



Building the bridge to infinity

Digital Continuity in Action

Capgemini  invent

Our extensive service portfolio covers all aspects of Digital Continuity bundled in different focus topics



1 FUTURE INTELLIGENT BUSINESS MODELS

2 DIGITAL CONTINUITY STRATEGY & VALUE CASE

5 Agile Collaboration Model
(Decentralized, Modular, Flexible, Boundless)

3 People, Leadership & Change

4 Governance & Processes

MODEL-BASED ENTERPRISE & CONNECTED LIFECYCLE

Innovation & Development

Sales & Experience

Supply Chain Collaboration

Manufacturing & Operations

Service Performance

Model-based Systems Engineering

Product & Portfolio Excellence

Extended enterprise collaboration

Manufacturing Eng. & Virtual Commissioning

Installed-base Management

Connected Lifecycle Innovation

Variant Configuration Management

Product costing & value engineering

Verification & Validation

Service and Closed-loop excellence

SUSTAINABILITY & CIRCULARITY

6 Physical & Digital Convergence
(Powerful, Secure, Reliable, Scalable)

TECHNOLOGY ENABLERS

Internet of Things

Digital Twin

Cloud Computing

GenAI & Analytics

AR/VR

3D Modelling

Simulation





1

Future Intelligent Business Models



Digital Continuity offers through agile and modular business models increased revenue opportunities



Digital Continuity



Key Challenges

Increasingly **unpredictable market dynamics** driven by rapid technological advancements and shifting customer expectations.

Rising complexity in managing diverse revenue streams while maintaining operational efficiency.

Difficulty aligning **cross-functional teams** with decentralized processes and strategies

The growing need for **sustainable and scalable** solutions to address environmental and societal challenges

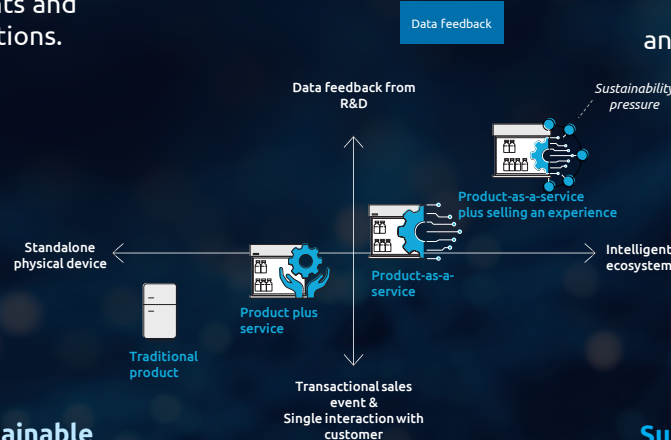
Target Picture

Hyper-personalized customer experiences enabled by real-time data analytics and AI-driven insights

Scalable ecosystems integrating partners, suppliers, and customers for seamless value delivery

Data-driven decision-making to optimize resource allocation and uncover new revenue opportunities

Sustainability as a core driver by embedding circularity and efficiency into value chains



Success Stories

Heavy Machinery Manufacturer

Customer-centric aftersales and digital strategy centered on connected customers, connected machines, and connected dealers

E-Bike Manufacturer

Creating a strategy for the pricing and monetization of data from connected eBikes, and designing the future data driven dialog

Windpower manufacturer

Establishing a sustainable organizational governance with sufficient accountability for digital services business

Industrial Service Provider

Development of a digital strategy and roadmap

Your benefits



Agile and modular business models reduce response times to market shifts ✓



Increased Revenue Opportunities: Leverage AI and digital twins to identify untapped opportunities ✓



Efficient collaboration across ecosystems reduces costs and improves productivity ✓

Capgemini supported to create a Digital Business model for eBikes



The Challenge

Our client is a leading manufacturer of eBike systems and digital pioneer in the field of urban, electrified mobility.



The Solution

- To further accelerate his digital business, the client engaged Capgemini to support in the monetization of eBike data and creating a data-driven customer dialogue.
- Research inside and outside of ecosystem
- Cross-industry best practices
- Data Monetization Framework
- Future user/rider experience
- Data-driven customer dialogue
- Roadmap and business case
- Data-driven customer dialogue



Our monetization framework enables the client to develop valid estimations for the monetization of his data points and directly engage partners.



