

Today's Agenda



- Everything you need to know about Murata
 - Innovator in Electronics
- Sneak Peak: What's happening in ASEAN, India & ANZ
- Murata's Comprehensive Sales Support & Tools
- Murata's New Business & Innovation
 - Digital Transformation in Agri-tech for Social & Environmental Issues
- Murata's Value Creation through SDG & CSR activities

About the Speakers

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Sales Division

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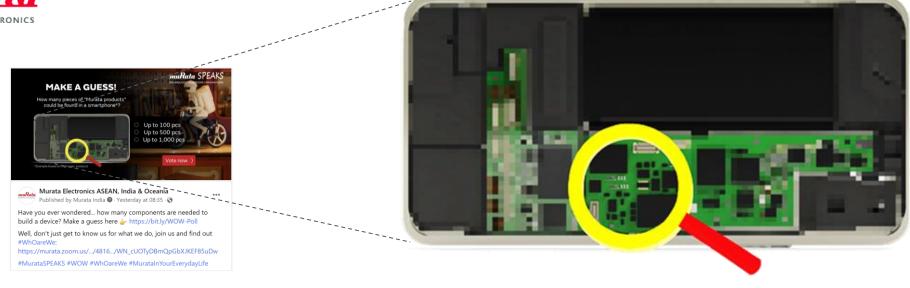
sathish.dhanasekar@murata.com





INNOVATOR IN ELECTRONICS





How many pieces of "Murata products" could be found in a smartphone*?

QUIZ TIME

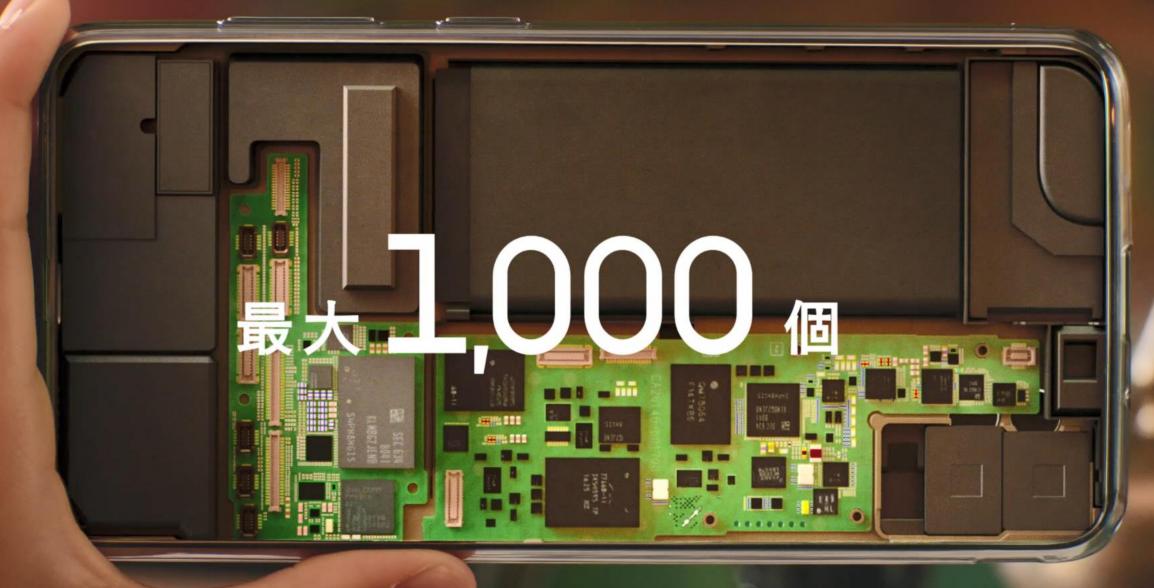
1 Up to 100 pieces

2 Up to 500 pieces

3 Up to 1,000 pieces



Murata is everywhere!



there are 1,000 pcs!

※高機能機種の一例(当社調べ)

Murata is more than just a capacitor manufacturer!

Murata Core Competency



CORE

Materials



Front-end process



Product design



Back-end process



Analytical



COMPREHENSIVE PRODUCT PORTFOLIO



SOLUTION PROVIDER (*include numerous collaborations with major market/technology leaders)



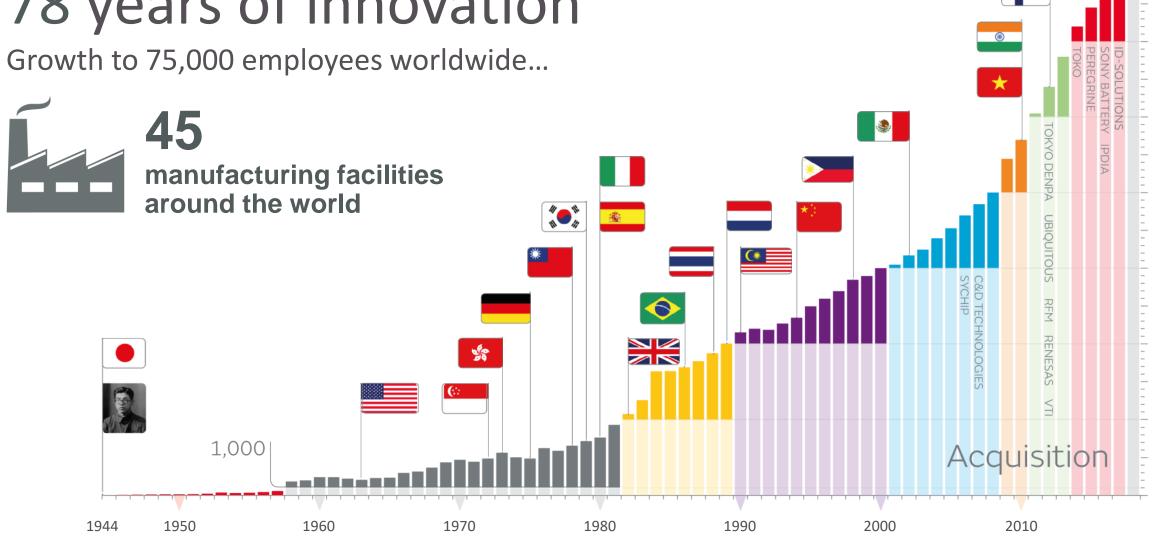








78 years of innovation



80,000

Murata Vision 2030



■ Murata focuses on 4 key fields with business opportunities to create value.

Core fields

Communications



All types of things will be connected and optimized by communications

We will correctly grasp the diversifying applications, changing customer structure and continue to offer value, taking an overwhelming lead with technological innovation.

Mobility 📇



Automobile industry entering an age of once-in-a-century revolution

In addition to contributing to the evolution of the automobile (in-car), we will aim to capture business opportunities in the broader sense of mobility (out-car).

Challenge fields

Environment



Markets where promises have been made to become a sustainable society

Murata aims to create innovation bringing together our business and solutions to the energy issue and other environmental issues.

Wellness W



Pursuing new prosperity for an age when people's expected lifespan reaches 100 years

We will use Murata's technology and our know-how in the electronics field to help the development of the medical field and seek to provide value in terms of preventing sickness and promoting health.

