SMC

Expertise – Passion – Automation

SMC Business Continuity Plan

The customer's trust is earned with our manufacturing, engineering, sales, management, and financial continuity efforts with a sustainable product supply.

"Uninterrupted operations and a resilient supply chain"

Working toward a sustainable world

As a comprehensive manufacturer of automatic control equipment, SMC aims to fulfil our product supply responsibilities and maintain the trust of our customers by contributing to both sustainable growth and the expansion of technological innovations.

SMC's mainstay products, pneumatic components are used within automatic control machinery utilizing compressed air. Compressed air is an environmentally friendly power source that can be safely released to the atmosphere. SMC foresees that the demand for pneumatic components will increase and that the expansion of the possible applications will directly lead to a reduction in the environmental burden of industry as a whole.

While taking advantage of the advanced technological capabilities we've accumulated over our many years of business, SMC plans to continue contributing to the sustainable growth of industries and the expansion of technological innovations by developing and supplying automatic control equipment. The products we develop and supply will be even more energy efficient, compact, and lightweight in order to not only meet but exceed the needs of our customers around the world.

In addition, SMC will assure that each and every process within our company's business activities will take the protection of the environment into consideration. This will include the removal of environmentally hazardous substances and materials, the conservation of energy and resources, the reduction of the use of packing materials, the reduction of noise, and the reduction of and the proper disposal of waste water and other waste materials.

In recent years we've seen an increase in natural disasters such as heavy rains, large earthquakes, and the spread of infectious diseases. These have gravely threatened our lives, our livelihoods, and our property. In these states of emergencies, many of our customers have found themselves working to maintain and recover their economic activities by switching their production to medical supplies and other daily necessities.

SMC is able to promptly provide products that meet the needs of our customers anywhere in the world as a comprehensive manufacturer of automatic control equipment that supports automation. We are committed to ensuring that SMC is prepared for any emergency and that our business activities will not stop in the event of such an emergency. This includes maintaining a system that can quickly resume operations in the event of an unavoidable termination. At the same time, we're also introducing the latest security technology in order to fully protect our customer's information.

SMC is further refining it's rock solid BCP, which is unrivaled amongst other companies in the our industry. We promise to do our utmost to fulfill our main responsibility; to provide our customers the products they require.

President
Yoshiki Takada

Sustainable BCP Initiatives

(**BCP**: Business Continuity Plan)

＊ As of September 2021

Production department BCP

Risk hedging by dispersing the location of production and logistics centres.

- A sustainable product supply is provided by consistently managing the flow of information and goods from procurement to production and distribution.
- Measures are taken with a long-term perspective in order to implement flexibility and rapid responses to the risks of sudden changes in the production environment.

SMC's supply system provides coverage of the world's major countries.

Production Bases located in 29 countries and regions with an extensive local inventory system

Technical department BCP

Global engineering network established

- The BCP is implemented with collaboration between the Japan, Asia, US, and European Technical Centres, providing a quick response with 1,700 engineering staff members.
- Accurate and rapid responses to customer issues on a global basis.
- Technical services are provided worldwide through information sharing and close collaboration

Other technical centres, working in parallel to each other can provide operational backups.

Product development conducted by the JTC (Japan Technical Centre) is backed up by the other technical centres.

Sales department BCP

With 532 sales offices in 83 countries around the world SMC provides support for customers with 8700 person strong global sales staff.

SMC offers a full range of sales offices and staff in order to meet every customer request from diverse countries and regions. By doing this, we can deliver additional satisfaction to our customers within the global market.

Customer relationship management via Sales Connect (CRM).

Management and finance related BCP

Establishment of an advisory committee

Established an emergency business continuity system with the Chinese, Italian, American, and Singaporean subsidiary general managers.

A strong financial foundation

In the event of an emergency, SMC can provide a safe and solid financial base (with cash, deposits, and equity capital) that will sufficiently cover the working capital and funds needed to rebuild buildings and equipment required for business continuity. This is done to provide our customers and workers alike with a peace of mind.

Information security (applicable to all departments)

Strengthened information security with a globally maintained unified infrastructure.

(Server, Firewall, Network Equipment, PCs, Security Tools)

Prevention of cyber attacks, automatic detection, and strengthening of the monitoring system.

Installation of data centres to establish a disaster recovery system.

