



Materials Analysis Technology Inc.

2021 Sustainability Report



Contents

About the Report	3
Message from the Chairperson	4
Glory and Affirmation	6
Sustainability Column 1 MA-tek's Intimate Service	7
Sustainability Column 2 MA-tek Industry–Academia Cooperation Project	8

Chapter 1 A Blueprint for Sustainable Leadership

1.1 Plan for Sustainable Development	10
1.2 Stakeholder Engagement	12
1.3 Identification of Material Topics	14

Chapter 2 The Pace of Sincere Governance

2.1 Company Profile	19
About MA-tek	19
MA-tek's Milestones	21
MA-tek Global Locations	23

2.2 Corporate Governance	24
MA-tek Organizational Structure	24
The operation of the Board of Directors and Functional Committees	26
Integrity Governance and Management	32

2.3 Management Overview	32
Business Performance	34
Tax Governance	35
Public Association Participation	36

2.4 Internal Audit and Regulatory Compliance	37
Internal Audit Operation	37
Regulatory Compliance	37

2.5 Supply Cooperation Good Partner	38
Supplier Management	38

2.6 COVID-19 Response Measures	40
--------------------------------	----

Chapter 3 Lighthouse of Technology Partners

3.1 Technical Service and Quality	42
Introducing the Scope of MA-tek Services	42
Sustainability Highlights:	46
New Technology Channel Collaboration Column	
Diverse Service Channels	47
MA-tek Express Service	48
Quality Policy and Certification	49

3.2 Technological Innovation and Technical Data Management	51
Technological Innovation and Management	52
Intellectual Property Management and Protection Measures	53
Internal Technology Presentation	54
Colleague Improvement Proposals	56

3.3 Customer Relationship Maintenance	58
Customer Service and Relationship Management	58
Customer Satisfaction Survey	61
Technical Exhibition and Seminar	64

3.4 Information Security and Customer Privacy	65
Information Security Policy and Framework	67
Annual key information security implementation measures	68
Information Security Incidents and Reporting Mechanism	70
Information Security Education and Training	71

Chapter 4 A Workplace for Growing Together

4.1 Talent Composition of Professional Teams	72
Employees Composition	73
Statistics of New and Resigned Employees	74

4.2 Excellent Compensation and Benefits	75
Compensation System	76
Various Benefit Policies	77

4.3 Diverse Recruitment and Talent Development	78
--	----

Labor and Ethics Policies	78
Recruitment System	79
Talent Development and Cultivation	81
Employee Performance Management	84

4.4 Friendly and Heart-warming Workplace	84
--	----

Labor–Management Communication Channels	84
Employee Satisfaction and Engagement Survey	85
Diversified Employee Activities	86

4.5 Environmental Safety and Health	88
Occupational Safety and Health Organization Committee	88
Environmental Hazard Assessment and Improvement Measures	88
Environmental Safety and Health Education and Training	91
Work Field Optimization	92
Babycare Measures and Benefits	93
Occupational Safety and Health Expenditure	93

Chapter 5 Public Welfare of the Industry–Academia Connection

5.1 Social Participation Strategy Themes	94
5.2 Precision Analytical Instruments Partner of the University	95
5.3 Common Prosperity Partners of Society	97
Charitable Donations	97
Support Diverse Education	98
Caring for Disadvantaged Groups	99
Local Support	100

Chapter 6 Green and Sustainable Operation

6.1 Climate Change and Adaption	101
Risks and Opportunities of Climate Change	101
Energy Conservation and Carbon Reduction Management	102
6.2 Effective Resource Management	104
Water Resources Management	104
Waste Management	105
Environmental Protection Expenditure	106

Appendix

GRI Sustainability Reporting Standards Disclosure Index	107
Taipei Exchange Rules Governing the Preparation and Filing of Sustainability Reports by TPEX Listed Companies	112
Sustainability Accounting Standards Board (SASB) Index Comparison Table	112
Third Party Verification Statement	113

About the Report

This report is the Sustainability Report published by Materials Analysis Technology Inc. (hereinafter referred to as MA-tek or We). It is currently available in Chinese and English versions, demonstrating the Company's commitment to the goals and actions of Corporate Social Responsibility and Sustainable Development, expecting to allow everyone to have a deeper understanding of MA-tek's actions related to sustainable development. This report discloses the ESG achievements and performance of MA-tek in 2021 (January 1, 2021 to December 31, 2021). The report update period is every year, and the latest Sustainability Report is published year by year.

Basis and Scope of Compilation

This report is supplemented by the Global Reporting Initiative (GRI) Sustainability Reporting Standards (GRI Standards) and SASB Standard List – Professional & Commercial Services. The Sustainability Reporting Standards is based on the Core as the disclosure principle. MA-tek's business covers the whole world, and there are service bases set up in Taiwan, Shanghai, Xiamen, and Nagoya, Japan currently. Since the Taiwan area is still the focus of operating income, the scope of disclosure in this Report is therefore focused on Taiwan, covering SoC Lab, Hsinchu Lab, Zhubei Lab, Jinshan Lab and Tainan Lab.

Report Compilation Standards and External Confirmation

Internal Audit :

This Report is organized and analyzed by the person in charge of the project team of each department, division and office to conduct the performance disclosure of related ESG Plans based on the GRI Sustainability Reporting Standards and the SASB Standards List – Professional & Commercial Services as the supplementary guide, and to be included in the Report and compiled by the project team only after the correctness of the content has been confirmed by the person in charge of each department and the Audit Manager. After completion, it is reported to the Board of Directors and compilation process of the Report is explained.

External Assurance :

The Report is commissioned to Deloitte Taiwan to conduct verification and to confirm the compliance with the core disclosure principles of the GRI Sustainability Reporting Standards, and to obtain the Confirmation Statement, which is attached to this Report as an appendix for reference.

Reporting Period

MA-tek's Sustainability Report is in principle published on a regular basis every year, the publication date of the previous year (2020) Report was June 30, 2021.
The publication of the report for this year (2021) is June 2022
The report for the next year (2022) is scheduled to be published in June 2023.

2022 **2023**
June **June**

Feedback - Contact Information

Materials Analysis Technology Inc.
Telephone: +886-3-6116678 ext: 3766
Address: 300094 1A3, No. 1, Li-Hsin 1st Road, Hsinchu Science Park., Hsinchu City
Email: ir@ma-tek.com
URL: <https://www.ma-tek.com>



Message from the Chairperson

The trend of the times pushes forward the industry development, and MA-tek strongly defends the role of technology R&D partners

In the past two years, the world has faced two major challenges, namely the US–China trade war and the COVID-19 outbreak, which have caused a severe impact on society and also led to an increase in the demand for the semiconductor industry. The trade war has driven the evolution of the third-generation semiconductor and advanced process trends. Benefiting from the strong demand for new materials and new process research and development, the overall market has reached the largest scale in history. The COVID-19 epidemic has affected the ecology of the entire industry. In response to the trend of localization, global companies have turned to seek local resources. MA-tek has set up overseas labs in Nagoya Japan, Shanghai and Xiamen one step ahead, and established a complete analysis service production line, so that the overall operation has a substantial growth. For this reason, even under the double attack of the US–China trade war and the epidemic, MA-tek's global capital expenditure in 2021 still increased sharply, expanding rapidly to meet the huge market demand. With the wave of the trend of the times, MA-tek still adheres to the original intention of starting the business, holds fast to the key role of technology research and development partners.

Taiwan's operations have also maintained steady growth. In 2021, many major technology companies expanded their locations in southern Taiwan, driving the demand for analysis in the southern region. In order to provide more immediate nearby services, MA-tek established the Tainan Lab II in Tainan Science Park, with the scale is equivalent to three times that of the Tainan First Lab. In terms of the northern region, the proportion of foreign businessmen coming to Taiwan to set up R&D centers has increased, and several technology leaders have expanded their operations in Zhubei Tai Yuen Hi-Tech Industrial Park, pushing the momentum of MA-tek Zhubei Lab II upward. Since the establishment in 2002, MA-tek is going to enter its 20th year. MA-tek has always set our sights on the world, expanded overseas, and established 12 laboratories around the world so far. MA-tek promises to continue to expand with the industry development, acting as a Precision Analytical Instruments Center of High-tech Industry, a Necessary Functional Unit of High-tech Industrial Parks, and a Medical Center of High-tech Products, growing with customer together, and realizing our vision of "MA-tek is available to serve you in every Science Park."

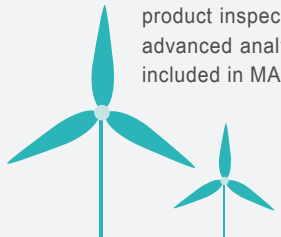
Attach importance to customer relationship, maintain operating capacities, and providing the most professional and reassuring service

As the country's largest analytical laboratory, MA-tek has always been proud to provide customers with accurate and efficient high-quality analysis services. MA-tek has passed multiple certification standards under strict quality management policies, including the international quality certifications of ISO 9001 Quality Management Certification, IECQ 17025 Lab Certification, ISO 27001 Information Security Certification, TUV NORD Certification for Automotive Electronics Verification, ANSI/ESD S20.20 Electrostatic Prevention Verification and ISO/IEC 15408 CC EAL6 IT Security On-site Evaluation Certification.

MA-tek passed the A-level Verification of Taiwan Intellectual Property Management System (TIPS) in 2021, formulated the intellectual property strategy that combines the Company's operating goals and R&D resources, and established an operation model that creates Company value through intellectual property rights, which not only protects the Company's freedom of operation, but also maintains innovation energy, on the other hand, it can also strengthen the competitive advantage and help the business profit and achieve operating goals.

At the same time, in order to improve the quality and efficiency of customer service, MA-tek has independently developed the UFAST customer service system, regardless of whether it is the submission of cases, technical consultations and quotations, the customers can always receive timely services from the technical team and customer service personnel online in. In addition, through the implementation of new intelligent experiments, information systemization, process standardization and production line automation, we can always grasp the status of personnel, work orders, machine status and the progress of experiments at any time. We also officially introduced the PMS system in the third quarter of 2021, to strengthen the operation model and optimize the production process, expecting to become the global E-based laboratory through the systematic process, to be the strongest R&D support for customers.

At present, MA-tek's services are still mainly based on semiconductor ICs. With the development of science and technology, MA-tek will develop toward multi-oriented high-tech value-added services, and work together with partners in the science parks to develop deeper and broader technologies. In addition to expanding into 5G-related applications in Mainland China, Japanese automotive electronic fuel cells, Taiwan's advanced semiconductor manufacturing processes, etc., the scope of development in recent years came to include applications in non-manufacturing areas, with infringement identification of high-end technology products, insurance compensation evaluation for high-tech products, archaeological identification of ancient cultural relics, and biotechnology product inspection all having become a stage for MA-tek. In the future, all front-end trends ranging from AI to Data Centers are the service opportunities for MA-tek. MA-tek will continue to invest in advanced analysis equipment to provide customers with strong and powerful support, to make the customers more competitive in the global supply chain. All demands of high-end inspection will be included in MA-tek's service radius.



“Talent” is the core technology of MA-tek, government–industry–university three-dimensional connection to master the front-end technology

MA-tek understands the high mobility of talents in the technology industry, retaining talents and continuing to improve technology capabilities is an important task for MA-tek's long-term development. In order to consolidate the foundation and enhance competitiveness, MA-tek continues to focus on talent cultivation, planning systematic training for employees and stabilizing the core competence of colleagues. At the same time, MA-tek promises to create a happy and safe working environment for employees, provide a diverse employee benefits system, and provide complete safety protection equipment for employees carrying out high-risk operations through regular environmental operation monitoring to reduce risk hazards and ensure a safe working environment.

MA-tek not only cultivates company talent, but also actively promotes Taiwan's technological and academic development, and cultivates academic talent through industry-university linkages and supporting academic research projects. In May 2021, MA-tek officially started the Industry–Academia Cooperation Project, with the Ministry of Science and Technology's “Basic Research Core Facility Service Center” as a cooperation platform, including National Taiwan University, National Taiwan Normal University, National Tsinghua University, National Yang Ming Chiao Tung University, National Central University, National Chung Hsing University, National Cheng Kung University and National Sun Yat-sen University for a total of eight Universities.

In the first year, a total of 20 projects were approved to be subsidized, with an investment of NTD 20 million, using advanced analysis and verification technology to assist in the implementation of research projects, supporting academic units in the early-stage research and development of innovative components, materials and innovative ideas. At the same time, MA-tek has specially set up a “New Technology Channel | Collaboration Column,” inviting cooperating professors to write special articles to introduce the most popular and advanced scientific and technological research and development content, and invites them to MA-tek to conduct in-depth analysis for customers and colleagues, and join hands with customers to grasp the next-generation key industrial technologies as early as possible, and continue to enhance the core competitiveness of colleagues through new technological knowledge.

Finally, MA-tek promises that while driving the development of the country's cutting-edge industries, we will give back to society through corporate power, exert positive influence with actions, and gradually implement the sustainable development of talent, society, environment and economy, and convey the concept of sustainability to every corner of society to build a national society of common prosperity.



“Dr. Hsieh's Life Etude”
produced by IC Broadcasting

Yong-Fen Hsieh Chairperson of Materials Analysis Technology Inc.



Glory and Affirmation

MA-tek 2021 Awards

Taiwan Intellectual Property Management System **TIPS A-level**

Passed the A-level Verification of Taiwan Intellectual Property Management System (TIPS) in 2021

(2021/12)



Telink **Best Service Award**

MA-tek was awarded with the Telink Best Service Award

(2021/12)

Harvard Business Review **Best Female CEO in Taiwan**

Chairperson Yong-Fen Hsieh was awarded the Best Female CEO in Taiwan by Harvard Business Review

(2021/11)



Pan Wen Yuan Foundation **ERSO Award**

Chairperson Yong-Fen Hsieh was awarded the Pan Wen Yuan Foundation "ERSO Award"

(2021/04)



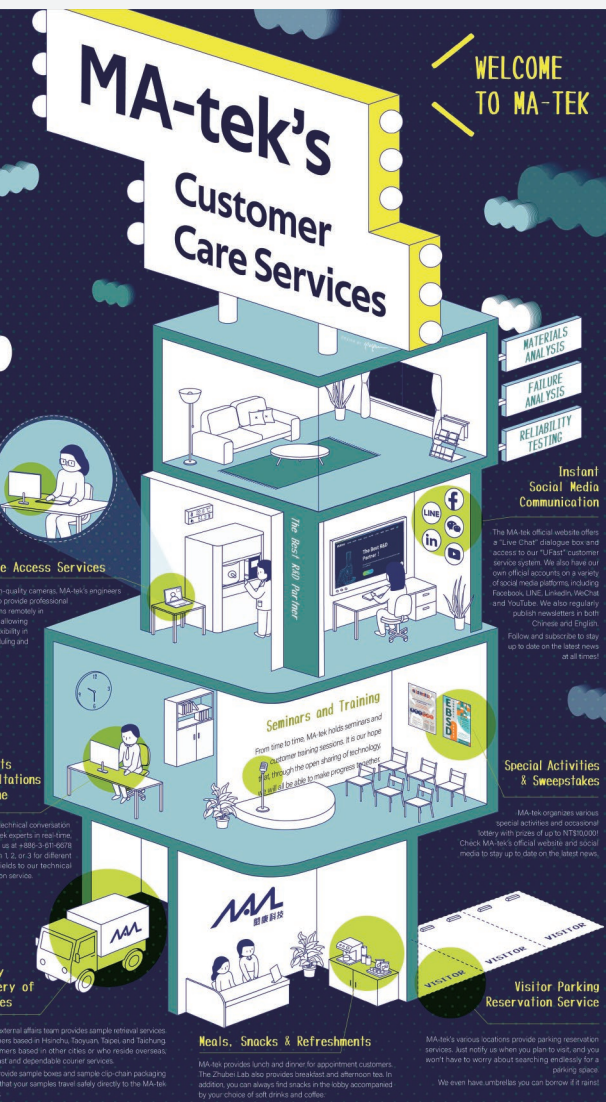
Shanghai

Recognition of High and New Technology Enterprises

MA-tek Testing (Shanghai), Co, Ltd. passed the Recognition of High and New Technology Enterprises

(2021/4)





Sustainability Column 1 MA-tek's Intimate Service

As a third-party impartial laboratory, MA-tek upholds integrity and acts as a Precision Analytical Instruments Center of High-tech Industry, a Necessary Functional Unit of High-tech Industrial Parks, and a Medical Center of High-tech Products, providing customers with precise, accurate, efficient and effective high-quality analysis services.

MA-tek strives to create more advantageous value-added services for customers, responds to the 17 Sustainable Development Goals (SDGs) set by the United Nations, and gradually implements the sustainable management ideas of talents, society and environment and economy through the development of different sustainable development themes. We strive to create a friendly workplace, give back to the society through corporate power, and at the same time abide by the responsibility of protecting the environment, actively develop environmentally friendly industrial application solutions, and convey the idea of sustainability to every corner.

7 AFFORDABLE AND CLEAN ENERGY



In recent years, electricity consumption has continued to grow, and the issue of power shortage has been frequently discussed. In addition to the continuous construction of renewable energy, energy-saving and energy storage equipment is bound to flourish. MA-tek provides comprehensive testing application solutions for environmental sustainable energy industries including LED and solar cells, and strengthens the corporate sustainable value chain through the common prosperity development of the ecosystem of suppliers and customers.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



In addition to acting as an important functional unit of the Science Park, MA-tek is involved in infringement identification, scientific and technological archaeology identification, insurance appraisal and other fields in many ways, to provide the industry with multiple innovative technology value-added application services. The less difficult analysis and testing cases will be referred to academic and research institutes for analysis after evaluation, so as to increase the accumulation of academic experience and strengthen the practical capabilities.

13 CLIMATE ACTION



Under the influence of global warming and extreme climate, the development of energy saving and renewable energy is absolutely necessary. The newly established laboratories of MA-tek in 2021 (Zhubei Lab II, Tainan Lab II) all use LED tubes, and the newly established air compressors in Jinshan Lab also use energy-saving machines to save power consumption, and at the same time, encourage colleagues to implement the environmental protection attitude of saving energy and not excessive waste in livelihood.

Sustainability Column 2 MA-tek Industry–Academia Cooperation Project

MA-tek has been assisting the high-tech industry in the analysis and testing requirements of advanced technology for a long time, and has won praise and trust from the industry. At the same time, MA-tek hopes to do more for the society, especially works with the Ministry of Science and Technology to establish Industry–Academia Cooperation Projects for eight National Universities including the National Taiwan University, National Tsing Hua University, National Yang Ming Chiao Tung University, National Central University, National Chung Hsing University, National Cheng Kung University, National Sun Yat-sen University and National Taiwan Normal University, to provide an annual R&D fund of NT\$20 million to improve the quality of analysis and testing in the academic research and development process.

The first Industry–Academia Cooperation Project call for papers in 2021 was officially started in May, and a total of 20 projects were approved to be subsidized, and the Program Beginning Exchange Meeting was held on October 5, inviting professors who were selected for cooperation projects and their research teams with a total about 30 distinguished guests coming to visit MA-tek Headquarters. The guests were guided by the Project Members of the R&D Center to visit MA-tek SoC Lab, and the Company's various advanced analysis and testing equipment and related applications were introduced to them in detail. The Chairperson Yong-Fen Hsieh also communicated and discussed with professors in person, to accelerate the progress of the R&D Projects.

MA-tek openly invites outstanding scholars in related research fields to cooperate with us. We will provide high-level analytical instrument services, combined with the research resources of academic institutions, to cooperate in promoting basic and applied researches, and to create a win-win situation for both industry and academia.



▲ MA-tek Chairperson Yong-Fen Hsieh communicated with the guests of Industry–Academia Cooperation on the spot

**Eight
National
Universities**

**NT\$20 Million
R&D Fund**

**Total of
20
Projects**



▲ MA-tek's research team guide the guests to visit the laboratory



In addition to providing funding and technical services to academia, MA-tek Industry–Academia Cooperation Project also invites professors to write articles introducing their most advanced research and technological development, and submit the articles to well-known industry magazines and media platforms including EETimes, EDN Taiwan and TechNews to expand the breadth of knowledge rendering; at the same time, it invites professors to give speeches at the MA-tek Quarterly Technology Presentation, so that the colleagues and customers can continue to absorb new knowledge of the industry through the professor's personal explanation and discussion learning, to grasp the key technologies of the next generation as soon as possible and enhance the core competitiveness.



MA-tek is well aware that academic institutions are responsible for cultivating talents for the development of advanced science and technology in the future, but they are facing the shortage of research funds and the lack of high-end or valuable equipment resources, which requires more injection of research resources. Therefore, starting from 2021, MA-tek will allocate 5% of annual net profit as academic feedback to provide high-quality analytical services and cutting-edge instrument operations, so that excellent laboratories in the academia and research institutes can also enjoy high-standard services in the industry, hoping to strengthen the research and development capabilities this way, to assist in the realization of more excellent research and development projects, and promote industrial upgrading.



In the 2021 annual cooperation projects, a total of two projects focused on the future application issues of the global environment. National Yang Ming Chiao Tung University – The visible light photocatalyst material researched by Professor Kuo-Pin Yu provides solutions to the important issue of environmental pollution caused by emerging organic pollutants; National Taiwan University – The research and development of forward-looking fiber composite materials led by Professor Feng-Cheng Chang uses characteristics of plant fibers that are lightweight, renewable, carbon-fixing, low-cost, biodegradable, sound-absorbing and shock-resistant, helping the industrial products transform towards sustainable goals. Through professional analysis and testing technology, MA-tek supports environmental sustainability related research projects to perform technology development, and jointly move towards zero carbon emissions.



MA-tek is the first semiconductor R&D laboratory in Taiwan that has allocated funds for research and development with the academic community. In the first year of many submissions of call for papers, all types of potentials and possibilities of research and development in Taiwan's academic laboratory research and development can be seen. In addition to surprises, it is further confirmed that the R&D funding and technology support programs can indeed accelerate the advanced research and development of innovative components, materials and ideas. MA-tek utilizes our own expertise to connect industry–academia with global technology development, and promises to achieve the vision of “MA-tek is available to serve you in every Science Park,” allowing the world to see Taiwan's technological techniques and promoting global scientific and technological exchanges and cooperation.



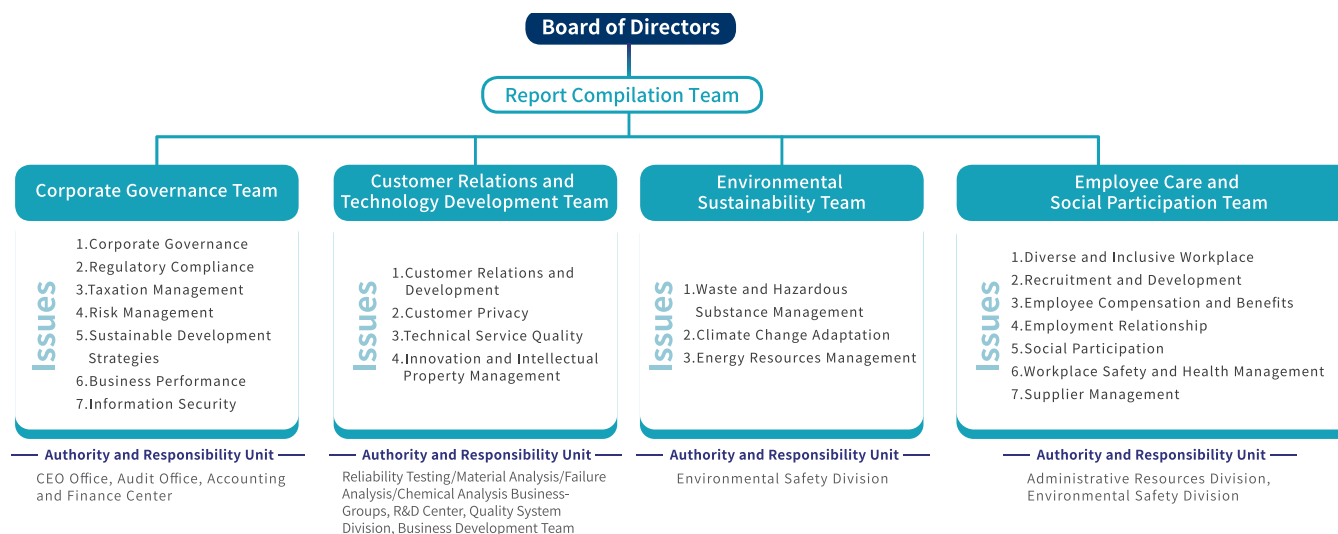
A Blueprint for Sustainable Leadership

1.1 Plan for Sustainable Development

MA-tek upholds integrity and acts as the Precision Analytical Instruments Center of the high-tech industry, the Necessary Functional Unit of High-tech Industrial Parks, and the Medical Center of High-tech Products, and through the development of different sustainability themes to gradually implement the sustainable development ideas of talents, society, environment and economy. We strive to create a friendly workplace with complete communication channels, give back to society through corporate power, and scrupulously abide by the responsibility of protecting the environment at the same time, expecting to exert positive influence with actions and convey the idea of sustainability to every corner.

Code of Practice for Sustainable Development

In order to achieve goal of common prosperity for MA-tek and society, corporate governance, environmental and social progress are promoted while pursuing economic growth, MA-tek has established the “Code of Practice for Sustainable Development” to manage the economic, environmental and social risks and impacts of MA-tek’s overall operating activities and to actively put MA-tek’s goals of sustainable development into practice.



Corporate Sustainability Promotion Team

MA-tek expects to achieve its sustainable development goals through organized management. MA-tek’s current Sustainability Promotion Team is composed of four major teams formed of various business units according to their job functions, namely the “Corporate Governance Team,” “Customer Relations and Technology Development Team,” “Environmental Sustainability Team,” and “Employee Care and Social Participation Team,” to manage their related sustainability issues. The promotion results of sustainability issues by each team are collected and organized by the Report Compilation Team and presented in MA-tek’s Sustainability Report. The promotion results and the contents presented in the Report are reported to the Board of Directors, and are disclosed and reported after having been confirmed by the Board of Directors.



Code of Practice for
Sustainable Development

Sustainable Development Strategies and Goals

MA-tek examined the operational goals for 2021, and formulated MA-tek's five sustainable development strategies in response to the United Nations Sustainable Development Goals (SDGs).



1.2 Stakeholder Engagement

MA-tek pursues Corporate Sustainable Development, and attaches importance to the responses of stakeholders, and communicates with all stakeholders through multiple channels in order to respond appropriately. In 2021, MA-tek referred to the AA1000SES:2015 Standard, guided by quantifying the five attributes of “Dependency, Responsibility, Tension/Attention, Influence, Diverse Perspectives” to identify seven major stakeholders, namely Employees, Customers, Shareholders/Investors, Suppliers, Government Agencies, Community and Society, Community and Society as well as Academic Research Institutions, to conduct engagement using different methods according to different stakeholders, and at the same time understand the needs and expectations of all stakeholders, in order to further include their issues of concern in the policies for MA-tek’s future development.

Identification Process of Stakeholders and Material Topics

Identification of Stakeholders

This Report refers to the principles of the five attributes in the AA 1000 Stakeholder Engagement Standard 2015, Dependency, Responsibility, Tension/Attention, Influence, Diverse Perspectives, as the basis for writing, and at the same time refers to the operation conditions and industrial characteristics of MA-tek to identify seven key stakeholders.

Identification of Sustainability Issues

Through various communication mechanisms and channels, including the Company website, customer satisfaction surveys, employee suggestion box feedback, investor section, and stock affairs agencies, issues of concern for the stakeholders are collected. In 2021, a total of 21 sustainability issues were identified as material issues for identification and analysis for the year.

Analysis of Sustainability Issues

Understand the “Stakeholders’ Degree of Concern” of the seven major stakeholders on each sustainability issue through questionnaire surveys, and the internal officers evaluate the “Operational Impact” of each sustainability issue on MA-tek, to identify the material issues in 2021 based on the survey results.

Material Issues Matrix

A total of 10 material issues were identified this time, and drawn the Material Issues Matrix with the results of this time were confirmed. In order to properly respond to the issues of concern of all stakeholders, 7 additional secondary issues have been added.

MA-tek Important Stakeholders



All Types of Stakeholders and Communication Methods in 2021

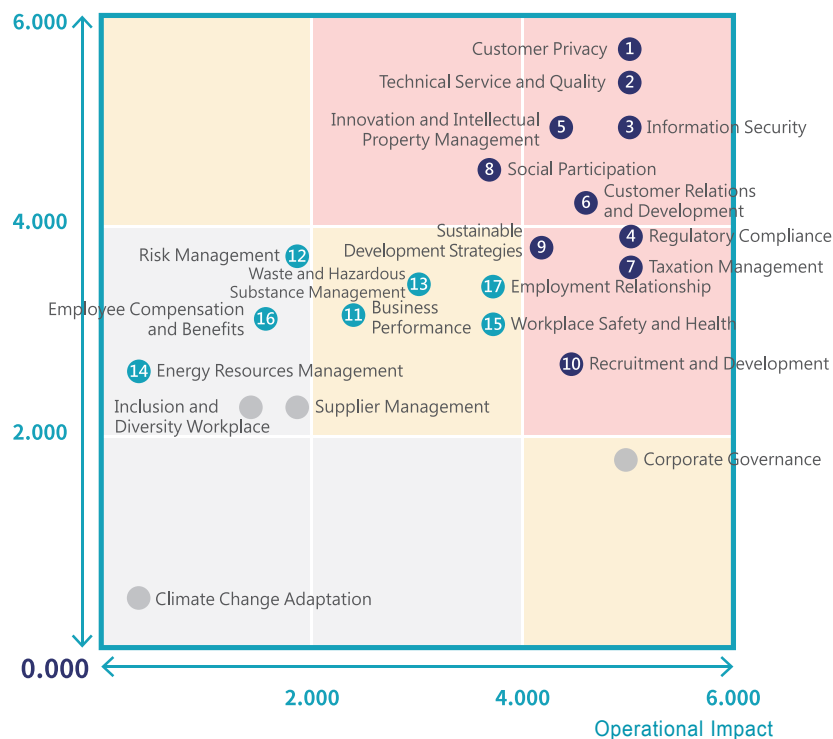
Stakeholders	Issues of Concern	Communication Method and Frequency	Corresponding Chapter	Stakeholders	Issues of Concern	Communication Method and Frequency	Corresponding Chapter
Employees	<ul style="list-style-type: none"> Information Security Customer Privacy Regulatory Compliance Business Performance Recruitment and Development 	<ul style="list-style-type: none"> Labor–Management Meetings (once every quarter) Employee Suggestion Box (without a fixed schedule) Employee Satisfaction Survey (once every year) Manager Monthly Meeting/Bimonthly Meeting (every month/every two months) Employee Conference (once every year) Performance Appraisal (once every year) 	2.2 Corporate Governance 2.3 Management Overview 2.4 Internal Audit and Regulatory Compliance 3.4 Information Security and Customer Privacy 4.2 Excellent Compensation and Benefits 4.3 Diverse Recruitment and Talent Development	Suppliers	<ul style="list-style-type: none"> Customer Privacy Information Security Taxation Management Technical Service Quality Social Participation 	<ul style="list-style-type: none"> Supplier Evaluation Procedure and Management Platform (without a fixed schedule) Telephone, Fax (without a fixed schedule) Email Contact (without a fixed schedule) 	2.3 Management Overview 3.1 Technical Service and Quality 3.4 Information Security and Customer Privacy 5.1 Social Participation Strategy Themes 5.2 Precision Analytical Instruments Partner of the University 5.3 Common Prosperity Partners of Society
Customers	<ul style="list-style-type: none"> Information Security Customer Privacy Technical Service Quality Customer Relations and Development Innovation and Intellectual Property Management 	<ul style="list-style-type: none"> Provision of Consulting Services on the Company Website (regular) Customer Satisfaction Questionnaire (once every year) Telephone, Email Contact (regular) Technical Seminars (without a fixed schedule) 	3.1 Technical Service and Quality 3.2 Technological Innovation and Technical Data Management 3.3 Customer Relationship Maintenance 3.4 Information Security and Customer Privacy	Government Agencies	<ul style="list-style-type: none"> Technical Service Quality Customer Privacy Innovation and Intellectual Property Management Information Security 	<ul style="list-style-type: none"> Conference/Laws and Regulations Briefing (without a fixed schedule) Official Document Communication (without a fixed schedule) Market Observation Post System (disclosed according to regulations) 	3.1 Technical Service and Quality 3.2 Technological Innovation and Technical Data Management 3.4 Information Security and Customer Privacy
Shareholders/ Investors	<ul style="list-style-type: none"> Sustainable Development Strategies Customer Relations and Development Innovation and Intellectual Property Management Recruitment and Development Social Participation 	<ul style="list-style-type: none"> The Company Spokesperson (without a fixed schedule) Stock Agency and Specific Responsible Personnel (without a fixed schedule) Company Website Investor Section (without a fixed schedule) Annual Shareholders' Meeting (once every year) Revenue Announcement (once every month) 	1.1 Plan for Sustainable Development 3.2 Technological Innovation and Technical Data Management 3.3 Customer Relationship Maintenance 4.2 Excellent Compensation and Benefits 4.3 Diverse Recruitment and Talent Development 5.1 Social Participation Strategy Themes 5.2 Precision Analytical Instruments Partner of the University 5.3 Common Prosperity Partners of Society	Community and Society	<ul style="list-style-type: none"> Regulatory Compliance Risk Management Technical Service Quality Workplace Safety and Health Employment Relationship 	<ul style="list-style-type: none"> Community, Social Group Contact and Cooperation (without a fixed schedule) Complaints Hotline (without a fixed schedule) 	2.4 Internal Audit and Regulatory Compliance 2.6 COVID-19 Response Measures 3.1 Technical Service and Quality 4.1 Talent Composition of Professional Teams 4.2 Excellent Compensation and Benefits 4.3 Diverse Recruitment and Talent Development 4.5 Environmental Safety and Health 6.1 Climate Change and Adaptation
				Academic Research Institutions	<ul style="list-style-type: none"> Waste and Hazardous Substance Management Energy Resources Management Social Participation Employee Compensation and Benefits Employment Relationship 	<ul style="list-style-type: none"> Industry–Academia Cooperation (every year) Provision of Consulting Services on the Company Website (regular) Telephone, Email Contact (regular) Technical Seminars (without a fixed schedule) 	4.1 Talent Composition of Professional Teams 4.2 Excellent Compensation and Benefits 4.3 Diverse Recruitment and Talent Development 5.1 Social Participation Strategy Themes 5.2 Precision Analytical Instruments Partner of the University 5.3 Common Prosperity Partners of Society 6.2 Effective Resource Management

1.3 Identification of Material Topics

This Report is written and information is disclosed in accordance with the four principles of the GRI Sustainability Reporting Standards: Materiality, Stakeholder Inclusiveness, Sustainability Context and Completeness. MA-tek focuses on deepening the content of issue management policy. After considering the characteristics of industry and MA-tek's operating conditions, 21 sustainability issues closely related to MA-tek were selected to identify material issues. The identification of material issues this time was through the questionnaire survey method to understand the "Stakeholders' Degree of Concern," and the internal officers evaluated the "Operational Impact" of each sustainability issue on MA-tek, to identify the sustainability material issues in 2021, and the 2021 Material Issues Matrix was drawn based on the results of this evaluation.

A total of 10 material issues were identified in 2021. Compared with 2020, two new material issues were added, namely "Tax Management" and "Social Participation." At the same time, the top five major concerns of all stakeholders but not identified as items of material issue are included as secondary issues for additional disclosure, in order to strengthen communication with stakeholders and improve information transparency and disclosure quality; the disclosure requirements of the SASB Guidelines – Professional & Commercial Services are also brought in correspondence this time, making the Report richer and more complete.

