

# ENVISION TOMORROW WITH NETAPP AT HANNOVER MESSE 2025



Sustainable manufacturing transformed with  
hybrid cloud solutions

## Hybrid cloud pioneering in modern manufacturing

In the dynamic world of manufacturing, having the right technology is not only key to staying competitive but also improving sustainability. The industry is increasingly turning to hybrid cloud solutions to revamp their infrastructure, a move that is pivotal in advancing the progress of smart manufacturing and driving more sustainable practices.

Hybrid cloud technology ensures a seamless flow of data from IoT devices, opening the door to advanced analytics, innovative technologies like digital twins, as well as new product and engineering approaches.

By adopting the hybrid cloud, companies can swiftly create, roll out, and refine digital twins. This ongoing enhancement improves production, supply chains, and machinery performance, and it also boosts sustainability by supporting energy-saving practices, cutting waste, and better resource use during production.

## Powering innovation and efficiency

# 40% VIEW HYBRID CLOUD

as a transformative technology for  
manufacturing, enhancing IT,  
operations, and innovation.



[Source: Grid Dynamics, 2023](#)



## KEY BENEFITS

Want to unlock the untapped potential of your operations? Looking to thrive in a competitive market? NetApp and their partners enable this and more by:

- Enhancing product quality and production efficiency
- Ensuring worker health and safety
- Emphasizing sustainability with a focus on minimizing production waste and effective distribution
- Implementing predictive equipment maintenance
- Reducing resolution time and minimizing production downtime through strategic collaboration
- Harnessing AI-powered Retrieval-Augmented Generation (RAG)
- Streamlining supply chain operations
- Establishing and following operational best practices

## Sustainable practices powered by digital twin technology

In the face of escalating environmental concerns, digital twin technology emerges as a beacon for sustainability in manufacturing. These virtual models offer comprehensive insights into the entire production process enabling end-to-end insights from product creation through to product recycling. This empowers manufacturers to conserve and reduce resources from inception to completion.

Moreover, digital twins are transforming product development by enabling rapid prototyping and iterative simulations, which not only improve product quality but also speeds up time to market. They promote a culture of innovation, encouraging collaborative efforts, and sharing insights across various teams.

Digital twins enable fulfillment of future regulatory requirements such as digital product passports. They also allow participation in industry-specific dataspaces such as Catena-X and Manufacturing-X.

The efficacy of digital twins is closely linked to the integrity of data and the adoption of open standards that allow a seamless exchange with suppliers, partners and customers. A harmonized approach to data integration is key to providing manufacturers with a holistic view of their operations and supporting informed decision-making.



# UP TO 20%

The amount digital twin technology can help reduce manufacturing cycle time, significantly reducing energy consumption and carbon emissions.

Source: Deloitte



### Data integration undermines digital twin mastery

The foundation of successful digital twin applications lies in effective data management, provisioning, and security. Drawing on our experience in data infrastructure, NetApp ensures the availability of high-quality, secure data, both on-premises and in the cloud, accelerating insights and innovation. Our partnership with Fraunhofer is key, bringing together our infrastructure intelligence with their strategic expertise to drive the implementation of these solutions.

### Forge ahead with NetApp and Fraunhofer IESE

NetApp and Fraunhofer IESE are at the forefront of Industry 4.0, bringing digital twin technology into the mainstream with Eclipse BaSyx. Our collaborative effort is advancing the future of manufacturing with a platform that's both versatile and user-friendly, merging AI, IoT, and cloud computing for holistic digitization.

Our partnership prioritizes secure and universal data access, offering solutions that are not only easy to implement but also ensure seamless communication across various tech ecosystems. By offering open standards, we're ensuring that digital twins can operate across different systems, and company borders, allowing participation in future data spaces without a hitch.

Together, we're offering customizable solutions that meet the varied needs of our customers and drive their digital evolution forward.



