



A Better Tomorrow

# 2017 | Sustainable Development Report

Delta Electronics (Thailand) Public Company Limited



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We are  
CELEBRATING  
**30** of  
*Thirty Years* Innovation





## **Delta Electronics (Thailand) Public Company Limited**



Delta Electronics receives Rising Star Award and  
Thailand Sustainability Investment Award  
at SET Sustainability Awards 2017



Delta commits to conducting business with the highest standards of integrity, transparency and accountability to drive sustainability and deliver mutual benefits to stakeholders. Our founding mission- "To provide innovative, clean and energy-efficient solutions for a better tomorrow", underpins our sustainable growth and guides our ethical business practice and care for our environment and communities as we pioneer innovative solutions to engender a healthy society.

As a responsible global citizen, Delta abides by international standards including RBA (former EICC) Electronic Industry Code of Conduct, the Universal Declaration of Human Rights and Global Reporting Initiative (GRI). We benchmark our Environmental, Social, Governance (ESG) performance with the world's most sustainable companies. Delta leverages robust participation on every level of our company to actualize the policies proposed by our Sustainable Development (SD) Committee and facilitated by our Corporate Social Responsibility (CSR) team. Our strategic sustainability priorities consider the impact of global shifts in economic power and demographics on society. We recognize the challenges that rapid urbanization, climate change and resource scarcity bring to communities and strive to be part of the solution.

In 2017, Delta SD projects reduced the electricity intensity and waste in production and our training programs upgraded team member's skill sets to encompass a range of new technologies that boost eco-efficiency. We reexamined our Delta Supplier Code of Conduct, which includes our eco-policy for partners, and

stepped-up engagement with government and communities to heighten awareness of energy conservation and resource optimization. Delta Industrial Automation Academy and talent development programs continued to foster innovation and support SMEs.

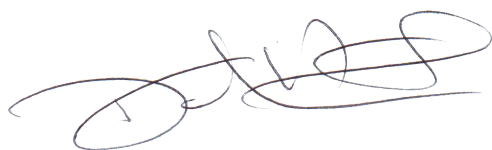
Our passion for sustainability resulted in many awards in 2017. We would like to thank the following organizations for their recognitions:

1. S&P Dow Jones Indices and RobecoSAM for the DJSI Sustainability Index Inclusion: Bronze Class
2. Stock Exchange of Thailand (SET) for the 2017 SET Sustainability Award: Rising Star and Thailand Sustainability Investment
3. CSR Club, Thai Listed Companies, the Securities and Exchange Commission, Thailand and Thaipat Institute for The Sustainability Report Award 2017 : Recognition
4. Thaipat Institute for inclusion into their 2017 ESG 100 Universe
5. U.S. Green Building Council (USGBC) for a Gold Level certification of LEED-EBOM
6. Carbon Disclosure Project (CDP) for a CDP listing B Level
7. The Ministry of Industry of Thailand for the Green Industry Award 2017 Level 4
8. Thai Institute of Directors Association (IOD) CG Report (CGR) for its "Excellent" CGR Score

We would also like to thank all the government and private organizations who have assessed and given recognitions to Delta in 2017.

Delta SD achievements could not be possible without the dedication and diligence of our team members who add value for our stakeholders while supporting our communities. We are proud of how Delta has matured in global citizenship and excited to set bold new targets in-line with current world trends. With everyone at Delta behind the company's transformation, you can look forward to us passing many more milestones in our ongoing growth as a sustainable business that empowers all stakeholders.

Yours sincerely,



Hsieh Shen-yen

President of Delta Electronics (Thailand) PCL.  
and Chairman of Sustainable Development Committee

# Mission

To provide innovative, clean and energy-efficient solutions for better tomorrow

## Corporate Culture

Strive to change, and pursue sustainability

- **Innovation**  
Create new ideas and take them to success effectively.
- **Quality**  
Consistently deliver superior performance and pursue improvement all the time.
- **Agility**  
Identify emerging trends and act quickly to capture new opportunities.
- **Teamwork**  
Fully leverage global value network and collaborate to achieve mutual goals



อนุรักษ์  
พลังงาน  
สิ่งแวดล้อม

Smarter. Greener. Together.  
Our Brand Promise

## 2017 Highlights

Delta carried out consistent SD activities to fulfill the company's mission "To provide innovative, clean and energy-efficient solutions for a better tomorrow". The company's SD program scope covers economic activities related to society and the environment and aligns with its short to long-term business strategy. Our highly effective SD activities have attracted strong interest and cooperation from stakeholders.

During the past year, the company extended its SD scope to corporate citizenship for enrichment that benefits society. This includes a student training program and Industrial Automation Smart Lab that supports Thailand's educational system and enhances research capabilities with both resources and IT personnel. Additionally, the company disseminates information on energy conservation to employees' families and communities.

### RobecoSAM Award for Excellence in Sustainability



February 12, 2018 – Delta Thailand won the RobecoSAM Bronze Class Award for its excellent sustainability performance and is the only Thai company to earn this award in the electronics category. This recognition reinforces Delta's position as a global sustainability leader within its industry.

### Rising Star Award and Thailand Sustainability Investment at SET Sustainability Awards 2017



Delta Thailand won the Rising Star Award at the SET Sustainability Awards 2017 ceremony. This is the first time Delta was placed in the category for listed companies with market capitalization higher than 100,000 million baht. For the third year Delta was selected as one of the outstanding SET listed companies for the Thailand Sustainability Investment Award.

### Sustainability Report Award: Recognition Level 2017



December 14, 2017 – Delta Thailand won the Sustainability Report Award 2017: Recognition Level at the CSR Club Conference 2017.

The award drives development in Thailand's capital market and economy while motivating registered companies to implement corporate social responsibility (CSR), sustainability and good governance that is in line with the UN Sustainable Development Goals.

## Excellence in Corporate Governance Score



October 17, 2017- Delta Thailand got "Excellent" score for Corporate Governance (CG) on the Thai Institute of Directors Association (IOD) Corporate Governance Report (CGR), with support from the Stock Exchange of Thailand.

Based on the assessment system of the National Committee on Corporate Governance, Delta is one of the 110 companies (18%) scoring 90% or above.



## Three Gold Level National Occupational Safety and Health Awards 2017

October 5, 2017 - Delta Thailand was won three Gold Level National Awards for Safety, Occupational Health and Environment 2017 at the 31st National Safety Week.

## Eco Factory Award 2017 Management



September 28, 2017 - Delta Thailand won the Eco Factory Award 2017. The award recognizes factories with a balanced approach to economic, environmental and social aspects according to the Eco Industrial Town sustainable development framework that drives the Thailand 4.0 era.

## Multiple Recognitions for Greenhouse Gas Management



## Multiple Recognitions for Greenhouse Gas Management

September 7, 2017 - Delta Thailand won four awards and 22 certificates at the 100 Hearts Effort to Reduce Global Warming Event. The event was organized by Thailand Greenhouse Gas Management Organization (TGO) to promote low carbon footprint activities and mitigate global warming issues in Thailand.



## Green Industry Award 2017

September 11, 2017 - Delta Thailand won the Green Industry Award 2017 Level 4 (Green Culture) as part of the Ministry of Industry's efforts for Thai Green Industry.



### Eco Factory Award 2017

Delta Electronics (Thailand) PCL. received the Eco Factory Award 2017 at the Eco Innovation Forum 2017. Dr. Somchai Hanhirun, Permanent Secretary to the Ministry of Industry, presented the award to Mr. Pitisook Jitkasem, Delta's Senior Manager for General Administration. The award recognizes factories with balanced approach to economic, environmental and social aspects according to the sustainable development framework for Eco Industrial Town which is a major driver for Thai industries toward Thailand 4.0 era.

### Thailand Energy Awards 2017 in Two Categories



August 21, 2017 - Delta Thailand won the prestigious Thailand Energy Award 2017 in two categories, Excellent Personnel in Energy Management and Excellent Energy Management Team.

Delta Thailand was selected as one of 100 best-performing publicly listed companies in ThaiPAT's ESG100 universe for the 3rd consecutive year.

### Delta Thailand Head Office Receives LEED Gold Certification from the U.S. Green Building Council



### Thailand's Top Corporate Brand Values Award



August 16, 2017- Delta Thailand has been honored for the third consecutive year at Thailand's Top Corporate Brand Values Awards organized by the Chulalongkorn University and the Stock Exchange of Thailand. Delta achieved the highest corporate brand value in Thailand worth 50,381 million baht.

August 1, 2017- Delta Thailand head office in Bangpoo, Samutprakarn received the LEED (Leadership in Energy and Environmental Design) Gold certification in the EBOM (Existing Buildings: Operations and Maintenance) category. It is the first company in Thailand to receive the certification under the EBOM category.

### Delta Innovation Product Launch and Press Conferenc for Thailand 4.0





Delta Electronics (Thailand) PCL. is the only Thai company to have been ranked in the top 5 on "Electronic Equipment, Instruments & Components" sector in DJSI (Dow Jones Sustainability Index). In addition, the company has won the RobecoSAM Bronze Class 2018 distinction which is awarded to company scoring within a range of 5% to 10% of the sector's top performing company's score.

## Award for Excellence in Sustainability

February 12, 2018 – Delta Electronics (Thailand) PCL. has won a prestigious global distinction for its excellent sustainability performance and is the only Thai company to earn this award in the electronics category. This recognition reinforces Delta Electronics (Thailand) PCL.'s position as a global sustainability leader within its industry.

## Two Awards at SET Awards 2016



February 2, 2017– Delta Thailand won the Outstanding CEO Awards and the Outstanding Company Performance Award for listed companies with SET market capitalization of THB30 billion to THB100 billion.

100 อันดับหลักทรัพย์ที่มีความโดดเด่นในการดำเนินงานด้านธุรกิจอย่างยั่งยืน (ESG100)

AAV	ADVANC	AHC	ALLCON	ARROW	BAFS	BAY	BCP	BDM	BEAUTY
BEM	BKD	BWG	CENTEL	CHG	CK	CM	CPN	D	DCC
DELTA	DTAC	DTC	EGCO	ERW	FPI	FORTH	GC	GLOW	GPSC
GYT	HANA	HMPIC	ILINK	INTUCH	IRC	IRPC	ITEL	IVL	KBANK
KCE	KKP	KSL	KTG	KTC	KYE	LIABANK	LPH	LPN	M
MBK	MINT	MSC	NSI	NTV	OGC	PB	PM	PR	PREB
PPS	PSH	PT	S&J	SAT	SCB	SCC	SIS	SMIT	SMPC
SNC	SFA	SPALI	SPI	SPRC	SSSC	STANLY	SYNEX	SYNTEC	TACC
TASCO	TCAP	TF	THAN	THP	TISCO	TKS	TMB	TMD	TMT
TOG	TOP	TPCH	TPCORP	TTW	TU	TVO	UFP	VNT	WINNER

■ Agri & Food Industry (AGFO) 
 ■ Consumer Products (CONSUM) 
 ■ Financials (FINANC) 
 ■ Industrials (INDUS) 
 ■ Property & Construction (PROPCON) 
 ■ Resources (RESOURC) 
 ■ Services (SERVIC) 
 ■ Technology (TECH)

## Included in Thaipat Institute's ESG100 Universe Three Years in a Row

Delta Electronics (Thailand) Public Company Limited is selected to be one of 100 best-performing publicly listed companies in Thaipat's ESG100 universe for the 3rd consecutive year.

The ESG Rating unit from Thaipat Institute, the pioneer in the development of Thailand's corporate sustainability database, has been compiling the ESG100 list since 2015. ESG100 refers to the 100 best performing publicly listed companies in ESG (Environment, Social and Governance) areas. Only 100 out of the 656 companies on the Thai stock market (excluding businesses that have been undergoing rehabilitation) have made it to the ESG100 list. Thaipat Institute has assessed all these companies based on more than 12,148 data points of publicly available ESG information from six data sources.



Delta Electronics (Thailand) Public Company Limited (referred to as DET or Delta Thailand in the following content) is a manufacturer and exporter of power supplies and electronics equipment and parts, the company was inaugurated on June 16, 1988, with THB 40 million in initial capital. The company was converted to a public limited company on September 23, 1994, and listed on the Stock Exchange of Thailand on July 24, 1995, under the symbol of "DELTA". As of December 31, 2017, the company has THB 1,259,000 in registered capital with THB 1,247,381,614 in paid-up capital at THB 1 par value per share.

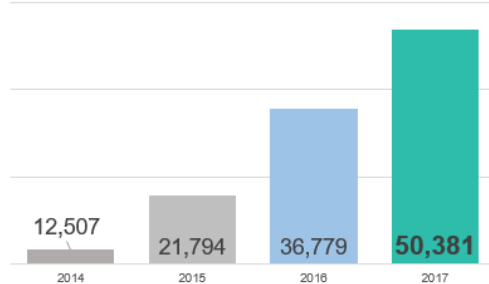
Delta Thailand is one of the world's leading producers of power supplies and electronic components that include cooling fans, EMI filters and solenoids. Our businesses are now mainly involved in power management solutions. Our current power management product line covers various types of power supplies including power systems for information technology, telecommunications, industrial applications, office automation and medical industries; and power supplies for servers, networking and DC-DC converters and adapters. Presently, we are extending our businesses to cover renewable energies such as solar power, wind power, electric vehicle and hybrid-electric vehicles.

More information about our products : <http://www.deltathailand.com/main.php#nogo>

<b>1990</b> Inauguration of first Bangpoo factory for production of magnetic and EMI filter	<b>1993</b> Started production of display products and power supplies	<b>1994</b> Delta Electronics (Thailand) Public Company Limited established	<b>1995</b> Listed on Stock Exchange of Thailand	<b>1998</b> Awarded Best Factory Award by the Ministry of Labor and Social Welfare
<b>1999</b> Inauguration of new Bangpoo factory for production of power supplies	<b>2002</b> Inauguration of Wellgrow factory for production of industrial cooling fans	<b>2003</b> Acquired ASCOM Energy System, Switzerland	<b>2004</b> Received BOI privileges for Skill Technology and Innovation (STI)	<b>2005-2017</b> Listed as one of the SET50 Index by the Stock Exchange of Thailand
<b>2006</b> Inauguration of Slovakia factory in Nova Dubnica	<b>2007</b> Delta designed and produced mCube 90 wins CES and IF international design awards	<b>2008</b> Inauguration of India's Rudrapur Green factory certified by LEED	<b>2009</b> Started automotive power business	<b>2010</b> Started Greenhouse Gas Inventory Disclosure
<b>2011</b> <ul style="list-style-type: none"> <li>First Company in Thailand to receive ISO14064-1 for Greenhouse Gas Emissions and Removals Standard</li> <li>Started Branding and Regional Business</li> <li>Started material localization to generate income to local entrepreneurs</li> </ul>			<b>2012</b> <ul style="list-style-type: none"> <li>Awarded Prime Minister Best Industry Award</li> <li>Started solar energy business</li> </ul>	
<b>2013</b> <ul style="list-style-type: none"> <li>Awarded ASEAN Business Award in Innovation for Large Enterprise</li> <li>Started wind power business in India</li> <li>Started sustainable development public disclosure in accordance with GRI standards</li> </ul>			<b>2014</b> <ul style="list-style-type: none"> <li>Awarded Alpha Southeast Asia Institutional Investor Corporate for Best Senior IR Support</li> <li>Awarded SET Awards 2014 in the Category of "Best Company Performance"</li> </ul>	
<b>2015</b> <ul style="list-style-type: none"> <li>Attained Excellence in CG score and Top Quartile Companies</li> <li>Included in ESG100 universe by ThaiPat Institute</li> </ul>			<b>2017</b> <ul style="list-style-type: none"> <li>Awarded a Bronze Class medal in ITC Industry in RobecoSAM's Sustainability Yearbook 2018</li> <li>Scored B Among Top 7 Thai Companies on CDP List in First Submission</li> <li>Certified LEED-EBOM Gold Level for HQ Building in Thailand</li> </ul>	

## The Brand

Mil THB



Delta Corp. brand

**59%**

avg. annual growth

**302%**

growth in 2017  
from base year 2014

Delta Electronics (Thailand) PCL. partners with our subsidiaries and business associates (collectively known as "Delta" in this section, to increase Delta's global brand value and recognition through Delta brand products and solutions. According to Thailand's top university Chulalongkorn University's 2017

assessment, Delta Thailand's brand corporate value has grown by an impressive 302% from 2014.

Delta's brand emphasizes innovation and energy conservation and combines robust business development with comprehensive corporate social responsibility. The company seizes on the latest global trends of today's fast-changing industrial landscape and climate change issues by creating ultra-efficient and reliable energy-saving solutions for environmental protection, energy conservation and value-add.



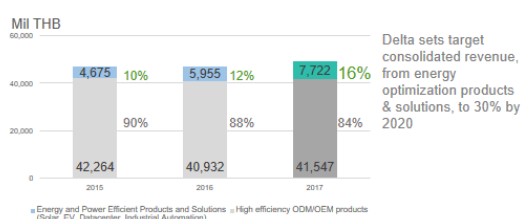
Delta showcases DC Wallbox EV charger innovated to respond to rapid urbanization, climate change and resource scarcity and technology breakthrough in Thailand Industry Expo 4.0 at Impact Arena Exhibition and Convention Center

"To provide innovative, clean and energy-efficient solutions for a better tomorrow." is both our corporate mission and our commitment to environmental protection. Delta commits to its brand promise of "Smarter. Greener. Together." in our core competencies and product development. Our brand not only embodies what we demand of ourselves, but also is a commitment to our investors, customers, and employees alike. Our strong belief in Delta's brand drives the synergy of leading technology and business partner cooperation in our ongoing creation of ultra-efficient and reliable products and services including power and component products, industrial automation, energy management systems and consumer electronics products that support a smart and environment-friendly future.

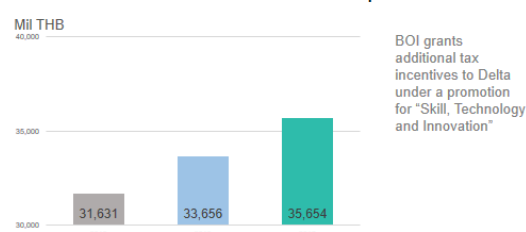
# Driving Growth with Energy and Power Efficient Products and Solutions

Economic growth is the remarkable prove of Delta Thailand and all of its subsidiaries' corporate governance policy to bring the utmost benefits to the Company, its shareholders and other stakeholders. Energy and Power Efficient Products and Solutions are Delta's future growth engines and drive our businesses in the Solar, EV, Datacenter and Industrial Automation sectors. We develop our state-of-the-art products and solutions in response to current global conditions in climate change, natural resources and social needs. Delta seeks to add value for stakeholders and society while maintaining our sustainability through ethical business strategy, responsible operations and energy-efficient innovations.

## Sales Revenue

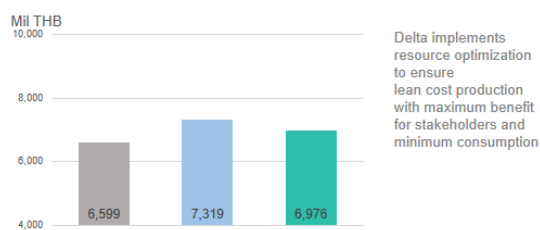


## Sales Revenue covered by Thailand BOI's promotion

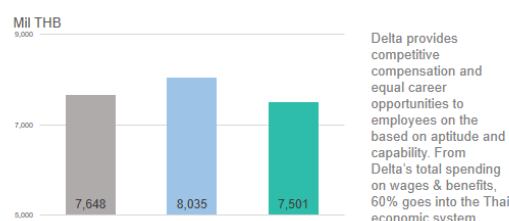


More info: [http://www.deltathailand.com/pdf/ir/2018/EN/Annual%20R\\_E\\_10-08-18\\_small\\_1-en.pdf](http://www.deltathailand.com/pdf/ir/2018/EN/Annual%20R_E_10-08-18_small_1-en.pdf)

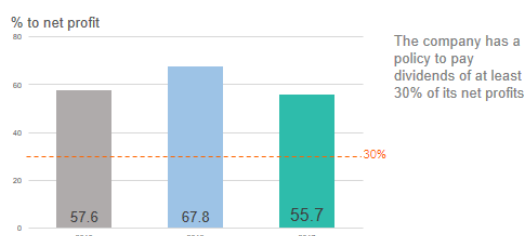
## Operating Cost



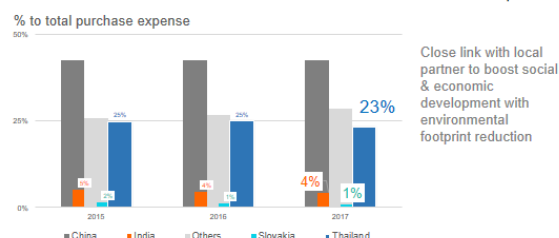
## Employee Wage & Benefits



## Paid Dividend



## Geographic Distribution of Global Raw Material Purchase Expense



- Key financial performance from Delta's financial statement is compiled using International Financial Reporting Standards (IFRS), published by the International Accounting Standards Board (IASB).
- Geographic Distribution of Global Raw Material Purchase Expense is compiled from the company's Enterprise Resource Planning (ERP) System

# Our Commitment

**D**elta Electronics (Thailand) Public Company Limited commits to conducting business based on these Corporate Social Responsibility (CSR) policy and practices. Delta has always conducted our business in the spirit of Sustainable Development (SD) and CSR. The company's mission statement, "To provide innovative, clean and energy-efficient solutions for a better tomorrow", is an apt reflection of how important SD and CSR are in every aspect of our business practice.

For this reason, Delta's SD Strategy aligns the company's mission statement with the Environmental, Social and Governance (ESG) aspects that form the backbones of SD and CSR. The company considers SD as the only way to do business without exception. To reinforce commitment at every level to the company's mission statement, Delta developed the brand promise- "Smarter. Greener. Together." Each word in this brand promise corresponds to the key materiality issues for our company: Innovation, Eco-efficient Operation and Partnership respectively. With this in mind, Delta continues to set SD initiatives and roadmap that aim to deliver added value to our stakeholders while ensuring sustainability in all three ESG aspects and thus create a better world.

The commitment to **enable added value** for the stakeholders are:

**Employee:** To ensure employees' well-being with respect of human rights and providing good welfare.

**Supplier:** Regard suppliers as partners to collaborate continuously for win-win situation while abiding by the spirit of SD with socially responsible practices and ethical operation.

**Customer:** To provide high value-added products and solutions which are ethically produced with high performance to ensure minimum energy wastage.

**Shareholders:** To provide good returns with good corporate governance with transparency and accountability.

**Community:** Give back to the communities through providing useful assistance them in self-development, education aids and social innovations.

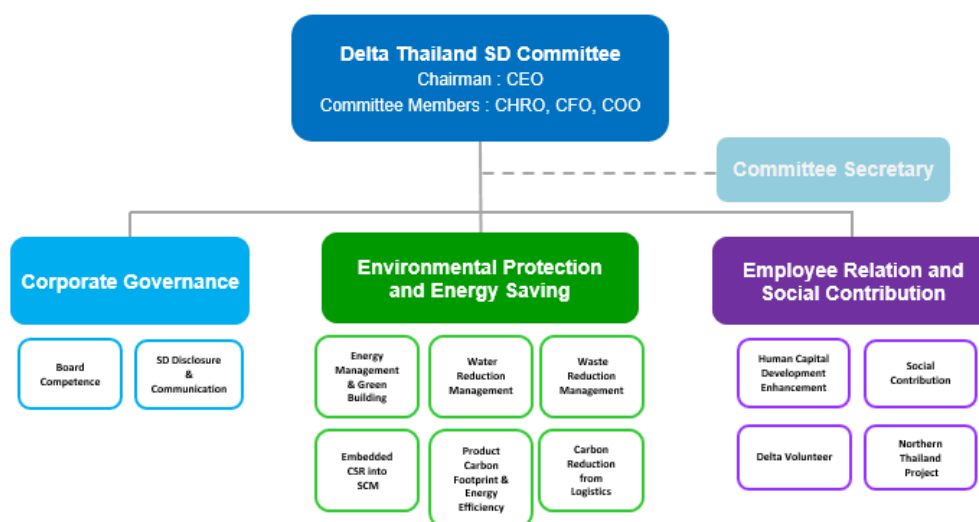
Delta believes a sustainable business not only performs well for stakeholders but also contributes in every capacity, in direct and indirect ways, to forge a better tomorrow for the world.

## Sustainable Development Organization

Delta Electronics (Thailand) PCL. has a sustainable development organization for the full implementation of our Global Sustainability Development Strategy. The main body in the organization is the SD Committee which includes the company President, Chief Human Resource Officer (CHRO), Chief Financial Officer (CFO) and Chief Operations Officer (COO). The SD Committee reviews and monitors each CSR project, at periodic meetings, according to project-specific standards.

The SD Committee secretary proposes benchmarking procedures for the company's CSR projects and from time to time communicates the global sustainable development practices to the committee for their reference. The committee secretary is responsible to arrange quarterly CSR meetings to inform the SD Committee and operational leaders on the progress of each company CSR project. In addition, the committee secretary will follow-up on and compile the results of each project in an annual report to the Board of Directors.

The CSR target fields form three categories: Corporate Governance; Environmental Protection and Energy Saving; and Employee Relation and Social Contribution. Each category has relevant directors and managers who define key performance indicators (KPI), set up specific achievement goals and take responsibility for the project's progress and on-time execution as per the company's policy and relevant standard requirements.

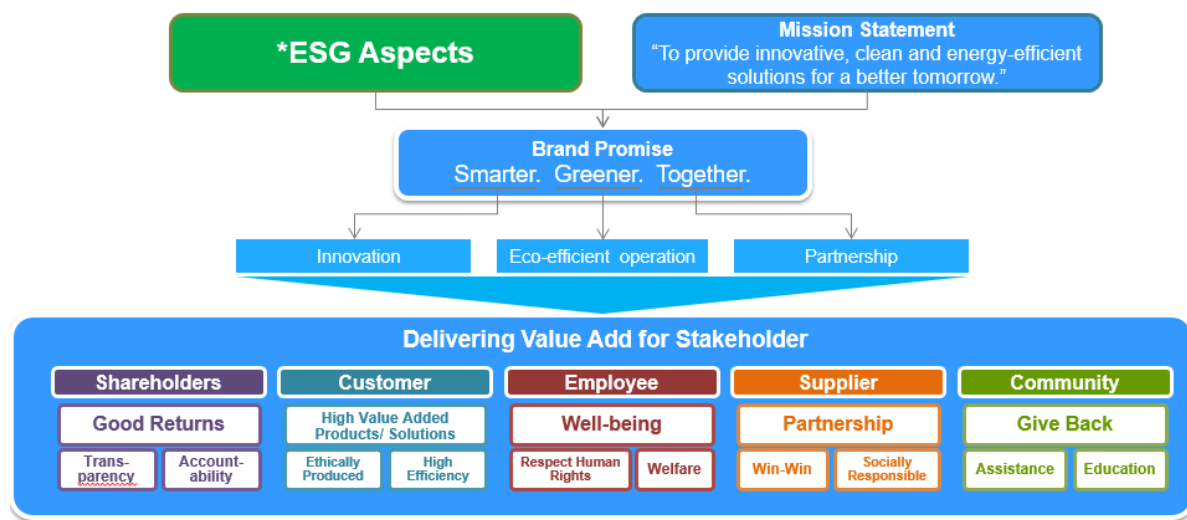


Delta Electronics (Thailand) PCL. Sustainability Development Committee Organization

## Enable Added-value to Business

Delta Thailand is a leading supplier of power supplies and energy management products to power electronics manufacturers around the world. Delta has continued improving its products, processes and business models to increase productivity and generate profits while reducing costs. The company commits to providing the best return to its stakeholders and we receive local, national and international honors for outstanding performance.

### Our Sustainable Development Strategy



Delta Sustainable Development Strategy aims to enable added-value to our stakeholders

However, we know that increased productivity and cost reduction alone is not enough. Sustainable growth in the ever-changing business environment to meet global needs is necessary for the company in the long-term. Delta is integrating sustainable development strategies with our business strategies. We focus on product development and continuous CSR in our business processes to address emerging risks.



Delta Thailand's value chain

In 2015, Delta set targets to increase revenue from its products and solutions portfolio while increasing energy efficiency to up to 30 percent of total revenue by 2020. These products and solutions areas include Solar Energy, Datacenter and Industrial Automation systems that respond to the needs of businesses and the wider community. With the growth of valuable business opportunities in the past 20 years, Delta's energy efficiency products and solutions rose 6% from 2015 to account for 16% of total revenue in 2017.

To achieve our strategic goal while promoting value in the value chain, Delta is responding to three key core company ideals: Smarter. Greener. Together. and our Mission Statement. Since 2004, every employee bases their daily operations on our core company concepts which form the DNA of Delta culture and drive our social progress and effective responses to change.

## Partnerships to Sustainability

For active response to SD and business development to achieve our target, Delta maintains its regular membership status with key organizations such as Thai Chamber of Commerce, Thai Photovoltaic Association (TPVA), Electricity Vehicle Association of Thailand (EVAT) to keep up to date. However, with the company's Code of Conduct item 2.2.11 on Political right, these membership will be maintained at organization. Delta strives to operate its business with political neutrality, not participating and siding to certain political party or influential political leader and not using the Company's capital, resource to support political parties, politicians directly or indirectly.

## International corporate initiatives



From a broader business perspective, this dedication to CSR ideals makes Delta a true global citizen. Our commitment contributes to the United Nations Sustainability Goals, which aims to reduce disparities in society. The UN goals we commit to include SDG4 to promote quality education, SDG7 to deliver affordable clean energy, SDG9 to develop industry infrastructure, SDG12 to have responsible resource consumption and operations, SDG13 to respond to Climate Change and SDG 17 to forge Partnerships to Achieve Sustainable Goals.

# Keep in touch for Agile Action

In addition to timely hearing activity, Delta Thailand has adopted AA1000APS 2018 principle to communicate with both direct stakeholders who have a visible role in the organization, regulation, operation people, communities and entities that use the service or are impacted by it; and indirect stakeholders interested in Delta's performance. The stakeholders' expectation identified with systematic materiality analysis, so that we can take the necessary responsive action and enrich the content of our information disclosures. Furthermore, any stakeholder's highlights raised in "Other important area" portion of the on-line questionnaire had reported to the management and Sustainability Development Committee to seek for any further action as well.

