

## "Influencing 50, Embracing 50" Delta's 50<sup>th</sup> anniversary global activities kick off



### SPECIAL REPORT /

"Influencing 50, Embracing 50" –  
Delta's 50<sup>th</sup> anniversary  
global activities kick off

### IoT SMART SOLUTIONS /

DeltaKnEW realizes long –  
distance zero contact work

### SUSTAINABILITY /

Forward-looking deployment of  
low-carbon economy – Introduction  
of TCFD to identify business  
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Thank you for  
being here with us  
Delta's 50<sup>th</sup>  
anniversary

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What did Delta look like 50 years ago? What changes has Delta underwent over the past half-century? In this issue of Special Report on the 50th Anniversary, you are invited to travel through the corridor of time and enter the "Delta Newsroom" to review Delta's footprints. A touring exhibition was launched at the Tongli Lakeview Hotel in Suzhou, China, along with the participation of the guests, teachers, and students at the Delta Power Electronics Seminar. In Thailand, Delta Electronics (Thailand) also held a 50th-anniversary special exhibition and a projection screening of 8K environmental documentaries to convey the concept of "Sustainable conservation, Nurturing life". On the other hand, the foundation launched a coral restoration campaign, calling for more people to care about marine ecology.

Recently, in response to the COVID-19 outbreak in Taiwan, Delta has improved its pandemic measures by immediately initiating plans, such as split operations and working from home, to reduce the risks of cross-regional movement and cluster infections as well as to ensure a smooth operation of production lines and distribution of supplies. To minimize the impact, the 50th anniversary, will be carefully adjusted from time to time as the pandemic develops.

The pandemic has normalized modes of work like split locations, remote work, and cross-team collaboration. In this issue of "IoT Smart Solutions," we will introduce a series of remote interaction and collaboration tools developed by Delta Reach Center DeltaKnEW. These tools meet customer needs throughout product life cycle, effectively enhance communication, and create new inter-enterprise collaboration modes.

The Computex Taipei exhibition this year has been moved online due to the pandemic. Despite the shift to the digital sphere, Delta still displays complete solutions, including building automation, energy infrastructure, data center, telecompower, and the latest B2C products. In this issue of "Brand People," we specially interviewed Mr. ChihHua Lin, the sales manager of IAQ (Indoor Air Quality), and Mr. PS Tang, senior manager of Innergie; they will share B2C brand management strategies and their own Delta experiences and insights.

The World Economic Forum (WEF) released the latest Global Risks Report at the beginning of this year, revealing the threats faced by humanity, which involve not only the serious social and economic effects around the globe cause by COVID-19 but, above all, climate change and environmental crises. This issue of "Sustainability" discusses strategies in a low-carbon economy and introduces TCFD (Task Force on Climate-related Financial Disclosures), which help to turn the climate crisis into business opportunities. Stay tuned!

"Delta Green Life" tells the story about how the Human Resources Department of Delta Thailand, confronted by the pandemic, built an online learning environment through digital transformation and assisted their coworkers to quickly adjust their organization and management methods, creating the home-like experiences.

Brand Management Division





## "Influencing 50, Embracing 50" – Delta's 50<sup>th</sup> anniversary global activities kick off

Text by Brand Management Division

Delta has experienced half a century of refinement, but what did Delta look like 50 years ago? What changes has it undergone? Our 50th Anniversary series of reports in this issue covers related events in China, Thailand, and Taiwan. The "Delta Newsroom" in China launched a touring exhibition to lead guests through the corridors of time; whereas, the "8K VIP Feast" hosted in Thailand presented environmental documentaries with advanced 8K projection, conveying concern for sustainability of the environment. The Delta Foundation launched a "nurturing marine life" initiative on Earth Day devoted to the work of coral restoration, echoing Delta's ideals of "sustainable conservation & nurturing life" for the 50th anniversary.





## Delta's 50th anniversary touring exhibition joins hands with industry to strive toward sustainable development

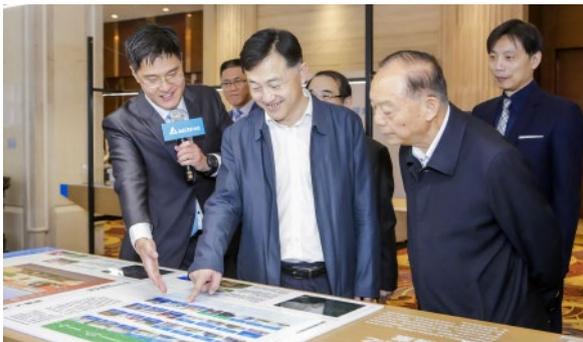
"Sustainable Conservation & Nurturing Life - Delta 50th anniversary exhibition" grandly commenced at the Tongli Lakeview Hotel in Wujiang, Suzhou, China. With the reporting and narrative perspective of the "Delta Newsroom," it led the public to experience Delta's 50 years of history, with eight onsite theme areas. The content included Delta's development track over the past 50 years and its efforts to protect the natural environment through the years. In addition, the exhibition area also showcased Delta's excellent products and solutions, as well as the achievements of many people who have contributed to Delta's development.



"Sustainable Conservation & Nurturing Life - Delta 50th anniversary exhibition" is officially inaugurated. Official representatives of Wujiang, representatives from Delta's Gratitude 50 and Delta managers jointly launched the exhibition

Secretariat Li Ming of the Wujiang District, who was invited to participate in the opening ceremony, said: "As a world-renowned company, Delta has been an important partner of Wujiang for many years. Delta is accelerating its deployment in Wujiang and has also trained many high-tech talents for the development of Wujiang. For the new ground of external origin of development, our cooperation will continue to be deepened."

The exhibition was held in conjunction with the Delta Power Electronics Seminar and received enthusiastic responses from more than 500 teachers and students at the site. The guests visited the exhibition area and listened attentively to the guided tour led by Delta colleagues at the site. They also scrambled to take photos with their mobile phones. The touring exhibition is currently displayed at the Wujiang Plant with enthusiastic participation by colleagues. The exhibition's subsequent stops include Delta's bases in Wuhu, Beijing, Dongguan, Chenzhou, and the Pudong area of Shanghai, allowing colleagues and partners from many different places to participate in the grand event together.



When seeing the "Delta Greentech China Low-Carbon Demonstration Residence," Secretary Li Ming of Wujiang District said, "This green building is in Wujiang!"



Chen Boshi, a professor at Shanghai University, was delighted to see that he is listed as one of Delta's 50 influential figures



DET invited local partners to participate in the 50th anniversary event at Siam Paragon in Bangkok



DET utilized 8K projection and the corridors of time during the series of 50th Anniversary events to help guests understand Delta

## Delta Electronics Thailand (DET) 8K projection festival celebrates the 50th anniversary

Established in Thailand for more than 30 years, DET has developed power and energy-efficient products and also promoted local industries. This year, to celebrate Delta's 50th anniversary, DET held a special "8K festival for distinguished guests" in Bangkok in April, inviting local government agencies and partners to share in the celebration. More than 700 distinguished guests participated in the first and second halves of the event that lasted five consecutive days. They learned about Delta's development and core ideals through Delta's corridors of history. With an immersive experience created in the VIP cinema, Delta's 25,000 lumens INSIGHT 8K laser projection perfectly showcased the 8K environmental documentary "Water with Life in Taiwan," which conveys Delta's ideals for sustainable development and environmental protection.

Mr. Bruce Cheng, the founder and honorary chairman of Delta, gave a speech from overseas via video: "We are proud of the strong growth of DET and will continue to cooperate with Thailand to promote smart manufacturing and green cities!"

## Coral restoration action responds to "Nurturing Marine Life"

Echoing the Delta Group's environmental initiative of "nurturing marine life", starting this year, the Delta Electronics Foundation (DEF) joined hands with a professional marine conservation team and a volunteer team devoted to actively restoring coral. Over the next three years, the teams expect to restore 28 coral species and more than 1,000 coral younglings, and train approximately 300 corporate diving volunteers to help build breeding bases. We look forward to bringing more people closer to the marine ecology and helping them understand the importance of climate change and other environmental issues.

