Story of Value Creation in the Industry Sector

In the world of industry, the speed and complexity of market changes caused by factors such as climate change and resource shortages are increasing along with the working-age population decreases and global competition intensifies. Under these circumstances, the creation of new services and innovations using advanced digital technologies, such as AI, IoT and big data analysis technologies, is in demand in a variety of different fields. As a result of this demand, the global IoT market is expected to experience a high rate of growth.



Vision and Targets under the 2021 Mid-term Management Plan

"Increasing the efficiency of customers' production and processing systems," "providing safe and secure water environments" and "reducing CO₂ emissions"

In the Industry Sector, we aim to become the best solution partner for customers in the industrial field by utilizing our strengths in "Products \times OT \times IT." Furthermore, we will create social and environmental value by "increasing the efficiency of customers' production and processing systems" through the provision of solutions that contribute to productivity and quality improvements in the manufacturing and distribution fields; "providing safe and secure water environments" to 70 million people per day worldwide using water and sewage infrastructure and seawater desalination technology; and "reducing CO₂ emissions" through energy-saving products.

Growth Strategies under the 2021 Mid-term Management Plan

As the world changes and customer needs diversify and become more high-level, we face various issues that arise between the workplace, management and the supply chain. In the Industry Sector, we recognize these issues as "boundaries." By connecting cyber spaces and real spaces using digital technology, we will solve "boundary" issues and provide total

Principal Products and Services



*1 The impact of a large-scale overseas Engineering, Procurement, Construction (EPC) project of the Industry & Distribution BU has been excluded. Figures for Hitachi Plant Services and Hitachi Plant Mechanics, which were transferred in FY2019 from the Industry & Distribution BU to the Water & Environment BU and Hitachi Industrial Products, respectively, were revised retroactively. Figures for each subsegment include intersegment transactions, Figures for each BU include the control systems business, which is posted in the IT Sector.

*2 Air conditioning and water treatment facilities for factories, social infrastructure, etc.

seamless solutions that achieve overall optimization. The keys to achieving these goals are the Industry Sector, which is a business entity that simultaneously possesses products, OT and IT; the use of Lumada and robotic SI, which drives digital innovation; and the construction of value chains that range from management to workplace and from procurement to manufacturing while spanning across fields such as logistics, sales, services and maintenance. With these keys in place, we will aim to become the best solution partner for customers in the field of industry.



Vision of the Industry Sector

*3 Supply Chain Management (SCM)

*4 4M: huMan, Machine, Material and Method

Collaborative Creation of Value within the Industry Sector

Total Seamless Solutions that Solve "Boundary" Issues In the Industry Sector, we will provide total seamless solutions while focusing on four next-generation solutions (manufacturing, logistics, maintenance and utility) and connected products, thereby helping to improve the overall value of our customers' businesses.

One Lumada solution contributing to the achievement of these goals is the digital twin solution, which was launched in November 2018. The solution facilitates AI analysis and simulation by using an advanced data model to link manufacturing workplace OT and IT data in cyber space, supporting the optimization of the entire production process.

Data Modeling of Business Operations and 4M and the Optimization of Production Processes through Digital Twin



Conceptual diagram of the digital twin solution

One example of the application of Lumada at manufacturing workplace is our collaboration with the AMADA Group, a major metalworking machinery manufacturer. After delivering servo motors used in pressing machines, we constructed a tooling IoT production line by applying robotics in 2017. We also contributed to the improvement of productivity and operational efficiency in 2019, when we built Assembly Navigation System with the goal of upgrading manufacturing workplaces.



Assembly Navigation System at the AMADA Group's Fujinomiya Works

Furthermore, because of the importance of connected products in the Industry Sector, in 2017, we worked to increase our global strength in terms of connected products by acquiring Sullair, an air compressor manufacturer in the United States.

Strengthening of OT Area through the Acquisition of the Robotic SI Business

In the Industry Sector, we believe that the manufacturing industry will evolve from "manufacturing through people and machines" to "manufacturing through people and robots" before progressing to "manufacturing that connects management with the workplace." Under these circumstances, we have decided that OT areas related to the Robotic SI business, which accumulates field data, will become increasingly important in addition to rising needs for advanced and optimized manufacturing conducted using robots. In accordance with this judgment, we reached acquisition agreements in 2019 with JR Automation, a United States-based robotic SI business operator, and Japan-based KEC.

The industrial world is facing a growing need for automation due to labor shortages and rising labor costs, and the robotic SI market is expected to grow rapidly as a result. In the Industry Sector, we will work to expand the Robotic SI business on a global scale by mutually utilizing the resources of JR Automation, KEC and Hitachi Industrial Equipment Systems and the research and development capabilities of Hitachi.

In the Industry Sector, we will globally develop Lumada solutions that utilize digital technology based on 4M data obtained workplace from customers by acquiring technology, expertise and customer bases from these two companies in the robotic SI market. This will enable us to contribute to the improvement of our customers' management and to help raise the overall values of their businesses through seamless collaboration between workplace and management.



KEC's Robotic SI business

In Pursuit of Further Growth in the Industry Sector In the Industry Sector, we will strengthen and expand total seamless solutions that leverage the strengths of "Products × OT × IT" and accelerate and enhance global expansion in pursuit of further growth. Furthermore, we will aim to become a business entity that provides high added value by expanding recurring business⁵ and improving capital efficiency.

*5 Cycling business that exists after sale service market and continual replace demand such as replacement parts.