Past    Now    Future

Solution    Make you think
Excellence

“We are what we repeatedly do. Therefore, excellence is not an act, but a habit.”

Aristotle
Now   →   Future

What are the habits?
Excellence

Classic
Efficiency

I4.0 Environment
Effectiveness
Business Vulnerability due to a lack of speed
“If you aren’t embarrassed by the first version of your product, you shipped too late.”

Reid Hoffmann, LinkedIn Cofounder and former PayPal COO
Geometry

Property

Value Engine

Physical

Via

Machines

Fixtures

Tools

Production aids

Full-digital Engineering

Data form suppliers

Vertical and horizontal integration

Raw data

Processed data

Excellence in an I4.0 Manufacturing Environment

Value Engine

Virtual

Via

Data storage

Data processing

Virtual product

Data for customers

Raw part

Machined part

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Value Engine
Physical

Optimization
Risk Reduction

Operational Excellence
Operational Insurance

Virtual

Virtual Products
Data for Customers

Excellence in an I4.0 Manufacturing Environment
Now  →  Future

What are the habits?

Seize opportunities

T: Technology
P: Process
P: People
B: Business model
Technology

How does technology enable to size opportunities?
Hierarchy

Centralized Intelligence
due to non-intelligent
machine

Planning

Network

Decentralized Intelligence
due to intelligent machine

Adaption

Edge Computing
Same Software

Manual Operation Mode

Manual Automatic
Materialized Machining

Long and complex supply chain
Planning
Stock

Dematerialized Machining

Short and simply supply chain
Continuous Replenishment

Software
Software-defined
• Tool

Classic Supply Chain
• Part
• Fixture
• Machine
Software-defined
• Tool
• Fixture
• Part

Classic Supply chain
• Machine
Technology

How does technology enable to size opportunities?

Adaptability
Excellence in I4.0

Effectiveness
Built in
Holistic
Q & A

Please wait for the microphone