

A shared responsibility

As environmental and social issues such as global warming, marine plastic issues, and human rights issues become more diverse, companies' attitudes toward solving these issues have come to be strongly questioned. All companies are increasingly being required to contribute to environmental and social sustainability Sustainable Development Goals (SDGs).

In its management policy announced in June 2021, Mitsubishi Electric declared that it would "contribute to the realization of sustainability through all its activities". My own department, The Sustainability Planning Division, was established in April 2021 to promote these activities. We will contribute to the SDGs through our core businesses and strive to increase social value even more than before in order to realize our corporate philosophy of "Realizing a Vibrant and Sustainable Society."

In this edition of Monozukuri we examine the various ways in which Mitsubishi Electric, Factory Automation is helping drive the sustainability agenda.



**Asako Ueno,
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Sustainability Planning Division**

Is “Sustainability” Sustainable?

Sustainability needs to become sustainable, and that can only happen when people and companies step up and put this at the heart of their agenda. And that is just what Mitsubishi Electric has been quietly doing over many years, from its successful series of environmental activities to its efforts towards equal opportunities, and now as it helps others to do the same as it continues its own “journey” with the establishment of a new Sustainability Division.



The UN sustainable agenda is an independent activity to drive awareness, it does not exclusively endorse any single approach or company but aims to motivate “all” towards a more sustainable existence.

There is currently a lot of hype and discussion going on about SDGs (Sustainable Development Goals) and sustainability as objectives. In fact, the United Nations efforts to raise this agenda item have been phenomenally successful, those “colored wheels” are to be seen gracing the lapels of politicians to business leaders. Please don’t misunderstand, it truly is a great idea to try to make the “sustainability” topic accessible to everyone and to give easy ways to quantify what it means.

More than good intentions

But like so many ideas and good intentions, it needs to move past that stage and really become something that is actively being delivered.

Surprisingly, it is already more than six years since the SDG policy was unanimously endorsed by the UN under the mantle of “Transforming our world: the 2030 Agenda for Sustainable Development” (2015). Two thoughts occur,

- Let’s start delivering on these great initiatives
- There are only nine years left to run until 2030, but why should that be the end?

Where do you start?

A good place to begin is to make sure we all have a common understanding of what sustainability means and the UNs intentions behind this initiative, for example, it is not simply a euphemism for the “green agenda”. Yes, there are many aspects of the sustainability ethos that affect our “biological ecosphere”. And that’s important. But the UNs goals also embrace gender equality and inclusivity for all members of society, regardless of physical or mental capacities. They even extend to fundamental issues, like having enough food to eat and clean water to drink as well as considering key elements such as access to education and technology.

Continued on page 6...

Mitsubishi Electric’s Sustainability team!

When Mitsubishi Electric established its Sustainability Planning Division it did so by putting the full force of both senior management and its employees behind it.

The company’s corporate philosophy, which has been passed down since the company’s foundation, underlies the activities of each and every member of the Mitsubishi Electric Group as they contribute to a better society. If you do not believe that, take a look at some of the corporate slogans over the years, starting with today’s; “Changes for the better”, to “SOCIO-TECH” (Social technology) in the 1980’s and even back to the 1960’s when “With you today and tomorrow” was first used in Japan.



The Mitsubishi Electric Group’s materiality and SDG initiatives

In sustainability management, Mitsubishi Electric has classified issues that must address into two broad categories: “solving social issues through business activities” and “strengthening management foundations to support sustainable growth”. In interviews with employees, business partners, investors, and experts, the Mitsubishi Electric Group worked to identify what is expected of the Group and what is attracting attention, and finally identified five materiality(areas) to focus on.

In “Solving Social Issues through Business,” Mitsubishi Electric will focus on the following SDGs 3, 7, 9, 11, and 13, maximizing the strengths of the group targeting the realization of a sustainable global environment and a safe, secure, and comfortable society. As for the management foundation that supports sustainable growth, the focus will be to contribute to the achievement of the 17 goals of the SDGs by engaging in “respect for everyone,” “sustainable enhancement of corporate governance and compliance,” and “creation of a corporate culture oriented toward sustainability”.