Source: https://corporate.murata.com/en-global/company/business-strategy/vision2030/growthstrategy1#id1

Murata ASEAN & India Outlook in 2030



No.1 Population & No.2 GDP in the world



- The population and GDP will be 1.5 billion and 36.1 trillion USD in 2030 respectively
- Economic power will shift from Europe and America to Asia and Africa
- 70% of global economic growth will be generated in these regions

Sustainable Society



- The EV market in ASEAN is expected to grow to over 20% of all vehicles by 2025
- In India, at least 30% new vehicle sales will be electric by 2030
- The total installed capacity of renewable energy will be 40% in ASEAN by 2040
- India will increase its non fossil energy capacity to 500 GW

Digital Transformation



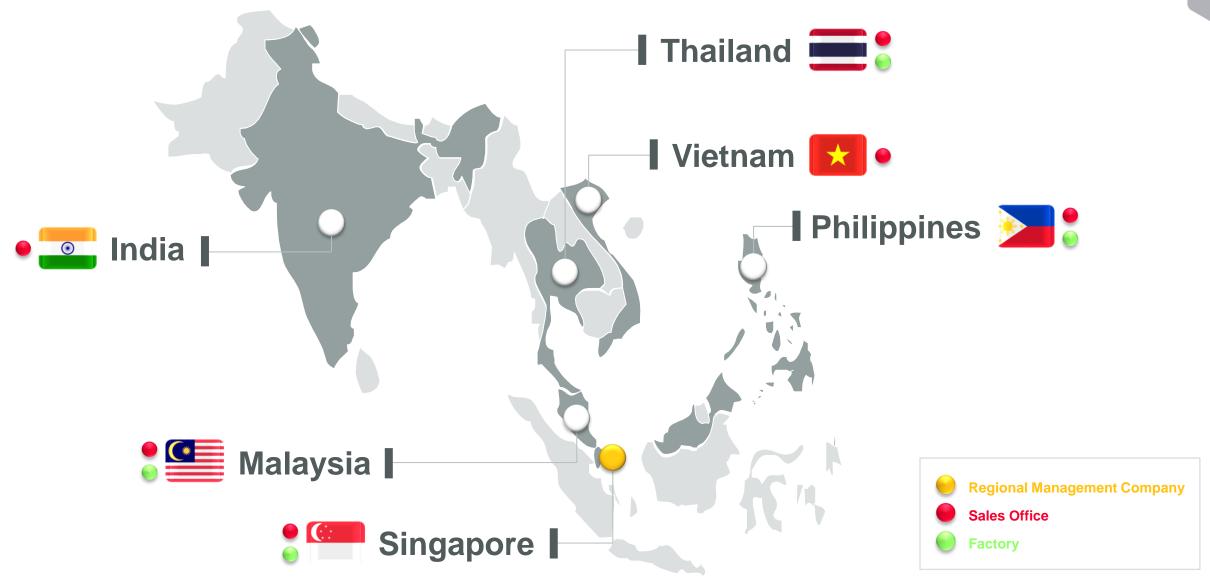
- New business style by harmonizing digital and business
- Digital technologies adoption such as machine learning, deep learning, machine vision
- Talents who possess skillsets that can facilitate transition to smart manufacturing will be required

Geo-Political Opportunity



- Shifting production facilities from China to countries (e.g. India, Vietnam, Thailand, etc.) due to trade tensions and supply disruptions
- ASEAN to pursuit for a Zone of Peace, Freedom and Neutrality
- Big manufacturing area by "Make in India" policy
- Expanding trade based on RCEP



















Murata Electronics Singapore (Pte.) Ltd. (MES)



Murata Singapore is the **Regional Management Company** for ASEAN and India, holding multiple regional roles such as, Sales, Product Marketing, Planning, Administration, etc.



Besides supporting customers in Singapore, MES Sales also support customers in **Indonesia and Oceania.**













Yishun Sales Office & Plant (est. Dec 1972)

200 Yishun Avenue 7, Singapore 768927

Development and manufacturing of capacitors



Tuas Plant (est. Oct 2007)

- 1 Tuas Rd, Singapore 638481
- · Development and manufacturing of battery







"INNOVATOR IN ELECTRONICS" is our company slogan.

Murata Electronics Singapore (Pte.) Ltd. (MES) team strives to contribute to the society with an innovative mindset. Leveraging on our diverse talents to serve as the window to our valuable customers, we will continue to deliver value, and touch our customers' hearts.

We aim to be our customer's "first call", achieving the highest customer satisfaction continuously.

Peter Tay Wee Peng

General Manager Murata Electronics (Singapore)



Murata Singapore Sales Office

Murata Singapore: Mission & Vision



Mission

Grow and contribute to society, customers and colleagues

Vision

Be the next game changer



Strengthen our core and showcasing the future through value creations

Enhance business opportunity through distribution channels

Establish long lasting customer relationship

Singapore Economic Policy



Singapore Economy 2030 – Seizing Opportunities, Energising Enterprises



Services

Seize opportunities especially in sustainability & digitalisation



Manufacturing

Building up a strong and advanced manufacturing sector



Trade

Enhancing trade and strengthening connectivity to the world



Enterprises

Growing **global** enterprises and strengthening core capabilities



Transitioning Singapore to a low-carbon economy

Source: https://www.mti.gov.sq/COS-2022/Singapore-Economy-2030---Seizing-Opportunities-Energising-Enterprises

Murata contributing to Singapore Economy 2030

Core fields

Communications (**)





Mobility 🚚





Environment



Challenge fields

Wellness W





Indonesia Economic Policy

Indonesia 4.0 - To revitalize its manufacturing sector and become a powerhouse in the Fourth Industrial Revolution (4IR)

■ 5 Manufacturing Industries Sectors











Source: https://www.linkedin.com/pulse/industry-40-indonesia-moving-up-manufacturing-value-chain-wickberg-3d/

■ Solutions

Murata contributing to Indonesia 4.0



Smart Street Lighting



Smart Metering



Wireless Sensor Network



Energy Storage System



Soil Sensor



■ Components/ Devices

Wireless Modules











Vibration Sensor



Power Modules, Batteries





Coin batteries

Electronics Components







Target Audiences:

Design makers, Design houses, System Integrators TELCO, Network providers, Government agencies, and more...

Activities:

Factory automation exhibitions, Roadshows & workshops, Joint-webinar (with major local & global partners), Proof-ofconcept Design-IN activities

Future Plans:

More collaborations with existing or new business partners, Events – Exhibitions, Technical workshops, etc. Sponsorship activities

Australia & New Zealand Economic Policy



Australia's Digital Economy

Australia's vision to be a leading digital economy and society by 2030.

■ Key technologies shaping the future to 2030



Artificial Intelligence Internet of Things Data Analytics







Quantum Computing



Source: https://digitaleconomy.pmc.gov.au/

Industry Transformation Plan

New Zealand to be an early adopter and a world leader in the digital economy.

■ Key technologies shaping the future to 2030



Mobile Internet



Advanced robotics Additive manufacturing

⑤ Fintech



Cloud computing





Source: https://www.mbie.govt.nz/

Murata contributing to Australia & New Zealand

■ Solutions



Smart Metering



Industrial



Telematics





Healthcare



Energy Storage System



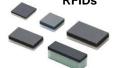
■ Components/ Devices

Wireless Modules









Power Modules, Batteries







batteries

Target Audiences:

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Battery module

Murata Singapore: Events Calendar





Smart City Expo (ICC Sydney)

Event Date:

26th ~ 27th Oct 2022



All Energy (Melbourne)

Event Date:

26th ~ 27th Oct 2022













Murata Singapore: Events Calendar









Industry Tech Days

Event Date: 19th ~ 23rd Oct 2022



Event Date:

Nov 2022

[Monthly Webinar Series] Murata SPEAKS

Event Date:

Last Thursday of each month













Murata Singapore: CSR Activities



CSR as Value Creation

- Corporate's routine donation
- Groceries donation
- Donation drive
- End of year activities at Sunbeam

Singapore Charity Organization







CSR as Corporate Philanthropy

- Ease financial burden and help secure 6 months of internship in Murata
- Supported meal vouchers to lower income students





Murata Singapore: History







Murata Electronics Singapore (Pte.) Ltd.



