Capgemini

Digital Engineering Experience Center

> **"We create a new consulting experience by combining value orientation with digital capabilities and fun."**

As competition becomes fiercer due to globalization, cost pressure and higher product complexity, innovative approaches are needed to meet customer requirements to further increase revenues. We therefore suggest to utilize digital methods to shorten time to market and create a flexible, modern and efficient way of working.
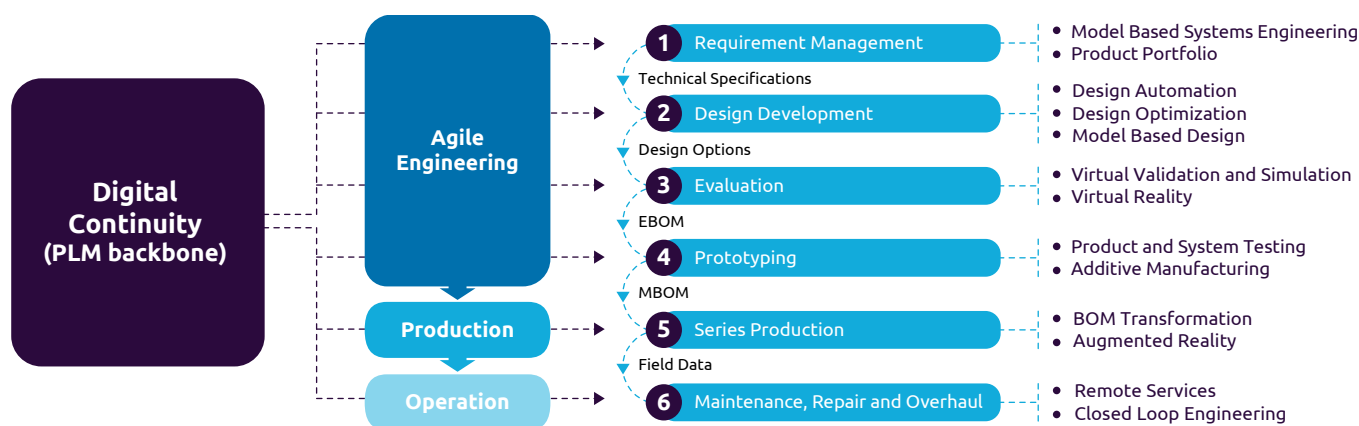
The Capgemini Digital Engineering Experience Center allows you to learn about the latest trends and methods along the product lifecycle. It enables you to experience modern technology using real life examples and to find the best solution for your organization.

Are you interested? Take a look at our unique showcases which demonstrate the use of model based systems engineering, design automation, digital twins, additive manufacturing and much more.

What is it about?

Digital technologies are widely discussed, but only a few experts already know what is necessary to implement them into their processes. We therefore developed a comprehensive end to end scenario which demonstrates the potential of digital technologies in engineering with real life examples from the automotive and aerospace industry.

For example, we look at the engineering processes of an aircraft component. Due to new regulations, it needs to be redesigned. We demonstrate how to use different technologies in an optimal way combining them with agile and model based methods along an engineering change process. You can walk through the process step by step, from the definition of requirements regarding homologation followed by redesign and implementation of changes in engineering and manufacturing. Within this walk-through we give you real-life examples for digital technologies as described below.

Digital Continuity (PLM backbone)

Agile Engineering

Production

Operation

1 Requirement Management
Technical Specifications
- Model Based Systems Engineering
- Product Portfolio

2 Design Development
Design Options
- Design Automation
- Design Optimization
- Model Based Design

3 Evaluation
EBOM
- Virtual Validation and Simulation
- Virtual Reality

4 Prototyping
MBOM
- Product and System Testing
- Additive Manufacturing

5 Series Production
Field Data
- BOM Transformation
- Augmented Reality

6 Maintenance, Repair and Overhaul
- Remote Services
- Closed Loop Engineering

Our added value

- Innovative mindset to frame Intelligent Industry visions
- E2E process coverage with engineering, methods & IT capabilities
- Network of international experts for each technology and method
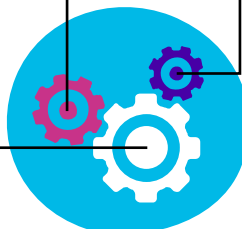- Strong ecosystem & strategic partnerships

55%[2] lower total development cost compared to typical systems engineering

30%[1] cost reduction by eliminating physical prototypes

60%[3] shorter time-to-market delivering high quality products

1 Capgemini benchmark data base | **2** Result of a study by our partner Autodesk | **3** Result of a study by our partner ptc

Model Based Systems Engineering (MBSE)
MSBE utilizes models instead of documents for engineering. Our full 3DX based solution uses the native RFLP methodology to demonstrate the development of a new mechanism.

Generative Design
Generative Design uses an intelligent algorithm to generate multiple variations of the product design to validate different production mechanism and to optimize parts to meet the requirements.

Digital Working
We show how digital solutions and platforms ensure a collaborative cooperation between different business units developing the door mechanism and how agile methods help accelerate the process.

Virtual Reality
3D models as well as simulation data ensure that newly developed parts are effectively virtually tested during different development phases.

Bills of Materials (BOM) Transformation
Linking BOMs to automatically transmit engineering data in collaboration networks allows for rapid changes of production processes.

Additive Manufacturing
Learn how to reduce time to market with generative design and rapid prototyping in agile R&D processes.

Augmented Reality
Capgemini offers an end to end service portfolio across all project phases to support clients benefit from AR. Experience different use cases such as AR supported trainings, remote services and quality assurance.

Configure, Price, Quote (CPQ)
A CPQ configurator guides customers towards the optimal purchase using virtual reality. We show what it takes to create the perfect customer experience.

Digital Twin
We demonstrate how to transform a document based into a model based information model and how to create closed loop engineering.

Internet of Things (IoT)
We show you how to collect and analyze data from an injection molding machine and how to utilize it for your engineering processes.

About Capgemini

Capgemini is a global leader in consulting, digital transformation, technology, and engineering services. The Group is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year+ heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. A responsible and multicultural company of 265,000 people in nearly 50 countries, Capgemini's purpose is to unleash human energy through technology for an inclusive and sustainable future. With Altran, the Group reported 2019 combined global revenues of €17 billion.

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discover   devise

sustain   deploy

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We have developed a comprehensive discipline and platform for applied innovation.
The result is a proven model to go from problem statement to business outcome.