HFS Top 10 Cognitive Assistant Service Providers
Excerpt for Cognizant

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Introductions and Definitions
Introduction to HFS Top 10 Cognitive Assistant Service Providers

» Cognitive agents are part of conversational services that are poised to have a significant impact on business operations. They also have the potential to help create organizations that are more agile, predictive, and customer-centric, in the way that we have outlined with our HFS Digital OneOffice framework.

» In this inaugural HFS Top 10 research, we explore the emerging service provider ecosystem for conversational services that we call cognitive assistants—the intelligent, automated interactions that replace or augment human customer-facing transactions and processes and internal enterprise interactions and processes.

» HFS Research sees cognitive assistants as the combination of conversational interaction and process execution capabilities; it combines characteristics of smart analytics and artificial intelligence. These services can include front-office facing elements (e.g., conversations with end customers) and internal employee use cases (e.g., help desk, HR onboarding, assisting contact center agents).

» The goal of this HFS Top 10 research is to help you understand services that incorporate the cognitive assistant capabilities and use cases that go well beyond traditional chatbots and IVR to have a greater impact on business outcomes.

» We based this research on interviews with 300 enterprise clients of IT services from the Global 2000 in which we asked specific questions about innovation and execution performance of service providers assessed. We augmented the research with information collected in Q1 and Q2 2018 through provider RFIs, structured briefings, client reference interviews, and from publicly available information sources.

» The research provides a comprehensive assessment of 19 service providers—Accenture, Cognizant, Concentrix, Convergys, CSS Corp, DXC, EXL, Genpact, HCL, IBM, Infosys, LTI, Sitel Group, Sutherland, TCS, Tech Mahindra, Teleperformance, Wipro and WNS—based on their execution ability, innovation capability, and the voice of the customer. Service providers may have developed these technical capabilities internally or are using partners to execute services related to cognitive agents (or both).

» The service providers we evaluated use various terms including smart agents and virtual assistants; thus, in the profiles, there are some variations on naming conventions used with regard to the providers’ respective solutions and go-to-market strategies. We think it is much more important to understand what business problems these bots solve (rather than what they are called), the services they provide, and the opportunities they present. Cognitive assistants can combine characteristics of conversational and voice-focused services, but ultimately are more sophisticated virtual assistants with the ability to learn and the potential to substitute for human-agent interaction.
Service providers assessed in this report
Cognitive assistants represent a combination of conversational interaction and process execution capabilities

» Cognitive assistants are part of the evolution on the continuum of service agent automation and intelligence.

» “Dumb bots” become more intelligent bots as they gain experience; these more sophisticated cognitive assistants are poised to significantly impact business operations.

» Most people are familiar with more consumer-focused conversational assistants like Alexa and Siri or traditional chatbots that provide automated conversations using rules-based programming. Enterprise-level cognitive assistants, while still nascent, have learning and processing capabilities that transcend those basic conversational tools.

» At the more sophisticated end of the spectrum, cognitive assistants will have the abilities to self-learn, self-remediate, and execute on business processes. They are also often able to understand structured and unstructured data and to use natural language processing to learn, comprehend, and recommend next steps.

» Advanced cognitive assistants may also enable predictive decision making using real-time analytics. They can be used externally to communicate with customers in customer service inquiries and internally to augment customer service staff with knowledge management, to support the IT help desk, or to assist with HR or finance processes (such as employee onboarding).

Note: the continuum above does not represent a linear evolution but rather the different building blocks of automation.
Cognitive assistants represent a combination of conversational interaction and process execution capabilities.

