From LEGO to the Shopfloor: Driving Digitalization Through Process Technology

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Abstract

Processes constitute the major vehicle to support companies to move towards digital business (models). One major application area is smart manufacturing, also referred to as Industrie 4.0. Here, processes connect and integrate machines, actors, sensors, information systems, and business partners, collecting, processing, and exchanging production-relevant data. This yields manifold benefits such as optimized processing and integrated data analysis. Designing and implementing such solutions touches and raises many research challenges, including the flexible and robust implementation of distributed process networks and the application and extension of process-oriented data analysis methods. We illustrate these challenges by our own journey from a LEGO-based Industrie 4.0 lab setting to the centurio.work manufacturing orchestration suite.

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