

# Driving the Digital Enterprise

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## 1 Digitalization is revolutionizing our economy

Business is becoming more and more impacted by digitalization. Customers are increasingly able to tell manufacturers directly – via the Internet – exactly what they want and when. If manufacturers don't respond, alternatives can often be found easily, and potential business can be lost quickly. Manufacturers need to respond to address this challenge and they need to significantly reduce their time-to-market, while massively increasing flexibility to enable individualized mass production – and do so with reduced energy and resource consumption. Solutions to address this challenge are developed by initiatives such as the Internet of Things and Industrie 4.0.

Holistic approach is a very good approach to optimize the entire value chain. By simply focusing on the automation of manufacturing processes, it is not possible to meet the aforementioned requirements. A holistic approach, stretching over the complete value chain and encompassing an often global ecosystem of suppliers, is necessary. The manufacturing industry is now at the stage where the automation of complete workflows is the only way to ensure a long-term, defendable, competitive position.

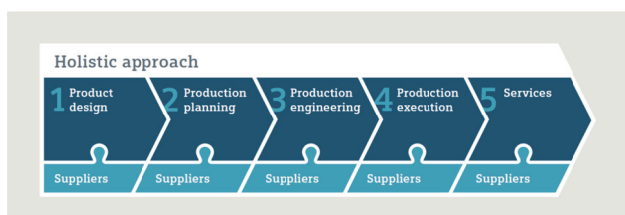


Figure 1: Holistic approach to the entire value chain

## 2 Digital Enterprise Software Suite

The seamless integration of data along the industrial value chain will gain more and more in importance for manufacturers. Siemens aims to provide its customers with a comprehensive portfolio of hardware and software products that enables the comprehensive integration of data from development, production and suppliers. The complete digital representation of the entire physical value chain is the ultimate goal. The holistic automation solution for this purpose is the Digital Enterprise Software Suite, a comprehensive suite of Siemens Industry Software.

## 3 Continuous digitalization of the value chain

Over the past 15 years, Siemens has developed an extensive suite of software products and is now in a position to offer its customers a holistic automation solution covering all major Industrie 4.0 requirements – the Digital Enterprise Software Suite. The Siemens product portfolio already smoothly connects major parts of the product and production lifecycle today. Powerful Product Lifecycle Management (PLM) software, for example, allows the development and optimization of new products on an entirely virtual basis. In the real manufacturing world the Totally Integrated Automation (TIA) solution, which has proven its worth for nearly 20 years now, ensures the efficient interoperability of all automation components. The Totally Integrated Automation Portal (TIA Portal), for example, already enables significant time and cost savings in engineering.

#### 4 Siemens Collaboration Platform: Teamcenter

As the Siemens Collaboration Platform and single data backbone for the Digital Enterprise, Teamcenter enables globally dispersed enterprises to engage every facet of their business in new product introductions. Integrated idea capture and management, project and portfolio management tools are combined with industry-leading product design and development solutions in a single, shared source of product and process knowledge.

Teamcenter helps companies take control of their multicomputer-aided-design (CAD) and multi-domain design processes, including mechanical, electronics, software and simulation, and manage that data in a single secure source. Users can access, assemble and re-use valuable intellectual property and

validate the quality and completeness of all product data.



*Figure 2: Siemens Collaboration Platform:  
Teamcenter*

#### 5 Literature

[1] [www.siemens.com](http://www.siemens.com)