |
| Inventories | 291,266 | 237,566 |

Decline in value of inventory recognized as cost of goods sold for the years ended December 31, 2017 and 2016 were Baht 4.70 million and Baht 2.76 million, respectively.

11. PROPERTY, AND EQUIPMENT

Property, and equipment were consisted of :

| | Thousand Baht | | | |
|-------------------------------------|-----------------------------|---|----------|-----------------------------|
| | Balance Dec. 31, 2016 | Transactions during the year Additions | Decrease | Balance Dec. 31, 2017 |
| <u>Cost</u> | | | | |
| Land | - | 114,950 | - | 114,950 |
| Tool and equipment | 3,427 | 244 | (19) | 3,687 |
| Furniture and office equipment | 23,809 | 1,616 | (512) | 24,913 |
| Vehicles | 27,551 | 829 | (2,250) | 26,130 |
| Assets for rental and demonstration | 34,645 | 6,033 | (3,846) | 36,680 |
| Total | 89,432 | 123,672 | (6,627) | 206,360 |
| <u>Accumulated depreciation</u> | | | | |
| Tool and equipment | (1,987) | (598) | 11 | (2,590) |
| Furniture and office equipment | (9,796) | (4,522) | 463 | (13,855) |
| Vehicles | (13,504) | (2,294) | 1,401 | (14,397) |
| Assets for rental and demonstration | (22,580) | (4,872) | 2,244 | (25,050) |
| Total | (47,867) | (12,286) | 4,119 | (55,892) |
| Property and equipment - net | 41,565 | | | 150,468 |

| | Thousand Baht | | | |
|---------------------------------------|-----------------------------|---|---|-----------------------------|
| | Balance Dec. 31, 2015 | Transactions during the year Additions | Acquire through business combination | Balance Dec. 31, 2016 |
| <u>Cost</u> | | | | |
| Tool and equipment | 1,192 | 63 | 2,177 | 3,427 |
| Furniture and office equipment | 10,354 | 2,060 | 11,458 | 23,809 |
| Vehicles | 12,691 | 18 | 15,633 | 27,551 |
| Assets for rental and demonstration | 3,929 | 628 | 30,116 | 34,645 |
| Building and construction in progress | - | - | 868 | - |
| Total | 28,166 | 2,769 | 60,252 | 89,432 |

| | Thousand Baht | | | | |
|-------------------------------------|------------------|------------------------------|---|----------|------------------|
| | Balance | Transactions during the year | | | Balance |
| | Dec. 31, 2015 | Additions | Acquire through business combination | Decrease | Dec. 31, 2016 |
| <u>Accumulated depreciation</u> | | | | | |
| Tool and equipment | (746) | (251) | (995) | 5 | (1,987) |
| Furniture and office equipment | (3,622) | (2,238) | (3,991) | 55 | (9,796) |
| Vehicles | (4,221) | (1,228) | (8,183) | 128 | (13,504) |
| Assets for rental and demonstration | (3,355) | (609) | (18,630) | 14 | (22,580) |
| Total | (11,944) | (4,326) | (31,799) | 202 | (47,867) |
| Equipment - net | 16,222 | | | | 41,565 |

| | Thousand Baht | |
|---------------------------------------|---------------|-------|
| | 2017 | 2016 |
| Depreciation for the years | | |
| - cost of sale | 4,502 | 1,195 |
| - selling and administrative expenses | 7,784 | 3,131 |
| Total | 12,286 | 4,326 |

As at December 31, 2017 and 2016, the Company had equipment which were fully depreciated but still in use with the cost price of Baht 24.30 million and Baht 23.31 million, respectively.

According to the minutes of the Board of Directors' Meeting No.4/2017 dated October 18, 2017, it had a unanimous resolution to approve purchasing land size 5 - 0 - 90 rai, amounted Baht 114.95 million which is located in Tambon Dok Mai (North Samrong) Praveth (Prakhanong) Bangkok to increase the warehouse center management efficiency, and the ownership already transferred at Land Department is on October 30, 2017.

12. 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. (See Note 4).

