Banking Transformation Through AI: 94% Faster Queries, 50% Better Fraud Detection, and 40% Cost Reduction

Client Overview

A leading retail bank with over 10 million customers faced operational inefficiencies in handling routine banking services. Customers experienced delays, high wait times, and security risks, leading to dissatisfaction and increased costs.

Challenges

The bank faced rising call volumes and operational inefficiencies in managing account information requests while striving to enhance customer experience and reduce costs. Manual processes for handling inquiries, verifying account details, and resolving discrepancies required significant time and resources, leading to long wait times and increased customer frustration.

Banking System Process

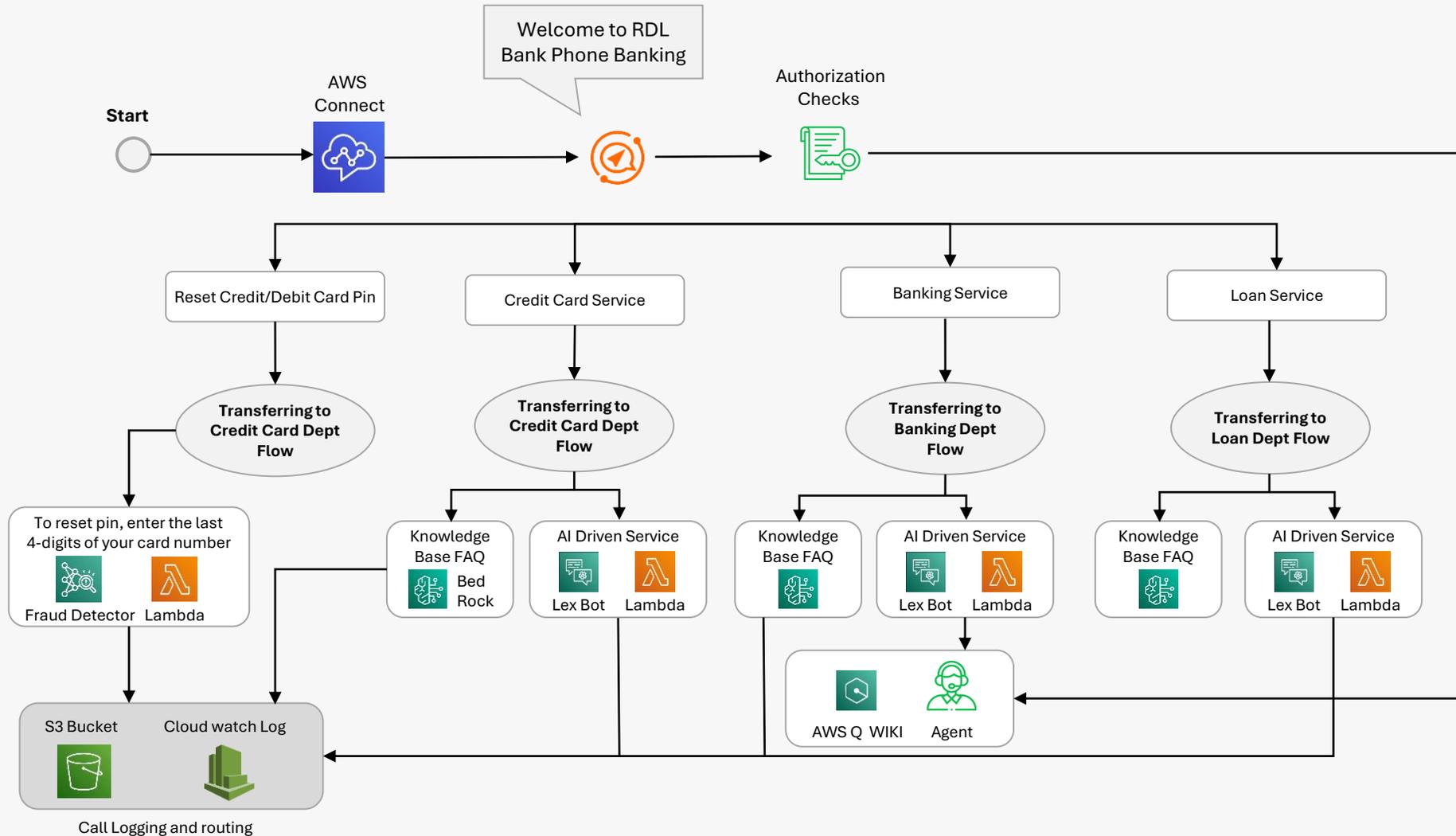| Long Wait Times on Account Information	Customer Support Bottlenecks	Cyber Fraud	Long Verification Process
Customers had to contact support for simple inquiries like balance checks and transaction history. Long wait times led to customer dissatisfaction.	Customers frequently asked the same questions about fees, transactions, and services. Long hold times frustrated customers. High agent workload led to burnout.	Manual fraud detection caused delays in flagging suspicious activities. Customers had to wait days for credit limit approvals. The card blocking process was slow, leading to financial losses.	Manual verification caused long processing times. Customers abandoned applications due to complex paperwork. Fake documents were difficult to detect.