The HfS Triple-A Trifecta: Automation, Analytics and AI

- **Robotic Process Automation (RPA)**
  - Increase efficiency and productivity
  - Requires human intervention for judgment-intensive tasks and to make changes or improvements
  - Non-disruptive to legacy IT, business user friendly
  - Primarily structured data

- **Artificial Intelligence**
  - Solve business problems
  - Structured and unstructured data
  - Humans only involved in setting objectives and initial training
  - Combination of reasoning, knowledge, planning, learning, NLP, and perception

- **Smart Analytics**
  - Improves decision-making
  - Structured and unstructured data
  - Humans make final decisions after receiving actionable recommendations from machines that learn and improve over time
  - Ability to sense, comprehend, adapt, recommend

Source: HfS Research, 2018

Cognitive assistants typically exhibit characteristics of smart analytics and AI.
This report focuses on the conversational services that have one or more of the following characteristics:

- **Solves business problems**
  - Engaging customers on digital channels
  - Opening new revenue streams, improving speed and security of employee onboarding

- **Handles structured and unstructured data**
  - Integrating with discovery platforms
  - Processing social media feeds, digital pictures, and video

- **Uses reasoning, NLP, and perceptive capabilities (sentiment)**
  - Managing context
  - Processing natural language
  - Analyzing sentiment

- **Goes beyond narrow conversations typically associated with chatbots or IVR**
  - Making personalized recommendations
  - Executing business processes
Executive summary
The focus of cognitive assistants is generally about augmentation of employee work rather than replacement. Automation tools can often replace a human interaction—we see this a lot in self-service, especially in the case of straightforward, focused inquiries. Tools can typically free the employee to do something less transactional, more valuable to the customer, and more “human.” However, with cognitive assistants, the capabilities are more powerful and therefore more nuanced. Generally, the use cases we’ve seen are about making employees, whether contact center representatives, IT service desk staff, or human resources officers more efficient and effective; often that means that the bot is working side-by-side with the employee as an assistant, synthesizing and presenting data, aimed at making their lives easier and processes more intelligent and agile.

Front-office deployments are common, but their AI implementations are not as mature as examples often found in HR, finance and accounting, and help desks. The majority of case studies we saw in this research involved the front office, particularly in sales and customer service. These are often the starting points or the low hanging fruits where enterprises will decide to test the use of cognitive assistants. But the capabilities for cognitive assistants go well beyond the front office, assisting in various elements of the enterprise such as HR, finance and accounting, and the help desk. While the front-office examples are ubiquitous, more mature use cases are often found in other areas where cognitive assistants can execute on processes such as ordering equipment for an employee during onboarding or creating and resolving a help desk ticket autonomously.
Partnerships are essential building blocks for cognitive assistants. Many of the service providers in this study cited a “unique” approach with “best-in-breed” technology providers. The reality is that the technology is advancing so rapidly that there’s really no such thing as best-in-breed, and having a partner ecosystem is hardly unique. Those leading in this market will develop strong relationships with well-known players (e.g., IBM Watson, IPsoft’s Amelia, Nuance for NLP), which is essential to have a flexible client-friendly environment—but will keep a keen eye on up-and-comers. Integration with other systems (e.g., ServiceNow for ticketing, HCM platforms for recruitment and onboarding, or CRM systems for customer data) is also important. Almost all of the service providers we spoke to have a technology-agnostic platform (perhaps with the exception of IBM, which partners but leverages the Watson platform heavily), which enables them to leverage their clients’ existing investments and be flexible to clients’ needs and modular with building the tools.

Pure-play contact center BPO companies are less mature but have tremendous potential to move up the value chain. The contact center BPO companies (Convergys, Sitel, and Teleperformance) we profiled had less mature capabilities and fewer actual client case studies; two reasons are that contact center BPO companies are finding that it is difficult to fit cognitive assistants into their bread-and-butter business and that automating customer interactions brings with it revenue cannibalization. However, for front office use cases there is a tremendous opportunity for these players to take the lead given their wealth of customer data and customer experience expertise. By embracing cognitive assistants, these service providers have the opportunity to carve out a differentiated capability for a blended bot and human model, providing seamless transitions to human agents and harnessing the power of their core capability—while potentially breaking out of the legacy FTE models that have dampened innovation and profitability for years. Two ripe areas for further developing cognitive assistants for contact center companies are in use cases that employ bots internally for recruiting and hiring and those that augment agents. Companies that use these tools internally to their best advantage will create differentiation in their service delivery.
HFS Top 10 cognitive assistant service providers
Research methodology: Cognitive assistant service providers were assessed on three main dimensions

