

Internet of Things

»Facing the Smart Future«

Smart Products, Production and Services

SECOND ROUND

Internet of Services

Industrial Internet

Digital Manufacturing

Call for Partners: Consortium Study

KEX.
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Our Expert Network:

 **Fraunhofer**
IPT

 **WZL** | **RWTH AACHEN**
UNIVERSITY

 **DEMOFABRIK**
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 **fir** an der
RWTH AACHEN

Smart Products, Production and Services



Motivation

Digitalization, including the integration of networking capabilities into physical products, is no longer just affecting the consumer electronics industry. Terms like »Internet of Things«, »Industrie 4.0«, »The Industrial Internet« or »Smart Data« are just examples for the diversity of buzzwords that are used. But what do these buzzwords mean for companies, particularly regarding their product portfolio, production technologies and value-added services?

Various industries and markets have a high potential for products, services and production getting »smarter«. What will be the lead application that will drive smart technologies in particular segments? Which markets and applications will be the next to profit from – and potentially be disrupted by – smart products, services or production technologies?

In cooperation with the most relevant players, this consortium study aspires to create economic and technological transparency and to explore and analyze market and technology trends as well as possibly game-changing business model shifts. Furthermore, we aim to promote valuable exchange and networking between

the most relevant international industry partners in the fields of smart products, services and production.

In order to achieve these goals, we are promoting a consortium study entitled "Facing the Smart Future". In 2015, a first round of the consortium study started with the participation of over 20 leading companies from different industries. Due to the high demand for the study and the continuous request for further places, a second round with a further consortium will start in April 2016.

First Round Partners



Facing the Smart Future



Main Focus

Just as in the first round of the study, the second round addresses smart products, smart production and smart services. However, as a consortium partner you will be able to influence the study focus.

Specifically, the study covers a broad, explorative range of questions and issues covering technologies, applications and business models.

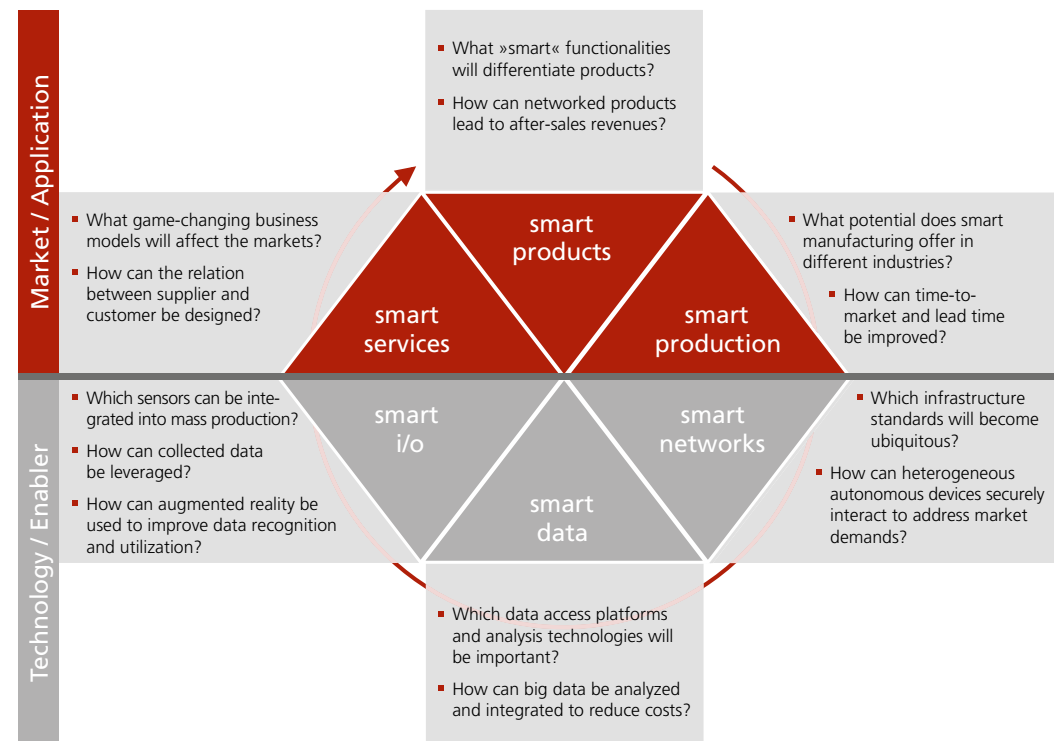
On the one hand, the study addresses technology users already working with or planning to implement smart technologies in the context of smart products, services and production. On the other hand, it enables technology providers to know their future markets and applications. Thus, the study forms a community covering all relevant elements of the »smart« value chain.