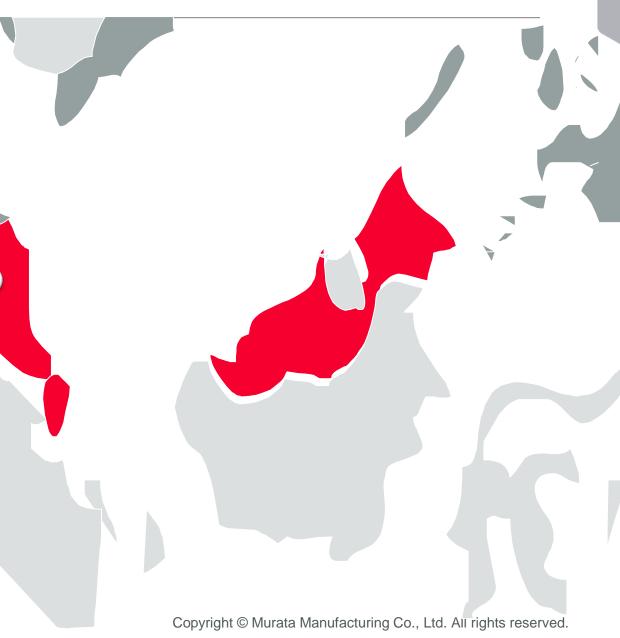












Murata Electronics (Malaysia) Sdn. Bhd. (MME)





Penang Sales Office (est. Oct 1994)

Unit 6.03, Menara Boustead, 39 Jalan Sultan Ahmad Shah, 10050 Penang, Malaysia



Kuala Lumpur Sales Office (est. Jun 1990)

Suite 13.01, Level 13, Menara IGB, No.1 The Boulevard, Mid Valley City, Lingkaran Syed Putra, 59200 Kuala Lumpur, Malaysia



Malaysia Plant (incorporated May 1993)

Plot 15, Bemban Industrial Park Jalan Bemban, 31000 Batu Gajah, Perak, Malaysia

EMI Winding Factory & resales of Murata products through IPC



MURATOR IN ELECTRONICS

Murata Electronics (Malaysia) Sdn. Bhd. (MME) is an overseas subsidiary of Murata Manufacturing Co. Ltd. and functions as a production base and sales foothold of the Murata Group in Malaysia and Southeast Asia.

Our mission is to solve customer's issues by our innovative products and solutions. We pursue to be an "innovator" while constantly considering how we can play a part in improving the environment and contribute to our society.

Kazuya Kitahata

General Manager Murata Electronics (Malaysia)



Murata Malaysia Sales Office

Murata Malaysia: Mission & Vision



Mission

Create NEW values; Challenge NEW things; Grow with NEW stakeholders

Vision

Be the Next Game Changer



Industrial 4.0



Mobility



Environment



Malaysia Economic Policy



■ DEFINITION

Strengthening political stability, enhancing nation's prosperity, and ensuring unity while celebrating ethnic and cultural diversity as the foundation of nation state.

■ AIM

Providing a decent standard of living to all Malaysians by 2030.



Shared Prosperity Vision 2030

■ 7 STRATEGIC THRUST

Source: https://www.malaysia.gov.my/portal/content/30901

- Small and medium-sized enterprises (SMEs) and multinational corporation (MNCs) in manufacturing
- Drive for innovation, digitalisation and sustainability

RESTRUCTURING **BUSINESS AND** INDUSTRY ECOSYSTEM KEY ECONOMIC GROWTH **ACTIVITIES** (KEGA)

3 **TRANSFORMING HUMAN CAPITAL**

LABOUR MARKET & COMPENSATION OF EMPLOYEES

SOCIAL WELLBEING

REGIONAL INCLUSION

SOCIAL **CAPITAL**

Murata contributing to Malaysia Vision 2030

Core fields

Challenge fields

















Murata Malaysia: Events Calendar





Metaltech 2022

Event Date:

22nd ~ 25th Jun 2022

Theme:

Smart Factory Automation

Event Location:

Malaysia International Trade & Exhibition Centre (MITEC) – Hall 4













Murata Malaysia: CSR Activities



Donation Drive

Many **NGOs** voluntarily initiated support for affected victims physically at the flooded area or monetarily.

Malaysian Medical Relief Society -The MERCY Malaysia appeals for funding for the victims.

Murata Malaysia donated to the MERCY Malaysia to support the flood relief and recovery plan.







^{*} CSR: Corporate Social Responsibility









Thai Murata Electronics Trading, Ltd. (TMT)



Factory



Thailand Sales Office (est. Mar 1997)

Thaniya Plaza Bldg., 10th Floor, 52 Silom Rd., Suriyawongse, Bangrak, Bangkok 10500 Thailand





Thailand Plant (est. Sep 1988)

Northern Region Industrial Estate 63 Moo 4, Tambol Ban Klang Amphur Muang, Lamphun 51000, Kingdom of Thailand

Development and manufacturing the following products:
 Ultrasonic sensors, Antenna coils, Piezoelectric buzzers, EMI suppression filters and various type of capacitors



2022 marks a significant milestone for Thai Murata Electronics Trading Ltd (TMT). As we celebrate 25 years of establishment, contributing to the advancement of electronics devices in across many application segments.

As a global innovator in electronics, our spirited team continuously strives to be the first choice of our partners and customers, creating new collective values, to contribute to the sustainable Thai society through our cutting edge advanced technologies.

Gary Han Wee Kwang

Director - General Manager Thai Murata Electronics Trading Ltd

Thai Murata Sales Office

Thai Murata: Mission & Vision



Mission

Contribute to Advancement of Society

Vision

Reinventing ourselves to be a Value Innovator



Leading innovation driven by Thai's local core for sustainable economic growth and social development

To be the **Business Innovator**

To be the **Strategic Partner** through Innovation

To contribute through Innovative Operation & Service

Thailand Economic Policy













Thailand 4.0 - Prosperity, Security, Sustainability [Innovative/Value-based Industry – High Income Country]

■ 10 S-Curve Targeted Industries





















Murata contributing to Thailand 4.0

Solutions

Traffic Counter System

Position Detection

Wireless Sensor Network





Energy Storage System



Helmet with Vital sign sensor



Soil Sensor







■ Components/ Devices

Wireless Modules















Power Modules, Batteries





Electronics Components











Thai Murata: Events Calendar









Industrial Forum

Event Date:

12th Jul 2022

24th Nov 2022

20th Dec 2022

Maintenance & Resilience ASIA

Event Date:

14th ~ 16th Sep 2022

[Monthly Webinar Series] Murata SPEAKS

Event Date:

Last Thursday of each month



















Thai Murata: CSR Activities



With Murata's Wireless Sensor Network

New Collaboration Channel

Brand Awareness

Contribution to Society

















Business

"University"

KU



Create Education Lab for research

Enhance students' knowledge and skills



 Installation on actual production machine in University (Clean Water Processing Plant)

Sustainable Environment (SDG)

 Expand/scale to solve society's issues (Clean Water & WSN Usage Concept)