## USE CASES

- In-process monitoring and production control enable low-risk license production
- A digital supply chain and enhanced customer engagement to improve transparency, traceability, and efficiency throughout the supply chain
- Smarter products, sharing of product data, and complete documentation of the individual components
- Monitoring and reporting carbon emissions (CO2 reporting) along the product life cycle
- Data Monetization for better information on products and services
- The ability to personalize production (Lot size 1)

## THREE REASONS HYBRID CLOUD IS THE FUTURE FOR THE MANUFACTURING INDUSTRY

1

### **Innovation and speed unleashed**

The agility and scalability offered by hybrid cloud infrastructures mean manufacturers can swiftly respond to market demands and innovate faster. This dynamic environment not only enhances customer experiences and operational efficiencies but also shortens product time-to-market, providing a competitive edge that is essential for building and maintaining industry leadership.

2

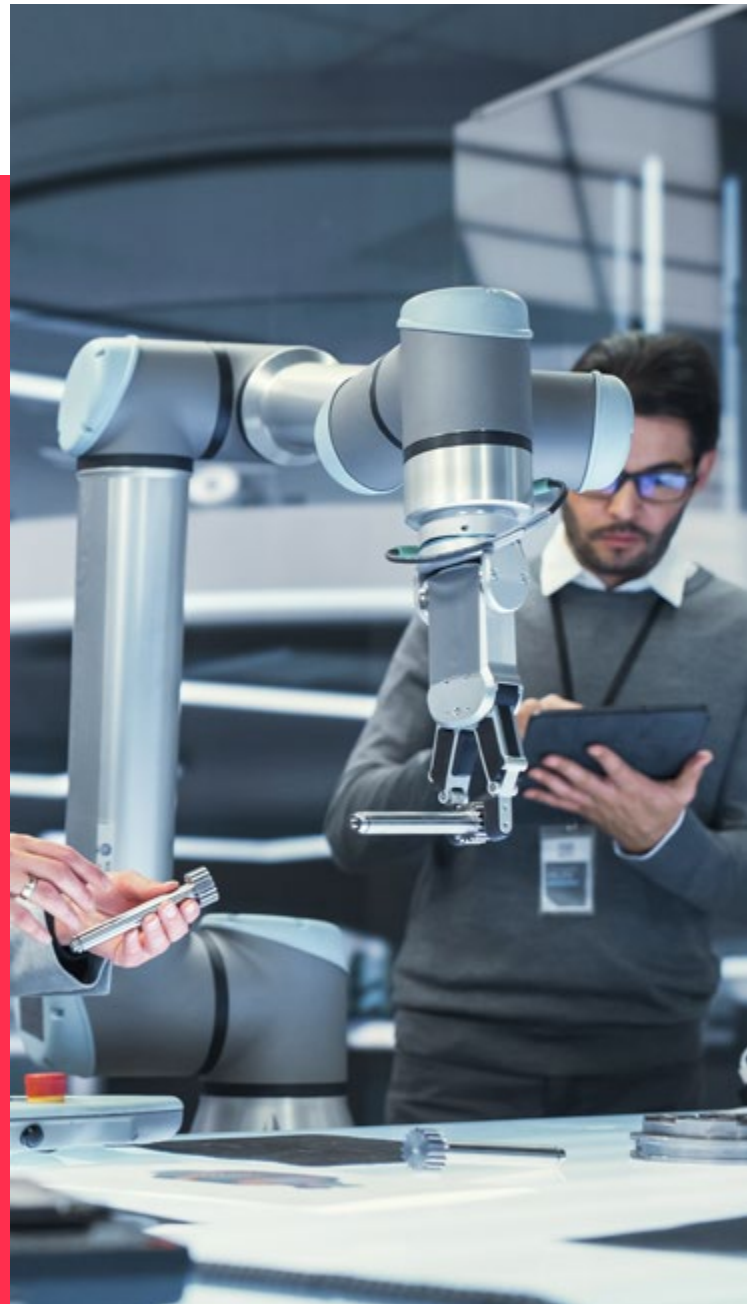
### **Collaboration without borders**

Hybrid cloud technologies open the door to collaboration. Teams can now access, modify, and share files effortlessly, regardless of their physical location. This newfound flexibility fosters a more cohesive and efficient R&D process, significantly accelerating the development cycle from concept to market.