Clear rollout- and engagement strategy for data-driven communication increases retention and riders' engagement in owned channels

e-Bike Manufacturer



Concept for Data Monetization Data-Driven Customer Dialogue

Global Digital Experience Transformation



The Challenge

Our client, a leading manufacturer of mobile machinery, engaged Capgemini to redefine, reimagine and deploy their customer-facing solutions.



The Solution

- Capgemini supported CNH on a global scale while delivering regionally-specific requirements including customer and dealer-facing services.
- Integrated Sales and Service Experience
- Connected and non-Connected Services
- Connected Dealer Workshops
- Dealer Managed Inventory
- OEM & Dealer Change and Enablement
- Data Consistency



Increased customer satisfaction/NPS through higher machine uptime and recognition of the client becoming “easy to do business with”



Higher loyalty resulting in increased parts and machine re-purchase rates



New revenues through connected and non-connected services (including connected retrofits), as well as increases in parts penetration



Heavy Machinery Manufacturer



Customer & Dealer Experience
Connected Services
Digital Enablement

Capgemini supported Siemens Gamesa in leveraging the business potential of digital services



The Challenge

- Siemens Gamesa identified the need to better leverage the business potential of digital services. This is driven by different drivers: the need to further grow the revenue of the service business and the additional competitive pressure by direct competitors as well as new digital players.
- Several areas require an adapted approach as the digital service revenue is not growing as expected



The Solution

- In order to successfully achieve the ambition, they need to establish a sustainable organizational governance with sufficient accountability for digital services business, establish an appropriate IoT platform, build the needed capabilities and develop a set of new digital services.
- To accelerate the initiation of the transformation, the first development projects are executed applying a 'Minimum Viable Product'-approach with a first customer-ready release ready within 3 months.



Broaden the current scope and reach of Digital services



Extend footprint of digital services to more phases of the value chain



Differentiate by expanding business models to disrupt market

Windpower Manufacturer

Digital service portfolio roadmap

Capgemini supported an industrial service provider in setting up a digital roadmap



The Challenge

- Digitalization offers new options to increase efficiency (back and front office), improve collaboration with customers and value chain partners, as well as create new revenue streams
- Key challenges in the plant construction, modernization and maintenance business are very specific and differ substantially from manufacturing businesses



The Solution

- Development of a consistent digital vision and target picture and identify preconditions for realizing both
- Development of a portfolio of digital measures to increase process efficiency, improve collaboration with customers and value chain partners, and generate additional revenue through innovative digital services and business models
- Definition of digitalization projects and consolidation into a realistic digital roadmap



Conducting a digital maturity assessment



Development of high-level business cases for cost/benefit analysis



Creation of a digital roadmap the key activities to achieve the target picture

Industrial Service Provider

Digital Roadmap



Digital Continuity Strategy & Value Case



Digital Continuity enables information flow through all lifecycle phases promoting collaboration & data sharing

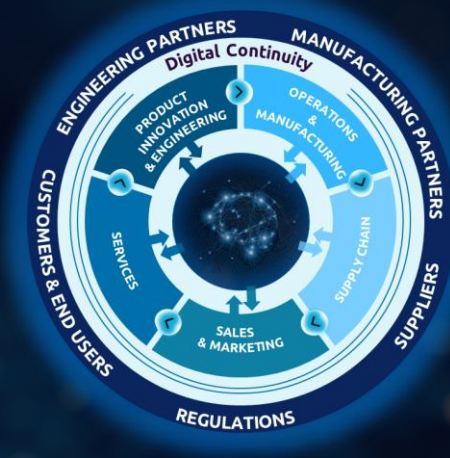


Digital Continuity



Key Challenges

- **Siloed** and **sequential** approach for complex **product development**
- Increasingly more complex and faster evolving **consumer demands**
- Difficulty to **create, access, and reuse information** on how a product was designed, manufactured, and serviced
- Insufficient discovering and collection of **problems and needs** of all **stakeholders**



Target Picture

- Transparency and quality control with **traceable materials** optimizing efficiency
- **Automated sourcing** leading to gained **synergies** and sped up **decision-making**
- Optimized lab procedures enhancing **productivity** and **reducing errors** by saving resources
- Systematic use of modelling & simulation for **early & improved decision-making**

Success Stories

Automotive OEM

Development of demonstrator for future collaboration and industrial simulation platform integrating supplier data and reducing planning cycle

Life Science company

Innovative Bioreactor Digital Twin optimizes complex biopharma manufacturing process following a first-time-right approach

Your benefits*



Increase in **production planning & manufacturing efficiency** **Up to 30%**



Time savings by breaking silos & connecting data for value ✓



Reduced **time to market** **Up to 40%**

* Numbers based on Capgemini's project experience

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Digital Twin for production planning in the Industrial Metaverse of an Automotive OEM



The Challenge

Our client; a major Automotive OEM faced challenges in independent planning and isolated digital protection created inefficiencies and errors due to poor synchronization, unsatisfactory data exchange, and siloed operations



The Solution

Cross-functional process mapping and tailored use case, leading to actionable business cases, a prioritized transformation roadmap, and a plan for both quick wins and long-term strategic alignment.