^{*} CSR: Corporate Social Responsibility

^{*} SDG: Sustainable Development Goals

^{*} WSN: Wireless Sensor Network

Thai Murata: Exclusive Support Tools



■ Smart Factory Automation Solution Page

Available in Thai language

- Provides essential information and solutions for kick-starting your smart factory project with ease
- Introduction to a fast, easy and hassle-free solution

Website: https://solution.murata.com/th-th/service/wireless-sensor/





Thai Murata: SNS Communication Channel













THAI MURATA



- Murata is now on LINE!
- Discover Murata new solution
- Exchange information and opinions within community of like-minded professionals
- Keep up-to-date with Murata Thailand's events



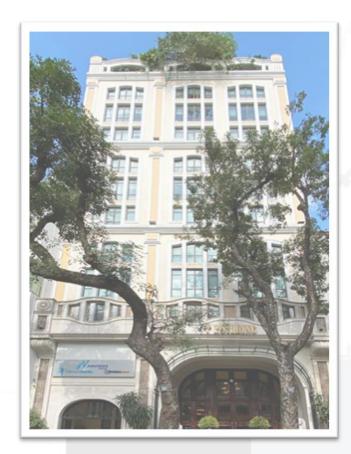






Murata Electronics (Vietnam) Co., Ltd (MEV)





Vietnam (Hanoi) Sales Office

Room 501, 5th Floor, V Building, 125-127 Ba Trieu Street. Nguyen Du Ward, Hai Ba Trung District, Hanoi, Vietnam

Establishment:

October As a representative office of Murata Electronics Singapore

October "Murata Electronics (Vietnam) Co., 2010 Ltd" as an agency office of Murata

Singapore

Sales amount: 75M USD (2021)

No of employees: 20 (Mar'22)

Direct customers:

40+ (Mar'22)





Murata Vietnam Sales Office

Murata Vietnam: Mission & Vision



Mission

Contribute to Vietnam society together with customers and stakeholders, with advanced solutions

Vision

Optimization of Murata Vietnam's presence with new valuable proposals



Taking resolution of social problems as key action purpose by all members – creating values for Vietnam society



Vietnam Economic Policy



■ ASPIRATIONS FOR 2035

Source: https://openknowledge.worldbank.org/handle/10986/23724









Vietnam 2035 - Toward Prosperity, Creativity, Equity, and Democracy

Murata contributing to Vietnam 2035

Core fields

Communications





- **5G Infrastructure** Preparation for 6G
- **IoT x Digital Transformation** Diversified applications

Mobility 🚚



- Connected
- Autonomous
- Sharing
- Electrification

Challenge fields

Environment





Resolving environmental issues, such as:

- Air pollution
- Climate changes
- Resources shortage
- Renewable energy
- etc...

Wellness





- Medical devices
- Health monitoring
- Sleep tracker
- Remote consultation
- Remote surgical
- etc...

Murata Vietnam: Long-term Commitment to Society



With Murata's continuous innovation and value creation in the electronics field









Air and water pollution

Smart agriculture

Renewable energy























Winning together with customers and stakeholders

Murata Vietnam strives to be a company that makes local communities happy and proud. To contribute in making Vietnam society more sustainable and prosperous, Murata will focus on SDG and CSR activities.

^{*} **SDG:** Sustainable Development Goals

^{*} ESG: Environmental, Social, and Governance

Murata Vietnam: CSR Activities



Scholarships Sponsorship to Hanoi Medical University



- Number of sponsorships: 5
- Award: VND 10M per student

Murata Vietnam: SDG Initiatives



Continuously reducing environmental impact through sustainable business operation practices



Effective Logistics Service



Sustainable Packaging



Paperless Operation

Murata Vietnam: Exclusive Support Tools



■ Vietnam 5G Solution Page

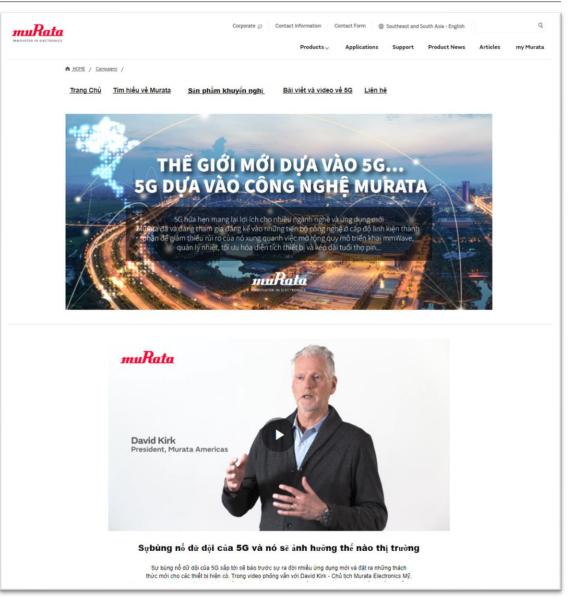
Available in Vietnamese language

Access out 5G application guide webpage to gain:

- Immediate grasp on the latest 5G technology trends → preparation for 6G
- Timely update on Murata's latest products and solutions for 5G technology
- Support from Murata experienced field experts

Website: https://www.murata.com/en-sg/campaigns/5gvietnam/home



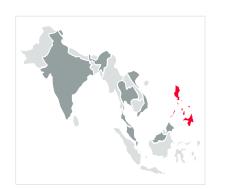












Murata Electronics Philippines Inc. (MEP)









Philippines Sales Office (est. 1998)

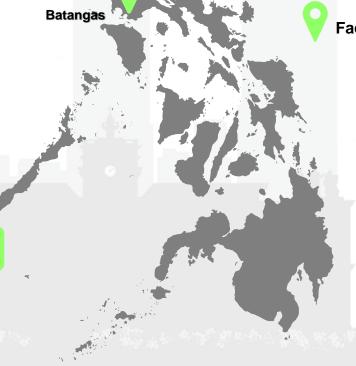
Unit 3A and 3B, 3rd Floor LTI Administration Building 1 Annex 2, North Main Avenue Laguna Techno Park, Biñan Laguna 4024



Philippines Plant (est. Sep 2011)

Lot 2-A Phase 1B, First Philippine Industrial Park, Barangay Pantay Bata, Tanauan City, Batangas, Philippines

Development and manufacturing of capacitors





Murata Electronics Philippines, Inc. (MEP), a well trained Sales team, with more than 23 years of establishment in Philippines, has always been strong and clear about it's vision to be the most preferred and trusted business partner – providing essential solution that meets customer's needs, wants and satisfactions.

We will do our utmost to support and help our customers achieve their business goals.

Gen Suganuma

President

Murata Electronics (Philippines)

Murata Philippines Sales Office

Murata Philippines: Mission & Vision



Mission

Become essential to our customers by providing utmost support to help them achieve and meet their expectations

Vision

Be the Next Game Changer



To be
No.1 supplier
through market diversification
and reliable supply

To exceed customers' expectations in quality, delivery and support through continuous improvement and customer interactions

To provide unique and unrivalled values for our partners

Philippines Economic Policy



2022



TO LAY DOWN THE FOUNDATION FOR INCLUSIVE GROWTH, A HIGH-TRUST AND RESILIENT SOCIETY, AND A GLOBALLY-COMPETITIVE KNOWLEDGE ECONOMY

2040



MATATAG, MAGINHAWA AT PANATAG NA BUHAY

Philippine Development Plan (PDP)

■ 5 Main Pillars



Enhancing the Social Fabric ("Malasakit")



Inequality-Reducing Transformation ("Pagbabago")



Increasing Growth Potential ("Patuloy na Pag-unlad")



Enabling and Supportive Economic Environment



Foundations for Sustainable Development

Murata contributing to Philippine Development Plan

■ 5 Focus Markets



IC Maker



Agriculture



Energy



Electric Vehicle



Infrastructure

Murata Philippines: Events Calendar





Philippine Subcon and Manufacturers Exhibition 2023

Event Date: 26th ~ 29th Apr 2023







Murata Philippines: CSR Activities



■ [2021] Christmas gifts (relief packs) giving to the low income community









■ [2018] Christmas party for neglected and abandoned kids



Contributing and extending support to the community

Constantly taking environmental and social measures to contribute to the well-being of our community and society

Projecting a positive company image - emotionally appealing and making our employees, community and customers proud

Philippine Manufacturing Murata: CSR Activities muRata



EDUCATIONAL PROGRAM













To benefit unprivileged talented students to achieve their educational goals and become valuable members of the community. In addition, to help selected poor individuals finish their courses, in return helping them on their livelihood.