Testing for impairment of goodwill

During the year ended December 31, 2017, 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 |
|------------------------------|--|---|
| • Discount rate | 10.8% for Chillmatch Co., Ltd. 12.3% for Q II S Co., Ltd. | The discount rate which is a pre-tax rate that reflects the specific risk of the particular business unit |
| • Terminal Value Growth Rate | 1% | Appropriate estimated rate |
| • EBITDA growth | 4.7% for Chillmatch Co., Ltd. 5.4 for Q II S Co., Ltd. | Experience and industry |

13. CUSTOMER RELATIONSHIP

Customer relationship were consisted of :

| | Thousand Baht | | |
|--------------------------------------|------------------|------------------------------|------------------|
| | Balance | Transactions during the year | Balance |
| | Dec. 31, 2016 | Addition Decrease | Dec. 31, 2017 |
| <u>Cost</u> | | | |
| Customer relationship | 104,308 | - | 104,308 |
| <u>Less</u> accumulated amortization | (1,325) | (14,901) | (16,226) |
| Customer relationship - net | 102,983 | | 88,082 |

| | Thousand Baht | | |
|--------------------------------------|------------------|---|------------------|
| | Balance | Transactions during the year | Balance |
| | Dec. 31, 2015 | Acquire through business combination Decrease | Dec. 31, 2016 |
| <u>Cost</u> | | | |
| Customer relationship | - | 104,308 | 104,308 |
| <u>Less</u> accumulated amortization | - | (1,325) | (1,325) |
| Customer relationship - net | - | | 102,983 |

| | Thousand Baht | |
|--|---------------|-------|
| | 2017 | 2016 |
| | 14,901 | 1,325 |
| Amortization cost for the years - selling expenses | | |

14. INTANGIBLE ASSET

Intangible asset were consisted of :

| | Thousand Baht | | | | |
|--------------------------------------|------------------|------------------------------|----------|----------------------|------------------|
| | Balance | Transactions during the year | | | Balance |
| | Dec. 31, 2016 | Addition | Decrease | Transfer In / out | Dec. 31, 2017 |
| <u>Cost</u> | | | | | |
| Software licenses | 32,397 | 3,926 | - | - | 36,323 |
| Software in progress | 40 | 419 | (40) | (9) | 410 |
| Total | 32,437 | 4,345 | (40) | (9) | 36,733 |
| <u>Less</u> Accumulated amortization | | | | | |
| Software licenses | (5,688) | (3,744) | - | - | (9,432) |
| Total | (5,688) | (3,744) | - | - | (9,432) |
| Intangible asset - net | 26,749 | | | | 27,301 |

| | Thousand Baht | | | | |
|--------------------------------------|------------------|------------------------------|---|----------|------------------|
| | Balance | Transactions during the year | | | Balance |
| | Dec. 31, 2015 | Addition | Acquire through business combination | Decrease | Dec. 31, 2016 |
| <u>Cost</u> | | | | | |
| Software licenses | 7,249 | 8,192 | 16,956 | - | 32,397 |
| Software in progress | 833 | 5,077 | 1,640 | (7,510) | 40 |
| Total | 8,082 | 13,269 | 18,596 | (7,510) | 32,437 |
| <u>Less</u> Accumulated amortization | | | | | |
| Software licenses | (1,367) | (1,469) | (2,852) | - | (5,688) |
| Total | (1,367) | (1,469) | (2,852) | - | (5,688) |
| Intangible asset - net | 6,715 | | | | 26,749 |

| | Thousand Baht | |
|---------------------------------------|---------------|-------|
| | 2017 | 2016 |
| Amortization cost for the years | | |
| • selling and administrative expenses | 3,744 | 1,469 |

As at December 31, 2017 and 2016, the Company had intangible assets which were fully depreciated but still in use with the cost price of Baht 1.01 million and Baht 0.91 million, respectively.

15. DEFERRED TAX ASSETS AND DEFERRED TAX LIABILITIES

Changes in deferred tax assets and deferred tax liabilities for the years ended December 31, 2017 and 2016 were summarized as follows:

| | Thousand Baht | | | |
|--|---------------|-----------------------------------|---------------|---------------|
| | Balance as at | Income (expenses) during the year | | Balance as at |
| | Dec. 31, 2016 | In profit or | In other | Dec. 31, 2017 |
| | | loss | comprehensive | |
| | | | income | |
| Deferred tax assets: | | | | |
| Allowance for doubtful accounts | 1,196 | (314) | - | 882 |
| Allowance for devaluation of inventories | 2,996 | (313) | - | 2,683 |
| Allowance for impairment of investment | 1 | - | - | 1 |
| Employee's benefit obligations | 2,018 | 480 | 9 | 2,507 |
| Foreign currency forward contracts | 35 | 80 | - | 115 |
| Total | 6,246 | (67) | 9 | 6,188 |
| Deferred tax liabilities: | | | | |
| Inventories (from fair value adjustment of business combination) | 1,511 | 1,254 | - | 257 |
| Equipment (from fair value adjustment of business combination) | 1,281 | 448 | - | 833 |
| Unrealized gain (loss) on temporary investments | 1,433 | 1,070 | - | 363 |
| Customer relationship (from fair value adjustment of business combination) | 20,596 | 2,980 | - | 17,616 |
| Depreciation of equipment | 276 | 1 | - | 275 |
| Finance lease assets | 106 | (193) | - | 299 |
| Total | 25,203 | 5,560 | - | 19,643 |
| Deferred tax assets (liabilities) - net | (18,957) | | | (13,455) |
| Deferred tax income (expenses) - net | | 5,493 | 9 | |

