



chyme
BOTS FOR BUSINESS



A Guide to Implement your Chatbots Strategy

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Digital Delivered

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CHAPTER- 1

Chatbots Overview

Introduction to Chatbots

A Chabot is a lightweight program that enables humans to interact with systems via a Text/Voice interface. It is digital assistant that communicates with the humans through text messages, a virtual companion that integrates into websites, applications or instant messengers and helps entrepreneurs to get closer to customers. Such a bot is an automated system of communication with users. Chatbots can be used for various business operations like Customer Service, IT Help Desk, Marketing, Sales, Procurement, Supply Chain, HR, Analytics, and Finance & Accounting.



Need of Chatbots in the Enterprise



Communication has evolved rapidly in the last few years – from emails on PCs to mails on mobile and messaging on mobile. Mobile mails shrunk the conversations in size. Messaging made remote conversations more humane unlike mails.

Messaging technology has enabled people to use various messaging platforms. As per the reports from 'BI Intelligence', active monthly users of top 4 messaging apps (WhatsApp, Facebook Messenger, Viber, and WeChat) have surpassed the top 4 social networks (Facebook, Twitter, LinkedIn, and Instagram). This implies that messaging apps are going to be the platforms of the future and bots will be how users increasingly access all sorts of services.

Due to the advancements in AI, Machine Learning, Natural Language Processing (NLP), and Voice, enterprises have started opting for Chatbots for various business scenarios. Chatbots are already disrupting sales, marketing, customer service, supply chain and other business functions. This enables enterprises to enhance customer engagement/customer service, reduce costs, automate business processes, collaborate with vendors and make employees more productive.

Chatbots Vs Apps: Which one to Choose?

Enterprise system access has changed rapidly too in the last decade. Traditional web based or PC app based access reduced. People adapted to mobile apps. While mobile apps are good an app for every task is an overload and leads to app fatigue. This is where people communication and enterprise system access come together – Chatbot.

If you are about to implement your digital strategy, one of the decisions that you will have to make is whether to build mobile apps or Chatbots or both. Here are the factors you should consider before making a decision:



- **Natural Language Communication:** Mobile apps are not communicative, however, bots are intelligent and offer a conversational interface. You can't have a conversation with mobile app but you can ask a question to Chatbots in natural language.
- **Unified Interface:** We live in an era where there is a mobile app for almost every service we use. There are too many apps and it is really frustrating to download each app to use a service. So the question here is do we really need to download the app for each service? The answer is that in many cases that we do not. We can package all those information in a single messaging app where a Chatbot can offer all of the services.
- **User Experience:** Mobile Apps offer a static user experience and less personalization. In contrast, chatbots are smarter and offer a personalized user experience based on learning from past responses.
- **Cost Effective/Faster Development:** Building a mobile app often require large teams, long development cycle, GUI screens, and time to deploy and maintain the apps. However, building a Chatbot is simpler and requires very little user training that costs lesser and is deployed rapidly.
- **AI Enabled:** Chatbots become smarter over time by incorporating Machine Learning.
- **Scope:** If the functionality needed is limited, then a Chatbot may make more sense. However, if the scope is complex, a mobile app may be more appropriate.

CHAPTER- 2

Chatbots Use Cases in Enterprise

1. IT Helpdesk Support

One of the areas within an enterprise ripe for disruption is the traditional IT Help Desk. Over the past decade, enterprises have become more cost-efficient through the outsourcing of Help Desk operations. However, in order to continue driving efficiencies across the enterprise, internal workforce productivity must also rise. Here are some of the use cases of Chatbots for IT Help desk operations:



 **Julia North**
Reset my Windows Password

IT Help Desk Assistant

Hey Julia! Done. Check your email for the password link and reset your password. Can I be of assistance to you for anything else?



 **Julia North**
My iPhone is not able to connect to the office VPN after the IOS upgrade.

IT Help Desk Assistant

iOS no more supports PPTP VPN. Here's a step by step guide to connect your iPhone to the office VPN
[Connect iOS to the Office VPN](#) iOS no more supports PPTP VPN. Use the following steps to connect to the office VPN:...



