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Realizing the art of possible in retail banking with AI

Can you envision sophisticated robots driving the front-end as well as back-end operations for banks? While the answer would have probably been in the negative a few years ago, today, it is an emphatic yes. Most of the capabilities needed to realize a digitally-driven retail bank of the future are predominantly based on Artificial Intelligence (AI) and Machine Learning (ML)—technologies that are hardly new today. On top of it, massive growth of cloud, high-speed processing power, and cheap hardware has enabled rapid proliferation of AI and ML in the banking sector.

Hyper-automation enabled by AI (as illustrated in Figure 1) is emerging as a key trend in the modern banking industry.

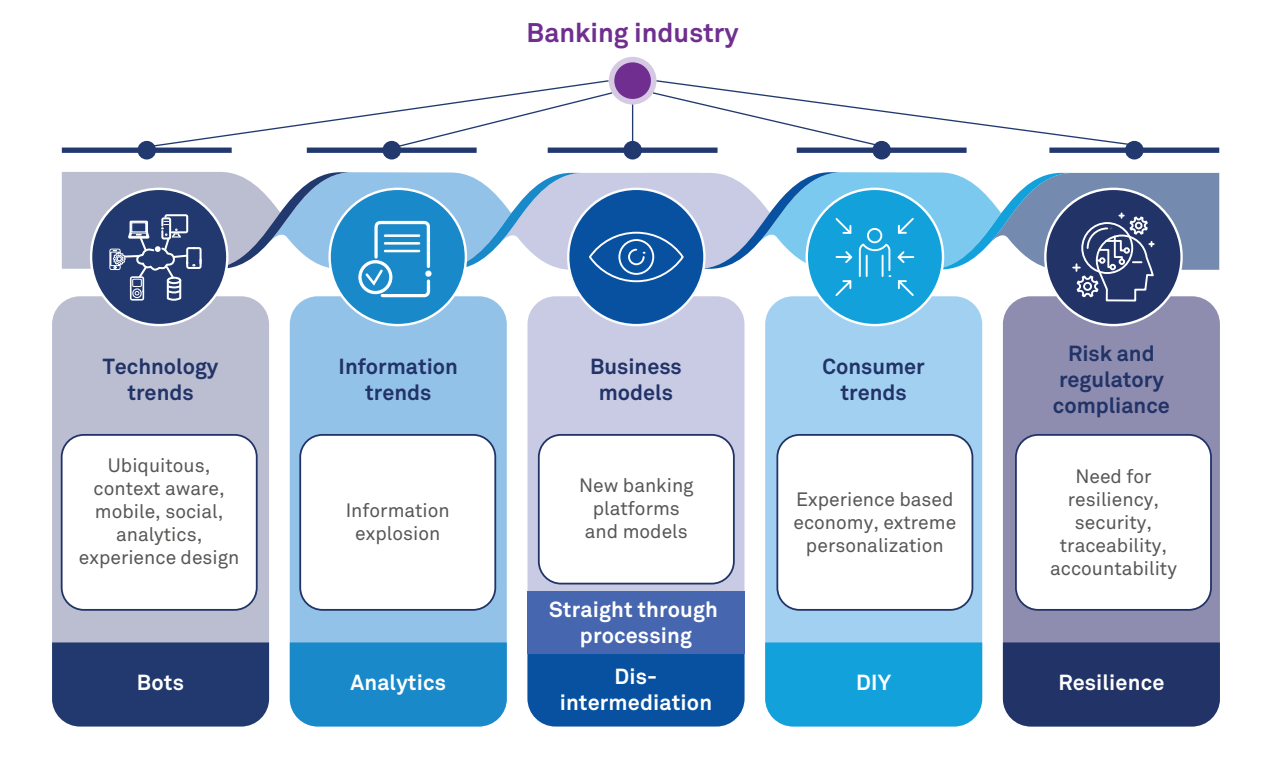

Figure 1: Trends in the banking industry

Opportunities for cognitive computing in the banking sector can be broadly divided into three key parts:

1. Cognitive engagement: User experience (UX) is at the core of this tenet; and includes providing seamless user engagement to bank's customers during customer-facing activities.

2. Cognitive automation: AI-driven robots and Robotic Process Automation (RPA) are playing a key role in enabling back office hyper-automation of various mundane tasks like image and text processing for form filling and straight through processing (STP) of other repetitive tasks.

3. Cognitive insight: This involves looking into various sources of structured, unstructured, and numerical data to build actionable insights for the bank. It requires processing of huge volumes of disparate data and using AI to enable near real time fraud detection and regulatory compliance.

