



## Driving Enterprise Chatbot Adoption

Simplify to Conquer

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## Enterprise chatbots: redefining the workplace

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Chatbots provide an effective medium for enterprises to enhance the end-user experience through personalized and high-touch services in a cost-efficient manner.

The concept of the chatbot is evolving as next-generation technologies continue to mature.

The chatbot for the digital age takes an experience-centric view by leveraging the concepts of machine learning and natural language interaction.

The enterprise chatbot landscape is undergoing a significant shift, driven by the transformation to the digital workplace. Enterprise interest in chatbots is accelerating as a result of the need to deliver on the twin mandates of user experience and productivity:

- **About 70% of large enterprises** believe that virtual service desk agents will be the primary point of contact for their service desk operations by 2020
- By 2025, more than **75% of the global workplace will comprise millennials**, with many of them in influential decision-making roles, a change that we expect to further accelerate the preference for a bot-first user interaction model within the enterprise landscape

Against this backdrop, chatbot adoption is on the rise, as enterprises look for ways to improve user experience and increase productivity in a cost-effective manner.

The chatbot landscape is now entering the third generation of technology evolution. The first- and second-generation chatbots focused on reducing manual intervention and providing cost efficiencies. In a leap forward, the third-generation chatbot leverages machine learning and automation to provide a marked increase in user experience and productivity.

To realize adoption benefits, enterprises need to overcome siloed adoption and internal change resistance and clearly define the business case. Relatedly, they must devise a well-defined planning and implementation strategy to reap the benefits of chatbot adoption.

This report:

- Delineates the benefits of chatbot adoption
- Examines the current state of enterprise chatbot adoption
- Introduces the key features and lifecycle of a user-centric chatbot
- Suggests best practices for enterprises as they expand their chatbot adoption

## Enterprise chatbots: the future of work is here

### Everest Group take:

The focus of the digital workplace is achieving the dual mandate of enriching user experience and improving productivity.

A planned chatbot implementation can play a significant role in achieving this dual mandate by offering effective and personalized engagement to users.

### Heralding a new era of enterprise chatbots

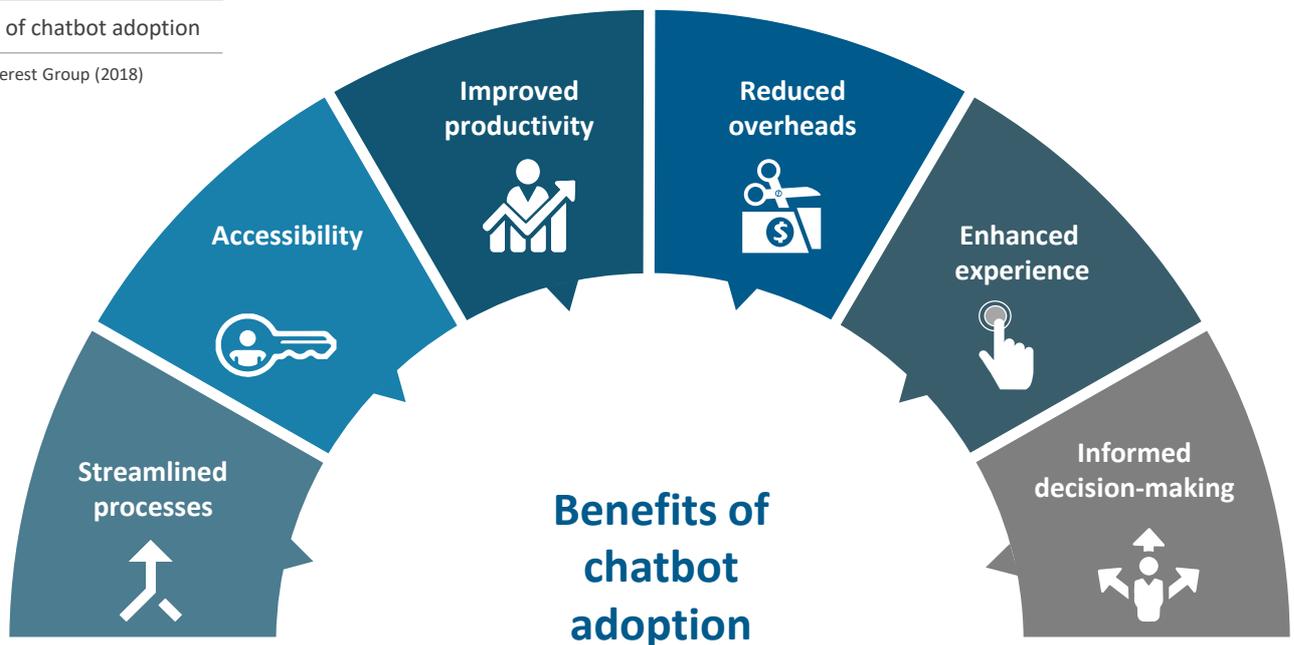
The digital revolution has led to increasing demand for a ubiquitous, consistent, and personalized experience across channels. Chatbots create new avenues for enterprises to effectively engage the workforce.