Objectives

In our study we aim to create transparency with regard to

- the current and future potential of smart products, production and services
- relevant recent technology developments and upcoming technology trends

- existing best practices and skill requirements as well as challenges and opportunities for the design, development, production or management of new applications
- new business models and derived market development opportunities



Exemplary key questions to be answered by the study. The consortium partners decide on the final questions.

Partners and Markets in Focus



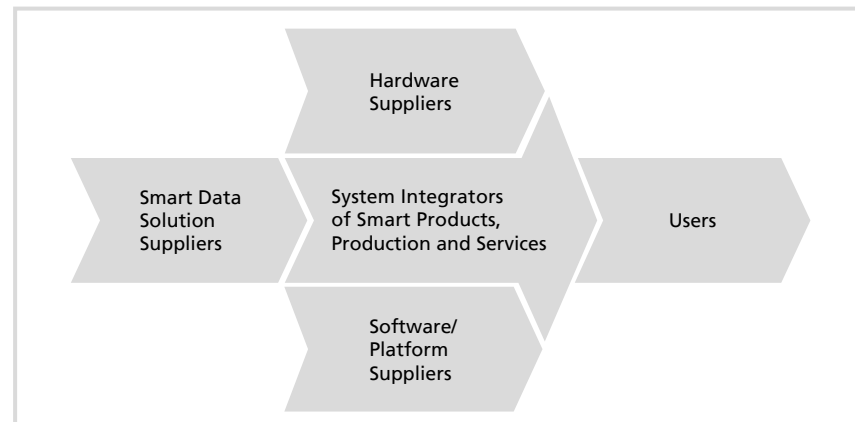
Networking with cross-industrial players and experts

In order to achieve the mentioned objectives, the consortium study will be based on the extensive knowledge and previous projects done by the research partners in the context of »Industrie 4.0« and other smart applications, and leverage the pooled expertise in the consortium.

Furthermore, we are building an expert network that enables knowledge exchange and information generation across value creation stages and business sectors.

In other words, we are bringing together all experts and decision makers involved with smart products, services and production.

Benefit from the opportunities provided by our network and determine which innovations will soon be cutting edge in the market!



Addressed Partners in the study

Markets

Smart products, production and services have been established in specific markets already, especially the consumer, electronics and logistics segments, but will also have an extensive

effect in various other industry sectors. In this consortium study we will focus on the following markets:



Automotive



Aerospace & Defense



Electronics & ICT



Medical & Healthcare



Transportation & Logistics



Energy & Storage



Consumer



Engineering & Manufacturing



Communication

Study Approach



Methodology

This study aims at providing an overview on »smart« technologies and related future trends. In addition, it also aims at aligning these trends with requirements from diverse applications within the most relevant target markets. This broad information basis on both technological capabilities and market requirements will then be utilized to derive and assess highly attractive market opportunities and emerging potentials as well as new business models enabled by the use of data. In order to reach this aim systematically, the study is divided into three phases:

Phase 1 - Pilot Study

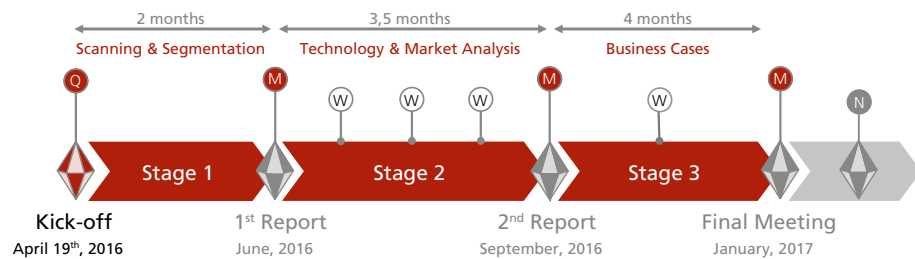
Generating an overview on the status-quo of market applications, relevant trends and technologies.