AI in retail banking: Three key use cases

When it comes to deploying AI solutions, doing it alone can get tricky. Banks can partner with IT firms to leverage the latter's in-house cognitive assets and AI partner ecosystem to enable these key use cases:

a) Account opening

The current process, in most banks, is still time and effort intensive (See Figure 2).

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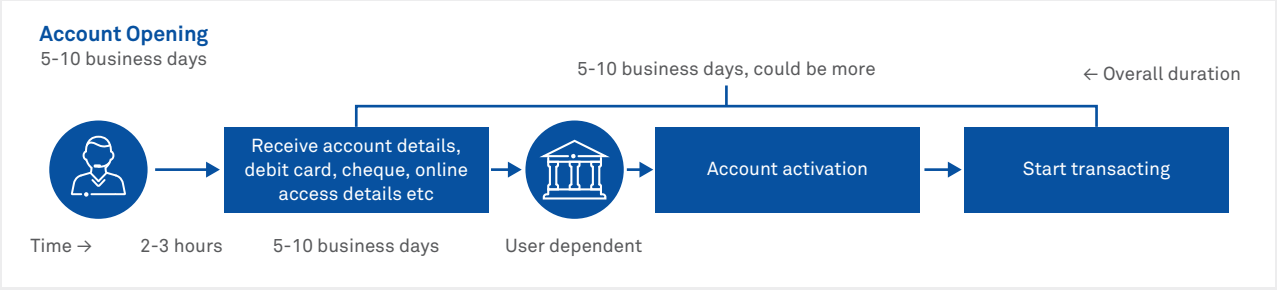

Figure 2: Account opening process in banks

A combination of AI-driven hyper-automated solutions and RPA can make the process effortless for customers as they would only need to visit the bank's website and upload the soft copy of necessary documents in the account opening section (as indicated in Figure 3).

The automated process will involve multiple system integrations and use of AI/ML for text/email classification, OCR, ICR, automated voice calls, text-to-speech, speech-to-text, process automation, and more.

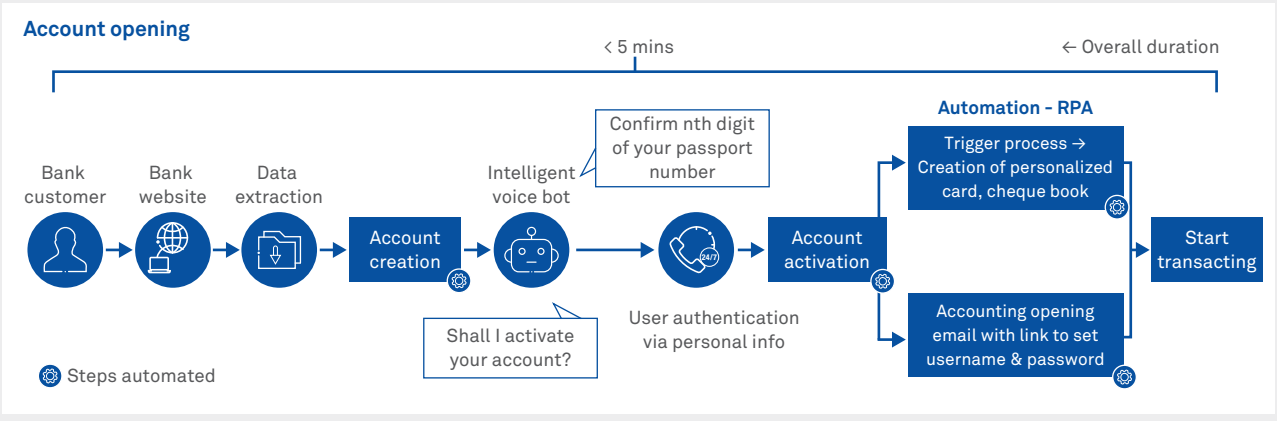

Figure 3: AI and RPA driven account opening process

b) Customer support

Customer support is another pain area for retail banking customers; especially when a customer wants to place a service request outside the bank's working hours.

AI-driven hyper automation can provide twin benefits here—enhancing user experience as well as streamlining back office operations. Customers can call and converse with an

intelligent voice-enabled bot 24/7 to report loss of card, lodge complaints or book an appointment with a bank department.

Fraud detection

Sophisticated fraud is on the rise, even as banks adopt several solutions to detect and mitigate fraudulent transactions. Most solutions depend on data models to detect an out-of-the-ordinary transaction, which must be noticed by a bank employee, following which he/she must call up the customer to confirm whether it was a fraud or not. Unsurprisingly, these solutions are prone to human error, and are resource and time consuming (See Figure 4).

