

# Applying Concept-Driven Engineering for Business Process Specifications

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## Abstract:

This paper presents the principles of concept-driven engineering and the Concept-Manager tool as an implementation of these principles. Concept-Driven Engineering is capable of eliminating inconsistencies and redundancy that occur within projects, i.e. in the software-development process to increase quality, decrease time to market, and increase flexibility. This method is based on the principle of human communication: concepts that classify objects by their characteristic features. Concepts are e.g. software artefacts, models, meta-models or (sets of) words. The Concept-Manager tool supports creation and organization of concepts and integration of generators, that add a certain syntax to a concept. The evolution of concepts is enabled through version paths and the management of generators over concepts. We demonstrate the practical use of the Concept-Manager tool by organizing BPMN and UML metamodels using the same or related concepts for similar components in order to apply the same syntax of the ASM generator.