DEF also commissioned prestigious land artist Lee Kuei-Chih to create an art installation in the coral pool adopted by Delta that incorporates the wonders of the local mountains and seas. The installation is titled "Birth," which symbolizes the harmonious coexistence of mankind and nature, as well as the vitality of the future.

Delta's series of events for "Influencing 50, Embracing 50" started with the main theme of "Sustainable Conservation & Nurturing Life" to express gratitude to participating guests and colleagues and share Delta's efforts to cherish energy and nurture the environment. With 50 years of cumulative achievements, Delta is ready to embrace its next 50 years.



Delta Electronics Foundation joins hands with a professional marine conservation team and a volunteer team devoted to actively restoring coral



Little volunteers learn about coral restoration and planted younglings on the bases with their own hands



## Differentiation and diversification to expand B2C brand influence

Interview with Sales Manager of FMBG-IAQ – Mr. ChihHua Lin, and Senior Manager of PSBG-Innergie – Mr. P.S Tang

Text by Brand Management Division

Brand management encompasses different mindsets and strategies, be it B2B or B2C. "Brand People" has interviewed marketing managers of various regions and business groups. In this issue, on the occasion of the online exhibition of Computex Taipei, we especially interviewed the managers of Delta's Consumer Products Division — Lin ChihHua, Sales Manager of FMBG-IAQ (Indoor Air Quality), and P.S. Tang, Senior Manager of PSBG-Innergie. We invited them to discuss their B2C brand management and marketing plans and their experiences at Delta.



Senior manager of PSBG-Innergie - Mr. PS Tang (Left)  
Sales manager of FMBG-IAQ - Mr. Lin Zhihua(Right)



## Embedding the OBM Industry with Delta's DNA of Energy Saving

Manager Lin ChihHua recalled the division's decision to develop OBM products in 2008. Interestingly, the founder, Mr. Cheng, provided two of the disassembled competing ventilating fan prototypes for the team's research. As a result, Mr. Lin assembled and tested the first ventilating fan prototype. "The simple assembly of Delta's fan blades and motors exhibited 40% less energy consumption under the same air volume than the competitor's products, and it was quieter and lighter. At that moment, I saw a blue ocean!" said Lin fervently.

"Our goals have always been introducing Delta's power supplies, fan technology, and energy-saving DNA into ventilation products in the construction industry with new technologies, designing product differentiation, and meeting user needs." Lin further explained that the development of new technologies and high-quality products is relatively costly. Therefore, the challenge is how to promote products that have higher unit prices yet are quiet and energy-saving for traditional channels. IAQ decidedly positions ventilation products mainly for building repair, a category distinctive from consumer electronics. Most customers have backgrounds in traditional industries, necessitating a commitment to building long-term partnerships and communicating with the channels.



IAQ's ventilation fan series products were imported through COSTCO channels in America in 2014



Mr. ChihHua (R1) promoted IAQ products with first line colleagues at the IBS exhibition in 2020

## Grasping core positioning, cultivating local markets

Delta's IAQ products are currently sold in the United States, Taiwan, mainland China, Thailand, Japan, and other countries. In particular, Delta's ventilation products are available through major channels in the US and Taiwan. Lin shared with us that channel planning for any country starts with precise product positioning. "The characteristic of our products is 'buy, install, and use,' which is different from the 'buy and use' of B2C consumer electronics. For instance, American consumers are used to DIY installations. Some American construction sites employ two-stage installation and construction, in which the casings and ducts are installed first. The main fan units and outer panels are installed after the completion of the ceiling. Conversely, most Taiwanese consumers are unable to install by themselves, and the construction is completed by plumbing and electrical contractors. Hence, the products require one single installation. These examples demonstrate the diverse requirements in different markets." Lin further added that the building codes and safety regulations vary in each country. Most US houses are built with wood, and ventilating fan casings must be metal due to fire safety standards. In contrast, reinforced concrete buildings predominate in Taiwan, and the casings are mostly plastic. Thus, the same product has to adjust to local markets. Echoing Delta's business philosophy, the IAQ is devoted to improving product energy efficiency. This year, Delta has won the US Energy Star Award for six consecutive years and its highest honor—Sustained Excellence—for three. Lin believes the "localization and differentiation" of innovative products is a "user-friendly" marketing strategy that suits the local market.



### Increased promotion for brand awareness

Over the last few years, IAQ and BMD have jointly developed digital advertising, product image videos, and visual identities to communicate product features and functions to consumers. "It's fascinating to do OBM. People call us to buy our products!" expressed Lin. There are, on average, 20 to 30 phone calls per month from end consumers and even regional construction companies and contractors inquiring about purchasing information in Taiwan. Although the orders are not large, the reputation gained and popularity accrued all lead to significant outcomes.

Manager Lin ChihHua joined Delta in 2006 and the IAQ team in 2008. At first, he was mainly responsible for product development and then later entered global business marketing. He concluded his 15 years of experience in new product development and marketing was influenced by Delta's innovative and inquisitive spirit, as well as its persevering entrepreneurship. Managing relationships with customers and partners relies on compassion. Customers will eventually recognize your unwavering efforts.

### Diversified marketing conveys Innergie's brand energy

Innergie, Delta's consumer brand, has for years continuously expanded its market influence through online and offline promotion channels by leveraging Delta's core technology of power electronics. PSBG-Innergie's Senior Manager P.S. Tang shared with us his management mindset, "Only when Innergie's products adopt the most advanced NBBU technologies do typical outsourcing customers follow. This way, it maintains Delta's technological leadership in the B2C and outsourcing markets while simultaneously creating and extending the company's value chain."

Innergie has been actively promoting the One For All universal charger in recent years, emphasizing that one Innergie charger can handle a wide range of mobile devices. Versatile yet compact, Innergie has created market differentiation with a solid product. "The One For All Universal Charger is, in fact, an extension of Delta's core concept of eco-friendliness," P.S. told us that not only does this design represent the cutting edge of technology, but the highly efficient product also helps reduce electronic waste and carbon footprint for the earth, as well as energy consumption for consumers!



Mr. P.S. Tang introduced Innergie products to Mr. Bruce C.H. Cheng, Delta's founder and honorary chairman, at Computex in 2019



## Excelling in every aspect for diversified brand experience

Innergie has been in the consumer electronics market for a long time, and P.S. spoke about development strategies in various channels. "In the early stages, we exhibited and sold products in duty-free shops at airports in Singapore and Thailand. We also provided passengers with free charging stations, which not only helped with sales but also increased brand exposure." Other than Southeast Asia, there were also activities in European airports. In Taiwan, pop-up stores and product launch events integrated physical events and online marketing to maximize publicity. In Japan, the hybrid Innergie Café was established at the Delta Yokohama Electric Vehicle Charging Station, allowing consumers to charge both their cars and mobile devices. P.S. stated that besides expanding offline channels, social media management, which values reviews and the unboxing experience, also plays an important part. With collaborations with influencers and the Innergie Classroom, the product's concept of One For All is conveyed to consumers.

P.S. also talked about the marketing trend of crossover collaborations. "Omnichannel is the trend of the future. Chargers do not have to be purchased from electronics stores. Everyone is a potential consumer." The target market is no longer only limited to traditional channels. Rental chargers at coffee shops or co-working spaces provide divergent ways for product advertising.



Innergie 45H pop-up stores (Left) and Innergie C6 Duo online campaign (Right) promoted brand image and products

## Internalization of brand spirit – a day of Innergie

Since Innergie was founded in 2006 by Delta Thailand, P.S. has gained copious experience along the way. "Thanks to Delta, I had the opportunity to build a consumer power brand so that more consumers can understand the concept of environmental protection, energy conservation, and love for the earth." P.S. was convinced that internalizing the brand spirit into daily work and life and observing the details of life facilitate product ideation. "There is no shortcut to success. Keep communicating our brand concept to consumers, and you will definitely see the effects!"



## DeltaKnEW realizes long – distance zero contact work

Text by DRC

Based on the full life cycle of customers, DeltaKnEW of Delta Research Center (DRC) has launched a series of remote interaction and collaboration tools, which not only improve communication efficiency, but also open a new page for the cooperation model between enterprises.



