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SPECIAL REPORT

# The Augmented Workforce

## A Maturity Model for Intelligent Virtual Assistant Usage

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ABOUT THE AUTHOR

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# Introduction

Chatbots are a familiar piece of the customer experience landscape; they provide a basic solution for automating simple recurring requests. They can handle high-scale interactions in low-stress environments at a low cost. However, as customer interactions become more complex with multiple, nuanced intents and requests, businesses need to explore more advanced options that go beyond most chatbots' ability and offer a more human-like, two-way interaction. These advanced systems – intelligent virtual assistants (IVAs) – enable a personalized experience that drives meaningful business outcomes across the entire customer lifecycle. Early products focused on call deflection and cost reduction. More sophisticated IVAs open up a massive untapped opportunity to augment marketing, sales and customer experience teams by automating the human-to-human interactions that drive customer engagement.

IVAs are not designed to fully replace skilled marketing, sales and customer success teams; even at the most mature stages, IVAs are still assistants. However, they must perform reliably with a high degree of accuracy across the use cases they support. With machine learning capabilities, IVAs will evolve to become more personalized, with the ability to recall historical exchanges and eventually analyze customers' situations and act as guided advisers for complex processes at scale across departments.

Intelligent virtual assistants that are adopted in customer-facing situations directly impact top-line growth; they can accelerate revenue while improving the customer experience. This special report illustrates the evolution of IVAs: as enterprises become more mature in their use of AI and other emerging technologies, a wide spectrum of use cases expands the options for human/IVA collaboration. 451 Research has found that rudimentary chatbots only meet early-stage needs because of their limited capabilities; businesses need to adopt more advanced systems before they can reap the benefits that accrue across departments.

Figure 1: The road to autonomous assistants

*Source: 451 Research*

| | LEVEL 1: CHATBOTS | LEVEL 2: CONTEXTUAL ASSISTANTS | LEVEL 3: PERSONALIZED ASSISTANTS | LEVEL 4: AUTONOMOUS ASSISTANTS |
|---|---|---|---|---|
| **DEGREE OF ADOPTION** | • Single team, usually marketing or customer service<br>• Regional | • Departmental adoption<br>• Regional | • Multiple department adoption<br>• Multiple regions | • Entire organization<br>• Global |
| **USE CASES AVAILABLE** | • Notifications<br>• Routing<br>• FAQs | • Automation of repetitive, routine interactions<br>• Drive engagement toward a known outcome understanding context | • Drive engagement toward next best action based on deep knowledge of end-user preferences | • Drive customer engagement based on historical interactions & context to operate across an org (prospect > customer history & preferences) |
| **DEPTH OF AI/ML** | • Rules-based/ conditional logic<br>• No or limited NLU<br>• Manually written conversations | • NLU + NLG + ML<br>• Some use of predictive models and action-oriented<br>• Templated conversations | • NLU + NLG + Deep Learning + PA<br>• Model/mimic human decisions and actions<br>• Pre-built skill & conversation library | • NLU + NLG + Deep Learning + RPA<br>• Model/mimic human decisions, empathy and actions<br>• Broader & deeper skill and conversation library |
| **TECHNOLOGY ATTRIBUTES** | • Limited integration capabilities<br>• One communication channel | • Moderate integration capabilities but no API<br>• Two communication channels | • Broad integration and API<br>• Multiple communication channels | • Fully integrated across stacks<br>• All communication channels |
| **QUALITY OF INTERACTIONS** | • Simple one- or two-way | • Conversational, defined guided flows with complex multi-turn Q&A based on context | • Human-like, free-flowing exchanges<br>• Adapt to context and preferences | • Human-like interactions<br>• Learn from customer inputs and historical exchanges |

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DEPTH OF IVA EXPERIENCE

## The 451 Take

Chatbots are the first step in automating simple, common CX team workflows and communications with customers. Many organizations use chatbots in the early stages of AI adoption, emphasizing enhancements to meet rapid response times with a decent degree of accuracy for well-structured, known workflows. Thus, chatbots represent the beginning of a journey, not an endpoint. Figure 1 illustrates the four stages of intelligent virtual assistant technology. Businesses can benefit by being aware of where they sit on the IVA maturity continuum, and what they can gain by moving beyond the early stages.

This maturity model shows that as organizations implement advanced IVA capabilities, they enhance human performance through greater scale, proactive outreach and interdepartmental collaboration. As businesses progress by putting IVAs to work in new contexts – such as taking routine tasks and decisions off the shoulders of human employees – both employees and customers benefit from a richer experience that serves both sides. Augmenting human staff with advanced IVAs turns an automated experience from clunky pseudo-dialog into a nuanced conversation that delivers personalized offers, service and greater value for customers. The business benefits from accelerated revenue growth, better, more consistent customer experiences, and operational efficiencies driven by the increased scale it can handle.

# Assessing Maturity

In identifying the four stages of IVA maturity, we find variation based on how deeply embedded IVAs are within the enterprise, from being a simple triage tool to spanning multiple departments. As enterprises become more mature, they leverage advanced AI and machine learning models more deeply and integrate their IVAs more pervasively across front-office operations.