Operating Model

Setup of cross-functional expert network



Process Landscape

Cross-functional way of working and data flow



Pilot Application

Development of MVP in Nvidia Omniverse



Use case backlog

Detailed description of use cases



Transformation Plan

Generation of quick wins and long-term strategy alignment

Automotive OEM

Strategy for E2E Digital Twin initiatives

Development of use and business cases

We developed the first ever Bioreactor Digital Twin for a leading life science client



The Challenge

The client wants to provide state-of-the-art tools, services and expertise to organizations so that it accelerates their solution journey to the toughest problems in life science. A digital twin of a bioreactor will play a central role in embarking on the data-driven research and production. Our digital twin technology will become a top-of-the-line product which our client intends to bring to market in the shortest possible time.



The Solution

For the digital twin to communicate in near real-time with the bioreactor, the capabilities for the modeling and simulation of bioreactor processes need to be developed and integrated with history and live sensor data. All of this needs to be done with a cloud computing platform providing a user-friendly and intuitive interface while adhering to GxP compliance.



Process Optimization

Optimization of upstream processes by providing an operative range of control parameters to produce the maximum titer



Increased product outcome

More antibodies can be produced for the same amount of input feed.



Transformation Plan

Scope for extension to production phase



Life Science

Bioreactor Digital Twin

Development of use and business cases



People, Leadership & Change



Strengthen Digital Competence across the organization to achieve increased productivity and efficiency.



Key Challenges

Digital Competence

Lack of digital skills to operate tools and understand complex processes in a digitized workplace

Strategic alignment

Leaders must develop and clearly communicate a comprehensive digital transformation strategy that aligns the entire organization

Integration of technology and processes

Integrating new technologies into business processes is complex, requiring significant changes in workflow and organization



Target Picture

Understanding of roles

A shared understanding of roles ensures efficient collaboration, aligning expertise for smooth coordination and effective teamwork.

Culture & Mindset

Commitment ensures a long-term bond between employees and the company as well as increased identification and commitment to project goals, tasks and roles.

Continuous learning

For project success, required expertise must be identified and considered. Continuous learning paths support flexible, independent growth, offering qualification recommendations and training opportunities.

Success Stories

Automotive OEM

Development of a Functional Systems Engineering training concept

Life Sciences

Enabling a data-driven company through Agile Coaching & Change Management

Your benefits



Increased Productivity

Empowering employees with the necessary digital skills and tools



Efficiency and cost savings

Clear strategic focus and vision enable more effective decision making, improved product quality and better communication and collaboration.



Better organization

Focus on value creation through the product, agility for more flexibility, better collaboration

Capgemini creates and maintains a communication and learning platform for end users for SE



Agile PLM Transformation and enabling Model-Based Value Chain



The Challenge

- PMTO solutions are to be made available to the end user (in this case, the vehicle development project) with the overarching goal of rethinking product development according to systems engineering
- Configuration management of PMT statuses that are to be transferred to the learning platform
- Customer implementation Wiki/ Confluence as a learning platform ≠ User-friendliness



The Solution

- Qualification needs analysis for each end user target group
- Transfer of PMTO solutions from the PMTO factory to an internal VW communication and learning platform
- Analysis and didactic preparation of multimedia learning content (videos, screencasts, scribbles, simple shows, guided tours, one-pagers and click instructions) to communicate the PMTO solutions.