Stakeholders' Degree of Concern



Material Issues		Secondary Issues	
1	Customer Privacy	11	Business Performance
2	Technical Service and Quality	12	Risk Management
3	Information Security	13	Waste and Hazardous Substance Management
4	Regulatory Compliance	14	Energy Resources Management
5	Innovation and Intellectual Property Management	15	Workplace Safety and Health
6	Customer Relations and Development	16	Employee Compensation and Benefits
7	Taxation Management	17	Employment Relationship
8	Social Participation		
9	Sustainable Development Strategies		
10	Recruitment and Development		

Material Topics Impact Boundaries and GRI Material Topics Comparison Table

Material Issues	Corresponding GRI Material Topics	Meaning to MA-tek	Internal Boundary		Important Stakeholders						Corresponding Chapter
			MA-tek	Employees	Customers	Shareholders / Investors	Government Agencies	Suppliers	Community and Society	Academic Institutions	
Customer Privacy	GRI 418 Customer Privacy	MA-tek has established a customer data management mechanism to prevent leakage of customer privacy information, and pays close attention to relevant domestic and foreign privacy data protection laws and regulations.	●	○	●	○				●	3.4 Information Security and Customer Privacy
Technical Service and Quality	[Set Topic] Quality Management	MA-tek has established quality standards (including international certification) and implements service quality management to provide customers with high-standard and stable testing services.	●	○	●	○				○	3.1 Technical Service and Quality
Information Security	GRI 418 Customer Privacy	MA-tek has established information security policies to ensure the stability of the information system and maintain the Company and customer information.	●	○	●	○				●	3.4 Information Security and Customer Privacy
Regulatory Compliance	GRI 205 Anti-corruption GRI 307 Environmental Compliance GRI 419 Socioeconomic Compliance	MA-tek actively complies with laws and regulations, conducts promotion of laws and regulations from time to time, and fully discloses major violations of relevant environmental and labor laws and regulations.	●	●	○	●	●		○		2.4 Internal Audit and Regulatory Compliance
Innovation and Intellectual Property Management	GRI 203 Indirect Economic Impacts [Set Topic] Number of Patent Applications and Approvals	MA-tek invests in technological innovation development, advances testing service technology, and improves the management procedures of new innovative intellectual property rights.	●	○	●	○				○	3.2 Technological Innovation and Technical Data Management
Customer Relations and Development	[Set Topic] Customer Satisfaction GRI 418 Customer Privacy	MA-tek provides an efficient customer service platform and troubleshooting mechanism, and investigates customer satisfaction with the service, and explores the development of potential customers and market needs.	●	○	●	○				○	3.3 Customer Relationship Maintenance
Taxation Management	GRI 207 Tax	MA-tek is committed to complying with tax laws and regulations, fulfilling the social responsibility of taxpayers, and disclosing tax information in financial statements and annual reports.	●			○	●				2.3 Management Overview

Material Topics Impact Boundaries and GRI Material Topics Comparison Table

Material Issues	Corresponding GRI Material Topics	Meaning to MA-tek	Internal Boundary		Important Stakeholders						Corresponding Chapter
			MA-tek	Employees	Customers	Shareholders / Investors	Government Agencies	Suppliers	Community and Society	Academic Institutions	
Social Participation	GRI 203 Indirect Economic Impacts	MA-tek practices social welfare through the industry-academia cooperation, charitable donations, support for diversified education, care for disadvantaged people, and promotion of Taiwan's agricultural products and arts and culture.		○					●	●	5.1 Social Participation Strategy Themes 5.2 Precision Analytical Instruments Partner of the University 5.3 Common Prosperity Partners of Society
Sustainable Development Strategies	[Set Topic] Sustainable Development Strategies	MA-tek's sustainable development strategy planning includes the Company's sustainable development goals, as well as the practice of economic performance, environmental protection and social participation.	●	○	○	○	○	○	○	○	1.1 Plan for Sustainable Development
Recruitment and Development	GRI 401 Employment GRI 405 Diversity and Equal Opportunity	Set recruitment strategies to recruit outstanding talents from all sectors of society to join, and plan professional technical training to provide employees with the assistance required for career development.	●	●					○	●	4.1 Talent Composition of Professional Teams 4.3 Diverse Recruitment and Talent Development

◆ Note: ● Represents Direct Impact; ○ Represents Indirect Impact

Material Topics Management Directives

Material Topics	Management Directives Description	2021 Assessment Results	Corresponding Chapter
Economic Performance	<ul style="list-style-type: none"> Strengthen corporate governance and integrity management, and maintain operational performance. Conduct internal audit operations and risk management. 	<ul style="list-style-type: none"> The annual revenue grew by 9.78%. The internal audit items were checked and found to be in compliance with the regulations. 	2.3 Management Overview 2.4 Internal Audit and Regulatory Compliance
Tax	<ul style="list-style-type: none"> Truthfully abiding by the tax laws and regulations Disclosing tax information in financial statements and annual report information on a regular time schedule 	<ul style="list-style-type: none"> The internal audit items were checked and found to be in compliance with the regulations. Verified by independent certified accountants, all are truthfully disclosed. 	2.3 Management Overview
Indirect Economic Impacts	<ul style="list-style-type: none"> Improve testing and technological innovation. Practice social welfare through the industry-academia cooperation, charitable donations, support for diversified education, care for disadvantaged people, and promotion of Taiwan's agricultural products and arts and culture. 	<ul style="list-style-type: none"> Organized one physical external technical seminar. Organized three physical internal technology presentations. Launched the five-year Industry-Academia Cooperation Project. A total of 20 cooperation projects were selected this year, with an investment of NT\$20 million. Provided financial assistance of NT\$1 million to Blue Sky Blue Sky Home Work-Study Fund, NT\$346,642 was used this year; Donated NT\$500,000 to Minfu Elementary School for purchasing the remote computer equipment for epidemic prevention. Supported one physical art and culture event. 	3.1 Technical Service and Quality 3.2 Technological Innovation and Technical Data Management 5.1 Social Participation Strategy Themes 5.2 Precision Analytical Instruments Partner of the University 5.3 Common Prosperity Partners of Society

Material Topics Management Directives			
Material Topics	Management Directives Description	2021 Assessment Results	Corresponding Chapter
Anti-corruption	<ul style="list-style-type: none"> Formulate the "Regulations for Evaluating the Performance of the Board of Directors" to implement self-evaluation by the Board of Directors and third-party evaluations. Strictly implement the principles of corporate governance and integrity management. Establish an effective Whistle Blower System. 	<ul style="list-style-type: none"> Complete the self-evaluation of the performance of the Board of Directors. There were no anti-corruption incidents this year. 	2.2 Corporate Governance 2.4 Internal Audit and Regulatory Compliance
Regulatory Compliance of Environmental Protection Related Laws	<ul style="list-style-type: none"> Comply with the environmental protection laws and regulations. Track changes in environmental protection laws and regulations, and assess the impact on the Company. Implementation of laws and regulations education, training and promotion. 	<ul style="list-style-type: none"> There were no violations of environmental protection laws and regulations this year. 	2.4 Internal Audit and Regulatory Compliance
Employment Relationship	<ul style="list-style-type: none"> Provide employees with compensation and benefits that are better than those in the industry. Strengthen communication channels between employees and employer. 	<ul style="list-style-type: none"> "Average Salary" and "Median Salary" for full-time employees who are not in management positions increased by NT\$156,401 and NT\$96,978 respectively. Employee satisfaction averaged above 4 points (out of 6 points). 	4.1 Talent Composition of Professional Teams 4.2 Excellent Compensation and Benefits 4.3 Diverse Recruitment and Talent Development
Diversity and Equality in Employment	<ul style="list-style-type: none"> Ensure that employees are treated equally in terms of age, gender, race, religion, nationality, party affiliation, place of birth, sexual orientation, marriage, appearance, and physical and mental disabilities. Any workplace discrimination and sexual harassment is prohibited. 	<ul style="list-style-type: none"> There were no incidents of discrimination or sexual harassment this year. 	4.1 Talent Composition of Professional Teams 4.3 Diverse Recruitment and Talent Development
Customer Privacy	<ul style="list-style-type: none"> Establish and implement information security policies to prevent leakage of confidential customer information. Organize employee information security education and training, and announce the concept of protecting customer data. 	<ul style="list-style-type: none"> There were no incidents of discrimination or sexual harassment this year. 	3.4 Information Security and Customer Privacy
Social Economy Regulatory Compliance	<ul style="list-style-type: none"> Comply with Social Economy Laws and Regulations. Track changes in social economy laws and regulations, and assess the impacts on the company. Implementation of laws and regulations education, training and promotion. 	<ul style="list-style-type: none"> There were no incidents of discrimination or sexual harassment this year. 	2.4 Internal Audit and Regulatory Compliance
[Set Topic] Quality Management	<ul style="list-style-type: none"> Strictly abide by the quality management policy. Implement quality management education and training. Introduce and maintain international quality management certification. 	<ul style="list-style-type: none"> Organized two quality education training sessions. Passed the TIPS A-level verification of Taiwan's Intellectual Property Management System 	3.1 Technical Service and Quality
[Set Topic] Number of Patent Applications and Approvals	<ul style="list-style-type: none"> Implement intellectual property management procedures. 	<ul style="list-style-type: none"> A total of 22 patent applications were filed this year, and a total of 20 patent applications were approved. 	3.2 Technological Innovation and Technical Data Management
[Set Topic] Customer Satisfaction	<ul style="list-style-type: none"> Organize business and service personnel education and training. Develop diverse service channels. Implement customer satisfaction surveys. 	<ul style="list-style-type: none"> More than 95% of the survey respondents expressed satisfaction. 	3.3 Customer Relationship Maintenance
[Set Topic] Sustainable Development Strategies	<ul style="list-style-type: none"> Implement action plans of technological innovation, talent nurturing and social care with the goal of Corporate Sustainable Development. 	<ul style="list-style-type: none"> Establish the Sustainable Development Policies. Evaluate the Establishment of Sustainability Committee. Plan for Carbon Inventory. Continue to develop our own patented products (K-kit Special Copper Mesh). 	1.1 Plan for Sustainable Development

MA-tek 2021 Secondary Issues and Corresponding Chapter

Secondary Issues		Corresponding Chapter
1	Business Performance	2.2 Corporate Governance 2.3 Management Overview
2	Risk Management	2.2 Corporate Governance 2.4 Internal Audit and Regulatory Compliance 4.5 Environmental Safety and Health 6.1 Climate Change and Adaption
3	Waste and Hazardous Substance Management	6.2 Effective Resource Management
4	Energy Resources Management	6.1 Climate Change and Adaption 6.2 Effective Resource Management
5	Workplace Safety and Health	2.6 COVID-19 Response Measures 4.5 Environmental Safety and Health
6	Employee Compensation and Benefits	4.2 Excellent Compensation and Benefits
7	Employment Relationship	4.1 Talent Composition of Professional Teams 4.3 Diverse Recruitment and Talent Development



The Pace of Sincere Governance

2.1 Company Profile About MA-tek

MA-tek is a world-class technical service company covering electronics, electrical machinery, and material analytical labs.

Founded in 2002, Materials Analysis Technology Inc. (MA-tek) achieved revenue and profit/loss balance in the second year of its establishment, and went public for investors in its fifth year. Looking at the world, MA-tek has expanded overseas to set up laboratories and business offices in twelve locations around the world since its establishment, and was officially listed on the over-the-counter market in its seventh year.

With the continuous advancement of science and technology, MA-tek's future development areas continue to deepen and expand, in response to the advent of the era of big data ranging from AI, machine learning, and security encryption, quantum computing has become a hot topic in the global technology industry, and its hardware core is extremely difficult to manufacture and analyze. MA-tek has laid out the advanced detection technology required for different quantum structures in advance to meet the technical challenges of the quantum generation. We continue to invest in advanced analysis equipment to provide customers with strong and powerful support to make customers more competitive in the global supply chain. Wherever there is a demand for chip manufacturing, it is the responsibility and value of MA-tek's service. MA-tek engaged in materials analysis and research in the past; since the purchase price of relevant instruments such as Transmission Electron Microscopes (TEM), Scanning Electron Microscopes (SEM), Focused Ion Beam Microscopes (FIB), and Secondary Ion Mass Spectrometers (SIMS) were expensive, only academic institutions or resource-rich semiconductor factories had the machinery available, and those were not widely available in the industrial sector. MA-tek is currently the most comprehensive materials analysis laboratory and electronic and electrical laboratory in Taiwan. Both equipment models and the number of machines are far ahead of universities and research institutions, giving MA-tek a leading position in the world.

The purpose of founding MA-tek is to promote the application of materials analysis to the research and development, manufacturing process and quality control of various fields, and to increase the speed of product R&D in the industry. In recent years, MA-tek has gradually constructed failure analysis and reliability testing laboratories and expanded service locations in Shanghai, Xiamen and Nagoya, Japan to provide technical services for the complete product lines of global customers.

In terms of sustainable development and long-term development, MA-tek's operating structure is based on four ideas



Precision Analytical Instruments Center of High-tech Industry



Necessary Functional Unit of High-tech Industrial Park



Medical Center of High-tech Products



A common technology research and development platform & quality assurance laboratory for various industries, including semiconductors, polymers, electronics, metals, ceramics, and nanomaterials



Precision Analytical Instruments Center of High-tech Industry

In January 2008, MA-tek established the SoC Lab in the Hsinchu Science Park. In addition to providing technical services for the centralized management of the materials analysis machines of the past, MA-tek also continued to invest in advanced analysis equipment.

At present, MA-tek has become the Precision Analytical Instruments Center of the international science and technology industry. In addition to the leading manufacturers in different domestic industries, MA-tek also provides materials analysis services to advanced development countries in Europe, America, and Japan; the customer base covers semiconductor factories, automotive factories, academic research institutions, equipment manufacturers and research institutions.

MA-tek is a global professional strategic partner and complementary laboratory.



Medical Center of High-tech Products

MA-tek's analysis and testing system, like the human body medical system, ranges from scientific examinations, internal medicine diagnosis and treatment, and surgery, to pathological research in medical centers; non-destructive testing, electrical analysis, and physical analysis to materials analysis is conducted for failed samples.

Consultation, analysis, and repair are conducted with the same diagnostic logic to provide customers with medical-grade analysis and testing services, to become a high-quality medical center in the science and technology sector.



Necessary Functional Unit of High-tech Industrial Park

MA-tek plays the role of the R&D service center of the industry, and its main business is to provide the analysis services required at all stages of the IC supply chain, including IC design, manufacturing, packaging, and testing.

In order to be able to closely integrate with customers to improve services, MA-tek has successively rooted itself in Zhubei Tai Yuen Hi-Tech Industrial Park, Hsinchu Science Park, Tainan Science Park, Shanghai Zhangjiang Hi-Tech Park, Xiamen Huli District, and entered Japan in 2019 to establish a materials analysis laboratory in Nagoya.

In the future development of the science and technology industry, MA-tek brings customers friendly, standardized and efficient high-quality analysis services.



A common technology research and development platform & quality assurance laboratory for various industries, including semiconductors, polymers, electronics, metals, ceramics, and nanomaterials

At the beginning of its establishment in 2002, MA-tek was approved by the Industrial Development Bureau, Ministry of Economic Affairs to provide R&D services and intellectual property rights services, and passed the ISO 9001 Management Certification, IECQ 17025 Laboratory Certification, ISO 27001 Information Security Certification, ISO 15408 Information Security On-site Certification and On-site Audits by international major manufacturer customers, and passed the A-level Verification of Taiwan Intellectual Property Management System (TIPS) in 2021.

The Company's microscopic size measurement results those of are a small number of independent laboratories with verified measurement standards that can be traced back to the U.S. National Institute of Standards and Technology (NIST), which can provide customers with accurate analysis data with international-level high-quality certification.

MA-tek's Milestones



- Established the Materials Analysis Technology Inc. (MA-tek)
- Zhubei Tai Yuen Laboratory (JB Lab) has officially started operations, mainly providing Materials Analysis (MA) and Product Failure Analysis (PFA) services



- Established MA-tek Japan Inc. to actively expand into the Japanese market
- Established the Shanghai Lab (SH Lab) in Shanghai Zhangjiang Hi-Tech Park, Shanghai, China to mainly provide failure analysis and expand into Mainland China market

- Listed on the Taiwan OTC market (Stock Code 3587)
- Established the MA-tek USA subsidiary

- Reinvested to establish Bio MA-tek Inc. and introduce liquid sample analysis (K-kit) service
- Established MA-tek Tainan Science Park subsidiary

2002

2004

2006

2007

2008

2009-2011

2013

2014

- Received the ISO 9000 and ISO/IEC17025 Certification
- Expanded Electrical Failure Analysis (EFA) and Electrostatic Discharge (ESD) Protection Testing services



- Ranked 157th in Deloitte Asia Pacific High-tech Fast 500 Companies
- Ranked 32nd in Deloitte Taiwan High-tech Fast 50 Companies
- Established the Hsinchu Science Park subsidiary and Hsinchu Lab (HC Lab) to provide failure analysis services
- Established the MA-tek (Shanghai) Co., Ltd.
- Established the Hsinchu Science Park subsidiary
- Elected as Benchmarking Enterprise by the Industrial Development Bureau, Ministry of Economic Affairs.



- Received the Ninth Industrial Sustainable Excellence Award, Technical Service Category.
- Set up the Reliability Testing Lab (JS Lab) in Hsinchu, Taiwan to provide dynamic and static testing services for various environments of IC components
- Set up the SoC Lab in the SoC Center in Hsinchu Science Park, coordinating high-level materials analysis services (TEM, SIMS, XPS, DB-FIB), to provide the most advanced materials analysis for customers in the global high-tech industry

- The only independent lab selected as A+ company by Global Views Monthly Magazine
- Selected as one of the Top 500 high tech and high growth companies in 2012 by Deloitte
- The ESD&LU testing services provided by MA-tek Shanghai Lab passed the Texas Instrument certification



- Jinshan Lab passed the TUV NORD Certification in Automotive Electronics
- Established the MA-tek Xiamen subsidiary



- Established MA-tek Xiamen Educational Consulting Co., Ltd.
- Set up the Nagoya Lab in Japan



2015

2017

2018

2019

2020

2021

- Passed the ISO 27001 Information Security Certification



- Passed the ANSI/ESD S20.20 certification in ESD protection
- Awarded the Entrepreneur of the Year Award by Ernst & Young Global Limited – Top Service Entrepreneur Award
- Chairperson Dr. Yong-Fen Hsieh qualified as a Fellow of the Materials Research Society-Taiwan.

- Passed the ISO/IEC 15408 CC EAL6 Information Security On-site Certification by Bundesamt für Sicherheit in der Informationstechnik (BSI) (German Federal Office for Security in Information Technology)
- Ranked 83th among Top 100 Rapid Growth Companies in Taiwan 2019 by CommonWealth Magazine

- Passed the A-level Verification of Taiwan Intellectual Property Management System (TIPS) in 2021
- Xiamen Lab added Materials Analysis (MA) Service
- Nagoya Lab added Failure Analysis (FA) Service
- Special Copper Mesh for K-kit New Product on the Market
- Chairperson Yong-Fen Hsieh Selected the Best Female CEO in Taiwan by Harvard Business Review
- Set up the Tainan Lab II
- MA-tek (Shanghai) Co., Ltd. passed "High and New Technology Enterprise" Recognition
- Chairperson Yong-Fen Hsieh was awarded the Pan Wen Yuan Foundation "ERSO Award"
- Set up the Zhubei Lab II

MA-tek Global Locations

Shanghai Lab I

Comprehensive Analysis: No. 138, Aly. 1505, Zuchongzhi Rd., Zhangjiang Hi-tech Park, Shanghai, P.R.C.

Shanghai Lab II

Failure Analysis/Reliability Verification: Bldg. 16, No. 1500, Zuchongzhi Rd., Zhangjiang Hi-tech Park, Pudong, Shanghai, P.R.C.

Shanghai Lab III

Reliability Verification: 1F-2F, No. 2, Aly. 33, Jinji Road, Jinqiao Export Processing Zone, Pudong, Shanghai, P.R.C.

Xiamen Lab

Materials/Failure Analysis: Zone B, 1st Floor, Building D, No. 518, Lushan North Road, Huli Dist., Xiamen City, P.R.C.

Japan Nagoya Lab

Materials/Failure Analysis: 4-130 Kamiyashiro, Meito-Ku, Nagoya-City, Aichi Prefecture, Japan

Tainan Lab

Materials Analysis: 1F, No. 9, Nanke 3rd Rd., Xinshi Dist., Tainan City, Taiwan

Tainan Lab II

Materials Analysis: 1F, No. 23, Nanke 3rd Rd., Xinshi Dist., Tainan City, Taiwan

SoC Lab (Headquarters)

Comprehensive Analysis: 1A3, No. 1, Li-Hsin1st Rd., East Dist., Hsinchu City, Taiwan

Zhubei Lab I

Failure Analysis: 1F, No. 26-2, Taiyuan St., Zhubei City, Hsinchu County, Taiwan

Zhubei Lab II

Failure Analysis: 1F, No. 8, Taiyuan 2nd St., Zhubei City, Hsinchu County, Taiwan

Hsinchu Lab

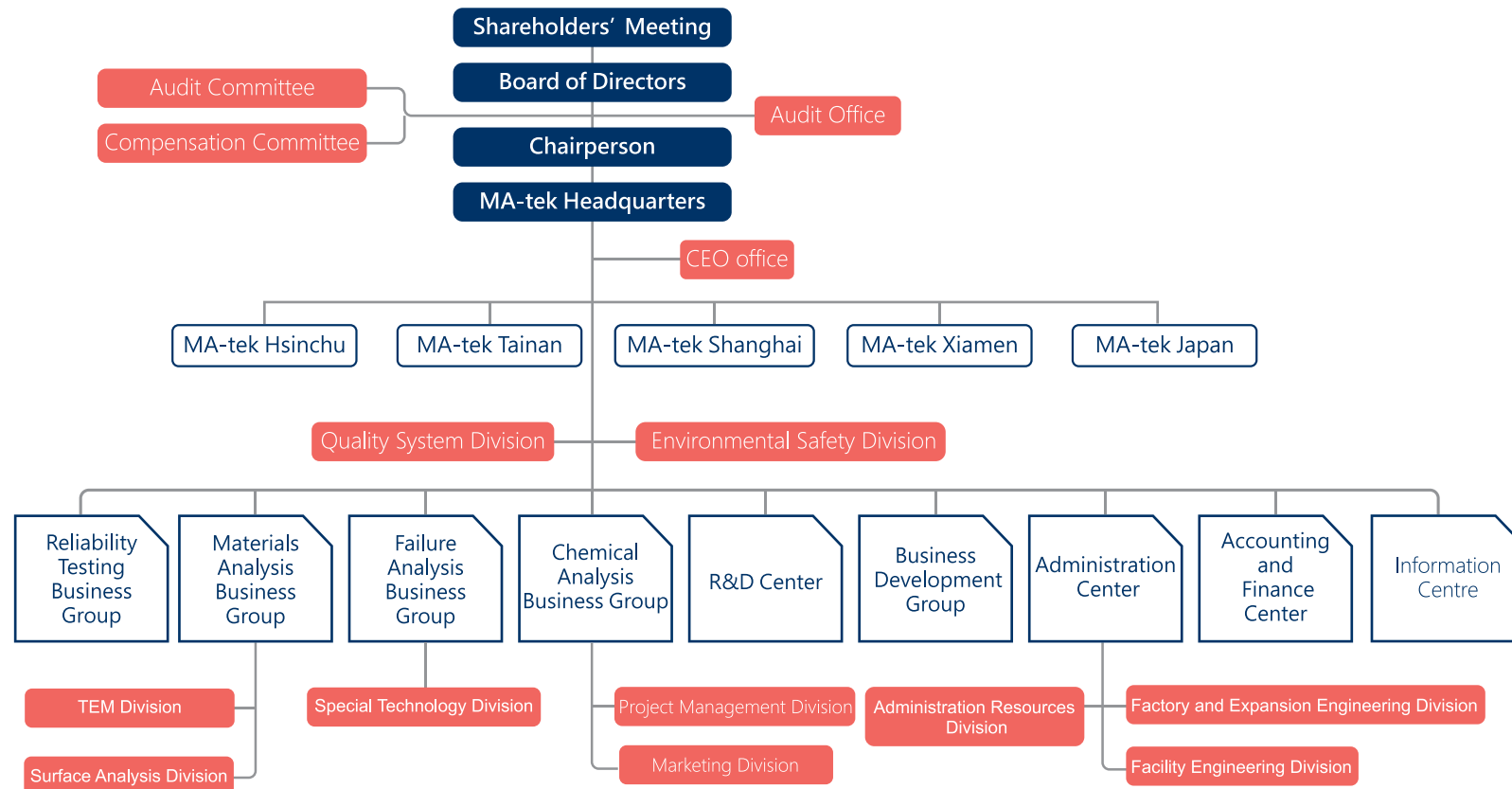
Failure Analysis: 1F, No. 14, Zhanye 2nd Rd., East Dist., Hsinchu City, Taiwan

Jinshan Lab

Reliability Verification: 2F, No. 1, Jinshan 7th St., Hsinchu City, Taiwan

2.2 Corporate Governance

MA-tek Organizational Structure



CEO Office

- > Company's operation and management.
- > Formulation of business strategy and direction.
- > Evaluation and management of reinvestment business.

Audit Office

- > Perform internal control system audits and deficiency improvements.
- > Risk management planning, supervision and analysis operations.

Reliability Testing/Materials Analysis/Failure Analysis/Chemical Analysis Business Group

- > Execution and management of testing and analysis work
- > Testing record production and analysis result judgment.
- > Research and develop new technologies and upgrade original technologies.
- > Customer problem troubleshooting.

R&D Center

- > New technology development.
- > New products development.
- > Research and development of new applications with existing technologies.
- > Research and development on the special needs of customers.

Business Development Group

- > Establishment of customer information, establishment and review of customer credit limits, management of accounts receivable and formulation of sales targets.
- > Integration of the domestic and foreign customer product demand, trend forecast and promotion of sales target.
- > Strategic planning of product composition and price control to achieve profitability goals.
- > Global market information collection and feedback new customer deployment and planning.

Administration Center

- > Formulation and implementation of human resources and management related systems, planning and implementation of employees' education and training, and establishment and implementation of performance evaluation operations.
- > Planning and control of material requirements.
- > Fixed asset management.
- > Laboratory environment maintenance and management.

Accounting and Finance Center

- > Budget preparation and execution analysis.
- > Accounting, billing management and tax planning.
- > Financial statement preparation, statistics and analysis.
- > Conduct overall planning and management for the source and use of capital funds.
- > Stock affairs related management.

Information Centre

- > Construction and integration of the company information management system.
- > Personal computer software and hardware purchase and maintenance.
- > Computer machine room management and consumables management.
- > Website planning, management and maintenance.
- > Implementation and supervision of the backup operation of the data for all factories.

Quality System Division

- > Planning the quality policy and system, implementing laboratory work quality assurance and product reliability works.
- > Managing customer quality related business.
- > Responsible for company-wide regulatory management, printing, updating, and standard operating procedures and keeping, releasing of quality record and maintenance and assistance of ISO/QS quality (environmental protection) system.

Environmental Safety Division

- > Implementing emergency response systems and management control at all lab sites.
- > Implementing all types of public safety and environmental protection declarations and inspection operations.
- > Environmental protection laws and regulations, safety management education and training.

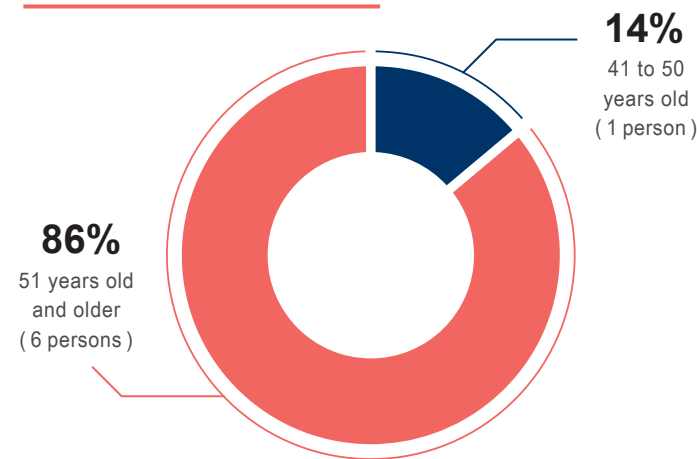
The operation of the Board of Directors and Functional Committees

MA-tek's Board of Directors is composed of 7 Directors with a term of three years. Among them, Independent Directors account for three seats, and one Director of the Company is female. According to MA-tek's "Regulations for Evaluating the Performance of the Board of Directors," the Board of Directors of the Company should convene meeting at least every quarter, with both Independent Directors and Audit Manager should participate in the Board of Directors Meeting. The Audit Manager should attend and report the internal audit business in every Board of Directors Meeting.

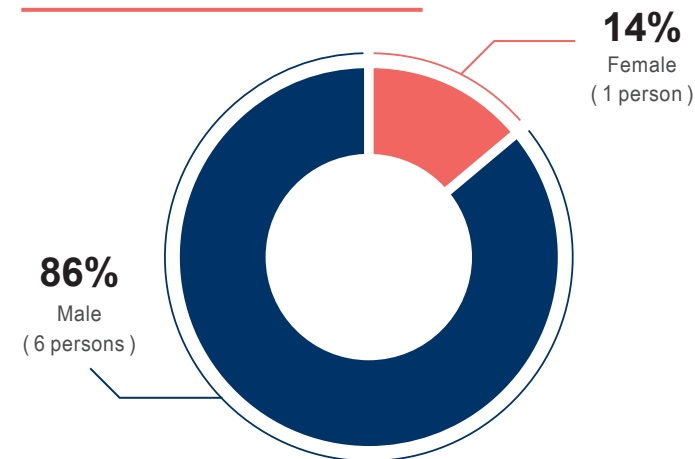
MA-tek stipulates in the "Corporate Governance Best-Practice Principles" and the "Regulations Governing Board of Directors Election" that the composition of the Board of Directors should be diversified, with different professional backgrounds, work fields or genders, and possessing the necessary knowledge, skills and accomplishments to perform their job duties. The overall Board of Directors should have the following capabilities:



Age Distribution of Directors



Gender Distribution of Directors



Information of Board of Directors Members and Supervisors

Position	Name	Nationality	Gender	Date of Appointment	Date of First Appointment	Education and Experience	Concurrently held positions in the Company and other companies at present
Chairperson	ARQ Consulting Company Representative: Yong-Fen Hsieh	Republic of China	Female	June 18, 2020	Tuesday, April 16, 2002	Ph.D., Materials Science, National Tsing Hua University, Taiwan Senior Manager, United Microelectronics Corporation Manager, Unipac Optoelectronics Corporation Director of AU Optronics Corp. Chairperson & CEO, MA-tek	The Company: CEO Chairperson, MA-tek (Shanghai) Ltd. Chairperson, ARQ Ltd. Chairperson, MA-TEK US Chairperson, MA-tek (Xiamen) Ltd. Chairperson, MA-tek Educational Consulting (Xiamen) Co., Ltd.
Director	ERP Investment Corp. Representative: NG BENG SOON	Singapore	Male	June 18, 2020	Wednesday, September 17, 2008	Singapore Polytechnics – Diploma in Electrical, Electronic and Communication Vice Chairperson, Ellipsiz Pte Ltd. President, SmartSolve Ptv Ltd. President, International Business Services Pte Ltd.	President, Core Resolution Pte Ltd.
Director	Chun Kuan	Republic of China	Male	June 18, 2020	June 16, 2017	MBA, Southern New Hampshire University, USA Senior Vice President, King Yuan Electronics Co., Ltd. Accounting Department Manager, United Microelectronics Corporation CFO, Unipac Optoelectronics Corporation	Independent Director, IC PLUS Corp. Chairperson, Xun Jie Investment Co., Ltd.
Director	SHIN MING Corp Representative: Hsi-Lin Wu	United States of America	Male	June 18, 2020	June 16, 2017	MBA, Waseda University, Japan Assistant Vice President, General Planning Office, Shin Kong Life Insurance Co., Ltd. Assistant Vice President, Overseas Stock Investment, Shin Kong Life Insurance Co., Ltd.	Director, SHIN MING Corp Director, Shin Pei Industrial Co., Ltd. Director, FUHBIC Supervisor, MA-tek Educational Consulting (Xiamen) Co., Ltd. Chairperson, Prosoon Intelligent Automation Corp.
Independent Director	Ching-Hsiang Hsu	Republic of China	Male	June 18, 2020	June 16, 2017	Ph.D., Electrical Engineering, University of Illinois, USA Director, Department of Electrical Engineering, National Tsing Hua University, Taiwan Researcher, IBM TJ Watson Research Center, NY, USA	Chairperson, eMemory Technology Inc Chairperson, IMQ Technology Inc. Chairperson & CEO, PUFsecurity Corporation Representative Director, SecuX Technology Inc. Representative Director, Powerflash Technology Corporation Independent Director, Acer Inc. Director, National Applied Research Laboratories (NARLabs)
Independent Director	Neng-Hsien Tsai	Republic of China	Male	June 18, 2020	June 18, 2020	Ph.D., Materials Engineering, Massachusetts Institute of Technology Vice President, Quality and Reliability, Taiwan Semiconductor Manufacturing Company Limited Vice President of Operations, Vanguard International Semiconductor Corporation Researcher, Bell Labs, USA	Chairperson, Jing Jie Investment Co., Ltd. Director, TSMC Foundation
Independent Director	Juine-Kai Tsang	United States of America	Male	June 18, 2020	June 18, 2020	Ph.D., Physics, University of Illinois, Urbana Champaign R&D and management positions in semiconductor companies in the US	Managing Member, VentureTech Alliance Management Co., LLC, Director, 5V Technologies, Ltd. (Cayman) Director, 5V Technologies, Ltd. Director, Mutual-Pak Technology Co., Ltd. Director, Great Team Backend Foundry, Inc. (BVI) Director, LIQUIDLED Lighting Corp. Director, Aether System Inc. Independent Director, TrueLight Corporation

Note: Please refer to the 2021 Annual Report of Materials Analysis Technology Inc. for details.

Audit Committee

MA-tek passed the establishment of the first Audit Committee at the General Shareholders' Meeting on June 18, 2020. According to the laws and regulations of the Republic of China, the members of the Audit Committee shall be composed of all Independent Directors; therefore, three Independent Directors, Mr. Ching-Hsiang Hsu, Mr. Neng-Hsien Tsai and Mr. Juine-Kai Tsang, served as members of the first Audit Committee for the term from June 18, 2020 to June 17, 2023, the same date as the end date of the seventh term of the Board of Directors. The purpose of the Audit Committee is to assist the Board of Directors in supervising the quality and integrity of the Company's implementation of accounting, auditing, financial reporting procedures and financial control. Its main purpose is to supervise the following matters:

- ✓ Appropriate expression of the Company's financial statements.
- ✓ The selection (dismissal) of Certified Accountants and their independence and performance.
- ✓ Effective implementation of the Company's internal control.
- ✓ Relevant laws and regulations for the Company to comply with.
- ✓ The management and control of the Company's existing or potential risks.

Compensation Committee

On October 21, 2011, the MA-tek Board of Directors approved the establishment of the Compensation Committee. After coordination with the full re-election of the Directors in 2020, three Compensation Committee members were reappointed. The term of service is from the effective date passed by the Board of Directors to June 17, 2023, the same as the ending date of the seventh term of the Board of Directors; three Independent Directors, Mr. Ching-Hsiang Hsu, Mr. Neng-Hsien Tsai and Mr. Juine-Kai Tsang, serve as Committee members. The function of this Committee is to evaluate the policies and system for the compensation of the Directors and Managers of the Company from a professional and objective position, and to make recommendations to the Board of Directors as reference for decision-making.

Information on the operation of the Compensation Committee:

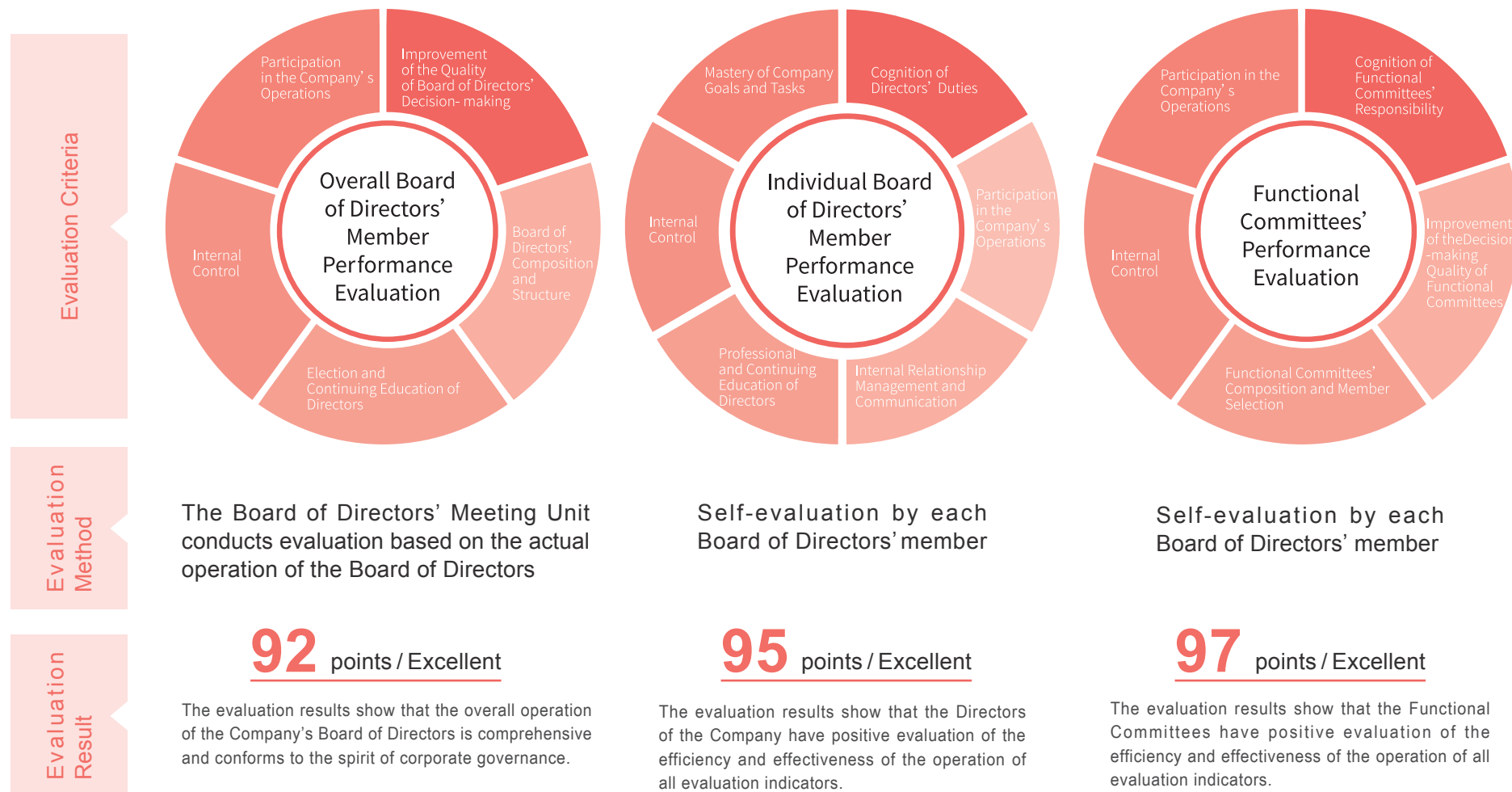
- Number of meetings and attendance of the Board of Directors, Audit and Compensation Committee in 2021

	Board of Directors	Audit Committee	Compensation Committee
Number of meetings in 2021 (times)	5	4	2

Position	Name	Actual attendance (as observer) of the Board of Directors (%)	Actual attendance (as observer) of the Audit Committee (%)	Actual attendance (as observer) of the Compensation Committee (%)
Chairperson	ARQ Consulting ompany Representative: Yong-Fen Hsieh	100%	-	-
Director	ERP Investment Corp. Representative: NG BENG SOON	100%	-	-
Director	Chun Kuan	40%	-	-
Director	SHIN MING Corp Representative: Hsi-Lin Wu	60%	-	-
Independent Director	Ching-Hsiang Hsu	80%	75%	50%
Independent Director	Neng-Hsien Tsai	80%	100%	100%
Independent Director	Juine-Kai Tsang	60%	50%	50%
Average attendance (%)		74.3%	75%	66.6%

Board of Directors Performance Evaluation

MA-tek approved the establishment of the Company's "Regulations for Evaluating the Performance of the Board of Directors" on November 7, 2019. The evaluation content includes overall Board of Directors' performance evaluation and individual Board of Directors' member performance evaluation, and the functional committees' performance evaluation. The performance evaluation of the internal Board of Directors in 2021 is listed as follows:



The content and recommendations of the above performance evaluation will be reported to the Board of Directors in February 2022.