Business continuity risks and countermeasures

Production

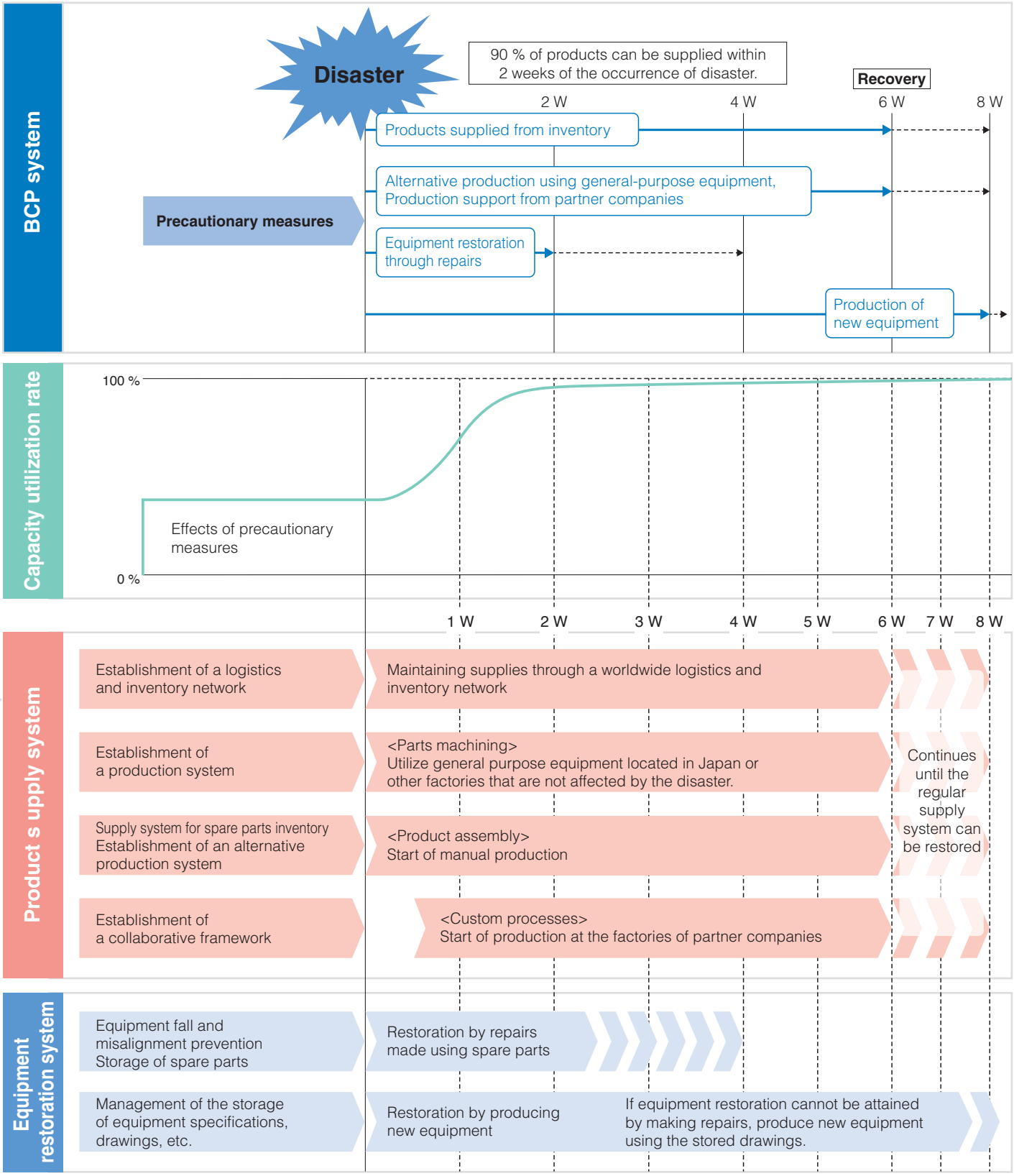
Business continuity risks

Categories of risk	Risk Factors
External risks	Electric power shortages, nuclear accidents, terrorism, cyberattacks, extortion, obstruction of business, stoppage of supplier operations, rising rent, exchange rate fluctuations, trade friction, war, etc.
Internal risks	Food poisoning, recalls, contamination, leakage of personal or corporate information, non-compliance, improper accounting, loss of a key employee, lack of a successor, workplace accidents, staff shortages, etc.
Natural risks	**Earthquakes, fires, typhoons, floods, sedimentation, eruptions, heavy snowfall, lightning, tornados, pandemics, etc.** 

Most common risks to production activities

SMC has evaluated the degree of impact on our production in the event of an earthquake. As a result of this evaluation we've set targets for the product supply recovery time and have formulated proactive measures and business continuity plans in the event of such a disaster.