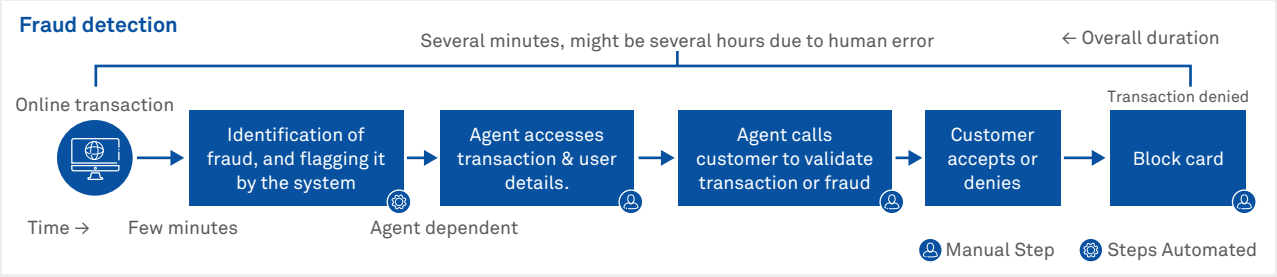

Figure 4: Current fraud detection system

AI-based anomaly detection engine (as shown in Figure 5), on the other hand, can not only report a fraudulent bank transaction but, also trigger an Intelligent Interactive Voice Bot to call the customer and take feedback. If customer acknowledges the transaction as valid then the bot records it as false positive and the system learns from this. Alternatively, if the customer denies making the transaction, the bot marks it as fraud, blocks the card, and initiates a new card request for the customer.

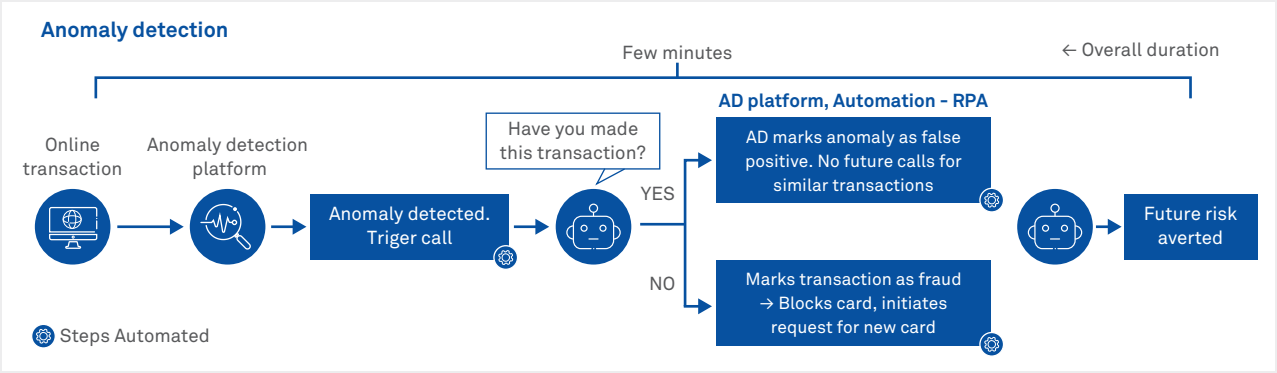

Figure 5: AI-driven fraud detection and automated feedback system

Banking on AI to remain 'always-on'

Amid shifting customer demands and intensifying competition from incumbent as well as disruptive new entrants, banks are realizing that they must be always available to their customers – regardless of the time, device or channel. Whether it is core banking operations or advanced security needs, customers expect access to the bank anytime, anywhere. Leveraging a combination of AI and RPA can help banks do just that by hyper-automating processes, to improve efficiency, enable quicker response at less cost, and ensure service consistency. After years of incremental changes in silos, it's time for banks to adopt AI and fundamentally reimagine core operations to suit the new digital reality.

About the authors

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John is a part of the AI and Automation group within Wipro HOLMES™. John comes with a background of building products and automating processes in enterprises using AI and Cloud based solutions. At Wipro, he focuses on the AI and Automation ecosystem, and works with large Intelligent Automation partners like Amazon Web Services and Microsoft to drive joint GTM initiatives. He also works with customers to solve complex business problems by architecting cognitive automation solutions and running proof-of-concepts using a combination of Wipro HOLMES™ platform and AI services from the partner ecosystem.

Manish has been associated with Wipro HOLMES™ since its inception in the CTO's office and is instrumental in building complex AI solutions in various verticals like Health, Communications etc. At Wipro, he is primarily responsible for accelerating the cognitive automation transformation journey for customers through use case ideation, building minimum viable products and proof-of-concepts using Wipro HOLMES™, Wipro's artificial intelligence platform. In addition, he supports targeted go-to-market initiatives for strategic customers.

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