



A Better Tomorrow
2020 | Sustainable Development Report



Delta Electronics (Thailand) Public Company Limited

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Sector:	Electronic Components
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The Sustainability Yearbook 2020





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SET AWARDS 2019



การเงินธนาคาร
MONEY & BANKING MAGAZINE



สมาคมส่งเสริมพลังงาน
THAI INVESTORS ASSOCIATION



2019 Best Sustainability Excellent Awards and Thailand's Sustainability Investment Award

Delta Electronics (Thailand) PCL. received the Stock Exchange of Thailand (SET) Best Sustainability Excellence Award and the Thailand Sustainability Investment (THSI) 2019 Award at the SET Sustainability Awards 2019.



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

Customer Satisfaction

Anticipate customer needs and exceed expectations



Foreword



In our ever changing world, Delta's far-reaching vision and passion for sustainability drive us to forge a resilient business to overcome challenges and stand the test of time. During 2019, we saw an escalation in trade tensions and geopolitical risks, including a trade war between two major economies and Brexit, which heightened uncertainty and contributed to economic slowdown. Climate change was a dominant global issue, with the adverse effect of global warming and pollution on human health and safety becoming top concerns for our stakeholders and communities. As a global corporate citizen, Delta commits to tackling these material issues to ensure sustainability and deliver on our brand promise: Smarter. Greener. Together.

Delta leveraged core competencies in innovative, clean and energy-efficient technology and infrastructure development to respond to drastic growth in the Southeast Asia region. Currently, Delta is delivering the first Uptime certified 2N green data center to the Hanoi region.

Meanwhile, Delta supports an Indonesian state electricity company and global automotive partners with EV charging solutions. In addition, Delta entered a partnership with a Singapore government agency to foster adoption of Industry 4.0 technology in the country. As a result of our efforts to respond to stakeholders' expectation and social needs, Delta showed resilience amid a climate of regional and global economic decline.

Our expert teams continued driving ESG performance to achieve targeted UN Sustainable Development Goals (SDG). Up to 2019, Delta Thailand and its subsidiaries achieved 26% of our cumulative greenhouse gas reduction compared with based year 2015. Meanwhile, Delta pioneered new ways to contribute to the creation of an ethical business ecosystem with effective policy, certification program and anti-corruption compliance standards. The company qualified as a certified member in Thailand's

Collective Action against Corruption (CAC). Delta also supported the development of an innovative society by expanding our programs to develop Thai talent through education in the Eastern Economic Corridor for the first time. We also partnered with top Taiwan and Thai universities to launch an international exchange and internship program that offers study and work opportunities for Thai students studying abroad.

By following rigorous standards and driving continual improvement throughout our organization, our teams have helped us win prestigious CSR and sustainability awards in 2019. We would like to thank the following organizations for their recognitions:

1. S&P Global for the Silver Class Award in the 2020 Sustainability Yearbook. Delta Thailand is proud to be the only Thai company in the yearbook's "ITC Electronic Equipment, Instruments & Components" sector.
2. The Stock Exchange of Thailand for the Best Sustainability Award and the THSI Award at the SET Sustainability Awards 2019.
3. The London Stock Exchange Group (LSEG), FTSE Russell for inclusion into the FTSE4Good Emerging Index.
4. The Ministry of Energy of Thailand for the Thailand Energy Award 2019 in Three Categories: Creative Energy, Energy Conservation: Green Building and Designated Factory.
5. Chulalongkorn Business School and the Stock Exchange of Thailand for Thailand's Top Corporate Brand Hall of Fame Award 2019.

In addition to the above, we would like to thank all the government and private organizations who assessed and gave recognitions to Delta in 2019.

Finally, we acknowledge the passion for excellence of everyone at Delta who makes our sustainable development vision become reality through their daily diligence. We celebrate the successes of our family of employees and stakeholders who join us on our exciting sustainability journey. Together we will boldly tackle global challenges with innovation and green solutions that have long-lasting benefits for society.

Yours sincerely,



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



An overview on Delta's milestones, products, operation sites, market presence, success stories, value chain, sustainability management, CSR commitment, long-term sustainable development goals, emerging risk (that may disrupt the set goals)

This is Delta



This is Delta

Delta Electronics (Thailand) Public Company Limited ("Delta" or "Delta Thailand" in the following content) is a manufacturer and exporter of power supply, electronics equipment and parts. The company was inaugurated on June 16, 1988, with THB 40 million in initial capital and 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, 2019, 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 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. Delta slightly transform its role to power management and automation solutions provider.

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.

In 2019 Delta Electronics (Thailand) PCL. received Conditional Voluntary tender offer (CVTO) from Delta Electronics Int'l (Singapore) Pte. Ltd. at the offer price of THB 71 per share. The key intentions of the CVTO are as follows;

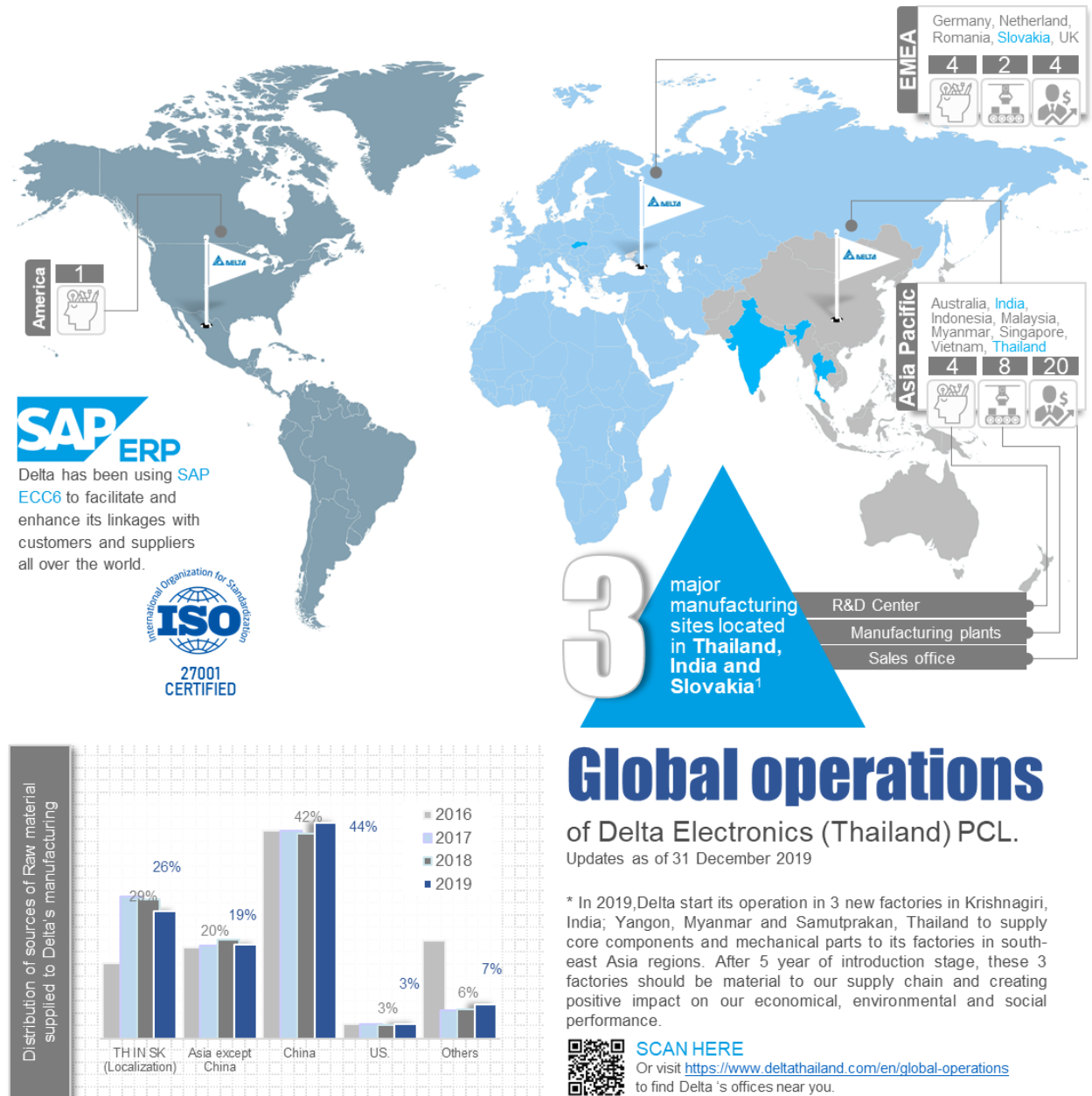
(1) **Global manufacturing reach:** The offeror intends to strengthen its global manufacturing reach to deal with international trade uncertainties. The Company possesses excellent manufacturing competencies in Thailand, India and Slovakia, which will complement the group of main manufacturing facilities based in China and Taiwan.

(2) **Customer supports in the related regions:** South East Asia and India have fast economic growth. The Company's proximity to key customers in South East Asia and other regions is expected to be beneficial as well as in regards to better customer support.

(3) **Positive impacts on revenues and profits:** From 2010 to present, the Company's revenues have surpassed USD 1 billion and its earnings will also add up to the Offeror's profitability structure with the Company

The CTVO implementation, has not made any major change to the Delta Thailand's organization size, operation and supply chain in the reporting period. Our worldwide network of sales and technical support teams are located in Asia, USA and Europe. These teams are backed by centrally located design-engineering centers that diagnose problems during the design and production stages. This can be demonstrated by Delta Thailand's latest investment structure disclosed in our Annual Report page 10 To keep our stakeholders informed, Delta Thailand's major shareholders has publicly disclosed at <https://tinyurl.com/yx97a23h>.

As a strategic partner to the world's technology leaders, Delta has made firm commitment to provide leading-edge product/system solutions at a reasonable cost, less environmental footprint and with the highest quality.



Powering green innovations

From its expertise in designing and creating high-efficiency power supply, Delta leverages our market leading power supply technology to create greener product and solutions that enhance quality, reliability, customer satisfaction and necessary ESG actions for our stakeholders. Since 2010, the company realized its potential to relief global climate change with smarter and greener solutions. Consequently, Delta gradually phased in to solutions business in 2015 with healthy growth in EV, green and energy-efficient solutions which are potential opportunity implied from the company's awareness of Climate Change impact to broad society.

What is power Supply?

The purpose of a power supply is to supply electric power for a device that we use. There are many varieties of devices and power supply types. Some types are the Linear Power Supply, i.e. Transformer, Non-Linear Power Supply and Switching Power Supply. In short, power supply is a device that supplies electricity to various electrical devices and converts AC voltage to DC voltage to meet the needs of various electrical equipment for DC voltage (voltage goes to the device's capacitors or internal components)

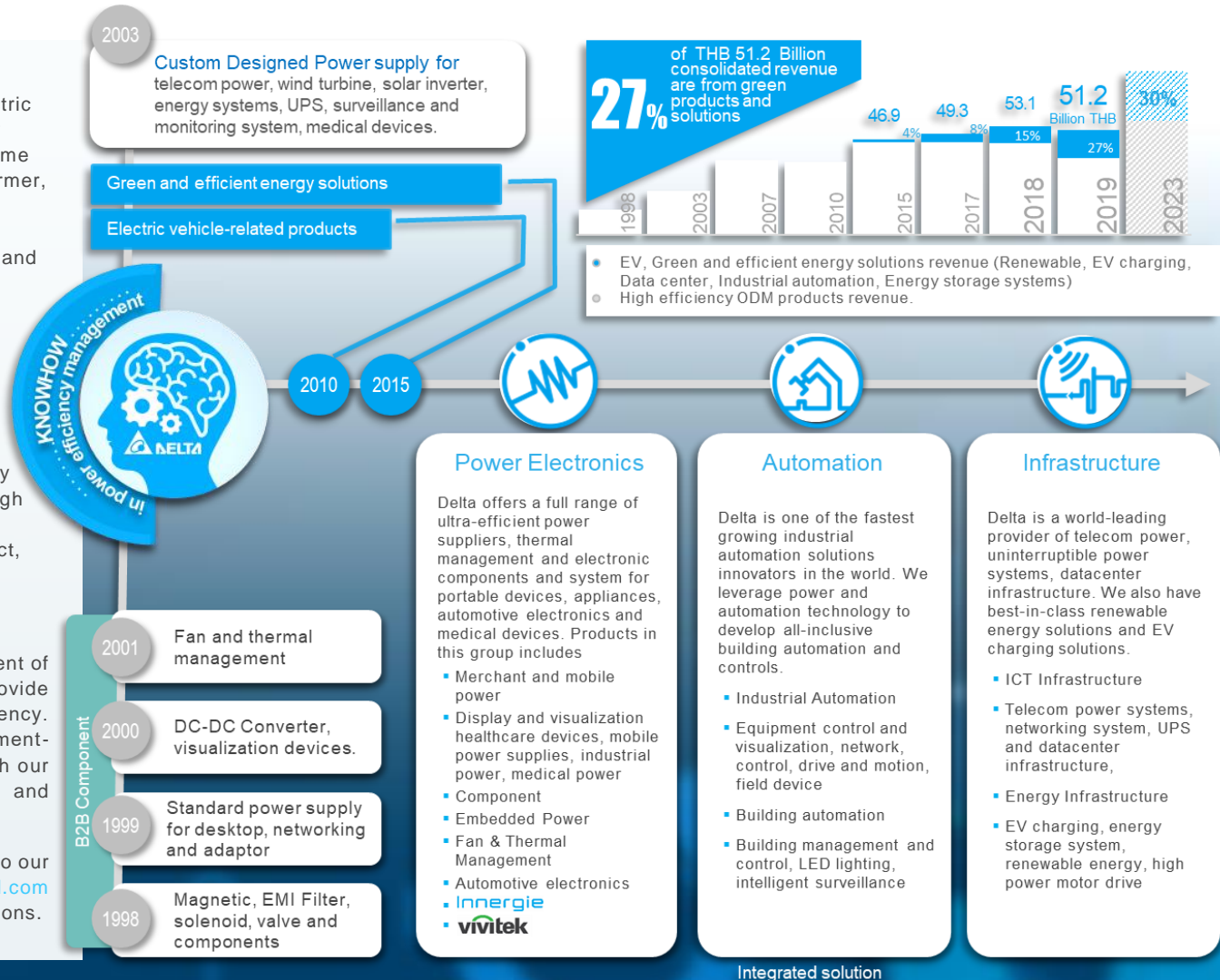
Why Switching Power Supply?

The main advantages of Switching Power Supply or Switching Mode Power Supply (SMPS) are high efficiency of 80-100%, which means the input is almost as much as the output. It is light, compact, which can be installed in a variety of devices.

Why Delta?

At Delta, we commit ourselves to the advancement of power and electronics technology to provide "smarter" products and solutions with high efficiency. It help us make a "greener" and more environment-friendly way of life possible. We collaborate with our partners by listening to their needs and accomplishing our mission "together".

Visit <https://goo.gl/todPf6> or drop your queries to our sales managers at products_info@deltathailand.com to get more information on our products & solutions.



The Brand



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.

"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 value and product development inspiration. 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.

Delta partners with our subsidiaries and business associates to increase Delta's global brand value and recognition through Delta brand products and solutions. In B2C scope, Delta Thailand and its subsidiaries have acquired world leading brand of electronics component, visualization, consumer electronics and IOT technology-related brands to enhance continuous growth to Delta's brand from 2016-2019. These merger and acquisitions not only help Delta to strengthen its brand image and market presence; but also another way to strengthen our value chain of innovation among Delta group. In the reporting period, Delta Thailand's corporate brand value has recognized by Chulalongkorn University's Thailand Top Corporate Brand Award, Hall of Fame for its brand valued over THB 50 billion for 5 years in row.

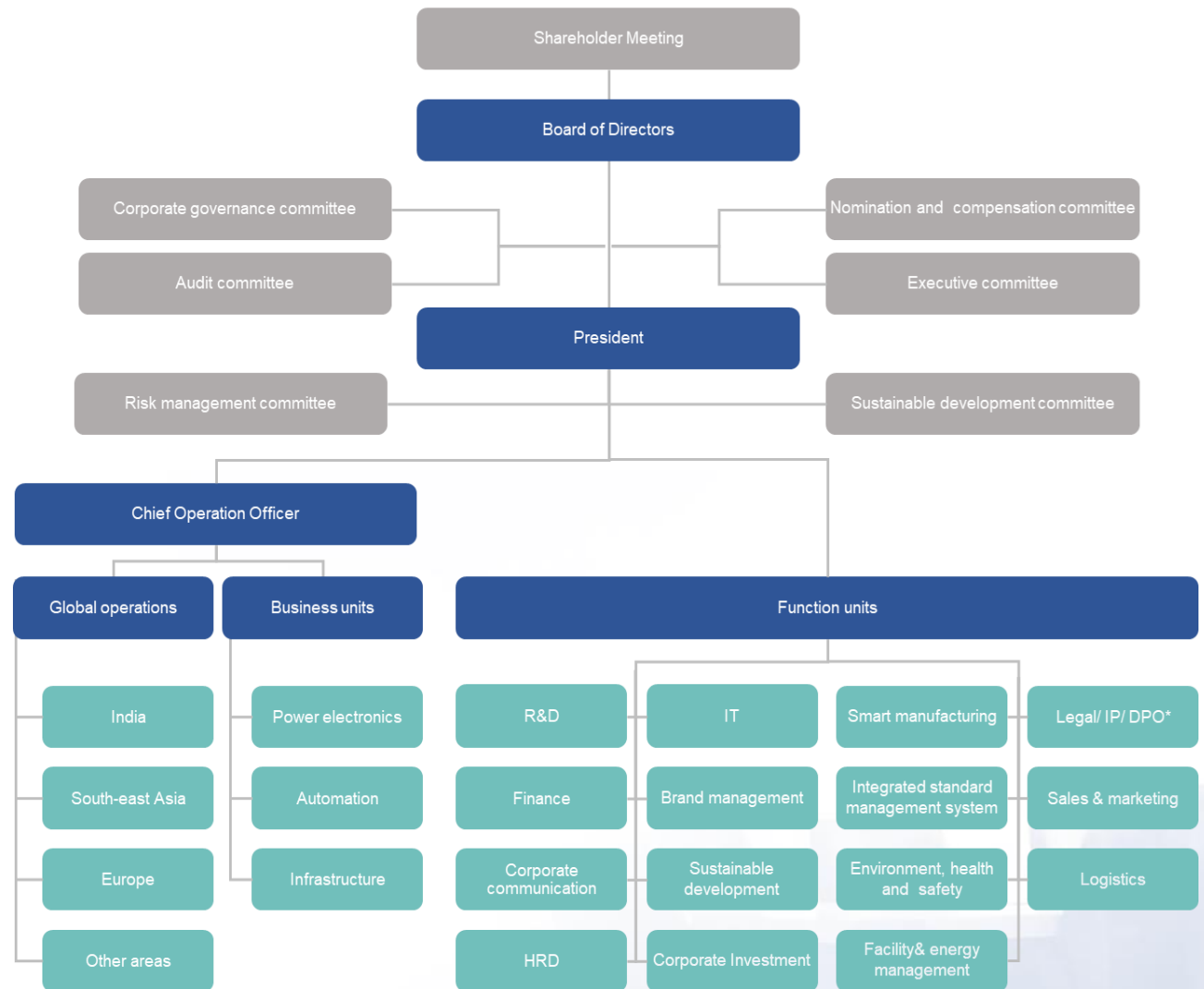


Our Structure

In spite of global presence and wide range of products, solutions and businesses, Delta set up simple organization for delegating authority for economic, environmental, and social topics. Through flat reporting lines policy, strategic target and directions from the highest governance body has communicated to senior executives and other employees with various approaches.

Though all Delta's executive-level position has responsible for economic, environmental, and social topics up to their functions, Sustainable Development (SD) Office had founded to connect smarter and greener values chain among related functions and its subsidiaries across the globe. This significant development demonstrate the company strong passion to boost up its performance in sustainable development matters.

Due to the rising concern of individual privacy and information security in the digital economy era, in 2019, Information Security Management Committee meeting resolve to invite its legal manager to acting for Data Protection Officer (DPO). The DPO is responsible for collaborate with data-related function, IT and HRD; for instance, to conducting data protection impact assessments, monitoring the organization's compliance with relevant data privacy rules including monitor data privacy risks arising in our organization's activities. Due to the assigned person/s' independency, the acting DPO will be Delta's reliable point of contact for data subjects and supervisory authorities.



* Acting

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”.



2019
A greener way to power on world-class innovations.



Delta and HTC-ITC sign contract to Build Vietnam's first uptime certified 2N T3 and Green Data Center



Delta and Nissan pioneer Thailand's first partnership to enable EV-HOME charging



Delta's EV charging solutions support MG launch of India's first pure Electric Internet SUV-MG ZS E



Data Center Solutions Support Submarine Cable Landing Station in Myanmar



Delta installed the first commercialized EV ultrafast charger in Indonesia (first in Southeast Asia)



Delta, Nissan and CSIRO launch trial of Victoria Government-Funded joint Solar EV charging research

According to its stronger shareholding structure, I'm confident that Delta will be able to generate reasonable values to its shareholders in long-term.



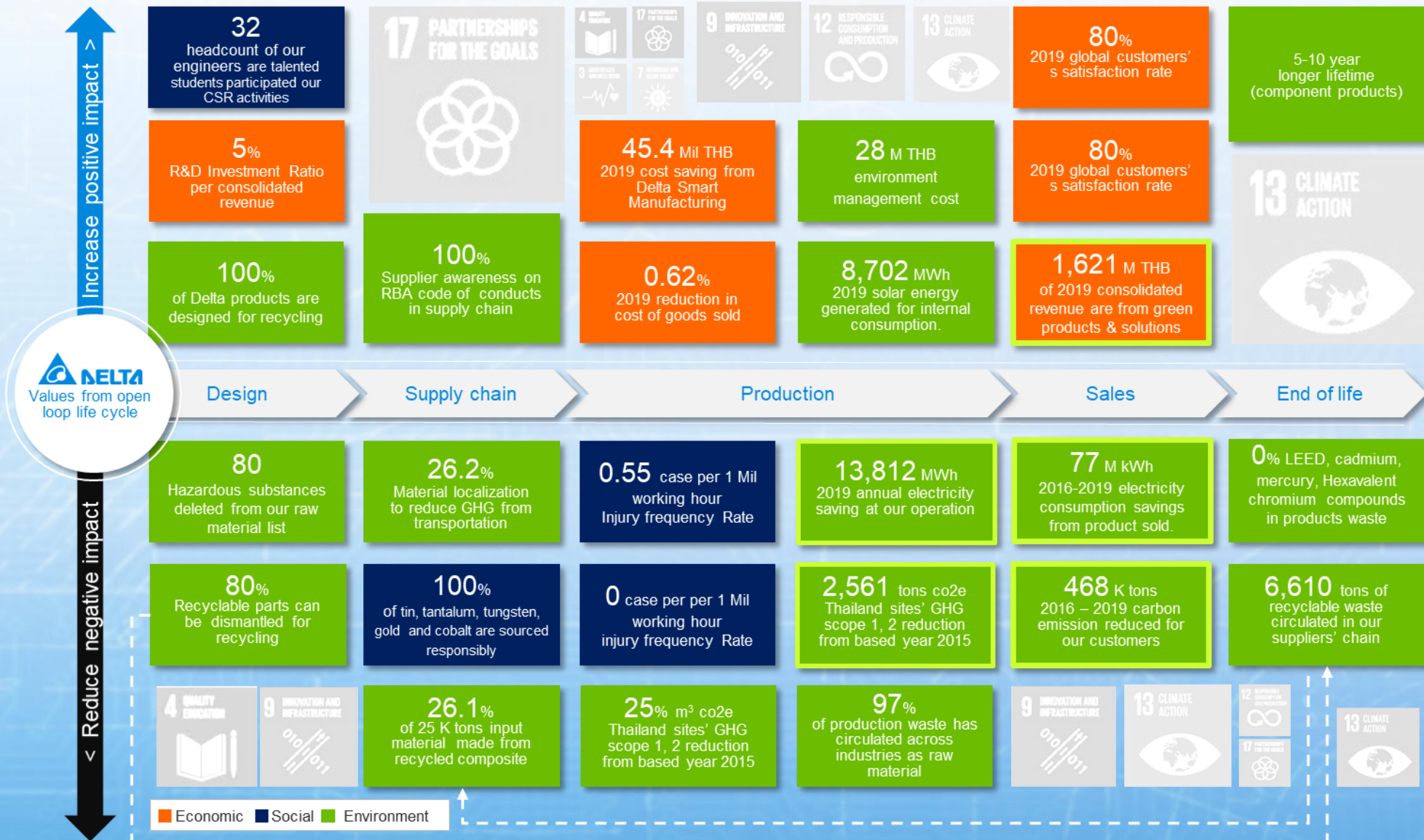
Ms. Phantaporn Chaipornmetta

Shareholder & Follower of Delta's performance

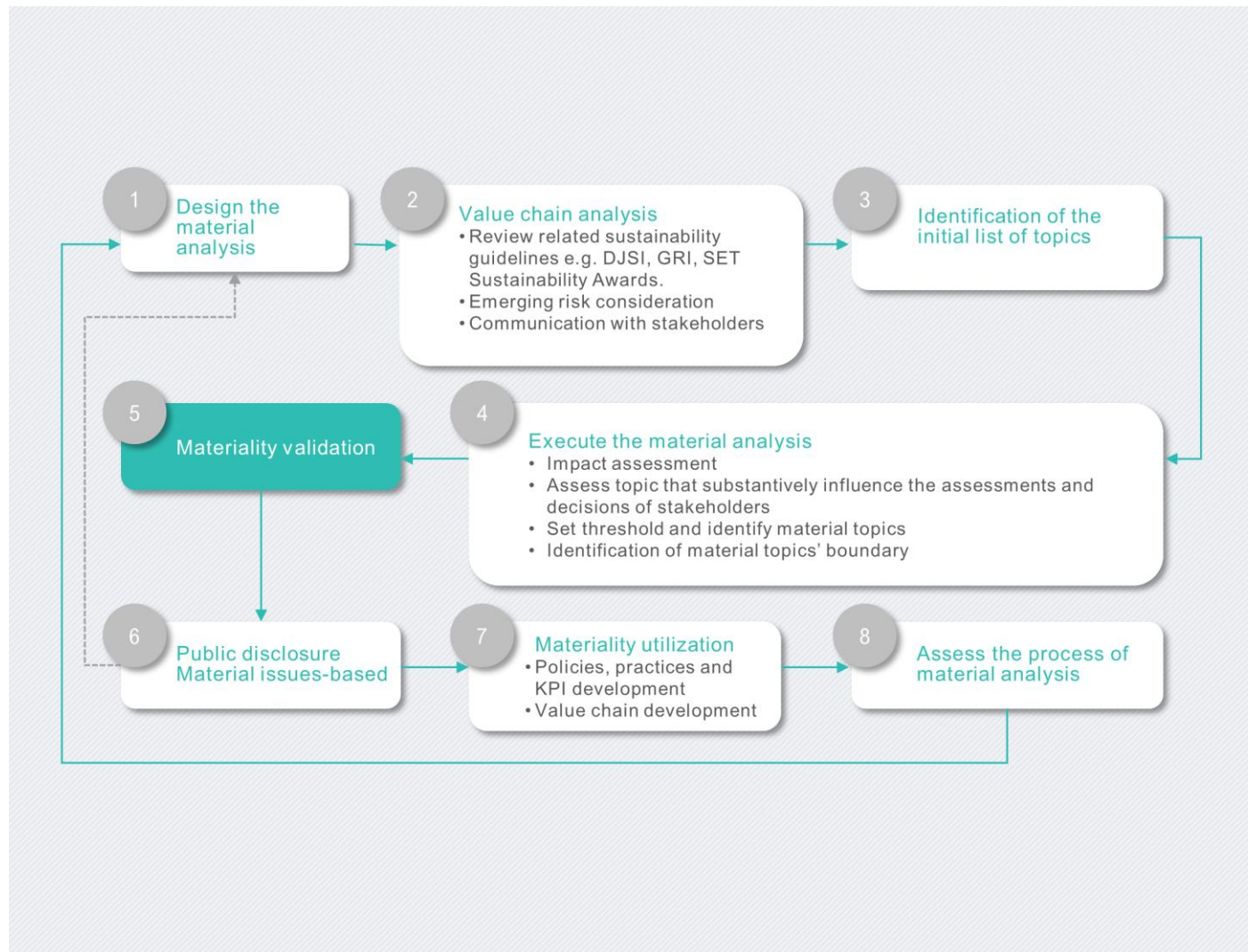


Find Delta's 2019 Opportunity Data

Sustainability Management



The Matters



Through daily business process, feedback from related public disclosure, various communication channels, trade events and partnership with leading institute; our stakeholders' voices help us realized the material issues in extended view.

Delta Thailand has adopted AA1000APS 2018 principle to communicate with both direct stakeholders who have a visible role in the organization, regulation, e.g. operational personnels, communities and entities that influenced or be impacted by it the services; and indirect stakeholders who are interested and echo their needs in Delta's performance through various approaches.

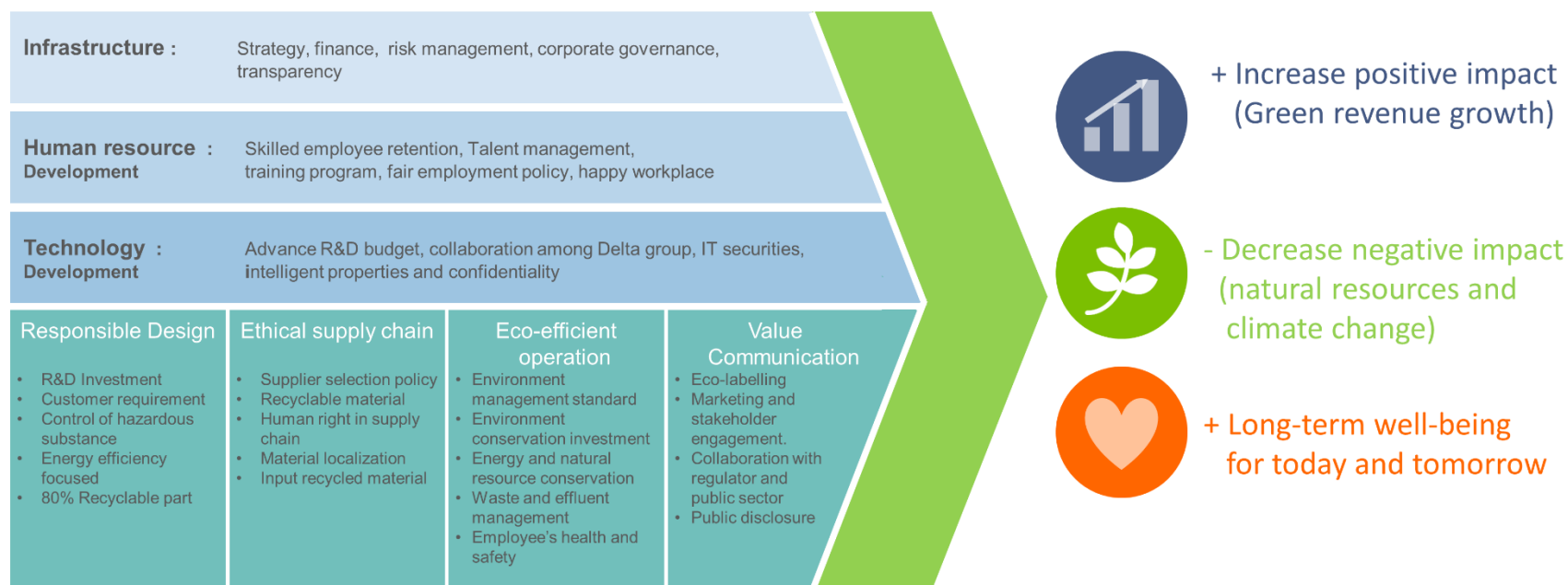
The stakeholders' expectation identified with systematic materiality analysis, so that we can take the necessary responsive action and enrich the content of our information disclosures. Furthermore, any stakeholder's highlights raised in "Other important area" portion of the on-line questionnaire had reported to the management and Sustainability Development Committee to seek for any further action as well.

Step 1: Design the material analysis

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. Our sites in these countries cover 100% of our manufacturing process that contribute to 98% of the Company's consolidated financial performance.

Step 2: Value chain analysis

To meet related stakeholders' expectation while providing innovative, clean and energy-efficient solutions for better tomorrow, Delta alone cannot create significant impact. We conduct value chain analysis to attain a full and seamless interaction among stakeholders to create a win-win situation for all.



Step 3: Identification of initial list

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 2019, due to the air pollution issue, the company In conclusion, there are 18 issues for investigation included in the Company's questionnaire as following:

Initial list of key Sustainable Development issues

Economic

- Economic performance
- Corporate governance
- Code of business conduct and transparency
- Information security management
- Brand management
- Risk and crisis management
- Innovation Management
- Customer relationship management

- Environmental policy and management system
- Product stewardship
- Operational eco-efficiency
- Water-related risk

Environment

- Supply chain management
- Occupational health and safety
- Cultivation of talent and training
- Labor relations and employee's benefit
- Labor rights
- Corporate citizenship and philanthropic activities

Society

Step 4: Execute the material analysis

Communication with stakeholders

Delta Thailand has adopted ISO 26000 and 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.

In 2019, Delta established [Stakeholder engagement guideline](#) to systemize its consultation process with its stakeholders on economic, environmental and social topics. The consultation is delegated to related departments/functions eg. HRA, Volunteer working team, Employee relation team, Corporate governance committee, to get their stakeholder feedback and reported to Sustainable Development committee meeting at least once a year. Finally the result of Sustainable development response to their stakeholders' expectation will be summarized and reported to the Board of Director at least once a year.

After the stakeholders prioritization process, their material expectations will be 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.

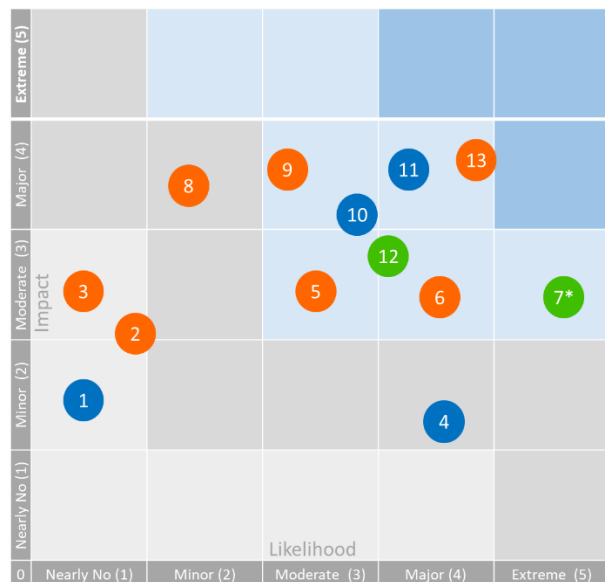


Stakeholder	Expectation	Engagement & Communication Approach	Respond the key topics with stakeholder	Interval / Frequency
Regulator and public sector	<ul style="list-style-type: none"> - Compliance with related law and regulation - Response to government/ public updated policy - Strengthen global partnership to sustainability 	<ul style="list-style-type: none"> - Related function's head - Newsletters form regulators - Timely meeting per regulator request - Compliance contact windows - CSR activities with government sector - On-site meeting - Regular audit - Compliance to related regulator standard - On-line channels <ul style="list-style-type: none"> - Website: www.deltathailand.com - Facebook: DeltaElectronicsTH - e-mail : IR@deltathailand.com info@deltathailand.com 	<ul style="list-style-type: none"> - Risk management committee meeting - Board of directors meeting - Communication channels and training included in new employee orientation program - Meeting with regulator representatives - Public disclosure of financial and non-financial information 	<ul style="list-style-type: none"> - Twice a year - Quarterly - Irregularly - Annually
Employee	<ul style="list-style-type: none"> - Job security during global economic constraints and technology transformation - Fair treatment on labor practice - Good health and well-being 	<ul style="list-style-type: none"> - Labor Union, Welfare, OHSMR meeting - Delta Thailand's intranet - Delta Group on-line magazine - Corp communication boards and displays - CSR activities - Top down communication - Career development Training programs - Employee satisfaction survey - Suggestion boxes - Stakeholder engagement questionnaire - On-line channels <ul style="list-style-type: none"> - Website: www.deltathailand.com - Facebook: DeltaElectronicsTH - Youtube: https://goo.gl/9dnYix - LinkedIn: deltaelectronicsthailand/ - e-mail : det.sd@deltaww.com whistleblow@deltaww.com - Random Interview 	<ul style="list-style-type: none"> - Whistleblow and communication channels for employees repeated in COC & Anti-corruption training - Career development program and training for improving employee's skill - LEED building implementation for better work environment - Welfare committee meeting - Public disclosure of financial and non-financial information including update the CTVO progress 	<ul style="list-style-type: none"> - Annually - Approx. monthly - Irregularly

Stakeholder	Expectation	Engagement & Communication Approach	Respond the key topics with stakeholder	Interval / Frequency
Customer	<ul style="list-style-type: none"> - Product quality and safety - Business continuity against any possible crisis - Transparency and information security of online services solutions/sales platform. - Stronger brand perception to ease next-tier customer's decision - Price changing due to currency fluctuation - Technical knowledge and Q&A platform to facilitate users. 	<ul style="list-style-type: none"> - Customer's survey questionnaire - Direct feedback via sales channel - On-site discussion, audit - CRM System in Front Office - Feedback through DET contact channel - Delta's Customer satisfaction survey - Roadshow, Marketing events - On-line channels <ul style="list-style-type: none"> - Website: www.deltathailand.com - Facebook: DeltaElectronicsTH - LinkedIn: deltaelectronics-thailand/ - Youtube: https://goo.gl/9dnYix - e-mail : product_info@deltathailand.com info@deltathailand.com whistleblow@deltaww.com 	<ul style="list-style-type: none"> - Safety and eco label compliance. - Environment-related substance management procedure. - More detail disclosure in separate SD report includes <ul style="list-style-type: none"> • Corporate governance • Risk Management • Product stewardship • Customer relationship management - Compliance with ISO27001 - Participate world leading assessments eg DJSI, CDP to strengthen brand reliability. - More frequent participation to related industry tradeshow, exhibition and knowledge sharing. - Risk Management Committee review currency fluctuation issue as its fix agenda - Introduce Delta's tutorial channels to users 	<ul style="list-style-type: none"> - Annually - dialy - Re-certified every 3 years - Annually - At least once a quarter - At least twice a year
Supplier & Business partner	<ul style="list-style-type: none"> - Business continuity in long-term on the basis of fair pricing - Public disclosure of clear ESG policy/ direction. - Delta's advocacy and more frequent communication on ethics and sustainable development. 	<ul style="list-style-type: none"> - Supplier's social responsibility management measure - Procurement Agreement - Feedback through DET contact windows - Regular and irregular meeting. - Daily business process. - Supplier survey and stakeholder engagement questionnaire. - RBA Validation Audit - Self-declaration of circular economy initiative - On-line channels <ul style="list-style-type: none"> - Website: www.deltathailand.com - Facebook: DeltaElectronicsTH 	<ul style="list-style-type: none"> - Supplier Management Standard available on public domain. - Establish RBA working committee to provide consultation for suppliers' responsibility. - Official introduction of circular economy to suppliers in 2019 Annual partner meeting. 	<ul style="list-style-type: none"> - Annually - Annually

Stakeholder	Expectation	Engagement & Communication Approach	Respond the key topics with stakeholder	Interval / Frequency
		<ul style="list-style-type: none"> - Youtube: https://goo.gl/9dnYix - LinkedIn: deltaelectronicsthailand - e-mail : supplier@deltathailand.com whistleblow@deltaww.com - Random Interview 		
Investor & shareholder	<ul style="list-style-type: none"> - ESG policy and performance disclosure to drive sustainable investment - Good return for shareholders 	<ul style="list-style-type: none"> - Direct e-mail - Press release/ Opportunity day - Annual report - Annual General Meeting - Stakeholder engagement questionnaire - On-line channels <ul style="list-style-type: none"> - Website: www.deltathailand.com - Facebook: DeltaElectronicsTH - Youtube: https://goo.gl/9dnYix - LinkedIn: deltaelectronicsthailand - e-mail : ir@deltathailand.com whistleblow@deltaww.com 	<ul style="list-style-type: none"> - More detail disclosure in separate SD report includes <ul style="list-style-type: none"> o Corporate governance o Code of conduct o Risk & crisis management o Operation eco-efficiency o Human resource related figures - Improve communication channel 	<ul style="list-style-type: none"> - Annually - Irregularly
Community	<ul style="list-style-type: none"> - Continue advance technology and energy education at schools - Job opportunity - Affordable product/ solutions for B2C market 	<ul style="list-style-type: none"> - Direct feedback via CSR on-site team. - Stakeholder engagement survey - Meet the community activity held by IEAT - Green building visit - On-line channels <ul style="list-style-type: none"> - Website: www.deltathailand.com - Facebook: DeltaElectronicsTH/ - Youtube: https://goo.gl/9dnYix - LinkedIn: deltaelectronicsthailand - e-mail : info@deltathailand.com whistleblow@deltaww.com - Random Interview 	<ul style="list-style-type: none"> - On-site visit/ meeting - CSR activity - In addition to energy conservation, Delta invests in VOC and water recycling solutions to mitigate environmental impact to externalities in 2019. - Collaborate with vocational colleges and universities to provide dual vocational education and work-based learning program. - Partner with SME and business communities to boost up advance eco-efficient technology environment and local employment. - Launch new products that response to social needs eg. Modular datacenter, ev charger for home use, air quality detection solutions. 	<ul style="list-style-type: none"> - Avg. quarterly - Daily business process - Irregularly

Consider adhered and emerging risk



1.) Occupational environment, health and safety for business continuity. 2.) Corruption. 3.) Legal and Intellectual property protection 4.) Supplier responsibility 5.) Socially responsible subsidiaries 6.) Trade risk countries. 7.) Resources availability for ramp-up order fulfillment * (co-impact in economic, social and environment) 8.) New technology adaptation. 9.) Currency fluctuation resulting from major countries' politic change. 10.) Information security. 11.) Subsidiaries' tax compliance 12.) Environmental policy and performance disclosure. 13.) Subsidiaries' local telecom network policy change

Delta realized that emerging risks include trends, or events that happen suddenly, and are characterized by a high degree of uncertainty in terms of their occurrence probability, the loss amount that can be expected from them, and their potential impact. They are frequently long-tail risks with a medium- to-long-term period for loss settlement. The best-known example from the past is asbestos. In sustainable development context, investigating emerging risk help us to realize the design of new business ideas to meet stakeholder expectation while response to the precautionary approach and social needs. Since embarking on its ongoing sustainability journey, Delta Electronics (Thailand) relentlessly **exploit** emerging trends and impacts. To counter emerging risks, we take mitigating actions and create proactive strategies to bolster our company's long-term (impact over 3 years) 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.

