



SMART BOTS AS BANKING CONCIERGE

Abstract

It was during the COVID-19 pandemic that most banks started looking for alternative options for their customers to receive banking services rather than visiting branches in person. Some of the financial institutions were looking for a temporary solution; however, most of the institutions were looking for a permanent solution to avoid staff servicing their customers. Also, it was an opportunity for them to improve their business efficiency in terms of customer satisfaction and revenue. That was the time, the entire industry was looking at digital transformation ideas for their businesses.



Introduction

An era of digitalization had started in all industries, and banking was no different. The introduction of artificial intelligence,

RPA, NLP, and ML paved way to a big revolution in the banking sector. Services like online banking, e-banking, and mobile

banking have already been significant for the past few years.

Chatbot – a real-time virtual assistant

“Chatbots” were introduced to interact with customers then. A chatbot is a software application that can chat online with customers through text or text-to-speech, instead of a customer service agent. These

bots chat with customers in real time and try to answer/solve their queries. It was found that more than 70% of banks are expected to use chatbots in the next few years. The prime purpose of a chatbot is to

assist customers with their banking needs, and it also inspires trust and faith in banks giving them the right and accurate details.

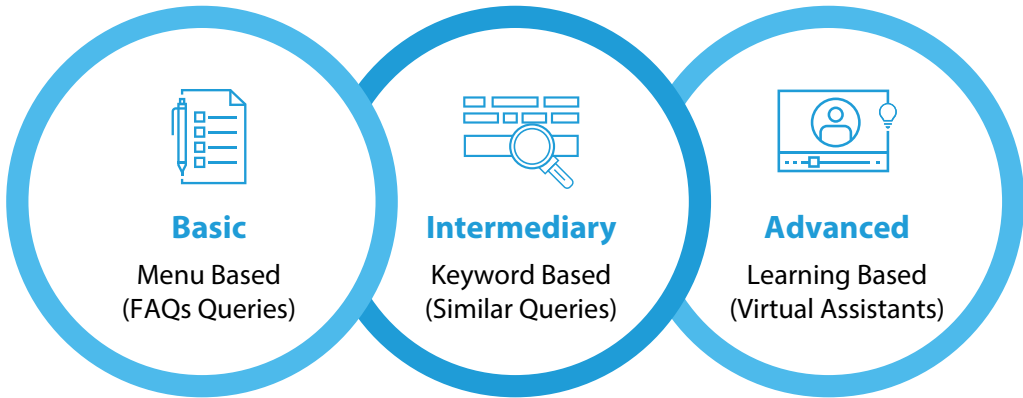


Fig 2: How a virtual assistant chatbot works

It is now astounding that chatbots can do much more than resolve simple banking tasks. The significant proposal is on how the machines understand banking concepts. Its basic ability is to work as a digital channel that can respond and answer customer queries and then develop it more like a virtual assistant.

The future is that the chatbots are not just for answering the FAQs, but also to assist banks and their customers as a smart virtual financial assistant for all their needs. Be it answering on transactions, payment dues, or account details, chatbots can perform all tasks on its own. This is like we have Siri for Apple, Bixby for Samsung,

and Alexa for Amazon. Bots can leverage the latest digital solutions, in advanced analytics and cognitive messaging in collaboration with AI. They can be easily modified and customized as per the banking requirements. This makes normal bots smart.