The concept of chatbot has undergone a significant shift in the last five years, moving from a cost-focused approach to an experience-centric approach. From automating mundane, repetitive tasks, chatbots are evolving to integrate with Artificial Intelligence (AI), Machine Learning (ML), and Big Data platforms to deliver tangible business value.

#### EXHIBIT 1

#### Benefits of chatbot adoption

Source: Everest Group (2018)



## State of enterprise chatbot adoption

### Everest Group take:

Enterprise adoption has been largely focused on first- and second-generation chatbots built for cost reduction. The increasing maturity of next-generation chatbot platforms, geared toward delivering superior user experience and personalization, has given birth to third-generation chatbots.

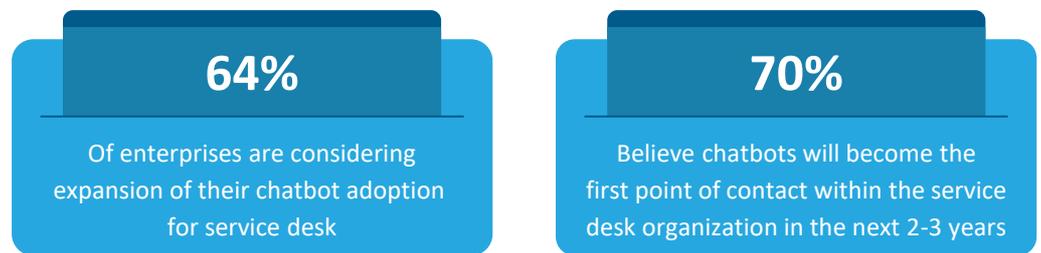
Enterprise demand for chatbots is on the rise as focus shifts toward business outcomes and user experience. In fact, 70% of CIOs in large enterprises<sup>1</sup> believe that chatbots will become the primary interface for the service desk within the next two to three years.

### EXHIBIT 2

#### Chatbot adoption outlook

Source: Everest Group (2018)

Chatbot adoption is gaining momentum due to the emergence of next-generation platforms that leverage ML and AI to improve the efficiency and effectiveness of the chatbot