Delta Thailand's Risk Management Committee (RMC) reports risk management to the President. The risk and risk management result will be reported to Audit Committee or the Board at least 2 times a year. In 2019, RMC consolidated working teams' concerns from Delta Thailand group including Delta Thailand, India and Slovakia to report to the Board of Director on 18 February 2019. In addition to each risk impact and likelihood measurement. RMC also study the impact's life time which can be illustrated by the size of each plot.

Delta extends its coverage of risk management from business and operation risk to ESG-related issues. The status of the risks management in terms of tax management, public policy change, material scarcity in supply chain, information securities, transparency and corruption, trade war's effect, human rights management due to overtime working and air pollution risk to employee's occupational health and safety. Light color plots are risk as nature of business have disclosed in 2019 [Annual Report](#) page 49-55.

From both internal and external stakeholder engagement, 2019 key mega trends which are potential to impact Delta's business in long-term has raised as following:

Emerging Risk	Raised issue	Delta material issue	Potential impact - Negative + Positive ? Unknown	Mitigating actions	Opportunity
Rapid urbanization and Climate change	<ul style="list-style-type: none"> Demand ramp up Material (+manufacturing factor) shortage Air pollution 	<ul style="list-style-type: none"> Eco-efficient operation Economic performance Innovation management Supply Chain management Norm of Transparency Occupational Health and Safety 	<ul style="list-style-type: none"> + Demand ramp-up in energy-efficient and clean energy products and solutions. - Increased in power demand - Increase in local electricity intensity - Increase in fossil fuel used to generate electricity - Higher production cost - Natural resource scramble - Flood way blockage - Customer's higher expectation on ESG-related information - ? Difference of governmental policies to face - ? Difference in supply and demand behavior - Operation lost time - Employee health and safety 	<ul style="list-style-type: none"> Develop Supply chain in emerging market Energy intensity reduction projects Delta Smart Manufacturing Renewable energy generate from Delta solar roof top Eco-friendly and ethical supply chain Green product design Business contingency and recovery plan established Build up awareness of Energy and environment conservation Brand development to seize future market Review hazardous substance banned in production process Public disclosure of hazardous substance management policy, GHG inventor and CSR in supply chain information. Set up emergency and recovery plan Watch up meteorological and PM 2.5 statistics Utilize Delta Uno pollution sensor and Delremo, green energy solutions, as key component to help OHSAS work. Expand GHG inventory coverage to subsidiary plant in Slovakia 	<ul style="list-style-type: none"> Growth in Power Electronics, Automation and infrastructure solutions. Value-added products through substitute and recycled material development Growth in Power Electronics, Automation and infrastructure solutions. Realize new demand in pollution sensor products. More frequent customer and public sectors engagement on EV-related and renewable energy product
Demographic and social change	<ul style="list-style-type: none"> Labor welfare at subsidiary plants in India 	<ul style="list-style-type: none"> Eco-efficient operation innovation management 	<ul style="list-style-type: none"> - Skilled labor force shortage due to aging population and new industries flourishing (e.g. AI and programming) ? Faster turnover of product life cycle. + Higher expectation / requirements on responsible product & services esp. in ESG aspect. 	<ul style="list-style-type: none"> Delta's focus on automation and energy management solutions resolve aging workforce problems Maintain comparable research & development infrastructure Green design & green supply chain development On-line communication channel development Build up awareness of Energy conservation Brand development to seize future market Develop green supply chain 	<ul style="list-style-type: none"> Growth in Power Electronics, Automation and infrastructure solutions. Value-added products and solutions through eco-friendly supply chain.

Emerging Risk	Raised issue	Delta material issue	Potential impact - Negative + Positive ? Unknown	Mitigating actions	Opportunity
Shift in global economic power	<ul style="list-style-type: none"> Public policy change Fluctuated exchange rate in subsidiary sites Trade war impact on operation, supply chain and customer finance performance Tax Corruption 	<ul style="list-style-type: none"> Supply chain management Economic performance Norm of transparency 	<ul style="list-style-type: none"> ? High competition of supply chain in emerging market - Raw material scarcity - Intellectual information and confidentiality break-in effort ? Difference of governmental policies to face ? Difference in supply and demand behavior - More queries on ESG question from new investors in emerging market 	<ul style="list-style-type: none"> Boost up ethic in supply chain Systematic risk management Material localization Promote circular economic in supply chain Publicize supplier standard requirement Delta's presence in emerging markets Concentrate IT security policy and practice Public disclosure of hazardous substance management policy, GHG inventor and CSR in supply chain information. 	<ul style="list-style-type: none"> Additional business opportunity in emerging market.
Technological breakthroughs		<ul style="list-style-type: none"> Eco-efficient operation innovation maintaining Supply chain management Information security Personal data protection 	<ul style="list-style-type: none"> - IoT application to home appliances/ devices - Adoption of Industry 4.0 - Information security : Hacking frequency increases + Higher power and capacity demand for datacenters + Higher expectation / requirements on responsible product & services esp. in ESG aspect. ? Faster turnover of product life cycle. 	<ul style="list-style-type: none"> IT Security Standard and practice promotion. Validity of the director's IT background Implemented Information Security Management procedure (doc no 06-027) Set up Information Security Management System Committee Appointed Data Protection Officer Implement ISO 27001 Delta SMART manufacturing and automation solutions Green design & green supply chain development Public ESG info used for investment decision Build up awareness of Energy conservation Brand development to seize future market Maintain R&D investment at approx. 5% to revenue 	<ul style="list-style-type: none"> Growth in Power Electronics, Automation and infrastructure solutions.

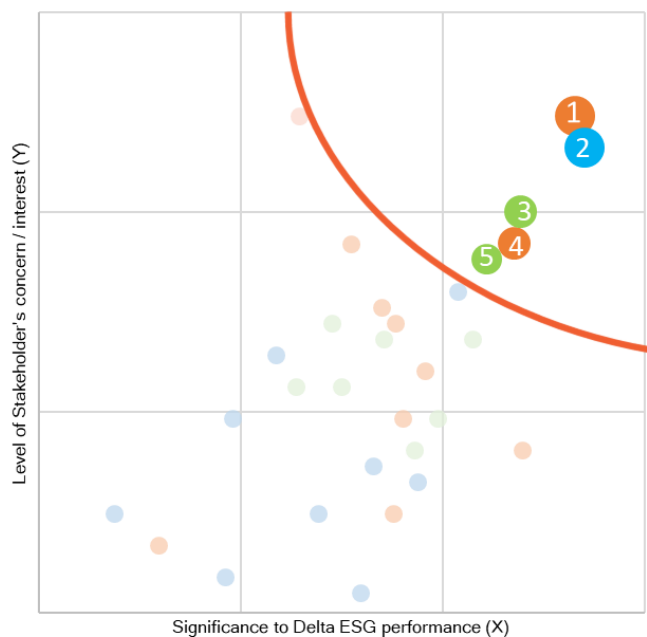
Executive Review

2019 Sustainable Development key performance had reported to the Board of Director meeting dated 18 Feb 2020. According to the Board of director advices, stakeholder interest survey result, emerging risk review; Sustainable development committee summarized the material issues.

Step 5: Material issue validation

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.

The result of materiality prioritization indicates that 7 from 15 issues have been expected and 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's competence competences, this issue has added as Delta's materiality. Finally, the 7 material issues had disclosed in this report in detail.



Interested/ concerned issues	Material Involvement to Delta's sustainability	Disclosure page
1. Business ethics and transparency	• Ethics, anti-corruption and transparency enhancement	37
2. Frequent occurrences of emerging and re-emerging diseases	• Responsible supply chain	50
3. Market's rising demand for eco-friendly supply chain, products and services	• Innovation management	42-70
4. China-US trade war	• Environment, Health and Safety Management	71
5. More frequent and severe natural disasters resulting from extreme weather	• Operation eco-efficiency	40-72
	• Information security	13,20,22,24, 36,42,63
	• Employment policy	74-95

Delta Electronics (Thailand) PCL. publicly 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 company 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.

If you have comments or suggestions to make about Delta's CSR & Ethics, please contact us through det.sd@deltathailand.com

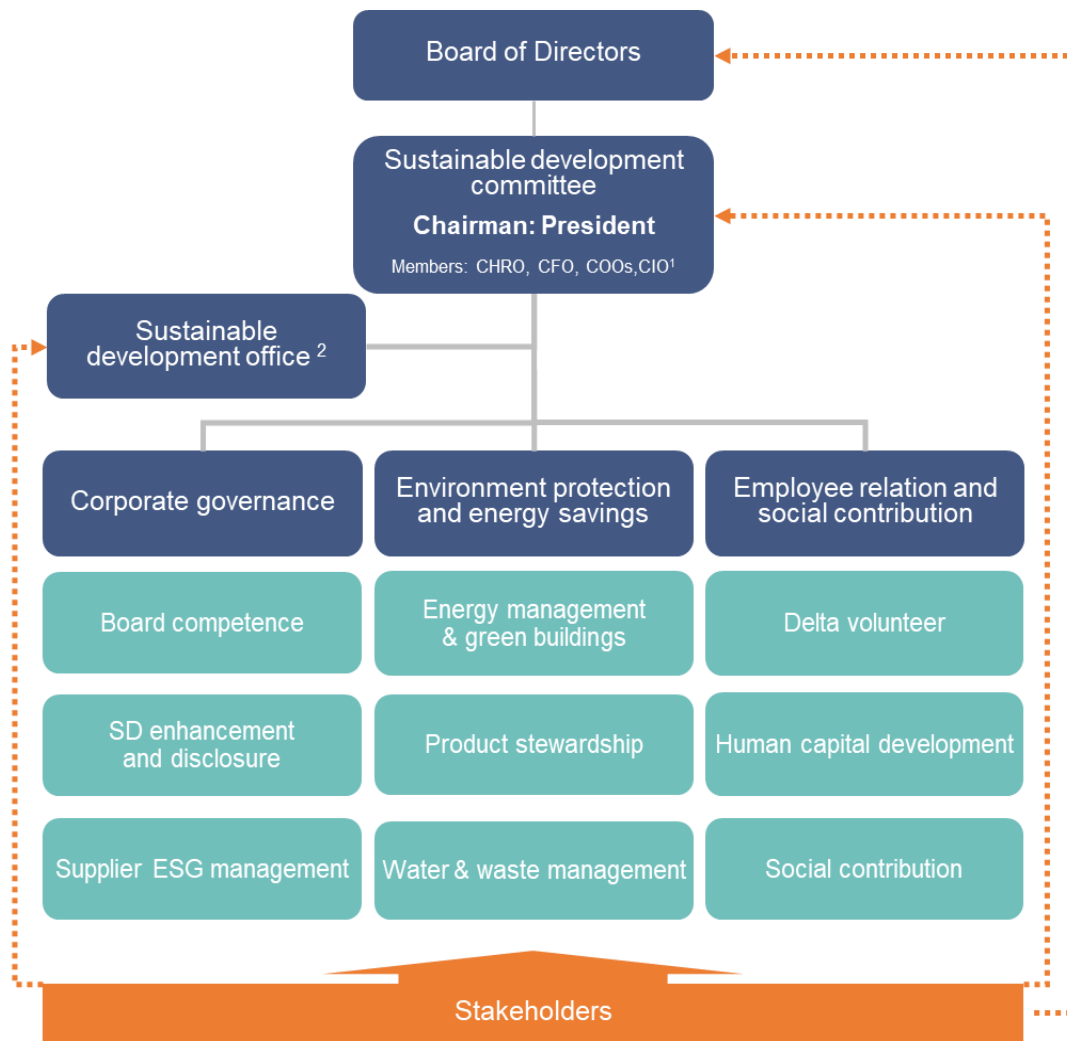
"Enable added values for the stakeholders through smarter and greener business"



- Create company value and enhance shareholder value
- Invest in innovation and research, develop intellectual property rights, and devote ourselves to the progress of human culture and technology, the development of society and the economy, as well as the sustainable development of the Earth and its environment.
- Develop environmentally-friendly, energy saving products and implement sound practices to reduce our impact on the environment to fulfill customer satisfaction.
- Provide employees with a safe and healthy work environment where they can live up to their full potential in return for reasonable remuneration and benefits.
- Promote CSR ideals and practices throughout our supply chain and work together for better performance.
- All executives shall extend their collaboration and promote their staff members to fulfill these policies successfully.



Delta Thailand 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. 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. 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. In 2015, Delta set targets to increase green revenue from its products and solutions portfolio while increasing energy efficiency to up to 30 percent of total revenue by 2023. 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 6.37% from 2015 when this amount of revenue have acknowledged. Finally Delta's green revenue account for 27% of the company's total revenue in 2019.



Note:

1. Since IT security and on-line platforms does matter to corporate strategy communication, Delta has include Chief Information Technology Officer (CIO) into its SD Committee members.
2. Sustainable Development organization body officially established in 2018.

Sustainable Development Organization

According to [ISO 26000 guideline](#), Delta has established 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), Chief Operations Officer (COO) and Chief Information Technology (CIO : join the committee in 2018). 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 ESG risk, critical concern and 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. Finally, Delta publicly discloses its sustainable development performance on annual basis at

<https://www.deltathailand.com/en/download-sd-report>.

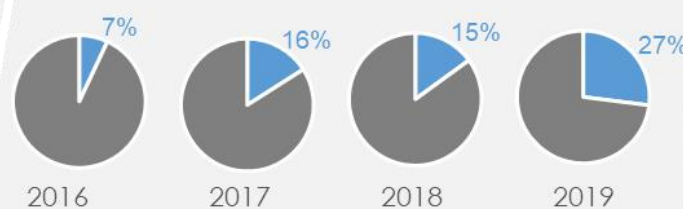
From responsibility to sustainable growth



Consolidated revenue (Billion THB)



Proportion of green revenue (%)

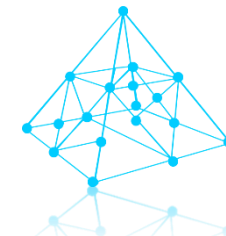


Note

- Green revenue contributed by the revenue from EV, Green and efficient energy solutions revenue (renewable, EV charging, Data center, Industrial automation, Energy storage systems)
- High efficiency ODM products revenue.
- The green revenue reported accordingly to the company's performance breakdown by business group presented to the Board of directors on 17th February 2020

We embrace risk management, supply chain management, innovation and stakeholder's expectation together with responsibility for ESG aspects as sustainable innovation. Delta synergizes its technology to response to social needs in environment conservation while mitigate climate change impact. Delta has invested 100 million Baht in average since 2015 to make its operation greener. Meanwhile, the company maintains its research and development cost at approximately 4-5 percent of its consolidated revenue to develop smarter and greener products and solutions for the mentioned purpose

From relentless collaboration across different expert domains, sustainable development consciousness has gradually embeded into our culture and daily operation. In additiona to the risk we have been precautious and our potential in clean and energy-efficient innovation, Delta has focused on "Power and Energy Optimization Products and Solutions" business since 2010. 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. With leading technology that help our leading customer's competitiveness in term of efficiency, Delta's green revenue from Infrastructure and Automation revenues represent steady growth in 2019.



Towards Sustainable Development Goals

From a broader business perspective, this dedication to CSR ideals makes Delta a true global citizen. Since Mr. Dick Hsieh, President, delivered Delta Thailand's Sustainable Development Goals to business partners and the company's personnel in Delta Annual Partner Meeting dated 28 December 2016, awareness and various forms of collaboration in Delta's value chain increasingly matter.

In 2017, Delta realized its potential to response to 6 major goals which aim to reduce disparities in society. The goals we voluntary 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.

In 2019, Delta has invited by the Thai Ministry of Justice, Global Compact Thailand and Shift to join **EXPERT CONSULTATIONS: Developing Better Ways to Evaluate Business Respect for Human Rights** dated 17 December 2019 at Sukosol Hotel, Bangkok. The session aimed to gain illicit feedback from leading company's experts to establish new methods and management tools to support practitioners evaluate, draft indicators Supporting companies and their stakeholders to focus on human rights risks inherent in business models; and draft Indicators for evaluating the extent to which a company's leadership and governance supports – or undermines– a rights-respecting culture. In the reporting period, Sustainable development office has encourage other working teams eg. Component engineering, Supply chain management team, and OHSAS team to join related SD session to gain first-hand experience on Sustainable development across industries.



Inclusive and equitable quality education, relevant skills, including technical and vocational skills, updated knowledge leading to decent jobs which reduce inequality in the society.

Higher opportunity from quality education help ones to access the developing infrastructure in the changing global technology and world environment. Delta promotes education and life-long learning for its employees, employee's families and undergraduate students by promoting;

- 1.) basic and STEM education,
- 2.) environment education,
- 3.) talent cultivation mechanism
- 4.) experience-based learning

Finally, life-long learning will be a noble pursuit that will keep ones healthy life even after retirement.



Constructing a reliable and sustainable clean energy system is one of the global focus.

Delta dedicates developing solar power and renewable energy solutions, and discovering new business opportunity from these green solutions. Delta also provides affordable renewable energy and industrial automation solutions for leading research institutions to extend affordability opportunity to access clean and modern energy in rural areas and developing countries.



Accelerating industrial innovation and assisting in the construction of resilient infrastructure are the best solutions for companies facing the dual pressure of climate change and sustainable development.

Strengthen innovation ecosystem by enhancing future innovator pool to advance green technology industry while mitigate environmental impact.

Delta has implemented and internal incentive system to continuously accumulate innovative energy-saving solutions for global customers. It applications include smart manufacturing and modal shift transportation to reduce carbon in logistics process.



Sustainable consumption and production are the basis for sustainable business operations. Delta upholds its mission "To provide innovative, clean and energy efficient solutions for a better tomorrow".

To mitigate global environmental challenges including air pollution, water and natural resources scarcity, the company has implemented sustainable consumption and production into daily operations through promoting eco-efficient operation measures, procurement localization, circular economy enhancement in supply chain, green building promotion and green life-style throughout the organization.



Property responding to climate change and its impact, and taking countermeasures are a major challenges for the company's sustainable business strategy.

Delta response to climate risk by adaptation and mitigation, and continue to identify climate change opportunities. In addition, Delta uses "COP21", "Carbon Footprint for Organization (CFO)", "voluntary carbon reduction scheme (LESS)" and "Carbon Disclosure Project (CDP)" and participation in climate change-related policy as strategies to carry in-side-out strong action.



Delta participated in global partnerships to help activate sustainable development. In business process, Delta enhance smarter and greener value chain through various approaches of communication to our stakeholders.

Delta participates in national and international sessions on climate change and sustainable development. We collaborate with leading organizations to develop essential infrastructures for greener and inclusive future.

The company also share our knowledge and practices with business and social sectors to create broader greener impact for next generation's well-being.



The chapter describes Board competence, Directors' skill matrix, Sub-committee, Mechanism to drive ethic and transparency

Corporate Governance





Corporate governance systems ensure that a company is transparently managed in the interests of shareholders (including minority shareholders). On the one hand this includes checks and balances that enable the Board of Directors to have appropriate control and oversight corporate-wide responsibilities.

Board Competence

The [Board of Directors](#) (BOD) is the key driver in developing the company's corporate governance to enable added values for Delta business. To enhance BOD's competence, Delta has the policy to encourage directors, executives and the company secretary to participate training involving good corporate governance at least once a year.

The company organizes internal and encourage the BOD members to participate external training by relevant institutions such as the SET, the SEC and the Thai Institute of Directors Association (IOD). In 2019, Mr. Cheng Ping and Mr. Ko Tzu-shing, Director of the Board (Authorized Director), attended Global Smart Manufacturing Team's training subjects "Balance between Technology and Humanities- Which Side AI Stand On" to capture risk and opportunity from digital transformation. Meanwhile, Mrs. Tipawan Chayutimand attended the Director Certification Program (DCP) organized by Thai Institute of Directors Association.

Selection of Directors

The Board of Directors assigns the [Nomination and Compensation Committee](#) (NCC) to search, select and

Corporate Governance

nominate qualified candidates to be a director or member of related committees. The committee member selection have made 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. In addition, the NCC also consider any committee's association of social group to ensure none of them is membership of under-represented social groups, cross-shareholding with suppliers

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, one female director with experience in finance, accounting and tax has on-boarded. This is to ensure the achievement on company's objectives BOD diversity and a solid company structure with good corporate governance standards. 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 2019 Extraordinary General Meeting, the [company consult our shareholders](#) to consider and approve the appointment of directors to replace the directors who will be retired by rotation. Resolution in this agenda shall be approved by the majority votes of the shareholders attending the meeting and casting their votes. Finally, appointment of three directors has approved with [99.8%](#) score in average.

Board of Directors competence matrix

Board of director's qualification and competence (as of 31 December 2019)				Unit	Total / Average	% (for reference only)									
Competences															
Basic information	Type of director	-		-			Non-executive	Non-executive	Non-executive	Non-executive	Independent	Independent	Executive	Independent	Independent
	Nationality						Malaysian	Taiwanese	Taiwanese	Thai	Thai	Taiwanese	Taiwanese & British	Thai	Thai
	Age	years	66	-		73	58	72	66	71	73	53	62	66	
	Date of Election by the Annual General Meeting	-	-	-		2-Apr-18	24-Jun-19	24-Jun-19	2-Apr-19	2-Apr-19	2-Apr-18	24-Jun-19	2-Apr-18	2-Apr-18	
	Tenure	years	1.0	-		1.8	0.5	0.5	0.8	0.8	1.8	0.5	1.8	1.8	
	Delta's share holding (as of 31 Dec 2019)	shares	80,000	-		80,000	None	None	None	None	None	None	None	None	
	% of held shares to paid up capital	%	0.006%	-		0.006%	0%	0%	0%	0%	0%	0%	0%	0%	
Member of sub-committee	Audit committee	-	3	33%											
	Corporate governance committee	-	2	22%											
	Nomination and compensation committee	-	3	33%											
	Risk management committee	-	2	22%											
	Sustainable development committee	-	2	22%											
Education background	Finance & Accounting	-	5	56%											
	Business Administration	-	4	44%											
	Engineering	-	3	33%											
	Humanities	-	1	11%											
	Science & Technology	-	4	44%											
Experience/ Knowledge background	Solution Business	-	7	78%											
	International Business Management	-	8	89%											
	Local law/ Tax Compliance	-	7	78%											
	Human resources & Talent Development	-	7	78%											
	Public and Investor Relationship Communication	-	6	67%											
	Supply Chain Management	-	5	56%											
	Sustainable Development	-	9	100%											
	Information and privacy security	-	4	44%											
	Consumer Discretionary	-	4	44%											
Experience in Global Industry Classification (GICs) Level 1	Consumer Staples	-	1	11%											
	Energy	-	8	89%											
	Material	-	7	78%											
	Industrials	-	9	100%											
	Healthcare	-	4	44%											
	Financials	-	7	78%											
	Information technology	-	9	100%											
	Communication service	-	3	33%											
	Utilities	-	6	67%											
	Real Estate	-	1	11%											

Chairman of the Board of directors

- In 2019 Mr. Cheng ping and Mark Ko possessed existence of controlling shareholders while none of Delta Thailand director held cross-board membership, cross-shareholding with suppliers and other stakeholders,. For more information on the board of directors' skill and experience please find http://www.deltathailand.com/about_board.php.
- Delta's directors and executives have equal voting right to other shareholders said "one share one vote"
- Experience in Global Industry Classification (GICs) Level 1 has objectively evaluate by Sustainable Development Committee based on Profile of Board of Directors published at [Annual Report](#), page 60-65.
- Delta has no explicit requirements indicating that the Board of director, CEO and/or other executive managers are required to build up share ownership equivalent to a specific multiple of their annual base salary. However, the Board of director, CEO and/or other executive managers are required to disclose information on their personal securities holdings (including that of their spouses and minor children) to the Office of the Securities and Exchange Commission. Find [CG Policy](#) page 13.

Structure of the BOD

Delta's one-tier-system 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, four are non-executive directors and one 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. Explicit definition of the "independence" publishes on <https://bit.ly/2OYVYe3> page 17-18.

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 the Board and the President. Different individuals must hold these two positions to enhance management accountability and transparency. The Board plays its role to setting purpose, values, and strategy and assigns the President to manage the day-to-day operations according to defined duties and responsibilities guidelines. Find [Annual Report](#) page 80-84 for roles and responsibilities in setting purpose, values and strategy.

BOD's Authorization

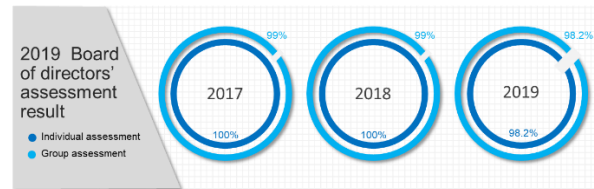
The Board of Directors can authorize matters under their scope of authority stipulated by law, the Company's Articles of Association and the shareholders' meeting resolutions. Such matters include

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.

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



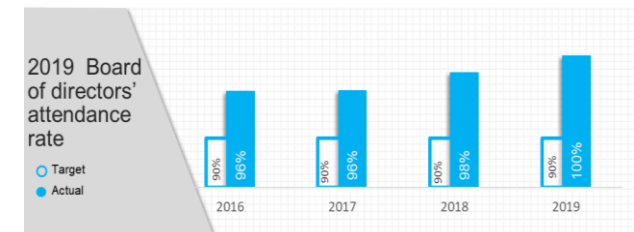
Areas of assessment include Board duties, Board structural composition and individual member's qualifications, job performance, professional development and teamwork. Other areas of member's assessment are meeting attendance, general knowledge and expertise as well as proactive action in areas of responsibility. 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 2019, the Board had outstanding 98.2% of group assessment and 98.2% of individual member performance result. The Board of Directors acknowledged the results of both group and individual

level assessments and discussed possible areas for improvement.

Yearly, Delta Board of Directors' responsibility is assess by the Thai Institute of Directors Association. In 2019, Delta achieved 91% score while overall listed companies' score of BOD responsibility was 75%,

BOD Meeting

The independent directors' service term is limited to a maximum of nine years or three consecutive terms. Appointed directors cannot hold a director position in over three companies listed on the Stock Exchange of Thailand. Board meetings are conducted at least once every quarter to review the company's business and ESG-related performance and discuss important strategic issues including their risk and opportunity.



According to the Corporate Governance Policy and the BOD's agreement, the minimum attendance rate for every Board of Director member is 90% for good governance. In 2019, six meetings had held with an average attendance rate of 100%. Since 3 Taiwanese directors have been being appointed by the Annual general meeting No 1/2019 held on 24 June 2019, they are eligible to attend 3 Board of Director Meetings in 2019.

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 four sub-committees under the Board of Directors with the Executive Committee, Audit Committee, Nomination and Compensation Committee and Corporate Governance Committee. There are two committee under the President with Sustainable Development Committee and Risk Management Committee.

Executive Committee

The Executive Committee of the company consists of five members to operate and manage the business of the company in compliance with company's objectives, Memorandum of Association, policies, regulations, notifications, order as well as the resolution of the Board of Directors. The Committee also establishes 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. Besides, the Committee monitors and follows up the result of the operation of the company to be in accordance with the policies. To ensure that a company is managed in the interests of its shareholders, directors, CEO and executive committee members have requested to [report their ownship](#) of the company's share accordingly to SEC's best corporate governance practice.

On 7 November 2019, the committee assigned Mr. Beau Yu, CFO, to attend Thai Listed Company Association's CFO Professional Development Program (TLCA CFO CPD) No 5/2019 subjected "The CFO's role in stakeholder communications". The training program has been developed to equip finance professionals with all the tools, skills and strategies that they need in order to become finance leaders to prepare listed companies to plan for the right response and reporting changes in financial strategy development while respect their stakeholders' expectation.

Audit Committee

The Audit Committee of the company consists of three members and all the members are independent directors. The Committee reviews the company's financial reporting and consider the capability and 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 do any other matters assigned by the Board of Directors. 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

This Committee consists of three members, two independent directors and one executive director to review the remuneration policy and determine the remuneration of the

directors of the company and members of sub-committee. Up to 2019, there is no claw back provision nor deferred share policy. The Committee also define the qualifications, structure, size and composition of the Board member and attracting qualified candidates for Board of Directors' consideration. The Term of office shall follow the Annual Director Election.

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 aspect which are varied by the company's sustainable development targets such as revenue, profit, return on equity, regional business, training and development, social benefit optimization and environmental impact reduction performance. With variable performance considered, President and other executives' deferred bonus is paid out in April after which the income was earned for their January – December performance period. Find more detail from [remuneration policy](#) page 7.

On 2 April, 2019, remuneration of Chairman of the Board, non-Executive Director, executive director, independent director and Audit committee chairman had [100% approved by the company's shareholders](#) in its Annual general meeting. Finally, the Ratio of the annual total compensation for Delta President, Executive and management to total employee's wages and salary was reasonably determined. Finally, increment of President , executives and management; and employee was -14% per 6% respectively.

Corporate Governance Committee

To systematically drive transparency among Delta Group, Corporate Governance Committee has set up in early 2019. The committee consists of three members, one non-executive director and two executive director. The Committee review whether the company's Corporate Governance Policy, [Code of Conduct](#) and Anti-Corruption Policy are appropriate, adequate and regular update. This includes overseeing of how to promote them to employees for clear understating and actual implementation.

Risk Management Committee

Risk Management Committee is reporting to 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. In 2019, 7 major risks by business with 2 critical concern had communicated to the highest governance. In addition to consideration of impact and likelihood of the ESG-related risk in daily business process, emerging risk of air pollution in Bangkok and surrounding areas which will impact DET's operation, employees' health yet expose another business opportunity had reported to the BOD as well.

Sustainable Development Committee



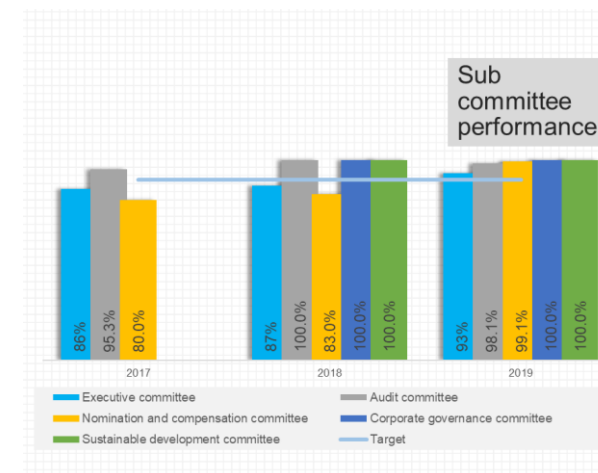
In addition to periodical meeting, ESG issues are frequently discussed among Delta group through various on-line platform

Sustainable Development Committee consists of four 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.

Since information technology and information security play significant roles in facilitating sustainable development and transparency, Chief Information

Technology Officer had join Delta Sustainable Development Committee. With the CIO's support, on-line platforms for both internal and external stakeholder engagement had developed with the right technologies and securities.

All the sub-committee agree to follow the Board of director's good practice where the sub-committees' member must have a minimum required meeting attendance rate of at least 90% for effective good governance. In 2019, the sub-committees' attendance rate has reported as following.



Find more information of Delta's sub-committees at <https://bit.ly/2WiFuRo>



Ensure Norm of Transparency

Shift in global economic power, urbanization and population growth are set to lead to a growing demand for commodities in such a way that could intensify existing interdependencies, radically alter market structures, and potentially increase the returns to corruption¹. Delta has observed [Corruption Perception Index](#) to have precaution and track corruption and bribery situation in the countries we invested. In 2019, Delta has assessed its 2 major sites in Thailand (50% of global manufacturing sites) and investigate its subsidiaries in India and Slovakia (another 50% manufacturing sites) to mitigate potential risk of corruption and all the form of bribes. The company evaluation the potential 5 risky areas, strengthen up our control and perform necessary activities to implement our ZERO TOLERANCE target while maintaining its tangible and intangible assets for sustainable growth.

At risk likelihood 2/5 and impact level 3/5, 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, resources 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 100% risk assessment and internal monitoring has placed as part of for countermeasures.

According to our [public shareholding disclosure](#), there is no individual governmental institutions nor individual founding family members owning more than 5% of voting rights. In 2017-2019 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 list membership of association has report to the Sustainable development committee and publicly disclosed at <https://bit.ly/2W2yv9S>.

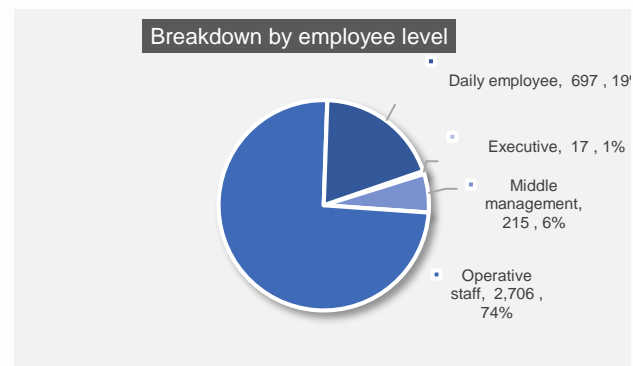
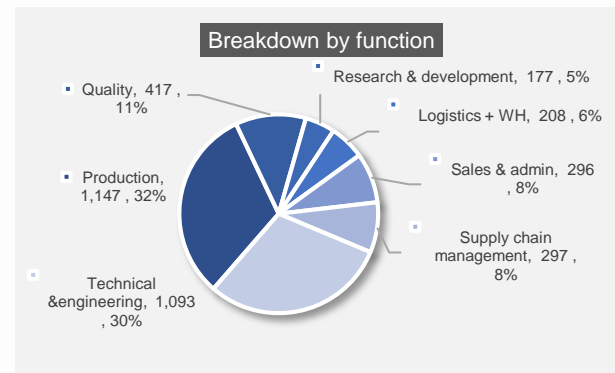
1. Amy Morgan and Daniel Pease (Foreign and Commonwealth Office). **Beyond Geography: Shifts in Global Economic Power**..Retrieved from <https://tinyurl.com/y7efhd5p>

Delta Thailand's Board of Directors has approved the Anti-Corruption Policy which aim to clarify the company's goal to combat all forms of corruption had communicated to all the Board of Director and Executives based in Thailand headquarter since 2016 Delta has set a zero corruption goal to further develop our sustainability. The company commits to conducting its business with transparency and integrity. To enhance our stakeholders' confidence, Delta Thailand's 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 and all the form of bribery. 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.



In addition to regular ethic commitment as a part of employment agreement and code of conduct training as part of new staff orientation, in 2019, our Corporate Governance Committee appointed an Anti-corruption working team. The team launched the Anti-Corruption Commitment Program to ensure that employees are aware of their duties and responsibilities and perform their jobs with honesty and integrity. The commitment had

implemented through both reliable on-line platform and physical training with black and white signatory commitment. Since 2017, accumulated 7,351 employees (65% of Delta Thailand's total employees) has educated and sign the Anti-Corruption Commitment on-line.

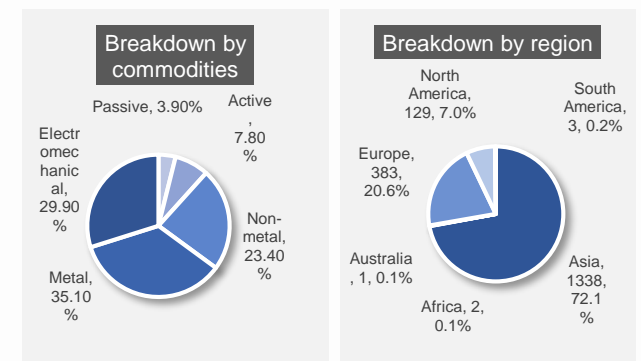


The company initiated an [agreement](#) between the purchasing department and suppliers named The Procurement and Supplier Covenants in 2001 and later changed to Integrity Undertaking to build a healthy procurement system and avoid the negative influence of human factors on normal business. The agreement is an acknowledgment by both parties to 100% of the our 1,856

active suppliers had educated and signed this agreement for common understanding to do business with integrity and without bribery or any unwarranted returns.



During the Delta Annual Partner Meeting dated 13 December 2019, the company covered the topic of anti-corruption to educate suppliers about our anti-corruption policies and stance against corruption. As well as inviting business partners to participate in symbolic expression in combating corruption together. This year the company seeks cooperation from suppliers not to send any gift/gratuity to company management, employees or their family member during New Year and other festival occasions.



