



Financial Services

# Transforming Financial Services with AI and Edge Computing

Get started >



# Contents

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Paving the Way for the  
Future of Finance

03

Market Dynamics  
in the Financial  
Services Industry

05

AI is Transforming  
how Financial Services  
Organizations Operate

06

Breaking Barriers:  
Tackling AI  
Adoption Challenges

07

The Dell AI Factory  
With NVIDIA Accelerates  
AI Innovation

08

Accelerate AI Innovation  
at the Edge

12

Why Dell NativeEdge  
and NVIDIA

14

Infrastructure is the  
foundation of the Dell  
AI Factory

15

Enabling Edge AI  
Innovation with Advanced  
Server Hardware

16

Take the Next Step

17



# Paving the Way for the Future of Finance

The financial services industry is undergoing a seismic shift driven by heightened customer expectations, the rapid pace of technology change, and a highly complicated regulatory landscape. Capabilities such as digital-only banking, open finance, and real-time services are no longer the exception – they have quickly become table stakes. Banks, insurers, and wealth management firms are racing to keep up with these changes, and the pressure to innovate is now higher than ever.





## At the heart of this transformation lies a data explosion

Every second, massive amounts of data are generated across trading floors, ATMs, mobile devices, and through online transactions. Yet, many institutions find challenges in processing and managing this data effectively. Legacy systems, fragmented infrastructures, and inefficient strategies have led to bottlenecks, preventing firms from capitalizing on the full potential of their data.



# Market Dynamics in the Financial Services Industry

Success in this new era requires financial services organizations to reimagine operations



## Digital Transformation

The shift towards digital banking and financial services is accelerating.

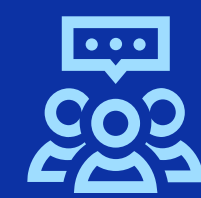
Consumers increasingly prefer online and mobile banking solutions, driving financial institutions to invest heavily in digital platforms and technologies.



## Regulatory Changes

The industry is subject to stringent regulations that are constantly evolving.

Institutions must stay compliant with these regulations, which can impact their operations and strategies.



## Customer Expectations

Customers now demand personalized, seamless, and efficient services.

Financial institutions are leveraging data analytics and AI to understand customer behavior and preferences, enabling them to offer tailored products and services.



## Technological Advancements

Innovations such as blockchain, artificial intelligence, and machine learning are transforming the industry. These technologies improve operational efficiency, enhance security, and enable the development of new financial products and services.



## Cyber Security

Rising cyber threats push financial services to prioritize security. AI-driven threat detection, blockchain, and MFA are transforming protection. Staying proactive secures sensitive data, builds trust, and empowers a safer digital future. Security isn't optional – it's vital.

# AI is Transforming how Financial Services Organizations Operate

AI brings speed and precision to areas where delays and inaccuracies can be costly. It helps financial institutions to build trust, while equipping them with the tools they need to lead in a rapidly advancing industry.

## Prevent Fraud

AI can flag suspicious patterns in milliseconds, preventing fraudulent transactions.

## Personalize user experiences

Machine learning models predict customer needs, enabling more tailored services.

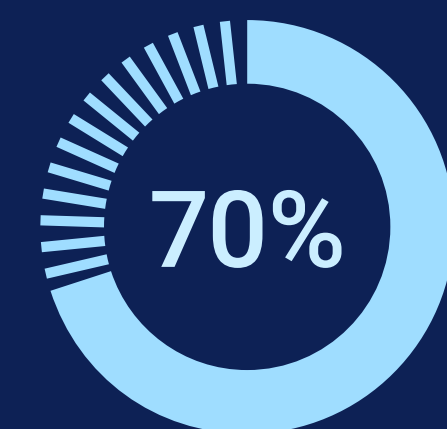
## Enhance customer service

Digital assistants and AI chatbots help to elevate customer interactions by delivering more accurate, personalized, and sophisticated responses.

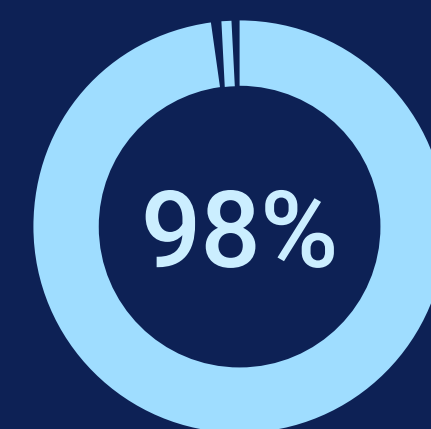
## Increase operational efficiency

Processes that once took days – like loan approvals – can now be completed in mere hours.