AWS Connect Center Banking System

Results and Business Impact

The HR Contact Center implementation delivered measurable improvements across multiple metrics:

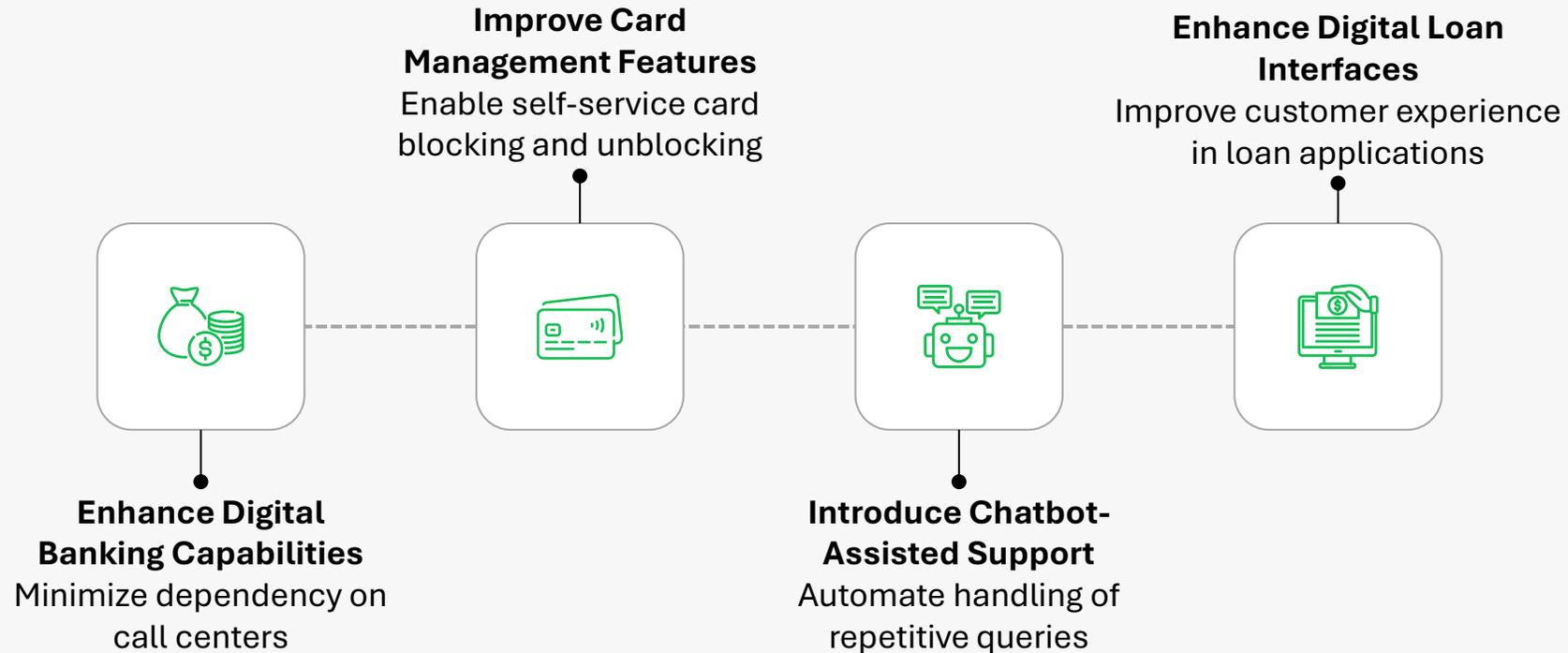| AI-Powered IVR & Chatbots for Account Information	AI-Driven Credit Card Fraud Detection & Automation	Automated Loan Verification & Processing	AI-Driven Customer Support Automation
Deployed AWS Connect and Lex Bot to enable customers access their balance, statements, and transaction details via self-service IVR and AI chatbots.	Configured a real-time fraud detection system to flag suspicious transactions and provide service to customers who could instantly block lost/stolen cards via IVR.	Integrated real-time eligibility verification and prior authorization systems with bank-recommended provider databases, ensuring accurate pre-submission validation.	Deployed chatbots & AI agents to handle routine inquiries, reducing agent workload and enhance channel support (mobile app, SMS, email, WhatsApp).

