

# The Technology Tsunami



## Preparing Financial Institutions for What's Next

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# Emerging/Disruptive Banking Technologies



- Artificial intelligence & Quantum computing
- Financial Infrastructure and Digital Trust
- Real Time Payments
- Open banking
- BaaS/Embedded Finance
- Payments Ecosystem Modernization/Payment Hubs
- Other Foundational technologies: Augmented reality (AR), Virtual reality (VR), Internet of Things (IoT), Artificial intelligence of Things (AIoT), and Edge computing

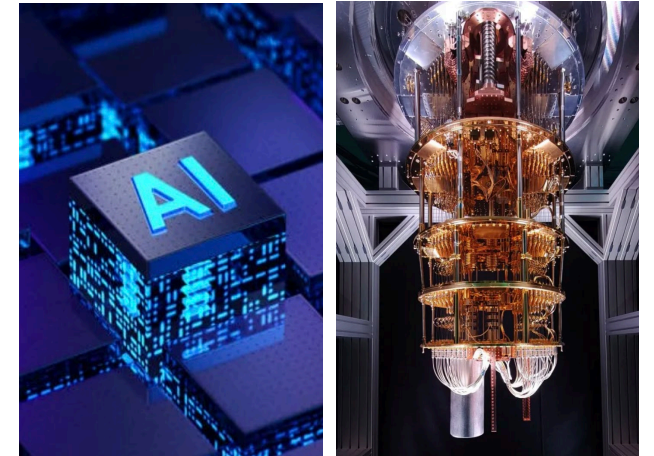




# Artificial Intelligence & Quantum Computing



- **Artificial Intelligence** – is transforming financial services via automating tasks, personalizing financial advice, and developing new financial products and services.
- **Quantum computing** – is fast advancing and holds promise in developing new algorithms for financial risk analysis and fraud detection.



- **Blockchain** - is a distributed database that allows for secure, transparent, and tamper-proof record-keeping. Blockchains are being used to create faster, cheaper, and more secure payment systems.
- **Cryptography** - protects information by transforming it into an unreadable form and typically utilizes cryptographic keys.
- **Tokenization** - is the process of converting data into a unique digital token that can be used to represent the original data; usually on a shared ledger.
- **Digital IDs** - are electronic representations of a person's identity that can be used to authenticate themselves.



# Real-time Payments



78% of U.S. millennials and Gen Z consumers reported using instant payment methods like Zelle or Venmo for at least half of their transactions, while 62% of businesses globally said real-time payments reduced operational costs by up to 30%.

- **FedNow** – domestic instant payment service developed by the Federal Reserve
- **RTP** – domestic instant payment service developed by The Clearing House
- **Stablecoins** - digital representations of the US dollar (or another currency) used for instant global settlement
- **Tokenized deposits** - are digital representations of deposits



- **Shifts data ownership to the customer** - enabling permissioned access via secure APIs.
- **Promotes competition** - allowing fintechs and third parties to build services on top of bank infrastructure.
- **Drives innovation** - in payments, lending, budgeting, credit scoring, and embedded finance.
- **Catalyst for Banking-as-a-Service (BaaS)** and the rise of “super apps” and niche digital providers.
- **Raises key risks around privacy and liability**



# BaaS/Embedded Finance



- **BaaS enables non-banks to offer financial products** via licensed banking infrastructure delivered through APIs.
- **Embedded finance integrates banking into non-financial platforms** - meeting users within apps, marketplaces, and business software.
- **Creates new revenue channels for financial institutions** - monetizing infrastructure instead of relationships.
- **Accelerates disintermediation risk** - brand loyalty shifts to the front-end platform (e.g., Shopify, Uber, Apple), not the bank.
- **Blurs the lines between fintech, tech, and regulated banking**, raising regulatory complexity and supervisory gaps.
- **Key battleground for small and mid-sized institutions:** partner, platform, or get left behind.





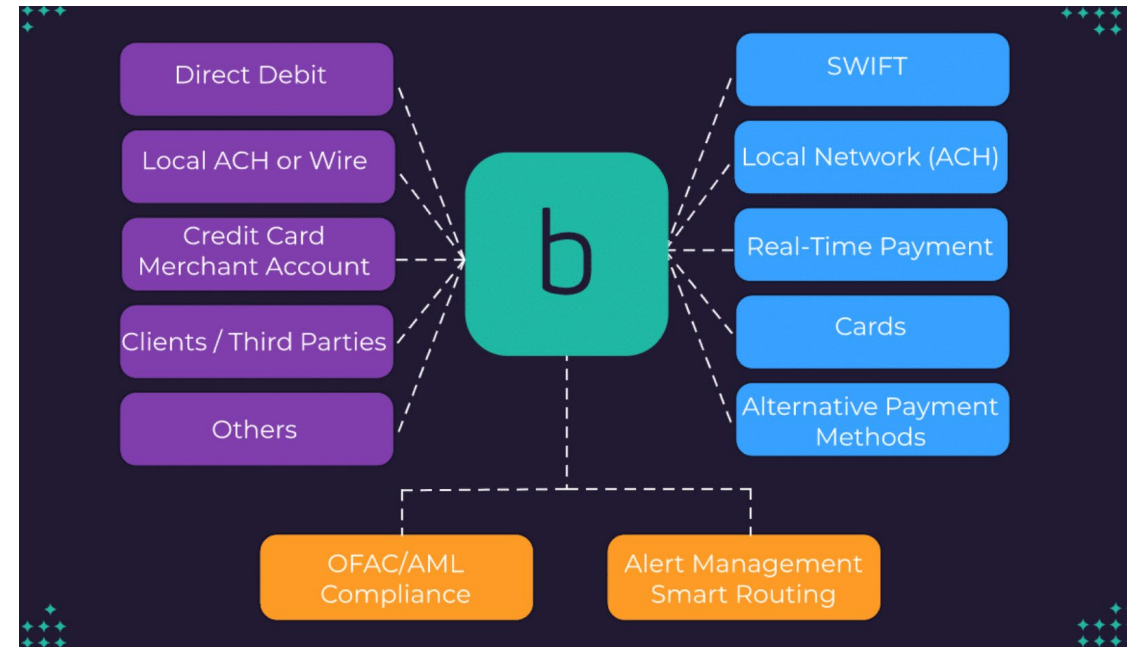
# Payments Ecosystem Modernization / Payment Hub



