



# Mittelstand 4.0 – Digital Production and Work Processes funding initiative

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## Digital transformation in small and medium-sized enterprises

Companies are currently undergoing fundamental transformation: custom-designed goods produced in small quantities that can be delivered fast are increasingly becoming the new standard. These products are being manufactured in a world where machines, service providers, products and clients all communicate with one another as part of one network – from the product planning stage right through to post-purchase service, and across all phases of value creation. SMEs in particular are not yet fully aware of the efficiency gains and business opportunities that digital processes can offer them.

The Mittelstand 4.0 – Digital Production and Work Processes initiative supports SMEs to become digitised, to network, and to start using Industrie 4.0 applications. The Mittelstand 4.0 agencies work to develop solutions for overarching issues of digitalisation and eBusiness which they share with multipliers, such as associations and business chambers, in order to make these known. The Mittelstand 4.0 Competence Centres raise awareness about digitalisation among companies and provide information, training, and the opportunity for companies to view and test new solutions out in practice across the various different regions.

## Funding aims

The aims of the *Mittelstand 4.0* funding initiative are as follows:

- to raise awareness among SMEs about the technological and economic potential of digitalisation, including *Industrie 4.0*, and about the challenges involved
- to support the development of needs-oriented, secure, and market-ready solutions for SMEs by providing opportunities to view and test these out in practice
- to provide key information and knowledge for established transfer agencies and multipliers.



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## What the funding initiative can do

Digitalisation offers major opportunities for SMEs: by networking with other companies, almost all business processes can become more streamlined, more efficient, and more resource-friendly. Novel forms of production that are closely tailored to the needs of customers enable new products and business models to be developed.

Current studies show that there are already many exemplary solutions for digital production and distribution processes in use, particularly in large companies. These solutions are, however, bound to specific technologies and are not easily transferable, which means that SMEs can not easily replicate them.

The Mittelstand 4.0 funding initiative has been set up to systematically advance the digitalisation of procurement, production and distribution processes in SMEs across all sectors of business. The Mittelstand 4.0 funding initiative helps implement the Federal Government's Digital Agenda.

## Projects receiving funding

There are four Mittelstand 4.0 Agencies, each of which focuses on a specific issue of digitalisation and eBusiness. These agencies pass on their expertise to Mittelstand 4.0 Competence Centres and use multipliers to share it with companies.

- The *Mittelstand 4.0* Agency for the Cloud provides support on the application and growing use of cloud computing technologies.
- The *Mittelstand 4.0* Agency for Processes offers help with the use of digital process and resource management.
- The *Mittelstand 4.0* Agency for Communication supports innovation management and helps raise the use of digital communication processes.
- The *Mittelstand 4.0* Agency for Trade is there to answer questions on new technologies in digital trade, such as eBilling, and on production-related trade.

We currently have ten *Mittelstand 4.0* Competence Centres around the country and a Competence Centre for Digital Skilled Crafts:

- The topics that the *Mittelstand 4.0* Competence Centre in Hanover is concerned with range from the digitalisation of specific production and logistics processes to dealing with legal and economic issues through to Labour 4.0. The centre boasts one general factory, nine expert factories and one mobile factory which bring state-of-the-art solutions directly to the companies.
- The *Mittelstand 4.0* Competence Centre in Darmstadt offers further training in order to help companies upgrade their knowledge on value creation processes, Labour 4.0, IT security, new business models and energy management.
- The *Mittelstand 4.0* Competence Centre in Dortmund lends support to SMEs across three regional hubs that focuses on new approaches to smart automation of products and production systems, helping SMEs to adopt autonomous and adaptable logistics systems and new solutions in the field of production technology.
- The *Mittelstand 4.0* Competence Centre in Kaiserslautern has a completely modularised, vendor-neutral Industry 4.0 plant which enables companies to gain access to realistic demonstration and test environments. By way of best-practice examples, companies are shown solutions for networking production processes, starting from engineering processes up to IT systems.
- The *Mittelstand 4.0* Competence Centre in Berlin provides guidance on the following four digital transformation processes: value creation processes 4.0, digital marketing, business models and human resources.
- The *Mittelstand 4.0* Competence Centre in Chemnitz offers a broad service portfolio including instruments for integrating Industry 4.0 while taking account of legal aspects, particularly concerning SMEs.
- The *Mittelstand 4.0* Competence Centre in Ilmenau deals with topics including aspects of 3D printing

and real-time data recording and processing, i.e. possibilities for automated process and quality control.

- The *Mittelstand 4.0* Competence Centre in Hamburg places a special focus on logistics in terms of conducting a comprehensive supply chain analysis. Other important cross-cutting topics are the development of new business models and catering to the needs of employees facing the difficult challenges related to technological change.
- The *Mittelstand 4.0* Competence Centre in Augsburg, for example, provides technological solutions in the field of automation solutions, software and assistance systems. Furthermore, the centre addresses questions concerning cross-cutting topics such as human resources, organisation, technology and business models.
- The *Mittelstand 4.0* Competence Centre in Stuttgart presents digitalisation solutions in the areas of smart mobility, smart production, smart building and smart health.
- The Competence Centre for the Digital Skilled Crafts uses showcases in order to raise companies' awareness of digitalisation.

In 2017, additional Competence Centres will gradually be set up.

## Supporting institutions

Evaluation work and scientific backing for the *Mittelstand 4.0 – Digital Production and Work Processes* funding initiative is undertaken by the accompanying *Mittelstand-Digital* research agency. Specialist and administrative support for the research projects is provided by a project management agency.

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