

Voice-based personal
assistants in an enterprise:
Walking the talk



Frank is always pressed for time. He has spent almost a decade as the head of a retail store for a large chain. Over the last few years, he has been steadily handed over the reins of four other stores in the chain. His knowledge and expertise are beyond doubt. The problem is that while work has multiplied several folds and his responsibilities have grown, he still has only 24 hours in a workday. Frank, our superhero cast in the image of scores of successful store managers, needs help. He needs a solution that lets him work faster, more efficiently, with greater confidence, and just as independently as he now does. We think Frank could do with a personal voice-based assistant that smoothly takes over routine secretarial tasks, responds to queries that need analysis of data prised out of large enterprise systems with the air of a seasoned information analyst and hunts down material on the Internet with the practiced eye of a sleuth.

How would Frank use such a personal assistant? Exactly like you would use Amazon's Alexa: "Wake me up at 4.30 am" or "What does my commute look like?" Except Frank would change that to, "Set up a meeting with the marketing team at 4.30 pm" or "Which was the top-selling nappy rash cream last fortnight?" Frank's spanking new voice-based assistant could turn practically any task into kid stuff. And Frank, always on the lookout for a helping hand, would have found the perfect one: quick, accurate and always available.

AI-based personal assistants such as an Alexa can make people like Frank and other middle-level managers extremely productive. This happens when personal assistants get integrated with the enterprise systems and combine data with AI.

AI is everywhere

Hotel chains are deploying Siri and Alexa to take guest queriesⁱ. Travel agents are deploying them to find the ideal destinations and deals for their clientsⁱⁱ. Enterprises are deploying them to improve corporate productivity by helping out with emails and automating meeting schedulesⁱⁱⁱ.

Notice how Alexa, Siri, Cortana, etc., first invaded the personal space, before coming to the notice of the enterprise? It is exactly how new technologies such as Facebook, Whatsapp and Twitter are

finding their way into the enterprise - via consumers. Once they gain widespread adoption and acceptance and user comfort levels are high with systems that can serve millions of simultaneous users, these technologies find their way into offices, stores, plant floors, warehouses and field operations. The wide applicability of the technology is expected to double the AI-driven personal assistant market from 2018 to become \$12 billion by 2020^{iv}. What this means is self-evident: There is no way to ignore the use of personal assistants in the enterprise.

The difference between the application being used in the general consumer domain and within an enterprise is that once these applications are integrated with enterprise systems, AI, Machine Learning, Natural Language Processing, IoT, algorithms, predictive analytics, etc., can be used to make them smarter and faster than they would otherwise. This is because it is possible to train the personal assistant specifically within the context of the domain it is being deployed in, making it an invaluable 'specialist' practically overnight.

The voice of convenience in enterprise

In the case of Frank and other store managers like him who are short on time and hungry for help, it means a personal assistant can be integrated with ERP – say, SAP Customer Activity Repository in the retail industry – and trained to assist with employee management, inventory analysis, visual merchandising and cost management. Need comparative sales figures and margins of products over a period? No problem, the personal assistant will take care of it. Want to apply that knowledge to compare prices of similar products with competitors? No problem, the personal assistant will take care of it.

The technology can be deployed to take notes during employee evaluations, manage everyday analysis of sales campaigns, write emails to teammates, ask for reports, set up meetings, and even being smart enough to say, "Frank, it's the wife's birthday, you need to leave early. Would you like to set up the meeting for another day?" In other words, the assistant would not only be a boon in the workspace but also to manage personal life, making it fit the needs of the office.

Secure – And being human

There is another critical difference between a personal assistant in the consumer space and that within an enterprise—the enterprise is obsessively concerned about security. The problem of security is easily solved. Personal assistants cannot be used/abused by others as they are trained to recognize the user’s voice pattern. Speech becomes the ID while an authentication process can be set up by sending a one-time password (OTP) to a mobile device that is then used to unlock the personal assistant.

In summary, everything that a voice-based personal assistant can do can also be achieved using a keyboard and a screen by clicking on boxes and radio buttons, selecting from drop-down menus, pointing systems to various databases, etc. But deploying a voice-based

personal assistant humanizes the entire process, removing the clumsy keyboard-and-mouse interface between man and machine. This simple act of removing friction between man and machine takes the tedium out of work, making employees productive and keeping them happy.

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ⁱⁱⁱ<https://venturebeat.com/2017/08/11/x-ai-to-break-its-ai-assistant-out-of-email-to-help-slack-and-alexa-users/>

^{iv}<https://venturebeat.com/2017/10/31/why-digital-assistants-are-so-hot-right-now/>



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