Systems for the restoration of equipment and product supply



Routine efforts and emergency response efforts

During normal operations, the following measures are taken to efficiently ensure safe and secure activities.

1. Periodic inspections, preventive maintenance, and the restoration of deteriorating products
2. Crime prevention measures
5. Product quality improvement
6. Strengthening of information security

When an emergency occurs, the following actions are taken.

- **Natural disasters** — Earthquakes, typhoons, tsunamis, etc.
- **Man-made disasters** — Accidents, etc.
- **Power failures or power shortages**
- **Cyber attacks**

A The occurrence of an emergency — Emergency response

1. Detection of a disaster or accident
2. Confirmation of employee safety
3. Energy management
6. Routine monitoring of malware and hacking attempts
7. Information provision (robustness, speed, and accuracy)

During normal operations

During normal operations, the following measures are taken to ensure efficient and secure activities.

1 Periodic inspections, preventive maintenance, and the restoration of deteriorating products

Periodic inspections, status monitoring, preventative maintenance management, and the restoration of all deteriorating equipment are performed in order to maintain proper working functions.

2 Crime prevention measures

Factory and section entry/exit logs are maintained and these records are checked in order to prevent theft, information leakages, and other crimes.

3 Energy measures

Additional energy reduction activities are implemented by introducing overall optimization control, identifying areas for energy saving efforts by "visualizing" the energy being used.

During emergencies

When an emergency occurs, the following actions are taken.

1 Detection of a disaster or accident Assure safety

Once an accident or disaster has been detected, an emergency is announced and equipment is automatically shut down in order to prevent secondary disasters.

2 Employee safety confirmation

In order to secure the evacuation route in the event of an accident or disaster, locks are opened in an emergency to allow for rapid evacuations. In addition, employee safety confirmation is transmitted quickly to a remote countermeasure headquarters.

3 Energy management

Since the amount of energy consumption is known, a minimum production power requirement can be determined. Therefore, important equipment such as emergency power supplies can be used in order to supply this minimum power and minimal production can continue.

3 Energy measures

4 Efficiency improvement

7 Information gathering / Organizing / Shared infrastructure construction

Creating profits for the company

Local community contributions

Protecting clients' profits

B Decision Making Policy decisions

Status check

Make basic BCP policy decisions

Begin support

C BCP implementation Recovery

4 Production equipment recovery (Provide support)

5 Product quality restored (Provide support)

6 System recovery following viral attack (Provide support)

4 Improve efficiency

The production process is monitored to collect and provide information in order to achieve greater efficiency.

5 Improve product quality

Information is collected and analyzed and is the key to improving product quality.

6 Enhance information security

A system resistant to cyberattacks has been put in place. Viruses are quickly detected and countermeasures are taken prior to widespread damage occurring.

7 Information gathering / Organizing / Shared infrastructure construction

Knowledge and skills collected during daily production activities can be shared while providing an environment where this information can be used to improve safety, security, environmental awareness, and profitability.

4 Production equipment recovery (Provide support)

Information regarding the damage to the equipment is accurately and efficiently gathered in order to quickly determine whether production can restart and determine the number of days required to do so.

5 Product quality restored (Provide support)

The time to equipment recovery is shortened by collecting and analyzing the information required to restore and maintain product quality when production resumes with the damaged equipment.

6 Continuously monitor Mal-ware / Intrusions / Support system to recover after a viral attack

Rapid system recovery utilizing previously collected backup data.

7 Information (Accurate, robust, and fast)

Establish a system whereby situational awareness and emergency responses are reliably shared during a disaster even in remote areas. In addition, organize the required information in the proper form and provide an environment where decision makers can act quickly.

A global production network providing the world with a stable and continuous supply of high-quality products

Production department BCP

Mass production factory Risk hedging

Production system BCP

90% production supply system recovery within 2 weeks after a disaster

<Product supply system>

1. Maintaining supplies with a worldwide logistics and inventory network
2. Transferring production to factories outside the disaster
3. Backup production performed by cooperating companies
4. Equipment recovery: Recovery possible with new equipment installations and repairs.