In 2018, Delta has signed on declaration of intent in establishing Thailand's Private Sector Collective Action against Corruption (CAC) on 16 July 2018 and submitted Self-Evaluation Tool for Countering Bribery to the CAC Board on 12 December 2019 for certification. On 7 February 2020, the company has listed as a certified member of Thailand's Private Sector Collective Action Coalition Against Corruption.

The company has established the following communication channels to allow all employees and stakeholders to provide feedback or file complaints concerning this issue.

- Communication channel for Delta employees
 - (1) Head of the unit where the employee belongs to
 - (2) Email: HR.GRIEVANCE.SEA@deltaww.com
 - (3) Suggestion box
- Communication channel for other stakeholders
 - (1) Opinion Box (PO Box 50, Bangpoo, Samutprakarn 10280);
 - (2) Email: whistleblow@deltathailand.com

Depending on the relevance of the complaints, the Board's Secretary will gather and submit the complaints to the Anti-Corruption Committee, the Corporate Governance Committee or the Board. The details of the complaint will be kept confidential in order to avoid an infringement of privacy. More details on [Whistleblowing policy and practice guidelines](#) can be found on the company website www.deltathailand.com/en/about_anti-corruption

At the Board of Directors Meeting No. 1/2020 and Sustainable Development Committee meeting dated 13 February 2020, the company secretary informed the meeting that there were 1 confirmed incidents happened at our subsidiary in India in fiscal year 2019. An employees were dismissed or disciplined of in-kind giving for business relationship during New year festival. The case has investigated by the President of Delta Thailand through the company's cash reimbursement system. To mitigate repeat occurrence and violation of anti-trust and fair competition, the employee had filed warning letter. All managers at our subsidiary sites have been officially reminded to study and apply Delta headquarter Code of Conduct, Anti-corruption Policy, Purchasing Management Procedure and Approval Authority Instruction to maintain ethical relationship with their customers, consultants, suppliers and other related business partners in business to business manner. Meanwhile, Corporate Governance Committee has assigned to extend its coverage of on-line code of conduct and anti-corruption training and signatory ethical commitment to all employee at subsidiaries in Southeast Asia region.

However, the company **did not receive any complaints**, non-compliance with law and regulation in the social and economic area nor public legal case which brought against the company **for code of conduct, anti-corruption** and information and confidentiality fraud and abuse during the reporting period.





In this section you will find Delta's proactive-response to climate change, environment policy and management system, science-based performance on simplified life cycle measurement, CSR in supply chain, Delta's innovation and responsible manufacturing process

Operational Eco-efficiency



Eco-friendly operation



Ms. Aonthip Aorthong, Delta's Sustainable Development Executive, [participate TGO's Carbon Business Indicator Seminar](#)

Proactive action to Climate change once again occurs in Delta Thailand's stakeholder interests (both internal and external) and risk matrix in 2019. SMOG or pollution fog situation in Bangkok and surrounding areas outstandingly demonstrates the impact of climate change. It is broadly discussed that such negative impact resulting from the growth of business especially manufacturing sector.

According Delta Thailand's Risk management report, climate change had been in our focus since 2012. In 2019, at full score of 5, its likelihood and impact level was rising at 3 and 4 respectively. However, SMOG is the latest

climate change-related risk occurred at likelihood and impact level of 3 last year. With these 2 occurrences, raw material scarcity, energy intensity constraint, our employees and global citizen's health and safety will impact our operation.

Proactive Response to Climate Change

To ensure our eco-efficient operation reduce negative impact on climate change, Delta learn from our stakeholder requirement, global best practices and utilize possible technologies to illustrate its brand promise; Smarter. Greener. Together, in our daily operation to mitigate climate change impact.

Delta aligned with [ISO 26000](#), [ISO 14001](#), [ISO 50001](#), [ISO 14064](#) [Responsible Business Alliance code of conduct](#) and Carbon Disclosure Project, UNCG principle 7 and 8 guidelines to reduce overall environmental footprint of companies. The company proactively plan and periodically measures its environment-related performances to seek for improvement in every process. With smarter and greener business process, mutual benefits for Delta, its stakeholders and world's environment will be inclusively enable in long-term.

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://bit.ly/2K2g5EG> 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 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 2019, there is no non-complied issues accordingly to our certified recognized standards listed as following

- ISO 26000:2010... Guidance on social Responsibility
- 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/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 Standards of Electrostatic Discharge Control Program ANSI / ESD S20.20
- ISO 27001...International Standard of Information Security management
- TS16949...Automotive Industry Standard

Eco-friendly Design

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

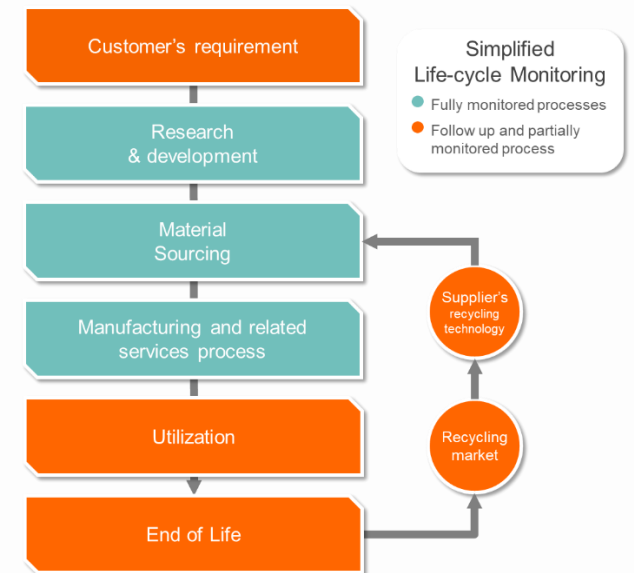
well-established universities to keep abreast of the latest technologies and in return provide our R&D expertise (from more than four countries) and training for the respective institutions in countries like Germany and Thailand. In addition, with a healthy balance sheet, DET is constantly looking out 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. Growth of green revenue and technology optimization to mitigate social and environmental impact are part of CEO's KPI to link with the executive compensation.

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.



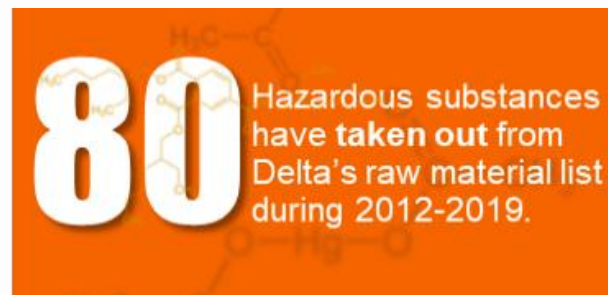
The Life Cycle Assessment (LCA) is a green design approach that systemically analyzes the environmental impact of a product from material extraction, manufacturing, shipping, product use, and disposal. According to guidance of ISO 14040 international standard divided LCA into several key processes including 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 by using the Simplified Life Cycle assessment (SLCA) methodology, we can accurately identify design or process areas for improvement.

Hazardous and Environment related substance reduction

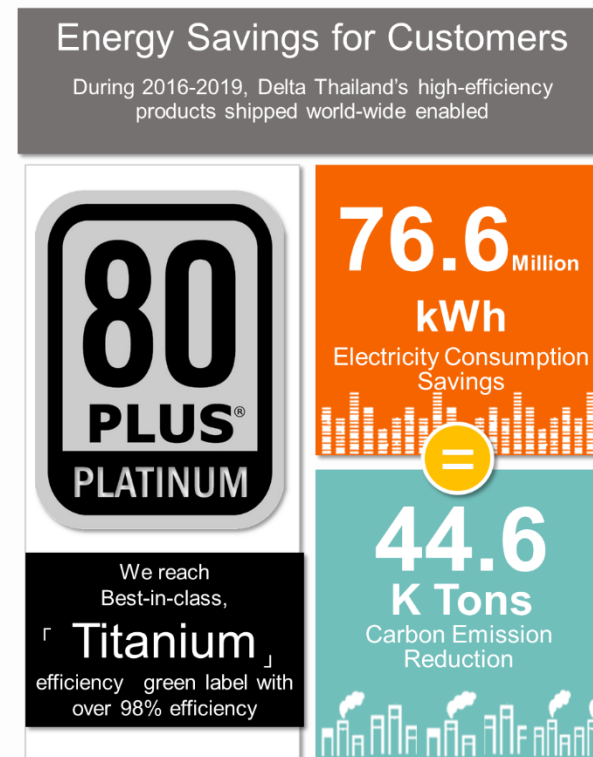
Delta has implemented the Green Product Management (GPM) IT system based on the QC 080000 Hazardous Substance Process Management System. Apart from inspecting materials testing reports from suppliers, Delta manages parts/components based on their environment-related substance risk level to ensure the 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.

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 [corporate-wide procedures- Management Standards for Environmental Related Substances \(Document No. 10000-0162\)](#) and ERS Management Procedure (Document No. 06-028). Up to 2019, 80 hazardous substances endanger our employee, users and environment had taken out from Delta's book of material.



The Management Standards for ERS (Document No. 10000-0162) is an exhaustive list of internationally banned and controlled substances according to recognized standards. The standards include 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.

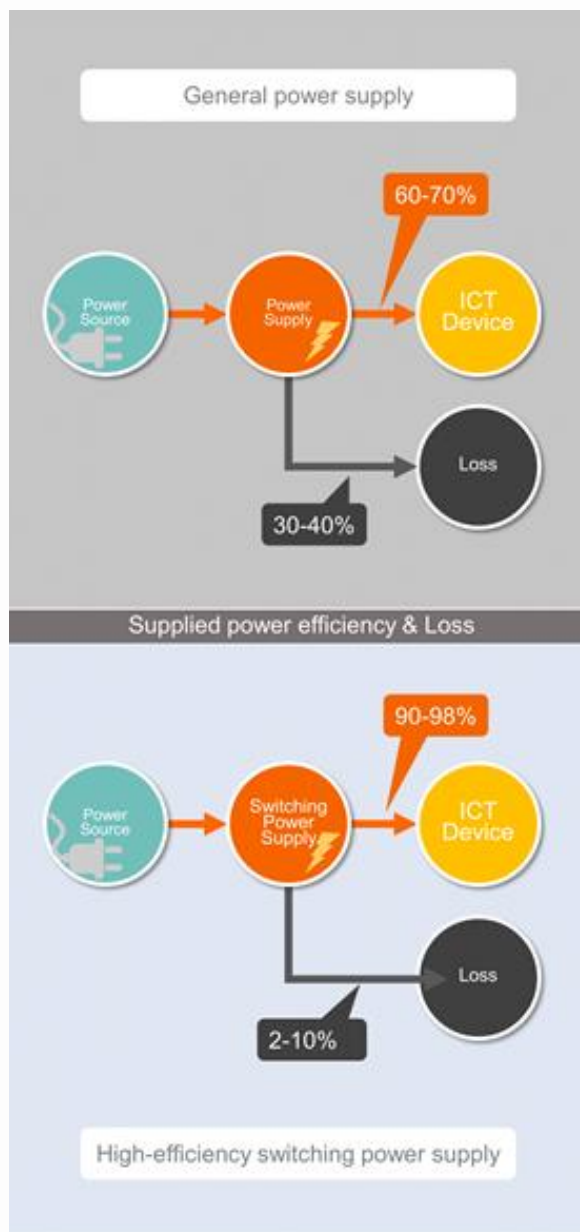
The ERS Management Procedure elaborates the many measures that must be taken to control the related substances starting from product design phase including subsequent design change and then vendor sourcing, vendor audits, incoming parts inspection, in-process check and complete manufacturing control 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.

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. Delta targets to reduce 2% of product carbon footprint of the sampled products every 3 years. 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.

Product efficiency enhancement

For ICT devices and solutions, Energy efficiency is the frequently asked query raised by our customers. **It is not only the electricity and excessed heat management cost resulting from ICT solutions' 7/24 operating hours, but also the transmission stability when the source of electricity power switched to renewable sources** resulting from their environmental awareness. High efficiency power supplies that help to stabilize power distribution and generating power from renewable sources have become priorities for customers in ICT industry.

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. 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.

Find Delta Group's leading-efficiency products at plugloadsolutions.com



Eco-labels and Eco-declarations

Australia

We help our global customers to make informed purchasing choices.

America

Europe

Asia

POWER SUPPLY
开关电源 交换式电源供应器

P/N 料号 料號 : R0501-A0030-11
DATE 日期 : 25082015

INPUT 输入 輸入
AC100-240V 7.5A MAX. 47-63Hz
OUTPUT 输出 輸出
+5VSB --- 1.0A MAX.
+5V --- 40.0A MAX.
+12V --- 33.0A MAX.

THE TOTAL COMBINED OUTPUT POWER OF THE
+5V, +12V AND +5VSB SHOULD NOT EXCEED 600W.
+5V 和 +12V 和 +5VSB 的组合输出不能超过 600W
+5V 和 +12V 和 +5VSB 的组合输出不能超过 600W









台达电子工业股份有限公司
DELTA ELECTRONICS
MODEL 型号 型號 : TDPS-600FB A REV 版本 : 08F
S/N 序号 : ABTT15352248
MADE IN THAILAND 生产地: 泰国 / 生產國: 泰國
製造商: 台达电子工业股份有限公司 仅适用于海拔 2000m 以下地区安全使用

1. Specification and clear product information is basically in English and Chinese which are used by over 46% of global citizen. (Ref: <https://bit.ly/2vPPQJg>)
2. Product origins.
3. Information of health, safety and environmental handling according to requirement of customers in various regions.
4. Level of product efficiency helping our customer to create positive impact from less energy consumption
5. Disposal instruction of the product
6. Barcode display for data traceability of part/component source.
7. Safe use of the product.
8. Laboratory standard assurance.

Consequently from Delta Group participation in COP21 and various occurrences resulting from climate change; product Safety, health and environmental handling instruction on electronics products is in global regulators and customers focus. According to the company procedure of Product Regulatory Mark Application and Control Procedure ([document no. 06-025](#)), 100% Delta products declare related compliances with health, safety and environmental regulations to encourage our worldwide customers to make informed purchasing choice. Content, that particularly might produce an environmental or social impact, safe use of the product and proper disposal; for example, had significantly posted onto our products.

In 2010, Delta launched the “**EnergE**” program for rectifiers which offers a energy savings calculator on the product webpage to help customers understand the cost and energy conservation benefits they can achieve by using Delta rectifiers under different scenarios based on the type of power source, number of sites, average load per site and energy cost information. In addition, we added “EnergE” labels to our Rectifier product catalogs and products with energy efficiency of over 95%, 96%, and 97% to allow easy identification by customers.

Delta support informed purchasing choice by applying Ecolabel onto its product. In 2019, Delta Thailand had sampling checked its top ten revenue custom design products which cover 26% of Thailand’s revenue. The sampling check is to ensure implementation of environmental declaration on its products. Finally, the result from the test are as following:

Type	Standard /principle references	Features	Key samples	% to sampled products
Type I Ecolabels	ISO 14024	<ul style="list-style-type: none"> pass/fail award system third party grants license to use label (typically a logo) - voluntary multi-issue, based on product's life cycle impacts criteria set and product assessed by third party 	<ul style="list-style-type: none"> 80 Plus family Bureau of Indian Standards (BIS) The Eurasian Conformity mark 	—
Type II Self-declared environment	ISO 14021	<ul style="list-style-type: none"> text statement and/or logo improvements should be quantified voluntary avoid meaningless statements eg 'environmentally friendly', 'sustainable' generally single issue but may be multi-issue; must be significant according to ISO standard self-declared, no third party involvement 	<ul style="list-style-type: none"> EnergE 	9.6%
Type III Environment declarations	ISO 14025	<ul style="list-style-type: none"> quantified information may be presented in variety of forms eg text, graphs, pictorals. multi-issue, based on Life Cycle study Generally B2B, or used in public procurement self-declared but must be peer reviewed according to ISO technical report 	      	RoHS II family WEE EU Directive 90.4%

Up to 2019 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. During the reporting period, 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.

Reference:

- UNOPS. (2009))A GUIDE TO ENVIRONMENTAL LABELS - for Procurement Practitioners of the United Nations System. Retrieved May 02, 2019. From https://www.unops.org/Areas/Public/Downloads/Env_Labels_Guide.pdf Charles Allison & Anthea Carter .
- OECD. (May 2016). **Environmental labelling and information schemes**. Retrieved May 23, 2019, from <https://www.oecd.org/env/policy-perspectives-environmental-labelling-and-information-schemes.pdf>
- Lanchakorn Pathumrat, PhD. Thailand Environment Institute . (July 7,2013). **Green Products and Eco labels**. Retrieved May 23, 2019, from https://www.ditp.go.th/contents_attach/77079/77079.PDF
- Big room Inc.(NA) **All ecolabels on electronics**. Retrieved May 23, 2019, from <http://www.ecolabelindex.com/ecolabels/?st=category.electronics>

Keep introduce innovative solutions

In 2019, we maintain our R&D investments at 5% of consolidated revenue with specific focus on our fast growing businesses for electro-mobility, networking, datacenters and industrial power. Major extensions of the product lines and integrated solutions were achieved as well as continued improvement of our product's key features efficiency, power density and digital intelligence. Additionally, Delta R&D has increased the application range and customer base respectively of its power technology products like industrial wireless charging, combined charge units for the electro-mobility and artificial intelligence.

The healthy view of the markets, their customers and their demands combined together with the R&D manpower's know-how and strengths is the door to Delta's competitiveness and leadership in green environment and efficient energy saving power devices and solutions.



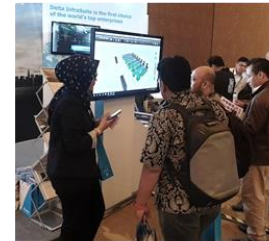
Delta joined an EV education project to raise awareness of EV charging solutions and help boost EV adoption in Thailand.
Bangkok, January 21, 2019

Delta is supporting the project, organized by a global EV leader, to highlight the benefits of the Delta AC Mini Plus EV Charger for home charging and outline quick DC charging options in the country.



Delta EV Charging Supports EV Test Drive at Bangkok International Motor Show 2019.
Bangkok, March 27 - April 7, 2019

Delta's 25kW DC Wallbox EV Charger was used to fast charge the international best-selling EV of a global manufacturer at the test drive zone in IMPACT Exhibition Center.



Delta Launches Secure and Sustainable Data Center Infrastructure Solutions at DCD Jakarta 2019
Jakarta, Indonesia, June 18, 2019

Delta Electronics (Thailand) PCL subsidiary Delta Indonesia unveiled its latest Cast Resin Busway System in its Data Center Infrastructure Management (DCIM) solution showcase at the 7th DCD Jakarta 2019

Delta Joins Synnex Alliance Roadshow 2019 to Showcase Data Center and UPS Solutions
Sydney, Brisbane, Melbourne, Perth, Australia, February 27 - March 27, 2019

Delta's exhibited its mission critical infrastructure solutions including Micro Data Center Solution, UPS and Power Distribution Unit (PDU).



Delta Unveils Latest E-Mobility and Green Solutions at ASEAN Sustainable Energy Week 2019.
Bangkok, Thailand, June 5-8, 2019

Delta Electronics (Thailand) PCL showcased its portfolio of solar inverters (PVI) and Electric Vehicle (EV) charging products and solutions at the ASEAN Sustainable Energy Week 2019



Delta Reinforces Open Community Commitment with Launch of AGCVA48S and AGCX422S Networking Switches at OCP Regional Summit 2019
AMSTERDAM, 26 September, 2019.

Delta, a global leader in power and thermal solutions, as well as a provider of open networking equipment, will present two new BNG platforms for CSP's mission-critical applications in access networks, at the OCP Regional Summit 2019



Delta Demonstrates IoT-based Smart Green Solutions to Enable Sustainable Cities at Hannover Messe 2019
Germany, April 1-5, 2019

Delta's exhibited its mission critical infrastructure solutions including Micro Data Center Solution, UPS and Power Distribution Unit (PDU).



Kuala Lumpur, Malaysia, May 15-18, 2019
Kuala Lumpur, Malaysia, May 15-18, 2019

Delta Showcases the Latest Solutions in Industrial, Power and Building Automation at AUTOMEX Malaysia 2019



Be the first who know our move!

Subscribe to receive emails about Delta Electronics (Thailand) Products and events.

<https://www.deltathailand.com/en/calendar>

Retain Innovation pipeline

Regarding more frequent technology break through and changing aspect of customer requirement changeover, innovation pipeline is vital for our long-term growth. With over 1,400 patents and countless knowhow, Delta frequently disseminate its cutting edged technologies to develop ICT and related industries infrastructure. In 2019, we expand the collaborative networks in Southeast Asia region. Among over hundred site visit and collaborative activities, followings are some key events happened in 2019.



Delta Automation Academy 2019 | for 120 students from top Thai universities at King Mongkut's University of Technology Thonburi. The Delta Automation Academy offers advanced industrial automation training to students at the Delta Industrial Automation Labs at Chulalongkorn University, Kasetsart University, King Mongkut's Institute of Technology Ladkrabang (KMITL) and King Mongkut's University of Technology campuses in North Bangkok (KMUTNB) and in Thonburi (KMUTT).

Delta Electronics and JTC Corporation Sign MOU for Smart Manufacturing Development and Training in Singapore | Delta Electronics International (Singapore) and JTC Corporation (JTC) today signed an MOU for collaboration as strategic partners to drive adoption of Industry 4.0 technology.



Delta and DIP Join Hands to Support Thai SMEs Leverage Smart Manufacturing for the Industry 4.0 Era

Delta Electronics (Thailand) PCL. and the Department of Industrial Promotion (DIP) signed a memorandum of agreement to support the DIP Big Brother project which enhances Thai SME competitiveness through technology.



The project aims to leverage the latest technology and the Industrial Internet of Things (IIoT) to uplift local manufacturers and guarantee sustainable development.

Delta Signs MOU With Burapha University for Industrial Automation Training | Delta Electronics (Thailand) PCL. signed an MOU with Burapha University for partnership and collaboration to develop the Faculty of Engineering student's skills in robotics, automation systems, IoT, electronics and embedded systems at the Delta Industrial Automation Lab. Students at Burapha University's Faculty of Engineering can train with 12 advanced automation training kits donated by Delta at the new Delta Industrial Automation Lab.



Besides the equipment, Delta's Industrial Automation experts conducted a five-day training course for the faculty professors in: Programmable Logic Controllers (PLC), Human Machine Interfaces (HMI), Variable Frequency Drive (VDF), servo motors/drives and system integration.

Delta and KMUTT Open EV Charging Station at KX Building | Delta Electronics (Thailand) PCL. attended an EV charging station opening at Knowledge Exchange for Innovation Center (KX) in Bangkok with the Delta DC Wallbox EV Charger donated to the King Mongkut's University of Technology Thonburi (KMUTT).



The latest EV charging station will add to Delta's country-wide network supporting EV drivers across Thailand.



Delta Thailand's Southeast Asia and India Teams Compete at the 6th Delta Advance Automation Contest (Delta Cup)

From total 79 participated team, the teams from the three countries vied for top prizes with elite engineering student teams from Taiwan and China. Delta Thailand's business associate, Delta Electronics Inc. organized the 5th Delta Cup under the event theme-Seeking Smart Manufacturing Talents.

Since 2016, Delta Thailand sponsored prize-winning teams from Thailand's Chulalongkorn University, Kasetsart University, King Mongkut's Institute of Technology Ladkrabang (KMUTL), King Mongkut's University of Technology North Bangkok (KMUTNB) and King Mongkut's University of Technology Thonburi (KMUTT). Delta's offers training and sponsorship in the Delta Automation Academy, Delta Automation Labs and Delta Cup as part of its commitment to develop society and support Thailand's competitiveness in the Industry 4.0 Era. These academic projects also aim to provide work experience to the students who are the industry's future innovators after their graduation. After on-field experience on application, equipment and knowledge adoption, these new generation engineers will be quality blue pillars to advance innovation infrastructure of ICT industry in long-term.

With their creative use of Delta automation products for industrial applications, Thai teams participating at the Delta Cup received the following awards from the judging committee comprised of industry, government and academic experts.

Gold prize	Silver prize	Bronze prize
<ul style="list-style-type: none"> Team The Neat Fleet from R.V. College of Engineering : Solar Panel Cleaning Robot project. Team Easy Maintenance from Ho Chi Minh City University of Technology, Vietnam : Power Cable Inspector (PI) project. 	<ul style="list-style-type: none"> Team Woodpecker from King Mongkut's University of Technology North Bangkok : Flood Management by IIoT project. Team KU Non-Stop from Kasetsart University : Smart Real-Time Supply Chain project Team B-IoTians from Bannari Amman Institute of Technology : IoT Based Smart Factory for Additive Manufacturing System (ISFAMS) with Visual Inspection using Machine Learning Approach project. Team Neurons from Vellore Institute of Technology, India : A Friendly Chair for Your Care project. 	<ul style="list-style-type: none"> Team The Presenters from King Mongkut's Institute of Technology Ladkrabang : Industrial AR Demo Kit project. Team IOTSP from Industrial University of Ho Chi Minh City, Vietnam : Smart Parking System project

Responsible supply chain



Mr. Vichai Saksuriya, Delta Operation Vice President, meet 100 suppliers at Delta Annual Partner Meeting 2019

Well-managed supply chain does not only help Delta but also our customers in term of competitive quality, technology, delivery, cost, human rights and social responsibility.

Climate and demography change lead to raw material scarcity and high competition among global supply chain. Delta views suppliers as long-term partners as described in our Delta [Supplier Social Responsibility Management Measure](#) which is based on the [RBA code of conduct](#) guidelines. 100% New suppliers that were screened using environmental criteria 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. Thousands of suppliers all over the world are Delta business partners and support our promotion of a sustainable business.

In 2001, Delta formed an [agreement](#) between its purchasing department and approximate 1,800 active

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 2019, the supplier's quality and ESG performance, circular economy, Delta's responsible business directions, emerging risks, technology and global trend updated and collaborative opportunities among supply chain had communicated to our global automotive suppliers.

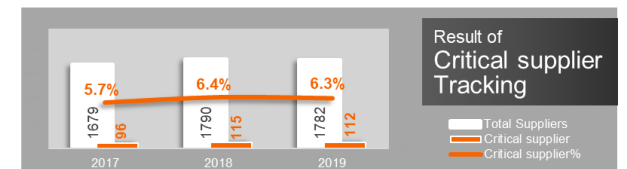
Strategy for responsible chain

Delta undertake its annual procurement spending analysis of its 100% supply chain to secure its productivity performance, cost management and seek for the right decision among global fluctuated situations. The company categorized its production suppliers into three types: direct materials (production-related), indirect materials (non-production-related) and labor.

In 2019, the company performed sources diversity while engage new automotive and automation suppliers to be ready for higher demand of new business group e.g. automation and automotive business. However, compare with our historic purchase expenditure, there was no significant change in Delta's direct material's supply chain.

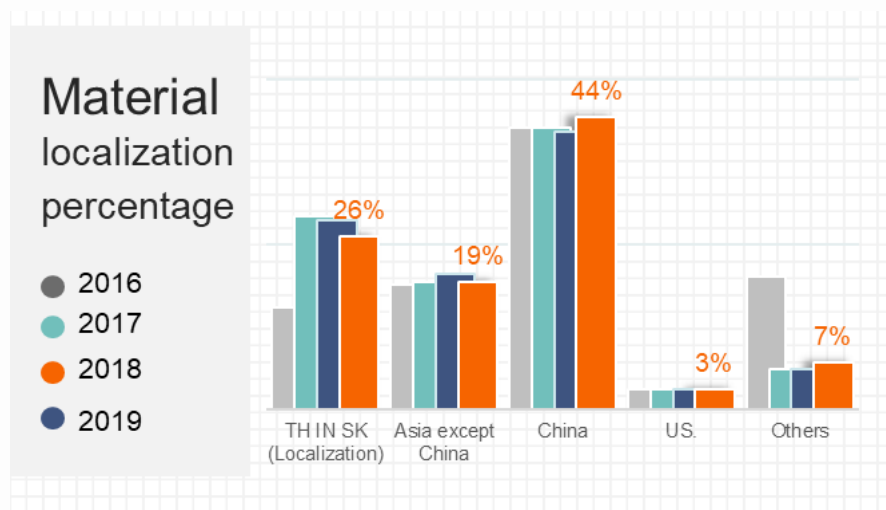
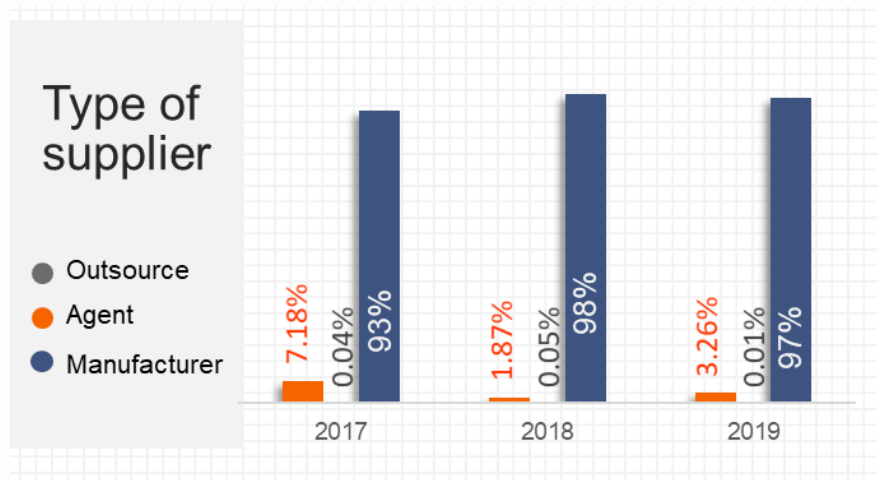
The right focus

1 High-volume suppliers or similar	2 Critical component suppliers or similar	3 Non-substitutable suppliers or similar
Major source prioritized by spent value or purchasing amount.	special item providers that meet either of following conditions <ol style="list-style-type: none"> 1. raw material which co-design with suppliers 2. suppliers for molds of case or PCB 3. single-source , suppliers for molds of case 4. single-source suppliers 	Newly introduced suppliers. It takes time for new suppliers to be familiar with Delta's procedure and requirements. These suppliers are listed as critical suppliers for more attention e.g. Automotive suppliers.



The first step to understand supply chain risks and dependencies from a general, economic point of view is to aware potential areas of possible risky occurrences.

Once a company has identified its critical suppliers, it can focus its supply chain monitoring and risk management efforts on those suppliers with the potential to cause problems. When ESG-related risk consider, suppliers that meet any of the three criteria are considered as "critical suppliers."



Direct deal preferred

For effective communication, ESG-related issues control, Delta major raw material and component had supplied by direct manufacturers rather than agents and outsourced suppliers. For direct control our supplier's ESG responsibility, Delta aims to have 100%

tier-1 supplier in 2023. In 2019, Raw material and component direct suppliers and manufacturer counted as our tier-1 suppliers slightly decrease from 98% in 2018 to 97%.

Spending Analysis

To enhance ESG performance of critical supplier type 1 (high purchase volume) while closely monitoring critical supplier type 2 and type 3 competence, Delta continues to adopt purchasing localization is highly required. Localization is Delta practical way to establish close links with local partners, improve social and economic development in the community and reduce the environmental footprint of our operation. To mitigate supply chain hiccup, Delta target to have one third (35%) of total suppliers localized by 2023. In 2019, 29% of direct materials had purchased locally for our major production sites in Thailand India and Slovakia. This material localization ratio slightly increase from 26.8% in 2018.

Regarding these 3 major procurement practices, either risk as nature of business process or emerging risk in supply chain can be effectively mitigated. With smooth and collaborative supply chain, agile action to fulfill Delta requirement and customer satisfaction has stably retained.

Responsible supply chain enhancement

"How to have long-term business with reasonable margin and smooth supply chain among natural resources constraint, changed-over technology and high competition market?" was the question recurrently asked by our suppliers during supplier engagement meetings with accounted buyers. RBA code of conduct became our world-class customers' expectation. According to Delta stakeholder engagement questionnaires and frequent customer engagement questionnaire, human right issue especially forced labor in ICT industry was still in broader society's interest.

To this concern, Delta encourage our suppliers to provide their collaboration to enhance Green supply chain. This not only lowers operational costs for us and our suppliers but also increases the competitiveness of the entire supply chain. Finally, the company realized our suppliers' collaborative actions as following



Delta Thailand performed on-site audit to its overseas suppliers to ensure and advocate their quality and ESG-related performance

Since 2014 Delta promotes RBA (EICC) Verification Consultation to lower ESG risks in our supply chain and improve competitiveness. Delta Thailand 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 related law and regulation compliance, human rights, labor rights, health and safety, environmental issues and Ethics and Management Systems accordingly to our [standard checklist](#). We found room for improvement for most of our suppliers in Health and Safety aspects of the RBA management system. Delta plan to implement 100% critical supplier RBA audit in 2023.

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.

In 2019, Delta group has established [“Supplier Registration Platform”](#) to allow global suppliers to have precaution about Delta’s supply chain responsibility. In this platform, a supplier can pre-assess his/her organization performance to Delta’s requirements. Business overview, qualification process, sample of agreements, CSR direction and related business terms are available on the platform.

According to our [Supplier Management Procedure \(doc no 06-009\)](#), RBA audit score will be used for supplier classification. The classification will affect each supplier volume of order share, reporting process as well as Delta’s decision qualification process. At 70% point score threshold, our 2019 audit (include paper-based audit) included 229 suppliers. In 2019, Delta RBA audit team has closed 21 risky areas at our supplier sites. Majorly, these findings are the suppliers risk to environmental, occupational health and safety and labor law violation. However, these suppliers can perform corrective action accordingly to Delta requirement (immediate action after audit for minor findings and 90 days for major findings.). Finally, accumulated 287 suppliers (16% of total active suppliers) audited who all passed with an average score of 89 points, mean 84 points and highest score 96.71 points. None of our supplier has suspended or disqualified last year.

Risk in supply chain

Delta uses tools such as [OECD Due Diligence Guidance for Mineral](#) and related 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.

Modern Slavery labor and human trafficking

According to the U.K. Modern Slavery Act of 2015 and Thailand’s Emergency Decree Amending the Anti-human Trafficking Act, B.E. 2551, B.E. 2562, (the “Act”), Delta Electronics Thailand and its subsidiaries (“Delta”) has performed essential due diligence to prevent modern slavery and human trafficking in our business and supply chain. Though all suppliers are requested to sign an RBA commitment statement, we keep tracking our supply chain as preventive action. In 2019, we surveyed a total of 229 Tier 1 and 39 Tier 2 suppliers through an ESG questionnaire survey to identify those with a high risk for human rights issues in the supply chain. We identified a total of 25 Tier 1 and 7 critical non-Tier1 high risk suppliers, for a high risk rate of 10.9% and 17.9% respectively.

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% signatory agreement implementation of all commodities include Electro mechanical, Non-metal and Metal in 2023.

Since 2010, Delta implements a [Conflict Mineral Policy](#) that bans the use of Tungsten, Tantalum, Tin, Gold (3TG) and cobalt mined from human right harassment countries accordingly to “Dodd-Frank Wall Street Reform and Consumer Protection Act”. The company’s suppliers had request our power supply products suppliers to declare the origin of out a “Metal Origin Survey Form” and to sign a “[Responsible Minerals Initiatives \(RMI\) Agreement](#)”. 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 2019, 98 % of our major material suppliers have signed the “[Responsible Minerals Initiatives \(RMI\) Agreement](#)”. It was ensured that 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.

Though EV battery and [energy storage system](#) is significant to our green growth, Delta Thailand and its subsidiaries in India and Slovakia has no production of any type of the mentioned batteries which cobalt is required. All the battery has source from our [associated company' in Taiwan with Japanese technologies](#) where major minerals like cobalt and copper has sourced from standard suppliers China. These suppliers have committed to [our associated company's Conflict mineral policy](#) as part of ESG screening of new supplier agreement. While Delta and its business partner keep investment in research and development substitutional mineral, the parties has [develop](#) the battery's efficiency, containers and product variations for longer lifetime to optimize the consumption of natural resources.

Environment related risk

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](#)).

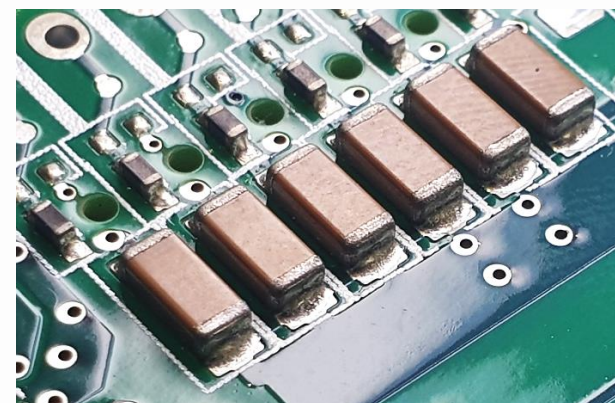
The company also leverages the GPM system as a shared platform of environmental information in the supply chain. Delta relays the most recent international environmental requirements, such as the latest controlled substances of EU’s RoHS 2.0 and REACH SVHC, to all supplier partners on the platform.

Material availability, the subsequence of climate change

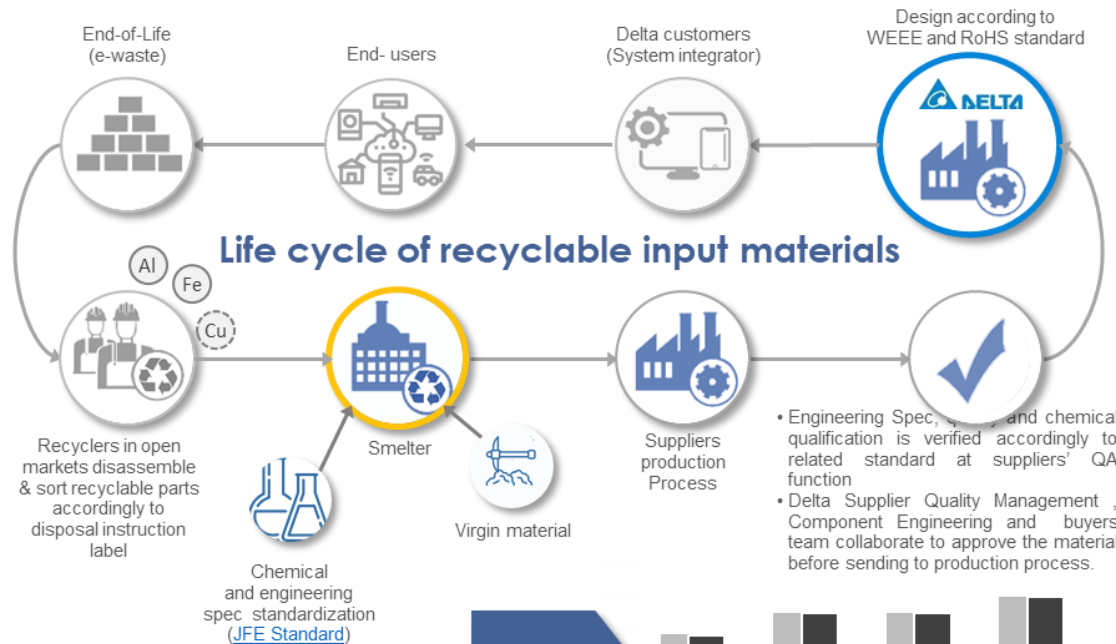
Global Multi-layer Ceramic Capacitor (MLCC) Shortage has been emerged in electronics and related industries. MLCC’s function in electronic devices is to temporarily charges and discharges electricity. It regulates the current's flow in a circuit and prevent electromagnetic interference between components. Raw materials

consumed in the production of mass-produced surface mount passive components are usually made from transition metals, post-transition metals and some rare earth element.