- **Self-Service:** Access Knowledge Base to answer queries from users. Avoid unnecessary incidents with suggestions to solve the problems from Knowledge Base or known workaround for issues.
- **Automation:**
 - Reset passwords and other services.
 - Restart systems and services- Unlock Accounts, Enable, Disable.
 - Send alerts for routine tasks, build requests, access requests, and others.
- **Issue Management:**
 - User: Report Incident, Status Check, Add Notes, Alerts.
 - Agent: Alerts, Add Notes, Assign, Change Urgency, Impact, Assignment Group, Category, Description.
- **Reporting / Escalation**
 - Inform business heads when criticality changes.
 - View issue summary and other reports.

2. Customer Service

The potential to improve customer service while lowering the support cost makes this one of the most exciting areas of opportunity. According to a [Gartner report](#), "By 2020, customers will manage 85% of their relationship with the enterprise without interacting with a human". To enhance the customer support experience, enterprises have now started using AI-powered Chatbots (Virtual Assistant) which enables a new medium where customers can raise their concerns through Text/Voice interface.

Chatbots can play a major role in this space by automating and handling the first level customer interactions. Chatbots can free up the time of agents at Call Centers so that they can resolve the more complex tasks and increase customer satisfaction. Mundane, repetitive tasks can be performed by chatbots 24/7 with quick turn-around time that increases Call Center productivity significantly. For example, chatbots can enable various self-service scenarios like help customers check for order status, find out their tracking number, or create an incident. In a Telco environment, consumers can have their account settings reset using chatbots without the intervention of a human agent. Or consumers can notify their Insurance company of an accident by creating a First Notification of Loss using an Insurance Assistant.

Mary Granger
I want to notify a claim for a vehicle accident

Insurance Assistant
Hello Mary. Sure. Is this for your Ford Model T?

Mary Granger
Yes

Insurance Assistant
What is the damage?

Mary Granger
Wind shield is broken

Insurance Assistant
Please give the location of accident

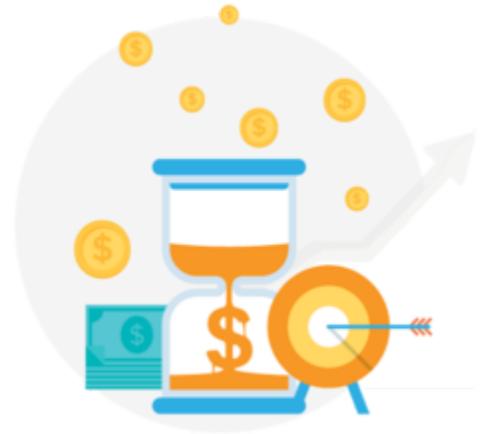
Insurance Assistant
I have created a Claim Request for this accident. The claim number is 214-768-2980. I will notify you as soon as the claim is processed.

Mary Granger
Thank You!

3. Sales & Marketing

Chatbots provide brands a new and fresh way to engage with their users in a useful way. Today, more and more marketing managers are looking for ways to build Chatbots for their brands to increase the brand awareness and engagement. There are many interesting use cases around notifications of new products or special offers by top brands.

Bots are also useful to sales teams and can be connected to the CRM to relay relevant information. Let's look at some of the best use cases where Chatbots can be efficient:



Julia North
What's my day looking like?

Sales Assistant
Hey Julia! Good Morning!
You have 3 scheduled calendar meetings and 2 activities planned starting at 9.30am and ending at 5.30pm

