QUANTUM SIX

Pragmatic AI

Three core AI activities
that will reshape banking
automation

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Contents

Purpose of This Paper

This paper identifies key AI use cases in banking on a global scale. It provides:

- Guidance on essential operational platforms and their embedded AI architecture

- Real-world examples of how AI-driven technology delivers tangible value to clients

- A "Pragmatic AI Roadmap" outlining how organisations can adopt AI based on their operational and technological maturity

With a strategic and practical approach, banks can harness AI to drive innovation while maintaining compliance and operational stability.

AI in Banking: **An Evolution, Not a Revolution**

AI is not a revolution rather, it represents the next step in the evolution of analytics, making it ultimately self-learning. While social media often fuels AI hype, prioritising theory over practicality, real-world success in banking hinges on pragmatism. Whether data is leveraged by a human or an AI agent, the same fundamental principles of efficiency and effectiveness must remain at the forefront.

Three Core AI Activities Shaping Banking Automation

1. **Small Models for On-Premise and Sovereign AI**
   Compact AI models allow financial institutions to maintain data sovereignty while leveraging AI-powered automation.

2. **Enhanced Reasoning for Complex Use Cases**
   Advanced AI models enable deeper insights and more sophisticated decision-making, unlocking new possibilities for banking services.

3. **From Assistants to Agents to Multi-Agent Systems**
   AI-driven assistants are evolving into fully autonomous multi-agent systems, enhancing operational efficiency.

AI's Role in Banking's Regulated Environment

Banking remains one of the most heavily regulated industries. To capitalise on AI-driven transformation, banks must focus on optimising:

Operating models	Governance & Maturity	Data Capabilities
Streamlining processes for greater efficiency	Ensuring compliance with evolving regulatory landscapes	Enhancing data management while balancing capital constraints and geopolitical risks

By addressing these areas, financial institutions can position themselves to fully leverage the opportunities presented by AI's industrial evolution.

3 Core Areas that Limit AI Projects Delivering on their Business Case

Key Challenges	Description	Consideration
Data	Inaccurate, siloed and unstructured data	Data strategy, Canonical data model, Mastering of data, Data layer
Governance, Auditability & Compliance	Defining financial ROI business cases, milestones for delivery against value achieved, dedicated AI funding	Buy in from stakeholders, Buy in for use cases, Analyse how to improve business case and adoption, defining value, milestones and KPIs together to move through pilots in a structured way
Operating Model	Lack of centralised AI-focused team	Move from pure advisory to actual empowerment of a team, ownership of use-case prioritisation, platform architecture, deployment

The Quantum Six Top 10 **AI Use Cases** in Banking

The financial services industry is planning to incorporate advancements in both traditional and generative AI technologies at scale and speed. The below table presents Quantum Six's view of the 10 most impactful AI use cases for banks, along with the applicability to different tiers of bank size (e.g. Tier 1), and the associated business value and feasibility.

Table 1: Top 10 AI use cases in financial services

#	AI Use cases	Description	Applicable to Tier (Bank)			Business Value	Feasibility
			1	2–3	4–5		
1	**AI as a Digital Agent (i.e. Chatbots)**	AI-powered digital agents enhance customer service by reducing wait times, personalising interactions, improving retention, and lowering support costs.	✓	~	✕	5	4
2	**AI for Marketing and Communications**	Gen AI models predict customer needs, personalise marketing, and enhance engagement, boosting satisfaction and retention.	✓	~	✕	5	2
3	**AI for Risk Management and Fraud Detection**	AI analyses customer data, usage patterns, and transaction history to detect behavioural irregularities and uncover potential risks.	✓	~	✕	5	4
4	**AI for Compliance**	AI strengthens compliance by automating document preparation, aggregation, and validation, ensuring regulatory adherence while reducing manual workload.	✓	~	✕	4	2
5	**AI for Data Management**	AI enhances data retrieval, organisation, analysis, and data mesh, enabling banks to manage data more accurately and efficiently while supporting decision-making.	✓	~	✕	4	3
6	**AI for Software Modernisation and Coding**	GenAI accelerates IBM Z modernisation by using AI-powered LLM tools to understand and optimise COBOL based applications, reducing transformation time and costs.	✓	✕	✕	4	5
7	**AI for Generating Operational Content and Reports**	AI automates operational document production (e.g. reports), reducing manual workload, saving time, and lowering costs.	✓	~	~	3	2
8	**AI for Research**	AI scans and summarises news, reports, and research papers, reducing research time, identifying trends, and providing actionable insights.	✓	~	~	3	2
9	**AI for Credit Analysis and Loan Processing**	Gen AI automates credit assessment and loan verification, enhancing lending decisions, reducing errors, and improving operational efficiency.	✓	~	~	4	3
10	**AI for Investment Management**	AI analyses market data and client behaviour to deliver tailored investment recommendations, enhancing decision-making and customer satisfaction.	~	~	✕	3	2

✓	~	✕
AI use case currently observed at FIs	AI use case observed at some FIs/likely to be observed in near future (next 1-3 years)	AI use case not observed at FIs/may be observed in distant future (5+ years)

Tier 1	Tier 2 – 3	Tier 4 – 5
>$100 Billion Asset Size	$40 - $100 Billion Asset Size	<$40 Billion Asset Size

	2	3	4	5

Value
- Utopian vision for FI
- Lowest risk
- Highest commercial value
- Highest additional technical or business value
- Most improved efficiency

Feasibility
- FI maturity
- Operating model capability
- Technical approach and readiness

Superior Data Governance

Modernising Banking Architecture for AI and Data-Driven Transformation

The banking industry, with its long-established institutions, faces a significant challenge in managing technical debt. Many leading banks must maintain mission critical applications while integrating newer cloud-native capabilities. To enable seamless integration, banks require a modern architecture layer that simplifies connectivity across these platforms.