COMMUNITY CALAMITY SUPPORT









To offer financial and non-financial aids to affected communities, assisting in the recovery development of disaster-hit areas.

Cultural, Arts and Sports Program

To foster social inclusion and community empowerment by bringing people together in conducting and participating in cultural activities such as arts and festivals and sports competitions.

FEEDING PROGRAM











To reduce/ prevent children from under-nutrition such as stunting, wasting, micronutrient deficiencies; To educate children and improve their knowledge on healthy diet and lifestyle habits; To improve school enrolment, school attendance and academic performance; To reduce food insecurity and hunger.

HEALTH & SAFETY PROGRAM











To improve the health through preventive and/or supportive medical treatment of less fortunate members of the society; To aim to provide safety in the community.

Livelihood Programs

To improve the state of life of the low-income sector by giving jobs and business opportunities, healthcare access, and other forms of assistance.

Philippine Manufacturing Murata: SDG Initiatives muRata



Murata Philippines plant set to become the 1st overseas production site to operate on 100% renewable energy



Murata Manufacturing Group is committed to promoting the use of renewable energy at its domestic and overseas locations to combat climate change.

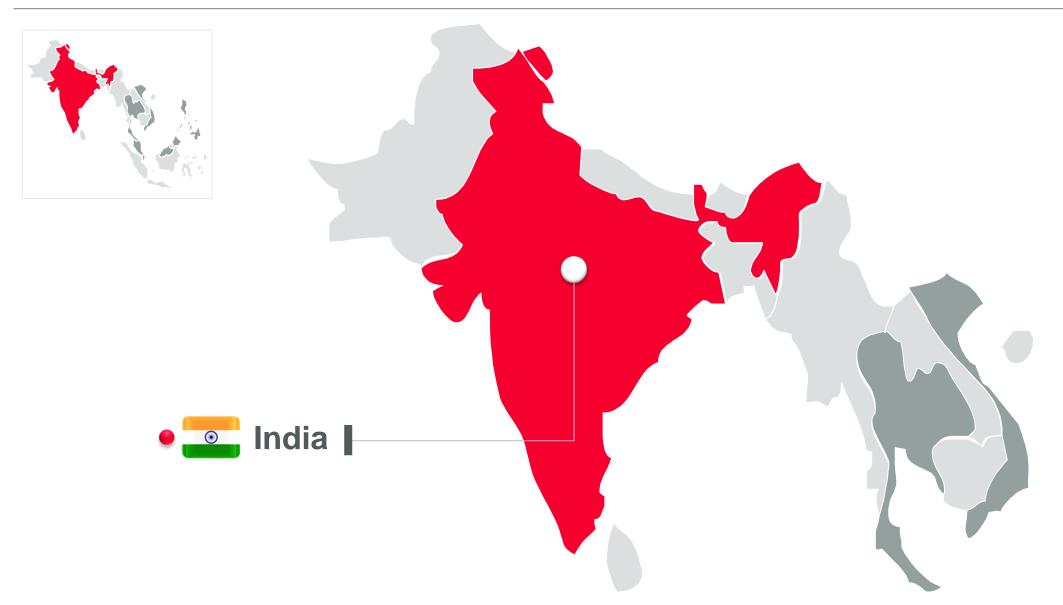
Murata Manufacturing Group is converting all electricity consumed in the group's business activities into renewable energy to meet the goals of the RE100 global environmental initiative.

NEWS LINK









Murata Electronics India Private Limited (MIE)





Chennai Sales Office (est. 2007)

New Door Nos.610, 610A & 612, 3rd Floor, Block A, "Imperial" building Anna Salai, Teynampet, Chennai 600 018, India



Bangalore Sales Office (est. 2013)

Ground floor, Nitesh Timesquare, No.8, M.G. Road, Bangalore - 560 001, India



Gurgaon Sales Office (est. 2018)

Unit No. 107, 1st Floor, Vatika City Point, MG Road, Gurgaon-122 002, India



Murata Electronics (India) Private Limited (MIE) has 11 years of business history in India where the next big global demand of electronics exists. With young and dynamic talents in our organization, MIE is heading towards a dynamic growth in the Indian market and contributing prominent share in Murata business.

India's economic growth is expected to gain momentum. MIE will focus to fulfil the huge market demand and sow new business seeds in the near future, following the next-China trend. MIE will continue to innovate to have an edge over other competitors and contribute to Murata's global business significantly





Ryuji Hayashi

Managing Director Murata Electronics (India)

Murata India Sales Office

Murata India: Mission & Vision



Mission

Being a world-class business exporter of great talent and technology

Vision

Solid foundation to be the next GAME CHANGER



Contribute to Murata growth with the best team (talent) and innovate technology and business in India

Communication



Mobility



India Key Influencing Trends



















Growth in Population Strong Pool of **Top Talents** (Tech Giants)

Start Up **Ecosystem** **Automobile** Industry

Government **Incentives**

Make in India

India Dynamic Growth

























E-RUPI/ Digital Money

Energy Storage

Smart Home **Appliances**

5G Network

Delivery Drone

Agri-Tech

Edu-Tech

Health-Tech

E-fleet (last-mile deliveries)

Cars

EV Shared Mobility

Charging Station/ EVs

Murata contributing to India Dynamic Growth

Core fields







Communications (5)







Environment



Wellness































Sleep monitoring

Telecom service providers





4-wheelers

Electric Collaborative efforts for Smart agriculture vehicles







Platforms







Murata India: Events Calendar

muRata
INNOVATOR IN ELECTRONICS

■ Check out our upcoming events in India <u>here!</u>







■ Celebrated 10th anniversary in 2020



We are going into our 12th year and we are sure to have

as many decades to celebrate with our customers and stakeholders contributing to the society with our wonderful pool of talents.



Online Design Support Software – SimSurfing











https://www.murata.com/tool/simsurfing

SimSurfing is a *free website design tool* which provides information and data for selecting electronic components.

The functions of the software allow you to narrow your search for the component part numbers, display various characteristics, and perform characteristic calculations.