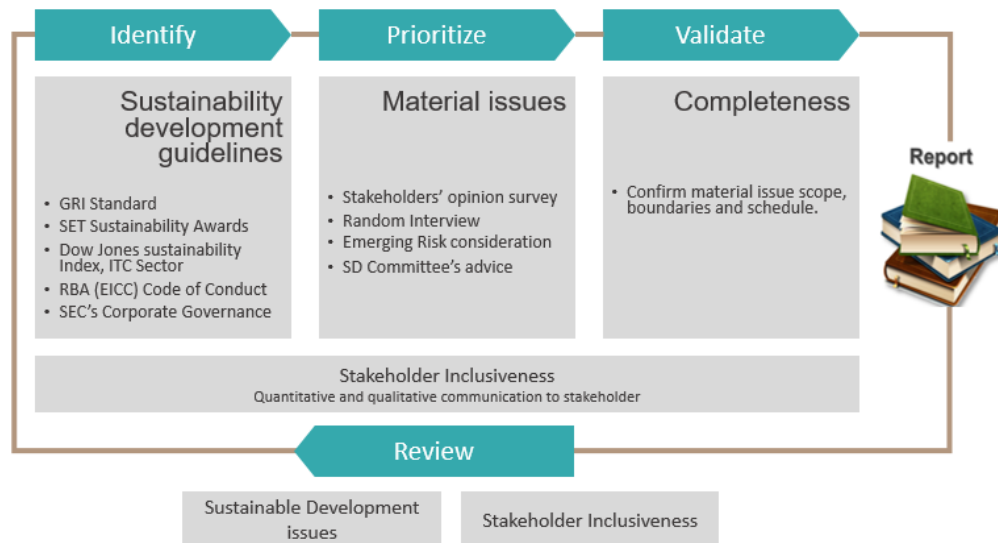
Stakeholder	Expectation	Engagement & Communication Approach	Respond the key topics with stakeholder	Interval / Frequency
Regulators	<ul style="list-style-type: none"> <li>- Compliance with related law and regulation</li> <li>- Response to government/ public updated policy</li> <li>- Collaboration to sustainable</li> </ul>	<ul style="list-style-type: none"> <li>- Related function's head</li> <li>- Risk management committee meeting.</li> <li>- Compliance contact windows</li> <li>- CSR activities with government sector</li> <li>- On-site meeting</li> <li>- Regular audit</li> <li>- Compliance to related regulator standard</li> <li>- On-line channels               <ul style="list-style-type: none"> <li>- Website: <a href="http://www.deltathailand.com">www.deltathailand.com</a></li> <li>- Facebook: <a href="https://www.facebook.com/DeltaElectronicsTH">DeltaElectronicsTH</a></li> <li>- e-mail : <a href="mailto:IR@deltathailand.com">IR@deltathailand.com</a> <a href="mailto:info@deltathailand.com">info@deltathailand.com</a></li> </ul> </li> <li>- Random Interview</li> </ul>	<ul style="list-style-type: none"> <li>- Risk management committee meeting</li> <li>- Board of directors meeting</li> <li>- Communication channels and training included in new employee orientation program</li> <li>- Meeting with regulator representatives</li> <li>- Public disclosure of financial and non-financial information</li> </ul>	<ul style="list-style-type: none"> <li>- Twice a year</li> <li>- Quarterly</li> <li>- Irregularly</li> <li>- Irregularly</li> <li>- Annually</li> </ul>
Employees	<ul style="list-style-type: none"> <li>- Fair treatment on labor practice</li> <li>- Job security in 4.0 era</li> <li>- Good health and well-being</li> </ul>	<ul style="list-style-type: none"> <li>- Delta Thailand's intranet</li> <li>- Delta Group on-line magazine</li> <li>- Corp communication boards and displays</li> <li>- CSR activities</li> <li>- Top down communication</li> <li>- Career development Training programs</li> <li>- On-line channels               <ul style="list-style-type: none"> <li>- Website: <a href="http://www.deltathailand.com">www.deltathailand.com</a></li> <li>- Facebook: <a href="https://www.facebook.com/DeltaElectronicsTH">DeltaElectronicsTH</a></li> <li>- Youtube: <a href="https://goo.gl/9dnYix">https://goo.gl/9dnYix</a></li> <li>- LinkedIn: <a href="https://www.linkedin.com/company/deltaelectronicsthailand/">deltaelectronicsthailand/</a></li> <li>- e-mail :</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Whistleblow and communication channels for employees repeated in COC &amp; Anti-corruption training</li> <li>- Career development program and training for improving employee's skill</li> <li>- LEED building implementation for better work environment</li> </ul>	<ul style="list-style-type: none"> <li>- Annually</li> <li>- Approx. monthly</li> </ul>

		<a href="mailto:det.sd@deltaww.com">det.sd@deltaww.com</a> <a href="mailto:whistleblow@deltaww.com">whistleblow@deltaww.com</a> <ul style="list-style-type: none"> <li>- Random Interview</li> </ul>	<ul style="list-style-type: none"> <li>- Welfare committee meeting</li> <li>- Public disclosure of financial and non-financial information</li> </ul>	<ul style="list-style-type: none"> <li>- Irregularly</li> </ul>
Customer	<ul style="list-style-type: none"> <li>- Code of Conduct</li> <li>- Quality Product &amp; services</li> <li>- Customer relationship management</li> <li>- Innovation management</li> </ul>	<ul style="list-style-type: none"> <li>- Direct feedback via sales channel</li> <li>- On-site discussion</li> <li>- CRM System in Front Office</li> <li>- Feedback through DET contact channel</li> <li>- Customer satisfaction survey</li> <li>- On-line channels <ul style="list-style-type: none"> <li>- Website: <a href="http://www.deltathailand.com">www.deltathailand.com</a></li> <li>- Facebook: <a href="https://www.facebook.com/DeltaElectronicsTH">DeltaElectronicsTH</a></li> <li>- LinkedIn: <a href="https://www.linkedin.com/company/deltaelectronicsthailand/">deltaelectronicsthailand/</a></li> <li>- Youtube: <a href="https://goo.gl/9dnYix">https://goo.gl/9dnYix</a></li> <li>- e-mail : <a href="mailto:product_info@deltathailand.com">product_info@deltathailand.com</a></li> <li><a href="mailto:info@deltathailand.com">info@deltathailand.com</a></li> <li><a href="mailto:whistleblow@deltaww.com">whistleblow@deltaww.com</a></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- More detail disclosure in separate SD report includes <ul style="list-style-type: none"> <li>• Corporate governance</li> <li>• Risk Management</li> <li>• Product stewardship</li> <li>• Customer relationship management</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Annually</li> </ul>
Supplier & Business Partner	<ul style="list-style-type: none"> <li>- Code of Conduct</li> <li>- Better profit margin</li> <li>- Business continuity</li> </ul>	<ul style="list-style-type: none"> <li>- Electronics signage board</li> <li>- Feedback through DET contact windows</li> <li>- On-line channels <ul style="list-style-type: none"> <li>- Website: <a href="http://www.deltathailand.com">www.deltathailand.com</a></li> <li>- Facebook: <a href="https://www.facebook.com/DeltaElectronicsTH">DeltaElectronicsTH</a></li> <li>- Youtube: <a href="https://goo.gl/9dnYix">https://goo.gl/9dnYix</a></li> <li>- LinkedIn: <a href="https://www.linkedin.com/company/deltaelectronicsthailand/">deltaelectronicsthailand</a></li> <li>- e-mail : <a href="mailto:supplier@deltathailand.com">supplier@deltathailand.com</a></li> <li><a href="mailto:whistleblow@deltaww.com">whistleblow@deltaww.com</a></li> </ul> </li> <li>- Random Interview</li> </ul>	<ul style="list-style-type: none"> <li>- More detail disclosure in separate SD report includes <ul style="list-style-type: none"> <li>o Code of conduct</li> <li>o Customer relationship management</li> <li>o Environment policy and management system</li> </ul> </li> <li>- Annual Partner Meeting</li> </ul>	<ul style="list-style-type: none"> <li>- Annually</li> <li>- Annually</li> </ul>
Investor & shareholder	<ul style="list-style-type: none"> <li>- Economic performance</li> <li>- Good return</li> <li>- Corporate Governance</li> <li>- Code of Conduct</li> <li>- Risk &amp; Crisis management</li> </ul>	<ul style="list-style-type: none"> <li>- Direct e-mail</li> <li>- Press release/ Opportunity day</li> <li>- Annual report</li> <li>- Annual General Meeting</li> <li>- On-line channels <ul style="list-style-type: none"> <li>- Website: <a href="http://www.deltathailand.com">www.deltathailand.com</a></li> <li>- Facebook: <a href="https://www.facebook.com/DeltaElectronicsTH">DeltaElectronicsTH</a></li> <li>- Youtube: <a href="https://goo.gl/9dnYix">https://goo.gl/9dnYix</a></li> <li>- LinkedIn: <a href="https://www.linkedin.com/company/deltaelectronicsthailand/">deltaelectronicsthailand</a></li> <li>- e-mail : <a href="mailto:ir@deltathailand.com">ir@deltathailand.com</a></li> <li><a href="mailto:whistleblow@deltaww.com">whistleblow@deltaww.com</a></li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- More detail disclosure in separate SD report includes <ul style="list-style-type: none"> <li>o Corporate governance</li> <li>o Code of conduct</li> <li>o Risk &amp; crisis management</li> <li>o Operation eco-efficiency</li> <li>o Human resource related figures</li> </ul> </li> <li>- Improve communication channel</li> </ul>	<ul style="list-style-type: none"> <li>- Annually</li> <li>- Irregularly</li> </ul>

Community	<ul style="list-style-type: none"> <li>- On-site marketplace for better income</li> <li>- Continue Energy education at schools</li> <li>- Good health and well-being</li> <li>- Job opportunity</li> </ul>	<ul style="list-style-type: none"> <li>- Direct feedback via CSR on-site team.</li> <li>- On-line channels <ul style="list-style-type: none"> <li>- Website: <a href="http://www.deltathailand.com">www.deltathailand.com</a></li> <li>- Facebook: <a href="https://www.facebook.com/DeltaElectronicsTH/">DeltaElectronicsTH/</a></li> <li>- Youtube: <a href="https://goo.gl/9dnYix">https://goo.gl/9dnYix</a></li> <li>- LinkedIn: <a href="https://www.linkedin.com/company/deltaelectronicsthailand">deltaelectronicsthailand</a></li> <li>- e-mail : <a href="mailto:info@deltathailand.com">info@deltathailand.com</a></li> <li><a href="mailto:whistleblow@deltaww.com">whistleblow@deltaww.com</a></li> </ul> </li> <li>- Random Interview</li> </ul>	<ul style="list-style-type: none"> <li>- On-site visit/ meeting</li> <li>- CSR activity</li> </ul>	<p>Irregularly</p> <p>- Avg. quarterly</p>
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## Material issues

Though Delta Thailand change its non-financial report standard to GRI standard, we use GRI Standard guideline to prioritize our material issue.



Delta Thailand analyzes the significance of sustainable development issues based on GRI Standard and related regulations as the processes described below:

Step 1 : List sustainable development issues related to Delta Thailand's sustainable development in ESG aspects according to GRI Standard, Dow Jones Sustainability Index Assessment for ITC Sector, SET Sustainability Awards, Responsible Business Alliance (formerly EICC) Code of Conduct

and the Securities and the Exchange Commission of Thailand's Corporate Governance. In conclusion, there are 16 issues for investigation included in the Company's questionnaire as following:

Aspect	Sustainability Development Key Issues		
Economics	<ul style="list-style-type: none"> <li>• Economic performance</li> <li>• Corporate Governance</li> <li>• Code of Conduct</li> </ul>	<ul style="list-style-type: none"> <li>• Risk &amp; Crisis Management</li> <li>• Customer relationship management</li> </ul>	<ul style="list-style-type: none"> <li>• Innovation Management</li> <li>• Brand management</li> </ul>
Environment	<ul style="list-style-type: none"> <li>• Environmental Policy &amp; Management system</li> <li>• Green Operation</li> </ul>	<ul style="list-style-type: none"> <li>• Product stewardship</li> <li>• Water-related risk</li> </ul>	
Social	<ul style="list-style-type: none"> <li>• Corporate Citizenship and Philanthropy</li> <li>• Occupational Health and Safety</li> <li>• Supply chain management</li> </ul>	<ul style="list-style-type: none"> <li>• Cultivation of Talent and Training</li> <li>• Labor Relations and Employee is benefit</li> </ul>	<ul style="list-style-type: none"> <li>• Labor Rights Standard for suppliers</li> </ul>

Step 2 : The company's report boundaries to cover the Company's operations in Thailand which include its factories in Bangpoo Industrial Estate, Samutprakarn and factory in Wellgrow Industrial Estate, Chachoengsao and our subsidiaries in India and Slovakia which cover 95% of the Company's consolidated performance.

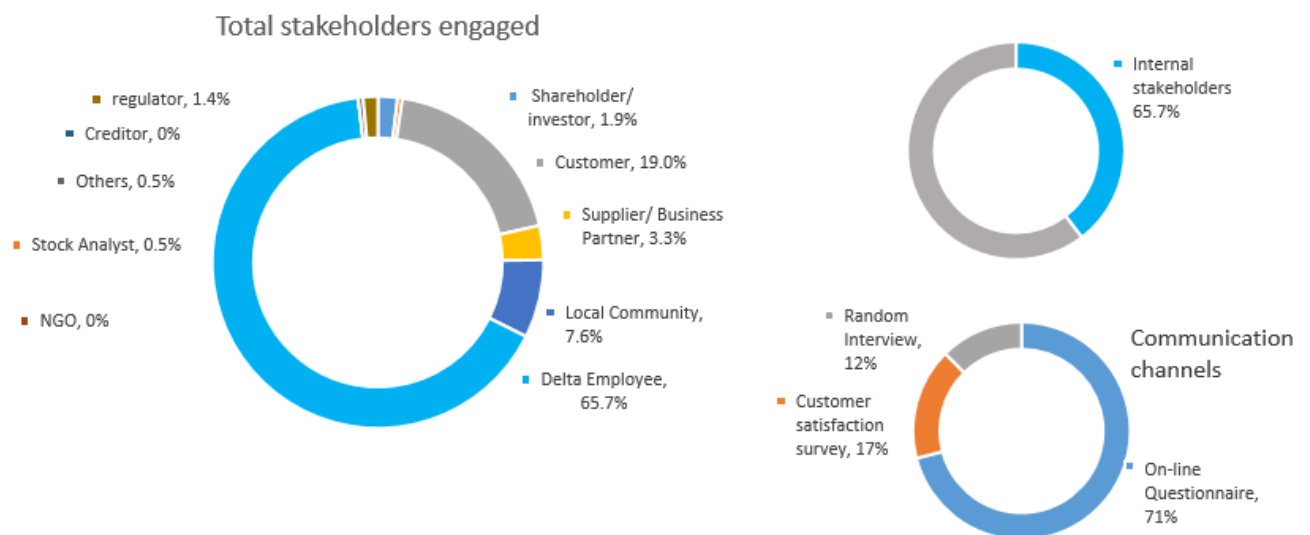
Step 3 : Communicate with the Company's major stakeholders via following communication channels:

- On-line questionnaire published on <https://goo.gl/SSxCmT>
- Direct e-mail to send the link of questionnaire to stakeholders who registered their participation with the Company's activities in 2017.
- Feedback through Delta contact windows of related functions
- Customer satisfaction survey <https://goo.gl/forms/Ww1WIT6eGFUlyT8a2>
- On-site questionnaire distribution to stakeholders who registered their participation with the Company's activities in 2017.

- Random interview and printout questionnaire to related stakeholders who join Delta Thailand's on-site activities.

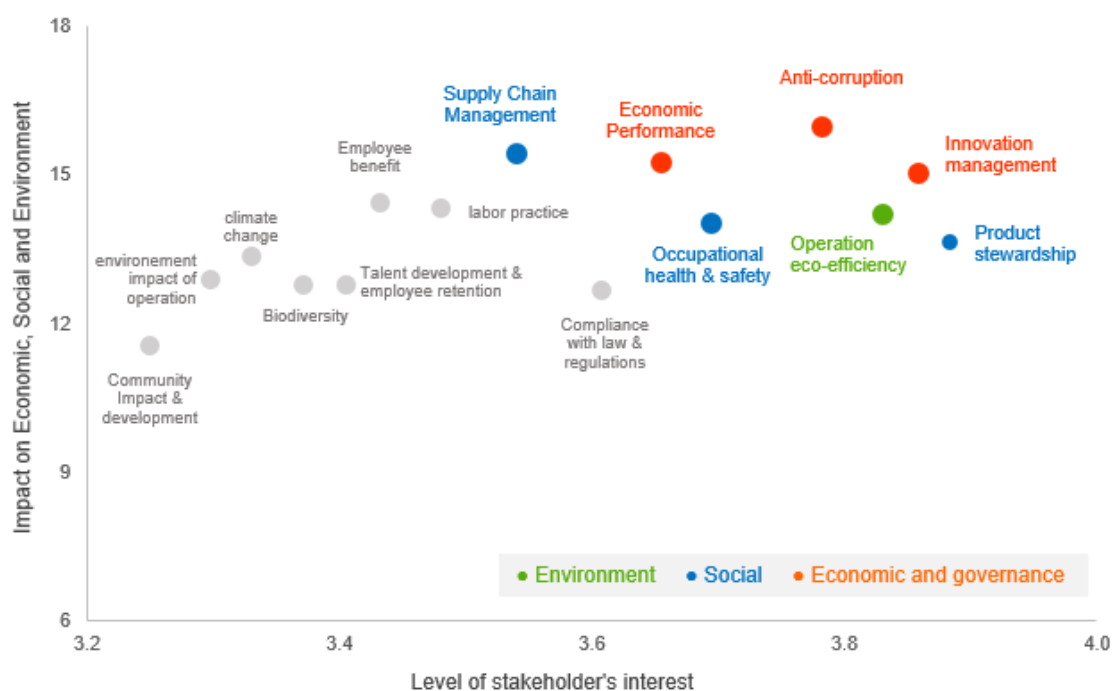
Step 4 : Identify the issues in the Company's major stakeholders' focus through an opinion survey of stakeholder with 5 score level said Very high, High, Moderate, Low and Very Low. In addition, to ensure the stakeholder's opinion is in the right direction, random interview has arranged in parallel.

### Feedback from engaged stakeholders



Step 5: Prioritize the each material aspect by using Simple Correlation Test to validate the level of significance of each aspects to the Company's key performances. Discuss the result and detail of stakeholders' score and related suggestion with the Sustainable Development Committee to assess the impact of each issue to Delta Thailand's performance.

## Materiality Analysis



The result of stakeholder materiality Analysis indicates that 6 from 15 issues have been interested by the Company's stakeholders and evaluated by the Sustainable Development Committee in high level. However, the SD Committee meeting agreed that Innovation management is the most significant issue to maintain the company competence, this issue has added as Delta's materiality. The **7 material issues** had disclosed in detail as following.

Material Issues	Page *
Anti-corruption	37-39
Eco- efficient operation	60-73
Economic Performance	14
Innovation management	42-47,119
Occupational health and safety	87-96,120-122
Product stewardship	42-47,100-101
Supply chain management	48-53

Remark: page indicated in draft version will be updated after layout process for printed copy

Step 6: Publicly disclosed in our Sustainability Development Report.

# Corporate Governance and Integrity

## Corporate Governance

Delta leverages corporate governance as an effective mechanism to fulfill the company's commitment and achieve our strategic goals transparently. Through an effective corporate governance framework, Delta seeks to minimize costs and manage resource allocation. The company's corporate governance impacts the business performance of Delta Thailand and its subsidiaries and spurs its innovation and supply chain ethics that boost its competitiveness.

### Delta Thailand BOD Reporting Structure



For the supervision of subsidiaries and associated companies, The Board of Directors has assigned the Executive Committee to supervise the operations of the subsidiary and associated companies. The Executive Committee has a certain authority to make investment in subsidiaries and associate and may assign some Directors or Top Executives of the company and/or appoint some local people to participate in the Board of Directors or management of its subsidiaries or associates in order to support the management and determine business policies and direction. After the appointment, the Executive Committee reports such appointments to the Board of Directors for their acknowledgement. However, if the investment amount exceeds the granted authority, the Executive Committee is required to seek for the Board's approval. The supervision

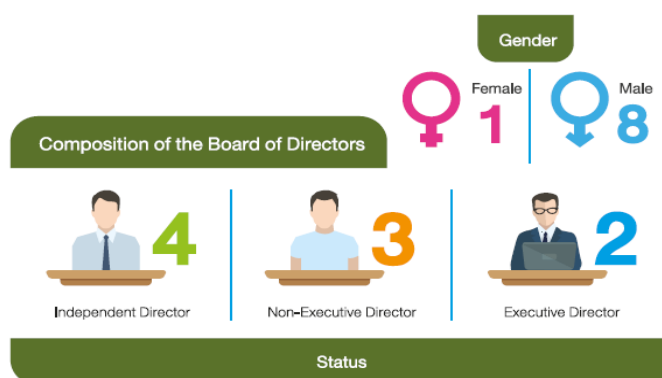
and monitoring have been further done through the implementation of EMP Meeting to evaluate the monthly results against target of sales team and supporting departments, leads by the President. The meeting effectively gathers and provides important information including operation performance from each region with root causes analysis and corrective action. An outlook for the next period and year on year outlook is also discussed. In case the goal deviates from the plan, the management is required to explain the causes. Then, the committee may provide comments or recommendations for improvement

## Board Competency

The Board of Directors is the key driver in developing the company's corporate governance. Delta has the policy to encourage directors, executives and the company secretary to train in good corporate governance at least once a year. The company organizes internal or external training by relevant institutions such as the SET, the SEC and the Thai Institute of Directors Association (IOD).

## Selection of Directors

The Board of Directors assigns the Nomination and Compensation Committee (NCC) to search, select and nominate qualified candidates to be a director or member of any committee. The committee makes selections regardless of gender, race and nationality based on whether the candidate is knowledgeable and experienced in areas such as accounting, finance, management, strategy and possesses individual skills and expertise in line with the company's business and strategies. The company has prepared a skill matrix to define the requirements for members of its Board of Directors to aid in the Board nomination process. To ensure that selection of Board of Directors is fair, Delta commits to basic human rights principles including gender equality. In April 2018, the company selected one female director with experience in finance and accounting. This commitment is to ensure Board diversity and a solid company structure with good corporate governance standards that achieve company objectives.



Each of the nine directors possesses knowledge and expertise in various professional disciplines that are in-line with the company's corporate governance policies and cover all aspects of sustainable growth. In addition, for the board of directors diversity, one female director is on board in April 2018.



## Structure of the Board of Directors

The Board of Directors comprises nine directors in a one-tier structure. With one female director who is onboard in April 2018, Four of the Board members are independent directors, three are non-executive directors and two are executive directors. The target number of independent directors, according to the company's practices of the Board of Directors, is no less than one-third of the total number of board members. The Board must have at least three independent directors according to the regulations of the Stock Exchange Commission and the Stock Exchange of Thailand.



## Roles and Responsibilities

Delta Board of Directors is responsible to decide, give directions and supervise effective decision-making processes to facilitate the company's success in economic, social and environment areas.

The company has the policy to separate the roles and responsibilities of the Chairman of the Board and the President. Different individuals must hold these two

positions to enhance management accountability and transparency. The Board assigns the

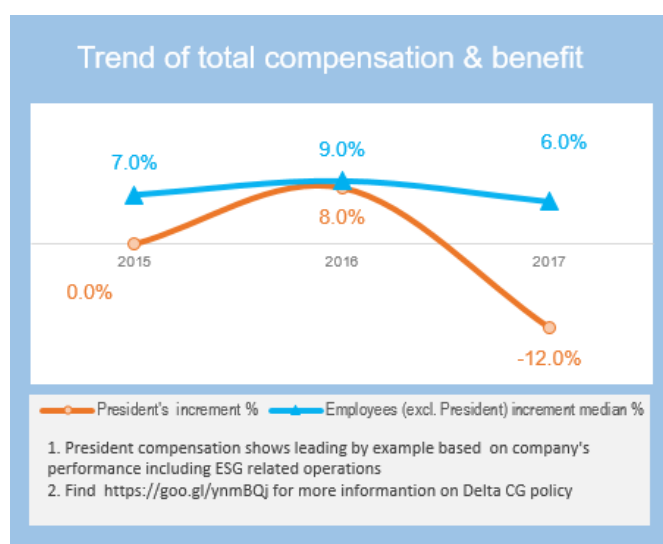
President to manage the day-to-day operations according to defined duties and responsibilities guidelines.

In 2015, the Board of Directors improved the Corporate Governance of the Board, limiting the service term of an independent director to a maximum of nine years or three consecutive terms. In addition, appointed directors cannot hold a director position in over three companies listed on the Stock Exchange of Thailand. In 2017, it was agreed among the meeting that every Board member must have a minimum required meeting attendance rate of at least 90% for effective good governance.

## Board of Directors' Authorization

The Board of Directors can authorize matters under their scope of authority stipulated by law, the Company's Articles of Association and the shareholders' meeting resolutions. Such matters include defining and reviewing corporate vision, operating strategies, operating plans, risk management policy, annual budget and business plans, and medium-term business plans. The Board will also define the company's target operating results and follow up by appraising operating results to ensure they are in line with plans. The Board oversees capital expenditure, mergers and acquisitions, corporate spin-offs, and joint venture deals.

## President's Performance Assessment



The Board of Directors assigns the NCC to evaluate the President's Key Performance Indicators (KPI). The NCC works together with the President to set the President's KPI with consideration to his/her role as the chairman of the Sustainable Development Committee. The President's KPI covers economic, environmental and social aspects which align with the company's sustainable development targets such as revenue, profit, return on equity, regional business, training and development, social

and environmental performance, university project collaboration, energy conservation and green building education. The President's performance is measured against these KPIs and reported to the Board quarterly. The President's KPI results will affect his/her remuneration. To

ensure continuous development in ESG aspect, the President's minimum qualifications have been defined by the NCC and filed in the President's succession plan.

Apart from fixed salary which the President receives every month, he/she is also entitled to variable compensation (variable bonus) annually. In order to assess the sustainable performance of the President, the NCC sets a target agreement with the President or with the President's KPI according to the company's 5 years plan which contains short and long-term goals. The NCC assesses the goal achievement of the current year and previous two years. The target of each year such as sales revenue and earnings per share will be set higher 8-15% depending on the market situation and new product launches.

## **Board of Directors Performance Assessment**

The Board arranges a yearly self-assessment for the Board of Directors as follows.

1. Group self-assessment for the entire Board of Directors
2. Individual self-assessment of the Board of Directors members

Areas of assessment include Board duties, Board structural composition and individual member's qualifications, job performance, professional development and teamwork. Other areas of member's assessment are meeting attendance, general knowledge and expertise and proactive action in areas of responsibility. After the assessments, the evaluation forms will be submitted to the Company Secretary for tabulation and the results will be presented to the NCC with action plans to address the gaps, if any, for deliberation and onward submission to the Board.

In 2017, the Board had an excellent group and individual member performance score of 100%. The Board of Directors acknowledged the results of both group and individual level assessments and discussed possible areas for improvement.

In 2017, Mr. Hsieh Shen-yen attended the IOD Breakfast Briefing 3/2017 "Corporate Disclosures: What are investors looking for beyond financial measures?" Dr. Witoon Simachokedee attended the Audit Committee Forum 2017 "The Audit Committee's Role in Compliance and Ethical Culture Oversight" arranged by Thai Institute of Directors Association and Green Technology and Sustainable Development Training Course arranged by China Productivity Center (CPC)

## **Board Meeting**

Board meetings are convened at least once every quarter to review the company's business performance and discuss important strategic issues. According to the Corporate Governance Policy, the minimum attendance rate for every Board of Director member is 90%. In 2017, six meetings were held with a total attendance rate of 95.83%.

## **Sub-Committee**

In addition to their roles and responsibility as the nature of Delta business, the Board of Directors appoints sub-committees to help study, deliberate and give opinions on ESG matters. Presently, there are five sub-committees under the Board of Directors with the Executive Committee, Audit Committee, Nomination and Compensation Committee and under the President.

## **Executive Committee**

The Executive Committee of the company consists of 5 members to operate and manage the business of the company in compliance with company's objectives, Memorandum of Association, policies, regulations, notifications, orders as well as the resolution of the Board of Directors and establish policies, business plan, directions, strategies, budget and the main organization structure and authority of each department within the company including the organization chart in order to propose to the Board of Directors for its consideration and approval as well as to monitor and follow up the result of the operation of the company to be in accordance with the policies.

## **Audit Committee**

The Audit Committee of the company consists of 3 members and all the members are Independent Directors to review the company's financial reporting and consider the capability and the independence of an external auditor, review that the company complies to the law on securities and exchange, the regulations of the SET and other laws related to the company business and to do any other matters assigned by the Board of Directors of which the Audit Committee agrees. The service term of an independent director is no longer than 9 years or no more 3 consecutive terms and qualifications and responsibilities of the Committee as prescribed by the Stock Exchange of Thailand.

## Nomination and Compensation Committee

The Board of Directors Meeting No. 5/2015 held on 26 October 2015 approved to adjust roles of Compensation Committee to Nomination and Compensation Committee. This consists of 3 Members, 2 Independent Directors and 1 Executive Director to review the remuneration policy and determine the remuneration of the directors of the company and members of sub-committee, define the qualifications of the Board member and attracting qualified candidates for Board of Directors' consideration. The Term of office shall follow the Annual Director Election.

## Risk Management Committee

Risk Management Committee consists of 10 members to delegate the risk management to their respective managers, develop and review strategic risk management plans, monitor and continuously improve risk management and annually and/or any time that is necessary to present a detailed report to the Board or to the Audit Committee.

## Sustainable Development Committee

Sustainable Development Committee consists of 4 members to delegate sustainable development to respective managers, develop and review strategic sustainable development plans, monitor and continuously improve CSR-in-process and ESG-related initiatives and annually and/or any time that is necessary to present a detailed report to the Board of Director.

## 2017 Summary of Board of Directors' and Sub-Committees' Meeting Attendance

Committee	Percentage (%) of Meeting Attendance
The Board of Directors	95.83
The Executive Committee	90.00
The Audit Committee	91.66
The Nomination and Compensation Committee	83.33
The Risk Committee	100
The Sustainable Development Committee	100

The Board of Directors competency policy ensures the rights of shareholders, equal treatment of shareholders, the role of stakeholders and disclosure procedures. Further, it adds value to Delta's

supply chain, eco-efficient operations and partnerships to reach the company's sustainable goals.

## Risk Management

The company regularly offers continuing training/ education opportunities including risk management for all directors and management managers to enhance their skills and to ensure each has a current understanding of the risk management and other management skills. Some of the directors had participated in Risk management training classes during the past few years.

Risk is inherent in all business and administrative activities and becoming more complex [with highly dynamic business environment change](#). The company has continuously raised risk management awareness throughout the organization, as we believed risk management is one of the most effective tools to ensure the good management practice and facilitate the achievement of organization's objectives. 4 of non-executive members of the board of directors/ supervisory board possess expertise in enterprise risk management.

The Board of Directors has appointed a Risk Management Committee to prescribe risk management policy that covers the entire organization and its extended networks to ensure that risk management procedures or systems are in place to appropriately mitigate impacts on the organization.

### **Risk Management Committee**

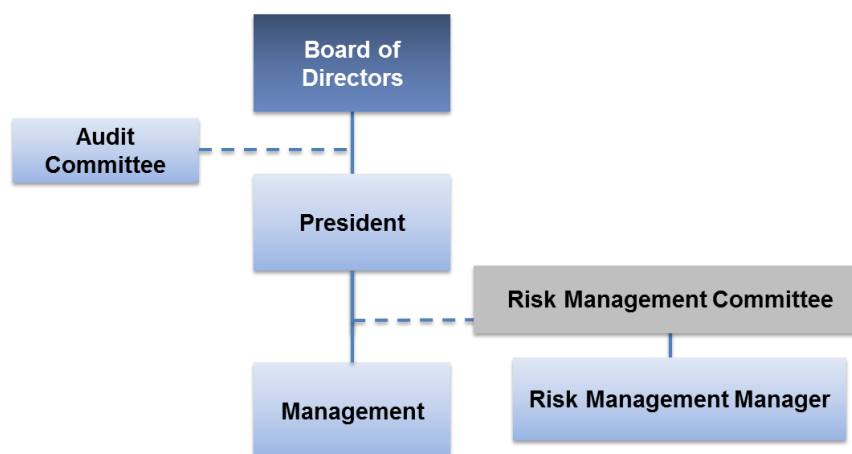
The Risk Management Committee's Chairman is the President of the company and one of the members of the Board of Director. The Committee comprises of not less than five members who are the head of the major functions and/or the person assigned by Board of Directors or Chairman of the Committee. The Committee may, when necessary, invite other persons, who are involved with or responsible for any matters related to the meeting agenda, to participate in the Risk Management Committee meeting.