Laying the Foundation for Transformation

To successfully modernise, banks must establish a strong foundation by selecting and deploying the right Infrastructure-Platform-as-a-Service (IPaaS). This enables them to:

- Simplify integration across mission critical systems, i.e. IBM Z, and associated systems
- Decompose outdated architectures
- Facilitate AI and data-driven operations

Data Mastery Is a Must to Achieve AI Gains…

With the rise of AI, particularly agentic platforms, banks must focus on key architectural principles to maximise their data potential:

- **Canonical Data Model:** Standardising data structures for consistency
- **Data Integration:** Ensuring seamless data flow across systems
- **Mastering vs Subscribing Information:** Deciding which data to control centrally versus externally

Once these principles are in place, banks will be well-positioned to harness AI and drive meaningful transformation.

Established Banks Must Leverage Their Governance Advantage

New challenger bank or neo-bank entrants have minimal technical debt and are built from the ground up for data integrity, giving them a first-mover advantage. However, mature and more heavily regulated banks hold a competitive edge in governance, compliance, and risk management. Governance is key in the confidence of scaling more generative AI projects broader. If they can effectively unlock and leverage their data using modern architectural principles, they can bridge the gap and maintain their industry dominance.

Banks Must Start by Focusing on Strategic Transformation

In this fragmented and evolving market, banks must prioritise investments where they will see the greatest return. The key question is: Where can AI and modern architectures deliver the most immediate value?

By focusing on strategic transformation, banks can balance legacy constraints with future-proof innovation, positioning themselves for long-term success, starting specifically with Quantum Six's top 10 AI use cases.

IBM's Strategic Investment in AI and Hybrid Cloud Delivers End to End AI Capabilities

IBM has made strategic investments in AI since CEO Arvind Krishna announced its commitment to leading in AI and Hybrid Cloud. The company has developed a comprehensive AI stack that spans:

- Flexible AI Acceleration in Hardware – Expanding AI capacity in line with business needs
- Complete AI Development Environment – Enabling seamless AI innovation
- AI Governance Leadership – Designed to ensure compliance and responsible AI deployment
- Data Warehouse and Data Lake Capabilities – Enhancing data management and utilisation
- AI Model Families like Granite – Advancing IBM's AI capabilities
- "Ensemble" AI and Multi-Model AI – Driving next-generation AI architecture

IBM Z is a Better Environment to Develop and Run Banking AI

IBM Z remains essential to financial services, with over 70% of global transactions running on IBM Z, and 90% of credit card transactions[1]. Its reliability and security make it the foundation of mission critical banking infrastructure.

Challenges with Data Movement from IBM Z

Financial institutions rely on IBM Z for transaction processing, but moving data off IBM Z for AI-driven insights presents challenges:

- Data summarisation – Valuable granular insights are lost in the ETL and/or ELT process
- Reduced data fidelity – Limiting real-time AI use cases and decision-making

Since banks require real-time anomaly detection rather than just aggregate data, running AI models directly on IBM Z provides a competitive advantage, especially for Tier 1 banks. Data quality can lead to higher value generative AI outcomes, better performance and easier hallucination management.

IBM Z: Enabling AI-Driven Transformation in Banking

By leveraging IBM Z's capabilities, financial institutions can accelerate AI adoption while supporting:

- Minimised latency for real-time insights – AI-powered fraud detection and decision-making
- Enhanced security and resilience – Observing compliance and mitigating risks
- Seamless integration of AI, data, and business applications – Built to maximise efficiency and data utilisation

Unlocking AI's Full Potential in Banking

The latest IBM Z system is engineered to deliver significant value in the banking and financial services sector by enhancing:

- Fraud detection – Identifying overdraft defaults and preventing payment fraud
- Payment processing – Improving clearing and settlement processes
- Cybersecurity – Strengthening risk management and real-time threat detection
- Document handling – Automating workflows and reducing manual processes
- Customer interactions – Powering AI-driven product recommendations
- Anti-money laundering (AML) – Detecting suspicious transactions in real-time
- Climate impact assessment – Supporting sustainability and ESG initiatives

The Potential Impact of AI on Fraud Prevention

Based on an IBM study undertaken by Celent, if AI models were applied across all banking, card, and payment transactions running on IBM Z, global fraud losses could be reduced by $161 billion[2]. However, many large banks and payment processors currently analyse only a fraction of transactions due to limitations in processing speed and latency, allowing fraudulent activities to go undetected.

