

December 2013 - Smart Enterprise Content Management through a Dashboard information system for Performance prediction & indicators: A First Prototype

Smart Enterprise Content Management (SECM) is a new concept based on prototype software proposed in the FoFdration project which addresses sustainability issues through the visualization and processing of production data. A sustainability Dashboard along with various adapters is proposed to this end. The Dashboard allows the visualization of sustainability indicators thus supporting decision making at the management level, while the adapters are used to integrate other project's development outcomes such as Smart Manufacturing Execution System or to interconnect seamlessly with external systems, such as ERP and PLM.

The architecture of the Dashboard is based on server/client logic and its functionality areas are depicted in Figure 2 below. These areas cover all aspects of the FoFdration project to achieve bottom-up integration and overall Smart Management of Production Performance. It is worth noting that a first Dashboard Prototype has been delivered, however, development continues up to the end of the project, along with integration activities.

Dashboard consists of three main sections based on production aspects. Firstly, the Performance section provides the ability to present graphically Key Performance Indicators (KPIs) and provide decision support at management level using predictive analysis of the performance. The KPIs concern both productivity and sustainability in accordance with the Triple Bottom Line objectives. Sample screenshots of the Dashboard, in Figure 1, illustrate the visualization capabilities of KPIs acquired from the Production Shopfloor.

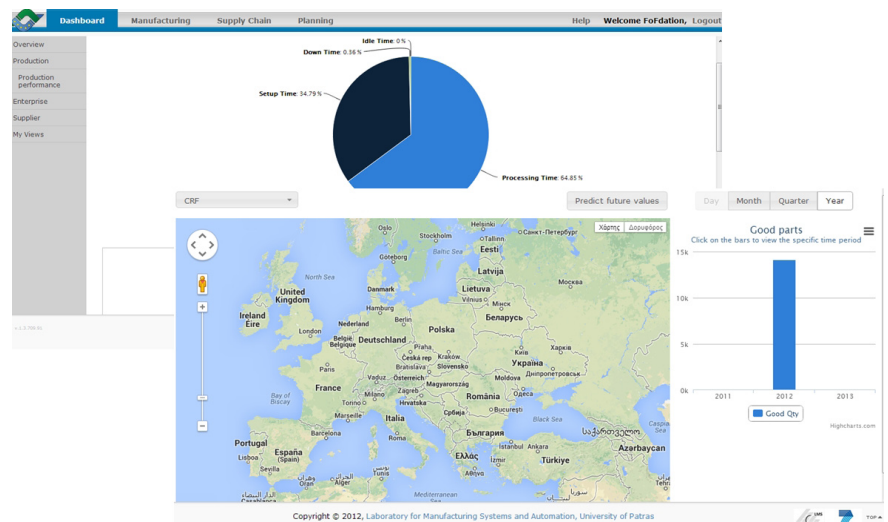


Figure 1: Dashboard sample screens

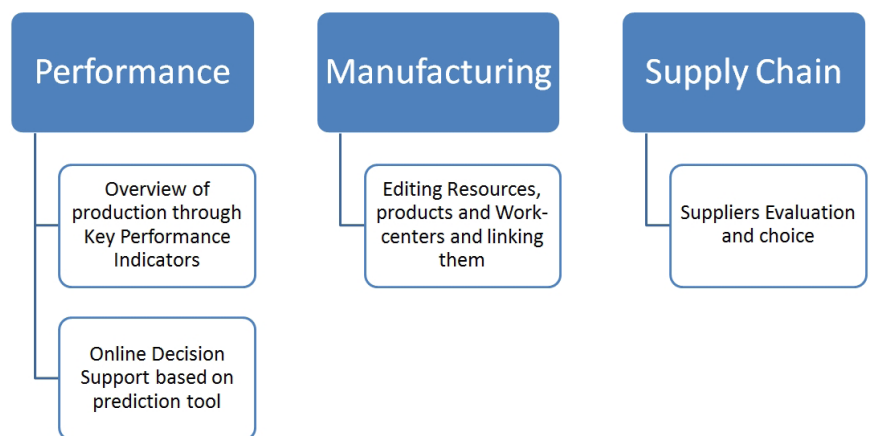


Figure 2: Dashboard Functionality Areas

Manufacturing section provides access to the back-end systems that enable End-Users to model a full production system in hierarchical form, from OEM/Suppliers to Equipment and Resources, successively passing from shop floors, work centers, products and processes. This is the very basis for encountering production entities globally.

Supply Chain section provides decision aiding for selection of suppliers regarding individual components or complete product structures. Moreover, the built-in collaboration features enable the managers to create Calls for Tender and supplier validation. The supply chain partners are enabled to easily procure by providing quotation based on the requirements. Electronic copies of product specifications, CAx files and more, consist the Dossier attached to Calls. This is a part of the document management features which are delivered through the FoFdation Manufacturing Information Pipeline (MIP) framework.

MIP Framework is developed within the project and it provides the means for exchanging manufacturing information. Information is compliant with International Manufacturing Standards like STEP-NC EXPRESS and data migration with State-of-the-art PLM Systems, such as Siemens Teamcenter.

For more information about the FoFdation project visit <http://www.fofdation-project.eu> and the project's social media pages, including Facebook ([#fofdationproject](#)) and Twitter ([@FoFdation](#)).

Acknowledgements:

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For further information please visit:

http://ec.europa.eu/research/industrial_technologies/factories-of-the-future_en.html