Julia North
Move the contract call with Bricks Inc. to tomorrow 3pm

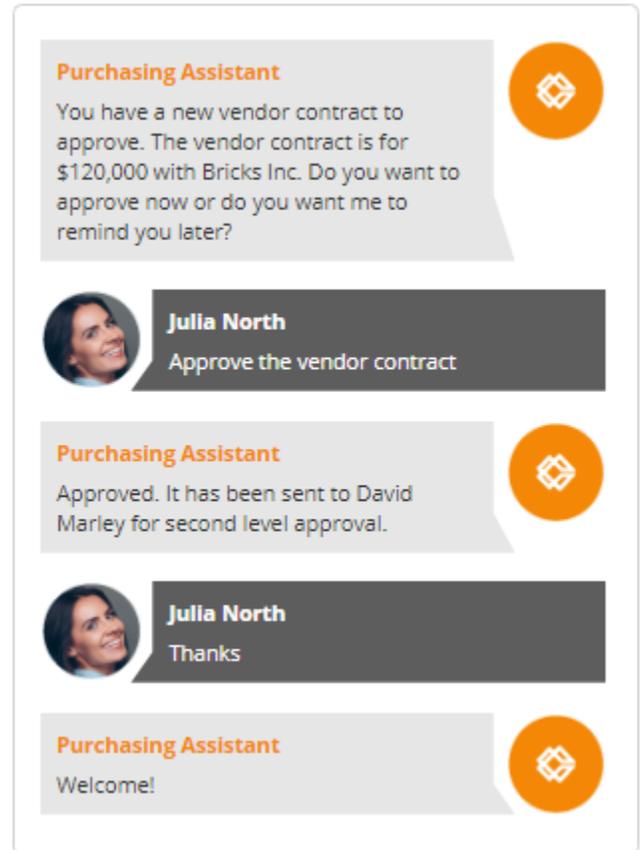
Sales Assistant
Done.

- Bot interfaces with Customer Interaction Center (CIC) systems
- Access customer data from the backend system, manage daily calendar/meeting activities, and generate sales reports
- Provides support for critical sales metrics like the stock list, revenue, receivables
- Access key information like credit history, outstanding amount/payment terms
- Automation: Create new leads, update the lead status and account formation in backend systems like SAP and Salesforce.
- Customer search, sales order search, delivery search, shipment delivery details
- Manage client meetings & calendar

4. Procurement

Provides support for both vendors and employees on simple queries like:

- Purchase Order Status
- Shipment Status
- Stock Availability
- Stock Price
- Supplier Status
- Contract details and others
- Payment terms
- Approvals of Purchase Orders
- Sales Contracts, and others to take appropriate action instantly.