Figure 1: AI on IBM Z

AI on IBM Z © 2024 IBM Corporation
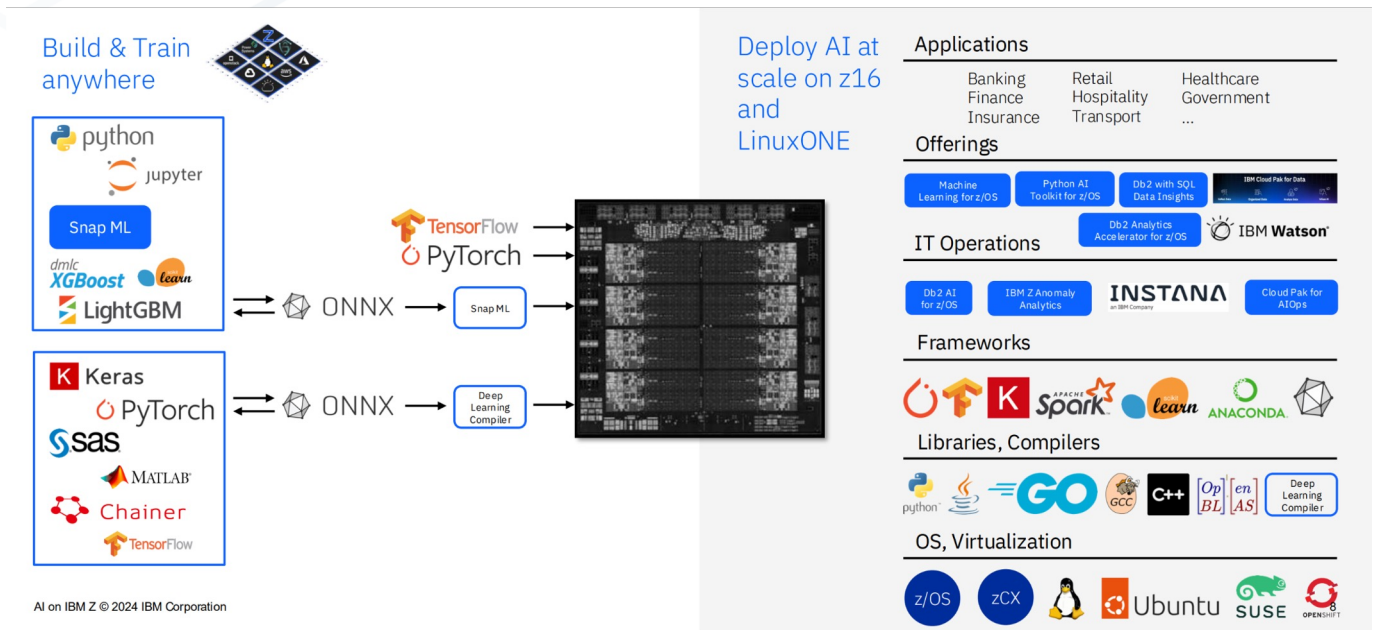
IBM Z Capabilities: Advancing AI on IBM Z

In 2025, IBM will introduce the next generation of IBM Z hardware and software, featuring the Telum II™ Processor and IBM Spyre™ Accelerator. These innovations are designed to enhance AI capabilities by integrating traditional AI, Large Language Models (LLMs), and Generative AI for greater accuracy and precision.

The Evolution of AI on IBM Z

The banking sector has a growing demand for multi-model advanced AI inferencing, which combines traditional AI models with generative AI LLMs through the use of agentic AI. This approach facilitates more accurate, efficient, and intelligent decision-making by leveraging:

- Traditional AI – Proven predictive analytics and rule-based AI

- Large Language Models (LLMs) – Enhanced natural language processing for real-time insights

- Generative AI – Advanced automation and deeper contextual understanding

Benefits of Multi-Model AI on IBM Z

IBM's multi-model AI architecture harnesses non-generative LLMs to help IBM Z clients make more informed, real-time business decisions. Thanks to advancements in Telum II, these decisions can be executed with unparalleled speed and efficiency, allowing for:

- Higher Accuracy – Reduced false positives and negatives for improved decision-making
- Increased ROI – Minimised losses and maximised gains through better risk assessment
- Enhanced Customer Relationships – Improved service delivery and personalised interactions
- Operational Efficiency – Reduced reliance on manual processes, saving time and resources
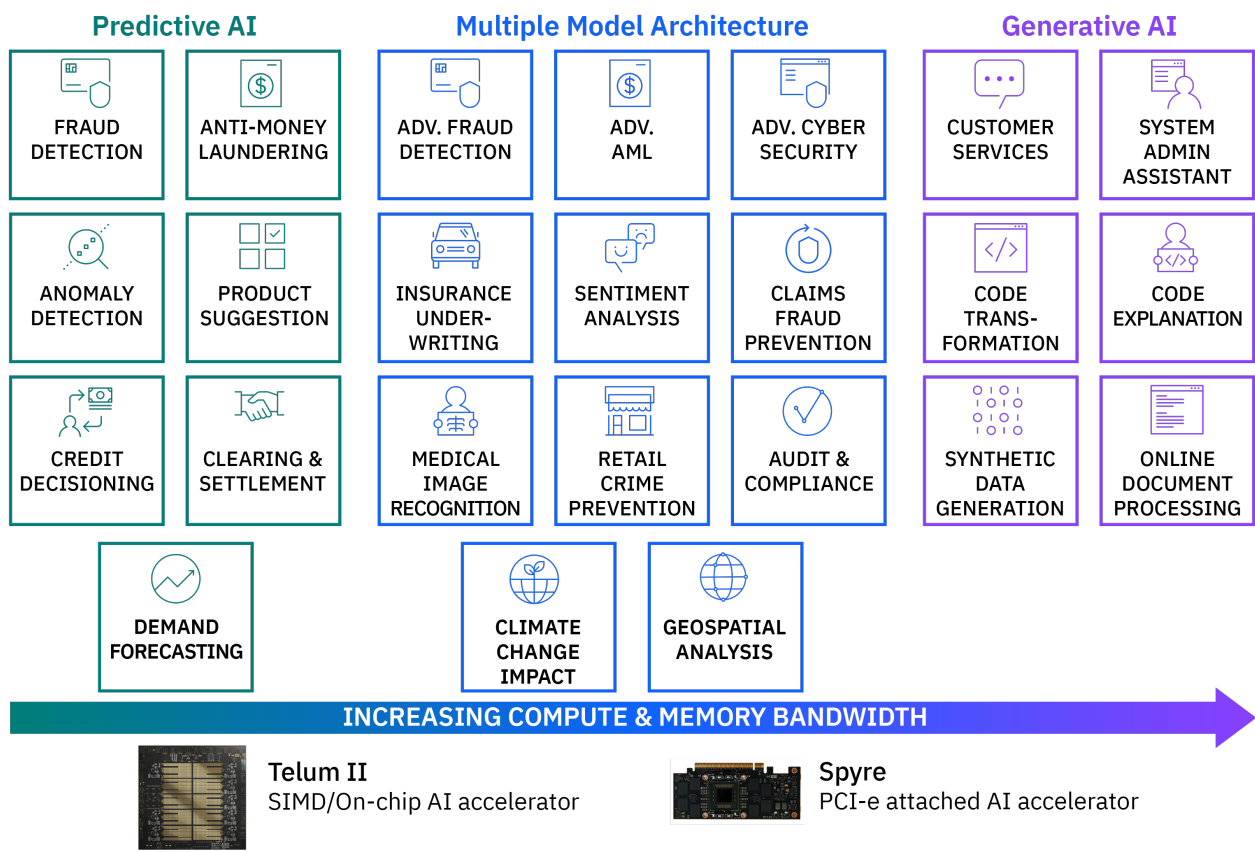
The Future of AI on IBM Z

With the next generation of IBM Z, IBM is pushing the boundaries of AI-powered financial services, helping banks to:

- Leverage real-time AI-driven insights
- Improve fraud detection and risk management
- Optimise transaction processing with AI-augmented automation

By integrating multi-model AI at scale, IBM Z continues to be a cornerstone of AI modernisation for financial institutions, driving smarter, faster, and more resilient banking operations.

Figure 2: Enterprise AI with Telum II and Spyre

Telum II & Spyre – Designed to accelerate enterprise AI use cases at scale

Predictive AI		Multiple Model Architecture			Generative AI	
FRAUD DETECTION	ANTI-MONEY LAUNDERING	ADV. FRAUD DETECTION	ADV. AML	ADV. CYBER SECURITY	CUSTOMER SERVICES	SYSTEM ADMIN ASSISTANT
ANOMALY DETECTION	PRODUCT SUGGESTION	INSURANCE UNDER-WRITING	SENTIMENT ANALYSIS	CLAIMS FRAUD PREVENTION	CODE TRANS-FORMATION	CODE EXPLANATION
CREDIT DECISIONING	CLEARING & SETTLEMENT	MEDICAL IMAGE RECOGNITION	RETAIL CRIME PREVENTION	AUDIT & COMPLIANCE	SYNTHETIC DATA GENERATION	ONLINE DOCUMENT PROCESSING
DEMAND FORECASTING		CLIMATE CHANGE IMPACT	GEOSPATIAL ANALYSIS			

INCREASING COMPUTE & MEMORY BANDWIDTH

Telum II
SIMD/On-chip AI accelerator

Spyre
PCI-e attached AI accelerator

Differentiated Vendor Partners Enabling Top 10 Use Cases

These vendors are integrating their solutions with IBM Z to take advantage of the native AI Acceleration within the platform

Figure 3: ISV AI use cases

WORLDLINE (FINANCIAL SERVICES APAC)

AI powered merchant prepayment

Use Case

AI Powered Merchant Prepayment offers financing for eligible merchants from acquiring banks using Worldline Cardlink

Value Proposition

Provide business financing with no late, early payment or origination fees, only the advance amount plus a flat fee. Merchant payments are withheld directly from sales, and banks using Cardlink can use leverage AI tools to identify, vet and selectively offer this service to eligible merchants

Benefits

Enables Banks to pre-select merchants, predict repayment, automate settlements

Merchants have access to capital without impacting personal credit.. Banks ensure a fast, transparent process through using historical data where no financial records are needed

FIS

Risk analysis for overdrafts

Use Case

FIS aimed to improve risk assessment for customer overdrafts by developing an enhanced Overdraft (OD) Risk Score. The project involved extracting 30 data points from Systematics, feeding them into an IBM AI tool, and using a Random Forest Algorithm to generate precise risk scores