Communication and learning platform for PMTO solutions



Consulting recommendations for continuous further development



Multimedia learning content

Automotive OEM

Communication and Learning platform

Enabling a data-driven company through Agile Coaching & Change Management

Agile PLM Transformation and enabling Model-Based Value Chain



The Challenge

- Life Science company is conducting a strategic Digital enabler Data as an Asset program
- The program makes global data assets findable, accessible, interoperable and reusable by every employee to increase business benefits and data-driven decision-making.
- It aims on enabling data-driven decision processes and project portfolio management to apply a new way of working for data analytics activities



The Solution

- Communicate and facilitate organizational change management strategically to adopt the data solutions as well as to implement a global mindset shift towards data-driven decision making & innovation globally
- Develop training content, formats and workshops for specific target groups to enable future workforce.
- Assess training/enabement needs



Agile coaching



Develop and deliver change strategy, content and communication in an agile way of working



Supervise scrum teams on platform development



Develop training content, formats and workshops for specific target groups to enable future



Life Sciences

Agile Coaching and Change Management



Governance & Processes

State-of-the-art business process management & process governance structures enable reaching digital continuity benefits



Key Challenges

Product complexity

Increasing complexity of products and services, due to technical disruption and rising stakeholder expectations. This exacerbates the operation of a fitting **process landscape** and the assurance of **process quality**.

Complexity of markets

High competition pressures the classical price quality and time dimensions, while regulatory and sustainability requirements lead to a need for **agile processes and modern organization models** to adapt to the changing environment.

Process complexity

Unstructured, organically grown process landscapes create friction, intransparency and inefficiencies.



Target Picture

Methodical **Business Process Management** in Engineering enables more **efficient product development** and helps you to stay competitive in volatile & complex market conditions and ensures **sustainable success**.

Value oriented and user centric E2E process definition with **clear accountabilities** as solid foundation for continues improvement and optimization initiatives

Fact-based decision making and process optimization empowered by data continuity and **business intelligence** solutions like process mining

Success Stories

Automated Driving Alliance

Capgemini developed together with an automotive OEM and supplier a holistic PMT Landscape to enable efficient and collaborative development of ADAS solutions, while ensuring regulatory compliance with e.g., A-SPICE Level 2, ISO26262, SOTIF, ISO21434.

Tier-1 Automotive Supplier

Creation of a future-proof product development process based on agile principles and values, catering for A-SPICE Level 3, Cybersecurity, functional safety, as well as customer-specific requirements.

Your benefits*



Reduction of
lead time

up to **30%**



Reduction of
scrap and rework

up to **15%**



Engineering efficiency
increase

up to **30%**



Process compliance
increase

up to **100%**

* Numbers based on Capgemini's project experience

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PMT landscape for collaborative ADAS development

Agile PLM Transformation and enabling Model-Based Value Chain



The Challenge

- The client must design and develop an innovative ADAS solutions to ensure state-of-the-art products and vehicles
- ADAS functions must be customer-ready in the coming years
- Challenges are the complexity of development and regulatory compliance requirements, which must be addressed through a holistic approach with deep expertise from all parties involved



The Objectives

- We support the partnership with the definition of a PMT target architecture and process landscape, followed by the definition and rollout of the PMT solutions into the domains
- To enable a fast start of the development, the PMT definition and rollout will be integrated into the SAFe framework of the ADAS development.



Holistic PMT framework for ADAS development, ready for collaboration between CARIAD and the Alliance



Integrated interfaces between the Alliance and the automotive OEM to enable integration of ADAS functions into the vehicle platform

Automotive Industry

Holistic PMT landscape for the Automated Driving Alliance

Establishing an ASPICE Level 3 development process for an automotive supplier

Agile PLM Transformation and enabling Model-Based Value Chain



The Challenge

- Creation of a future-proof development process that meets ASPICE Level 3, functional safety, cyber security requirements and customer-specific demands
- To solve future challenges, a future-oriented Idea-to-Produce process is to be created to meet future customer requirements
- Switch to agile and lean product development processes to shorten development cycles and solve increased complexity



The Objectives

- Designing a future-proof process house for the Idea-to-Produce process according to agile principles and values
- Promoting an integrated development process based on system engineering, combining hardware, software and mechanics into a joint cross-functional development team
- Designing the future process with a view to the latest technologies such as digital twin development, AI-based software development and model-based system engineering MBSE



Future proof and compliance-compliant development process



Merging systems engineering with lean and agile principals

Automotive Supplier

ASPICE Level 3 - compliant development process



Agile Collaboration Model



Agile collaboration is the driving force for breaking down silos enabling rapid adaptation and continuous improvement



Key Challenges

- Rigid planning with extensive upfront requirements can be inflexible to changing priorities.
- **Prolonged development** cycles hinder quick adaptation to market changes, **delaying time-to-market**.
- **Misalignment** between stakeholders on feature maturity
- Late detection of issues can lead to high costs and project delays.

Target Picture



Flexibility, quickly adopt to changes in the market requirements.