Climate change, and rapid rising demand of technological products that affect the limited availability of these element and oil tighten the capacity MLCC manufacturers. In addition, ramp-up demand of MLCC in automotive and ITC industry caused high completion with big players in technology market to get sufficient supply for production.



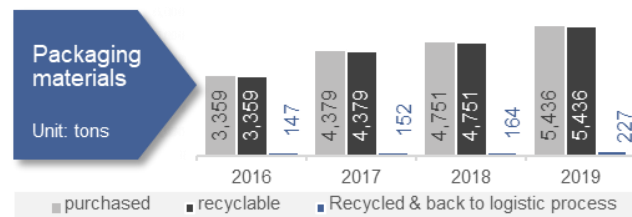
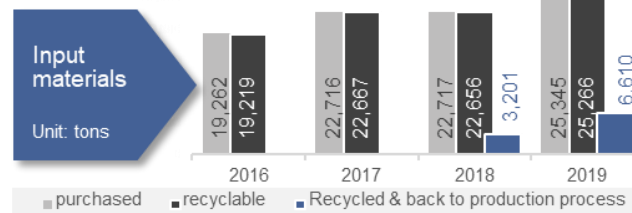
In addition to plan for longer lead-time, close monitoring, seek for alternative source and more frequent supplier engagement, our Component Engineering team has assigned to downsize MLCC component to optimize the natural resources consumption. Simultaneously, several conversation regarding substitution material with our supplier has opened to urge related parties collaboration.



26% of total purchased material

produced with certain ratio of recycled materials at our suppliers' manufacturing sites.

- Calculated from supplier self-declared percentage of recycle material used at supplier's next tier suppliers.
- In 2019, Delta realized 2 types of metal material which made of a certain percentage of recycled raw material. We plan to verify the weight of recycled material of another type of metal in 2021.



- Total packaging material include filling material for goods shipment.
- Total weight of recycle packaging material calculated from the percentage of recycled tissue/ fiber used to produce the packaging.

In spite of takeback program for close-loop recycling, Delta reduce impact to natural resources through close loop recycling. Since Delta is 100% export company, take back program will double total variable cost (eg. people cost, shipment cost, customs process cost) and GHG scope 3 for both Delta itself and our customers. To ensure 80% recyclable part & component as WEEE requirement will be utilize, since 2018, Delta has conducted circular economy possibility survey to seek for further possibility to encourage our supplier to use recycled input material in their process.

From the supplier self-declare process and solder dross recycling project result reported to Operation Vice President, Delta realized that 6,610 tons of recyclable material had used by our suppliers in their production process. This 6,610 tons account for 26% of our purchased recyclable materials in 2019 without any impact on material cost, quality and technology investment cost. This volume of recycled input material was used as direct material for conversion to our product.

Regarding packaging material, 100% of our wooden pallet made of 4% of our packaging material had produced from recycled compositions. These packages of 100% of our products shipped world-wide last year. From this outstanding result, it is discussed among Sustainable development, Component engineering and purchasing function to seek for further possibility to add allowed percentage of recycled material in to supplier's certificate of conformance (COC).

Since 2015, Delta cooperates with major processing factories to reuse packaging materials such as expanded polyethylene (EPE-used as filling packaging) and paper etc. Delta recycles up to 71% of the packaging materials for mechanical products and 30% of packaging for non-metal product

Green Logistics

Major global distribution centers cooperate with logistics providers to implement transportation cost optimization, consolidated delivery, full-truck load, packaging design, container packaging and selection of optimal delivery routes. Since Delta attained [ISO/IEC 27000 Information Security Management System \(ISMS\)](#), we encourage our suppliers to utilize e-invoice and e-document as much as possible to save natural resource and mitigate greenhouse gas from distance transportation.

Introduction of energy saving and carbon reduction products and solutions

Delta cooperated with five suppliers to introduce energy saving products and solutions. After Delta implemented lobby, solar roof carpark, showroom renovation and Delremo (real-time solar energy monitoring) to draw more attention of suppliers who visit our site.

Boost up innovation infrastructure with SMEs' innovation

Delta Electronics (Thailand) PCL. and the Department of Industrial Promotion (DIP) presented 2,900,000 Baht to 27 winning teams and an additional 1,000,000 Baht seed fund to five entrepreneur teams of the Delta Angel Fund for Startup 2019. Mr. Kobchai Sungsitthisawad, Department of Industrial Promotion (DIP) Director-General, and Mr. Anusorn Muttaraid, Delta Executive Director of Electronics, presided over the award ceremony held at Century Park Hotel Bangkok.



This year, startup companies presented their projects related to the themes Industrial Automation or Energy and Water Management Technology. Of the 108 teams who applied, 47 teams passed to take part in special training and pitch their proposals to a judging panel. Delta organized the entire process including a Business Camp, Design Sprint, Pitching training and On-site Study for 12 days to gain experience in presenting their original business plans and startup ideas to the fund managers. The teams then showcased their planning and training results at Delta's business concept pitching session.

Since 2016, Delta has worked with the DIP at the Ministry of Industry to foster entrepreneur and startup talent in Thailand. Delta Angel Fund for Startup aims to encourage young Thai entrepreneurs to establish business models that leverage advanced technology and develop useful products for commercial use.

Over the past four years, 650 teams have passed the application stage to enter the Delta Angel Fund for Startup. Among them, 174 teams have won funds from Delta for their startup projects and 122 teams have created outstanding economic value of over 450 million Baht. All competing teams must present their proposals to a committee of Delta managers, DIP experts and academics. The committee will then award funds to the most potential proposals based on technical knowledge, entrepreneurial flair, sustainable vision and competitive spirit.

Delta commits to nurturing local talent and empowering Thai youth to develop the country's industry. Delta's Angel Fund for Startup is part of Delta's contribution to its communities and stakeholders and is in line with the company's brand promise "Smarter. Greener. Together."

A greener process

According to Thailand's pollution situation re-occurrence in 2019, business sector was broadly reminded to reduce environmental negative impact and climate change risks is in global focus. Delta's founding mission is "to provide innovative, clean and energy efficient solutions for a better tomorrow". With no significant change in operating locations and supply chain, the company carried out its eco-efficient operation with continuous effort in reducing a business' environmental impact. Our group-wide [environmental policy publicly](#) published on our website is showing our sincere effort and partnership with global citizen to make a smarter and greener future.

2019 Major contributors to Delta's consolidated revenue



98% of Delta consolidated revenue has contributed by our major sites in 3 countries

Source of Energy



Type of grid operator



Green building certification



Slovakia



Dubnica nad Vahom

Production area : 10,500 sq.m
No. of workers : 560
Production line : 22 lines
Actual production : 75% of full capacity



India



Rudrapur Plant

Sector - 5, SIDCUL Industrial Area

Production area : 13,880 sq.m
No. of operators : 1,183
Production line : 15 line
Actual production : 85% of full capacity



Others

- Subsidiaries of Delta Thailand's where their business nature are sales & service offices and research 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,.
- Delta major operation sites are in well-management Industrial parks.
- These major sites had certified ISO 50001, ISO 14001, ISO 14064-1 and OHSAS18001
- In 2019, though 3 new factories had established in Thailand, Myanmar and India (Hosur), the total revenue of these 3 plants were less than 1% of consolidated revenue. Hence, these 3 factories were not material to the company's ESG performance in the reporting period.

Thailand



No. of workers : 11,297

Plant 1

Bangpoo Industrial Estate

Production area : 16,710 sq.m
Production line : 14 lines
Actual production : 80% of full capacity

Plant 5 (HQ)

Bangpoo Industrial Estate

Production area : 41,700 sq.m
Production line : 65 lines
Actual production : 85% of full capacity

Plant 6:

Wellgrow Industrial Estate

Production area : 14,100 sq.m
Production line : 90 lines
Actual production : 80% of full capacity



29.88

2019 GHG Intensity (scope1+2) tons CO₂e :
1 MUSD production amount.



GHG Scope 1: tons CO₂e

897



GHG Scope 2: tons CO₂e

40,126



GHG Scope 3: tons CO₂e

56,310

Electricity intensity
Reduction from
base year 2014

13%

8,702



Solar energy internal use: MWh

18,395

Reduced energy consumption from
energy saving projects: Gigajoule

71,667



Total electricity purchase: MWh

The company extended GHG inventory scope to the full coverage of manufacturing sites (Thailand/India/Slovakia) since 2017. The cases show here is covered 100% of manufacturing sites

Plan with awareness

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.

In 2009, Delta 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 - 2019. The [GHG Inventory](#) has disclosed on Delta Thailand's website to show our GHG performance for Thailand's sites. In addition, 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.

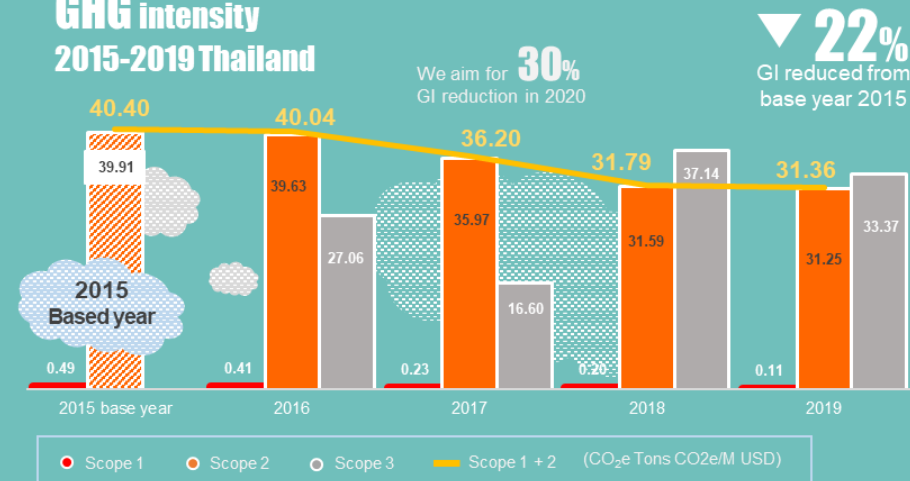
Delta had included GHG scope 3 to its report in 2016 to expand its responsibility throughout its supply chain and fully covered its subsidiaries India and Slovakia in 2017-2019 which the GHG inventory reports for each location are issued retrospectively. Thailand's sites, the direct emissions (Scope 1) of 2019 were 133.72 tons CO₂e, indirect emissions (Scope 2) were 37,651.01 tons CO₂e and other indirect emissions (Scope 3) were 40,207.66 tons CO₂e separately.

For the full coverage of manufacturing sites (Thailand/India/Slovakia), the direct emissions (Scope 1) of 2019 were 897.08 tons CO₂e, indirect emissions (Scope 2) were 40,126.24 tons CO₂e and other indirect emissions (Scope 3) were 56,309.65 tons CO₂e.

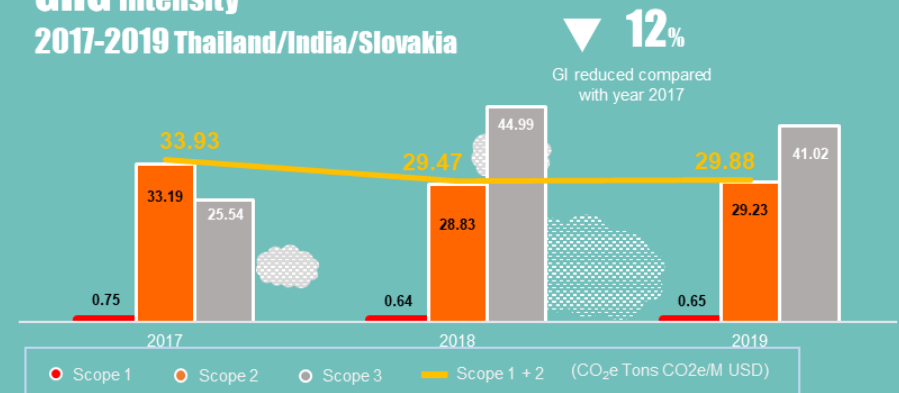
Delta's emissions disclosure had validated by the independent assurer to ensure data accuracy and transparency. When our goal in 2020 is to reduce 30% GHG intensity per 1 million USD production amount, latest statistics shows that the GHG intensity (Thailand's sites) of 2019 (scope1+2) was 31.36 tons CO₂e/ M USD, a decrease of 22% from base year 2015. In additional, the GHG intensity of 2019 (scope1+2) was 29.88 tons CO₂e/ M USD, a decrease of 12% from 2017 (compared with the same database of full coverage in 2017).

Standards, methodologies, assumptions, and/or calculation tools used, source of the conversion factors used, and third party assurance for all reported greenhouse gas inventory is available at <https://bit.ly/2JuH2Qh>

GHG intensity 2015-2019 Thailand



GHG intensity 2017-2019 Thailand/India/Slovakia



To mitigate climate change risk, Delta proactively start collecting greenhouse gas inventory statistics accordingly to ISO 10464-1 standard since 2010. After Delta group's participation in COP21 2015, the company extended its responsibility coverage to GHG scope 3 and expand to the full coverage of manufacturing sites (Thailand/India/Slovakia) since 2016 and 2017, respectively.

- Greenhouse Gas Emissions Rate follows Global Warming Potential from IPPC GWP2007
- Calculation included CO₂, CH₄, N₂O, HFCs, PFCs, SF₆
- Suggestion or query det.sd@deltathailand.com

2019 Highlights

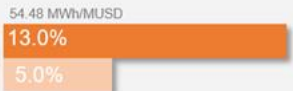
2019 Delta Energy Reduction projects performance



2020

30% Target of energy intensity reduction

2019



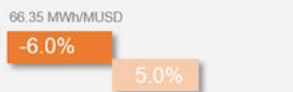
2018



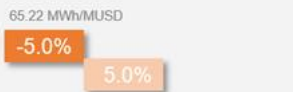
2017



2016



2015



2014



Since 2014 our long-term target had set and collective efforts had closely monitored.



51.2%

Smart Energy Recycling System (SERS)

Adoption of Smart Energy recycle System (SERS) in the production process. The usability testing for Delta's products caused energy loss and high temperature in the working area that affected the air conditioning system. The SERS System installation saves 80% of electricity from usability test loads.

Reduced energy consumption 9,410,688 MJ per year

Monetary saving 401,962.19 USD per year

GHG reduction 1,564,788.29 kgCO₂e per year

Measurement Method: Using power meter for measurement before and after improvement.
Energy saving = $A \cdot \Delta kW \cdot (h/y)$
A = set of equipment
kW = Testing power usage (reduce up to 80%)
h/y = hour per year



6.7%

Installation Cooling Spot Air Condition

Adoption of Cooling Spot Air Condition for reducing AHU Energy Consumption.

Reduced energy consumption 1,224,922 MJ per year

Monetary saving 203,677.24 USD per year

GHG reduction 39,305.38 kgCO₂e per year

Measurement Method: Using power meter for measurement before and after improvement.
Energy saving = $HVACP \times \Delta TR \times (h/y) \times OF$ (Operating factor)
CHP = HVAC performance (kW/TR)
ΔTR = AHU Ton of refrigerant reduction = Flow rate redu TR before



26.2%

HVAC (heat, ventilation & air conditioner)

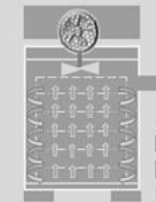
Delta replaced an old existing chiller with a high-efficiency chiller 600 TR. This new chiller has highly effective current technology to improve energy efficiency.

Reduced energy consumption 4,822,272 MJ per year

Monetary saving 801,836.67 USD per year

GHG reduction 156,319.33 kgCO₂e per year

Measurement Method: Using power meter for measurement before and after improvement.
Energy saving = $\Delta CHP \times TR \times (h/y) \times OF$ (Operating factor)
ΔCHP = Chiller performance reduction (kW/TR)
TR = Ton of refrigerant = 500*flow/diff temp / 12,000



2.5%

Installation Backing oven heat recovery Unit

Adoption of Backing oven heat recovery Unit in order to recover heat waste for use in heating the backing oven machine to reduce energy consumption.

Reduced energy consumption 464,620 MJ per year

Monetary saving 77,255.91 USD per year

GHG reduction 15,173.49 kgCO₂e per year

Measurement Method: Using power meter for measurement before and after improvement.
Energy saving = $A \cdot \Delta kW \cdot (h/y)$
A = set of equipment
kW = Testing power usage (reduce up to 20%)
h/y = hour per year



9.7%

VFD inverter installation for controlling motors

Delta installed Variable Frequency Drives (VFD) for AHU (Air Handling Unit) Control/ Water pump CDP/Motor pump CHR/Motor pump CHS to improve the energy and performance efficiency of equipment.

Reduced energy consumption 1,783,523 MJ per year

Monetary saving 296,560.21 USD per year

GHG reduction 57,852.25 kgCO₂e per year

Measurement Method: Using power meter for measurement before and after improvement.
Energy saving = $\Delta kW \times QTY \times \%LF \times (h/y)$



2.3%

Installation Cooling tower 500 RT

Replacement of cooling tower 500 RT in order to reduce energy consumption in air conditioning systems.

Reduced energy consumption 419,904 MJ per year

Monetary saving 69,820.70 USD per year

GHG reduction 13,666.05 kgCO₂e per year

Measurement Method: Using power meter for measurement before and after improvement.
Energy saving = $\Delta kW \cdot (h/y)$
kW = Power consumption of Chiller land cooling tower

8,720 MWh

(full capacity) of solar Rooftop generated in 2019.



1.4%

Others

Adoption of insulation in Reflow SMT and Wave Soldering machines to prevent heating loss and reduce energy consumption.

Reduced energy consumption 205,704 MJ per year

Monetary saving 34,204 USD per year

GHG reduction 6,717.91 kgCO₂e per year

Measurement Method: Using power meter for measurement before and after improvement

Calculate heat loss before and after:

Energy saving = $(Qs + Qc) \cdot h/y$

Qs = Q before - Q after

Q = $h \cdot A \cdot \Delta T$

h = convection heat transfer coefficient 5.6697 W/m²

A = Air conduction of Ceramic 0.324 W/m²

Qc = Qs/COP

COP = Coefficient of Performance = 6.12 kW/kW

Removed the excess light bulb in the corridor

Reduced energy consumption 63,868 MJ per year

Monetary saving 10,619.76 USD per year

GHG reduction 2,078.59 kgCO₂e per year

Measurement Method: Calculation by using:

$P (Watt) = E (Volt) \cdot I (Ampere) \cdot \text{total lamps (before/after)} \cdot LF80\%$ (Load Factor)

Do more with less

From our close monitoring on Greenhouse gas inventory report, Delta realizes its potential to mitigate climate change impact by reducing greenhouse gas and related environment footprint in our daily operation. With smarter & greener operation, mutual benefits will be enabled for Delta, its stakeholders and world's environment.

Energy efficiency optimization

Delta has gradually invested in innovation and technology to achieve our goal of reducing energy use and greenhouse gas emissions according to production amount. This technology helps us to reduce energy consumption and promote innovative and efficient use of clean energy, along with reducing greenhouse gas emissions as stated in our mission "To provide innovative, clean and energy-efficient solutions for a better tomorrow". We also implemented and certificated our company's energy management system in our operations according to ISO140001 and ISO50001. Since 2016-2019, Delta Electronics (Thailand) PCL. received the Thailand Energy Award in three categories: Creative Energy, Energy Conservation: Green Building and Designated Factory. This award demonstrated Delta as a role model of factories, buildings and individuals that demonstrate responsible use of energy resources for sustainable development. Fine more details on <https://www.deltathailand.com/en/corporate-detail/10/129/Delta-Wins-Thailand-Energy-Awards-2019> and <http://www.thailandenergyaward.com/TH/hall.php>

In addition, Delta has steadily implemented energy conservation projects since 2014 - 2019 such as installing a high-

efficiency chiller, high-efficiency motor pumps and injection, Smart Energy recycle System (SERS) etc. In 2020, we set our energy intensity reduction target at 30% with the base year as 2014. From 2014 -2019, our energy conservation pathway relative to energy intensity reduction resulted in our achievement of 18% energy reduction intensity in 2019, reduced energy consumption 18,395.50 Gigajoule amounts to 3,058.76 tons CO₂e per year for DET in Thailand which was 13% energy reduction intensity in 2019 for DET (including our subsidiaries; India and Slovakia). To meet the challenge of targeting, we will continue to improve our operating efficiency and provide greener energy for the better tomorrow.

Refrigerant replacement

Delta keeps tracking its ozone depletion substances (ODS) based on IPCC2007 methodology. According to [UNEP initiative](#), Delta uses HCFCs to replace CFC to decrease Ozone Depletion Potential. Therefore, during the HCFCs lifecycle, only about 1-10% of CFC-12 had emitted to Ozone. According to the company's 2015-2019 GHG Inventory report, OSDs include Chlorofluorocarbons (CFCs), Halon (CBrF₃), Carbon tetrachloride (CCl₄), Methyl chloroform (CH₃CCl₃), Hydrobromofluorocarbons (HBFCs), trichlorofluoromethane (CFC-11) equivalent), Hydrochlorofluorocarbons (HCFCs), Methyl bromide (CH₃Br), and Bromochloromethane (CH₂BrCl) as defined in the 'Montreal Protocol' has not produced, imported or exported by Delta.

Energy Saving Programs

Since energy conservation became a major component of our comprehensive, multifaceted climate protection program to reduce the amount of CO₂ 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 2015, 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 2015. In 2019, we have achieved a decrease of 22% of electricity intensity. With strong focus on energy management, we continue to aim higher and share our experience with our clients.



The Department of Alternative Energy Development and Efficiency visit Delta Electronics (Thailand) PCL headquarter to explore energy saving projects and 3.2 MWp solar rooftop on 27 November 2019

Process Innovation

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

From 2015 – 2019, the Company had accomplished more than 602 automation projects in 6 major potential processes. 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. Since 2014 when we gradually introduced higher innovative automation processes and robotic arms. 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 2019 had achieved 16% improvement from the previous year. Our focused investment and effort in process automation and continuous process improvement projects had been the main contributors. 69 majors process with latest automation technologies had implemented to concrete Delta smart Manufacturing line. 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 disruption on daily production schedule and output will be minimized. Beyond Delta's benefit of stable cost of goods sold, accurately automated process helps to reduce environment negative impact, optimize manufacturing resources and electricity power while our employees' safety had secure from complex and hazardous process.

In addition to process digitalization, Delta has been focusing on [Kaizen](#) and [ECSR](#) to improve its process efficiency. Annually, Delta group organizes [Delta Innovation Awards](#) to drive innovation in its intellectual properties, new product development, manufacturing process improvement and new business model development. In 2019, 47 projects had from Delta's global sites had submitted while 8 teams and 10 individuals granted "The 11th Delta Innovation Award". In Thailand, 1,010 ECRS projects had submitted to eliminate process wastes. The 4 teams of winners had grants monetary and non-monetary awards. Their projects had adopted to Delta's production process.



Green Building Certified



Delta Rudrapur, India
LEED-INDIA Gold

- 2017 EUI : 88 < EUI Baseline : 210
- Historical highest energy saving rate: 76% (compared to commercial buildings)
- Saved approximately 2,920 MWh of electricity
- Reduction of approximately 2,666 tons CO₂e
- Applied Technologies :
 - Natural Lighting
 - Energy-efficient HVAC Systems
 - Solar PV Systems
 - LED Street Lighting
- Waste Water Recycling Systems
- Rainwater Harvesting Systems

2008



Delta Gurgaon, India
LEED Platinum

- 2017 EUI : 50 < EUI Baseline : 210
- Historical highest energy saving rate: 76% (compared to commercial buildings)
- Applied Technologies:
 - Exceeds 85% Natural Lighting
 - Smart HVAC Solution
 - High Efficiency Lighting System
- Water savings: 40% (compared to LEED design basis)
- Set up high SRI roof coating to reduce heat island effect
- Indoor Ventilation and Eco-materials design

2012



Delta Thailand HQ
LEED (EBOM) Gold

- 2017 EUI: 657 EUI Baseline: 640
- Historical highest energy saving rate: 23% (compared to pre-renovation plant)
- Water savings: 35% (compared to LEED design basis)
- Set up high SRI roof coating to reduce heat island effect
- Applied Delta own technologies:
 - Solar PV System generates 3M kWh/year
 - Datacenter Solution
 - Energy Management Solution
 - Smart HVAC Solution
 - LED Lighting Solution

2018

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.

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 sustainable 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 2019. 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. The company plan to implement LEED standard to its new plant in Chachoengsao, Thailand in 2019.

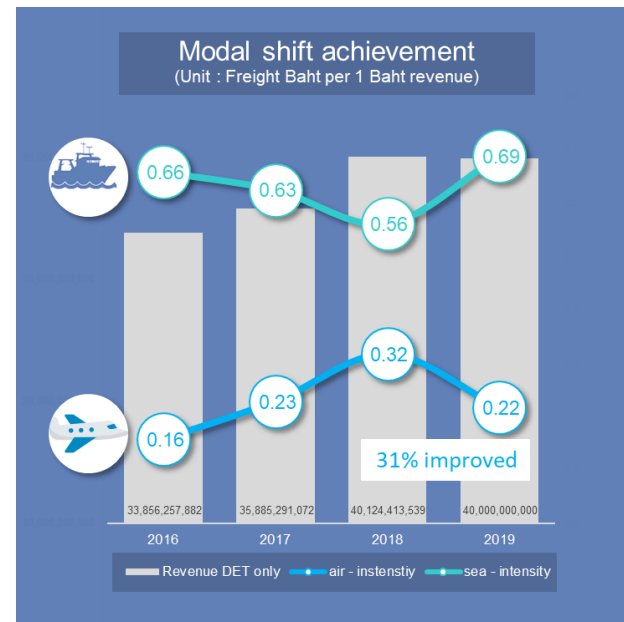
Discover Delta group's 13 own green building and 4 donated green building at <https://bit.ly/2S81XuR>

Smart logistics modal plan

Delta Thailand Logistics function 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.

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 outgoing shipment and realize an impressive impact as following:

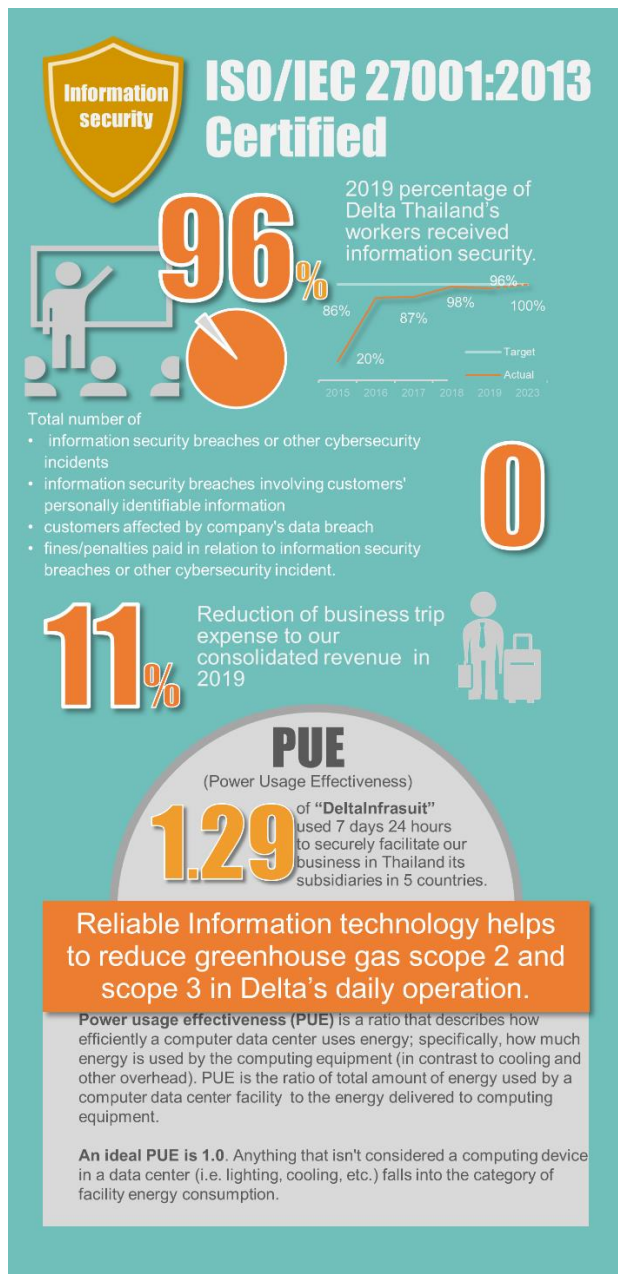


1. Ensure that inbound and outbound shipments are for full truck load (FTL) by loading trucks with as much cargo as possible. By doing this, the number of trips between the production base to port per day is reduced, warehouse cost is saved.

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.

With the related functions' awareness on environmental footprint from logistic process, Delta can reduce 31% of air freight intensity to its consolidated revenue in 2019. In addition to its effort to reduced transportation environmental footprint, Delta encourage our stakeholder to reduce transportation and paper works in business process by utilized our secured on-line communication platform. IT Security for reliable on-line communication.



Reliable on-line business process

On-line communication among Delta group and its business partners is Delta's effective tool to reduce GHG scope 3 from unnecessary transportation and business trip ; for instance, on-site stock checkup, material flow follow up, order fulfillment status, and design and business-related discussion. Delta strengthens its online operation by acquiring ISO/IEC27001 for its information security management system. In addition to Delta own product and solution utilization, 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.

Four of Delta' BOD members has Information Security knowledge background. The Board of directors has assigned the Chief Information Technology (CIO) to be responsible for overseeing cybersecurity within the company. The CIO will collaborate with Information

Security Management Committee, Data Protection Officer, Internal Auditors and report to the President to oversee cyber security strategy at least once a year. As Sustainable Development committee member, the CIO and DPO has requested to share information security performance to the SD committee at least once a year as well.

To ensure valuable information security and ethical communication, Delta communicate the [Information security policy](#) on our intranet. In addition, to raise employees' awareness on this issue, the company target to conduct 100% IT security training to its employees annually. Up to the report period, there is no confirmed case of breaches of [customer privacy](#) identified leaks, thefts, losses of customer data or misuse of intelligence properties from outside parties or regulatory body to Delta's whistleblowing channels and DPO.

On top of transportation reduction, intelligence properties protection, trade confidentiality protection and personal data protection, [Delta InfraSuite](#) help the company to optimize energy consumption. According to [a leading research institute survey](#) of 1,600 data center owners and operators found that 2019's average PUE is 1.67 while Delta's data center performed with **1.29 PUE** rate in 2019. This competitive performance finally help the company to reduce ghg scope 2 from IT 7/24 operation where represent approximately 1% of total energy consumption at Delta.

We ensure natural resources conservation

Outstanding emergence of pollution outstandingly raised our stakeholder's awareness of climate change. Delta realized regularly monitors its environmental performance and disclose it transparently to get related stakeholder feedback.

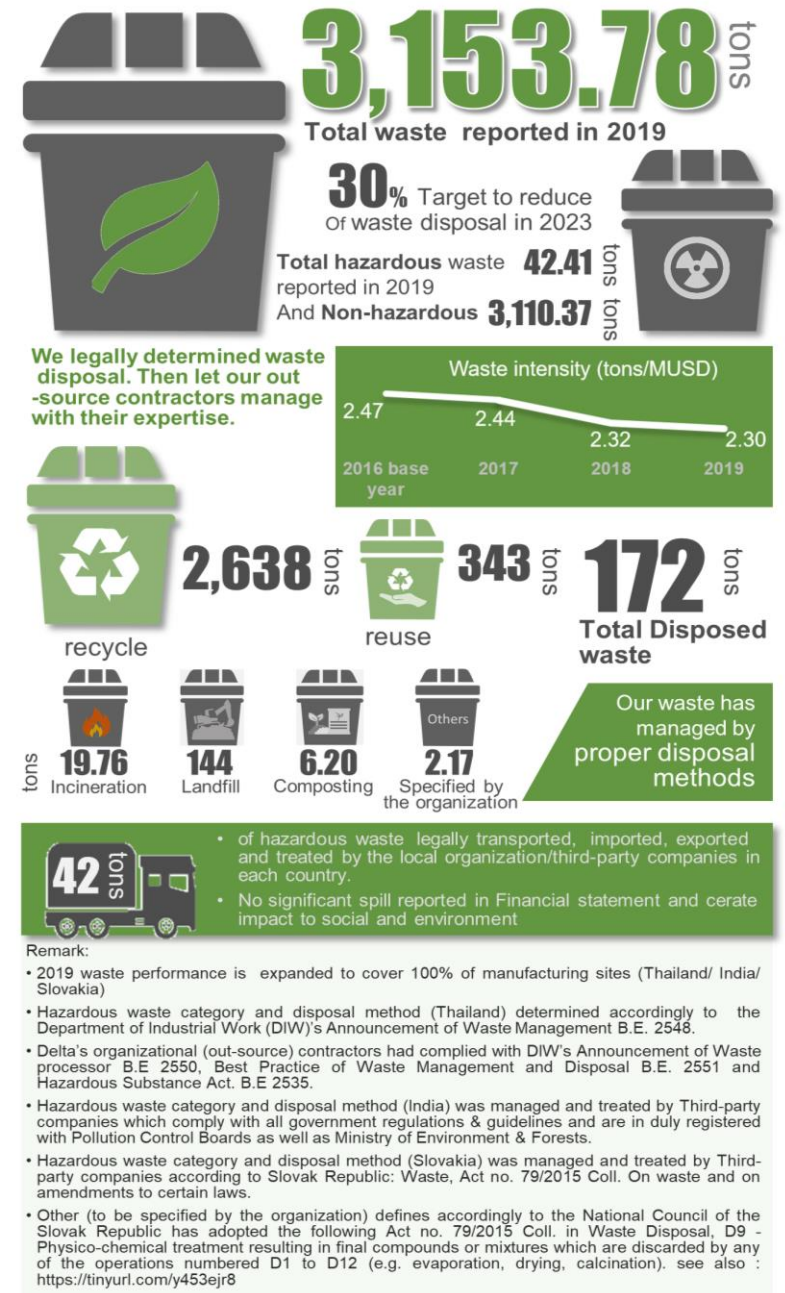
Waste in Focus

In consequence of Delta's [Management Standard for Environment-related Substances](#), Delta ensure that our stakeholders' and natural resources by counter checking our waste management will stay safe and sound for long-term. 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) had transported to garbage incinerators, composting, and landfill plants designated by the government by qualified garbage disposal businesses. According to the Department of 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.

In 2019, waste performance is expanded to cover 100% of manufacturing sites (Thailand/ India/ Slovakia). With 2016 based year, Delta targets to reduce 30% of non-hazardous waste (Total disposed waste) in 2023 (5% yearly). In the reporting period, Delta generated waste in total 3,152.78 tons. These 3,152.78 tons of generated waste were categorized in to non-hazardous waste 3110.37 tons and hazardous waste 42.41 tons which included recycle 2,637.82 tons, reused 343.13 tons, secure landfill 143.70 tons, waste to incineration 19.76 tons, composting 6.20 tons and others specified by the organization 2.17 tons had transported to third party located in proper distance to manage. According to the stated result, Delta has set target for Hazardous waste reduction by 5% in 2023 from base year 2019. Total disposed waste decreased 47.3 tons or 21.59 % compared to 2016 of 213.40 tons. In addition, Delta is tracking this issue by using waste intensity (ton waste generation/million USD of revenue) as an indicator, waste intensity in 2019 was 2.30 tons per Million USD production amount which decrease 6.9 % from 2.47 tons per million USD production amount in 2016.

Due to business expansion and higher production requirement, Delta plans various waste reduction project in Delta's daily operation to minimize environmental footprint. In 2019, the company ran its waste reduction projects to reduce its production waste. In addition to waste reduction, 12.53 million baht or 0.024% of cost of goods sold in 2019 so reduced by following projects.

1. Size of our plastic runner for finish goods transportation had reduced. The mentioned mini runners which can be reused to save single-wooden carton.





2. Design for new tooling for reduce Silicone steel waste by increase sectional area metal sheet and modify tooling 5 part number leading to 60tons of metal waste reduction last year.
3. Work with 8 packaging suppliers to change material packaging form carton to recyclable plastic box 8 vendor use recycle box. 58 tons of packaging waste had reduce.
4. 35 tons of wooden pallet are reused for packing of battery and accessories of UPS in 2019

We emit less

To mitigate environment health and well-being impact on our employee and surrounded community, Delta keeps monitoring our Volatile Organic Compounds (VOCs), Total Suspend Particles (TSP), Carbon Monoxides (CO), Nitrogen Oxides (NO_x), Sulfur Oxides (SO_x), Toluene (C₆H₅-CH₃), Xylene (C₈H₁₀), Tin (Sn), Lead (Pb) and other Hazardous Air Pollutions (HAPs) discharged from our manufacturing process. Periodically, the company has carried out air quality monitoring at various stations. 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. Charcoal Tube and Gas Chromatography (GC) /NIOSH, unambiguously and related methodologies have complied for close monitoring. VOCs, TPS, CO, NO_x, SO_x, and HAPs control are another way to mitigate impact to healthiness and wellness of the company's personnel's as well as neighbor communities.

Air Emission performance in 2019, Delta expanded to cover 100% of manufacturing sites (Thailand/ India/ Slovakia). Delta Thailand, India and Slovakia's emission data reported from the factories' stacks inspection where VOCs, TSP, CO, NO_x, SO_x and HAPs had annually/biannually monitored, measured and reported accordingly to their local department of pollution control and [NIOSH standard](#) for each country that Delta operates. 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, 6C, 7E, 10, 18, 19 and 29,

Charcoal Tube and GC/NIOSH 1501 will be applied to each stationary sources.

Delta's 2019 pollution inspection result ensured all the key parameters met the local standard and regulations. As in 2019 is the first year that Delta fully performed covering 100% of its manufacturing sites (Thailand/ India/ Slovakia). Delta Thailand's Air emission results has been measuring and monitoring since 2014, Delta India's Air emission results were fully covered since 2017 and Delta Slovakia's Air emission results were covered in 2019.

Since 2015-2019, Delta had indicated VOCs emission as the aggregation of Xylene, Toluene and Isopropyl Alcohol using US. EPA Method 18 (This method is designed to measure gaseous organics emitted from an industrial source). No significant chemical spill reported from any location. To be received the actual total VOCs released from its operations, the company measured total VOCs in 2019 and still examined the volume of Xylene and Toluene to further monitoring the progress of VOCs reduction. The total VOCs was measured as 82.43 tons VOC (t VOC) per year or equal to 0.06 t VOC/ MUSD per year, xylene and toluene were detected as 0.56 and 0.63 tons/year in 2019, respectively. The VOCs mainly came from the cleaning agent to remove flux residue for Printed Circuit Boards (PCB) during the heating process and using volatile organic solvents such as or silicone sealants, welding processes and others. To mitigate the VOCs emission in its operations, the company has started screening and deduction unnecessary volatile organic chemicals or cleaning solvents which are mixtures of additives of VOCs from the process since 2017. To compare the VOCs reduction performance to target at base year 2016, to reduce 5% of VOC yearly (30% in 2023 from base year

2016), the intensity of Xylene, Toluene and Xylene + Toluene were plotted graph from 2016 -2019 in tons/MUSD per year. The results showed the intensity of the aggregation of Xylene and Toluene was 3% reduction compared with base year intensity 2016. However, the volume of total VOCs will be used to calculate as an actual target 5% reduction of t VOC in 2020 instead of the aggregation of Xylene and Toluene which is more accuracy with the actual target for 2020 of 5% reduction t VOC as 78.31 t VOCs/year.

