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Conceptualizing the Knowledge to Manage and Utilize Data Assets in the Context of Digitization: Case Studies of Multinational Industrial Enterprises

Authors : Martin Böhmer, Agatha Dabrowski, Boris Otto

Abstract : The trend of digitization significantly changes the role of data for enterprises. Data turn from an enabler to an intangible organizational asset that requires management and qualifies as a tradeable good. The idea of a networked economy has gained momentum in the data domain as collaborative approaches for data management emerge. Traditional organizational knowledge consequently needs to be extended by comprehensive knowledge about data. The knowledge about data is vital for organizations to ensure that data quality requirements are met and data can be effectively utilized and sovereignly governed. As this specific knowledge has been paid little attention to so far by academics, the aim of the research presented in this paper is to conceptualize it by proposing a “data knowledge model”. Relevant model entities have been identified based on a design science research (DSR) approach that iteratively integrates insights of various industry case studies and literature research.

Keywords : data management, digitization, industry 4.0, knowledge engineering, metamodel
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