



MTU AERO ENGINES BUILDS ITS NEXT-GENERATION PLATFORM FOR PRODUCT LIFECYCLE MANAGEMENT

MTU Aero Engines engages Capgemini Invent as its single, end-to-end solution provider for transformation management, design, and implementation to accelerate transformation and build the next evolution of the company's product lifecycle management.

A leading manufacturer in aero engines

MTU Aero Engines is Germany's leading manufacturer and an expert in the development, production, and maintenance of civil and military aero engines. The company's innovative engine solutions have been shaping the aviation industry for more than 85 years.

For the development, production, and maintenance of MTU's products, efficient management of all processes along the value chain is crucial. Therefore, IT innovations are essential and play a key role in the organization's digitization strategy.

Overview

Client: MTU Aero Engines

Industry: Aerospace & Defense

Region: Germany

Client Challenge:

MTU Aero Engines identified the need to transition from their existing solutions for product lifecycle management to a central future-proof PLM backbone to realize digital continuity along their value chain. However, since the project approach did not correspond to the high complexity of the transformation, the go-live had to be repeatedly postponed resulting in significant sunk costs.

Solution:

As part of the project's restart, MTU partnered with Capgemini Invent to develop and implement a new target operating model that makes use of a scaled agile framework (SAFe Framework) to roll out solutions in three-month product increments in the organization.

Result:

In April 2022, only 6 months after the re-setup of the project, the system was productively rolled-out in the first organizational unit with 500 users. A second rollout with 4800 users followed in October 2022.

In addition, the new agile way of working was broadly accepted and resulted in higher-level of trust within the teams jointly committing to the project success.

The backbone for next-generation technology

In 2018, MTU Aero Engines launched the INTEGRATE project, a comprehensive digital transformation of its product lifecycle management (PLM) solution for civil and military engine programs. During this initiative, the company intended to replace existing PLM legacy systems with a new generation of technology and optimize functional processes in engineering, manufacturing, and maintenance.

Within two-and-a-half years in the traditional project setup, the planned project progress that had been anticipated could not be achieved. Reaching a tipping point in 2021, confidence was lost that the project could be completed on time and budget, and the need for a new project approach was recognized.

Setting the vision for transformation

To restart INTEGRATE, MTU partnered with Capgemini Invent to develop and roll out a foundation for future transformation. Therefore, a new target operating model that uses a scaled agile framework (SAFe Framework) was implemented to launch solutions in three-month product increments. Focusing on interdisciplinary teams, and an

orientation towards value streams, this agile way of working enables the presentation of objectively assessable results. In short cycles, these results are then made available to customers in the form of an executable system.

By establishing lean portfolio management, MTU can now manage the scope and control the implementation period and costs for individual solution components (so called epics) while also ensuring financing. To do so, individual solution components are evaluated by calculating a business case with regard to the value for MTU and the costs of implementing a productive Minimum Viable Product (MVP). Within this structure, the business works with project customers to agree upon participatory budgeting, scope, and implementation costs.

MTU now uses Earned Value Methodology, which evaluates the progress of the project in both planned and actual monetary values, for reporting and to provide a longer-term view on the core issues of time and scope. To achieve digital continuity throughout the entire value chain, MTU and Capgemini Invent implement a modern, model-based way of working within engineering, manufacturing, and maintenance.

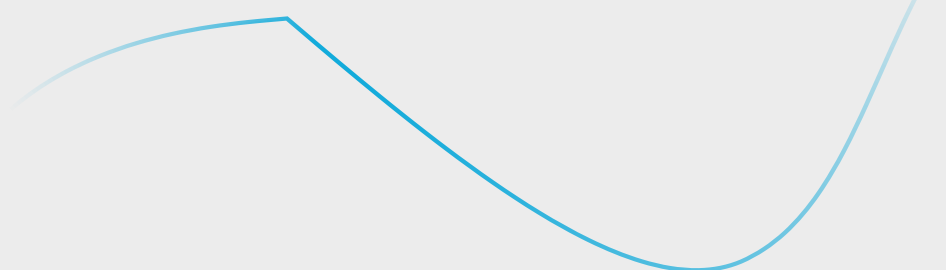
Capgemini Invent is the prime end-to-end supplier for transformation management, design and implementation of the solution to accelerate transformation for MTU Aero Engines and to build the next evolution of the company's product lifecycle management. With Capgemini Invent's experts and track record in successful execution of large-scale PLM transformation programs, our client has the right partner to execute its ambitious plans for the future.

Roll out to civil and military clients

The PLM system was rolled out to 4800 users in civil and military maintenance. Everyone involved, from the MTU team to customers, broadly accept the new way of working and trust that the agile workflows will continue to fuel project success. The roadmap for transformation has built trust within the board and the rest of the company

regarding the success of the project while improving transparency regarding the progress of the project, the budget, and the adherence to the given framework.

The project's next milestones are to support and enable the development, manufacturing, and maintenance of the next generation of fuel-efficient, sustainable civil and military aircraft engines. MTU and Capgemini Invent will work together to achieve this by using model-based approaches, optimized processes and innovative technology throughout the organizational value chain, including suppliers and OEMs.





“INTEGRATE is probably the most important IT project for the renewal of MTU’s PLM backbone - converted to BizDevOps and agile methodology and relaunched within a very short time. Not for fun or because the Zeitgeist is agile, but because waterfall didn’t work well. Results are now quickly visible and the spirit in the team is also good.”

Dr. Lutz Seidenfaden

Senior Vice President Information Technology, MTU Aero Engines

About MTU Aero Engines

MTU Aero Engines AG is Germany’s leading engine manufacturer. The company is a technological leader in low-pressure turbines, high-pressure compressors, turbine center frames as well as manufacturing processes and repair techniques. In the commercial OEM business, the company plays a key role in the development, manufacturing and marketing of high-tech components together with international partners. Some 30 percent of today’s active

aircraft in service worldwide have MTU components on board. In the commercial maintenance sector the company ranks among the top 3 service providers for commercial aircraft engines and industrial gas turbines. The activities are combined under the roof of MTU Maintenance. In the military arena, MTU Aero Engines is Germany’s industrial lead company for practically all engines operated by the country’s military. MTU operates a network of locations around the globe; Munich is home to its corporate headquarters. In fiscal 2022, the company had a workforce of more than 11,000 employees and posted consolidated sales of 5.3 billion euros.

About Capgemini Invent

As the digital innovation, design and transformation brand of the Capgemini Group, Capgemini Invent enables CxOs to envision and shape the future of their businesses. Located in nearly 40 studios and more than 60 offices around the world, it comprises a 10,000+ strong team of strategists, data scientists, product and experience designers, brand experts and technologists who develop new digital services, products, experiences and business models for sustainable growth.

Capgemini Invent is an integral part of Capgemini, a global leader in partnering with companies to transform and manage their business by harnessing the power of technology. The Group is guided everyday by its purpose of unleashing human energy through technology for an inclusive and sustainable future. It is a responsible and diverse organization of 360,000 team members in more than 50 countries. With its strong 55-year heritage and deep industry expertise, Capgemini is trusted by its clients to address the entire breadth of their business needs, from strategy and design to operations, fueled by the fast evolving and innovative world of cloud, data, AI, connectivity, software, digital engineering, and platforms. The Group reported in 2022 global revenues of €22 billion.

Get the Future You Want | www.capgemini.com/invent