An Assessment Model to Foster the Adoption of Agile Software Product Lines in the Automotive Domain

Philipp Hohl

Abstract: The automotive industry is changing rapidly. E-Mobility, self-driving and other trends revolutionize the automotive industry. These trends have to be addressed when developing new car generations and future mobility solutions. Traditionally, software product lines have been used to cope with the large amount of software in cars by means of software reuse. Anyhow, there is a lack of knowledge about how to react flexibly on rapid changes with software product line development. The use of agile software development methods promise a flexible development with the possibility to react fast to changes. This talk presents the development of an approach for supporting organizations with the establishment of agile software product lines. In order to fulfill this goal, an assessment and improvement model, the so-called Agile Software Product Lines in Automotive Model (ASPLA Model), was developed to foster the adoption of agile software product lines in the automotive domain. The ASPLA Model identifies improvement potential for a change towards agile software product lines and provides a prioritized list of recommendations on how to combine agile software development with software product lines within the assessed development process. Main characteristics of the ASPLA Model are the compatibility with the widely-used ASPICE model, the integration of a new product-focused category and empirically-based recommendations.