ABeam Consulting®
Build Beyond As One.

ABeam Digital®

IoT Data-driven Engineering - Smart Process Engineering -

Implement advanced product development and processes based on product data

Transformation of product development processes is now more critical than ever to survive in the manufacturing industry, with its increasing demands for quality, short product development lead time, on-demand development and mass customization.
Going beyond conventional tools to implement digital technology with advanced data utilization is critical to achieving this transformation. ABeam Consulting can provide support in your digital transformation of product development processes with our proven data utilization scenarios, latest analysis methods, and applications with IoT implementation.

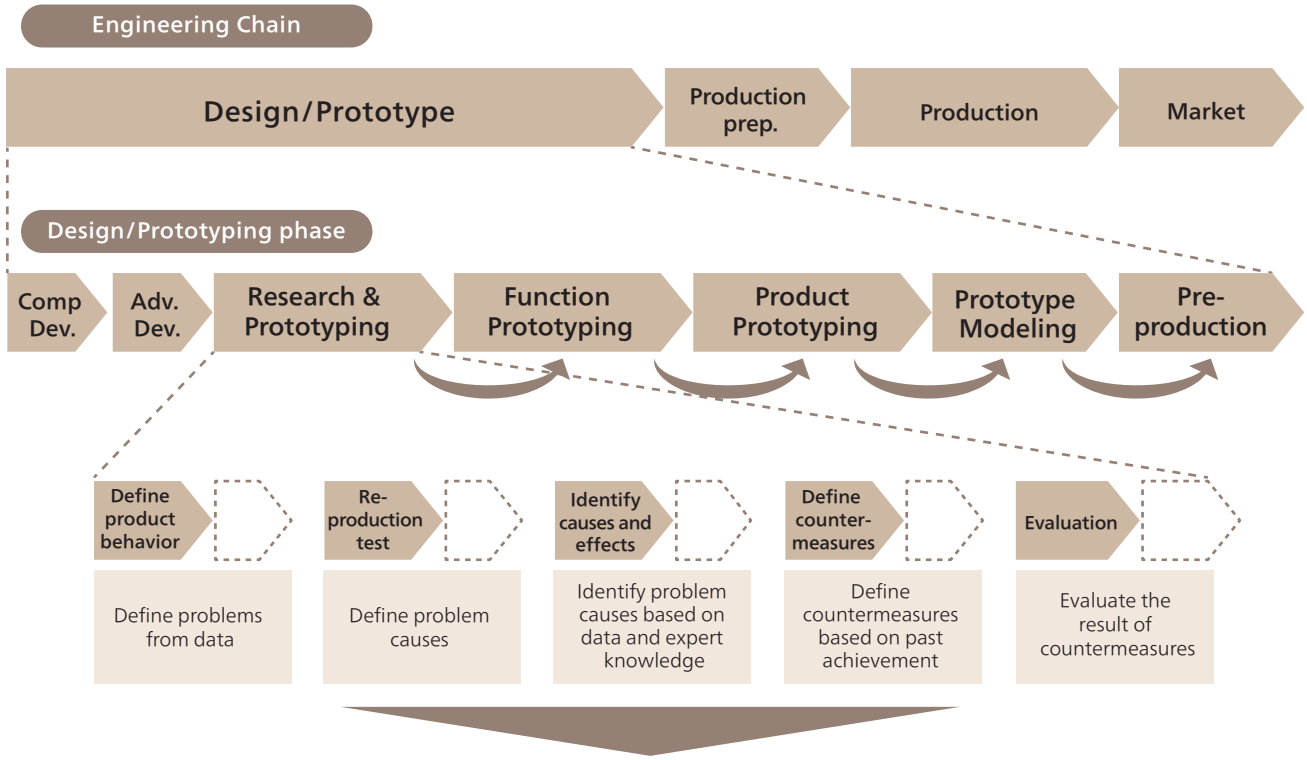
Improve design quality by frontloading with data utilization

Reduce lead-time by accelerating problem solving

Minimize profit loss by guaranteeing quality from development phase

Transformation in design and prototype processes

We realize quick problem solving and guarantee high-quality design by utilizing data from the design phase. This means lead-time reduction in the design and prototype processes by reducing the need for reworking and multiple prototype iterations. Our solution creates a platform for staff members working in design, production preparation and production, and it also can be used for concurrent engineering.



Reduce lead time in the design and prototype processes, by guaranteeing quality from design phase

Functions that Transform Design and Prototype Processes

Data gathering and processing

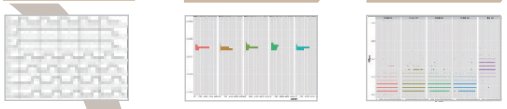
- Define important data based on assets
- Data gathering, processing, and storage

Gather → Process → Store

Visualization/Data analysis

- Define output based on quality evaluation standards
- Detect change and deviation from data

Visualize → Evaluate → Detect



Data-driven Engineering

Design improvement

- Improve design based on feedback
- Store quality evaluation knowledge

Feedback → Evaluate → Store

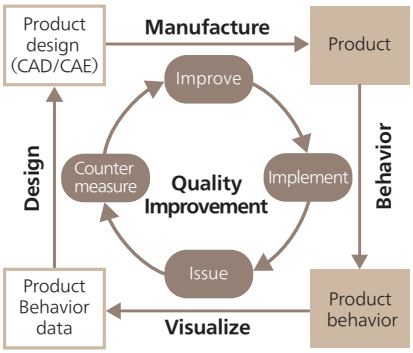
Quality Evaluation

- Discussion based on data and blueprint
- Define countermeasures based on engineers opinions

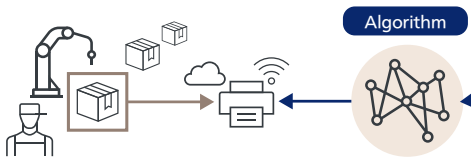
Discuss → Evaluate → Store

Problem solving scenario on Value chain

Design & Development	Production	Market
■ Unexpected problems because of product spec complexity ■ Needs to repeat Design→ Prototype→ evaluation cycle (High man-hour cost) ■ Differences in quality evaluation standards between divisions	■ Built a production process to fit with complex design ■ Require high man-hours for quality inspections ■ Prevent shipment of defective products	■ Unexpected quality problems occurring in the market ■ High cost for market ■ Difficulty comprehending numerous demands from customers
Scenario 1 **Improve design quality By CPS**	**Scenario 2** **Change quality evaluation on production site into automation**	**Scenario 3** **Improve product quality by Demand-driven**

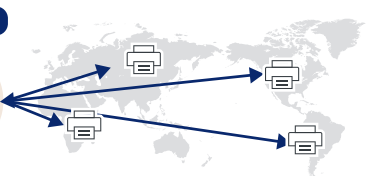


Product quality evaluation (production site)



- Evaluate whether products are as designed
- Detect and countermeasure the cause of defect

Notify product usage behavior on market



- Confirm whether products behave as expected
- Detect and accumulate defect data from market

Contact
Digital Technology Business Unit Digital X Innovation Sector JPABDGTLTech@abeam.com