| | Thousand Baht | | | | |
|---|-----------------------------------|---|-----------------------------------|-------------------------------------|-----------------------------------|
| | Balance as at Dec. 31, 2015 | Acquire through business combination | Income (expenses) during the year | | Balance as at Dec. 31, 2016 |
| | | | In profit or loss | In other comprehensive income | |
| Deferred tax assets: | | | | | |
| Allowance for doubtful accounts | 585 | 423 | 188 | - | 1,196 |
| Allowance for devaluation of inventories | 1,322 | 1,695 | (21) | - | 2,996 |
| Allowance for impairment of investment | 2 | - | (1) | - | 1 |
| Employee's benefit obligations | 1,692 | 1,339 | 225 | (1,238) | 2,018 |
| Foreign currency forward contracts | - | 20 | 15 | - | 35 |
| Total | 3,601 | 3,477 | 406 | (1,238) | 6,246 |
| Deferred tax liabilities: | | | | | |
| Inventories (from fair value adjustment of business combination) | - | 2,085 | 574 | - | 1,511 |
| Equipment (from fair value adjustment of business combination) | - | 1,336 | 55 | - | 1,281 |
| Unrealized gain (loss) on temporary investments | - | - | (1,433) | - | 1,433 |
| Customer relationship (from fair value adjustment of business combination) | - | 20,861 | 265 | - | 20,596 |
| Depreciation of equipment | 151 | 31 | (94) | - | 276 |
| Finance lease assets | - | 107 | 1 | - | 106 |
| Total | 151 | 24,420 | (632) | - | 25,203 |
| Deferred tax assets (liabilities) - net | 3,450 | (20,943) | | | (18,957) |
| Deferred tax income (expenses) - net | | | (226) | (1,238) | |

16. TRADE AND OTHER PAYABLES

Trade and other payables were consisted of :

| | Thousand Baht | |
|---|---------------|---------|
| | 2017 | 2016 |
| Trade payables | | |
| Trade payables - other companies | 109,507 | 104,569 |
| Other payables | | |
| Other payables | 7,635 | 7,640 |
| Accrued commission expenses | 15,725 | 13,582 |
| Accrued bonus | 17,039 | 15,842 |
| Advance from customers for goods and services | 13,668 | 12,649 |
| Accrued expenses | 6,555 | 14,376 |
| Other | 4,346 | 7,908 |
| Total | 64,968 | 71,997 |
| Total trade and other payables | 174,475 | 176,566 |

17. EMPLOYEE'S BENEFIT OBLIGATIONS

Movements of employee's benefit obligations for the year ended December 31, 2017 and 2016 were as follows :

| | Thousand Baht | |
|--|---------------|---------|
| | 2017 | 2016 |
| Beginning balance defined benefit obligations | 13,910 | 9,841 |
| Benefit paid by plan acquired through business combination | - | 9,593 |
| Current service costs and interest | 2,843 | 1,200 |
| Actuarial (gain) loss | 46 | (6,189) |
| Benefits paid by the plan | (1,901) | (535) |
| Ending balance defined benefit obligations | 14,898 | 13,910 |

The statements of comprehensive income for the years ended December 31, 2017 and 2016 are as follows :

| | Thousand Baht | |
|-------------------------|---------------|-------|
| | 2017 | 2016 |
| Current service costs | | |
| Cost of sales | 322 | 102 |
| Selling expenses | 597 | 296 |
| Administrative expenses | 1,419 | 386 |
| Total | 2,338 | 784 |
| Interest on obligation | 505 | 416 |
| Total | 2,843 | 1,200 |

Principal actuarial assumptions at the reporting date for the year ended December 31, 2017 and 2016 are as follow :

| | Thousand Baht | |
|------------------------|--|--|
| | 2017 | 2016 |
| Discount rate | 2.40 - 2.99 | 3.50 |
| Salary increase rate | 4.50 | 6.57 |
| Employee turnover rate | 0 - 29 | 0 - 24 |
| Mortality rate | Thai Mortality Ordinary Table 2017 | Thai Mortality Ordinary Table 2008 |

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, 2017 and 2016 are summarized below:

| | 2017 | | | |
|----------------------|-------------|-----------------|---------------|----------|
| | % | | Thousand Baht | |
| | increase | decrease | increase | decrease |
| Discount rate | 2.90 - 3.49 | (1.90) - (2.49) | (722) | 778 |
| Salary increase rate | 1 | (1) | 1,303 | (1,139) |
| Turnover rate | 20 | (20) | (1,702) | 2,069 |

| | 2016 | | | |
|----------------------|----------|----------|---------------|----------|
| | % | | Thousand Baht | |
| | increase | decrease | increase | decrease |
| Discount rate | 0.50 | (0.50) | (658) | 701 |
| Salary increase rate | 0.50 | (0.50) | 612 | (572) |
| Turnover rate | 0.50 | (0.50) | (721) | 512 |

18. 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 2017 and 2016, the Company contributed Baht 3.42 million and Baht 2.20 million, respectively, to the program.

