



2022 NET ZERO VISION  
REPORT



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# Establishing Sustainable Development for a Net Zero Future





## 1.1 Letter from our Chairman

Global climate-related environmental issues are no longer an afterthought for enterprises, but a social responsibility that they must fulfill. As the world's biggest high-tech manufacturer and service provider, Hon Hai knows that great responsibility comes with great power. Therefore, over the past few years, we have extended our pre-existing environmental protection actions and actively tracked environmental changes in the world, responded to international environmental and climate issues, and declared our own responsibilities and action goals. This year, we released our first Net Zero Vision Report to disclose Hon Hai's climate-related governance strategies, risks and opportunities, and indicators and goals, thereby demonstrating our internal values, consensus, and determination regarding implementation.

"Sustainable management = EPS + ESG" is a principle I proposed in 2020 to manage sustainability at Hon Hai. We constantly remind all colleagues to focus not only on continued EPS growth, but also active implementation of ESG measures. In environmental terms, Hon Hai is a member of the Taiwan Alliance for Net Zero Emission and has successively joined various initiatives such as Climate Action 100+, Carbon Disclosure Project, the Task Force on Climate-related Financial Disclosures, and the Science Based Targets initiative. We have publicly pledged to achieve net zero greenhouse gas emissions by 2050 and submitted a Business Ambition for 1.5°C Commitment Letter to the Science Based Targets initiative.

This year, apart from active participation in and response to international sustainability trends, we also renamed our CSR Committee to the Sustainability Committee, of which I serve as chairman. Three professional teams have been established under this Committee to promote Environmental (E), Social (S), and Governance (G) actions. We have also set detailed goals and indicators for our net zero vision goals (including carbon emission targets for 2050, green electricity ratios, zero waste management, and water treatments) which have been disclosed to the public. We encourage all teams to actively interact with external parties and participate in third-party

appraisals to gain external recognition, create a sense of team pride, and generate synergy through external attention and internal drive so that we can lead our employees in achieving a net zero vision from top to bottom and through internal and external collaboration. Hon Hai was recently recognized by FTSE Russell as one of the large-scale enterprises in Taiwan with the greatest ESG achievements.

To achieve our net zero vision, our action strategies and goals need to be in-depth and widespread to align with our operating scale and facilitate smooth implementation; these concepts should be incorporated into our DNA and every unit should contribute to our net zero plans. Our Shenzhen "Zero Waste Factory" received the UL 2799 Zero Waste to Landfill Operations Gold Certification in 2022, encompassing 14 corporate entities and an area covering 2.3 square kilometers (equivalent to 9 Daan Forest Parks) within our Shenzhen site. We have also completed greenhouse gas inventories for Scope 1 to Scope 3 emissions over our 870 subsidiaries and 6,000 suppliers, and hope to lead others in our industrial chain in multifaceted implementation of net zero actions.

Hon Hai adheres to high standards when carrying out net zero actions and works to maximize internal and external consensus through communication with multiple parties to demonstrate internal and external consistency, transparent net zero efforts, and net zero achievements. We hold weekly internal action meetings to communicate ESG-related issues and gradually establish our internal corporate culture focused on ESG. We have also hosted multiple training sessions themed around climate-related issues and provide digital teaching materials through our training website to enhance knowledge and awareness of climate-related issues and actions in all colleagues. Hon Hai further works with external institutes on various net zero projects, using the rich expertise

of external institutes to supplement our internal inadequacies related to knowledge and implementation. We also utilize diverse external communication channels to disclose our progress and goals on net zero actions.

Hon Hai is working to realize net zero achievements through top-down promotion of net zero vision goals and bottom-up creation of benefits through net zero actions. We actively embrace the opportunities and challenges brought on by climate-related issues, and hope to spread our positive energies through external communication, supervise our value chains, and work with other enterprises in achieving sustainable transformations and our ESG visions: Technology for Smart Living; Passion for Sustainable Development; Creation of a Better Future Together.

Young Liu, Hon Hai Precision Industry Co., Ltd. Chairman

*Young Liu*







## 1.2 About this Report

Hon Hai Precision Industry Co., Ltd. (also known as Hon Hai Technology Group or Foxconn Technology Group; hereinafter referred to as "the Group" or "Hon Hai") and its majority-owned subsidiary companies and controlled entities. This report is based solely on the activities of the legal entities controlled by the Group, and no significant changes have been made to company information. This report focusing on climate-related risks and opportunities is Hon Hai's first "Net Zero Vision Report" and is based on the Recommendations of the Task Force on Climate-related Financial Disclosures released by the Task Force on Climate-related Financial Disclosures (TCFD) in 2017. For more information on other environmental, social, and governance themes, please refer to our Sustainability Report (<https://www.honhai.com/en-us/CSR/csr-report>).





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## Introduction





In recent years, the environmental, economic, and social impacts caused by global warming have gradually become apparent. The latest Global Risks Report released by the World Economic Forum (WEF) in 2021 listed “climate action failure” and “extreme weather” as the top two major global risks associated with climate change over the next 10 years, indicating that climate change is an urgent issue that all enterprises should take into account.

Hon Hai’s sustainable management principles include 6 major ESG strategies and 32 long-term goals encompassing “Green Solutions, Circular Economy, Employee Satisfaction, Win-Win Strategy, Business Sustainability, and Corporate Governance.” Increasingly serious climate issues have alerted us to an urgent need for climate risk management. Hon Hai’s ESG strategies include three stages of assessments to inventory internal operations, regulations, and customer requirements and expectations. We also reference international trends and research reports to evaluate climate-related risks and opportunities as well as their impacts on Hon Hai, propose corresponding measures for climate management, and comprehensively identify and assess climate change risk and opportunity mechanisms to establish a corporate culture of environmental sustainability.

The first stage incorporated the four main aspects of TCFD recommendations (governance, strategies, risk management, and indicators and goals) in 2022 to facilitate transparent disclosure of our management procedures for key climate-related risks and opportunities, as well as the strides we are making in our operational strategies and performance for our net zero vision. In the second stage, we aim to conduct analyses and discussions of climate scenarios, as well as quantify financial impacts. The third stage will integrate results from the first and second stages to generate standardized forms and processes that extend the scope of climate-related financial assessments to the whole world.

To mitigate possible impacts from climate change, we have always set “Energy Saving, Emission Reduction, Greening, and Circular Economy” as our principles for managing environmental issues. In 2008, we formulated plans to inventory supplier greenhouse gas emissions; in 2012, we began installing solar photovoltaic facilities in our factories; in November 2020, we proposed our goal of achieving net zero emissions over our value chain by 2050 and fully incorporated climate-related issues into our business strategies and sustainability goals to actively respond to zero-carbon transformations in an economic era.

## Hon Hai climate transformation milestones

### Understanding Climate Information

2007

- Established Group Global CSR Committee

2008

- Established GHG inventories and carbon reduction projects, and encouraged suppliers to complete greenhouse gas inventories in accordance with ISO 14064

2009

- Established Energy Resource Management Committee

2010

- Formulated plans to establish a green high-tech demonstration zone at Longhua Factory and installed solar photovoltaic energy systems
- Commenced participation in Carbon Disclosure Project (CDP)



## Energy Conservation and Carbon Reduction Governance Throughout Value Chain

2011

- Launched supplier GHG management platform to form a supplier carbon emissions database

2012

- Commenced 2 MW solar-integrated photovoltaic building project at Longhua Factory

2013

- Participated in Shenzhen carbon transaction pilot program and founded Fu Neng New Energy Technology Co., Ltd.
- Formulated supplier energy and carbon reduction policies and required suppliers to abide by Hon Hai energy saving and carbon reduction policies

2014

- Hon Hai's Plastic Resource Application Center commenced recycling of waste plastics at all factories in China and organized various activities, including the "Eco-friendly, green living and shared resources" event
- Adhered to "green, ecological, natural, zero-emissions, and reusable" principles and established our fourth-generation industrial park "Guizhou Factory"

2016

- Initiated "Green supplier energy conservation pilot program" to provide emission reduction guidelines to our suppliers
- Integrated advanced international photovoltaic simulation software to optimize designs of solar photovoltaic power stations
- Signed collaboration agreement with Nanyang City Government to build power stations with 100 MW solar photovoltaic installed capacity

### Energy conservation and carbon reduction Governance Throughout Value Chain

### Hon Hai Net Zero Transformations

2017

- Encourage suppliers to obtain ISO 50001 certification to enhance energy efficiency
- Formulated "Action Plan for Evaluations of Green Factory Construction Projects (2017-2020)," which includes plans for major entities in our factories in China to complete construction and evaluation of green factories

2020

- Proposed three major climate goals and joined the Climate Action 100+ initiative
- Launched MIH EV Open Platform and formed the MIH Consortium

2021

- Became a TCFD supporter
- Submitted Commitment Letter to the Science Based Targets initiative (SBTi)
- Formulated supplier net zero emission policies and requirements aligned with our climate goals
- Launched "Supplier carbon management system" and encouraged use of renewable energies within our supply chain
- Became a founding member of Association of Taiwan Net Zero Emissions, and served as a director and supervisor

2022

- Formulated 6 major ESG strategies and 32 long-term goals
- Officially submitted science based targets application for SBTi approval
- Renamed the Global Corporate Social Responsibility Committee to the "Sustainability Committee"





## 2.1 Hon Hai Net Zero Goals and Key Actions

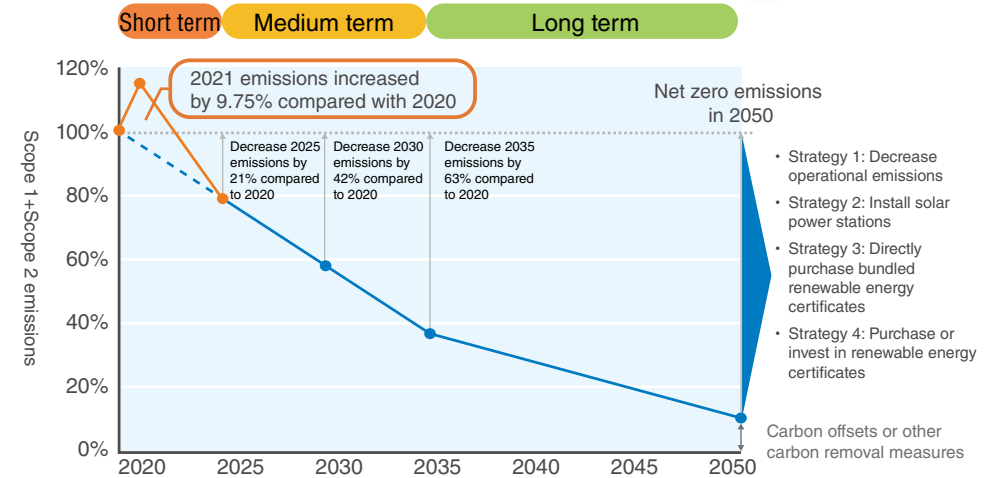
Hon Hai proposed three climate goals in 2020:

- Hon Hai factories should comply with local governmental NDCs and carbon emission policies.
- Align GHG emissions of the Hon Hai value chain with the goals of the Paris Agreement and realize our goal of net zero GHG emissions by 2050.
- Respond to and act upon the three targets proposed by the Climate Action 100+ steering committee:
  - (1) Strengthen climate change governance;
  - (2) Implement actions relating to GHG emissions within Hon Hai's value chain;
  - (3) Provide disclosures in accordance with the Task Force on Climate-Related Financial Disclosures (TCFD).

