Aspects affecting Boundary Objects in Product Realization – A systematic literature review

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Abstract. Product realization is inherently transdisciplinary, resulting in the need for different functions to collaborate. However, collaboration can be hindered by boundaries, arising from differences and dependencies in knowledge. One way to integrate knowledge across these boundaries is through the use of so-called boundary objects. However, boundary objects are situational, meaning that different aspects can affect whether an object functions as a boundary object or not. Based on a systematic literature review, this paper presents a comprehensive overview of different aspects that need to be considered for an object to function as a boundary object in the context of product realization. The aspects were divided into properties relating to the object, and situational aspects connecting to the situation in which the object is used. The paper further shows the role that interplay between aspects plays, and how it can be accounted for.

Keywords. Knowledge management, boundary crossing, boundary objects, systematic literature review, product realization, transdisciplinary engineering

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