

FROM STARTUP TO GLOBAL PLAYER

How the Right Infrastructure
Unleashes FinTech Growth



INTRODUCTION

Developing the Fintech Infrastructure of the Future

The global fintech market is on an explosive trajectory, expected to grow from \$226.71 billion in 2024 to \$1.0713 trillion by 2034. With rapid growth comes critical challenges in scaling operations, managing data centre infrastructure, and maintaining regulatory compliance. But many fintech startups lack the in-house expertise needed to make informed decisions about their IT infrastructure, leading to inefficiencies and risks.

Imagine a fintech startup in its early stages. First, it operates smoothly with a small team and a cloud-based infrastructure. But as the user base grows and transaction volumes skyrocket, performance issues emerge. Then, customers experience delays, compliance requirements become overwhelming, and security risks increase. Without a solid infrastructure strategy, scaling quickly becomes a nightmare, instead of an opportunity.

The backbone of fintech operations is made up of data centres, colocation facilities, networking, and security. Having the right infrastructure will enable growth. But to scale successfully, fintech firms must consider five key infrastructure components.

This viewpoint explores the five foundational infrastructure considerations that will determine whether infrastructure will be an enabler in Fintech , or an inhibitor.

1. THE COLOCATION CHOICE

Building and maintaining a proprietary data centre is expensive and resource intensive. That's why most fintech companies, from startups to billion-dollar giants, rely on colocation facilities. These ready-made solutions offer a flexible, scalable alternative with high availability, security, and regulatory compliance built in, without the burden of managing an entire data centre.

For a fintech expanding into multiple regions, colocation can be a game-changer. Instead of sinking capital into costly infrastructure, fintechs can leverage colocation facilities in key financial hubs. This enables lower latency, faster transaction speeds, and seamless global expansion, all while staying compliant with regional regulation.

Even the biggest fintech players today are relying on colocation. Why? Because scaling data operations under strict privacy regulations requires agility. While larger firms may eventually build their own data centres, for many, colocation remains the most practical choice. As regulations tighten and data demands skyrocket, fintechs need infrastructure that grows with them. Colocation delivers that scalability without locking fintechs into rigid, expensive setups.

2. AI AND EDGE COMPUTING: POWERING DATA-DRIVEN FINANCE

AI is reshaping fintech with real-time fraud detection, automated trading, and risk assessment. But these applications generate massive volumes of data that must be processed instantly. As AI adoption grows, fintechs will increasingly rely on machine learning models for personalised financial services, driving demand for efficient infrastructure.

But demand for data centres is soaring, while operators continue to fall behind. To prevent a shortfall, the industry must double the capacity added since 2000 – in less than a quarter of the time. Edge data centres provide a solution by decentralising compute resources, reducing latency, and enhancing security. This enables fintechs to integrate AI-driven analytics, offering hyper-personalised solutions while reducing the burden on cloud infrastructure.



For edge data centres to support AI-driven fintech, power, cooling, and cabling must function seamlessly:

01. CABLING

Cabling: High-power AI workloads generate significant heat, requiring meticulous cable management to prevent congestion, connectivity issues, and deployment delays.

02. COOLING

AI hardware increases power consumption and heat output. While air cooling is cost-effective, liquid cooling is more efficient for high-density workloads.

03. POWER

Edge facilities must balance stable power delivery with sustainability. Proximity to urban areas strains local grids, making energy integration, advanced power management, and tailored UPS solutions essential.

By addressing cabling, cooling, and power together, fintech organisations can build resilient, efficient edge data centres to meet the growing demands of AI.

3. REGULATORY COMPLIANCE AND SECURITY: SAFEGUARDING FINANCIAL DATA

Fintechs operate in a heavily regulated industry, governed by strict frameworks like GDPR, PCI-DSS, and financial data protection laws. A secure, well-structured IT infrastructure is critical to ensuring compliance and protecting sensitive financial data. But navigating these complex regulations is no easy task.