Total Suspend particles was reported as 27.46 tons in 2019 and the highest result came from Thailand's sites which was the consequence of the PM 2.5 critical pollution in Thailand 2019. The worst air pollution PM 2.5 was detected as unsafe levels in Bangkok and cities nearby (see also: <https://tinyurl.com/y4axh7he>). Delta Thailand implemented the preventive measurement of PM/TSP in workplace, every 62 square meters (m²) were applied with air purifiers for clean air condition in the workplaces.

Nitrogen oxides, sulfur oxides and carbon monoxides were detected as 5.52, 0.05 and 8.95 tons/year in 2019. Nitrogen oxides, sulfur oxides and carbon monoxides mostly came from testing /using the generators and boilers to generate heat and hot water for domestic purpose. Delta cautiously chose the innovative condensing gas boiler using at its sites. The boiler is designed to run with natural gas which less emission and low NOx, SOx and CO level (see also: <https://tinyurl.com/y6f34kt3>). All Delta's Air emission reports and all related indicators met the air quality standard control regulation/requirements.

Remark:

- 2019 Air Emission performance is expanded to cover 100% of manufacturing sites (Thailand/ India/ Slovakia). Delta Thailand, India and Slovakia's emission data reported from the factories' stacks inspection where VOCs, TSP, CO, NOx, SOx, Toluene, Xylene, Tin and Lead had reported and all related indicators met these standard requirements.
- Delta Thailand's Air Emission data from stacks had collected and measured 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. To calculate the estimation of air pollutants load per year following "[Measurement mass balance emission factors engineering calculation](#)" by Pollution Control Department, Bangkok, Thailand.
- Delta Electronics India Pvt Ltd. 's Air Emission data from stacks had collected accordingly to Central Pollution Control Board, Ministry of Environment & Forests, Govt. of India, G.S.R.771(E), 11th Dec 2013– Emission Limits for New Diesel Engine up to 800 kW) for Generator Set (Genset) Application and measured methods following IS 11255-1 (1985): [Indian Standard Methods for measurement of emissions from stationary sources prescribed by Bureau of Indian Standards](#).
- Delta Electronics (Slovakia), s.r.o. Air Emission data from stacks (NOx , SOx and CO) had collected accordingly to Decree of the Ministry of Environment of the Slovak Republic no. 411/2012 Coll., on monitoring of emissions from stationary sources of air pollution and air quality in their vicinity as amended by Decree of the Ministry of the Environment of the Slovak Republic No. 316/2017 Coll. Others emissions results were calculated emission factors from heat input (Natural gas boilers) using [Preferred and Alternative Methods for Estimating Air Emission from Boilers](#) and EPA [AP-42 Chapter 1.4](#)

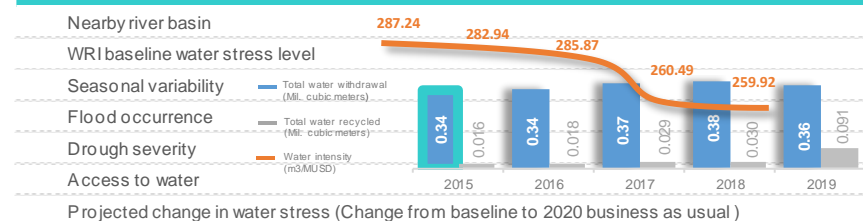
We maintain water security

The company's water management had been interested by our stakeholders. Such interest is not only their concern of global change in baseline water and drought severity, but also their concern about chemical contamination to natural water source from technology industry. Although water is not our production factor or used in manufacturing process, the company has taken many measures to conserve clean and accessible water for our local community. Based on Delta's water consumption breakdown, 95% of the water used by Delta's own operation sites for domestic and sanitary purpose (95%). According to our water bill, municipal water supplied by governmental offices is the main source for Thailand, India and Slovakia plants.



Delta consumes 0.0003 Mio. m3 of water to create 1 Mil. USD revenue

Why we care ?



WRI Risk min 0 - max 5

Thailand	India	Slovakia	Total
Chao phraya River	Ganges River	Elbe River	
2-3	4-5	0-1	
▲ 12X	▲ 12X	Near normal	



Are you in risky area?

Check out Aqueduct Water Risk Atlas
<https://bit.ly/2LSq0gu>

Our Consumption

(Source: figures from municipal water bills and rain water harvestin pond's)

Municipal water (supplied by government)	(m ³)	319,687	1418	5,095	326,199.69
Ground water (supplied by local government)	(m ³)	0	19,684	4,943	24,627.40
Rainwater collected directly and stored by the organization (Source: meter)	(m ³)	6,003	0	0	6,003
Surface water including water collected from wetlands, rivers, lakes, and oceans	(m ³)	0	0	0	0
Wasted water from another organization	(m ³)	0	0	0	0
Total water withdrawal	(m³)	325,690	21,102	10,038	356,830
Water used in production process	(m ³)	0	0	0	0
Water used for domestic hygiene purpose	(m ³)	319,687	21,102	10,038	356,830.09

Think twice before discharge

Volume of water recycled in cooling tower (Model: cycle of concentration x capacity of cooling system)	(m ³)	46,903.56	0	0	46,903.56
Volume of water RO recycled water using in Cooling system (Source: meter)	(m ³)	11,562.00	0	0	11,562
Volume of water recycled in toilet flush, gardening and resemble purposes. (Source: meter)	(m ³)	0	15,888.00	0	15,888
Volume of water reused in Cooling system and backwash process. (Source: meter)	(m ³)	17,110	0	0	17,110
Total volume of water recycled & reused water	(m³)	75,575	15,888	0.00	91,463
% of recycled & reused water to total water withdrawal	%	23.6%	75.3%	0.0%	25.63%

Ensure quality discharge

(80% of water withdrawal planned to be treated before discharge to Industrial park's sewer that lead to its treatment plants)

Discharged from production process	(m ³)	0.00	0.00	0.00	0.00
<div> <div> <p>Target to reduce water intensity reduction in 30% 2020 from base year 2015</p> <p>2019 WPI ▼11% Accum WPI ▼23% Acheivement 77%</p> </div> <div> <p>Volume of wastewater is assumed to be 80% of Municipal water and transferred to Third-party who provide wastewater treatment services (IEAT: Industrial Estate Authority of Thailand)</p> <p>wastewater is transferred to their own Sewage water Treatment Plant (STP). The treated water is used in domestic process</p> <p>Transfer to Third-party who provide wastewater treatment services</p> </div> </div>					
Discharged from domestic consumption - rainwater	(m ³)	254,494	Zero Discharge	3,334	257,828
Evaporation water to source (Source: Model calucation)		59,451	0.00	0.00	59,451
Total water discharged	(m ³)	257,828	-	3,334	317,279
pH	-	7.17	7.36	9.00	7.84
BOD	mg/L	148.80	15.00	-	81.90
COD	mg/L	315.66	53.10	800.00	389.59
TDS	mg/L	622.03	660.00	2500.00	1,260.68
TSS	mg/L	50.16	21.50	500.00	190.55
Oil and Grease	mg/L	5.72	4.00	-	4.86
Wastewater Quality Standard categorized by countries		Thailand*	India**	Slovakia***	
pH	-	5.5-9.0	5.5-9.0	6.0 - 9.0	
BOD	mg/L	500	30	-	
COD	mg/L	750	250	800	CODCr if the BOD5 (ATM) / COD ratio is <0.4
TDS	mg/L	3,000	-	2,500	Dissolved substances (RL 105)
TSS	mg/L	200	100	500	Insoluble matter (NL)
Oil and Grease	mg/L	10	10	-	

Source: *Announcement of the Industrial Estate Authority of Thailand No. 76/2560 (2017) dated July 13, 2017

** General Standards for Discharge of Environmental Pollutions Part-A : Effluents Limits as per CPCB (EPR-1986Schedule-VI Part-A/ EPA

*** The Ministry of the Environment of the Slovak Republic according to Annex no. 3 of Act no. 55/2004 Coll. Maximum Permissible Rate of Pollution of Industrial Wastewater and Special waters discharged into public sewerage. (refer to : <https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2004/55/20040215> and <http://www.povs.sk/zakaznicka-zona/verejne-kanalizacie-a-kanalizacna-pripojka/>)

Remark

1. Delta plant in Rudrapur, Uttarpradesh is in wetland listed in the Ramsar Convention <http://archive.ramsar.org/pdf/sitelist.pdf>
2. Endemic species found in Chao praya river https://en.wikipedia.org/wiki/Chao_Phraya_River
3. Slovakia's sewage water is transferred to the public sewerage system to be treated by third-party who provide wastewater treatment services for the local district. <http://www.povs.sk/zakaznicka-zona/verejne-kanalizacie-a-kanalizacna-pripojka/>. Thus the water quality indicators, Slovakia's site reports the highest permissible rate of wastewater discharged into public sewerage according to Slovakia's local water quality standard.
4. There is no usage of surface water/sea water /produce water for Delta's domestic purposes.

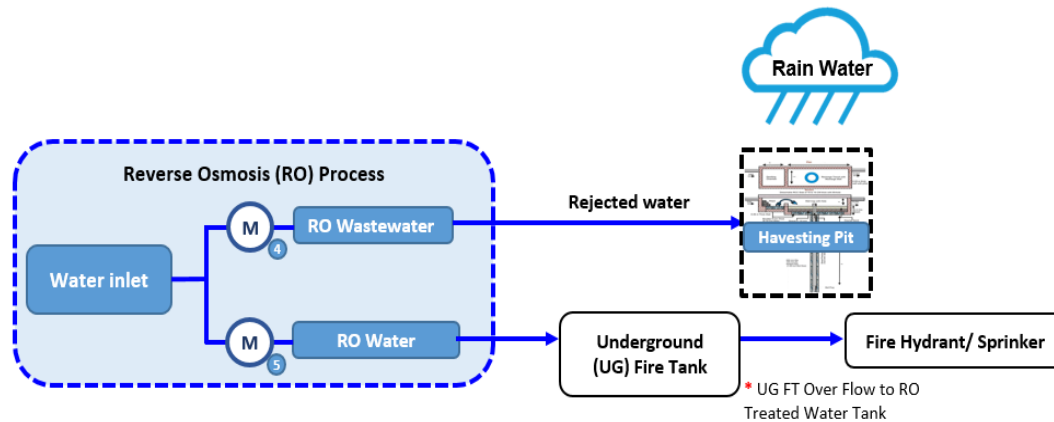
In 2019, the company had consolidated information about the [rivers near Delta's major operation sites](#). This information is presented without any right of ownership. All the information in this booklet is from Wikipedia, the world's largest free online encyclopedia, to be used as reference for the Delta Group's sustainable development study and performance improvement on natural resource management tracking. In this booklet, readers will learn the size of nearby water sources, national or international protection status, biodiversity values (such as species diversity and endemism, and public highlighted number of protected species), and value of the water source to your local communities and indigenous people. Finally, this resource of consolidated data should help to raise awareness of water and natural resources conservation specific to each area.



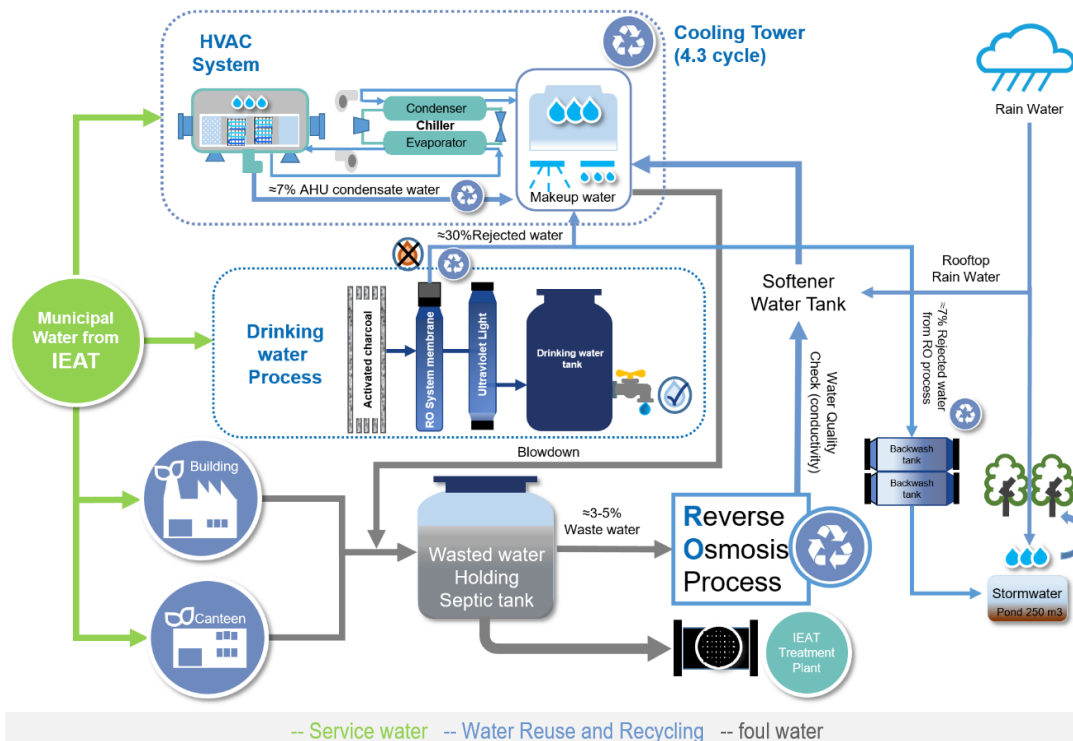
In 2019, the company and its subsidiaries (India and Slovakia) apply **India Water Tool** developed by the World Business Council for Sustainable Development (WBCSD) to assess Water Stress of India's sites and **WWF Water Risk Filter** and **WRI Aqueduct**, which recommended by WBCSD to implement [Water Risk Assessment](#) for our major operation sites. Although Delta's water consumption is used for domestic and sanitary purpose only and has less impacts, Delta uses those water tools to analyze its activities both in its operational risks and basin risk assessment. Using the location of the factories and the volumes of water used from each source by factories to understand the potential relates links between local basin risks and operation risks and other factors for planning its water management ensuring its activities not to impact to stakeholders or communities.

According to Third-party who provide wastewater treatment services in Thailand (IEAT: Industrial Estate Authority of Thailand), the volume of wastewater is assumed to be 80% of Municipal water. Our discharged water has handled and professionally treated by Global Environmental Technology Co., Ltd. (GETCO), 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 safe whenever these water discharge to the surrounded canals. According to 2015-2019, with our professional management and standard in accordance with the regulation. There is no value of water quality indicators is over the limit of standard in average as mentioned in the table of total water discharge above.

In December 2019, Delta had an engagement opportunity with GETCO to discuss about the water situation in 2019, the biodiversity around the IEAT's Industrial Park besides, understanding the water treatment process and good practices, Delta also exchanged feedback from GETCO's staff to improve company's water practice which will make both sides work in efficiency and drive the sustainable development planning and more effective environment management.



Delta's Water Reuse and Recycling Program



The company's subsidiaries (India and Slovakia), have been closely tracking the quality of water discharge every month each year. According to each local regulation and our sensitivity analysis on water basin availability, India's sites have their own Sewage Treatment Plants (STP). All discharged water goes straight forward to STP through the water treatment process. The treated water is sampled and tested the water quality by third-party according to Central Pollution Control Board of India, CPCB (EPR-1986Schedule-VI Part-A/ EPA) and reused as garden irrigation and toilet flushing. Besides, the rejected water from RO (Reverse osmosis) process and rainwater (storm water) are collected, accommodating more water to re-charging pit (sub-surface recharge) for groundwater. Slovakia's site waste water management is assigned to local third-party which proficiently in wastewater treatment according to the recommended values in accordance with Decree of Slovak: Annex no. 3 of Act no. 55/2004 Coll. Maximum Permissible Rate of Pollution of Industrial Wastewater and Special waters discharged into public sewerage.

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 for cooling tower, Rejected RO water for gardening or irrigation. The company adopts water-saving taps and water-saving sanitary wear, 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 RO-system water purifiers.

With target to reduce 30% water consumption intensity (m3/MUSD consolidated revenue) in 2019, we have a consolidated reduction of 23.1% in 2019 compared to that in base year 2015. Since 2015, no wasted water from our production process discharged to our local industrial parks sewage points.

Percentage of employees expose to occupational disease risk



Key risk exposed processes



Grinding process

Exposure to particulate Matter (TSP)

Soldering and coating process

Isopropyl alcohol, Tin, Lead, Aluminum and acetone

Assembly and cleaning processes

Exposures to thinner, acetone and organic solvents (toluene, xylene, styrene)

Specific checkup methodology

• Spirometry

0 occupational disease rate since 2016

• Spirometry
• Aluminum
• Toluene
• Xylene
• Styrene
• Tin
• CBC
• Isopropyl alcohol

• CRE
• SGPT
• MEK
• Methanol
• Acetone
• Phenol
• Tin
• Isopropyl alcohol

0 of hazardous substance - related abnormality

found from risk exposed employee's blood and urinal checkup (aluminum, toluene, xylene, styrene, MEK, isopropyl alcohol, methanol, acetone, phenol and tin) since 2012.

Occupational disease record and rate calculation based on Thailand Labor Department's guideline

The deeper we check

Delta's eco-efficient operation is not only help to lessen environmental impact, but also mitigate occupational disease rate Delta realizes that 30% of our total Delta employees involved in routine work/ activities which exposure to risk to occupational diseases announced by the Ministry of Labor of Thailand dated August 15, 2007.

Though the company has established 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 for aligning work practices or make engineering improvements to reduce the risk of occupational illnesses.

The company target 0 volatile organic compound impact to its workers' health. By utilizing automation process, we reduced 10% of worker who exposed to hazardous factors from 4,947 employees in 2018 to 4,441 employees (30% of total employees in Thailand) in 2019. The risks these employees exposed in their daily work included noise, particulate matter, mineral oil, acetone, x-ray, ionic ray, lead, tin, light, thinner and heat that determined by independent professional physician with Occupational health safety management representative committee. This group of risky employees had encouraged to participate annual high-risk group checkup performed by independent physicians. 0% of hazardous substances contamination in blood and urine found from recent specific checkup ensures 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, occupational cancer and impact on reproductive system. Finally, without any medical treatment required for these specific employees, ZERO occupational disease rate and occupational disease-related fatality had reported for the 4th consecutive years.



Biodiversity

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. For transparency in environment management, Delta implement "[Sustainability in numbers](#)", a collective result of our environment since 2014 at our public domain. 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..

The monitor Lizard (Varanus salvator), semi-aquatic local wetland habitat included as protected reptile species [ranked 91 \(page 113\) of the appendix list of Ministerial Regulations B.E 2546 of Thailand's Ministry of Natural Resources and Environment](#) according to [Wildlife Preservation and Protection Act, B.E. 2562](#) , has been simply investigated as our headquarter(approximately 70,000 s.q.m)'s environment management indicator.

Generation by generation, local monitor lizard help to keep the environment balance by eating fish carrions and human's leftover and animal carrions in nearby wetlands. Since most of Bangpoo Industrial Estate's surrounding areas are fish farms and swamps, huge number of fish were killed when when the temperature change. With such expertise in janitorial habit, Delta and our neighbor communities have protected from plague resulting from bacteria.

Unless these local crawlers are recognized by the [IUCN Red List](#) as [Least Concern species](#)

[\(LC\)](#), they help to protect Delta employees and our neighbor communities from plague resulting from bacteria with such expertise in janitorial habit over 30 years we have been being here. ♥

Strong action with partnership

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" and "OHSC@deltathailand.com" 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 has established to drive, monitor, review and improve the company's environment-related issues. The committee also provides appropriate countermeasures for any confirmed cases. Up to 2019, there was no any case of non-compliance with environmental laws and regulations, significant fines for non-compliance with environmental laws and regulations, non-monetary sections for non-compliance with environmental laws and regulations nor Cases brought through dispute resolution mechanism.



The chapter demonstrate how Delta create shared value for its internal and external stakeholder. In addition to 2019 social activities update, key performances of the activity has measure and disclosed on the basis of social science methodology.

**Better
Together**

Better together

The contribution of innovation to natural resources conservation and responsible supply chain does not only create positive impact to Delta, but also create vital impact to Delta's stakeholders. The shared values have not limited to Delta's value chain, but spreads to partnership with global citizen to make a smarter and greener future. In long-term, to unceasingly maintain inclusive well-being against the global changing scenario, Delta personnel's potential and social voluntary participation must be unleashed. In addition to our internal society, sound sustainable development practices enables long-term mutual benefit to its externalities.

Employment with care

According to customers and regulator engagement in 2019, Electronics industry characterized by organized labor, maintaining good relations with employees is particularly essential for the success of a business's operations and innovation. Delta's employees represent one of a company's most important assets. 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.

As a world-class enterprise and responsible corporate citizen, **Delta Electronics (Thailand) PCL. commits to providing our employees with an environment to develop to their full potential.**

Delta's Labor & Human Right Risk Assessment including risk matrix and mitigation process has reviewed by Human right working team and SD committee on annual basis. To accomplish this objective, the Company has implemented the group-wide [Delta Employment Policy](#) (which in-line with ISO26000) and disclose on our website 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. **The 9 pillars of Delta's employment policy** to retain our innovative and skillful employees are as following:

1. Law & regulation compliance

To comply with applicable labor or employment laws and international standards wherever it operates. To fulfill this commitment, the Company constantly strives to comply with local regulations and to meet international labor and

human rights standards, including the [Responsible Business Alliance Code of Conduct \(RBA\)](#), Universal Declaration of Human Rights, International Labor Office Tripartite Declaration of Principles, [OECD Guidelines for Multinational Enterprises](#), and more. Minimum 1 month notice for relocation case; for instance, typically provided to employees and their representatives prior to the implementation of significant operational changes that could substantially affect them accordingly to [Thailand's Labor Act B.E 2541 clause 120](#).

Since 2016 to 2019, **no grievance** in the workplace such as, but not limited to, a breach of the terms and conditions of an employment contract, raises and promotions, or lack thereof, as well as harassment and employment discrimination had raised by employees towards Delta.

2. Freely chosen employment

To prohibit hiring forced labor or child labor, all jobs at Delta are voluntary and employees can voluntarily leave the company within a reasonable period after giving notice. The company 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.

Indicators	Unit	Boundary			2019			2018			2017		
		TH	SK	IN	Male	Female	Total/ AVG	Male	Female	Total/ AVG	Male	Female	Total/ AVG
Employee turnover	head	•	•	•	318	506	824	215	375	590	177	271	448
Employee turnover rate	%	•	•	•	9.5%	6.2%	7.1%	6.9%	4.7%	5.3%	6.7%	3.4%	4.2%
Voluntary turnover rate ¹	%	•	•	•	98.1%	99.0%	98.6%	95.3%	95.2%	95.3%	98.3%	92.3%	94.6%
Employees turnover by area													
• Thailand	head	•			194	483	677	102	339	441	129	246	375
% to total workforce	%	•			5.8%	5.9%	5.9%	3.3%	4.3%	4.0%	4.8%	3.1%	3.5%
• Slovakia	head		•		30	12	42	25	29	54	36	25	61
% to total workforce	%		•		0.9%	0.1%	0.4%	0.8%	0.4%	0.5%	1.4%	0.3%	0.6%
• India ²	head			•	94	11	105	88	7	95	12	0	12
% to total workforce	%			•	2.8%	0.1%	0.9%	2.8%	0.1%	0.9%	0.5%	0.0%	0.1%
Permanent employees turnover by age													
• Over 50 years old	head	•	•	•	9	18	27	10	18	28	3	21	24
% to total workforce	%	•	•	•	0.3%	0.2%	0.2%	0.3%	0.2%	0.3%	0.1%	0.3%	0.2%
• 30-50 years old	head	•	•	•	96	303	399	68	250	387	58	72	130
% to total workforce	%	•	•	•	2.9%	3.7%	3.5%	2.2%	3.1%	3.5%	2.2%	0.9%	1.2%
• Under 30 years old	head	•	•	•	213	185	398	137	107	175	116	93	209
% to total workforce	%	•	•	•	6.4%	2.3%	3.4%	4.4%	1.3%	1.6%	4.4%	1.2%	2.0%
Number of employees entitled to maternity / parental leave ²	head	•	•	•	329	7,377	7,661	323	7,338	7,661	316	8,031	8,347
• Number of employees taken maternity / parental leave	head	•	•	•	57	268	325	0	273	273	1	276	277
• Number of employees return to work after maternity / parental leave	head	•	•	•	45	264	309	0	253	253	1	276	277
Parental leave retention rate ³	%	•	•	•	NA	93%	95%	NA	93%	93%	100%	100%	100%

Remark

1. Voluntary employee turnover rate = (headcount of total leavers - (headcount of over 50 years-old retired leavers + headcount of dismissal for disciplinary reasons) ÷ headcount of total leavers"
2. According to Slovakia labor law, maternity leave is entitle for male workforce.
3. Return to work rate = Total number of employees that did return to work after parental leave

3. Humane Treatment



Delta refer to Universal Declaration of Human Rights (UDHR) and Responsible Business Alliance (RBA)'s guideline 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. As such, Delta have 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. **The company commits to protecting, respecting and supporting our employees, business partners and vulnerable individuals or groups in all our business processes** as outlined in the Company's [Human Rights policy](#). We will ensure that human rights are respected and that human rights violations in all forms are prevented throughout the Company and our value chain. In this policy; roles and responsibility of related functions, coverage of prevention, communication channels, Protection of whistleblowers and confidentiality, investigation and penalties and remedy guideline, had clearly communicated. In 2019, no any form of human right violation , harassment or inhumane treatment, violation of labor right had been noted raised through whistleblow@deltathailand.com.

In 2019, Delta Electronics Group conduct 100% on-line training subject [Human Rights Policy and Responsible Business Alliance Code of Conduct](#). The online training material has prepared in English, Thai and Chinese to ensure its global employees full understanding of their rights and their responsibilities to related stakeholder. To reduce digital divide, training rooms and schedule has arrange for non-computer-user employees. The course require 60% score of posttest to pass. Finally, 100% of the participated employees has passed the course.



4. Non-Discrimination

The company hires its employees based on their 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.

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. Due to business expansion in 2019, official (monthly) employees account for 35.2% of the total while another 64.8% are in production, operation and other function positions. Employees are 29% males and 71% females. Direct employees account for 78%, and 52% of the employees are under the age of 30. For management, 69% are native to the country where they are employed and 43% are female. 98 disables work and get vending stalls at Delta.

Delta believes that diversity of workforce By the end 2019, Delta Thailand and its subsidiaries had a total workforce of around 11,000. The distribution of diversity in employee composition can be illustrated as followings

Indicator	Unit				2019			2018			2017		
		TH	SK	IN	Male	Female	Total/ AVG	Male	Female	Total/ AVG	Male	Female	Total/ AVG
Salary-based workers	head	•	•	•	2,861	1,198	4,059	2,524	1,088	3,612	2,297	1,254	3,551
Daily wage workers	head	•	•	•	480	6,999	7,479	602	6,874	7,476	363	6,777	7,140
Total permanent workforce (Sub- contract and other workers excluded)	head	•	•	•	3,341	8,197	11,538	3,126	7,962	11,088	2,660	8,031	10,691
Sub-contracted worker	head	•	•	•	525	1,380	1,905						
Other workers ¹	head	•	•	•	46	67	113	48	78	126	43	75	118
Permanent Employees by areas													
• Thailand	head	•			1,902	7,867	9,769	1,796	7,642	9,438	1,692	7,764	9,456
• Slovakia	head		•		329	251	580	329	242	571	316	229	545
• India ²	head			•	1,110	79	1,189	1,001	78	1,079	652	38	690
Employees by age													
• Over 50 years old	head	•	•	•	99	145	244	140	177	317	147	165	312
• 30-50 years old	head	•	•	•	1,866	3,451	5,317	2,261	5,688	7,949	1,862	5,557	7,419
• Under 30 years old	head	•	•	•	1,376	4,601	5,977	725	2,097	2,822	651	2,309	2,960
• Under 18 years old	head	•	•	•	0	0	0	0	0	0	0	0	0
Employees by level													
• Executives (level 10-12)	head	•	•	•	19	5	24	14	4	18	15	3	18
• Middle Management (level 7-9)	head	•	•	•	385	302	687	396	291	535	396	268	664
• Senoir and Operative (level 3-6)	head	•	•	•	2,100	891	2,991	2,114	793	3,064	1,886	983	2,869
• Daily employees (level 1-2)	head	•	•	•	480	6,999	7,479	602	6,874	7,471	363	6,777	7,140
Total New Employees	head	•	•	•	771	813	1,584	480	624	1,104	277	371	648
New hire rate	%	•	•	•	23.1%	9.9%	13.7%	15.4%	7.8%	10.0%	10.4%	4.6%	6.1%
Hiring cost	1,000THB : head	•	•	•	7.8			13.7			18.3		
New Employees by areas													
• Thailand	head	•			427	746	1,173	256	571	827	177	334	511
% to total workforce	%	•			12.8%	9.1%	10.2%	8.2%	7.2%	7.5%	63.9%	90.0%	78.9%
• Slovakia	head		•		24	24	48	38	31	69	11	21	32
% to total workforce	%		•		0.7%	0.3%	0.4%	1.2%	0.4%	0.6%	4.0%	5.7%	4.9%
• India	head			•	320	43	363	186	22	208	89	16	105
% to total workforce	%			•	9.6%	0.5%	3.1%	6.0%	0.3%	1.9%	32.1%	4.3%	16.2%
New Employees by age													
• Over 50 years old	head	•	•	•	8	4	2	2	0	2	0	0	0
• 30-50 years old	head	•	•	•	382	384	41	22	19	41	30	56	86
• Under 30 years old	head	•	•	•	381	425	806	456	605	1061	247	315	562
• Under 18 years old	head	•	•	•	0	0	0	0	0	0	0	0	0
Ratio of basic salary and remuneration	%	•	•	•	45%	55%	100%	41%	59%	100%	31%	69%	100%

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 which increase due to warehouse expansion to other warehouse building in Thailand. These workers work 8 hours a day and 6 day a week though the time they start and finish their works differ from Delta employees

3. Additional manpower in India resulting from R&D & operation expansion (<https://bit.ly/2HYhCqJ>).

4. Thailand higher turnover rate resulting from "Golden Hand Shake Program" for employees whose age is over 45 and work with Delta over 15 years. The program is voluntary without any quota of applicants.

5. Major employee-related information has collected from SAP system based on ISO 9001 standard.

6. Up to the reporting period, Delta has no indigenous worker, no incidents of violations involving rights of indigenous people happen in our operation.

5. Working hours

To establish a management mechanism for working hours in line with labor laws and regulations. In spite of operating under special conditions required, employees allowed at least one day off for every seven working days. Delta refer to [Responsible Business Alliance \(RBA\) code of conduct](#) which refer to [Thailand's Labor Protection Act B.E. 2541](#) to monitor its employee's working day, working hours, overtime and holiday. Annually, Delta's working hours and holidays had informed to its employees not less than 30 days before the next fiscal year. The working calendar had announce and be available on the company's [intranet site](#) for employee to plan their schedule.

In the reporting period, the company had studied its worker's working hour by using sampling check method. Delta employee had not required to work overtime on a working day and/or holidays unless the employee's prior consent is obtained on each occasion, exceed overtime had found. In spite of validity of employees' voluntary OT applications, their overtime records are not over 36 hours a week accordingly to Thailand's local regulation, Delta aim to align with RBA code of conduct regarding working hours by using following measures:

1. Before the working period, employees will raise their overtime requisition and/or RBA working hours waive request form through OA system. The forms must get approval by related supervisors, without the mentioned approval, the company will not responsible for their overtime pay and related supporting facilities.
2. Plant manager and operation vice president will have weekly OT summary from payroll system for workforce planning.
3. The company utilizes Delta Smart Manufacturing system and on-line application to shorten certain process while facilitating 24-hours operation run. Cloud-based real-time material stock balance check, auto component insertion,



cloud-based production process simulation; for instance, can help to release labor-intensive tasks and shorten the reporting line for smooth operation.

4. The company keep training its operation to have overall skills through their related process. With clusters of multi-skill operators, skilled workforces can replace each other.
5. In certain/ urgent condition that exact employees is required for overtime work, the supervisors/managers will consider skilled labor overtime record. If that operators' OT excess the OT limitation, other operator will be replace to have the job done.

6. Compensation and Benefits

According to the company's [Remuneration and Welfare Policy](#) which is in-line with [Thailand's National Wage Committee Notification on Minimum Wage Rate \(No.9\)](#) Delta Electronics (Thailand) Public Company Limited places great importance on the remuneration package of its employees to ensure reasonable remuneration based on individual performance and in line with the Company's operation performance.

Comparison of Delta Thailand employee's average base salary and Thailand's minimum wage

		
Daily-waged operators	1.21	1.40
Operative employees	1	1.04

• According to Thailand's Ministry of Labor's announcement No. 9 effective April 2019, minimum wage is 328 Thai baht per day x 30 days.

• Most of female employee in operative and management level are buyers, sales and business coordination while male are in engineering field.

Since the agreement signing day, all new employee will be informed about their role, working day, code of conduct, communication channel and their compensation and benefit by

access [Welcome onboard!](#), a guidebook for new employees and will be repeated on the Orientation day. In addition, the Company also places importance on remuneration by market benchmarking so that remuneration is fair within the organization and competitive with other companies. The Company has set the following guidelines:

1. Employment and Hiring shall be conducted with consideration for the necessity and appropriateness of a job. The hired employee must have the academic background, experience and ability to fit the position. He/she must also possess qualifications in accordance with the Company's rules and regulations;
2. Command line and job division: The Company shall organize a command line and job division so that a job's scope of responsibility and position are clear and suitable to the nature of the Company's business operation. The Company shall regularly review this part of its policy.
3. The Company manages remuneration, salary and wages fairly by taking into account factors such as qualifications, experience, job grade, position, responsibility and individual performance; when benchmarking with the salary rate of other companies with a similar business nature; the domestic wage rate, market conditions and demand and the Company's operation performance. In addition, the Company reviews the remuneration package in collaboration with labor unions every year.
4. Welfare: The Company has a policy to take care of its employees' health and working environment to ensure their performance and efficiency. The Company also has policy to lighten costs by providing welfare for the employees that is comparable with similar companies in the same industry or as prescribed by the laws. In addition, the welfare committee conducts monthly reviews of employee welfare.

Compensation and welfare for Delta Employees

	Employee benefit	Performance-based	Frequency					Eligible for			
			Daily	Monthly	Quarterly	Yearly	Irregularly	Daily employee	Staff	Management	Executive
Short-term	Diligent bonus ¹	●	●	●				▲	▲		
	Yearly diligent bonus ¹	●				●		▲	▲		
	Productivity achievement incentive	●		●				▲	▲	▲	
	Quarterly incentive	●			●			▲	▲		
	Language ability and experience surplus entry benefit ²						●	▲	▲	▲	▲
	Patent reward	●					●	▲	▲	▲	▲
	Overtime	●		●				▲	▲		
	Holiday pay and holiday overtime pay	●		●				▲	▲	▲	
	Year-end bonus	●				●		▲	▲	▲	▲
	Annual increment	●				●		▲	▲	▲	▲
	Night shift allowance		●	●				▲	▲	▲	
	Transportation		●					▲	▲	▲	▲
	Uniform and anti-static slippers					●		▲	▲	▲	
	Job-based personal protection equipment		●				●	▲	▲	▲	▲
	Annual checkup					●		▲	▲	▲	▲
	Employees life insurance					●		▲	▲	▲	
	Self medical fee subsidy					●		▲	▲	▲	▲
	Self dental fee subsidy					●		▲	▲	▲	▲
	Living cost subsidy (daily meal)		●					▲	▲	▲	
	Free drinking water *	●	●					▲	▲	▲	▲
	Family funeral support						●	▲	▲	▲	
	Cremetary fund for fatality at work						●	▲	▲	▲	▲
	Meal allowance for business trip						●	▲	▲	▲	▲

	Employee benefit	Performance-based	Frequency					Eligible for			
			Daily	Monthly	Quarterly	Yearly	Irregularly	Daily employee	Staff	Management	Executive
Short-term	Breastfeeding facilities		●					▲	▲	▲	▲
	Vacation leave					●		▲	▲	▲	▲
	Training and work-outside expense subsidy						●	▲	▲	▲	▲
	Maternity leave						●	▲	▲	▲	▲
	Graduation leave						●	▲	▲	▲	▲
	Meal allowance for business trip						●	▲	▲	▲	▲
	Free EV car charger *		●					▲	▲	▲	▲
	Dormitory for foreign staff			●				▲	▲	▲	
	Islamic prayer room		●					▲	▲	▲	▲
	Facilities for disables		●					▲	▲	▲	▲
	Friend for friend emergency support						●	▲	▲	▲	
	Annual recreation trip					●	●	▲	▲	▲	▲
	Free alternative language courses (English, Thai, Mandarin)					●	●	▲	▲	▲	▲
	Family education bursaries					●		▲	▲	▲	
	Medical fee subsidy for family *					●		▲	▲	▲	
Long-term	Dental fee subsidy for family *						●	▲	▲	▲	
	Education fee subsidy (for post-graduate degree) *					●		▲	▲	▲	
	Provident fund					●		▲	▲	▲	▲
	Social assurance			●				▲	▲	▲	▲
	Voluntary early retirement package	●				●		▲	▲	▲	▲
	20 years disciplinary reward (2018)*	●					●	▲	▲	▲	▲

Remark:

* Delta's new welfares introduced during 2016-2019. All Delta new employee will be notified

1. Managers and executive level's time records are not considered as compensation and benefit evaluation.

2. Included in salary base.

3. The stated benefits are not eligible for part-time employee

4. More information for long-term provision has published in our 2019 [Annual Report](#) page 151-152

5. The company consider setting up compensation schemes for management and other employees to provide long-term incentives when appropriate, such as employee stock ownership plan (ESOP). In 2010, Delta raised the proposal of employee's stock option plan as agenda item 2 into its 1/2010 [Extraordinary General Meeting of Shareholders](#). The proposed stock option is to create unity among directors and employees in many locations of the company and its subsidiaries as one team, one company. With the company's significant growth at that time, there will be many new businesses and new teams to add to create more value. As in the past 2 ESOP scheme in year 2000 (DELTA-W1) and year 2005 (DELTA-W2), providing directors and employees with additional incentives through the grant of warrants has been a proven effective tools in maintaining and promoting loyalty as well as improvement of personal competency for continued success and growth of the Company.

This agenda item must be approved with not less than three-fourths of the votes of the shareholders attending the meeting and having the right to vote. On the other hand, shareholders holding an aggregate number of shares exceeding 10 percent of the votes of shareholders attending the meeting must not oppose the offering of warrants to the directors and employees of the Company and its subsidiaries under ESOP 2010. Finally, the objection of this Agenda item was made by the amount of 117,875,122 votes, representing 10.74% of the total votes of the shareholders attending the meeting, this Agenda item was disapproved. However, due to the company's healthy growth, the company keep studying ESOP

In addition to public information available at <https://www.deltathailand.com/en/careers> , Delta employee

benefit has described in above table. 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 2016-2019 financial statement, the company's provision for long-term employee benefits is set at an average of 3% of consolidated revenue (7% of basic salary). To optimize benefit and maintain transparency, the jointly-establish fund has managed by TMB Bank Public Company Limited. (Find 2019 [Annual report](#) page 119 and 164). As at December 2019, the weighted average duration of the liability for long-term employee benefit of the company and its subsidiaries is 9-21 years (Delta Thailand only : 13 years)

7. Freedom of Association

To respect the rights of the employees to associate on a voluntary basis, Delta allow its global employees 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. In the reporting period, Delta supported various affinity groups activities ran by its employees. Sample of Delta affinity group's key activities happened in 2019.





