Title.
Assessing the dilemma of product/process data interface in the Industry 4.0 framework.

Keywords.
Knowledge management in production,
Enterprise modelling, integration and networking,
Industry 4.0.

Abstract.
A successful adoption of the I4.0 paradigm mainly involves three actions:

1. The integration of production facilities, automation systems, shop floor data through IoT solutions;
2. The capability to systematically identify wastes and non-added value activities, according to the Lean principles;
3. Proactivity of human resources, appropriately trained and equipped, able to support the former actions.

A similar journey has been undertaken few decades ago with the adoption of the Product Lifecycle Management (PLM) approach, an integrated digital framework for data management in product design. The availability of PLM systems increased the productivity of designers and product engineers through an efficient information reuse and sharing.

Although the solutions proposed by PLM and I4.0 are conceptually similar, the respective applicative domains are not fully connected due to cultural and technological gaps. Therefore, there exists an impelling need for solutions that promote the use of product information for intelligent manufacturing (for example the Virtual commissioning in PLM) as well as the collection of process information (e.g. through IoT platforms) to optimize product redesign.

In line with these considerations, the session calls for both conceptual and empirical papers dealing with the following topics:

- Development of data models for integration of product design and manufacturing processes
- Investigation on PLM integrability with IoT applications in Industry 4.0
- Use cases of virtual commissioning for manufacturing applications
- The role of the human factor in the product/process integration
- Examples of Cyber Physical systems supporting manufacturing applications.
- Key performance Indicators for the efficiency of data management along the product/process interface

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