Abstract:

Products are facing numerous changes, both during their development and especially during their usage phase. Reasons for this arise from changes in markets, customer demands, laws and regulations as well as society or technology advancement after products are launched. This leads to minor updates or evolutions of the offered products during their life cycle. As a product is mostly offered in different variants, product platforms are applied for the efficient development and manufacturing of product families. By product platforms, economies of scale are achieved by e.g. common parts or modules, always facing the trade-off of differentiation. In the light of the above mentioned changes, this paper presents an approach how external changes can be anticipated by the combination of an expert-based and data-based method for identifying the required flexibility of a product platform. Based on a change perspective, components and their main characteristics are categorized towards their expected flexibility based on future change frequency. The approach is evaluated by an industrial case study.