Payment Hubs are centralized platforms that consolidate payments from a variety of sources like ACH, RTP, FedNow, RTGS, and SWIFT into a single ecosystem for the purpose of orchestrating payment processing, control, analytics, and reporting.

## Benefits:

- **Reduced costs:** Consolidating payments into a single stream, help reduce processing costs and improve efficiency.
- **Increased visibility and control:** Provides a single view of all payments, which can help identify and mitigate fraud, improve financial planning, and make better business decisions.
- **Improved compliance:** Helps comply with Know Your Customer (KYC) and Anti-Money Laundering (AML) requirements.





# Other Foundational Technologies



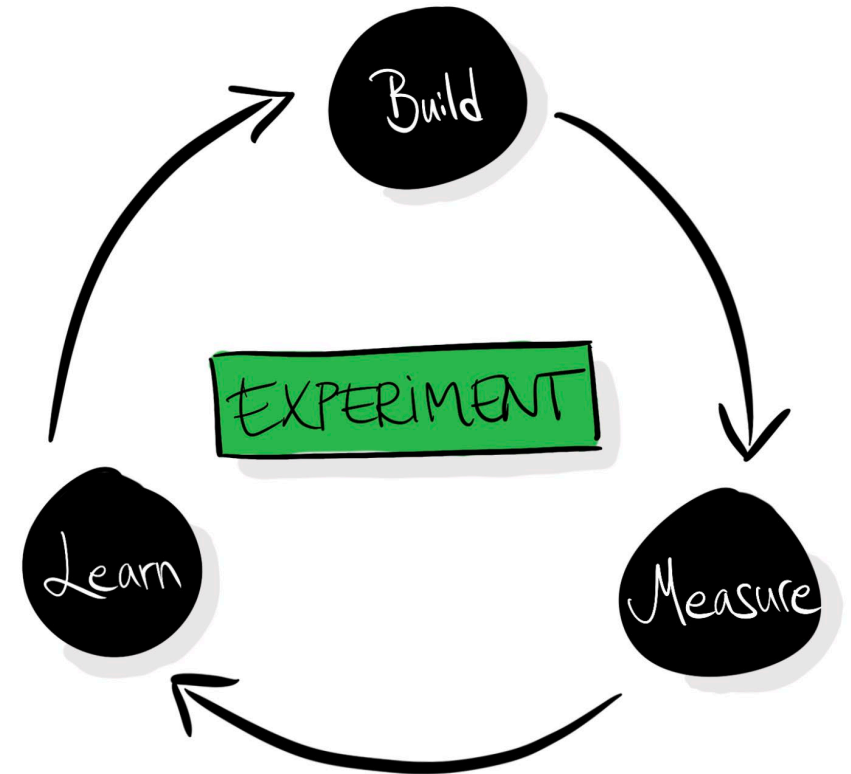
- **Augmented/Virtual Reality (AR/VR)** could be used to create new customer experiences, such as virtual bank branches or AR-powered financial planning tools.
- **Internet of Things (IoT)** could be used to collect data from financial transactions and devices to develop new insights into customer behavior and market trends.
- **Artificial Intelligence of Things (AIoT)** could combine AI and IoT to create new intelligent devices and services that can automate financial tasks and make it easier for people to manage their finances. An AIoT-enabled financial assistant could automatically pay bills, track spending, and provide financial advice.
- **Edge computing** is a distributed computing architecture that brings computation and data storage closer to the sources of data. This is expected to improve latency and save bandwidth which could enable faster and more secure financial transactions.



# How to proceed?



- **Doing nothing is Not a strategy.**
- Educate yourselves on these technologies - identify passionate SMEs in your organization to keep-up with the technologies and identify use cases and risks.
- Experiment with these technologies. Observe your competitors already leveraging these advancements. Is the experience seamless, enjoyable, and providing the expected result?
- Find a trusted advisor like Strategic Resource Management to help educate your team, build a strategy, identify and vet potential partners, help with integration efforts, and develop go-to-market approaches.
- Measure, measure, measure.



# Questions & Discussion

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