

Results

An extensive collaboration through industry demonstrators, workshops and research meetings. The results include:

- A prototype computer model by which it is possible to predict the readiness level of total offers
- Identification of several groups of potential new products at the partner companies
- Methods to facilitate indentifying and communicate customer needs
- Methods for simulation driven functional product development

By taking part in the Faste Laboratory, partner companies have implemented new methods of work. Hägglunds Drives AB has implemented a new product development process and AB Sandvik Coromant are using innovative methods for idea generation developed in the Faste Laboratory. By 2009-10-15 the Faste Laboratory, including other funding, had produced 150 publications in journals, books, conference papers and theses.

Industrial partners

AB Sandvik Coromant
BAE Systems Hägglunds AB
Gestamp HardTech AB
Hägglunds Drives AB

LKAB
Volvo Aero
Volvo Car Corporation
Volvo Construction Equipment



A VINN Excellence Centre for Functional Product Innovation

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Form: Plan Sju reklambyrå. Foto: Per Pettersson.



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The Faste Laboratory is a VINN Excellence Centre focusing Functional Product Innovation

A functional product is much more than hardware. It is a solution that integrates hardware, software and services as a base for future development. In this context, a new development process based on simulation driven design will be applied in an environment which includes distributed engineering methods and tools.

The profile of the Faste Laboratory has its roots in a longstanding commitment to use modelling and simulation methods and tools to predict product/process properties and behaviour. Additionally, Faste Laboratory partners have extensive experience in developing, evaluating and using tools and methods for collaborative engineering in geographically distributed teams. In recent years, it has become quite obvious how important these capabilities are when introducing a Functional Product Innovation perspective.



The high-level vision of the Faste is that: New methods and tools have been developed enabling functional products with optimized lifecycle cost and customer value.

The Faste Laboratory links the traditionally separated areas of business and technology. Based on the partner companies' strategic business development and the capabilities of Luleå University of Technology, the projects address the following perspectives:

- Functional Product Development
- Simulation Driven Design
- Distributed Collaborative Engineering

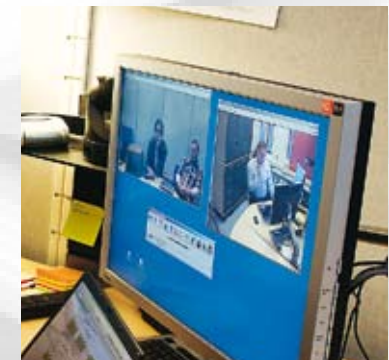
The programme highlights the demands on a cross disciplinary approach. It also adds competence within computer science, manufacturing, production, materials, business, organisation and human work science.

VINN Excellence Center

VINNOVA is the Swedish governmental agency for innovation systems. They promote sustainable growth by funding needs-driven research, and by developing effective innovation systems. VINNOVA, in partnership with industry and academia, is funding Vinn Excellence Centres at a selected number of Swedish universities. The Vinn Excellence Centres build internationally competitive research environments and networks. VINNOVA is staking up to 7 million euro in each center and the academic and industrial partners are investing at least the same amount over up to a ten year period.

Sustainability

One important requirement for achieving a sustainable society is that industries are expected to provide functions throughout the lifecycle of the products rather than only the product itself. The provider, or networked group of providers, will then be responsible for all costs to develop, manufacture, support and upgrade the product over its lifetime. This business model will force companies to cooperate as early as possible in the product development to minimise the risks.



Functional Product Innovation