Paint for Good Deed by OOm Plaeng group: OOm plang group founded by Delta's engineers and technicians since 2012. The name Oom Plaeng means "support the better change". When Delta brand has not renowned, the group leader was asked for help by a temple in his hometown to re-paint the building since the abbot misunderstanding that Delta is the brand of paint manufacturer company. However, this misunderstanding has guide the group to additional opportunity to bring up volunteer spirit among the members while maintain religious spirit in rural society.

After the first activity, the group had continuously helped to paint other temples. 60 members from manufacturing-orient functions pay their holidays in turn to paint over 10 temples a year. All the resources used by this activity are donated and voluntary supplies by the group's participant. To keep group's outstanding result and strong action, Delta partially support the paint expense and arrange free transportation to the group. In 2019, the group collaborate with Delta labor union to implement 5 renovation activities for rural communities' better quality of life.



Delta Credit Union Limited: To boost up Happy money, part of Happy workplace initiative, Delta supports credit union offices and related facilities since Delta Credit Union Limited's registration in [2011](#). The organization complies with The Coperative Act of Thailand B.E 2542. Since 2015, Delta Credit Union has recognized by the Cooperative Audit Department as TOP 10 co-op in central Thailand highest number of regular member records of 9,030 members in 2019.



Amateur Yogi at Delta India: The idea of an International Day of Yoga was first proposed by the current Prime Minister of India, Narendra Modi, during his speech at the

United Nations General Assembly (UNGA), on 27 September 2014. On 21 June 2019, Delta India employees of different religions and cultures organized its International Yoga Day activities.



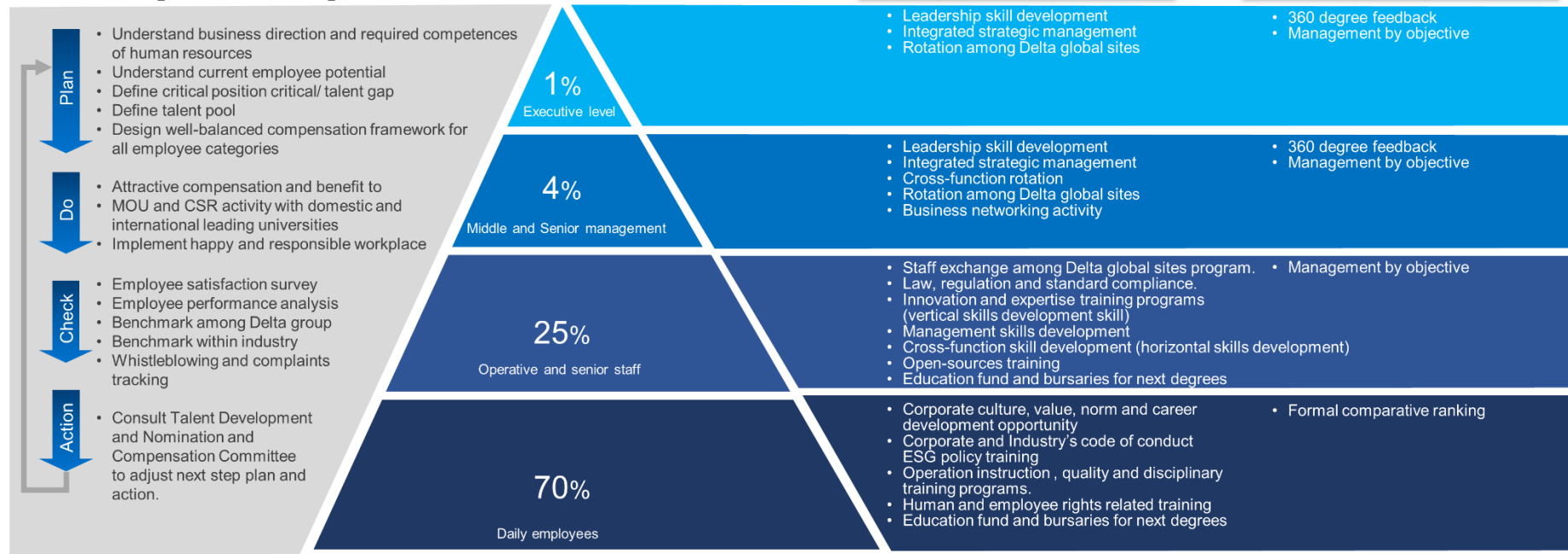
Athletic groups: Delta supports various athletic groups founded by its employee according to happy workplace and White factory guideline. Delta football, Volleyball, sepak takraw and running club has continuously supported by the company. The accomplishment of such support is only employees' health, but also the healthy relationship across the organization and industry. In 2018, Delta's male and female volleyball team won first prizes from Bangpoo Industry Society Leagues.

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. Since the company start its operation in Thailand, none of political parties are allowed to run their political or election campaign at any Delta operation site or on-line platform.

8. Training opportunity

To ensure equal opportunity for employee development and provide job-related training to enhance employee capabilities and skills. The company aligns its 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.

Human Capital Development Measures



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. According to level-based human development scheme 100% of our employee receiving regular performance and career development reviews annually.

Through my 28 years at Delta, half of a better career is from equal opportunity to learn, another half is your decision to take the opportunity and optimize the gained knowledge.



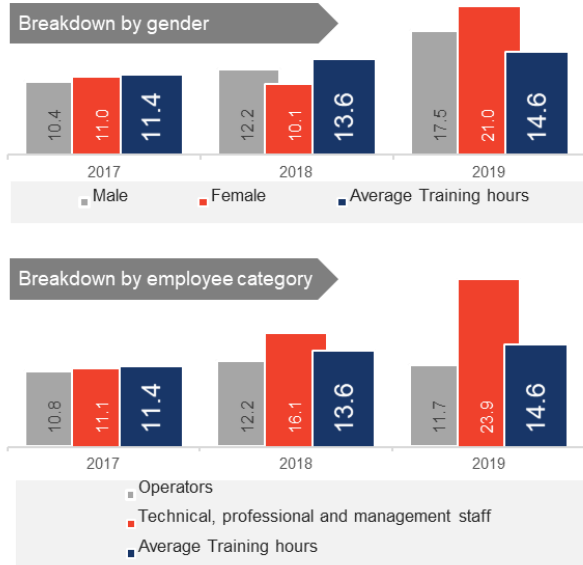
Ms. Kesnapa Pueng-U

Winner from "DETtalk", an employee's speak out program as part of our annual SDWeek



Average Training Hours

2019 result include verifiable training information from our subsidiary in India.



Orientation: B 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 value and sustainable development direction, environment and safety regulations, employees' rights, human rights, welfare and benefits, Information security measures, had included into the orientation program for 100% of new-hired employees. In 2019, 2,182 training hours of orientation had provided to Delta new employees.

Fundamental training:

This type of training regards to computer skills, language skills

and other interpersonal skills training to help employees perform in a decent manner.

Statutory training:

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

In 2019, 16,834 statutory training hours had recorded. Key courses related to this category of training included training of Labor Relation Act, Workmen's Compensation Act, Labor protection Act, Social Insurance Act and Responsible Business alliance Code of Conduct.

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.

In 2019, advance skill and training course such as statistical process control, why-why analysis and OHSAS18000 internal auditor courses had arranged to strengthen our expert in various functions.

Leadership competency-based training

Design for front-end Research and Development leaders, entry-level supervisor, middle and high level manager. Focus on corporate's strategic goals, core value and competency delivery aligned with Corporate Multi-language training programs is also delivered.

Self-learning and experience-based learning

To boost up expert and professional pools in various functions, Delta encourage our employees to attend advanced or continuing studies, provide a sponsorship and flexible working hour program for employees. Delta leverage Corporate 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. Travel fare, accommodation expenses and meal allowance for supporting employee's domestic and oversea learning for each level of employees had clearly announced and available on Delta's intranet. With IT security practice, internet access authority had granted to Delta's talent and specialists when specific on-line learning channels required.



Training opportunity with leading international organization

On 25 October 2019, Delta joined hands with the International Labor Organization (ILO) to implement MOU of "Women in STEM workforce readiness and development programme".



ILO addressed that the automotive and ICT, IT-BPO, and electrical and electronics sectors are identified as high-growth in Indonesia, the Philippines and Thailand respectively, presenting significant projected skills gaps and opportunities for growth for women over the next decade. These sectors are rapidly evolving and becoming more innovative, requiring critical soft and technical STEM-related skills.



As a result, low skilled-jobs are declining and traditional blue-collar jobs are shifting to more skilled occupations. Therefore, the programme aims to improve enterprises' productivity along with career prospects of women in STEM sectors. In turn, productivity

is a key source of improved living standards for women and also a major contributor to economic growth.

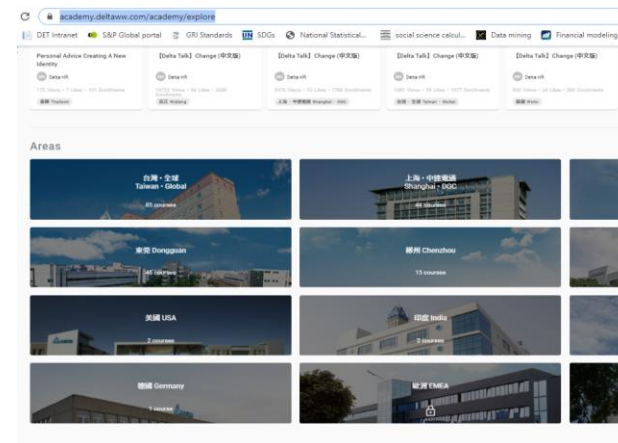
The second phase of MOU aims to upgrade woman employee's soft and technical STEM-related skills. This stage of training will enable opportunity for those who are already in employment but in low-skilled jobs with limited mobility to expand their career. The course comprised of High-end technical skills, or leadership and managerial training for those who are already in supervisory or mid-skilled positions.

E-learning platform utilization

In 2019, Delta benchmark its average training our to global technologies companies. To reach industry's average standard of average training hours, Sustainable Development Committee has proposed related parties to target to 40 average training hours per employee by 2025.

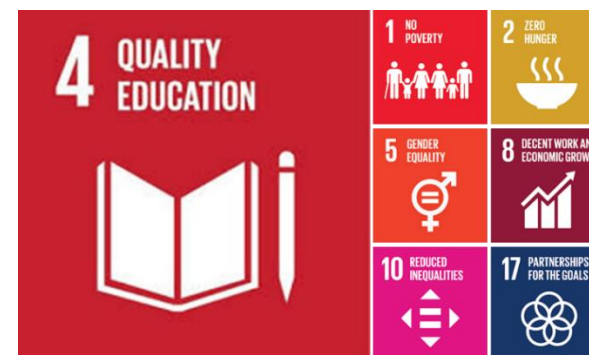
In addition to the variety of training course, Delta utilize its IT platform as the key tools to reach the set target. We synergizing global sites' best practices, knowhow and lesson learned and share on e-learning platform called "Delta Academy". 448 training medias had prepared in English, Chinese, German, Slovak, Thai and Japanese to ensure Delta's global employees understanding on the practices shared.

Delta also constructed an internal Delta Management System (DMS) for storing data in the traditional sense and integrating functions for smart search, document management, and expert communities. It greatly increases the internal knowledge management, promotes inter-department information exchanges, and optimizes internal communication channels. The DMS accumulated 166,198 records of knowledge documents in 2019 which is a 103% growth over the previous year. The number of users steadily grew and the number of users in December 2019 increased by 245% from January of the same year.



The number of active social groups was 701 which is a 166% increase from the previous year. To encourage employees to use the DMS platform, we organized the "Gems Hunt" event for connecting employees through "use", "question", "sharing", and "approval" gems that reward employees for their use of the DMS platform. We then used the gems to analyze user behavior and promote platform optimization.

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.



9. Health and Safety

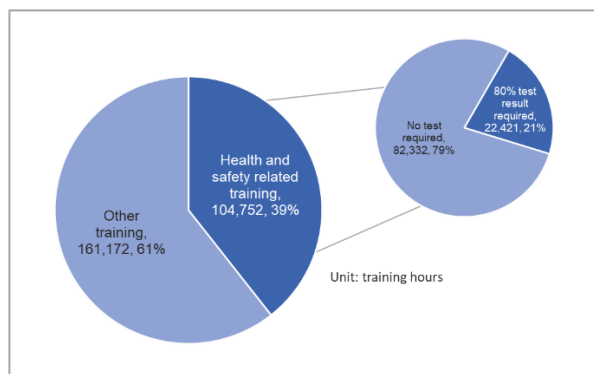
To provide a safe and healthy working environment that is in accordance to the required safety and health regulations. Furthermore, we strive to establish and maintain an occupational health and safety management system that defines operational procedures and monitors the implementation of continuous improvements in the safety and health performance. The company organizes internal occupational safety health and environment inspections carried out at each plant in accordance with the [Ministerial Regulation on the Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment B.E. 2549 \(A.D.2006\)](#) which in-line with [ILO's Code of Practice on Recording and Notification of Occupational Accidents and Diseases \(Code of Practice\)](#). Delta also organize cross-site audits conducted jointly by the OSH committee members and audit personnel accordingly to formal agreement. 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, has implemented as due diligence to ensure OHSAS 18001 management system fulfilled.

	Daily	Weekly	Monthly	Yearly	Irregularly
Safety	<ul style="list-style-type: none"> Morning talk (in production line) Stationary 6S audit ESD discharge before operation process Machine and working area safety inspection Forklift and its route inspection Personal protection equipment inspection Sub-contractor's work permit review Security personnel meeting 	<ul style="list-style-type: none"> Facility team (+6S team) meeting Operation weekly meeting 	<ul style="list-style-type: none"> New staff orientation First aid kits, medicine and stretcher inspection Eye-wash basin at chemical storage inspection Risky workstation and injury rate review ESHMR Meeting 	<ul style="list-style-type: none"> Stakeholder engagement (labor union meeting, safety week, safety home trip activity, community interview, regulator activity participation, occupational and executive safety personnels training, supplier safety audit, sub-contractor training) OHSAS18001 standard compliance review Building and alarm system inspection Fire drill and evacuation rehearsal Emerging risk, risky workstation and injury rate review Radiation inspection Work environment inspection Transportation condition inspection 	<ul style="list-style-type: none"> New employee health check Civil construction approval process Sub-contract work permit sampling check Emergency case meeting
Health	<ul style="list-style-type: none"> Drinking water quality inspection Canteen, food and cooking areas hygiene inspection Clinic and ambulance readiness inspection Breastfeeding corner inspection 	<ul style="list-style-type: none"> OHSAS team meeting Operation weekly meeting 	<ul style="list-style-type: none"> New staff orientation Emergency route and related facilities inspection Quality pregnancy knowledge training Pest control inspection Injury and disease rate review ESHMR Meeting 	<ul style="list-style-type: none"> Stakeholder engagement (safety week, injury case interview, regulator activity participation, supplier health and welfare audit) OHSAS18001 standard compliance review Influenza and cervical cancer voluntary checkup Injury and disease rate review General, emerging risk and risky group health checkup Social security rights training 	<ul style="list-style-type: none"> Non communicating and emerging diseases training
Environment	<ul style="list-style-type: none"> Incoming hazardous substance inspection Chemical storage inspection AHU system inspection Air pollution and related factor inspection* Scrap room inspection Waste and effluence record 	<ul style="list-style-type: none"> Environment team meeting Operation weekly meeting 	<ul style="list-style-type: none"> New staff orientation Stationary 6S audit Chemical spill inspection Energy, water and waste management performance review ESHMR Meeting 	<ul style="list-style-type: none"> Transportation condition inspection Energy, water, waste, effluence and GHG management performance review Supplier natural resource and environment management audit Chemical spill case summary ISO14064 and 14001 compliance review 	<ul style="list-style-type: none"> Stakeholder engagement (education week, community interview, regulator activity participation)
Reporting line / communication channels	<ul style="list-style-type: none"> Supervisor Related -department manager 	<ul style="list-style-type: none"> Department managers 	<ul style="list-style-type: none"> Plant manager EHSMR committee Operation vice president 	<ul style="list-style-type: none"> Labor union Related department managers EHSMR committee Sustainable development committee Regulator and public 	<ul style="list-style-type: none"> Sustainable development committee Regulator and public

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

SHE Compliance

The Company complies with [Ministerial Regulation on the Prescribing of Standard for Administration and Management of Occupational Safety, Health and Environment B.E. 2549 \(A.D.2006\)](#), Environment Management standard ([ISO14001](#)), occupational health and safety standards ([OHSAS18001 in the reporting period](#)), standards of the industrial sector ([Responsible Business Alliance-RBA](#)) and its risk management result by ensuring the safety and health standards of food, water and overall employee well-being at the workplace. 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.



Delta provided various occupational health services and welfare to ensure its workers safety and healthiness. Majorly, these occupational health services can be categorize to preventive service and corrective service. Sample of these services include

- Preventive: free annual health check, free risky group health check, health and safety training, free personal protective equipments, professional safety officers, fire distinguisher and emergency route inspection, safety room for chemical storage, dental expense subsidy, safety and emergency case training up to employees' exposure to risk, first aid kits, nursing room, on-site ambulance and free on-site doctor 4 days a week.
- Corrective: work accident leave without effect to diligence and annual bonus, social security assurance, medical expense subsidy, group life insurance and crementary fund.

These services are not only available for our employees but also cover sub-contractors who gain the company's work permit and other worker up to the case.



11,538 employees in plants of Delta Thailand (100% of Delta global manufacturing workforce) and sub-contract

worker is controlled by the organization that are represented by formal joint management worker and Environment Health and Safety Management Representatives (EHSMR) Committee. In 2019, this exclusive committee consisting of 106 employer, employee and labor union representatives shall be established and measures implemented for the prevention, investigation, audit and management of emergencies, work-related accidents, illnesses or injuries. The committee will also implement safety procedures for risk-exposure processes, machinery and labor-intensive tasks. The EHSMR committee report to Chief Operation Officer monthly. Annually, they report key activities and performance to Sustainable Development Committee.

Promotion of worker's health

To ensure workers' long-term healthiness and well-being Delta also offer voluntary health promotion services and programs to workers. Thai girl red check project; for instance, is the we participate to address major non-work-related health risks, including the specific health risks for female workers who are our major drivers of our productivities.

Delta in collaboration with Thailand's Department of Health to ands out Prenatal Vitamins to its female employees who plan to have kid. Due to demographic change and technology market demand ramp up, female worker in the industry exposure to risk of inequality pregnancy. It is broadly forecasted that Thailand's population grew only 0.4% in 2015, down from 2.7% in 1970. If this trend continues, the annual population growth will be down to 0% in 10 years. This situation should be worsen with inequality pregnancy.

The project actually surplus value chain of Delta's existing "Quality pregnancy" and "Breastfeeding project". Delta female workers at the age 20-34 year who plan to have kid will be trained and followed up to have proper nutrition. Weekly, these applicants will get fero-folic vitamin tablets. The fero-folic supplements help on prevention and treatment of iron deficiency anaemia and to supply a maintenance dosage of folic acid.



Furtherly, Delta keeps providing free service to prevent emerging communicating and non-communicating disease for its employees. Annual voluntary cervical cancer, HIV and tuberculosis free checkup; for instance, helps our employees to ensure their health without extra expense. Result of these checkup will be kept by specific HRA officer to safeguard employee's privacy. To voluntarily promote long-term well-being of employees, Delta relentlessly carry out its [Happy Workplace policy](#) accordingly to Office of the Health Promotion Foundation (Thai Health Promotion Foundation)'s Happy 8 guideline.

The Company has safety officer in professional level who had trained in human rights policy and procedure to tracked injury frequency rate (IFR.) 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. In spite of no recordable work-related disability and work-related fatality had report of our employees, subcontractors and other workers in 2015-2019, Delta strives to reduce accidents to zero to meet our "Zero Accident" target in 2023. The annual industrial safety management goal of 2019 in Thailand, was Injury Frequency Rate < 0.5 and Injury Severity Rate (I.S.R)) < 6. The results for 2019 were I.F.R = 0.15 and I.S.R = 4.07 where standard target had met.

At the monthly interplant safety and health meetings, representatives from each plant discuss incidents related to employees, 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 2019.

In 2019, the total recordable injury rate (including minor injury and fatality) was 0.51 cases per 1 million working hours. There were 70 injury cases occurred to our employees in 2019, increase from 55 cases in 2018. 57 of these cases are recordable injury which require beyond-first-aid treatment, 40 cases caused less than 3 days of work loss, 2 cases led to work loss of over 3 days and another 2 case of Delta female operators and 1 sub-contractors faced machine clamping and knife injury respectively but not lost any body part . For the mentioned cases, Delta fully take responsibility in this operator's medical expense and his legal process as remedy action. Finally, the operator had received lost working day compensation from the Social Security Office accordingly.

2019 Work-related injuries

Delta Thailand Employees



29,004,074



Working hours in 2019

Other workers
at our workplace



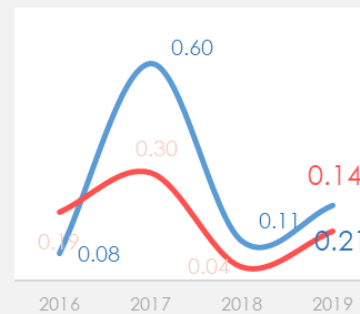
4,897,001



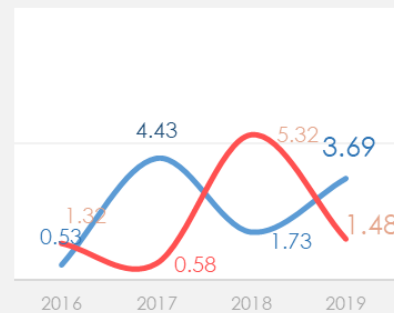
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No fatalities
and work-related
illness
since we start
collecting data
For public
disclosure
in 2015

Injury Frequency Rate
(I.F.R)



Injury Severity Rate (I.S.R)



Delta employees 'High-consequence work-related injuries

Being hit by falling objects	Chemicals	
Case Rate 24 0.82	Case Rate 5 0.17	Case Rate 1 0.03
electrocute	Knife injury	Walk in to machine
Case Rate 1 0.03	Case Rate 10 0.34	Case Rate 8 0.27
Slip, trip fall		Others
Case Rate 5 0.17	Case Rate 3 0.10	Case Rate 13 0.44

1. Delta employees injury rate calculated based on 1,000,000 working hours
2. In 2019 there were 2 cases of male subcontractor's slip, trip fall which account for 0.9 IFR rate (calculated based on 200,000 hours work)
3. Majorly, other accident had been resolved at first-aid stage, they were not counted as recordable injury

The number of severe injuries cases (with work absence of 3 scheduled work days or more) declined by 25% or represented only 0.43% of total employees. No occupational disease and fatality cases at work were recorded for Delta employees, subcontractors and other related workers.

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

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.

Due to Zero accident target and 2015-2019 collective statistics, electrocuted and fire and heat injury had successfully eliminated in 2019. Most significant risks for Delta employees, subcontractors and workers were 2

major causes; working with machine and knife instruments. To relief these man-made failures, Delta embed following measures into its routine operation.

1. Training: In 2019, Occupational safety and health and work instruction trainings was 46% of our total training hours. 65,177 OSH-related training hours had provided to our employees which 4,399 hours increased from 60,778 in 2017 and 11,584 hours in 2016. 20:80 is the ratio of work instruction and specific training hours recorded. The company realized that the higher injury severity rate caused by machinery-related activity. Hence, intensive courses of work instruction; for instance, 8,671 hours of training coursed of overhead crane operation, Print circuit board cutting machine operation, trimming and stamping machine operation had organized 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.
2. Improper work place and process management: 6S audit, workstation safety, personal protection equipment and operator's readiness checkup has carried out daily in operation morning talk. 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.

3. Digitalization and automation process implementation: According to the injury cases caused by foot-pedal machine, Delta gradually replace this manual process by using its knowhow in automation to safeguard its employee. Meanwhile we re-skill the material stamping operators to be the controllers of these automation process. EHSMR committee, Delta Smart Manufacturing Committee and Sustainable team has assigned to follow up the improvement of injury statistics resulting form this investment.

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 2019. In parallel, the company's Happy Workplace activities and other affinity groups activities help to release the operators' stress. The result of these activities reflect in better trend of reported case.

Emergency and Recovery 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. According to the company's public [Human Right policy](#), 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.

2018-2019 Emerging issue

According to Delta's [Environment, Safety and Health Policy](#), Delta commit to identifies and manages environmental, safety and health risks to create a work environment that promotes personnel health and prevents occupational injuries and disease. In spite of our serious action to control on its emission discharged to mitigate global warming and rapid urbanization, Delta experienced the rising PM2.5 pollution situation in Bangkok since 2018. The SMOG pollution possibly impact to our employees' health and safety which could be able to

Emergency Preparedness and Response: Particulate Matter 2.5

PM 2.5 Level	Impact	Measurement	Responsible
Good (00 – 50 $\mu\text{g} : \text{m}^3$)	<ul style="list-style-type: none"> Air quality is considered satisfactory, and air pollution poses little or no risk 	<ul style="list-style-type: none"> Daily Investigation via government/ public organization's on-line platforms N95 Mask sourcing Air quality and related factor watching up and update to on-site stakeholders via digital signage board daily. 	Environment, OHSAS, Facility, Purchasing
Moderate (51 – 100 $\mu\text{g} : \text{m}^3$)	<ul style="list-style-type: none"> Air quality is acceptable; however, for some people there may be a moderate health concern. 	<ul style="list-style-type: none"> Daily Investigation via government/ public organization's on-line platforms N95 Mask supply Air quality and related factor watching up Spare N95 mask @ Clinic and open-space eg. warehouse, guard houses, solar roof operation team. 	Environment, OHSAS, Purchasing, Operation
Unhealthy for sensitivity group (101 – 150 $\mu\text{g} : \text{m}^3$)	<ul style="list-style-type: none"> Members of sensitive groups may experience health effects. The general public is not likely to be effected. 	<ul style="list-style-type: none"> Distribute N95 or higher series of pollution mask when requested. Training all employee of how to apply nearby stuff to make emergency mask Inform place for medical inspection and medical treatment. Announce employee's right of taking vacation leave. Factory clinic to prepare necessary facilities for first aid and medical treatment 	Environment, OHSAS, Facility, Corporate Communication, HRA, Operation
Unhealthy (151 – 200 $\mu\text{g} : \text{m}^3$)	<ul style="list-style-type: none"> Everyone may start experiencing health effects; member of sensitive group may experience more serious effects. 	<ul style="list-style-type: none"> Same evacuation plan and route as fire drill rehearsal to be reminded to all employee. EHSMT meeting to get approval of reporting plan and announcement rehearsal All plant managers and support function managers to download application air4thai to closely monitor pollution situation hour by hour 	Environment, OHSAS, HRA, Operation
Very unhealthy (201 – 300 $\mu\text{g} : \text{m}^3$)	<ul style="list-style-type: none"> Health warning of emergency conditions. The entire population is more likely to be affected. 	<ul style="list-style-type: none"> Standby personnels, facilities and transportation for evacuation plan Announce employee's right of taking vacation leave. Announce whistleblow policy and communication channel in let employee complain if their supervisor doesn't approve their leave according to pollution concern. 	Environment, OHSAS, HRA, All function
Hazardous (301 – 500 $\mu\text{g} : \text{m}^3$)	<ul style="list-style-type: none"> Health alert: everyone experience more serious health effects 	<ul style="list-style-type: none"> Announce offtday to related stakeholder and inform communication channels. Immigrate employees, workers on site stakeholders through the same route and assemble points as fire drill evacuation plan. Communicate DET offtday with suppliers and customers. Announce recovery plan 	Environment, OHSAS, All function

enlarge to our productivity, on-time delivery and even our recognition.

In parallel with emergency preparedness and response plan, Delta implements business recovery plan for business continuity. Though the pollution issue in 2018 pass without any impact to our employee's health nor Delta's operation, the company prepares 5-year roadmap to prepare the organization to be ready for such issue. This roadmap includes focusing on science-based study, disseminating eco-efficient practice to the company's stakeholders, setting routine environment-related inspection and additional performance indication to be report in Sustainable Development Committee. From the SMOG pollution issue, Delta found new business opportunity "[Uno](#)", air quality sensor, which response to social emergency needs. The emerged climate change impact leads to change in demographic behavior and new

business segment for Delta. Instead of wearing protecting mask when the pollution matter, citizen in metropolitan and manufacturing intensity area require their health security. By close monitoring to pollution-related factors such as humidity, temperature, total volatile organic compounds and quantity of PM 2.5; user will be able to forecast pollution situation in their area leading to proper preparation to save themselves.

For additional information, suggestion and complaints on environment, health and safety issue; our Environment, health and safety team is ready to help at White boxes in canteen, office and production line; email OHS@deltathailand.com and HR.grivience@deltaww.com.



From eco-efficient operation to eco-friendly lifestyle

Eco-friendly habit cultivation

Delta [corporate social responsibility commitment](#) does not mean only natural resources saving in our operation process, but also our the devotion to the progress of human culture and technology, the development of society and the economy, as well as the sustainable development of the Earth and its environment.

From manufacturing-based practices, the result of our sustainable practice had embedded into every single actions at Delta in both organization and individual level.

1. Eco-friendly work environment

Delta's work environment and facilities are not only managed for employee's safety, health and well-being, we also manage our work environment to minimize waste and pollution which may occur from our daily personal life too.

Green purchasing products and services that cause minimal adverse environmental impacts. It incorporates human health and environmental concerns into the search for high quality products and services at competitive prices. In 2019, 68% of 194 million baht of our spending solar power and burn in recycling system, 20% was spent for energy star computing devices and testing equipment, 11% spent for high efficiency chiller while another 9% had spent for paper from responsible sources and process, green printing ink, eco-friendly cleaning agent and LED lighting.



Delta HQ (LEED Green Building) invested over 10M Baht to renovate the lobby with the objectives to create an environment to remind our employees about energy and environmental conservations and encourage communications and collaborations. The highly connected lobby provide USB charging points, vertical gardens, ample comfortable discussion areas and demonstrations of Delta energy management.

In addition to greener environment, Delta applied its high-efficiency renewable energy, surveillance, networking, display and automation products and solutions to this co-working space to showcase our visitor. To trim down digital divide , free wifi is accessible for all employee and visitor by simply applying OTP for security protection.

2. Extension of stuff useful life

Next to transparency, eco-efficient lifestyle turns to be everyone's norm at Delta. We realized decline trend of cash donation request to SD Committee while the trend of circular economy initiative to optimize stuff usage was higher. Various activities had initiated and run by our employees while SD committee and the company played supporting role for sundry facilitations backup. Following are sample of key activities to extend usage of stuff in collaborative manner.

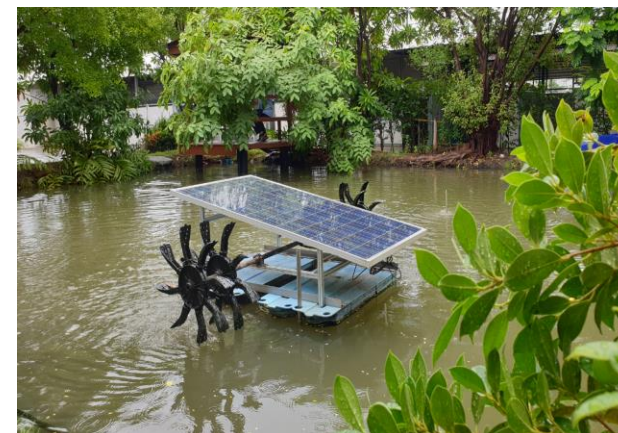


February 26, 2020- Delta Electronics (Thailand) PCL. visited the Bangkok School for the Blind in Rajavithi, Thailand to deliver used calendars donated by Delta employees for reuse as braille books. Mr. Thanayot Samanvorakij, Delta Component Senior Engineer, represented the Delta volunteers to distribute approximately 500 donated calendars to over 150 students at the school. Ms. Jittama Loysanguan, Educational Technology Center for the Blind Public Relations Officer, represented the school to receive the used calendars for printing Thai braille encyclopedias. The Educational Technology Center for the Blind produces a variety of media for distribution to 293 Centers for the Blind in Thailand.



May 21, 2019 - Delta Electronics (Thailand) PCL. in collaboration with its labor unions donated 0-net-book asset for improve science lab at the Chumchon Wat Rat Bumroong School. To promote student's interest in science, Delta also provided volunteer labor and materials to paint and renovate the lab environment. Founded in 1933, the public school is an local educational institution in Samutprakarn province that offers kindergarten school and primary school education to 500 students.

3. Regeneration of natural systems



In addition to well-managed integrative process, location and transporation, water efficiency, energy and atmosphere, material and resources, indoor environment quality, innovation and regional priority, Sustainable site is another significant factor that drive Delta to the first manufacturing factory with LEED EBOM certified From LEED standard, Delta had learned importance of native plants that provide shelter and food. On the other hand, native plants are the determining factor for what local birds, insects, and animals can live within the community. During 2017-2019, Delta replaced its ornament plants by

local plants. Turf area had limited to 25% of the total vegetated onsite area.

Though the company does not use water as its manufacturing factor, our awareness of water conservation had raised frequently by our investors. In 2018, the company had consolidated information about the [rivers near Delta's major operation sites](#). This information is presented without any right of ownership. All the information in this booklet is from Wikipedia, the world's largest free online encyclopedia, to be used as reference for the Delta Group's sustainable development study and performance improvement on natural resource management tracking.



Since Delta's headquarter is based in Samutprakarn, one of the coastal provinces located along the Gulf of Thailand. We are well aware that mangrove forests are highly diverse coastal ecosystems that play a crucial role as a nursery for marine life, thus ensuring bountiful fishing in the future. Without waste water from our production process discharged to public water basin and well-control of emission, the company collaborate with

Bangpoo Industrial Estate to reforest Bangpoo coastal mangrove forest yearly.

In 2019, 62 Delta employees joined 1,500 participants to reforest *Avicennia alba* at Bangpoo Recreation Center. Bangpoo Industrial Estate organize this activity annually to sustain coastal ecosystem and biodiversity with collaboration from business and local communities.

4. Sharing best practices

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.

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, since 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. ESG stories, business move, events and CSR activities can be access easily by our internal and external stakeholders. From 1 January to 31 December 2018), our [facebook](#) posts reached 15,055 organic reaches by our employee and stakeholders.



Well-being through Lifetime learning

45 weeks ago · 4.3K Views



I, YOU, THEY or WE
45 weeks ago · 3.8K Views
323



A Greater me
45 weeks ago · 2.3K Views
156

In addition to one-way communication, periodical face-to-face activities like Safety Week and SD week had organized more frequent. In 2019, SD team initiate DETalk activity to encourage our employee to share their simple ideas for a better tomorrow to their friends. The 3 finalists did their speech in person for the judge panels ad 60 on-site audiences on 25 October 2019 at DET5 conference hall. The speech time limit was 10-15 minutes. There are no restrictions for media or presentation methods during the speech.

To amplify the impact of the speaker's first-hand experiences, videos of the finalists had posted on the Delta Thailand Facebook account. The clip's number of Likes (1 point) and Shares (5 points) will be included with the judges' final score. The 5 videos had published on Delta Thailand's Facebook had reached 10,400 times, 3,057 engagement, 9,87 shares and 872 likes in 2 days.



The same communication theme had applied to digital sustainable development (SD) panels located at various path to work stations. In addition to Delta friends' SD-related practices and performances, digital SD panel had utilized for sharing the others' responsible practices both in domestic and international level. Videos of global eco-friendly movements, social actions and simple method to reduce environmental footprints had inspired non-computer-user employees.

With NovoDS Studio, Delta's own cloud-based digital signage solutions, non-computer-user employees can learn of global eco-friendly milestones, best practices and tons of how-to available on open sources. Stories of electronic waste recycling, PM 2.5 cause and effects, design for the dump, importance of renewable energy and waste categorization; for instance, had shared through the platform to raise operators' awareness without any violation to any intellectual properties.

To boost up non-office employee's participation, Delta separate CSR board from general announcement boards in 2018. With classy design, proper locations including photos with simple captions; latest activity, statistics, awards, projects, global CSR trend and simple but effective practices had communicate to all level of passerby. Our employees are encouraged to suggest and report their activities by using this channel.



Employee Retention



According to Delta's fair [employment policy](#), [happy workplace policy](#) and various program to ensure our skilled personnel with eco-efficient awareness will be with us in long term, Delta organize the first Global Employee Engagement Survey in 2018. With 100% coverage, the standard method survey had conducted by renowned external consultancy to provide independent and fair analysis.

From basic survey regarding Delta Thailand's employees' satisfaction on their work environment infrastructure which cover 28% of global employee in 2014 and 70 since 2016, Delta expand the survey coverage to its subsidiary in Slovakia, India and South East Asia business units to meet 100% coverage since 2018.

The objective of the survey had adjusted to realize its employees' understanding in the company and employee's value, ideals and team-work which reflect their willingness to stay with us in long-term. For timely response to employee's expectation, Delta plan to conduct this survey every 2 year to retain our healthy

retention rate. From our latest study employee retention rate is significantly relative to the company's strong return of human capital rate at 6.5 in average in past 3 years.



In 2018, 1,935 employees or 50% of Delta Thailand's global staff had actively engaged. Ratio of male to female of participant were 70:30 accordingly to staff's gender diversity proportion. These staffs' year of service had considered as selection criterion as well. 1,238 employee's feedbacks corresponded to 64% response rate which was in line with participation rate of large enterprises based on the standards of the consultancy company's advice to the analysis.

From 4 point scale plus 1 NA scoring system, Top 3 most favorable and least favorable areas including in-depth analysis had reported to the CEO, Sustainable Development Committee. Thereafter, the result had discussed and followed up closely by Delta's executives.

In spite of competitive turnover rate compared to industry peers at 5.3 in 2019, Delta keeps monitoring the reason why our employees made their decision to go.



In 2019, 100% of leavers are voluntary turnover. As every single reason of leaving does matter for effective management of human resources, 2019 exit interview information had collected accordingly. When over 50 years-old retired leavers and headcount of dismissal for disciplinary reasons is not considered. From exit interview and questionnaire, in 2019, It is found that 30% of our employees enjoy the company's fair early retirement program. Another 24% found their potential from gained knowledge and experiences, they challenges themselves with new career and their own business. 19% of leavers made decision to back to hometown and take care of their family, 21% continue their study for higher degree, 3% of this group of leavers need time for taking care of their health issues while another 3% reserved their right to refuse to answer the exit questionnaire.

