



Project Profile

IDEaliSM

Development framework for Multidisciplinary Design and Optimisation

IDEaliSM aims to drastically improve the time-to-market and development cost of high-tech structures and systems through a radical change in the Product Development Process by enabling continuous integration of distributed and highly specialised development teams.

ADDRESSING THE CHALLENGE

To survive in the fiercely competitive market of high-tech transport manufacturing, European companies need to be inventive, innovative and operationally excellent. Employing the concept of High Performance Engineering, companies will be able to capitalise on their corporate design knowledge and realise a gain in efficiency and reduction in time to market of 50%. Such ambitious objectives will require a paradigm shift in product development. This entails effective management of valuable resources and sharing knowledge, methods and tooling being complemented by a more flexible collaboration and a higher level of integration throughout the design chain, on all levels of people process and technology.

PROPOSED SOLUTIONS

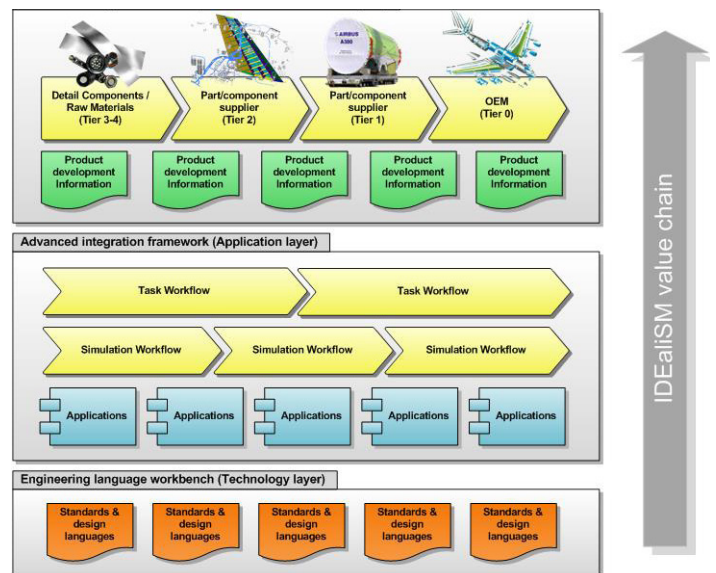
To this end the project will deliver a new distributed flexible and service-oriented development framework for Multidisciplinary Design and Optimisation relying on software solutions for knowledge management and engineering. The solutions lie in three main deliverables: an advanced integration framework for distributed Multidisciplinary Design and Optimisation, an Engineering Language Workbench (a set of domain specific and high-level modelling languages, ontologies and data standards) and a methodology for service-oriented development processes to redefine the product development

process and information architecture to enable collaboration between service-oriented Competence Centres in Distributed Development Teams.