Value Proposition

The AI-driven OD Risk Score allows banks to make better overdraft authorisation decisions, reducing charge-offs while maximising overdraft fee revenue., allowing more accurate and efficient assessment of customer risk

Benefits

Reduced risk by limiting charge-offs by improving overdraft decision-making

Increased revenue in optimising overdraft fee collection

Increased assessment accuracy through AI-driven tool

DXC TECHNOLOGY

Fraud prevention

Use Case

UmbrellaFraud enables real-time AI fraud detection within mainframe applications using IBM's Telum chip. With most financial transactions running on IBM Z, traditional fraud models suffer from latency and false positives up to 90% in credit card anti-fraud measures

Value Proposition

By integrating AI directly into the mainframe via a simple API, UmbrellaFraud ensures 100% of transactions undergo AI fraud detection in real-time, reducing fraud, latency, and false positives while improving security and customer experience

Benefits

Fraud savings in tier 1 banks of up to $120m as 100% of transactions are checked using Deep Learning models

Ultra-low latency as fraud check latency drops from 40-80ms to 1-2ms

Lower false positives which reduces friction and prevents lost revenue

Differentiated Vendor Partners Enabling Top 10 Use Cases *cont...*

Figure 4: Ecosystem vendor AI use cases

EXATE

Secure AI data governance

Use Case

AI models need sensitive data for training and inference, but complying with data privacy regulations like GDPR and CCPA is challenging. eXate provides a policy-driven solution that ensures secure data access and sharing, maintaining governance while preserving AI performance

Value Proposition

Automated data protection – dynamically applies access controls and masking based on regulations

Policy-driven AI governance – enforces enterprise-wide compliance with customisable governance policies

Audit and traceability – tracks and monitors AI data usage to ensure full transparency and compliance

Benefits

Reduces compliance risk – ensures AI models adhere to global data regulations

Enhances trust and transparency – provides clear audit trails and robust access controls

Accelerates AI innovation – enables secure AI adoption without legal roadblocks

OVATIONCXM

Streamlined merchant onboarding and activation

Use Case

Rapidly changing payments landscape makes acquiring and retaining merchant services customers increasingly challenging. OvationCXM leverages advancements in AI to empower banks to adopt an ecosystem approach, providing a single point of access for merchants to manage their business through integrated solutions and secure data sharing

Value Proposition

OvationCXM helps banks streamline complex customer journeys by integrating data and systems across internal teams and third-party partners. An example of this is:

Connected data and systems – connects disparate systems to eliminate data silos

Orchestrate seamless merchant experiences – real-time visibility into all aspects of onboarding process

Personalised merchant journeys – uses bank's core data to tailor journey to individual preferences

Benefits

Boosts revenue – streamlines onboarding and activation

Improves satisfaction and service visibility – uses personalised customer journeys and enhanced communication

Reduces churn – strengthens customer retention

Minimises operating costs – through automation and efficiency gains

Figure 5: GSI AI use case

COFORGE

Banking efficiency and security

Use Case

Coforge helps banks modernize their IT infrastructure by integrating IBM Z and the Telum coprocessing chips into their applications. This enables real-time AI/ML processing for fraud detection, compliance, and operational efficiency while reducing cloud dependency and IT costs.

Value Proposition

By leveraging Telum AI capability, banks enhance security, reduce fraud, improve compliance, and optimise costs. Coforge's expertise ensures seamless integration, balancing IBM Z reliability with AI-driven transformation for real-time decision-making and improved customer experience

Benefits

Fraud Reduction – up to 50% fewer fraudulent transaction

Faster Loan Approvals – reduced processing time by up to 40%

Cost optimisation – reduced cloud computing cost by up to 35%

Operational Resilience – self-healing mainframes minimise downtime by 70%

Customer Value Stories *cont...*

Elpida Tzortzatos, IBM Fellow & Distinguished Engineer for AI on IBM Z, provided a banking use case for a large North American Bank.