5. HR Operations

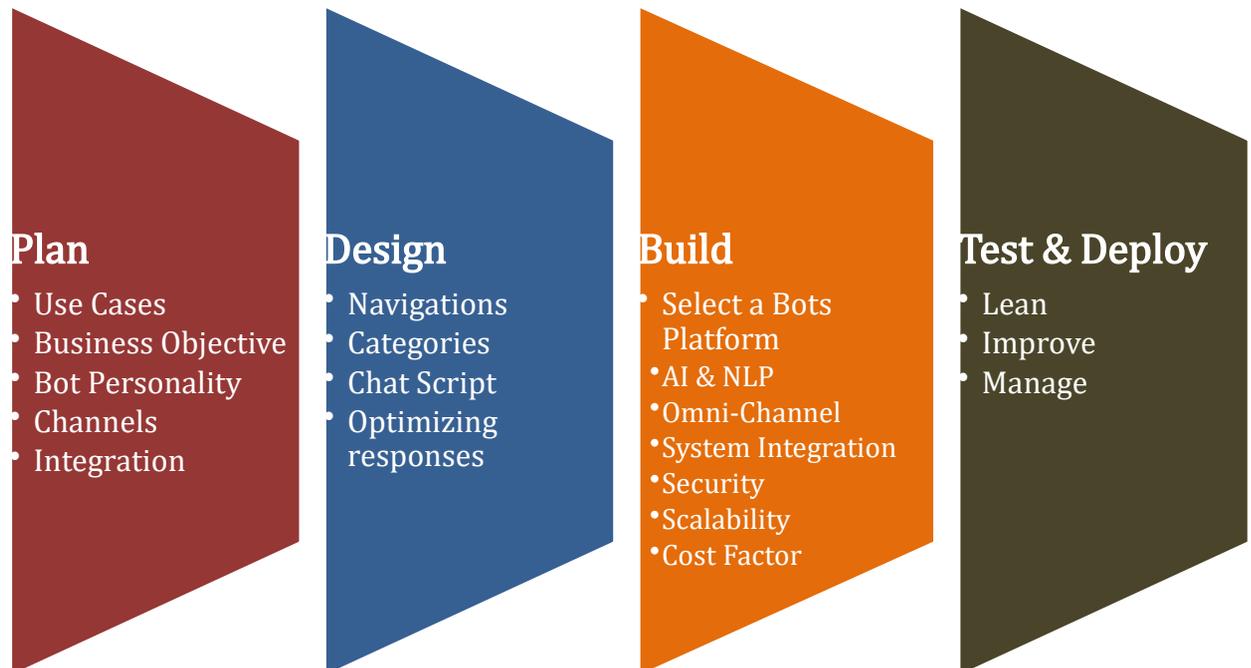


- Enable employees to easily access HR information
- Leave: Check Balance, Create, Approve
- Timesheets: Fill
- Travel Requests: Create, Approve
- Expenses: Create, Approve
- View Payroll statement

CHAPTER- 3

Roadmap to Chatbots Journey

Whether you are building a Chabot yourself or outsourcing the development to a third party vendor, it is important to plan ahead. If you are building a bot for the first time, it can be challenging. A typical roadmap to rolling out a Chatbot is as below:



1. Planning

- **Define the business objective and goals:** You should be clear on why you want to build a Chatbot and what the use-cases are.
- **Think about end users:** Think like an end user and capture some most important information they need from the Chatbots. What kind of queries it should be able to answer, how would the customer react, what he would not want etc.
- **Personality:** While deciding the personality of the bot, think about your brand image and in what situation your customers are interacting with your bot. E.g, if an insurance company wants to build a bot for the customers to notify the loss, it should be sympathetic in tone. However, if you are building a bot for Consumer Products company which wants to engage the customers on social media, the Chatbot should have a cool and charming personality.

- **Channels:** Knowing through which channel your bot will interact with the customers/employees will help you to decide in choosing the right deployment channels. Facebook Messenger, Facebook Workplace, Slack, Skype for Business, Google Assistant, and Amazon Alexa, and Web Chat are some of the most popular channels.
- **Technology:** Think about the current systems and developer tools required to build the bot. Which Bots Platform should you select? Do you need to build AI/ML powered Chatbots? What internal skill sets do you need?
- **Integration:** Identify the backend systems (SAP, Oracle, SharePoint, ServiceNow etc.) which you want to integrate with the chatbots. Do you have connectors enabled with REST, SOAP, OData, and Web Services?
- **Deployment:** On-premise/Cloud



2. Designing



- **Chatbot flow:** It is the time now to design the Chatbot's flow. It is all about taking your customers/employees through the process of using your Chatbot. You need to choose how exactly you want your Chatbot to start the conversation. Will it be pre-set buttons or users will have to text/voice or a combination of both to start the conversation?

- **Chat Script:** Preparing the content script for the inputs (questions) and output (answers) is one of the key elements for the success of Chatbots. Here is how to go about this:
 - **Existing Knowledge Base or FAQs:** If you have customer facing FAQs, the same can be utilized and users can chat and find the answers to general queries through the chat interface.
 - **Existing Chat logs/Helpdesk Agents:** Helpdesk agents (Chat/phone/email) are the one who face customer queries/complaints so they are the best resource to come with the frequently asked questions. You can use existing chat logs/ canned messages to identify the questions asked by the customers/users.
 - **Categories:** Once you have prepared a list of questions asked by the users, divide them into categories to prepare a category-specific chat script.
 - **Navigation buttons:** Put the broad categories as navigation buttons, and further break-it-down it in niche categories. This will help the user to navigate to the next step.
 - **Optimize responses like a real human:** Think like an end user and make your responses as real as possible.
 - **Share Video/Link to Articles:** If the question requires in-depth answers, you can share the informative video or link to the Knowledge Base. This will help your bot to be more informative.
 - **Prepare responses for misspelling words/Similar questions:** If your users are going to text/voice the questions, then you need to put little extra effort and prepare for the answer to questions which can be asked in different ways/misspelling words.
 - **Set responses to questions which Chatbot cannot answer:** Irrespective of whatever you prepare, there will always be questions which Chatbot cannot understand/answer. So it is important to set the humble responses like “Sorry, I could not understand or sorry I don’t understand, what you mean?”