### The third-generation chatbots are the future

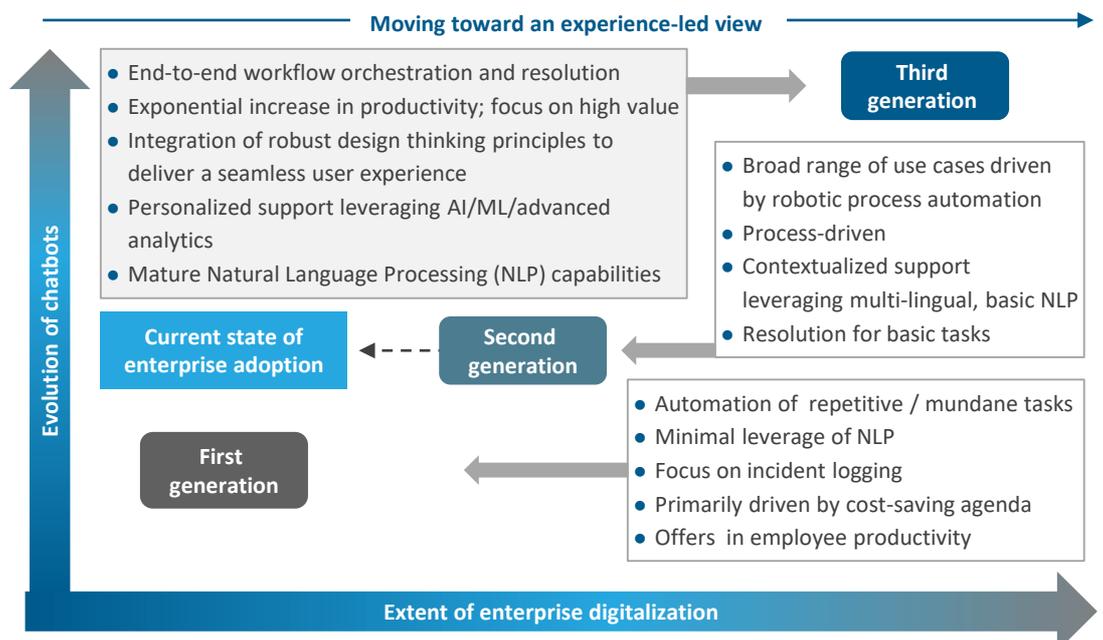
The digital workplace construct is leading to an evolution in the enterprise chatbot landscape. Third-generation chatbots are focused on improving user experience and efficiency, leveraging next-generation technologies such as ML and AI.

The growth in the number of advanced chatbot platforms, such as Watson, Microsoft Bot Framework, LUIS, Api.ai, Wit.ai, and the recent chatbot analytics platform from Google Chatbase, is generating credible enterprise interest for third-generation chatbots.

### EXHIBIT 3

#### Evolution of Chatbots

Source: Everest Group (2018)



<sup>1</sup> Global revenues > US\$ 1 billion

The emergence of next-generation chatbot platforms has opened up possibilities to enhance chatbot functionality and deliver on the promise of user-centric services.

#### EXHIBIT 4

##### Benefits of leveraging chatbots

Source: Everest Group (2018)

Platform	Key features
<b>IBM Watson Conversation</b>	<ul style="list-style-type: none"> <li>• Guided data discovery and automated predictive analytics</li> <li>• Natural language interaction with multi-lingual support</li> <li>• Pre-built chatbots; built on a neural network</li> </ul>
<b>Microsoft LUIS</b>	<ul style="list-style-type: none"> <li>• Active learning to develop context and understand user intent</li> <li>• Natural language interaction with multi-lingual support</li> <li>• Pre-existing models from Bing and Cortana</li> </ul>
<b>Dialogflow (previously Api.ai)</b>	<ul style="list-style-type: none"> <li>• Machine learning to understand user intent</li> <li>• Natural language understanding with multi-lingual support</li> <li>• Pre-defined knowledge repositories</li> </ul>
<b>wit.ai</b>	<ul style="list-style-type: none"> <li>• Machine learning to develop better context of user input</li> <li>• A developer interface to ease the development process</li> </ul>
<b>AgentBot</b>	<ul style="list-style-type: none"> <li>• Memory coherence for long conversations</li> <li>• Obtains user information to provide a personalized experience</li> <li>• Natural language interaction and machine learning to contextualize user input</li> <li>• Provides related information in the absence of an automated solution to a query to enable faster decision-making</li> </ul>
<b>Semantic Machines</b>	<ul style="list-style-type: none"> <li>• Communication based on context</li> <li>• Self-updating learning framework to maintain context</li> <li>• Language-independent architecture</li> <li>• Machine learning in real-time to improve its understanding of semantics</li> </ul>

The common features across these platforms include ML to develop context, customized interactions based on user input, and an omnichannel & personalized experience.

Apart from next-generation chatbot platforms, the increasing levels of speech recognition accuracy of voice-based chat platforms such as Amazon Alexa, Google Now, and Apple Siri will create an enhanced demand for voice-based chat within the workplace in the medium-/long-term.