Tsukuba Factory
Actuators
Air line rquipment
Solenoid valves/Tubing
Auto switches

Yamatsuri Factory
Fittings
Air dryers/Temperature control equipment
Air line equipment
Actuators

Asia

Singapore Factory
Fittings
Air dryers

Distribution warehouse Risk hedging

Korea Central Warehouse

East Japan Logistics Center

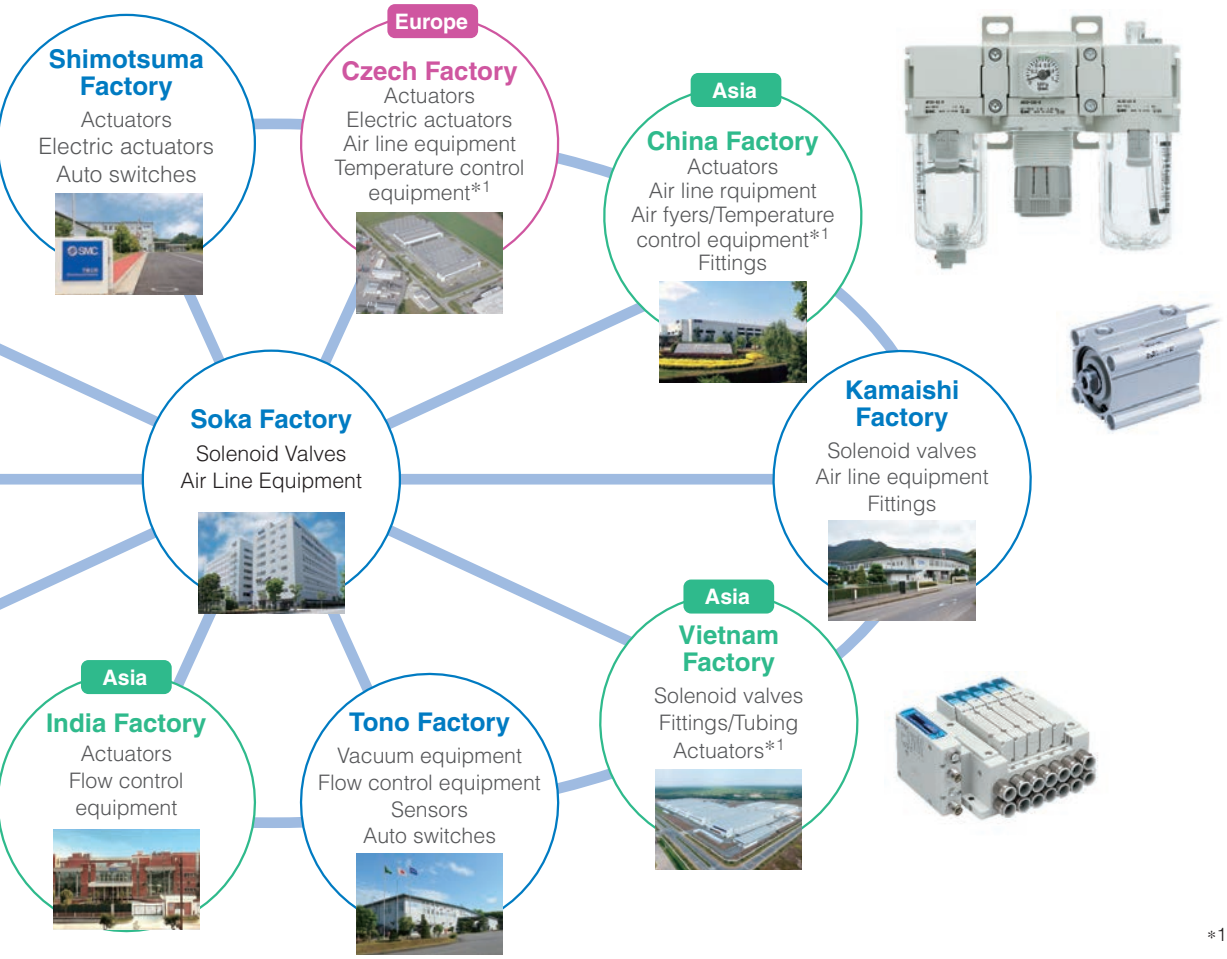
Scheduled to start operation in 2022
(Image of completed building)

Belgium European Central Warehouse

Germany Factory
Under planning

China Logistics Center
Beijing, Shanghai, Guangzhou

∗ BCPs are supported with product inventory held at each of the global sales offices.