Inclusive well-being

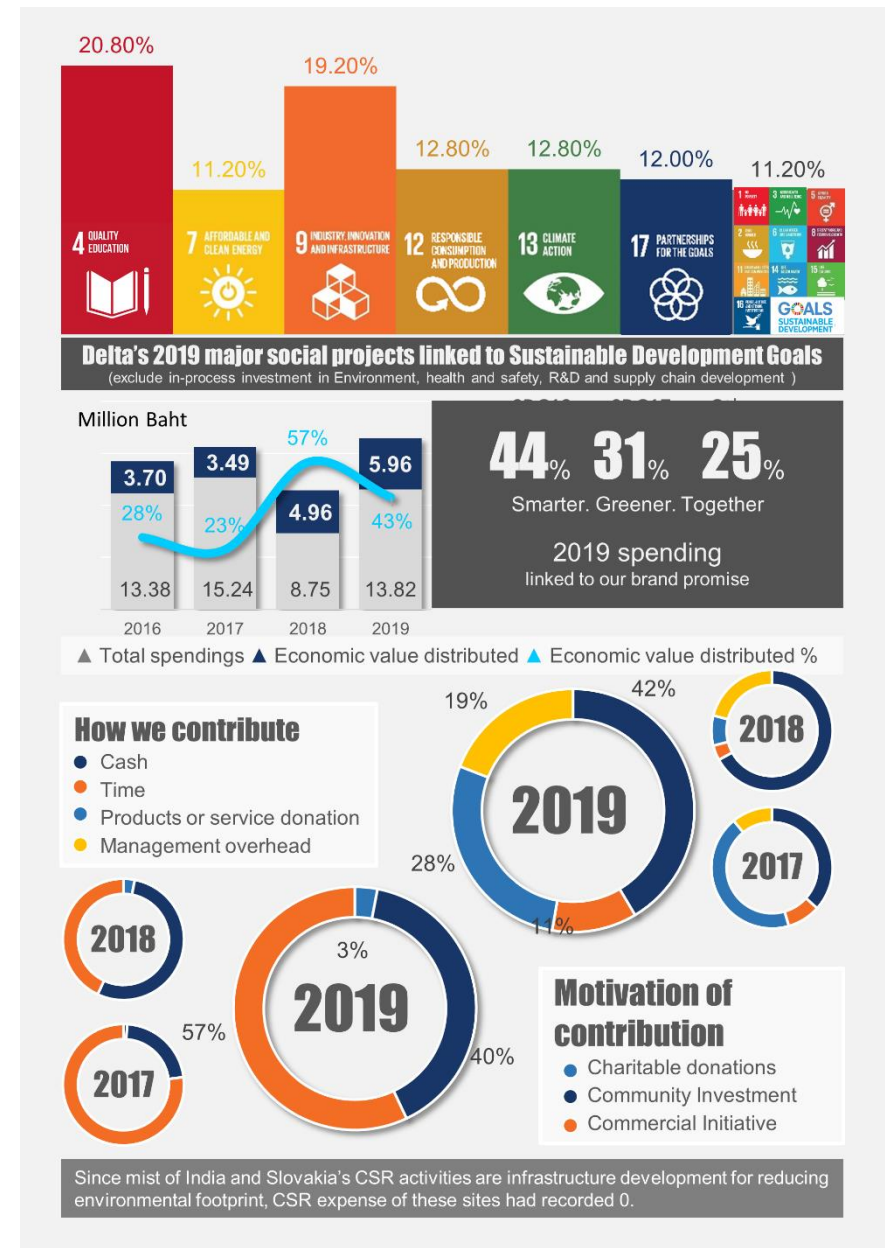
Delta Thailand, as an active corporate citizen, carries specialism of making smarter and greener life on its social responsibilities through various CSR activities, projects, and programs which our catering to the needs of its stakeholders. In addition to continuous effort to take care of its customers, 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.

Since 2018, Delta management and SD team have realized that the years of efforts invested in SD have reached a milestone especially with the recognition by Dowjone Sustainability Indices' outstanding 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.

To amplify our effort to **mitigate** global agenda of **climate change**, Delta disseminate its innovation to and eco-efficient operation expertise to navigate greener communities by make it ; 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.

Quality education, affordable and clean energy, industry innovation and infrastructure, responsible consumption and production and partnership to sustainability had taken as our prioritized goals based on our core competence. In 2019 Delta Thailand contributed approximately 13.82 million Baht which increased from 8.75 million Baht in 2018 as measured by the London Benchmarking Group (LBG) guidelines.

43% 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 41.5% cash donations, (charitable and other donations), and 58.5% non-cash donations, (which include employee time, in kind donations, and certain management costs). Full list of our 2019 philanthropic programs is available at <https://bit.ly/2lmbW44>



Participation and Membership

Delta Thailand's total contributions and spending for association memberships in 2019 was 167,100 Thai Baht increasing 3% compared with 2018. Major purpose of these spending is to exchange and advocate emerging trend, climate change and innovation issues and sustainable development matter. 26% of the spending goes to business related associations while 74% goes to governance, leadership enhancement and sustainable development related associations. None of these spending had paid for politic and tax exemption purpose.

By types of spending, 10% had paid for life time membership (one time cost), 90% for routine membership fee. The company hadn't sponsor any membership-related activity in 2019. By organization-level role, 85% of these spending was for maintaining Delta's member level while another 15% of the membership fees enhance the company's role as the committee of the joined associations. Delta's major role and responsibility as the committee of these network is to provide its point of view and engage industry partners to boost up knowledge sharing among the industry.

Item	Organization / Network	Organizational level role			Membership purpose				Type of spending				Contribution and other Spendings (Thai Baht)					
		Management	Committee	Member	Business	Politics	Tax exemption	Governance and leadership related	One time membership fee	Routine membership due	Activity sponsorship	Others	2019	2018	2017	2016	2015	2014
1	Bangpoo Industrial Society	-	-	•	-	-	-	•	-	•	-	-	1,000	1,000	1,000	-	-	-
2	CONNEX ED	-	-	•	-	-	-	•	-	-	-	-	-	-	-	-	-	-
3	Electricity Vehicle Association of Thailand	-	-	•	•	-	-	•	-	•	-	-	10,000	10,000	10,000	-	-	-
4	Happy Workplace Network	-	-	•	-	-	-	•	-	-	-	-	-	-	-	-	-	-
5	Safety and Health at Work Promotion Association (Thailand)	-	-	•	-	-	-	•	-	•	-	-	2,500	2,500	2,500	2,500	2,500	2,500
6	SDG-Friendly Business	-	-	•	-	-	-	•	-	-	-	-	-	-	-	-	-	-
7	Sustainability Disclosure Community	-	-	•	-	-	-	•	-	-	-	-	-	-	-	-	-	-
8	Thai Auto-part Manufacturers Association	-	-	•	•	-	-	•	-	•	-	-	50,000	-	-	-	-	-
9	Thai Automotive Institute	-	-	•	•	-	-	•	-	-	-	-	-	100,000	-	-	-	-
10	Thai Breastfeeding Center Foundation	-	-	•	-	-	-	•	-	-	-	-	-	-	-	-	-	-
11	Thai Chamber of Commerce	-	-	•	-	-	-	•	-	•	-	-	24,610	24,610	24,610	24,610	24,610	24,610
12	Thai Institute of Directors	-	-	•	-	-	-	•	-	•	-	-	17,000	12,000	12,000	12,000	12,000	12,000
13	Thai IoT Association	-	-	•	•	-	-	•	•	•	-	-	50,000	-	-	-	-	-
14	Thai Listed Company Association	-	-	•	-	-	-	•	-	•	-	-	7,000	7,000	7,000	7,000	7,000	7,000
15	Thai Photovoltaic Association	-	-	•	•	-	-	•	-	•	-	-	5,000	5,000	5,000	-	-	-
16	Thailand Responsible Business Network	-	-	•	-	-	-	•	-	-	-	-	-	-	-	-	-	-
17	Thailand's productivity Institute	-	-	•	•	-	-	•	-	-	-	-	-	-	-	-	-	-
Total contributions and other spending		0	0	17	6	0	0	17	1	9	0	0	167,110	162,110	62,110	46,110	46,110	46,110

1. The expenses reported above are annual member fees compiled from the company's recorded in SAP system as

- a) due and member fee expense
- b) CSR support / donation
- c) other related activities expense as remark in expense reimbursement form with official invoice and receipt attached

2. Delta monitors and feedbacks these expense to cost center owner on monthly basis. Annually, Delta Thailand group's total membership and donation expenses are consolidated and report to the Chairman of Sustainable Development and Corporate Governance Committee.

3. Delta's payment and reimbursement system module had design in accordance with Thai Financial Reporting Standard (revise 2017) which were aimed at alignment with the corresponding International Financial Reporting Standard.

4. None of these amounts had paid for lobbying, tax exemption, interest representation or similar purposes.

5. Delta doesn't have any payment Local, regional or national political campaigns / organizations / candidates.

6. All the stated organization locates in Thailand where Delta generate approximate 76% of its total revenue (2019 financial statement). Membership fee occurs at our subsidiaries in others countries (another 24%) are not related to the scope of this report since they are the membership fee to maintain routine consumables and services.

7. Restatement: the company's membership fee for the Safety and Health at Work Promotion Association (Thailand)

We learn and Share

According to our commitment to invest innovation and research, develop intellectual property rights, and **devote ourselves to the progress of human culture and technology, the development of society and the economy, as well as the sustainable development of the Earth and its environment**, Delta has performed various activities to disseminate what we've learned from our long journey in ITC Industry. On the contrary, Delta realized that communities sustain innovation because as they share ideas they can mutate and grow, especially at they adapt to new conditions. From both business and non-business simple visits, projects and discussion, we have learned what we can do more to balance our passion for betterment with the communities' requirement.



Delta Electronics (Thailand) Public Company Limited, develop Delta Energy Education Program (DEEP) 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 2019, with strong support from 64 Delta (accumulated 116) volunteers created 33,195 training hours. In addition to quantitative measurement, simple questionnaire has designed to get qualitative achievement from participated student feedback. The impressive result from 982 students sampling size at confidence response rate 98% 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 94%. From students' comment of 2019 activity, 3.7% of these children were interested in having our renewable products and solutions at home.



September 25, 2019- Delta Electronics (Thailand) PCL. hosted a delegation led by the Department of Alternative Energy Development and Efficiency (DEDE) from Thailand's Ministry of Energy for an on-site survey of its green factory and headquarters in Bangpoo Industrial Estate. As a winner of the Thailand Energy Awards for the past three consecutive years, Delta hosts the Ministry of Energy as a model factory to promote energy

management and renewable energy activities among Thai-based companies.



November 26, 2019: Delta Electronics (Thailand) PCL. hosted a group of over 40 energy experts from Thai companies and members of the media led by the Department of Alternative Energy Development and Efficiency (DEDE), from Thailand's Ministry of Energy, to study Delta's solar energy solutions and green headquarters in Bangpoo Industrial Estate.

Cooperation between the private sector and government agencies are essential in helping Thai SMEs become stronger and allowing them to grow to stand on their own in the digital economy.



Mr. Kobchai Sungsitthisawad
DIP Director-General

Regulator and strategic partner
to promote SME development.



Delta Angel Fund
2019



December 16, 2019 Delta Electronics (Thailand) PCL. signed an MOU with Burapha University for partnership and collaboration to develop the Faculty of Engineering student's skills in robotics, automation systems, IoT, electronics and embedded systems at the Delta Industrial Automation Lab.



Delta Electronics (Thailand) PCL. signed Partnership School Project 100% MOU with Samutprakan Primary Educational Service Office 1. The MOU aims to increase partnership between Delta and the university to offer education to employees and their children and continuing education courses for working employees.



November 14, 2019 | Delta Electronics (Thailand) PCL. joined the Asian and Oceanian Stock Exchanges Federation (AOSEF) Working Committee and Investor Education Working Group 2019, at the Stock Exchange of Thailand (SET) in Bangkok, to share the company's sustainable development strategy to 30 executive attendees under the event theme- Environmental, social and corporate governance (ESG) Investment and New Products for Investors.



Delta Electronics (Thailand) PCL. held an orientation and interview for Thai students studying at six universities in Taiwan. The campus outreach aimed to raise awareness of opportunities Thai students in Taiwan and recruit

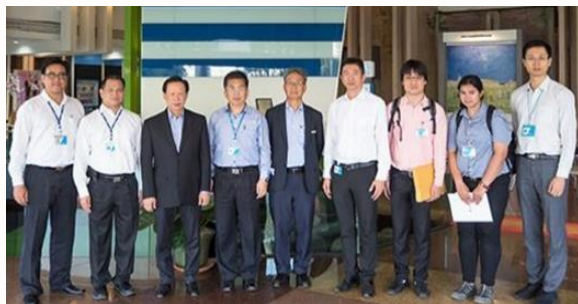
members for the 2020 internship program at Delta Thailand.



August 17-18, 2019 | Delta Electronics (Thailand) PCL. awarded 438 annual scholarships to underprivileged students from 19 schools in Chiang Mai and 30 schools in Chiang Rai who have excellent academic results. Of the scholarships, 276 were 1,000 Baht for primary school students and 162 were 2,000 Baht for high school students. Delta gave the scholarships at the Chiangmai Yunnan Association and The Yunnan Association of Thailand Chiangrai Branch.



May 30, 2019 | Delta Electronics (Thailand) PCL. welcomed the Peruvian Embassy in Thailand to explore Delta's green energy and smart factory solutions. Mr. Anusorn Muttaraid, Delta Executive Director, welcomed the delegation led by Ms. Yolanda Torriani, President of Chamber of Commerce of Lima (CCL), and Ms. Kesanee Palanuwigse, Ambassador of Thailand at the Royal Thai Embassy in Lima, to the company headquarters in Samutprakarn.



February 07, 2019 : Delta Electronics (Thailand) PCL. welcomed Mr. Adisak Rohitasune, Acting President of the Thailand Automotive Institute (TAI), to see Delta's latest EV solutions and manufacturing capabilities at the company's Samutprakarn headquarters. The TAI is Thailand's leading organization for automotive and auto parts industry development with a focus on environment-friendly business ecosystems and modernization.



January 18, 2019 :Delta Electronics (Thailand) PCL. welcomed 23 delegates from the Metropolitan Electricity Authority (MEA) led by Mr. Jumpote Himacharoen, MEA Director of Research and Development Division, to Delta headquarters at Samutprakarn. The state-run MEA supplies electricity to the Bangkok Metropolitan Area and cooperates with Delta to share ideas and information on industrial innovation and sustainable development (SD).



November 19, 2019 | Delta Electronics (Thailand) PCL. attended an EV charging station opening at Knowledge Exchange for Innovation Center (KX) in Bangkok with the Delta DC Wallbox EV Charger donated to the King Mongkut's University of Technology Thonburi (KMUTT). The latest EV charging station will add to Delta's country-wide network supporting EV drivers across Thailand.



As part of our organization philosophy to contribute towards environment, Delta India took an initiative to visit a school: De Sales Academy, Bangalore on 7th June 2019 (Friday) to interact with the students and faculties and to provide awareness about importance of environment protection and energy conservation



July 22-24, 2019 | Delta Electronics (Thailand) PCL. supported the 7th Taiwan-Thailand Higher Education Forum (2019) in Bangkok, Thailand. The forum, jointly hosted by King Mongkut's University of Technology Thonburi (KMUTT) and Office of the Higher Education Commission (OHEC) Thailand, included an event at the Amari Watergate Bangkok Hotel and a visit to Delta's headquarters in Bangpoo Industrial Estate.

Your satisfaction, our pride

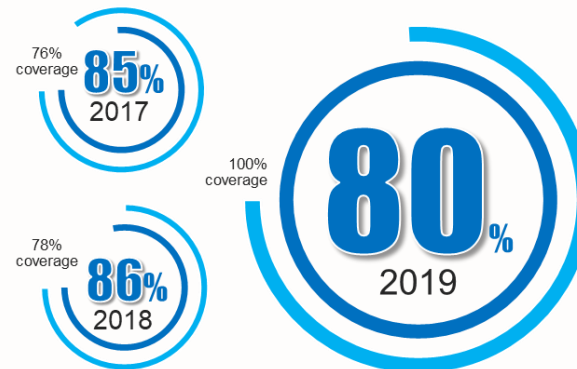
Paradigm shift in sustainability requirement turns to be a new normal for long-term business relationship. From the changing scenario of global business, 4Ps (Product, Price, Place and Promotion) are not sufficient customer satisfaction and loyalty.

Plenty of non-financial dialogues between Delta and its world-class customers had opened in recent year. In 2019, Delta's sales representative and Sustainable Development Office receives a numbers of questionnaire from the company's customer. Code of conduct, Anti-corruption progress, human rights in supply, hazardous substance control and environmental management; for instance, had repeatedly engaged by our customers.

Customer satisfaction is positioned as the central driving force for all the factors, including Innovation, Quality, Agility and Teamwork accordingly to our corporate culture all Delta family aim for. As a result, Delta is constantly driven to foster world-class standard level not just in product and technology but also in social and environmental inclusiveness to meet expectation.

In 2019, Delta conducted [Customer Satisfaction survey](#) by using on-line questionnaire to ensure our business really suit our customer's needs. We expand the coverage of the survey from approx 78% of consolidated sales (Thailand only) to 100% last year. The candidates had select accordingly to their contribution percentage of Delta's 90% sales revenue in the reporting cycle. With target 1 Bu 1 customer for each region, our selected key customers in APAC, Australia and New Zealand, Europe and America had

answer the questions with 100% response rate. With 80% satisfaction rate as Delta's qualitative target, the survey help to reflect the customer satisfaction level on the company's product, service and business ethics, etc. in different aspect. Meanwhile, there feedbacks from "Other comment" portion, has brought to Sustainable Development Committee, Strategic Marketing, Sales Meeting to seek for further improvement accordingly.



2017-2019

Customer satisfaction Rate

● Customer satisfaction rate
● Coverage of the survey

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 reporting period, the

company's annual customer retention rate was an impressive 85%.

Remark: Due to customer's privacy and confidentiality agreement, Delta is not allow to publicly disclose this information*



General Motors Supplier Quality Excellence Award; for instance, can be concretely illustrate Delta's effort to response to customer's requirement. In 2018, Delta Automotive Plant Cross Functional Team (CFT) received a Certificate of Recognition for "Excellent teamwork to drive quality improvement with 100% Problem Reporting and Resolution (PRR) reduction from Y2016" from General Motors (Thailand) Ltd. Mr. Thawatpong Romkaew, Delta Automotive Quality Manager, also received a Certificate of Recognition as "Key person to drive quality system improvement and lead quality review during GM Vehicle Launch". Following the certificate, Delta Automotive met the criteria to win the coveted General Motors Supplier Quality Excellence Award.

Next generation's rights reserved

Survival

- Safeguard
- Availability of smart and green energy for children basic needs

Development

- Leverage life-time education and innovation for higher living standards.
- Develop user-friendly and eco-friendly products and services.

Mission:

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

"Innovation for children's better tomorrow"




Participation

- Responsibility supply chain
- Responsible communities
- Inspire innovative future
- Join local and global initiatives that support children's needs.
- Better environment and communities for future (less waste, less GHG)
- RMI initiatives
- Labor/ Children's rights
- Value of supply chain

Delta continuously foster better tomorrow for children's lives through the way in which they operate facilities, develop and market products, provide services, and exert influence on economic and social development. As part of our [Human Rights Policy](#), children are our defined vulnerable population who requiring specific attention to guarantee respect for their human rights.

Delta provides decent work for young workers, parents and caregivers. We also contribute towards the elimination of child labour, including in all business activities and business relationships. We ensure the protection of children in all business activities and facilities. In the digital era, we Use marketing and advertising that respect and support children's rights. Most of Delta social programs have designed for children to cultivate innovation and awareness of environment conservation.

To respect and support children's rights in relation to the environment and security, Delta realize our impact to children while ensure our direction and efforts satisfy the needs of the present without compromising the capacity of their future, we performed self-assessment accordingly to the Unicef's [Children's Rights and Business Principle \(CRBP\)](#) guidance. The result of our assessment has demonstrated as following :

	Stakeholders	Involvement	Issues	Response & Mitigation	Measurement
 Workplace	Employee	<ul style="list-style-type: none"> • Employee • Employee's Children • Child labor 	<ul style="list-style-type: none"> • Hazardous substance • Human Rights • R&D investment (innovative dissemination) • Labor's rights (COC) • Safety Guard leverage • Responsible Business Alliance code of conduct 	<ul style="list-style-type: none"> • Children's rights as part of our Human rights policy • Happy workplace program for employee's family life balance • DEEP (DELTA Energy Education Program) • Education fund for employee's family • DELTA CUP • Informed decision label • Compliance to Responsible Business Alliance code of conduct • Use raw material from the countries where child labor is prohibited 	<ul style="list-style-type: none"> • Successor retention rate • Number of new employees from referral program.
	Supplier	<ul style="list-style-type: none"> • Child labor 			
 Marketplace	Consumer	<ul style="list-style-type: none"> • Children as future users and trend setter 	<ul style="list-style-type: none"> • Customer requirement • Safety Guard embedded in products and service • R&D investment • Information securities standards for product and service. • Technology product that easy for recycling • Technology literacy • Children's privacy 	<ul style="list-style-type: none"> • ISO 27001 complied • WEEE complied • DEEP (DELTA Energy Education Program) • Product safety standard verification • Clear product labelling and instruction for proper safety and environment management • Delta industrial automation Academy • Industrial Automation Lab and Industrial Automation kits fair-price for local universities. • Availability of free application and prologic control (PLC) codes for student to download. • Use marketing, advertising and public disclosure that respect Children's rights 	<ul style="list-style-type: none"> • Successor retention rate • Number of Delta Industrial Automation participants
 Community & Environment	Community	<ul style="list-style-type: none"> • Children in local communities and the countries we invest. • Children as "social licensor" 	<ul style="list-style-type: none"> • Safety Guard leverage • Environment, Safety and health • Energy Management System • Land use 	<ul style="list-style-type: none"> • ISO 9000,14000, 14064, 45001, 50001 complied • Availability of emergency preparedness plan to avoid impact to children in local community. • Invest and operate in well-managed industrial park. • Community/ public relation activity • Open House activity 	<ul style="list-style-type: none"> • 0 compliants • Satisfaction / whistle blowing assessment

Awards and Recognitions

As both a Thailand-listed company and global corporate citizen, Delta offers long-term value-add to stakeholders that delivers on the company brand promise: Smarter. Greener. Together. The growing list of Sustainability Development recognitions and international standard compliances underscore Delta's continuous improvement and long-term vision for sustainable development.



S&P Global SAM Silver Class Sustainability Award 2020

Delta Electronics (Thailand) PCL. won the prestigious S&P Global Silver Class distinction for excellent sustainability performance as the only Thailand-based company in the Sustainability Yearbook 2020 "Electronic Equipment, Instruments & Components" sector. This year's recognition comes after Delta Thailand's 2018 RobecoSAM Bronze Class Award and reinforces its position as a global sustainability leader within its industry.



FTSE4Good

FTSE4Good Index Series 2019

Delta Electronics (Thailand) PCL. is in the FTSE4Good Emerging Index for the third consecutive year. Delta remains a constituent of the FTSE4Good Index Series following the June 2019 index review by global index provider FTSE Russell.

CDP Disclosure



Delta Electronics (Thailand) PCL. participated in the CDP climate change related questionnaire and public environmental data disclosure of for the 3rd consecutive year. CDP, formerly the Carbon Disclosure Project, is a global disclosure system for companies, cities, states and regions to manage their environmental impacts and for investors or purchasers to access environmental information for use in financial decisions.

Delta Electronics (Thailand) PCL. participated in the CDP climate change related questionnaire and public



Nikkei Asia300

Delta Electronics (Thailand) Public Company Limited is on the Nikkei Asia300, an exclusive list of the

biggest and fastest-growing companies from 11 economies across the continent. Media conglomerate Nikkei Inc. selects the companies on the Asia300 list based on market capitalization, with consideration given to growth potential and geographic balance to focus on ASEAN economies. As a SET-listed company with global operations, Delta is one of the 25 Thailand-based companies listed in Asia300.

Best Sustainability Award and THSI Award at SET Sustainability Awards 2019

Delta Electronics (Thailand) PCL. received the Stock Exchange of Thailand (SET) Best Sustainability Excellence Award and the Thailand Sustainability Investment (THSI) 2019 Award at the SET Sustainability Awards 2019. Dr. Pakorn Peetathawatchai, President of The Stock Exchange

of Thailand, presented the Best Sustainability Excellence Award to Mr. Hsieh Shen-yen, Delta Electronics Thailand President, at the annual awards ceremony event held at the SET Conference Hall.



Thaipat Institute's ESG100 Universe for Fifth Consecutive Year



Delta Electronics (Thailand) Public Company Limited joins 100 of Thailand's best-performing public listed companies for Environmental, Social and Governance (ESG) aspects in the Thaipat Institute's ESG100 Universe for the 5th consecutive year. Delta is one of six companies in the technology sector among eight industry groups in ESG100:2019Excellent Corporate Governance Disclosure



Delta Electronics (Thailand) PCL. retained its excellent score in the Corporate Governance Report of Thai Listed Companies (CGR) 2019.

Delta Electronics (Thailand) PCL. maintained its excellent score in the Corporate Governance Report (CGR) of Thai Listed Companies 2019. The Thai Institute of Directors Association (Thai IOD), with support from the Stock Exchange of Thailand (SET), conducts the CGR every year.



2019 Thailand Electric Vehicle Charging Company of the Year by Frost & Sullivan

Delta Electronics (Thailand) PCL. was awarded 2019 Thailand Electric Vehicle Charging Company of the Year by Frost & Sullivan. This award is part of Frost &

Sullivan's Asia Pacific Best Practices Awards that recognizes Delta's best practices, strong performance and meaningful contributions of stakeholders towards a sustainable future.



ASEAN Energy Award 2019 in Green Building Category

Delta Electronics (Thailand) PCL. received 1st Runner Up for the ASEAN Energy Award 2019 in the ASEAN Energy Efficiency and Conservation Best Practices category and the Green Building sub-category. This is the first time for Delta to win the prestigious regional award from the ASEAN Centre for Energy (ACE) for its green building headquarter in a Samutprakarn, Thailand., social and governance (ESG) aspects.



2019 Thailand Electric Vehicle Charging Company of the Year by Frost & Sullivan

Delta Electronics (Thailand) PCL. received the 2019 Thailand Electric Vehicle Charging Company of the Year Award by Frost & Sullivan at the Asia-Pacific Best Practices Awards. Delta joined Asia-Pacific's leading companies honored at Frost & Sullivan's annual event held at Hilton Kuala Lumpur, Malaysia.

The award recognizes Delta's best practices, strong performance and meaningful contributions of stakeholders towards a sustainable future. Frost & Sullivan's analysts identified Delta as a recipient based on their in-depth research. Delta was then evaluated on a variety of actual market performance indicators which include revenue growth; market share and growth in market share; leadership in product innovation; marketing strategy and business development strategy.



Thailand Energy Award 2019

Delta received the Thailand Energy Award 2019 in three categories: Creative Energy, Energy Conservation: Green Building and Designated Factory. This is the fourth year for Delta to win the award from the Ministry of Energy in recognition of factories, buildings and individuals that demonstrate responsible use of energy resources for sustainable development in line with the UN Sustainable Development Goals.



Thailand's Top Corporate Brand Hall of Fame 2019 Award

Delta received Thailand's Top Corporate Brand Hall of Fame 2019 award by the Chulalongkorn Business School at the Stock Exchange of Thailand (SET), Bangkok. Delta earned the prestigious Hall of Fame award by Chulalongkorn University's Corporate Brand Success (CBS) Valuation to recognize its five straight years of winning the highest brand value in the electronics part sector.



Thailand's Top Corporate Brand Hall of Fame 2019 Award

Delta received Thailand's Top Corporate Brand Hall of Fame 2019 award by the Chulalongkorn Business School at the Stock Exchange of Thailand (SET), Bangkok. Delta earned the prestigious Hall of Fame award by Chulalongkorn University's Corporate Brand Success (CBS) Valuation to recognize its five straight years of winning the highest brand value in the electronics part sector.

The Ministry of Labor organized the award to recognize companies with outstanding workplace labor relations and welfare. The award program focuses on promoting good corporate practices according to international standardized labor management systems and encouraging both employers and employees to realize the benefits of bilateral labor management to prevent and solving labor issues.



Delta Receives Three 2019 CSR-DIW Continuous Awards from Ministry of Industry

Delta Electronics (Thailand) PCL. received three 2019 CSR-DIW Continuous Awards from the Department of Industrial Works (DIW), Ministry of Industry for its outstanding continual improvement in sustainability and Corporate Social Responsibility (CSR).

At the CSR-DIW Continuous Award 2019 ceremony held in Miracle Grand Convention Hotel, Mr. Kornphattawee Muangnoy, DIW Deputy Director General, presented the CSR-DIW Continuous Awards to Ms. Nannaphat Serithitivorachote, Delta HRD Manager, Ms. Parichat Leochareon, DET HRD Manager, and Ms. Somboon Phothong, DET HRD Manager, who received the awards on behalf of Deltas Plant 1, Plant 5 and Plant 6 respectively.



Delta Wins Sustainability Disclosure Award 2019

Bangkok, Thailand, December 11, 2019—Delta Electronics (Thailand) PCL. received the Sustainability Disclosure Award 2019 by the Securities and Exchange Commission (SEC) and the Thaipat Institute. This year, Delta has won the highest level award after receiving the Sustainability Disclosure Recognition Award for the past two consecutive years.

Ms. Aonthip Aorthong, Delta Senior Executive of Sustainable Development, represented Delta to receive the award from Dr. Pipat Yodprutikan (left), Chairman of the Thaipat Institute, at the SEC office in Bangkok.



Explore our methodology to get the disclosed KPIs, scope and boundary of the disclosed performance, external assurance, GRI content index and KPI mapping to related initiatives

Appendix



Calculation

Annual total compensation = base salary + cash compensation + total fair value of all annual long-term incentives

Mean compensation of all employees & CEO compensation = $\sum x_i / n$

Percentage of total employees covered by collective bargaining agreements = Headcount of labor union member ÷ total employees x 100

Community investment = Cash contribution + monetary value of products or stuff donation + mancost + overhead cost.

Percentage of the procurement budget spent to local supplier = Spent amount to local suppliers ÷ total spending x 100

Percentage of recycled input materials used = Total recycled input materials used ÷ Total input materials used x 100

Percentage of reclaimed products and their packaging materials = Products and their packaging materials reclaimed within the reporting period ÷ Products sold within the reporting period x 100

Total energy consumption within the organization = Non-renewable fuel consumed + Renewable fuel consumed + Electricity, heating, cooling, and steam purchased for consumption + Self-generated electricity-Electricity, heating, cooling, and steam sold

Energy intensity = Total energy consumption ÷ production amount

Requirement of energy of sold products = Average power consumption of sold product x average power load rate of sold products

Change in water storage = Total power consumption of sold products of the reporting period – Total power consumption of sold products at the beginning of the reporting period

Water consumption = Total water withdrawal - Total water discharge

Total water withdrawal = Surface water + groundwater + seawater + produced water + third-party water

Total water discharged = Discharged surface water + groundwater + seawater + produced water + third-party water

Percentage of suppliers with significant water-related impacts from water discharge that have set minimum standards for the quality of their effluent discharge = Number of suppliers that have set minimum standards for the quality of their effluent discharge ÷ Number of suppliers with significant water-related impacts from water discharge x 100

Change in water storage = Total water storage at the end of the reporting period - Total water storage at the beginning of the reporting period

Production of ODS = ODS produced – ODS destroyed by approved technologies – ODS entirely used as feedstock in the manufacture of other chemicals

Total weight of hazardous waste transported by destination = Weight of hazardous waste transported to the organization by destination from external sources/ suppliers not owned by the organization + Weight of hazardous waste transported from the organization by destination to external sources/ suppliers not owned by the organization + Weight of hazardous waste transported nationally and internationally by destination between locations owned, leased, or managed by the organization

Percentage of suppliers identified as having significant actual and potential negative environmental impacts = of suppliers identified as having significant actual and potential negative environmental impacts ÷ total numbers of suppliers x 100

Rate of new employee hires during the reporting period = Number of new employee hired during the reporting period ÷ total number of employee x 100

Rate of employee turnover during the reporting period = Number of employee resigned during the reporting period ÷ total number of employee x 100

Return to work rate = Total number of employees that did return to work after parental leave ÷ total number of due to return to work after taking parental leave x 100

Retention rate = Total number of employees retained 12 months after returning to work following a period of

parental leave $\times \div$ total number of employees returning from parental leave in the prior reporting period $\times 100$

Rate of fatalities as a result of work-related = Number of fatalities as a result of work-related injury \div Number of hours worked $\times 1,000,000$

Rate of high-consequence work-related injuries (excluding fatalities) = Number of high consequence Work related injuries (excluding fatalities) \div Number of hours worked $\times 1,000,000$

Rate of recordable work-related injuries = Number of recordable work-related injuries \div Number of hours worked $\times 1,000,000$

Rate of fatalities as a result of work-related = Number of disease cases as a result of work-related \div Number of hours worked $\times 1,000,000$

Average training hours per employee = Total number of training hours provided to employees \div Total number of employees

Average training hours per female = Total number of training hours provided to female employees \div Total number of female employees

Average training hours per male = Total number of training hours provided to male employees \div Total number of male employees

Average training hours per employee category = Total number of training hours provided to each category of employees \div Total number of employees in category

Percentage of total employees by gender who received a regular performance and career development review during the reporting period = number of specific gender employee who received a regular performance and career development review during the reporting period \div Total number employees of that specific gender $\times 100$

Percentage of total employees by category who received a regular performance and career development review during the reporting period = number of specific category employee who received a regular performance and career development review during the reporting period \div Total number employees of that specific category $\times 100$

Ratio of the basic salary and remuneration of women to men for each employee category = Sum of women employee in specific category \div Sum of men employee in that specific category $\times 100$

Percentage of workers who covered by collective bargaining agreement = Number of employees who have registered for labor union membership during the reporting period \div total number of employee in the reporting period $\times 100$

Percentage of security personnel who have received formal training in the organization's human rights policies or specific procedures and their application to security = Number of employees who have received formal training in the organization's human rights policies or specific procedures and their application to security \div total number of employee in the reporting period $\times 100$



About the report

Delta Electronic (Thailand) Public Company Limited or “Delta Thailand” or “Delta”’s disclosures annually disclose its Sustainable Development report to transparently communicate our continuous effort to ensure our stakeholder mutual benefit. Since our first stand-alone Sustainable development report launched with GRI-G4 standard in 2016, the company keep improve the accuracy of the report until our previous release with GRI Standard in June 2018. To enhance stakeholders’ participation, this report has prepared in two language, English and Thai (local language).

Reporting cycle

Annually, in June, Delta Thailand’s annual performance of economic, social, environmental and related achievements between January 1st and December 31th of 2019.

Coverage

Delta’s fiscal year is from January to December. The report therefore covers performance over 1 year period, in accordance with the methodology used in Delta’s 2019 consolidated financial statements that covered a 12-month period. The scope of this report includes Delta and its subsidiaries in **Thailand and its overseas subsidiaries and associates in India and Slovakia** whose nature of business are **manufacturing and assembly factories** that contribute to major revenue in consolidated financial statement. Social and Environmental performance has been collected from 7 factories in the mentioned 3 countries.

Reporting standard

This report has been prepared **in accordance with the GRI Standards: Core Option** in both Thai and English. 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 including emerging risk and issues consideration. The Company bases on Global Reporting Initiative’s [GRI Standards](#), 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. In addition, to boost up both internal and stakeholder participation, Delta add the linkage of this report to related sustainable business practices into its GRI content table. Delta has engaged Lloyd’s Register, an independent third party, to provide external assurance for selected environmental and social indicators and ensure the accuracy and reliability of the data reported herein.

Restatements of information

- There was no major changes resulting from business merger and acquisition, base year change, nature of business nor measurement method during the reporting cycle.

- In 2019, the company approached its subsidiaries to collect major environmental performances. To aware our subsidiaries’ performance the company has restated following KPIs in the past for this issue of disclosure.

- Energy consumption
- Energy intensity
- Volume of GHG discharged
- Total water withdrawal
- Waste by disposal method
- Water recycling and reuse
- Water discharge quality
- Volume of volatile organic compound



We value your suggestion for guidance to enable a better tomorrow

LR Independent Assurance Statement

Relating to Delta Electronics (Thailand) Public Company Limited's Sustainability Report for the calendar 2019

This Assurance Statement has been prepared for Delta Electronics (Thailand) Public Company Limited in accordance with our contract but is intended for the readers of this Report.

Terms of engagement

Lloyd's Register (LR) was commissioned by Delta Electronics (Thailand) Public Company Limited (DELTA) to provide independent assurance on its Sustainability Report 2019 (the Report) against the assurance criteria below to a moderate level of assurance and at the materiality of the professional judgement of the verifier using Accountability's AA1000AS (2008) Type 2 approach¹.

Our assurance engagement covered DELTA's operations and activities in India, Slovakia and Thailand (as Head Office) and specifically the following requirements:

- Evaluating the nature and extent of DELTA's adherence to all three AA1000 AccountAbility Principles - inclusivity, materiality and responsiveness.
- Confirming that the report is in accordance with GRI Standards and core option including related universal social responsibility standards principles addressed in ISO 26000
- Evaluating the reliability of data and information for the selected economic, environmental and social indicators listed below:
 - Economics: Human Capital Return on Investment and Community investment (GRI201-1); Operations assessed for risks related to corruption (GRI205-1); Communication and training about anticorruption policies and procedures (GRI205-2) and Confirmed incidents of corruption and actions taken (GRI205-3)
 - Environmental: Recycled input materials used (GRI301-2); Energy consumption within the organization (GRI302-1); Reduction of energy consumption (GRI 302-4); Water withdrawal by source (GRI 303-1); Water recycled and reused (GRI 303-3); Direct GHG emissions (Scope 1) (GRI305-1); Energy indirect GHG emissions (Scope 2) (GRI305-2); Other indirect GHG emission (GRI305-3) - Transportation of Raw material and Finished Goods (Ocean and Air Freight only) and Transportation of Business trip by Air Freight; Nitrogen oxides (NO_x), Sulfur oxides (SO_x), and other significant air emissions (GRI305-7); Water discharge by quality and destination (306-1) and Waste by type and disposal method (GRI 306-2)
 - Social: worker covered by Occupational health and safety management system (GRI403-8); Work-related injuries and Work-related ill health (GRI403-9 and 10); Operations with local community engagement, impact assessments, and development programs (GRI 413-1); Average hours of training per year per employee (GRI 404-1) and Freedom of association and collective bargaining (GRI 407-1)

Our assurance engagement excluded DELTA's data and information of the selected indicators (GRI 201-1, 301-2, 302-4, 403-9, 403-10 and 404-1) outside of Thailand

LR's responsibility is only to DELTA. LR disclaims any liability or responsibility to others as explained in the end footnote. DELTA's responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of DELTA.

LR's Opinion

Based on LR's approach nothing has come to our attention that would cause us to believe that DELTA has not, in all material respects:

- Met the requirements above
- Disclosed reliable performance data and information as no errors or omissions were detected
- Covered all the issues that are important to the stakeholders and readers of this report.

The opinion expressed is formed on the basis of a limited level of assurance and at the materiality of the professional judgement of the verifier.

Note: The extent of evidence-gathering for a moderate level assurance engagement is less than for a high-level assurance engagement. moderate level assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a moderate level assurance engagement is substantially lower than the assurance that would have been obtained had a high-level assurance engagement been performed.

¹ GHG quantification is subject to inherent uncertainty.

LR's approach

LR's assurance engagements are carried out in accordance with our verification procedure. The following tasks though were undertaken as part of the evidence gathering process for this assurance engagement:

- Assessing DELTA's approach to stakeholder engagement to confirm that issues raised by stakeholders were captured correctly. We did this through reviewing associated records.
- Reviewing DELTA's process for identifying and determining material issues to confirm that the right issues were included in their Report. We did this by benchmarking reports written by DELTA and its peers. We also tested the filters used in determining material issues to evaluate whether DELTA makes informed business decisions that may create opportunities that contribute towards sustainable development.
- Auditing DELTA's data management systems to confirm that there were no significant errors, omissions or mis-statements in the Report. We did this by reviewing the effectiveness of data handling procedures, instructions and systems. We also spoke with those key peoples responsible for compiling the data and writing the Report.
- Sampling facilities and consolidated data and information at DELTA's head office.