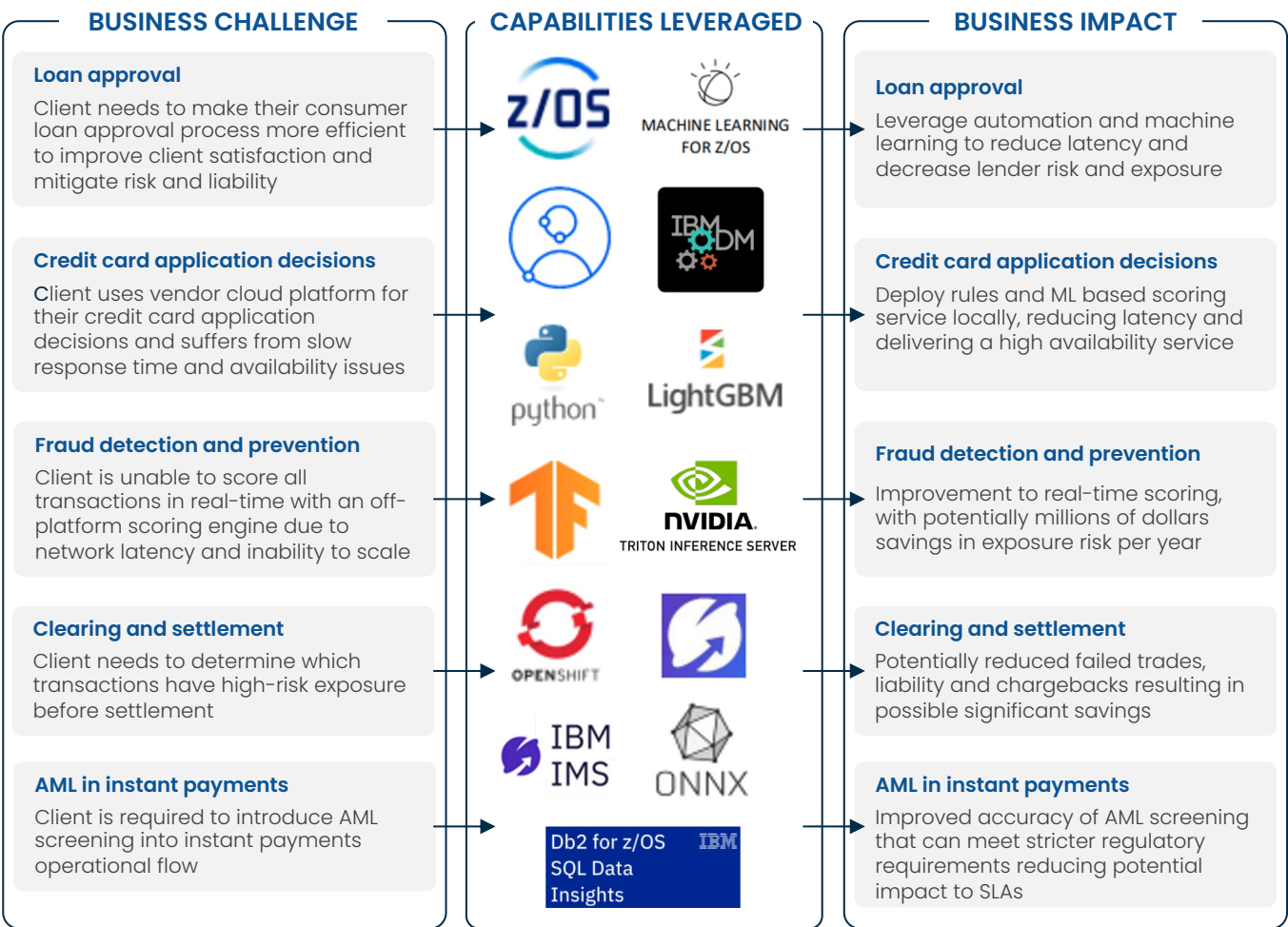## Payment Fraud Use Case on IBM Z at a Large North American Bank

Elpida Tzortzados says "A bank in North America harnessed the power of AI on IBM Z to detect fraud patterns and proactively prevent fraudulent payment transactions. The results have been nothing short of impressive, with profound implications for their operations and customer satisfaction. One of the bank's primary objectives was to scale their core payments fraud detection capabilities to examine every transaction in real time. By leveraging AI on IBM Z, the bank achieved the ability to comprehensively analyze each payment transaction as it occurred. This translated into a reduction in fraudulent activities, potential cost savings and, perhaps most importantly, enhanced customer satisfaction.

The bank also experienced a substantial improvement in response times. By leveraging the Telum I on chip accelerator, the bank improved response times. This improvement in response times enabled faster decision-making, critical in fraud prevention.

Another critical achievement was the bank's newfound capability to score 100% of their transactions in real time. This scale ensures that no transaction goes unchecked, significantly enhancing their fraud detection capabilities. Prior to implementing our solution, the bank encountered a considerable challenge when performing AI inferencing off-platform. Due to timeout issues, they were forced to approve transactions without the benefit of additional fraud checking, exposing them to unwanted risks.

By embracing AI on our platform, the bank did not only address a critical challenge but has also elevated their fraud detection capabilities to new levels. The bank reduced fraud, saved operational costs, and improved the satisfaction of their valued customers. This success story underscores the transformative potential of AI on IBM Z and its ability to drive tangible value for our clients."

Figure 6: Other client use cases of AI on IBM Z

BUSINESS CHALLENGE

Loan approval
Client needs to make their consumer loan approval process more efficient to improve client satisfaction and mitigate risk and liability

Credit card application decisions
Client uses vendor cloud platform for their credit card application decisions and suffers from slow response time and availability issues

Fraud detection and prevention
Client is unable to score all transactions in real-time with an off-platform scoring engine due to network latency and inability to scale

Clearing and settlement
Client needs to determine which transactions have high-risk exposure before settlement

AML in instant payments
Client is required to introduce AML screening into instant payments operational flow

CAPABILITIES LEVERAGED

z/OS • MACHINE LEARNING FOR Z/OS • IBM ODM • python • LightGBM • NVIDIA TRITON INFERENCE SERVER • OPENSHIFT • IBM IMS • ONNX • Db2 for z/OS SQL Data Insights

BUSINESS IMPACT

Loan approval
Leverage automation and machine learning to reduce latency and decrease lender risk and exposure

Credit card application decisions
Deploy rules and ML based scoring service locally, reducing latency and delivering a high availability service

Fraud detection and prevention
Improvement to real-time scoring, with potentially millions of dollars savings in exposure risk per year

Clearing and settlement
Potentially reduced failed trades, liability and chargebacks resulting in possible significant savings

AML in instant payments
Improved accuracy of AML screening that can meet stricter regulatory requirements reducing potential impact to SLAs

Building out Three Phases of a Pragmatic Roadmap

Bridging the Gap to Agentic AI in Banking

As AI advances towards agentic and assemble execution, there remains a significant gap between today's single or multi-modal AI agents and the maturity required for true agentic AI.

