PREREQUISITE

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Chatbots in Banking | Benefits, Building Blocks, Examples and Future

o Conversations with customers have become the need of the hour for businesses. Now we are witnessing a paradigm shift from mass-centred to granular, account-based approach.

o Banks and other financial institutions, who work closely with customers, and relyheavily on customer relationships, have always leveraged technology to assist them.

o First, it was internet banking in the late 90s, then mobile banking when the smartphone revolution took over the world. Now, with the advent of AI andmachine cognizance, conversational banking is on the rise.

o Conversational banking is nothing but communication between a bank and itscustomer through text, voice, or visual interface. It adds that extra touch of personalization in customer relationships.

o Conversational banking, though highly effective, comes with the hardship of effective implementation given the sheer volume of customers banks serve (or anyB2C business for that matter).

o That is why AI becomes extremely important in conversational banking. With chatbots and virtual assistants, banks can serve their customers effectively withoutspending huge amounts of time, resources, and manpower.

o In 2017, some of the major banks in the US released their chatbots and virtual assistants. According to a survey by Celent, 85% of the banks think that AI will have significant effects on banking. 32% of the banks have already started making direct investments in it.

"Customer service is the most important aspect of delivering better customer experience forbanks."

The reason why chatbots are deemed to the future of banking assistance is their capability to have personal, one-to-one conversations with customers. It gives theassurance of being taken care of to customers.

Let's now briefly look at what chatbots are and how an ideal chatbot for banking isbuilt.

Elements of building chatbots for banking

Chatbots are nothing but software programs written to facilitate conversations. Hence, they are going to be as smart as you want them to be.

Your chatbot can be a simple button-based or advanced AI-powered contextual chatbot. The amount of sophistication you want to bring depends on the use caseyou are trying to solve.

A simple chatbot that tells your account balance, fetches your statement, or transfers money does not necessarily require AI. While on the other hand, a purelyconversational chatbot is powered by AI and requires a lot of data to learn.

Irrespective of the type, you need to consider these elements to build a great chatbot for banks:

1. Channels
2. Chat interface and conversational UI
3. Rich actionable messaging
4. Security
5. Natural Language Processing
6. Fallback to humans

Let's discuss these points in detail.

1. Which channels to use ?

Chatbots can be deployed on one or multiple channels. The obvious ones are yourwebsites and banking apps. These are the platforms where customers transact.
They can also be deployed in instant messaging apps such as Facebook, Twitter, or Whatsapp.

It largely depends on the support channels you use, the audience behavior, and your use case.

Bank of America has deployed [Erica](), the financial digital assistant, on their mobileapp. While Wells Fargo has used the [Facebook Messenger bot]() to kick start their chatbots journey. Going a road a little different, Capital One has developed [Eno](), anSMS based chatbot.
The channels are not limited to textual conversations only. With the rise of DeepLearning, voice-based virtual assistants are on a rise. Probably we interact with voice-based chatbots on a daily basis. Google Assistant, Siri, Alexa, and Google Home to name a few. Few banks are leveraging voice cum text-based chatbots towiden the functionality.

2. Chat interface and conversational UI

One more reason chatbots are flouring in the banking industry is the ease of use.Instant messaging apps saw an exponential rise in the last decade.

The reason is – most human interactions are carried over short conversations. The ease of use and effort required in chatting is much lesser when compared to calling.

Hence, when you create a chatbot, make sure to keep the interface similar to that ofmessaging apps, often called conversational UI. Most people already have used some or other kind of messaging app. Hence the UI does not look alien and they can make an instant connection.

It also gives a feeling of personal touch and being taken care of. They mimic human to human interaction, which we have been actively using for the past decade at least.

You need not build the whole chat interface from scratch. The SaaS boom has

puta plethora of options on the platter. There are solutions specifically made for customer support chat that you can integrate into your website/apps easily.

Communicate comes with an option of directly integrating a chatbot into thecustomer support chat.

3. Rich actionable messaging

Rich actionable messaging makes the conversation interactive, fruitful, and easy toact upon. You can use buttons, lists, cards, and carousels. It helps speed up the whole process by providing visual, interactive, and beautiful elements in the chat itself.