DeltaKnEW digital collaboration tool product portfolio includes:

- Academy: Online learning platform
- Mastering: VR<sup>1</sup> training solution
- Frontline: AR<sup>2</sup> frontline empowerment program
- Virtual Tour: Virtual display platform
- Simulation: Digital twin simulation service

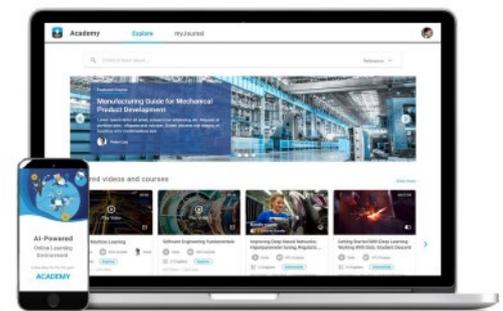
1 VR = Virtual Reality  
2 AR = Augmented Reality

DeltaKnEW digital collaboration tools satisfy the full life cycle of customers

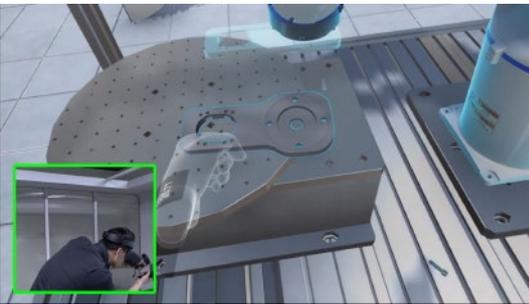
In the journey, the customer will have preliminary understanding of Delta's solutions first through online audio and video contents of Academy; if the customer wishes to learn of more details, he/she can have an immersive experience of the solution in the environment of Virtual Tour; before a customer decides whether to purchase, he/she can also simulate the cost effectiveness of the solution introduction through the Simulation service in order to speed up the decision process; after the purchase, the customer can learn how to assemble or operate through Mastering. In case of any problems, the customer can also obtain assistance from real-time remote expert through Frontline. Besides, the expert knowledge can be stored and accumulated in a systematic way to continuously optimize the after-sales service.

## Academy online learning platform

DeltaKnEW Academy has been successfully applied to different internal and external partners, including smart manufacturing training courses and certification for professionals launched by Nanyang Technological University, Singapore; the Human Resources Department of Delta Group launched more than 4,015 online courses for employees in 17 branches around the world; Delta Greentech uploaded more than 400 product videos, enabling local system integrators to carry out brand promotion and product services.



Mobile APP version and web version of DeltaKnEW Academy can be seamlessly switched to meet the needs of mobile and fragmented learning



DeltaKnEW Mastering is used to simulate real machine operation in virtual environment

## Mastering VR training solution

Delta uses DeltaKnEW Mastering to let employees repeatedly practice the assembly and operation procedures of the machine in the VR environment, in which real-time feedback mechanism can improve learning results; the introduction of Mastering not only lowers the overall training cost and the operational risk and loss caused by employees' lack of experience, but also pass on expert experience and improves skills systematically.

## Frontline AR frontline empowerment program

DeltaKnEW Frontline allows frontline personnel to display the operating manual of the machine in a real-time manner or search for information to solve problems independently through AR glasses or hand-held devices, or connect with remote experts online in a real-time manner for assisting in solving problems or repairing. Its unique systematic knowledge accumulation function is more conducive to the continuous optimization of after-sales service; at present, Frontline has not only been introduced into Delta, but also steps into the medical industry to assist hospitals in providing emergency notice, and obtain cross-discipline physician support at the first moment to improve the efficiency of inquiry and diagnosis.



On-site personnel wear AR glasses and connect with remote experts online in a real-time manner to perform maintenance of the machine



## Virtual Tour virtual display platform

DeltaKnEW Virtual Tour has been applied to exhibitions and guided tours. Through VR display, clients can now have immersive experience in interaction with products as if they were on the same site. DeltaKnEW Virtual Tour also provides both VR helmet version and standalone version at the same time to meet the needs of different scenarios and different customer groups.

Delta displays "Dynamic-Beyond Series Micro-Module" through VR, showing dynamic airflow and warning of abnormality

## Simulation digital twin simulation service

DeltaKnEW Simulation has successfully assisted the product team of Delta in quickly establishing the 3D environment in the customer site and evaluating the cost effectiveness of the introduction, in order to develop and design products that most meet the needs of customers accordingly, and realize "Design on Demand."



Digital twin technology is used to simulate product design, smart adjustment of the machine, production line configuration, etc.



## Forward-looking deployment of low-carbon economy – Introduction of TCFD to identify business opportunities from climate crisis

Text by Corporate Sustainable Development Office

According to the latest “Global Risks Report” released by the World Economic Forum (WEF) earlier this year, humans are facing seven major risks<sup>1</sup>, and, as expected, other than the COVID-19 pandemic that has brought a huge impact on global society and economy, the major risks are climate change and environmental crisis.

In December 2020, Delta’s second internal educational training that is held once every three years to identify climate risks and opportunities was in full swing. In the training, the ESG team mustered more than 70 managerial representatives from a total of 37 relevant divisions, which include eight major business groups and the functional units such as human resources, procurement, finance, legal affairs, investor relations, and factory affairs. In accordance with the Task Force on Climate-related Financial Disclosures (TCFD) Protocol<sup>2</sup> published by Financial Stability Board (FSB), material risks through internal evaluation and analysis were identified out of the 22 items of risks proposed by the TCFD framework based on the possibility and impact of the influence of various climate change risks on Delta’s business operation, in which the risks of “increase in raw material costs” and “renewable energy regulations” have raised greater concern.



In the TCFD internal educational training held once every three years, Delta musters more than 70 managerial representatives from its business groups and functional units to jointly identify key climate risks and opportunities faced by Delta based on the possibility and impact of the influence of various climate change risks on Delta’s business operation

**TCFD**

TASK FORCE ON  
CLIMATE-RELATED  
FINANCIAL  
DISCLOSURES





## Delta is devoted to resolving climate risks and grasping business opportunities and turns out to be the world's first TCFD supporter in the technology industry

Why is climate risk management important to businesses? Texas's statewide power outage caused by an ice storm in February further led to a financial crisis of local power companies. It illustrates that climate change can affect a nation's social security, financial order and even the global economy. Thus, it is an issue closely related to business and mankind's sustainable development. To this day, not only do corporate investors use it to evaluate their future investment objects, but international sustainable ratings, such as CDP and DJSI, also include climate risk-related issues as important guidelines for corporate ESG strategic planning.

In 2015, Delta signed We Mean Business Initiative and one of the commitments was "disclosure of climate change information." When the 2017 TCFD Protocol came out, Delta followed the Protocol's framework to pilot climate risk identification, whereas it also headed for transformation to the low-carbon economy to explore new business opportunities. Subsequently, it has disclosed the progress every year in its annual financial statements and sustainability reports. In February 2018, Delta was officially registered as the supporter of TCFD and became the world's first TCFD supporter in the technology industry.

## Incorporation of climate change into business strategies and sustainable objectives, TCFD deepens its concept of climate risk resilience

When introducing TCFD in 2017, Delta encountered a lot of obstacles. The main reason was that global industries were still groping about the specific effects of climate change and had neither precedents nor standard methodology to follow. Nevertheless, Delta has long integrated climate change into its business strategies and sustainability objectives, been concerned about direct and indirect impacts of climate on business operations, built up adaptability and constantly studied and analyzed opportunities arising from climate change, so as to echo TCFD's four core elements – governance, strategy, risk management, and metrics and targets. As such, Delta was able to overcome all the difficulties and gradually introduce TCFD, which has also deepened colleagues' concept for climate risk resilience.

In response to climate change, Delta has conducted a major survey every three years and a review every year. It has sifted through transformational risks, such as policy and regulatory risks, technical risks, goodwill risks and market risks, and physical risks, such as immediate risks and long-term risks, to identify important climate risk items and further develop coping measures to locate derived opportunities.