**Level one** is where we find organizations using chatbots to triage customer inquiries and gather first-level information for further processing. Businesses at this level are using basic chatbot technology to provide preconfigured answers to simple customer questions, which works well for applications like event notifications, routing customers to the right resources, and other basic two-way Q&A instances. At this early stage, there is limited use of AI and little intersection between human roles and automated functions. Chatbots do not contribute much to human productivity or to strategic CX goals, although they do reduce the number of first-touch human interactions and, thus, costs.

**Level two** brings a bit more technological sophistication and opens the door to more flexibility and innovation. Level two IVAs can access information from other systems to provide context to conversations with customers, which extends the range of potential use cases. At this stage, businesses can trust an IVA with more open-ended interactions that involve unpredictability. They can still be used to deflect simple interactions away from employees, but they are also more likely to begin handling more complex connections and relationships, providing breathing room for humans.

Common use cases are pre-sale and post-sale interactions, either in real time via a chat interface or asynchronously through email or SMS. The goal is to drive engagement toward a known outcome using machine learning and natural language understanding to bring context to the situation and support the next action or trigger an alert. There is also more use of natural language generation (NLG) tools based on templated conversations to provide more interaction automation.

**Level three** IVA technology includes more intelligence and uses more data to drive that intelligence. The goal at level three is to improve the customer experience while demonstrating the technology's ROI. The transition from stage two to three is where IVA usage migrates from being a triage/deflection tool into one of superior communication, decision-making and action based on less-structured, more variable scenarios. The outcomes are judged by whether they improve overall performance rather than reduce costs.

Technology that comes into play includes robust NLG models based on pre-built skills and conversation libraries for more human-like dialogs, as well as a deeper AI application of decision and learning models that helps the IVA make decisions and take actions. With more robust technology and greater access to data, IVAs at this stage have the communication skills and best-practice insights to support a broader set of use cases.

Use cases include isolating the next best action to take based on deep knowledge of the end user's preferences. For example, the AI can proactively determine a good time to reach out to a potential customer and what channel to use for best results. Businesses at this level require the IVA to interact with multiple departments and regions, so it's important to ensure broader language support.

At **level four**, IVAs are fully integrated into multiple back-end and front-end systems from which they pull customer data, product and transaction histories, and relevant sales/marketing collateral based on both context and user input. At their most advanced stage, IVAs are deployed to perform unpredictable tasks across multiple organizational boundaries. They learn from customer inputs based on historical exchanges, creating consistent, personalized, human-like experiences across the organization. Automation is used to augment human abilities across processes in marketing, sales, HR and finance – far beyond the simple Q&As handled by chatbots for top-of-funnel marketing or customer service.

Level four IVAs have arrived at a state of true autonomy. They can augment the workforce across the entire organization and use multiple languages for global support. The ability to leverage natural language processing, deep learning and robotic process automation to model human decisions adds a level of emotional intelligence in deciding what path is the right one to take.

# Putting IVAs to Work

In a recent series of Business Impact Briefs, 451 Research reported on how various CX stakeholders have benefited from adding intelligent virtual assistants to the tech stack and into their workforce. The three core use cases for IVAs are sales, marketing and customer success applications.

IVAs help salespeople re-engage with dormant leads, gauge interest from active ones and work open opportunities. They can speed up the qualification process by asking prospects whether they are interested in speaking with a salesperson. The key benefit is filling the pipeline at scale – allowing sales teams to reach many more, higher-quality potential buyers than humans can qualify by themselves and close more revenue with confidence.

As marketing departments move through the four stages of development, they can more effectively generate high-quality leads and foster better collaboration between them and the sales teams. Augmented workforces have better visibility into the relationship between marketing spending and the measured outcomes. The biggest benefit for marketers is the ability to revive lost or derailed opportunities. Instead of leaving them to lie fallow because of resource constraints, an IVA can reach out to inactive leads to warm them back up, check in with existing customers and cultivate potential new leads without consuming employees' valuable time and resources.

Finally, IVAs can vastly improve the effectiveness of customer success efforts by onboarding new customers smoothly, scheduling account reviews, encouraging customers to provide more feedback, and finding early renewals or new expansion opportunities – ultimately giving customers the most value as well as getting the most value out of customers. More frequent and persistent engagement allows businesses to accelerate revenue growth and reduce operational costs across the entire customer journey. IVAs can reach out when human reps aren't available; they can nudge customers toward renewing their partnership, participating in events or leaving feedback.

# Conclusion

As human/IVA collaboration becomes the norm, customers will expect their needs to be met 24/7/365, and for the first time, businesses can respond to both urgent and less urgent needs without over-resourcing CX teams. Progressing further along the maturity scale brings measurable benefits in system ROI, human performance, customer satisfaction and advocacy.

Most companies are still at levels one or two, so there is ample room for experimentation and innovation for most. Organizations that are eager to move forward or need to reach high performance and productivity gains across their front-office operations will be further along at level three or beyond; they may find that leveraging context and personalization in the IVA is an effective competitive differentiator.

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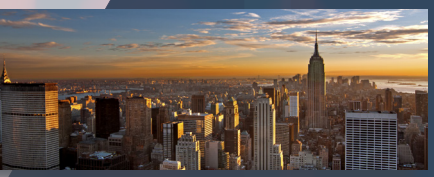

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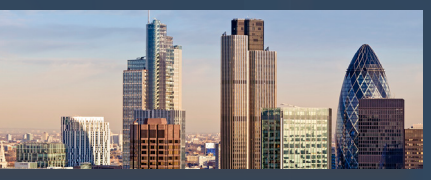

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