Imagine the process where a customer needs to type all the things out and get answers to those queries. In place of this, rich messaging provides avenues forhandling basic cases with the click of a button.
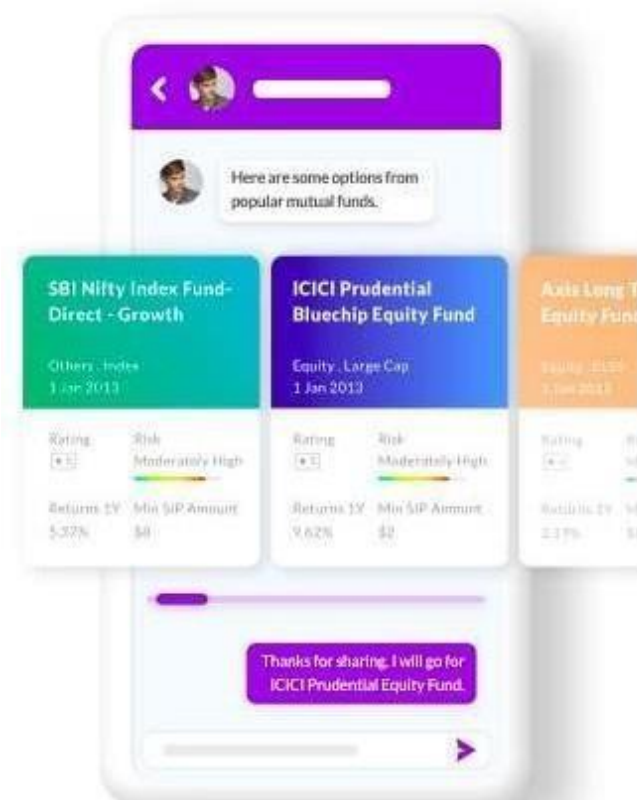
This makes it a win-win for both customers and banks alike. The sheer volume ofcustomer queries received are solved faster and the customer's need for instant gratification is satisfied.

4. Security

Data security is extremely important for banking operations due to the

involvement of financial assets. Also, a customer will be more comfortable in using conversational banking services if they trust the services.

Trust comes from ensuring good security and authentication processes. You need to have an authentication layer(s) to identify the user and authenticate transactions.

5. Natural Language Processing (NLP)

[NLP](#) is a branch of AI concerned with the interactions between computers and human (natural) languages, in particular how to program computers to process andanalyze large amounts of natural language data.
In simpler terms, NLP facilitates the chatbot to understand, process, and reply touser conversations.

Though all the chatbots do not necessarily require NLP (say button-based chatbots), but for delivering a better customer experience and keeping theconversation as human-like as it can be, NLP is a must.

As said earlier, the reason why chatbots are termed as the future of customer conversations is their ability to carry out a human-like conversation. The more youtrain your chatbot with relevant data, the better it would be.

Although, NLP is a relatively new and novice branch. There are multiple challenges associated with NLP. Most noticeably, the requirement of data and itsinevitability to fail in certain conversations.

To give you a perspective, [Capital One's Eno](#) understands over 2,200 terms and emojis people use to ask about their account balances. It may take more than a yearto fully train and develop such a chatbot. Yet, in all their glory, chatbots are not humans and are deemed to fail at a certain point in time.
Even the leading AI researchers do not have a date or year in mind for chatbots that can carry on conversations in the same depth as that of humans. Hence, it is really important to handle such cases judiciously.

6. The fallback to humans

The whole point of leveraging chatbots in financial services is to provide a great,personalized customer experience without spending fortunes on time and resources. But chatbots may not be able to answer all customer queries.

You should be able to handle these cases without breaking the customer experience. This is where [chatbot to human handoff](#) comes in handy. You can transfer the conversation on the basis of triggers that emphasize that the chatbot isunable to understand and answer.

To go a step above and improve your chatbots, you can store all these messages where the chatbot wasn't able to answer customer queries. You can feed the samequestions and answer back to the NLP system and train your bot.