Accelerating AI Maturity

Key developments in low-cost small language models and improved AI reasoning will be crucial in accelerating AI's maturity.

Challenges in AI Evolution

The focus will shift from simply expanding multi-modal AI to:

- Tailoring AI to each bank's unique knowledge and differentiation
- Tuning dynamic learning models to align with proprietary IP and value propositions
- Managing governance across large language models (LLMs) and smaller AI models

IBM & Quantum Six: Guiding AI Transformation

IBM and Quantum Six are uniquely positioned to support banks, financial institutions, hyperscalers, and fintechs in navigating this transition, ensuring AI-driven innovation while maintaining governance and security.

Key Challenges	Description	Consideration	Quantum Six Value	IBM Value
Data	Inaccurate & siloed data	Data strategy, Canonical data model, Mastering of data, Data layer	AI data readiness review	AI on IBM Z and LinuxONE Discovery Workshop in partnership with Quantum Six value accelerators
Governance, Auditability & Compliance	Defining financial ROI business cases, milestones for delivery against value achieved, dedicated AI funding	Buy in from stakeholders, Buy in for use cases, Analyse how to improve business case and adoption	AI business case definition and acceleration review	
Operating Model	Lack of centralised AI-focused team	Move from pure advisory to actual empowerment of a team	AI operating model journey review	

The Evolution of AI in Banking: Moving from Agents to Agentic AI

The banking industry primarily operates with agent-based AI or extensions of AI agents to drive value. However, true agentic AI deployments remain rare—though they are the clear direction of future innovation.

Building out Three Phases of a Pragmatic Roadmap cont...

Building Trust: The Key to AI Adoption

For AI to deliver meaningful impact, trust must be established across three critical areas:

1. Use Case & Financial Benefits – Confidence in the tangible value AI delivers
2. Governance & Business Discipline – Ensuring structured oversight and accountability
3. Operational Model Adaptation – Empowering teams to fully leverage AI's potential

Once these elements are in place, financial institutions can adapt their operating models to maximise AI-driven benefits.

Laying the Right Foundations

Before deploying AI at scale, banks must establish robust data foundations, including:

*   A Clear Data Strategy – Aligning AI initiatives with business goals
*   Canonical Data Models – Standardising data for consistency
*   Data Mastering & Change Control – Ensuring high-quality, governable data

Key Takeaways for AI Success in Banking

1. High-Quality Data Drives AI Success
    *   Strong data governance and quality controls significantly impact AI adoption and effectiveness.
2. Empowered AI Teams are Critical
    *   A centralised AI team must own the use cases, architecture, and initial deployment, shifting from an advisory role to direct leadership.
3. Transform Stakeholder Engagement & Business Cases
    *   Secure buy-in across leadership for multi-use case adoption.
    *   Use calculators and accelerators to demonstrate rapid business impact.
4. Security is a Core Foundation
    *   AI success depends on built-in security at every stage of development and deployment.

By focusing on trust, data quality, and governance, banks can successfully transition from agent-based AI to fully agentic AI, unlocking new levels of efficiency, insight, and innovation.