Focus on delivering high-priority features and functionalities that provide immediate value to customers.



Synergy between stakeholders when accepting a feature for development



Early identification and resolution of defects, reduce rework and associated costs.

Success Stories

Heavy Equipment Manufacturer

Capgemini Invent has supported client product groups in Business process transformation, documentation & training adhering to SAFe methodology

Engine Manufacturer

Re-set up of E2E Digital PLM Transformation in Aerospace Industry with focus on agile ways of working based on SAFe framework for next level product development

Your benefits

Improved Prioritization and forecasting will facilitate resource allocation to meet delivery targets

Increased Flexibility and Adaptability to changing market requirements

Enhanced Customer Satisfaction by ensuring that the product aligns closely with their needs and expectations

The power of agile to achieve digital transformation



Since many years now, Capgemini has chosen agile-at-scale frameworks to deliver its services linked to the digital transformation of its clients. These methodologies and ways of working were progressively adapted and capitalized by our delivery teams to the specific challenges of the digital transformation. This adapted approach is the core of our DRIVE execution model.

BENEFITS OF ADOPTING AGILE: WHAT COMPANIES WHO IMPLEMENTED IT SAY ABOUT IT

.....
70%

Manage changing priorities

.....
70%

Increase visibility

.....
66%

Align Business and IT

.....
64%

Increase delivery speed/
Time to market

.....
60%

Improve Team productivity

The benefits of resorting to agility frameworks are clear on the market as illustrated here. The relevancy of our adaptation of SAFe model to digital transformation programs is also undeniable to us.



**Source: « 15th Annual State Of Agile Report 2021 »*

Re-setup of an end-to-end digital PLM transformation initiative in the aviation industry

Key components of the project

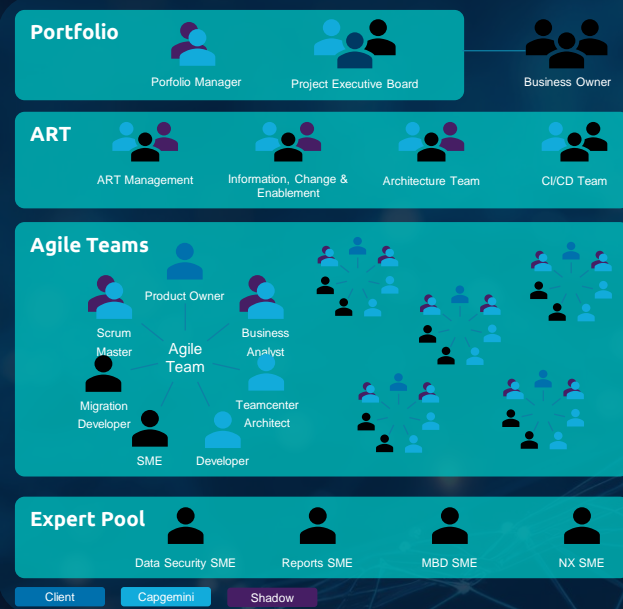
Cooperation with customers at all levels
Sharpening collaboration and agile working methods at all levels

Close cooperation between specialist department & IT
Coordination of program managers & lean portfolio to coordinate strategy and implementation