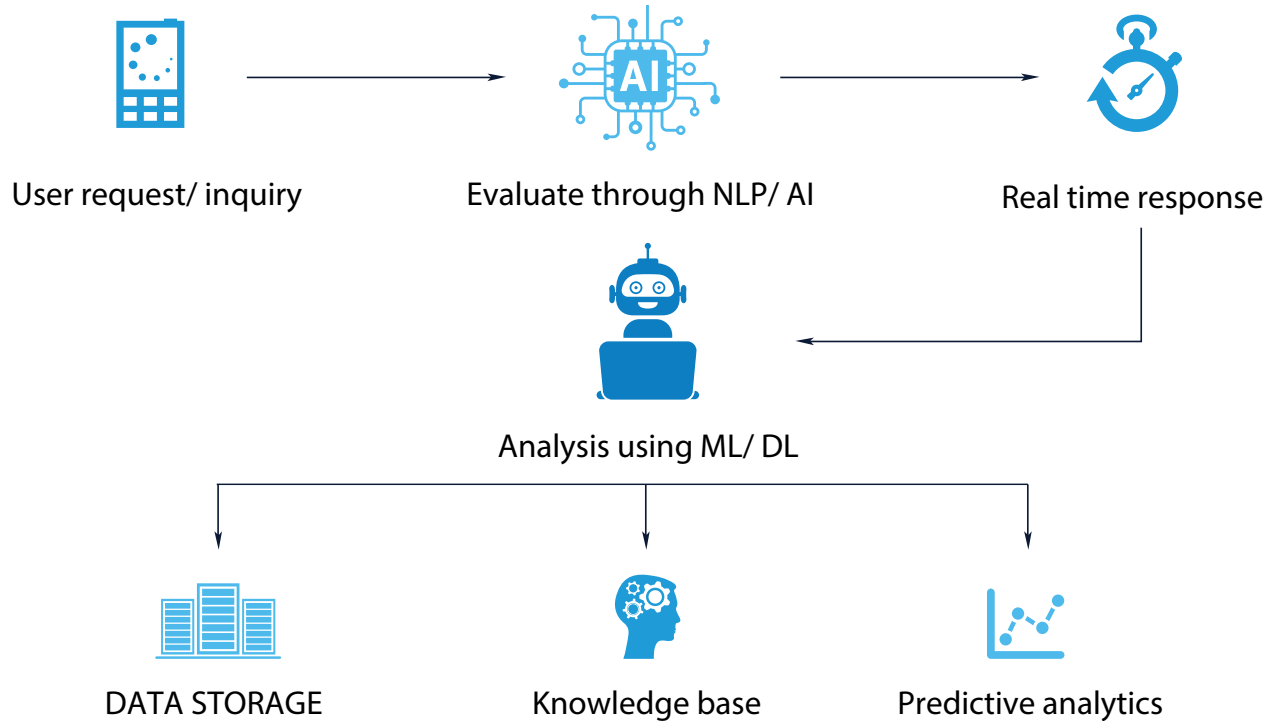


Fig 2: How a virtual assistant chatbot works

The capabilities of a virtual assistant in banking is still expanding. Invoking a virtual assistant can be done by just a tap, sending text command, or just through a voice command. The bot can perform below activities.

- Predictive analytics to analyze the average monthly spending
- Determination of changes in credit score via the integration of FICO's scoring system
- Reminders for recurring, due, or overdue

payments

- Using NLP for text mining to retrieve basic account information and transaction details
- Flagging any abnormal or unusual payment via AI-based anomaly detection (for detecting deviations from a normal data in real-time)
- Unlocking and locking debit and credit cards

- Feedback and reviews based on the spending patterns
- Setting account transfer limits
- Alerts on low balance and payment dues

The significant benefit of these bots are time saving and personalized attention/ support. A chatbot answers queries instantly. It manages most of the queries, is available 24x7, and minimizes the need for customers to contact bank staff.

Bots channels

The bots work through various channels with or without internet. Though RPA-based bots do not necessarily need internet, a connection to internet will make

them smart. They will connect with third party/external websites, online portals, and servers to perform advanced multi-tasking in a more efficient and smarter way.

The evolution of smart devices makes it more feasible and adaptable for working.



