disciplines is usually a manual and therefore time-consuming and error-prone task.

In this paper, we introduced the so-called eMDSC (extended Model-Driven Systems Configuration) approach for the automate derivation of integration technology configurations based on explicit and machine-understandable models of engineering process requirements, engineering tool domain requirements and capabilities, as well as engineering tool instance capabilities. The eMDSC is based on the Mode-Driven Architecture (MDA) paradigm and therefore enables an efficient, less complex, and less error-prone configuration derivation process.

We evaluated the proposed eMDSC approach by using a well-known software engineering process, the Continuous Integration & Test (CI&T) process. Major results of the evaluation were a) that the proposed approach has proven to be efficient and effective, regarding both the effort needed for setting up the integration environment as well as the number of error sources; and b) that tool domains enable easy adaptations of existing integration solutions by allowing the efficient exchange of similar tools without affecting the existing engineering process.

Future work will include investigation of the eMDSC approach in large-scale industry projects regarding practical issues such as effort and defect rates. In addition, the usability of the eMDSC approach will be evaluated in settings with industrial experts.

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