*1 To be supported soon

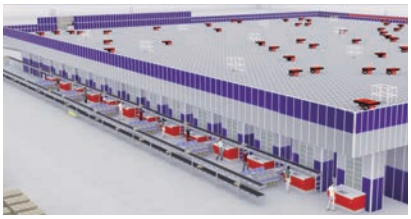
West Japan Logistics Center

Construction in progress
(Image of completed building)

China Warehouse

Under planning

U.S. Central Warehouse



Automated warehouse introduction

A global production network providing the world with a stable and continuous supply of high-quality products

Production department BCP

SMC provides products to world markets from six domestic production facilities, including our Soka (Saitama Pref.) and Tsukuba (Ibaraki Pref.) factories, as well as from overseas production facilities in China, Singapore, India, Vietnam, and the Czech Republic.
Additionally, in order to respond quickly and flexibly to the demands of local markets outside of Japan, overseas production facilities have been established in SMC subsidiaries around the world.

1 Domestic production facilities (Japan)


Soka Factory (Saitama Pref.)



Kamaishi Factory
(Iwate Pref.)


Tsukuba Factory (Ibaraki Pref.)


Tono Factory (Iwate Pref.)


Shimotsuma Factory
(Ibaraki Pref.)



Yamatsuri Factory
(Fukushima Pref.)

Shimotsuma Second Factory (Tentative name)
Scheduled to start operation in 2022

Production facilities in 29 countries and regions

13 countries/regions in Asia and Oceania
(Japan, China, Korea, Singapore, India, etc.)

11 countries in Europe and Africa
(Germany, England, France, Spain, Czech Republic, etc.)

5 countries in North, Central, and South America
(United States of America, Mexico, Brazil, etc.)

Distribution warehouses: 4 countries and regions

(United States of America, Belgium, China, and Korea)

2 Key overseas production facilities


China Factory


Singapore Factory


India Factory


Vietnam Factory


Czech Factory

3 Overseas local production facilities

Americas


United States of America


Brazil


Mexico

Argentina
Chile

Europe and Africa


Germany


United Kingdom


Italy


Russia

Austria
Switzerland
Sweden
Spain
Turkey
Finland
France
South Africa

Asia and Oceania


Australia


Korea

Singapore
Thailand
Taiwan
China (Guangzhou)
New Zealand

Philippines
Hong Kong
Malaysia

SMC's global engineering network

■Global engineering network established

Technical centers have been established in Japan, the USA, Europe, and China in order to provide accurate and rapid responses to the challenges faced by our customers around the world. We have been able to put BCPs in place in the event of an emergency thanks to our strong global engineering network based on information sharing between technical centers. This allows us to provide homogenous technical servicing anytime, anywhere in the world.

Technical division global backup system

We are continuously working to improve our backup systems so that operations can continue from the home, satellite locations, and overseas technical centers in the event of an emergency (disaster, pandemic, etc.)

■Backup of business systems

Through the strengthening of our data centers, we are able to strengthen our data backup system as a whole (CAD, drawing data, technical data, etc.).

■Japan Technical Center (JTC) function backup

This allows overseas technical centers to be able to cover the functions of the JTC, namely product design development and technical support, in the event of an emergency.

JTC Japan Technical Center (Japan)

ETC European Technical Centre (United Kingdom)

GTC German Technical Centre

1700
engineering staff

CTC

JTC
Japan Technical Center
(Japan)