Incorporating emerging technologies and trends is key to staying ahead in this ever-evolving AI landscape. In a recent survey of 600 global financial services professionals:



thought upskilling IT teams to manage AI-driven infrastructures efficiently was important<sup>1</sup>



plan to increase AI infrastructure spending this year<sup>1</sup>

<sup>1</sup> NVIDIA Survey Report, "State of AI in Financial Services: 2025 Trends": <https://resources.nvidia.com/en-us-2025-fsi-survey/ai-financial-services>



# Breaking Barriers: Tackling AI Adoption Challenges

AI is more than just a tool, it's a catalyst – accelerating innovation, driving profitability, and creating a more agile financial services industry.

While AI offers clear benefits, many financial institutions face the following adoption or scalability challenges:



## Data silos

Legacy systems often lead to fragmented data, reducing the effectiveness of AI models.



## Complexity at the edge

Many organizations lack the infrastructure to effectively process distributed data in real-time.



## Security concerns

Handling sensitive customer data with AI introduces new vulnerabilities, especially during implementation.



## Cost and expertise

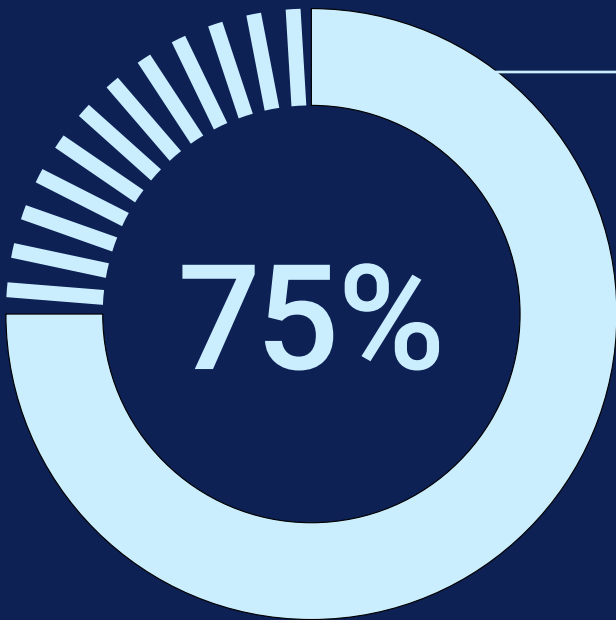
Migrating from traditional systems to AI-enabled architectures requires a significant investment of time and resources.

Addressing these challenges is as critical as adopting AI itself. Institutions must ensure their infrastructure is prepared to handle the demands of AI, edge computing, and real-time analytics.