19. SHARE CAPITAL

On November 1, 2016, the Company's Extraordinary Shareholder's Meeting No. 1/2016 passed resolutions as follows:

- 19.1 Purchase and acceptance of the Entire Business Transfer of Chillmatch Co., Ltd. and its subsidiary. The process is consisted of 2 steps as follows :
 - 19.1.1 To acquire Chillmatch Co., Ltd.'s entire business which includes investment in QIIS Co., Ltd. The entire business value is Baht 614,390,000 and the Company will issue its new 234,500,000 ordinary shares with par value of Baht 0.50 per share, at the offering price of Baht 2.62 per share, total value of Baht 614,390,000. On the same day of the entire business transfer, Chillmatch Co., Ltd. will proceed with dissolution and liquidation on November 29, 2016 and return the remaining assets (including 234,500,000 newly issued ordinary shares of the Company) to its existing shareholders under the liquidation process.
 - 19.1.2 After the purchase and acceptance of the entire business transfer of Chillmatch Co., Ltd., the Company will become a shareholder of QIIS Co., Ltd., holding 99.99 percent of QIIS's registered capital. After the dissolution of Chillmatch Co., Ltd., QIIS Co., Ltd. will transfer its entire business to the Company and proceed with dissolution on December 1, 2016 and liquidation process.
- 19.2 Increase of the registered capital of the Company by Baht 117,250,000, from Baht 175,000,000 to be Baht 292,250,000 by issuing newly 234,500,000 ordinary shares with the par value of Baht 0.50 per share.
- 19.3 The offering of the newly issued 234,500,000 ordinary shares of the Company to Chillmatch Co., Ltd., which is private placement, with the par value of Baht 0.50 per share at the offering price of Baht 2.62 per shares business in exchange of the entire business transfer (See Note 4).

Referring to the Entire Business Transfer Contract of Chillmatch Co., Ltd. and its subsidiary, the consideration transfer consist of 234,500,000 ordinary shares at the offering price of Baht 2.62 per share in total amount of Baht 614,390,000. The consideration transfer was also approved by the Extraordinary Shareholder's Meeting No. 1/2559 dated November 1, 2016. However, Thai Financial Reporting Standard No.3 "Business Combination" has set rules to value the consideration transfer at fair value at the execution date. The Company registered and issued the ordinary shares to the shareholders of Chillmatch Co., Ltd. on November 29, 2016 and the closing market price of the Company's stock in the Stock Exchange of Thailand was Baht 2.88 per share. (See Note 4). Thus, the valuation of the consideration transfer changed to 675,360,000 Baht.

The Company registered the increased capital with the Department of Business Development, Ministry of Commerce on November 2, 2016 and the Company fully paid for such capital increase on November 29, 2016.

20. 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.

21. 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.

22. APPROPRIATION OF RETAINED EARNINGS

On February 24, 2017, the Company's Board of Directors No. 1/2017 passed the resolution to declare dividend at Baht 0.09 per share for 584,500,000 issued and paid up ordinary shares, in total amount of Baht 52,605,000. The dividend declaration had been approved from Annual General

Shareholders' Meeting No. 1/2017 on April 28, 2017. On April 28, 2017, the Annual General Meeting of Shareholders passed a resolution to pay dividend from operations of year 2016 of QRK, KKK, KKK shares at the rate of Baht K.LK per share, in the total amount of Baht QR million.

23. 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, 2017 and 2016, the Company paid contributions to provident fund and recognized as expenses amounting to Baht 3.76 million and Baht 1.88 million, respectively.

