

Material engineering dataflow integration for industry 4.0

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One of the key Industry 4.0 design principles is the ability of machines, devices, sensors, and people to connect and communicate with each other via the Internet of Things. Necessary data and access to information therefore represent two central layers of the Reference Architectural Model Industrie 4.0 (RAMI 4.0) and material data are one of the most relevant aspects of that space. This paper will present a concept of integration of material properties data through public and companies' private material properties databases, both within a company and through a supply chain. The use cases include examples of the potential for integrating engineering workflow within companies and externally, by the means of the VDA standard for material data exchange in the automotive industry, thus paving a way for an Industry 4.0 level of connection throughout the entire value chain.