This not only improves your chatbot, but also reduces cases of human interventions. Better the chatbot, happy the customer, merrier the banks.
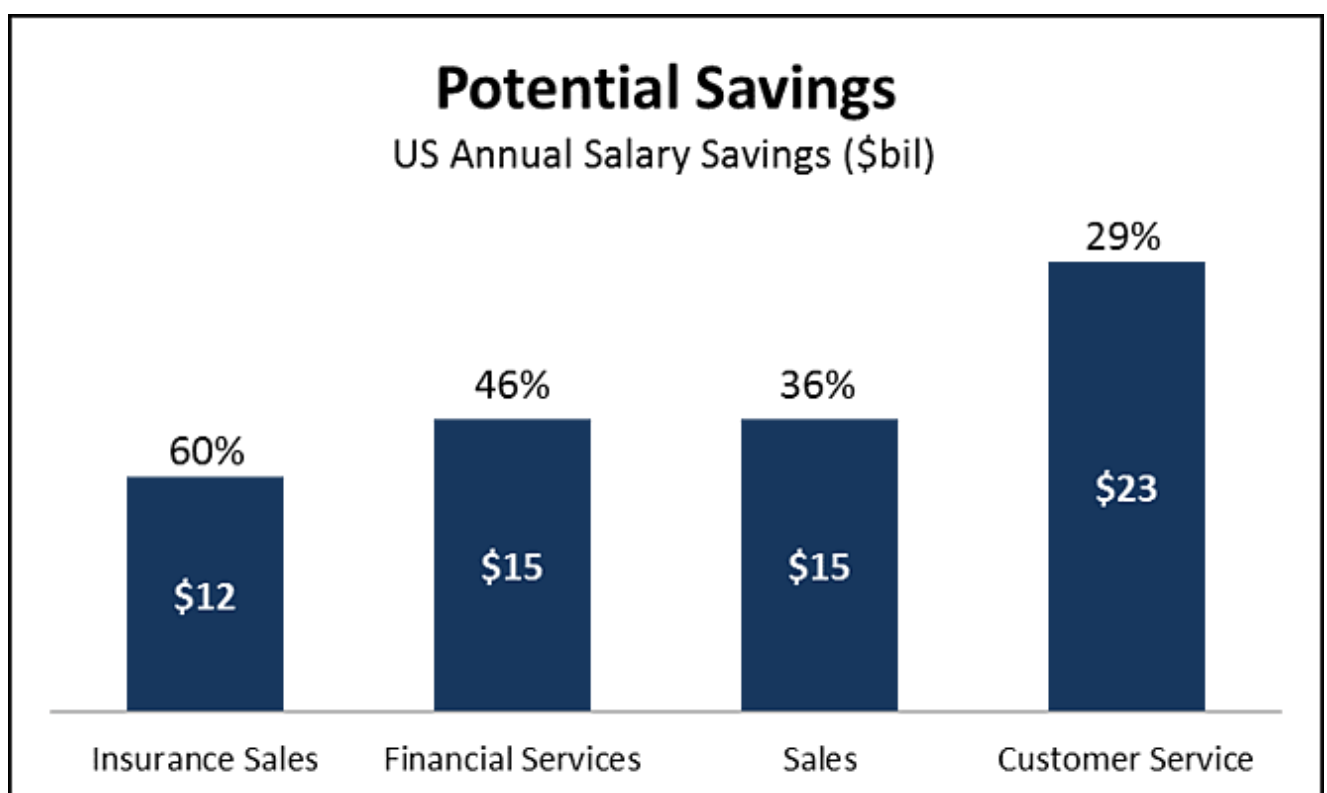
Advantages & Disadvantages of chatbots in banking

Although chatbots and customer support automation are promising, they certainly are not flawless. Let's jump into some important pros and cons of using chatbots inthe banking and financial services industry.

Advantages of using chatbots in banking customer service

1. Chatbots are faster
2. They tirelessly work round the clock and are available 24*7*365
3. Chatbots result in huge cost savings (see the graph below)
4. Chatbots free up customer support reps time by solving basic queries, so they canconcentrate on the complex ones
5. They provide a personalized experience

The figure below suggests that we can achieve a potential savings of $23 billion inthe U.S. alone using chatbots. Chatbots have the potential to automate 29% more of the tasks done by contact centre staff today.

Potential Savings
US Annual Salary Savings ($bil)

Insurance Sales	Financial Services	Sales	Customer Service
60%	46%	36%	29%
$12	$15	$15	$23

Disadvantages of using chatbots in banking customer service

1. Chatbots are as smart as they are programmed to be

2. Handling multiple languages and dialect can be a troublesome task for chatbots

3. Gathering data, cleaning it and training the chatbot with it is a lengthy process

4. They are bound to fail. AI is a developing branch and a chatbot with human-level cognizance is probably decades away

5. Reportedly, some chatbots have a low retention rate. About 40 percent of users never get past the first text, and another 25 percent drop off after the second message.

