

Gothenburg Studies in Informatics, Report 51, January 2016
ISSN 1400-741X (print), ISSN 1651-8225 (online), ISBN 978-91-982069-6-8
<http://hdl.handle.net/2077/41221>

Value Network Transformation: Digital Service Innovation in the Vehicle Industry

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UNIVERSITY OF GOTHENBURG

Department of Applied Information Technology

DOCTORAL DISSERTATION

To be publicly defended on 28th January 2016 at 1.00 PM

Halmstad University, Building Visionen, Hall Halda

Kristian IV:s Väg 3, Halmstad

Abstract

Title: Value Network Transformation: Digital Service Innovation in the Vehicle Industry

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Language: English

Keywords: digital service innovation, value network, value creation, digitized products, digital services

ISBN 978-91-982069-6-8

<http://hdl.handle.net/2077/41221>

Advancement in digital technology is rapidly changing the contemporary landscape of business and associated networks for manufacturing firms. Many traditional physical products are now being embedded with digital components, providing them digital capability to become digitized products. The digitization of physical products has become an important driver for digital service innovation within manufacturing industries. Such digital service innovation transforms value networks of manufacturing firms in various industries. While digitization of products and digital service innovation can be observed in many manufacturing industries, this thesis focuses on the transformation of value networks within the vehicle industry.

This thesis is a collection of papers and a cover paper. The thesis reports from a project in the vehicle industry. The project explored new digital services for vehicles based on remote diagnostics technology. The exploration and conceptualization of digital services is investigated in a collaborative manner with participants from the vehicle industry. The results reflect that there is a paradigm shift for manufacturing firms digitizing their products, and stretching the business scope from product to solution oriented business.

This thesis contributes to the existing literature on digital innovation with insights on the transformation of value networks in the vehicle industry. The research question addressed in this thesis is: How are value networks of manufacturing firms transformed by digital service innovation? To answer this, this thesis conceptualizes how the value creating pattern of digitized products transforms value networks of manufacturing firms. A model is presented that reflects how the symbiotic value relationship between the digitized product and digital services transforms the roles, relationships and exchanges in the value networks of manufacturing firms. The model can serve as an analytical tool to further advance the knowledge on business aspects in digital innovation. This thesis contributes to practice by providing an understanding of how manufacturing firms can leverage value of digitized products and digital services in value networks.