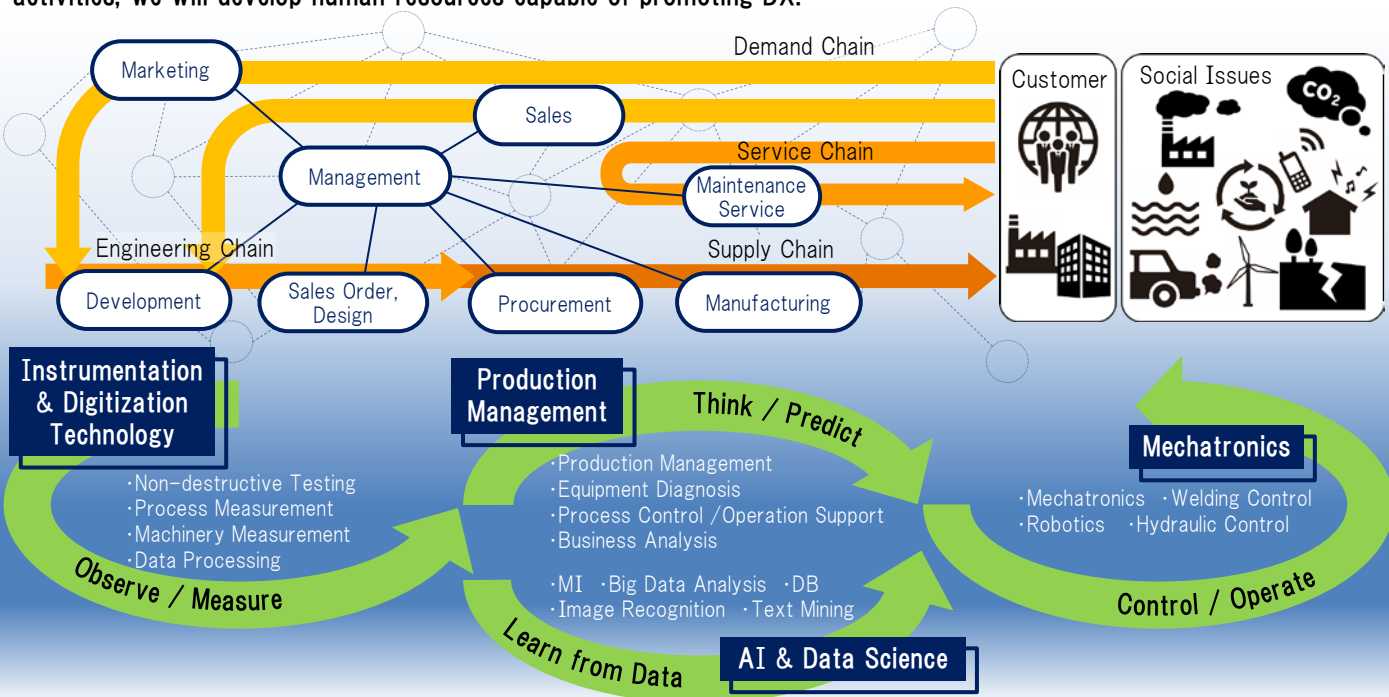


Digital Innovation Technology Center (DITec)

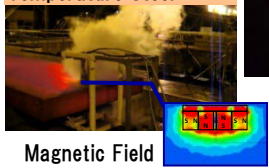
The KOBELCO Group is promoting DX (Digital Transformation) and established a Digital Innovation Technology Center in April 2021. We aim to accelerate the development of advanced technologies and their application to our business activities. DITec will create new value by connecting data across the entire 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 systems for the high temperature/exacting conditions peculiar to the steel industry. Lead digitalization in the real world, creating customer value and enhancing product competitiveness.

Ultrasonic Sensor (EMAT) for Internal Tests of High-Temperature Steel



Magnetic Field Design Simulation

Radiation Thermometry for Blast Furnace Pig Iron



Heat-resistant Wireless Sensor



Housing TEMP. Simulation

Measurement Systems for High Temperature Processes

Manipulate / Operate

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

Robot Benchmarking System



Obtaining knowledge by various evaluations

3D Simulation



Feasibility evaluation / Pre-designing robot motion

Extract Works For Automation

Applying Knowledge



Production Factory

Automation Solution by Robotics

Think / Predict

Connect data from customer demand trends to factory production plans and manufacturing sites, and optimize business and equipment processes based on predictions.

Manufacturing process of materials factory



Production control technology for high-mix products in small lots

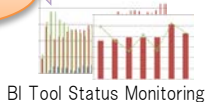
Process control

Utilization of IoT Data collection



Data utilization

Management support for delivery date, progress and inventory depending on manufacturing process.



Optimization of operating conditions Statistical quality analysis

Optimal Production Control for High-mix Variable-volume Factory

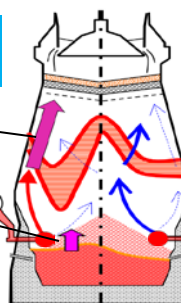
Learn from Data

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

Before introduction

Channeling (Abnormal)

Rise of slag



After introduction

Indexing of operating conditions

+

Operation support

Prevention of channeling

Stabilization of Blast Furnace Operation by Operation Support System Utilizing Sensor Data