### **Duties and Responsibilities of Risk Management Committee:**

1. Follow up related law and regulation from related functions to establish risk management measurement
2. Establish risk management procedures
2. Implement risk management, to delegate the risk management to their respective managers
3. Develop and review strategic risk management plans

4. Semi-Annually and/or any time that is necessary report to the Audit Committee and at least once a year report to the Board
5. Monitor and continuously improve risk management
6. The Committee may seek advice from relevant professional consultant in some cases

## Risk Management Committee Organization

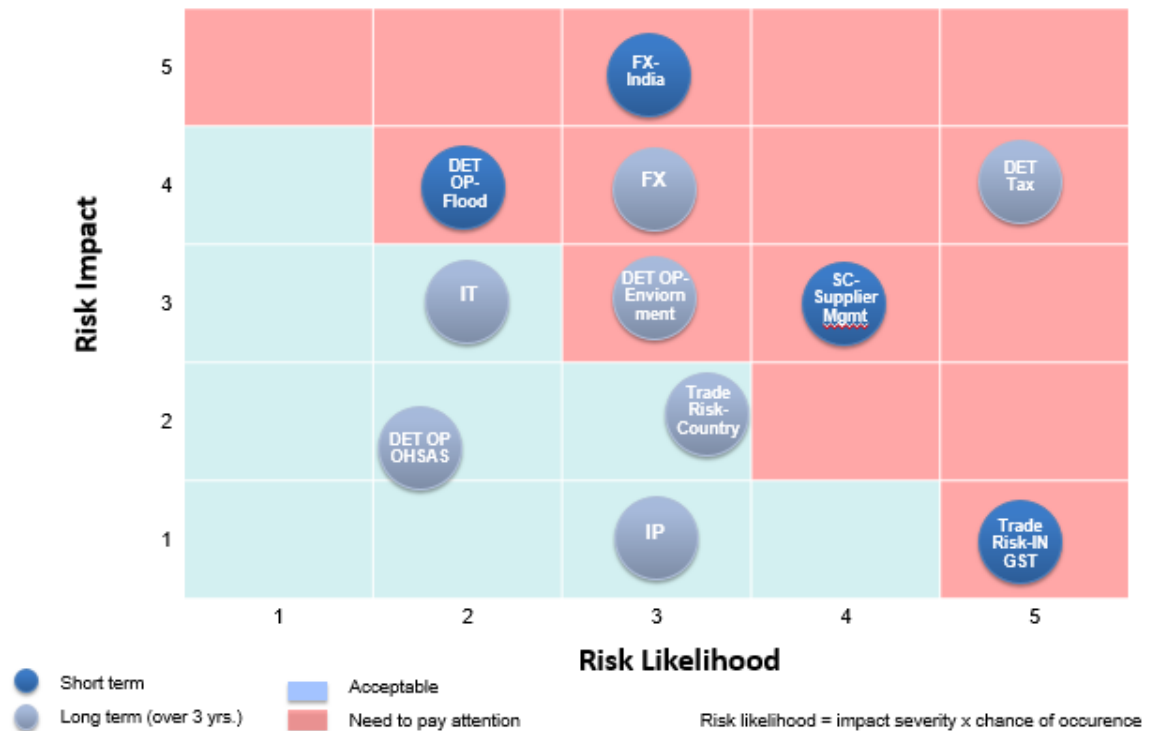


## Risk Management Process

In order to put the risk management framework into practice, the Risk Management Committee has set up the risk assessment and risk policy to the management and the information is documented in the "Risk Management Committee Charter".

The Committee has advised the management to perform risk management according to the Risk Management Policy with the support from Risk Management Manager who acts as the focal point for each department. The management and head of the major functions need to identify the risks and how the risks happen, risk foundation, the area which risks occurred; measure the risks, ranked them, and prioritized them, then form the risk management strategies and processes. Risk Management Manager will summarize the information and documentation from relevant departments and present it to the Committee.

The Committee will review the documentation, allocate priorities, develop and review of strategic risk management plans proposed by each function (if any), and ensure the compliance with risk assessment and management procedures. Finally, submit a report on the status of the risk management to the Audit Committee or the Board at least 2 times a year. management of risks for our business in terms of financial, investment, supply chain, information, legal and intellectual property, environmental and occupational health and safety which have disclosed in 2017 [Annual report](#) page 44-49



## Emerging Risk

Since embarking on its ongoing sustainability journey, Delta Electronics (Thailand) relentlessly identifies emerging trends and impacts. To counter emerging risks, we take mitigating actions and create proactive strategies to bolster our company's long-term resilience. We seek to manage risks through informed decision making, foresight and agility and to forge a business that will benefit society far into the future.

Emerging Risk	DET material issue	Potential impact - Negative   + Positive   ? Unknown	Mitigating actions	Opportunity
Rapid urbanization and Climate change	<ul style="list-style-type: none"> <li>Eco-efficient operation</li> <li>Economic performance</li> </ul>	<ul style="list-style-type: none"> <li>Increased in power demand</li> <li>Increase in local electricity intensity</li> <li>Increase in fossil fuel used to generate electricity</li> </ul>	<ul style="list-style-type: none"> <li>Energy intensity reduction projects</li> <li>Delta Smart Manufacturing</li> <li>Develop Supply chain in emerging market</li> </ul>	<ul style="list-style-type: none"> <li>Growth in Power Electronics, Automation and infrastructure solutions.</li> </ul>

Emerging Risk	DET material issue	Potential impact - Negative   + Positive   ? Unknown	Mitigating actions	Opportunity
Rapid urbanization and climate change (con't)	<ul style="list-style-type: none"> <li>• <b>Innovation management</b></li> <li>• <b>Supply Chain management</b></li> <li>• <b>Occupational Health and Safety</b></li> </ul>	<ul style="list-style-type: none"> <li>- Higher production cost</li> <li>- Natural resource scramble</li> <li>- Flood way blockage</li> <li>? Difference of governmental policies to face</li> <li>? Difference in supply and demand behavior</li> </ul>	<ul style="list-style-type: none"> <li>• Green and ethical supply chain</li> <li>• Green product design</li> <li>• Business contingency plan established</li> <li>• Build up awareness of Energy and environment conservation</li> <li>• Brand development to seize future market</li> <li>• Develop eco-friendly supply chain</li> </ul>	<ul style="list-style-type: none"> <li>• Value-added products through substitute material development</li> <li>• Growth in Power Electronics, Automation and infrastructure solutions.</li> </ul>
Shift in global economic power	<ul style="list-style-type: none"> <li>• <b>Supply chain management</b></li> <li>• <b>Economic performance</b></li> <li>• </li> </ul>	<ul style="list-style-type: none"> <li>? High competition of supply chain in emerging market</li> <li>? Difference of governmental policies to face</li> <li>? Difference in supply and demand behavior</li> </ul>	<ul style="list-style-type: none"> <li>• Boost up ethic in supply chain</li> <li>• Systematic risk management</li> <li>• Publicize supplier standard requirement</li> <li>• Delta's presence in emerging markets</li> </ul>	<ul style="list-style-type: none"> <li>• Additional business opportunity in emerging market.</li> </ul>
Demographic and social change	<ul style="list-style-type: none"> <li>• <b>Eco-efficient operation</b></li> <li>• <b>innovation maintaining</b></li> </ul>	<ul style="list-style-type: none"> <li>- Skilled labor force shortage due to aging population and new industries flourishing (e.g. AI programming)</li> <li>? Faster turnover of product life cycle.</li> <li>+ Higher expectation / requirements on responsible product &amp; services esp. in ESG aspect.</li> </ul>	<ul style="list-style-type: none"> <li>• Delta's focus on automation and energy management solutions resolve aging workforce problems</li> <li>• Maintain comparable research &amp; development infrastructure</li> <li>• Green design &amp; green supply chain development</li> <li>• Communication channel development</li> <li>• Build up awareness of Energy conservation</li> <li>• Brand development to seize future market</li> <li>• Develop green supply chain</li> </ul>	<ul style="list-style-type: none"> <li>• Growth in Power Electronics, Automation and infrastructure solutions.</li> <li>• Value-added products and solutions through eco-friendly supply chain.</li> </ul>
Technological breakthroughs	<ul style="list-style-type: none"> <li>• <b>Eco-efficient operation</b></li> <li>• <b>innovation maintaining</b></li> <li>• <b>Supply chain management</b></li> </ul>	<ul style="list-style-type: none"> <li>- IoT application to home appliances/ devices</li> <li>- Adoption of Industry 4.0</li> <li>- Hacking frequency increases</li> <li>+ Higher power and capacity demand for datacenters</li> <li>+ Higher expectation / requirements on responsible product &amp;</li> </ul>	<ul style="list-style-type: none"> <li>• IT Security Standard</li> <li>• Delta SMART manufacturing and automation solutions</li> <li>• Green design &amp; green supply chain development</li> <li>• Public ESG info used for investment decision</li> <li>• Build up awareness of Energy conservation</li> <li>• Brand development to seize future market</li> </ul>	<ul style="list-style-type: none"> <li>• Growth in Power Electronics, Automation and infrastructure solutions.</li> </ul>

		services esp. in ESG aspect. ? Faster turnover of product life cycle.	• Maintain R&D investment at approx.. 5% to revenue	
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## Finding Opportunity in Emerging Risks

Since 2010 Delta has focused on "Power and Energy Optimization Products and Solutions". These solutions businesses are growing and underpin our sustainable development strategy by responding to key emerging risks on a global scale. For example, the emergence of climate change was a powerful catalyst for increased innovation in our energy management and green solutions. In 2017, Delta divided its core business into three main categories: Power Electronics, Infrastructure, and Automation respectively. The revenue percentage for each category for 2015-2017 is shown below. Compared to 2015, Infrastructure and Automation revenues represent steady growth in 2017.

Product Group	2017		2016		2015	
	Revenue	%	Revenue	%	Revenue	%
<b>Power Electronics Group</b>	36,672	74.4	33,481	71.4	32,496	69.2
Embedded Power Supplies (EPSBG)	17,182	34.9	16,867	36.0	18,404	39.2
- DC-DC Power	3,212	6.5	2,572	5.5	2,695	5.7
- Power Supply for Computer & Networking	3,072	6.2	4,160	8.9	4,837	10.3
- Custom Design Power	10,898	22.1	10,135	21.6	10,872	23.2
Electric Vehicle Solutions (EVSBG)	5,017	10.2	2,897	6.2	2,054	4.4
Merchant Power (MPBG)	7,452	15.1	6,653	14.2	5,985	12.8
Fan & Thermal Management (FMBG)	7,021	14.3	7,064	15.1	6,053	12.9
<b>Infrastructure Group</b>	10,532	21.4	11,088	23.6	12,310	26.2
Information Communication Technology Infrastructure (ICTBG)	9,354	19.0	10,135	21.6	11,373	24.2
- Telecom Power Solutions (TPS)	8,364	17.0	8,998	19.2	10,321	22.0
- Uninterruptible Power Supplies (UPS)	990	2.0	1,137	2.4	1,052	2.2
Energy Infrastructure Solution (EISBG)	1,178	2.4	953	2.0	937	2.0
- PV Inverter BU	1,172	2.4	949	2.0	881	1.9
- Medium Voltage Drive BD	3	0.0	2	0.0	5	2.2
- Wind Power	3	0.0	2	0.0	51	0.1
<b>Automation Group</b>	1,796	3.6	1,974	4.2	1,584	3.4
Industrial Automation (IABG)	1,778	3.6	1,974	4.2	1,584	3.4
Building Automation (BABG)	18	0.0	-	-	-	-
Others	269	0.5	344	0.7	548	1.2
<b>Total sales Revenues</b>	<b>49,269</b>	<b>100.0</b>	<b>46,887</b>	<b>100.0</b>	<b>46,938</b>	<b>100.0</b>

Note :

• Power Electronics business comprises 1) EPSBG Product Group (e.g. Power Supply for storage devices in Computer and Networking system, Customized design Power supplies and DC-DC converter) 2) Electric Vehicle Solutions (e.g. Power Supply for Automobile); 3) MPBG Product Group (e.g. charger/adaptor for both industrial and personal use, broadband, and printer); and 4) FMBG Product Group (e.g. cooling fan, EMI filter and Solenoid)

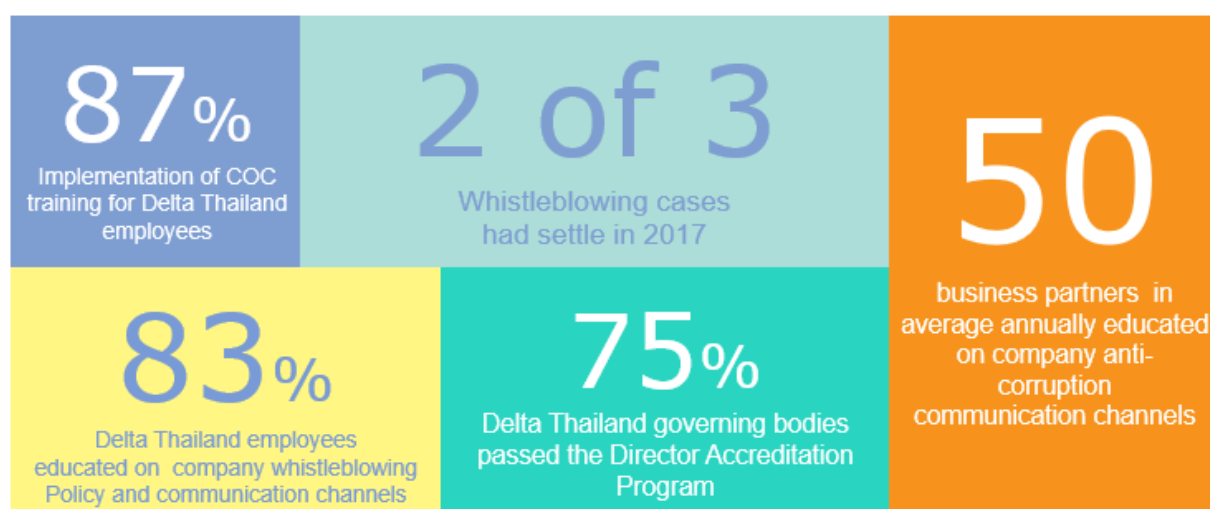
- Infrastructure business are designs, manufactures, and installations of information and communication technology infrastructure and energy system infrastructure. Major products are Power Systems for Telecom Power Solutions (TPS), Mission Critical Infrastructure Solutions (MCIS), and Renewable product.
- Automation business are designs, manufactures, and installations of industrial and building automation. The main products are Machine automation, Industrial motion system, Smart sensor system and Lighting automation for building

## Integrity



According to the company's code of conduct published on <https://goo.gl/Pb3eCm>, all level of Delta Employees are required to perform and carry out their duties and assignments with integrity, trustworthy, transparency, moral and ethics which are considered the key for the Company's business to grow sustainably and be acceptable to all stakeholders. Good Reputation, customers loyalty, advance earning potential; for instance, is the positive impact from ethical business.

## Anti-Corruption



Delta believes that corruption brings serious risks to the company's growth and competitiveness and causes irreparable damage to our organization's reputation. Governments in Thailand and the countries where Delta operates have taken strong stances against corruption with countermeasures and anti-corruption campaigns. Delta anti-corruption policies are in-line with global legislative and business trends that demand high levels of information transparency and accountability from companies. We believe corruption runs counter to Delta goals by increasing operational costs, reducing consumption efficiency, creating an unfair company culture and

fostering mistrust among stakeholders. Robust anti-corruption policies are essential for our corporate culture and sustainability.

The company applied the COSO Enterprise Risk Management to all business processes in its daily operations to mitigate corruption risk and ensure transparency and traceability in high-risk areas such as purchasing, resource use and reimbursement. In addition, Delta operates its business with political neutrality, not participating and siding to certain political party or influential political leader and not using the Company's capital, resource to support political parties, politicians directly or indirectly. Periodic risk assessment and internal monitoring has placed as part of for countermeasures. In 2017 the company does not make any contributions to or expenditures to political campaigns or organizations, lobbying, trade associations, tax-exempt entities, or other groups whose role is to influence political campaigns, anti-competitive behavior, violation of anti-trust and monopoly or public policy and legislation.

Delta Thailand's Board of Directors has approved the Anti-Corruption Policy to set the company principles and practice guidelines, arrange communication and offer training about anti-corruption. This policy aims to clarify the company's goal to combat all forms of corruption. Delta **has set a zero corruption goal** to further develop our sustainability. The company commits to conducting its business with transparency and integrity. Delta Electronics (Thailand) Public Company Limited policy prohibits directors, directors of sub-committees, management, personnel and related business partners of the company to act or consent to any form of corruption. Our aim is to enhance our stakeholders' confidence in the company. Our corporate codes of conduct cover discrimination, confidentiality of information, conflicts of interest, antitrust/anti-competitive practices, money-laundering and/or insider trading/dealing, environment, health and safety and whistleblowing. More details on company practice guidelines are on the company website [http://www.deltathailand.com/about\\_corp\\_anti\\_corruption.php](http://www.deltathailand.com/about_corp_anti_corruption.php).

To ensure integrity in its supply chain, Delta formed an agreement between its purchasing department and supplier in 2001. The Procurement and Supplier Covenants promotes a healthy procurement system that avoids the negative influence of human factors such as bribery or unwarranted returns on normal business. During the Delta Annual Partner Meeting 2017 we covered the topic of anti-corruption to educate suppliers about our policies and stand against corruption.



*Delta annually communicated the company's code of business conduct, anti-corruption progress according to CAC's self-check guideline and whistleblowing policy to ensure ethic in supply chain.*

In addition to due diligence by management, Delta aims to instill a strong consciousness of integrity among our employees. We believe that establishing a common understanding of the standard of behavior expected of all employees as the most effective way to combat bribery and corruption. During October and November 2017, the company arranged employee training on the Code of Conduct and Anti-Corruption. The mandatory course's training scope included Anti-Corruption as part of the Code of Conduct and covered risks our businesses may face such as bribery, gifts and hospitality. The Code of Conduct places an obligation on all Delta employees to take responsibility for their personal conduct and work with colleagues cooperatively to establish a collaborative workplace where people are happy and proud to work. To enhance anti-corruption operations, the company also seeks cooperation from suppliers not to send any gift/gratuity to company management, employees or their family member during New Year and other festive occasions.

Delta handles every complaints under its protection of whistleblowers and confidentiality policy in the company's Anti-corruption policy. The company secretary will compile the progress and results of anti-corruption campaigns and complaints in an annual report to the Board of Directors. In 2017, Delta settled two of three whistleblowing cases, the other single case is still under process. These three cases are internal disciplinary cases with no relation to business partners or public legal issues.

## Human Rights

Delta Thailand supports UDHR - Universal Declaration of Human Rights. Delta Electronics (Thailand) Public Company Limited truly recognizes the importance of and upholds human rights principles. We have, therefore, incorporated human rights principles, namely RBA (formerly EICC)'s Code of Conduct and ILO's labor standards into the Company's operations and developed our human rights policy based on the UN's Guiding Principles on Business (UNGP) and Human Rights (UNGP). According to Delta's Human Rights policy published on <https://goo.gl/KRDzd3>, **the company commits to protecting, respecting and supporting our staff, business partners and vulnerable individuals or groups as outlined in the Company's human rights policy in all our business processes.** We will ensure that human rights are respected and violations of human rights in all form are prevented throughout the Company and our value chain.



Delta's Human Rights Due Diligence Process

The company is in regards to respect human rights by defining wrong doing practices and mistreatment. It has introduced a non-discrimination policy which governs equitable treatment towards all genders, races, physical disabilities including immunodeficiency, HIV/ AIDS and tuberculosis (TB). Delta Thailand strictly acts on this policy and made known to employees by means of training so that all employees adopt a positive attitude towards their co-workers with respect and equitable. Accordingly, human right training had provided to all new securities officer as a part of their orientation to ensure our employees' right will be deserved. Delta Thailand awards a Gold Standard of ASO-T Thailand for best TB-HIV/AIDS Prevention and

Management in Workplace Program issued by the Department of Labour Protection and Welfare, Ministry of Labour, in corporation with Department of Disease Control, Ministry of Public Health, and the Thailand Business Coalition on AIDS. There is a mechanism available for the feedback and filing complaints concerning human rights issues.

From annual assessment in 2017, Delta Thailand settled five of five whistleblowing cases on human rights. Four of these three cases are internal disciplinary cases while another one is supplier' labor relation with no relation to business partners or public legal issues which remedy process required.

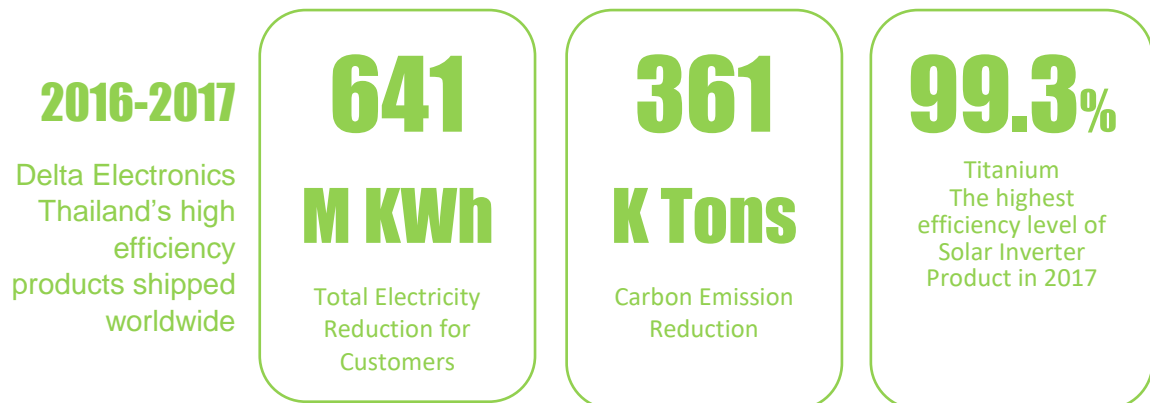
## Whistleblowing Channels:

Delta realizes the importance of listening to all our related parties. We leverage input from all sources to ensure business integrity in the company that benefits all stakeholders. Delta will ensure fairness and provide protective measures to all complainants or whistleblowers who collaborate to report malpractice and corruption. We provide the following whistleblowing or complaint channels for both internal and external parties to report any cases of misconduct in ESG aspects.

- Head of the employee's unit
- Head of HRA, Internal Audit, Legal Department or Company Secretary
- Electronic mailbox: [Whistleblow@deltathailand.com](mailto:Whistleblow@deltathailand.com)
- Suggestion box: At Delta Thailand head office
- Opinion Box: PO Box 50, Bangpoo Samutprakarn 10280

According to our Anti-corruption Policy published on <https://goo.gl/ySUfWg>, confidentiality and anonymity will be ensured for whistleblowers. The results of anti-corruption activities will be reported to the Board of Directors annually.

# Customer Satisfaction with Responsible Solutions



## Innovation Management

### Green Product Innovations

Delta Thailand (DET) has been consistently investing around 5% (higher than industry's average) in R&D budget and will remain so in the coming years as can be seen in our Annual Report. The annual investment encompasses state of the art equipment, global talent sourcing and development, global R&D facilities enhancement and research activities. DET shall continue to collaborate with well-established universities to keep abreast of the latest technologies and in return provide our R&D expertise (from more than four countries) and training for the respective institutions in countries like Germany and Thailand. In addition, with a healthy balance sheet, DET is constantly looking out for suitable M&A targets. The objective in M&A is not only about growing revenue but more importantly to seek out new perspective in business and product innovations from a healthy and compatible company.

To ensure innovation is in place Delta targets to

- 1) Launch market leading new technology every 2 years
- 2) Annual increase in power efficiency for the products

3) Continuously reduce carbon footprint in product development process

4) Maintain high R&D budget above industry average.

The success of new product development (item1,2) will increase the revenue of the Company. Sales growth is one of CEO's KPI to link with the executive compensation.

## Green Products and Services

All Delta products comply with international safety standards or international environmental requirements. Products or product packaging are also labeled with conformity information in accordance with the environmental regulations of the target market, such as the EU RoHS and WEEE directives, and the China Measures for the Control of Pollution from Electronic Information Products. We also display environmental certification information such as US Energy Star and 80 PLUS on our products that are required by our customers.

## Green Design

The Life Cycle Assessment (LCA) is a green design approach that systemically analyzes the environmental impact of a product from material extraction, manufacturing, shipping, product use, and disposal. The ISO 14040 international standard divided LCA into several key processes including the definition of the goal and scope, inventory analysis, and impact assessment and interpretation. Due to the complex nature of supply chain relationships in the electronics industry, Delta knows that a complete LCA will consume enormous amounts of time and resources. Delta has drawn on research by the Society of Environmental Toxicology and Chemistry (SETAC) on LCA methodology and adopted the Screening, Simplified and Streamlined LCA (SLCA) to focus on the issues with the most significant environmental impact, such as GHG emissions, and reduced the amount of data that needs to be gathered. Additionally, we use available LCA databases as supporting tools to further facilitate the SLCA process. By using the SLCA methodology, we can identify design or process areas for improvement.

## Product Carbon Footprint

Product carbon footprint is the best example of the SLCA in action. Delta has now completed the carbon footprint inventory and verification of several Business-to-Business (B2B) products based on the PAS 2050 Product Carbon Footprint Standards issued by the British Standards Institution (BSI), including notebook adaptors, PV inverters and DC fans. Delta is committed to developing new products that reduce product carbon footprint by improving power efficiency and utilizing

renewable energy sources and. For example, our power supply units used in data centers have the highest efficiencies in the world to significantly reduce power loss. Furthermore, the energy storage system of Delta's bi-directional PV inverters has overcome the storage limitations of photovoltaic energy. In addition, Delta's wind power products are gradually entering the market with the goal of increasing the percentage of renewable energy sources used in global power generation.

## Strategies for lowering the environmental impact of products

We actively employ the following strategies to reduce the potential environmental impact during each stage of the product life cycle.

### **Reduce Use of Environment-related Substances:**

Delta has implemented the Green Product Management (GPM) IT system based on the QC 080000 hazardous substance process management system. Apart from inspecting materials testing reports from suppliers, Delta manages parts/components based on their environment-related substance risk level to ensure the proper control of environment-related substances. Delta sites have also introduced lead-free processes and low-halogen materials to help customers develop greener and more eco-friendly products.

### **Control of Hazardous Substances**

With regard to hazardous substances and chemical safety and control, Delta abides strictly to comprehensive sets of ERS (Environmental Related Substances) procedures and standards according to our ISO procedures- Management Standards for Environmental Related Substances (Document No. 10000-0162) and ERS Management Procedure (Document No. 06-028).

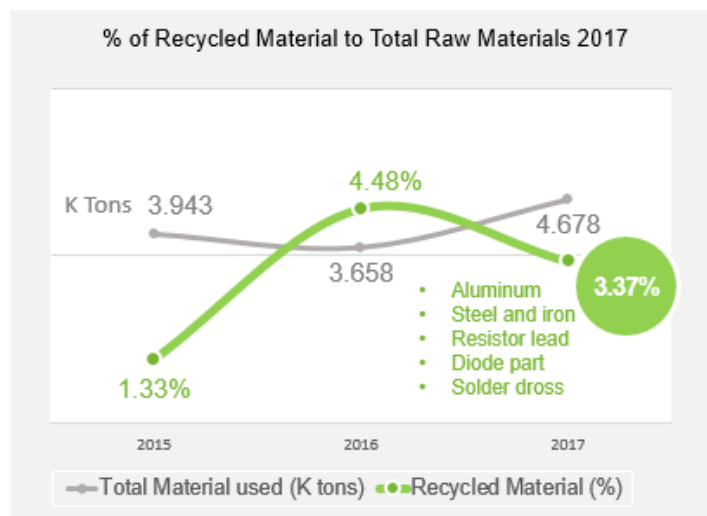
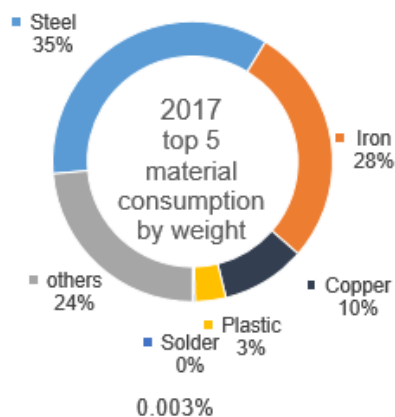
The Management Standards for ERS (Document No. 10000-0162) is an exhaustive list of internationally banned and controlled substances according to recognized standards including but not limited to the Regulation (EC) No. 1907/2006 - REACH concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) issued by the EU; the Directive 2011/65/EU (updated to Directive 2014/1/EU) for the restriction of use for certain hazardous substances (RoHS); the Regulation (EC) No. 842/2006 on certain fluorinated greenhouse gases. The ERS Management Procedure (Document No. 06-028) is an operational procedure to complement the Management Standards for ERS document so as to ensure that the substances

and chemical listed inside the latter are closely managed and controlled according to internationally established procedures and methods.

The ERS Management Procedure elaborates the many measures that must be taken to control the related substances starting from product design phase including subsequent design change and then vendor sourcing, vendor audits, incoming parts inspection, in-process check and complete manufacturing control until delivery. In order to ensure adherence to the procedure by all related parties including R&D, procurement, quality assurance, production and many more, the ERS Management Procedure also identified the ERS Organization that is set up specifically to drive effective implementation and execution of the ERS monitoring and control efforts.

## Input Material Recycling

Delta aware recycling helps protect the environment by reducing the need for extracting (mining, quarrying and logging), refining and processing raw materials. All of these create substantial air and water pollution. As recycling saves energy it also reduces greenhouse gas emissions, which helps to tackle climate change and sustain raw material sources for business opportunity in long-term.



## Adoption of Green Packaging Materials:

We employ green packaging materials for all of our products, including corrugated paper, cardboard, paper, and wooden boxes, for the transport process. Waste materials can be recycled, reused, or used repeatedly. For example, paper packaging materials that contain more than 74% paper are 100% recyclable and reusable. Automotive and industry products are packaged in boxes which are returned to Delta after delivery to customers, ready to be reused for subsequent shipments.



## Enhanced Energy Efficiency:

Delta is strongly committed to our mission "To provide innovative, clean and energy-efficient solutions for a better tomorrow" The company will continue to improve our product energy efficiency and below table show our past achievement and future trend. Most of Delta's power management products have surpassed 92% energy efficiency, such as our PV inverters with a conversion efficiency of over 98.7%, DC-DC converters for automotive with 96% efficiency, and telecom power supplies up to 98% efficiency.



**Tiger Q 3000W 54V AC/DC PSU**  
Delta PN: ECD16010081 Model Number: DTQ3000AN54C32

- Best-in-class, "Titanium" efficiency
- AC to DC power module; W 68mm x H 40mm x L 430mm.
- Wide AC input voltage range: 180 ~ 264Vac
- Hot-Plug Capable with ORing MOSFET
- Parallel operation via active current sharing approach
- Self-cooled with monitored, variable speed fans
- PSU meet RoHS 6/6 and marked with WEEE symbol.
- I2C communication interface
- Over-temp, output over/under voltage and over

current protection

- 8k Bytes of EEPROM for user information
- 2 Status LEDs
- Safety-approved to IEC/EN 60950-1, IEC/EN

## Eco-labels and Eco-declarations Type I eco-labels

Till 2017 more than 200 of Delta power supply products had obtained 80 plus certification, and some of them achieved the Titanium level launched in volume production. Nevertheless, Delta Key businesses majorly falls at ODM/OEM business section, any label on product is under customers' specification requirement. However, Delta complies with 80 environmental regulations, such as material composition declaration, RoHS certification, CE Mark...etc.