Continuing Studies Status of the Board of Directors

Seven directors of the Company completed a total of **43.5** hours of continuing studies in 2021.

Continuing Studies Date	Position	Name	Organizer	Course Title	Continuing Studies Hours
11/23/2021	Chairperson	Yong-Fen Hsieh	Accounting Research and Development Foundation	"Sustainable Development" New Policy, Climate Governance and Low-Carbon Management (Video Class)	6
10/20/2021	Director	Chun Kuan	Taiwan Corporate Governance Association	Analysis of the new version of the corporate governance blueprint and the key points of legal compliance	3
10/20/2021	Director	Chun Kuan	Taiwan Corporate Governance Association	How do Directors and Supervisors Supervise the Company to Do a Good Job in Corporate Risk Management and Crisis Management	3
3/17/2021	Independent Director	Ching-Hsiang Hsu	Taiwan Corporate Governance Association	Analysis of the Economic and Industrial Situation in the Post-epidemic Era	1.5
5/5/2021	Independent Director	Ching-Hsiang Hsu	Taiwan Corporate Governance Association	Ransomware and Corporate Operational Risk Management	1.5
7/2/2021	Independent Director	Ching-Hsiang Hsu	Securities and Futures Institute	Corporate Governance and Securities Regulations Research and Study	3
11/3/2021	Independent Director	Ching-Hsiang Hsu	Taiwan Corporate Governance Association	Current Domestic and International Economic Situation and Outlook for 2022	1.5
11/10/2021	Director	NG BENG SOON	Securities and Futures Institute	Corporate Merger & Acquisition Practice Sharing – Focusing on Hostile Merger & Acquisition	3
10/29/2021	Director	NG BENG SOON	Corporate Operating and Sustainable Development Association	Practical Operation and Case Analysis of Corporate Governance, Board of Directors and Compensation Committee	3
10/27/2021	Director	Hsi-Lin Wu	Securities and Futures Institute	Discussion on Human Resource and Merger & Acquisition Integration Issues in the Process of Corporate Merger & Acquisition	3
10/28/2021	Director	Hsi-Lin Wu	Securities and Futures Institute	Discussion on the Legal Responsibility of Directors and Supervisors in the Case of Financial Statement Fraud	3
10/18/2021	Independent Director	Neng-Hsien Tsai	Taipei Exchange	Insider Equity Publicity Information Meeting of Companies Listed at Over-the-Counter and Emerging Stock Market	3
10/29/2021	Independent Director	Neng-Hsien Tsai	Corporate Operating and Sustainable Development Association	Practical Operation and Case Analysis of Corporate Governance, Board of Directors and Compensation Committee	3
4/16/2021	Independent Director	Juine-Kai Tsang	Taiwan Corporate Governance Association	The Only These Two Insurances Directly Point to Corporate Governance_Information Security Insurance	3
4/23/2021	Independent Director	Juine-Kai Tsang	Taiwan Corporate Governance Association	Discuss the Taiwanese Business Operations and Merger & Acquisition Strategies from the Perspective of the Global Political and Economic Situation	3

Corporate Governance Officer

On March 19, 2021, MA-tek Board of Directors appointed Chief Financial Officer, Vice President Sung-Shan Lee, to serve the Corporate Governance Officer, with responsibilities mainly including “Managing business matters related to the meetings of the Board of Directors and Shareholders’ Meeting in accordance with the law,” “Producing the meeting minutes for the Board of Directors and Shareholders’ Meeting,” “Assisting Directors taking office and continuing education,” “Providing Directors with information required to execute their business,” “Assisting Directors in complying with laws and regulations” and “Other business matters stipulated in the Articles of Association or contracts, etc.”

Managed 5 meetings of the Board of Directors and the 2021 General Meeting of Shareholders in accordance with the law, and completed the minutes of the Board of Directors and Shareholders’ Meeting after the meeting.

Assisted 7 Directors of the company to complete a total of 43.5 hours of continuing studies.

Provide relevant information required by Directors to execute their duties.

The Business
Execution in
2021

Continuing Studies Status of the Corporate Governance Officer

Continuing Studies Date	Organizer	Course Title	Continuing Studies Hours
11/19/2021	Securities and Futures Institute	Analysis of Practical Cases on the Conviction of Directors and Supervisors’ Breach of Faith and the Crime of Special Breach of Faith	3
11/19/2021	Securities and Futures Institute	Discussion on the Practice of Preventing Money Laundering and Combating Capital Terrorism	3
11/23/2021	Accounting Research and Development Foundation	“Sustainable Development” New Policy, Climate Governance and Low-Carbon Management (Video Class)	6
11/23/2021	Securities and Futures Institute	How do Directors Analyze the Bottom Line of Financial Statements and Grasp the Business Risk Management Firmly	3
11/23/2021	Securities and Futures Institute	Discuss Corporate Tax Governance and Tax Technology Solutions from the Perspective of ESG Trends and the Epidemic Environment	3
Total Continuing Studies Hours			18

Integrity Governance and Management

MA-tek has established the "Corporate Governance Principles," "Ethical Corporate Management Best-Practice Principles," "Code of Ethical Conduct," "Code of Ethical Conduct for Employees," "Code of Practice for Sustainable Development," "Rules for Risk Management" and other standards to establish a good governance structure, actively implement corporate governance in accordance with relevant regulations, and clearly regulate the ethics and conduct for Directors, Managers, and Employees at the same time. In 2021, MA-tek did not have any disputes or litigation related to professional ethics.

Honest Management

All employees shall implement and fulfill their obligations ethically, honestly and uprightly, avoid personal and work conflicts of interest, and are strictly prohibited from any form of corruption, extortion and misappropriation of public funds.

No Illegitimate Gains

All employees are prohibited from providing or accepting any form of gains from business partners, especially when these gains may jeopardize objective and fair business decisions. At the same time, employees and their families are required to avoid violating the principles of business integrity, including bribery and fraud.

Information Disclosure

Under the premise of not violating Company and legal regulations, disclose business activities, organizational structure, financial status and performance in accordance with applicable laws and regulations as well as industry practices.

Intellectual Property Rights

Commit to abiding by the relevant laws and regulations of intellectual property rights.

Fair Trade, Advertising and Competition

Abide by fair trade and do not participate in market competition in false advertising and other illegal forms.

Identity Protection and Prevention of Retaliation

Protect supplier and employee whistleblowers, and ensure the confidentiality and anonymity of their identities to prevent retaliation.

Confidentiality Mechanism

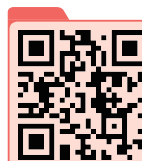
Reasonably protect the personal data and privacy of those who do business with the Company (including suppliers, customers, and employees); abide by the requirements of the Personal Data Protection Act when collecting, storing, processing, disseminating and sharing personal data due to business needs.

MA-tek Important Governance Regulations



Corporate Governance Principles

In order to establish a good corporate governance system, MA-tek has formulated these "Corporate Governance Principles" to implement the principles of "Building an Effective Corporate Governance Structure," "Protecting Shareholders' Rights and Interests," "Strengthening the Functions of the Board of Directors," "Exerting the Functions of Supervisors," "Respecting the Rights and Interests of Stakeholders," and "Enhancing Information Transparency."



Ethical Corporate Management Best-Practice Principles

These "Ethical Corporate Management Best-Practice Principles" assist the Company in establishing a corporate culture of ethical corporate management and sound development, and provide a reference framework for good business operations to prohibit dishonest behavior by MA-tek's governance units and employees.



Code of Ethical Conduct

In order to enable the Directors and Managers of the Company to adhere to their ethical behavior when engaging in business activities for the Company based on their job authority and to prevent unethical behavior and behavior that harms the interests of the Company and shareholders, this Code is established.



Code of Ethical Conduct for Employees

In order for the Company's employees to be compliant and to let the Company's stakeholders understand the ethical standards and code of conduct that the Company's employees should follow when performing their duties, this Code is established as the basis for the Company's employees to follow. All employees of this Company are responsible for carefully reading, understanding and complying with the contents of this Code.



Code of Practice for Sustainable Development

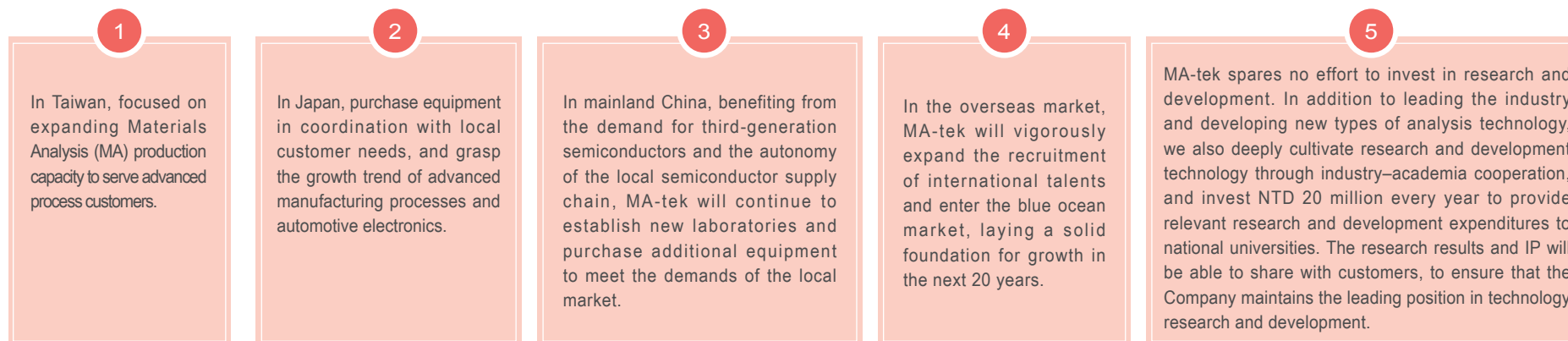
In order to assist the Company in fulfilling sustainable responsibility and to promote economic, environmental and social progress to achieve the goal of sustainable development, this Code is established to be followed.

2.3 Management Overview



MA-tek's consolidated revenue for the full year of 2021 was NTD 3,361,082 thousand, an increase of 9.78% from the previous year's NTD 3,061,573 thousand; net profit after tax was NTD 585,681 thousand, a significant increase of 52.09% from the previous year's NTD 385,077 thousand; earnings per share was NTD 9.48, a significant increase of 53.40% from the previous year's NTD 6.18. In 2021, the COVID-19 epidemic has slowed down, and the global economy has rebounded from the bottom; however, due to the continuous heating up of the China-US technology war, the Company's revenue still maintained a growth of 9.78%. The Company's product mix optimization and operating efficiency continued to improve, the gross profit margin increased from 29.63% to 35.88%, and the net profit after tax increased from 12.58% to 17.43%. In order to meet the growing needs of customers, the Company will continue to expand various analytical capacity, and will continue to deeply cultivate technology and recruit international professional talents, strengthen the Company's long-term competitiveness, to become the best long-term R&D partner for customers with fast and professional services. The summary of MA-tek's 2022 business plan is as follows:

Operating Strategy



Expected Sales Amount

The company's performance is expected to increase in the same pace with the expansion of production capacity, and this year's profit is expected to increase to a higher level.

Important Production and Marketing Policies

As the Company's service projects become more complete, under the current situation that the utilization rate of various important equipment of MA-tek is fully loaded, the Company decides to continue to invest a larger amount of equipment to meet customer needs, and make greater efforts to expand the recruitment of international talents and enter the blue ocean market, to establish a solid foundation of growth for the next 20 years. In general, the Company's active deployment of technology, patents, talents and equipment will push forward the continuous improvement of the Company's performance. It is expected that the Company's performance will grow in the same pace with the expansion of production capacity, entering a golden 20 years of continuous profit growth.



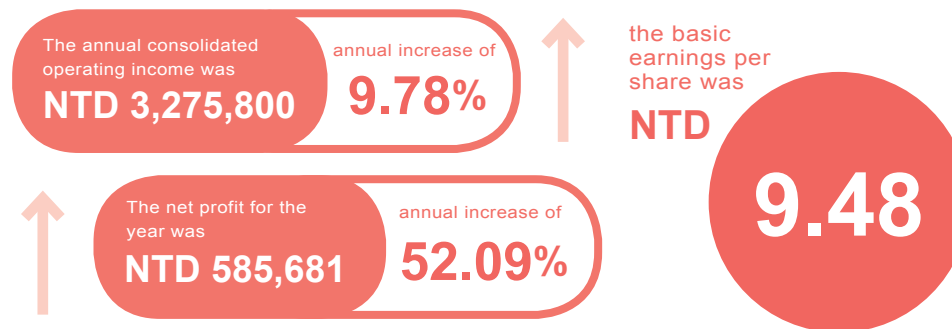
Please refer to the
2021 Annual Report
for more details.

Business Performance

MA-tek benefited from the strong demand for semiconductor testing in 2021, with revenue and profit reaching new heights. The annual consolidated operating income was NTD 3,275,800 thousand, an annual increase of 9.78%. The net profit for the year was NTD 585,681 thousand; an annual increase of 52.09%, and the basic earnings per share was NTD 9.48.

ACCOUNT (Unit: NTD Thousand)	2021	2020	2019	2018
Net Operating Income	3,361,082	3,061,573	2,541,447	2,081,046
Operating Cost	2,155,093	2,154,546	1,854,830	1,436,680
Operating Gross Margin	1,205,989	907,027	686,617	644,366
Operating Expenses	536,237	463,561	361,333	330,348
Net Operating Profit	669,752	443,466	325,284	314,018
Non-operating Income and Expenses	32,504	8,226	(15,636)	6,762
Net Profit before Tax	702,256	451,692	309,648	320,780
Income Tax Expense	116,575	66,615	63,705	64,273
Net Profit for the Year	585,681	385,077	245,943	256,507
Basic Earnings per Share	9.48	6.18	3.95	4.13
Total Assets	5,313,191	4,413,412	4,275,162	3,712,705
Total Liabilities	2,037,391	1,467,617	1,554,435	1,006,430
Total Equity	3,275,800	2,945,795	2,720,727	2,706,275

Note: Please refer to MA-tek's financial statements for the fourth quarter of 2021 for details.



Monetary Value of Received Government Subsidies

Subsidy Item	Subsidy Amount (Unit: NTD Thousand)
Government subsidies related to "Power and Utility Equipment Subsidy" and "The Youth's Employment Ultimate Program"	898
Government subsidies related to office rent in Xiamen area	921
Relevant policies for subsidizing business stabilization and cultivation in Shanghai area	5,049
Government preferential interest rate loans of "Action Plan for Welcoming Overseas Taiwanese Businesses to Return to Invest in Taiwan" (Government low-interest loan subsidies, Note 1)	1,991

Note 1: The difference between the amount received and the fair value of the loan of NTD 13,833 thousand is regarded as the overnment's low-interest loan subsidy and recognized as deferred income. MA-tek recognized other income of NTD 1,991 thousand in 2021.

Note 2: Please refer to MA-tek's financial statements for the fourth quarter of 2021 for details.

Tax Governance

A. Tax Policy

In order to pursue sustainable development and fulfill corporate social responsibility, the following tax policies are hereby established to implement tax governance:

1 Abiding by the tax laws and regulations, calculating and paying taxes correctly, fulfilling the social responsibilities of taxpayers.

2 Supporting the government's tax-related policies to encourage enterprise innovation and reinvestment.

3 Upholding ethical principles in managing tax matters related to transactions.

4 Maintaining an open and good communication relationship with the Taxation Bureau.

5 Disclosing tax information in financial statements and annual report information in accordance with the Financial Standards Bulletin and relevant laws and regulations

6 Assessing the impact on the Company and way of response immediately when faced with changes of tax laws and regulations.

7 Continuing to understand the new knowledge/changes of laws and regulations of various countries and strengthening tax professional capabilities through internal education and training

8 Following the internationally recognized transfer pricing guidelines promulgated by the Organization for Economic Cooperation and Development (OECD) for transactions between related parties, unless there are no related similar transactions to follow, the rest are similar to ordinary transactions

9 Not transferring profits to low-tax or no-tax havens

B. Tax Risk Management

MA-tek's main operating locations are in Taiwan, Mainland China and Japan, abides by the tax laws of the countries where the operating bases are located at the same time, and fulfills its tax obligations, maintains good communication with Taxation Administrations and actively cooperate with the requirements of relevant units. Any changes in tax laws and regulations will affect the Company's effective tax rate and have an impact on business performance. MA-tek continues to pay close attention to the update of relevant tax regulations closely, and analyze potential tax impacts to plan the countermeasures.

C. Tax Governance

The frequency of tax review by MA-tek is based on once a year. The Chief Financial Officer of MA-tek bears the ultimate responsibility for tax management, and the daily tax administration and management is entrusted to the Accounting Manager to execute, and assisted by the qualified and experienced tax professionals to fulfill the tax obligations of MA-tek, also conduct internal training at the same time, to ensure that employees have the necessary tax skills and awareness. In addition to internal training, MA-tek also has external tax consultants to provide tax advice to reduce potential tax risks.

D. Effective Tax Rate

MA-tek's effective tax rate was 16.6% for 2021 and 14.75% for 2019, which was lower than the statutory income tax rate of 20% for Business Income Tax of the Republic of China, mainly because the income tax rate of 15% for the Shanghai subsidiary with the qualification of High and New Technology Enterprises.

(Unit : NTD Thousand)

Tax Jurisdiction	Taiwan
Main Activities	MA/FA/RA
Number of Employees	678
Income from Third Parties	1,672,690
Group Internal Transaction Income	305,700
Net Profit before Tax	599,174
Tangible Assets other than Cash and Cash Equivalents	1,168,554
Corporate Income Tax Paid in Cash	11,983
Accrued Corporate Income Tax Gain/Loss	12,634
Remarks : The scope of disclosure in this Report is mainly for Taiwan area, covering SoC Lab, Hsinchu Lab, Jubei Lab, Jinshan Lab and Tainan Lab.	

Public Association Participation

MA-tek actively participates in the Industry Association and Public Association. Through the process of participation, MA-tek seeks any opportunities for communication and cooperation with external units, so as to share industry information and follow the latest developments in the industry, and increase MA-tek's visibility in the industry at the same time. As of the end of 2021, MA-tek is a member of a total of 11 Public Associations, and Chairperson Yong-Fen Hsieh also serves as the director of some of the associations.

Item	Public Association Name	MA-tek's Role (Such as Member, Director, Supervisor, etc.)
1	Taiwan Printed Circuit Association (TPCA)	Member
2	Taiwan Vacuum Society	Member
3	Materials Research Society – Taiwan	Executive Director (Chairperson Yong-Fen Hsieh)
4	Microscopy Society of Taiwan	Director (Chairperson Yong-Fen Hsieh)
5	Tze Chiang Foundation of Science and Technology	Director (Chairperson Yong-Fen Hsieh)
6	Outstanding Enterprise Manager Association	Member
7	Hsinchu Science Park Trade Association	Member
8	Southern Taiwan Science Park Trade Association	Member
9	Taiwan ElectroStatic Discharge Association	Member
10	HsinChu City Nurses Association	Member
11	Taiwan Optoelectronic Semiconductor Industry Association (TOSIA)	Member

2.4 Internal Audit and Regulatory Compliance

Internal Audit Operation

MA-tek's Internal Audit is an independent unit, directly subordinate to the Board of Directors. The Internal Audit Unit checks each transaction cycle and operation management regulation in accordance with the annual audit plan approved by the Board of Directors, and prepares the relevant original work papers and audit results into a written audit report, and submits the report to the Chairperson and Independent Directors for review on a monthly basis, and reports it in the Board of Directors meeting regularly. MA-tek draws up the Internal Control System and Internal Audit Implementation Rules in accordance with laws and regulations and by taking the Company's operational risks into consideration with the scope covering all the Company's trading cycles, important management operation regulations and subsidiaries. In 2021, a total of 47 audits were conducted, and no internal control deficiencies or abnormalities were found.



Regulatory Compliance

MA-tek upholds the principle of integrity management, strictly abides by laws and regulations in corporate governance and daily operations, continues to track the revision of laws and decrees of the competent authorities, makes internal measures and operational adjustments for laws and regulations that may have an impact, and conducts promotion among the internal colleagues. Since MA-tek's operations involve the confidential information of many companies and customers, in order to ensure that every colleague can establish the concept of information protection when joining MA-tek, we also include the promotion of the regulations on business secrets in the education and training of new employees to strengthen the colleague's cognition of data protection.



Furthermore, MA-tek's Internal Audit Unit conducts audits on compliance with laws and decrees every year, to ensure that the Company operates in compliance with laws and regulations and prevents the occurrence of illegal incidents. In 2021, MA-tek did not have incidents involving the violation of environmental protection, social and economic, marketing and labeling laws and regulations, nor have there been any cases of corruption.

2.5 Supply Cooperation Good Partner

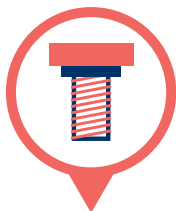
Supplier Management

In order to provide customers with high-quality analysis services, MA-tek must work with suppliers to satisfy the various resources required for our operations. MA-tek's suppliers are niche and provide high-end resources, which can be divided into six major categories:



Fixed Assets

Equipment, Machines, Instruments, etc.



Material Management

Equipment spare parts, etc.



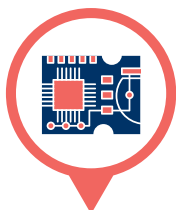
Miscellaneous

Laboratory consumables, small chemicals, gloves, etc.



Facility Affairs

Electromechanical, waste removal, etc.



Hardware

PCB boards for Reliability testing, etc.



Outsourcing Analysis

MA-tek currently has established the "Supplier Management Procedures" and "Purchase and Procurement and Management Procedures." In order to establish and maintain a good cooperative relationship with suppliers, MA-tek also fully requires suppliers to sign the "Honesty and Integrity Commitment" and "Confidentiality Affidavit." The supplier shall not have any behavior that violates honesty and integrity, and shall strictly abide by the laws and regulations related to integrity (including but not limited to the laws and regulations of the Republic of China) and confidentiality obligations.

Supplier Evaluation and Annual Audit

In order to ensure that the supply of important raw materials is sufficient and in line with demand, MA-tek conducts initial evaluation and annual evaluation for suppliers who have cooperated for the first time and will be cooperated with for a long time. The supplier evaluation refers to conducting relevant units and procurement unit cross-departmental grading aiming at the top five suppliers in each category. The evaluation items include product quality/price, service attitude, technical capability, supply/delivery schedule capability, and cooperation with information security requirements, to judge the supplier by three grades as Good, Normal or Poor based on the final evaluation results, to evaluate whether the supplier can become the qualified suppliers of the Company, or there is a need for improvement or even the possibility to be listed in the watch list/debarred list, as the reference for the subsequent relevant units to determine whether to cooperate.

Furthermore, MA-tek's Procurement Unit also conducts annual audits on key material suppliers or outsourcers, and invites the Quality Assurance Unit and necessary Technical Units to participate, and confirm that the suppliers do not have nonconforming matters. The audit items include Process Approval, Process Control, Non-conforming Control, Incoming Quality Control (IQC), Outgoing Quality Control (OQC), and Warehouse Management. In 2021, the annual audits were conducted on important suppliers with a transaction amount of more than NTD 5 million or more than 10 transactions. Among 78 suppliers, 38 were rated as Good, 39 were Normal, and 1 was Poor, with the average score of 84.59. In 2021, for the supplier with evaluation of Poor, MA-tek will turn to alternative suppliers for procurement, and conduct a coaching process for the supplier with Poor grade.

Build a Sustainable Supply Chain

MA-tek contributes to environmental sustainability and continues to increase the proportion of local procurement, expecting to reduce transportation costs and decrease environmental impact. For the US-made equipment parts with the largest procurement amount, it was originally purchased from the US original factories which was time-consuming and labor-intensive; after the establishment of Taiwan Agent, MA-tek turned to the local agent for purchase, with an annual purchase amount of NT\$3,273,128, and saving percentage of 15.68%.

The annual procurement amount
of US-made equipment parts

NT **3,273,128**

The saving percentage after turned
to the local agent for purchase

15.68 %

MA-tek also requires relevant suppliers to sign a “Declaration of Non-Use of Conflict Minerals” to ensure that the materials supplied to MA-tek comply with the “Conflict Minerals Policy,” and do not use conflict minerals mined and extracted from the mining areas in Congo or neighboring countries, including gold (Au), tin (Sn), tantalum (Ta), tungsten (W) and other metals, and require their upstream suppliers to comply with them together, to jointly fulfill social responsibilities and respect human rights. In 2021, MA-tek required a total of five suppliers to sign, and 100% of them have signed.



不使用衝突礦物聲明書

Declaration of Non-use Conflict Minerals

(公司名, 以下稱“本公司”)保證供應給閩康科技股份有限公司之材料, 符合閩康科技「衝突礦物政策」要求, 禁止使用由剛果或其鄰近國家礦區所開採採煉出來的衝突金屬於產品。身為優秀的企業公民, 本公司自當善盡社會責任、尊重人權, 並持續關注衝突礦產議題, 致力詳實調查供應鏈, 以確保金(Au)、錫(Sn)、鉭(Ta)、鎢(W)等金屬, 非來自剛果民主共和國(DRC)及其鄰近國家受武裝團體控制之礦區所開採。

因此, 本公司承諾:

(Company Name, hereinafter referred as “Company”) as the supplier/vendor of Materials Analysis Technology guarantees that all of the parts comply with the “Conflict Minerals Policy” which prohibits to use the mines from Congo or neighboring countries, that the mines derived from the conflict metal are prohibited in the product also. As a good corporate citizen, Company shall bear its social responsibility, respect the human rights, pay close attention to conflict minerals issues continuously, and make efforts to examine its supply chain with diligence to assure the metals sources of, including but not limited to, gold (Au), tin (Sn), tantalum (Ta), and tungsten (W), and which are not gotten from the mines of the Democratic Republic of Congo (DRC) and its neighboring countries controlled by armed groups.

Company hereby makes following commitments:

1. 不採購來自衝突區域所生產的衝突金屬, 但其地區的「無衝突礦產」並不需要抵制
Not to purchase Conflict Minerals from mines in the Conflict Regions; however, the conflict-free minerals from the DRC and neighboring countries are not banned.

2. 要求供應商應將此要求傳達給其上游供應商
Request its suppliers to notify their upstream suppliers of such requirements.

3. 此 致 To

4. 閩康科技股份有限公司 Materials Analysis Technology Inc.

公司名稱 Company:

公司地址 Address:

代表人 Representative:

日期 Date:

公司章 Company Stamp

In response to the European Chemicals Agency (ECHA) listing perfluorooctanoic acid (PFOA) as a PBT (persistent, bioaccumulative and toxic) substance and included in the EU's list of substances of special attention, some countries have amended laws to restrict the manufacture, import and use of PFOA. PFOA is a chemical used in high-tech equipment. As the Precision Analytical Instruments Center of the high-tech industry, MA-tek also simultaneously started the suppliers' inventory that may contain PFOA substance in 2021, and requested relevant 48 suppliers to provide chemical Material Safety Data Sheet (MSDS) and related inspection reports, and publicize the non-use of conflict substances. MA-tek ensures that the environmental impact is reduced as much as possible in the process of providing high-quality services, and protects employees and customers from safety hazards caused by toxic substances, and protects workplace safety.

2.6 COVID-19 Response Measures

The COVID-19 crisis is sweeping through the world, and the continuous spreading of the epidemic has caused a health crisis and exacerbated market risks. In such an uncertain environment, the Company's capabilities for planning ahead and risk control are even more important; in order to prevent operational interruptions from endangering the rights and interests of the Company, employees, shareholders, and all stakeholders, MA-tek focuses on epidemic prevention work and hopes to bring a safer workplace environment to employees, because the crisis can be survived only with partners sharing the same philosophy and working together.

After multiple layers of risk assessment and analysis, MA-tek established the "MA-tek Infectious Disease Prevention Procedures" to prevent the transmission and spread of diseases. In order to implement comprehensive risk control, the Company established an epidemic prevention reporting mechanism, distributed masks, installed partitions in the rest area, and arranged regular disinfection, and released internal and external publicity announcements according to the epidemic situation; for the outside visitors, they shall use alcohol to disinfect hands at the laboratory lobby and entrances/exits when visiting, and fill in their "Health Record History" during the epidemic to ensure the office safety for visitors and colleagues. For employees on business trips overseas, MA-tek has prepared "COVID-19 Epidemic Prevention Packages," which contain hand sanitizer, alcohol, medical masks, etc., to provide employees with epidemic prevention materials, and to give care and encouragement, improve the Corporate Health Management System and enhance workplace health management standards, and work together hand in hand to overcome the difficult time of the COVID-19 epidemic.

100% of visitors sign
the Health Declaration



Advocate washing
hands frequently



Ensure Implement
wearing masks in
the workspace



Advocate internal and
external epidemic
prevention



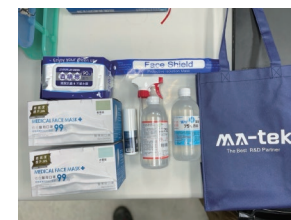
The entrances and public areas
of each laboratory in MA-tek
are equipped with alcohol for
disinfection, and colleagues are
arranged to disinfect and wipe
clean the environment on a
regular basis



Partitions are set up
in the customer and
employee rest areas



Provide "COVID-19 Epidemic
Prevention Packages" for
colleagues on business trips
overseas, which contain
hand sanitizer, disinfection
alcohol, medical masks and
face shield, etc.

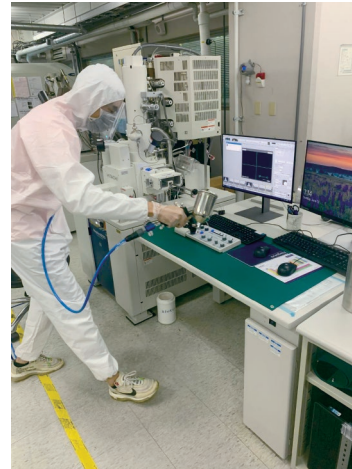


Custom made medical
masks and cloth mask
covers are given to
customers and visiting
guests as gifts



In response to the frequent epidemic infection news of semiconductor factories after the Spring Festival in 2021, and the start of government's work-from-home policy, MA-tek immediately pushed the customer remote video online service. The remote connection can be used through the professional video camera in the laboratory, in addition to protecting customers not limited by location and being free from exposure risk of traveling outside, the time can be effectively and flexibly arranged at the same time. MA-tek also took advantage of the Dragon Boat Festival to strengthen epidemic prevention, and specially introduced "Japanese Nano Antibacterial Film" to spray plating in the most crowded factory areas in SoC Lab and Zhubei Lab, in addition to the machine operation area and seats in the laboratory, and it was also applied to all places in the public area where the human body may come into contact, to provide a layer of protection for all colleagues and customers.

The "Medical Nano Coat" used by MA-tek has been certified by the United Nations Industrial Development Organization (UNIDO). This technology helps prevent the spread of epidemic infections. The coating ingredients contain titanium dioxide, and when irradiated with ultraviolet rays, it will generate active oxygen, which can inhibit the reproduction of bacteria and deactivate the virus for a long time, and has an anti-static effect. There is no problem with spraying in professional laboratories, preventing any risk of possible spread of COVID-19 virus, ensuring the health of employees and the normal operation of the Company.



3 Lighthouse of Technology Partners

3.1 Technical Service and Quality

With the vision of becoming “The Best R&D Partner in the High-tech Industry,” MA·tek continues to provide quality countermeasures for high-tech industry technological advancement with professional analysis services, assists in enhancing the competitiveness of customers’ products in the market, and promotes the research and development of the high-tech industry. In order to continuously improve and enhance the competitiveness of the industry, the MA·tek Quality System Division prepares management review procedures, and holds a review meeting every year to review the effectiveness and appropriateness of the laboratory quality system. The content of the review includes revision of the laboratory quality manual and regular review of the key performance management indicators formulated by each department.

”
The Best R&D Partner in the High-tech Industry

In the management review meeting, the quality problem will be concluded as the deficiency of “system aspect” or “management aspect,” to discuss whether to revise the laboratory system, or it is necessary to strengthen the internal management and supervision, and the final decision will be made by the Chairperson of the meeting. The review results will be completely recorded and kept for at least 3 years. For unsatisfactory items, the countermeasures, responsible person and improvement period shall be truthfully recorded, and the Laboratory Manager or Quality Manager are responsible for tracking and confirming the results. In the quality management review meeting in 2021, according to the CEO’s instructions, MA·tek’s quality goal is still “pursuing the highest customer satisfaction,” and develop according to the 2022 business goals, continue to promote the key performance of each department, strive to provide customers with the highest quality analysis services.

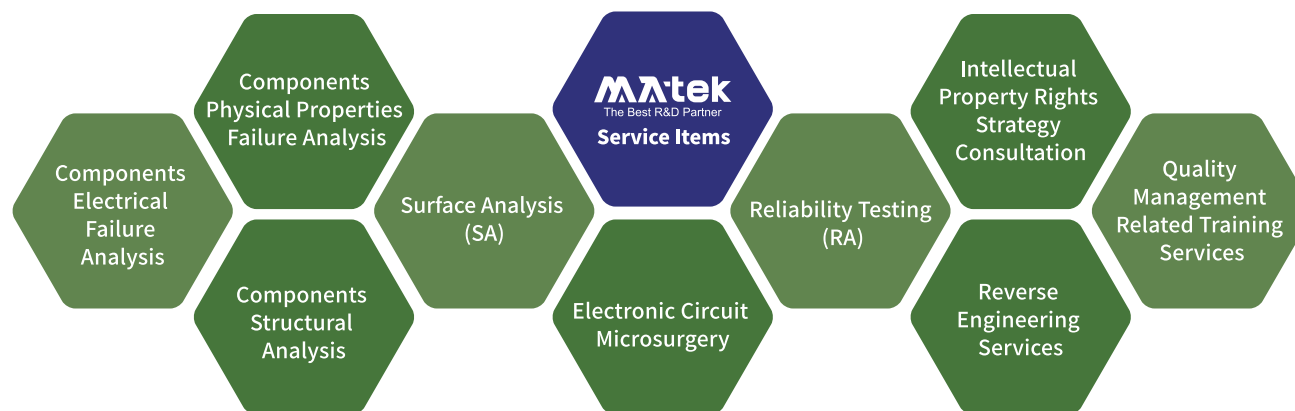
Content of Management Review	
Quality system related	<ul style="list-style-type: none"> · Update and Review of Quality Policy/Manual · Correction effect of problems from the previous review · Establishment and review of quality objectives and key performance management indicators of each department · Review of risk assessment results · Review of quality system audit
Laboratory related	<ul style="list-style-type: none"> · Review of laboratory-related internal/external issues · Review of laboratory analytical test scope/capability test
Customer and project related	<ul style="list-style-type: none"> · Review of customer satisfaction and customer complaints · Review of projects and special cases · Review of analysis report revision status
Others	<ul style="list-style-type: none"> · Education and training/supplier evaluation/confidentiality measures and other related reviews



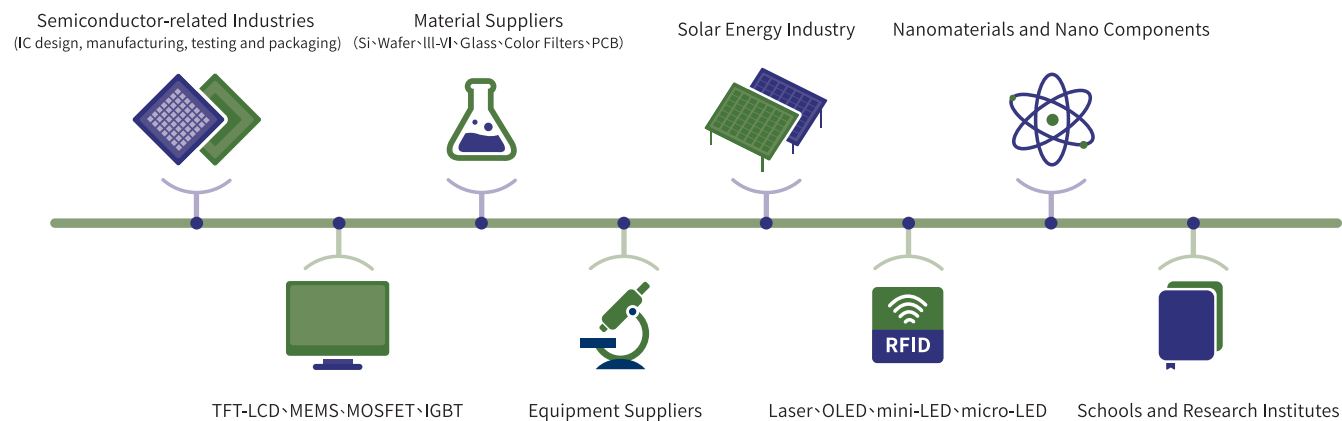
Introducing the Scope of MA-tek Services

MA-tek serves diversified industries, of which more than 50% are from the IC industry, including design companies, foundries, as well as packaging and testing. The scope of MA-tek's services covers the rapid debugging and physical verification in the electronic product design phase, as well as the precise positioning of the fault areas of the micro and nano products, structure observation, material composition and other static and dynamic testing; ranging from manufacturing process development, manufacturing process integration, to basic academic research, quality control, patent litigation, failure analysis, competitive product structure analysis or customer returns related issues, these are all within the scope of services. In addition, MA-tek's services can be widely used in various industries, providing industry-customized professional services.

