



GOODMAN

AGENT ORIENTED ZERO DEFECT
MULTI-STAGE MANUFACTURING

Deliverable 4.2

ZDM Data and Management Environment – Implementation

Explanatory Notes

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REVISION	DATE	INVOLVED PARTNERS	DESCRIPTION
0.1	31/01/2018	BOC	Initial prototype development freeze for partner meeting in Ancona
0.2	23/02/2018	BOC, NISSA, LOC, UNIVPM, UNINOVA,	Incorporation of feedback from meeting, extension and data adaptors realized (consuming, providing)
0.3	15/03/2018	BOC	Code freeze for review version, documentation and deployment infrastructure for demonstration ready
0.4	18/04/2018	BOC	Implementation of meta-model extension framework for integration at pilots, development of abstract meta-model building block concept
0.5	03/04/2018	BOC	Draft version of explanatory notes as commented table-of-content
0.6	23/05/2018	BOC, UNINOVA; IPB	Review version ready of explanatory notes Review by UNINOVA and IPB
0.7	31/05/2018	BOC	Finalisation of explanatory notes document

Author

Wilfrid Utz (BOC)

List of Contributors:

Robert Woitsch (BOC), Nenad Stojanovic (NISSA), Cristina Cristalli (LOC), Paulo Leitao (IPB), José Barbosa (IPB), Ricardo Peres (UNINOVA)

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Executive Summary

This document summarizes as **explanatory notes** for D4.2 “ZDM Data and Management Environment Implementation” the results of T4.2 “Developing ZDM Knowledge Management Tool”. As such the first of three prototype deliverables provided as an output of WP4 is presented, that targets the WP objective to provide a cloud based meta-modelling and semantic platform, merging modelling, data and semantic technology.

In line with the positioning of the WP4 specification discussed in D4.1 (see [4] and the conceptual architecture for the overall project), the components realized in the context of T4.2 are provided as a proof-of-concept implementation of the ZDM Knowledge Management Tool that enables the following capabilities:

- Receive data streams from operational systems on the shop floor as well as management systems at the production site,
- Integrate and aggregate/compose these data streams into information artefacts that can be visualized in the form of dashboards, reports and ad-hoc queries, that are interpretable by domain experts,
- Trigger intervention actions using smart rules that detect the context of issues, perform reasoning and to support the decision making process in using extendible knowledge action, and
- Structure the continuous improvement process systematically according to industry standards and best practices.

Figure 1 shows the start page of the tool that provides personalized access to the functionalities defined.

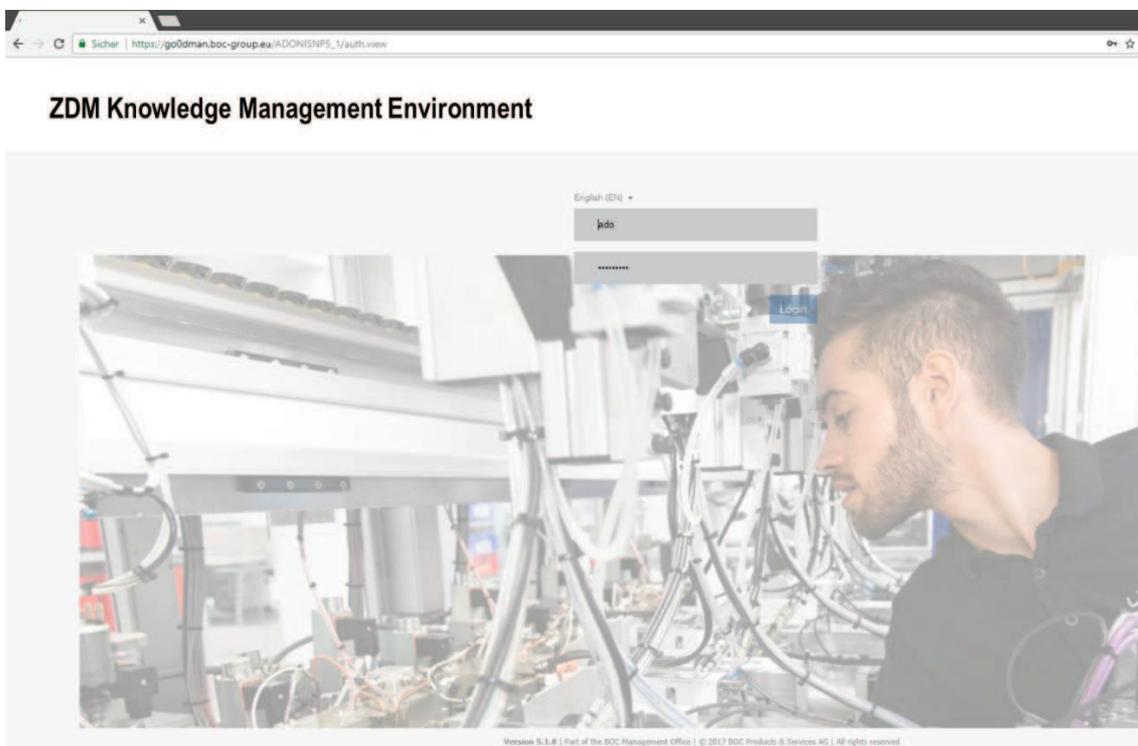
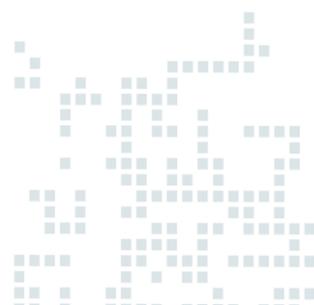


Figure 1 ZDM KM Environment: Start Page



The ZDM KM Tool is composed of services that a) encapsulate the capabilities for tool functionalities, b) demonstrate integration using standard web-service protocols and c) provide a proof-of-concept implementation of the specification detailed in [4].

For review purposes, the tool has been deployed in a demonstration environment (subject to unannounced restarts, updates and maintenance windows) at BOC. Example/demonstration content is provided in the tool's repository to verify functionalities of the different services integrated.

As explanatory notes, this document provides background information on the implementation results by introducing the approach to realize the prototype and discuss each component in detail in line with the conceptual architecture of the specification.