Future Enhancement in Banking System Flow

Improve Card Management Features
Enable self-service card blocking and unblocking

Enhance Digital Loan Interfaces
Improve customer experience in loan applications

Enhance Digital Banking Capabilities
Minimize dependency on call centers

Introduce Chatbot-Assisted Support
Automate handling of repetitive queries

Business Outcome

The Banking system with AI implementation delivered measurable improvements across multiple metrics:

Decrease in Account Information Query Handling

Before AI, bank staff took more than 5 minutes to answer customer questions about their accounts. Now, the AI gives answers in just 30 seconds.

Fraud Detection Accuracy

The old system caught only 60% of fraud cases, missing many problems. With AI, the bank now catches 90% of all fraud, enhancing security.

Customer Support Call Management

Earlier, bank workers had to handle every single customer call. Now, AI handles over 60% of calls, letting the staff focus on harder problems.

Operational Cost Efficiency

The bank used to spend a lot of money on staff to do manual work. After integrating AI, they saved 40% of their costs by automating many tasks.

Conclusion

The integration of AI-powered banking automation transformed the financial institution's operations, delivering substantial improvements in efficiency, security, and customer satisfaction.

By automating complex processes such as loan verification, fraud detection, and customer support, the solution optimized resource allocation, enabling faster decision-making and reducing operational risks.

This implementation demonstrates how AI technology can revolutionize banking services, creating a more efficient, secure, and customer-centric financial ecosystem while enhancing overall financial performance and compliance.