24. 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 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

Operating segment by business in the statement of comprehensive income for the years ended December 31, 2017 and 2016 were as follows :

| | 2017 | | | | | 2016 | | | | |
|--|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Segment 1 | Segment 2 | Segment 3 | Segment 4 | Total | Segment 1 | Segment 2 | Segment 3 | Segment 4 | Total |
| Revenue from sale of goods | 482,079 | 86,175 | 312,506 | 273,159 | 1,153,919 | 474,798 | 48,531 | 23,955 | 24,185 | 571,469 |
| Revenue from rendering of services | 97,466 | - | - | 34,580 | 132,046 | 71,288 | - | 14 | 2,746 | 74,048 |
| Cost of sale of goods | (352,168) | (63,921) | (216,282) | (156,017) | (788,388) | (357,067) | (34,174) | (16,369) | (14,833) | (422,443) |
| Cost of rendering of services | (84,783) | - | - | (31,869) | (116,652) | (62,798) | - | (132) | (2,239) | (65,169) |
| Gross profit | 142,594 | 22,254 | 96,224 | 119,853 | 380,925 | 126,221 | 14,357 | 7,468 | 9,859 | 157,905 |
| Other income | | | | | 14,736 | | | | | 17,206 |
| Selling expenses | | | | | (89,369) | | | | | (36,618) |
| Administrative expenses | | | | | (145,157) | | | | | (87,749) |
| Finance cost | | | | | (1) | | | | | (21) |
| Profit before income tax expense | | | | | 161,134 | | | | | 50,723 |
| Income tax expense | | | | | (31,455) | | | | | (10,192) |
| Profit for the periods | | | | | 129,679 | | | | | 40,531 |
| Other comprehensive income (expense) | | | | | (37) | | | | | 4,951 |
| Total comprehensive income for the periods | | | | | 129,642 | | | | | 45,482 |

Operating segment by business in the statement of financial position as at December 31, 2017 and 2016 were as follows :

| | 2017 | | | | | 2016 | | | | |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Segment 1 | Segment 2 | Segment 3 | Segment 4 | Total | Segment 1 | Segment 2 | Segment 3 | Segment 4 | Total |
| Assets for reportable segments | | | | | | | | | | |
| Trade receivables | 118,278 | 19,085 | 70,717 | 54,807 | 262,887 | 114,378 | 10,165 | 77,506 | 57,283 | 259,332 |
| Inventories | 136,777 | 9,088 | 87,324 | 58,077 | 291,266 | 128,967 | 8,661 | 55,110 | 44,828 | 237,566 |
| Customer relationship | - | - | 63,624 | 24,458 | 88,082 | - | - | 74,391 | 28,592 | 102,983 |
| Goodwill | - | - | 200,066 | 134,606 | 334,672 | - | - | 200,066 | 134,606 | 334,672 |
| Assets under common use | | | | | | | | | | |
| • Equipment | - | - | - | - | 150,468 | - | - | - | - | 41,565 |
| • Intangible assets | - | - | - | - | 27,301 | - | - | - | - | 26,749 |
| • Others | - | - | - | - | 302,666 | - | - | - | - | 376,984 |
| Total assets for reportable segments | 255,055 | 28,173 | 421,731 | 271,948 | 1,457,342 | 243,345 | 18,826 | 407,073 | 265,309 | 1,379,851 |
| Total liabilities for reportable segments | - | - | - | - | 242,666 | - | - | - | - | 242,212 |

Thousand Baht

For the years ended December 31, 2017 and 2016, there was no revenue from sales with a single external customers contributed 10% or more to the total revenue.

The Company has revenues from service with external customers over 10% of total revenue from service. For the years ended December 31, 2017 and 2016, the Company has revenue from service with 2 major customers in amount of Baht 25.86 million and Baht 21.13 million, respectively.

25. EXPENSE BY NATURE

Expenses by nature for the years ended December 31, 2017 and 2016 consist of the significant expenses were as follows:

| | Thousand Baht | |
|------------------------------------|------------------|----------------|
| | 2017 | 2016 |
| Purchases of finished goods | 936,388 | 601,134 |
| Other changes in finished goods | (31,346) | (113,522) |
| Employee expenses | 145,633 | 78,543 |
| Office rental and service expenses | 13,893 | 6,464 |
| Depreciation and amortization | 30,931 | 7,120 |
| Others | 44,068 | 32,261 |
| Total | 1,139,567 | 612,000 |

26. TAX EXPENSE (INCOME)

26.1 Major components of tax expense (income)

For the years ended December 31, 2017 and 2016 consisted of:

| | Thousand Baht | |
|--|---------------|---------------|
| | 2017 | 2016 |
| Income tax expense (income) shown in profit or loss: | | |
| Current tax expense: | | |
| Income tax expense for the years | 36,948 | 9,966 |
| Deferred tax expense (income): | | |
| Changes in temporary differences relating to the original recognition and reversal | (5,493) | 226 |
| Total | 31,455 | 10,192 |

26.2 A numerical reconciliation between tax expense (income) and the product of accounting profit multiplied by the applicable tax rate.