Taking policy and regulatory risks as an example, while carbon tax or mandatory carbon trading management is on the rise in the world, Delta is in preparation for its operating strategy although its plants are not within the management scope. Once Delta is regulated, it may bring about an increase in operating costs and expenses, short supply of renewable energy or insufficient policy transparency or even penalties. Hence, Delta has introduced internal carbon pricing, joined RE100 to set renewable energy targets and had active concern about the development of international policies, such as the border carbon tax and renewable energy regulations, so as to cope with possible risks and develop future business opportunities.

### Four Core Elements of TCFD





## Establishment of scenario analysis model through cross-division collaboration to plan for future climate business opportunities



Delta establishes the model of TCFD scenario analysis using the energy storage system as an example. The results show that the energy storage project can be more significantly thrusted to meet Taiwan's demand under the Beyond 2°C carbon neutrality and renewable energy development scenario

For the past three years, the ESG team has worked with various business units in four phases. From finding parameters, monetizing parameters, assessing resilience to analyzing scenarios, the team has built TCFD basic database and methodology step by step to prepare Delta for climate change.

Delta completed its first climate risk and opportunity identification survey in 2018. According to the survey results, the ESG team has cooperated with the crews of uninterruptible power systems, electric vehicle components, fans, energy storage systems, etc. as of 2019 for pilot projects in an attempt to determine Delta's future climate business opportunities. At the same time, the team has made good use of the international databases (e.g. the online climate risk information platform) to assess immediate and long-term physical risks of respective regions on a larger geographical scale.

Taking its energy storage system as an example in 2020, Delta adopted the analysis of the two most important climate scenarios – one is NDC (Nationally Determined Contributions), which is the result of national self-commitment to carbon reduction, and the other is Beyond 2°C, which is a carbon reduction path via carbon neutrality with the temperature rise of no more than 2°C<sup>3</sup> as the target to establish the model of TCFD scenario analysis and evaluate the potential opportunities for energy storage products in the Taiwan Market under the two renewable energy development scenarios. The analysis results show that, the overall energy storage market in 2030 is expected to grow more than twice compared with 2025 under the Beyond 2°C carbon neutrality scenario, but the growth will be less than twice under the NDC scenario. On the other hand, in 2030 alone, the estimated overall energy storage market under the Beyond 2°C carbon neutrality scenario will be 4.7 times more than that under the NDC scenario. It shows that the Beyond 2°C carbon neutrality scenario can more significantly drive the energy storage project to meet Taiwan's demand.

The analysis results of Delta's introduction of the TCFD correspond with the fact that renewable energy is one of the main options in response to climate change mitigation and adaptation. The energy storage system can help ensure reliability and stability of electric grid power supply, which turns out to be the climate business opportunity of Delta's focus development. In addition to renewable energy, extreme weather and any changes in weather patterns can all significantly affect Delta's business operation. Thus, adaptation action has become a matter of urgency.

### Footnotes:

- 1 The "2021 Global Risk Report" released by the WEF published the world's seven "most likely risks" and seven "risks with highest impact." The "most likely risks" are in order of: extreme weather events, climate action failure, human environmental damage, infectious diseases, biodiversity loss, digital power concentration and digital inequality, whereas "the risks with highest impact" are in order of: infectious diseases, climate action failure, weapons of mass destruction, biodiversity loss, natural resource crises, human environmental damage and livelihood crises. Source: World Economic Forum: The Global Risks Report 2021.
- 2 The TCFD formed by the Financial Stability Board in 2015 has drafted a consistent set of recommendations for voluntary climate-related financial information disclosure to assist investors and decision makers in understanding an organization's major risks, and more accurately assessing climate-related risks and opportunities.
- 3 The NDC scenario is the carbon reduction path of the existing policy scenario incorporating NDC, with which the annual carbon reduction is estimated to be 3% (CO<sub>2</sub>/GDP). Beyond 2°C carbon neutrality scenario is the carbon reduction path of the sustainable development scenario of the net zero carbon emission target committed or planned by more than 120 countries throughout the world, with which the annual carbon reduction is estimated to be 11.3% (CO<sub>2</sub>/GDP).



## Thank you for being here with us Delta's 50th anniversary

Text by Delta HR Division

### Co-prosperity, sharing, common memory

Each year, right before the Labor Day on May 1st is the time for Delta to offer its thanks to its employees. Bruce C.H. Cheng, the founder of Delta, took the lead to express his gratitude to the colleagues. "Who is responsible for such excellence of ours? Without a doubt, you are!" crediting Delta's growth to the entire staff.

While the pandemic has brought many activities to a halt, the online ceremony allowed more colleagues to participate. Short videos have left fond memories. many senior managers and model employees were invited to take part. Regardless of their seniority and positions, the awardees seemed to become the awkward and innocent new recruits of Delta once again in front of the camera. "If possible, we will be here again to celebrate Delta's 60th anniversary," as the employees wished to grow with Delta. "Influencing the passing 50 ; Embracing the next 50."

### Modest yet cordial

Although we were unable to get together at a large-scale awards ceremony, Delta still held small ceremonies at each plant, creating lasting memories with the intimate atmosphere. Our colleagues worked with HR to specially prepare cakes, surprises, and dances to convey the warmth connections. The award recipients held the 50th-anniversary special trophy, their eyes betraying how touched they truly were, notwithstanding the largely hidden expression because of the masks.

### Senior officers Danced for Delta!

In the commendation reception, the HR Department thoughtfully coordinated with the management team to prepare the "Dance for Delta" event for the 50th anniversary. The awardees were invited to dance to the exclusive rhythm of Delta 50, using physical movements to create classic memories with the colleagues.



Thank you for being here with us Delta's 50th anniversary



"Dance for Delta" event for the 50th anniversary



## Delta builds a “smart factory” to “digitized automation for a changing world”

Text by Delta IABG

Delta has built a strong task force with approximately 20 professionals from 10 divisions. They are dedicated to “smart manufacturing” and have conducted elaborate planning, equipment configuration and countless test runs to meet the goal of adopting smart technologies, such as AIoT, edge computing, AR/VR/MR and 5G within half a year. Introducing the concept of smart manufacturing to Taiwan, the team successively upgraded more than 16 workstations of the frequency converter production line at Taoyuan Plant 1. In addition, Delta aggressively organized an alliance for “decentralized manufacturing” and joined forces with Microsoft Taiwan, FET and PTC on March 30th. Mr. Simon Chang, president and COO of Delta noted, “Industrial automation will focus on customization and fulfilling the demands of “small batch and diverse” production. We expect a new industrial revolution brought on by flexible manufacturing. Delta is optimistic about this new direction and has aggressively invested in a smart transformation to complement our long dedication to industrial automation. Currently, the smart production line of Taoyuan Plant 1 is officially commissioned. We plan to replicate our experience in Taiwan throughout the world as we enter the era of smart factories.”

Paul Lin, plant manager of Delta’s Taoyuan Plant 1 indicated, “The smart upgrades of Taoyuan Plant 1 involve smart logistics, smart assembly, smart equipment and smart analysis. By adopting mixed reality (MR) to assist material preparation, the operators can see the route recommendation through MR glasses, profoundly enhances the efficiency of material preparation. In addition, we have also adopted virtual reality (VR) for personnel training to reinforce learning efficiency. At the same time, by integrating MR, artificial intelligence (AI) and production quality management (PQM), our personnel’s assembly became more efficient.” He added, “In terms of equipment, other than deploying a rapid transformable machine (RTM) equipped with a quick calibration mechanism, we also leveraged the advantage of “Digital Twin” to come up with the optimal process parameters through virtual integration and simulation.

By continuously applying a successful formula to its 20 manufacturing sites and global partners, Delta is creating a robust ecosystem to achieve its vision of “Digitized Automation for a Changing World.”

[Click here to watch the video of this success case](#)



Delta is ready to achieve its vision of “Digitized Automation for a Changing World.”