Fig 3: Bot channels

Use cases of chatbots as banking assistant

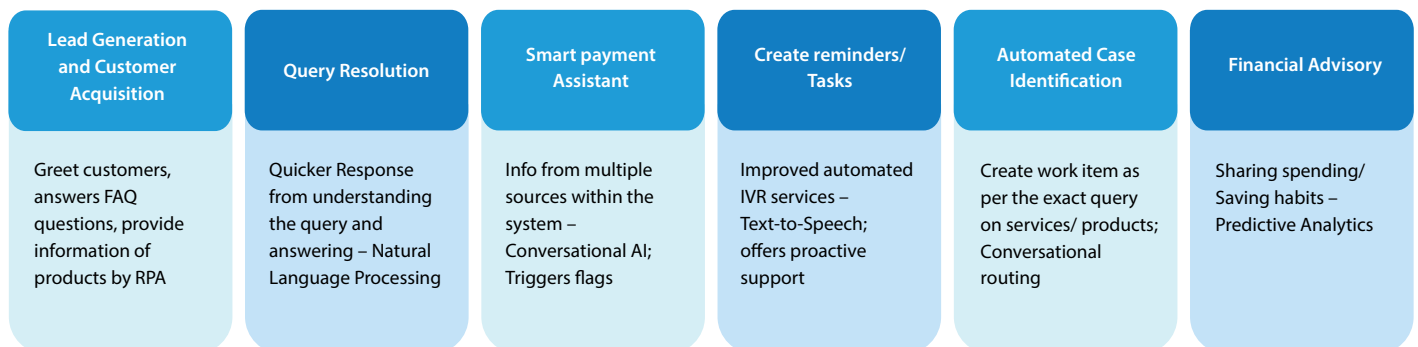


Fig 4: Chatbot use cases

Smart payments assistant

Intelligent bots interact with multiple application forms on websites. These bots impersonate the interaction of a customer

with the website and can perform any repetitive payments virtually. These bots can collect information from various search

engines and government regulatory bodies and provide the details within seconds.

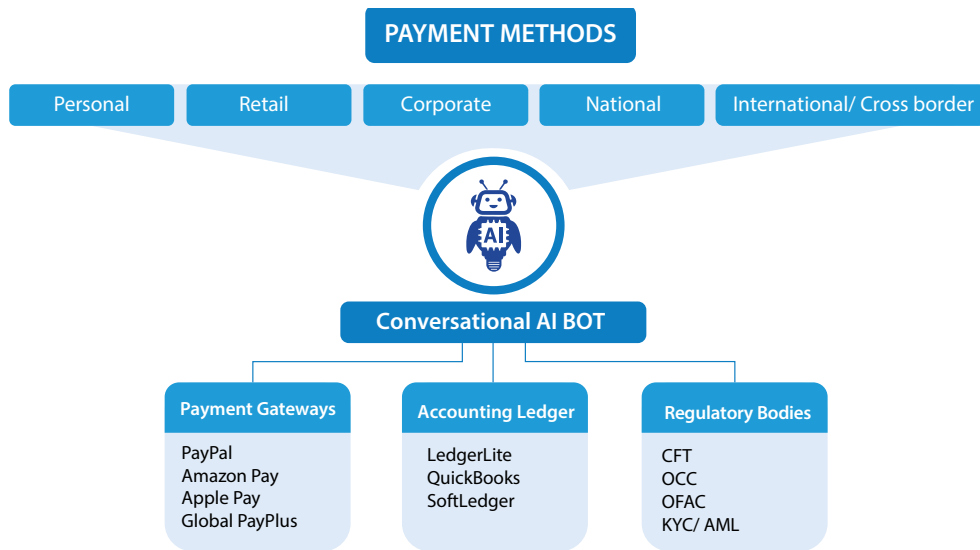


Fig 5: Flow for smart payments assistant (payment gateways mentioned above are illustrations and there are more available)

These bots help in improving efficiency, reducing AHT, reducing operational costs and achieving greater level of customer

satisfaction. These bots also can log into websites with authentication credentials, using predefined customer details and

authorize payments. Intelligent agents or bots are an extension of the technology used for profile-based form filling.

