

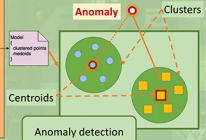
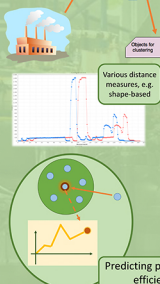
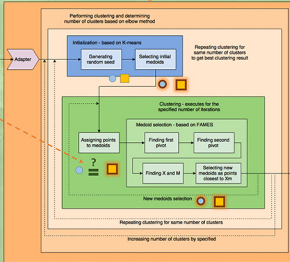
Big Data Process Analytics for Continuous Process Improvement in Manufacturing

ALL RELEVANT PROCESS DATA

Scalable (Big data) clustering algorithm

Clustering runs on Hadoop cluster

BIG DATA ANALYTICS



**IMPROVED QUALITY CONTROL:
EARLY DISCOVERY OF UNUSUALITIES**

**BETTER e2e PROCESS UNDERSTANDING:
ANOMALY DETECTION**

**BUSINESS PROCESS
IMPROVEMENT:
RESOLVING ROOT-CAUSE**

Applied in

Supply Chain Monitoring:

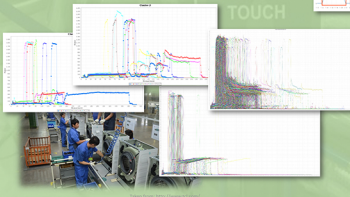
- Realizing end-to-end Process Visibility

What if one of your supplier starts to behave unusually?

➢ Spot unusualities in the process before they escalate



DO NOT TOUCH

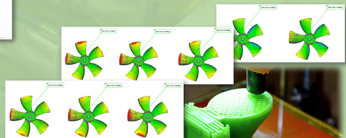


Zero Defect Production:

- Enabling Multidimensional Quality Control

Can you spot the critical dependencies between all process parameters?

➢ Discover outliers based on BIG historical data



3D Printing / Additive Manufacturing:

- BIG DATA driven Total Quality Management

Can you get objective evidence of compliance to design intent (metallurgical, mechanical, geometric properties)?

➢ Link in-process dynamical features and post-process features