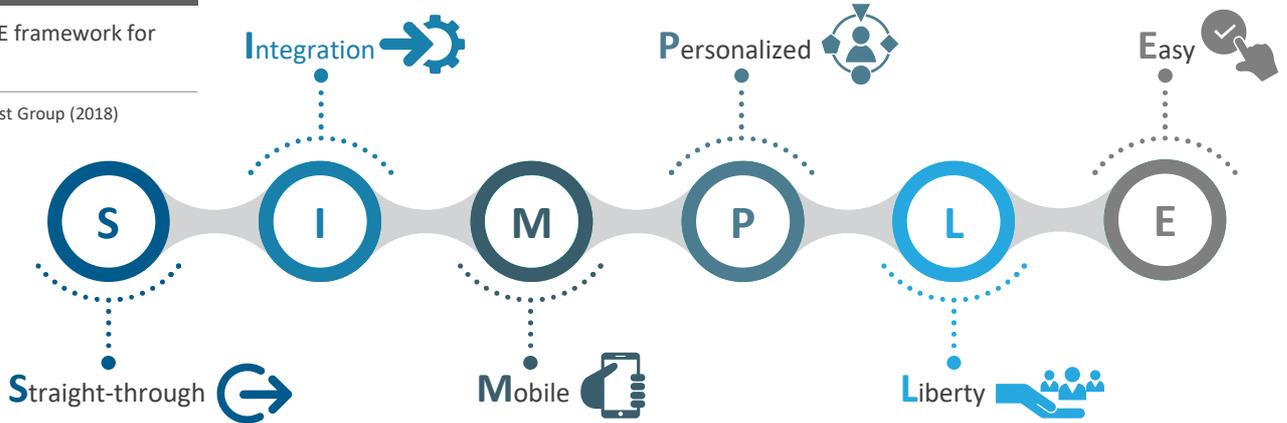
Third-generation chatbot: chatbot for the digital age

Third-generation chatbots need to have simplistic, intuitive, and user-friendly design and features, and a robust functionality set covering a wide variety of use cases.

EXHIBIT 5

The SIMPLE framework for chatbots

Source: Everest Group (2018)