Automated case identification

Now bots are used for IVR whenever a customer calls a bank's customer care. Bots can direct customers to the correct support options and can inform on callbacks from agents. In case a customer chooses the

callback option, the customer must wait for the agent to call them back and will not have opportunity to completely get details what they are looking for. So, we are now in need for an enhanced and static customer

resolution that will provide them right direction for what they are looking for also the necessary details at the earliest.

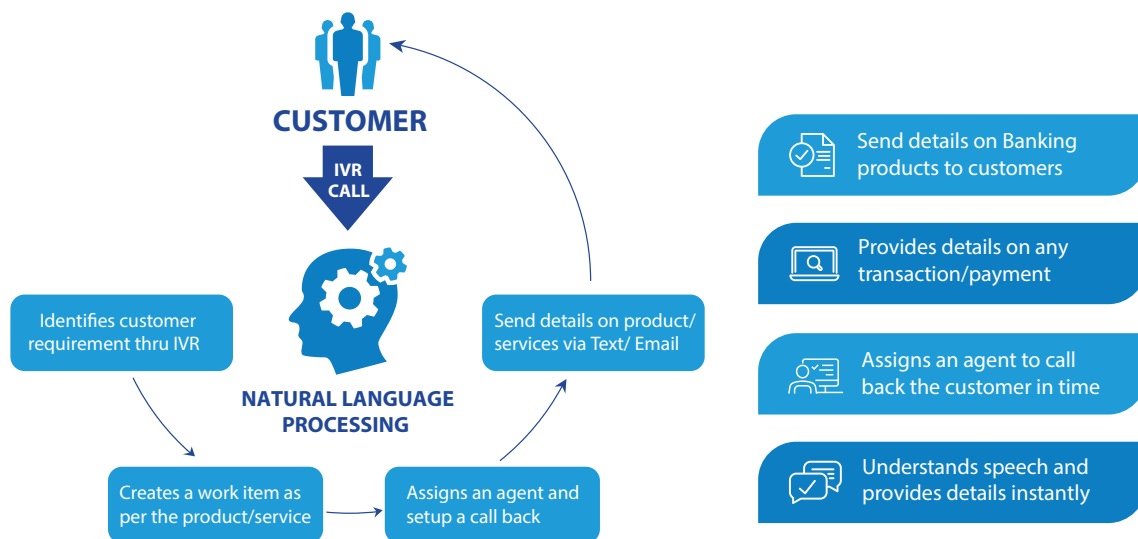


Fig 6: Flow for automated case identification bots

Hence, there shall be an option wherein whenever the customer calls the bank and reaches the IVR, the bot needs to send them the links/details about the service or

the product they are looking for, in a text message, over WhatsApp, or in an email before they get a call from the customer service agent. Bots will understand the

requirement from the customer, identify the work item, collect the necessary details, send them the details, and assign a person to call back.

Financial advisory

The situation now with digital banking is that we just swipe and scan to make payments digitally in just few seconds.

Nowadays, people are spending their money with no control limits and go for loan/debt by the month end. So, we need

someone to advise us on our spending habits. This is now possible with the help of chatbots in the banking application.