The best bet yet: Chatbot + human hybrid solution

We have arrived at a point where life without technology will be impossible to imagine let alone running a bank. We need machines to assist us and do the dirtywork while we work on complex and strategic tasks.

Machines are faster, efficient, do not tire out and can essentially work 24*7*365.But they are not smart enough, lack emotion, empathy, and human-level cognizance.

Whilst we humans may be rich in all the cognitive and emotional elements, wecertainly have physical limits.

The question arrives whether chatbots are the way to go forward or customer service needs a human touch always. The customer service industry stands divided into these two aspects. Many people prefer chatbots for offloading work and manyothers think customer service is fundamentally an emotion-driven process and must require human attention.

But we need to understand that this is not a race. In the near future, the best possible solution is to harvest the good from both humans and chatbots. The speed and eternal availability of machines, empathy, and the cognizance of humans is theway forward. Here's why:

1. Leverage speed, agility and 24*7 availability of chatbots

Banks receive numerous queries in a day, most of them are basic. Such as askingfor balance in their account, looking for loan-related documents, how to send money to their peers, and similar activities.

You can train a chatbot to understand these basic intents and provide an appropriate response. Generally, all these queries are simple FAQs and redirection links. Hence a chatbot will save you time and resources which you can deploy to solve more complex queries.

2. Leaving the complex tasks for humans

When the chatbot is unable to understand the customer query, then you can bringyour customer support agents to tackle the situation. The chatbot may fail to answer because of numerous reasons. Mainly:

1. Customer may ask a question for which the chatbot hasn't been trained
2. The language or dialect uses is incomprehensible to the chatbot
3. The query is complex
4. Or the customer wants to talk to a human

In such cases, you can leverage chatbot to human handoff and bring a human to take over the conversation. Ultimately, solving customer queries is the goal, be itsimple or complex.

3. Re-learning and improving

Given that chatbots cannot always have answers to customer queries, how do you make sure that the chatbot keeps learning? How do you make sure that the chatbotdoes not fail at the same question again and again?

The answer lies in feeding the important data from the customer conversation itself. Banks serve a wide variety of customers and from re-looking into the conversation, the chatbot can learn consumer behavior over time.