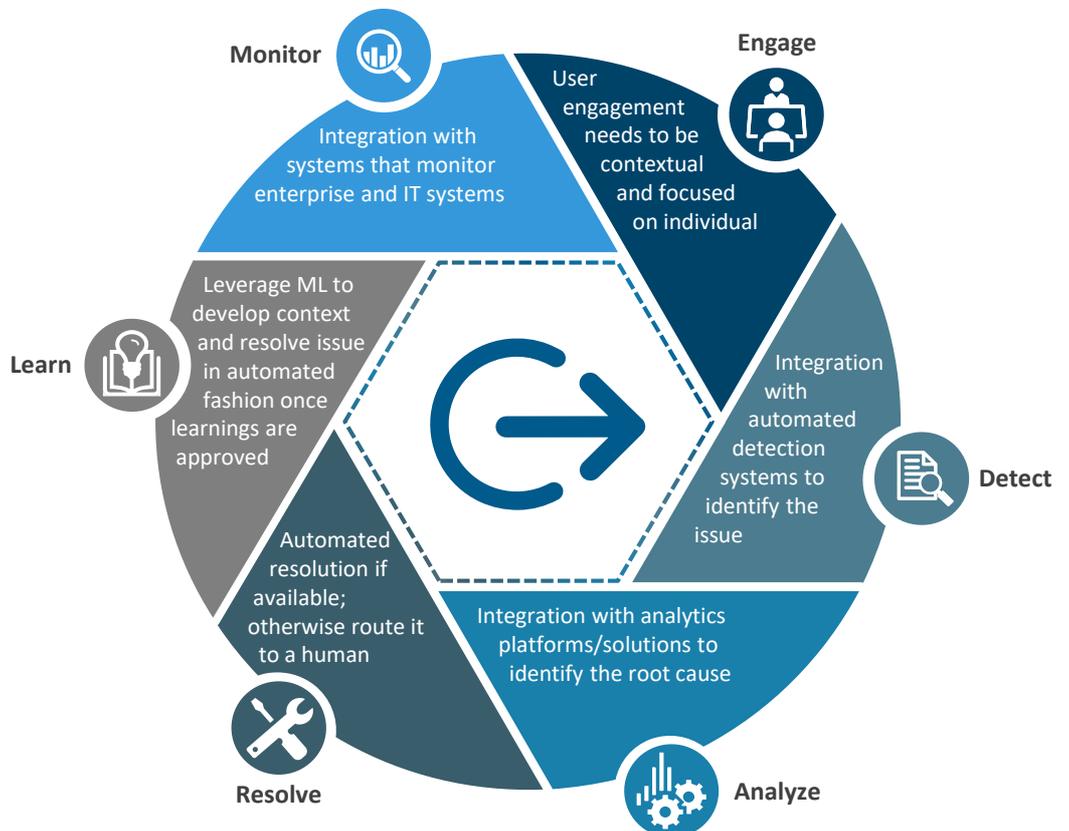


1. **Straight-through processing:** Leverage analytics and automation to deliver end-to-end workflow orchestration and resolution. As the chatbot keeps learning, the focus will eventually shift from a reactive resolution mechanism to proactive detection and resolution

EXHIBIT 6

Straight-through process for a user-centric chatbot

Source: Everest Group (2018)



2. **Integration:** Is technology-agnostic and has the ability to integrate seamlessly with a multitude of platforms including discrete collaboration suites (e.g., Slack, Yammer, and Facebook), enterprise systems, and multi-channel interface (e.g., text/voice inputs)
3. **Mobile:** Chatbots need to be ubiquitous with any time, anywhere, and any device access to deliver on the promise of the digital workplace. For example, a service desk agent needs to be able to approve an automated resolution from his/her mobile device, irrespective of the location
4. **Personalized experience:** Contextualized chat support to the individual based on person-specific analytics in real time. For example, integrating with an employee's calendar to check for scheduling options
5. **Liberty:** In a truly user-centric workplace, users need to have support through the channel of their preference (e.g., chatbot offering the option of human-aided assistance based on user preference). Excessive focus on shift-left strategies, although effective for cost optimization initiatives, may lead to user frustration. The chatbot needs to provide flexibility to the user by offering the option of human-aided assistance
6. **Ease of use:** Designing the chatbot interface and functionality in a user-friendly manner that is simple and easy to understand. Examples include:
  - A voice-based chat interface (providing access to either a voice-based chat platform such as Alexa or a human agent, based on preference) within the chat window. This provides the flexibility of choosing the channel of communication through a single, unified interface, thus ensuring that the user has a single destination to access multiple channels of communication
  - Integration of the chat window of the chatbot with the chat window of the human agent – i.e., in case the chatbot directs a user to a human agent, the chat window is retained so that the human agent has the requisite context and can jump directly to resolution
  - Multi-lingual support catering to specific user requirements

## Enterprise chatbots: distilling reality from hype

### Everest Group take:

The enterprise chatbot landscape is seeing strong demand due to the potential business value it can offer. However, enterprises still struggle to obtain value from chatbots due to a lack of strategic focus.

Chatbot adoption requires a well-defined planning, implementation, and maintenance roadmap wrapped around a strong business case to realize benefits commensurate with promised value.

### EXHIBIT 7

#### Chatbot adoption: Myth vs. Reality

Source: Everest Group (2018)

Myth	Reality
Enterprises are still on the fence in terms of considering chatbot adoption	Enterprise interest is at its peak due to the value chatbot adoption can deliver
Chatbots are not as efficient as they are hyped to be	A proper roadmap for chatbot adoption can offer significant progression in terms of user experience and productivity
Chatbot deployment and maintenance are easy	Chatbot deployment needs to be based on robust design thinking principles to realize potential benefits
Chatbots need to be sophisticated and mimic human intelligence to be effective	Chatbots need to be simple to understand and use and focused on solving user-specific issues in an efficient manner