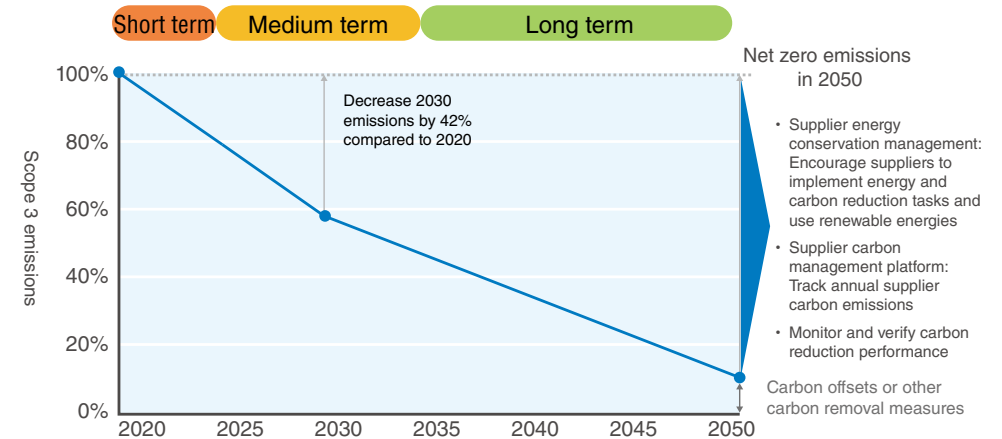
In line with the aforementioned goals, the Group's operating sites have always complied with local environmental and carbon reduction policies, as well as set long-term plans for environmental management of energy conservation and carbon reduction measures in collaboration with our suppliers. In 2021, we pledged to set science based targets based on the Business Ambition for 1.5°C campaign so as to achieve net zero emissions throughout our value chain by 2050. Following a year of inventory and analysis, the Group officially submitted the science based targets application in April 2022 and passed the audit in March 2023, further reviewed and strengthened these targets to establish carbon reduction goals and mechanisms aligned with international initiatives, and also implemented corresponding actions (please refer to the images below; please refer to "[5. Net Zero Transformation Strategy](#)" for more information on our net zero actions). Hon Hai officially became a TCFD supporter in 2021 and pledged to adopt the TCFD recommendations and guidance framework. This report details the various greenhouse gas emission reduction actions undertaken by us and our suppliers. In future, we will also continue to enhance our climate governance.



### Hon Hai greenhouse gas reduction plans: Scope 1 + Scope 2 <sup>Note 1</sup>



### Hon Hai greenhouse gas reduction plans: Scope 3 <sup>Note 1 and Note 2</sup>



Note 1: The SBTs disclosed here were officially included in our SBT application submitted in April 2022., and passed the audit in March 2023.

Please refer to the official SBT website for information on Hon Hai's approved SBTs (<https://sciencebasedtargets.org/companies-taking-action>).

Note 2: The Group has completed inventory of Scope 3 GHG emissions for 2020, and inventory of Scope 3 emissions for 2021 are scheduled to be completed in the first quarter of 2023.



A white seagull is captured in mid-flight, its wings spread wide, against a backdrop of a lush, green mountain landscape. The mountains are partially shrouded in mist or low clouds, creating a serene and atmospheric scene. A winding road is visible on the mountain slopes. The foreground is filled with dense, golden-brown evergreen trees. The top of the image features a green gradient with a pattern of white dots.

# 3 Building Comprehensive Climate Governance Mechanisms



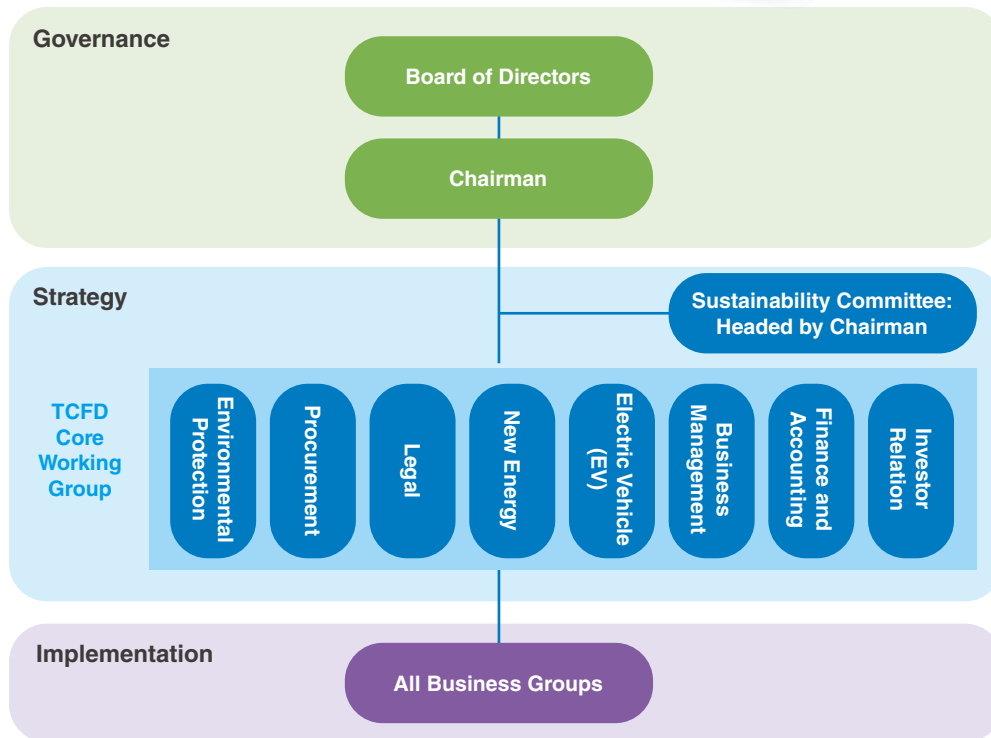
### 3.1 Hon Hai Sustainability and Climate Governance

Hon Hai's management of climate change issues is supervised by the Board of Directors and segregated into different functional units. The "Sustainability Committee," which is headed by Chairman Young Liu, is responsible for reporting said progress to the Board each year. A promotion office staffed with a dedicated team has been established under Sustainability Committee to formulate systems and regulations for sustainable development, monitor corporate sustainable development policies and plans, periodically track and assess implementation progress and performance of sustainable development tasks, compile sustainability reports, and promote and integrate sustainable development concepts within the Group's corporate culture. The Sustainability Committee periodically meets with the ESG teams and tracks the 32 ESG goals, which include 8 environmental long-term goals (for more information on goal implementation and performance, please refer to "[6. Net Zero Performance and Outlook](#)").

#### Organizational structure for climate governance at Hon Hai

Unit	Governance/Supervision Duties	Monitoring Frequency
Board of Directors	Supervise the Group's overall management of climate issues and confirm the Group's progress on climate-related goals each year	Annual
Sustainability Committee	Headed by Chairman Young Liu and reports directly to the Board. Formulate systems and regulations for sustainable development, monitor corporate sustainable development policies and plans, periodically track and assess implementation progress and performance of sustainable development tasks, and report said progress to the Board each year	Periodic: Report progress to the Chairman Annual: Report to the Board
TCFD Core Working Groups	TCFD Core Working Group include Sustainability Committee and Group central management units Coordinate and communicate climate issues with internal and external stakeholders, identify response measures to climate issues, formulate implementation strategies for climate issues, and categorize and assess materiality of climate-related risks and issues: <ul style="list-style-type: none"> <li>• Policies and laws (Management and implementation related to all climate-related policies and regulations around the world, including those associated with carbon trading, carbon taxes, and energy conservation and carbon reduction)</li> <li>• Market (Management and implementation related to stakeholders, changes in market demand and supply, and low-carbon R&amp;D and innovation)</li> <li>• Physical risks (Management and implementation related to extreme weather events, increased average temperatures, enhanced resource usage efficiency, and prevention and responses to climate-related disasters)</li> </ul>	Annual

#### Chart of organizational structure for climate governance at Hon Hai



### 3.2 Implementing Climate Governance

The Group also has an ESG-E team for the planning and execution of environmental protection related to climate issues, the central Environmental Protection Division as the coordinating unit, and the Group Environmental Protection Officer as the person in charge. The ESG-E team is responsible for coordinating management of Hon Hai's carbon emissions, water resources, pollution prevention, and other global environmental protection policies and goals; periodically tracking and updating progress; making monthly progress reports to the Chairman; and making progress reports to the Sustainability Committee every six months.

To strengthen our understanding of how climate-related risks and opportunities impact the Group, we incorporated the TCFD framework and established TCFD Core Working Group in 2022. In future, we plan to analyze and discuss climate scenarios, as well as quantify the financial impacts of climate-related risks. The Finance and Accounting Department is responsible for auditing and updating the financial impacts of climate risks on an annual basis.



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## Professional Segregation for Risk Management





## 4.1 Risk Management Framework

Hon Hai owns diverse businesses and operations all over the globe. The operational risks faced by different businesses and operational locations vary greatly. In order to effectively reduce the impacts of various risks on Hon Hai operations, we have established a hierarchical risk management process based on risk levels and unit functions, as well as built complete climate risk management processes at the Group, business/entity, and factory levels according to different management hierarchies and impacts from risk issues.

### Hon Hai management processes for climate-related risks



## 4.2 Identifying and Assessing Climate-Related Risks and Opportunities

The TCFD Core Working Group are coordinating units for climate risk management, and are responsible for organizing and coordinating relevant units and departments in conducting risk identification and assessments, as well as compiling climate-related risks and opportunities for the Group so that the Sustainability Committee can convene training sessions and identification meetings. The TCFD Core Working Groups distribute questionnaires to stakeholders (investors and clients) and conduct composite analyses to summarize the Group's major climate risks and opportunities, existing achievements, and countermeasures.

### Process for identifying and evaluating climate-related risks and opportunities at Hon Hai





#### 4.2.1 Setting Assessment Benchmarks

The Group determined the likelihood and magnitude of impact based on its internal operations and used these to assess material risks.