Online Support – Murata Community Forum





https://community.murata.com

Murata Solution Technology





https://solution.murata.com/th-th/service/wireless-sensor/



https://solution.murata.com/en-sg/technology/telkom-everynet-solution



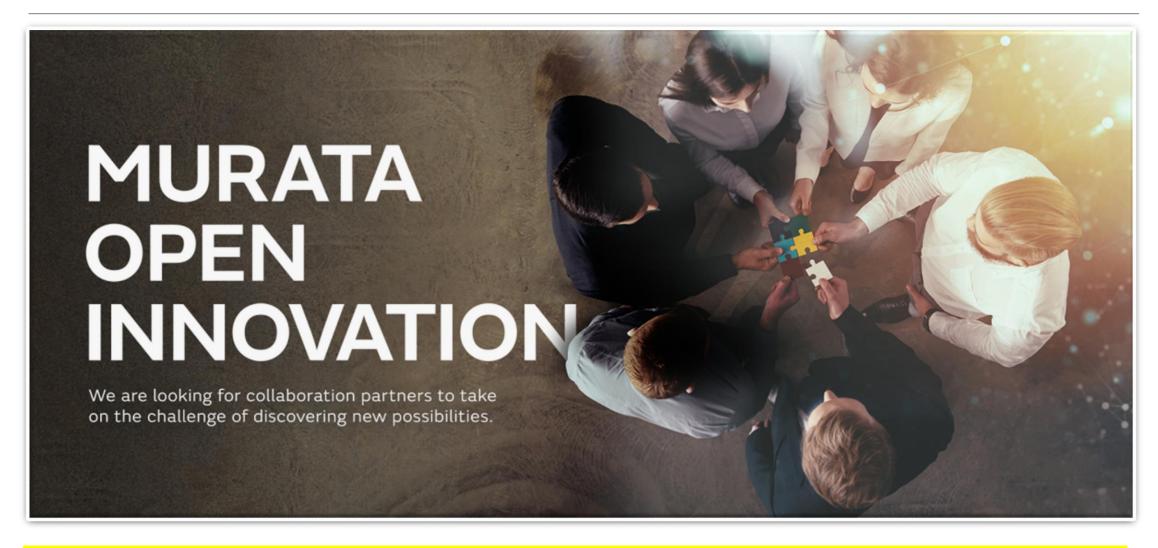
https://www.murata.com/en-sg/campaigns/5GVietnam/Home

https://solution.murata.com



Murata Open Innovation





https://www.murata.com/en-eu/s/blog/how-startups-can-collaborate-and-innovate-with-murata.html



TECHNOLOGY | SOLUTIONS | INNOVATIONS



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August 2021



December 2021
*Thai Language



September 2021



January 2022
*Bahasa Indonesia



October 2021



February 2022



November 2021



March 2022 *Thai Language

Murata Social Media Channels

















https://lin.ee/xLeyNyy

https://zalo.me/g/zjgzyx087





Digital Transformation in Agri-tech for Social & Environmental Issues



Priority SDGs related to Agri-Tech





ZERO HUNGER







Challenges faced in Agri-Tech Market





Agriculture is the **least digitized** of all major
industries globally
(as per McKinsey Global
Institute's Digitization Index)



1/3rd of all food produced for humans is wasted annually



The Earth has lost ~33% of its adequate or high-quality food producing land in the last 40 years



Agriculture contributes to 20% of global GHG emissions



270 Mn+ smallholder farmers will be affected by climate change impacts

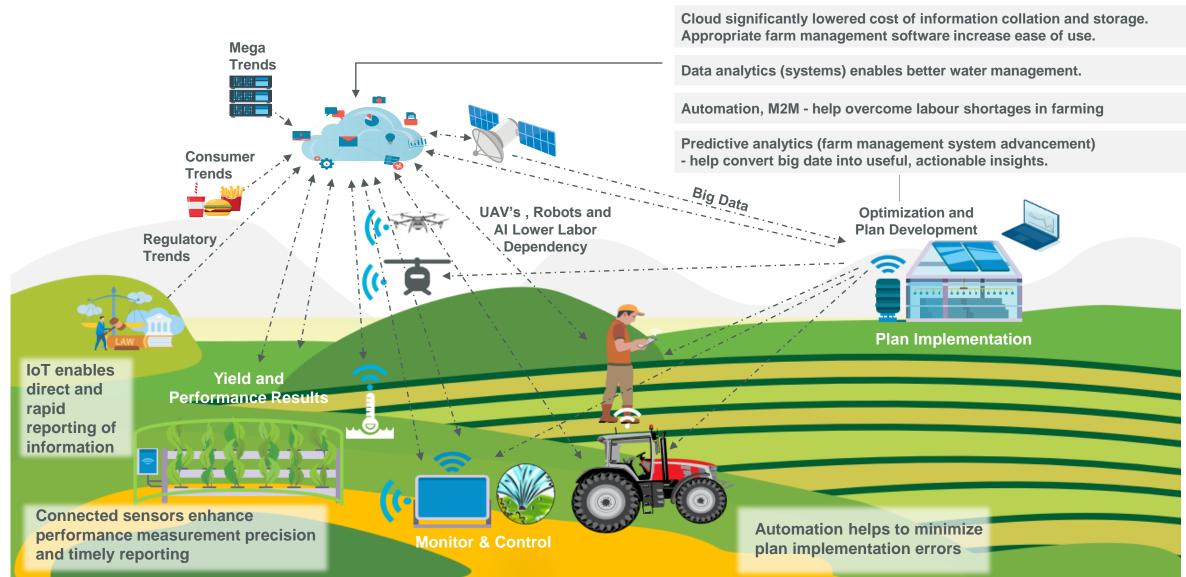


Agriculture accounts for 70% of global water use and excessive irrigation is accelerating a global water crisis

Source: FAO, Agfunder, McKinsey

Digital Transformation Trends in Agri-Tech

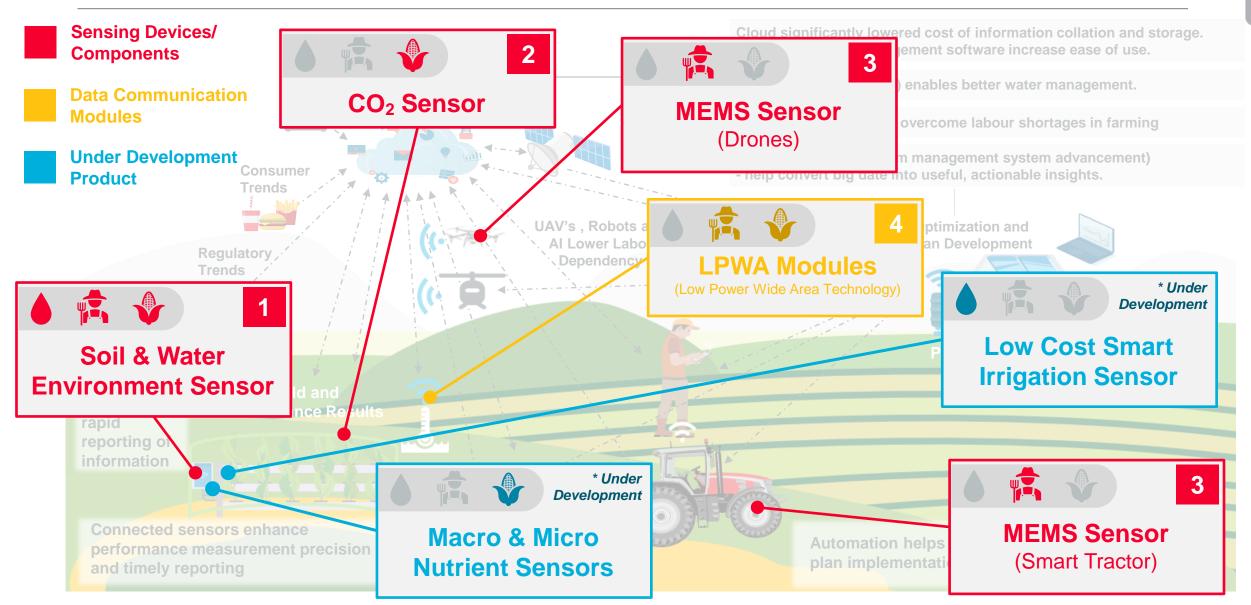




Source: Frost & Sullivan

Murata Technologies for Smart Agri-Tech





Murata's Sensor in Irrigation & Increase in Yield muRata

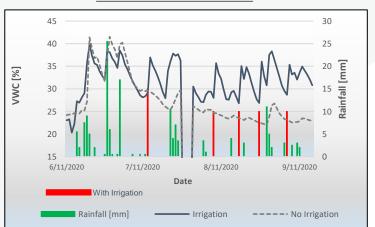
Use Case

To monitor key parameters of agriculture such as water humidity level, soil minerals, temperature, etc. in order to improve crop/ farm productivity and resource use efficiency