MA-tek Service Items



Industrial Application of MA-tek Services



MA-tek Comprehensive Analysis Services	
Reliability Testing Services (RA)	Reliability refers to how many products are expected to fail during the service life after the product is sold. At the same time, it can also estimate how many products will be returned within the warranty period (Return Material Authorization, RMA) through the reliability assessment. MA-tek provides component reliability, board level reliability, system reliability in different product stages, and reliability services for automotive components. In order to ensure the quality and stability of experiments, MA-tek's reliability laboratory uses internationally renowned equipment brands, so that MA-tek customers will have the most stable testing machines and the best test environments.
Non-destructive Analysis	The non-destructive analysis provided by MA-tek includes "Optical Microscopy (OM)," "3D Optical Microscopy (3D OM)," "2D X-ray," "3D X-ray," "Scanning Acoustic Tomography (SAT)," "Optical Profilers (OP)," and "Time Domain Reflectometry (TDR)," to observe the defect localization in semiconductor packages or PCBs with the technique without destruction to the samples.
Electrical Failure Analysis (EFA)	The purpose of electrical measurement is to verify and measure the parameters and characteristics of semiconductor electronic components, such as voltage-current, capacitance-voltage characteristic curve, resistance, capacitance, inductance value measurement or signal waveform, etc., so as to understand the component's failure behavior to conjecture the possible failure mechanism and determine the subsequent analysis action. MA-tek provides complete Electrical Failure Analysis services including "InGaAs," "OBIRCH," "Thermal EMMI," "C-AFM," "AFM/SEM-based Nano-probing," "EBIC/EBAC," and "EBIRCH," etc.
FIB Circuit Repair	Circuit repair is an indispensable and increasingly important service in the IC design industry. Quick return speed and high construction yield are the keys to solving the customer IC design experiment problems. MA-tek has a total of 15 Single Beam FIB (SB-FIB) microscopes that can provide IC circuit repair services. We operate 24 hours a day, 7 days a week to provide the customers with the most immediate services and to guarantee the completion of customers' commissioned cases within 24 hours. This is MA-tek's commitment to customers.
Sample Preparation	MA-tek provides various sample preparation services, including "TEM Sample Preparation," "Chemical Decap," "Laser Decap," "Delayer & Parallel Lapping," "Ion Milling," "IC Packaging & Bonding," "Rework Station" and "Laser Reballing."

MA-tek Complete Product Analysis Project	
Materials Analysis (MA)	<p>The SEM Electron Microscope is the fastest and most effective method for observing the fine structure of surfaces. MA-tek also has a series of ultra-high resolution devices such as the Hitachi S-8020 and S-4800 Field Emission-SEM (FE-SEM), which can be paired with precise sample preparation, such as CP (ion milling) or a highly skilled delayer method, to perform micro-zone magnification observation and component size measurement on the sample surface and cross-section. And the Energy Dispersive Spectrometry of X-ray (EDS) can also be added to perform qualitative and semi-quantitative analysis on the micro-zone materials.</p> <p>The TEM Transmission Electron Microscope is used to observe the fine structure of the sample, and the image resolution can also reach the atomic resolution of at nano-level. In addition, a large-area EDX detector can be added, so that the element detection ability can be done below 0.1%.</p> <p>MA-tek also has important Materials Analysis tools including "FIB," "DB P-FIB," "EBSD," and "EELS," which can provide customers with nano-level precise positioning and observation analysis.</p>
Surface Analysis (SA)	<p>MA-tek provides various Surface Analysis services, including "Secondary Ion Mass Spectrometry (SIMS)," "Spreading Resistance Probe (SRP)," "Scanning Capacitance Microscope (SCM)," "X-ray Photoelectron Spectroscopy (XPS)," "Field-emission Auger Electron Microscope (FE-AES)," "Atomic Force Microscope (AFM)," "Thin Film Analyzer (α-step)," "Optical Thin Film Analyzer," and Fourier Transform Infrared Spectroscopy (FTIR)."</p>
Physicochemical Characteristics Analysis (CA)	<p>Mass Spectrographic Analysis is an important technology to identify the structure of substances, and its application scope covers air and water pollution detection, chemical and biomedical research, food, drug and cosmetics inspection and other fields. Mass Spectrographic Analysis has different qualitative and quantitative purposes, and can be used to identify unknown compounds, quantify the amount of compounds in the sample, or study the chemical fundamental principles of gas-phase ion. MA-tek can provide analysis services for the three major mass spectrometry techniques in chemical analysis (ICP-MS/GC-MS/LC-MS).</p> <p>In the Physicochemical Characteristics Analysis service, MA-tek can perform qualitative or quantitative determination of samples, including the information of their physical or mechanical properties, ingredient composition, appearance size, particle distribution pattern, degree of aggregation or agglomeration, dissolution and dispersion status, surface electrical properties and surface chemistry.</p>
Integrated Analysis	<p>The integrated services provided by MA-tek include "Competitive Product Analysis," "Patent Analysis and Identification," "Third Party Identification Report" and training courses.</p>

Sustainability Highlights: New Technology Channel | Collaboration Column

With the rapid development of the semiconductor and material industries, in addition to providing professional and complete analysis services, MA-tek has set up the "New Technology Channel | Collaboration Column" in the Tech Article Page of the Company's website after the official launch of the Industry-Academia Cooperation Project in the fourth quarter of 2021, inviting professors and experts from the industry, academia and research institutes to write and introduce the most popular and advanced scientific and technological research and development content every month, and work with customers to grasp the key industrial technologies of the next generation as soon as possible.

October 2021
National Yang Ming Chiao
Tung University

Professor
Ray-Hua Horng



Ga₂O₃, Why is it called the Fourth-Generation Semiconductor? The Technical Principles, Advantages and Industry Prospects of Ga₂O₃



Gallium Oxide Ga₂O₃ is a newly developed material. Its wide bandgap characteristics and transparent film have significant applications in power components and optoelectronic components, including electric vehicles, power systems, turbines of wind power generator, light sensors and gas sensors are the scope of its application, so it has great potential and there are still many components waiting to be developed and commercialized, it is indeed one of the forward-looking materials.

Professor Ray-Hua Horng has been dedicated to pioneering research and development in the fields of wide bandgap material applications, optoelectronics and power devices for many years, through this special article to lead readers to have a preliminary understanding of the technical principles, advantages and industry prospects of the fourth generation semiconductor Ga₂O₃ Technology, and lead customers to be the first to understand the fourth-generation semiconductor huge application potential.

November 2021
National Yang Ming Chiao
Tung University

Professor
Pei-Wen Li



A Discussion of the Evolution and Challenges of Quantum Computing Technology



Quantum computing has become a hot topic in the global technology industry, and its importance is no less than that of the silicon industry in the last century. The world's quantum industry ecology has gradually taken shape, and global quantum computing is rapidly moving from theoretical basis verification to application.

Professor Pei-Wen Li, an expert in the field of quantum technology, has made many major research breakthroughs in the combination of semiconductor components and quantum structures. Through this article, Professor Pei-Wen Li introduced the application principle, development overview and technical challenges of quantum computing hardware core "qubit," leading readers to enter the brilliant world of qubits.

The quantum dots and metal electrodes of the key components of quantum computing are extremely small in size, and the difficulties in manufacturing and analysis are very high; therefore, the assistance of many high-level analysis techniques are needed. MA-tek specializes in various structural and component analysis techniques, ranging from component level electrical property measurement positioning technology, precision sample preparation to high-resolution Transmission Electron Microscope (TEM), etc., and whether it is the superconductor, ion trap, Nitrogen-Vacancy (NV) in diamond and other different types of qubit structures, MA-tek can meet the analysis requirements required for the research of quantum components, assist the key components of quantum computing to conduct the technological development of structure and electrical property aspects, stand together with customers and contribute to Taiwan's investment in the R&D layout of the quantum generation.

December 2021
National Tsing Hua
University

Professor
Meng-Chyi Wu



The Future of Display Technology Lies with the High Resolution UVA MicroLED



MicroLED has the advantages of high resolution, high brightness, low power consumption, and long product service life, and can realize advanced display screen functions including softness, transparency, and curved surface. With the increasing demand for high-end display systems in smart life, and the application opportunities of ultra-high-resolution image virtual and augmented reality driven by the concept of “Metaverse” virtual world, it is suitable for application in many emerging industries with huge business opportunities, and is regarded as the display technology of next Generations.

Professor Meng-Chyi Wu specializes in the research of two main themes of “III-V compound semiconductor element process” and “power devices.” In this article, Professor Meng-Chyi Wu uses actual research results to lead readers to understand the academic and application research progress of MicroLED in Taiwan, as well as the problems and challenges faced in the technology aspect. Taiwan has process technology advantages and a complete industrial chain in the semiconductor field. MA-tek holds our high analytical technology content to cooperate with academia and research institutes and jointly deploy to accelerate the building of Taiwan’s great future of MicroLED trillion-dollar business opportunities.

Diverse Service Channels

The MA-tek official website has four languages: Traditional Chinese, Simplified Chinese, English and Japanese, which meet the browsing needs of customers in different regions. In addition to listing relevant information and various perfect service projects of MA-tek, the domestic and foreign news media reports, exhibition information and the latest information will also be updated in the “Latest News” in real time. If there is any conversation needs, the dialog box in the lower right corner of the web page can also be used, and there will be specially assigned person to reply immediately during working hours, to help customers quickly find the information and contact windows they need.



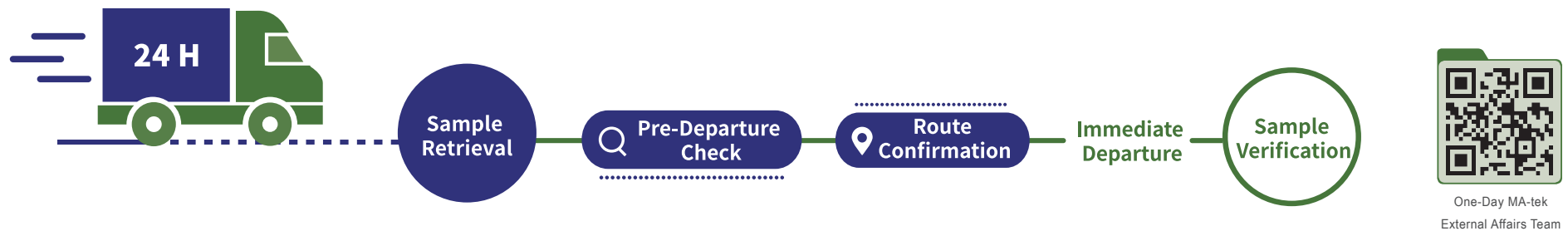
MA-tek also has official Line account, Facebook fan page, YouTube channel, LinkedIn page, WeChat official account, Weibo and other social network platforms, through different media platforms to find the most suitable communication channels, to provide customers with the most comprehensive first-hand information.



MA-tek Express Service

MA-tek provides 24-hour sample delivery service. We have organized the MA-tek External Affairs fleet to serve Taipei and Hsinchu cases, and cooperate with express delivery companies for delivery in other areas. Every day, MA-tek's External Affairs personnel will first collect the samples in the mail room, and then distribute the samples to be delivered to each area; before the trip, the accuracy of the samples and route allocation will be repeatedly checked, and then the Chief of External Affairs Section will be responsible for answering the special telephone line for pickups and deliveries. After the customer's required route is confirmed, the External Affairs colleague departs to the customer's location immediately to pick up the package. Finally, the sample is returned and verified, and an electronic PDA is used to sign and save the file to complete the entire sample reception and delivery process.

MA-tek Sample Reception and Delivery Process



Quality Policy and Certification

MA-tek's quality policy upholds the principle of "Precise and Accurate, Efficient and Effective," and continuously tracks the requirements of laws and regulations, ISO 9000 standards, customers, and general management principles, improves the Quality Management System continuously, and conducts the PDCA Circular Quality Management of "Plan," "Do," "Check" and "Act," to ensure that MA-tek's quality objectives are successfully achieved and to urge continuous quality improvement. In order to strengthen colleagues' cognition and concept of service quality, MA-tek also continues to organize quality education and training, and deeply roots MA-tek's insistence on quality in the hearts of every colleague.

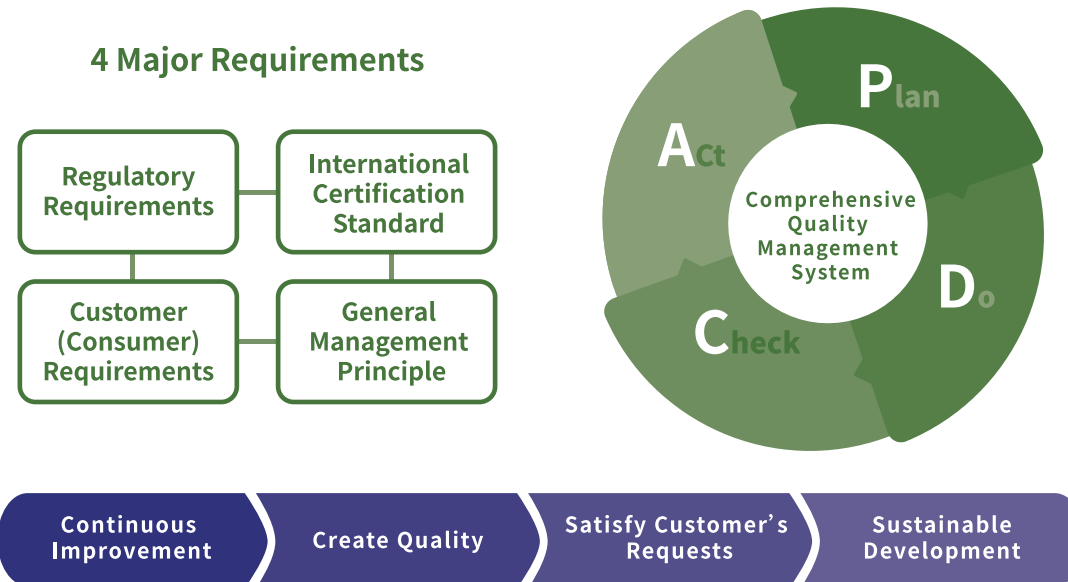
MA-tek Quality Education and Training



Quality Policy



Quality Management System Process



3.2 Technological Innovation and Technical Data Management

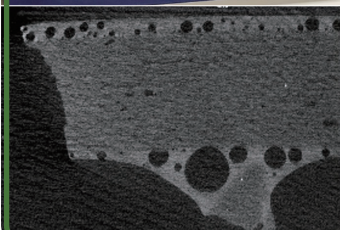
Highlights Column: MA-tek's scientific and technological archaeology and identification of cultural relics

MA-tek not only provides a complete one-stop professional testing service for the semiconductor industry chain, but also extends its contacts to the field of scientific and technological archaeology. With the help of valuable precision analytical instrument and equipment, to study various relics from archaeological excavation, analyze and deduce the information including ancient craftsmanship and chronological background through the material evidence remaining in the samples. In the future, MA-tek will continue to expand exchanges with academics and archaeological culture circles in the future to enhance the breadth of analysis category and cultural depth, and contribute scientifically to the preservation of ancient traditional craftsmanship and culture with a long history.

Ru Ware

Northern Song
Dynasty
960–1127

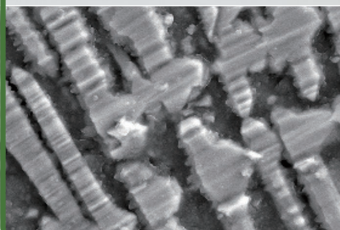
Using 3D-Xray, PV (plane view)/XS (Cross-section)-SEM to confirm the structure of the spurs, crackles, and the melting phenomenon of anorthite caused by the firing temperature.



Blue and White Porcelain

Tang, Song and
Yuan Dynasties
1271–1368

Using SEM/EDX, XPS, and XRF to explain the appearance/composition of rust spots on the body of blue-and-white porcelain bottles, through the differences in the elemental composition and content of the porcelain, it is concluded that the cobalt material only contains manganese (Mn) after the Ming Dynasty.



Khitan Talisman

Liao
916–1125

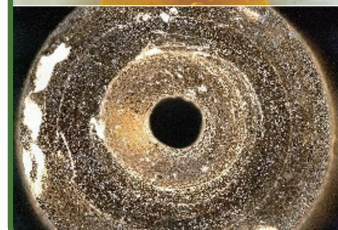
Using XRF and 3D OM to observe the surface of the talisman contains 40% gold element, and the substrate contains copper oxide, and there are artificial gouges and long-term interface oxidation.



Colored Glaze Seed Beads

Ki-Wu-Lan Upper
Cultural Layer
700–1200

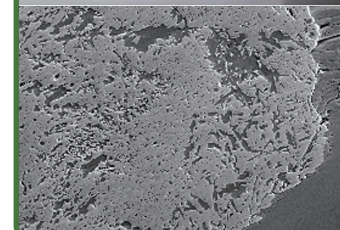
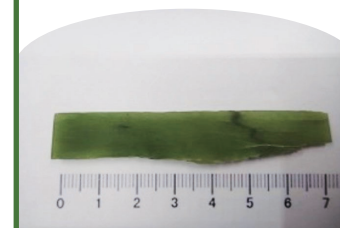
Using non-destructive analytical instruments such as 3D OM and 3D X-Ray to observe the form of gold foil embedded in the colored glaze seed beads, so as to understand its production techniques and technology transfer channels.



Puyuma Jade Artifact

Pinuyumayan
3000B.P.

Using SEM/TEM to analyze the microstructure of Taiwan jade, and its rich in zinc element can be identified through compositional evidence.



Technological Innovation and Management

MA-tek's business content belongs to that of the Knowledge Economy Industry. At the beginning of its establishment in 2002, MA-tek received special letter approval by the Bureau of Industry, Ministry of Economic Affairs to provide R&D services and intellectual property rights services. MA-tek has successfully combined rare and valuable precision analytical instrument operation services with the functions of consultants and consulting to accurately and correctly provide various sample preparation services to meet the analysis needs of customers in the research and development of electronic products and the development of new material structures and new manufacturing processes. In order to continuously improve and innovate its services, MA-tek not only actively invests funds in R&D every year, but has also established an Improvement Reward System for the proposals of colleagues, and organizes a Colleagues Technology Presentation every quarter, expecting to stimulate innovative thinking between colleagues through different forms of exchanges and rewards. Furthermore, in order to effectively protect the Company's intellectual property, MA-tek also actively strengthens its patent layout to enhance its economic moat. Since MA-tek is in the service industry with a high-knowledge economy, therefore, we pay special attention to the protection of technical information and conduct two-way protection from the legal and systematic aspects.

✓ Legal Protection of Technical Information

All MA-tek colleagues have signed a confidentiality agreement with the Company from the day of their employment. In addition to abiding by the relevant agreements during their employment, there are also non-competition regulations for two years after leaving the job.

✓ Systematic Protection of Technical Information

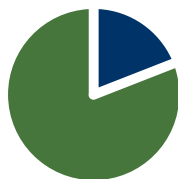
MA-tek divides departments according to service items, and each department's professional field is different. In terms of personnel recruitment principles, materials analysis is mainly based on talents with backgrounds in materials, physics, and chemical engineering. Failure analysis is mainly based on talents with backgrounds in electronics, electrical engineering and chemistry. Reliability testing and ESD testing are mainly based on talents in IC testing and electronics. Each has its own expertise in professional fields, and ordinary employees are not able to be skillful in multiple fields and aspects at the same time. In terms of customer confidential information protection, the Company fully implements the following programs to ensure that employees cannot obtain complete customer information or the technology secrets in all fields analyzed by the Company:



Inform customers not to provide the Company's analysts with information about manufacturing process parameters, material properties, or special formulas that are not related to analytical technology.



All documents and samples provided by the customer shall be taken back by the customer after the analysis is completed (unless the customer requests to keep it on their behalf).



Only the case execution analyst can access the data in the Company's internal data access computer, and only after the Unit Manager has reviewed the analysis data quality can it be delivered to the customer.



PCs attached to machines are not allowed to go online, and the analysis results need to be organized by the specially assigned person before they can be sent to the customer by a general PC.

**ISO 27001
Information
Security
Certification**

MA-tek has passed the ISO 27001 Information Security Certification in September 2015, and will continue to strengthen information security protection, so that every piece of customer data is fully protected.

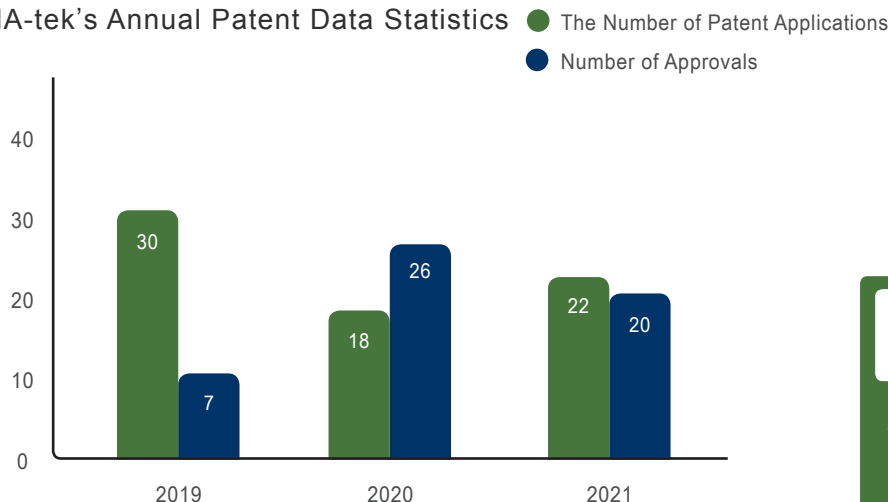
Intellectual Property Management and Protection Measures

It mainly develops in the direction of continuous improvement of the intellectual property management system, establishment of an organizational culture focusing on innovation and patent applications, as well as emphasis on customer relationships and sustainable operations, and protection of confidential information delivered by customers. At the same time, protect the Company's research and development achievements and technological leadership through the implementation of the appropriate review mechanism, reward system, publicity education and talent training and other implementation aspects.

Intellectual Property Management System

MA-tek strengthens its industry leadership and maintains its hard to come by advanced technological achievements. The company officially introduced the "Taiwan Intellectual Property Management System (hereinafter referred to as TIPS)" since July 21, 2021, and passed the A-level Verification review on December 6, 2021. With the implementation of this management system, we at MA-tek can truly protect our own research and development achievements, maintain our innovative competitive advantage, and enhance all employees' awareness of protecting confidential customer information.

MA-tek's Annual Patent Data Statistics



Note 1: The scope of data on the number of patent applications and number of approvals includes the Taiwan Parent Company and Mainland China Subsidiaries.

Note 2: Some patent applications in 2021 are still subject to review by relevant agencies.

Taiwan Intellectual Property Management System TIPS A-level Certification



TIPS is the abbreviation of Taiwan Intellectual Property Management System, which is an intellectual property management model. The purpose of this system is to enable the introduced organization to establish a systematic management system linking intellectual property management and operational objectives with the "P-D-C-A Management Cycle." The requirements of TIPS are based on the rights management process. The organization sets the intellectual property management goals according to the intellectual property management policy established by it, and conducts the acquisition, protection, maintenance and utilization of intellectual property, and takes measures to avoid infringement and protect rights in the process.

Intellectual Property Risks and Countermeasures

Response Strategies

1. Strengthen the education and training in the aspect of intellectual property protection and patent for employees
2. Establish the Patent and R&D Cycle Management Regulations
3. Add the incentive measures to increase employees' willingness to innovate and apply for patents

In order to strengthen employees' understanding of intellectual property management, to achieve continuous improvement of the intellectual property management system, and to establish an organizational culture that focuses on innovation

MA·tek
The Best R&D Partner

Internally Externally

Aiming at all types of information and documents provided by customers, there may be concerns of unable to be properly kept or leaked for the delivered confidential information

Response Strategies

1. Establish Confidential Information Management Regulations
2. Build corresponding software equipment for information control
3. Organize employee confidentiality mandatory education and training, so as to achieve the effect of attaching importance to customer relationship and sustainable operation, and protecting the confidential information delivered by customers

Employee Intellectual Property Management Education and Training

Compared with tangible assets (real property, movable property), Intellectual Property Rights mainly include patents, trademarks, copyrights and business secrets, which are intangible assets, and therefore the essence of the patent system is mainly to use text definitions to rigorously describe the technology ideas and the scope of rights to be protected. On December 16, 2021, MA·tek specially invited senior lawyer Sung-mei Hsiung, Vice President of Deloitte Business Law Firm, to introduce the basic concept of intellectual property "Intellectual Property Rights Law that you must know" to MA·tek colleagues, and explain the content of intellectual property and protection concepts in simple terms, to strengthen the basic concepts and cognitions of all colleagues in introducing intellectual property.



Internal Technology Presentation

In order to broaden the technical knowledge of engineers and cultivate their presentation ability, MA-tek organizes Internal Technology Presentations in the second month of each quarter, inviting colleagues from all Business Groups to participate. The Technology Presentation provides 15 minutes of reporting time and 5 minutes of on-site Q&A for each team. The “Best Popularity Award,” “Best Presentation Award,” and “Best Stage Style Award” are selected after the presentations by all teams, and award money is provided as encouragement.

Highlights Column : MA-tek Technology Presentation (4th Quarter of 2021)

MA-tek 2021 4th Quarter Technology Presentation was successfully held on November 17th. Before the official launch of this Technology Presentation, an expert in the field of semiconductors, Professor Ray-Hua Horng of National Yang Ming Chiao Tung University was invited to give us a speech with comprehensive introduction on the fourth generation compound semiconductor which is more forward-looking and full of future market potential. Professor Hong's two-hour splendid speech with great enthusiasm and charm, explained the profound theories in simple language, led all the participants to deeply understand the technical value of fourth-generation semiconductors, and previewed the new era of high-power applications that about coming to the world, and received long-lasting applause.

The last technical presentation of 2021 will be held next, and all departments presented their best R&D results to compete for this award. Through this presentation, colleagues in the company have gained a lot of new knowledge, and a high-quality environment for mutual learning and growth was created

Best Presentation Award Tsu-Yu Liu

(Surface Analysis Division)



Best Stage Style Award Wei-Hung Ku

(Failure Analysis Division II)



Best Popularity Award Jui-Shu Yeh

(TEM Division)



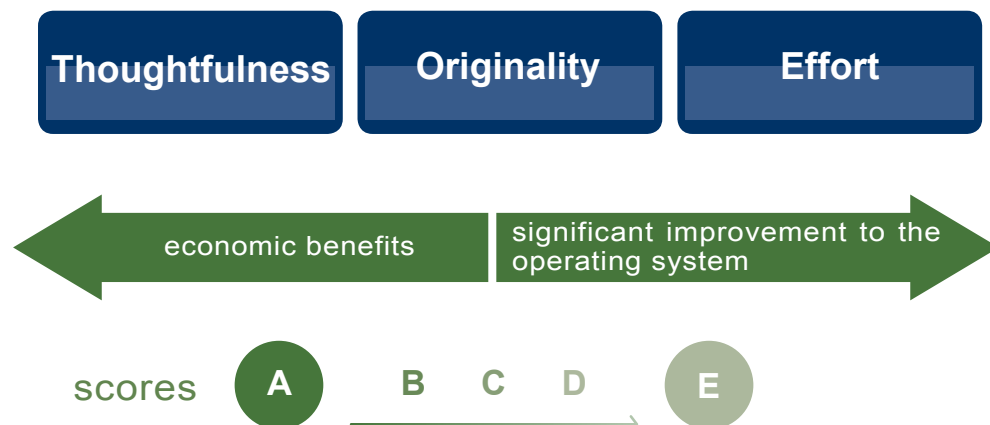
Due to the development of Intelligent Vehicle, optical discrete components such as VSCEL are gradually being widely used. Colleagues of Surface Analysis Division lead us into the tiny world through the MA-tek new technology, TOF-SIMS, and let the listeners understand the composition of VSCEL epitaxy. The rich and brilliant content won the Best Presentation Award.

In the failure analysis process, the initial sample preparation plays a key role in the overall success of the analysis. Through the interesting and humorous stage style, colleagues from the Failure Analysis Division shared the rescue tips when the chip was de-layered, which made the atmosphere of entire speech lively, and won the Best Stage Style Award with the unanimous praise of the judges.

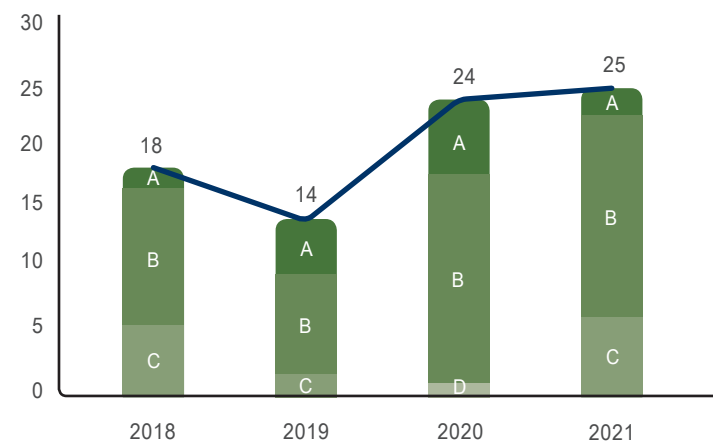
The colleagues from the TEM Division explained the evolution and improvement of the PMS process to the participated colleagues, to let us understand the secrets of how to ensure effective operation, reduce production costs, shorten production cycles, and reduce remanufacturing products, to achieve the goal of optimizing analysis capacity, and won the Best Popularity Award voted by the entire audience.

Colleague Improvement Proposals

In order to encourage colleagues to discover and propose improvements in their work, MA-tek set up a system for improvements by colleagues and provides award money for outstanding improvement proposals to encourage colleagues. Colleagues can submit applications for proposals ranging from technology breakthroughs to anything capable of increasing business revenue, reducing costs, expanding markets and other improvements. The evaluation criteria for improvement proposals include “economic benefits” and “significant improvement to the operating system” to measure the effectiveness of the proposal, and we also attach importance to the thinking ability of our colleagues at the same time, and evaluate based on the “Originality,” “Thoughtfulness,” and “Effort.” After the proposals are reviewed, the proposals are classified into grades A to E according to the scores. The proposals of different grades are rewarded with award money for encouragement, with Grade-A proposals being the highest honor.



The number of proposals submitted by MA-tek colleagues over the years

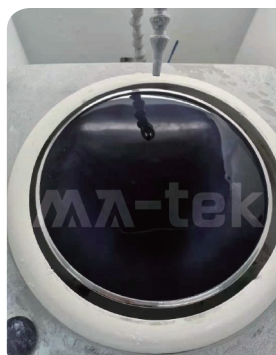




The “Fixed Grinding Platform Size Adjustment” proposal submitted by the colleagues from Shanghai Failure Analysis Division, through the adjustment of the size of the grinding machine platform, can avoid the problem of damage to machine parts, reduce the possibility of wear and tear as well as the operation errors, improve output efficiency, and further effectively save the costs.

The “Improving Special Sample Preparation – Improvement of Glass Thinning Technique” proposal submitted by the Chemical Analysis Division proposes a technique improvement plan aiming at the labor-consuming problem of glass sample grinding, which not only avoids the grinding risk of the original technique, but also improves the success rate of sample preparation, greatly reduces the working hours for colleagues, and achieves the output by multiples. The high-efficiency and high-yield report quality also improves customer satisfaction and creates greater business opportunities for the future. The Grade-A honor is well deserved.

Since 2018, all departments have gradually submitted proposals for improving the operation area. In 2021, there were a total of 25 proposals submitted by colleagues, 2 of which were rated as Grade-A honors.

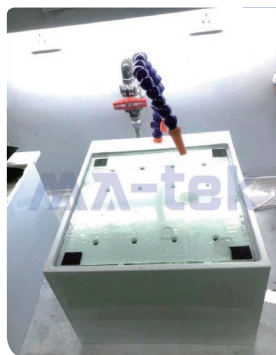


The original electric grinder is easy to make the liquid flow into the machine, resulting in machine damage.

Before
Improvement



The sample thinning by manual grinding requires repeated confirmation by the instrument, which is time-consuming and easy to result in errors.



Install the self-developed proper grinding platform on the machine, which not only prevents the liquid from flowing into the machine, but also enlarges the working space and improves the work efficiency of colleagues.

After
Improvement



For sample etching with chemical solvents, the thinning state of the sample can be accurately controlled through the conversion of the etching rate, and multiple samples can be processed simultaneously, greatly improving the productivity and accuracy.

3.3 Customer Relationship Maintenance

"MA-tek is available to serve you in every Science Park" is our vision. We have always been committed to becoming a professional strategic partner for our customers, providing accurate, effective, and high-quality analysis services. In order to improve the quality and efficiency of our customer service, we are devoted to the education and training of our business and technical service colleagues. We provide multiple communication channels, including Internet and email, while at the same time carrying out regular satisfaction surveys to gain insight into the customer service experience and improvement directions, hoping to grow together with every customer.

Customer Service and Relationship Management

MA-tek continues to improve service quality and customer experience, and deepens the connection between MA-tek and each customer through various methods. MA-tek actively implements education and training for business colleagues to provide customers with high-quality and professional services. At the same time, in order to make management more immediate and efficient, we provide LiveChat for online customer service dialogue on the MA-tek website, and launched the UFAST online customer service system in the first quarter of 2020, and officially introduced the Customer Relationship Management (CRM) system in the third quarter. Furthermore, we also have special mailboxes and channels for customer feedback to receive customer suggestions and feedback.

Business Personnel Training

MA-tek provides bi-monthly training sessions for business personnel and business assistants (6 times a year), and holds business training from time to time to share the latest business information and market trends. The training is mainly done by the Chairperson, the Manager of the Technology Unit, and external consultants. The content includes introductions to MA-tek's service projects, market and industry information, industry supply chain overview, technology trends, customer audits, and business skills, etc. The training of business assistants introduces the relevant operation regulations of the daily work as a business assistant, such as the operation of the quotation system, bargaining agreements, account statements, and pro-forma invoices, etc.

Number of Business Personnel Training classes in the past three years		
Year	Business Education Training	Business Assistant Education and Training
2021	12	8
2020	18	7
2019	20	8



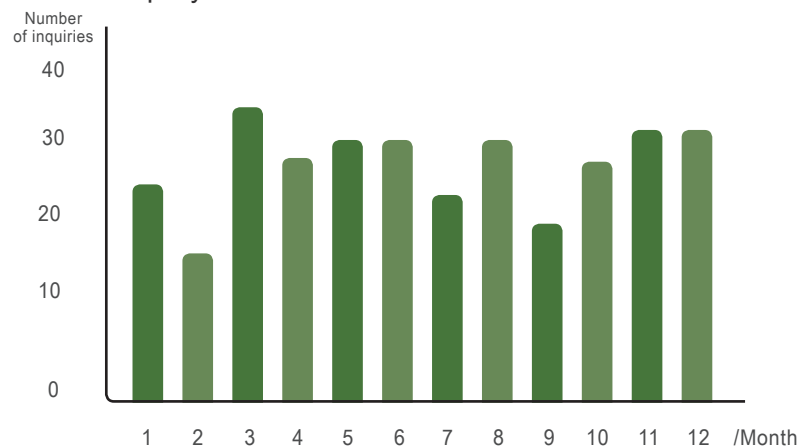
LiveChat Online Customer Service

When visiting the MA-tek official website, a customer service dialogue box will appear on the right side of the web page. Domestic and international customers can make inquiries with the customer service personnel in real time through the chat window. We will also reply to the customer the first time, or transfer them to the responsible unit to conduct follow-up contact. According to statistics, we received a total of 364 online inquiries in 2021, an average of about 30 per month, and all online inquiries in 2021 have also been successfully closed.



Online customer service system UFast

LiveChat online customer service monthly inquiry statistics in 2021



LiveChat online customer service conversation screen



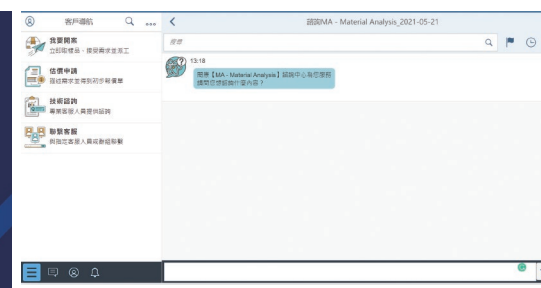
Online customer service system UFast

MA-tek has launched its independently developed UFast online customer service system for the first time in 2020. The system has a responsive web design and supports a variety of major browsers. Customers can use desktop computers, laptops, cell phones, and tablets to manage business in real time anytime, anywhere. Customers can log in to the platform from MA-tek's official website. Through this instant online communication software, regardless of whether it is the submission of cases, technical consultations or quotations, the customers can always receive the services of the technical team and customer service personnel in a timely manner. The UFast system also complies with ISO 27001 Information Security Standards, and uses multiple encryption mechanisms to protect the security of customer information, so that customers can use it with peace of mind. According to the Ufast use records statistics there were 1,111 window conversations in 2021, and more than 433 cases were opened through UFast.

UFast online customer service system login screen



UFast online customer service system interface



Customer Relationship Management (CRM) System

MA-tek officially introduced the CRM system in the third quarter of 2020 to strengthen the Company's service-oriented operation model and optimize its service process, expecting to become a global professional strategic partner through all types of value-added services and to be the strongest R&D support for customers.

Customer Service Management

Enhance the capabilities for case management through the use of milestones and knowledge management.

Marketing Activity Management

From before the sales to after the sales, an automated marketing process is implemented through the customer journey, so that marketing personnel can complete the marketing automation settings themselves and collect customer responses in real time.