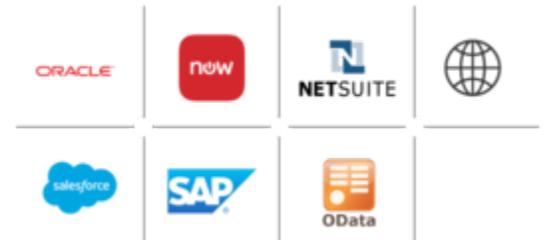
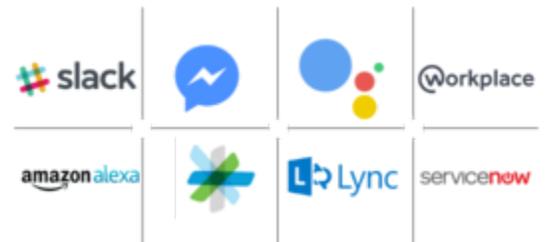
3. Development

Selecting a robust Bots platform is the key for the development of a bot which meets your business requirements. Selecting a right bot platform gives you gives you a freedom to integrate it anywhere i.e. mobile apps, web chat, or messaging apps like Facebook Messenger, Skype for Business, Slack, or Google Assistant/Amazon Alexa. Bots Platforms are designed to provide customizable, secure, scalable, and cost-effective frameworks to build, deploy, and manage the bots. It frees the enterprises and developers from building and maintaining necessary landscape and connectors to build, deploy and manage the bots.

Select a Bots Platform:

There are several bots platforms to choose from, and each one offers different features and benefits. Here are some of the top features you should be looking for while selecting a bots platform:

- **AI & Natural Language Processing:** AI and NLP are the two main reasons for the rise of chatbots. Your bots platform must be powered by AI and NLP in order to provide a conversational interface via text/speech. You should check the capability of the platform if it offers conversational interfaces such as text to text, voice to text, and Voice to Voice. Natural Language enables the bot to understand the natural human language in order to answer user queries and identify intent and parameters for executing tasks.
- **Omni-Channel:** The platform should allow you to deploy your bot anywhere from messaging apps like Facebook Messenger/Workplace, Skype for Business, Slack, Cisco Spark, to mobile apps, websites, or Voice assistants like Amazon Alexa/Google Assistant. The Omni-channel capability allows you to choose the preferred channels where your users are.
- **Integration with Backend Systems:** The platform should allow you to easily and securely connect to backend systems (SAP, Oracle, Salesforce, SharePoint, ServiceNow, and others), to access the data and response to user queries. You should check and analyze if the Bots platform has connectors such as SOAP, REST, OData, web services, Webhooks to integrate with backend systems.
- **Security:** Security is one of the biggest concerns when it comes to sharing the data with the users. The platform should offer custom methods of user authentication to ensure there is no access to information by any authorized user. Encryption should be utilized.
- **Multi-Language Support:** A Chatbot platform should support multiple languages in order to support the users in their preferred language. The multi-language capability allows you to deploy the bot anywhere and users can interact with the bot in their own language.
- **Deployment:** The platform should support both on-premise and cloud deployments. Depending on how a cloud or on-premise deployment supports your organization's policy for data security and operational compliance.



- **Scalability:** The volume of chat interaction doesn't remain same all the times and if your bot platform is not scalable, then there will be technical glitches at the time of high demand. So select a bot platform that has enterprise-grade scalability so that it can handle fluctuating demands with ease without affecting Chatbot functionality.
- **Cost Factor:** Cost structure varies across the platforms so choose a platform which suits your budget. Check out their licensing models and detailed terms & conditions and choose wisely.

4. Test, Learn, Improve & Deploy

Once you have built the bot, test it with a small group of users. Analyze the chat log, user behavior, bot's real-time response and usage statistics (no. of messages, users) etc. There may be few unexpected actions from the users that might result in additional requirements and user stories that need to be addressed. You should learn and enable continuous improvement of the bot based on incorrect bot responses, user experience, and additional load on users. Analyze the KPIs that were set out to be achieved through the Chatbot to improve the bot capabilities and measure the success.