## Salt-field-converted solar farm in Tainan used Delta's centralized inverter C1000

Text by Delta EISBG



Salt-field-converted solar farm in Tainan used Delta's centralized inverter C1000

Delta's three-phase grid-connected solar inverter C1000 has won the favor of Taipower and Star Energy because of its specifications that are superior to the bid and professional services. According to Star Energy's plan, there are sixty-nine 40-foot containers installed in hundreds of hectares of salt fields, and each container will be equipped with two pieces of C1000, which will be responsible for converting the direct current generated by more than 480 thousand solar panels on site and then integrating the alternating current into the power grid, so that the currently largest solar farm in Taiwan can provide 200 million kWh of green electricity per year for household, industrial and commercial use.

The C1000 provided by Delta for this project is not only the only large-scale centralized inverter among Taiwanese brands that can provide 1MW, but also boasts 98.84% ultra-high efficiency. It can feed the electricity generated by the solar system into the mains with the maximum power during the day when there is sunshine; when night falls, it uses the "virtual work at night" function provided by it to stabilize the mains voltage by means of virtual work compensation, thereby protecting stability of the grid. In addition, as the equipment of this project must be installed in the salt flats, and the location is close to the sea, the equipment is thus tried rigorously by the environment of high humidity, high heat, strong wind, and high salt.

Fortunately, the C1000 provides an IP65-rated enclosure, which provides better protection against entry of fine solid particles and permeation of liquid than the requirements of IP54 specified in the project. In addition, the C1000 with a broad temperature design can operate stably in a wide range of temperatures (-25°C - 60°C); and having obtained the voluntary product certification (VPC) and certification of IEC 60068-2-52 salt spray test also proves that C1000 is a durable and excellent product. Therefore, even if it is not placed in a container but installed outdoors in a bare manner, its excellent tolerance is sufficient to withstand the trial of the harsh environment.

For the load reduction and mechanism of protection, unlike commercially available products that drastically reduce the load when encountering high temperatures, the C1000 will only start to reduce the load slowly when the ambient temperature detected is greater than 50°C, in order to maintain a higher level of power generation. The built-in DC and AC circuit breakers provide protection functions, and will automatically trip in the event of an abnormality or failure to ensure the safety of the inverter and the power system.



### Delta BIC creates elegant atmosphere for the KOHLER experience center Taipei

Text by Delta BABG

The KOHLER Experience Center (KEC) Taipei has refitted its overall lighting design and configuration with a tunable lighting system from Delta BIC to enhance its high-quality lighting environment. The KEC is introducing the group's leading bathroom brand KALLISTA to Taiwan. With the tunable lighting system, display scenarios can simulate the physical situation of a customer's home by displaying products under different lighting color temperatures.



Delta BIC creates an elegant atmosphere for the KOHLER experience center Taipei

To highlight the elegance of the KALLISTA series, the remodeling of the KEC Taiwan included the installation of Amerlux lighting. The Amerlux lighting offers outstanding color rendering that highlights the design and materials of KALLISTA. The KEC used the latest Delta BIC technology to not only reduce the trouble of refitting the circuit, but also to make it easier for designers to use a mobile APP to control and adjust the lighting. The BIC technology allows designers and customers to experience the effects of lighting matched with the products.

KOHLER, founded in 1873, has its headquarters in Kohler, Wisconsin, and is one of the longest-established and largest private companies in the United States. KALLISTA is the leading designer bathroom brand under the KOHLER Group. Its product design is famous for its classic, luxurious and noble characteristics.



## Delta and B&A ensures uninterruptible power at provinciehuis Utrecht

Text by Delta ICTBG, EMEA

Delta's 120kVA modular UPS was a perfect fit as a replacement for the existing equipment at provinciehuis Utrecht. It delivers high efficiency and required only minor adjustments upon installation. Delta's modular UPS features three-phase modular UPSs for power rating requirements above 20kVA that serve as power protection for mission-critical infrastructure such as datacenters, mid to large network equipment, and more. Its modular design delivers an ideal solution for datacenters demanding peak efficiency and availability at a lower TCO.

One of the big challenges in this project was ensuring continuity. The extensive knowledge and skill of Delta engineers proved to be a great asset that helped to make this deployment go smoothly. "We were impressed with the quick response from B&A and Delta which helped us to make it a very successful project", said Nico van Leeuwen , Facilitair Medewerker (facility manager) from provinciehuis Utrecht.

"Our Delta modular UPS are innovative and high-quality solutions that help our customers achieve high efficiency and reliability," said Mandy Ho, sales manager BeNeLux of Mission Critical Infrastructure Solutions (MCIS) business unit at Delta Electronics EMEA region. "The modular design of the UPS units will also allow for easy system scalability if necessary in the future, resulting in a lower total cost of ownership. B&A have a deep knowledge of our product and solution portfolio as well as an extensive technical expertise and we're glad to have found a partner we can fully trust. We are proud of having been part of this successful UPS project."

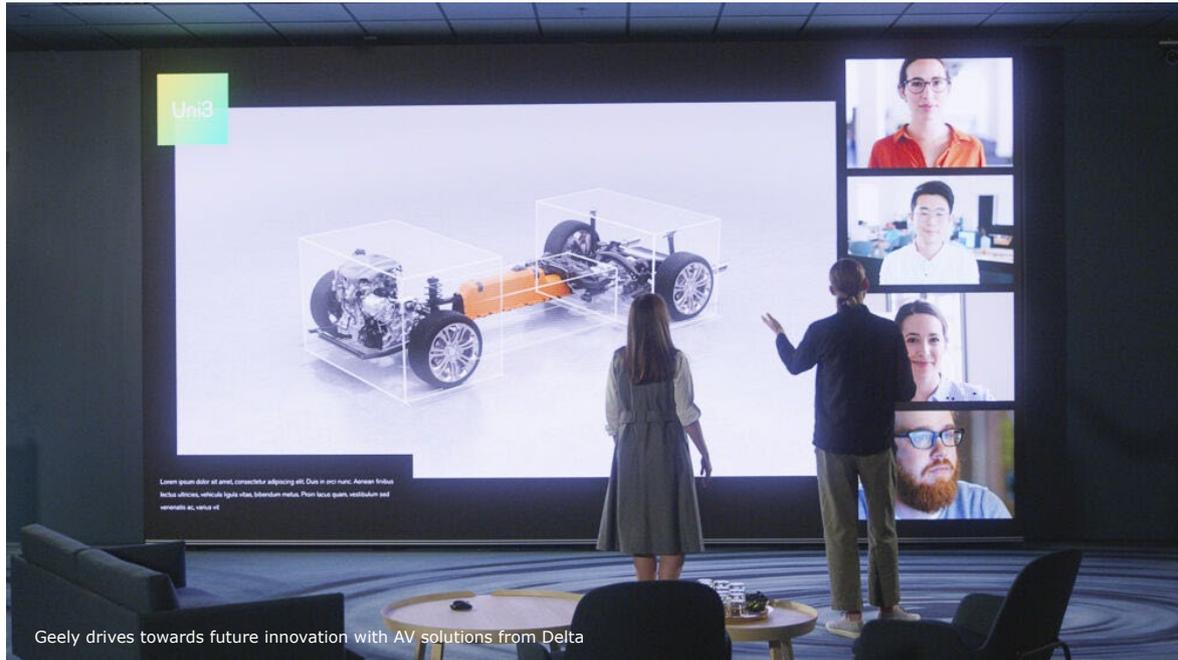


Delta and B&A ensures uninterruptible power at provinciehuis Utrecht



## Geely drives towards future innovation with AV solutions from Delta

Text by Delta EMEA



The Uni3 campus is a home to Gothenburg's development know-how which, over the last century, has secured Volvo Car's position as a leading premium brand. It is also home to the Geely R&D company CEVT. The Uni3 campus will be a hotspot for innovation and will house several different tenants on site, including Geely companies and external startups and creative companies.

Helping to make Geely's campus a compelling location to visit for meetings or tours, are visual solutions from Delta and Vivitek. Their presence onsite is thanks to China Telecom, which for many years has been highly successful in offering project management services to companies in Europe. This experience has now resulted in a highly successful collaboration between China Telecom and Delta, through which Delta supplies a variety of products and services including range of display solutions to the Uni3 campus.

Currently in the first of three build phases, the campus opened its first building in 2020. From early 2021, visitors will be able to admire not just its fresh design and architecture, but the seamless way that visual solutions from Delta and Vivitek have been elegantly integrated throughout the building, in a way that reflects the flair and creativity that exists within the campus.