### Remark:

There was no incidents of non-compliance concerning product and service information labeling, marketing communication, the health and safety impacts of products and services up to the reporting period.

# Enhance Responsible Supply Chain



Integrity and ESG-related matters communication during Delta Annual Partner Meeting 2017

Delta views suppliers as long-term partners as described in our Delta Supplier Management Policy which is based on the EICC code of conduct guidelines. We believe a prolonged partnership is only viable between enterprises with similar cultures and make integrity, code of business conduct and honesty our top priorities when selecting a supplier.

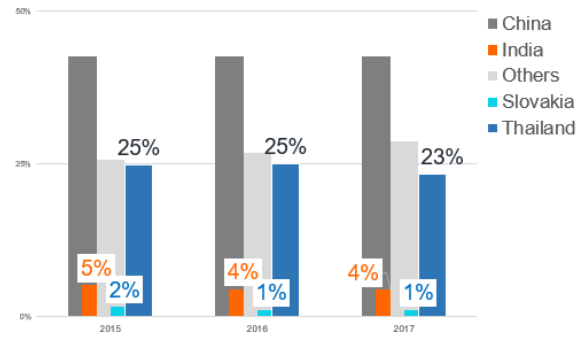
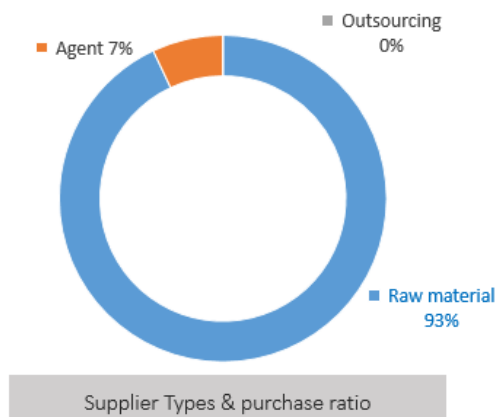
We also request competitive quality, technology, delivery and cost from our suppliers. Thousands of suppliers all over the world are Delta business partners and support our promotion of a sustainable business. Please refer to the link below for the full version of our Supplier Policy: <https://goo.gl/LxfBqk>.

In 2001, Delta formed an agreement between its purchasing department and suppliers to ensure integrity in its supply chain. The Procurement and Supplier Covenants promotes a healthy procurement system that avoids the negative influence of human factors such as bribery or unwarranted returns on normal business. During the Delta Annual Partner Meeting 2017 we discussed anti-corruption to educate suppliers about our policies and stance against corruption.

## Procurement Strategy

Delta provides products and services in three major categories: Power Electronics, Automation and Infrastructure. Delta divides its production suppliers into three types: direct materials (production-related), indirect materials (non-production-related) and labor. At 93%. In 2017, there is no significant change in Delta supply chain, direct material makes up the majority at of our historic purchase expenditure. We divide our direct material suppliers into three types: Raw material/component suppliers, agents and outsourced suppliers. Raw material and component suppliers make up the majority, up to 93%, of our direct material suppliers.

Delta continues to adopt localized purchasing practices to establish close links with local partners, improve social and economic development in the community and reduce the environmental footprint of production. In 2017, 23% of direct material for our major Thailand production sites was purchased locally.



Geographic Distribution of Global Purchase Expense

## Supply Chain Risk Management

To meet sustain supply chain requirements and establish a sustainable supply chain, our critical suppliers, high-volume suppliers and/ or critical component suppliers, has closely monitored. Furthermore, percentage of share of total procurement spent on critical non-tier 1 suppliers has been in our focus too. Delta request all new suppliers to have certifications in Quality, Environment, and Occupational Health & Safety and sign the company's "Integrity Statement" and "RBA (EICC) Commitment Statement". Delta also encourages existing suppliers to have the above-mentioned certificates.

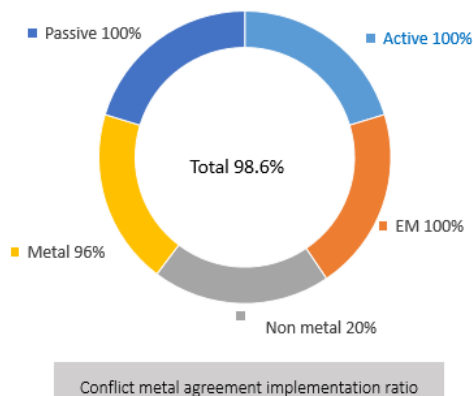


Delta Thailand frequently perform on-site audit to its domestic and oversea suppliers to ensure and advocate their quality and ESG-related performance

In addition, Delta uses tools such as risk mapping that considers economic, environmental, and social factors to verify potential risks in the supply chain and strengthen risk management. During the past years, the number of key suppliers for our power supply products that received relevant industry standard certificates has increased every year.

Components	PCBs	Wire A'ssy	Heat Sink	Inductor / Transformer	Metal/Plastic casing
<b>Risk Attributes</b>	Environment	Environment, Society	Environment, Society	Environment, Society	Environment, Society
<b>Potential Risks</b>	<ul style="list-style-type: none"> <li>Etching process hazardous substance</li> <li>VOC escape from PCB process</li> <li>Hazardous chemicals</li> <li>Toluene emissions</li> <li>Imm. Tin causes cancer</li> </ul>	<ul style="list-style-type: none"> <li>Labor intensity</li> <li>VOC escape from PVC heating</li> <li>Labor safety risks in soldering process</li> </ul>	<ul style="list-style-type: none"> <li>Labor intensity</li> <li>Labor safety risks during stamping process</li> <li>Dust and high noise level in work environment</li> <li>Human toxicity from melting process</li> <li>Solid waste production from AL dross</li> <li>Aquatic toxicity Global warming</li> </ul>	<ul style="list-style-type: none"> <li>Labor intensity</li> <li>Process chemicals</li> <li>High temperature and high humidity in work area</li> <li>REACH</li> <li>RoHS</li> <li>Red phosphorus</li> <li>Halogen Free</li> </ul>	<ul style="list-style-type: none"> <li>Labor safety risk in injection stamping processes</li> <li>High temperature and high humidity in work area</li> <li>Odor of plastics and resins</li> <li>Safety concern in tooling/mold installing and stamping/injection process</li> <li>High noise</li> <li>High temp.</li> </ul>
<b>Key Suppliers</b>	<b>16</b>	<b>25</b>	<b>11</b>	<b>42</b>	<b>28</b>

## Conflict Mineral Control

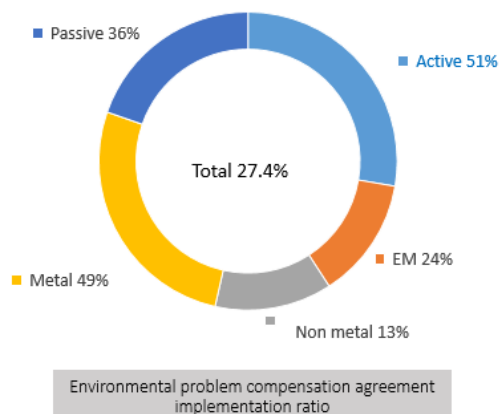


Delta implements a policy that bans the use of conflict metals. In addition, we request our power supply products suppliers to fill out a "Metal Origin Survey Form" and to sign a "Statement of Non-use of Conflict Metals". These are very important steps to help mitigate human rights risk, we also help trace the original ores of metals in our supply materials. By 2017, 98.6% of our main material suppliers have signed the "Statement of Non-use of Conflict Metals". We have not found any conflict metal in our supply chain yet

and continue to communicate the need for our major materials suppliers to leverage their influence for corporate social responsibility and increase efforts for origin verification of ore products by the RBA or a third party.

## Environment-related Substance Control

The company has introduced the IECQ/QC080000 Quality System and promotes a Green Product Management (GPM) system. We implemented the IECQ based on the risk classification of materials and the Green Supply Chain based on the following principles:

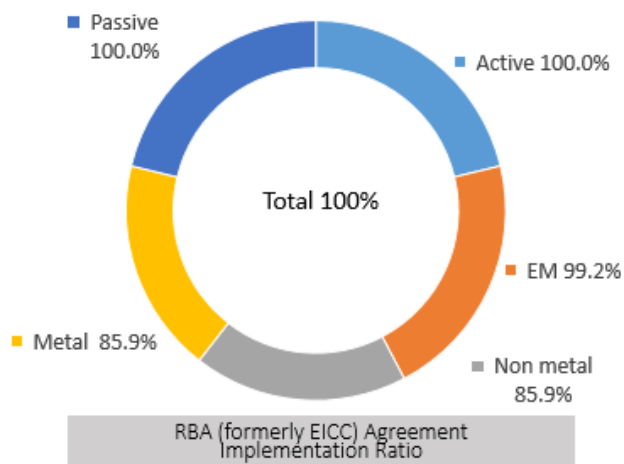


- A supplier must have total compliance with local statutory regulations and define its own risk control mechanism.
- A supplier must set up environmental protection, staff health and safety. The supplier must be hazardous substance free (H-F).
- A supplier must follow relevant Delta Thailand's standards on managing environment-related substances (such as 10000-0162 Management Standards for Environment Related Substances).

The company also leverages the GPM system as a shared platform of environmental information in the supply chain. Delta relays the most recent international environmental requirements, such as the latest controlled substances of EU's RoHS 2.0 and REACH SVHC, to all supplier partners on

the platform for reference and compliance. We also send requirements and procedures for establishing a management system for the material supply system. In addition, we have established teams for ongoing consultation in major plants to verify Environment-Related Substances in products and improvement of our key supplier's management system.

## Partner's Competency and Standard Enhancement



Since 2014 Delta promotes RBA (EICC) Verification Consultation to lower ESG risks in our supply chain and improve competitiveness. Delta Thailand's Human Resources, Labor Safety, Plant Affairs, and Purchasing Departments set up a verification and consultation team, "RBA (formerly) EICC committee", composed of five major departments: Human Resource

Administration, Occupational Health and Safety, Facilities, Central Purchasing Control, Purchasing Material Control and Supplier Quality Management. The RBA committee will examine Labor, Health & Safety, Environmental issues and Ethics and Management Systems. We found room for improvement for most of our suppliers in Health and Safety aspects of the EICC management system. Our 2017 audit included 8 suppliers who all passed with an average score of 100%. Finally, accumulated 47 suppliers audited.

Excessive work hours is a common management problem in the industry. Our RBA verification and consultation team provided experience in introducing and promoting Delta Thailand's Management System to address these findings to our suppliers. The team also conducted status followed-up to ensure continued improvement. The company **sets target to gain 100% agreement implementation of all commodities** include Electro mechanical, Non-metal and Metal **in 2023**.

## Green Supply Chain

Delta continues to collaborate with suppliers to reduce carbon emissions and fulfill our business principles of “Care for the Environment, Energy Saving, and Our Green Earth”. This not only lowers operational costs for us and our suppliers but also increases the competitiveness of the entire supply chain.

Cooperation Items	Summary	Quantitative/Qualitative Results
Materials recycling	<p>Delta cooperates with major processing factories to recycle packaging materials such as EPE and paper etc.</p> <p>Recycled input material</p>	<p>Delta recycles up to 71% of the packaging materials for mechanical products and 30% of packaging for non-metal products.</p> <p>From 2015-2017, recycled material such as resistor lead and solder dross was use as our input raw material (average 0.5% of total weight of) to mitigate raw material scarcity and climate change.</p>
Green Logistics	Major global distribution centers cooperate with logistics providers to implement transportation cost optimization, consolidated delivery, full-truck load, packaging design, container packaging, e-invoice process utilization and selection of optimal delivery routes.	Delta's total saving for airfreight costs in 2017 was around 20.16 % compared to 17.67% in 2016.
Introduction of energy saving and carbon reduction products and solutions	Delta assists suppliers in introducing energy saving products and solutions such as LED, inverters and energy management systems etc.	Delta cooperated with five suppliers to introduce energy saving products and solutions in 2014 and 2015.

# Customer Relationship Management



Delta's corporate culture is represented by five key contributing factors. Customer Satisfaction is positioned as the central driving force for all the factors, including Innovation, Quality, Agility and Teamwork. Many of Delta's customers are among the Fortune® 500 companies. As a result, Delta is constantly driven to meet world class level not just in product and technology but also in overall customer satisfaction

standard and expectation.

With innovative design and eco-efficient manufacturing under international standards, Delta has been illustrating its value to create mutual commitment to its mission to provide products, services and solutions, under short to long term contracts, to fulfil customer's requirements.

## Mutual Success Stories

In the ever-emerging complexity of the Industry 4.0 era, customers around the world are seeking Delta products and solutions to maximize energy efficiency, drive growth and boost competitiveness. Our growing project portfolio is a testament to our successes in a wide range of areas including industrial automation, datacenters, green buildings, smart factories, telecom power, monitoring and displays, EV charging and renewable energy. Delta teams leverage global R&D and manufacturing synergies in our relentless push to deliver the most add-value to our customers. Our core competencies in energy management and power electronics power Delta innovation, providing the impetus for our ongoing journey "to provide innovative, clean and energy-efficient solutions for a better tomorrow".

## Delta Solar Farm in India

The Indian agricultural center Kadappa is the ideal location for Delta Solar Farm to harvest green energy. Delta's client selected Delta Green Energy Solution for our world class design and excellent customer service.



Kadappa, Andhra Pradesh, India

acre (186,155 sq. M) area, which are connected to 20 Delta C500 inverters.

### Application

The generated power supplies a 10MW solar power plant that is connected to the grid.

### Energy Savings

Delta Solar Farm at Kadappa, India has zero internal consumption. All of the generated energy is exported to the grid.

### Power Generation

Delta solar farm generates an up to 40MWh/Day, 1,200MWh/ Month. It has a peak daily generation of 63 MWh/Day five to six days in a year.

### Scale

Delta installed 36,600 panels, over a 46



Kolar, Karnataka, India

Located outside of the tech hub Bengaluru, the "Golden City" Kolar is transforming into an industrial powerhouse. Delta Rooftop Solar Systems brings cutting-edge technology to meet the area's growing renewable energy needs.

### Energy Savings

Delta Rooftop Solar system in Kolar, India saves 1000000W/Year.

### Power Generation

Delta PV system generates an average of 5.5 MWh/Day, 165 MWh /Month.

### Scale

Delta installed 3, 225 solar panels over 5160 sq. M of roof area. Each 310Wp panel has 16% efficiency.

### Application

Generated power is exported to the grid.

## Delta Rooftop Solar System in Thailand



Delta Plant 5- Samutprakarn, Thailand

Delta Thailand global HQ, Delta Plant 5 was built in 1999 and is the first factory in Thailand to receive the internationally recognized green building LEED Gold certification for EBOM (Existing Buildings: Operations and Maintenance).

### Energy Savings

The Delta Plant 5 Rooftop Solar System saves 2,905.4 MWh/Year.

### Power Generation

Delta PV system generates 2,905.4 MWh /Year with 100% internal usage.

### Scale

Delta installed 11,411 panels, over 12,123 sq. M of roof area, which are connected to 38 Delta 50 kW RPI M50A inverters.

### Application

All of Delta Plant 5 generated solar energy is used for approximately 6% of the total energy used in its SMT & HVAC system.

## Global presence to deliver satisfaction

Since 2014, Delta is undergoing a gradual but successful business model transition from being mainly an ODM supplier to a key solution provider in Southeast Asia and Australia regions. As a result, the retention of top 20 ODM customers who are still the main revenue contributors are kept consistently above 80% for three years in row. This is also an indication on the gradual and fruitful transition from over dependence on ODM businesses to solution and system integration businesses.

Most of our major customers have quarterly business reviews which are commonly known as Quarterly Business Review (QBR). Such reviews include assessment in areas like order fulfillment, cost, quality and general business responses. Delta regards these information and feedback with great importance and will act on it as part of our continuous improvement and customer satisfaction pursuit. Moreover, these QBRs have direct impact to subsequent business opportunities.



Delta Thailand's Global operation

For efficiency and maximum effectiveness in operation and communications with customers, Delta rely heavily on electronics means like SAP and other ERP tools proposed by customers and listed below. Since 2015, Delta has also expanded our sales offices in Southeast Asia to be closer to our newer markets in addition to more than doubling our tradeshows in the region in terms of scale of display and number of shows participated. Please find [http://www.deltathailand.com/about\\_global.php](http://www.deltathailand.com/about_global.php) for more information on our operation site.

## Communication with our customers



1. Tradeshow/ Road show

2. Sales offices

3. Software utilization

4. Online presence and Communication channels have reshaped customer relationships: companies need to be present on several platforms to reach out to customers. These channels are especially useful for some of our new businesses.

a. Homepage [www.deltathailand.com](http://www.deltathailand.com)

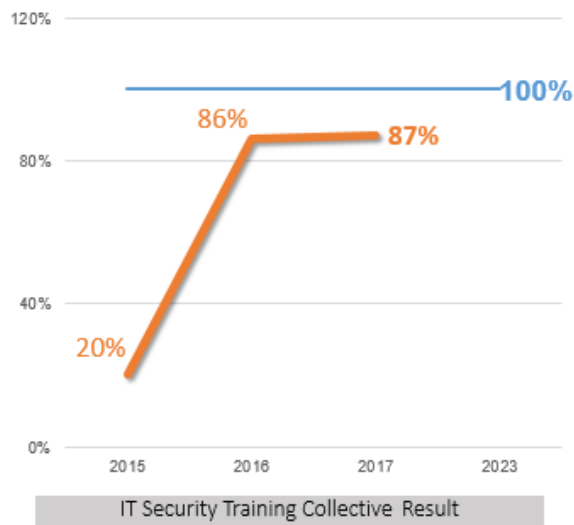
b. Facebook [DeltaElectronicsTH](https://www.facebook.com/DeltaElectronicsTH)

c. YouTube <https://goo.gl/9dnYix>

d. LinkedIn [deltaelectronics/thailand/](https://www.linkedin.com/company/deltaelectronics/thailand/)

e. E-mail: [product\\_enquiry@deltathailand.com](mailto:product_enquiry@deltathailand.com) for sales services [Whistleblow@deltathailand.com](mailto:Whistleblow@deltathailand.com) for corruption, all the form of bribery, code of conduct, human right and ESG-related violation complaint [Info@deltathailand.com](mailto:Info@deltathailand.com) for general enquiry.

## IT Security for reliable on-line communication



On-line communication among Delta group and its business partners is Delta effective tool to get good collaboration and our stakeholder advice. Delta strengthens its online operation by acquiring ISO/IEC27001 for its information security management system. This enables a secure flow of important information to support our customers and suppliers to ensure a sustainable cooperation.

ISO/IEC 27001 is formally specified as an information security management system (ISMS) and includes a range of activities concerning the management of information security risks. It is an overarching management framework taking care of:

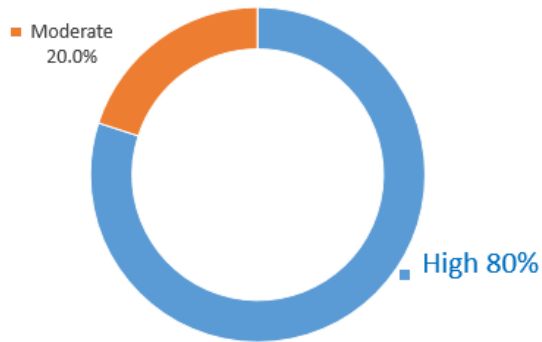
1. Assessing the risks inherent to transmitting confidential information
2. Implementing information security measures through development, documentation and dissemination of methods
3. Building a management system to share roles and responsibilities, establishing an internal audit
4. Managing the risk evaluation process, developing countermeasures and understanding exceptions and ongoing improvements protecting our information is critical for a successful and smooth operation.

To ensure valuable information security and ethical communication, Delta communicate the IT security policy on our intranet. In addition, to raise employees' awareness on this issue, the company target to conduct 100% IT security to its employees annually and target to 100% implementation in 2023\*.

Note: major variable factor is the daily employee turnover rate

## Customer Satisfaction survey

Delta's corporate culture is represented by five key contributing factors. Customer Satisfaction is positioned as the central driving force for all the factors, including Innovation, Quality, Agility and Teamwork. Many of Delta's customers are among the Fortune® 500 companies. As a result, Delta is constantly driven to meet world class level not just in product and technology but also in overall customer satisfaction standard and expectation.



Delta Thailand 2017 Customer Satisfaction Survey result

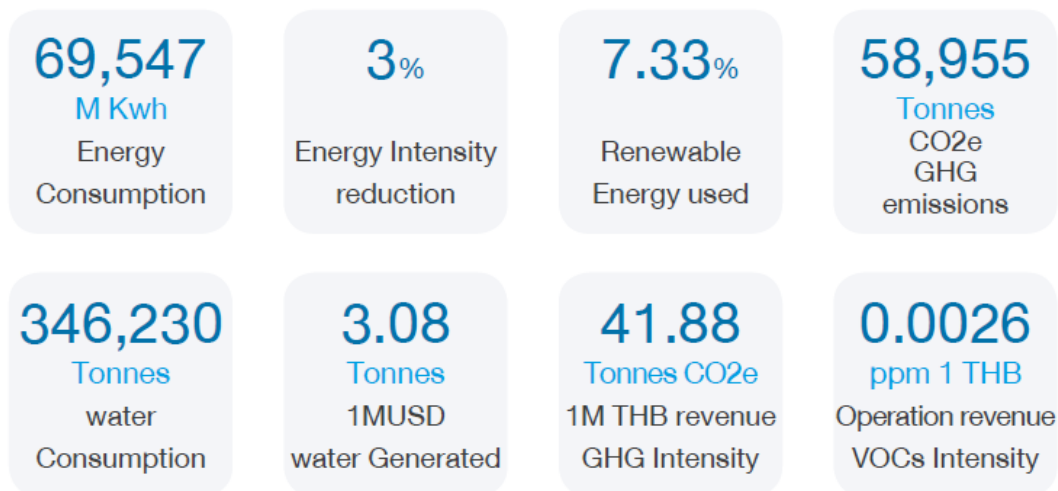
In 2017, Delta conduct Customer Satisfaction survey by using on-line questionnaire to ensure our business really suit our customer's needs.

The survey help to reflect the customer satisfaction level on the company's product, service and business ethics, etc. in different

aspect. The 2017, customer satisfaction survey showed that customer rated **high satisfaction 80%** while moderate satisfaction 20%.

Our outstanding customer satisfaction rate correlates with our high customer retention and lifetime value (LTV). From the standpoint of customer satisfaction, Delta gains from value-add to its core competencies, including cost-effectiveness, low service requirements, partnerships for sustainability and business that generates referrals for business growth. To help maintain its steady business growth, Delta has tracked the annual customer retention rate of its top 20 clients since 2014. During this period, the company's annual **customer retention rate was an impressive 83%** on average.

## Eco-Efficient Operation



2017 Key KPI from Delta Thailand's eco-efficient operation programs

Producing more with less material is essential for many industries affected by growing natural resource scarcity. For Delta, minimizing natural resource consumption and waste-generating activities can lead to lower costs and in some cases, new business opportunities for Delta Thailand group.

## Environment Policy and Management System

Delta's founding mission is "to provide innovative, clean and energy efficient solutions for a better tomorrow". An eco-efficient operation requires continuous effort in reducing a business' environmental impact. Our environmental policy publicly published on <https://goo.gl/SfkHqE> is showing our sincere attempt and partnership with global citizen to make a smarter and greener future.

With this practical management system, drive business operations on the basis of the PDCA principle (Plan/ Do/ Check/ Action). The system allows us to cope with various contexts of quality, economic, social and environmental requirements and stakeholders' expectations, which

employees at all the levels can continue applying as part of their daily activities. In 2017, there is no non-compliance issues

At present, the Company has been certified with various recognized standards, both on national and international level:

- ISO50001 International Standard for energy management
- ISO9001:2015 International standard for quality management
- ISO 13485 Medical Devices Quality System
- ISO14001 International Standard of Environmental management System
- ISO14064-1 Standard of Management System for Quantification and Reporting of Greenhouse Gas Emissions
- ISO/TS 14067:2013 Carbon footprint of products
- ISO/IEC17025 Standard of quality laboratory system
- OHSAS 18001 Occupational Health and Safety Management System
- IATF16949 International Automotive Task Force
- TL9000 International Standard of quality management system for Telecommunications Industry
- IEC-61340-5-1 and ANSI / ESD S20.20 Standards of Electrostatic Discharge Control Program
- ISO 27001 International Standard of Information Security management
- TS16949 Automotive Industry Standard

The Company fully supports the Environment protection Program and is committed to constantly work to strictly and continuously observe and comply with environment laws, regulations and customer's requirement customer to implement green-label products. The company always confine and conserve available resources of global contents, listen and respond to comments from every source to improve environment conditions. In addition, the company strive to drive pollution reduction programs, execute waste management and efficient utilization of energy and resources. Environment education has promote among our employees. Release and instill information of environment productive to every employee and to the public. We always strive for the support of all activities that fosters to achieve safe and clean environment. To confide our related stakeholder, the company has disclosed our environmental policy and report on our public domain. Furthermore, more environment-related information and activities has reported to raise related stakeholders' awareness and collaboration.

To do so, Delta's must continuously inculcate environmental conservation awareness to all staff and ensure compliance with major international standards and in-house programs from sourcing, design, production to order fulfillment. Consequently, Delta has been creating sustainable businesses that provide added value to our customers. By setting industry benchmark for product that creates lesser impact to our environment, Delta also becomes an advocate to make things better for the earth. Other evidences can be seen in our published Green House Gas Inventory report and high score in CDP (Carbon Disclosure Project)

## Smarter & Greener Operation

To mitigate climate change impact, Delta utilize possible technology to illustrated its brand promise; Smarter. Greener. Together, in our daily operation. Reducing the overall environmental footprint of companies in both the manufacturing and services sectors is crucial. With smarter & greener operation, mutual benefit will be enabled for Delta, its stakeholders and world's environment.

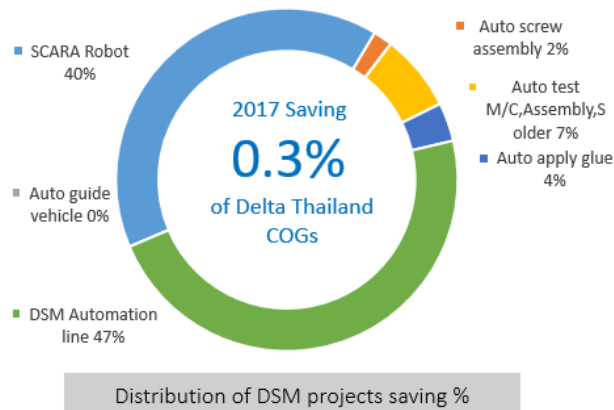
### Process Innovation

	Unit	2017	2016	2015
No. of Project introduced	projects	27	7	88
cost reductions as a percentage of COGS	%	0.30%	0.26%	0.24%

Delta continuously develop its manufacturing process for less material use, decreased energy intensity, lower production waste and provide greener products to customers.

From 2015 – 2017, the Company had accomplished more than 120 automation projects. At the same time, the Company has made a strategic decision to upgrade all Delta factories to "**Delta Smart Manufacturing**". It is a five year plan to integrate all manufacturing process digitally with optimum automation rather than just upgrading with single station automation. Such integration aims to enable all data regarding the manufacturing process to be available at any time and in anywhere with IoT platform. The big data collected will be used for predictive analysis to optimize

production plan, improve logistic efficiency and enhance machine maintenance process, quality control and many more..



Delta Thailand's overall manufacturing productivity for the factories in 2017 had achieved 4% improvement from the previous year, meaning more than 10% improvement since 2014 when we gradually introduced higher innovative automation processes and robotic arms. Our focused investment and effort in process automation and continuous process improvement projects had been the

main contributors. More than 120 process automation related projects were implemented and subsequently deployed to all sites in Thailand as stated above. The rapid deployment of such new processes can be done due to the thoughts and researches put into the concept and implementation phase to ensure minimal to no disruption on daily production schedule and output.

## Green Logistics Program



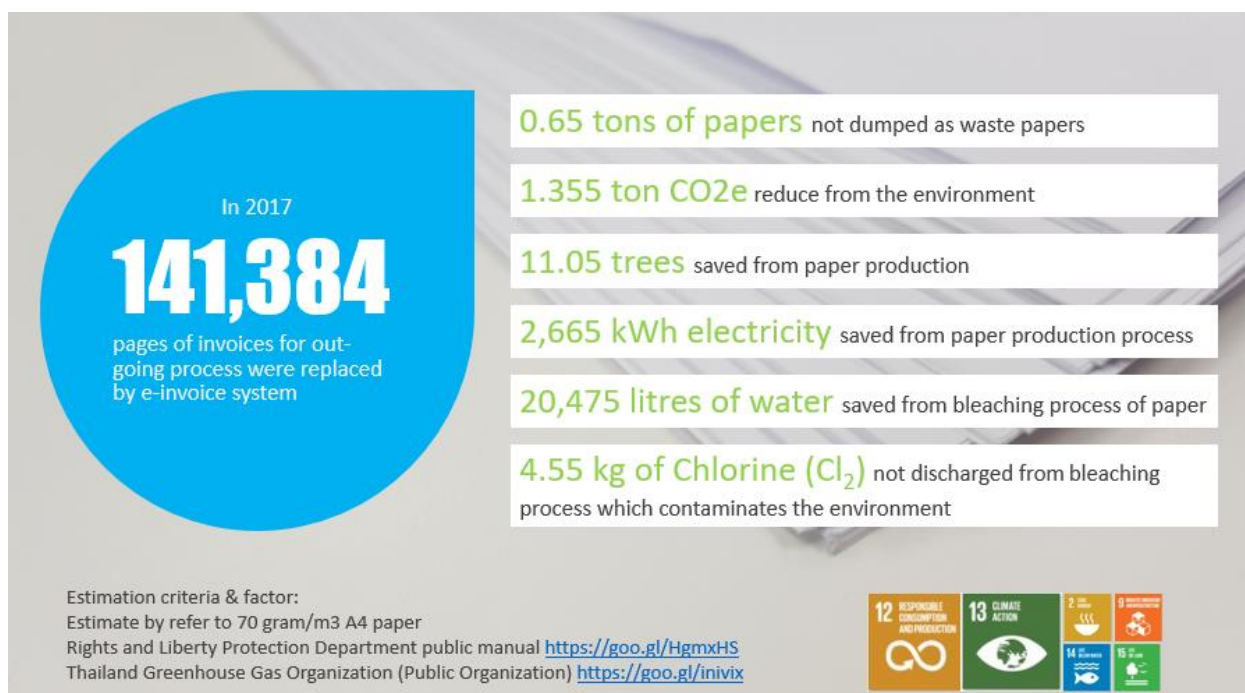
Local and international organizations are actively working towards improving business operations together with protecting the environment. Hence, extensive cooperation has been fostered to reduce the impacts of operations activities on the environment. Delta Thailand Logistics Department is mainly responsible for transporting domestic and international materials to the production line,

delivering finished products to our customers and managing all the relevant parties in the logistic chain in line with the "Green Logistics" approach. Delta is constantly working towards optimizing operations processes and minimizing the harmful impacts to the environment.