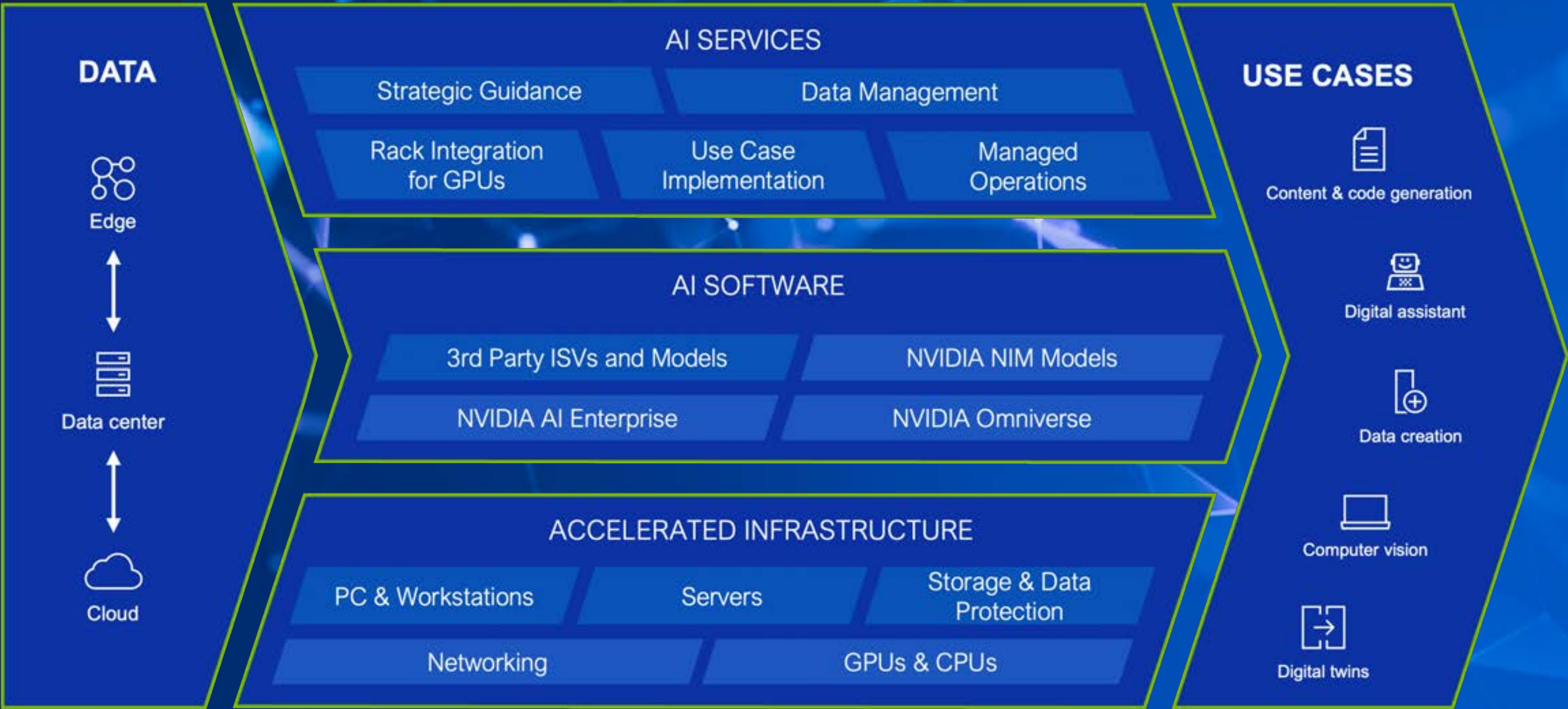


# The Dell AI Factory With NVIDIA Accelerates AI Innovation

The Dell AI Factory with NVIDIA provides the foundation for modern AI computing and is the industry’s first end-to-end AI enterprise solution.<sup>2</sup> It’s a framework that helps maximize the value of data, which is increasingly generated at the edge.



In fact, Gartner predicts that 75% of enterprise-managed data will be created and processed outside of the core data center or cloud.<sup>3</sup>



<sup>2</sup> Based on Dell analysis, July 2024.

<sup>3</sup> Gartner, “Innovation Insight for Edge AI,” Arun Chandrasekaran & Eric Goodness, April 10, 2024





The foundation of the Dell AI Factory with NVIDIA is an end-to-end AI optimized infrastructure portfolio.



This is complemented by an ecosystem of AI software applications and tools designed for AI solutions, such as NVIDIA AI Enterprise, NVIDIA NIM microservices and NVIDIA Omniverse.



Dell Services also provides the insight and skills to maximize the value of your AI use cases – from strategy and planning to implementation and scaling.

Recent survey findings reveal that AI factories are pivotal in shaping the future of financial services. They enable faster product development and shorten time-to-market cycles, providing institutions with a competitive edge.

**60%** of executive leadership acknowledges the value of AI in driving business success.<sup>4</sup>

These advancements are transforming how financial organizations innovate and adapt to a constantly evolving digital landscape.

<sup>4</sup> NVIDIA Survey Report, "State of AI in Financial Services: 2025 Trends": <https://resources.nvidia.com/en-us-2025-fsi-survey/ai-financial-services>



The Dell AI Factory with NVIDIA enables the delivery of desired AI outcomes.

## Improve Customer Experiences

Generative AI-powered virtual assistants can improve customer experience and drive operational efficiency by handling routine inquiries, helping customers with account-related tasks, or escalating complex issues to human agents.

This approach enhances customer satisfaction by providing swift and accurate assistance, while enabling human agents to dedicate their time to more complex, high-value tasks that require empathy and critical thinking.