Observations

Further observations and findings, made during the assurance engagement, are:

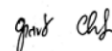
- Stakeholder inclusivity: We are not aware of any key stakeholder groups that have been excluded from DELTA's stakeholder engagement process.
- Materiality: We are not aware of any material issues concerning DELTA's sustainability performance that have been excluded from the Report. DELTA reviews regularly their material issues, against their established and extensive criteria for determining material issues, to reconfirm that their material issues are still relevant. The criteria for determining materiality are not biased to DELTA.
- Responsiveness: DELTA has processes for responding to various stakeholder groups, included disclosure of GHG related information to its clients and stakeholders.
- Reliability: DELTA uses spreadsheets together with ERP to consolidate data and information associated with the selected economic, environmental and social indicators. DELTA should apply periodically internal verification to enhance the data quality and promote awareness of data and information disclosure throughout the operations.

LR's standards, competence and independence

LR ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

This verification is the only work undertaken by LR for DELTA and as such does not compromise our independence or impartiality.

Dated: 31 August 2020



Opart Charuratana
LR Lead Verifier



On behalf of Lloyd's Register
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GRI Content Index

Structure:

The structure of this report follows the Global Reporting Initiative's (GRI) "GRI Sustainability Reporting Standards (2016)" (GRI Standards), GRI 403 (2018) and GRI 207 (2019).

Related initiatives mapping tools:

- ISO26000: [GRI G4 Guidelines and ISO 26000:2010 How to use the GRI G4 Guidelines and ISO 26000 in conjunction](#)
- CDP: [Linking GRI and CDP, How are the GRI Sustainability Reporting Standards and CDP's 2017 water questions aligned?](#)
- UNGC: [Making the Connection: Using the GRI G4 Guidelines to Communicate Progress on the UN Global Compact Principles](#)
- SDG: https://www.globalreporting.org/Documents/ARCHIVES/resource%20library/SDG_GRI_Linkage
- CRBP: [Children are everyone's business 2.0](#)

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
					ISO26000	CDP	UNGC	SDG	CRBP
102-1	Name of the organization	<ul style="list-style-type: none"> This report page 2 			6.4.1, 6.4.2				
102-2	Activities, brands, products, and services	<ul style="list-style-type: none"> This report page 2, 9-12 Annual report page 10-36 			6.4.1, 6.4.2				
102-3	Location of headquarters	<ul style="list-style-type: none"> This report page 2, back cover Annual report page 4 			6.4.1, 6.4.2				
102-4	Location of operations	<ul style="list-style-type: none"> This report page 10, 56 Annual report page 11-14 			6.4.1, 6.4.2				Principle 1
102-5	Ownership and legal form	<ul style="list-style-type: none"> Annual report page 11-14 			6.4.1, 6.4.2				
102-6	Markets served	<ul style="list-style-type: none"> This report page 14 Annual report page 11-14 			6.4.1, 6.4.2				
102-7	Scale of the organization	<ul style="list-style-type: none"> This report page 2, 77 Annual report page 4, 8, 9, 72 			4.4, 6.4.1, 6.4.2				
102-8	Information on employees and other workers	This report page 75, 77-80			4.4, 6.4.1, 6.4.2		principle 6	8.5, 10.3	
102-9	Supply chain	This report page 50-53			4.4, 6.4.1, 6.4.2				
102-10	Significant changes to the organization and its supply chain	This report page 50, 56			4.4, 6.4.1, 6.4.2				

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
					ISO26000	CDP	UNGC	SDG	CRBP
102-11	Precautionary Principle or approach	This report page 21-24, 37, 40, 102			4.4, 6.4.1, 6.4.2				Principle 1
102-12	External initiatives	This report page 21-24, 37, 40, 102			4.4, 6.4.1, 6.4.2	CC2.3 b , CC2.3c, CC 2.3 d			Principle 1
102-13	Membership of associations	<ul style="list-style-type: none"> This report page 97 Full Major social contribution list 			4.4, 6.4.1, 6.4.2				
102-14	Statement from senior decision-maker	This report page 6-7			4.4, 4.7, 6.2	CC2.2, CC2.2a, CC3.1, CC3.1e, CC3.1f			
102-15	Key impacts, risks, and opportunities	This report page 22-24,29			4.4, 6.2	CC2.1, CC2.1a, CC2.1b, CC2.1c, CC2.2, CC2.2a, CC3.1a, CC3.1b, CC3.1c, CC3.1d, CC3.1e, CC3.1f, CC5.1, CC5.1a, CC5.1b, CC5.1c, CC6.1, CC6.1a, CC6.1b, CC6.1c			Principle 1
102-16	Values, principles, standards, and norms of behavior	<ul style="list-style-type: none"> This report page 5, 37 Corporate Governance Policy Code of Conduct Anti-corruption policy Delta's membership on Thai CAC site Supplier SR Management Measure 		✓	4.4		principle 10	16.3	Principle 1
103-1	Explanation of the material topic and its Boundary	This report page 37		✓	4.4, 5.2				Principle 1
103-2	The management approach and its components	<ul style="list-style-type: none"> This report page 31-39 Corporate Governance Policy Anti-corruption Policy 		✓	4.4, 5.2				Principle 1
103-3	Evaluation of the management approach	This report page 32,37		✓	4.4, 5.2				Principle 1
102-17	Mechanisms for advice and concerns about ethics	This report page 112		✓	4.4		principle 10	16.3	
102-18	Governance structure	<ul style="list-style-type: none"> This report page 13, 28 Corporate Governance Policy 			4.4, 6.2	CC1.1, CC1.1a			Principle 1
102-19	Delegating authority	This report page 13,28,85			4.4, 6.2				Principle 1

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
					ISO26000	CDP	UNGC	SDG	CRBP
102-20	Executive-level responsibility for economic, environmental, and social topics	This report page 28,34-36, 85			4.4, 6.2	CC1.1a			Principle 1
102-21	Consulting stakeholders on economic, environmental, and social topics	<ul style="list-style-type: none"> This report page 19-21,50,52,98-101 Stakeholder Engagement Guideline Shareholder meeting Opportunity day Customer experience survey 			4.4, 6.2			16.7	Principle 1
102-22	Composition of the highest governance body and its committees	<ul style="list-style-type: none"> This report page 31-36 Annual report page 58-72 			4.4, 6.2			5.5, 16.7	Principle 1
102-23	Chair of the highest governance body	<ul style="list-style-type: none"> This report page 33 Annual report page 60-66 			4.4, 6.2			16.6	
102-24	Nominating and selecting the highest governance body	<ul style="list-style-type: none"> This report page 32-33,35 Annual report page 82-86 			4.4, 6.2			16.7 5.5	
102-25	Conflicts of interest	<ul style="list-style-type: none"> This report page 38 Annual report page 79 			4.4, 6.2			16.6	
102-26	Role of highest governance body in setting purpose, values, and strategy	This report page 34			4.4, 6.2				
102-27	Collective knowledge of highest governance body	This report page 33			4.4, 6.2			4.7	
102-28	Evaluating the highest governance body's performance	This report page 32-36			4.4, 6.2				
102-29	Identifying and managing economic, environmental, and social impacts	This report page 13,28,32-36			4.4, 6.2	CC2.1, CC2.1a, CC2.1b, CC2.1c		16.7	
102-30	Effectiveness of risk management processes	This report page 36			4.4, 6.2	CC2.1, CC2.1a, CC2.1b, CC2.1c			
102-31	Review of economic, environmental, and social topics	This report page 34			4.4, 6.2	CC2.1, CC2.1a, CC2.1b, CC2.1c			
102-32	Highest governance body's role in sustainability reporting	This report page 6, 25, 28			4.4, 6.2				
102-33	Communicating critical concerns	This report page 22-25,28			4.4, 6.2				

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
					ISO26000	CDP	UNGC	SDG	CRBP
102-34	Nature and total number of critical concerns	This report page 22-25			4.4, 6.2				
102-35	Remuneration policies	<ul style="list-style-type: none"> • This report page 78-80 • 2019 AGM Minutes page 7 • Annual report page 82-83 			4.4, 6.2	CC1.2, CC1.2a			
102-36	Process for determining remuneration	This report 35, 78-79			4.4, 6.2				
102-37	Stakeholders' involvement in remuneration	<ul style="list-style-type: none"> • 2019 AGM Minutes page 7 			4.4, 6.2			16.7	
102-38	Annual total compensation ratio	<ul style="list-style-type: none"> • This report page 35, 77 • 2019 AGM Minutes page 7 			4.4, 6.2				
102-39	Percentage increase in annual total compensation ratio	This report page 35			4.4, 6.2				
102-40	List of stakeholder groups	<ul style="list-style-type: none"> • This report page 18-21,97,102 • Stakeholder Engagement Guideline 		✓	4.4				
102-41	Collective bargaining agreements	This report page 80			4.4		principle 3	8.8	
102-42	Identifying and selecting stakeholders	<ul style="list-style-type: none"> • This report page 18-21,97,102 • Stakeholder Engagement Guideline 		✓	4.4				Principle 1
102-43	Approach to stakeholder engagement	<ul style="list-style-type: none"> • This report page 18-21,97,102 • Stakeholder Engagement Guideline 		✓	4.4				Principle 1
102-43 102-44	Approach to stakeholder engagement Key topics and concerns raised	<ul style="list-style-type: none"> • This report page 18-21,97,102 			4.4				Principle 1
102-44	Key topics and concerns raised	<ul style="list-style-type: none"> • This report page 18-21,97,102 			4.4				Principle 1
102-45	Entities included in the consolidated financial statements	<ul style="list-style-type: none"> • This report page 56 • Annual report page 10-14 • CIC Summary 			4.4				Principle 1
102-46	Defining report content and topic Boundaries	This report page 2, 109			4.4				Principle 1

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
					ISO26000	CDP	UNGC	SDG	CRBP
102-47	List of material topics	This report page 25		✓	4.4				Principle 1
103-1	Explanation of the material topic and its Boundary	This report page 16-25		✓	4.4, 5.2				
103-2	The management approach and its components	This report page 16-25		✓	4.4, 5.2				
103-3	Evaluation of the management approach	This report page 16-25		✓	4.4, 5.2				
102-48	Restatements of information	This report page 109							
102-49	Changes in reporting	This report page 109							
102-50	Reporting period	This report page 2, 109							
102-51	Date of most recent report	This report page 109							
102-52	Reporting cycle	This report page 109							
102-53	Contact point for questions regarding the report	This report page 129-131							
102-54	Claims of reporting in accordance with the GRI Standards	This report page 109			4.2				
102-55	GRI content index	This report page 111							
102-56	External assurance	This report page 110			4.2	CC8.6, CC8.6a, CC8.6b, CC8.7, CC8.7a, CC8.8, CC14.2, CC14.2a			
201-1	Direct economic value generated and distributed	<ul style="list-style-type: none"> This report page 32 Annual report page 120-165 Full Major social contribution list 		✓	6.8.1, 6.8.2, 6.8.3, 6.8.7, 6.8.9	material issue		2.a, 5.1, 5.4, 7.a, 7.b, 8.1, 8.2, 9.1, 9.4, 9.5, 9.a	

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
					ISO26000	CDP	UNGC	SDG	CRBP
103-1	Explanation of the material topic and its Boundary	This report page 27, 32		✓	4.4, 5.2				
103-2	The management approach and its components	This report page 27, 32, 35		✓	4.4, 5.2				
103-3	Evaluation of the management approach	This report page 23		✓	4.4, 5.2				
201-2	Financial implications and other risks and opportunities due to climate change	This report page 29			6.5.5	CC5.1, CC5.1a, CC5.1b, CC5.1c, CC6.1, CC6.1a, CC6.1b, CC6.1c	principle 7	13.1	
201-3	Defined benefit plan obligations and other retirement plans	<ul style="list-style-type: none"> This report page 78-79 Annual report page 134-135 			6.8.7				
201-4	Financial assistance received from government	<ul style="list-style-type: none"> Annual report page 27, 155 CIC Summary 							
202-1	Ratio of entry level wage by gender compared to local minimum wage	This report page 76			6.3.7, 6.3.110, 6.4.3, 6.4.4, 6.8.1, 6.8.2		principle 6	1.2, 5.1, 8.2, 8.5	
202-2	Proportion of senior management hired from the local community	This report page 78			6.4.3, 6.8.1, 6.8.2, 6.8.5, 6.7		principle 6	8.5	
203-1	Infrastructure investments and services supported	This report page 79, 80, 86, 91			6.3.9, 6.8.1, 6.8.2, 6.8.5, 6.8.7, 6.8.9			11.2, 2.a, 5.1, 7.a, 7.b, 9.1, 9.4, 9.a	
203-2	Significant indirect economic impacts	This report 95, 96, 98, 100, 102			6.3.9, 6.6.6, 6.6.7, 6.7.6, 6.8.1, 6.8.2, 6.8.7, 6.8.9			1.2, 10.b, 17.3, 2.3, 3.8, 8.2, 8.3, 8.5	Principle 10
204-1	Proportion of spending on local suppliers	This report page 51			6.4.3, 6.6.6, 6.8.1, 6.8.2, 6.8.7			1.4, 5.1, 8.3	
205-1	Operations assessed for risks related to corruption	This report page 37, 109		✓	6.6.1, 6.6.2, 6.6.3		principle 8 principle 10	16.5	Principle 10
205-2	Communication and training about anti-corruption policies and procedures	<ul style="list-style-type: none"> This report page 37, 38 Anti-corruption policy 		✓	6.6.3, 6.6.7		principle 7 principle 8 principle 10	16.5	Principle 10

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
					ISO26000	CDP	UNGC	SDG	CRBP
205-3	Confirmed incidents of corruption and actions taken	This report page 39		✓	6.6.1, 6.6.2, 6.6.3		principle 8 principle 10	16.5	Principle 10
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	This report page 39			6.6.1, 6.6.2, 6.6.3		principle 8	16.3	
207-1	Approach to tax	<ul style="list-style-type: none"> Website CIC Summary Tax policy This report page 22,32,97 							
207-2	Tax governance, control and risk management	<ul style="list-style-type: none"> https://www.deltathailand.com/en/about-tax This report page 22,32,97 							
207-3	Stakeholder engagement and management of concerns related to tax	<ul style="list-style-type: none"> CIC Summary Stakeholder engagement guideline 							
207-4	Country by country reporting	<ul style="list-style-type: none"> CIC Summary 							
301-1	Materials used by weight or volume	This report 54			6.5.4		principle 7 principle 8	12.2, 8.4	
301-2	Recycled input materials used	This report page 54		✓	6.5.4	material issue	principle 8	12.2, 12.5, 8.4	
103-1	Explanation of the material topic and its Boundary	This report page 50, 52, 53		✓	4.4, 5.2				
103-2	The management approach and its components	This report page 42 - 44, 50- 53		✓	4.4, 5.2				
103-3	Evaluation of the management approach	This report page 42 - 44, 50- 53		✓	4.4, 5.2				
301-3	Reclaimed products and their packaging materials	This report page 54					principle 8	12.2, 12.5, 8.4	
302-1	Energy consumption within the organization	<ul style="list-style-type: none"> This report page 58 ISO 50001 certificate (Thailand) ISO 14001 Certification (India) ISO 14001 Certification (Slovakia) 		✓	6.5.4	CC10.1a, CC11.2, CC11.3, CC11.3a, CC11.4, CC11.5	principle 7 principle 8	12.2, 13.1, 7.2, 7.3, 8.4	

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
					ISO26000	CDP	UNGC	SDG	CRBP
103-1	Explanation of the material topic and its Boundary	This report page 58, 59		✓	4.4, 5.2				
103-2	The management approach and its components	This report page 44, 53-55, 58, 59		✓	4.4, 5.2	CC3.1, CC3.1a, CC3.1b, CC3.1c			
103-3	Evaluation of the management approach	This report page 43, 44, 53-55, 58, 59		✓	4.4, 5.2				
302-2	Energy consumption outside of the organization	This report page 58, 59			6.5.4		principle 8	12.2, 13.1, 7.2, 7.3, 8.4	
302-3	Energy intensity	This report page 56, 58, 59			6.5.4		principle 8	12.2, 13.1, 7.3, 8.4	
302-4	Reduction of energy consumption	This report page 58, 59, 62		✓	6.5.4, 6.5.5		principle 8 principle 9	12.2, 13.1, 7.3, 8.4	
302-5	Reductions in energy requirements of products and services	This report page 43			6.5.4, 6.5.5		principle 9	12.2, 13.1, 7.3, 8.4	
303-1	Water withdrawal by source	This report page 67, 68		✓			principle 8	6.4	
303-2	Water sources significantly affected by withdrawal of water	This report page 69		✓			principle 8	6.4	
303-3	Water recycled and reused	This report page 67, 68, 70		✓			principle 7 principle 8	12.2, 6.3, 6.4, 8.4	
303-4	Water discharge	This report page 67, 68							
303-5	Water consumption	This report page 67, 68					principle 8		
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	This report page 56, 67-70, 72			6.5.6			15.1, 15.4, 15.5, 6.6	
304-2	Significant impacts of activities, products, and services on biodiversity	This report page 61, 72			6.5.6		principle 8	14.2, 15.1, 15.4, 15.5, 6.6	

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
					ISO26000	CDP	UNGC	SDG	CRBP
304-3	Habitats protected or restored	<ul style="list-style-type: none"> This report page 56, 69, 72 The River / Water Risk Assessment 			6.5.6		principle 8	14.2, 15.1, 15.4, 15.5, 6.6	
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	<ul style="list-style-type: none"> This report page 72 The River / Water Risk Assessment 			6.5.6		principle 8	14.2, 15.1, 15.4, 15.5, 6.6	
305-1	Direct (Scope 1) GHG emissions	<ul style="list-style-type: none"> This report page 57 Delta Thailand GHG Inventory Report Delta Thailand ISO14064-1 certificate Delta India ISO14064-1 certificate Delta Slovakia ISO14064-1 certificate 		✓	6.5.5	CC13.1, CC13.1a, CC13.1b, CC13.2, CC13.2a, CC7.1, CC7.2, CC7.2a, CC7.3, CC7.4, CC8.1, CC8.2, CC8.9, CC8.9a, CC9.1, CC9.1a, CC9.2, CC9.2a, CC9.2b, CC9.2c, CC9.2d	principle 7 principle 8	12.4, 13.1, 14.3, 15.2, 3.9	
305-2	Energy indirect (Scope 2) GHG emissions	<ul style="list-style-type: none"> This report page 57 Delta Thailand GHG Inventory Report Delta Thailand ISO14064-1 certificate Delta India ISO14064-1 certificate Delta Slovakia ISO14064-1 certificate 		✓	6.5.5	CC13.1, CC13.1a, CC13.1b, CC13.2, CC13.2a, CC7.1, CC7.2, CC7.2a, CC7.3, CC7.4, CC8.1, CC8.3, CC8.3a, CC10.1, CC10.1a, CC10.2, CC10.2a, CC10.2b, CC10.2c	principle 7 principle 8	12.4, 13.1, 14.3, 15.2, 3.9	
305-3	Other indirect (Scope 3) GHG emissions	<ul style="list-style-type: none"> This report page 57 Delta Thailand GHG Inventory Report Delta Thailand ISO14064-1 certificate Delta India ISO14064-1 certificate Delta Slovakia ISO14064-1 certificate 		✓	6.5.5	CC13.1, CC13.1a, CC13.1b, CC13.2, CC13.2a, CC3.1a, CC3.1b, CC3.1c, CC3.1e, CC8.9, CC8.9a, CC14.1	principle 7 principle 8	12.4, 13.1, 14.3, 15.2, 3.9	
103-1	Explanation of the material topic and its Boundary	This report page 10, 25-27, 56-57		✓	4.4, 5.2	CC1.1, CC1.1a, CC1.2, CC1.2a, CC2.1, CC2.1a, CC2.1b, CC2.1c, CC2.1d, CC2.2, CC2.2a, CC2.2b, CC2.2c,			

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
					ISO26000	CDP	UNGC	SDG	CRBP
						CC2.2d, CC3.1, CC3.1a, CC3.1b, CC3.1c, CC3.3, CC3.3a, CC3.3b, CC3.3c, CC3.3d, CC8.4, CC8.4a			
103-2	The management approach and its components	This report page 9, 10, 12, 15, 26-27, 57		✓	4.4, 5.2	CC1.1, CC1.1a, CC1.2, CC1.2a, CC2.1, CC2.1a, CC2.1b, CC2.1c, CC2.1d, CC2.2, CC2.2a, CC2.2b, CC2.2c, CC2.2d, CC3.1, CC3.1a, CC3.1b, CC3.1c, CC3.3, CC3.3a, CC3.3b, CC3.3c, CC3.3d, CC8.4, CC8.4a			
103-3	Evaluation of the management approach	This report page 26-27, 57		✓	4.4, 5.2				
305-4	GHG emissions intensity	<ul style="list-style-type: none"> This report page 57 Delta Thailand GHG Inventory Report Delta Thailand ISO14064-1 certificate Delta India ISO14064-1 certificate Delta Slovakia ISO14064-1 certificate 			6.5.5	CC12.2, CC12.3	principle 8	13.1, 14.3, 15.2	
305-5	Reduction of GHG emissions	<ul style="list-style-type: none"> This report page 57, 58 Delta Thailand GHG Inventory Report Delta Thailand ISO14064-1 certificate Delta India ISO14064-1 certificate Delta Slovakia ISO14064-1 certificate 			6.5.5	CC3.3a, CC3.3b, CC7.2, CC7.2a, CC7.3, CC12.1, CC12.1a, CC12.1b, CC14.3, CC14.3a	principle 8	13.1, 14.3, 15.2	
305-6	Emissions of ozone-depleting substances (ODS)	This report page 59			6.5.3, 6.5.5		principle 7 principle 8	12.4, 3.9	
305-7	Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	This report page 65		✓	6.5.3		principle 7 principle 8	12.4, 14.3, 15.2, 3.9	

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
					ISO26000	CDP	UNGC	SDG	CRBP
306-1	Water discharge by quality and destination	This report page 68, 69		✓					
306-2	Waste by type and disposal method	This report page 64		✓	6.5.3		principle 8	12.4, 12.5, 3.9, 6.3	
306-3	Significant spills	<ul style="list-style-type: none"> This report page 64, 66 Local regulator official endorsement 			6.5.3		principle 8	12.4, 14.1, 15.1, 3.9, 6.3, 6.6	
306-4	Transport of hazardous waste	<ul style="list-style-type: none"> This report page 64 Local regulator official endorsement 			6.5.3		principle 8	12.4, 3.9	
307-1	Non-compliance with environmental laws and regulations	<ul style="list-style-type: none"> This report page 41,50-53, 57-59, 64,70, 72 Local regulator official endorsement 			4.6		principle 8	16.3	Principle 7
308-1	New suppliers that were screened using environmental criteria	<ul style="list-style-type: none"> This report page 50-51 Procurement agreement Supplier Management Measure 			6.3.5, 6.6.6		principle 8		Principle 7
308-2	Negative environmental impacts in the supply chain and actions taken	This report page 50,51			6.3.5, 6.6.6		principle 8		
401-1	New employee hires and employee turnover [This Standard includes a Standard Interpretation on how to calculate the rates of new employee hires and employee turnover.]	<ul style="list-style-type: none"> This report page 75-77 Employment policy 			6.4.1, 6.4.2, 6.4.3		principle 6	5.1, 8.5, 8.6	Principle 3
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	<ul style="list-style-type: none"> This report page 79 Employment policy Welcome onboard, manual for new employees 			6.4.1, 6.4.2, 6.4.4, 6.8.7		principle 8	3.2, 5.4, 8.5	Principle 3
401-3	Parental leave	<ul style="list-style-type: none"> This report page 75 Employment policy Welcome onboard, manual for new employees 			6.4.1, 6.4.2, 6.4.4		principle 6	5.1, 5.4, 8.5	Principle 3
402-1	Minimum notice periods regarding operational changes	<ul style="list-style-type: none"> This report page 78 Employment policy Welcome onboard, manual for new employees 			6.4.1, 6.4.2, 6.4.3, 6.4.5		principle 3	8.8	
403-1 (2018)	Occupational health and safety management system	<ul style="list-style-type: none"> This report page 86 ISO 18001 certificate: Thailand, India, Slovakia 		✓				8.8	

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
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403-2 (2018)	Hazard identification, risk assessment, and incident investigation	This report page 74,85, 88-90		✓				3.3, 3.4, 3.9, 8.8	
103-1	Explanation of the material topic and its Boundary	This report page 22,23,25		✓	4.4, 5.2		principle 7 principle 8		
103-2	The management approach and its components	This report page 71,85-89		✓	4.4, 5.2		principle 7 principle 8		
103-3	Evaluation of the management approach	This report page 71		✓	4.4, 5.2		principle 8		
403-3 (2018)	Occupational health services	This report page 71,85, 86						3.3, 3.4, 3.9, 8.8	
403-4 (2018)	Worker participation, consultation, and communication on occupational health and safety	This report 86						8.8	
403-5 (2018)	Worker training on occupational health and safety	This report 86		✓					
403-6 (2018)	Promotion of worker health	<ul style="list-style-type: none"> This report page 86 Happy workplace policy Employment policy Welcome onboard, manual for new employees 							
403-7 (2018)	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	This report 43, 52, 102							
403-8 (2018)	Workers covered by an occupational health and safety management system	This report 86							
403-9 (2018)	Work-related injuries	This report page 88,108		✓					
403-10 (2018)	Work-related illness	This report page 71		✓					
103-1	Explanation of the material topic and its Boundary	This report page 22,23,25		✓	4.4, 5.2		principle 7 principle 8		
103-2	The management approach and its components	This report page 71,85-89		✓	4.4, 5.2		principle 7 principle 8		

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
					ISO26000	CDP	UNGC	SDG	CRBP
103-3	Evaluation of the management approach	This report page 71		✓	4.4, 5.2		principle 8		
404-1	Average hours of training per year per employee	This report page 83		✓	6.4.7		principle 6	4.3, 4.4, 4.5, 8.2, 8.5	Principle 3
404-2	Programs for upgrading employee skills and transition assistance programs	<ul style="list-style-type: none"> This report page 60, 83 Employment policy Full Major social contribution list 			6.4.7, 6.8.5		principle 8	8.2, 8.5	Principle 3
404-3	Percentage of employees receiving regular performance and career development reviews	This report page 75			6.4.7		principle 6	10.3, 5.1, 8.5	
405-1	Diversity of governance bodies and employees	<ul style="list-style-type: none"> This report page 33,75,77,81 CG Policy Employment policy 			6.2.3, 6.3.7, 6.3.110, 6.4.3		principle 6	5.1, 5.5, 8.5	Principle 3
405-2	Ratio of basic salary and remuneration of women to men	This report page 78			6.3.7, 6.3.10, 6.4.3, 6.4.4		principle 6	10.3, 5.1, 8.5	
406-1	Incidents of discrimination and corrective actions taken	This report page 74			6.3.1, 6.3.2, 6.3.6, 6.3.7, 6.3.10, 6.4.3		principle 6	16.b, 5.1, 8.8	Principle 1,3
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	This report page 50,80		✓	6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.3.8, 6.3.10, 6.4.5, 6.6.6		principle 3	8.8	Principle 3
408-1	Operations and suppliers at significant risk for incidents of child labor	This report page 50,102			6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.3.5, 6.3.10, 6.6.6, 6.8.4		principle 5	16.2, 8.7	Principle 1,2, 3
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	<ul style="list-style-type: none"> This report page 50 Procurement agreement RMI Agreement Supplier Management Measure 			6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5, 6.3.10, 6.6.6		principle 4	8.7	
410-1	Security personnel trained in human rights policies or procedures	This report page 86,108			6.3.1, 6.3.2, 6.3.4, 6.3.5, 6.6.6		principle 1	16.1	Principle 8
411-1	Incidents of violations involving rights of indigenous peoples	This report page 68,77			6.3.1, 6.3.2, 6.3.4, 6.3.6, 6.3.7, 6.3.8,6.6.7, 6.8.3		principle 1	2.3	
412-1	Operations that have been subject to human rights reviews or impact assessments	This report page 22,72			6.3.1, 6.3.2, 6.3.3, 6.3.4, 6.3.5		principle 1		principle 1
412-2	Employee training on human rights policies or procedures	This report page 83			6.3.1, 6.3.2, 6.3.5		principle 1		

GRI Standard	Description	Page / Link	Reason for omission	External Assurance	Linkage to other initiatives				
					ISO26000	CDP	UNGC	SDG	CRBP
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	<ul style="list-style-type: none"> This report page 50 Procurement agreement 			6.3.1, 6.3.2, 6.3.3, 6.3.5, 6.6.6		principle 2		
413-1	Operations with local community engagement, impact assessments, and development programs	This report page 22,23,74,80		✓	6.3.9, 6.5.1, 6.5.2, 6.5.3, 6.7.9		principle 1		Principle 7
413-2	Operations with significant actual and potential negative impacts on local communities	<ul style="list-style-type: none"> This report page 22,23,74,80 Local regulator official endorsement 			6.3.9, 6.5.3, 6.7.9		principle 1	2.3	Principle 7
414-1	New suppliers that were screened using social criteria	<ul style="list-style-type: none"> This report page 50, 52 Procurement Agreement 			6.3.5, 6.6.6, 6.8.1, 6.8.2		principle 7 principle 8		Principle 2, 3
414-2	Negative social impacts in the supply chain and actions taken	<ul style="list-style-type: none"> This report page 50, 52 Supplier Management Measure page 4-13 			6.3.5, 6.6.1, 6.6.2, 6.6.6, 6.8.1, 6.8.2		principle 7 principle 8		Principle 1, 2,10
415-1	Political contributions	<ul style="list-style-type: none"> This report page 97 Membership of Association Full Major social contribution list 				CC2.3, CC2.3a, CC2.3e, CC2.3f, CC2.3g	principle 8 principle 10	16.5	
416-1	Assessment of the health and safety impacts of product and service categories	This report page 42,45,102			6.7.1, 6.7.2, 6.7.4, 6.7.5, 6.8.8		principle 8		Principle 5
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	This report page 41			4.6, 6.7.1, 6.7.2, 6.7.4, 6.7.5, 6.8.8		principle 8	16.3	
417-1	Requirements for product and service information and labeling	This report page 45			6.7.1, 6.7.2,, 6.7.3, 6.7.4, 6.7.5, 6.7.9		principle 8	12.8	Principle 5,6
417-2	Incidents of non-compliance concerning product and service information and labeling	This report page 41			4.6, 6.7.1, 6.7.2, 6.7.3, 6.7.4, 6.7.5		principle 7 principle 8	16.3	
417-3	Incidents of non-compliance concerning marketing communications	This report page 46			4.6, 6.7.1, 6.7.2, 6.7.3		principle 7 principle 8	16.3	
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	<ul style="list-style-type: none"> This report page 63 ISO/IEC27001:2013 certificate 			6.7.1, 6.7.2, 6.7.6		principle 8	16.a, 16.3, 16.10	Principle 6
419-1	Non-compliance with laws and regulations in the social and economic area	<ul style="list-style-type: none"> This report page 39 Local regulator official endorsement 			4.6, 6.7.1, 6.7.2, 6.7.6		principle 7 principle 8	16.3	Principle 6

เพราะ O_2
สำคัญสำหรับ
คุณและครอบครัว



Power Input	Input Rating	380~415 Vac; 50 / 60 Hz; Three-phase / L1, L2, L3, N, PE
	Power Factor	> 0.98
	Current THD	Compliant with IEC 61000-3-12
	Efficiency	94%
Power Output	DC Output #1*	IEC CCS DC Level 2, 50-500 Vdc, 60A max., 25kW max. (Optional: SAE DC)
	DC Output #2	CHAdeMO, 50-500 Vdc, 60A max., 25kW max.
Protection	Protection	Over current, Under voltage, Over voltage, Residual current, Surge protection, Short circuit, Over temperature, Ground fault
User Interface & Control	Display	2.7" OLED screen
	Support Language	English (Other languages available upon request)
	Push Buttons	Multi-functional buttons (LED light: Orange, Blue) / Emergency stop button (Red)
	Charge Options	Charge options to be provided upon request: Charge by duration, Charge by energy
	User Authentication	ISO/IEC 14443 Type A/B RFID for user authentication
Communication	Network Interface	Ethernet (standard); 3G (optional); Wifi (optional)
Environmental	Operating Temperature	-30°C to +50°C (-22°F to +122°F)
	Storage Temperature	-40°C to +85°C (-40°F to +185°F)
	Humidity	< 95% relative humidity, non-condensing
	Altitude	Up to 2000 m (6500 ft.)
Mechanical	Ingress Protection	IP55
	Enclosure Protection	IK10
	Cooling	Forced air
	Charging Cable Length	4 m (13 ft.)
	Dimension (W × H × D) / Weight	680 × 430 × 230 mm (27 × 17 × 9 in.) 47kg (104 lb), excluding plug and cable
Regulation	Certificate / Compliance	CE, CHAdeMO / IEC 61851-1 / IEC 61851-23
Compatibility	Compatible vehicle brands	CCS: BMW, GM, Volkswagen; CHAdeMO: Nissan, Toyota, Mitsubishi, Peugeot, Citroen

* SAE DC is optional, Maximum current is 65A.
Specifications are subject to change without notice.

Delta Electronics (Thailand) PCL.

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TEL: +66 (0) 2709-2800

FAX: +66 (0) 2709-3200

For more product information and sales inquiries,
Please contact ev.det@deltatw.com



Delta DC Wallbox EV Charger

Key Features

- CCS* / CHAdeMO dual charging ports
- DIN 70121 / CHAdeMO compliance
- Max. output power: 25kW
- Output voltage range: 50-500Vdc (Combo); 50-500Vdc (CHAdeMO)
- Max. 94% power efficiency
- RFID card reader for user authentication
- Network connectivity (OCPP)
- IP55 protection and IK10 vandal-proof casing

Applications



Data Center Infrastructure Solutions



InfraSuite Manager (DCIM)

Have the entire data center at your fingertips!

- InfraSuite Manager integrates all facilities and IT equipment on one platform.
- InfraSuite Manager is Delta fully featured DCIM software solution that optimizes data center performance and life cycle management.

“The power behind your competitiveness”



Precision Cooling

- Highly-efficient variable fan speed control saves 27% of power if fan speed reduced by 10%



Power Distribution System

- Power Distribution Unit (PDU): Modular and hot-swappable output breaker with transformer
- Remote Power Panel (RPP): PDU without transformer
- Rack-Mount Remote Power Panel (rRPP): An ideal power distribution solution to small datacenters
- Rack Power Distribution Unit (rPDU): Reliable branch circuit breaker protection



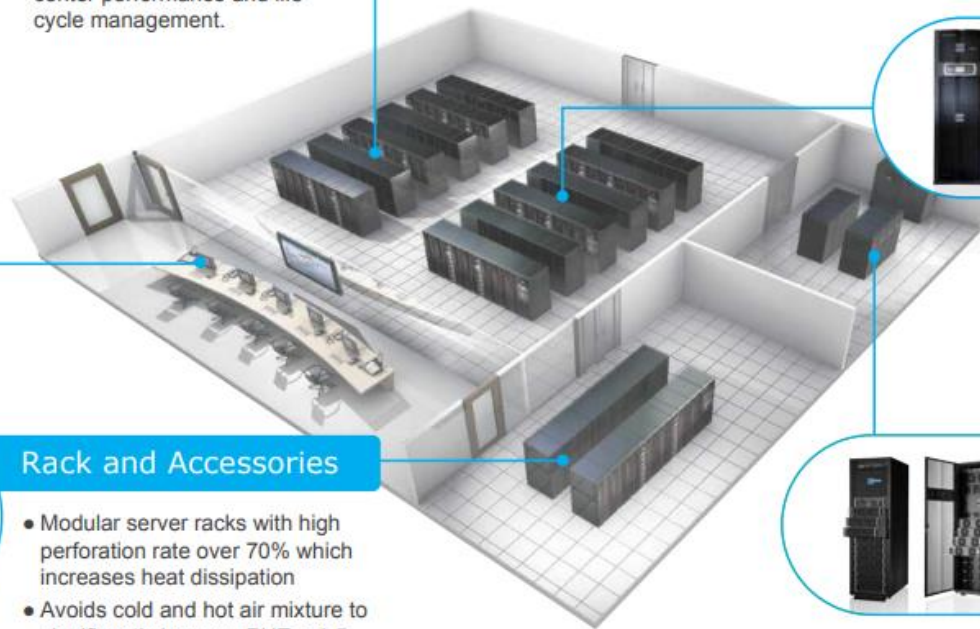
UPS System

- Fully modular design. Hot-scalable and hot-swappable.
- Ultra-integrated system with power supply, power distribution and runtime.
- Output PF up to 1
- Leading power efficiency up to 96.5%



Rack and Accessories

- Modular server racks with high perforation rate over 70% which increases heat dissipation
- Avoids cold and hot air mixture to significantly improve PUE < 1.5



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บริการธุรกิจตอบรับ

ใบอนุญาตเลขที่ 4/17 ปณ บางปู
ถ้าฝากส่งในประเทศไม่ต้องแนบตราไปรษณียากร



คณะกรรมการเพื่อการพัฒนาที่ยั่งยืน

บริษัท เติลต้า อีเลคโทรนิคส์ (ประเทศไทย) จำกัด (มหาชน)

909 ซอย 9 หมู่ 4 นิคมอุตสาหกรรมบางปู (เขตส่งออก)

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

1 0 2 8 0

Share your comment on this report

1. Which group of reader are you in?
 - ☐ Regulator ☐ Business partner ☐ Customer ☐ Creditor ☐ Shareholder/ investor ☐ Delta employee ☐ Student ☐ Research/ educational institute
 - ☐ Media ☐ Community ☐ Student ☐ Sustainable report developer ☐ Others (please specify).....

2. Which rank of age are you in?
 - ☐ under 22 yrs. old ☐ 22 – 35 yrs. old ☐ 36 – 46 yrs. old ☐ 46 – 60 yrs. old ☐ 61 yrs. old and above

3. Your overall satisfaction on this report

3.1) Easiness to understand	<input type="radio"/> High	<input type="radio"/> Moderate	<input type="radio"/> Need improvement
3.2) Attraction of the contents	<input type="radio"/> High	<input type="radio"/> Moderate	<input type="radio"/> Need improvement
3.3) Content grouping and chronicle	<input type="radio"/> High	<input type="radio"/> Moderate	<input type="radio"/> Need improvement
3.4) Completeness of material issues	<input type="radio"/> High	<input type="radio"/> Moderate	<input type="radio"/> Need improvement
3.5) Inclusiveness of stakeholders	<input type="radio"/> High	<input type="radio"/> Moderate	<input type="radio"/> Need improvement
3.6) Balance of the content	<input type="radio"/> High	<input type="radio"/> Moderate	<input type="radio"/> Need improvement
3.7) Key indicator mapping to related initiatives	<input type="radio"/> High	<input type="radio"/> Moderate	<input type="radio"/> Need improvement
3.8) Validity of additional information links	<input type="radio"/> High	<input type="radio"/> Moderate	<input type="radio"/> Need improvement
3.9) Overall satisfaction level	<input type="radio"/> High	<input type="radio"/> Moderate	<input type="radio"/> Need improvement

4. What are your top 3 subjects are you interested in?
 - 4.1).....
 - 4.2).....
 - 4.3).....

5. How should Delta improve our Sustainable Development Report to suit your requirement?
 - 5.1).....
 - 5.2).....
 - 5.3).....

6. Here's your e-mail addressand you would like to stay connect with Delta's move on these matters:
 - ☐ Press release activity ☐ Annual and Sustainable Development report ☐ Social contribution projects ☐ New product launch ☐ Others.....

Sustainable Development Committee



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