As with many buildings, the first area to convey the brand's capabilities, is of course the reception. Set to catch visitors' eyes when they walk in, is a 4K resolution LED display located in the main entrance. The display uses Fine Pitch (1.2mm) SMD technology, which combines exceptional resolution with contrast and brightness to provide a vivid and engaging image. This display conveys general 'meet and greet' information with the content being controlled by Vivitek's NovoDS 4K. This offers a very affordable, network-based digital signage solution, making it ideal for creating dynamic visual displays for corporate or public spaces.

The installation took place in one week, a process accelerated by the fact that the deployment was designed, delivered, installed - and will be maintained - by Delta, proving its capabilities to take large scale projects from conception to reality, effortlessly.



## Power electronics technology seminar and 20<sup>th</sup> anniversary of science and education programs

Text by Delta Public Affairs (Beijing)

Sponsored by Delta and undertaken by Xi'an Jiaotong University, the "2021 Delta New Power Electronics Technology Seminar and 20th Anniversary Celebration of Two Science and Education Programs" were held from May 7 to 9 in Wujiang, and the 15 science research projects listed to be funded by the "2021 Delta Power Electronics Science and Education Development Program" were announced. .

With the joint initiative by Bruce C.H. Cheng, the founder of Delta, and Professor Li Zeng-Yuan, an internationally renowned power electronics expert and a member of U.S. National Academy of Engineering, Delta has established the "Delta Power Electronics Science and Education Development Program" and "Delta Greentech Scholar Program" since 2000. By cooperating with 10 major universities, Delta has jointly developed power electronics with them. To this day, 302 innovative research projects of power electronics and power drives have been funded and a number up to 1,300 excellent graduate students received the scholarship.



A cocktail party was held at three places of Suzhou, Taipei and Virginia via video connectivity to celebrate the anniversary

Professor Li encourages us to "think outside the box" rather than stick to the rules. From now on until 2050, humans will use clean energy in a comprehensive manner, in which electricity will be the main energy to be used, i.e., the clean energy dominated by power electronics. As created by the new generation, the new world is full of challenges.

Mr. Bruce C.H. Cheng, the founder and honorary chairman of Delta, noted that he was very grateful to the academics and experts of power electronics for their long and broad view as well as support in promoting and establishing the two science and education programs. Through this platform, more academic exchanges and cooperation at home and abroad are facilitated and more young people are encouraged to dedicate themselves to innovative technology research. It is anticipated that more talent will be cultivated, newer and better scientific development results and applications will be seen and more solutions to environmental protection and energy conservation will be provided to solve the environment and energy crises faced by humans. Twenty years of science and education programs is not an end, but the beginning of the next stage. Delta will continue to support the programs. On the other hand, it happens to be Delta's 50th anniversary this year. At this time, Delta anticipates that it will continue to contribute its efforts to slow down global warming with the core technology of power electronics.



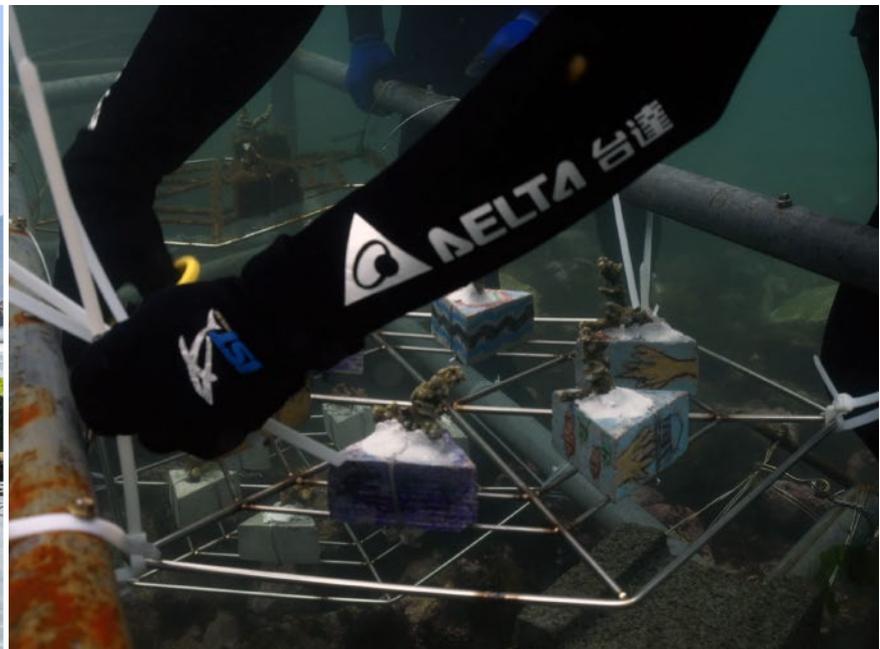
## Artist helps Delta build the installation art of coral restoration

Text by Delta Electronics Foundation

In the northeast coast of Taiwan, Longdong had once supported the prosperous culture of small abalone. This year, "Birth," a strangely shaped and head-turning piece of installation art is a new addition to the place, which quietly protects young corals.



From "nurturing life" to "birth," artist helps Delta build the installation art of coral restoration



We hope the young corals in Delta's coral pond will grow stronger day by day, and under the Birth's watch they will mature one day and be ready to return to the vast ocean

The installation art is inspired by the well-known phenomenon of global warming. Today, in 2021, below the sea level, the invisible impact of climate change has been brewing. In 2020, the water temperature of the ocean surrounding Taiwan hit a record high, and coral bleaching occurred throughout the island on the largest scale in decades. Even the coral reefs of the northeast coast that had never suffered from bleaching before were not spared.

As Delta is celebrating its 50th anniversary this year, Delta Foundation that has long been devoting itself to climate issues starts working on the coral restoration project in the northeast coast in response to the Group's environmental initiatives of "Nurturing Marine Life." Besides collaborating with local team of experts in marine ecology, we called on corporate volunteers to assist in protecting corals and diving, and entrusted prestigious environmental artist Lee Kuei-Chih to create an installation art that incorporates natural wonders of mountains and seas beside the coral pond adopted by Delta. Its name "Birth" symbolizes the harmonious coexistence between humans and nature, and future coral reef resurgence.

"Birth" is an elliptical steel sculpture covering 6 square meters that has a narrow top and a broad bottom. Based on arcs and spirals commonly found in nature, Lee created a hexagon that can bear the force most equally. It echoes with the mysterious beauty of all things in nature and the oval shape reminds us of the process of birth, which can withstand the ceaseless trials of waves and weather round the clock.

Lee believes that humans have to figure out a way to coexist with nature after a long-term loss of balance between ecological conservation and industrial development. We hope the young corals in Delta's coral pond will grow stronger day by day, and under the Birth's watch they will mature one day and be ready to return to the vast ocean.



## Delta Cup international solar building design competition

Text by Delta Public Affairs (Beijing)



Lei Zhang, the secretary general of the Solar Building Expert Committee of Chinese Renewable Energy Society hosted the opening ceremony of the competition

The 2021 Delta Cup International Solar Building Design Competition kicked off on March 21 at Beijing "cloud" platform. The livestream of the competition drew more than 20 media participants along with 13,000 viewers watching online. It echoes Chinese 2060 carbon neutralization goal. To contribute wisdom for green building to solve the climate problems around the world, this competition theme, "Sunshine Low Carbon Community," aims to recruit outstanding works throughout the world, in the hope of promoting low-carbon and building a green and healthy living environment. For the first time, the competition includes virtual and realistic categories. A construction site in Tibet for the public to observe and experience.

Bruce Cheng, the founder and honorary chairman of Delta indicated in his speech that, starting from itself, Delta has built and donated 27 green buildings plus two green data centers throughout the world, and the energy conservation performance has improved all the way from the earliest level of 30%. Some of their energy efficiency improved so much that they even achieve the goal of "Nearly (Net) Zero Energy Building." This year happens to be the 50th anniversary of Delta. At this time, we anticipate that, while developing new products and solutions, our colleagues will also dedicate their efforts to climate mitigation.