For the years ended December 31, 2017 and 2016, which were summarized as follows:

| | Thousand Baht | |
|---|---------------|--------|
| | 2017 | 2016 |
| Accounting profit (loss) for the years | 161,134 | 50,723 |
| The applicable tax rate (%) | 20% | 20% |
| Tax expense (income) at the applicable tax rate | 32,227 | 10,145 |
| Reconciliation items: | | |
| Tax effect of expenses that are not deductible in determining tax profit: | | |
| • Expenses not allowed as expenses in determining taxable profit | 92 | 84 |
| Addition expenses deductible for tax purpose | (651) | (263) |
| Others | (213) | 226 |
| Total reconciliation items | (772) | 47 |
| Total tax expense (income) | 31,455 | 10,192 |

26.3 A numerical reconciliation between the average effective tax rate and the applicable tax rate.

For the years ended December 31, 2017 and 2016 were summarized as follows:

| | 2017 | | 2016 | |
|---|-------------------------------|-----------------|-------------------------------|-----------------|
| | Tax amount (Thousand Baht) | Tax rate (%) | Tax amount (Thousand Baht) | Tax rate (%) |
| Accounting profit (loss) before tax expense for the years | 161,134 | | 50,723 | |
| Tax expense (income) at the applicable tax rate | 32,227 | 20.00 | 10,145 | 20.00 |
| Reconciliation items | (772) | (0.48) | 47 | 0.09 |
| Tax expense (income) at the average effective tax rate | 31,455 | 19.52 | 10,192 | 20.09 |

27. 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.

| | 2017 | 2016 |
|---|-------------|-------------|
| Profit (loss) for the years (Thousand Baht) | 129,679 | 40,531 |
| Weighted average number of ordinary shares (Shares) | 584,500,000 | 371,201,370 |
| Basic earnings (loss) per share (Baht per share) | 0.22 | 0.11 |

28. COMMITMENTS AND CONTINGENT LIABILITIES

As at December 31, 2017 and 2016, the Company had commitments and contingent liabilities as follows :

28.1 As at December 31, 2017 and 2016, the Company has letters of guarantee issued by banks for goods and work under system installation service agreement in the amount of Baht 18.78 million and Baht 12.64 million, respectively.

28.2 The credit facilities with financial institutions as at December 31, 2017 and 2016 consisted of:

| Type of credit | Facilities (Million Baht) | | Referred interest rate (% per annum) | |
|--|---------------------------|--------|--------------------------------------|---------------|
| | 2017 | 2016 | 2017 | 2016 |
| Bank overdrafts | 11.00 | 17.00 | MOR | MOR |
| | | | Fixed deposit | Fixed deposit |
| Letter of credit/trust receipt | 160.00 | 231.00 | MLR-1, MMR | MLR-1, MMR |
| Letter of guarantee | 24.47 | 30.00 | 1.65 - 2% | 2% |
| Forward exchange contracts | 562.39 | 363.39 | | |
| Promissory notes | 5.00 | 15.00 | MLR | MLR |
| Up country check purchase | - | 3.00 | | |
| Total | 762.86 | 659.39 | | |
| Forward foreign exchange contracts (Million US dollars) | 3.00 | 3.00 | | |

28.3 Minimum lease and service payments are as follows :

| Payment periods | Million Baht | |
|--|--------------|-------|
| | 2017 | 2016 |
| Due not later than 1 year | 13.71 | 12.83 |
| Due later than 1 year but not later than 5 years | 12.65 | 22.03 |

Rental and service expenses for the years ended December 31, 2017 and 2016 are Baht 13.89 million and Baht 6.36 million, respectively.

29. FAIR VALUE MEASUREMENT

The Company 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 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, 2017 and 2016, the Company had the following financial assets and liabilities that were measured at fair value on which the fair value hierarchy is classified as follows :

| Thousand Baht | | | | |
|---|---------|---------|---------|---------|
| 2017 | | | | |
| | Level 1 | Level 2 | Level 3 | Total |
| Financial assets (liabilities) measured at fair value | | | | |
| Investments in investment units | - | 199,119 | - | 199,119 |
| Foreign currency forward contracts | - | (514) | - | (514) |
| Thousand Baht | | | | |
| 2016 | | | | |
| | Level 1 | Level 2 | Level 3 | Total |
| Financial assets (liabilities) measured at fair value | | | | |
| Investments in investment units | - | 231,856 | - | 231,856 |
| Investments in equity securities | 33,329 | - | - | 33,329 |
| Foreign currency forward contracts | - | (168) | - | (168) |

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 period, 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, 2017 and 2016.

| Financial assets and financial liabilities | Fair value (Baht) | | Fair value Hierarchy | Valuation techniques and key inputs for fair value measurement |
|---|-------------------|-----------|-------------------------|---|
| | 2017 | 2016 | | |
| Financial assets (liabilities) | | | | |
| Foreign currency forward contracts | (514,283) | (168,223) | 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 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.