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NSE

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Global Footprint

USA, India, Europe, APAC
Established in 1993

Services

Digital Product Engineering (DPE),
Custom Application, Mobility,
Testing, Knowledge Services,
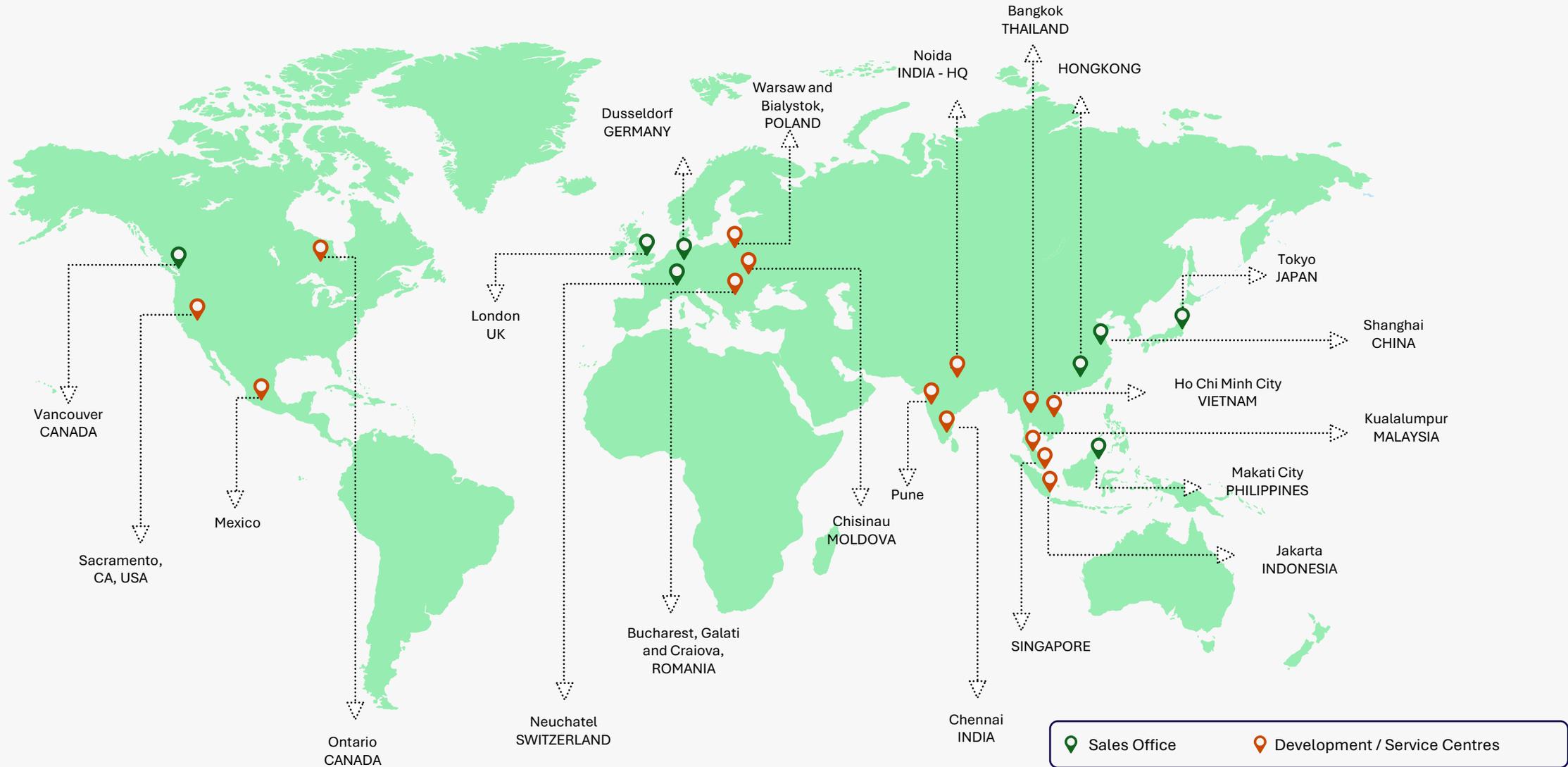Customer Experience

Digital Technology

Cloud & DevOps, Data & Analytics,
AI / ML, Embedded, Automation,
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Banking & Financial Services,
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Ready to drive efficiency and better outcomes? Let's discuss how Agentic AI can help.

Worldwide Headquarter
R Systems International Ltd.
C - 40, Sector - 59,
Noida 201307 (UP), India
P: (+91) 120-430-3500
F: (+91) 120-258-7123

USA Corporate Office
R Systems Inc.
5000 Windplay Drive,
El Dorado Hills, CA 95762
P: (+1) 916-939-9696
(+1) 800-355-5159
F: (+1) 916-939-9697