Consistent releases according to the MVP concept with continuous improvements

1. Strategic portfolio management
2. Continuous agile releases
3. Impact analysis through earned value management

Collaboration model

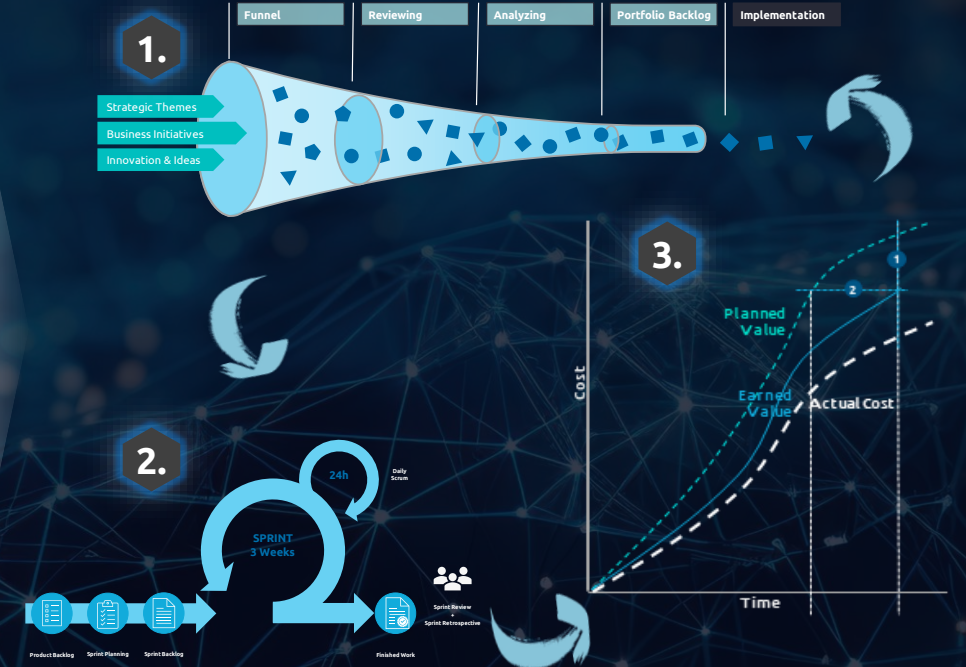


Project Outcomes

Introduction of an end-to-end PLM data backbone (along the value chain)

Optimization of existing processes

Working methods



Re-Setup of an E2E PLM Transformation



The Challenge

Our client worked over 2.5 years on a Digital Transformation initiative for R&D (PLM), Manufacturing and Operations but had to postpone Go-lives repeatedly which resulted in high sunk costs.



The Solution

Re-setup with focus on agile ways of working based on SAFe Framework as the basis for all future engine programs.



New Operating Model
according to SAFe



Portfolio Management
to control CxO objectives



Model-based definitions (MBDs)
for E2E digital continuity



CI/CD Pipeline
as continuous IT-Backbone



Earned Value Management
for transparent Reporting in agile way of working



Change Management, Training & Enablement



**Global leading
aerospace supplier**

**New Operating Model
Agile PLM, Manufacturing
& Service Transformation
Model-Based Value Chain**

Agile Business Process Transformation



The Challenge

The project faced difficulties in identifying key decision-driving use cases, capturing process pain points, key requirements and implementing automation to enhance transparency and efficiency in heavy machinery manufacturing.



The Objectives

By defining use cases, mapping business processes, leveraging automation, and utilizing advanced technologies like Siemens Teamcenter and PTC Creo, the team streamlined operations and improved product lifecycle management.



Reduction of lead-time
from idea to product delivery



Reduction
of development and industrialization effort



Minimized scrap and rework
in production



Reduction of
Roll out cycle times



Increased product maturity
at early stage



Better understanding of
the client's product line and business

Heavy Machinery Manufacturing

Business process transformation, documentation & training



Physical & Digital Convergence



Physical & Digital Convergence ensures continuous transparency & synchronization between real & virtual product and production



Key Challenges

Rising Product, Production complexity & amount of stakeholders

With the rising product & production complexity more and more stakeholders are involved to related lifecycle processes, challenged by a high speed of innovation and change.

Amount of data & IT systems

The number of data & IT systems had been rising extremely in the past years. Digital Convergence requires appropriate data management, synchronization and distribution.

Closed-Loop Manuf. & Data Analytics

Physical & Digital Convergence requires reducing the data from operation back to design. Closed-loop manufacturing incl. data analytics & AI are key challenges & enablers to manage the related complexity.



Target Picture

Digital & physical convergence means continuous data exchange and synchronization of "smart data" between the real and virtual world.

The digital twin "as designed" represents a product or production from early design phase until SOP with all related information from design & manufacturing planning. With specific quality features and e.g. related software versions, the digital twin "as built" represents a serialized instance after manufacturing. Ensuring highest availability and enabling closed-loop manufacturing as well as AI and analytics during operation the digital twin "as maintained" is continuously updated with data along the entire Lifecycle.

Success Stories

Aerospace industry

Capgemini helped an aerospace manufacturer to shape and establish their future way of working for digital design, manufacturing & services combining physical and virtual capabilities to create an fully digital twin

Railway provider

Capgemini and Deutsche Bahn AG developed a holistic strategy for the Digital Twin – evaluating different use cases targetting towards physical and digital convergence along the entire lifecycle from DB AG products.

Your benefits*



Lead-time reduction

up to **35%**



Increase of engineering efficiency

up to **15%**



Improved product and process quality

up to **20%**



Increase OEE & overall lifetime (costs)

up to **15%**

* Numbers based on Capgemini's project experience

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Digital Twins promise a multitude of benefits and studies prove their potential



Why do we talk about Digital Twins?



