Smart Manufacturing in the Chemical Sector – BASF‘s Digital Path

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Dr. Frithjof Netzer, Chief Digital Officer
“BASF adds value to customers through digitally enabled products and services. (...) Our team understands and leverages the value of data and new digital technologies.”

Kurt Bock, CEO

Chief Digital Officer reports directly to BASF’s CEO, Kurt Bock
Seven core technologies enable Industry 4.0

- Augmented Reality
- Artificial Intelligence
- 3D Printing
- Big Data Analytics
- Mobile Devices
- Cloud Computing
- Internet of Things
Chemicals are …

- Components / ingredients in a broad range of industrial applications and consumer goods
- Key to innovative solutions
- Subject to specific regulations (e.g., risk of explosion, toxicity, dual use)

Their production is typically automated and requires a high level of safety and security precautions.
Digitalization is a strategic lever for growth & efficiency

**Growth**
- Digitalization of R&D
- Customer Connectivity
- Digital Business Models
  - Higher innovation output
  - Increased supply share
  - New revenue streams

**Efficiency**
- Predictive Maintenance
- Augmented Reality in production
- Smart Supply Chain
  - Increased Capacity
  - Increased work efficiency
  - Reduced working capital
Efficiency through Smart Manufacturing

Predictive Maintenance
- Rotating equipment
- Distillation tower
- Heat exchanger
  - Reliability
  - Unexpected Shutdowns
  - Transparency

Augmented reality
- Operations
- Maintenance
- Turnaround
  - Workforce Efficiency
  - Potential Errors
  - Know-how Transfer
Building competencies for BASF’s digital transformation

AWARENESS
>> THE WOW<<
09/2016

BASIC UNDERSTANDING
>> THE WHAT<<
09-12/2016

PRACTICAL SKILLS
>> HANDS-ON<<
2017

GOOD PRACTICE
>> SHARING<<
09/2016-2017
Digital Transformation Campaign - Theme

We have a challenging route ahead but the confidence of the right direction.

Our Path is Digital
Let's take it together!