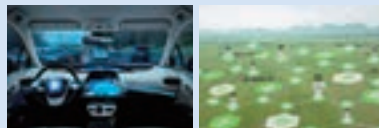



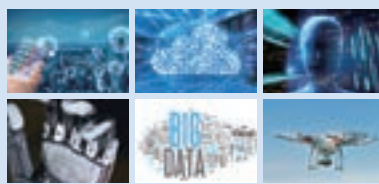
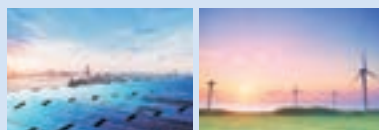

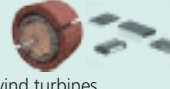



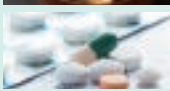

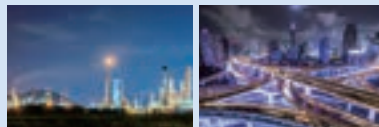

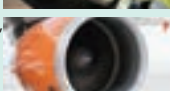



# ULVAC's Value Creation <Priority Issues>

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	ULVAC's six businesses						Main value offered by the business	Customers and their products	Contribution to resolution of principal social issues*
		Priority domains	FPD and PV production equipment	Semiconductor production equipment	Electronic device production equipment	Industrial equipment	Components	Materials			
<ul style="list-style-type: none"><li>Establishment of global network infrastructure and the smart society, progress of 5G and IoT</li></ul>	<ul style="list-style-type: none"><li>Aspiration for the progress of all industries and technological innovation</li><li>Diversification of semiconductor and electronic device applications and needs</li><li>Trend toward devices with smaller size, more speed, larger capacity and lower power consumption</li></ul>	<b>Realization of the smart society</b> Autonomous-driving, agriculture, healthcare, virtual currency, etc. 	See >> P.26	See >> P.29	See >> P.30	See >> P.25	See >> P.27	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 <b>Semiconductors: Memory, logic</b> 3D-NAND, PCRAM, CPU, etc.  <b>Functional devices: Sensing, communication (5G), display</b> MEMS, SAW/FBAR devices, OLED, etc. 		
		<b>Fundamental technology for realization of the smart society</b> IoT, cloud, AI, robots, big data, drones 									
<ul style="list-style-type: none"><li>Environmental issues, such as global warming and climate change</li><li>Global energy issues due to dependence on finite resources</li></ul>	<ul style="list-style-type: none"><li>Progress of renewable and low-carbon energy systems</li><li>Improvement in energy conversion efficiency</li></ul>	<b>Energy management, next-generation energy</b> 	See >> P.28	See >> P.28	See >> P.28	See >> P.28	See >> P.28	Enhancement of performance of solar cells and power devices by vacuum deposition, ion implantation and other technologies, contribution to lower power consumption of various devices 	Solar cell manufacturers, battery manufacturers, etc. <b>Energy: Heat generation, power storage, conversion</b> Solar cells, all-solid-state batteries, power devices, magnets for wind turbines 		
<ul style="list-style-type: none"><li>Food safety and security, population explosion and sharp increase in demand for food in emerging countries, increase in food loss</li><li>Longevity, needs and progress of health promotion and healthcare</li></ul>	<ul style="list-style-type: none"><li>Longer preservation of food and pharmaceuticals, volume reduction</li></ul>	<b>Healthcare, life innovation</b> 	See >> P.28	See >> P.28	See >> P.28	See >> P.28	See >> P.28	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. <b>Foodstuffs, pharmaceuticals: Freeze drying</b> Freeze-dried foods, emergency provisions, supplements, powder vaccines, etc. 		
<ul style="list-style-type: none"><li>Aging of infrastructure in developed countries</li><li>Development of industrial infrastructure in emerging countries</li><li>Wider gap between rich and poor</li></ul>	<ul style="list-style-type: none"><li>Development of safe, secure and comfortable infrastructure</li></ul>	<b>Construction, social infrastructure, mobility</b> 	See >> P.28	See >> P.28	See >> P.28	See >> P.28	See >> P.28	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. <b>Industrial materials: Heat treatment</b> Glass building materials, industrial materials, materials for transportation equipment, etc. 		

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