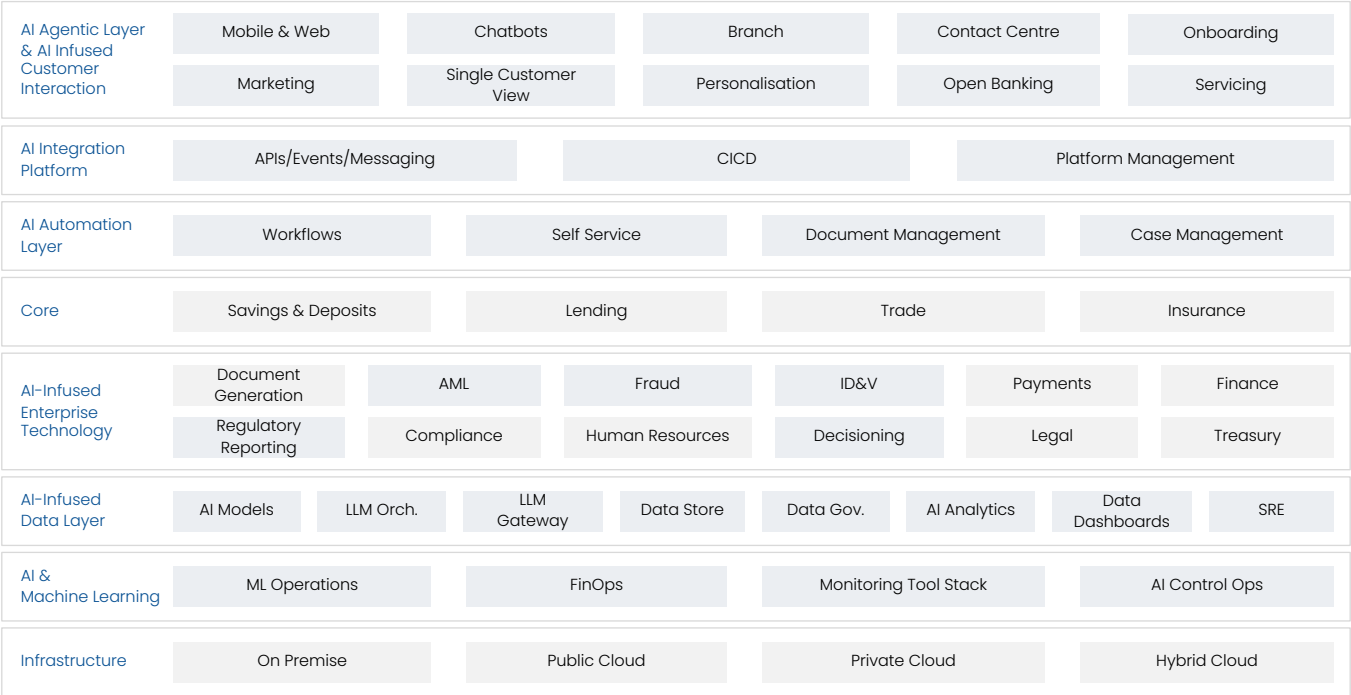# Pragmatic modernisation leveraging AI *cont...*

How do you get started?

To get started we believe financial institutes should follow our Quantum Six 4P model that will enable them to get started on their AI modernisation journey. Through this we can support financial institutes in their AI data readiness review, AI business case definition and acceleration review and AI operating model journey review.

Table 2: Quantum Six's 4P Model

Stage	Description
PLACE	Get the fundamentals in place i.e. define objectives, the challenges around data, empowered team, stakeholder / business case approach with pervasive security
POC	POC is low cost, very focused initiative that gets started with a focused business case to drive outcomes quickly
PILOT	Pilot, is summarising this POC down to the highest value business benefits for the bank enabling high chance of success with the fastest time to value. This includes time to value, vendor or internal build evaluation, board review and deeper vendor 3rd party due diligence to enable a business decision
PRODUCTION	Production, is taking pilot and operationalising it for the most efficient deployment incorporating existing platforms, data model and overall technology strategy to ensure best use of capital and fastest time to revenue

The path to the AI future state is not as complex as you may think

The majority of banks have a mixture of new and existing systems i.e. technical debt, and this is not a negative for AI. Existing platforms do not need to constrain AI success if the steps above are followed. This diagram shows the future state capabilities an AI financial institute will require.

AI Agentic Layer & AI Infused Customer Interaction	Mobile & Web	Chatbots	Branch	Contact Centre	Onboarding
	Marketing	Single Customer View	Personalisation	Open Banking	Servicing

AI Integration Platform	APIs/Events/Messaging	CICD	Platform Management

AI Automation Layer	Workflows	Self Service	Document Management	Case Management

Core	Savings & Deposits	Lending	Trade	Insurance

AI-Infused Enterprise Technology	Document Generation	AML	Fraud	ID&V	Payments	Finance
	Regulatory Reporting	Compliance	Human Resources	Decisioning	Legal	Treasury

AI-Infused Data Layer	AI Models	LLM Orch.	LLM Gateway	Data Store	Data Gov.	AI Analytics	Data Dashboards	SRE

AI & Machine Learning	ML Operations	FinOps	Monitoring Tool Stack	AI Control Ops

Infrastructure	On Premise	Public Cloud	Private Cloud	Hybrid Cloud

AI Infused Technology

Why Quantum Six?

1 Independence
We do not commercially partner with technology or platform players and are therefore positioned to provide true independent advice.

2 Banking ecosystem market knowledge
Utilising our existing vendor relationships and extensive vendor knowledge enables Quantum Six to manage and accelerate delivery of engagements.

3 Core technology & transformation experience
Our Leadership Team have delivered in excess of 50 core transformations over the last 20+ years.

4 Ecosystem frameworks & accelerators
We have proven frameworks, tools and accelerators such as the Quantum Six Ecosystem Banking Blueprint (EBB) and Quantum Six Green Banking Benchmark (GBB).

5 Advice & guidance
The combination of our experience and the calibre of resources ensures we provide the right advice to ensure a successful client outcome.

6 Trusted advisor
Our goal is to be your trusted advisor, supporting you throughout your transformation journey, facilitating collaboration between systems integrator, vendors and client teams.

ABOUT QUANTUM SIX

As a boutique consultancy, advisory and analyst firm Quantum Six will support you from business case creation to post live, ensuring that change is both fully embedded and adopted.

Our ability to provide the right modernisation and decomposition strategy and execution for banking ecosystems coupled with our independence from any vendor means we can support banks, FIs, ecosystem providers and large vendors in ecosystem creation, selection, assessment and assurance.

For more information, visit quantumsix.com

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