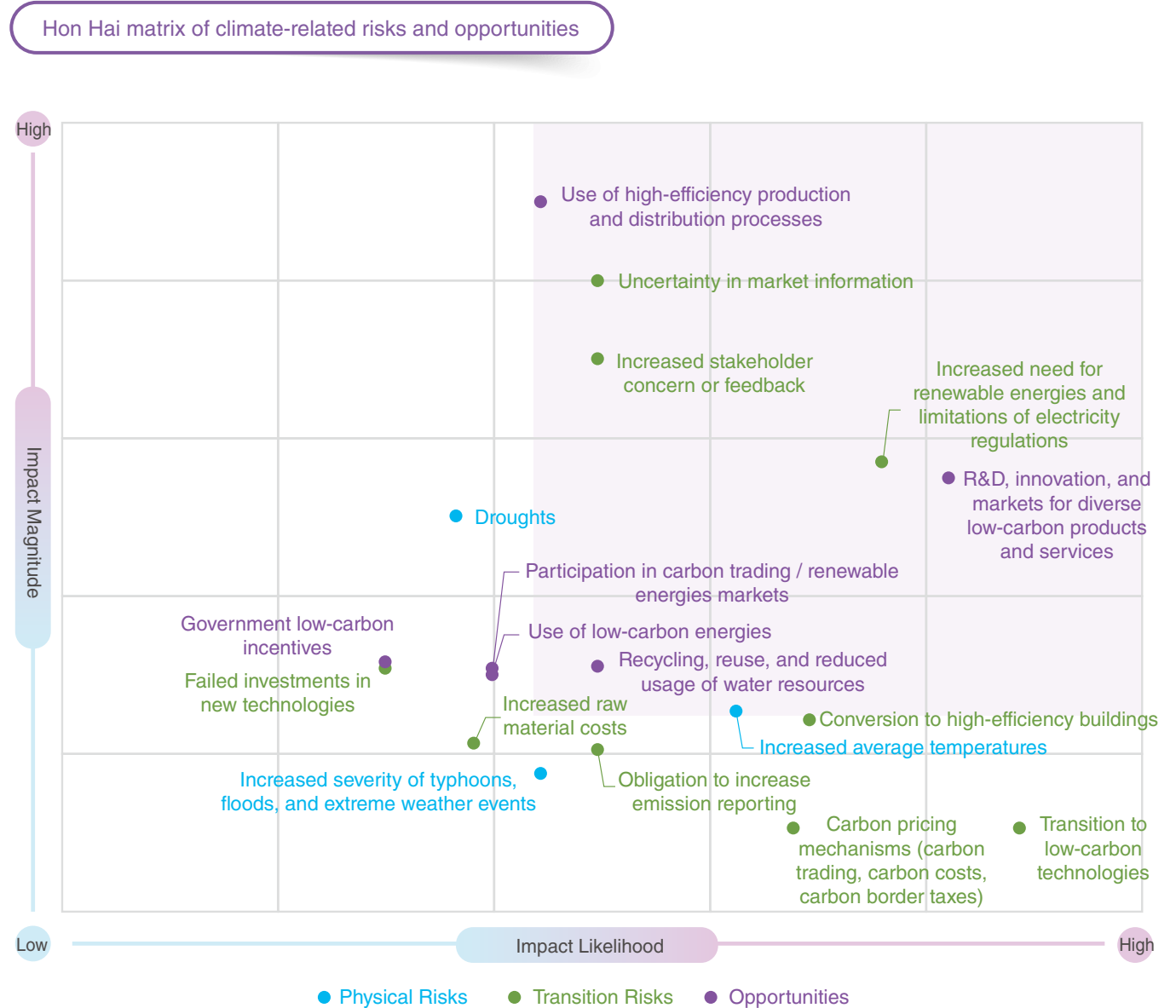
Likelihood of impact is based on the likelihood of occurrence for various issues/incidents, and is divided into five levels, while magnitude of impact is divided into five levels based on the four aspects of finance, production/products (and services), personnel injury, and reputation and image.

#### 4.2.2 Major Climate-Related Risks and Opportunities

In order to understand stakeholder needs, we conducted due diligence investigations targeted to investors and clients, and also distributed surveys to important external stakeholders to identify their levels of concern on climate-related risks and opportunities associated with Hon Hai's operational characteristics, industry characteristics, and "Recommendations of the Task Force on Climate-related Financial Disclosures" risks and opportunities. We collected a total of 10 responses from corporations and investment institutes, and also compiled data on historical Group events. Following statistical analysis, we screened out a list of climate risks and opportunities most relevant to the Group.



We organized workshops to discuss transition risks, physical risks, and opportunities with responsible units at Hon Hai, and also conducted composite analyses to determine materiality risks based on the likelihoods and magnitudes of impacts, then combined these with stakeholder engagement results to summarize the Group's major climate-related risks and opportunities, generating a total of 3 material risks and 3 material opportunities.

Hon Hai's matrix of climate-related risks and opportunities shows that material climate risks most relevant to the Group are "uncertainty in market information," "increased stakeholder concern or feedback," and "increased need for renewable energies and limitations of electricity regulations"; climate opportunities included "R&D, innovation, and markets for diverse low-carbon products and services," "use of high-efficiency production and distribution processes," and "reduced usage, recycling, and reuse of water resources." Please refer to the following table for relevant management strategies and impacts.







## Analysis of major climate-related risks and opportunities for Hon Hai

Climate Risks and Opportunities	Description of Climate Risks and Opportunities	Length of Impact	Potential Financial Impacts	Current Achievements	Response Strategies
<b>Risks</b>					
 <p>Increased need for renewable energies and limitations of electricity regulations</p>	<ul style="list-style-type: none"> <li>Hon Hai operates in the Taiwan and China regions, which have consecutively issued green electricity policies requiring the Group to continually expand usage of renewable energies</li> <li>Hon Hai voluntarily became a SBTi supporter and pledged to reduce carbon emissions by 42% before 2030 and achieve net zero emissions by 2050, while also increasing procurement of renewable energies</li> </ul>	Long-term (more than 3 years)	<ul style="list-style-type: none"> <li>Increased investment costs for procurement of renewable energies</li> <li>Increased costs for procurement of green electricity</li> </ul>	<ul style="list-style-type: none"> <li>Our two factories in Taiwan (Huyue and Minsheng) have established solar photovoltaic equipment with a total installed capacity of 254.46kW</li> <li>Our factories in China have established solar photovoltaic equipment with a total installed capacity of 260.02MW; in some factories, solar photovoltaic power accounts for 4% of electricity usage</li> </ul>	<ul style="list-style-type: none"> <li>The Group plans to raise the proportion of green energy usage to more than 50% by 2030</li> <li>In addition to overall Group goals, Fii has also pledged to raise the proportion of renewable energy usage to more than 80% by 2030</li> <li>The Group mainly plans to build and purchase solar photovoltaic power stations as well as purchase green electricity. All factories purchase green electricity based on client needs and carbon reduction requirements. Our factories in Taiwan work with Foxwell to purchase green electricity</li> </ul>
 <p>Uncertainty in market information</p>	<ul style="list-style-type: none"> <li>The chip shortage caused by climate change (including droughts, rising average temperatures, and heavy rainfall) remains unresolved, leading to fluctuations in raw material costs and increased uncertainty in market information, which may affect automobile production. If these conditions continue into 2023, this may also affect future shipments of Hon Hai electric vehicles (EVs)</li> </ul>	Mid-term (1-3 years)	<ul style="list-style-type: none"> <li>Fluctuations in raw material prices may affect production volumes and result in decreased potential revenues</li> </ul>	<p>from being affected by climate-related issues and other impacts, the Group has adjusted production lines and automated production to reduce impacts on production volumes. Examples of actions we have taken include the following:</p> <ul style="list-style-type: none"> <li>Our factories in China (3 in Guangdong, 3 in Zhengzhou, and 1 in both Shanghai and Nanning) have begun incorporating automation and digitalization in production lines and processes, and we are also adjusting and planning one-stop shop services for EVs</li> <li>One-stop shop services can reduce carbon emissions and prevent materials from being affected by transportation problems. The Group is currently converging factories needed for one-stop shop services (including wafer and packaging/testing factories) at operating sites located in the same region</li> </ul>	<ul style="list-style-type: none"> <li>Our strategy is to self-produce and develop our own products. Our main production target is to self-produce LFP lithium iron phosphate batteries to integrate battery materials within the Group while also avoiding material shortages and use of unclear mineral sources</li> <li>Promote one-stop shop services for our self-produced EVs to enhance efficiency and overall control of production capacity</li> </ul>







Climate Risks and Opportunities	Description of Climate Risks and Opportunities	Length of Impact	Potential Financial Impacts	Current Achievements	Response Strategies
 <p>Increased stakeholder concern or feedback</p>	<ul style="list-style-type: none"> <li>Inability to achieve climate goals and adopt active mitigation actions may cause our international ESG ratings to decline and investors to lose confidence in Hon Hai</li> <li>Inability to use green electricity or achieve carbon reduction targets according to schedule may affect the Group's corporate image and cause external interest groups to exert pressure on Hon Hai</li> </ul>	Mid-term (1-3 years)	<ul style="list-style-type: none"> <li>Inability to satisfy stakeholder expectations will affect the Group's reputation, which may cause our market value to decline or investors to decrease their investments</li> </ul>	<ul style="list-style-type: none"> <li>In 2022, Hon Hai formulated 6 major ESG strategies (Green Solutions, Circular Economy, Employee Satisfaction, Win-Win Strategy, Business Sustainability, and Corporate Governance) which also encompass 8 long-term environmental targets</li> <li>Continued promotion of "Sustainable operations=EPS+ESG" to incorporate ESG and sustainable development in our DNA</li> </ul>	<ul style="list-style-type: none"> <li>Actively engage with stakeholders to understand investor expectations and suggestions for Hon Hai regarding climate issues</li> <li>Regularly provide stakeholder feedback to the Sustainability Committee so they can effectively grasp external expectations</li> <li>Actively participate in ESG forums and other environmental sustainability activities to share the Group's practical experiences in operations, production, and manufacturing</li> </ul>
Opportunities					
 <p>R&amp;D, innovation, and markets for diverse low-carbon products and services <sup>Note 3</sup></p>	<ul style="list-style-type: none"> <li>Various countries have proposed regulations and schedules for banning use of gasoline cars, meaning EVs will become the mainstay for countries around the world from 2025 to 2040. Hon Hai's 3+3 strategy of developing EVs and components, lithium batteries, energy storage equipment, and other low-carbon products and technologies aligns with global trends, environmental protection laws, and subsidy policies, enabling us to increase our influence on the EV and energy storage industries while giving back to society</li> </ul>	Long-term (more than 3 years)	<ul style="list-style-type: none"> <li>Increased client demand for low-carbon products and increased revenues</li> <li>Entry into emerging markets and increased revenues</li> <li>Increases in electricity usage and operational costs due to new products, processes, technologies, and production lines</li> </ul>	<ul style="list-style-type: none"> <li>In 2021, we obtained 431 patents related to low-carbon cleansing technologies, including energy conservation and energy management, industrial automation, process optimization, pollution prevention, and environmental protection</li> <li>We are currently planning to establish a 4MW/d-Reg grid-connected energy storage system at our Kaohsiung Hofa Factory and beginning to build our expertise in energy storage system operations for 2024</li> <li>Hon Hai is currently planning to invest in battery cell factories and expects to launch energy storage systems which utilize self-produced battery cells after 2024</li> <li>Grid-connected systems align with Taiwan Power Company's plans to enhance power grid resilience where corporations are able to connect to the grid and facilitate adjustments. Hon Hai has participated in this project and expects Kaohsiung to begin serving as a demonstration site participating in grid adjustment services starting in the first quarter of 2024</li> </ul>	<ul style="list-style-type: none"> <li>Entry into renewable energy markets <ol style="list-style-type: none"> <li>Utilize relationships with collaborating partners to expand pilot projects for solar photovoltaic and wind power, while also using energy sales platforms to identify energy storage opportunities from industrial clients</li> <li>Integrate key processes from energy storage suppliers of collaborating partners to reduce our learning curve for self-produced energy storage equipment and products</li> </ol> </li> <li>Active developments in the EV market <ol style="list-style-type: none"> <li>Our global EV strategy includes use of BOL business models and collaborations with local governments to realize local construction projects, local operations, and localized industries; we also plan to expand the number of EV factories</li> <li>Promote control measures for battery production processes (such as shortening drying time for pole pieces, reducing liquid content in electrode slurry, recycling and reusing batteries following discharge testing, reducing energy consumption during material preparation) to enhance production quality and efficiency</li> <li>Jointly build green supply chains with suppliers</li> </ol> </li> </ul>