We hope to create a culture where all employees recognize the connection between their work and society, where they can explain in their own words how they are contributing to the SDGs through their work, and where they can think on their own how to better achieve the goals. Making the SDGs a personal concern will help strengthen everyone’s motivation regarding their work, and will ultimately provide a large boost to the Group’s contribution to the SDGs.

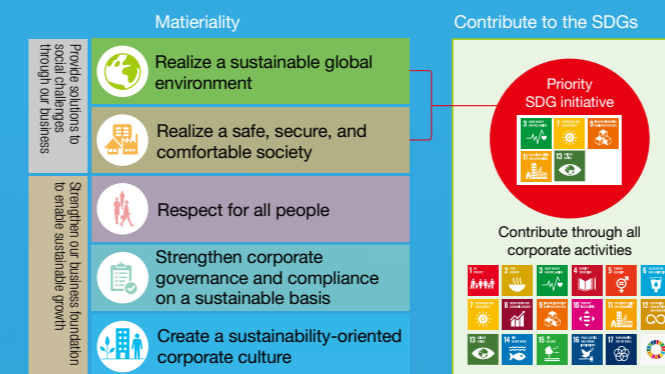
Addressing the SDGs with our customers

Many people are probably familiar with the colorful icons that represent the 17 goals of the SDGs. Each of the goals has “targets,” which define specific numbers and how to achieve each goal. There are 169 targets in all. Taking a good look at these targets might provide ideas for new businesses.

An important aspect of the SDGs is that it advocates achieving a balance between social contribution and economic development. By assisting customers who have strong interest in contributing to the SDGs, we can work together to solve social issues and realize sustainable growth at the same time.

Please look forward to the Mitsubishi Electric Group’s continued contribution to the SDGs.

Visit https://www.mitsubishielectric.com/en/our-stories/article/xx_ww_x_sc2109_01.page to learn more



It's an attitude

Looking at the UN SDGs as a whole, they are somehow reminiscent of the Japanese Government's Society 5.0 approach, both are taking a holistic view of the interaction of the environment, society, education and inclusion. And fundamentally, both concepts are human-centric.

In fact, the Japanese Business Association, Keidandren, has released a paper titled "The Evolution of ESG Investment, Realization of Society 5.0, and Achievement of SDGs" which suggests that Society 5.0 is indeed a way to achieve the SDG goals. Furthermore, Professor Koji Nomura from Keio University, in his role as Project Leader, the 21st Century Public Policy Institute has tried to qualify this further in the research paper "Society 5.0 for SDGs - Creating Future Economic Assessments". Therefore, sustainability is not just a concept being pursued by free thinking, environmentalists, but is actually something that can be embraced by both legislative, economic and business communities alike. In short, it can actually make good business sense, as many companies across the world have already found.

Making good business sense

Who doesn't want to save costs and reduce waste, because these all can all directly hit the "bottom line". And, if in addition we can also find new labor resources, make ourselves a more attractive employer what's not to like about that? When discussed in those terms sustainability makes good business sense across the spectrum. So there are many reasons to get started and far less to dawdle in the execution of sustainable activities.

In fact at Mitsubishi Electric it is seen as such an important topic that a dedicated department has been set up to promote sustainability both internally and externally. What might surprise people is that often factory automation, products and know-how, are a key enabler to both Mitsubishi Electric's own activities and those of its customers.

Learn more:

The Evolution of ESG Investment, Realization of Society 5.0, and Achievement of SDGs

www.gpif.go.jp/en/investment/Report_Society_and_SDGs_en.pdf



What is the difference between carbon-neutral, net-zero and climate positive?

www.plana.earth/academy/what-is-difference-between-carbon-neutral-net-zero-climate-positive/