Sales Management

Provide convenient tools for business personnel, from a full range of customer information (customer 360) and lead information, manage the data of interaction with customers, track sales results and integrate customer information effectively.

Highlights Column: Telink Best Service Award

At the end of 2021, MA-tek Shanghai Lab was awarded the "Best Service Award" specially made by Telink Semiconductor, our long-term partner, to express their trust in professional technology and affirmation of excellent quality service provided by MA-tek Shanghai. MA-tek and all colleagues are deeply honored, and also all colleagues are encouraged to continue to provide the best service to all our customers.



Hi MA-tek Partners:

At the end of 2021, looking back with deep emotion during the entire year of 2021 with MA-tek partners, the orders placed by Telink Semiconductor to MA-tek have achieved significant growth throughout the year. It is Colleague Sun, throughout the entire year of 2021, did his best to assist Telink Semiconductor in the delivery of the MA-tek order on time, with excellent performance in delivery efficiency and delivery effect.

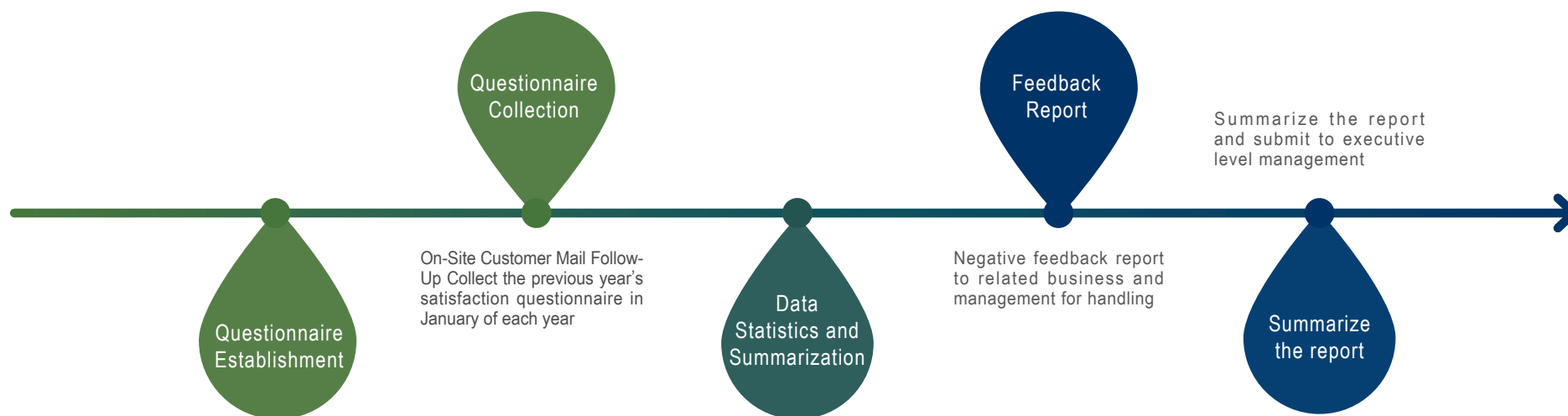
Special thanks to Colleague Sun OO! Looking into 2022, Telink Semiconductor will work with MA-tek together to build a new chapter in 2022! Special thanks to the following colleagues for their hard work: ESD/Chemical/X-ray/SAT/EFA/FACS

The Best Service Sward of Telink Semiconductor is awarded to You.

Customer Satisfaction Survey

MA-tek Laboratories regularly conduct customer satisfaction surveys every year, and the responsible unit conducts the surveys by telephone, on-site visit or other methods such as fax, email, etc. Based on the feedback of customer satisfaction surveys, we will review the content of the customers' replies, and conduct analysis and review for the key issues. The items to be improved will be handled according to the relevant corrective and preventive measures, and the final survey results are summarized and submitted to the Management Review Meeting for review.

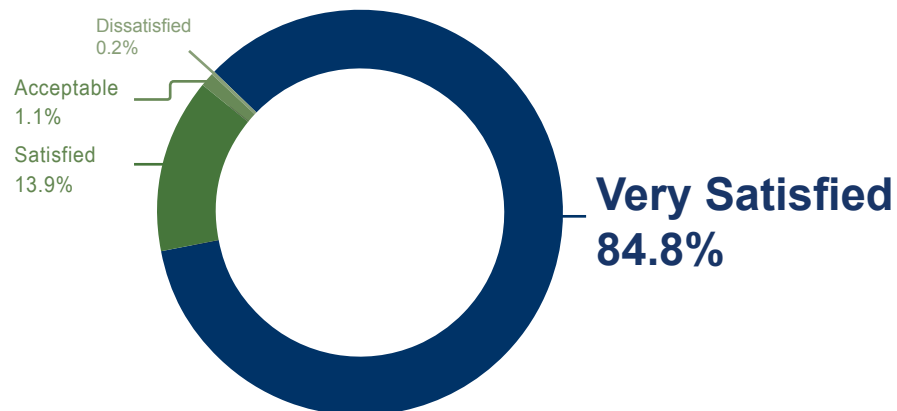
MA-tek conducted the 2021 annual customer satisfaction survey in January 2022, and a total of 344 valid questionnaires were returned. After the results of the 2021 satisfaction survey were reviewed, customers were more than 80% satisfied with the service attitude/delivery schedule/report quality provided by MA-tek; we also conducted inquiries for the area of analysis experiment to be strengthened and improved, of which 82.5% responded "no need for suggestions and improvement"; for the valuable suggestions provided from the other 17.5% response, MA-tek will truthfully review the feedback details, and assign responsible contact windows to assist in investigating the reasons for improvement and background events if necessary, conduct internal discussions to give customers appropriate answers, and continue to track the progress of improvement. We learned from this questionnaire that professionalism is the most important consideration for customers when choosing an analysis laboratory. MA-tek will continue to improve service quality and professional knowledge through internal and external education and training for colleagues, and strive to be the most powerful R&D support for customers.



Based on the results of the 2021 satisfaction survey, customers were more than **80%↑** satisfied.

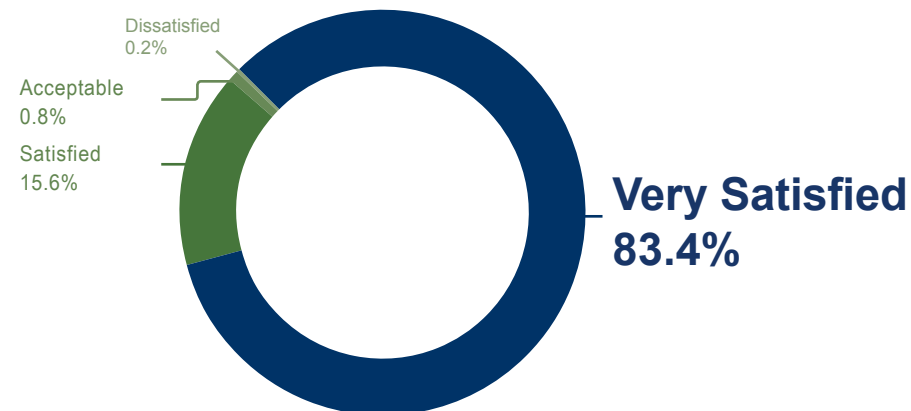
Q1

How do you feel about the service attitude of the personnel (counter administration/external affairs team) during telephone calls/pickup and delivery of packages?



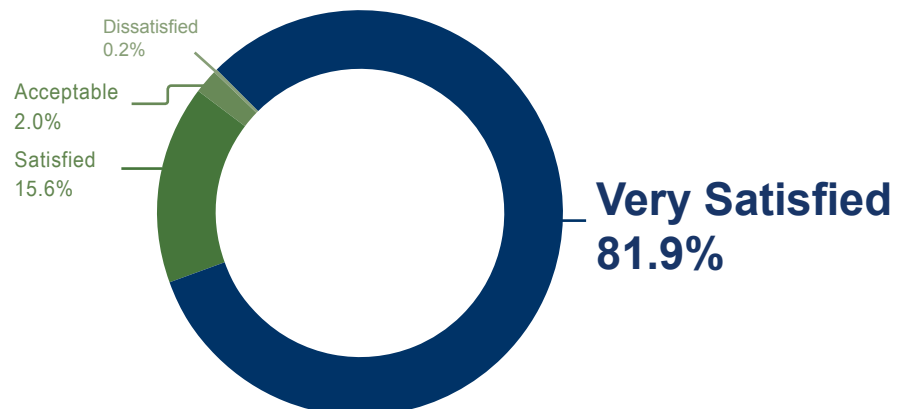
Q2

How satisfied are you with the process of communicating, discussing, and interacting with engineers during testing?



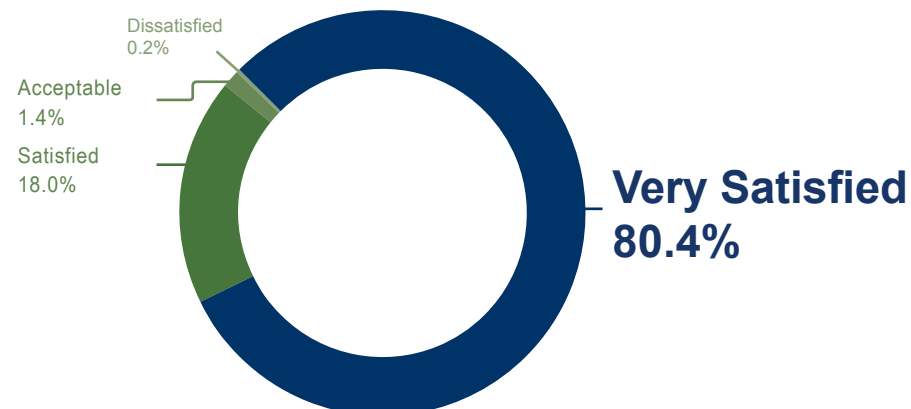
Q3

How satisfied are you with the delivery schedule provided by the engineers?



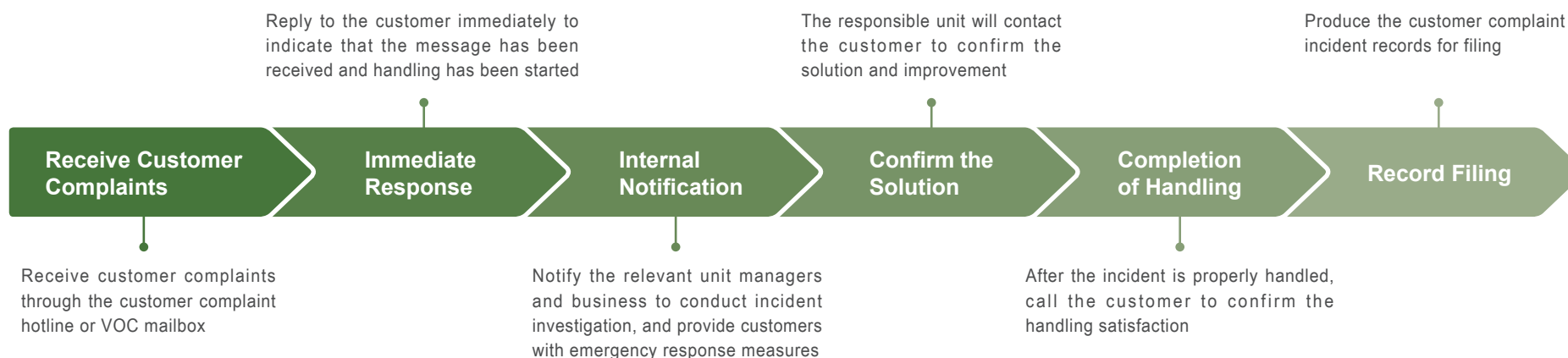
Q4

How satisfied are you with the test analysis results or report quality?



Handling of Customer Complaints

MA-tek attaches great importance to the voice of customers, and has customer complaints hotline and VOC mailbox. After receiving a customer complaint message, we will immediately reply to notify the customer that the message has been received, and handle it according to the customer complaint case handling process to ensure that customer losses are reduced. After the handling of the customer complaint is completed, we will call to confirm the customer's satisfaction with the handling of the responsible unit to understand the direction of continuous improvement.



In 2021, there were two major customer complaints submitted for “delivery schedule delay” and “operational negligence” respectively; improvements were completed and both cases were closed. Regarding the case of “delivery schedule delay,” we immediately contacted the customer to explain and apologize, and accelerated the follow-up analysis process and reviewed the efficiency of case communication, and called the customer after the case was closed and successfully closed the case. Regarding the case of “operational negligence,” we proposed immediate preventive measures to reduce customer losses, investigate the cause of the negligence and improve the method. After careful review of the operation process, the real cause of the problem was confirmed and permanent countermeasures were formulated. After the feasibility was verified, internal publicity and implementation were carried out to prevent the recurrence of the negligence.

MA-tek always maintains a positive attitude when facing the customer's complaints, listens to customers' voices through unobstructed communication channels, and thanks customers for their real feedback for us to have opportunities for improvement, and jointly create higher industrial value with the efforts and cooperation of the entire team.

Technical Exhibition and Seminar

MA-tek organizes external seminars from time to time every year, and shares MA-tek's professional services in the field of analysis with guests, to strengthen the connection with existing customers and explore potential customer groups. Although we were still affected by the epidemic in 2021, we continue to be concerned about the development of the epidemic. When the situation eased in March, we held a physical seminar in Taiwan and Shanghai respectively, and implemented the central epidemic prevention policy at the same time, so that the guests could feel at ease in participation.

Zhubei, Taiwan Failure Analysis Seminar in Zhubei · March 3, 2021 MA-tek Zhubei Lab II

In conjunction with the grand opening of MA-tek Zhubei Lab II, this seminar was held at the Zhubei Tai Yuen Hi-Tech Industrial Park Phase III Cultural Exhibition Hall, with a total of 144 guests participated. In the first half of the seminar, Manager Yu-Teng Lin of the Failure Analysis Division I gave a lecture on "Packaging Failure Analysis and Advanced Application Analysis," followed by the Failure Analysis Division II-Section Chief Jun-Hsien Yu, who explained "SEM Special Sample Preparation and Analysis," and then the Chip Circuit Repair Division – Manager Shih-Yi Peng brought everyone the "Introduction to CKT Line Repair." The professional and lively style of the lecturers, coupled with the wonderful and rich speech content, made the atmosphere very lively! In the second half of the seminar, followed by the Fault Analysis Division I – Section Chief Chia-Hsiang Yan brought "Transistor Characteristics Detection and Failure Mechanism Connectivity Analysis," and in the end, the Director of the R&D Center, Kuang-Tse He, gave the grand finale speech on "Physical Properties Failure Analysis Techniques and Case Analysis." After the rich knowledge builder, we believe everyone must feel that this was a worthwhile trip.

After the seminar, MA-tek Business led the guests to visit the newly completed Zhubei Lab II. The spacious and bright laboratory space and smooth traffic flow planning create a professional sense of semiconductor medical center. Through this Failure Analysis Seminar in Zhubei, in addition to providing opportunities for in-depth exchanges between customers and technical experts, it also opened the prelude of MA-tek Zhubei Lab II; in the future, MA-tek will continue to deeply cultivate them to provide customers in Zhubei area with faster professional services.

▼ Seminar Site



▼ Zhubei Lab II Visit after the Seminar



▼ Seminar Poster

開春喜慶

GRAND OPENING

03 MAR.

閎康竹北第二實驗室
盛大開幕

10:30 - 12:00 牛年到、竹北第二實驗室來報到
閎康科技2002年自台元科技園區出發
感謝竹北地區客戶19年來的支持
坐落於台元園區八期的竹北第二實驗室正式開幕！

13:00 - 17:40 竹北失效分析研討會
閎康科技呼應客戶迫切的分析需求
開幕當日加舉辦2021首場研討會 - 竹北失效分析研討會
邀請資深實驗室 學有專精的主管們傳授失效分析的屆角！

竹北失效分析研討會 AGENDA

13:00-13:30	報到
13:30-13:50	謝詠芬董事長 / 郭寶盛總經理 致詞
13:50-14:15	封装失效分析與進階應用解析 故障分析一處 林子騰經理
14:15-14:40	SEM特殊樣品製備與分析 故障分析二處 余俊憲課長
14:40-15:05	CKT線路修補介紹 晶片線路修補處 彭士益經理
15:05-15:25	Tea Break
15:25-15:50	進階失效定位技術與異常結構關聯性解析 故障分析一處 鄧東穎博士
15:50-16:15	電晶體特性偵測與失效機制連通性解析 故障分析一處 顏家祥課長
16:15-16:40	物理故障分析手法與失效解析 研發中心 何光澤處長
16:40-16:55	Lucky Draw
16:55-17:25	Lab Tour
17:25-17:40	Wrap up

LOCATION
台元三期文化展覽會館 宴會廳
竹北市台元一街3號2樓

REGISTRATION
02/05(Fri.) - 02/25(Thu.)
請洽各業務負責人 額滿為止 欲報從速

01 閎康臉書粉絲專頁按讚
02 填寫會後滿意度問卷調查

每完成一項即贈7-11百元禮券一張
現場還有超優好禮抽獎唷！



Shanghai 5G x AI Collaboration Seminar

March 25, 2021 at Parkyard Hotel, Pudong, Shanghai

This seminar was hosted by Shanghai MA-tek, and the number of people signing up exceeded 500. MA-tek prepared a total of five topics, and cooperated with the two topics provided by supplier partners, from Failure Analysis to Component Structural Analysis Comprehensive Analysis. First, the R&D Center – Director Kuang-Tse Ho brought “Compound Semiconductor Component Structure and Materials Analysis” across the sea as the prelude, and then the Shanghai Failure Analysis Division-Manager Ting-Wei Lin gave the “High-end Failure Positioning Techniques and Case Analysis.”

In the second half of the Seminar, the Reliability Business Group brought “ESD Electrostatic Protection and Verification Experience Sharing” and “Reliability Verification Analysis of Automotive Components,” and ended with “Advanced Packaging Defects and Failure Case Analysis” lectured by Manager Feng Kao of the Failure Analysis Business Group. We hope everyone takes the opportunity of this Seminar to have more technical exchanges with us, we also welcome customers to inquire by phone call or come to the laboratory to visit and exchange, so that MA-tek has the opportunity to serve you.

▼ Seminar Bulletin Board



▼ Seminar Site



Seminar Poster ►

5G x AI

齐芯合力研讨会

Materials Analysis Technology Inc.

25MAR. 2021

上海浦东 博雅酒店

Parkyard Hotel

报名请洽业务窗口

吴丹婷

021-5079-3616 ext.7167
sales3_02_sh@ma-tek.com

MA-tek 闕康科技

08:30	报到 <i>Registration</i>
09:00	开幕式 / 贵宾致词 <i>Opening Ceremony</i> MA-tek President of Greater China 郭宝声 <i>Max Kuo</i>
09:10	化合物半导体元件结构与材料分析技术 (IC / PKG / III-V / LED / Laser Diode) MA-tek RD Center Director 何光澤 <i>Bright Ho</i>
10:00	茶歇时间 <i>Tea Break</i>
10:20	高端失效定位手段及案例分析 MA-tek FA Div. Manager 林廷伟 <i>TW Lin</i>
11:05	Improving Optical Fault Isolation on Advanced Architecture Thermo Fisher EFA Business Development Manager Billy Tang
12:00	自助午餐 <i>Lunch Time</i>
13:30	电路分析技术在芯片失效分析中的应用 芯願景 RD Manager 张崇茜
14:15	ESD静电防护及验证经验分享 MA-tek RA Div. Deputy Director 朱剑凯 <i>Eleven Zhu</i>
15:00	茶歇时间 <i>Tea Break</i>
15:20	车用元件可靠度验证解析 MA-tek RA-PDQ Div. Deputy Director 张圣钧 <i>Graver Chang</i>
16:05	先进封装缺陷及失效案例解析 MA-tek FA Div. Manager 高峰 <i>Otis Gao</i>
16:50	Q & A / Lucky Draw

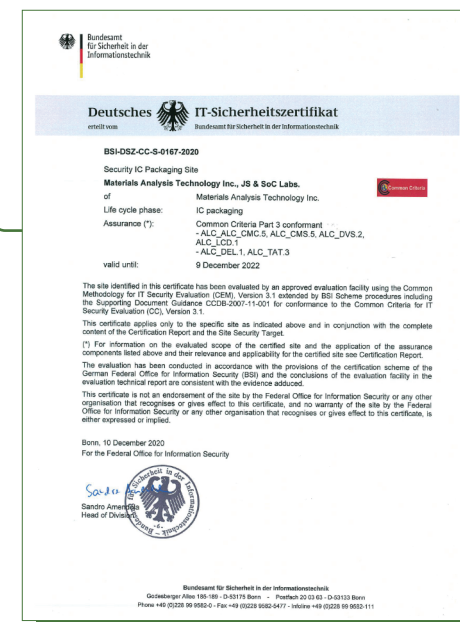
3.4 Information Security and Customer Privacy

Protection of information security and customer privacy is MA-tek's persistence and commitment. MA-tek has set up the Information Security Management System to organize and promote various information security activities and established information security policies and regulations related matters. In order to demonstrate MA-tek's commitment and responsibility to protect customer information security, MA-tek took the lead in obtaining the ISO 27001 International Information Security Management System certification in the material field, assessing all types of potential risks in a systematic way, and ensuring the safety of the customer's analysis data and the Company's information assets without worry. In September 2020, we passed the ISO/IEC 15408 CC EAL6 Information Security On-site Certification by the Bundesamt für Sicherheit in der Informationstechnik (BSI) (German Federal Office for Security in Information Technology) as the world's first analytical testing laboratory to pass ISO/IEC 15408 EAL6. MA-tek can ensure the safe operation of products from development to destruction, and become a good testing partner for the reliability technical services of information security products for customers in various countries.

ISO/IEC 27001 Information Security Management System



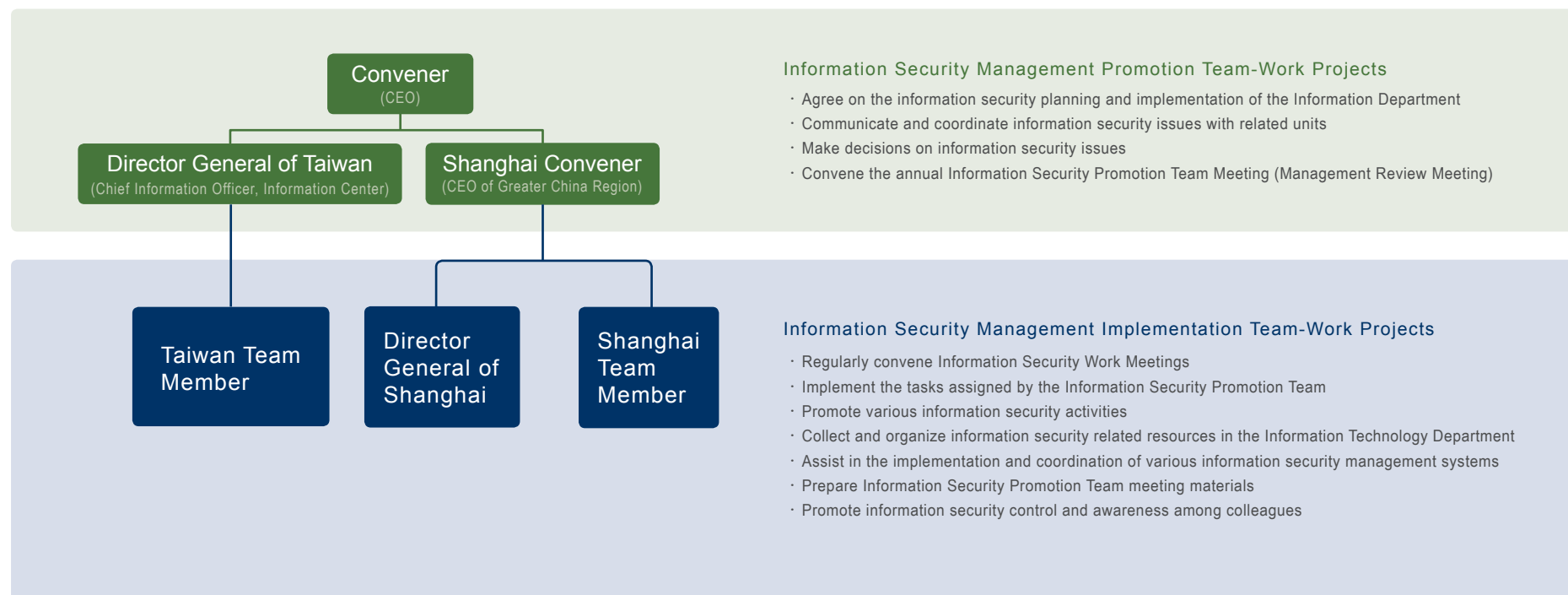
ISO/IEC 15408 Information Security On-site Certification



Information Security Policy and Framework

MA-tek has established an Information Security Policy to manage all types of information security matters, including operational data management, application system management, database management, system management, network environment management and equipment management of security area. We have also set up the "Information Security Management Organization" to help promote MA-tek's Information Security related activities. The MA-tek CEO serves as the convener of our Information Security Management Organization, and the CEO of the Greater China region serves as the Shanghai convener, and the Chief Information Officer serves as the Taiwan Director General and form the Promotion Team, responsible for the planning, implementation, communication, and decision-making of the Company's information security related activities. Under the Information Security Management Promotion Team, there is the Implementation Team composed of colleagues from Taiwan and Shanghai, responsible for managing information security activities, meetings, training and other tasks to ensure that all policies are truthfully implemented.

MA-tek Information Security Management System Organization Chart



Annual key information security implementation measures

In order to avoid external attacks and leakage of sensitive data, MA-tek has been continuously strengthening its information security protection capabilities to ensure that confidential customer information and the Company's information assets are not exposed to risks. MA-tek continues to strengthen our information security protection measures by formulating the Information Security Improvement Plan every year. In 2021, we implemented four major information security enhancement operations, with the scope covering the enhancement of software and hardware facilities, establishment of backup environment mechanism and the optimization of information security operation processes.

Information Security Risk Identification and Countermeasures

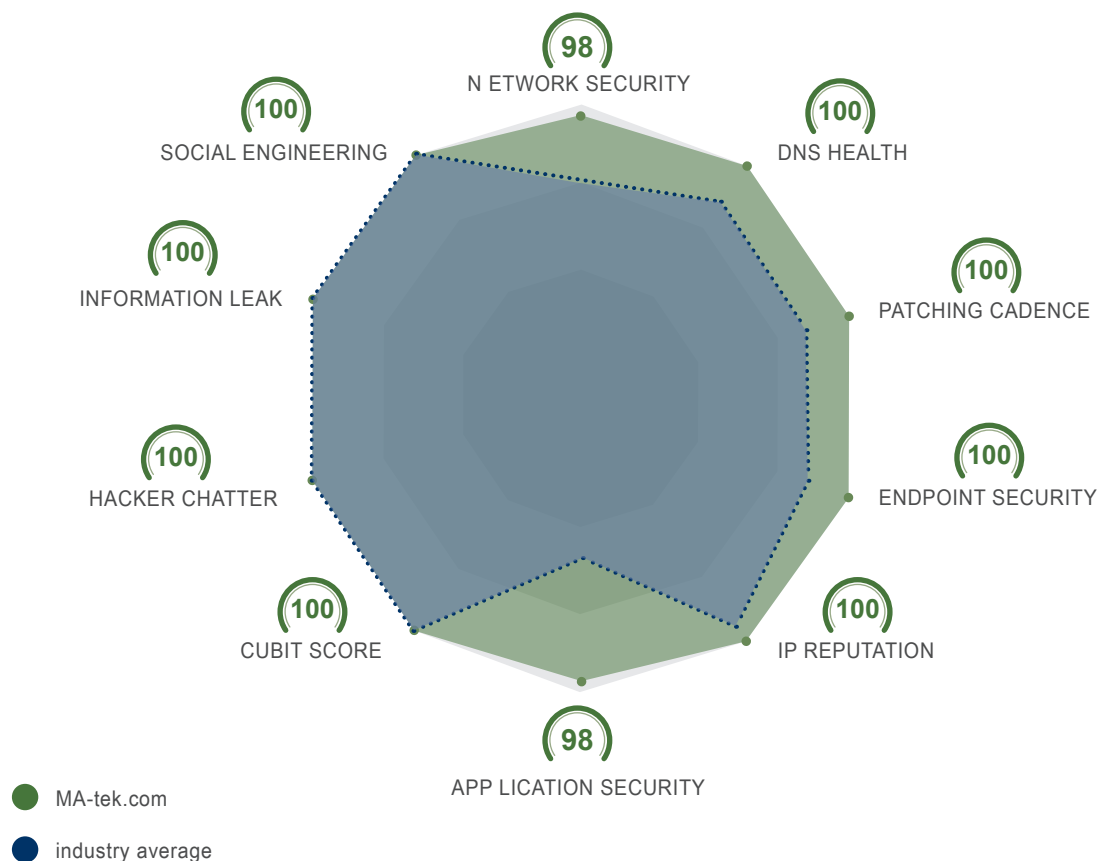
In order to proactively prevent information security violations, MA-tek installed the Security Scorecard Report Network Information Security Risk Management System, and continued to pay attention to the risks which may be brought by each third party in the information security ecosystem. The system evaluates and identifies the risk level of the Company's network by 10 key security risk factors, which reveals the security status of the organization and the security risk profile of its suppliers. The assessment rating of MA-tek in December 2021 was Grade-A, which has a high degree of information security protection capabilities.

Generated December 13, 2021
by It Infra (it_infra@ma-tek.com), MA-tek

A **99**

VULNERABILITIES	MEASURE
Open Ports	4
Site Vulnerabilities	7
Mal ware Discovered	0
Leaked Information	0

Industry Comparison : Technology



In 2021, MA-tek conducted the annual risk evaluation through the ISO 27001 risk identification process. Based on the six key topics discussed by the Information Security Management Promotion Team, points will be multiplied aiming at three aspects of "Information Asset Value," "Weakness" and "Threat," to identify the risk index exceeding a certain threshold and need immediate risk improvement. In 2021, a total of four high-risk information security issues have been identified, and MA-tek has developed relevant countermeasures for these four issues, to correct and prevent them as soon as possible, to establish a strong information security protection physique, and reduce the possibility of any security breaches.

ISO 27001 Risk Identification Process and Method Description



Generate the identification risk items according to the form of each asset group



Evaluate the Risky Items



Generate Risk Improvement Plan



Gather Statistics of Risk Assessment Results



Execute Risk Improvement Plan

High-risk information security issues and key measures for risk improvement in 2021

High Risk Matters	Root Cause Analysis	Corrective and Preventive Measures
Network structure environmental protection for factory expansion and new computer room construction.	In response to the organization's business expansion, the original factory area expansion requirements	<ul style="list-style-type: none"> · Computer Room Renovation · Replacing old core network equipment with new ones · Expansion and enhancement of data storage
Construction of an important host backup environment to prevent ransomware attacks.	In response to data/information security protection, the organization establishes an important host backup environment and measures to maintain the continuous effectiveness of operations, in order to verify the effective operation of the measures to maintain the continuous effectiveness of operations	<ul style="list-style-type: none"> · Build an important host disaster recovery host (Barcode, PMS, UFast, Lab portal, DB) · Choose a disaster recovery host for continuous operation drills every year (Barcode system was selected for drills in 2021)
Remote operation environment information security enhancement	In response to the impact of the COVID-19 epidemic, customers/employees remote operation requirements	<ul style="list-style-type: none"> · Remote operation endpoint software and hardware equipment environment settings and protection · Applying for authorization to open a VDI remote link tool account, no storing of data in endpoints · Remote operation guidelines operating instructions and information security publicity
New Site Information Security Protection Mechanism Settings	In response to the needs of the organization's business expansion, the establishment of new leased sites	<ul style="list-style-type: none"> · Establish an IT equipment maintenance room in the new site, and build Site2Site with network equipment and the old site · Confirm and set up the required network endpoints and communication environment · Build the data /information security protection measures with existing standards and systems · Set up access control and authorize personnel to enter and exit

Confidential Information Protection

MA-tek attaches great importance to the protection of personal data. Customer confidential information is the core of our protection, and it is also the Company's absolute competitive advantage. The MA-tek official was newly updated and online in January 2021, that is, updated the privacy policy and terms of use of the pages in Traditional Chinese, Simplified Chinese, English and Japanese in accordance with the EU GDPR Directive, and established the Cookie Policy, emphasizing when MA-tek collecting, processing and using personal data, in addition to taking necessary protection measures, also ensure compliance with laws and regulations. There was no incidents related to personal privacy leakage in 2021.

In addition to the continuous effective management and optimization of key technologies, MA-tek also implements the protection of confidential information between our customers and manufacturers through the signing of confidentiality agreements. When employees resign, the non-disclosure operation must be implemented truthfully to reduce the risk of leakage and ensure the best interests for all customers and stakeholders, and MA-tek will continue to upgrade our information security protection and become a trusted experiment partner of all technology factories.



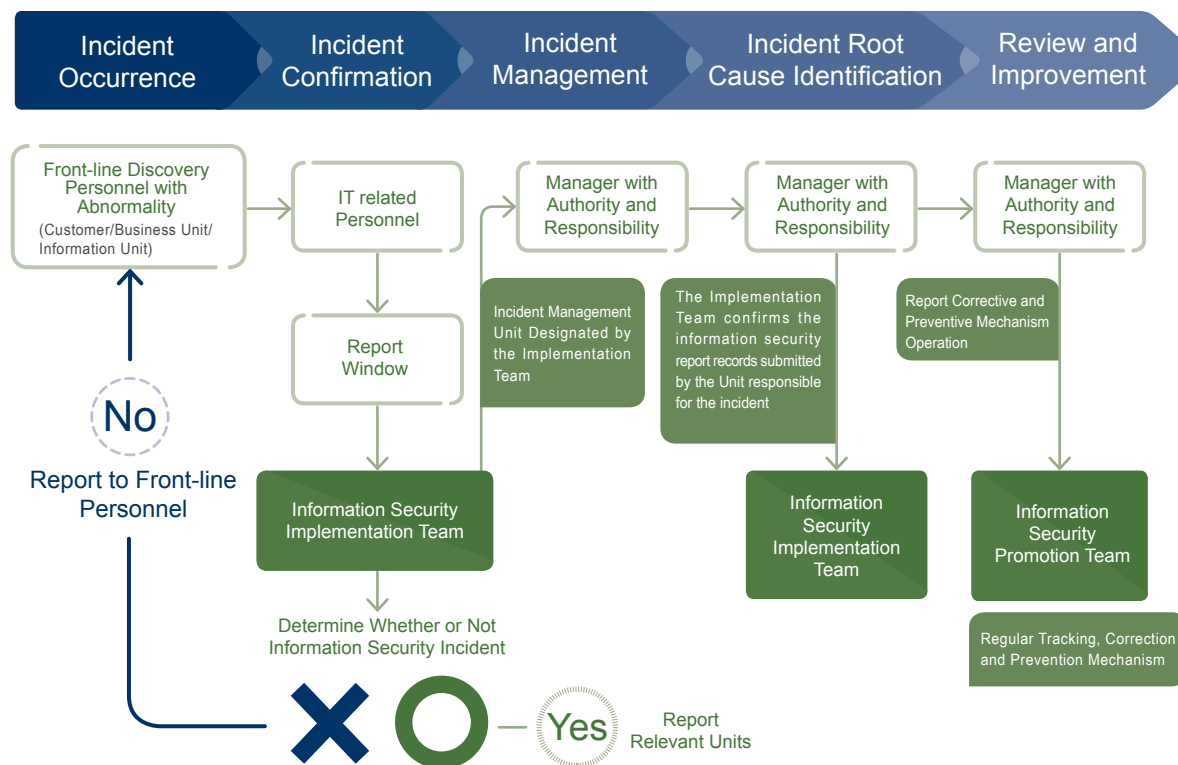
Privacy Policy



Terms of Use

Information Security Incidents and Reporting Mechanism

In order to prevent and properly manage the occurrence of relevant information security incidents, MA-tek has set up the Information Security Incidents and Reporting Mechanism. When the customer, front-line personnel of the Business Unit or Information Unit discovers and reports abnormalities, the incident processing operations will be initiated subsequently, and the Information Security Management Promotion Team and the Implementation Team will work with related personnel and the manager with authority and responsibility to eliminate the incident. Under the continuous implementation and enhancement of information security measures, MA-tek did not receive any complaints of infringement of customer information in 2021, and no incidents of information leakage, theft, or loss of customer information occurred.



Information Security Education and Training

In addition to strengthening the information security protection through various policies and measures, MA-tek also attaches great importance to the concept of information security protection of our colleagues. MA-tek's Information Security Management Implementation Team organizes various kinds of information security education and training every year. Our education and training forms include physical courses, email promotion, and circulation of printed teaching materials. The content of Information Security Education and Training covers the Company's information security measures, government decree announcements, incident reporting procedures and other policy descriptions. At the same time, we also include major information security incidents that occur domestically and internationally into the teaching materials, so as to enhance colleagues' awareness and alertness of information security incidents. Through various kinds of training and promotion, we hope to establish MA-tek's information security culture and allow the implementation of information security to become the mission and goal of every colleague.

Information Security Education and Training			
Training Subject	Training Form	Number of Participants in 2020 (person)	Number of Participants in 2021 (person)
New Employee Information Security Education and Training	Physical Course	103	92
Management Information Security Education and Training		97	87
In-service Colleague Information Security Training	Circulation of Printed Teaching Materials	All In-service Employees	All In-service Employees
Ransomware Information Security Protection Promotion	Email Promotion	All In-service Employees	All In-service Employees
Information Security Online Test	Online Test	510	587

Key points of routine information security promotion





A Workplace for Growing Together

Talent is the Cornerstone of MA-tek and the Core of Technology

For a long time, we have unceasingly focused on talent cultivation, actively promoting industry-academia connection, supporting academic research programs, and strengthening the connection between theory and practice. We have also planned systematic training programs for in-service employees, to cultivate the core competence of colleagues through continuous learning. In order to ensure a safe working environment, the Occupational Safety and Health Committee regularly conducts environmental operation monitoring, and provides complete safety protection equipment for employees carrying out high-risk operations to reduce risk hazard factors, and the creation of a happy and safe workplace environment is our responsibility and commitment to employees.