Climate Risks and Opportunities	Description of Climate Risks and Opportunities	Length of Impact	Potential Financial Impacts	Current Achievements	Response Strategies
 <p>Use of high-efficiency production and distribution processes</p>	<ul style="list-style-type: none"> <li>Monitor factory production and integrate information on orders and incoming materials to compile production records for automation and IoT, thereby enhancing Group production efficiency and generating positive external impacts</li> </ul>	Long-term (more than 3 years)	<ul style="list-style-type: none"> <li>Reduced operating costs from enhanced efficiency</li> <li>Increased revenues from enhanced production capacity</li> <li>Reduced personnel costs from incorporation of automated management and planning</li> </ul>	<ul style="list-style-type: none"> <li>Our factories in China (3 in Guangdong, 3 in Zhengzhou, and 1 in both Shanghai and Nanning) have begun incorporating automation in production lines and processes. Several business units have implemented MES (Manufacturing Executive Systems) and IIOT integrated platforms for all their products, and some factories in China are utilizing AJP platforms to manage their mechanical processing, chemical surface, mechanical surface, and laser assembly equipment <sup>Note 4</sup></li> <li>In 2021, in response to shortages in technical personnel, our Zhengzhou Factory adopted automation systems to increase direct labor productivity by 102% and reduced quality deficiencies by 38% through use of digital and AI technologies, while also increasing overall equipment efficiency by 27%</li> <li>In 2022, we implemented the technical improvement project "Transformation project for automation of main production lines" to strengthen automated production</li> </ul>	<ul style="list-style-type: none"> <li>Develop alternative delivery methods using tracking tools and autonomous delivery vehicles</li> <li>Install sensors (cameras and lasers) on production lines to judge product quality, effectively reducing manpower and maintenance needs, thereby decreasing material usage and employee contact</li> <li>Use battery-powered AGVs to move equipment when assembling vehicles, which can be tracked using floor paths and programmed using safety vision <sup>Note 5</sup></li> </ul>
 <p>Reduce usage, recycling Reuse of water resources <sup>Note 6</sup></p>	<ul style="list-style-type: none"> <li>Reduce use of water resources: Increase recycling of water resources bring positive benefits to the Group, which is demonstrated by the system for reusing reclaimed water at our Shenzhen Factory</li> <li>Recycling and reuse: Use recyclable materials and reuse waste (such as packaging, cardboard boxes, and pallets) to reduce waste disposal costs and increase income; we are actively planning to recycle batteries from scrapped EVs to facilitate recycling of lithium, cobalt, and nickel materials within the batteries</li> </ul>	Long-term (more than 3 years)	<ul style="list-style-type: none"> <li>Recycling and reuse increases investment costs and reduces operating costs</li> <li>Improving processes increases capital investments and reduces operating costs</li> </ul>	<ul style="list-style-type: none"> <li>Based on information from factories where we can estimate the proportion of reused reclaimed water, we currently have 8 factories in China that are reusing reclaimed water for various uses such as production processes, greening, or toilet flushing. The Nanning Factory is reusing 63% of reclaimed water</li> <li>Water-saving measures that have been implemented at all factories include recycling of air-conditioner condensate water, use of water-saving sanitary ware, installation of water-saving faucets, and reuse of first-stage RO concentrate when purifying water</li> <li>The Group holds 10 Platinum level and 2 Gold level UL2799 certifications, and the Longhua and Nanning factories have obtained campus-level certification. Currently there are four factories in both Taiwan and China which are working to obtain certification</li> <li>The Plastic Resource Application Center was established for active recycling of waste plastics</li> </ul>	<ul style="list-style-type: none"> <li>Establish various responsible organizations or departments to be responsible for relevant issues and proposal of related improvement or optimization measures, for example, by forming an environmental protection team to focus on water-related risks, incorporate new technologies, reduce consumption of water resources, and increase reuse of reclaimed water based on regulatory requirements. The ESG-E team and environmental protection units in all factories will focus on new policies and technologies for resource recycling</li> <li>Renewable/biodegradable materials will be incorporated into some production materials to effectively reduce environmental impacts of production processes</li> <li>We have signed memorandums of cooperation with UL Enterprise and aim to build "Zero Waste Pilot Factories" through incorporation of Turbo Waste management systems, digital management of waste using cloud technologies, and quantitative systems that enable waste reduction. Apart from tracking improvements, we have also extended these policies throughout the entire corporation to achieve our goal of building "Zero Waste Factories."</li> </ul>

Note 3: It includes "R&D and innovation for diverse low-carbon products and services" and "entering new markets"

Note 4: MES refers to Manufacturing Executive Systems or factory operations management systems; IIOT refers to Industrial Internet of Things; AJP refers to Analysis Judgement Prediction, a type of smart platform that can be used to generate analyses, judgements, and predictions.

Note 5: AGV refers to Automated Guided Vehicle, a type of unmanned material handling vehicle.

Note 6: It includes "reduce use of water resources" and "recycling and reuse"



5

## Net Zero Transformation Strategy





## 5.1 The Path to Net Zero

Hon Hai considers “Green Solutions” and “Circular Economy” to be core implementation strategies for environmental issues, and has set “clean production” and “resource management” as the two core concepts for establishing a sustainable action plan aligned with three major climate goals, and for formulating corresponding net zero targets, carbon reduction management, and monitoring mechanisms for the Group’s value chain. Hon Hai will take gradual steps to achieve net zero emissions through actions that mitigate climate change, value chain management, promotion of smart and green transformations, creation of emerging industries, enhancement of operational resilience, and other core concepts.

### Hon Hai key energy conservation and carbon reduction actions

Key Tasks	Description	Key Performance Indicators
Implement energy-saving policies and regulations	We use governmental policies and regulations as a basis for mandatory tasks such as promoting energy and carbon reduction measures; coordinating management and implementing energy management plans; reporting energy usage; obtaining certification for energy management systems; establishing energy management centers; auditing energy usage; formulating energy-saving plans; compiling energy-saving self-assessments; and evaluating new, converted, and expanded energy-saving projects	<ul style="list-style-type: none"> <li>The Group has begun participating in Shenzhen’s carbon trading pilot program since 2013</li> </ul>
Promote green manufacturing systems	Implemented our “Action Plan for Evaluations of Green Factory Construction Projects,” promoted establishment of key factories, and applied for national certifications relating to green factories, green supply chains, green factories, and green products. In future, we will continue to expand our green factories and aim to obtain green factory and green supply chain certifications for 100% of our key factories and supply chains by 2030	<ul style="list-style-type: none"> <li>As of 2021, a total of 23 entities have obtained “National Level Green Factory” medals</li> <li>As of 2021, a total of 2 entities have obtained “National Level Green Supply Chain Management Corporation” medals</li> <li>In 2022, our Tucheng Huyue Headquarters obtained the US Healthy Building Fitwel certification, becoming the first recipient in Taiwan as an existing building for diverse uses such as factory production lines, office areas, and canteens</li> </ul>
Diagnose industrial energy-saving measures	We diagnose main processes, key energy usage systems, key technologies and equipment, and promote technical consultations and technological transformations and upgrading. Functional energy conservation and carbon reduction units conduct annual audits and reviews of all projects to ensure achievement of energy and carbon reduction goals	<ul style="list-style-type: none"> <li>In 2021, we discovered 21,500 violation projects <sup>Note 1</sup> in the China region, and subsequently reduced power wastage by 7,800 MWh and decreased expenditures by 21 million NTD</li> </ul>
Full certification of energy management systems	We encourage Group entities to obtain and maintain ISO 50001 certifications as well as commence implementation of systematic energy and carbon reduction tasks	<ul style="list-style-type: none"> <li>As of 2021, a total of 43 entities have completed external verification of ISO 50001 energy management systems</li> </ul>
Execute key energy-saving projects	We focus on optimizing processes, transforming and replacing equipment with high energy consumption and low efficiency, upgrading energy systems, and installing power generators which use renewable energies to enhance energy efficiency during production processes	<ul style="list-style-type: none"> <li>In 2021, we invested 1.75 billion NTD in 1,587 energy-saving projects, achieving energy-saving benefits equivalent to 1.3 billion NTD</li> </ul>

Note 1: For effective implementation of energy and carbon reduction projects, the Group conducts annual audits and reviews of all projects to ensure achievement of energy and carbon reduction goals, and also monitors actual results and benefits. Projects that have not achieved their energy and carbon reduction goals are known as violation projects.

### 5.1.1 Actions for Mitigating Climate Change

The Group’s total greenhouse gas emissions (market-based Scope 1, 2, and 3 emissions) for 2020 included 0.94% Scope 1 and 17.62% Scope 2 emissions. In order to achieve net zero Scope 1 and 2 emissions by 2050, we plan to focus on the two core concepts of “clean production” and “resource management,” and have proposed the following measures:

#### 1. Operational energy conservation and carbon reduction measures

The Group adheres to relevant policies and regulatory requirements of major production areas, and implements the following key tasks for energy conservation and carbon reduction:



## 2. Motivational incentive mechanisms

To encourage and effectively enhance employee emphasis on climate change, we have incorporated relevant concepts in the Group's core organizational culture. We distribute energy and carbon reduction targets to our businesses in the China region each year and formulate the "Appraisal Items and Scoring Guidelines for Energy Management" which includes scores for energy conservation management, energy conservation systems, energy conservation implementations, supervision of energy conservation, and other energy conservation KPIs. We conduct comprehensive quarterly and annual appraisals, as well as periodic reviews and corrections each year, and present awards and monetary rewards to outstanding teams and individuals to provide an incentive for entry-level personnel and for subsequent implementation of energy conservation projects. In 2021, we awarded 1.57 million NTD to 5 teams and 5 individuals with outstanding energy-saving contributions.