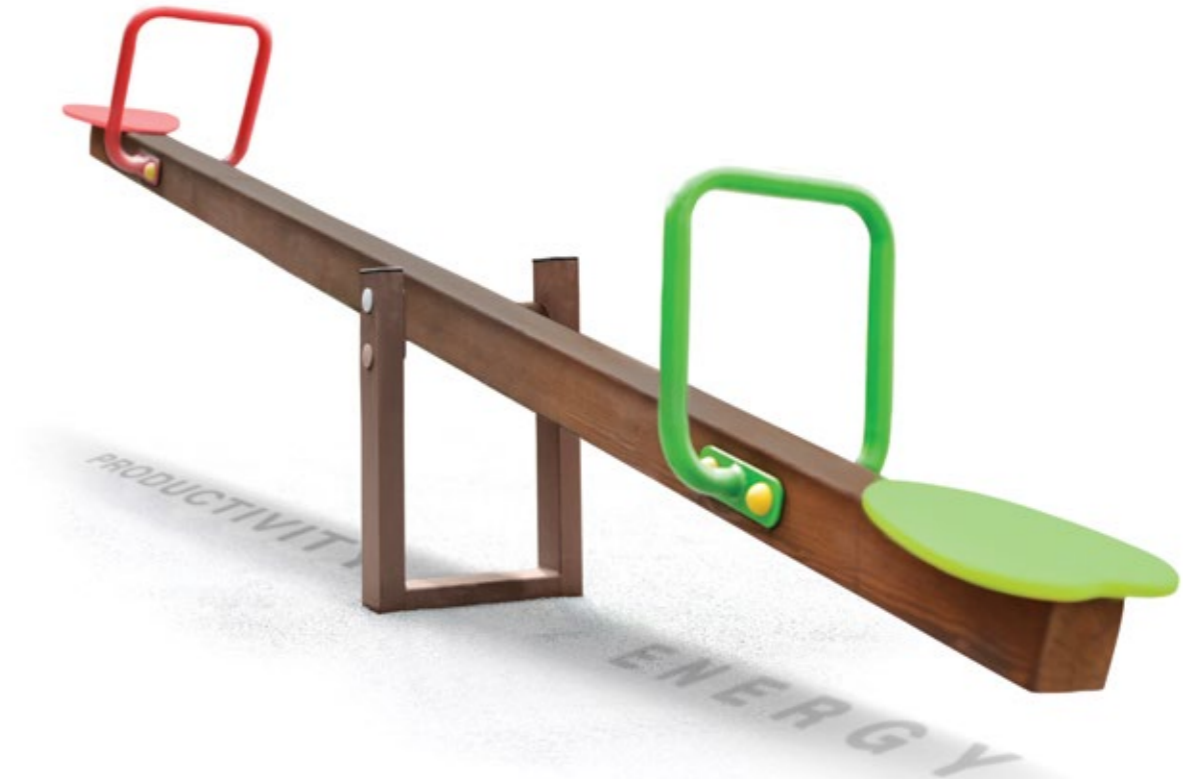


Toward the Realization of Society 5.0 for SDGs

www.keidanren.or.jp/en/speech/2019/0101.html



Enjoy both the ups and the downs



Lift productivity and lower energy waste

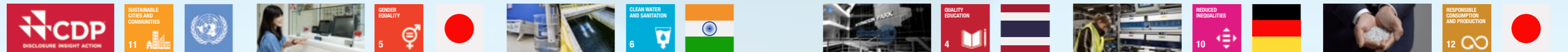
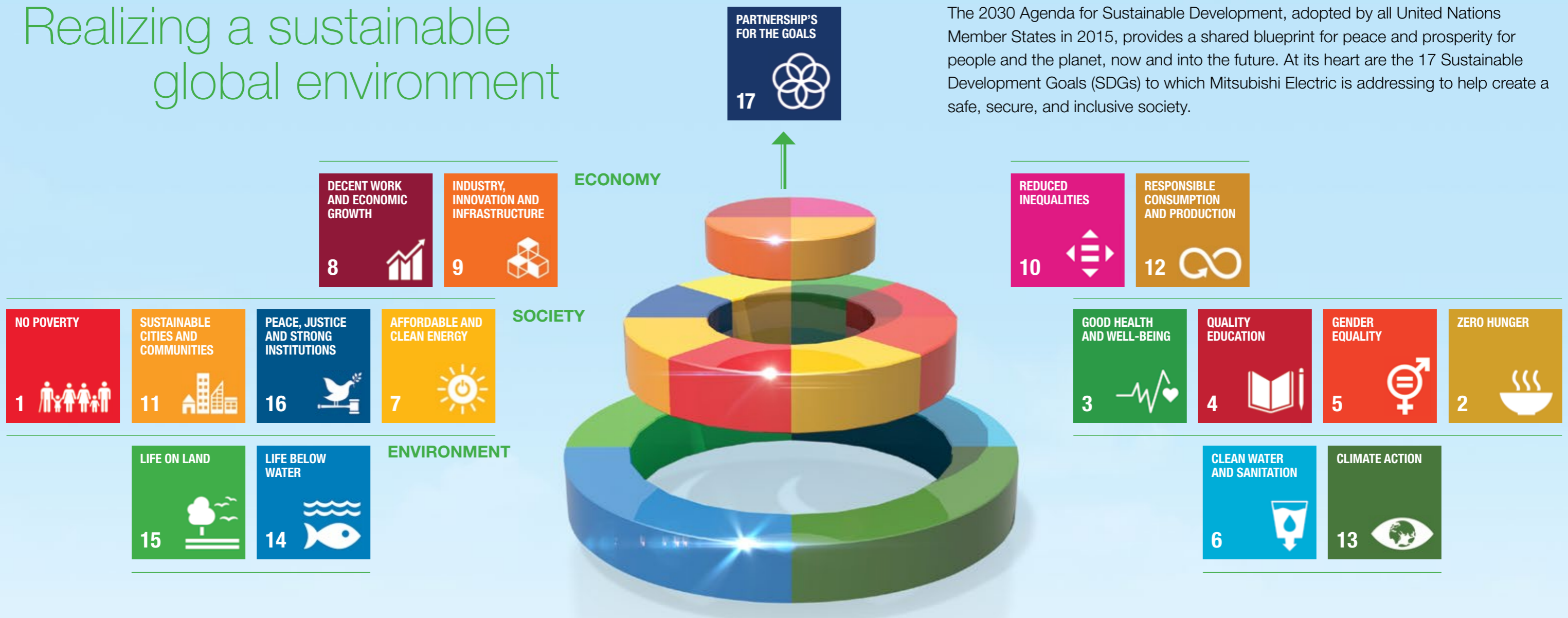
If you can't see it, you can't manage it. Eco-monitor exposes energy consumption as data that can guide your efforts to optimize energy efficiency, and also serves as an early warning system for preventative maintenance. It lets you monitor changes in energy consumption and identify potential problems long before they seriously impact performance. With Mitsubishi Electric's visualization technologies, your productivity can go up as your energy waste goes down.



www.mitsubishielectric.com/fa

Realizing a sustainable global environment

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs) to which Mitsubishi Electric is addressing to help create a safe, secure, and inclusive society.



Highest 'A List' in CDP for climate-change activities

The top rating recognizes the environmental focus of Mitsubishi Electric's commercial activities and goals as well as the company's timely and appropriate information disclosure. Mitsubishi Electric has been named to the A List five different times in the climate-change category.



Learn more

Success at Forbes Japan Women Awards

Atsuko Onishi, FA factory manager, was presented with the Pioneer Award. "There is a lot of group thinking that goes on in product development, and I believe having more female engineers can help create an environment that is more conducive to new ideas." Atsuko Onishi said.



Learn more

GIFT smart water infrastructure project

From supplying citizens to the Gujarat International Finance Tec-City (GIFT) with purified drinking water sourced from the river, to treating everyday wastewater for its environmentally safe return to the river.



Learn more

Creating opportunities for engineers of the future

The joint "Automation Park" initiative, developed by the "Eastern Economic Corridor (EEC)" team and the Thai government, aims to develop future skills and understanding to support and strengthen Thailand's manufacturing sector.



Learn more

Empowering the workforce

Pokayoko or guided operator systems help workers at this automotive OEM increase the quality and efficiency of their production. It does not matter if they are fully able-bodied or physically/mentally challenged workers, everyone benefits.



Learn more

'Closed-loop' plastic recycling

With over 20 years of experience, Mitsubishi Electric has been a pioneer in plastics recycling having developed a "closed loop" recycling plant where up to 80% of the materials from its home appliances can be reclaimed.