Robust security measures – such as encryption, controlled access, and real-time monitoring –are required to prevent breaches and maintain data integrity. AI-driven compliance tools can help automate risk detection, but alone they're not enough to ensure fintechs adhere to industry compliance standards for secure, auditable data handling. This is why fintech companies need partners who understand these regulatory landscapes inside and out.

Meeting GDPR and PCI-DSS requirements can be daunting for a fintech expanding into Europe, but by partnering with an expert in financial services, well-versed in regional regulations, any fintech can avoid falling into any regulatory pitfalls.

4. NETWORKING AND CABLING: ENSURING LOW-LATENCY PERFORMANCE

Ultra-low latency and high-speed connectivity are non-negotiable for fintech applications such as real-time payments, algorithmic trading, and AI-driven fraud detection. When financial markets move in milliseconds, a fraction of a second can mean the difference between profit and loss.

A robust network infrastructure ensures that financial data is processed and transmitted instantly. High-speed networks provide the most current market information, allowing for split-second decisions. However, not all networks are built for the demands of fintech. They need high-speed, low-latency, and highly secure networking solutions tailored to their operational needs.

Structured cabling and high-speed fibre-optic networks are critical investments for fintechs looking to scale. Poor network infrastructure creates bottlenecks, increasing latency and reducing operational efficiency. Future-proofing networking and cabling ensures fintechs can expand without costly disruptions.

Regardless of whether a fintech firm operates its own data centre or partners with a colocation provider, robust cabling is essential. High-quality cabling helps to reduce downtime, prevent performance issues, and ensure seamless connectivity – key factors for fintechs looking to maintain a competitive edge.

5. OFFICE EXPANSION AND IT GROWTH: SUPPORTING FINTECH SCALE-UP

Rapid growth is a key indicator of success in the fintech world, with some companies doubling their workforce each year. But scaling effectively requires a solid IT strategy. Without the right infrastructure, fintechs risk inefficiencies, security issues, and expensive downtime. A seamless office IT setup is crucial to maintain performance and security, especially when operating across multiple locations.

Working with a single IT provider simplifies expansion by offering comprehensive solutions for colocation, networking, cloud integration, and on-premise IT. Smart office setups, equipped with high-speed networking, structured cabling, and remote management, help fintechs scale smoothly and without friction.

To keep up with long-term growth, fintechs need partners who provide quality installations that meet both current demands and future needs. The right provider ensures continuous support, enabling firms to scale efficiently while maintaining top-notch security and performance.

SUMMARY

Future-Proofing Fintech Operations

Scalable, AI-ready infrastructure is essential for fintech companies to remain competitive in a fast-evolving market. A holistic approach to IT infrastructure ensures seamless growth, enhanced security, and regulatory compliance.

Partnering with a global infrastructure partner that specialises in colocation, networking, AI-driven infrastructure, and regulatory compliance allows fintechs to scale efficiently without security risks or operational disruption. A single point of contact for IT infrastructure simplifies complexity, enabling fintechs to focus on their core mission – innovation and growth.

For any fintech expanding rapidly, the ability to adapt infrastructure to meet evolving demands will define long-term success. Investing in the right infrastructure today ensures the agility and resilience needed for tomorrow's financial landscape.



ABOUT ONNEC

A global infrastructure partner like Onnec helps fintechs modernise, automate, and maintain regulatory compliance without operational risks.

Onnec is a leading Infrastructure Solutions and Services company for tech and enterprise, specialising in structured cabling, managed services, and network solutions. Our team of experienced designers, project managers, and engineers, supported by world-class vendor partnerships, delivers top-tier services and solutions.

Onnec's expertise spans all environments and can support customers with:

- Structured cabling design and installation
- Installation of cabling, ODFs, PDUs and containment solutions
- Network hardware installations, changes and support
- Connectivity and equipment upgrades and changes
- Smart Hands support services



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