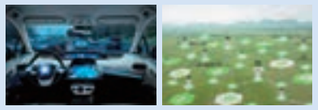
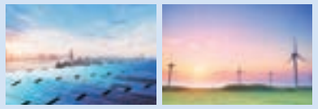
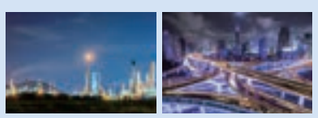
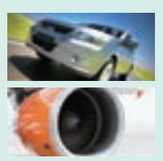
ULVAC's Value Creation <Priority Issues>

We are committed to realizing a society that is not only safe and secure but also affluent and convenient by offering value utilizing vacuum technology, which is indispensable for industrial and scientific development.

We will continue helping to resolve social issues in cooperation with our customers through the provision of products and solutions to them.

Social issues	Market opportunities	ULVAC's business activities Priority domains	ULVAC's six businesses Semiconductor production equipment / Electronic device production equipment / FPD and PV production equipment / Components / Industrial equipment / Materials	Main value offered by the business	Customers and their products	Contribution to resolution of principal social issues*
● Progress of the smart society, advances in 5G and IoT, and establishment of network infrastructure	● Aspiration for the progress of all industries and technological innovation ● Diversification of semiconductor and electronic device applications and needs ● Trend toward devices with smaller size, more speed, larger capacity and lower power consumption	**Realization of the smart society** Autonomous driving, agriculture, healthcare, virtual currency, etc.  **Fundamental technology for realization of the smart society** IoT, cloud, AI, robots, big data, drones 	See P.27 See P.28 See P.29 See P.30 See P.32	Response to new semiconductor and electronic device fields and needs by applying vacuum deposition and other technologies and R&D of cutting-edge processes through collaborative creation with customers	FPD, semiconductor, electronic equipment, and device manufacturers **Semiconductors: Memory, logic** DRAM, PCRAM, 3D-NAND, CPU, etc.  **Functional devices: Sensing, communication (5G), display** MEMS, SAW/FBAR devices, OLED, etc. 	Contribution to realization of an advanced, convenient, safe and secure, smart society
● Environmental issues, such as global warming and climate change ● Global energy issues due to dependence on finite resources	● Progress of renewable and low-carbon energy systems ● Improvement in energy conversion efficiency	**Energy management, next-generation energy** 	See P.31	Enhancement of performance of solar cells and power devices by vacuum deposition, ion implantation and other technologies, contribution to reduction of power consumption of various devices	Solar cell manufacturers, battery manufacturers, etc. **Energy: Heat generation, power storage, conversion** Solar cells, all-solid-state batteries, power devices, magnets for wind turbines 	Contribution to creation of a sustainable society by power generation, energy storage and energy saving
● Food safety and security, population explosion and sharp increase in demand for food in emerging countries, increase in food loss ● Longevity, needs and progress of health promotion and healthcare	● Longer preservation of food and pharmaceuticals, volume reduction	**Healthcare, life innovation** 		Longer life and volume reduction of freeze-dried food, powder vaccines, drugs, etc. by vacuum freeze drying and other technologies	Food manufacturers, pharmaceutical manufacturers, etc. **Foodstuffs, pharmaceuticals: Freeze drying** Freeze-dried foods, emergency provisions, supplements, powder vaccines, etc. 	Contribution to human health, the future of medicine, and realization of a sustainable society with minimal food loss by means of safe and secure foods and pharmaceuticals
● Aging of infrastructure in developed countries ● Development of industrial infrastructure in emerging countries ● Wider gap between rich and poor	● Development of safe, secure and comfortable infrastructure	**Construction, social infrastructure, mobility** 		Enhancement of performance of industrial materials and response to new materials by applying vacuum heat treatment and other technologies	Chemical and materials manufacturers, steelmakers, transportation equipment manufacturers, etc. **Industrial materials: Heat treatment** Glass building materials, industrial materials, materials for transportation equipment, etc. 	Contribution to creation of a sustainable society that is safe and secure and comfortable

* Indicates relationships with the United Nations' Sustainable Development Goals (SDGs).