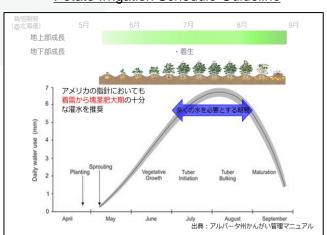
Merits

- Remote monitoring
- Automatically adjust resource usage (e.g. fertilizer, water supply, etc.)

Soil Moisture Data Trend



Potato Irrigation Schedule Guideline





Irrigation

NO Irrigation





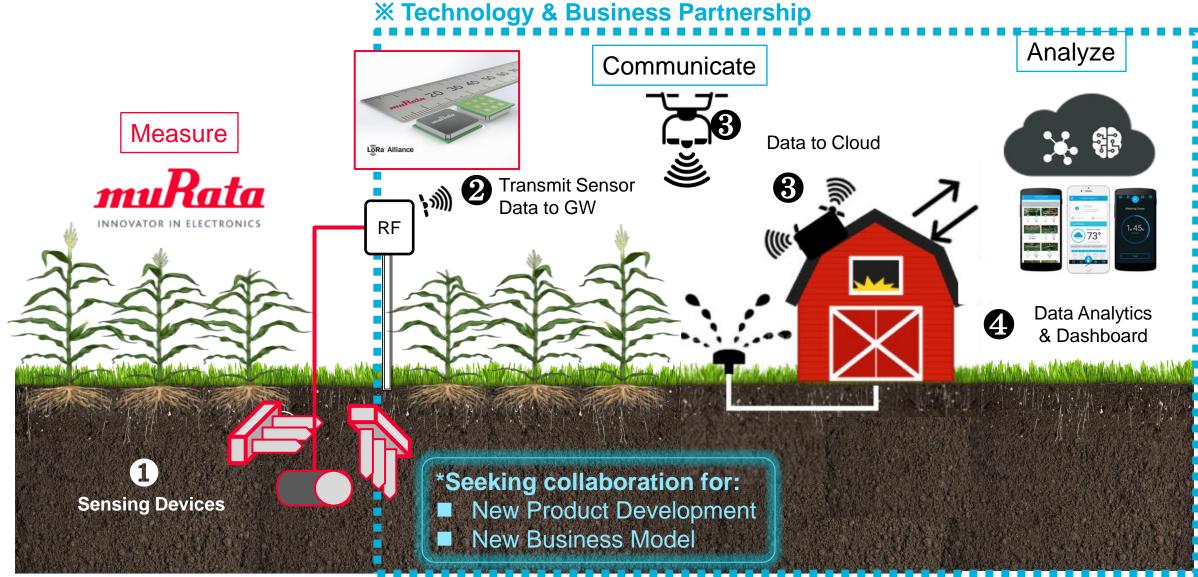


Soil classification name: "細粒質腐植質褐色森林土"

Soil classification symbol: I1h3t1

New Market Development: Open for Technology and Business Collaboration





Partnering for Growing Agri-Tech Future





Changing Business Environment



Expansion of the usage of electronics





Increasing importance of energy security



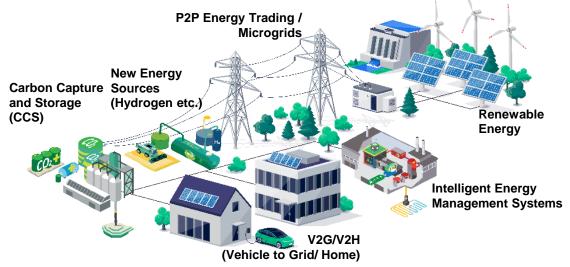


Transition to a sustainable society





Rise of New Clean-Techs



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Continuous Cycle of Social and Economic Value





Key issues (Materialities) originating with social issues

Initiatives to solve social issues through business activities overall

Aim to increase social value by minimizing burden on global environment and local communities.

Contribute to solving social issues through our business

Create the kind of innovation that Murata is known for achieving and aim to contribute to solving social issues through our business.

Key Issues (Materiality)



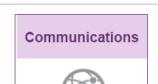
Opportunities Business

Social Responsibility

Qo

Risk Management

Contribute to solving social issues through our business



Contribute to building the social infrastructure that the advancement of communications technology is causing to expand







Create businesses to solve climate change and resource & energy shortages, thereby contributing to improving global environmental problems







Wellness



Contribute to a society where all people can live healthy, prosperous lives



Mobility

Contribute to achieving the formation of a safe transportation society and new cities



×

Social

Environmental

Strengthening to climate change Use of sustainable resources Preventing pollution and managing chemical substances











Safe and worry-free workplaces and health management Respect for human rights and diversity Coexistence with local



communities

Governance

Appropriate Business Transactions Business continuity management (BCM) initiatives Information security



Initiatives to solve through business a

e social issues activities overall

Green Transformation Target and Milestones

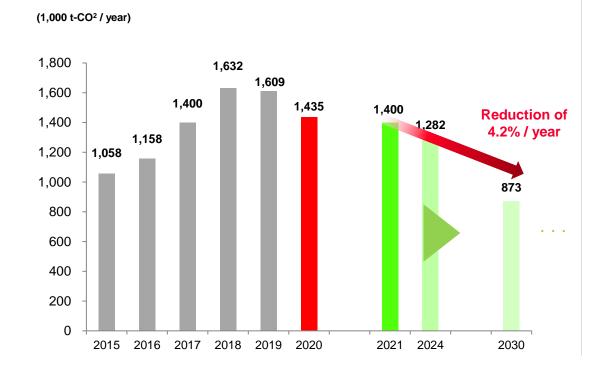


Amount of GHG emissions (vs fiscal 2019)

FY2024: 20% reduction FY2030: 46% reduction



Trend in GHG emissions



Renewable energy implementation rate

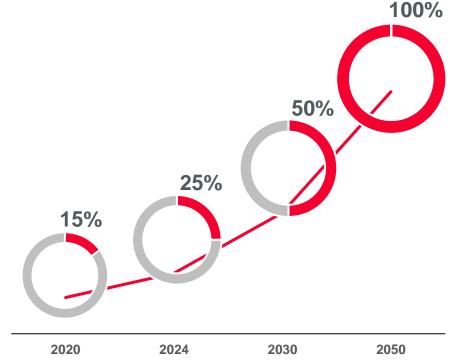
FY2024: 25% FY2030: 50% FY2050: 100%

RE100

°CLIMATE GROUP

*CDP

Renewable energy implementation rate



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Response to Climate Change: Energy Saving Activities