## Direct Operation Improvement

Reduce paper work to make the process faster and greener since 2002. With our attempt to be greener and confident in IT security management, Delta has addressed the value of paperless

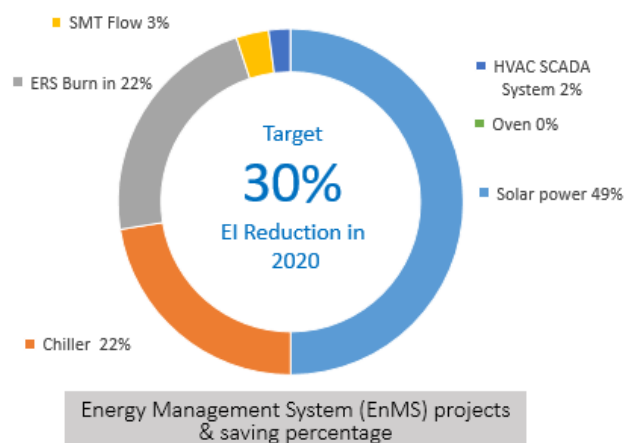
work by sampling check of **e-invoice process** for out-going shipment and realize an impressive impact as following:



1. Ensure that inbound and outbound shipments are for full truck load (FTL) by loading trucks with as much cargo as possible. By doing this, the number of trips between the production based to port per day is reduced, warehouse cost is saved, just-in-time production is achieved and minimize empty backhauling.
2. Request freight forwarders at the point of origin to fill containers with freight to full container load (FCL) so that a large amount of shipments can be delivered in one trip without having to waste free space in the container and involve intermodal transport. Delta also encourages suppliers to use durable eco packaging to prevent damage to goods and materials during transport. If products are damaged, Delta is responsible for delivering replacements to the customer, which results in an increased transportation cost.
3. Use major carriers and freight forwarders to ensure high quality service standard and green logistics operations. Not only does our choice of freight counterparts guarantee efficiency in the transportation, it also protects the environment by reducing CO2 emissions.
4. Promote modal shift by using sea freight over air freight as sea freight is more energy efficient and more environmental-friendly.

## Energy Saving Programs

Delta is committed to energy conservation and has continued unabated ever since energy conservation became a major component of our comprehensive, multifaceted climate protection program to reduce the amount of CO<sub>2</sub> released by our daily operations. Our manufacturing processes within the organization consist mainly of system assembly and the largest source of GHG emissions (95%) is externally purchased electricity.



To fulfill our commitment, since 2014, Delta have developed an Energy Management System (EnMS) Plan to reduce energy consumption in the entire grid by decreasing electricity intensity (Electricity consumption/Production value) by 30% in 5 years (2020) based on the electricity intensity of 2014. In 2017, we have achieved a decrease of 3% of electricity intensity. With strong focus on energy management, we continue to aim higher and share our

experience with our clients.

## Climate Strategy and Greenhouse Gas Control

To ensure our eco-efficient operation creates positive impact on climate change, one of Delta's significant emerging risk on natural resource scarcity and the biggest threats to our society, Delta aligned with Carbon Disclosure Project guideline to provide concrete measures to continuously implement energy management in order to improve usage efficiency of energy as well as to reduce carbon emissions.

Greenhouse Gas	Unit	2017	2016	2015	(base year) 2014
Scope 1	tonnes CO <sub>2</sub> -e	259	425	488	824
Scope 2		40,161	41,461	39,858	37,662
Scope 3		18,536	28,311	-	-
Total		58,955	70,197	40,346	38,486
GHG intensity	tonnes CO <sub>2</sub> -e per 1 M USD revenue	41.88	44.35	30.08	30.56

- Greenhouse Gas Emissions Rate follows Global Warming Potential from IPCC GWP2007

- Calculation included CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCx, PFCs, SF<sub>6</sub>
- Full greenhouse gas inventory report with 3rd party independent accredited is available at [http://www.deltathailand.com/about\\_csr\\_Greenhouse.php](http://www.deltathailand.com/about_csr_Greenhouse.php)

Delta have participated in the Carbon Disclosure Project - CDP since 2007. In 2009, we started to collect data on greenhouse gas (GHG) emissions, both direct and indirect and reported our progress on the website of Standard for Quantification, reporting greenhouse gas emissions and removals (ISO14064-1) in 2010 - 2016. The GHG Inventory was disclosed on Delta Thailand's website to show our GHG performance.



Delta Electronics (Thailand) scores among top 7 Thai companies on CDP List. In first submission, the company, in its relentless endeavor to pursue a sustainable business model, submitted its disclosure on climate

change related questionnaire to CDP for the first time in 2016.

We set 2015 as the base year and used the GHG intensity (ton CO<sub>2</sub>e/MUSD) as the management indicator to effectively manage direct emissions (scope 1) and indirect emissions (scope 2). In addition, the company started reporting GHG scope 3 publicly in 2016. For our first capture, 28,311 ton CO<sub>2</sub>e had discharged from transportation of raw material and finished goods including transportation of business trip by air freight respectively.

The direct emissions (Scope 1) of 2017 were 259 tons CO<sub>2</sub>e, indirect emissions (Scope 2) were about 40,161 tons CO<sub>2</sub>e and other indirect emissions (Scope 3) were 18,536 tons CO<sub>2</sub>e. Emissions have been validated by the independent assurance to ensure data accuracy. Statistics show that the GHG intensity of 2017 was 41.88 tons CO<sub>2</sub>e/ M USD, a decrease of 5.57 % from 2011, while our goal in 2020 is to reduce 30% GHG intensity from base year.

In addition to closely monitor our discharge by our operation, Delta keeps tracking its ozone depletion substances (ODS). According to the company's 2015-2017 GHG Inventory report, CFC, OSDs include Chlorofluorocarbons (CFCs), Halon (CBrF<sub>3</sub>), Carbon tetrachloride (CCl<sub>4</sub>), Methyl chloroform (CH<sub>3</sub>CCl<sub>3</sub>), Hydrobromofluorocarbons (HBFCs), Hydrochlorofluorocarbons (HCFCs),

Methyl bromide (CH<sub>3</sub>Br) and Bromochloromethane (CH<sub>2</sub>BrCl) as defined in the 'Montreal Protocol' has not produced, imported or exported by Delta.

## Green Building Certified



Delta has participated in the Ministry of Industry's "Green Industry" program to showcase its serious commitment to following environmental-friendly practices by shaping up its production and environmental management processes to be greener as well as displaying greater social responsibility

internally and externally throughout its supply chain, to achieve sustainable developments. Our company's two plants at Bangpoo Industrial Estate and Wellgrow Industrial Estate are certified to Green System, Level 4- Green Culture, which is a level for industries with systematic environmental management processes that include monitoring, evaluation and improvement. We have also received a number of awards and certifications related to environmental management and we will keep improving our operations to Green Culture and Green Network. In 2008 and 2012, Delta built 2 certified green factories, which were the plants in Rudrapur and Gurgaon, India.

In 2017, Delta Thailand Plant 5 (Headquarter) in Bangpoo Industrial Estate plans had been certified Leadership in Energy & Environmental Design (LEED) Certified by the U.S. Green Building Council (USGBC) in our existing building: Operations and Maintenance (EBOM) - Gold Level category by renovating the building energy-efficiently. For example, smart air-conditioning, lighting, energy-efficient elevators, avoiding invasion plants in the company's landscape and energy management information systems and solutions which are developed by the company are used. Presently, Delta Thailand is the first manufacturing factory in Thailand which has certified LEED-BOM. The company targets to implement 2 new green buildings in 2021

Delta is willing to share its experience in energy-efficient building, low-carbon green buildings and green factory-office buildings through the Open House Activity to green building programs. This includes working with local environmental protection groups to promote environmental education programs and the energy-saving ideas of green buildings with the government, school, media, communities and the public.



To ensure to substantially increase the share of renewable energy in the global energy mix, Delta utilizes its expertise in renewable (solar) energy for the energy conservation projects. In Delta's pursuit of replacing conventional energy sources with renewable energy, solar roofs are installed in all the three Thailand factories. All new factories within the group will be built as certified Green building while existing ones will have to work towards the same

standard. For example, Delta's Plant 5 in Thailand has attained LEED Gold certification for existing building while India's factories are certified Gold and Platinum.

Delta's green building initiative has replaced 5,840MW/ year of electricity generated from natural gas sources provided by Electric Generating Authority of Thailand (EGAT) with off-grid solar energy generated from the building's solar rooftop in 2017. The amount of natural gas saved needed to provide the equivalent of 5,840MW/ year of electricity is about 240.96 mmcft/ year. Consequently, Delta's direct externality impact on the environment is demonstrated with its reduced dependence of fossil fuel, i.e., natural gas that is non-sustainable and produces carbon emission.

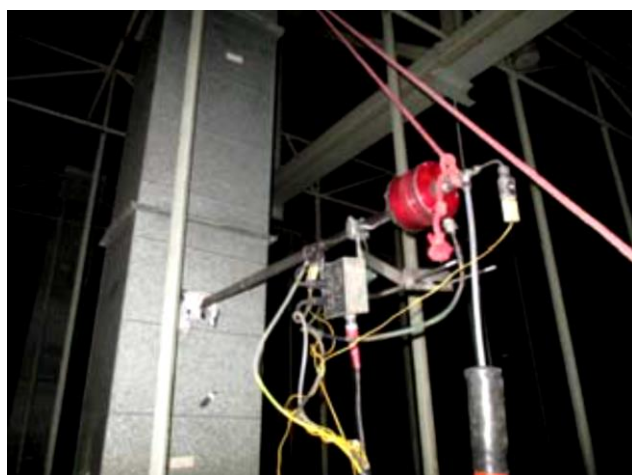
More information on Thailand's Green Industry Standard: <https://goo.gl/PJgj54>

## Emission Control

Air Quality	Unit	DIW standard	2017	2016	2015
VOC in Workplaces	mg / g	0.2	0.06	0.13	0.04
VOC from stacks	mg / g	0.2	0.01	0.005878	0.010014
Particulate matter	kg./rai/day	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Delta Thailand's Volatile organic compound and particulate matter history

## Air Emission



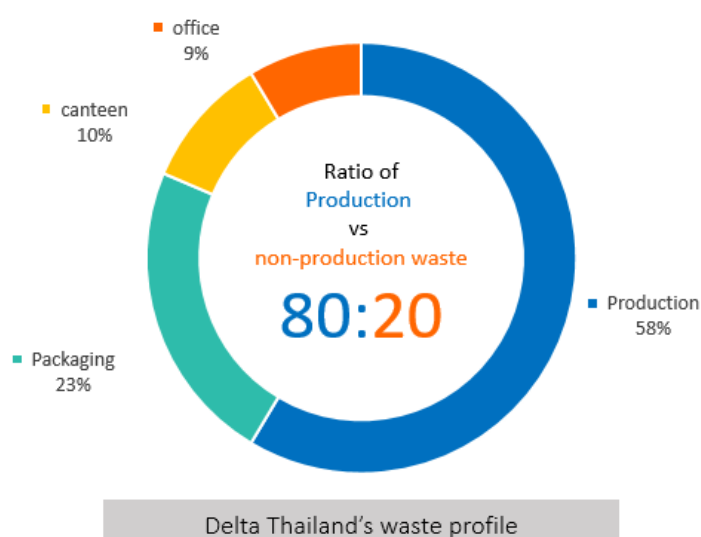
To mitigate environment health and well-being impact on our employee and surrounded community, Delta keeps monitoring our **Volatile Organic Compound** (VOC), e.g., Xylene (C<sub>8</sub>H<sub>10</sub>), Toluene (C<sub>6</sub>H<sub>5</sub>-CH<sub>3</sub>) and Styrene (C<sub>8</sub>H<sub>8</sub>) discharged from our manufacturing process. The company has carried out air quality monitoring at various stations from time to time. This is to make sure the air quality protection and control process

is in norm and sufficient to mitigate environmental impact such as surface water quality, underground water quality, and soil quality. Isokinetic & AAS./US. EPA Method 18, Unambiguously and related methodologies have complied for close monitoring. VOC control is another way to mitigate impact to healthiness and wellness of the company's personnel's as well as neighbor communities.

Annually, the company proceeds its air quality measurement accordingly to the Notification of Department of Industrial Works subjected "Standard Quantity of Pollutants Discharged from a factory B.E 2549 (2006)", "Standard of the Department of Interior's Article 2(7) of the Revolutionary Council's notification" and "NIOSH standard". To ensure the transparency, accuracy and compliance, Delta's air quality inspection is performed and assured by 3rd party specialist company. Proper methodologies such as US. EPA 5,10,18 and 29, Charcoal Tube and CG/NIOSH 1501 will be applied to each stationary sources.

According to Delta's 2017 environment inspection result, there is no persistent organic pollutants (POPs), Hazardous air pollutants (HAP) discharged from our process. **Suspended Particulate (Particulate matter - PM)** are inspected at our stacks by using US.EPA Method 5 annually. In 2017, Delta discharged less than 1.3 (kg./rai/ day) particulate matter which met the Department of Industry's standard while no significant chemical spill reported. Though No<sub>x</sub> and SO<sub>x</sub> had not been found from Delta's recent inspection, the result from our subsidiaries in India and Slovakia where coal used for electricity generators had reported in this report's appendix. The company targets to reduce 30% of VOC in 2020 from base year 2015.

## Waste in Focus



All of Delta's main plants divide waste into three categories: production waste, non-production waste and hazardous waste.

Production waste includes metal waste, plastic waste, waste pallets, paper, and paper boxes, which are sorted, collected,

and handed over to local qualified recycling businesses.

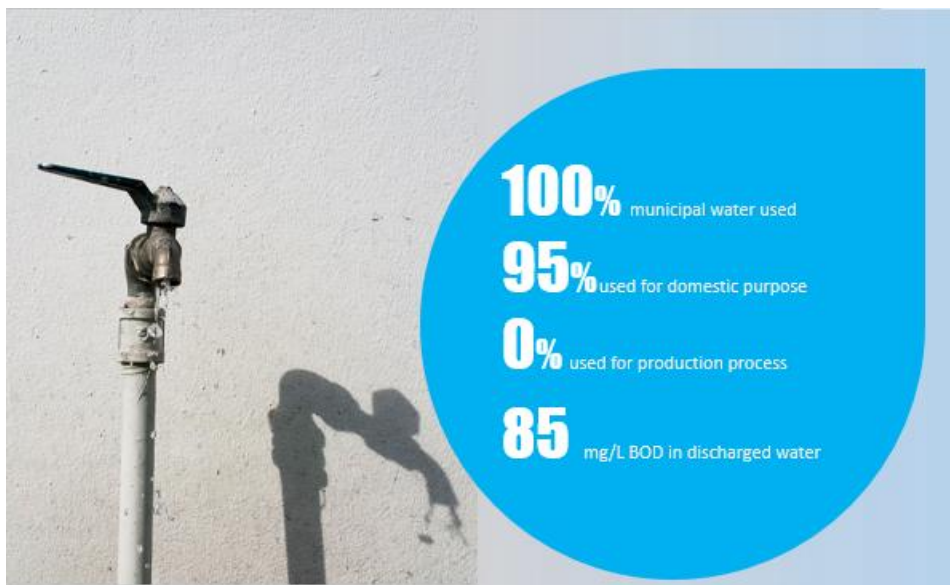
General waste (non-production waste) is transported to garbage incinerators, composting and landfill plants designated by the government by qualified garbage disposal businesses. Hazardous waste includes electronic waste, waste glass tubes and glass, and solvents which are also sorted, collected, and handed over to local qualified waste treatment businesses.

The total weight of waste of Delta Thailand and its subsidiaries was 2,154 tons in 2017. Total waste volume slightly decreased 60 tons or 27% compared to 2016 of 2,214 tones. The weight of non-production (general) waste and production (resource) waste was 491 tons and 1,723 tons respectively. 163 tons of hazardous waste were transported to third party located in proper distance to manage. The ratio of resource waste was 80% and increased 2.4% compared to that in 2016. However, Delta is tracking this issue by using waste intensity (ton waste generation/million USD of production value) as an indicator, waste intensity in 2017 decreased 7%. Due to higher production requirement, Delta plans various waste reduction project in Delta's daily operation which increased 11.0% and 10.9% compared to 2015. The waste generation at main sites increased, mainly due to an increase in factory production items, an increase in employee headcount, and a plant re-layout as well as adjustments. For general waste, 55.6% was landfill. No major illegal activity by our third party waste management company was notified in 2017.



On-site audit performed to ensure waste systematic management at vendor sites

## Water Conservation



With awareness of climate change and rapid urbanization, Delta carefully monitors its water consumption to avoid change in ground water and its salinity. As water is one of the most important resources on Earth and to

save water, Delta has taken many steps. Since water is not our manufacturing factor, most of the water used by Delta's main sites is for domestic use (95%). Municipal water is the main source for Thailand plants.

Delta estimates that 80% of our total withdrawal water will be discharged as wasted water. Our discharged water has handled and professionally treated by [Gusco](#), IEAT's Industrial Park's

environment management agent, with reliable standard, methodologies and assumption. However, Delta keeps tracking the quality of our discharged water twice a month to ensure our biodiversity will be saved whenever these water discharge to the surrounded canals. According to 2015-2017 (as at Mid December) wasted water quality inspected by using Azide Modification method, the biological oxygen demand (BOD) is 85.1 milligram/ litre in average which is under 500 milligram/ litre as the BOD standard for factory located in Export Zone of the industrial park.

According to Delta group's participation in Paris climate agreement (COP21), Delta take 2015 as base year to measure its implementation of various water-saving at main sites, such as recycling the condensed water of air-conditioners for flushing toilets or irrigation, using water-saving taps and water-saving toilets, reducing water output from taps and the water level of cisterns, managing the excess water of cooling towers as well as reusing the wastewater from water purifiers. With target to reduce 30% water consumption intensity (km<sup>3</sup>/MUSD production value) in 2020, we have a consolidated reduction of 12.3% in 2017 compared to that in base year 2015. Since 2013, average treated water returned to the source of extraction is 6% of the consolidated water usage.

## Local Habitats Existence



All of major Delta's own sites are located in industrial parks, this minimize the environmental impact on the local ecosystem, biodiversity and habitats during its operations. Delta realizes that protecting biological diversity is important for ensuring natural ecosystems which provide clean water and air, and contribute to food security and human health. Biodiversity also

contributes directly to local livelihoods, making it essential to reduce poverty, and thus achieve sustainable development.

With practical environment conservation, local habitats have been protected naturally and no reduction of species during the company's operation. Delta takes Delta HQ (approx. 70,000 sqm.) as sample area to ensure our environment has been well managed. The monitored Lizard is recognized by the International Union for Conservation of Nature and Natural Resources (IUCN) Red List as Least Concern species (LC). This local wetland species has been simply investigated

as our environment management indicator through our 30 years of operation in Bangpoo Industrial Estate.

More information about IUCN Red list is available at <http://www.iucnredlist.org/details/summary/178214/0>

## Voice for Betterment

In addition to the IEAT's certificate process to affirm its close monitoring of Delta Thailand's environmental performance, the communication channels "[Whistleblow@deltathailand.com](mailto:Whistleblow@deltathailand.com)" and "PO box 50, Bangpoo 10280" are always available to the public to report any cases in violation of environment-related regulations or human rights. Delta's Safety Health and Environment Committee is established to drive, monitor, review and improve the company's environment-related issues and provide appropriate countermeasures for any confirmed cases. In 2017, there was no confirmed case of any environment-related violation.

## Happy Workplace Social Contribution



2017 Key KPI form Delta Thailand's on labor management practice

## Labor Practice

Delta Electronics (Thailand) Public Company Limited recognizes the importance and respect for human equality including related human rights. The company has adopted Universal principles related to human rights. The Responsible Business Alliance Code of Conduct (RBA formerly EICC) and the International Labor Standards on Migrant Workers (ILO) Code of Conduct are adopted to implement **Human Right Policy** by using UN Human Rights Policy (UNGP) guideline. The policy is published on [http://www.deltathailand.com/en/about\\_corp\\_human.php](http://www.deltathailand.com/en/about_corp_human.php) for all stakeholders to realize their rights, review the company's related activities while query and whistleblowing channel can be easily accessed.

The Company is committed to protecting, respecting and treating the Company's human resources, business partners including vulnerable individuals or groups as defined by the company in every business process. It also encourages, monitors, avoids, and does not ignore human rights abuses within the organization. Include in the relevant business context.



Delta Thailand's Labor & Human Right Risk Assessment and mitigation process has reviewed by Human right Committee and SD committee on annual basis

## Employment Policy

Employees represent one of a company's most important assets. Maintaining good relations with employees is essential for the success of a business's operations and innovation, particularly in industries characterized by organized labor. In addition to employees' capabilities development, Delta, as a multinational enterprise, endeavors its employees' wellness by providing a safe and healthy working environment, fair treatment and non-discrimination, fair remuneration and supporting freedom of association. The company always complies with local and international standards on labor and human rights.

In addition, these standards have applied equally across all operations within the organization. The key focus of the criterion is on companies' policies to manage labor relations, related KPIs, equal employment and development opportunities, human rights and freedom of organization.

The company has implemented the Delta Group Employment Policy and disclose on our website. This is to facilitate the company's personnel to acknowledge their rights and obligation. Furthermore, the policy can be used by related business partner as the guideline for review the company's operation. In sum, essences of the policy are as following Law and Regulation Compliance: To comply with applicable **labor or employment laws and international standards**

**wherever we operate;** hence, minimum 1 month notice typically provided to employees and their representatives prior to the implementation of significant operational changes that could substantially affect them.

### **Freely Chosen Employment: .**

To prohibit hiring forced or child labor to ensure that all jobs are taken voluntarily and employees can voluntarily leave the company within a reasonable period after resigning officially.

According to Delta Human right policy clause 1.1, The Company allows its employees the freedom to choose a job that is appropriate for them. The Company is strongly opposed to the use of forced labor, bonded labor, slave labor or human trafficking. Work is to be performed on a voluntary basis.

### **Humane Treatment:**

To prohibit any form of harassment or inhumane treatment, including sexual harassment, abuse, slavery, corporal punishment, threatening, exploitative, mental or physical coercion or verbal abuse of employees.

### **Non-Discrimination:**

To hire employees based on capabilities and not to discriminate based on race, religion, nationality, age, gender, sexual orientation, disability, or any other reason which is protected by law for recruitment, training, awards, promotion, termination, retirement, or other employment conditions. Working Hours: To establish a management mechanism for working hours which are in line with the labor laws and regulations.

### **Compensation and Benefits:**

The company provides employee compensation and benefits that meet applicable laws, including industry-comparable wages, holidays with pay and legally stipulated welfare. In addition to standard life insurance and healthcare (including disability and hospital admission), operative and executive staff are eligible for short-term and long-term incentives based on their years of service and ESG performance. According to the 2015-2017 financial statement, the

company's provision for long-term employee benefits is set at an average of 3% of consolidated revenue. Delta employee benefit has described in table below.

	Employee benefit	Frequency					Eligible for				
		Daily	Monthly	Quarterly	Yearly	Irregularly	Daily employee	Operative & senior staff	Middle Management	Executive	
Shot-term	Diligent bonus		●				●	●	●		
	Yearly diligent bonus				●		●	●	●		
	Productivity acheivement incentive					●	●	●	●		
	Transporatation	●					●	●	●	●	
	Uniform			●	●		●	●	●		
	Self medical fee subsidy				●		●	●	●		
	Self dental fee subsidy				●		●	●	●		
	Meal allowance	●					●	●	●		
	Living cost subsidy	●					●	●	●		
	Anti-static shoes/ slippers			●	●		●	●	●		
	night shift allowance	●					●	●	●		
	Employees life insurance			●	●		●	●	●		
	Parent funeral support					●	●	●	●		
	Family (husband, wife, kid) funeral support					●	●	●	●		
	Cemetary fund for fatality at work					●	●	●	●		
	Annual increment (performance based)				●		●	●	●		
	Vacation leave				●		●	●	●		
	Meal allowance for business trip					●	●	●	●	●	
	Dormitory for foreign staff		●				●	●	●		
	Quarterly incentive			●			●	●	●		
	CSR Emergency case support					●	●	●	●		
	Annual recreation trip					●	●	●	●	●	
Long-term	Family education busary				●		●	●	●		
	Medical Fee subsidy for family			●	●		●	●	●		
	Dental fee subsidy for family					●	●	●	●		
	Education fee subsidy (for post-graduate deegree)					●	●	●	●		
	Provident fund				●		●	●	●		
	Social assurance		●				●	●	●		
	voluntary resignation				●		●	●	●		

## Freedom of Association:

To respect the rights of the employees to associate on a voluntary basis, to organize labor unions and to establish employee communication channels according to the local regulations.

According to Delta's Human Right policy clause no. 1.6 The Company allows its employees the freedom to associate or have affiliation with groups whose activities are not in conflict with the Company's code of ethics and will not have negative consequences on the Company's image or economic results.



Delta supports football and volleyball teams found by its employees to Bangpoo Industrial Society (B.I.S.) Sports Leagues held from November 18- December 12, 2017

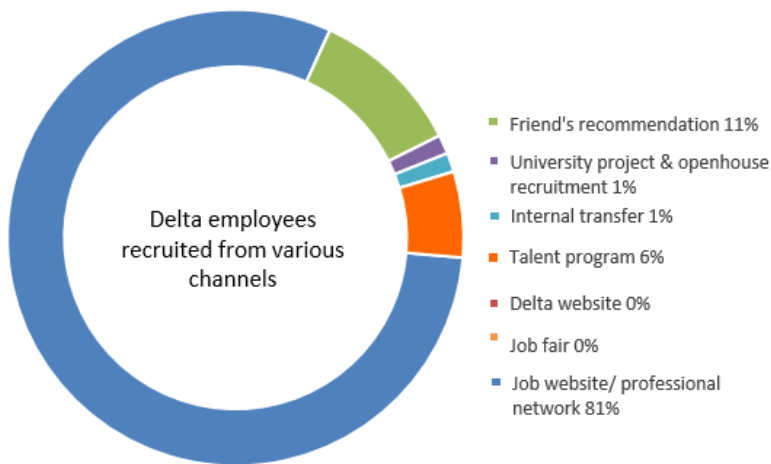
However, affiliation or association with a political group by the Company's employee is regarded as a personal decision which is a personal right. The Company has no policy to support or associate itself with any political groups or parties at any level.

## Health and Safety:

To provide a safe and healthy working environment that is in accordance to the required safety and health regulations. Furthermore, we strive to establish and maintain an occupational health and safety management system that defines operational procedures and monitors the implementation of continuous improvements in the safety and health performance.

## Be our family

Human capital is a very significant factor to maintain innovation, eco-efficient consciousness and ethical value chain. Delta does not only ensure a sufficient workforce to achieve challenging business goals, but also maintain up-to-date skilled and qualified manpower to realize future business opportunities. Delta builds various recruiting channels and incubation mechanisms.

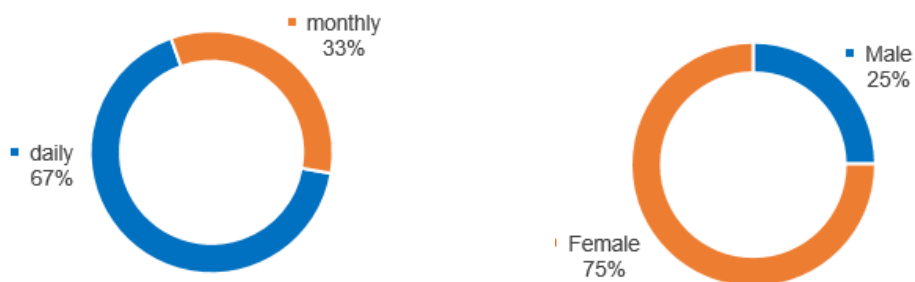


Delta signed an MOU with top-tier universities and engaged in several activities such as providing overseas and domestic internships, IA product training programs, campus recruiting events including recruit these students to be our employees. Accumulated 4 years, the company has annually produced 206 students

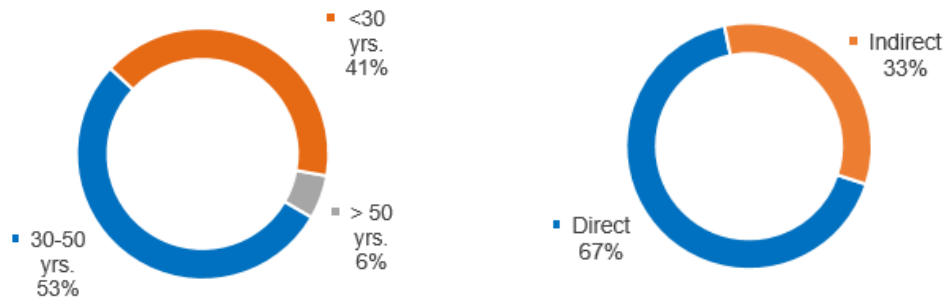
who have been familiar with our corporate-culture and ready-to-work. In addition, the company also proceeds its cross country MA programs to hire young talents from overseas. Comprehensive recruiting channel Delta dedicates a lot of effort in to recruiting talents from multiple channels such as domestic and overseas universities, career centers, social media (LinkedIn) and internal referrals.

## Employee Composition

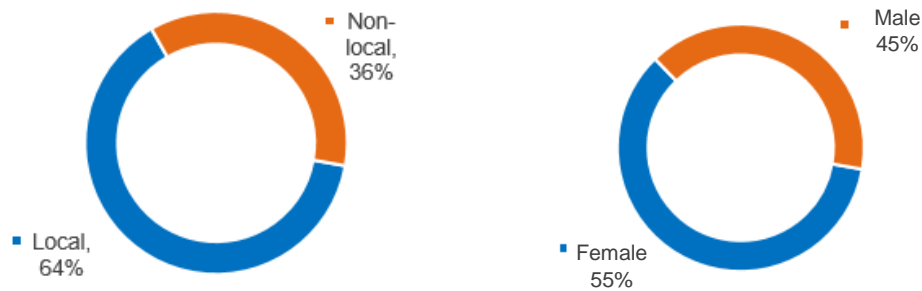
By the end 2017, Delta Thailand and its subsidiaries had a total workforce of around 10,000. The distribution of the workforce is shown below:



Delta recruits, appoints and develops employees based on their capacities, and treats all in the same way, regardless of race, faith, color, nationality, age, gender, sexual orientation, marriage status, political affiliation or disability. Official (monthly) employees account for 35% of the total while another 67% are in production, operation and other function positions. Employees are 25% males and 75% females. Direct employees account for 76%, and 41% of the employees are under the age of 30.



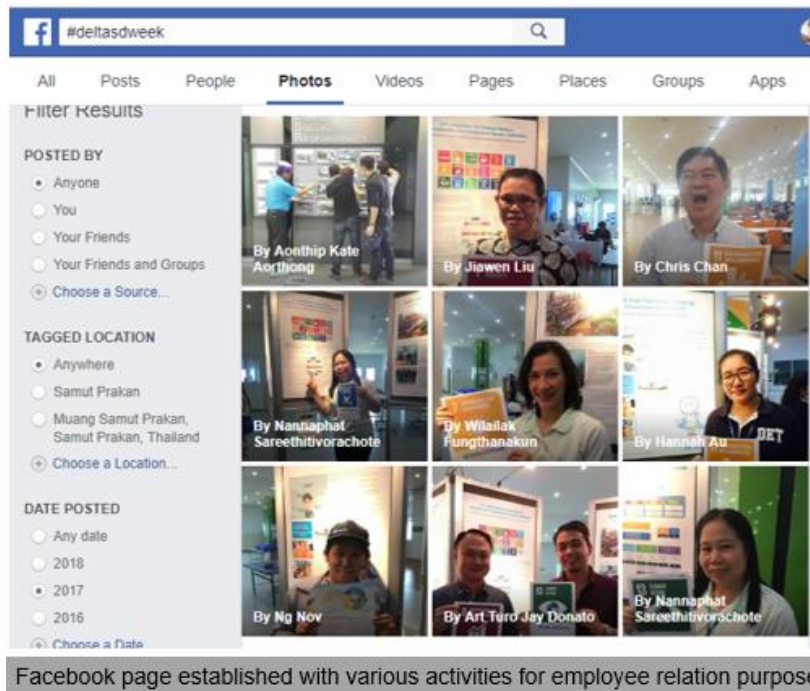
For management, 64% are native to the country where they are employed and 40% are female



## Employee Relation

Employee Relation Internal communication is vital for Delta as it enables exchange of information within our organization. Information sharing can also foster a healthy relationship between two or various parties and improve our business performance across the board. Delta Thailand's labor union was established in 1998 to represent its employees and to encourage effective information exchange between Delta's Employees and Management through various communication channels. This approach does not only promote the participation of multiple parties in collaboratively solving issues, but it also strengthens our unity and contributes to our growth. Currently Delta's labor union has 8,556 members or 93 % of our overall staff in Thailand. Meetings of the union committee are conducted on a monthly basis.

