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Personal Virtual Assistants: Primer and Planning Guide

We used to laugh at the idea of "the talking toaster" when thinking about the gratuitous addition of a speech-based interface to household appliances, consumer electronics, self-service kiosks or even ATMs. Now the machines laugh at us, as improvements in natural language understanding, artificial intelligence and text-to-speech rendering make phones, tablets, computers and (yes) household appliances more conversational, human-like and responsive to spoken input.

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Key Findings

Personal Virtual Assistants (PVAs), like Apple's Siri, are here to stay thanks to steady improvement in Natural Language Understanding (NLU), Artificial Intelligence (AI) and underlying computer and networking power. In this document, Opus Research will describe, compare and contrast different products and services to help readers determine what will work in both mobile and enterprise settings:

- **"Personal Virtual Assistant" (PVA) describes the "conversational user interface"** - enabling individuals to use their own words to provide instructions to devices, describe what they want, schedule events or conduct searches.

- **The role for PVAs on mobile devices and in contact centers is growing rapidly** – thanks to improvements and expansion of natural language processing (NLP) in popular verticals like financial services, telecommunications, retailing and, more generally, customer care

- **Competition comes from multiple disciplines** – including device makers (Apple, Google), chatbots, knowledge management and contact center automation

- **There's a business case for PVAs in the enterprise** – as solutions providers integrate artificial intelligence and decisioning into agent workstations, Web chat and interactive voice response systems to achieve common business objectives (like customer retention, customer satisfaction, increased sales, etc.)

- **PVAs accelerate the trend toward "human-aided self service"** – PVAs steer people "around" traditional interactive voice response (IVR) systems and are being embedded in Web chat to make it less clear whether an individual is interacting with an automated system or a live agent

- **Progress focuses on verticals and specific functions** – while it is tempting to "boil the ocean" and provide a broad set of features, functions or services, PVAs perform best when addressing specific verticals, emulating well-understood activities (E.g. customer care for telecoms)

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