Enhanced Performance

Optimize operations, reduce downtime, and improve efficiency

Predictive capabilities

Anticipate and address maintenance needs before failures occur



Improved Decision-Making

Make data-driven decisions based on real-time insights

Cost Savings

Reduce costs associated with maintenance, energy consumption, and production inefficiencies



Innovation and Iteration

Test and simulate scenarios to drive innovation and improve products

-13%
Decrease in cost

+15%
Increase in operational efficiency

+16%
Improved sustainability

+15%
Customer engagement and satisfaction

+15%
Increase in sales

Benefits in numbers

Source: Capgemini Research Institute, Digital Twins survey, September–October 2021, average benefits realized from N=800 organizations with ongoing Digital Twin programs, benefits averages across various use cases.

Companies need to define a clear strategy as Digital Twins differentiate between industries and systems



Across different industries...



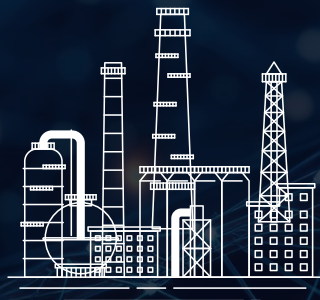
... and for different systems



PRODUCT



ASSET or FLEET



FACTORY



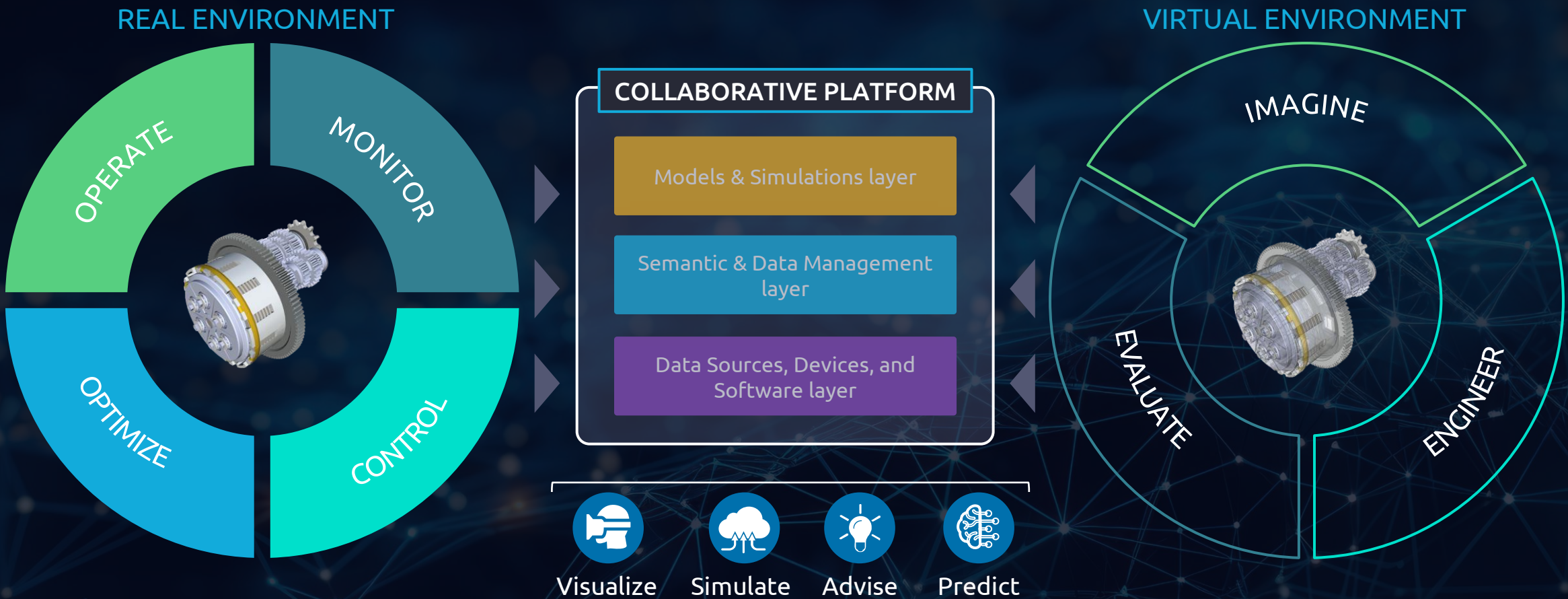
NETWORK or
SUPPLY CHAIN



BUSINESS PROCESS

**Digital Twins serve many purposes; there is no single digital twin.
Different stakeholders interact with digital twins from different perspectives and derive different types of value.**

A collaborative IT platform between the virtual and real environment enables use case applications



Digital Twin is not just a digital replica, but a collaborative platform leveraging Digital Continuity.