## Detect and Prevent Fraud

Rapidly evolving fraud schemes are increasing pressure on financial institutions by making it difficult to identify and stop malicious activities in real-time. In 2024, **\$485.6 billion** in losses were recorded globally due to fraud scams and bank fraud schemes.<sup>5</sup>

AI-enabled applications leveraging deep learning techniques such as graph neural networks (GNNs) can reduce false positives in transaction fraud detection, enhance identity verification accuracy for know-your-customer (KYC) requirements, and make anti-money laundering (AML) efforts more effective and thus improve both the customer experience and company's financial health.

## Reduce Operational Bottlenecks

By leveraging AI-driven insights, teams can streamline processes, enhance collaboration across departments, and eliminate repetitive, time-consuming tasks. This holistic approach allows organizations to focus on delivering secure, scalable, and compliant solutions that meet strict regulatory standards.

With improved workflows and increased efficiency, financial institutions can innovate faster, ensure operational resilience, and provide exceptional experiences for customers, all while staying ahead in a rapidly evolving industry.

<sup>5</sup> <https://verafin.com/nasdaq-verafin-global-financial-crime-report/>



## Build Trust Through Personalization

Personalization builds trust by valuing customers as individuals. Tailored investment recommendations and reports, customized financial education, and proactive alerts for bills or unusual activity addresses unique needs while enhancing convenience and security. These thoughtful touches boost satisfaction, strengthen loyalty, and create lasting relationships.

## Simulate Financial Precision

Digital Twins enable the simulation of financial systems and vulnerabilities, stress-test portfolios, and optimize financial processes with virtual models that mirror their real-world counterparts. This empowers institutions to make data-driven decisions, enhance operational efficiency, and proactively manage risks in an ever-changing market.

From fraud management to customer engagement, the Dell AI Factory with NVIDIA ensures seamless implementation of AI models tailored to meet the demands of the financial services industry.





# Accelerate AI Innovation at the Edge

Whether it's self-service transactions at ATMs, transaction alerts on mobile apps, or data streaming from global markets, the edge is where modern financial decisions are born. With edge computing, this data doesn't need to be transferred to a centralized location for processing – AI inferencing at the edge enables data to be analyzed and acted upon where it originates. This results in reduced latency, faster insights, and improved security.

**Financial services**  
and manufacturing  
are the two most  
mature and  
developed markets  
for edge IT<sup>6</sup>

**87%**  
of the Fortune 100  
use Dell Technologies  
edge solutions<sup>7</sup>

Dell Technologies is  
the **#1** global leader  
in edge storage and  
edge servers<sup>8</sup>

<sup>6</sup> IDC Market Note, "The impact of AI on edge investment plans for 2025," January 2025



<sup>7</sup> Dell Technologies internal analysis of US Fortune 100, February 2025

<sup>8</sup> IDC Worldwide Quarterly Enterprise Infrastructure Tracker: Buyer and Cloud Deployment, Q3 2024, January 2025. Based on revenue. Edge storage and edge servers refer to the heavy edge category, which IDC defines as the physical equipment that serves as the foundational infrastructure for edge.





Dell NativeEdge brings the power of Dell AI Factory with NVIDIA to the edge by enabling financial institutions to securely scale their infrastructure and orchestrate AI applications across any location. Support for virtualized and containerized environments is seamless, while NativeEdge Blueprints automate the deployment of frameworks and applications for faster, more efficient AI innovations.

-  **Reduce truck roll and time-on-site costs** with NativeEdge zero-touch deployment and automated application orchestration.
-  **Centralize management** of diverse devices and edge AI applications, and **free up time** with automated operations.
-  **Stay ahead of competition** by rapidly and easily deploying your choice of new AI use cases powered by Dell and NVIDIA.