### Energy conservation management indicators

#### Energy Conservation Management

Promote improved organization, formulation of work plans and energy and carbon reduction goals, and strict implementation by energy conservation and carbon reduction departments to ensure prioritized implementation and promotion of energy and carbon reduction tasks

#### Energy Conservation Systems

Establish comprehensive energy management systems for all businesses to enhance energy efficiency and promote reasonable and economical energy usage within the Group

#### Energy Conservation Implementations

Encourage application of high-performance energy conservation technologies and establishment of electricity generators using clean energies

#### Energy Conservation Supervisions

Raise energy conservation awareness among all employees and reduce energy wastage

#### Energy Conservation KPIs

Conduct quantitative appraisals of business group energy conservation and carbon reduction goals which truly reflect energy and carbon reduction results and annual achievement of targets

Apart from appraisals of energy conservation management mechanisms, the Group also adopts a "quality, quantity, and multiple usage" strategy for patents based around low-carbon cleansing technologies to encourage healthy competition and active innovation among employees in R&D departments. In terms of incentives, we began implementing new intellectual property rights incentive regulations in June 2021, which not only provide basic rewards for invention patents, utility model patents, IC designs, trade secrets, and software copyrights, but also offer bonuses during the proposal and certification stages. We also award higher bonuses to inventors of select outstanding patented inventions. In 2021, Hon Hai obtained 431 patents related to low-carbon cleansing technologies, bringing our cumulative number of active patents to 2,438.

### Number of patents for low-carbon cleansing technologies held by Hon Hai

Patent Types	New Patents Obtained in 2021	Cumulative Number of Active Patents
Energy-saving and energy management patents	81	754
Industrial automation patents	267	1,064
Process / procedure optimization patents	54	315
Pollution control and environmental protection patents	29	305



### 3. Establishment and procurement of green electricity

The ESG-E team coordinated and formulated green electricity proportion targets to provide carbon reduction planning and technical services for the Group's green electricity usage, solar photovoltaic power stations, and renewable energy certificates. Each functional department within the Group combines client requirements and overall Group goals to annually formulate feasible solutions based on their own needs; these solutions are then submitted to operational management units for review. According to the resources of each factory, decide to self-built or collaborate with external third parties for joint construction, or purchase renewable energy, and we will combine different solutions. The Group has also set green electricity goals and aims to raise proportion of green energy usage throughout the whole Group to more than 50% by 2030.

#### (1) Self-established solar photovoltaic power stations

The Group actively promotes development and usage of renewable energies. The main measures taken to establish solar photovoltaic power stations at our factories were as follows:

- Starting in 2010, we began formulating plans to establish a green high-tech demonstration zone at Longhua Factory and installed solar photovoltaic power generation systems to provide the electricity needed for daily operations of the factory sewage plant. We also implemented a 2 MW solar-integrated photovoltaic building project in 2012.
- In 2016, we signed a collaboration agreement with Nanyang City Government to build power stations with 100 MW solar photovoltaic installed capacity, and completed construction of a ground-mounted solar photovoltaic demonstration power station with installed capacity of 100 MW in 2018.
- We built and procured 16 roof-mounted and ground-mounted solar photovoltaic power stations with a total installed capacity of 260.02 MW in 2021.

#### (2) Bundled RECs and green electricity procurement plans and investments

In recent years, the Group has implemented a number of energy transformation actions, including investment of solar photovoltaic power generation and green electricity power stations, and also procured green electricity in locations all around the world.

In 2022, we announced our plan to procure green electricity for factories in the Taiwan region. The Group signed a memorandum of cooperation with Shinfox Energy to procure green electricity and announced that we would achieve 100% net zero emissions in all office sites by 2030. In future, we plan to procure 2.36 million kWh of green electricity and increase our procurement volumes year by year; we expect to accumulate a total of 70 million kWh of green electricity usage by 2030.

### Green electricity usage at Hon Hai for 2021

Green Electricity Usage		2021
Taiwan	Directly procured green electricity (10 <sup>4</sup> kWh)	73.18
	Renewable energy certificates (10 <sup>4</sup> kWh)	-
	Self-generated and self-consumed electricity (10 <sup>4</sup> kWh)	20.57
	Total installed capacity (MW)	0.25
China	Directly procured green electricity (10 <sup>4</sup> kWh)	3,627.00
	Renewable energy certificates (10 <sup>4</sup> kWh)	-
	Self-generated and self-consumed electricity (10 <sup>4</sup> kWh)	29,660.80
	Total installed capacity (MW)	260.02
Overseas markets	Directly procured green electricity (10 <sup>4</sup> kWh)	15,100.00
	Renewable energy certificates (10 <sup>4</sup> kWh)	-
	Self-generated and self-consumed electricity (10 <sup>4</sup> kWh)	12.00
	Total installed capacity (MW)	0.19
Ratio of renewable energy usage to overall energy usage at the Group (%)		5.17%



## 5.1.2 Value Chain Management

Hon Hai is one of the biggest electronics manufacturers in the world, with suppliers all around the globe. According to the results of greenhouse gas inventories conducted in 2020, Scope 3 emissions account for 81.44% of Group emissions. In order to achieve net zero Scope 3 emissions by 2050, the Group has proposed the following measures based on the two core concepts of “clean manufacturing” and “resource management”:

### Five carbon neutrality steps for electronics suppliers



### 1. Promote carbon reduction for electronic suppliers

Formulate five steps to promote carbon reduction for suppliers based on the Group's carbon neutrality promotion plan, and encourage suppliers to undergo transformations for energy conservation and use renewable energies to achieve carbon reduction goals for electronics suppliers.



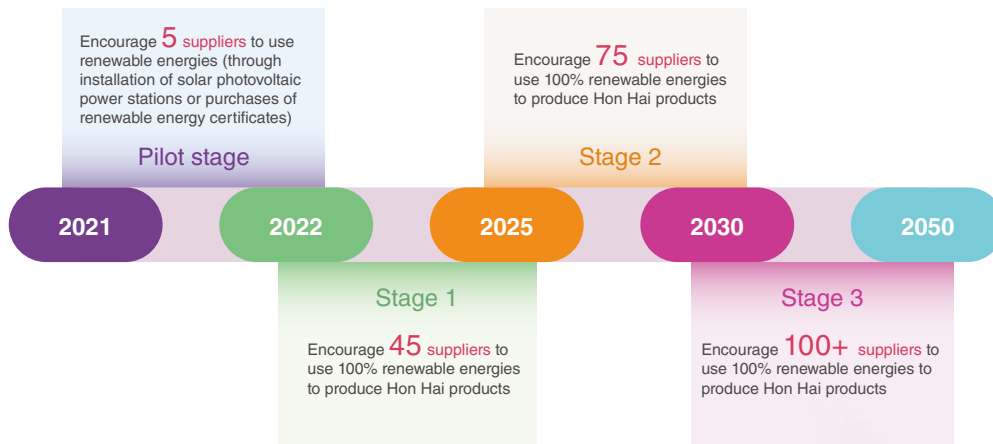
According to estimates from the UK Carbon Trust, the Group's Scope 3 Category 1 emissions for 2020 related to procurement of raw materials and services used for production were 17.12 million tCO<sub>2</sub>e, and procurement of electronic raw materials accounted for 38%. The Group's SBTs require electronics suppliers to reduce carbon emissions by 21% before 2025 (using 2020 as a base year).

The Group uses the "Supplier Carbon Management System" to monitor supplier carbon reductions and target achievement, and also requests that suppliers complete greenhouse gas inventories each year and report their emission data on the system as part of the Group's electronics supplier carbon database, ensuring an accurate portrayal of greenhouse gas emissions from the Group's electronics suppliers. In 2022, 110 suppliers completed greenhouse gas inventories for the previous year with assistance from the "Supplier Carbon Management System," and 55 suppliers completed ISO 14064 verification. Our electronics suppliers reduced carbon emissions by 225.5 thousand tCO<sub>2</sub>e in 2021 and 2022.

## 2. Promote use of renewable energies for electronics suppliers

Carbon emissions data from our electronics suppliers show that more than 90% of carbon emissions come from purchased electricity, and energy conservation transformations can only reduce carbon emissions by 10%. To realize net zero emissions throughout our value chain, it is necessary to neutralize the carbon emissions generated by externally purchased electricity through installation of solar photovoltaic equipment or by purchasing green electricity. In accordance with our emphasis on renewable energies, we actively work with collaborating suppliers to promote use of renewable energies within our supply chain, set an example for our suppliers, and work with our end clients to build a zero-emissions supply chain.











### Plans for promotion of renewable energies at electronics suppliers



## External recognition of climate actions within our supply chain

IPE, the largest non-government organization in China, evaluated Hon Hai and provided a Corporate Climate Action Transparency Index (CATI) score. Our unceasing efforts garnered us first place in the IT industry for the Greater China region, fourth place for the global IT industry, and recognition from external sources.

### Top 10 IPE CATI IT/ICT companies

Serial Number	LOGO	Company	Industry	CATI Score/Rating
1		apple	IT/ICT	78
2		Dell	IT/ICT	75.8
3		cisco	IT/ICT	73.2
4		Foxconn	IT/ICT	69
5		Microsoft	IT/ICT	65.8
6		Fii	IT/ICT	61.5
7		LUXSHARE ICT	IT/ICT	59
8		AVARY HOLDING	IT/ICT	57
9		hp	IT/ICT	54.4
10		Lenovo	IT/ICT	47.2

