

CRP: Data Analytics for Industry

Common Research Programme: Demonstrator Project 3

Data Analytics for Industrial Process Improvement



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MOTIVATION & GOALS

- Collect and analyze large amount of sensor data on manufacturing equipment in an Industry 4.0 environment
- Many manufactures are not yet able to use analytics beyond a tool to track historical performance
- Knowing what happened and why is not enough and does not exploit the full potential of the data: manufactures need to know what happens next and what actions to take in order to get optimal results
- Investigation of interoperability concepts of several smart factories to transfer novel concepts and technologies

Project FactBox

Project Name CRP DP3
Project ID DP3
Duration 48 Months

Area 3
Cognitive Decision Support

Area X
Common Research Programme

Project Lead
Prof. Dr. Christian Huemer

APPROACH

- Process-model-based visual analytics approach to analyse production data
- Visually highlighting interesting data points supporting engineers in their decision making
- Product quality prediction to optimize production process

CONTRIBUTION

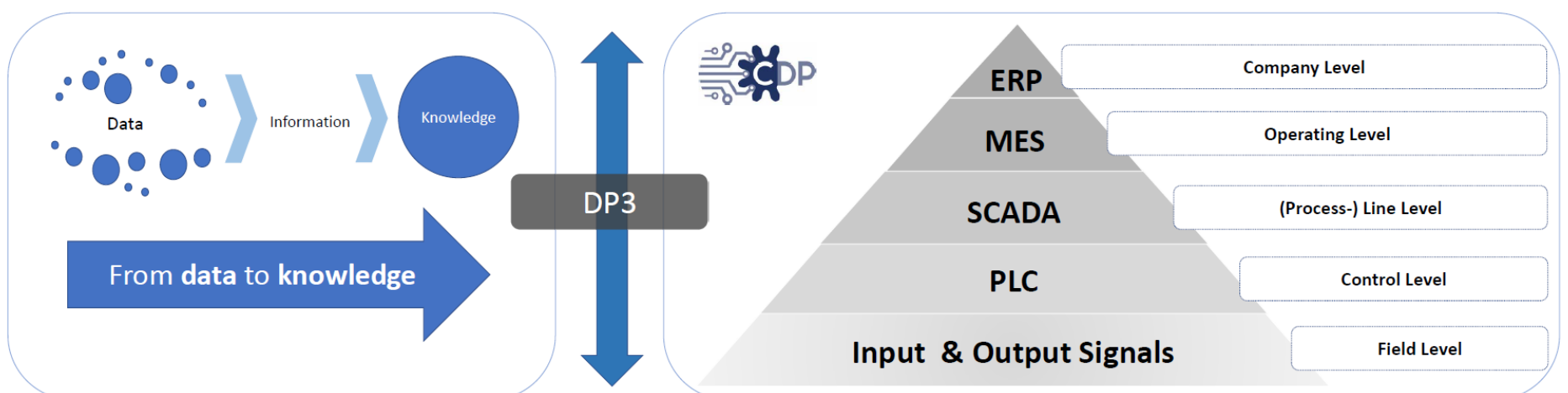
Scientific contribution

The scientific contributions of the work on DP3 are manifold. Several concept, visual analytics and data analytics papers have been submitted and accepted in close collaboration with the colleagues from CDP.

Economic contribution

As an economic contribution the techniques applied in the pilot factory in Vienna offers an optimization of the production process. For example, the bottleneck quality control process can be skipped, if so forecasted by the data-driven quality prediction model.

SYSTEM ARCHITECTURE



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