UTC

CTC China Technical Center

UTC U.S. Technical Center

Global sales network

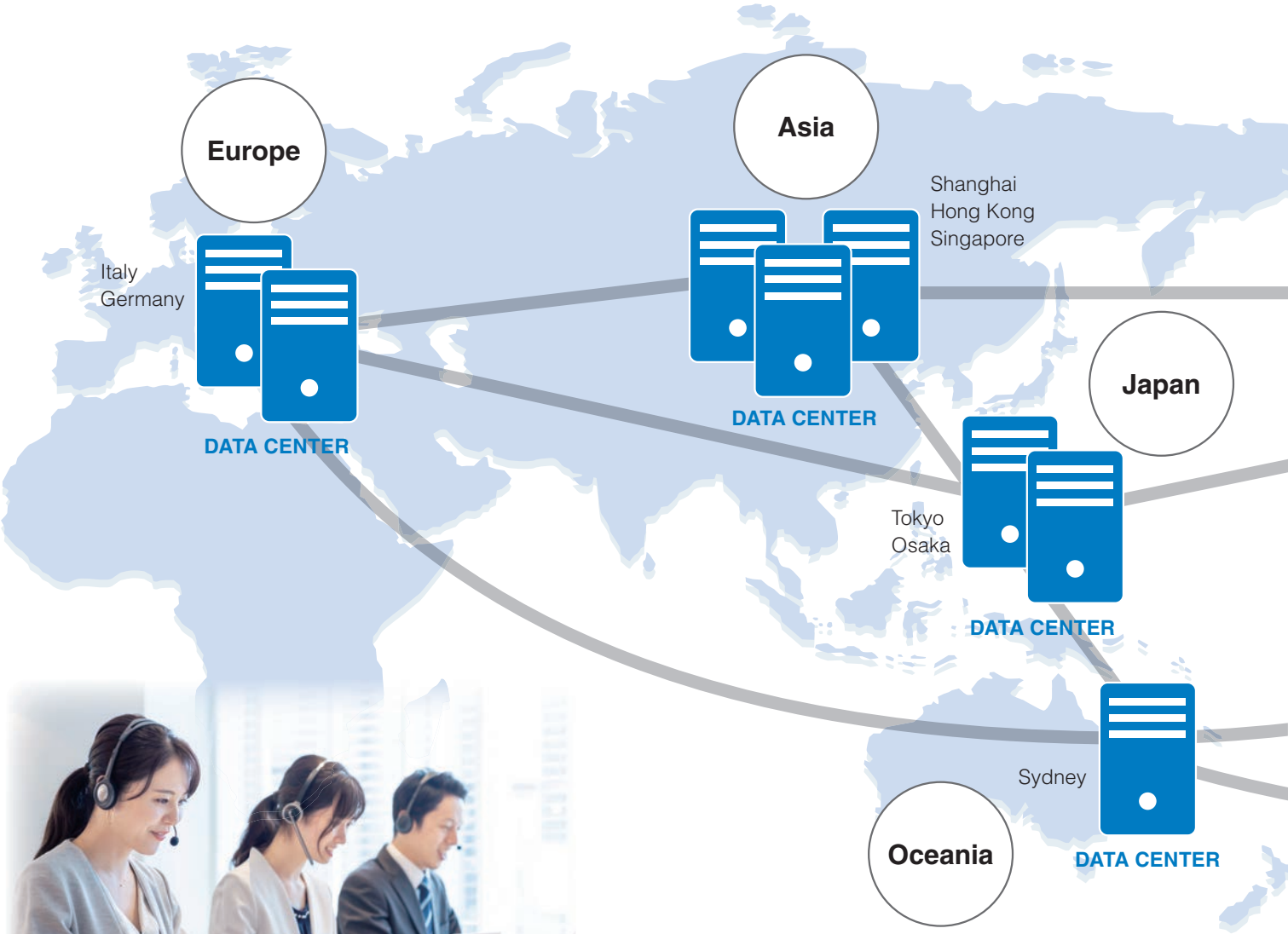
Technical department BCP

The sales network in 83 countries and regions is supported by 8700 global sales staff members.

Through our overseas network, SMC has established a solid reputation as a reliable international brand, with a global market share reaching 37% and aiming for more. We aim to leave customers worldwide with nothing to be desired. By increasing the numbers of sales locations and staff, we hope to continue to exceed the expectations of our customers in different countries and regions.

Managing client data through Sales Connect (CRM)

Customer information from countries around the world is managed using CRM.



Our management system will be strengthened to assure that our customers can rest assured that their vital data is safe.