Some successful chatbot use cases that bust the myths related to chatbots include:

- Bank of America:** Launched the AI-based chatbot, Erica, to advise customers on financial decisions, any time and anywhere  
 With a focus on enhancing the consumer’s digital banking experience and enabling smarter decisions for the user, B of A laid out a design and implementation roadmap 9 to 10 months prior to the launch of the chatbot
- SEB, Nordic Bank:** Adopted a virtual service desk agent to automate repetitive employee queries and basic knowledge-based queries. Through continuous learning, the virtual service desk agent aims to solve more complex queries in the future  
 The primary focus was on enhancing user experience and enabling optimal use of the service desk personnel
- Shell Oil:** Launched two virtual self-help assistants on the Teneo platform to provide information on its lubricant products and get personalized, automated responses  
 The bots leverage natural language interaction and provide contextualized responses

## Best practices / checklist for enterprise chatbot adoption

The journey toward the adoption of a user-centric chatbot strategy will present its own set of complexities in the short- to mid-term. The onus is on the enterprise and its service partners to devise a chatbot strategy with a business context to drive meaningful improvements in user experience and productivity.

- **Phased adoption:** Adopt a phased approach to chatbot implementation. Enterprises need to look initially for a minimum viable product that can reduce manual intervention by automating the bulk of repetitive and tedious tasks such as password reset, scheduling appointments, shutting down remote systems, remotely restarting services, and file monitoring. The successful implementation of an initial pilot should pave the way to a logical progression of features/functionality to derive maximum business value
- **Change management:** An important pitfall that enterprises need to guard against is the risk of organizational inertia to change. This can be avoided by leveraging a two-pronged approach:
  - A top-down approach to drive chatbot adoption where buy-in from the business leadership trickles down to individual business units
  - A bottom-up approach to evangelize the benefits of chatbots and drive a greater adoption among senior employees
- **Technology-agnosticism:** The chatbot needs to be able to integrate with multiple enterprise systems and platforms to provide breakthrough business value and straight-through processing capabilities. Leverage of open-source technologies for underlying tools and components is an important consideration in designing and developing a chatbot
- **Skill development and organizational restructuring:** The automation of repetitive tasks will enable service desk personnel to focus on more complex tasks. This requires three levels of talent investments:
  - Upskilling initiatives to enable the service desk personnel, specifically L1 and L0 personnel, to provide support for complex tasks
  - Investment in talent for automation and security to enhance the performance of the chatbot
  - An organizational structure that enables collaboration between service desk agents and domain experts
- **Clarity of purpose prior to adoption:** Enterprise adoption of chatbots should be driven by a strong business case and a strategic purpose. Having a proper implementation strategy and associated business objectives/goals in place prior to chatbot adoption is key to the success of an enterprise chatbot initiative

- **Leverage of analytics to measure adoption and effectiveness:** Enterprises need to monitor user adoption of chatbots and analyze the user experience through real-time analytics. The effectiveness of chatbots should be monitored through dashboards to improve bot accuracy and user experience, and to optimize overall performance. Leveraging chatbot analytics platforms such as Google Chatbase is a potential option
- **Well-defined metrics to measure chatbot success:** Enterprises need to have a well-defined set of metrics that aligns with their business and IT strategies to measure the success of chatbot initiatives. Some of the key metrics that may be included are:
  - Percentage of reduction in resolution time leveraging chatbots
  - Percentage of reduction in manual effort
  - Percentage of incidents/requests resolved end-to-end through chatbots
  - User experience/satisfaction index
  - Percentage of users leveraging chatbots as their primary channel of communication
- **Proper backup mechanisms in case of chatbot failure:** Enterprises need to ensure that user experience levels are not compromised due to chatbot shortcomings. This can include different scenarios:
  - In case of inefficiencies in understanding user intent, the chatbot needs to have fallback messages to tactfully redirect the user to a human agent
  - In case of a failure to respond or providing an out-of-context response due to lack of training on a specific use case, the user needs to be provided with the option of being redirected to a human agent within the same chat interface

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