The brand event themed on the "application of renewable energy in buildings", began in 2006 and it has been held for nine consecutive years with 8,700 teams participating from all over the world. A total of 1,724 valid works, covering a variety of buildings, such as the construction of new rural communities, beautiful rural communities, urban housing, renovation of existing buildings, sunshine primary schools, architectural adaptation to old buildings, kindergartens, etc., were submitted. Delta has further supported implementation and construction of the winning works. To this day, five pieces (sets) of works have been completed.



## Delta showcases energy-efficiency, smart and human-oriented solutions in COMPUTEX online

Text by Delta Brand Management Division

As affected by the pandemic, the 2021 COMPUTEX will be held in a digital form. It is hoped that the brand communication will be continued through online booth exhibition and forums. In this exhibition, Delta focuses on its 50th anniversary, showcasing the following main aspects to display Delta's comprehensive solution capacity: solutions for building automation, energy infrastructures, data centers, communications power supplies, indoor air quality, etc. and the latest consumer electronics products.

As a Keystone member of International Well Building Institute (IWBI), Delta offers human-oriented building automation solutions that are energy efficient, smart, and in line with IoT frameworks. For this year, based on air quality, smart lighting and video surveillance, Delta showcases the products such as "UNOnext indoor air quality monitor," "BIC IoT lighting," and "VOVPTEK smart network speaker."

Power supply has become an increasingly concerned issue in recent years. Delta has long invested in energy infrastructures. This time, Delta showcases smart energy solutions, including: solar energy solutions, energy storage solutions and electric vehicle charging solutions, with which power conversion and scheduling efficiency can be improved through energy control technologies, so as to optimize energy utilization. To meet the demand for massive data transmission and storage in response to the advent of the 5G era, Delta offers highly-efficient and stable power supply and engine room management through communications power and data center solutions to ensure smooth operation of key businesses and work towards a smart, low-carbon city.

With a user-centric philosophy, Delta also showcases a series of consumer products, including: ventilation fans and fresh air system adopting DC brushless motors to provide an energy-efficient and silent indoor air environment. Furthermore, Vivitek, a projector brand of Delta, also launches professional engineering projectors of DU9900Z/DU6199Z and NovoConnect/NovoDisplay smart meeting room solutions. Also, Innergie, a consumer power brand of Delta, is going to launch its One for All series of universal charger C3 Duo. We cordially invite you to come to catch a glimpse of our products and solutions.

In addition, Delta was specially invited to participate in two global forums, namely Future Car Forum to be held on June 1st and the New Era of Intelligence Forum to be held on June 2nd. James Tang, vice president and general manager of EVBSG will attend the former forum on behalf of Delta to share electric vehicle market trends and the experience and results of Delta's long-term deployment in the field of electric vehicles, whereas Dr. Chen Hong-Hsin of Intelligent Mobile Machine Applications Institute of Delta Research Center will join the latter forum to share with the global audience the indispensable AI applications required by smart manufacturing.

COMPUTEX is co-sponsored by Taiwan External Trade Development Council (TAITRA) and Computer Association, and will be held online on the website of TAITRA from May 31 until June 30, 2021, while the Computer Association's online platform service will be available from now until February 28, 2022.

[Click here for #COMPUTEXVirtual online zone](#)  
[Click here for COMPUTEX Cyberworld online zone](#)  
[Click to join the AI Empowerment online forum](#)  
[Click to watch the Future Car online forum](#)



Delta showcases energy-efficiency, smart and human-oriented solutions in COMPUTEX online



## DET wins S&P Global Silver Class Sustainability Award 2021

Text by Delta Electronics (Thailand)

Delta Electronics (Thailand) PCL won the prestigious S&P Global Silver Class distinction for the second consecutive year for excellent sustainability performance and is once more the only Thailand-based company in the “Electronic Equipment, Instruments & Components” sector of the Sustainability Yearbook 2021.

“Delta Thailand is honored to receive our second S&P Global Silver Class award in only two years. For over 30 years, we have focused on the mission to satisfy global customers with energy-efficient innovation while pioneering sustainable growth in Thailand and in Southeast Asia.” said Mr. Jackie Chang, Delta Electronics (Thailand) President.

Manjit Jus, Global Head of ESG Research, S&P: “We congratulate Delta Electronics (Thailand) PCL on its SILVER Award in The Sustainability Yearbook 2021, which showcases the best performing companies among industry peers and in terms of financially material ESG metrics. With over 7,000 companies assessed, an inclusion in the yearbook is a true statement of corporate sustainability excellence.”

Since 2018, Delta Thailand drives sustainability by educating and soliciting cooperation from partners and suppliers for anti-corruption and circular economy. Delta’s extensive reporting and data collection help to measure and encourage recycled materials usage and carbon footprint tracking of its products.

## Sustainability Award Silver Class 2021

### S&P Global

DET wins S&P Global Silver Class Sustainability Award 2021

## Delta is recognized in Global Child Forum Southeast Asia Benchmark

Text by Delta Electronics (Thailand)

Delta Electronics (Thailand) PCL received a total score of 7.8/10 and Leader rank in the Corporate Sector and Children’s Rights Benchmark Southeast Asia 2020 conducted by Global Child Forum and Boston Consulting Group. Delta is the only company in Thailand with Leader rank in its respective category B2B category.

The assessment recognizes Delta for developing, implementing policies for children’s rights across several important areas. B2B industry participants in 2020 assessment had a 5.3 average score. As a Leader, Delta embed children’s rights into company practice, following-up through monitoring, transparent reporting to create actions.

The Global Child Forum is a Swedish non-profit foundation. The assessment bring together business, civil society, academia and government to spur actions. This work is underpinned by the UN Convention on the Rights of the Child and the Children’s Rights and Business Principles.

Delta commits to global corporate citizenship aligned to the UN SDGs, ILO international labor standards, the Universal Declaration of Human Rights (UDHR) and RBA guidelines.



Delta is recognized in Global Child Forum Southeast Asia Benchmark



## Delta's UPS received the 2020 IT168 Technical Excellence Award

Text by Delta Greentech China

Favored by large data centers and IDC operators for its high power density, small footprint, and high efficiency, Delta's Ultron family DPS series 300-1500kVA uninterruptible power supply system (UPS) stood out and was given the "2020 Technical Excellence Award" by IT media, IT168. The "Technical Excellence Award" has been held for 16 years. Jointly assessed and selected by industry experts, CIO/CTO, and IT media, its criteria reflects the truest voices of technical experts, users, and media. This is also the sixth consecutive time that Delta won the award.



Delta's UPS - Ultron Family DPS Series 300-1500 kVA won the 2020 IT168 Technical Excellence Award

The organizer said: "As a global manufacturer for power management and thermal solutions, Delta has industry-leading technologies and expertise for development of power products. The award-winning Ultron DPS series UPS is designed to solve pain points for large-scale IDC in terms of space, operation and maintenance, and energy efficiency. In response to the trend of centralized IDC around the world and the needs of future growth and expansion, Ultron DPS series UPS is able to continuously provide excellent power protection, high energy efficiency, and low total cost of ownership, creating value for IDC users."

Delta's Ultron family DPS series 300-1500kVA uninterruptible power supply system (UPS) offers excellent power performance; it is with high power density and small footprint (up to 600kVA / m<sup>2</sup>). Its AC-AC efficiency under ECO mode can reach up to 96.5% and 99%, which significantly saves energy costs.

The Ultron DPS series utilize parallel redundancy to avoid failure at single points. Its intelligent battery health diagnosis and proactive detection of key components status can greatly reduce the risk arising during downtime. Key parameters and waveform recording support analysis and diagnosis of advanced events, enhancing its capabilities of smart operation and maintenance. Meanwhile, to enable high flexibility and ease of management, the Ultron DPS series features a user-friendly 10-inch color touch screen, full front access, and modular design for key components, which shortens the mean time to repair (MTTR), making it a new-generation UPS system that fulfills the requirements for large-scale data centers and data center colocation providers.