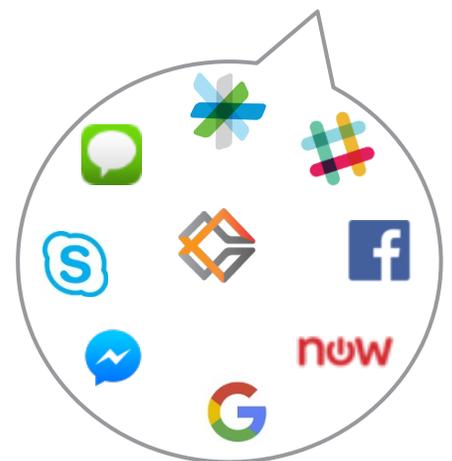
CHAPTER- 4

Get Started with Chyme

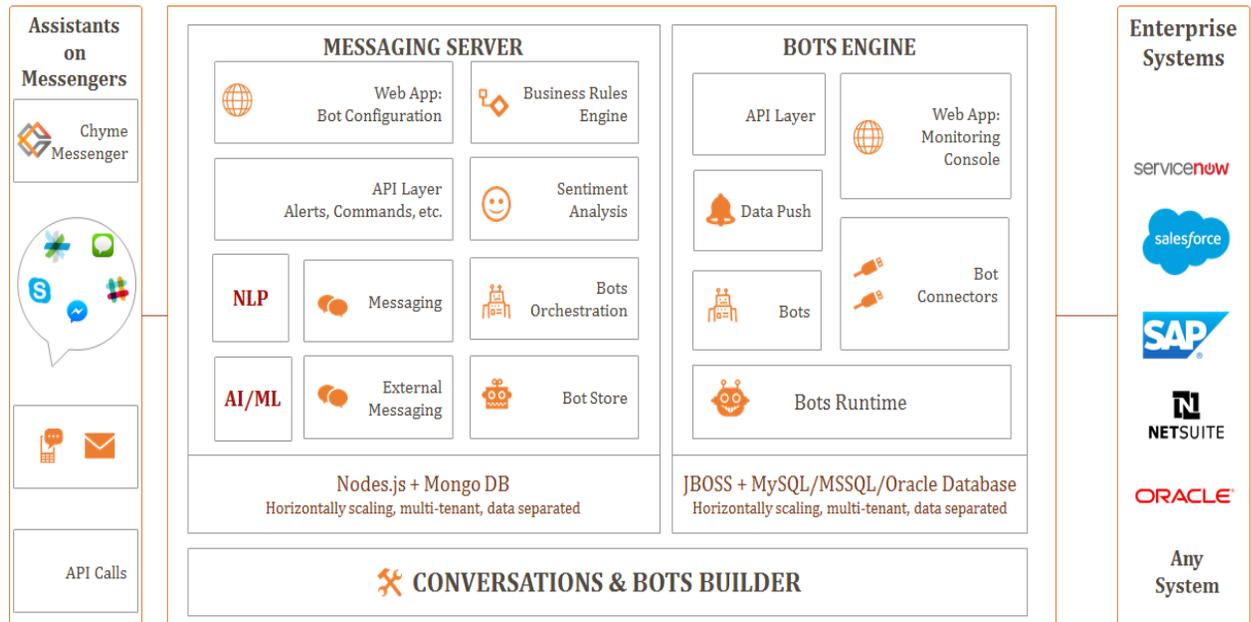
Chyme is an enterprise Bots Platform to build AI and NLP enabled Chatbots/digital assistants for customers, employees, and partners. Chyme offers a scalable, customizable, and secure Bots platform to build AI enabled chatbots for various use cases such as IT Helpdesk, Customer service, Sales & Marketing, Procurement, Customer Engagement, HR or any custom needs.