<table>
<thead>
<tr>
<th>Assessment dimensions</th>
<th>Sub-dimensions</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to execute</td>
<td>• Cognitive assistants in production</td>
<td>33.3%</td>
</tr>
<tr>
<td></td>
<td>• Partner ecosystem</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Delivery breadth (channel, language, process, verticalization)</td>
<td></td>
</tr>
<tr>
<td>Innovation capability</td>
<td>• Consulting and design capability</td>
<td>33.3%</td>
</tr>
<tr>
<td></td>
<td>• Vision and roadmap</td>
<td></td>
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<tr>
<td></td>
<td>• Focus on business outcomes</td>
<td></td>
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<tr>
<td>Voice of the customer</td>
<td>• Client reference ability, quality of client reference, case studies presented and quality of case studies</td>
<td>33.3%</td>
</tr>
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</table>

This Top 10 research is based on interviews with 300 enterprise clients of IT services from the Global 2000 in which we asked specific questions pertaining to innovation and execution performance of service providers assessed. The research is augmented with information collected in Q1 and Q2 2018 through provider RFIs, structured briefings, client reference interviews, and from publicly available information sources.
# HFS Top 10 cognitive assistant service providers

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>Execution Success</th>
<th>Innovation Capability</th>
<th>Voice of the Customer</th>
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<td>Weak</td>
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<td>4</td>
<td>TCS</td>
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<td>Strong</td>
<td>Weak</td>
</tr>
<tr>
<td>5</td>
<td>Infosys</td>
<td>Weak</td>
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<td>Strong</td>
</tr>
<tr>
<td>6</td>
<td>Tech Mahindra</td>
<td>Strong</td>
<td>Weak</td>
<td>Weak</td>
</tr>
<tr>
<td>7</td>
<td>CSS Corp</td>
<td>Strong</td>
<td>Weak</td>
<td>Weak</td>
</tr>
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<td>8</td>
<td>Wipro</td>
<td>Weak</td>
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<td>Sutherland</td>
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<td>Weak</td>
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<td>HCL</td>
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<tr>
<td>11</td>
<td>DXC</td>
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<tr>
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<tr>
<td>18</td>
<td>Teleperformance</td>
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<tr>
<td>19</td>
<td>Convergys</td>
<td>Weak</td>
<td>Weak</td>
<td>Weak</td>
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</table>

- **IBM**: Harnessing the power of Watson as a virtual agent for a wide breadth of services
- **Cognizant**: Well-developed portfolio of use cases for cognitive assistants
- **Accenture**: Powerful consulting capabilities to create well-designed solutions
- **TCS**: Breadth and scale of deployments and variety of use cases
- **Infosys**: Customer experience and analytics capabilities with differentiated use cases
- **Tech Mahindra**: Well-rounded business and technology expertise
- **CSS Corp**: Promising example of blending BPO and technology capabilities
- **Wipro**: Strength in execution of business processes
- **Sutherland**: A solid customer experience and design thinking partner for cognitive assistants
- **HCL**: Service desk expertise and partner ecosystems for cognitive assistants
- **DXC**: Strength in service desk and analytics
- **Genpact**: Domain expertise and depth of BPO are complementary to cognitive assistants
- **EXL**: Domain and analytics expertise with a flexible approach
- **Sitel**: Leveraging customer care BPO expertise to deliver on its “botshore” vision
- **L&T Infotech**: Differentiated thinking and partnerships
- **WNS**: A business outcomes and analytics focused approach
- **Concentrix**: Harnessing customer experience expertise for cognitive assistants
- **Teleperformance**: Leveraging global scale and customer expertise to develop cognitive assistants
- **Convergys**: A customer experience leader in very early stages of development

Source: HFS Research 2018
HFS top five cognitive assistant service providers by individual assessment dimensions