## Automatic test system for power supplies

Text by Delta EISBG

Delta's automatic test system for power supplies features a design with modular hardware configuration, which allows expansion flexibility and can increase the electronic load to be applied in testing power supply of higher power level. The system features built-in complete standard test items for power supplies, which is available on demand, eliminating the need for writing test items that is both time-consuming and labor-intensive. It's also able to test multiple test items at the same time, and prepare customized test reports automatically. Intelligent and automatic testing can effectively shorten the R&D or manufacturing process and respond to market demands in a timely manner.



Delta automatic test system for power supplies

## 120W and 150W AC-DC desktop adapters

Text by Delta Electronics (Thailand)

Delta has added 3 new models to the ADT Series of AC-DC desktop adapters. They meet DoE Level VI and CoC Tier 2 energy efficiency requirements. The extremely low no-load power consumption below 0.15W and wide operating temperature range from -10°C to +60°C with full power up to +40°C.

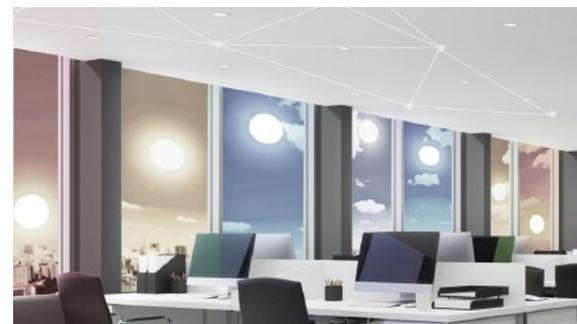


Delta has added 3 new models to the ADT series of AC-DC desktop adapters

## BIC Connected Lighting System

Text by Delta BABG

Using wireless lighting control to create a healthy light environment without additional wiring can turn an existing building into a health-oriented one that complies with international health building standards, which can effectively increase the value of the building. Delta BIC system provides the BIC Zone App the rapid configuration technology of the APP simulates various lighting scenarios the set parameters can be saved in the BIC lighting switch and complete the configuration.



Delta BIC provides light environment in sync with circadian rhythms



## Compensatory rebound in 2021 global energy demand

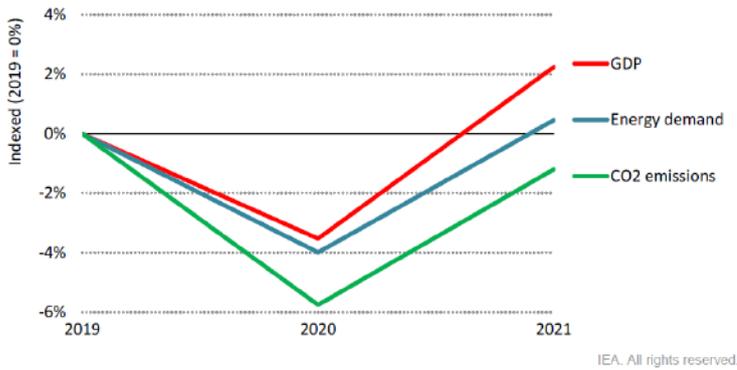
Text by Delta Electronics Foundation

The COVID-19 pandemic hit last year and has not subsided to this day, making it more difficult for think tanks to predict the energy demand and CO<sub>2</sub> emissions in 2021. As a result, the International Energy Agency (IEA) has a rolling revision and released the Global Energy Review 2021 in April.





Evolution of global GDP, total primary energy demand, and energy-related CO2 emissions, relative to 2019.



This year, global energy and carbon emissions are expected to rebound (Chart source: Global Energy Review 2021)

As seen from the chart, the global GDP dropped 3.5% in 2020, with this year's forecast being 6% higher than that of last year. This indicates the return of positive growth as opposed to pre-Covid levels. As for energy demand, due to the early control of the pandemic in some countries last year, there was a mere 4% decline which is lower than the previous estimate. Furthermore, being higher than that of last year, this year's estimate of GDP growth is 4.6%.

Unfortunately, global carbon emissions only fell 5.8% in 2020, which is lower than the 8% previously predicted by the IEA. However, this year's carbon emissions are estimated to be 4.8% higher than that of last year. The rebound forecast came true, making it only 1.2% lower than that in 2019. It shows that countries that failed to seize the opportunity for transformation by promoting green recovery vigorously.

## Growth in renewables remains strong during the pandemic

In terms of types of energy, global coal demand is expected to rise 4.5% this year, surpassing the peak in 2014, which is also the main reason why carbon emissions cannot be reduced. In terms of economic categories, coal demand in emerging countries is set to grow significantly. Furthermore, Fossil fuel demand will increase by 6%, and gas demand by 3%. The increase in global electricity demand will rise to 4.5%, which is five times the decline in 2020, indicating that there is still a lot of room for energy conservation in countries around the world.

The good news is, even if the pandemic continues to ravage the world, affecting the installation progress of new power plants, growth of renewables is still expected to rise 8%, which is the highest annual average rate of growth in history. As a result, the share of renewables in electricity generation in the world will approach 30% this year, which is a rapid growth compared with the level being less than 27% in 2019.

What's more, even though the COP26 UN climate change conference was not held last year, still, there had been a whirlwind of commitments in the past year: countries around the world successively released 2030 carbon reduction and 2050 carbon neutral goals, which far exceeded the independent commitments made in the Paris Agreement, chances are good that a temperature rise control may be viable.

Ironically, if the think tank's carbon emissions forecast for this year turns out to be accurate, it means that countries still have not taken immediate action, or the governments were too eager to control the pandemic and revive the economy to consider the long-term goal of carbon reduction. Even if climate change does not happen until 2050, extreme weather has almost become the new normal. Disasters such as heavy snow and severe drought can affect the global industrial chain at any time. Governments of developed and emerging countries must unite in action and not rely on fossil fuels, so as to prevent climate change from becoming the next unexploded bomb that comprehensively affects people's lives.



## Delta SEA HR embraces new normal strategy and practice

Text by Delta SEA HR, Delta Electronics (Thailand)

COVID-19 has had a huge impact in our world in terms of safety, economics and industry operations. People are currently living in a VUCA world that is one that is full of: volatility, uncertainty, complexity and ambiguity. We are forced to accept and adapt to lots of new terms and trends, such as WFH (work from home), mental health and digital transformation.

As HR, it is very important that we should support employees and help the company to design our strategy and practices to get through this critical moment. Let's take a look at how the SEA HR team has done this for the 14,000 employees at Delta Thailand.



## DELTA GREEN LIFE - PEOPLE

### Enhancing the employee experience - Delta as ONE family

COVID-19 has caused a turbulent and unstable environment for everyone. An important mission for us at this critical moment is how to comfort employees and enhance their experience. Therefore, we have designated two major focus areas to show employees our determination to make Delta as ONE Family.

#### Engagement

By promoting the concept of "I say. I stay. I strive.", our company is continuously holding employee engagement activities such as Coffee Talk, Health Club and Delta Share. Moreover, the official Delta Thailand Line Group was established to improve internal communication and listen to the voices of employees.

#### Empathy

As Thailand is a Buddhist country, our company periodically invites monks to make traditional blessings for employees and their families. To ease the pressures of work during the pandemic, our company provides free masks and alcohol gel to employees every day. We set up a mental health program and medical services to help employees during the COVID-19 outbreak. To improve our workplace environment, our company changed over 2,000 company chairs, renovated the open spaces and set up free WIFI areas.

### Driving digital transformation

It is key for HR to learn how to develop the mindset and reskill/upskill talent that shapes a data-driven and agile learning environment.

For the operator level, DET works with the ILO to launch a female employee reskilling program to improve skills of staff to work in the Industry 4.0 workplace. For our staff level, we launched a trilingual (Chinese, English and Thai) language learning program, online product learning for solution business and the DSM training academy. For management, we plan to develop a digital leadership development program to develop leaders and build up their forward-thinking mindset.

We believe that in the future, there will be more and more challenges. Thus, to embrace the New Normal, our company encourages each department to draft their own contingency plan, SEA HR had also conducted five regional LDC/TDC meetings to ensure every department has done their talent inventory and succession plans, to face any sudden changes.



It is very important that HR should support employees and help the company to design our strategy and practices