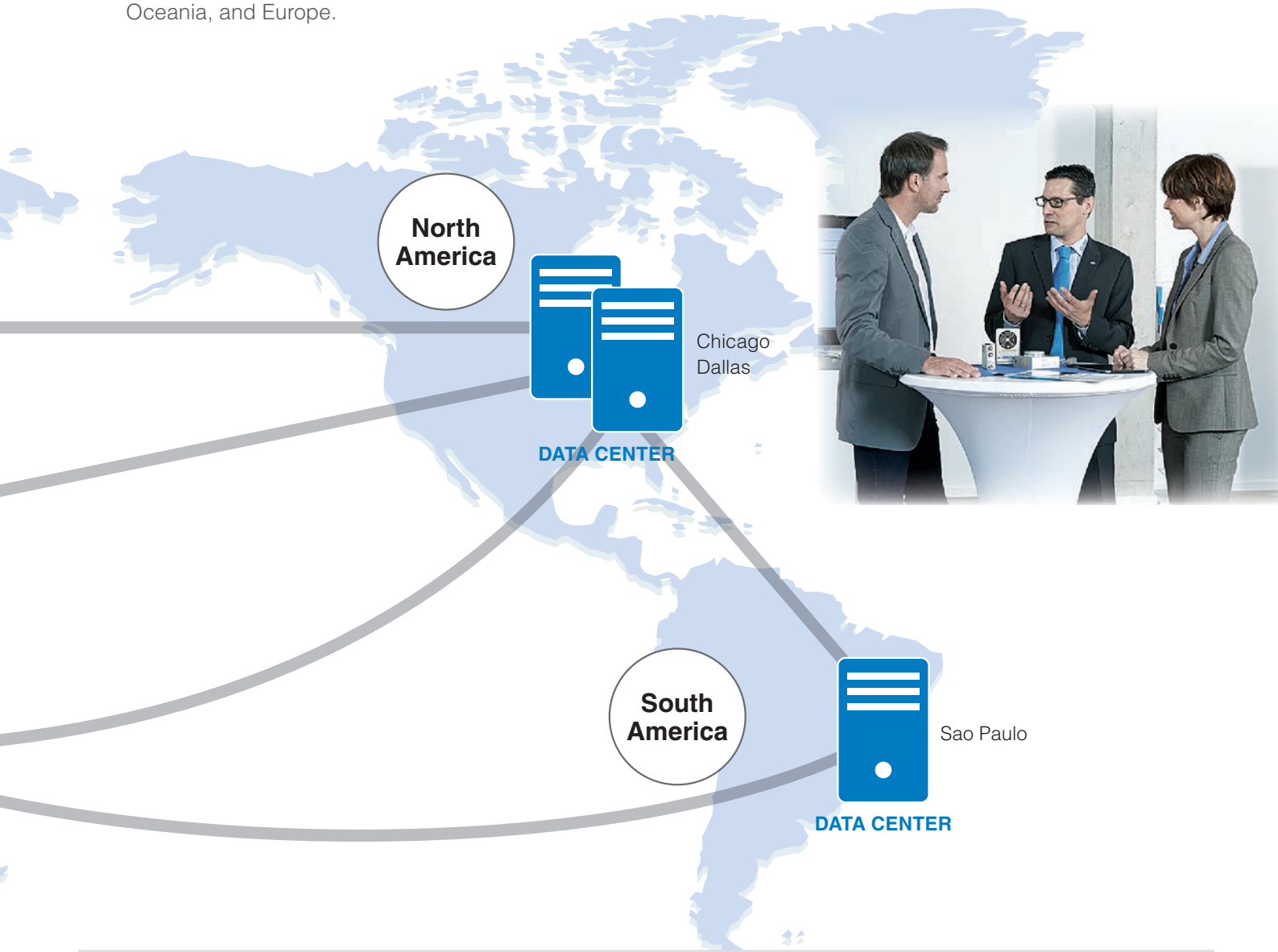
■ Strengthened information security with a globally maintained unified infrastructure.

(Server, Firewall, Network Equipment, PCs, Security Tools)

■ Prevention of cyber attacks, automatic detection, and strengthening of the monitoring system.

■ Installation of data centers to establish a disaster recovery*1 system.

- Implementation of strong security measures within several unified data centers.
- We'll build the latest disaster recovery system to detect and take countermeasures against the spread of virus and cyber attacks.
  The system will constantly monitor for malware and intruders. When an infection is detected, the system will recover in a short time span due to system redundancy.
- Utilizing cloud CTI, we will continue reliable operations, such as by shifting work from business centers to working from home.
- Ordering data is synchronized between data centers located in Japan, Asia, North America, South America, Oceania, and Europe.



*1 A "Disaster Recovery" refers to a disaster preparation plan for a rapid recovery and repair of a system after a catastrophic failure due to natural disasters such as earthquakes, tsunamis, or manmade disasters from terrorism and unauthorized intrusions, etc. This plan maximizes efficiencies and minimizes downtime for early recovery.

Introduction of SMC security staff to all SMC group locations by March 31, 2022

Great east Japan earthquake response: Kamaishi Factory

The Kamaishi area experienced three magnitude 7 earthquakes prior to the Great East Japan Earthquake. Because of this, countermeasures were implemented, problems corrected, and disaster prevention training was completed prior to the disaster in order to minimize damage and promptly restore production. (Production resumed 8 days after the quake.)