Phase 2 - Technology/Market analysis

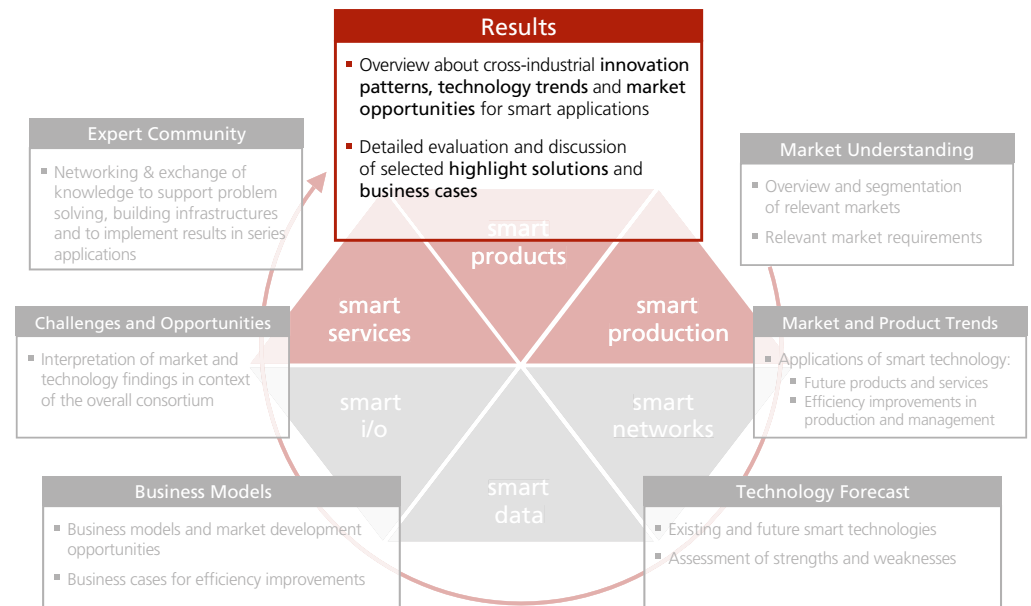
Providing detailed information on selected applications regarding technological opportunities and market potential.

Phase 3 - Business Cases

Deriving comprehensive business cases on selected highlight applications regarding technological feasibility and market competitiveness.



- Q Questionnaire
- M Consortium meeting
- W Optional workshops with partners/experts
- N Optional Network Meeting with partners of 1st Consortium (Round One)



General study approach

Participation and Benefits

Your Participation in the Study

Your participation in this consortium study provides you a broad access to an expert community regarding current performance and future development of smart applications. Through your regular participation in workshops you will be able to influence and direct the progress of the study. Furthermore, the consortium will get exclusive access to all independent study results.

Your Benefits

- Be able to define your roadmap making your products, production processes and services smart for the future
- Understand the innovation patterns behind digital solutions
- Know the enabling smart technologies
- Assess the possible added values based on digitalization and »Industrie 4.0«
- Learn how to apply new services and business models
- Network with cross-industrial players and experts

Time Frame

Start: 19th of April 2016
End: January 2017

Costs

Investment in this study: € 25,000



Long-term Opportunities

Community for Smart Products, Production and Services

The consortium study also serves as an expert community for exchanging and generating knowledge on smart applications. After the participation in the study, the consortium has the option to join a dedicated center for

»Industrie 4.0« and smart applications at the RWTH Aachen Campus, with infrastructure and machinery which can be used to conduct specific and agile development projects.

Benefits of a long-term participation in the center community

- Consolidation of study community and further development of study results
- Access to an entire company infrastructure (from shopfloor to ERP level)
- Test and validate »Industrie 4.0« product and production concepts in a real production environment
- Interdisciplinary development of »Industrie 4.0« solutions and demonstration under real life conditions
- Participation in »living demonstrator« concepts
- Use of center facilities for customer and further education events



Your Expert Network



Fraunhofer Institute for Production Technology IPT

- Founding year: 1980
- 415 employees
- Business portfolio: Turbomachinery, Tool Making, Optics, Lightweight Technologies, Life Sciences Engineering, Integrated Mechatronic Systems
- Knowledge and experience in all fields of production technology for developing and optimizing solutions for modern production facilities

www.ipt.fraunhofer.de



Institute for Industrial Management at RWTH Aachen

- Founding year: 1953
- Industry-oriented research in the areas service management, information management and production management
- Part of the initiative for excellence in North Rhine-Westphalia (NRW)

www.fir.rwth-aachen.de



Laboratory for Machine Tools and Production Engineering (WZL) of RWTH Aachen

- Founding year: 1906
- 760 employees
- 16.000 m² offices and laboratories
- Business portfolio: Manufacturing Technology, Gearing Technology, Machine Tools, Metrology and Quality Management, Production Engineering and Production Management
- Knowledge and experience in all fields of production engineering and production management for developing and optimizing solutions for modern production facilities

www.wzl.rwth-aachen.de



Demonstrationsfabrik of RWTH Aachen Campus

- Founding year: 2013
- Small-scale production of marketable products with a high vertical range of manufacture on 1.600 m²
- Application, exploration and further development of »Industrie 4.0« solutions with industrial and research partners
- Implementation of smart systems enabling transparent and consistent order tracking on the shop floor
- Further education in a real production environment

www.demofabrik-aachen.de



KEX Knowledge Exchange AG

- Founding year: 2012
- Technology and market information provider
- Demand-based provision of information: Scanning, scouting and monitoring of markets and technologies, as well as exclusive access to an unique network of experts.

www.kex-ag.com

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