Delta uses Intranet to communicate with the Employees via our internal portal where information about Delta including its subsidiaries and Delta Group in both local language and English can be accessed and speedy top-down information transfer is possible. In addition to the Company's information, Employees can find out about latest announcements, policies, updates, good practices, code of ethics, guidelines and specific technical information for self-learning on the Intranet. For the convenience of our Employees, Delta's Office Automation (OA system) is accessible through our Intranet to provide an easy-to-access platform for various types of



employee benefits offered, such as leave requisition, medical expense reimbursement and travel claim. In addition, in 2016 the company has established its official Facebook page and official Youtube channel to be alternative communication channels for the company's personnel and our business related parties which can be easily accessed.

## Employee Retention

According to our recent study, it is found that the employee retention rate has significant correlation with the company's performance as well as related cost control. Hence, the company has arranged to maintain its employees' satisfaction through reasonable welfares, efficiency and morale development program to boost up their career path, well-being enhancement and additional knowledge to have extra income for themselves and their families.

## Training and Development



To align employees capabilities with the company's innovation and eco-efficient operation, Delta keeps developing our employees' both hard skills and soft skill. The company doesn't not only keep focusing on deepening employees' capability, but also inspiring employees' motivation and potential to fulfill continuous growth. To realize organization's long term development and conquer future challenges, we provide a

comprehensive and solid training platform to our employees. These training resources are distinguished into several different approaches according to different strategies and goals. On one hand is to diminish the gap between individual contribution and organization's need, on the other hand is to incubate core advantages for business's future transformation and environment challenges.

1) **Orientation**: Provide new employee a general understanding of code of conduct, company regulation and policy aiming that employee in all level will produce better work performance, provide better products to customers, and observe laws and code of ethics to help uphold the company assets, interests and image and contribute to the sustainable operation and development of the company. In addition to ethic-related subjects, organization and product, environment and safety regulations, employees' rights, human rights, welfare and benefits, had included into the orientation program for 100% of new-hired employees.

2) **Fundamental training**: regarding to computer skills, language skills and other interpersonal skills training to help employees perform in a decent manner.

3) **Statutory training**: Provide a series of timely training according to statutory requirement and EICC regulation. Every employee shall attend at least 1 hour annual training regarding to EICC regulation (including to uphold Human Right).

4) **Professional Competency-based training**: Delta prepare employees for equipping qualified capability by different segment, including Manufacturing related, Sales and Marketing related, supporting related and managerial related training programs. A training roadmap and a clear career roadmap are also delivered to employee during performance management cycle.

- 5) **Leadership Competency-based training**: Design for front-end leader, entry level supervisor, middle and high level manager. Focus on core value and competency delivery aligned with Corporate Multi-language training programs is also delivered.
- 6) **Massive Open Online Courses/E-learning**: Leverage Corp. and outside learning platform to provide employees an open learning resources so that employees can learn along with individual needs without time or location limitation.
- 7) **Self-learning**: Encourage employee to attend advanced or continuing studies, provide a sponsorship and flexible working hour program for employees.

To ensure employee's career development, Delta assess the various tools to 100% of our employees that companies use to measure individuals' performance and to what extent these tools are applied throughout the organization. The company uses Management by Objectives to assess our STAFF (monthly paid employee C3-C12) while Formal comparative ranking of employees for C1-C2. In addition 360 degree feedback for some potential staffs in Talent development.

## Happy workplace

Our Employee is our innovation creator and the key factor to leverage the company's sustainable achievement. Delta Thailand always pay its attention to human resource development with clear target and strategy accordingly to our Group-wide strategy. This will be another way to facilitate the organization to continuous and sustainable growth.

The company keeps continuing its human resource retention activities based on "Happy 8" guidance. The "Happy 8", the guide to human life's balance, aims to encompass our employees to be happy in their 3 aspects of life. The overlapping aspects; personnel aspect, family aspect and social aspect respectively, should be managed to be in balance. Healthiness, well-being, understanding, morale and professionalism in one's career will be resulting in employee's engagement and retention which will drive the organization to sustainable growth.

### Happy Body

Delta Thailand always maintain a stable working environment such as air quality measurements, lighting in the workplace twice a year, Improving work environment Co-operation in Non-Smoking and Non-Smoking Activities with external Institutions, providing doctors and nurses service on-site. In addition, the company has also taken preventive actions to encourage employees to be

healthy. The company frequently sponsors employee's sport teams to participate in events such as the marathon team, Football team, etc.

### Happy Heart

Delta Thailand is an organization comprising with international personnel. The company promotes coexistence among the organization. We run our daily work without discrimination in employee's gender, sexual orientation, race, subculture, etc., the Company has a human rights policy as a guideline for looking after its employees to receive basic human rights treatment. The company has organized various activities to enhance good relationship among its employees while unity and good understanding of each other always in place. Various communication channels have established to keep in touch with our employees such as e-mail, intranet, website, facebook, face to face meetings and leisure activities. We also provide channels for employees to communicate with management for related complaints as well as communicate their diverse needs. This is how we foster mutual development of work and organization on the basis of understanding throughout the three decades.

### Happy Relax



Although the company is a happy organization, it is undeniable that daily work to reach the strategic target may cause stress on employees. This may have a negative impact on coordination among the department, analytical thinking and the potential of the employees to maintain their productivities. The Company has a policy to encourage employees to conserve their balance in living by supporting teamwork, employee empowerment in terms of budget

and facilities are always.

### Happy Brain

Human resources are a great source of innovation leading to sustainable corporate development. Delta Thailand has unceasingly developed all levels our employees' knowledge

and capabilities. This is to ensure that our business is constantly evolving. The company provides specialized training and expertise such as languages development courses, new technology and standards course, new requirements of the market. These training courses will help our employee's agility to response the progressive change of business landscape. The company offers on-site training, support the company's personnel to attend training with relevant institutions, sending employees to long-term training Delta business group in other countries. To provide our employees with the potential and knowledge, the company will be able to keep up with the fast changing business and related requirements. In addition, the company also provides scholarships for employee's children and employees while those employees who wish to continue their bachelor's and master's degree education will be sponsored as well.

### Happy Soul

Delta Thailand is committed to maintain employees knowledge and morale which will be another key factors leading to sustainable growth. On December 22, 2017, Delta Thailand organized a morale training "Happy Soul Happy workplace" by Boston Network Seminar to enhance the health and well-being of the Happy Workplace at the head office of Bangpoo Industrial Estate with over 100 executives and employees.

### Happy Money

The company encourages its employees to pay their attention to money management and savings. In addition to monetary welfare such as provident fund, Delta Thailand provide various facilitation on this matter such as mobile banking units for on-site services, payment of real estate loan through payroll remittance to eliminate overdue payment problems. One third of Delta Thailand employees are cooperative members. In addition, the company also provides career training such as making desserts, coffee, sushi, salad rolls, etc., that our employees will have additional sources of income which will mitigate insufficient income problem when the company's production plan adjustment as well as no overtime plan. In addition, the company also provides training in financial management to prepare for retirement to ensure that our employees will remain well-being after the end of their working life.

### Happy Family

80 per cent of our employees are female. Approximately 5 percent of these female employees take maternity leave annually. Unfortunately, if the employee is concerned about the welfare

and well-being of their children, the employee may decide to resign. Their resignation will impact on capacity, the company's innovation as well as the cost of recruiting and developing new employee's expertise. Finally, the company is aware of the importance of facilitating the facilities for those mothers who return to work after giving birth by providing a breastfeeding corner. The company has established in the breastfeeding corner business since 2008, with the goal of facilitating employee's children to be grown by having mother's breast milk for at least 6 month. In 2017, 30 mothers utilized the breastfeeding corner.

The company was honored by the Thailand Breastfeeding Foundation together with the Department of Labor Protection and Welfare, Ministry of Labor, Department of Health, Ministry of Public Health, the Office of the Health Promotion and UNICEF to be one of 5 model organizations in Thailand, with the best practices on breastfeeding activities on August 25, 2016.

### Happy Society

Society for working people can be divided into two-dimensions; the internal workplace and external workplace societies. Delta Thailand promotes a harmonious goodwill for the society in which employees live and work. In addition, the Company's personnel are encouraged to socialize in expanding views in national and global level participation. Delta has never neglected



the opportunity to fulfill the social needs to strengthen the society that have always supported our business. The Company has continuously promoted volunteer activities. In 2016, in addition to this spiritual activities, various social related scheme has

provided to maintain good relationships and beautiful tradition. The Company relentlessly insists to respond to the urgent needs of both nearby and distant societies. For instance, we re-aligned the New Year Festival to a festival of giving by changing the merit to the temple to giving the necessary supplies to natural disaster victim, donating used calendar for the blind education.

# Occupational Health and Safety



Since our employees' health and well-being is another key to maintain innovative and eco-efficient organization, Delta puts its full effort to maintain safe and healthy work environment to retain skilled workers. According to the company's Human Right policy published on <http://www.deltathailand.com/pdf/DET-Human-Rights-Policy.pdf>, Delta factories in Thailand has fully incorporated human rights principles, namely RBA's Code of Ethics and ILO's labor standards, into the Company's operations and developed our human rights policy based on the UN's Guiding Principles on Business and Human Rights – UNGP.

Delta Thailand's plants, in Bangpoo and Wellgrow Industrial Estate complies with Thailand's Labor Protection Act B.E 2554 (2011), ISO14001 and OHSAS 18001 standard, the company publicly commit on occupational health and safety matters as following:

1. The Company shall comply with occupational health and safety standards of the industrial sector by ensuring the safety and health standards of food, water and overall employee well-being at the workplace. A committee consisting of employer, employee and labor union representatives shall be established and measures Human Rights Policy implemented for the prevention investigation, audit and management of emergencies, work-related accidents, illnesses or injuries. The committee will also implement safety procedures for machinery and labor-intensive tasks.

2. The Company shall assign a representative and communication channel for occupational health and safety matters annually so that its employees and business counterparts are aware of their rights, roles, responsibilities, procedures and available communication channels.

3. The Company shall not force any individual to work in unsafe environment. Specific training, right work instruction and personal protective equipment will be provided to prevent accident, injury and occupational diseases which include infectious disease, non-communicable disease and mental health. In case proper safety instrument is not arranged accordingly, the assigned employee has the right to refuse unsafe work without fear of reprisal.

4. The Company shall not force any individual to undergo HIV/AIDS and TB tests nor will it make HIV/AIDS and TB tests an employment condition or pre-condition to providing health services during employment. However, the Company's employees are eligible for voluntary HIV/AID and TB testing with pre and post-test counseling. To ensure the employees' privacy reserved, their test results shall be kept confidential. The Company shall support a mechanism to promote HIV/AIDS and TB awareness.

5. The Company shall provide reproductive health protection for its female employees, e.g. assigning an appropriate job to a pregnant employee which does not expose her to hazardous substances, is not labor-intensive, does not require her to work in an unsafe area and does not affect rest time. This includes the provision of relevant reproductive health services in line with a physician's advice and information regarding pregnancy, maternity leave, maternity benefits and protection against dismissal during pregnancy.

6. The Company shall support and facilitate the process of claiming social welfare benefits to its employees to maintain their health.

7. The Company shall not force any individual to work in unsafe environment. Specific training, right work instruction and personal protective equipment will be provided to prevent accident, injury and occupational disease. In case proper safety instrument is not available, the assigned employee has the right to refuse unsafe work without fear of reprisal.

8. In addition to Channels for reporting allegations, complaints and feedback for human right concern, the company has established email address OHSC@deltaww.com for employees, related stakeholders and community for raising their concern on occupational

health and safety concern directly to the Occupational Health and Safety Committee. Through this communication channel, practice of Protection of whistleblower and Protection of personal information and confidentiality is complied. (find detail in page no. 10 of this policy)

Remark: Since our subsidiaries in India and Slovakia has cover by difference labor law and caste system, some of these commitment is not applicable due to specific legal

## Exclusive Committee

To ensure safety, health and environment related negative impacts either for Delta employees or our surrounded community has systematically mitigated, and reporting directly to the highest management in charge. 9,161 employees in plants of Delta Thailand (86% of Delta global workforce) is controlled by the organization that are represented by formal joint management worker and Environment Health and Safety Management Representatives (EHSMR) Committee.

In 2017, the company has appointed 61 representatives (in production-oriented departments) from its business units, plants to be on the EHSMR Committee. 13 representatives are female while another 48 is males. Based on PDCA principles, these representatives (0.7% of total workers) have been given occupational safety, health and work environment training and are responsible for keeping effective implementation of planning, promoting, inspecting health and safety management in Delta Thailand's where 86% of our workforce has covered. OHSC Committee's concerns, progress and result has reported to the Operation Vice President on monthly basis.

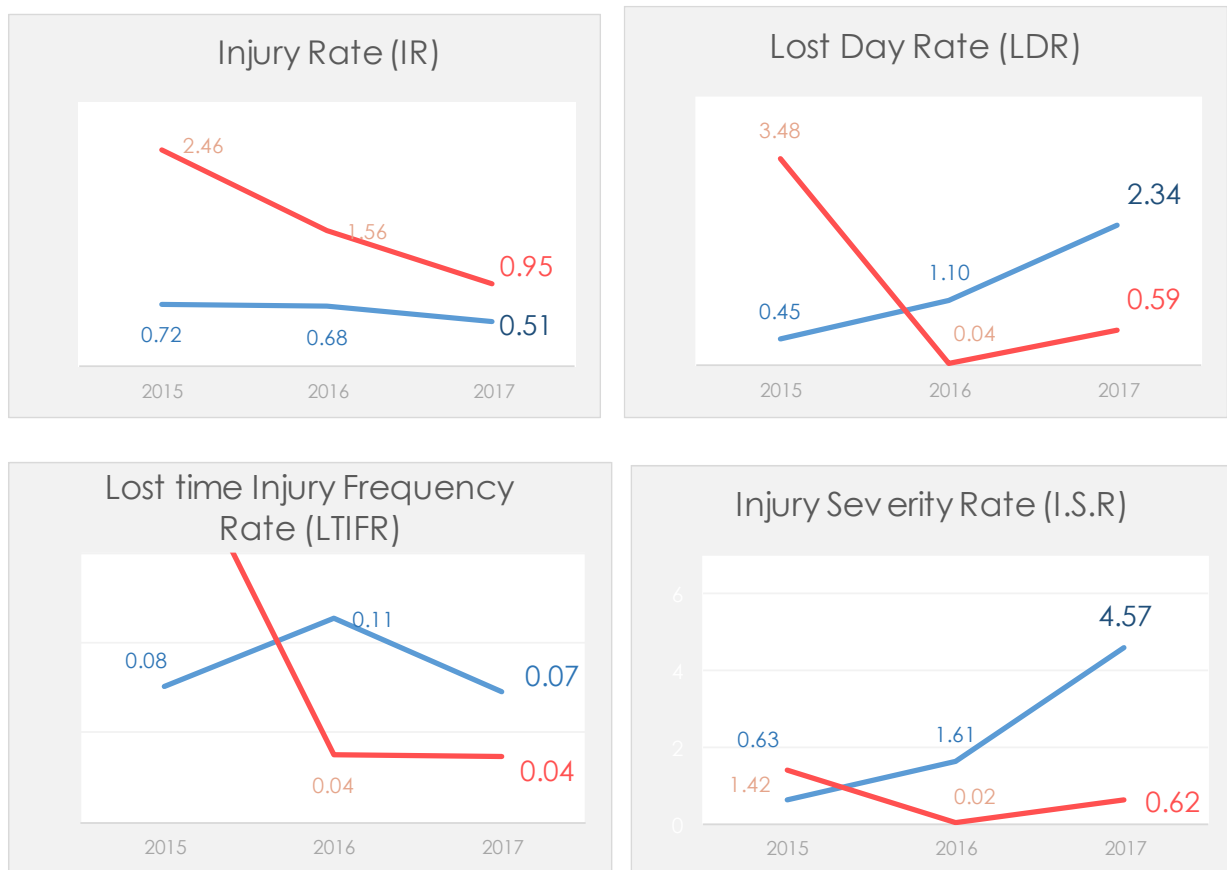
## Enhance Good Health and Well-being

The Company has safety officer in professional level tracked lost time injury frequency rate (LTIFR.) and Injury Severity Rate (ISR.) the main safety and health management indicators. Annual plan and targets for each plant have been set along with safety & health audits, safety and health education, regular work environment inspections and improved information exchange to effectively reduce the frequency of safety and health incidents.

Although no work-related disability and work-related fatality had report in 2015-2017, Delta strives to reduce accidents to zero to meet our **"Zero Accident"** target in 2023. The annual industrial safety management goal of 2017 in Thailand, was Injury Frequency Rate < 0.5 and Injury Severity Rate (I.S.R.) < 6. The results for 2017 were I.F.R = 0.11 and I.S.R = 2.

In 2017, the total injury rate (including minor injury and fatality) was 0.51 cases per 1 million working hours. There were 40 injury cases in 2017, down from 55 cases in 2016. Of these 40 cases, 37 cases caused less than 3 days of work loss, 2 cases led to work loss of over 3 days and another 1 case a male operator lost a body part (fingertip) from a machinery accident. For the mentioned disability case, Delta fully take responsibility in this operator's medical expense and his legal process as remedy action. Finally, the operator had received disability compensation from the Social Security Office accordingly.

The number of severe injuries cases (with work absence of 3 scheduled work days or more) declined by 25% or represented only 0.03% of total employees. No occupational disease and fatality cases at work were recorded for Delta employees, subcontractors and other related workers.

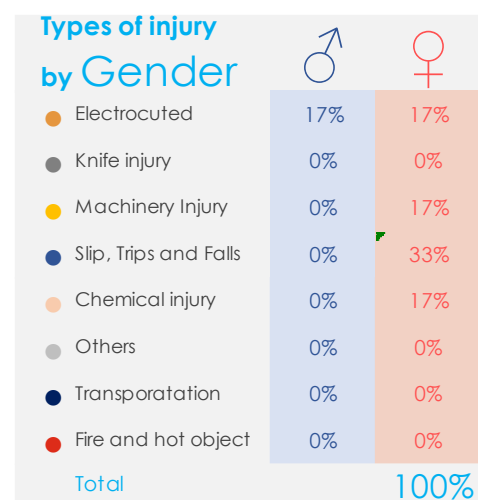
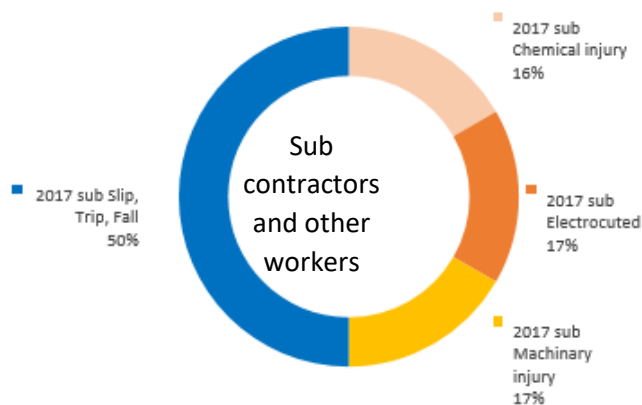
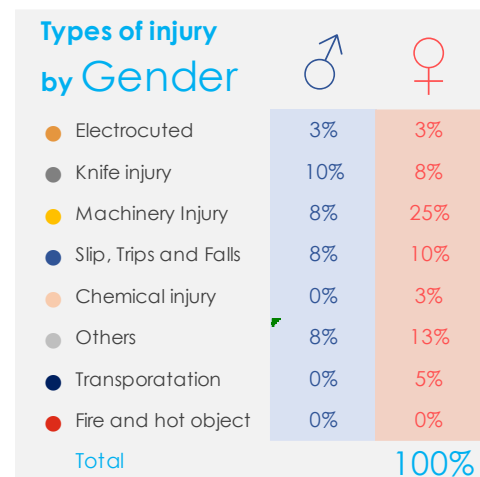
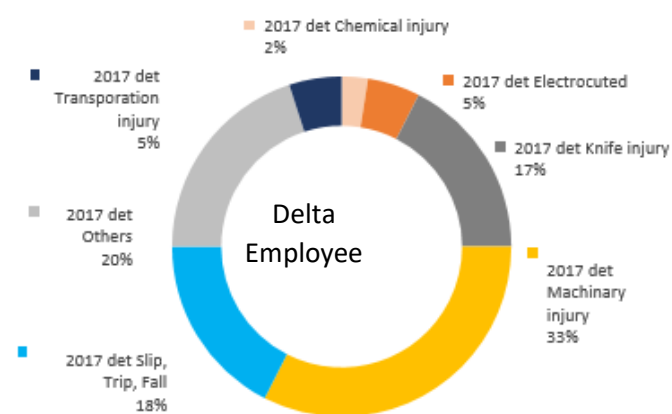


- male  
- female

Delta Thailand's employee OSHA Rate report by gender.  
(Related statistics for all worker has reported in Appendix portion)

Analysis of the major reasons for failing to fulfill preset goals as well as avoid repeat occurrence revealed that the number of days for employees on industrial injury leave was longer than expected. To help employees recover quickly from injuries with a reasonable number of days for industrial injury leave, the company will reinforce its re-examination mechanism while employees are on industrial injury leave and will include the number of leave days as part of periodic follow-ups.

At the monthly interplant safety and health meetings, representatives from each plant discuss incidents related to employees and contractors, analyze the reasons and propose improvements or engineering changes to prevent incidents in the future. In addition, Based on [Thailand's Social Security Office](#)'s guideline of injury data collection, 8 major types of injury had recorded by Delta in 2017.

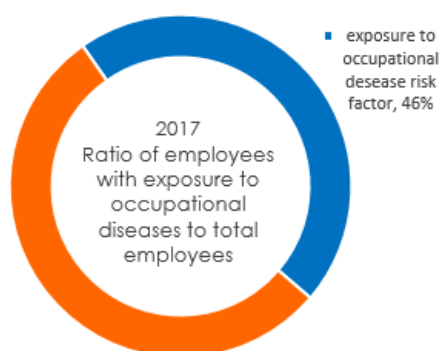


According to 2015-2017 collective statistics, the most significant risks for Delta employees, subcontractors and workers are the hazard from working with machine and hazard from slip, trip falls. There 2 major causes of accidents

- 1) Improper work place and process management
- 2) Human failure resulting from insufficient knowledge and improper work condition.

To ensure our employees are awareness of all initial policies and procedures and kept aware of any changes on a formal basis, create feedback loop and continual improvement and a safer workplace, Delta Environment and Occupational Health and Safety Management Representative Committees initiated various activities in 2017. The result of these activities reflect in better trend of reported case. (find more detail in appendix section).

## Mitigate risk to specific diseases

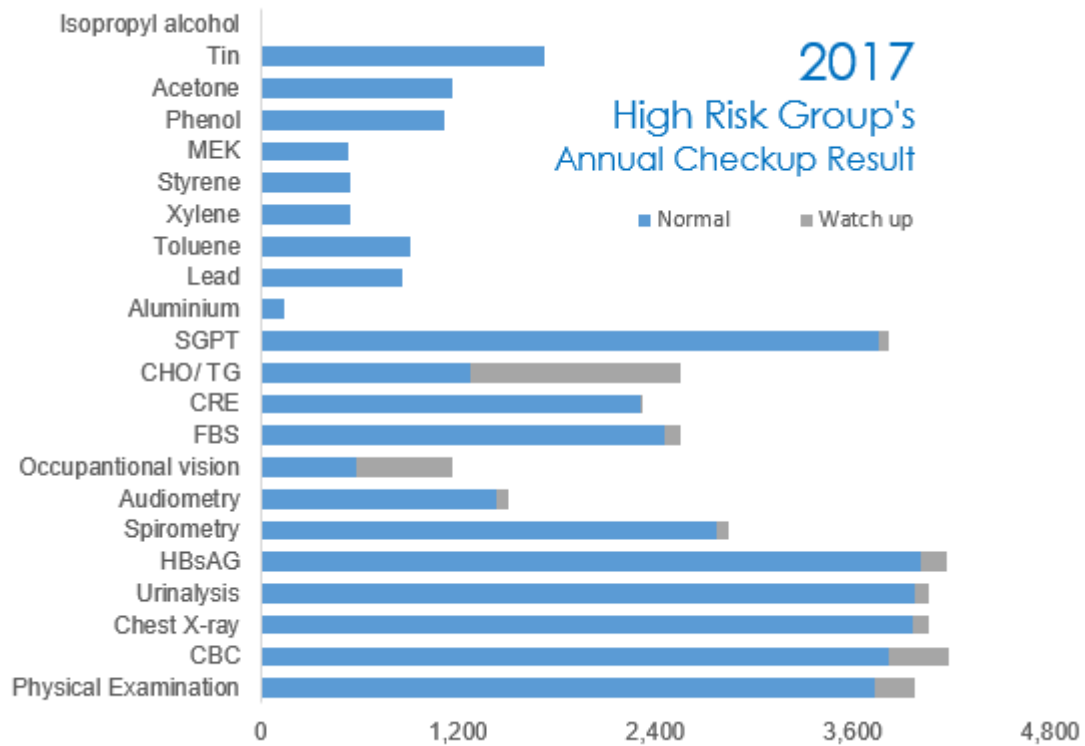


In spite of our effort to enhance green and eco-efficient operation, Delta realizes that **46%** of our total Delta employees involved in routine work/ activities which exposure to risk to occupational diseases announced the Ministry of Labor of Thailand date August 15, 2007.

Though the company has establish Personal Protective Equipment Manual and provide work instruction training on occupational health and work environment to our new employees, Delta constantly monitor the exposure to hazardous substances and the list of materials used. The results are used to correct work practices or make engineering improvements to reduce the risk of occupational illnesses. Delta provides employees engaged in hazardous operations, with annual high-risk group health exams and then providing health management according to their health exam results.

In 2017, **4,189** employees who work with hazardous exposures including noise, particulate matter, mineral oil, acetone, x-ray, ionic ray, lead, tin, light, thinner and heat had encouraged to participate annual high-risk group checkup performed by occupational health physicians. Specific checkup process like Spirometry, Audiometry, Urinalysis and blood test to examine contaminated VOC had provided to make sure both immediate and chronic effects or diseases from manufacturing, stamping, soldering, labor-intensive work, grinding and chemical-related processes; for instance, had properly managed. This annual action aims to prevent our

employees and subcontract from disease caused by chemical agents and specific process such as deafness from sound-intensive work, chronic physical hazard, occupational respiratory diseases, occupational dermatitis diseases, occupational musculoskeletal disorders and occupational cancer.



## Training

Delta realizes a person with suitable training and sufficient knowledge, experience and skill for the performance of the specific work will be able to deserve themselves in good safety conditions.



Delta Thailand's 2017 Occupational health and safety-related training hours

In 2017, Occupational safety and health trainings was 57% of our total training hours. 60,778 OSH-related training hours had provided to our employees which 49,194 hours increased from 11,584 hours in 2016. 20:80 is the ratio of work instruction and specific training hours recorded. According to the higher injury severity rate, Delta increase 38,625 training hours of work instruction to ensure employees' sufficient knowledge and awareness of hazardous at their work. In addition to the company's new staff orientation and in-house training, 1,107 hours of public course of ergonomics in workplace, radiation management, advance occupational safety officer; for instance, had provided to enhance Delta's OHS standards.

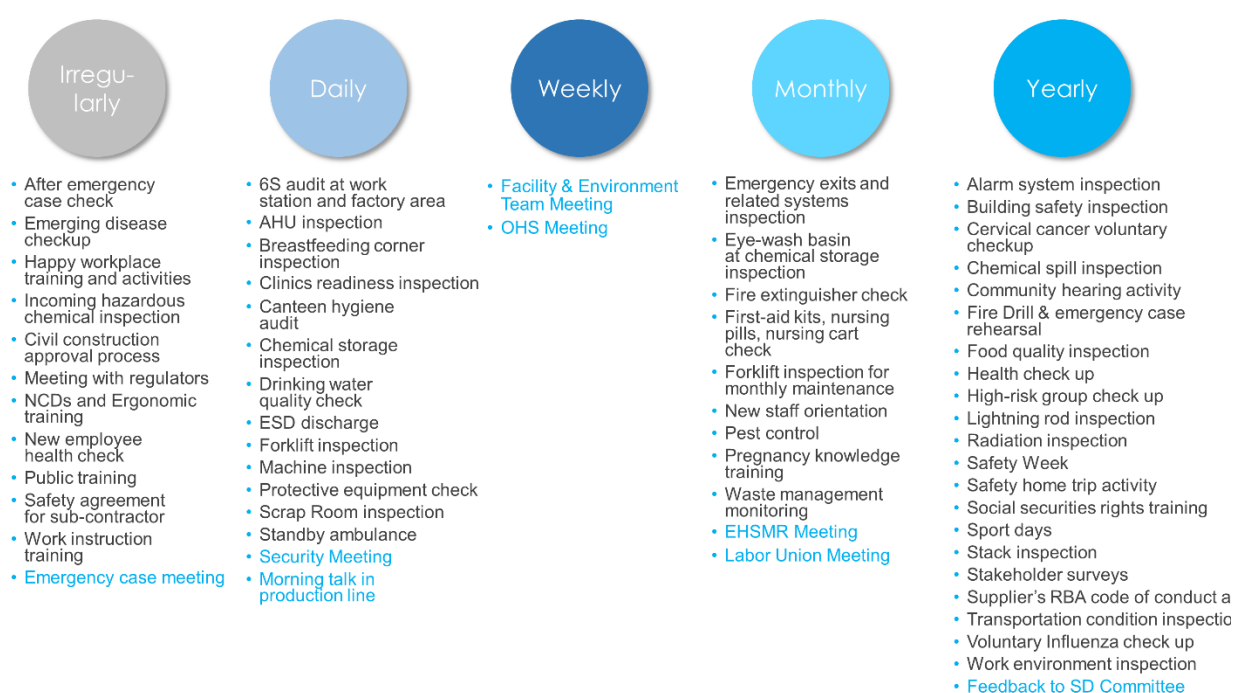


Employees who wins suggestion activity to eliminate risky location in workplace in Safety Week 2017

In addition to regular OSH committee meetings, the OSH department uses the company intranet and suggestion boxes to convey OSH messages to the employees and boost the exchange of OSH information in a timely manner. Employee feedback on OSH issues is also collected and studied. We hope that the creation of a smooth, two-way communication channel will help increase employee safety awareness and involvement and in turn, help ensure the safety and health of all the employees

## Occupational Safety and Health (OSH) Audit

In addition to internal OSH inspections carried out at each plant in accordance with the Labor Protection Act B.E 2554 (2011), Delta also organize cross-site audits conducted jointly by the OSH committee members and audit personnel accordingly to formal agreement. Through complete audit plans, the task force audits Environment, Safety and Health (ESH) documents, the results of risk assessments, Safety Health and Environment control and operations, monitoring and measurements, as well as the work environment, wasted water quality, air quality, noise level, lighting sufficiency, the equipment and onsite operations, to ensure the proper implementation of the OHSAS 18001 management system and identification of potential risks.