Learn more

SDGs in action!

Award winning “national green factory”

Mitsubishi Electric Automation Manufacturing, a factory automation manufacturing plant based in Changshu China, has been certified by the Chinese government as a “national green factory” after extensive evaluation. The plant known as MEAMC, has achieved an overall 10% reduction in power consumption, which at a product level translates to 27% less energy being needed to manufacture each product. This has been achieved through the combined use of Mitsubishi Electric’s e-F@ctory intelligent manufacturing system and the use of E-JIT (environment & energy just in time) to simultaneously optimize environmental, energy and production efficiency.



A foundation that helps disabled youths join the workforce

The Mitsubishi Electric America Foundation (MEAF) was established in 1991 by Mitsubishi Electric Corporation Japan and the Mitsubishi Electric US group companies with an endowment of \$15 million. Its mission is to help disabled youngsters to actively participate in society through maximizing their own potential. Since 2011 the Foundation’s vision has been to empower those affected through increased employment. According to the US CDC one in four Americans have some form of disability which for many prevents them from gaining employment opportunities. Of those that can work, often they are unable to find work, so to help address this issue the Mitsubishi Electric America Foundation launched its national M>PWR initiative in 2011. By investing its philanthropic resources in innovative approaches to prepare youths with disabilities for employment the foundation aims to plant the seeds of change and to identify strategies that are effective at scale in helping disabled youths transition into the competitive workforce.



A building that produces more energy than it consumes

SUSTIE - a building where not only the words “sustainability” and “energy” merge but also the implementation of those disciplines. As part of its efforts to fully understand and resolve issues around meeting its Sustainable Development Goals (SDGs) Mitsubishi Electric has set about creating a test facility which is actually a complete office block! The SUSTIE facility, located in Kamakura Japan, has set its goal to be both a Zero Energy Building (ZEB) and to prioritize the “wellness” of the workers within through improved health and comfort. In-fact through the use of creative design, maximizing natural light, thermal air flows and innovative elevator, lighting and control technology Mitsubishi Electric has created a building which generates more energy than it consumes as well as achieving a five-star rating for occupancy wellness. What is even more remarkable as it is achieved only within the footprint of the building itself.



SDG product contribution

Ingenuity: Material processing

Industries such as automotive and aerospace are seeking to utilize new materials like CFRP (Carbon-fiber-reinforced polymers) to reduce weight without impacting strength as a way to reduce environmental impact. However, new technologies are required to be able to process those materials, at scale. Mitsubishi Electric’s CV Series of Laser processing machines used ingenuity to do just that.



Experience: Inverters

It’s well know that in general using inverters can help motors reduce energy consumption. However, additional functions such as multi-pump control, power regeneration or harmonic management are a few of the many techniques that enable users to achieve their sustainability goals when using Mitsubishi Electric s inverters such as FR-F and FR-E800.



Smart design: Human sensitivity

Poorly lit factories place high demands on bright LCD displays, but if those displays are always on several problems can occur; screen burn in (making the screen unreadable), early screen failure and maintenance due to continuous use, unnecessary energy consumption. Taken together, that is not so sustainability. One smart countermeasure on some Mitsubishi Electric HMI’s is a “human sensor”, only turning on the screen when it is needed, i.e. a person is stood in front of it.



Enabling: Guided Operation

All of us need a helping hand at sometime. Digitalized Poka Yoke allows operators to be guided to the next correct actions. But for some users who may have learning disabilities, dyslexia or other challenges, being guided by pictures and video’s can make some jobs more accessible and therefore more successful and rewarding. Mitsubishi Electric’s Poka Yoke solutions can help in surprising ways.



Chris Hazlewood, Monozukuri editor in chief

Mitsubishi Electric’s deserved reputation for innovative excellence is very much reflected in the work our Stainability Promotion Department is doing to deliver on the UN’s Sustainable Development Goals. All the initiatives Mitsubishi Electric have developed are about translating worthy ideals and intentions into concrete action that stands to make a significant and lasting difference to all our lives. There could be no more important work than this, and I am immensely proud to be involved in it. ■