4.1 Talent Composition of Professional Teams

Listen to the voices of MA-tek employees

MA-tek's R&D and Management Teams are the elite of the Hsinchu Science Park. The main goal of MA-tek's establishment is to cooperate with the development of national strategic industries and to engage in high-tech R&D services, in order to provide materials analysis and failure analysis services related to IC, TFT-LCD, compound semiconductor materials and components and solar energy, as well as all types of electronic part industries. In 2021, a total of 10 laboratories were set up in Hsinchu area, Tainan, Shanghai, Xiamen, and Nagoya, Japan, and started using the 11th base of operations Zhubei Lab II and the 12th base of operations Tainan Lab II in 2021.



You are very welcomed to join us.



What the Company values is not academic qualifications, but development and hard work.

Ting-Yu Hu
Laboratory Engineer



In the teamwork atmosphere and unrestricted working environment, colleagues will provide assistance when encountering problems at work, willing to give employees unlimited opportunities for growth, and to treat employees well.

Keng-Chieh Chu
Laboratory Engineer



When ready to accept the challenge, there is a stage for connecting with international standards. There are many opportunities for overseas assignments to increase career experience and growth.

Cheng-Yu Huang
Assistant Manager, MA-tek Shanghai



Highly integrated, with the best and fastest analysis technology service advantages.

Ming-Ching Huang
Vice President,
Surface Analysis Division

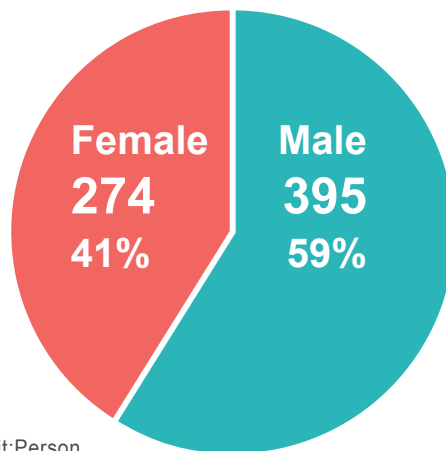
Employees Composition

MA-tek understands that the diverse composition of employees is an important element of organizational development, so MA-tek provides various types of job positions for the diverse and appropriate development of employees. In 2021, MA-tek had a total of 678 employees, of which 41.3% were female, 58.7% were male, 3 colleagues with disabilities, and 6 colleagues were indigenous people.

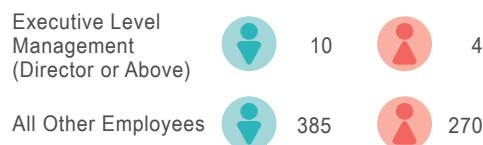
Employee Diversity Composition

Employee Diversity Indicator (Unit:Person)	Disability	Indigenous
Number of People	3	6

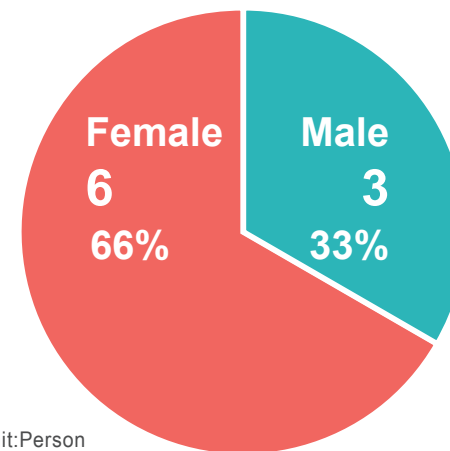
Full-time Employees



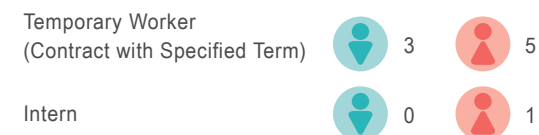
Unit:Person



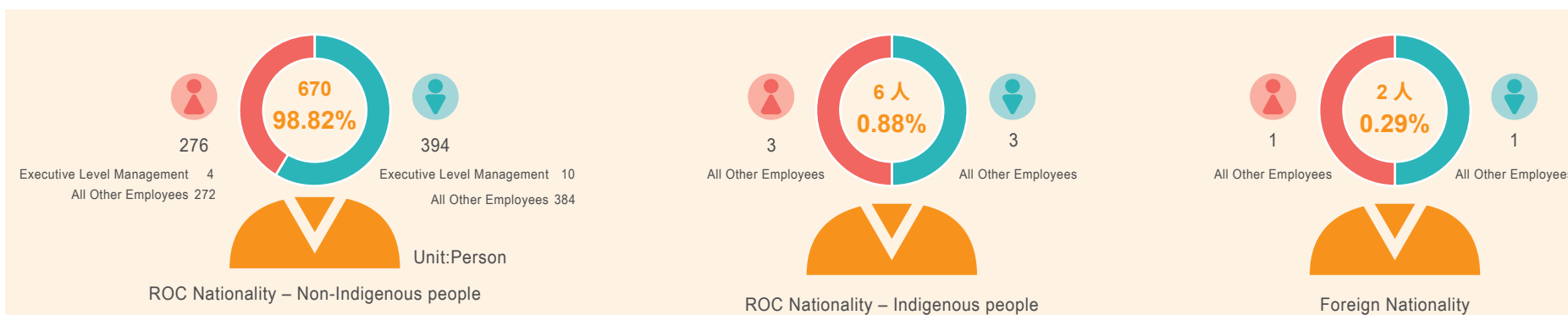
Part-time Employees






Unit:Person



Race/Ethnicity (Nationality)



Percentage of Employees in Each Employee Category

 Female	Age	Under 30 Years Old	31-50 Years Old	51 Years Old and Above	Total	Percentage
	Person	88	186	6	280	41.30%
 Male	Age	Under 30 Years Old	31-50 Years Old	51 Years Old and Above	Total	Percentage
	Person	128	242	28	398	58.70%
 Total	Age	Under 30 Years Old	31-50 Years Old	51 Years Old and Above	Total	Percentage
	Person	216	428	34	678	100%
	Percentage	31.86%	63.13%	5.01%	100%	-



Statistics of New and Resigned Employees

MA-tek continues to grow with the promotion of business; therefore, the number of employees also increases continuously. In 2021, both the number of male and female employees showed a growing trend. In addition, MA-tek understands that talents are an important driving force for the Company's operation and growth, so MA-tek actively provides excellent compensation and benefits to increase the retention rate.

In 2021, the total number of new employees of MA-tek was 191, and the percentage of new employees was 28.2%; in terms of resignation, the total number of resigned employees was 129, and the percentage of resigned employees was 19.0%, of which the number of voluntarily resigned employees was 128, and the voluntary resignation rate was 18.9%, the number of involuntarily resigned employees was 1, and the involuntary resignation rate was 0.1%.

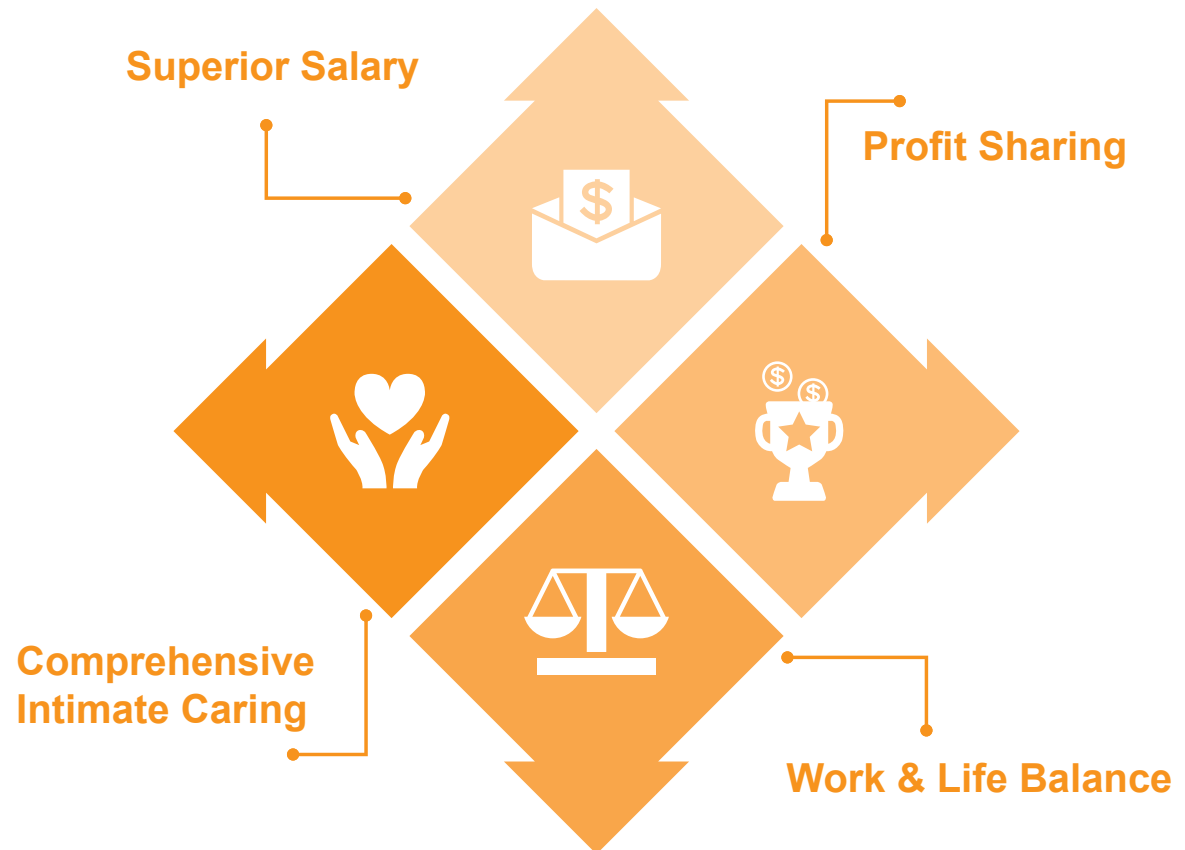
Statistics of New and Resigned Employees (Unit: Person)		MA-tek (Taiwan Area)									
		Under 30 Years Old		30-50 Years Old		50 Years Old and Above		Female		Male	
		Number of People	Percentage	Number of People	Percentage	Number of People	Percentage	Number of People	Percentage	Number of People	Percentage
Statistics of New Employees		116	17%	67	10%	8	1%	80	12%	111	16%
Statistics of Resigned Employees	Voluntary	49	7%	74	11%	5	1%	57	8%	71	11%
	Involuntary	0	0%	1	0%	0	0%	0	0%	1	0%
	Subtotal	49	7%	75	11%	5	1%	57	8%	72	11%

Note: The percentage of new employees, the percentage of resigned employees, the voluntary resignation rate, and the involuntary resignation rate are calculated by dividing the number of employees in this category by the total number of 678 employees at the end of 2021.

4.2 Excellent Compensation and Benefits

MA-tek provides multiple welfare measures to create a happy workplace environment for employees. MA-tek not only provides statutory employee benefits, but also allows employees to enjoy annual health examination and consulting services, annual long-term employee rewards, excellent counselor rewards, employee group insurance, marriage and childbirth subsidies, employee professional course continuing studies assistance, employee travel subsidies, hospitalization and bereavement condolences, gift coupons for festive occasions (birthdays/Dragon Boat Festival/Mid-Autumn Festival) and other employee benefits.

Affected by the epidemic in 2021, some employee activities and employee travel were suspended until the fourth quarter before starting again in succession. The Company's Welfare Committee changed the budget to distribute welfare meal coupons and gift coupons to colleagues. Even under the influence of the epidemic, MA-tek not only did not reduce employee benefits, but also listened to employees' voices through questionnaire surveys, greatly increased the amount of year-end bonuses, and added reserved parking spaces for pregnant women to provide more perfect workplace maternal and child care, creating a safe and happy workplace.



Compensation System

The semiconductor industry has always been the area for contending over Taiwan's talents, and retention is a key issue for MA-tek. Therefore, as the company grows and the industry drives salary adjustments, MA-tek believes that a compensation system superior to that of the industry and various bonus systems is the focus to ensure the stable development for the Company. Therefore, MA-tek provides multiple bonus systems to enhance employee salaries and benefits, including quarter bonus and annual bonus based on operational performance and personal work performance, as well as industry-unique technical unit points bonus and skill allowance, to provide corresponding incentive mechanism according to different job functions, hoping to attract outstanding talents to join and stay.



Salary

Fixed 14 months (including Dragon Boat Festival Bonus, Mid-Autumn Festival Bonus and Year-end Bonus).

Shift Allowance

Show solicitude for those who work for shifts

Annual Salary Adjustment

Adjusted according to personal work performance.

Quarter Bonus

Distributed according to the department target achievement rate and the Company's profitability.

Annual Employee Bonus

Distributed according to the job category, personal performance and the Company's profitability.

Points Bonus

Give an additional high amount of Points Bonus every month according to the number of all completed customer cases.

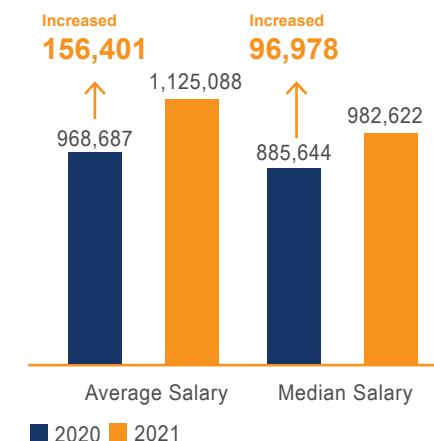
Skill Allowance

The Company provides training to improve the skills of employees. For those who pass the skill upgrade evaluation, each level will be given an additional skill allowance every month.

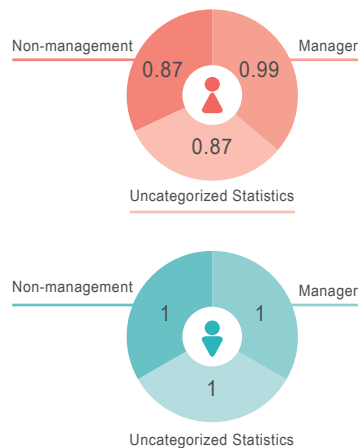
Furthermore, in order to demonstrate MA-tek's emphasis on employee compensation and benefits, we also follow the regulations of the Taiwan Stock Exchange to actively cooperate with the disclosure of salary information for employees who are not in management positions. In 2021, for full-time employees not in management positions in MA-tek's Taiwan area, the average salary was NTD 1,125,088, an increase of NTD 156,401 compared to 2020; and the median salary was NTD 982,622, an increase of NTD 96,978 compared to 2020, and both showed an upward trend, improving the salary competitiveness in the technology industry market, and showing MA-tek's affirmation of the continuous efforts of colleagues at the same time.

Item	2020	2021	Differences
Number of full-time employees not in management positions (Unit: Person)	538	567	Increased by 29 persons
"Average Salary" for full-time employees not in management positions (Unit: NTD)	968,687	1,125,088	Increase of NTD 156,401
"Median Salary" for full-time employees not in management positions (Unit: NTD)	885,644	982,622	Increase of NTD 96,978

Note 1: Disclosure based on the "Taipei Exchange Rules Governing the Preparation and Filing of Sustainability Report by TPEX Listed Companies" of the Taipei Exchange.



Compensation Ratio of Employees in Taiwan by Gender



Note: The definition of Management is employees above Section Level

Long-term incentive measures – treasury stock repurchase and transfer employee incentive plan and project talent retention plan

In order to motivate employees and enhance their centripetal force, in 2021, MA-tek formulated the company's share repurchase and transfer to employee regulations in accordance with the Securities and Exchange Act. The executive of each business group shall submit a list of full-time employees with special contributions to be eligible for subscription. The Company shall assign the number of shares for the employees based on the job grades, seniority, significant contributions and development potential, to be approved by the Chairperson. For the management position in the list will be submitted to the Remuneration Committee for consideration and then submitted to the Board of Directors, so that employees have the opportunity to share the results of the Company's profit growth. In addition, the Company issues retention bonuses based on job grades, seniority and significant contributions, and with signing of retention agreements, to motivate outstanding employees to stay in the job. Both work performance and retention desires show a positive trend.

Various Benefit Policies

MA-tek provides diverse benefit measures, to create a happy workplace environment for employees and provide employees with multiple employee benefits. Besides generous bonuses, we hope to create a warm workplace where employees can develop happily and healthily; therefore, MA-tek provides a variety of comprehensive benefit measures, caring for the needs of every colleague.



Protection with Peace of Mind

- In addition to labor insurance and health insurance in accordance with the law, MA-tek also helps employees take out group insurance and other forms of protection for free (including life insurance, accident insurance, medical insurance, cancer insurance, etc.), and provides preferential family group insurance plans.
- Colleagues on overseas business trips also have travel safety insurance to increase the overall protection for employees.
- Employee pensions are contributed in accordance with the law to take care of the retirement life of colleagues.
- Health examination is provided every year, and factory stationed nurses are appointed to provide health education and care consulting services.



Life in United Efforts

- Rental allowances or transportation allowances are provided to solve the problems of colleagues in other counties and cities when they leave their hometowns for work.
- The Welfare Committee provides wedding, funeral and festival celebration gifts, maternity benefits, hospital consolation money, birthday gift coupons, Mid-Autumn Festival, Dragon Boat Festival and May Day gift coupons.



Heart-warming Workplace

- Monthly party (afternoon tea time), quarterly department meals, and night shift colleagues also enjoy a supper surprise late night snack every week.
- Warming employees' hearts by providing free relieving massage.
- Provide reserved parking spaces for pregnant women, breastfeeding rooms and maternal care centers, and continue to track and care for one year after childbirth.



Rich and Abundant Activities

- Multiple club activities (such as board game club, yoga club, painting club, Japanese language club, etc.), colleagues can balance their lives while taking a break from work.
- Family day, Christmas party, singing competition, hiking day, annual reservation of VIESHOW CINEMAS for movie viewing, special store discount goodies, year-end party, other get-together parties, and social welfare activities to give back to the society.



Multiple Benefits

- Employees can enjoy special leave that is better than the stipulations specified in the Labor Standards Act from the date of employment. In addition to that, a flexible leave system allows employees to arrange the use of leave more independently, and gives colleagues the required leave according to law.
- Employee stock ownership has been provided since 2020 as a Company benefit.
- Provide "High Referral Bonuses" to encourage "Employees Referring Employees," and welcome outstanding work partners to join MA-tek.
- Provide "High Employee Travel Allowance" for employees to maintain the quality of life after work.
- Increase the "Year-end Ha Ha Bonus" greatly to provide employees with noticeable benefits at the end of the year.

4.3 Diverse Recruitment and Talent Development

MA-tek places employees in the center, upholds the principles of various labor and ethics policies, puts an end to the behaviors of infringing and violating human rights, and in the employment, management and development of employees, MA-tek is devoted to creating a friendly, fair and just workplace environment for employees.



Details of Labor and Ethics
Policies

Labor and Ethics Policies

Labor Policy

MA-tek established the Labor Policy to protect the rights and interests of employees, protect employees from inappropriate discrimination and sexual harassment, provide sound salary and benefits and working hours, establish a diversified and effective communication mechanism, and provide diversified training and development opportunities to implement humane management.

Ethics Policy

In order to avoid conflicts of interests arising from personal matters and work, and strictly prohibit any form of corruption, extortion, and misappropriation of public funds, while protecting the privacy and intellectual property rights of customers, MA-tek has established the Ethics Policy, and provides mechanisms for complaints and the protection of whistleblowers to ensure MA-tek's honest operation principles.



Guarantee the Right to Work



Non-discrimination



Do Not Force Overtime



Maintain Wages and Benefits

Information
Disclosure

Identity
protection

Honest
Management

Fair Trade

Confidentiality
Mechanism

Recruitment System

Talent has always been the cornerstone of MA-tek's growth. In order to ensure that there is sufficient talent within the Company, MA-tek has established a Recruitment System, and has set the Human Resource Plan regularly every year to respond to the changing needs of personnel. In addition, we hope to have more opportunities to contact and invite outstanding personnel to join us, and continue to narrow the distance with talent through the four major channels of "Campus Intensive Cultivation," "Internship Program," "R&D Substitute Military Service," and "Government Agency Talent Recruitment," and establish the "Internal Talent Referral System" to encourage colleagues referring outstanding relatives and friends to join MA-tek. We also continue to strengthen connections with academic institutions at the same time, expecting to accumulate more R&D energy through cooperation with academic institutions to achieve a research ecosystem of mutual benefit for industry and academia.

Four Major Channels of MA-tek Recruitment

Campus Intensive Cultivation

Campus Recruitment, Corporate Briefing, Tsing Hua and Chiao Tung University RAISE project

Government Agency Talent Recruitment

Recruitment activities of county and city government Employment Service Stations, and recruitment activities of competent authorities

Internship Program

One-year Internship and Summer Internship for School Students

R&D Substitute Military Service

Apply for an R&D Substitute Military Service quota from time to time, military service as employment, and early career direction planning

Establishment of Human Resource Plan

Based on the Company's overall development and consideration, the Human Resource Plan is set up regularly every year in response to the changing needs of personnel.

Application for Manpower Needs of Each Unit

Whenever a unit needs to increase manpower when there is a resignation or a new job post, internal promotion or transfer shall be adopted as the principle. Based on manpower planning, each unit can choose to increase manpower by means such as internal promotion, transfer and external recruitment.

Recruitment and Selection of Personnel

When there is a manpower need caused by resignation or a new job post within a unit, if the promotion or transfer still fails to meet the unit's manpower needs, the unit shall submit the external recruitment needs and qualifications for the responsible personnel of the Human Resources Department to conduct recruitment and selection operations.

Campus Intensive Cultivation

In 2021, MA-tek participated in three campus recruitment activities. Among them, the fall recruitment of National Tsing Hua University was changed to online. The online recruitment platform used by the university is Gather Town, through the simulated online chat room like a video game, combined with functions of social community interaction, exhibition viewing, and space tours to bring a brand-new online chat experience for the rise of remote working. In addition, in order to guide elites from academia to industries and improve the competitiveness of key industries in our country, MA-tek specifically accepts the "Rebuild After PhDs' Industrial and Skill Expertise" Rebuild After PhD Industrial Skill and Enterprise (RAISE) planned by the Ministry of Science and Technology. It is hoped that talent can be successfully guided to key industries and services through the one-year employment training program.

Government Agency Talent Recruitment

In order to implement diversified recruitment, MA-tek also makes good use of government employment counseling resources to bring its corporate vision into the community without overlooking any talent. MA-tek participated in the recruitment activities organized by the Hsinchu Employment Centers in September 2021.

In 2021, in response to the epidemic, some physical recruitment activities were held online, we participated in a total of three physical activities and one online activity in 2021.

Physical Recruitment Event

Minghsin University of Science and Technology	2021/03/25
National Taiwan University of Science and Technology	2021/03/26
Hsinchu Employment Center	2021/09/10



Fall Online Recruitment

National Tsing Hua University
2021/10/01



R&D Substitute Military Service

In order to cooperate with our Country's economic development and effectively use the R&D expertise of servicemen to enhance our Country's talent R&D capability and competitiveness, MA-tek cooperates with the national military service system to provide R&D Substitute Military Service from time to time, allowing military service and employment to be carried out simultaneously, while letting students smoothly integrate into the workplace after graduation.

Internship Program

Based on the intensive cultivation of the campus and the training of future analysis and testing professionals, MA-tek has reached an agreement for a One-year Internship Program for senior students with the Department of Chemical and Materials Engineering of Minghsin University of Science and Technology, and for a Summer Internship Program with the Department of Materials Science Engineering of National Tsing Hua University respectively. In addition to achieving the principle of mutual benefit for internship cooperative teaching and practical training through setting the learning themes, planning complete education and training and actual practical work, it can also enable students to cultivate the attitude they should have in the workplace and to plan for their future career directions. If the performance is good, there is also the opportunity to transit from the internship to full-time employment.

Summer Internship

One-year Internship

Experiences of Employee
Transition to Full Time
Employment in 2021

Get a preliminary understanding of the work content and process of testing and analysis, for the students to get close to industry practices.

Cooperate with the Unit Manager to start learning from basic practice (such as machine operation), and provide basic practical operation opportunities to students according to their abilities.

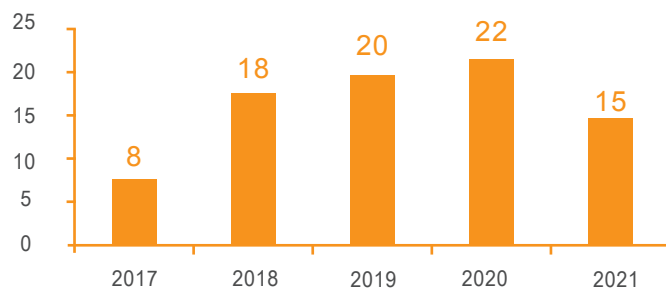
I chose to join MA-tek when I approached company for internship in my senior year. I didn't expect three months flew by. It was my first time to join this industry!

In the past three months of internship, at first stayed in the Reporting Team for a period of time, and then transferred to the Production Management Unit to challenge myself with different levels. So far, I have become more proficient, and my work has become more and more substantial. Most of my works are cases of handling VIP customers, so I have the opportunity to see the process of FIB extraction probe and sticking P.V., those are something cannot be seen in the school, and I also realized that the whole process from sample pretreatment, FIB to TEM is really not easy!

Internal Talent Referral

In order to increase the retention rate of talent, MA-tek has established a comprehensive recruitment system and plan. In addition to the four major recruitment channels, the "Internal Talent Referral System" has also been established. Internal colleagues are welcome to refer outstanding talents around them to join MA-tek. After the referral is successful, a two-stage bonus will be provided to the referrer after the referee takes up the job. In 2021, a total of 15 people were successfully recruited through the referral of colleagues, with a total bonus of NT\$207,500 awarded.

Number of Talent Recruitment



2021 Employee Training Statistics

Employee Category	Total Training Hours (hours)	Total Number of Employees in this Category (persons)	Average Training Hours
Female Management	465.5	43	10.83
Male Management	1,000.5	92	10.88
Female Non-management	1,066.5	237	4.50
Male Non-management	1,319.5	306	4.31
Total	3,852	678	5.68

Note: The definition of Management is employees above Section Level.

Talent Development and Cultivation

MA-tek attaches great importance to the cultivation and development of talent. In order to allow employees to have solid professional skills and continue to improve their professional capabilities, we continue to provide a number of training courses and arrangements, mainly divided into "General Knowledge Training," "Professional Technical Training," "Management Training" and "Environmental Safety Training." Every employee can receive the following at MA-tek:

- Comprehensive and solid new employee orientation training, internal professional skill training to continuously improve colleagues' professional capabilities.
- Encouragement for colleagues to participate in external professional technical training, with fully subsidized assigned training and approved internal and external training courses.
- Smooth promotion channels and overseas development opportunities, and the provision of excellent dispatch benefits.



Employee education
and training totaled

3,852 hours

Average training hours

5.68 hours



General Knowledge Training

MA-tek's General Knowledge Training includes New Employee Orientation Training, Information Security, Quality Management, Core Competency, and Language Training, to lay the foundations of the basic capabilities and cultivation of colleagues through such training. Quality Management and Information Security training are introduced in Sections "3.1 Technical Service and Quality" and "3.4 Information Security and Customer Privacy" respectively.

New Employee Orientation Training

In order to help new colleagues get to know MA-tek quickly we introduced the Company Profile, Introduction of Company Rules and Regulations, Occupational Safety and Health, Information, Quality System, Retrieving and Delivering/Requisition/Material, ESD Electrostatic Protection, etc., into the New Employee Orientation Training Courses, to improve the new employees' understanding and recognition of the company, and accelerate their integration into the corporate culture. In order to ensure that the new employees are fully taken care of, MA-tek has also established a new employee Mentor System, allowing senior colleagues to act as Mentors to assist new employees in integrating into the environment as soon as possible, and providing sufficient resource assistance, to enhance the new employees' sense of security and stability.

Purpose

In order to reduce the difficulty of adaptation for the new employees, a senior colleague will be arranged for each new employee reporting to work as their mentor. With the assistance and care of senior colleagues, new employees can be integrated into the environment as soon as possible, understand the company culture, adapt to the work content, also can increase their retention rate.



Mentor Job Duties

Before reporting to work

Discuss with the manager to draw up a training plan for the new employee after they have taken up their position, so that the new employee can be clearer about the future training goals, plans and tests.

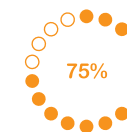
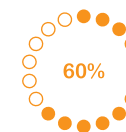
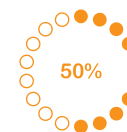
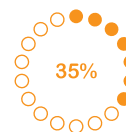
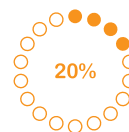
After reporting to work

Lead the new employee in familiarizing themselves with the work environment and job content, establish a close relationship with the new employee's work and life, assist the new employee in establishing a surrounding personal connection relationship, guide the new employee in familiarizing themselves with the work content, regularly report the new employee's learning status to the manager and make corresponding learning plan adjustments. Upon the end of the probation period for new employees, the mentor must fill out the relevant End of Probation Evaluation Form to provide counseling opinions as feedback, and remind the new employee to complete the online E-learning course.

General Knowledge Course

As a service industry in the technology industry, the purpose of general knowledge course is to cultivate colleagues' basic etiquette, service etiquette and how to make speaking more attractive and enhance the overall soft competitiveness.

Course Title	Course Content Summary
Clothing Etiquette (physical course)	<ul style="list-style-type: none"> MA-tek Corporate Culture dress code. Male/Female Office Duty Wear, Male/Female Business Wear, Male/Female Engineer Wear, and Male/Female Field Work Wear.
Service Etiquette (physical course)	<ul style="list-style-type: none"> Importance of service. Communication skills with customers. Etiquette when answering telephone calls.
How to make speaking more attractive (physical course)	<ul style="list-style-type: none"> How to speak with focus How to speak to touch other's heart Affectionate speaking skills The first impression determines the success or failure of speaking Good way to ask questions How to speak to persuade other party easily Create the charm of speaking



Professional Technical Training

In order to continuously improve MA-tek's professional capabilities, the management must arrange various training courses based on actual needs to improve personnel skills, including internal and external training, skills evaluation training, and personnel qualification certification. In addition, the Material Analysis Business Group and Failure Analysis Business Group have set up a Skill Upgrade System (T1-T5), and each level has corresponding skill development training, and continues to strengthen personal technical skills in accordance with the training map.

Internal Training

The CEO or the responsible manager of each laboratory may assign the training specialist of the laboratory to arrange for senior personnel to conduct education and training for laboratory members based on actual requirements.

External Training

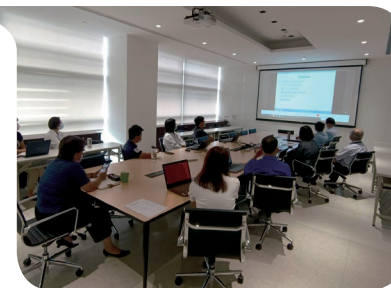
The CEO or the responsible manager of each laboratory may assign relevant personnel to participate in external education, training or seminars according to actual business needs.

Personnel Qualification Certification

Before the actual operation of machines, new laboratory personnel shall accept relevant appraisal technology courses. The appraiser shall schedule the date and complete the appraisal according to actual requirements. All appraisal records are recorded in the "Colleague Education Training Course Appraisal Implementation Record." Only those who pass the appraisal can perform operations.

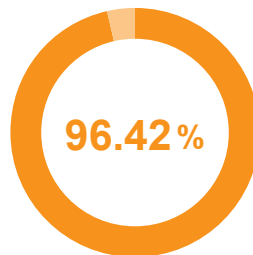
Management Training

When a colleague is promoted to manager, they must have the ability to manage the team in addition to their professional ability. MA-tek also provides managers with management training to strengthen their management ability in order to achieve excellence. In addition, business personnel need to serve customers on the front line, so MA-tek provides them with Customer Management and Service related training. Please refer to the introduction in "3.3 Customer Relationship Maintenance" for related training information.

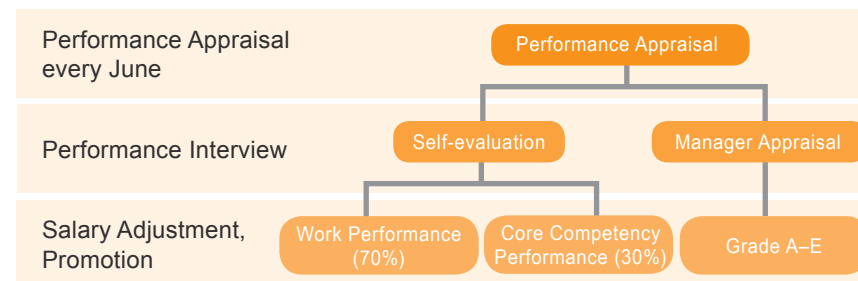


Employee Performance Management

MA-tek executes performance appraisal operations in June every year. The operation is divided into self-evaluation and manager's evaluation: self-evaluation is divided into two parts, work performance records (70%) and core competency performance evaluation items (30%); manager's evaluation is divided into five grades (A–E) according to the "Regulations Governing Performance Appraisal Management," and is conducted by employee performance interviews. The performance scores will be used for the management of annual salary adjustments and annual promotions. Excluding the contract personnel and the personnel who plan to resign, the proportion of employees receiving performance appraisal in 2021 was 96.42%.



Proportion of employees receiving performance appraisal in 2021



4.4 Friendly and Heart-warming Workplace

In order to create a people-oriented workplace and ensure that employees' voices can be heard by the Company, MA-tek provides opportunities for managers to listen to the voices of basic level employees and build internal consensus through multiple formal and informal communication channels to meet different demands. In addition, MA-tek also organizes many fun employee activities, including family days, parties, hiking days, clubs, as well as cultural and creative lectures to create a warm and homey MA-tek family.

Employee Suggestion Box

MA-tek has set up a family email box and a physical suggestion box, for the Human Resources Department to receive information on employees' suggestions. Whether the message is sent through the suggestion box or the family email box, if the sender's name is available, the Department Manager will be informed according to the specific content of the message, and the information of the colleague who sent the message will not be disclosed, or a response will be given to the relevant unit for improvement. If the sender's name is not available, the message will be handled separately depending on the content.



Management Monthly Meeting/Bimonthly Meeting/Employee Conference

Employees can put forward their suggestions and ideas at the Management Monthly Meeting, Bimonthly Meeting or the Employee Conference, communicate with the management level openly and directly, and for the on-site manager to reply. The Chairperson also participates in the Employee Conference from time to time to get an up-close understanding of colleagues' suggestions and ideas, and personally explain the specific salary and benefit system and major policy promotion.



Labor–Management Communication Channels

Good two-way communication is the key to build a harmonious employee relationship. In order to achieve the purpose of effective communication and problem solving, MA-tek provides the following channels for employees to provide feedback and opinions, establish a smooth communication channel in multiple ways, and enhance colleagues' recognition of the Company and centripetal force.

Labor–Management Meeting

MA-tek regularly organizes Labor–Management Meetings once every three months in accordance with the regulations specified in the "Regulations for Implementing Labor–Management Meetings" and an ad hoc meeting may be held when necessary. MA-tek collects ideas and suggestions from employees through the Labor–Management Meeting and gives timely feedback.

Interview Form for New Employees During the Probation Period -Work Report

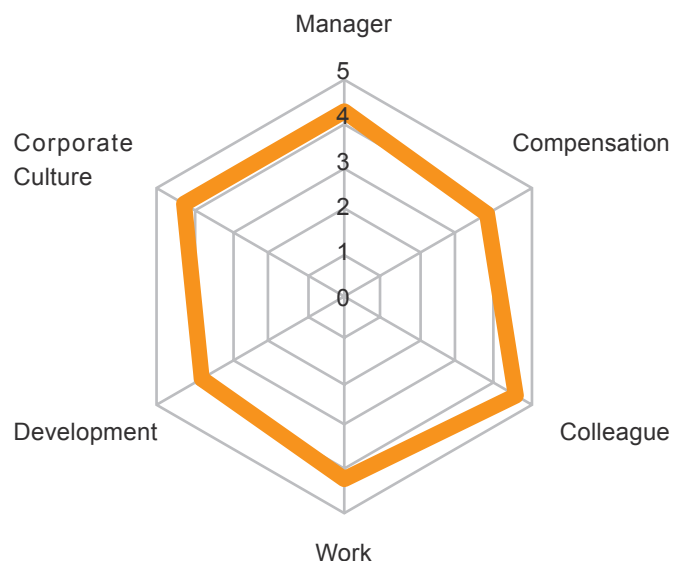
Through the Probation Period Report of new employees, new employees can report to their Managers on the situations they encounter during their probation period, so as to facilitate work adjustment and follow-up counseling, and increase the communication channels between employees and the Company.



In addition, in response to the "Act of Gender Equality in Employment," MA-tek has established the "Regulations for Establishing Measures for Prevention, Correction, Complaint and Punishment of Sexual Harassment." When employees experience sexual harassment, they can use the Company's complaint channels, including the sexual harassment prevention hotline and email mailbox, to make complaints. The entire process is handled in a confidential manner, so that the complainant is protected, and physical or non-physical sexual harassment is strictly prohibited. In 2021, MA-tek did not have incidents of sexual harassment in the workplace.