Note: Taken from <https://www.ipe.org.cn/GreenSupplyChain/CATI.aspx>



### 5.1.3 Promoting Green and Smart Transformations

#### 1. Active promotion of circular economy

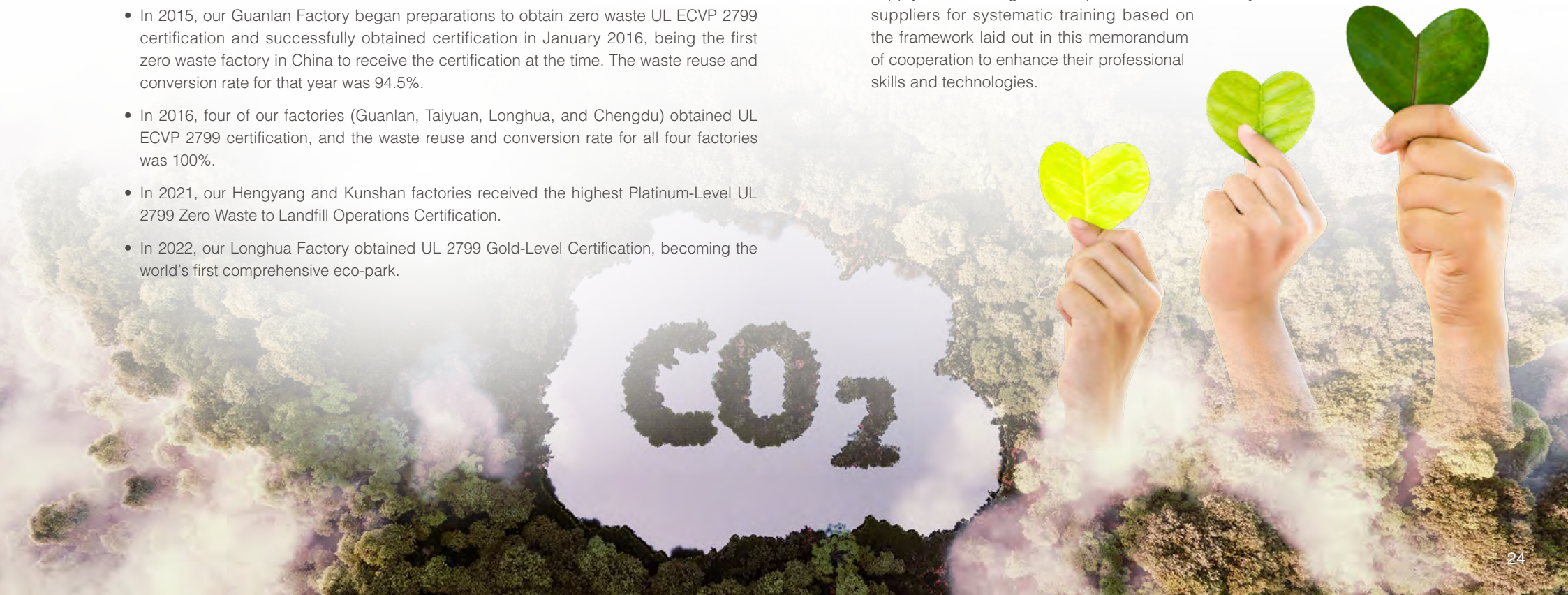
##### A. Zero waste factories

The Group has implemented “Zero Waste to Landfill Operations” policies at all key factories to gradually reduce amounts of incinerated and landfill waste while ensuring compliance with maximum limits of 100% waste conversion rates and 10% incineration rates (thermal processing and energy recovery). Our “Zero Waste to Landfill Operations” policies have become one of our most important strategies. Our “Zero Waste to Landfill Operations” projects minimize generated waste through source reduction of raw materials; we also actively recycle and reuse inner and outer packaging materials for continued enhancement of waste recycling and reuse rates. All factories have waste management units that are responsible for routine management of various waste materials, data compilation, and supporting other units in implementing waste reduction and recycling tasks.

- In 2015, our Guanlan Factory began preparations to obtain zero waste UL ECVP 2799 certification and successfully obtained certification in January 2016, being the first zero waste factory in China to receive the certification at the time. The waste reuse and conversion rate for that year was 94.5%.
- In 2016, four of our factories (Guanlan, Taiyuan, Longhua, and Chengdu) obtained UL ECVP 2799 certification, and the waste reuse and conversion rate for all four factories was 100%.
- In 2021, our Hengyang and Kunshan factories received the highest Platinum-Level UL 2799 Zero Waste to Landfill Operations Certification.
- In 2022, our Longhua Factory obtained UL 2799 Gold-Level Certification, becoming the world's first comprehensive eco-park.

In 2021, the Group signed a memorandum of cooperation with UL Enterprise to incorporate Turbo Waste management systems which encompass digital management of waste using cloud technologies and quantitative systems that enable waste reduction. Apart from tracking improvements, we have also incorporated Turbo Waste in our Longhua and Yantai factories (achieving a fill rate of 100%) to grasp waste flows and volumes in our factories, and will gradually extend the system throughout the entire corporation to achieve our goal of building “Zero Waste Factories.”

To ensure that our products and the products of our clients meet the highest environmental specifications, we included our supplier partners in this memorandum of cooperation. Our central procurement and supply chain management departments have already convened suppliers for systematic training based on the framework laid out in this memorandum of cooperation to enhance their professional skills and technologies.





## B. Circular usage of resources

The Group established the “Plastic Resource Application Center” early in 2000 to serve 22 key factories. The Center mainly recycles waste plastics from factory production lines and makes these into environmentally friendly trays which can be reused at factories, or modifies and shreds the waste plastics into raw materials. In future, we plan to add a cleaning line for trays so that recycled trays can be reused in production lines after cleaning; new trays may undergo cleaning inside clean rooms depending on production needs. As of 2021, the recycling rate of waste plastics throughout the Group has nearly reached 41%, with the highest rate seen at our Longhua Factory (80%). We aim to achieve a recycling rate of 60% across the Group by 2025.

## 2. Global Lighthouse

The “Global Lighthouse” project is an initiative launched by the World Economic Forum (WEF) in collaboration with McKinsey & Company to select leading global enterprises that have made impressive progress in applications of Fourth Industrial Revolution technologies. Global Lighthouses are required to possess Fourth Industrial Revolution (4IR) technologies, and must combine environmental management with enhanced efficiency and productivity.

The Group is a leading global provider of electronics manufacturing services, and is the only enterprise in the world which holds 4 WEF Global Lighthouse certifications (for our Shenzhen, Chengdu, Wuhan, and Zhengzhou factories; there were only a total of 90 Global Lighthouses in the world as of 2021).

### Hon Hai WEF Global Lighthouse certifications

Global Lighthouse Certifications	Key Features
Shenzhen Factory	Utilized “smart equipment,” “automated optimization systems,” “smart maintenance systems,” and “smart production real-time monitoring systems” to enhance production efficiency by 30%, reduce inventory cycle times by 15% ,and decrease manpower by 92%
Chengdu Factory	Starting in 2015, our Chengdu Factory gradually established an IIoT team with more than 600 professionals, using OT (operational technology) and IT (information technology) for wider application of various artificial intelligence and IoT technologies, moving from a “handicraftsman” to an “intelligent smith,” enhancing labor efficiency by 200% and equipment efficiency by 17% to realize our goals of quality operations and a “worry-free” factory as we successfully transform from traditional manufacturing to smart manufacturing
Wuhan Factory	Wuhan Factory is able to fulfill client needs for greater customization and faster product delivery time. The factory uses cutting-edge advanced analysis technologies and flexible automation technologies to redesign manufacturing systems, increasing direct labor productivity by 86%, reducing quality losses by 38%, and shortening delivery dates by 29%, enabling delivery within 48 hours
Zhengzhou Factory	In response to shortages in technical personnel, need for stabilization in industrial quality, and uncertain needs, the Zhengzhou Factory adopted automation systems to increase direct labor productivity by 102% and reduced quality deficiencies by 38% through use of digital and AI technologies, while also increasing overall equipment efficiency by 27%



The Group successively transformed ten internal “lighthouse factories” in 2020 to upgrade key production processes including mold production, CNC manufacturing, surface mounting, and system assembly. These internal “lighthouse factories” were the first to successfully implement advanced automated, digital, and smart technologies, greatly enhancing the Group’s product capabilities and production management. Through gradual addition of digital tools, we were able to innovate our operational systems and create a single operating system applicable throughout the enterprise, which will serve as a blueprint for modernizing enterprise operating systems in the future. In 2021, we plan to establish 20 lighthouse factories in China, Taiwan, and Vietnam, as well as promote IIoT and smart manufacturing, to lay a solid foundation for restructuring under our F3.0 goal while further implementing future restructuring and upgrading.



### 5.1.4 Creating New Industries

Many countries around the world have issued policies and regulations banning gasoline cars. In response to these policy changes, the Group announced active development of three industries (including EVs) and three core technologies in 2019; launched the “EV Open Platform” on the first Hon Hai Tech Day held in 2020 and actively worked to promote the EV industry; and formed the MIH EV Alliance in 2021 to utilize Hon Hai’s strong advantages in global markets, supply chains, technological manufacturing, design, and R&D. We wish to be an important driving force that enables global transportation sectors to achieve net zero emissions.

In terms of future plans for the EV industry, Hon Hai plans to provide one-stop shop integrated design and manufacturing EV services, use the open platform and reference designs to greatly lower EV development thresholds, and collaborate with local enterprises on sustainable development through BOL business models. We also plan to formulate key EV development goals to become an industry leader.

#### Hon Hai’s business strategies for electric vehicles



#### Establish One-stop Customer Services

Hon Hai provides innovative and integrated design and manufacturing services focused around vehicle design, vehicle manufacturing, and key components, incorporating industrial design into innovative core technologies, software, and hardware to provide the business model that one-stop customer services, 2 R&D Clusters, 3 Design and Manufacturing Zones, and Global Assembly and Delivery.



#### Establish Open Platform

We officially launched our EV Open Platform in 2020, formed the MIH Consortium in 2021, and plan to release EV reference designs in 2022, as well as host Model C promotion conferences in various regions.

We are prepared to enter the market in 2023 to 2024, exert Alliance advantages in 2025, and expand our overseas markets.



#### Establish BOL Business Model

In 2021, we used the BOL concept to develop a unique collaboration model to solve problems caused by manufacturer exits in BOT models. Hon Hai adjusted the BOT model to form the BOL (L for Localize) model, working with local companies to ensure continued operation of local enterprises.



#### Establish Industrial Fund for Alternative Energies

Hon Hai signed a memorandum of cooperation with CTBC Bank to establish an industrial fund for Electric Vehicle (EV), aiming to raise 5-10 billion NTD, thereby attracting investments and bringing new life to the alternative fuel vehicle industry.



## Key milestones in electric vehicle development at Hon Hai

2020

2021

2022

- Launched EV Open Platform at the first Hon Hai Tech Day
- Formed a joint venture company with Geely to establish a new OEM model for global EVs
- Signed a memorandum of cooperation with Nidec (next-generation EV power systems)
- Formed joint venture company XSemi with Yageo to create new markets for small ICs
- Signed collaboration agreement with Fisker (new class EVs)
- Formed joint venture company Mobile Drive with Stellantis to create smart vehicle cockpit solutions
- Hon Hai invested in and formed a joint venture company with Gigasolar to develop battery materials
- Formed a strategic alliance with Gogoro to expand battery swap systems and smart electric motorbikes
- Signed memorandum of cooperation with SanDi Group (electric buses)
- Established an industrial fund for alternative fuel EVs with CTBC, building a capital and technical foundation for green, eco-friendly, sustainable businesses to create alternative fuel vehicles
- Acquired Macronix's 6-inch wafer fab and formed Hon Young Semiconductor to build a foundation for third-generation semiconductors
- Formed a joint venture company with Thailand company PTT to build a foundation for the EV market in Southeast Asia
- Invested in Gigasolar, Long Time Technology, and China Steel Chemical Corporation to develop battery anode materials and jointly build an ecosystem for EV batteries in Taiwan
- Launched three self-developed EVs on Hon Hai Tech Day
- Established Software Development Center to develop smart vehicle cockpits, smart gateways, and smart driver application platforms to create software for vehicles and enterprises
- Signed OEM agreement with Lordstown to manufacture electric pickup trucks, using the MIH platform to develop basic designs for commercial EVs
- Exhibited rotating dashboard screen at LA Auto Show
- Jointly developed automobile chips with Stellantis and built a semiconductor supply chain
- Hon Hai, Gogoro IBC, and Indika collaborated with the Indonesian government to build an EV ecosystem focused on the EV industry and development of alternative energy batteries

In 2021, the Group officially commenced sales of electric buses and signed a memorandum of cooperation with Kaohsiung Bus under the SanDi Group, using Foxtron's self-developed MIH commercial vehicle platform as a basis for creating the first electric bus, which we plan to integrate with the SanDi Group's advantages in bus systems and charging facilities over several stages. We officially delivered an initial shipment of 30 Model T electric buses on March 3, 2022. The Model T, the first commercial vehicle self-developed by Foxtron, was developed, designed, and manufactured in Taiwan, and more than 65% of components were supplied by MIH Consortium members and Taiwanese suppliers. In future, we plan to integrate Hon Hai's advantages in the global EV industry for continued development and expansion, and aim to achieve vehicle manufacturing and servicing by 2025.