Benefits of Dell NativeEdge

The world's most **adaptable and open** edge operations ecosystem<sup>9</sup>

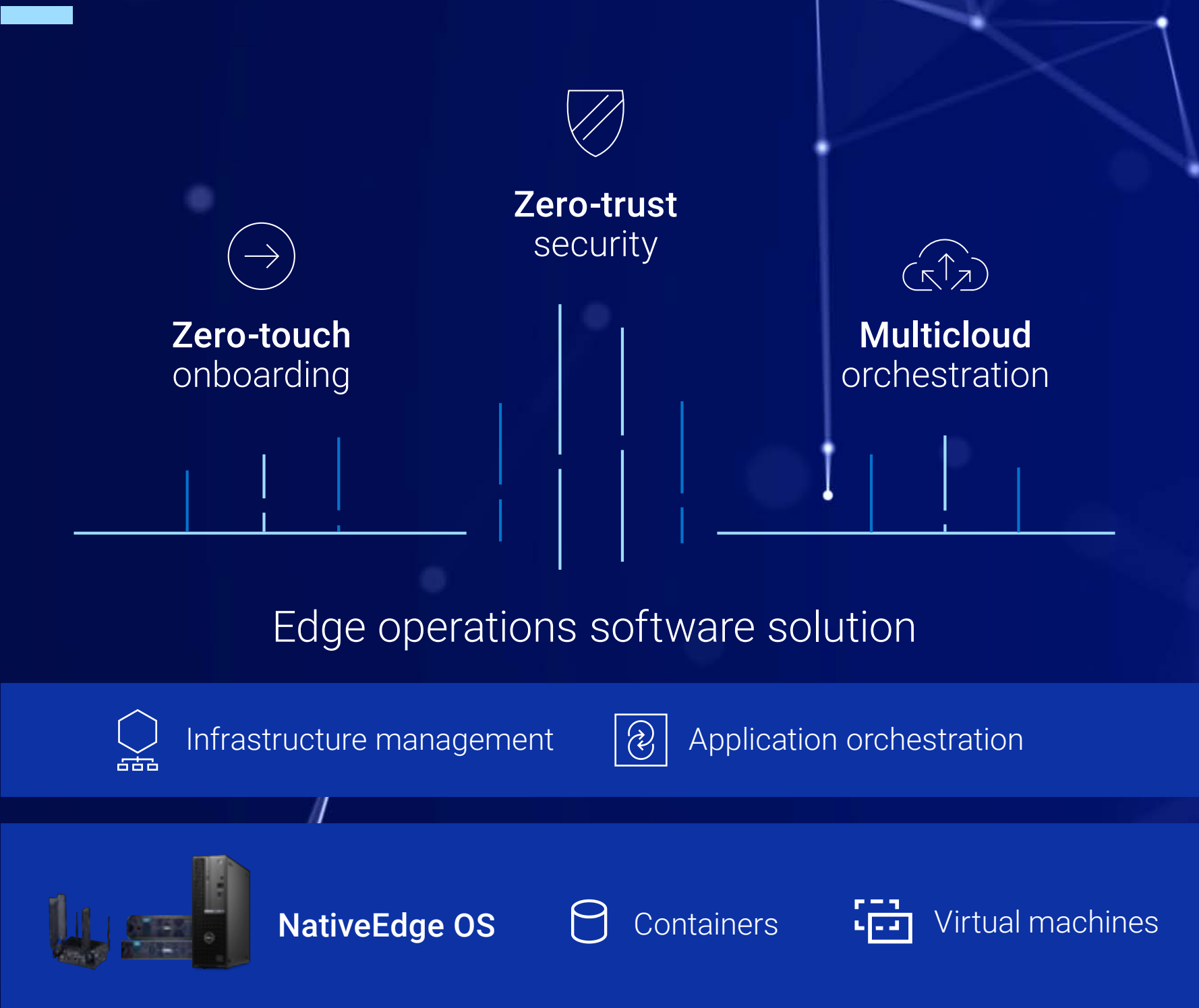
Up to **68% time savings** by automating edge application orchestration<sup>10</sup>

**Less than 1 minute** to deploy infrastructure and applications<sup>10</sup>

<sup>9</sup>Based on Dell Technologies internal analysis, February 2025  
<sup>10</sup>Enterprise Strategy Group by TechTarget Technical Validation commissioned by Dell Technologies, "Dell NativeEdge - Edge Operations Software Platform," February 2025.



Dell NativeEdge:  
Accelerate AI innovation at the edge





# Why Dell NativeEdge and NVIDIA

Dell NativeEdge is the first edge orchestration solution that automates the delivery of NVIDIA AI Enterprise software, bringing NVIDIA frameworks for video analytics, speech and translation, and optimized inferencing to your edge devices.

This capability is powered by NativeEdge Blueprints, which act like a recipe, detailing the ingredients and steps for automated deployment. This includes application settings, infrastructure resources, network configurations, and custom workflows.

This tight integration between Dell NativeEdge and NVIDIA delivers:



Faster, easier deployment of AI models and inferencing solutions to distributed edge locations.



