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Model-driven management of BPMN-based business process families (Summary)*

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Abstract. Business processes can have variants depending on specific business requirements, which lead to the definition of a so-called business process family. Since conventional business process modeling languages, e.g., the Business Process Model and Notation (BPMN), do not explicitly support variants' specification, several proposals have emerged to deal with it. However, they mainly focus on languages' definition, while less emphasis is made on providing complete variability management. This article presents a Model-Driven Engineering approach for managing BPMN-based business process families composed of a metamodel for conceptualizing process families, a high-level process for managing them (involving model transformations for the configuration of variants), and tool support for the complete approach. We validated the proposal using a real-world example from a university and an empirical study with real users. Users rated the support tool's principal functional suitability and usability features as very good. Many improvement opportunities were detected, e.g., version control, collaborative work, and error reporting. We also provide a literature review and thorough evaluation of BPMN-based business process families' proposals using the VIVACE framework.

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