To create comprehensive solutions, the Group is also working to develop charging stations and energy storage systems, and has invested in the development, design, and manufacturing of EVs as well as the battery packs and battery cells within energy storage systems to ensure mastery of key core capabilities. We officially broke ground on the Hon Hai Kaohsiung Battery Cell and Mass Production Trial Center on June 15, 2022 and plan to invest 6 billion NTD of capital to generate a production capacity of 1.27 GWh in battery cells each year; we plan to officially commence mass production in 2024, and will focus on applications in electric buses, passenger cars, and energy storage systems, as well as downstream extensions into battery modules and entry into the Ciaotou Science Park to build a national grade test site for self-driving cars and networks. We are currently accelerating our development of comprehensive solutions for smart cities and aim to start by building a demonstration site in Kaohsiung to set an example of smart cities before exporting relevant concepts to other cities in Taiwan and internationally.

## 5.2 Improving Operational Resilience

Risk and opportunity are two sides of the same coin. To minimize impacts in the face of rapidly evolving external environments and transform risks into opportunities, the Group works to enhance operational resilience through risk identification and improved response capabilities, which allows us to keep abreast of future opportunities and realize our vision of sustainable development.

### Responding to and Managing Immediate Climate-Related Risks at Operating Sites

Starting in 2020, Hon Hai began implementing ISO 22301 Business Continuity Management Systems in factories to strengthen factory operational continuity and recovery speeds during crises. As an example, our Taoyuan Namkam Factory used assessments of operational continuity risks to identify potential events that could interrupt products and services; the results of said assessment were used to formulate subsequent management plans and prioritize development of emergency response procedures (please refer to the table below for the steps implementation for risk assessments).

For short-term climate risks, Hon Hai issues weather warnings and implements on-site prevention and management procedures in accordance with emergency typhoon and storm plans; for mid- and long-term climate risks, we use our risk analysis results to determine management strategies and implementation measures for climate risks and opportunities; to avoid emergency accidents such as property losses and operational interruptions, risk transfer is carried out by purchasing various types of commercial insurance.

### Hon Hai's operational continuity plans and responses to climate-related risks

Process	Step 1 Identify threat events	Step 2 Assess risks of threat events	Step 3 Identification results and handling methods
Description	Threat events are sources of possible risks; these can be identified through the Group's own experiences, the experiences of industry peers, or through reports released by research institutes	Assess occurrence probability (level of likelihood) and impacts of threat events	<ul style="list-style-type: none"> <li>Determine cost-effectiveness based on identification results, select significant threat events, and use control measures to reduce the probability of threat events</li> <li>Response and management plans should be formulated if occurrence probabilities cannot be reduced</li> </ul>
Examples Of Responses to Climate-Related Risks	Physical climate risks	Typhoons and storms	[Emergency Response Plan for Typhoons and Storms] <ul style="list-style-type: none"> <li>Disseminate typhoon information</li> <li>Inspect construction areas, lightning protection facilities, dormitories and factories, and public areas to remove hidden dangers; warning zones should be established for dangers that cannot be instantly removed</li> <li>Prepare emergency equipment</li> <li>Initiate three-level response measures for typhoons that trigger orange and red alerts and storms that trigger red alerts, and establish an emergency command center</li> </ul>
		Medium to long-term climate changes	<ul style="list-style-type: none"> <li>Information and management strategies and response measures</li> <li>Transfer risks through commercial insurance</li> </ul>



# 6 Net Zero Performance and Outlook





## 6.1 Net Zero Performance Assessment Indicators and Annual Achievements

To achieve Hon Hai's net zero vision, we set 2020 as our base year and proposed corresponding environmental protection goals and commitments related to net zero emissions, green resources, water conservation and environmental protection, waste reduction and recycling. Apart from the Group's overall goals, we have also formulated annual targets for each factory and department, which we periodically track and review.

### Hon Hai's Net Zero achievements over the past 3 years

Theme	2020 Net Zero Vision Performance	2021 and 2022 Net Zero Vision Performance	Future Implementations and Goals
Resource Management	<p>[Water Resource Management]</p> <ul style="list-style-type: none"> <li>Water consumption intensity for 2020 was 0.1618 tons per 10,000 NTD</li> </ul> <p>[Waste Reduction and Recycling]</p> <ul style="list-style-type: none"> <li>Internal plastic recycling ratio in factories for 2020 was 44%</li> <li>We plan to sign a memorandum of cooperation with UL Enterprise and establish a pilot "Zero Waste Zone" at our Longhua Factory</li> </ul>	<p>[Water Resource Management]</p> <ul style="list-style-type: none"> <li>Water consumption intensity for 2021 was 0.146 tons per 10,000 NTD, 1.5% lower than for 2020</li> </ul> <p>[Pollution Prevention]</p> <ul style="list-style-type: none"> <li>Installation ratios for industrial wastewater quality monitoring systems at our factories was 79.3% in 2021</li> <li>In 2022, we established our Que Vo 1 factory in Vietnam as a pilot factory with an air quality monitoring system</li> </ul> <p>[Waste Reduction and Recycling]</p> <ul style="list-style-type: none"> <li>Internal plastic recycling ratio in factories for 2021 was 41%</li> <li>As of year-end 2021, our Longhua Factory has received the Zero Waste to Landfill Operations Gold-Level Certification, and our Hengyang and Kunshan factories have received the highest Platinum level certification</li> <li>Our Nanning Factory received the Zero Waste to Landfill Operations Gold-Level Certification in 2022, and our Tianjin Factory is in the process of obtaining certification</li> </ul>	<p>[Water Resource Management]</p> <ul style="list-style-type: none"> <li>Reduce water use intensity by 6% before 2025</li> </ul> <p>[Pollution Prevention]</p> <ul style="list-style-type: none"> <li>Complete 100% of industrial wastewater discharge and water quality monitoring system installations by 2025</li> <li>Establish at least 3 pilot factories with air quality monitoring systems by 2025</li> </ul> <p>[Waste Reduction and Recycling]</p> <ul style="list-style-type: none"> <li>Raise proportion of internally recycled plastics in factories to 60% by 2025</li> <li>Obtain at least 5 UL2799 Zero Waste to Landfill Operations Gold-Level Certifications by 2025</li> </ul>
Energy Management	<ul style="list-style-type: none"> <li>Formulated the "Audit Procedures for Energy-Saving Projects" and "Audit Procedures for Energy-Saving Management," and set annual energy conservation goals at the beginning of each year</li> <li>The Group's actual energy conservation ratio was 5.18%, which exceeded our annual target of 4.5%, and constituted a reduction of 26.06% (2016-2020) compared with the base year, successfully achieving the Group's mid- to long-term energy-saving goal</li> <li>Audited all energy conservation projects. The Group identified 1,551 projects in violation of regulatory requirements in 2020, all of which have been corrected, reducing power wastage by 167,000 kWh and decreasing expenditures by 41.1 million NTD</li> </ul>	<ul style="list-style-type: none"> <li>Formulated the "Audit Procedures for Energy-Saving Projects" and "Audit Procedures for Energy-Saving Management," and set annual energy conservation goals at the beginning of each year</li> <li>Proportion of green electricity usage for 2021 was 5.17% of overall energy usage</li> <li>Achieved actual energy conservation rate of 5.56% and successfully met our annual target for energy conservation (5%)</li> <li>Implemented 1,587 energy-saving projects with energy-saving benefits equivalent to 1.3 billion NTD in 2021</li> </ul>	<ul style="list-style-type: none"> <li>Raise proportion of green energy usage to more than 50% by 2030</li> </ul>





Theme	2020 Net Zero Vision Performance	2021 and 2022 Net Zero Vision Performance	Future Implementations and Goals
Management of Greenhouse Gases	<ul style="list-style-type: none"> <li>Market-based emissions of Scope 1 and Scope 2 greenhouse gases in 2020 were 5,476,802 tCO<sub>2</sub>e</li> <li>Implemented 1,751 energy-saving projects with total carbon reductions of 312,083 tCO<sub>2</sub>e and energy-saving benefits equivalent to 1.339 billion NTD</li> </ul>	<ul style="list-style-type: none"> <li>Market-based emissions of Scope 1 and Scope 2 greenhouse gases in 2021 were 6,010,866 tCO<sub>2</sub>e</li> <li>Implemented 1,587 energy conservation projects in 2021 with total carbon reductions of 320,925 tCO<sub>2</sub>e</li> <li>Consolidated and virtualized servers in 2021, increasing our cloud computing power by 20 times and reducing carbon emissions by 702 tCO<sub>2</sub>e each year.</li> <li>Responded to the SBTis, conducted a carbon inventory, and officially submitted the SBTi Standard Commitment application in April 2022</li> <li>Became a TCFD supporter</li> <li>Became a founding member, committee member, and supervisor of Association of Taiwan Net Zero Emissions</li> </ul>	<ul style="list-style-type: none"> <li>Achieve net zero emissions of greenhouse gases by 2050</li> <li>Using 2020 as the base year, reduce emissions by 21% before 2025; by 42% before 2030; and by 63% before 2035</li> </ul>
Supply Chain Management	<ul style="list-style-type: none"> <li>Assisted 88 electronics suppliers in implementing greenhouse gas inventories; 40 electronics suppliers also completed ISO 14064-1 verification</li> </ul>	<ul style="list-style-type: none"> <li>In 2021, we have coached and promoted 98 electronic suppliers to complete carbon inventory and 51 to complete ISO14064-1 verification</li> <li>In 2022, we have coached and promoted 110 electronic suppliers to complete carbon inventory and 55 to complete ISO14064-1 verification</li> <li>In 2021 and 2022, promote electronic suppliers to reduce carbon emissions by 225,500 tCO<sub>2</sub>e</li> <li>By 2022, 12 electronics suppliers have signed the Renewable Energy Commitment to use renewable energy</li> <li>10 electronics suppliers have obtained UL 2799 Zero Waste to Landfill certification by 2022</li> </ul>	<ul style="list-style-type: none"> <li>Promote 45 suppliers to use 100% renewable energy to produce Hon Hai products by 2025; and further assist 75 suppliers by 2030 and more than 100 suppliers by 2050</li> <li>Drive 25 suppliers to obtain UL 2799 Zero Waste to Landfill certification by 2025</li> </ul>