Delta established various periodic activities and audits to ensure safety and well-being through our operation

Targeted accident prevention audits are also implemented at the plants for special or critical equipment. Examples include electrical safety audits using thermal imaging to check for the potential electrical hazards, soldering pots, chemical use, surface mount technology (SMT) equipment, specialist equipment, ventilation equipment, contractors' specialist operations such as cranes and fire, RBA- OSH execution, and other specialist checks. The Executive Directors on each site also convene monthly OSH meetings to review OSH performances. On top of daily 6Ss Safety audits are performed on a yearly basis. Departments found with deficiencies are asked to analyze the causes and improve. Auditors confirm improvement results in subsequent follow-up audits.

## Emergency Plan

Due to the changing context of the world and business, precaution of all the possible emergency case is to ensure well-being of our employees and those who work at our site including business continuity. Delta is spotting, allocating resource and plan preventive action for hazards from potential emergencies which include fire, accident, chemical spill & chemical waste, explosion, flood, labor strike, earthquake, tsunami, sabotage and terrorism, hurricane, depression, thunderclap, radiation spill and plague. To evaluate, remove and control these risks before any possible harm, Preparedness Procedure has established as regulation and legislation for preventing

To localize any emergencies that may arise and if possible eliminate them; (b) to minimize the harmful effects of an emergency on people, property and the environment.

Since our employees' health and well-being is another key to maintain innovative and eco-efficient organization, Delta puts its full effort to maintain safe and healthy work environment to retain skilled workers. According to the company's Human Right policy published on <http://www.deltathailand.com/pdf/DET-Human-Rights-Policy.pdf>, Delta factories in Thailand has fully incorporated human rights principles, namely RBA's Code of Ethics and ILO's labor standards, into the Company's operations and developed our human rights policy based on the UN's Guiding Principles on Business and Human Rights – UNGP.

For additional information, suggestion and complaints, e-mail [OHSC@deltaww.com](mailto:OHSC@deltaww.com)

## Better together

Delta Thailand, as an active corporate citizen, carries specialism of making smarter and greener life on its social responsibilities through various CSR activities, projects, and programs which our catering to the needs of its stakeholders. In addition to continuous effort to take care of its customers, employees, suppliers, creditors, societies and environment simultaneously with fair competition to our competitors accordingly to the Company's Fair Treatment Policy; Delta Thailand broaden our effort to enrich its corporate citizenship in equivalent view and extended view accordingly to the UN Sustainable Development Goals guidance. Hence, the Company's CSR activities has developed, more impact to larger group of stakeholder and more in-line with external society's directions.

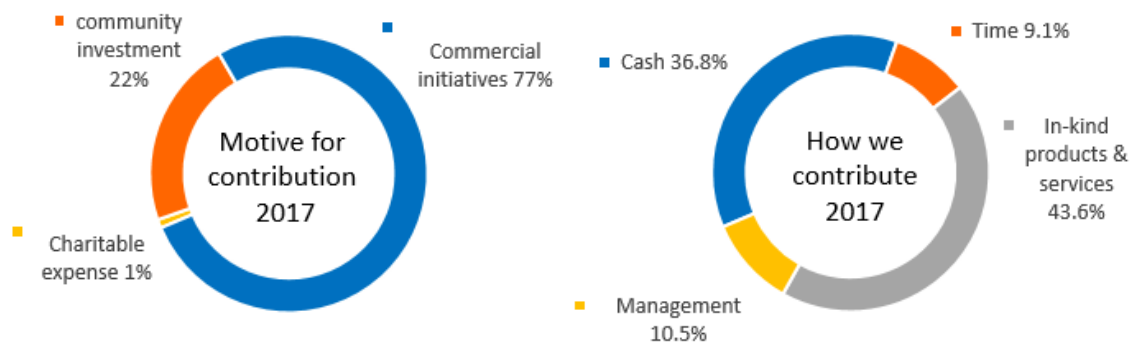
In 2017, Delta management and SD team have realized that the years of efforts invested in SD have reached a milestone especially with the recognition by DJSI's assessment results. Therefore, Delta has derived a more focused strategy that will align our corporate mission and brand promise (Smarter. Greener. Together. with all of the company's SD endeavors. This will ensure a clear and consistent message and action reaching and influencing every level of employees in the company. Consequently, the three new SD priorities as published in our 2017 SD Report are Smarter- Creating innovations that will benefit the society and environment; Greener- energy and environmental conservation and; Together- actively work with our stakeholders for a better tomorrow. These are revised from 2016's four priorities of Energy and Climate, Education, Community Contribution and Green Building.

In 2017 Delta Thailand contributed approximately 15 million Baht which slightly increased from 13 million Baht in 2016 as measured by the London Benchmarking Group (LBG) guidelines.



Detail of our major projects/ contribution percentage with linkage to Delta's business and UN Sustainable Development Goals demonstrated in Appendix of this report

100% of the reported amount had contributed to the local and national communities to enhance industry innovation, eco-efficient living and climate action initiatives. This is made up of cash donations, (charitable and other donations), and non-cash donations, (which include employee time, in kind donations, and certain management costs).



## 2017 Key Activities

### MOU with Chulalongkorn University at Delta IA Laboratory Opening



Delta Industrial Automation Laboratory was officially opened at the Faculty of Engineering, Chulalongkorn University. The MOU between Delta and Chulalongkorn University for collaboration and the increase of R&D resources for the automation and robotics industries. Keeping in pace with the rapid digital transformation in the Thailand 4.0 era, Delta and

Chulalongkorn University have both established developer and startup incubation projects for the sustainable development of Thailand's automation industry.

Through collaboration with elite educational institutions, Delta supports the education of a new generation of innovators who will drive development in Thailand. Delta believes in the future of smart automotive and robotics technology and looks forward to greater product value and productivity in Thailand's economy.



### Delta Angel Fund for Startup

Delta Angel Fund for Startup is collaboration between Delta and the Ministry of Industry to encourage entrepreneurial spirit among Thais. Winners are selected based on the practicality and creativity of their proposed business. From 254 startup teams, 24 teams were eventually selected for the final round. After the

award ceremony, the Department of Industrial Promotion will continue to provide these teams with various supports like publicity so as to increase their chance of success in the new business and in turn contribute to Thai society and its economy.



### The 2017 Delta's Educational Grants for Employees and Their Children

In realizing the importance of education, Delta Electronics (Thailand) PCL. presented a total of 238 grants at the "2017 Delta's Educational Grants for Employees and Their Children" ceremony. The company was represented by Dr. Anusorn Muttaraid, Executive Director. According to Delta's

policy on enhancing quality of life through sustainable development, Delta's grants aim to promote better educational opportunities for the younger generations while encouraging all employees in pursuing continuous life-long learning. Through 16 year, 1,750 bursaries granted to Delta employees and their families.

## Delta Energy Education Program (DEEP)

Delta Electronics (Thailand) Public Company Limited, develop Delta Energy Education Program to build awareness of energy and environment conservation. The program targets elementary students nearby Delta's Bang Poo factory, some of whom are Delta employees' children. In 2017, with strong support from 56 Delta volunteers, 5,516 students from 7 schools had educate; Wat Klong Kao School, Eamsuree School, Wat Tamru Mittaphap Thi 65 School, Piboonpachaban School, Wat Prackasa School, Praksawited School and Nakdee Anusorn School.



In 2017, the program created 11,032 training hours. In addition to quantitative measurement, simple questionnaire has designed to get qualitative achievement from participated student feedback. The impressive result from 359 students sampling size at confidence interval 5 expresses that 93 % of participated students will disseminate the gained knowledge to their family and friends, 91% will adopt the gained knowledge to their daily life and overall satisfaction is 96%.

## Five Teams from Thailand Universities Selected for International Delta Cup 2017 Contest in Automation Innovation



Thailand's younger generation is the key driving force in the transformation of the country towards Thailand 4.0. As part of the company's collaboration with Thai education sectors, Delta Electronics (Thailand) has selected five teams of students to participate in Delta Cup 2017 in the end of July, 2017.

The international contest aims to encourage engineering undergraduates from universities in China, Taiwan, India and Thailand to come up with automation innovations that will bring immense value to the society and industry. The selected teams in Thailand are from Chulalongkorn University, Kasetsart University, King Mongkut's Institute of Technology Ladkrabang, King Mongkut's University of Technology North Bangkok and King Mongkut's University of Technology Thonburi. The contest comprises of three categories, namely, Smart Robots, Smart Machine and Internet of Things, which are instrumental for Industry 4.0. Prior to the team selection in Thailand, Delta Electronics (Thailand) has supported leading Thai universities by setting up the Delta Automation Academy to enhance the students' automation knowledge through workshops, lectures and lab training. The training program also prepares the students for the Thailand 4.0 era when innovations in automation and robotics are crucial in bringing about a highly productive manufacturing landscape for an improved economy that will lead to a better quality of life for everyone.

## Thailand Automotive Institute Opens Thailand's First Technology and Innovation Learning Center for Electric Vehicles



(Third from the right) Mr. Hsieh Shen-yen, President of Delta Electronics (Thailand) PCL. with other industry executives in front of the EV charging station

July 7, 2017 Dr. Somchai Harnhiran, Deputy Permanent Secretary of Ministry of Industry presides over the grand opening of Thailand's first Technology and Innovation Learning Center for Electric Vehicles (EV). Dr. Somchai was accompanied by Mr. Adisak Rohitasune,

Acting Deputy Director of Thailand Automotive Institute (TAI), at TAI's Bangpoo office in Samut Prakarn province. As part of Delta Electronics (Thailand) PCL. support for Thailand's EV industry development, the company had donated a state-of-the-art 50kW DC Quick EV Charger and AC Charger to the new learning center. The company was represented by Mr. Hsieh Shen-yen, President of Delta, at the opening ceremony. Apart from the EV charging station, the event also showcased many types of EV such as E-Tuk Tuk, E-Bike and EV cars. The learning center is intended to be an EV technology development and learning center for entrepreneurs, government officials and general public. This is to support the advancement of Thailand's automotive industry and drive Thailand toward the goal of becoming ASEAN's EV hub and main production base. In addition, the learning center will be instrumental in generating public awareness in a sustainable future with EV technology.



## Partipate Eco Industrial Town Development for stronger climate action

June 16, 2017, Delta Electronics (Thailand) PCL., and 80 representatives from other companies in Bangpoo Industrial

Estate and neighbor communities joined Eco Green Network Quarterly Meeting at Thanachart Bank Training Center, Bangpoo, Samutprakarn.



The Eco Green Network was established by the Industrial Estate Authority of Thailand (IEAT) to bring in the Industrial Environment Institute and private sectors to create shared values in environmental conservation. The network's development plan covers five significant dimensions, namely, physical, economics, environment, social and management system. Strategic targets include long-term and short-term development plans for the city, waste (water, emission and scrap) management, control and monitoring system, infrastructure, occupational health and safety, education, local SME promotion, research and development and communications. In this session, much emphasis was placed on flood risk mitigation and progress of preventive action in the area.

## Siam Cement Group Joins Delta SD Sharing Session



November 13, 2017 – Delta Electronics (Thailand) PCL. welcomed Mr. Numpol Limprasert, Sustainable Development Director of The Siam Cement Group (SCG) PCL., to speak at the Delta Sustainable Development (SD) Week Sharing Session held at the company head office in

Bangpoo Industrial Estate. Mr. Anusorn Muttaraid, Delta Executive Director, warmly received the SCG team and encouraged the 85 Delta executives and operations staff participating to use the opportunity to interact, learn and add value to their work during the session. SCG holds the prestigious Dow Jones Sustainability Indices (DJSI) recognition as the world's Industry Leader in Construction Materials and is a key Delta business partner since 2015 for the development of Delta Green Building. Over the years, Delta and SCG have widened the scope of collaboration, driven by the shared goal for a corporate growth model that deftly balances economic, governance, social and environmental aspects. At the sharing session, both companies discussed how systematic SD work adds value to a corporation, the differences between CSR in-process and after process and CSR business opportunities

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# Appendix

# Independent Assurance Statement

## Introduction and Engagement

Delta Electronics (Thailand) Public Company Limited (hereafter 'Delta') commissioned TÜV NORD (Thailand) Ltd. for Sustainability Assurance Engagement. TUV India Private Limited (TUVI) in consortium with TÜV NORD (Thailand) Ltd. conducted the independent assurance of Delta's sustainability report (hereinafter 'the Report'), which includes "limited assurance" of Delta's sustainability information for the applied reporting period. This assurance engagement was conducted against the Global Reporting Initiative Standards and AA1000AS (2008) Protocol (Type 1, Moderate Level). TUVI also performed Assurance, based on AccountAbility Principles Standard AA1000AP (2018) and AccountAbility Stakeholder Engagement Standard AA1000SES (2015). The onsite verification was conducted in August 2018 at Delta (Thailand Plant). In addition desk review was carried out for other sites which are parts of report boundary. Delta opted for external assurance first time for the calendar year 2017. The Report covers Delta's sustainability information for the period 1<sup>st</sup> January 2017 to 31<sup>st</sup> December 2017.

## Scope, Boundary and Limitations of Assurance

The scope of the assurance includes the economic, environmental and social indicators in the report as per the Core disclosures required by GRI Standards. In particular, the assurance engagement includes the following:

- Verification of the application of the Report content, principles as mentioned in the GRI Standards, and the quality of information presented in the Report over the reporting period;
- Review of the policies, initiatives, practices and performance described in the Report;
- Review of the disclosures made in the Report against the requirements of the GRI Standards and AA1000AS (2008), with a Type 1, moderate level of assurance;
- Verification of the reliability of the GRI Standards Disclosure on economic, environmental and social (disclosures are tabulated below)
- Specified information was selected based on the materiality determination and needs to be meaningful to the intended users;
- Confirmation of the fulfilment of the GRI Standards; 'in accordance' with the Core criteria, as declared by the management of Delta.

The reporting boundary is based on the internal and external materiality assessment. The reporting aspect boundaries are set out in the Report covering the sustainability performance of Delta Thailand and its subsidiaries in India and Slovakia.

Our engagement did not include an assessment of the adequacy or the effectiveness of Delta's strategy or management of sustainability related issues. During the assurance process, TUVI did not come across the limitations to the scope of the agreed assurance engagement. No external stakeholders were interviewed as a part of the sustainability engagement for the reporting period.

## Verification Methodology

This assurance engagement was planned and carried out in accordance with the GRI Standards and AA1000AS (2008). The Report was evaluated against the following criteria:

- Adherence to the principles of Stakeholder inclusiveness, Materiality, Responsiveness, Completeness, Neutrality, Relevance, Sustainability context, Accuracy, Reliability, Comparability, Clarity and Timeliness; as prescribed in the GRI Standards and AA1000AS (2008);
- Application of the principles and requirements of the GRI Standards for its “in accordance Core” criteria.

During the assurance engagement, TUVI adopted a risk-based approach, concentrating on verification efforts on the issues of high material relevance to Delta’s business and its stakeholders. TUVI has verified the statements and claims made in the Report and assessed the robustness of the underlying data management system, information flows and controls. In doing so:

- TUVI reviewed the approach adopted by Delta for the stakeholder engagement and materiality determination process. TUVI performed limited internal stakeholder engagement to verify the qualitative statements made in the Report;
- TUVI verified the sustainability-related statements and claims made in the Report and assessed the robustness of the data management system, information flow and controls;
- TUVI examined and reviewed the documents, data and other information made available by Delta for the reported disclosures including the Disclosure on Management Approach and performance indicators;
- TUVI conducted interviews with key representatives including data owners and decision-makers from different functions of the Company during the site visit;
- TUVI performed sample-based reviews of the mechanisms for implementing the sustainability related policies, as described in Delta’s Sustainability Report;
- TUVI verified sample-based checks of the processes for generating, gathering and managing the quantitative data and qualitative information included in the Report for the reporting period.

## Opportunities for Improvement

The following is an extract from the observations and opportunities for improvement reported to the management of Delta and are considered in drawing our conclusions on the Report; however they are generally consistent with the Management’s objectives.

Opportunities are as follows:

- Delta can undertake assessment of present emission targets following the “Science Based Targets” methodology (sectoral de-carbonization approach or absolute based targets or economic approach).
- Delta can engage subsidiaries in India and Slovakia for sustainability performance achievement more extensively.
- Delta can develop the matrix w.r.t. material issues, KPI’s, aspect, impact, risk and opportunities to strategies the sustainability program.
- Delta can impart the training on sustainability development, human rights, code of conduct, anti-corruption, occupational health and safety, carbon footprint etc. for subsidiaries in India and Slovakia.

## Conclusions

The Report was prepared based on the GRI Standards Reporting Principles and Standard Disclosures ‘in accordance’ with the GRI Standards Core option. In our opinion, based on the scope of this assurance engagement, the disclosures on sustainability performance reported in the Report along with the referenced information provides a fair representation of the material aspects, related strategies, and performance indicators, and meets the general content and quality requirements of the GRI Standards Core option.

- **Disclosures:** TUVI is of the opinion that the reported disclosures generally meet the GRI Standards reporting requirements for ‘in accordance’- Core reporting criteria. Organization refers to general disclosure to report contextual information about an organization while the Management Approach is discussed to report the management approach for each material topic.

- **Topic Specific Standard:** TUVI is of the opinion that the reported specific disclosures for each material topic generally meet the GRI Standards reporting requirements for 'in accordance'- Core reporting criteria.

The requirements below material aspect were verified by the assurance team:

Material Issues	GRI Disclosure Number
Anti-corruption	GRI 205-1, 2,3
Eco- efficient operation	GRI 301-1,2,3, GRI 302-1,2,3,4,5, GRI 303-1,2,3, GRI 307-1, GRI 305-1,2,3,4,5
Economic performance	GRI 201-1
Occupational health and safety	GRI 403-1,2,3,4
Supply chain management	GRI 102-9, GRI 204-1, GRI 308-1, 2, GRI 414-1, 2

On the basis of the procedures we have performed, nothing has come to our attention that causes us to believe that the information subject to the Type 1 moderate level assurance engagement was not prepared, in all material aspects, in accordance with the GRI Standards "Core option" sustainability reporting guidelines, or that the sustainability information is not reliable in all material respects, with regards to the reporting criteria.

TUVI did not perform any assurance of procedures on the prospective information, such as targets, expectations and ambitions, disclosed in the sustainability information. Consequently, TUVI draws no conclusion on the prospective information. This assurance statement has been prepared in accordance with the terms of our engagement. Type 1 moderate level assurance engagement with respect to sustainability related data involves performing procedures to obtain evidence about the sustainability information. The procedures performed depend on the practitioner's judgment, but their nature is different from, and their extent is less than, a Type 2 moderate level assurance engagement. It does not include detailed testing of source data or the operating effectiveness of processes, internal controls and consequently they do not enable us to obtain the assurance necessary to become aware of all significant matters that might be identified in a Type 1 moderate level assurance engagement.

TUVI has evaluated the Report's adherence to the following principles with respect to the requirements of the GRI Standards.

**Stakeholder Inclusiveness:** Stakeholder identification and engagement is carried out by Delta on a periodic basis to bring out key stakeholder concerns as material aspects of significant stakeholders. In our view, the Report meets the requirements.

**Materiality:** The materiality assessment process has been carried out, based on the requirements of the GRI Standards, considering aspects that are internal and external to the Company's range of businesses. The Report fairly brings out the aspects and topics and its respective boundaries of the diverse operations of Delta. In our view, the Report meets the requirements.

**Responsiveness:** TUVI believes that the responses to the material aspects are fairly articulated in the report, i.e. disclosures on Delta's policies and management systems including governance. In our view, the Report meets the requirements.

**Impact:** Delta has adequately captured the impact of its business on the community and environment and has taken several measures to reduce the impact.

**Completeness:** The Report has fairly disclosed the General and Specific Standard Disclosures, including the Disclosure on Management Approach, covering the sustainability strategy, management approach, monitoring systems and sustainability performance indicators against the GRI Standards, 'in accordance' with the Core option. In our view, the Report meets the requirements.

**Reliability:** The majority of the data and information was verified by TUVI's assurance team at Delta's office on the factory's premises and found to be fairly accurate. Further desk review of web-based data was carried out for all other sites mentioned above. Some inaccuracies in the data identified during the verification process were found to be attributable to transcription, interpretation and aggregation errors and these errors have been corrected. Therefore, in accordance with the GRI Standards and AA1000AS (2008) for a Type 1, moderate level assurance engagement, TUVI concludes that the sustainability data and information presented in the Report is fairly reliable and acceptable. In our view, the Report meets the requirements.

**Neutrality:** The disclosures related to sustainability issues and performances are reported in a neutral tone, in terms of content and presentation. In our view, the Report meets the requirements.



TUVI expressly disclaims any liability or co-responsibility for any decision a person or entity would make based on this Assurance Statement. The intended users of this assurance statement are the management of Delta. The management of the Company is responsible for the information provided in the Report as well as the process of collecting, analyzing and reporting the information presented in web-based and printed Reports, including website maintenance and its integrity. TUVI's responsibility regarding this verification is in accordance with the agreed scope of work which includes non-financial quantitative and qualitative information (Sustainability Performance – environmental and social indicators) disclosed by Delta in the Report. This assurance engagement is based on the assumption that the data and the information provided to TUVI by Delta are complete and true.

### **TUV's Competence and Independence**

TUVI is an independent, neutral, third-party providing sustainability services, with qualified environmental and social assurance specialists. TUVI states its independence and impartiality with regard to this assurance engagement. In the reporting year, TUVI did not work with Delta on any engagement that could compromise the independence or impartiality of our findings, conclusions and recommendations. TUVI was not involved in the preparation of any content or data included in the Report, with the exception of this Assurance Statement. TUVI maintains complete impartiality toward any people interviewed during the assurance engagement.

For and on behalf of TUV India Private Limited

Manojkumar Borekar  
Project Manager and Reviewer  
Head – Sustainability Assurance Service  
TUV India Private Limited

Date: 20/08/2018  
Place: Mumbai, India  
Project Reference No: 8116002187  
[www.tuv-nord.com/in](http://www.tuv-nord.com/in)



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# About the Report

In 1995, Delta Electronics (Thailand) Public Company Limited or “Delta Thailand” or “Delta” began disclosures on its performance in the Annual Report. In 2013,

Delta launched its first report on Corporate Social Responsibility, including environmental and social aspects with iCSR guideline. Delta has achieved successful growth rate and has gained valuable confidence from its stakeholders. As a result of this the Company has taken considerable steps to improve the methodology of disclosure on Sustainability by implementing GRI-G4 in 2014 and continue this series of reporting standard to our 2016 SD Report (for January –December 2016 disclosed on May 2017).

Due On this year, the company leveraging its SD report to GRI Standard to ensure report accuracy to our value stakeholders.

## Report cycle for the material topics

Delta issues SD report on an annual basis

Current issue: Released in June 2018 for January 2017 – December 2017 performance

Previous issue: Released in June 2017

Next issue: Planned release in June 2018

## Topic Boundaries

The economic performance in this report covers Delta Thailand and its subsidiaries in India and Slovakia which represents 95% of the consolidated financial statements. However, the coverage of major environmental and social performance reporting is only operating result from Thailand from manufacturing plants in Bangpoo Industrial Estate, Samut Prakarn and Wellgrow Industrial Estate in Chachoengsao, which covers 70% of the consolidated financial statements. Additional information about the other subsidiaries and associated companies generating the rest 5% of

consolidated revenue have disclosed in 2017 Annual Report under the Investment Structure portion.

## Disclosure on Management Approach

Material Topic	Inclusiveness				% Cove- rage	Externa l Assura nce	Remark
	Thailand	India	slovakia	Others			
Economic and governance							
Contribution % to consol. Revenue in Financial Statement	70.39	10.09	14.8	4.72	100	YES	Assured in accordance with International Accounting Standards Board (IASB).
Economic Performance	●	●	●	●	100	YES	Assured in accordance with International Accounting Standards Board (IASB).
Anti-corruption	●	●	●	●	100	-	-
Supply chain Management	●	●	●	●	100	-	
Product Life cycle assesment	●	IU	IU	IU	70	YES	
Product carbon footprint	●	NA	NA	NA	70	YES	Irregular specific product / project report
Environment (Eco-efficient Operation)							
Energy consumption	●	●	●	IU	95	YES, partial	Thailand certified ISO 14064
Energy intensity	●	●	●	IU	70	YES, partial	Thailand certified ISO 14064
Air Emission (VOC)	●	●	●	IU	70	YES	OHSAS 18001, ISO 14001-2005
Water	●	●	●	IU	95	YES	ISO 14001-2005
Waste	●	●	●	IU	95	YES	ISO 14001-2005
Harzadous Waste	●	●	●	IU			ISO 14001-2005
Waste intensity reduction	●	IU	IU	IU			
Carbon Disclosure Project	●	IU	IU	IU	70	YES	India and Slovakia is under study process and enhance management system to get ISO 14064-1 in 2019
Greenhouse gas inventory	●	IU	IU	IU	70	YES	

Social							
Employment disclosure	•	•	•	•	100		
Human right	•	•	•	•	100		
Training hours	•	IU	IU	IU	70		
Occupational Health & Safety	•	IU	IU	IU	70	YES	India and Slovakia is under study process and enhance management system and data collection as OHSAS 18001 guidance.
Injury Frequency Rate	•	IU	IU	IU	70	YES	
Injury Severity Rate	•	IU	IU	IU	70	YES	
CSR initiatives as corporate citizen	•	•	•	•	70	-	

**Remark:**

Others Subsidiaries of Delta Thailand's where their business nature are sales & service offices and reasearch and development centers located in Australia, Austria, Brazil, Czech, Finland, France, Germany, Italy, Myanmar, Netherlands, Poland, Romania, Russia, Singapore, Slovakia, Spain, Sweden, Switzerland and USA,

NA Not applicable  
 CC Confidentiality constraints  
 SI Specific legal prohibition  
 IU Information unavailable

## Methodology

This report has been prepared in accordance with the **GRI Standards: Core Option** in The material issues of this report has been selected as per the Company's stakeholders' feedback via our on-line questionnaire published on <https://goo.gl/HKsqeV> and also through face-to-face random interviews. The Company bases on Global Reporting Initiative's GRI-G4, Dow Jones Sustainability Index and SET Sustainability Awards frameworks to identify the questionnaire's aspects per sustainability context, data collection as well as the report implementation. The report qualitative and quantitative contents can be obviously indicated with GRI Content Index which shows in the final page after table of Company's performance Appendix portion.

In order to demonstrate the Company's continuous effort to improve operations suitably relating to the regulations among our industry group, RBA (formerly EICC) indicator Index is provided in this report.

## Restatements of information

In the past year, Delta has significant changes from SD strategy to its Sustainability disclosure as following:

- February 13, 2018, The SD Committee has selected the **new Delta SDG targets** based on the company's most critical materiality issues, identified from the company's stakeholders' survey, and current economic, social and environmental aspects. Hence, the scope of material issues and linkage to SDG reported will be more accurate.
- February 20, 2018 - **CSR Commitment** revised by Delta Sustainable Development Committee to make it clearer and focus more on material issues that sustain the company's value proposition.
- Change reporting standard from GRI-G4 to GRI Standard core option, some KPIs had adjusted accordingly to GRI Standards.

For more information on the report please contact Sustainable Development Committee [det.sd@deltaww.com](mailto:det.sd@deltaww.com) Tel. +662 709 2800 ext. 6395

# Participation and Membership

GRI Standard Disclosure Number	Name	Status	Role	Contribution and other Spending (Thai Baht)			
				2017	2016	2015	2014
415-4	Thai Chamber of Commerce	Member	Obtain updated information and utilize APEC card	24,610	24,610	24,610	24,610
	Thai Photovoltaic Association (TPVA)	Member	Obtain updated information about Solar technology and business	5,000	-	-	-
	Electricity Vehicle Association of Thailand (EVAT)	Member	Obtain updated information about Electric Vehicle technology and business	10,000	-	-	-
	Other in-kind political and industry influence contributions.	NA	NA	0	0	0	0
Total contributions and other spending				41,627	24,610	24,610	24,610

## Remark:

1. All the stated expense is annual membership fee to keep update with the stated organization only.
2. All the stated organization locates in Thailand.
3. The stated amounts are the summation of specific cost center from the company's SAP system for
  - a. Donation and
  - b. Dues & Member fee
4. Due to Delta' code of conduct, target of 0 Baht in-kind political and industry influence contributions target had followed up yearly.

# 2017 Major Social Contributions

Priority	Projects	Major SDG Goals Supported	Importance to Delta & Society			Category			% to 2017 social contribution
			Smarter	Greener	Together	Charitable Donation	Community Investment	Commercial Initiatives	
<b>Smarter</b> education for innovative industry infrastructure	Smart Classroom	9	•	•	•			•	0.7%
	Delta Industrial Automation Academy	9	•	•	•			•	0.5%
	Delta Smart Industrial Automation Lab	4	•		•			•	19.3%
	Delta Cup	9	•		•			•	12.9%
	Universities scholarships	4	•		•		•		0.3%
	Angel Fund for startups	9	•	•	•			•	25.5%
<b>Greener</b> with responsible consumption &	Delta Energy Education Program (DEEP)	13	•	•	•		•		2.4%
	Energy classroom for primary schools	12	•	•	•		•		0.9%
	EV Charging Stations	7	•	•	•			•	20.2%
	Green building promotion	13	•	•	•		•		1.2%
<b>Together</b> for better society	Electric wheel chair donation	3			•	•			0.2%
	ICU room donation	3			•	•			0.7%
	Blood donation	3			•		•		0.0%
	Northern Thailand projects	4	•		•		•		7.4%
	- High school bursaries	4	•		•		•		1.2%
	- Annual scholarships	4	•		•		•		4.0%
	- School facility subsidy	4	•		•		•		2.5%
	Scholarship to employees and employees' families	4	•		•		•		2.7%
Total contribution to local and Thailand society						100%			

Remark:

This is made up of cash donations, (charitable and other donations), and non-cash donations, (which include employee time, in kind donations, and certain management costs).

# 2017 Major Social Contributions

Priority	Projects	Type of Benefits		Business Benefit		Social/ Environment Benefit	
		Direct Economic	Indirect Economic	Target	Result	Target	Result
Smarter education for innovative industry infrastructure	Smart Classroom	•	•	40% new employee recruited from participate universities	44%	100,000 students	122,670
	Delta Industrial Automation Academy	•	•			650 students	757
	Delta Smart Industrial Automation Lab	•	•	30 of new products from DET RD per year	45	40,000 users	41,600
	Delta Cup	•	•			20 projects	32
	Universities scholarships	•	•			10 scholarships	17
	Angel Fund for startups	•	•			1,000 smarter & greener projects submitted	1,154
Greener with responsible consumption &	Delta Energy Education Program (DEEP)		•	10% Growth rate for green energy & efficient power management solutions (IA+MCIS+EV+PVI)	15%	5,000 students	6,760
	Energy classroom for primary schools		•			2,000 students	2,560
	EV Charging Stations	•	•				
	Green building promotion	•	•			1,000 visitors	1,164
Together for better society	Electric wheel chair donation		•	Direct labor recruitment lead time: 4 days	3.5 days		
	ICU room donation		•				
	Blood donation		•				
	Northern Thailand projects	•	•				
	- High school bursaries	•	•				
	- Annual scholarships	•	•				
	- School facility subsidy	•	•				
	Scholarship to employees and employees' families	•	•	80% employee satisfaction rate	85%		
Total contribution to local and Thailand society							

## Related KPIs

Since Delta Thailand (coverage 70%) is studying and aligning India (coverage 15%) and Slovakia (10% coverage)'s reporting basis, our subsidiaries' key ESG performances are collected accordingly to our material issues.