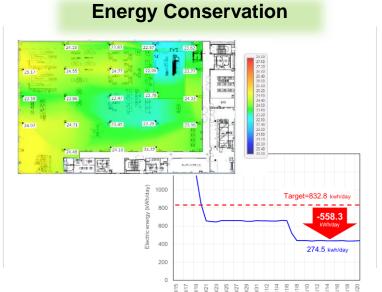




- Continuous miniaturization of our components to reduce energy consumption in the process and energy loss of electronic devices
- Executing hundreds of energy saving measures every year for our operations
- Introduced in-house "Carbon Pricing" scheme to encourage sustainable investment

Examples of Initiative

Murata Global Market Share MLCCs overall 0603M size or under



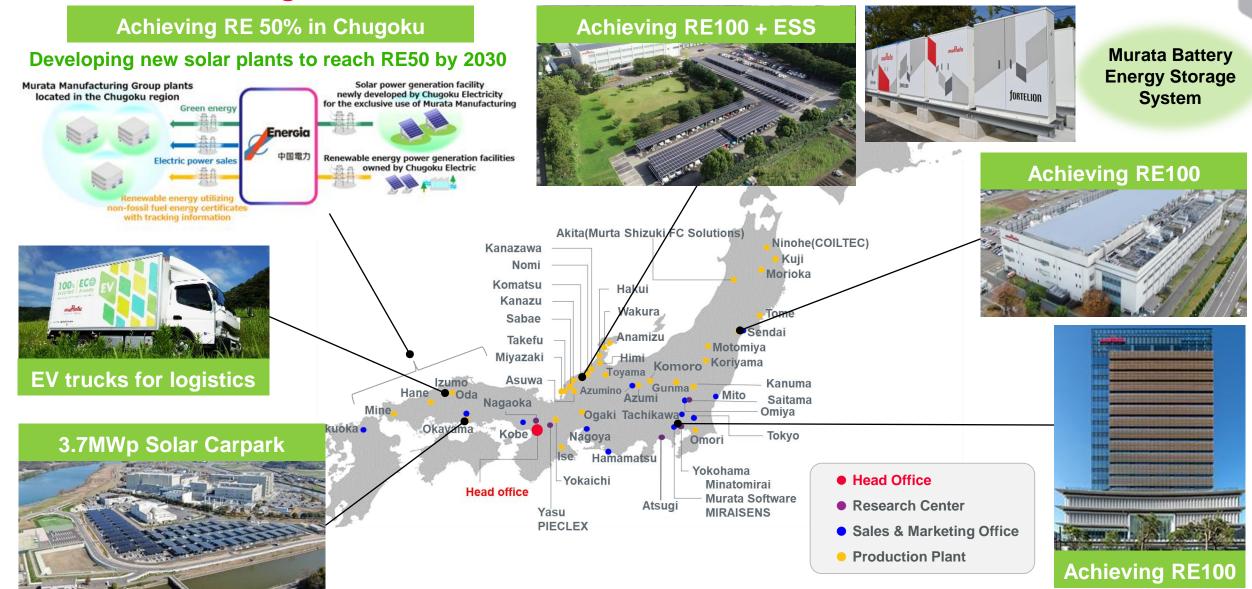


Carbon Pricing Scheme

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Response to Climate Change: Transforming to Renewables

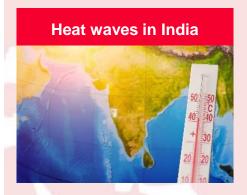




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Climate Issues in the Region





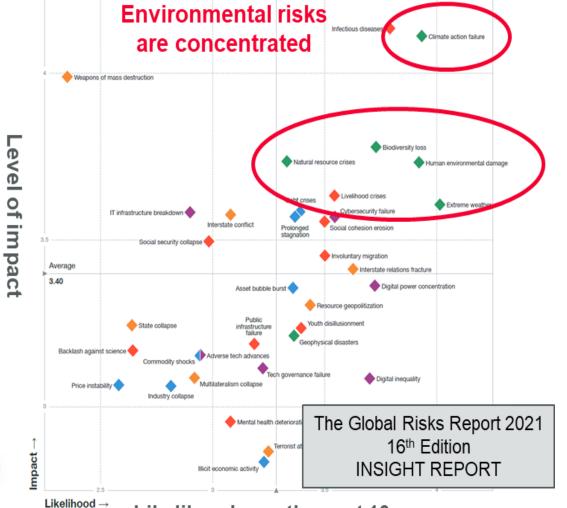












Likelihood over the next 10 years

Murata Operations in Southeast and South Asia and Renewable Transition

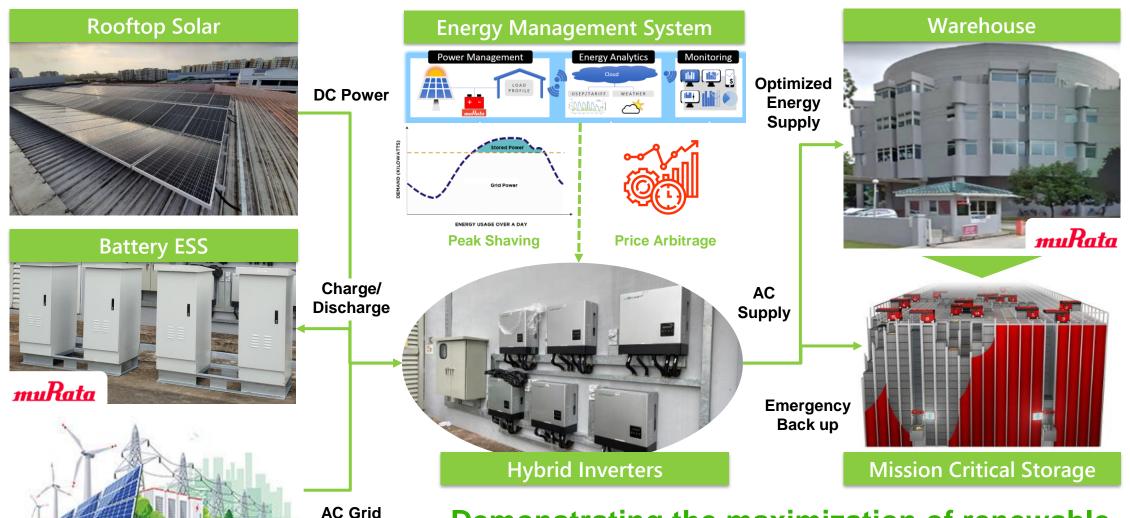




Energy Management System Demo in Singapore

Grid Power





Demonstrating the maximization of renewable energy usage and reduction of energy cost

New Business Challenges: Contributing to a Sustainable Society



Traffic Counter

Providing high-quality data to take effective measures against social issues such as traffic jams











Soil Monitoring

Digital transformation of farming to reduce climate impact and improve productivity











Microgrids

Provision of clean and affordable energy to remote communities and develop future energy architecture













Thank You

We will email you with the On-Demand video for today's webinar.

www.murata.com



stay tuned

...for our upcoming events!





Uniting Bright Minds for IoT 19th May 2022, Thursday





- Largest LoRaWAN® Telecomm and Network Providers in Australia & New Zealand
- Global Provider of scalable IoT connectivity solutions for the Internet of Things





MetalTech & Automex 2022





- Malaysia International Trade & Exhibition Centre (MITEC) @ Hall 4, Booth 4373
- 30-mins LIVE TechTalk
- NEW! Product Showcase & Demo











The world relies on technology. Technology relies on Murata.

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in









muRata SPEAKS

TECHNOLOGY | SOLUTIONS | INNOVATIONS



Please take a moment to share with us your experience so that we can do better at future events.

https://bit.ly/3LgjYlJ

We would love to hear from you!