Zero-touch deployment of edge AI apps across infrastructure based on zero-trust security principles to meet the rigorous standards of financial institutions.



Ease of Edge AI solution lifecycle management with scalability to support any workload – from ATM transactions to financial markets.





# Infrastructure is the Foundation of the Dell AI Factory with NVIDIA

The Dell AI Factory with NVIDIA brings together Dell AI Infrastructure for powerful computing and networking, enhanced by NVIDIA acceleration, NVIDIA AI Enterprise software, and Dell Professional Services, to form a seamless, all-in-one solution for businesses ready to unlock the power of AI. Our edge-optimized platforms for AI provide a wide range of capabilities, such as:

- Ruggedized platforms
- GPU-enabled systems
- Small form-factor products
- Long life systems
- Industry certifications
- OEM-Ready solutions (de-branded, re-brand ready)
- Customization capabilities



## PowerEdge Servers

Fast-track your Edge AI goals using PowerEdge servers with superior acceleration, diverse GPU options and rugged, small footprint and industry certified platforms.



## Dell Laptops and Workstations

Allow AI processing locally on the device. Our broad portfolio of AI workstations and AI PCs provide the necessary hardware and software infrastructure to enable AI inferencing at the edge, empowering organizations to leverage the power of AI in real-time, even in resource-constrained environments.



## Edge Gateways

Compact in design, Edge Gateways enable you to collect, consolidate, and extract value from vast amounts of edge-generated data.



## Storage and Data Protection

Unlock the value of edge data and secure AI workloads against data loss and cyber-threats with modern, simple, and resilient storage and data protection solutions.



## Hyperconverged Infrastructure (HCI)

Benefit from the breadth of the Dell Technologies HCI portfolio that allows for choice based on your desired outcomes.



## Networking

Enable simplified design, management and monitoring of powerful Ethernet fabrics to handle modern workloads like Generative AI and Edge AI inferencing.



## Data Management

Empower your customers to access data across edge, core and multicloud to power analytics workloads for faster model tuning and business insights.



# Enabling Edge AI Innovation with Advanced Server Hardware

As financial institutions navigate an increasingly digital-first world, the demand for secure, high-performance infrastructure has become a top priority. Dell PowerEdge XR servers, powered by NVIDIA GPUs, are engineered to meet these demands head-on, delivering powerful, scalable solutions for AI applications at the edge. With real-time data analysis capabilities, these servers ensure low latency and high performance beyond the traditional data center, even in space-constrained or challenging environments.

## Built to withstand the toughest environments:

- Extreme heat and cold
- Dust
- Shock and vibration of factory floors
- Construction sites
- Mobile command centers
- Other extreme environments





# Take the Next Step

The **Dell Accelerator Workshop** is a great first step for financial institutions looking to begin their AI and edge journey. This half-day program focuses on the activities required to achieve your desired end state, concluding with next steps to further advance your business and IT strategies.

Your team will work with Dell experts to develop a point of view on important GenAI questions and create a vision for your future state. Utilizing our “AS-IS” / “TO-BE” methodology, we’ll conduct interviews and review your existing environment to identify challenges, opportunities and drive consensus for GenAI, synthesized in an Executive Overview.

Interested in validating the capabilities of NativeEdge in your edge environment? Contact your Dell sales representative to discuss the possibility of deploying an onsite proof-of-concept experience for Dell NativeEdge.

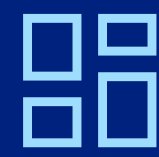
Accelerate and simplify your AI journey with Professional Services



Develop a  
Generative AI  
strategy and  
roadmap tailored to  
your organization



Prepare your data  
for Generative  
AI integration,  
inferencing,  
and model  
customization



Build your  
Generative AI  
operations with  
training and  
infrastructure  
management  
expertise

Assess  
current  
state

Identify  
challenges  
in the  
environment

Define  
goals and  
objectives

Establish  
vision for  
ideal future  
state

Develop an  
executive  
roadmap

Define  
expected  
results and  
benefits

Harness the power of data generated at the edge to meet the evolving and rigorous requirements of the Financial Services Industry with the Dell AI Factory with NVIDIA and Dell NativeEdge.



# Dell AI Factory

WITH NVIDIA



[Learn more about the Dell AI Factory with NVIDIA >](#)

[Learn more about Dell NativeEdge >](#)