<table>
<thead>
<tr>
<th>HFS Ranking</th>
<th>Ability to execute</th>
<th>Innovation capability</th>
<th>Voice of the customer</th>
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<td>Cognitive assistants in production</td>
<td>Delivery breadth (channel, language, process verticalization)</td>
<td>Consulting and design</td>
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<tr>
<td>#1</td>
<td>IBM</td>
<td>IBM</td>
<td>accenture</td>
</tr>
<tr>
<td>#2</td>
<td>Cognizant</td>
<td>accenture</td>
<td>Cognizant</td>
</tr>
<tr>
<td>#3</td>
<td>accenture</td>
<td>IBM</td>
<td>IBM</td>
</tr>
<tr>
<td>#4</td>
<td>TATA Consultancy Services</td>
<td>Tech Mahindra</td>
<td>TATA Consultancy Services</td>
</tr>
<tr>
<td>#5</td>
<td>Infosys®</td>
<td>HCL</td>
<td>Infosys®</td>
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Service provider profiles
Cognizant: Strength in thought leadership and a well developed portfolio across use cases for cognitive assistants

**Strengths**

- Cognizant is leveraging its recent investments and acquisitions in the social sciences and experience design such as RED Associates, Mirabeau, and IdeaCouture for developing its vision for cognitive assistants.
- The firm has a practical approach toward building reusable components that it can replicate across industries and processes.
- It boasts one of the most extensive portfolios of examples and case studies.

**Development opportunities**

- Cognizant’s messaging and case study illustrations are heavily leaning toward the front office and customer care use cases, leaving more to be desired for other processes such as service desk and HR.
- It is developing a more balanced narrative that showcases how other enterprise processes that can support the customer-centric organization would make for a more well-rounded portfolio of services across the Digital OneOffice value proposition.

**Key clients and go-to-market approach**

- Key clients include an insurance company, a major bank, a car manufacturer, a quick serve restaurant, and a multinational manufacturer.
- Cognizant’s services for cognitive assistants can be broken up into the three major buckets of advisory, production deployments, and managed services.
- Cognizant has developed this cognitive assistant capability under its “Conversational AI” go-to-market practice aimed at transforming customer care with “AI-powered bots.” Cognizant has tier-1 partnerships with Google, Amazon, Microsoft, and IBM.

**Client case study highlights**

- One of the best-developed examples is Cognizant’s Intelligent Mortgage Advisor, in which the cognitive assistant can gather information to begin the mortgage application process, to assist customers with questions about the application process, and to provide updates on the status of the mortgage application. This service is integrated with several channels, including chat across various devices, and some aspects of this capability have been developed for Amazon Alexa, Google Home, connected cars, and wearables.
- In a pilot for a quick serve restaurant drive-through process, Cognizant is using a cognitive assistant to enable personalized cross-selling and up-selling to customers making and picking up orders. Cognizant is building a prototype for a menu interface that shows items based on the individual customer’s buying behaviors, uses voice recognition to take the order, confirms the order, and then transfers it to the kitchen management system for delivery.
About the author and HFS
About the author

Melissa O’Brien | Research Vice President

Melissa O’Brien is Research Vice President, Customer Engagement, Retail and Travel Strategies at HFS Research. Melissa leads HFS’ research initiatives for digital front office services, including customer engagement operations, digital marketing, cognitive agents and CX design and consulting – digging into the trends and change agents that are driving customer experience across the enterprise. In addition, her industry research focuses on key dynamics within retail, CPG, travel and hospitality with regards to customer-centric strategies, intelligent operations and service delivery. (view bio and contact details).
HFS Research: Defining Future Business Operations

The HFS mission is to provide visionary insight into major innovations impacting business operations, including: automation, artificial intelligence, blockchain, Internet of things, digital business models, and smart analytics.

HFS defines and visualizes the future of business operations across key industries with its OneOffice™ Framework.

HFS influences the strategies of enterprise customers, to help them develop OneOffice backbones to be competitive and to partner with capable services providers, technology suppliers, and third-party advisors.

Read more about HFS and our initiatives on our website.