PROJECTED RESULTS AND IMPACT

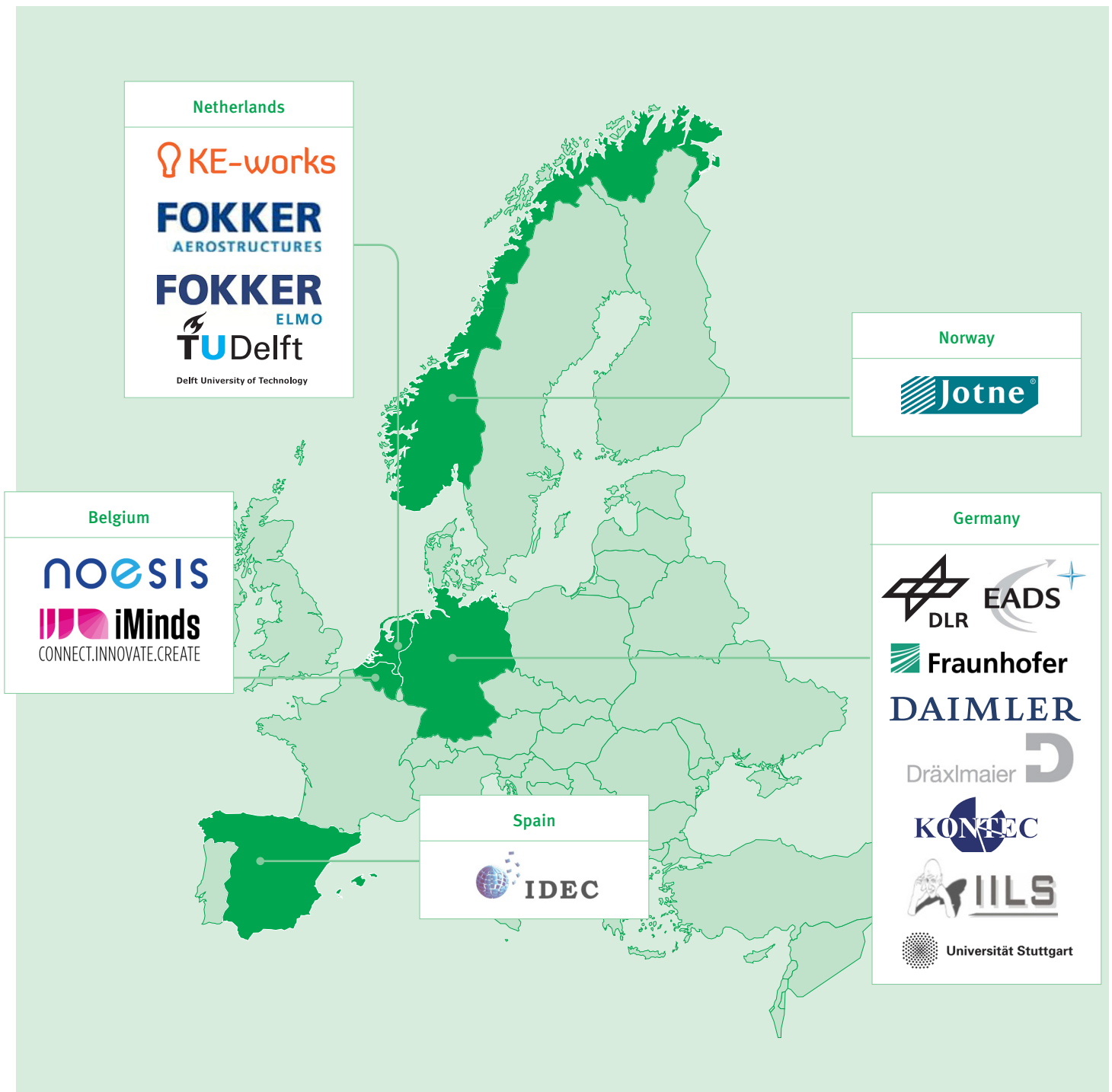
The resulting development framework will help European industries to enhance their level of integration and flexibility in product development and thereby reduce the effort, cost and time-to-market in designing innovative aircraft and automotive structures and systems. Combining the modules/ functionalities of the IDEaliSM framework into exploitable packages will allow the partners (KE-works, NOESIS, IILS, KONTEC, DLR and Jotne) to offer flexible solutions and exploit the framework directly through enhancing their product and service portfolios and indirectly by improving the efficiency and productivity of their internal processes. Early access to these methods and prototypes

will give them a competitive advantage. The industrial partners (Fokker Aerostructures, Fokker Elmo, Dräxlmaier, EADS, IDEC and Daimler) will industrialise these prototypes to exploit the results commercially.



Product Development Process (Process and information layers)

The research and academic partners (DLR, Delft University of Technology, the University of Stuttgart, KU Leuven and Fraunhofer IPK) will undertake intensive market exploration and dissemination activities to gain interest and explore new market opportunities as well as define the standards that will be used within European industry and research.

**Project start**

October 2014

Project leader

Stefan van der Elst, KE-works

Project websitewww.idealism.eu**Project end**

June 2017

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ITEA is the EUREKA Cluster programme supporting innovative, industry-driven, pre-competitive R&D projects in the area of Software-intensive Systems & Services (SiSS). ITEA stimulates projects in an open community of large industry, SMEs, universities, research institutes and user organisations.

As ITEA is a EUREKA Cluster, the community is founded in Europe based on the EUREKA principles and is open to participants worldwide.