Employee Satisfaction and Engagement Survey

In order to understand colleagues' satisfaction with all aspects of work and to help plan for further improvement and optimization measures, MA-tek conducts surveys on job satisfaction every year. The 6 main aspects include Manager Management, Compensation, Colleague-related, Job Content, Future Development, and Company Culture, with a total of 24 sub-indices. In 2021, employees' satisfaction in all aspects were 4.2 points on average, which shows that colleagues have given high praise of the Company's policies and measures in all aspects. In addition, employees can also make suggestions and provide feedback to the Company through the satisfaction questionnaire. Looking back on 2021, the suggestions received through the satisfaction questionnaire were mainly suggestions for improving the travel and meal environment of employees. The Company also reviews and optimizes the results of the questionnaire, hoping to provide all employees with a good working environment and considerate workplace benefits.



Engagement Survey

In the overall employee satisfaction survey, one of the indicators includes the "Employee Engagement Contribution Survey," which includes value commitment, effort commitment, and retention commitment to understand employees' views on organizational commitment, and paired with the employee satisfaction survey as the reference for human resource measures.

Value Commitment

Recognize the company, be proud of the company

- I understand and agree with the vision, business philosophy and medium and long-term goals revealed by the company
- I am proud to be part of the company

Effort Commitment

Work hard for the Company and advance bravely

- No matter how the external environment changes, I am still willing to work hard and help the company develop
- For the company's operational needs, I am willing to cooperate with the Company's arrangements at work or organization

Retention commitment

Loyal to the Company and willing to stay for a long time

- Even if there are better jobs at other companies, I wouldn't consider leaving my current company
- Although I don't agree with some of the company's measures, I will not leave the company because of this

MA-tek commissioned a third-party unit (104 Job Bank) to conduct employee engagement surveys, following definitions of Gallup, Utrecht Work Engagement Scale (UWES-9), Grovo, etc., and using employee engagement levels corresponding to different levels. The survey questions include objective setting, help to achieve goals, training and development, workflow and commitment to the organization related topics. In 2021, MA-tek adopts a 6-point scale. The overall score of value commitment was 4.36, the overall score of effort commitment was 4.28, and the score of retention commitment was 4.11. A total of 84% of MA-tek's colleagues have achieved the grade of "positive engagement" in terms of engagement performance.

58%

Questionnaire Coverage

84%

Engagement
(Percentage of active engagement)

Diversified Employee Activities

In order to increase colleagues' cohesion and sense of identification with the Company, and to strengthen the concept of teamwork, MA-tek organizes diversified group activities every year to increase the opportunities for colleagues to communicate with each other and cultivate teamwork spirit. MA-tek regularly organizes fun activities for employees and family members to encourage employees to bring their family members to participate together, increase family members' sense of identification with the Company, so family members can become the strongest support for colleagues. Examples are family day, Christmas party, hiking day, basketball shooting contest, mystery room escape, year-end lucky drawing and other large-scale event activities. In addition, we also encourage our colleagues to form clubs and we provide subsidies for association activities, expecting to relieve the work pressure of colleagues and make them achieve a balance between work and life.

Employee Self-improvement Activities



2021 Manager's Beitou Tamsui Gathering



2021 Party



2021 Quarterly Department Meals

Club Activities

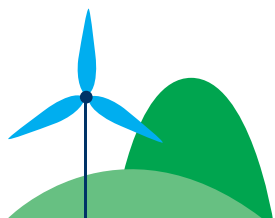
The Company provides club subsidies and encourages employees to call on friends with same interests to organize clubs and participate in employee club activities while taking a break from work to balance their lives.



Yoga Club

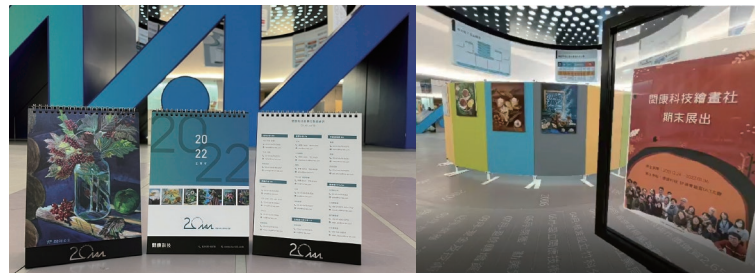


Board Game Club





Since its establishment in 2020, MA-tek Painting Club has always been a popular club in the Company. Chairperson Yong-Fen Hsieh has signed up for the first class, never missed any class, and filled the office with painting works. At the end of 2021, the MA-tek team has demonstrated its cross-border strength full of artistic energy in addition to science and technology, and held an end of term painting exhibition in the gorgeous hall of MA-tek SoC Lab, with the themes from Christmas to local scenery of Hsinchu, to demonstrate fruitful achievements of the past year with amateur paintings full of colors in profusion and vitality, to let everyone know that MA-tek is actually full of artist spirit under the appearance of professional engineers!



We also processed the works of the students of the Painting Club into a 2022 desk calendar to give to customers and guests as a gift, which is different from the desk calendar of the general public, not only allows customers to easily find the corresponding contact window of the technical unit, but also uses the MA-tek's intelligently designed KUSO slogan to express the state "temporarily leaving seats," "on vacations" and "on business trips," which are well received by customers, and even urgently added a second batch of desk calendars before 2022 to respond to the enthusiastic voices of customers.

Diversified Creative Lectures

MA-tek focuses on the importance of employee education and training, and deeply understands that assisting employees in lifelong learning is the key to the success of the Company. Therefore, MA-tek regularly organizes on-the-job and off-the-job training activities, so that employees can acquire the knowledge, functions and attitudes required professionally or in life, not only help colleagues to recharge at work, and also more cohesive in employees centripetal force.

In 2021, MA-tek specially invited Dr. Po-Lin Lin, a senior attending physician from the Cardiology Department of MacKay Memorial Hospital, to explain "How to avoid from stroke and myocardial infarction for the high-risk groups with high cholesterol" to MA-tek colleagues, reminding everyone to pay attention to the warning signals issued by the body, strengthening the concept of employees' self-health care; in the afternoon, the well-known host Li-Gang Tai was invited to share the secret of "How to make speaking more attractive," and teach the speaking skills of how to attract the attention of others as soon as speaking and let speaking become more lively and interesting.

MA-tek attaches great importance to cultivating talents. In addition to training employees to improve their core competency, MA-tek also cares about their physical and mental health and etiquette style of conversation, and provides multiple channels to encourage employees' self-improvement to become mature.



2021 Dr. Po-Lin Lin
"Avoid stroke and myocardial infarction"



2021 Li-Gang Tai
"How to make speaking more attractive"



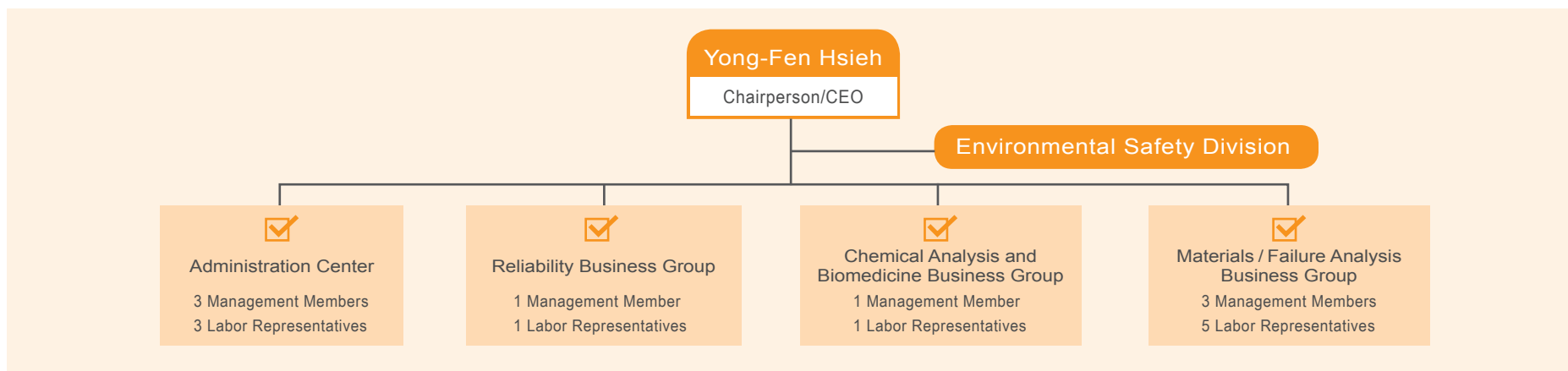
2021 Lawyer Sung-Mei Hsiung
"Intellectual Property Patent"

4.5 Environmental Safety and Health

MA-tek implements the principle that employees are the most important assets of the Company and believes that protecting employees and providing a safe working environment for employees is the Company's responsibility. MA-tek promises to provide a safe working environment and training to reduce risk hazard factors and establish a complete and transparent risk communication mechanism. Although the Occupational Safety and Health Management System has not yet been introduced at present, we still actively implement occupational safety and health management projects and strictly comply with the requirements specified in the Occupational Safety and Health Act and other regulatory requirements to establish a safe and secure working life without worries, improve the environment for employee safety, and maintain a foundation for stable long-term corporate operations.

Occupational Safety and Health Organization Committee

MA-tek has set up the Occupational Safety and Health Organization Committee with the Chairperson serving as the convener, composed of the Environmental Safety Division, 8 management members, and 11 Labor Representatives. It meets quarterly in accordance with law to explain the Company's environmental safety and health implementation status and policy promotion.



Environmental Hazard Assessment and Improvement Measures

In order to ensure that the Company can effectively identify risks and opportunities related to environmental safety and health to meet the expectations of the Company's internal and external stakeholders and all employees of zero environmental safety and health risks. MA-tek has set up the Environmental Hazard Identification and Assessment Process and the Laboratory Risk Hazard Identification Execution Plan, according to Article 31 of the Enforcement Rules of the Occupational Safety and Health Act to implement the occupational safety and health matters including identification, assessment and control of work environment or work hazards, change management and emergency management, to identify any matters that may affect the public safety of the laboratory or involve the environmental protection issues. MA-tek started to formulate plans in 2020, and completed the standard specification of risk and hazard identification procedures in the first quarter of 2020, including employee work arrangements, potential emergency response, and prevention of past industrial safety and environmental protection issues from recurring.

MA-tek emphasizes comprehensive risk control for all employees, and implements overall prevention during ordinary times, and encourages employees to report possible risks to their superiors immediately upon finding them to prevent the risks in time; and the Audit Unit actively supervises all Execution Units to follow the verification authority and related management practices and procedures to ensure the risk management awareness and degree of execution of all employees.

- ☑ Conduct risk and hazard identification and assessment of chemical operations.
- ☑ Distribute personal protective equipment to colleagues operating hazardous substances, to be worn and used when performing chemical operations, and provide emergency decontamination equipment for emergency response use. For the colleagues who operate the controlled radiation equipment, they must be trained to obtain the operation qualification certificate and retrained regularly every year, and carry out special operation health examination every year according to regulations, and issue personnel radiation armbands for wearing.
- ☑ The laboratory supervisor serves as the person in charge of "organic/special chemical" operations to strengthen supervision and guidance.
- ☑ Effectiveness inspection aimed at laboratory emergency response preventive equipment.
- ☑ Increase the frequency of cleaning and transportation for laboratory chemical waste liquids, to reduce the high risk of laboratory waste liquids.

Risk and Hazard Identification Implementation Plan

The Implementation Plan is initiated by the Environmental Safety Division, according to the implementation methods of "Plan," "Do," "Check" and "Action," to call the industrial Safety Committee members to explain the implementation of risk assessment. The committee members of each unit select the high risk factors of the unit for evaluation, and the Environmental Safety Division makes recommendations for improvement plans after confirming whether the evaluation method conforms to the actual situation and confirms the improvement results after implementation.

The high risk factors of each unit will be evaluated according to four aspects: "Harm," "Accident," "Incident" and "Risk."

Harm

Sources with the potential to cause personal injury and health effects.

Accident

"Accidental Event" or "Event of Loss" means an event resulting in obvious injury, property damage, ill health or death.

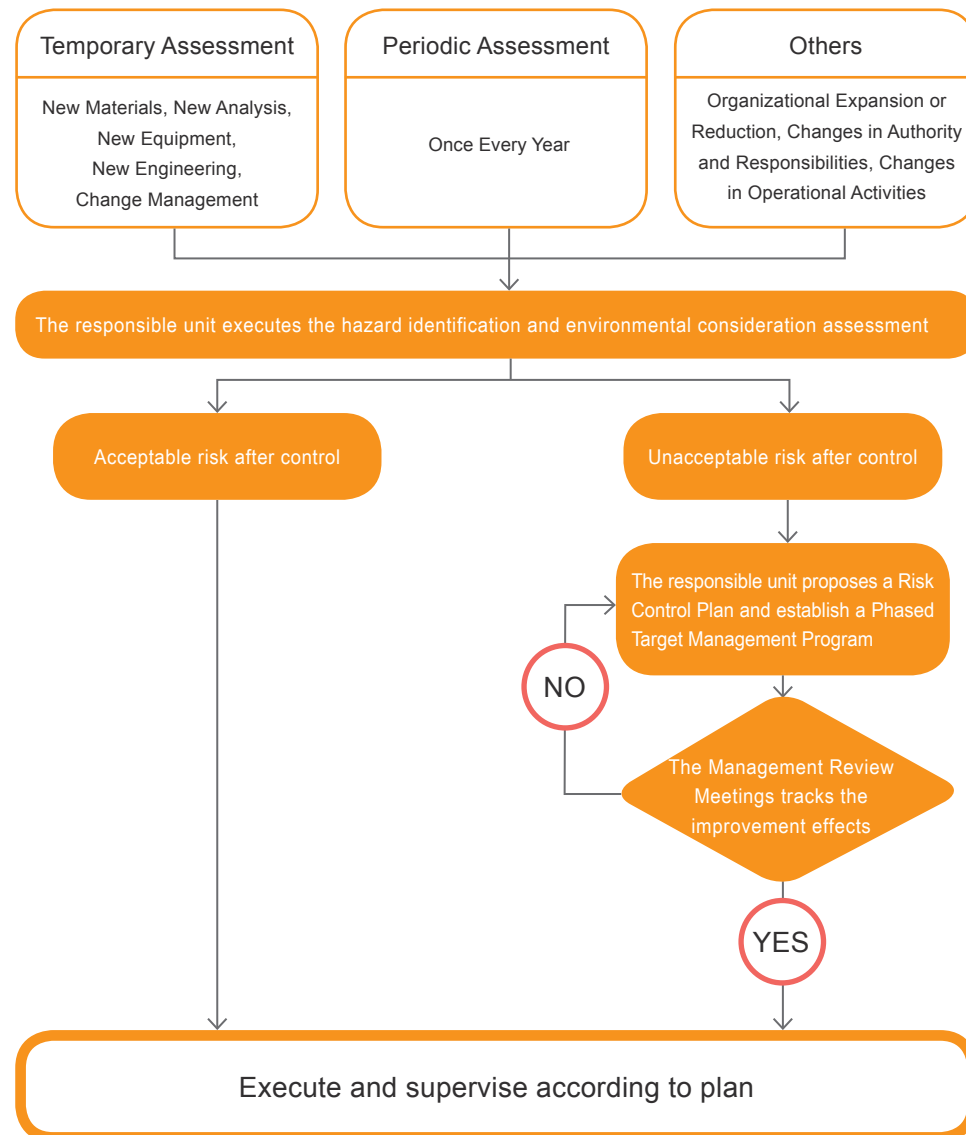
Incident

Deviation from proper procedures or the occurrence of harmful facts due to natural disasters or human intervention, but no quantifiable property losses such as personnel injury or equipment damage, etc.

Risk

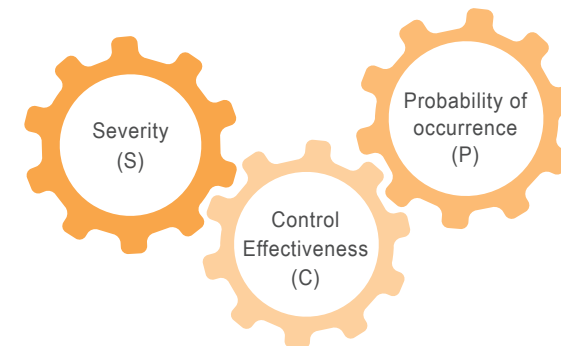
All uncertain effects affecting industrial safety and environmental protection.

Identification flow chart

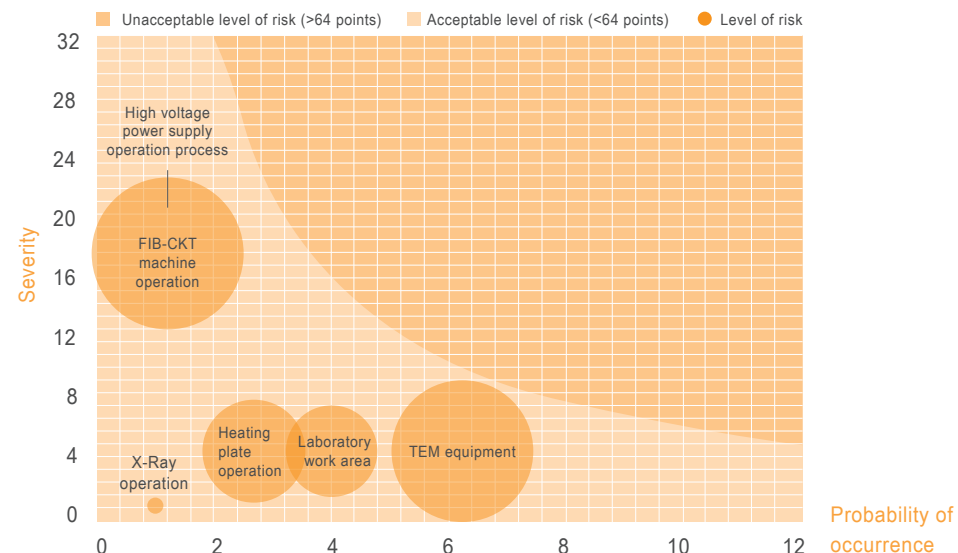


Score calculation

Conduct evaluation for each type of "Hazard Factors" and "Environmental Impacts," by Severity (S), Probability of occurrence (P), and Control Effectiveness (C).



In 2021, MA-tek conducted high-risk operation evaluation for each laboratory operation, and evaluated a total of six hazard risks, including "X-Ray operation," "High voltage power supply operation process," "Laboratory work area," "Heating plate operation," "FIB-CKT machine operation" and "TEM equipment." According to the MA-tek's Operating Procedures for Risk and Hazard Identification, the evaluation scores of each item did not reach the threshold of unacceptable score. The responsible unit will conduct continuous supervision, provide radiation dosimeters and other related equipment, and complete the personnel training according to the regulations, and obtain the operation qualification certificate; the Environmental Safety Committee also holds regular quarterly meetings to review and optimize, and assist colleagues to effectively monitor the safety of the operating environment.



Ma-tek did not have any occupational injury incidents in 2021. The details are as follows.

Occupational Injury Statistics in 2021	Employees			Intern			Contractor		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Total Working Hours	712,554	520,496.5	1,233,050.5	0	1,045.5	1,045.5	0	9,348	9,348
1.1 Number of deaths caused by occupational injuries	0	0	0	0	0	0	0	0	0
1.2 Number of serious occupational injuries (excluding deaths)	0	0	0	0	0	0	0	0	0
1.3 Number of recordable occupational injuries	0	0	0	0	0	0	0	0	0
2.1 Ratio of deaths caused by occupational injuries	0%	0%	0%	0%	0%	0%	0%	0%	0%
2.2 Ratio of serious occupational injuries (excluding deaths)	0%	0%	0%	0%	0%	0%	0%	0%	0%
2.3 Ratio of recordable occupational injuries	0%	0%	0%	0%	0%	0%	0%	0%	0%

Note: 1. Because the contractor's information for 2020 only includes the cleaning personnel of each laboratory, the other information of contractors is not included.

2. Ratio of deaths caused by occupational injuries = (Number of deaths caused by occupational injuries / Total working hours) * 200,000

3. Ratio of serious occupational injuries = (Number of serious occupational injuries / Total working hours) * 200,000

4. Ratio of recordable occupational injuries = (Number of recordable occupational injuries / Total working hours) * 200,000

Environmental Safety and Health Education and Training



MA-tek emphasizes the safety of the workplace, and actively promotes occupational safety and prevents occupational hazards with the goal of providing a safe working environment for colleagues. For the employees who operate the controlled radiation equipment, it is also required to be trained to obtain the operation qualification certificate and to be retrained regularly every year to reduce the occurrence of industrial safety accidents.

Fire-fighting Safety Education and Training



2021 Environmental Safety and Health Education and Training		
Training Program	Number of People	Total training hours (single training hours*single training number of people)
Occupational Safety and Health Education and Training	188	752
Hazardous Substance Education and Training	145	435
Radiation Operator_Initial Training	19	342
Radiation Operator_Re-training	27	81
Emergency Rescue Personnel_Initial Training	2	36
Occupational Safety Business Manager_Initial Training	1	42
Toxic and Chemical Concerns Professional Emergency Response Personnel Training	5	40
The First Pressure Container Operator	2	70
Firefighting Safety Training	17	136
Total	406	1934

Work Field Optimization

MA-tek understands that the work environment can drive better work performance and provides employees with a comfortable, clean and professional field so that everyone can maintain a happy mood at work. With such a virtuous circle, a happy workplace with a low absentee rate and high work quality can naturally be achieved.





In March 2020, according to the Labor Health Protection Rules, MA-tek hired 1 full-time occupational nurse stationed in the factory according to the range regulation of the Company's number of laborers as 300–900, and established a Health Center to provide employees with health education, caring and assistance, assist in performing physical health data analysis to help employees familiarize themselves with their own health status.

- Employee Health Classification: Classified according to the annual health report summary and medical level.
- Employee Health Tracking: Track the high-risk groups from time to time.

- Maternal Caring Center
- Employee Overload Analysis
- Workplace Violence Questionnaire



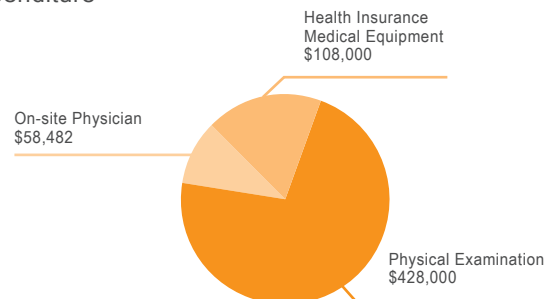
- Occupational Physician On-site Service
- Employee Health Consultation
- Laboratory Medical Equipment Check
- Milking Center
- Health Lecture



Occupational Safety and Health Expenditure

In order to ensure the overall work safety of employees, MA-tek strives to create a safe workplace. In 2021, MA-tek invested a total of NTD 1,220,774 in occupational safety and health with NTD 594,482 in "Employee Health Category" and NTD 626,292 in "Occupational Safety Category" respectively, which included employee health management, health insurance medical equipment expenditure, occupational safety and health education and training, and environmental safety maintenance equipment and safety inspection projects.

◆ 2021 Health Expenditure

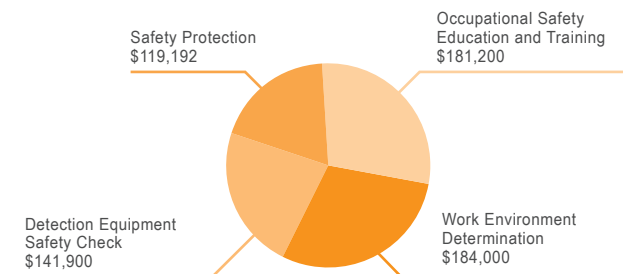


Babycare Measures and Benefits

MA-tek had a total 77 employees who were entitled to parental leave in 2021, and 9 of them asked for leave. The reinstatement rate and retention rate in 2021 were both 100%. Furthermore, the "Act of Gender Equality in Employment" 2021 stipulated 5-day leave for pregnancy checkups, MA-tek provided employees with 7-day leave for pregnancy checkups in July 2021 which is better than the days stipulated by the laws and regulations, for the employees accompanying expectant mothers and their spouses to have a safe pregnancy. Colleagues can also apply to the Welfare Committee and the Company for a total of NTD 5,600 in maternity benefits. In addition, employees who get married can also apply for a subsidy for a total of NTD 8,000.

Item	Male	Female	Total
Total number of employees entitled to parental leave in 2021	41	36	77
Total number of employees applying for parental leave in 2021	1	8	9
Number of people who should be reinstated after parental leave in 2021 (A)	1	3	4
Actual number of people reinstated after parental leave in 2021 (B)	1	3	4
Actual number of people reinstated after parental leave in 2020 (C)	0	3	3
Number of people who have worked for one year after actual reinstatement of parental leave in 2020 (D)	0	3	3
Reinstatement Rate % = B/A	100%	100%	100%
Retention Rate % = D/C	N/A	100%	100%

◆ 2021 Safety Expenditure





Public Welfare of the Industry-Academia Connection

5.1 Social Participation Strategy Themes

MA-tek has injected its commitment to Corporate Social responsibility at every level of operation, and spares no effort in Corporate Sustainability. In 2015, the United Nations announced the "2030 Sustainable Development Goals" (SDGs); MA-tek hopes to keep up with the three main issues of Environmental Protection, Society and Economy proposed by the SDGs to implement up to 5 goals through the activities of industry-academia cooperation of the "Precision Analytical Instruments Center," charitable donations, support for diversified education, care for disadvantaged people, and promotion of Taiwan's agricultural products and arts and culture, to successfully put social welfare into practice, and work hand in hand with society for the common good.

Precision Analytical Instruments Partner of the University



Common Prosperity Partners of Society



✓ Target of Assistance

- University and College Researchers (Professors and Students)

- Disadvantaged Groups
- Disadvantaged Students
- People with Disabilities
- Farmers
- Arts and Culture Workers

✓ Method of Assistance

- Provide academic and research units for research and development at the cost price
- Seeking for future research projects, providing R&D funding and high-end instrumental analysis services.

- Christmas Charity Gift Collection Event
- Provided financial assistance to schools to purchase remote teaching equipment
- Continue to invest in Blue Sky Home Project
- Support Campus Activities
- Provide employment opportunities for disadvantaged groups
- Support Taiwan's Agricultural Products
- Support Taiwan's Sports and Cultural Activities

✓ Social Impact

- Industry-Academia Cooperation
- Cultivate Industrial Talent
- Enhance Brand Influence in the Industry

- Improve the Education and Living Standards of Disadvantaged Groups
- Eliminate the Gap in Education between Urban and Rural Areas
- Realize the Self-worth of Disadvantaged Groups
- Support Taiwan's Fruit Farmers and Increase Their Market
- Support the Development of the Arts in Taiwan and Enhance the Arts and Culture Environment of Society

5.2 Precision Analytical Instruments Partner of the University

Industry–Academia Cooperation

MA-tek is committed to promoting the application of materials analysis in various fields of R&D, manufacturing processes and quality control. Since the establishment of the SoC Lab in Hsinchu Science Park in January 2008, MA-tek has continued to invest in advanced analysis equipment and gradually expanded the construction of laboratories for Failure Analysis and Reliability Testing to increase the speed of product research and development in the industry. At present, MA-tek has a relatively complete materials analysis laboratory and electronic and electrical engineering laboratory in Taiwan. Both equipment models and the number of machines are far ahead of universities and research institutions, giving MA-tek a leading position in the world. For a long time, MA-tek has implemented a “people-oriented” corporate philosophy, actively cultivating talent for industry–academia cooperation with various universities, and providing the Precision Analytical Instruments Center for tests at preferential prices at cost.

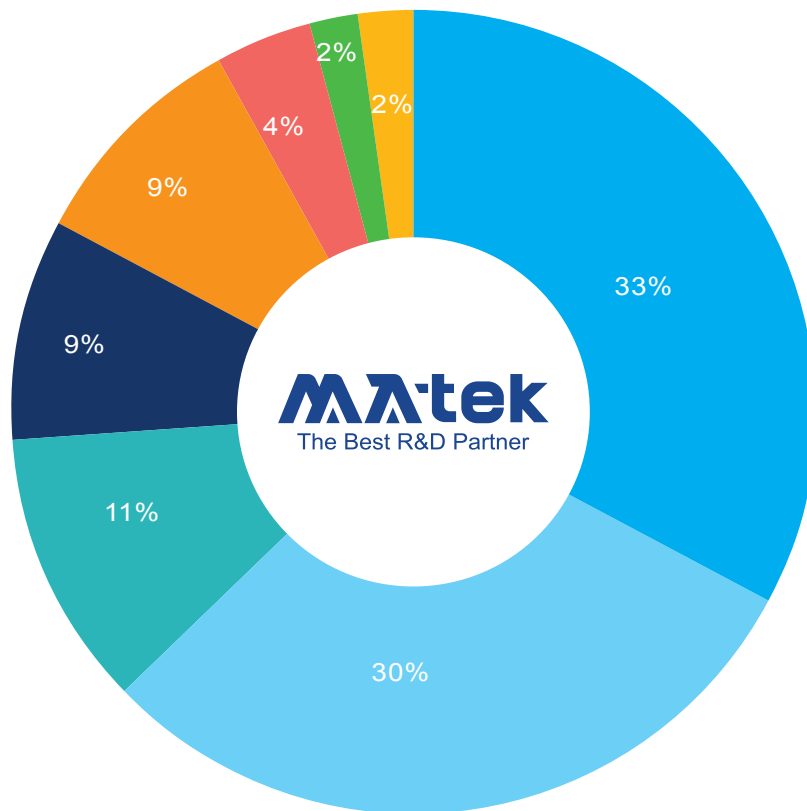
Since MA-tek's establishment, statistics show that hundreds of professors and graduate students have used MA-tek's laboratory to conduct research and development, letting academic researchers enjoy the most advanced electronic products, the latest materials and the most comprehensive R&D processes. By integrating business with the research resources from academia and cooperating to promote basic and applied research, a win-win situation for industry and academia is jointly created. In addition, MA-tek has from time to time donated second-hand instruments to institutions and academic units in need to expand our own industrial influence, establish industry benchmarks, and make our brand more prestigious and competitive in industrial research and development.



MA-tek has been sparing no effort in contributing to academic research units. In 2021, we further openly invited outstanding scholars to participate in research and development, including the joint participation of eight universities, namely National Taiwan University, National Taiwan Normal University, National Tsing Hua University, National Yang Ming Chiao Tung University, National Central University, National Chung Hsing University, National Cheng Kung University and National Sun Yat-sen University. MA-tek provided high-end analytical instrument services, and expects to invest about NTD 20 million every year; with the development of high-tech products and manufacturing, packaging, testing and systems as the main themes, and semiconductors, optoelectronic materials, manufacturing and packaging and other related fields as the priority, MA-tek will lead innovative talents and technology, not only strengthening and deepening the core of MA-tek's technology, but also promoting industrial upgrading.





2021 MA-tek
Industry–Academia
Cooperation Project
Approval Results



 National Yang Ming Chiao Tung University


 National Cheng Kung University


 National Tsing Hua University

 National Sun Yat-sen University

 National Taiwan University

 National Central University

 National Chung Hsing University

 National Taiwan Normal University

The 2021 annual plan has been openly soliciting the Industry–Academia Cooperation Project since May 1. As of the deadline for submission of June 15, more than 50 plans were received. The proportion of submissions from each university is 17 submissions from National Yang Ming Chiao Tung University as the most, followed by 16 submissions from Tsinghua University. For these many outstanding project applications, after careful discussion by the external review committee and experts in various technical fields of MA-tek, a total of 20 cooperation projects have been approved, targeting the aspects of innovative applications and technical challenges of each project.

Due to the limited number of cooperation projects, for the projects not selected, MA-tek also provides preferential prices for academic research, hoping to assist the front-end research project of the academia and research institutes to become more complete and rich through the support of research funds and preferential prices, and contribute our efforts in improving the analysis and testing quality in the research and development process and assisting in nurturing the development of future advanced technology.

5.3 Common Prosperity Partners of Society

MA-tek actively promotes social welfare. In addition to our commitment to society, we also hope to give back to society through corporate power. Chairperson Yong-Fen Hsieh takes the lead in charitable donations, establishing cooperative relationships with many non-profit organizations, and encouraging Company colleagues and their families to donate voluntarily and participate in the Christmas Charity Gift Collection Event, the Kenya, Africa – Used Shoes Collection Project, and the “Teach For Taiwan (TFT)” donation project, etc. MA-tek integrates and brings resources to give back to society, and is not falling behind in talent cultivation to reflect MA-tek’s support for diversified education. In 2020, MA-tek and Office of Deep Cultivation for Disadvantaged Groups of Tsing Hua University jointly set up a work-study fund to start the “Blue Sky Home Project,” and donated NTD 1 million to subsidize underprivileged students of Tsing Hua, inviting them to Blue Sky Home serving as counselors to put the diversity and equality of educational resources into practice. At the level of care for the disadvantaged, MA-tek combines company resources to provide employment opportunities for people with disabilities, implements care for disadvantaged people in employment, expecting to help more people and letting society be more sound and perfect.

The Company has also been concerned about the development of local agriculture in Taiwan for a long time, and actively promoted Taiwan’s agricultural products to help Taiwan’s small farmers survive. For the arts and culture industry, the Company encourages employees and their family to participate in arts and culture activities to enhance art appreciation and cultivate the body and mind at the same time, to achieve a balance in work and life. MA-tek develops corporate social responsibility out of its core values, spreading love and practicing the idea of helping others to benefit others, and exerting positive influence with actions, in hope of spreading love to every corner of society.

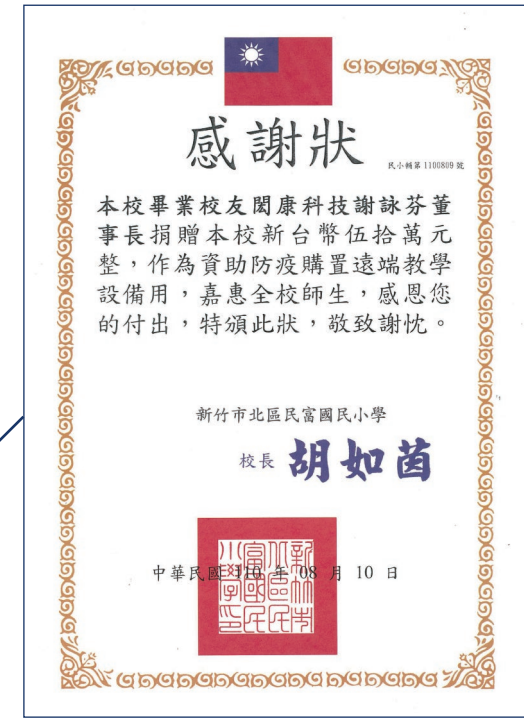
Charitable Donations

Christmas Charity Gift Collection Event

Since 2017, Chairperson Yong-Fen Hsieh has led MA-tek to join the ranks of gift collection, and encouraged employees and their families to voluntarily buy for Christmas wish gifts, including Christmas wish cards and Christmas shoe boxes for children in remote areas, by collecting more to achieve small self into big self, and inspiring the disadvantaged children who need to be cared for with warmth and happiness. However, due to the epidemic in 2021, we were notified to suspend donation activities. MA-tek will continue to care for the long-term cooperated Miao Li Love of Life Foundation, and take the initiative to return to the ranks of loving charity when the gift collection activities reopened.

Subsidy for the purchase of remote teaching equipment

Facing the continuous spread of the epidemic, campus education has been forced to transform into distance teaching, so it is faced with the challenge of insufficient hardware and equipment in schools or homes, whether it is the limitation of home network speed problems, or the lack of computers, peripheral hardware or vehicles, it will make the distance learning, which is highly dependent on networked devices, become very difficult. MA-tek donated NTD 500,000 to “Hsinchu Municipal Min Fu Primary School” in 2021 as a subsidy for the purchase of distant learning equipment to reduce the stumbling blocks in children’s learning caused by environmental factors.



“Municipal Min Fu Primary School”
Certificate of Appreciation

Support Diverse Education

Blue Sky Home Project

"Do not fail to do good no matter how petty the deed; do not engage in evil no matter how trivial the deed." MA-tek actively participates in social charity. Chairperson Yong-Fen Hsieh attaches great importance to the learning and development of young people, and has assisted disadvantaged students for a long time in her own name, supplementing this with all kind of resources. She expresses: "Young people are the masters of the country's future. Only by continuous education can there be hope for the future. By doing so, this program can get the ball rolling in attracting new ideas, to arouse more people to care for disadvantaged groups in society and to help the weak and aid those in need, so that every child can grow and become strong in the company of love."

Because of the compassionate heart that does not want children to lose their educational opportunities due to family reasons, through the strength of oneself and the corporation, MA-tek launched the "Blue Sky Home Project" with the Office of Deep Cultivation for Disadvantaged Groups of Tsing Hua University in 2020, to set up the work-study fund. Blue Sky Home is a halfway house for teenagers at risk, in order to solve the problems of facing rebellious period, academic pressure and making friends in addition to the great changes in the family, MA-tek provided NTD 1 million in 2020 to invite students from Tsing Hua University going to the "Blue Sky Home" to provide school tutoring for the children in the Blue Sky Home.

On the one hand, this Program can help the children of Blue Sky Home to receive guidance from the students of Tsing Hua University, and to be closer to the children and provide timely guidance through counseling, to promote the physical and mental development of children and adolescents. On the other hand, the students of Tsing Hua University can have work-study opportunities to increase their income, allowing the public welfare program to gain two advantages by one single move.



▲ "Blue Sky Home Work-Study Fund" Signing Ceremony

As of December 31, 2021, the sponsored fund has spent NTD 346,642 as work-study fund and related expenses for Mentors, with a total of 13 Tsing Hua University students served as Mentors to participate in this Blue Sky Home Project, with a total teaching hours of 1,610 hours. In the last semester of the 2021 academic year (September 2021 to January 2022), due to the severe epidemic situation, all changed to online video teaching, considering the students' learning condition, it was changed back to physical teaching in March 2022 when the epidemic eased. Before returning to the park, in addition to confirming the vaccination situation of each Mentor, the rapid testing fee was also subsidized to ensure the health and safety of all Mentors and students.