3

### **Cost-effective resource management**

The economic model of hybrid cloud services allows for the scaling of resources as needed, ensuring that manufacturers only pay for what they use. This efficiency not only reduces upfront hardware investments but also reallocates financial resources towards innovation, enhancing the company's market position.



65%

of manufacturing executives consider cloud technology crucial for achieving their strategic priorities.

70%

of manufacturers are considering or planning to adopt cloud-based PLM.

2.1X

return on investment for cloud-based applications versus on-prem applications.

Source: 2024's Manufacturing Makeover: Cloud-Powered Product Lifecycle Management Takes Center Stage. Six Reasons Why.



## Broad partner ecosystem enables engineering excellence

NetApp has well-connected partnerships, including the three major hyperscalers. For example, in partnership with Amazon, NetApp is pioneering the integration of product and engineering workloads in AWS. This collaboration ensures seamless data sharing and high-performing storage that enable faster design iterations, accelerate development timelines, and optimize engineering productivity. Our comprehensive suite of solutions supports CAD/CAE simulations, eVDI, and PLM, ensuring your engineering challenges are met with speed, efficiency, and innovation.



### NetApp solutions for engineering excellence

Maximize efficiency and drive innovation with our intelligent data infrastructure solutions. Tailored for CAD, 3-D simulations, and eVDI, our solutions streamline resource usage, reducing costs while boosting productivity.



### Faster time-to-market for new designs

Leverage model-based design and parallel simulations to tackle complex challenges swiftly. Our approach accelerates the design process, ensuring your innovations reach the market faster.



### Fast, secure, scalable solutions for GenAI

Bring GenAI projects to life with intelligent data infrastructure. Our unified data storage solutions deliver unmatched speed and agility that improves data mobility, delivers faster insight, and simplifies operations to power your GenAI workloads.



### Seamless collaboration across teams

Empower your engineers with cloud-based data access and computing power. Our platform enables real-time collaboration of distributed teams of engineers across the globe without any latency issues.



### Cost optimization and performance enhancement

Achieve unparalleled efficiency gains in your infrastructure. Our solutions optimize costs and enhance performance, providing a robust foundation for hosting mission-critical applications and demanding product and engineering workloads.

## Discover sustainable innovation with NetApp at Hannover Messe

Come and meet us at Hannover Messe, the world's leading industrial trade fair, from March 31-April 4, 2025 where NetApp, alongside our partners Fraunhofer and AWS, will present high-performance solutions that enable a sustainable industry.

### Where to find us

Visit us at the Fraunhofer booth in Hall 2, Stand B24 for a demo on how to leverage digital twins. Or drop by the AWS booth in Hall 15, stand D76 to see our work with AWS on engineering solutions, complete with a demo and a 30-minute presentation.

# LEARN MORE ABOUT HOW NETAPP CAN TRANSFORM YOUR MANUFACTURING OPERATIONS

Hannover Messe

Digital Twin

AWS



Contact Us

### About NetApp

NetApp is the intelligent data infrastructure company, combining unified data storage, integrated data services, and CloudOps solutions to turn a world of disruption into opportunity for every customer. NetApp creates silo-free infrastructure, harnessing observability and AI to enable the industry's best data management. As the only enterprise-grade storage service natively embedded in the world's biggest clouds, our data storage delivers seamless flexibility. In addition, our data services create a data advantage through superior cyber resilience, governance, and application agility. Our CloudOps solutions provide continuous optimization of performance and efficiency through observability and AI. No matter the data type, workload, or environment, with NetApp you can transform your data infrastructure to realize your business possibilities. [www.netapp.com](http://www.netapp.com)



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