# Analysis of Product Development Connected to Production for Industrialized Housebuilding

Martin LENNARTSSON [1], Dag RAUDBERGET and Fredrik ELGH
*Jönköping University*

**Abstract.** Industrialized housebuilding (IHB) is a sector within the construction trade where product platforms have been introduced from the mechanical industry to manage the product architecture and allow mass customization. The aim of this study is to analyze product development projects connected to the product platform and the production. For IHB, the backbone is a technical platform where components are designed and combined. Clients are satisfied, avoiding compromising the technical platform and the product architecture of the different variants. However, the adaptation to production is decisive and production has increased automation, with less flexibility in relation to the products. Still, product development has focused on the engineering view and the development of building components which fit in the predefined or well-established production facility while at the same time satisfy customer demands, i.e., maintaining the balance between distinctiveness and commonality. The study has observed one IHB company and two of their development projects focusing on changes in the product architecture for components across several of their product families. The development has been carried out in a bottom-up fashion. The results indicate difficulties in finding solutions, which fit production. An integrated design of production obstructs product development; the selection of project participants may affect the project results, both in terms of prior experience but also the problem-solving ability; the lack of project documentation is costly since experience is not captured, which could be recycled in future developments.

**Keywords.** Product development, Industrialized housebuilding, Product Platforms, Production Platforms

[1] Corresponding Author. Mail: martin.lennartsson@ju.se