Taiwan Materials Science Microstructure Image Aesthetics Competition

MA-tek plays a leader in the industry with its electron microscope specialty, and has maintained a good interactive relationship with the Materials Research Society-Taiwan (MRS-T) for a long time, and exclusively sponsored the "2021 Taiwan Materials Science Microstructure Image Aesthetics Competition" hosted by the Chinese Society for Materials Science in 2021, with the groups divided into Scanning Electron Microscopy (SEM) imaging group, Transmission Electron Microscope (TEM) imaging group, Optical Microscopy (OM), X-ray or various imaging analysis instruments, hoping through the scientific properties of materials captured by the visual image analysis instruments, combining the imagination and creativity to convey the unique aesthetic qualities of scientific images. MA-tek not only focuses on providing customers with the most professional analysis services, but also contributes to cultivating outstanding professional talents, encouraging students in the field of material science to develop their creativity and imagination while cultivating professional skills, and enjoy the learning of boundless science.



▲ "Taiwan Materials Science Microstructure Image Aesthetics Competition" Awards Ceremony

Caring for Disadvantaged Groups

Provide employment opportunities for disadvantaged groups



For a long time, visually impaired people cannot be as free as ordinary people in their daily lives, learning, and interpersonal communication because of their relative inconvenience in independent mobility, and they are even subject to all types of restrictions and difficulties in self-realization. For disadvantaged people, general social welfare mechanisms and facilities can only provide support in their daily lives, but these are far from adequate for embodying their self-worth. How to help visually impaired people rebuild their confidence and dignity is an issue of the first priority. MA-tek actively responds to the care for disadvantaged groups, recruits people with disabilities and hires visually impaired people to provide massage services, and provides more opportunities for disadvantaged groups to integrate into the social system, so as to realize social value and enhance self-recognition, and also to provide the Company colleagues with a way to relieve stress and boost spirits through massage services to improve their work efficiency.

Local Support

Support Taiwan's Agricultural Products

Taiwan is currently the country with the largest planting area of sugar apples, the best production technology, and the best quality in the world, and Taitung, especially, is the most important planting place. Compared with the traditional sugar apple, the pulp of pineapple sugar apples is chewier, with high sweetness and a bit of sourness. Because it combines the aroma of pineapple, it is also called the "Pineapple (Prosperous) Sugar Apple." In the past, Taiwan's best pineapple sugar apples were mainly exported. In 2021, due to the impact of policy on the export of pineapple sugar apples, MA-tek purchased 500 boxes of pineapple sugar apples from the 40th Group of the Taimali Sugar Apple Agriculture Production and Marketing Groups, to support the local fruit with practical actions. Through this purchasing opportunity, MA-tek customers and colleagues can taste these delicious fruits from Taimali Township, Taitung County. The fruits are plump, rich, sweet and nutritious.



Support Taiwan's Sports and Arts and Culture Activities

In order to improve the social arts and cultural environment, cultivate the vision of art appreciation, so that employees and their families can have more exposure to art in life, enrich their lives and broaden their horizons, MA-tek purchases tickets for arts and cultural groups, concerts from time to time as gifts to employees and their families, to introduce diverse and international high-quality arts and cultural activities by means of art sponsorship, including the Mystery Theater of Mud River University, Faust Theater, and Folk Singer Concerts; it also encourage employees to participate more in arts and cultural performances and art exhibition activities, for them to have more opportunities to experience the artistic atmosphere, cultivates their body and mind while enhancing their vision of identifying art, and expands their broader vision.

In 2021, due to the epidemic, many opportunities for physical public welfare activities have been reduced. The Company still has plans to continue sponsoring sports competitions and other competition activities. During the 2021 Christmas holiday, customers were invited to the Hsinchu Municipal Gymnasium to support the Hsinchu local professional basketball team – Hsinchu JKO Lionees, and specially produced MA-tek's 20th anniversary joint commemorative jerseys, which were given to MA-tek employees and customers who attended the event as gifts, and arranged for the excellent players of Hsinchu JKO Lionees to sign autographs for everyone after the game, to spend a wonderful Christmas weekend together!





Green and Sustainable Operation

6.1 Climate Change and Adaption

Risks and Opportunities of Climate Change

As a member of the earth family, MA-tek cares about the sustainable development of earth, pays attention to environmental issues, and improves the environmental management mechanism with due diligence to reduce the impact of economic activities on the environment. In view of the continuous intensification of climate change that has caused a continuous increase of heavy rainfall and water shortages in Taiwan, which may affect the Company's daily operations. In order to ensure that the impact of climate change on the Company's operations is minimized, MA-tek continues to pay attention to the impact of climate change on the environment, and pays attention to common climate risks.

Climate change is one of the most serious problems in today's society. Taiwan has also been continuously affected by heavy rainfall and drought in recent years. MA-tek has also reviewed climate risks to ensure the safety of employees and property. MA-tek refers to the Task Force on Climate-related Financial Disclosures (TCFD) issued by the International Financial Stability Board (FSB), and examines the four elements of the report structure to assess the climate related risks and opportunities MA-tek is facing at the moment.

MA-tek is currently gradually improving all aspects of TCFD, and will gradually build a climate governance organization, formulate climate strategies to assess actual and potential impacts, build risk management processes, and set relevant indicators and goals. At present, according to the related classification of TCFD Climate-related Risks, conduct preliminary identification of "Physical Risks" and "Transition Risks" related to low-carbon economy. After assessment, the potential climate change risks MA-tek is currently facing include:



Climate Change Risk				
Category	Aspect	Risk Factor	Financial Impact	Countermeasures
Physical Risk	Extreme Weather	Typhoon or heavy frontal rain brings flooding danger	<ul style="list-style-type: none"> The storm and accompanying flooding affect the safety of Company, equipment and personnel. 	Pay attention to the heavy rain warnings from the Central Weather Bureau, cooperate with the precautions against typhoons by the city government, prevent storm waves from affecting the safety of the Company's equipment and personnel.
		Drought causes laboratories to be unable to operate normally	<ul style="list-style-type: none"> Unable to ensure sufficient inventory of water used by laboratories such as distilled water during droughts which results in operational difficulties. Promote an increase in expenditure on water-saving measures, such as constructing a water recycling system to filter and recycle water. 	Prepare in advance during drought warning periods to ensure that the inventory of water used by laboratories such as distilled water is sufficient.
Transformation Risk	Market	Customer Low-carbon Requirements	<ul style="list-style-type: none"> In order to reduce energy consumption, the purchase of renewable energy certificates, or the addition of renewable energy sources causes an increase in costs. 	Improve energy management measures to reduce the energy consumed by the Company's operations.
	Policy	Carbon Tax	<ul style="list-style-type: none"> The government's levy of carbon taxes has resulted in rising energy costs. 	

In accordance with the greenhouse gas inventory requirements of the "Sustainable Development Guide map for TWSE- and TPEX-Listed Companies" issued by the Financial Supervisory Commission, MA-tek plans to implement the inventory planning and schedule from the fourth quarter of 2022 to the first quarter of 2023, and complete the carbon emission announcement by the fourth quarter of 2024.

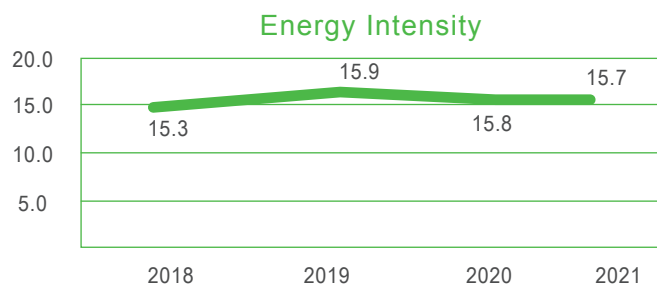
Energy Conservation and Carbon Reduction Management

As a testing center with a wide range of high-tech and valuable instruments, MA-tek has gradually gathered statistics regarding the information of each laboratory to understand that most of the energy usage comes from laboratory electricity consumption and business vehicle fuel. According to statistics of seven laboratories in Taiwan, the average annual total electricity consumption from 2019 to 2021 was about 12,771MWh, and the fuel consumption of business vehicles was about 38.2 thousand liters. The total calorific value of energy use has increased by about 14% year by year. The average annual emission of greenhouse gases is about 6,555.20 metric tons from 2019 to 2021, a year-by-year increase of about 13.26%, which is in line with the trend of electricity consumption and the trend is flat if examining the energy intensity in the past three years.

MA-tek's official vehicles are mainly used to pick up and drop off customer samples and are frequently used. At present, the Company's vehicles have been evaluated for replacement with electric vehicles in order to reduce Scope 1 greenhouse gas emissions. Regarding Scope 2, since the orientation of MA-tek is technical testing services, it is more difficult to generate energy-saving benefits on the equipment, and the Company will continue to strengthen the assessment of the possibility of energy-saving. Other public electricity is mainly for lighting and central air-conditioning, and has been gradually phased out with LED lighting equipment.



MA-tek's energy intensity per unit of revenue from 2018 to 2021



Note: Energy intensity is calculated by dividing total energy use by operating income (unit: GJ/NTD Million).

Greenhouse Gas Emissions	Unit	2019	2020	2021
Scope 2	Metric Tons	5,582.96	6,675.75	7,142.96
Scope 1	Metric Tons	71.44	81.49	111.01
Scope 1 + 2	Metric Tons	5,654.40	6,757.24	7,253.97

MA-tek 2019–2021 Energy
Consumption Statistics

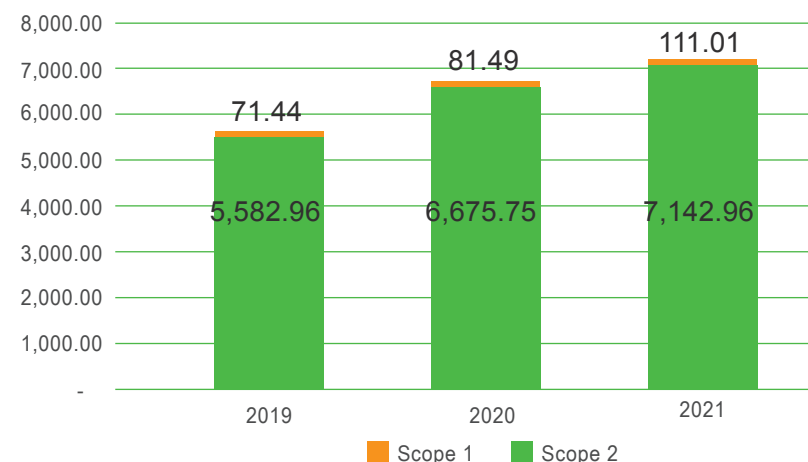


Energy consumption within the organization (Taiwan area)	Purchased Power (general)	Gasoline	Total Energy Use
	Thousand kWh	Thousand Liters	GJ
2019	10,968	31.5	40,513.9
2020	13,115	35.9	48,387.3
2021	14,229	47.1	52,762.5

Note 1: MA-tek uses no renewable energy in Taiwan.

Note 2: Calorific value conversion coefficient: 7,800 kcal/L for gasoline and 3,600 GJ/million kWh for electricity.

MA-tek's greenhouse gas emissions statistics from 2019 to 2021 (Unit: metric tons of carbon dioxide equivalent)



Note 1: The calculation of greenhouse gas emissions is inventoried using the operation control method. The calculation method is activity data * emission coefficient * GWP value. Greenhouse gases include CO₂, CH₄, N₂O, and non-HFCs, PFCs, SF₆, NF₃ three types of greenhouse gas emissions

Note 2: The emission coefficient value refers to version 6.0.4 of the Greenhouse Gas Emission Coefficient Management Table of the Environmental Protection Administration, and the GWP value refers to the 6th Assessment Report of IPCC (2021)

Note 3: 2021 Data of Greenhouse Gas Scope 1 gasoline emission coefficient 2.357kg CO₂e/L; Scope 2 takes 2019 Taiwan Power emission coefficient 0.502kg CO₂e/kWh

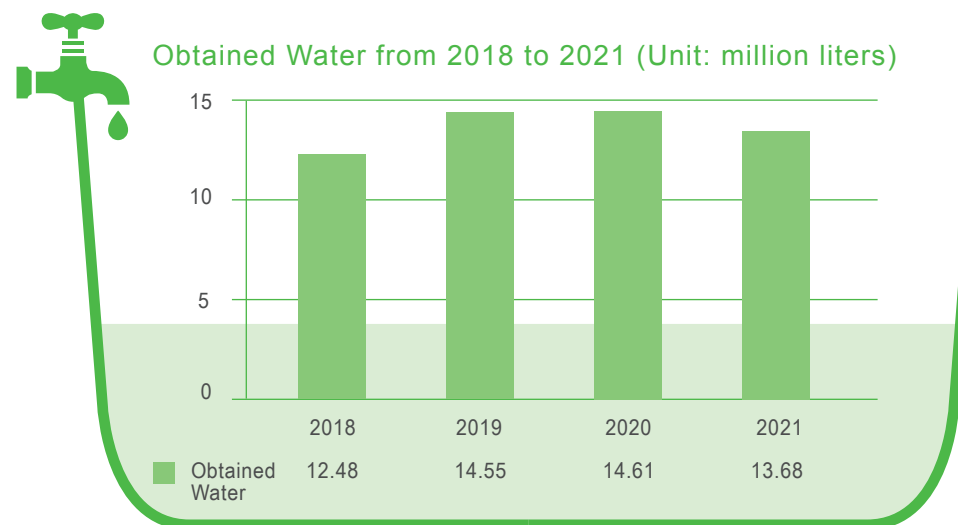
6.2 Effective Resource Management

Although the earth is vast, with the development and cultivation of human beings, there are fewer and fewer renewable resources available. As a company operating across countries, MA-tek cares about the earth, the common hometown of mankind, from the perspective of a global citizen. MA-tek continues to carry out internal publicity, and requests the managers of each business group to lead by example, implement life saving and resource recycling, and take the management of local resources as the actual starting point, and make a contribution to the earth homeland.



Water Resources Management

MA-tek is located in Science Parks, and the source of water usage for all laboratories is tap water. The laboratories currently listed in the statistics are all located in Taiwan. According to public information provided by the World Water Institute, MA-tek Taiwan's water source is not a scarce water resource area. Because it is mainly used for administrative water (such as drinking water, toilets), there is not much water used in the laboratory, and the water consumption is similar to that of a general office.



Note 1: Data from 2018 to 2021 includes SoC, Hsinchu Prosperity, Zhubei, and Tainan Lab.

Note 2: Zhubei Lab II and Tainan Lab II were added in 2021.

Note 3: Actual water consumption cannot be calculated for Jinshan Lab because the rent already includes the water bill, so there is no additional water consumption information calculated.

Note 4: The source of water is tap water, which is fresh water from a third party.

Waste Management

MA-tek is a testing and inspection unit and mainly produces general waste and hazardous waste. General waste is office paper and other domestic waste generated in ordinary offices. Hazardous waste mainly comes from laboratories. There are two main types of hazardous waste in laboratories: laboratory-produced waste liquid and scrap metal. General waste is disposed by the building management bureau, so there is no record of the total quantity; the hazardous waste is disposed by the contractors separately.

For the domestic waste generated in the office area, all are with recycle and reuse as the priority. MA-tek has set up garbage sorting bins in the Tea & Water Room and garbage disposal area to classify waste into the categories of general garbage, paper, plastic, glass, iron and aluminum cans, kitchen waste, and encourages colleagues to reuse copy paper, to reduce the production of general business waste by implementing garbage sorting, and move towards the goal of garbage reduction and resourcization.

A total of 1.73 metric tons of hazardous waste generated in 2021 was disposed of by incineration. In view of the increasing attention to the issue of waste disposal by government agencies currently, MA-tek not only confirms that the other parties have relevant government licenses, but also use the waste disposal process flow as the basis for evaluation when executing the audit of the waste disposal contractors. MA-tek signs contracts with the contractors every year, with requirements for all issues related to waste removal for the contractors. At present, MA-tek has signed two waste disposal contractors, and selects one to conduct on-site audits every year, to confirm whether there is a record of violations or improper disposal.

MA 閱康科技

實驗室廢棄物丟棄分類宣導說明

說明: 為符合環保法規要求規定, 實驗室產出下列廢棄物『不得』與一般生活廢棄物夾雜丟棄, 請實驗室同仁確實遵守執行。

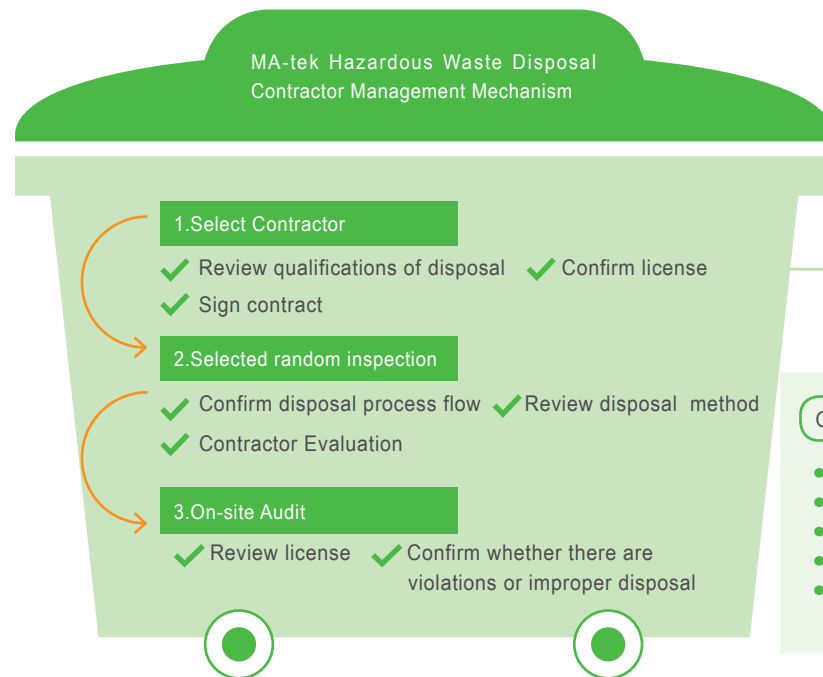
類 型	化學【瓶/罐】	廢電子零組件	廢機板	其它類
細 項	玻璃瓶、PP 塑膠桶	IC、晶圓、PCB 板	木棧板；塑棧板	大型傢俱、晶周盒
說 明	需清潔乾淨並且乾燥，禁止瓶內存有水份。	1.需詳細分類品項。 2.禁止夾帶一般垃圾丟棄。	與環安聯繫安排廠商清運。	與環安、總務聯繫安排廠商清運。
備 註				

以上分類說明請實驗室全體員工確實遵守，避免造成觸法情況。

環安處分機：3735

MA-tek Toxic Chemical Substance Management Mechanism

- Obtain the Toxic Chemical Substance Operation License according to the regulatory requirements.
- Annual regular maintenance and functional testing on environmental detectors.



On-site Audit Items of Waste Contractor

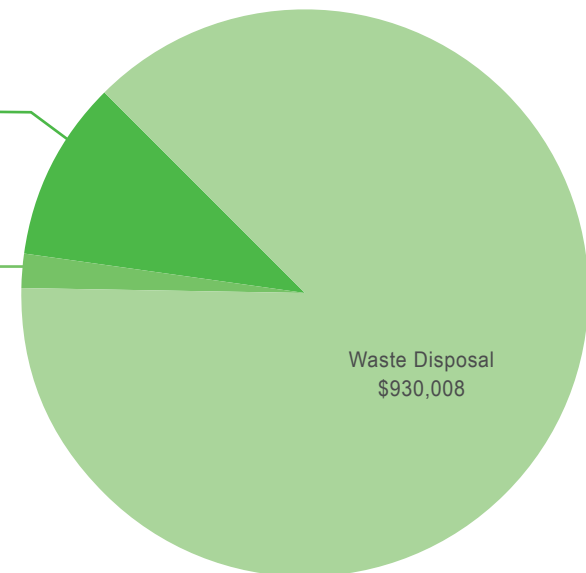
- License Description
- Waste Removal Assessment
- Waste Disposal (Reuse) Assessment
- Waste Disposal Management
- Contractor Safety Management

Environmental Protection Expenditure

In order to implement work environment safety and maintain environmental protection, MA-tek's environmental expenditure in 2021 including equipment maintenance (toxic gas detection equipment, sewage detection equipment), waste disposal, regular inspection of the sewage pipe in the park, etc., for a total of NTD 1,056,950.

Equipment Maintenance
\$107,790

Regular inspection of
the sewage pipe in the
park
\$19,152



Appendix GRI Sustainability Reporting Standards Disclosure Index

Disclosure		Corresponding Chapter	Page	Remarks
GRI102: General Disclosure 2016				
Organizational Profile				
102-1	Name of the Organization	About the Report	3	
102-2	Activities, Brands, Products and Services	2.1 Company Profile	19	The company does not have any products prohibited for sale.
102-3	Location of Headquarters	About the Report	3	
		2.1 Company Profile	19	
102-4	Location of Operations	About the Report	3	
		2.1 Company Profile	19	
102-5	Ownership and Legal Form	2.2 Corporate Governance	24	
102-6	Markets Served	2.1 Company Profile	19	
102-7	Scale of the Organization	2.1 Company Profile	19	
		2.3 Management Overview	32	
		3.1 Technical Service and Quality	42	
		4.1 Talent Composition of Professional Teams	72	
102-8	Information of Employees and Other Workers	4.1 Talent Composition of Professional Teams	72	
102-9	Supply Chain	2.5 Supply Cooperation Good Partner	38	
102-10	Major Changes of the Organization or Supply chain	-	-	There were no major changes in the organization and supply chain this year.
102-11	Pre-warning Principle or Directive	2.3 Management Overview	32	
		2.4 Internal Audit and Regulatory Compliance	37	
		2.6 COVID-19 Response Measures	40	
		3.4 Information Security and Customer Privacy	65	
		4.5 Environmental Safety and Health	88	
		6.1 Climate Change and Adaption	101	
102-12	External Initiativ	-	-	The Company has not signed any relevant initiatives.
102-13	Membership of Public Associations	2.3 Management Overview	24	

Disclosure		Corresponding Chapter	Page	Remarks
Strategy				
102-14	Statement of Decision Maker	Message from the Chairperson	4	
102-15	Key Impacts, Risks and Opportunities	Message from the Chairperson	4	
		2.4 Internal Audit and Regulatory Compliance	37	
		6.1 Climate Change and Adaption	101	
Ethics and Integrity				
102-16	Values, Principles, Standards and Code of Conduct	2.2 Corporate Governance	24	
Governance				
102-18	Governance Structure	1.1 Plan for Sustainable Development	10	
		2.2 Corporate Governance	24	
Stakeholder Engagement				
102-40	Stakeholder Group	1.2 Stakeholder Engagement	12	
102-41	Collective Bargaining Agreements	-		The Company has not yet set up a labor union, so no Collective Agreement has been signed.
102-42	Identifying and Selecting Stakeholders	1.2 Stakeholder Engagement	12	
102-43	The directives for communication with interested parties	1.2 Stakeholder Engagement	12	
102-44	Key Topics and Concerns Raised	1.2 Stakeholder Engagement	12	
		1.3 Identification of Material Topics	14	
Reporting Practice				
102-45	Entities Included in the Consolidated Financial Statements	About the Report	3	
		2.3 Management Overview	32	
102-46	Define the Report Content and Subject Boundaries	About the Report	3	
		1.3 Identification of Material Topics	14	
102-47	List of Material Topics	1.3 Identification of Material Topics	14	
102-48	Restatements of Information	About the Report	3	No such incidents this year.
102-49	Changes in Reporting	About the Report	3	No such incidents this year.
102-50	Reporting Period	About the Report	3	

Disclosure		Corresponding Chapter	Page	Remarks
102-51	Date of Most Recent Report	About the Report	3	
102-52	Report Cycle	About the Report	3	
102-53	Contact Point for Questions Regarding the Report	About the Report	3	
102-54	Claims of Reporting in accordance with the GRI Sustainability Reporting Standards	About the Report	3	
102-55	GRI Content Index	Appendix GRI Sustainability Reporting Standards Disclosure Index	107	
102-56	External Guarantee/Assurance	About the Report Appendix Report Confirmation Statement	3 113	
GRI103: Management Approach 2016				
103-1	Explanation of the Material Topic and Its Boundary	1.3 Identification of Material Topics	14	
103-2	The management approach and its components	1.3 Identification of Material Topics	14	
103-3	Evaluation of the Management Approach	1.3 Identification of Material Topics	14	
GRI201: Economic Performance 2016				
201-1	Direct Economic Value Generated and Distributed	2.3 Management Overview	32	Please refer to the 2021 Annual Report of the Company for details.
201-4	Financial Assistance Received from Government	2.3 Management Overview	32	Please refer to the 2021 Annual Report of the Company for details.
GRI203: Indirect Economic Impacts 2016				
203-2	Significant Indirect Economic Impacts	3.2 Technological Innovation and Technical Data Management	51	
		5.2 Precision Analytical Instruments Partner of the University	95	
		5.3 Common Prosperity Partners of Society	97	
GRI205: Anti-corruption 2016				
205-3	Confirmed Incidents of Corruption and Actions Taken	2.4 Internal Audit and Regulatory Compliance	37	No such incidents this year.
GRI206: Anti-competition 2016				
206-1	Legal Actions for Anti-competitive Behavior, Anti-trust and Monopoly Practices	-		No such incidents this year.
GRI207: Tax 2019				
207-1	Approach to tax	2.3 Management Overview	32	
207-2	Tax governance, control, and risk management	2.3 Management Overview	32	

Disclosure		Corresponding Chapter	Page	Remarks
207-3	Stakeholder engagement and management of concerns related to tax	2.3 Management Overview	32	
207-4	Country-by-country reporting	2.3 Management Overview	32	
GRI302: Energy 2016				
302-1	Energy Consumption Within the Organization	6.1 Climate Change and Adaption	101	
302-3	Energy Intensity	6.1 Climate Change and Adaption	101	
GRI303: Water 2018				
303-3	Water withdrawal	6.2 Effective Resource Management	104	
GRI306: Waste 2020				
306-3	Waste generated	6.2 Effective Resource Management	104	
306-5	Waste directed to disposal	6.2 Effective Resource Management	104	
GRI307: Environmental Compliance 2016				
307-1	Non-Compliance with Environmental Laws and Regulations	2.4 Internal Audit and Regulatory Compliance	37	No such incidents this year.
GRI401: Employment 2016				
401-1	New Employee Hires and Employee Turnove	4.1 Talent Composition of Professional Teams	72	
401-2	Benefits Provided to Full-Time Employees That are not Provided to Temporary or Part-Time Employees	4.2 Excellent Compensation and Benefits 4.5 Environmental Safety and Health	75 88	The benefits described in the corresponding chapters are all benefits are eligible for full-time employees.
401-3	Parental Leave	4.5 Environmental Safety and Health	88	
GRI403: Occupational Health and Safety 2018				
403-2	Hazard Identification, Risk Assessment, and Incident Investigation	4.5 Environmental Safety and Health	88	
403-5	Worker Training on Occupational Health and Safety	4.5 Environmental Safety and Health	88	
403-9	Work-Related Injuries	4.5 Environmental Safety and Health	88	
GRI404: Training and Education 2016				
404-1	Average Hours of Training Per Year Per Employee	4.3 Diverse Recruitment and Talent Development	78	

Disclosure		Corresponding Chapter	Page	Remarks
GRI405: Diversity and Equal Opportunity 2016				
405-1	Diversity of Governance Bodies and Employees	2.2 Corporate Governance	24	
		4.1 Talent Composition of Professional Teams	72	
405-2	Ratio of the Basic Salary and Remuneration of Women to Men	4.2 Excellent Compensation and Benefits	75	
GRI406: Non-discrimination 2016				
406-1	Incidents of Discrimination and Corrective Actions Taken	4.3 Diverse Recruitment and Talent Development	78	In 2021, there were no relevant incidents of discrimination as defined by the International Labor Organization against race, color, gender, religion, politics, nationality or social background, and involving stakeholders internal or external to the organization.
GRI408: Child Labor 2016				
408-1	Operations and Suppliers at Significant Risk for Incidents of Child Labor	4.3 Diverse Recruitment and Talent Development	78	MA-tek strictly complies with the regulations of the Taiwan Labor Standards Act and the requirements of the Code of Conduct of the Responsible Business Alliance, and does not hire employees under the age of 16, and workers under the age of 18 (young workers) shall not engage in work that may endanger their health or safety, including night duty or overtime. MA-tek will verify the employee's identity when hiring, and request them to provide proof of age as the basis for employment. There were no major risks of child labor in operating locations and by suppliers during the year.
GRI411: Rights of Indigenous Peoples 2016				
411-1	Incidents of Violations Involving Rights of Indigenous Peoples	-	-	In 2021, no incidents of violations involving rights of Indigenous peoples were identified, and no related incidents occurred.
GRI416: Customer Health and Safety 2016				
416-2	Incidents of Non-Compliance Concerning the Health and Safety Impacts of Products and Services	-	-	No such incidents this year.
GRI417: Marketing and Labeling 2016				
417-2	Incidents of Non-Compliance Concerning Product and Service Information and Labeling	-	-	No such incidents this year.
417-3	Incidents of Non-Compliance Concerning Marketing Communications	-	-	No such incidents this year.
GRI418: Customer Privacy 2016				
418-1	Substantiated Complaints Concerning Breaches of Customer Privacy and Losses of Customer Data	3.4 Information Security and Customer Privacy	65	No such incidents this year
GRI419: Socioeconomic Compliance 2016				
419-1	Non-Compliance with Laws and Regulations in the Social and Economic Area	2.4 Internal Audit and Regulatory Compliance	37	No such incidents this year.

Appendix Taipei Exchange Rules Governing the Preparation and Filing of Sustainability Reports by TPEX Listed Companies

Regulations	Description	Chapter	Page
Article 4, Paragraph 4, Item 1	The number of its full time employees in non-management positions, the average and median salaries of the full time employees in non-management positions, and the differences between these 3 figures and the figures of the preceding fiscal year.	4.2 Excellent Compensation and Benefits	75
Article 4, Paragraph 4, Item 2	Its governance around climate-related risks and opportunities, the actual and potential impacts of climate-related risks and opportunities, the processes used by it to identify, assess, and manage climate-related risks, and the metrics and targets used to assess and manage relevant climate-related risks and opportunities.	6.1 Climate Change and Adaption	101

Appendix Sustainability Accounting Standards Board (SASB) Index Comparison Table

Topic	Code	Category	Accounting Metric	Description	Corresponding Page
Data Security	SV-PS-230a.1	Discussion and Analysis	Description of approach to identifying and addressing data security risks.	Please refer to 2021 Sustainability Report 3.4 Information Security and Customer Privacy for related details.	65
	SV-PS-230a.2	Discussion and Analysis	Description of policies and practices relating to collection, usage, and retention of customer information.	Please refer to 2021 Sustainability Report 3.4 Information Security and Customer Privacy for related details.	65
	SV-PS-230a.3	Quantitative	(1) Number of data breaches, (2) percentage involving customers' confidential business information (CBI) or personally identifiable information (PII), (3) number of customers affected	(1) 0, (2) 0%, (3) 0.	-
Employee Diversity and Engagement	SV-PS-330a.1	Quantitative	Gender and racial/ethnic proportions of (1) senior managers and (2) all other employees	Please refer to 2021 Sustainability Report 4.1 Talent Composition of Professional Teams for related details.	72
	SV-PS-330a.2	Quantitative	(1) Voluntary and (2) Involuntary Resignation Rates	Please refer to 2021 Sustainability Report 4.1 Talent Composition of Professional Teams for related details.	72
	SV-PS-330a.3	Quantitative	Employee Engagement Percentage	Please refer to 2021 Sustainability Report 4.4 Friendly and Heart-warming Workplace for related details.	84
Professional Integrity	SV-PS-510a.1	Discussion and Analysis	Description of approach to ensuring professional integrity.	Please refer to the Company's "Code of Ethical Conduct" and "Code of Ethical Conduct for Employees" for related details. Please refer to 2021 Sustainability Report 2.2 Corporate Governance for related details.	24
	SV-PS-510a.2	Quantitative	Total amount of monetary losses as a result of legal proceedings associated with professional integrity.	In 2021, the Company did not have monetary losses caused by legal proceedings related to professional ethics.	-

Topic	Code	Category	Accounting Metric	Description	Corresponding Page
Activity Metric	SV-PS-000.A	Quantitative	Number of employees by: (1) full-time and part-time, (2) temporary, and (3) contract.	Please refer to 2021 Sustainability Report 4.1 Talent Composition of Professional Teams for related details.	72
	SV-PS-000.B	Quantitative	Employee hours worked is presented with percentage billable	The company has not disclosed relevant information.	-

Appendix Third Party Verification Statement

Sustainability Report Certified Public Accountants' Limited Confirmation Report

Deloitte.

勤業眾信

勤業眾信聯合會計師事務所
110016 台北市信義區松仁路100號20樓
Deloitte & Touche
20F, Taipei Nan Shan Plaza
No. 100, Songren Rd,
Xinyi Dist., Taipei 110016, Taiwan
Tel +886 (2) 2725-9988
Fax +886 (2) 4501-6888
www.deloitte.com.tw

INDEPENDENT AUDITORS' LIMITED ASSURANCE REPORT

The Board of Directors and Stockholders
Materials Analysis Technology Inc.

We have performed a limited assurance engagement on the selected subject matter information (see Appendix) in the Sustainability Report ("the Report") of Materials Analysis Technology Inc. ("the Company") for the year ended December 31, 2021.

Responsibilities of Management for the Report

Management is responsible for the preparation of the Report in accordance with Taipei Exchange Rules Governing the Preparation and Filing of Sustainability Reports by TPEx Listed Companies and GRI Standards and Sector Guidance published by the Global Reporting Initiatives (GRI) and other applicable rules according to its sector features, and for such internal control as management determines is necessary to enable the preparation of the Report that are free from material misstatement.

Auditors' Responsibilities for the Limited Assurance Engagement Performed on the Report

We conducted our work on the selected subject matter information (see Appendix) in the Report in accordance with the Statements of Assurance Engagements Standards No. 1 "Assurance Engagements Other than Audits or Reviews of Historical Financial Information" issued by the Accounting Research and Development Foundation of the Republic of China to issue a limited assurance report on the preparation, in all material respects, of the Report. The nature, timing and extent of procedures performed in a limited assurance engagement are different from and more limited than a reasonable assurance engagement and, therefore, a lower assurance level is obtained than a reasonable assurance.

We applied professional judgment in the planning and conduct of our work to obtain evidence supporting the limited assurance. Because of the inherent limitations of any internal control, there is an unavoidable risk that even some material misstatements may remain undetected. The procedures we performed include, but not limited to:

- Obtaining and reading the Report.
- Inquiring management and personnel involved in the preparation of the Report to understand the policies and procedures for the preparation of the Report.
- Inquiring the personnel responsible for the preparation of the Report to understand the process, controls, and information systems in the preparation of the selected subject matter information.
- Analyzing and examining, on a test basis, the documents and records supporting the selected subject matter information.

- 1 -

Inherent Limitations

The subject information included non-financial information, which was under more inherent limitations than financial information. The information may involve significant judgment, assumptions and interpretations by the management, and the different stakeholders may have different interpretations of such information.

Independence and Quality Controls

We have complied with the independence and other ethical requirements of the Norm of Professional Ethics for Certified Public Accountant in the Republic of China, which contains integrity, objectivity, professional competence and due care, confidentiality and professional behavior as the fundamental principles. In addition, the firm applies Statement of Auditing Standard No. 46 "Quality Control for Public Accounting Firms" issued by the Accounting Research and Development Foundation of the Republic of China and, accordingly, maintains a comprehensive system of quality controls, including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

Conclusion

Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the selected subject matter information in the Report are, in all material respects, not prepared in accordance with the above mentioned reporting criteria.

Other Matters

We shall not be responsible for conducting any further assurance work for any change of the subject matter information or the criteria applied after the issuance date of this report.

The engagement partner on the limited assurance report is Han-Ni Fang.

Deloitte & Touche
Taipei, Taiwan
Republic of China

June 10, 2022

Notice to Readers

For the convenience of readers, the independent auditors' limited assurance report and the accompanying summary of selected subject matter information have been translated into English from the original Chinese version prepared and used in the Republic of China. If there is any conflict between the English version and the original Chinese version or any difference in the interpretation of the two versions, the Chinese-language independent auditors' limited assurance report and summary of selected subject matter information shall prevail.

- 2 -

APPENDIX

SUMMARY OF SELECTED SUBJECT MATTER INFORMATION

#	Assurance Subject Matter (GRI Standards/ Designated Indicator)	Descriptions of Indicators	Corresponding Section	Applicable Criteria
1.	GRI 303-3: 2018	Water withdrawal	6.2 Effective Resource Management	Total volume of water (tap water) withdrawn with a breakdown by the sources in all regions and in areas with water stress.
2.	GRI 401-1: 2016	New employee hires and employee turnover	4.1 Talent Composition of Professional Teams	Total number and rate of new employee hires and employee turnover, by age group and gender.
3.	GRI 401-3: 2016	Parental leave	4.5 Environmental Safety and Health	Total number of employees that were entitled to as well as took parental leave, number and percentage of employees that should and actually return to work after parental leave ended, employees that returned to work after parental leave ended that were still employed, by gender.
4.	GRI 405-2: 2016	Ratio of basic salary and remuneration of women to men	4.2 Excellent Compensation and Benefits	The ratio of basic salary and remuneration of women to men for managerial position and non-managerial position.
5.	Designated indicator	Number of patent applications and approvals	3.2 Technological Innovation and Technical Data Management	The number of applications sent and patents approved.

- 3 -



Tel +886-3-6116678 ext : 3766

Mail ir@ma-tek.com

Web <https://www.ma-tek.com>

Add 300094 1A3, No. 1, Li-Hsin 1st Road, Hsinchu Science Park., Hsinchu City