30. FINANCIAL INSTRUMENTS

Financial risk management policies

The Company is 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 does not hold or use derivative financial instruments for speculative or trading purposes.

Risk management is integral to the whole business of the Company. The Company has 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's 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 defines 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 is exposed to foreign currency risk relating to purchases which are denominated in foreign currencies. The Company primarily utilizes 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, 2017 and 2016, the Company has financial liabilities in foreign currencies as follows:

| | Foreign Currencies | |
|------------|--------------------|---------|
| | 2017 | 2016 |
| Not hedged | | |
| US dollar | 288,857 | 788,508 |
| SG dollar | 200 | 161 |
| EURO | 111,944 | - |
| GBP | 80,109 | 43,278 |

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's customer base, management does not anticipate material losses from its debt collection.

Liquidity risk

The Company monitors its liquidity risk and maintains a level of cash and cash equivalents deemed adequate by management to finance the Company's operations and to mitigate the effects of fluctuations in cash flows.

31. EVENT AFTER THE REPORTING PERIOD

On February 23, 2018, the Company's Board of Directors No. 2/2018 passed the resolution to declare dividend at Baht 0.14 per share for 584,500,000 issued and paid up ordinary shares, in total amount of Baht 81,830,000. The dividend declaration will be proposed to the next Annual General Shareholders' Meeting for approval.

32. RECLASSIFICATIONS

Certain reclassifications have been made in the statement of financial position as at December 31, 2016 to conform to the classifications used in the statement of financial position as at December 31, 2017 as follows:

| | Thousand Baht | | |
|-----------------------------|------------------------|---------------------|-----------------|
| | As at 31 December 2016 | | |
| | As previously reported | Increase (decrease) | As reclassified |
| Trade and other receivables | 273,948 | 17,369 | 291,317 |
| Other current assets | 18,119 | (17,369) | 750 |
| Trade and other payables | 171,451 | 5,115 | 176,566 |
| Other current liabilities | 9,756 | (5,115) | 4,641 |

33. THE REVISED ACCOUNTING STANDARDS ARE NOT YET EFFECTIVE IN THE CURRENT YEAR

The Federation of Accounting Professions (FAP) has issued Notifications to mandate the use of accounting standards, financial reporting standards, and interpretations of accounting and financial reporting standards that are revised.

These revised accounting standards which are effective for the fiscal year beginning on or after January 1, 2018 are as follows:

| | |
|-----------------------|--|
| TAS 1 (revised 2017) | Presentation of Financial Statements |
| TAS 2 (revised 2017) | Inventories |
| TAS 7 (revised 2017) | Statement of Cash Flows |
| TAS 8 (revised 2017) | Accounting Policies, Changes in Accounting Estimates and Errors |
| TAS 10 (revised 2017) | Events After the Reporting Period |
| TAS 11 (revised 2017) | Construction Contracts |
| TAS 12 (revised 2017) | Income Taxes |
| TAS 16 (revised 2017) | Property, Plant and Equipment |
| TAS 17 (revised 2017) | Leases |
| TAS 18 (revised 2017) | Revenue |
| TAS 19 (revised 2017) | Employee Benefits |
| TAS 20 (revised 2017) | Accounting for Government Grants and Disclosure of Government Assistance |
| TAS 21 (revised 2017) | The Effects of Changes in Foreign Exchange Rates |
| TAS 23 (revised 2017) | Borrowing Costs |
| TAS 24 (revised 2017) | Related Party Disclosures |
| TAS 26 (revised 2017) | Accounting and Reporting by Retirement Benefit Plans |
| TAS 27 (revised 2017) | Separate Financial Statements |
| TAS 28 (revised 2017) | Investments in Associates and Joint Ventures |
| TAS 29 (revised 2017) | Financial Reporting in Hyperinflationary Economies |
| TAS 33 (revised 2017) | Earnings Per Share |
| TAS 34 (revised 2017) | Interim Financial Reporting |
| TAS 36 (revised 2017) | Impairment of Assets |
| TAS 37 (revised 2017) | Provisions, Contingent Liabilities and Contingent Assets |
| TAS 38 (revised 2017) | Intangible assets |
| TAS 40 (revised 2017) | Investment Property |
| TAS 41 (revised 2017) | Agriculture |
| TFRS 2 (revised 2017) | Share-Based Payment |
| TFRS 3 (revised 2017) | Business Combinations |
| TFRS 4 (revised 2017) | Insurance Contracts |
| TFRS 5 (revised 2017) | Non-current Assets Held for Sale and Discontinued Operations |
| TFRS 6 (revised 2017) | Exploration for and Evaluation of Mineral Resource |
| TFRS 8 (revised 2017) | Operating Segments |