Why Chyme:

- **AI Powered:** Build AI enabled chatbots that enable a conversational interface with systems- both Text and Voice.
- **NLP Engine:** Chyme uses an award-winning Natural Language Processing (NLP) engine enhanced by additional customization to enable free-flowing conversations. Chyme's Natural language suggestions for users to ease and speed up interaction
- **Conversational Interface:** All conversations are contextual: Text to Text, Text to Speech, Speech to Text
- **Knowledgebase Search:** Chyme has built-in algorithms to recognize and score knowledgebase search results and improve the user experience.
- **Integrates with any Enterprise Systems:** Enables a Conversational Interface (Chatbots) with systems like SAP, Oracle, SharePoint, ServiceNow, Salesforce, and others to Simplify Work.
- **Omni-Channel Interaction:** Enables an Omni-channel experience allowing the users to perform their work from their preferred messaging/speech platform such as Slack, ServiceNow, Facebook Messenger, Facebook Workplace, Skype for Business, Cisco Spark, Google Assistant, Amazon Alexa and others via text/voice.
- **Technology:** Chyme incorporates an award-winning Natural Language Processing (NLP) engine enhanced by additional customizations, open source Machine Learning/AI technology, and a Visual Conversation (Dialog) Builder.
- **Deployment:** Cloud and On-Premise
- **Security:** Supports enterprise-grade user security, channel security, and data security.
- **Support multiple languages,** sentiment analysis, monitoring, and complete audit trails.



Chyme- Architecture:



Chyme- Featured Chatbots

- IT Helpdesk/ITSM Assistant-integrated with ServiceNow
- Sales Assistant
- Marketing Chatbot for Brand Promotions
- Procurement Chatbot-integrated with SAP
- HR Chatbot--Leave
- P&C Insurance Chatbot/Claims Assistant
- Custom chatbots



CHAPTER- 5

Customer Case Studies

1. Global Beverage Company

Business Benefits	Use Cases	Highlights
<ul style="list-style-type: none"> • Increase Brand Awareness • Enhanced Customer Engagement • Drive Incremental Sales 	Marketing Chatbot (Facebook Messenger)	<ul style="list-style-type: none"> • Promote beer brand to consumers on Facebook Messenger • Scan QR code/Integrates with Lottery Engine • Enter code/Consumers served “Moments” & Redeem awards • Enhance Consumer Engagement during Sporting event • Engage with hundreds of thousands of consumers
<ul style="list-style-type: none"> • Reduces costs of Call Center • Enables agents to Focus on Customers 	Sales Chatbot for Customer Interaction Center (CIC) <ul style="list-style-type: none"> • Reduce calls to CIC from internal salespersons • CIC Resources can handle more calls from external customers 	<ul style="list-style-type: none"> • Virtual Sales Assistant • Check Cooler Logs, Credit Info, Order Status on entering customer • Integrates with SAP ERP and SAP CRM • Transfer to human agent, if needed
<ul style="list-style-type: none"> • Lower cost of Development • Simpler to Use 	HR Chatbot	<ul style="list-style-type: none"> • Apply for Leave; Approve Leave • Integrates with SAP ECC 6.0
<ul style="list-style-type: none"> • Lower cost of Development • Simpler to Use • Faster Decision Making 	Procurement Chatbot	<ul style="list-style-type: none"> • View and Approve PO • Workflow enabled • Integrates with SAP; Voice based via Google Assistant

2. MFX Services

Business Benefits	Use Cases	Highlights
<ul style="list-style-type: none"> • Reduced IT Helpdesk costs • Enhanced agent productivity • 24/7 self service option for end users • Simplified Text interface for End Users 	IT Helpdesk Chatbot	<ul style="list-style-type: none"> • Conversational Interface • Self-Service – Reset Passwords, Unlock Systems • Knowledge Base Search • Out of the box integration with ServiceNow • Handover to human agents with chat script for complex queries

3. Global Cigarette Manufacturer

Business Benefits	Use Cases	Highlights
<ul style="list-style-type: none"> • Increased Branding • Enhanced Consumer Engagement 	Promote new Products	<ul style="list-style-type: none"> • Chatbot deployed on Facebook Messenger • Consumers locate nearest store • Schedule appointment • Russian Language Chat Scripts

CHAPTER- 6

Lessons Learned

Over the last few years, we have developed intelligent chatbots for various business scenarios such as IT Helpdesk, Customer Service, Brand engagement, HR, and others. Based on our experience, here are the lessons learned for building and deploying the chatbots:

- **User experience:** Creating a Chatbot is for more difficult than mobile app or website in terms of user experience (UX). Chatbots have no GUI interface or screens in comparison to colorful dashboards, menu and header etc. So designing a Chatbot means to integrate all the functionality in a new type of user interface: the conversation. The user experience needs to be very simple and intuitive. A user can express “intent” in many different ways, and the bot needs to be trained to understand the emotions of the users and respond appropriately.
- **Conversational Interface- Text vs. Voice:** While Voice is the most natural way for humans to communicate, there is no denying the fact that text has widely been adopted by businesses as their preferred communication mode. It depends on the purpose and context for a chatbots use case to decide which one to use. You need to consider your audiences and their environment.
- **Ease of Development and Continuous improvement:** Selecting a robust platform is the key for the successful development of Chatbot. It should offer customizable, secure, scalable, and cost-effective frameworks to quickly build, deploy, and manage the bots. There will always be few unexpected actions from the users that might result in additional requirements. So you need a reliable maintenance support with quick turnaround time which assures that your application will run smoothly and consistently.
- **Integration:** This is one of the most important factors you should look for while selecting a software vendor. Bots are part of a larger ecosystem, and if it doesn't integrate with your existing systems, it means extra work to handle requests coming through this new channel and ultimately lack of consistency for the user. So make sure that your Chatbots integrate with enterprise systems like SAP, ServiceNow and others to simplify work and easy access to data.
- **Multi-Channel Interaction:** Build it once and enable any channel. Ensure that your Chatbots can be deployed Multi-channel so that your users can continue to do their work on their preferred messaging platform—be it Slack, Skype, Microsoft Teams, Facebook, or any others.



- **Focus:** We have seen Chatbots those try to handle too many tasks in the beginning usually fail. Bots that do one thing well are more helpful than bots that do many things poorly. So Chatbots need focus on helping the user achieve a related set of limited tasks. They are best developed for specific Use Cases like Sales, Customer Service, IT Help Desk as opposed to being a generic Chatbot. At the early stage of bot development, you should focus on the most important use cases and minimum viable domain knowledge required to perform the tasks. Adopt an iterative design approach and evolve the Chatbot later.
- **Security:** Data in transfer and at rest needs to be encrypted. Given that each company has its own security, cloud and related IT policies deployment flexibility is also necessary. Support for Public Cloud, Private Cloud or On-premise is a necessity. Audit and other security logs are also mandatory.
- **Multi-Language Support:** The multi-language capability allows you to deploy the bot anywhere and users can interact with the bot in their own language, be it English, French, Spanish, Russian or any other language.
- **Artificial Intelligence:** Your Chatbots need to get smarter over the time by incorporating Machine Learning. The bots need to learn from past interactions and improve the response based on its effectiveness.
- **Scalability:** For the consumer-facing bots, it is very difficult to predict the amount of traffic the bot will be exposed to but anticipating the sudden traffic increase stress and load testing needs to be performed to ensure that Chatbot can scale up as the number of users increases.
- **Data Privacy:** The Chatbots need to comply with GDPR and other regulations and capture any personal data after taking express consent from the user.



Want Chatbots for Your Enterprise?



Contact Chyme for a Personalized Demo.

[Request a demo](#)

About Unvired

Unvired delivers solutions to enable the Digital Enterprise. Unvired has developed Chyme, an Enterprise Bots Platform to easily build Digital Assistants (Chatbots) for IT Helpdesk, Sales, Marketing, Customer Service, Procurement, and other scenarios. Chyme powered bots are Omni-channel and can be invoked from Slack, Microsoft Skype for Business, Facebook Messenger and Workplace, ServiceNow Connect, Salesforce Chatter, Cisco Spark, Chyme Messenger, and other Messaging apps. Unvired also offers a Mobile Application Development Platform and Out of the Box as well as custom Mobile Apps. Unvired enables businesses to Work Smarter by turning Artificial Intelligence (AI) enabled conversations with Enterprise systems into actions. Headquartered in Houston, Texas, and with customers in N. America, Europe, S. Africa, ANZ, Middle East and APAC, Unvired enables its clients to realize the benefits of enterprise mobility as well as deploy intelligent chatbots that integrate with systems like SAP, ServiceNow, Oracle, Salesforce, and others.

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