The industrial Metaverse has the potential to revolutionize the traditional way of Product design



Industry Pain Points



› **Missing visualization in early development phase**



› **Iterative nature of design processes**



› **Validation of concepts in early design phase**



› **Globally spread design teams**



› **Isolated software solutions in design workflows**

Industry Opportunities



› **High fidelity product twins available**



› **Root cause identification via traceability**



› **Simulate ideas in virtual environment**







› **Unified collaboration platform**



› **Streamlined data flow via central platform**

Industrial metaverse can Reduce the reliance on physical prototypes, benefitting Engineers and Designers



	Who is impacted	Future way of working	Perceived Benefits
Engineers	 Designers & R&D Engineers	Virtual testing and simulation in the Metaverse	Increased simulation accuracy, reduced costs and iterations
Engineers	 Manufacturing Engineers	Visualizing manufacturing concerns in the Metaverse	Improved communication and collaboration with designers
Workers	 Assembly Workers and Maintenance Workers	Access real time sensor data and remote support when needed	Only relevant work instructions and references will be accessible
Managers	 Design Managers, Project Managers, Senior Management	Collaboration between stakeholders in the Metaverse	Higher planning security and informed decision making

We support an aerospace OEM in their agile transformation across different solution components along the entire DDMS value chain

Agile PLM Transformation and enabling Model-Based Value Chain



The Challenge

- Digital Design, Manufacturing & Services (DDMS) is a multi-national, multi-functional and group-wide transformation
- DDMS@EuroDrone & DDMS@FCAS are demonstrators of the global DDMS initiative which face additional challenges due to industry specific conditions:
 - **Confidentiality & Regulations:** The defense industry is highly regulated and the nature of the product and its purposes adding an additional level of operational complexity in terms of data confidentiality.
 - **Multi-supplier structure:** The overall transformation is performed by multiple entities that all need to be aligned creating additional organizational complexity



The Objectives

- Facilitate SAFe methodology and interface with programme and PMT teams.
- Support maturation of 3DX engineering capabilities (e.g., MBSE, Mechanical, Electrical Design).
- Assist with method writing, training material, testing, and bug fixing for 3DX.
- Establish processes for Transversal Training Planning.
- Develop a centralized reporting platform for transparent project steering.
- Implement and facilitate 3DX Rollout process.
- Develop and deploy PLM (server) infrastructure



Full utilization of high-quality engineering practices to increase product quality and engineering lead time



Automated and data-based provision of project status enabling efficient decision making and early identification of key blocking points



Target-group oriented, customized change and learning communication



Transparent and user-friendly 3DX Rollout process that fosters stakeholder engagement and adoption

Aerospace Industry

Digital transformation for
digital design,
manufacturing and
services (DDMS)

Development of a Digital Twin target picture for a railway provider

Agile PLM Transformation and enabling Model-Based Value Chain



The Challenge

- The rail ecosystem is evolving in terms of digitalization, sustainability and customer experience
- Interoperability of assets as well as knowledge and data exchange creates concrete added value for ecosystem partners
- There is no Group-wide target image that forms the basis for internal and external collaboration



The Objectives

- Internal definition of a digital twin target image and roadmap, incl. management mobilization
- Piloting the bogie-as-a-service use case to further develop the collaboration model (incentive system, stakeholder interlinking)
- Definition of use case-based, technological maturity levels to enable a step-by-step target image



Strategic investigation



Recommendation of next actions

Railway provider

**Digital Twin
target picture**



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Capgemini Invent is an integral part of Capgemini, a global business and technology transformation partner, helping organizations to accelerate their dual transition to a digital and sustainable world, while creating tangible impact for enterprises and society. It is a responsible and diverse group of 340,000 team members in more than 50 countries. With its strong over 55-year heritage, Capgemini is trusted by its clients to unlock the value of technology to address the entire breadth of their business needs. It delivers end-to-end services and solutions leveraging strengths from strategy and design to engineering, all fueled by its market leading capabilities in AI, cloud and data, combined with its deep industry expertise and partner ecosystem. The Group reported 2023 global revenues of €22.5 billion.

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