Also, it is of utmost importance that you build processes to automate the learning from the conversation between customer support agents and customers. You needto feed in the queries, questions, and triggers where chatbots failed to answer. In this way, the chatbot keeps learning new dialects, behavior, and questions. This helps further reduce the load on humans.
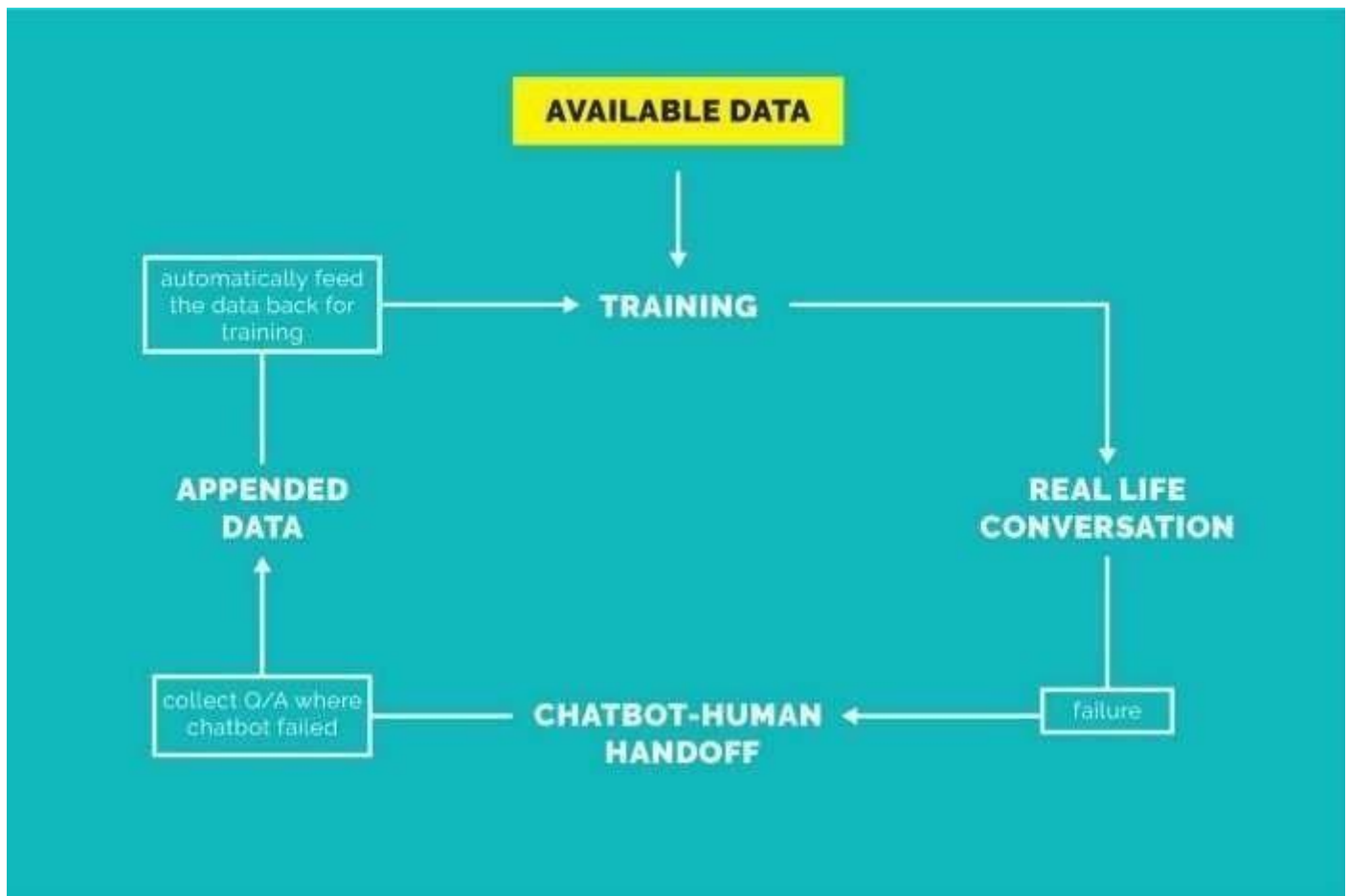
This is what we call a chatbot and human hybrid customer support system. As saidbefore, this coalition between humans and AI is the way forward in customer support.

Use cases of chatbots in banking

Banks are using chatbots for multiple purposes. Wherever there is a need for conversations or information, chatbots can pitch in.

Customer support

Chatbots have flourished in the customer support space. Their ability to efficiently solve basic customer queries (which constitutes 80% of all customer queries) fasterand efficiently makes them inherently important for customer support.

Lead generation

Chatbots can act as an additional channel for generating leads for banking products. If a user is looking for opening a savings account with good interest rates, the chatbot can provide initial details and collect contact information. The contact information can then be passed on to the sales team for further follow-up.

Information delivery

Chatbots can help deliver certain information to your customers. These are just likeFAQs delivered over chat by a chatbot. Customers can search for the nearest ATMs, how to open a new account, the procedure to get a credit card, etc.

Accountoperations

Customers can do basic account operations with chatbots such as checking accountbalance, getting statements, setting up a new account, paying bills, authenticating transactions, etc.

Back-office tasks

Another interesting use case of chatbots is to help in back-office tasks. JP MorganChase's COIN helps the team to read and analyze complex contract documents easily. It is more accurate and faster than human lawyers.

Internal support and training

A lot of banks are using chatbots to handle internal documentation, IT support, cross-team information exchange, etc. Also, chatbots are being used to onboard new customer support reps and provide initial training and support to them.

Recommendations and upselling

Chatbots are data mines. This facilitates so many customer conversations gathering a copious amount of data. These conversations can tell you about customer behavior and provide avenues to make new product recommendations or upsell the existing services.

Certainly, there are more use cases of chatbots in the banking and financial services industry. The aforementioned use cases have been tested and applied practically by numerous banks throughout the world.

Real-life examples of chatbots in banking and financial services

2017 witnessed the rise of AI in banking with many big names adopting chatbots. Chatbots are not only becoming popular in the US but also are becoming the center of attraction across European, Asian and Australian bank.