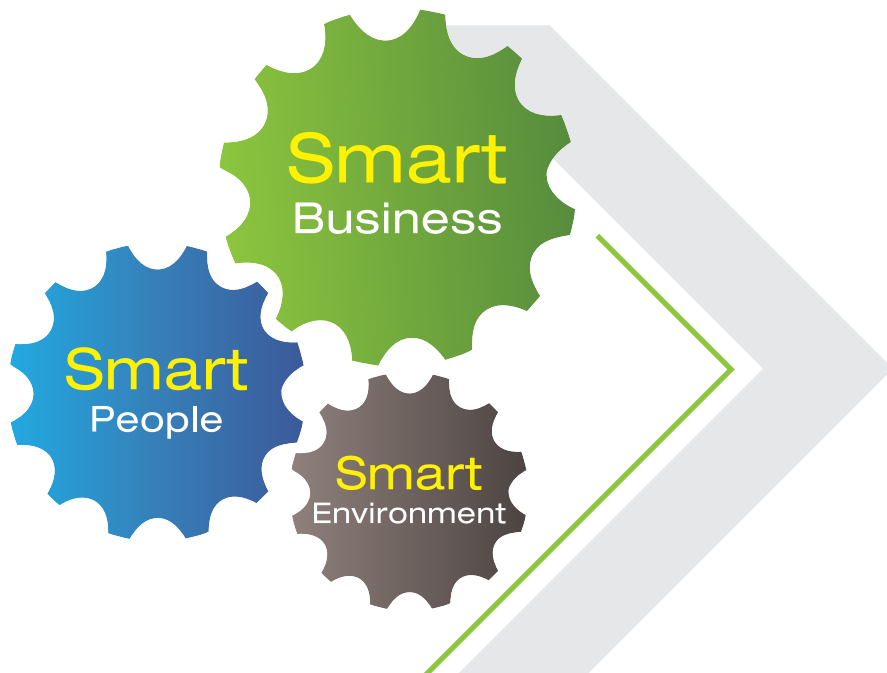
| | |
|-------------------------|--|
| TFRS 10 (revised 2017) | Consolidated Financial Statements |
| TFRS 11 (revised 2017) | Joint Arrangements |
| TFRS 12 (revised 2017) | Disclosure of Interests in Other Entities |
| TFRS 13 (revised 2017) | Fair Value Measurement |
| TSIC 10 (revised 2017) | Government Assistance - No Specific Relation to Operating Activities |
| TSIC 15 (revised 2017) | Operating Leases - Incentives |
| TSIC 25 (revised 2017) | Income Taxes - Changes in the Tax Status of an Entity or its Shareholders |
| TSIC 27 (revised 2017) | Evaluating the Substance of Transactions Involving the Legal Form of a Lease |
| TSIC 29 (revised 2017) | Service Concession Arrangements: Disclosure |
| TSIC 31 (revised 2017) | Revenue-Barter Transactions Involving Advertising Services |
| TSIC 32 (revised 2017) | Intangible Assets - Web Site Costs |
| TFRIC 1 (revised 2017) | Changes in Existing Decommissioning, Restoration and Similar Liabilities |
| TFRIC 4 (revised 2017) | Determining whether an Arrangement contains a Lease |
| TFRIC 5 (revised 2017) | Right to Interests arising from Decommissioning, Restoration and Environmental Rehabilitation Funds |
| TFRIC 7 (revised 2017) | Applying the Restatement Approach under TAS 29 (revised 2017) Financial Reporting in Hyperinflationary Economics |
| TFRIC 10 (revised 2017) | Interim Financial Reporting and Impairment |
| TFRIC 12 (revised 2017) | Service Concession Arrangements |
| TFRIC 13 (revised 2017) | Customer Loyalty Programmes |
| TFRIC 14 (revised 2017) | TAS 19 (revised 2017)-The Limit on a Defined Benefit Asset, Minimum Funding Requirements and their Interaction |
| TFRIC 15 (revised 2017) | Agreements for the Construction of Real Estate |
| TFRIC 17 (revised 2017) | Distributions of Non - cash Assets to Owners |
| TFRIC 18 (revised 2017) | Transfers of Assets from Customers |
| TFRIC 20 (revised 2017) | Stripping Costs in the Production Phase of a Surface Mine |
| TFRIC 21 (revised 2017) | Levies |

The management of the Company believe that these accounting standards, financial reporting standards, accounting standard interpretations and financial reporting standards interpretations which are revised will not have any significant impact on the financial statements for the year when they are initially applied.

34. APPROVAL OF FINANCIAL STATEMENTS

These financial statements were authorized for issue by the Board of Directors of the Company on February 23, 2018.

Quality Living through



Sustainable Engineering



บริษัท หาญ เอ็นจิเนียริง โซลูชั่นส์ จำกัด (มหาชน)

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