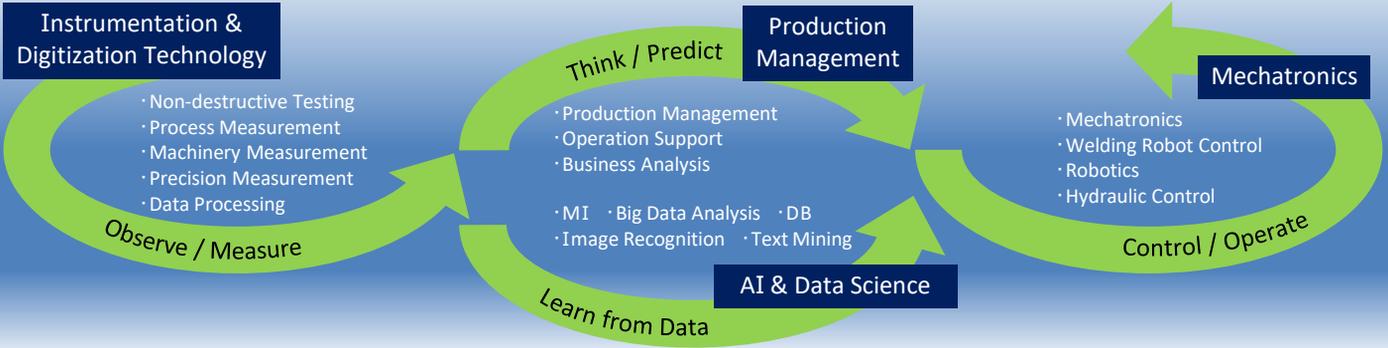
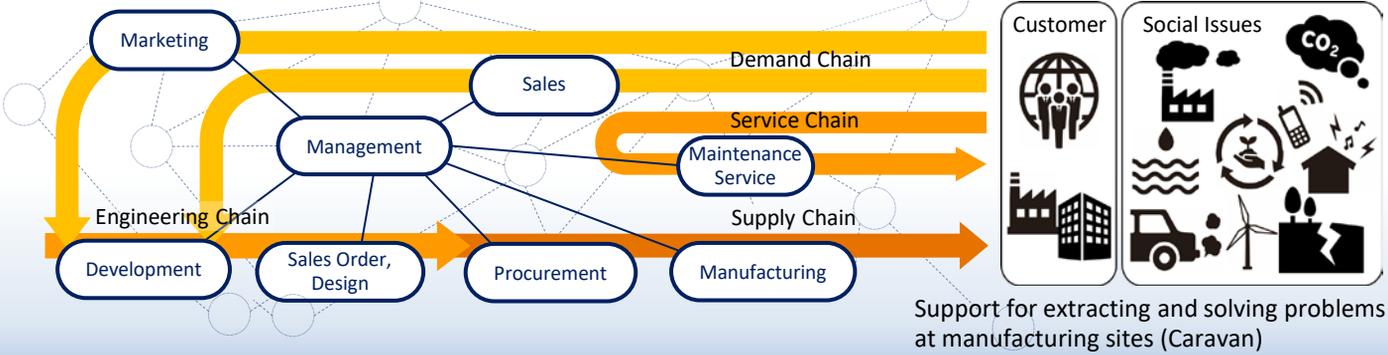


Digital Innovation Technology Center (DITec)

The Digital Innovation Technology Center plays an important role particularly in accelerating the development of advanced technologies and their business application in the DX (Digital Transformation) promoted by the KOBELCO Group. DITec will create new value by connecting data across the entire value chain of sales, marketing, development, manufacturing and services, as well as by utilizing advanced digital technologies. Moreover, through these activities, we will develop human resources capable of promoting DX.



Observe / Measure

Developed measurement technology for the high temperatures and harsh conditions unique to the steel industry. Lead digitalization, contributing to creating customer value and strengthening product competitiveness.

Measurement Systems for High Temperature Processes

- Ultrasonic Sensor (EMAT) for Internal Tests of High-Temperature Steel
- Radiation Thermometry for Blast Furnace Pig Iron
- Heat-resistant Wireless Sensor
- Magnetic Field Design Simulation

Manipulate / Operate

Functional evaluation of applying robotics can be performed by the robot-benchmarking system to accelerate factory automation.

Automation Solution by Robotics

- Robot Benchmarking System: Functional evaluation/Improvement, Obtaining knowledge by various evaluations.
- 3D Simulation: Feasibility evaluation /Pre-designing robot motion.
- Apply: From simulation to real-world application.
- Extract Works For Automation: From real-world application to automation.
- Applying Knowledge: From automation back to the production factory.

Think / Predict

Connect data from customer demand trends to factory production plans and manufacturing sites. Anticipate the future and optimize production management operations.

Production management and business model development for high-mix, variable-volume production.

- Manufacturing process of materials factory
- Connection of various data for processes, such as people and equipment
- IoT utilization Data collection
- Planning / Direction
- Production planning
- Data integration
- Data utilization
- Management support for delivery date, progress and inventory depending on manufacturing process
- BI Tool Status Monitoring
- Cost analysis by detail/process
- Statistical quality analysis

Learn from Data

Enhance human understanding of high-dimensional data and create new value through data-driven science.

Stabilization of Blast Furnace Operation by Using Sensor Data [AI-Based Blast Furnace Operation]

- Before introduction:** Channeling (Abnormal), Rise of slag.
- After introduction:** Indexing of operating conditions + Operation support = Prevention of channeling.