1 Infrastructure

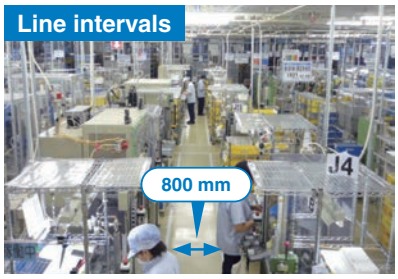
Satellite telephones are installed at each factory to ensure calling capability.

Large electric power generators (with capacity sufficient to supply power for 2 days at 80 % operating level) are installed at every factory.

2 Layout viewable from the front to the back (no dead ends are formed) In normal times: effective for the early discovery of problems, In times of emergency: widened pathway allows for prompt evacuation

- Layout change

- Easier discovery of injured workers and improved evacuation routes



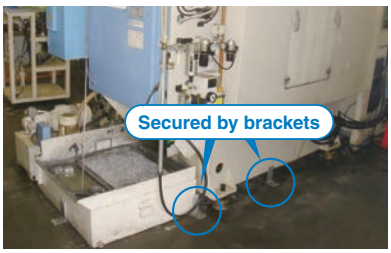
3 Emergency supplies: Regular warehouse inspections to confirm that a 3 day supply of food is always available

- Emergency supplies warehouse

4 Measures to prevent the falling over, falling down, or falling off of supplies and equipment

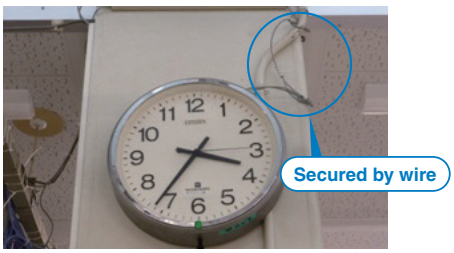
■ Measures to prevent equipment from falling over

- Large equipment secured by L-brackets



■ Measures to prevent equipment and production materials from falling down

- Secured by wire



- Measures to prevent production materials from falling from shelves

Structural resistance to natural disasters

Country	Factory name (Area)	Seismic Intensity Resistance	Estimated seismic intensity	Liquefaction risk	Sea level (m)	Power outage risks [1]	Processes with a power outage risk
Japan	Soka 1st and 2nd Factories (Saitama Pref.)	Upper 6 to 7*2	Lower 6*2	Slightly high	5	No	No
	Tsukuba 1st and 2nd Factories (Ibaraki Pref.)			No	19		
	Tsukuba 3rd Factory (Ibaraki Pref.)				9.8		
	Kamaishi 1st Factory (Iwate Pref.)				12		
	Yamatsuri 1st Factory (Fukushima Pref.)				158		
	Tono Factory (Iwate Pref.)		Upper 5*2		360		
	Shimotsuma Factory (Ibaraki Pref.)		Lower 6*2		28		
	◇Japan Technical Center (Ibaraki Pref.)				16		
	◇Head Office (Tokyo)			Slightly high	5		
China	China 1st to 4th Factories (Beijing)	8 degrees	—	No	28	No	No
Singapore	Singapore Factory (Jurong)	No	No	No	4.5	Yes	Forming, plating, and thermal processes
India	India Factory (Noida)	Zone 4 standards	Zone 4/IS standards (MSKVIII)	No	200	Yes	Machining, assembly, and logistic operations
Vietnam	Vietnam Factory (Ho Chi Minh)	Set according to local seismic force standards Seismic force of 0.0374	No	No	40	No	No
Czech Republic	Czech Factory (Vyškov)	3 to 4	No	No	254	Yes	Machining, assembly, and logistic operations
United States of America	U.S. Factory (Indiana)	B standards	B standards	NEHRP standards C/D	236	With generator/ Backup power supply	No
Korea	Korea Factory (Daejeon)	Standards for seismic intensities of 6*2	Standards for seismic intensities of 6*2	No	36	Yes	Machining, assembly, and logistic operations

Production facilities (Mass production factories) ■ Local market factories
◇Other facilities (Reference)
*1 In-house power generation capabilities eliminate power outage risks.
*2 Seismic intensity scale of Japan

Seismic intensity scale of Japan

3	Felt by most people in buildings. Felt by some people walking. Many people are awakened from sleep.
4	Most people startled. Felt by most people walking. Most people awakened from sleep.
5 Lower	Many people frightened enough to feel the need to hold onto something stable.
5 Upper	Many people find it hard to move. Walking is difficult within holding onto something stable.
6 Lower	Shaking makes it difficult to remain standing.
6 Upper & 7	Impossible to remain standing without crawling. People may be thrown into the air.

Expertise – Passion – Automation

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