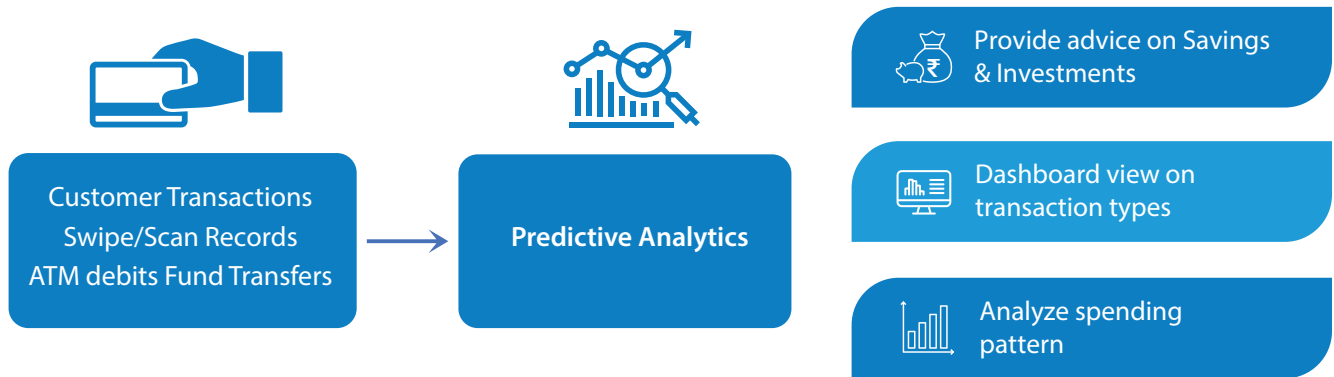


Fig 6: Flow for automated case identification bots

The bots will analyze your spending over a period and will show your spending pattern, where you have spent your money

the most. It will also tell us how we saved the money on monthly basis. It will also show us the prediction of

savings/spending through our habit.

Major benefits in banking

- Saved overall support costs by 30%
- Decreased resolution time by 80%
- Increased chat-driven revenue by 40%
- Fast-paced communication
- 4x7 real-time assistance
- Annoyance free experience
- Improved customer retention rate
- Great customer service



A few existing virtual assistants in the industry

» ERICA – Bank of America

Probably Bank of America is the first in the industry to introduce its own virtual assistant for all banking needs. “Erica” is the financial assistant they have for the customers. Erica is AI-driven and provides predictive analytics and NLP. Customers can interact any way they want by giving commands through voice, texts, or through the mobile app.

» EVA – HDFC Bank

EVA by HDFC Bank is powered by NLP to

understand customer inquiries and provide resolution. Some of the common queries provided are accessing details about branch address, IFSC codes, nation identity card (Aadhar) linking, and account and loan details.

» ENO – Capital One

ENO is Capital One’s exclusive mobile app assistant that leverages ML to track, understand, and adapt to customer’s behavior over time. Customers will be able to pay card bills instantly, check account

balance, transaction history, and track credit limits.

» Ally Assist – Ally Bank

Ally assist was introduced to improve customer experience and assist them with bill payments, account transfers, and cash deposits. It also gives advice on customers’ spending and savings based on transactions.

Case study: One of the leading Indian banks improved its lead generation by 30

Problem: A high rate of drop-offs (high bounce rate) of customers from the informational page to the application page for personal loans.

Solution: The bank deployed a banner

chatbot on the information page to educate customers in real-time and qualify leads by setting an automated outgoing call. Based on the call, leads would then be pushed to the bank’s lead management

system.

Impact: 30x increase in qualified leads and 10x growth on the personal loan page of customers at the top of the funnel.



Conclusion

Although today’s banking chatbots lack most of the digital capabilities of Google Duplex and Alexa, they are at the forefront of customer-facing AI applications in the banking industry. Going forward,

more banks and financial institutions will choose digitally aided virtual assistants on their banking apps, and they will be more sophisticated by assisting customers to oversee their finances on their own.

Chatbots are now powered by speech-to-text/voice recognition; they can recognize customers’ speech mannerism (tone/ accent) and voice patterns.

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*For organisations on the digital transformation journey, agility is key in responding to a rapidly changing technology and business landscape. Now more than ever, it is crucial to deliver and exceed organisational expectations with a robust digital mindset backed by innovation. Enabling businesses to sense, learn, respond, and evolve like living organisms will be imperative for business excellence. A comprehensive yet modular suite of services is doing precisely that. Equipping organisations with intuitive decision-making automatically at scale, actionable insights based on real-time solutions, anytime/anywhere experience, and in-depth data visibility across functions leading to hyper-productivity, [Live Enterprise](#) is building connected organisations that are innovating collaboratively for the future.

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