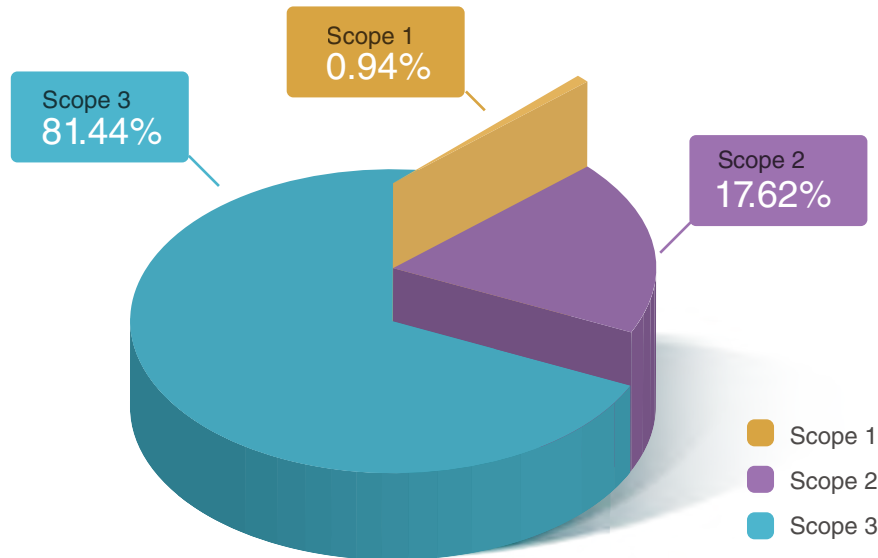




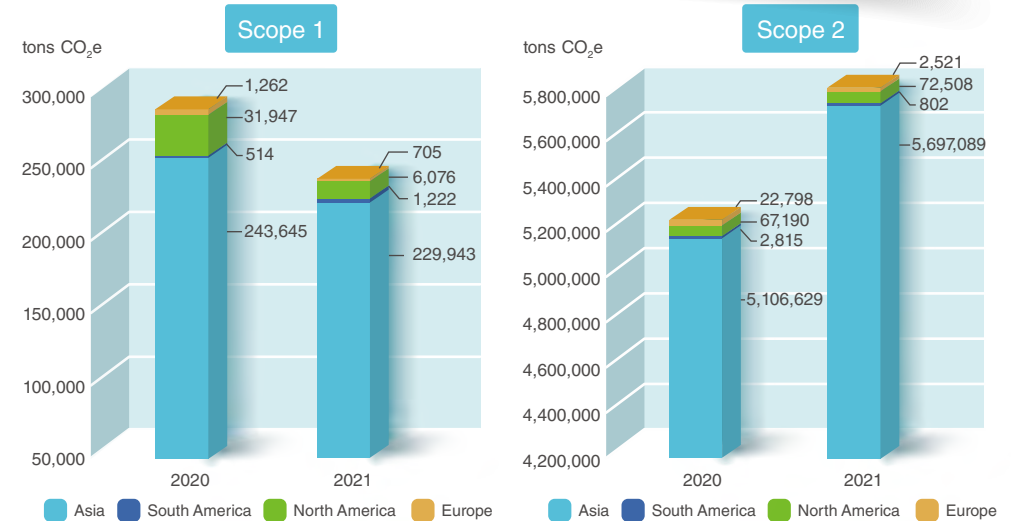
## 6.2 Greenhouse Gas Inventory

In order to achieve Hon Hai's net zero emissions target, we required our factories to conduct ISO 14064-1 greenhouse gas inventory and obtain third-party verification. As of 2021, the coverage rate for inventories conducted at our factories on all continents has surpassed 99%. Our market-based emissions for 2020 included 0.94% Scope 1 (direct) emissions, 17.62% Scope 2 (indirect from generation of purchased energy) emissions, and 81.44% Scope 3 (all other indirect value chain) emissions. Our Scope 1 and Scope 2 greenhouse gas emissions in 2021 rose by 9.75% compared to the base year (2020; 5,476,802 tCO<sub>2</sub>e), mainly due to revenue growth and business expansion, which increased our electricity usage and in turn raised our greenhouse gas emission volumes. Hon Hai will actively formulate plans, implement carbon reduction projects, and use renewable energies to reach our net zero emissions goal for 2050.

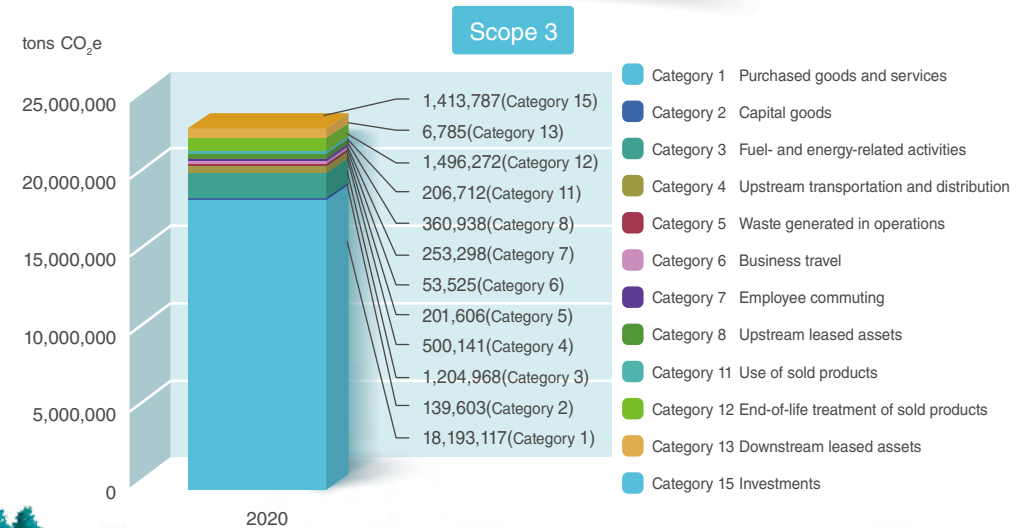
Hon Hai (market-based) greenhouse gas emission types in 2020



Hon Hai (market-based) Scope 1 and Scope 2 greenhouse gas emission volumes over past 2 years



Hon Hai Scope 3 greenhouse gas emission volumes for 2020





### Hon Hai's Scope 1 emissions over past 2 years

(Unit: tCO<sub>2</sub>e)

Year <sup>(Note 8)</sup>	Asia	South America	North America	Europe	Total
2020	243,645	514	31,947	1,262	277,369
2021	229,943	1,222	6,076	705	237,946

Note 8: Inventory coverage rates for 2020 and 2021 were over 99%.

### Hon Hai's Scope 2 emissions over past 2 years (market-based)

(Unit: tCO<sub>2</sub>e)

Year <sup>(Note 9)</sup>	Asia	South America	North America	Europe	Total
2020	5,106,629	2,815	67,190	22,798	5,199,433
2021	5,697,089	802	72,508	2,521	5,772,920

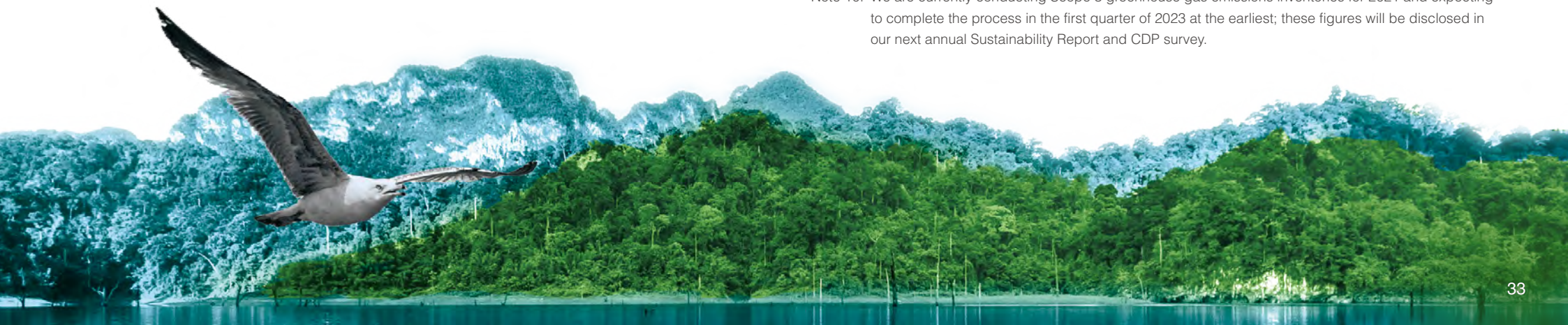
Note 9: Inventory coverage rates for 2020 and 2021 were over 99%.

### Hon Hai's Scope 3 emissions in 2020

(Unit: tCO<sub>2</sub>e)

Inventory Items	2020 Emission Volumes <sup>Note 10</sup>
Category 1 Purchased goods and services	18,193,117
Category 2 Capital goods	139,603
Category 3 Fuel- and energy-related activities	1,204,968
Category 4 Upstream transportation and distribution	500,141
Category 5 Waste generated in operations	201,606
Category 6 Business travel	53,525
Category 7 Employee commuting	253,298
Category 8 Upstream leased assets	360,938
Category 11 Use of sold products	206,712
Category 12 End-of-life treatment of sold products	1,496,272
Category 13 Downstream leased assets	6,785
Category 15 Investments	1,413,787
Total	24,030,752

Note 10: We are currently conducting Scope 3 greenhouse gas emissions inventories for 2021 and expecting to complete the process in the first quarter of 2023 at the earliest; these figures will be disclosed in our next annual Sustainability Report and CDP survey.





# 7

## Appendix





## TCFD Index

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	b. Describe management's role in assessing and managing climate-related risks and opportunities	3 Building Comprehensive Climate Governance Mechanisms	11
Strategy	a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	4.2.2 Major Climate-Related Risks and Opportunities	14
	b. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	4.2.2 Major Climate-Related Risks and Opportunities	14
	c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	In the first stage, we incorporated the TCFD framework in 2022; for the second stage, we plan to analyze and discuss climate scenarios, as well as quantify the financial impacts of climate-related risks	15
Risk Management	a. Describe the organization's processes for identifying and assessing climate-related risks	4.2 Identifying and Assessing Climate-Related Risks and Opportunities	13
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Indicators and Goals	a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	6.1 Net Zero Performance Assessment Indicators and Annual Progress	30
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