## People

GRI Standard Disclosure Number	Index Description	Unit	Boundary			2017		2016		2015	
			TH	SK	IN	Male	Female	Male	Female	Male	Female
102-8	Working days (as Delta Thailand HQ calendar )	days	•			249		246		247	
	Permanent employees (salary-based)	head	•	•	•	2,297	1,254	1,479	861	1,463	862
	Daily wage workers	head	•	•	•	363	6,777	453	6,971	472	7,197
	sub-contracted workers	head	•	•	•	141	1,336	109	1,107	106	38
	Total workforce (Sub- contract and other workers excluded)	head	•	•	•	2,660	8,031	1,932	7,832	1,935	8,059
	Other workers <sup>1</sup>	head	•	•	•	43	75	40	71	35	51
	Permanent Employees by areas	head	•	•	•	2,297	1,254	1,479	861	1,463	862
	• Thailand	head	•	•	•	1,951	995	1,246	740	1,233	737
	• Slovakia <sup>2</sup>	head		•		316	229	203	91	200	95
	• India	head			•	30	30	30	30	30	30
405-1	Employees by age	head	•	•	•	2,793	9,117	1,932	8,734	1,935	8,059
	• Over 50 years old	head	•	•	•	147	185	120	157	134	163
	• 30-50 years old	head	•	•	•	2,095	6,623	1,376	6,215	1,305	5,720
	• Under 30 years old	head	•	•	•	551	2,309	436	2,362	496	2,176
	Employees by level	head	•	•	•	2,793	9,117	1,932	8,734	1,935	8,059
	• Executives (level 10-12)	head	•	•	•	15	3	21	3	21	3
	• Middle Management (level 7-9)	head	•	•	•	225	285	212	80	339	184
	• Senoir and Operative (level 3-6)	head	•	•	•	1,455	1,609	813	1,046	912	1,070
202-2	• Daily employees (level 1-2)	head	•	•	•	1,098	7,220	886	7,605	663	6,802

GRI Standard Disclosure Number	Index Description	Unit	Boundary			2017		2016		2015	
			TH	SK	IN	Male	Female	Male	Female	Male	Female
401-1	Total New Employees	head	•	•	•	285	1,033	207	1,970	196	1,271
	New hire rate	%	•	•	•	10.2%	11.3%	10.7%	22.6%	10.1%	15.8%
	New Employees by areas	head	•	•	•	285	1,033	157	1,238	196	1,271
	• Thailand	head	•	•	•	243	999	137	1,030	116	1,163
		%	•	•	•	8.7%	11.0%	7.1%	11.8%	6.0%	14.4%
	• Slovakia	head	•	•	•	42	34	18	22	59	44
		%	•	•	•	1.5%	0.4%	0.9%	0.3%	3.0%	0.5%
	• India	head	•	•	•	0	0	2	186	21	64
		%	•	•	•	0.0%	0.0%	0.1%	2.1%	1.1%	0.8%
	New Employees by age	head	•	•	•	285	1,033	157	1,238	196	1,271
	• Over 50 years old	head	•	•	•	9	3	0	4	6	1
	• 30-50 years old	head	•	•	•	118	270	64	335	65	340
	• Under 30 years old	head	•	•	•	158	760	93	899	125	930
	Permanent employee turnover	head	•	•	•	220	1082.	210	137	206	131
	Permanent employee turnover rate	%	•	•	•	6.2%	30.5%	9.0%	5.9%	8.9%	5.6%
	Permanent employees turnover by area	head	•	•	•	140	90	210	137	206	131
	• Thailand	head	•	•	•	104	65	90	53	90	50
		%	•	•	•	2.9%	1.8%	3.8%	2.3%	3.9%	2.2%
	• Slovakia	head	•	•	•	36	25	30	31	26	31
		%	•	•	•	1.0%	0.7%	1.3%	1.3%	1.1%	1.3%
	• India	head	•	•	•	0	0	90	53	90	50
		%	•	•	•	0.0%	0.0%	3.8%	2.3%	3.9%	2.2%
	Permanent employees turnover by age	head	•	•	•	140	90	169	87	124	89
	• Over 50 years old	head	•	•	•	7	6	14	14	5	9
		%	•	•	•	0.2%	0.2%	0.6%	0.6%	0.2%	0.4%
	• 30-50 years old	head	•	•	•	76	47	105	54	72	38
		%	•	•	•	2.1%	1.3%	4.5%	2.3%	3.1%	1.6%
	• Under 30 years old	head	•	•	•	57	37	50	19	47	42
		%	•	•	•	1.6%	1.0%	2.1%	0.8%	2.0%	1.8%

GRI Standard Disclosure Number	Index Description	Unit	Boundary			2017		2016		2015	
			TH	SK	IN	Male	Female	Male	Female	Male	Female
401-3	Number of employees entitled to maternity / parental leave	head	•	•	•	NA	8,031	NA	7,832	NA	8,059
	• Number of employees taken maternity / parental leave	head	•	•		NA	276	NA	374	NA	271
	• Number of employees return to work after maternity / parental leave	head	•	•		NA	275	NA	374	NA	271
	• Retention Rate	%	•	•		NA	100%	NA	100%	NA	100%
405-2	Ratio of basic salary and remuneration	%	•	•	•	31%	69%	30%	70%	30%	70%
404-1	In-house training hours <sup>3</sup>	hours	•			108,528		106,891		116,723	
	Off-site training hours <sup>4</sup>	hours	•			6,633		5,864		15,252	
	Total Training hours	hours	•			115,161		112,755		131,975	
	• Average hours per total employee	hours	•			11.4		11.0		13.3	
	• Average hours of training for permanent employee	hours	•			10.7		20.7		22.7	
	• Average hours of training for daily employees	hours	•			11.8		8.82		11.0	
407-1	Employees covered by Collective Bargaining Agreement	head	•			1,277	7,279	959	7,373	767	7,373
103-2	Number of grievances about labor practices field	case	•	•	•	0		0		0	

Remark:

1. Terminologies of employee categories are as follows
  - 1.1) Permanent or Monthly employees refer to employees who are included in the salary-based payroll
  - 1.2) Daily employees refer to employees who are included in the daily-wage payroll
  - 1.3) Direct employees/laborers refer to employees whose working hours relate to manufacturing standard time and productivity and are mostly stationed in the production lines.
  - 1.4) Indirect employees/laborers refer to employees in supporting functions which are not related to manufacturing standard time and productivity targets.
  - 1.5) Other workers include canteen workers and nurses in the medical room
2. Additional manpower in Slovakia resulting from M&A process in Europe
3. Training course organized at Delta Thailand's Office
4. Training leave days recorded in payroll system x 8.45 working hours per day
5. Delta Thailand is developing communication process to collect subsidiaries' training information
6. Major employee- related information has collected from SAP system based on ISO 9001 standard.

# Health & Safety KPIs

GRI Standard Disclosure Number	Index Description	Unit	2017		2016		2015	
			Male	Female	Male	Female	Male	Female
Related factors	Delta Thailand calendar working days	day	249		246		247	
	Daily working hours	hours	8.45					
	Thailand permanent manpower	head	1,646	7,515	1,603	7,579	1,988	8,478
	Thailand sub-contractors & other workers	head	176	1,408	145	1,235	88	70
	Actual manhours (OT Included)	hours	27,349,861		26,318,914		26,455,030	
403-2	Type of Injury	recorded cases						
	● Slip, Trips and Falls							
	○ Delta employees		3	4	2	5	12	0
	○ Subcontractor & other workers		1	2	0	0	0	0
	● Knife injury							
	○ Delta employees		4	3	5	8	4	8
	○ Subcontractor & other workers		0	0	0	0	0	0
	● Fire and hot objects							
	○ Delta employees		0	0	0	2	1	4
	○ Subcontractor & other workers		0	0	0	0	0	0
	● Transportation and vehicle related accidents							
	○ Delta employees		0	2	2	5	2	4
	○ Subcontractor & other workers		0	0	0	0	0	0
	● Electrocuted							
	○ Delta employees		1	1	1	1	1	2
	○ Subcontractor & other workers		0	1	0	0	0	0
	● Machinery injury							
	○ Delta employees		3	10	1	6	4	11
	○ Subcontractor & other workers		0	1	0	1	0	0
	● Chemical injury							
	○ Delta employees		0	1	6	9	1	8
	○ Subcontractor & other workers		0	1	0	6	0	0

GRI Standard Disclosure Number	Index Description	Unit	2017		2016		2015	
			Male	Female	Male	Female	Male	Female
403-2 Con't								
	• Others							
	◦ Delta employees	recorded cases	3	5	1	5	6	6
	◦ Subcontractor & other workers		0	0	0	0	0	0
	• Total							
	◦ Delta employees		14	26	18	41	31	43
	◦ Subcontractor & other workers		1	5	0	7	0	0
	Injury Rate (IR)							
	• Delta Employee	case/ 100 workers	0.51	0.95	1.56	0.68	0.72	2.46
	• Subcontract and other workers		0.00	0.00	0.00	0.01	0.00	0.00
	Occupational Disease Rate (ODR)							
	• Delta Employee	found case per 100 head	0	0	0	0	0.04	0
	• Subcontract and other workers		NA	NA	NA	NA	NA	NA
	Lost Day Rate (LDR) <sup>4</sup>							
	• Delta Employee	day : 100 workers	2.34	0.59	1.10	0.04	0.45	3.48
	• Subcontract and other workers		NA	NA	NA	NA	NA	NA
	Lost time Injury Frequency Rate (LTIFR)							
	• Delta Employee	case: 1M hours	0.07	0.04	0.11	0.04	0.23	0.08
	• Subcontract and other workers		NA	NA	NA	NA	NA	NA
	Injury Severity Rate (I.S.R)							
	• Delta Employee	day: 1M hours	4.57	0.62	1.61	0.02	0.63	1.42
	• Subcontract and other workers		NA	NA	NA	NA	NA	NA
	Absentee Rate (AR)							
	• Delta Employee	case: 1M hours	0.009	0.001	0.009	0.036	0.007	0.034
	• Subcontract and other workers		NA	NA	NA	NA	NA	NA
	Work-related fatalities							
	• Delta Employee	case: 1M hours	0	0	0	0	0	0
	• Subcontract and other workers		0	0	0	0	0	0

Remark:

1. This report discloses only Delta Thailand's information (70% coverage).the Company is now under process to improve the Safety Health and Environment Report among its subsidiaries in other regions said Slovakia and India

where working hours and counting standard is different.

- Contractor and other worker not include short-term contractors e.g. for construction and building improvement
- Definition of other worker has described in "People" appendix table

2. Since actual manhours includes overtime working hours as payroll system record, contractor and other worker has not included. Hence, all the total manhour-related calculation has not include contractor and other worker.

3. OSHA rate calculations based on Thailand Labor department's guideline <https://goo.gl/wUWp4j> are as following:

- Injury rate (IR) = (all case x1,000,000)/MH
- Lost day rate (LDR) = over 3 day lost day x 1,000,000/ MH
- Lost-time Injury Frequency Rate (LTIFR) =(over 3 day case x1,000,000)/MH
- Severity Rate (I.S.R) = Number of day lost x 1,000,000/ Total workers man hours
- Absentee rate = Number of total absence hours/ total worker man hours (exclude C7 up employees whom time record is not required for their performance review)

4. Since subcontractors and other workers' time record hadn't included in Delta payroll system, their OSHA rates had not included.

5. NA = not applicable

# Energy

GRI Standard Disclosure Number	Index Description	Unit	Coverage			2017	2016	2015
			TH	SK	IN			
<b>302-1</b>	Fossil fuels (coal, oil, natural gas, etc.) purchased and consumed (for energy purposes)	MWh	-	-	•	163	2,158	1,942
	Electricity (non-renewable) purchased	MWh	•	•	•	76,583	77,482	73,871
	Steam / heating / cooling energy purchased	MWh	•	•	•	0	0	0
	Steam / heating / cooling energy sold	MWh	•	•	•	0	0	0
	Total solar energy generated for in-house consumption	MWh	•	•	•	2,774	313	96
	Total energy consumption within the organization	MWh	•	•	•	79,520	79,953	75,909
<b>302-4</b>	Energy Saving Projects	Projects	•	•	•	54	70	65

## Remark:

1. According to GRI Standards 302-1 formula, Total energy consumption within the organization = non-renewable fuel consumed + renewable fuel consumed + electricity, heating, cooling, steam purchased for consumption and self generated electricity, heating, cooling and steam, which are not consumed - electricity, heating, cooling and steam sold.

2. Regional power grid for electricity supply (sources of conversion) are as following

- Thailand : The Metropolitan Electricity Authority and Electric Generating Authority of Thailand
- Slovakia : Stredoslovenská energetika, a.s
- India Gurgaon: Dakshin Haryana Bijli Vitran Nigam (DHBVN)
- India Rudrapur: Uttarakhand Power Corporation Limited (UPCL)

3. 69,829 MWh of total non-renewable energy used in Thailand in 2017 had verified by SGS for GHG scope 2 disclosure.

4. Delta plans to implement data collection in the same standard from Slovakia and India for GHG Inventory Report. After this implementation, the coverage of Delta Thailand GHG Inventory disclosure will extend from 70% to above 90% in 2020"

# Environment

GRI Standard Disclosure Number	Index Description	Unit	Boundary			2017	2016	2015
			TH	SK	IN			
<b>303-1</b>	Total water withdrawal	Mil. m <sup>3</sup>	•	•	•	0.380	0.346	0.331
	• Surface water	Mil. m <sup>3</sup>	•	•	•	0	0	0
	• Seawater	Mil. m <sup>3</sup>	•	•	•	0	0	0
	• Municipal Water	Mil. m <sup>3</sup>	•	•	•	0.351	0.321	0.310
	• Groundwater	Mil. m <sup>3</sup>	-	•	•	0.029	0.025	0.020
	• Rainwater	Mil. m <sup>3</sup>	•	•	•	0	0	0
	Total salt/ brackish water	Mil. m <sup>3</sup>	•	•	•	0	0	0
	Water from all other sources (Surface water + Groundwater)	Mil. m <sup>3</sup>	•	•	•	0	0	0
<b>303-3</b>	Recycle & reuse water	% of ttl used	•	-	-	3.60%	1.63%	1.19%
	Water intensity	Mil. m <sup>3</sup> / 1 M THB revenue	•	•	•	0.00001	0.00007	0.00001
<b>306-1</b>	Total water discharge from production process	Mil. m <sup>3</sup>	•	•	•	0	0	NA
	Total water discharge from non-production process	Mil. m <sup>3</sup>	•	•	•	0.289	0.007	0.007
	Total water discharge	Mil. m <sup>3</sup>	•	•	•	0.289	0.007	0.252
	Chemical oxygen demand (COD)	Ton	•	-	-	0.063	0.026	NA
	Biochemical oxygen demand (BOD)	Ton	•	-	-	0.023	0.006	NA
<b>305-7</b>	Volatile organic compounds (VOCs)	Ton	•	•	•	2.15	2.36	2.03
	VOC intensity	Ton/ 1 M THB revenue	•	•	•	2.000	0.001	0.000
	Oxides of nitrogen (Nox)	Ton	-	•	•	0.694	0.335	0.216
	NOx intensity	Ton/ 1 M THB revenue	•	•	•	0	0	0
	Sulphur dioxide (SO <sub>2</sub> )	Ton	•	•	•	0.088	0.003	0.001
	SO <sub>2</sub> intensity	Ton/ 1 M THB revenue	-	•	•	0	0	0
<b>307-1</b>	Significant fines for non-compliance with environmental laws and regulations	Thai Bath	•	•	•	0	0	0
	Non-monetary sections for non-compliance with environmental laws and regulations	case	•	•	•	0	0	0
	Cases brought through dispute resolution mechanism	case	•	•	•	0	0	0

Remark:

1. Since the Company and its subsidiaries are manufacturers of electronics products, water is not the Company's production factors

2. Delta Thailand's municipal water supplier is the Metropolitan Water Authority. Majorly, its raw water is from Chaopraya and Maeklong river as stated on [https://www.mwa.co.th/ewt\\_news.php?nid=22194](https://www.mwa.co.th/ewt_news.php?nid=22194)
3. Delta Thailand's VOC data had collected and measure accordingly to the Department of Industrial Works' announcement subjects "Standard of air emission discharged from manufacturing factory" B.E.2549 and Thailand Industrial Estate Authority's announcement on "Emission Standard for factory located in Industrial Estate" reference number 46/2541. In 2017, related indicators met these related standard.
4. Thailand site's VOC reported from Workplace and Stack inspection which report VOCs are Xylene, Toluene and Styrene
5. IU= Information not available

# Waste

GRI Standard Disclosure Number	Index Description	Unit	Coverage			2017	2016	2015
			TH	SK	IN			
<b>306-2</b>	Total weight of hazardous waste	Ton	•	•	•	163	168	58
	• Reuse	Ton	•	•	•	0	1	0
	• Recycling	Ton	•	•	•	162	164	52
	• Composting	Ton	•	•	•	0	0	0
	• Recovery, including energy recovery	Ton	•	•	•	0	0	0
	• Incineration (mass burn)	Ton	•	•	•	0	0	0
	• Deep well injection	Ton	•	•	•	0	0	0
	• Landfill	Ton	•	•	•	1	1	2
	• On-site storage	Ton	•	•	•	0	2	4
	Total weight of non-hazardous waste	Ton	•	•	•	1,991	2,046	1,870
	• Reuse	Ton	•	•	•	1,597	513	439
	• Recycling	Ton	•	•	•	349	383	430
	• Composting	Ton	•	•	•	0	0	0
	• Recovery, including energy recovery	Ton	•	•	•	0	0	0
	• Incineration (mass burn)	Ton	•	•	•	0	0	0
	• Deep well injection	Ton	•	•	•	1	0	0
	• Landfill	Ton	•	•	•	5	20	9
	• On-site storage	Ton	•	•	•	39	40	43
<b>301-2</b>	Recycled input materials used	Ton	•	•	•	158	164	53
	% of recycle input material to total input material	%	•	•	•	0.58%	0.72%	0.19%

Remark:

1. Proportion of waste from routine operation non-routine operation is 80:20
2. Volume of hazardous waste weight at Delta's sites. Disposal method has been determined by the Department of Industrial Work (DIW) <https://goo.gl/TaeLZJ>

3. Hazardous waste has been classified accordingly to DIW's announcement on disposal material B.E. 2548 <http://iwmb5.diw.go.th/e-license/login.asp> as code XX XX 99 and HA

4. Without import, export or international shipment, 100% of Delta Thailand's hazardous waste transported nationally and treated by General Environmental Conservation PCL. (GENCO) located 44 km. from Delta factory. For more information on the waste management service provider please find <https://goo.gl/NhEKCq>

5. Recycled input materials included solder dross, disassembled resistor and diode.

# GRI Content Index

Remark: The stated page number for printed copy will be updated after layout process.

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102-3	This report: Back Cover	-
102-4	Website: <a href="http://www.deltathailand.com/about_global.php">http://www.deltathailand.com/about_global.php</a> This report: t page 14	-
102-5	Annual Report: <a href="https://goo.gl/LHBF1K">https://goo.gl/LHBF1K</a> page 8	-
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# General Disclosure

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102-29	This report: page 19-21, 27, 28	✓
102-30	This report: page 25, 31-33	-
102-31	This report: page 16, 28, 30, 32	-
102-32	This report: page 16	-
102-33	This report: page 16	✓
102-34	This report: page 19-24	-
102-35	Annual Report: <a href="https://goo.gl/LHBF1K">https://goo.gl/LHBF1K</a> page 60-61	-
102-36	Annual Report <a href="https://goo.gl/LHBF1K">https://goo.gl/LHBF1K</a> page 60-62	-
102-37	Annual Report: <a href="https://goo.gl/LHBF1K">https://goo.gl/LHBF1K</a> page 60-61	-
102-38	This report: page 28	-
102-39	This report: page 28	-
102-40	This report: page 19-21	✓
102-41	This report: page 119	-
102-45	This report: page 3, 110	-
102-46	This report: page 110-112	✓
102-42	This report: page 19-21	✓
102-43	This report: page 19-21, 23	✓
102-44	This report: page 21-24	✓
102-47	This report: page 24	✓
102-48	This report: page 113	✓
102-49	This report: page 110	✓
102-50	This report: page 110	✓
102-51	This report: page 110	✓
102-52	This report: page 110	✓
102-53	This report: page 113, 136	-
102-54	This report: page 112	✓
102-55	This report: page 128	-
102-56	This report: page 106	✓

# Specific Disclosure

Material Aspect	Disclosure Number	Page Number / Link	External Assurance
Economic Performance	103-1	This report: page 14, 25	
	103-2	This report: page 14, 26, 27, 29 Annual Report <a href="https://goo.gl/LHBF1K">https://goo.gl/LHBF1K</a> page 60-61 CG Policy <a href="https://goo.gl/7G645B">https://goo.gl/7G645B</a> page 1-2 Tax policy: <a href="https://goo.gl/Zxb5vN">https://goo.gl/Zxb5vN</a>	
	103-3	This report: page 14, 29 Corporate governance report <a href="https://goo.gl/bqo2Ky">https://goo.gl/bqo2Ky</a>	
	201-1	This report: page 13,14,100-111 Annual Report <a href="https://goo.gl/LHBF1K">https://goo.gl/LHBF1K</a> page 98	✓
	201-4	This report: page 53,14	-
	203-1	This report: page 97, 98, 100, 115-116	-
	203-2	This report: page 98, 115-116	-
	419-1	Annual Report <a href="https://goo.gl/LHBF1K">https://goo.gl/LHBF1K</a> page 150-152	-
Supply chain Management	103-1	This report: page 14, 48	
	103-2	This report: page 48, 49, 50, 51, 52, 53	
	103-3	This report: page 48, 49, 50, 51, 52, 53	
	204-1	This report: page 14, 49	✓
	308-1	This report: page 48, 51, 52	✓
	308-2	This report: page 42, 43,44, 48	-
	414-1	This report: page 48	✓
	414-2	This report: page 50, 52	✓
Eco-efficient Operation	417-1	This report: page 51	-
	103-1	This report: page 60	
	103-2	This report: page 61	
	103-3	This report: page 60	
	301-1	This report: page 45	✓
	301-2	This report: page 45, 53,126	✓
	301-3	Annual Report: <a href="https://goo.gl/LHBF1K">https://goo.gl/LHBF1K</a> page 153	✓
	302-1	This report: page 123	✓
	302-2	This report: page 123	✓
	302-3	This report: page 65	✓
	302-4	This report: page 67, 68, 124	✓
	303-1	This report: page 124	✓
	303-2	This report: page 125	✓
	303-3	This report: page 124	✓
	305-1	This report: page 65 GHG Inventory Report <a href="https://goo.gl/yNdkjt">https://goo.gl/yNdkjt</a> page 11	✓

# Specific Disclosure

Material Aspect	Disclosure Number	Page Number / Link	External Assurance
Eco-efficient Operation (Con't)	305-2	This report: page 65 GHG Inventory Report <a href="https://goo.gl/yNdktj">https://goo.gl/yNdktj</a> page 11	✓
	305-3	SD Report 65 GHG Inventory Report <a href="https://goo.gl/yNdktj">https://goo.gl/yNdktj</a> page 11	✓
	305-4	This report: page 65 GHG Inventory Report <a href="https://goo.gl/yNdktj">https://goo.gl/yNdktj</a> page 11	✓
	305-5	This report: page 65 GHG Inventory Report <a href="https://goo.gl/yNdktj">https://goo.gl/yNdktj</a> page 15	✓
	307-1	This report: page 124	✓
Innovation management	103-1	This report: page 42	
	103-2	This report: page 42, 43, 46, 47 CG policy <a href="https://goo.gl/7G645B">https://goo.gl/7G645B</a> page 7	
	103-3	This report: page 42,43, 44, 46, 47	
	302-5	This report: page 42	✓
	416-1	This report: page 42, 43,44, 48	-
	416-2	This report: page 47	-
	417-2	This report: page 47	-
	417-3	This report: page 47	-
	418-1	This report: page 47	-
Occupational Health & Safety	103-1	This report: page 87, 89, 96	
	103-2	This report: page 87, 89, 96 CG Policy <a href="https://goo.gl/7G645B">https://goo.gl/7G645B</a> page 19 Human Rights Policy: <a href="https://goo.gl/LTQ8vk">https://goo.gl/LTQ8vk</a> page 5	
	103-3	This report: page 91	
	403-1	This report: page 87, 89	✓
	403-2	This report: page 89, 90, 93, 120-121	✓
	403-3	This report: page 41, 92, 93	✓
	403-4	This report: page 87, 88, 89, 92, 93, 95, 96	✓
Anti-corruption	103-1	This report: page 38	
	103-2	This report: page 37, 38 Anti-corruption policy: <a href="https://goo.gl/5ZL7Qf">https://goo.gl/5ZL7Qf</a>	
	103-3	This report: page 39	
	205-1	This report: page 35, 37, 38	✓
	205-2	This report: page 35, 37, 38	✓
	205-3	This report: page 39, 41	✓
	206-1	This report: page 39	-
	415-1	This report: page 18, 114	-

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Material Aspect	Disclosure Number	Page Number / Link	External Assurance
-	201-2	This report: page 34-36,42, ,115-116	
-	201-3	This report: page 77,117 Annual Report <a href="https://goo.gl/LHBF1K">https://goo.gl/LHBF1K</a> page 150-152	✓
-	202-1	This report: page 76-77	-
-	202-2	This report: page 117	-
-	203-1	This report: page 97, 98, 100	-
-	203-2	This report: page 14	-
-	304-1	This report: page 72	-
-	304-2	This report: page 67, 71, 72, 73, 74	-
-	304-3	This report: page 72, 73, 74	-
-	304-4	This report: page 72	-
-	305-6	This report: page 66	-
-	305-7	This report: page 70, 124	-
-	306-1	This report: page 72, 124	✓
-	306-2	This report: page 64, 126, 127	✓
-	306-3	This report: page 70	✓
-	306-4	This report: page 45, 126, 127	-
-	306-5	This report: page 125	-
-	401-1	This report: page 18	-
-	401-2	This report: page 77	-
-	401-3	This report: page 119	-
-	402-1	This report: page 76	-
-	404-1	This report: page 119	-
-	404-2	This report: page 82-83	-
-	404-3	This report: page 83	-
-	405-1	This report: page 117	-
-	405-2	This report: page 119	-
-	406-1	This report: page 41	-
-	407-1	This report: page 119	-
-	408-1	This report: page 50	-
-	409-1	This report: page 41, 50	

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Material Aspect	Disclosure Number	Page Number / Link	External Assurance
-	410-1	This report: page 41	-
-	411-1	This report: page 41	-
-	412-1	This report: page 52, 74	-
-	412-2	This report: page 82	-
-	412-3	Supplier Management Agreements: <a href="https://goo.gl/XGMjmQ">https://goo.gl/XGMjmQ</a>	-
-	413-1	This report: page 60, 77, 112	-
-	413-2	This report: page 69, 70	-

### Remark:

External Assurance checklist based on

- AA1000AS certificated in this report page 106-109 of this report
- ISO and related standards certification gained and/or renew during the reporting period.

บริการธุรกิจตอบรับ

ใบอนุญาตเลขที่ 4/17 ปณ. บางปู

ถ้าฝากส่งในประเทศไม่ต้องแนบตราไปรษณียากร

คณะกรรมการเพื่อการพัฒนาที่ยั่งยืน

บริษัท เดลต้า อิเลคโทรนิคส์ (ประเทศไทย) จำกัด (มหาชน)

909 ซอย 9 หมู่ 4 นิคมอุตสาหกรรมบางปู (เขตส่งออก)

ถ. พัฒนา 1 ต. แพรกษา อ. เมือง จ. สมุทรปราการ

▽ พับตามรอยประ

## Questionnaire

### Sustainable Development Report



1. Your comment on this issue of Delta Electronics (Thailand) Public Company Limited
 

Easiness to understand	<input type="radio"/> Easy	<input type="radio"/> Moderate	<input type="radio"/> Difficult
Attraction of contents	<input type="radio"/> Good	<input type="radio"/> Moderate	<input type="radio"/> Need Improvement
Content grouping and chronicle	<input type="radio"/> Good	<input type="radio"/> Moderate	<input type="radio"/> Need Improvement
Overall satisfaction to this SD report	<input type="radio"/> Good	<input type="radio"/> Moderate	<input type="radio"/> Need Improvement
  
2. Your comment on Delta Electronics (Thailand) Public Company Limited's CSR activities and performance disclosed in this report
 

Economic and governance performance	<input type="radio"/> Good	<input type="radio"/> Moderate	<input type="radio"/> Need Improvement
Social Performance	<input type="radio"/> Good	<input type="radio"/> Moderate	<input type="radio"/> Need Improvement
Environmental performance	<input type="radio"/> Good	<input type="radio"/> Moderate	<input type="radio"/> Need Improvement
  
3. Which the TOP 3 subjects/ chapters are you interested in ?
  - 1) .....
  - 2) .....
  - 3) .....
  
4. Suggestion for report improvement
  - 1) Additional comment/ suggestion to this SD Report and Delta Electronics (Thailand) Public Company Limited's CSR activities/ performance .....
  - 2) Your suggestion of additional information/ content which should be disclosed in our next SD Report .....
  - 3) Other suggestions .....
  
5. Which group of readers are you in?
 

<input type="radio"/> Business partner	<input type="radio"/> Customer	<input type="radio"/> Creditor	<input type="radio"/> Shareholder/ Investor	<input type="radio"/> Delta Employee
<input type="radio"/> Students	<input type="radio"/> Research/ educational Institutes	<input type="radio"/> Governmental offices	<input type="radio"/> Media	
<input type="radio"/> Community	<input type="radio"/> Personnel with career of managing, performing and reporting Sustainability Development			
<input type="radio"/> Others (Please specify) .....				
  
6. You herewith provide my your basic information to be utilized for SD report improvement as well as being communication channel with Delta Electronics (Thailand) Public Company Limited as following (*voluntary*)
 

Name – Surname ..... Gender ☐ female ☐ male


Age ☐ under 22 yrs. old ☐ 22 – 35 yrs. old ☐ 36 – 46 yrs. old ☐ 46 – 60 yrs old ☐ 61 yrs. old and above

Address .....

e-mail: .....



1. Your information will be kept as confidential matter. Your basic information will be used as communication channel in case additional information/ suggestion required for improving next Sustainable Development Report only. Your privacy will be reserved hence, the company will not sell or share your information for any trading, research or other business purpose.
2. Two communication channels are available for your kind feedback 1) Send printed form to put your comments and send back to us via PO. Box 50. , Bangpoo together with business reply form provided in the next page 2) Send filled questionnaire back to us in photo form (.jpg, png) or pdf. File via e-mail address CSR-DET@deltaww.com

A photograph of three men standing in a large hydroponic greenhouse. The man on the left is wearing a brown uniform with a yellow and black striped tie. The man in the middle is wearing a blue polo shirt. The man on the right is wearing a brown uniform with a green beret and a yellow and black striped tie. They are all smiling and looking towards the camera. In front of them are long rows of green leafy plants growing in white trays. The greenhouse has a high, arched ceiling with a translucent covering and metal support structures.

Share your suggestion on this report  
and the Company's Sustainable Development.

**Sustainable Development Committee**  
**Delta Electronics (Thailand) Public Company Limited**

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