Voice and contactless interfaces set to play key role in post-COVID-19 workplace

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Nearly two months into the COVID-19 shutdown, there is increased pressure to reopen the economy. Although nonprescriptive, state and federal guidelines for reopening include ongoing physical distancing requirements. Voice and contactless interfaces could help employers provide a safe environment.

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Introduction

State and federal governments have issued guidelines for reopening the economy, providing some hope for struggling businesses and weary residents experiencing quarantine fatigue. This will not be an overnight process. Plans to reopen include several two- or three-week phases and will vary by region, based on risk level. The Centers for Disease Control and Prevention has also published guidelines to help employers evaluate when and how they should reopen. While not intended to be prescriptive, these guidelines emphasize physical distancing measures. Voice and contactless interfaces could play a key role, helping employers provide a safe work environment in compliance with these requirements.

451 TAKE

The COVID-19 outbreak will make social distancing the new normal. Guidelines for reopening from state and federal governments include physical distancing requirements that will likely remain in place for the foreseeable future. Even as organizations place strategic initiatives on hold and cut back on nonessential spending, technology will play a crucial role for businesses continuity. The need to provide a safe environment that complies with these guidelines will make the use of voice and contactless interfaces more compelling, driving workplace adoption of voice user interfaces, intelligent assistants and biometric authentication.

The coronavirus impact in the workplace

In a recent report, we looked at 20 trends encompassing some of the long-lasting impacts that will result from the COVID-19 outbreak. These fall under three main themes: a growing emphasis on virtual engagements, more empowerment at the workforce edge and the emergence of a new people management stack. Compliance with social distancing guidelines could accelerate these trends, making the use of voice interfaces in the workplace and the frontline digital experience even more relevant in the wake of COVID-19.
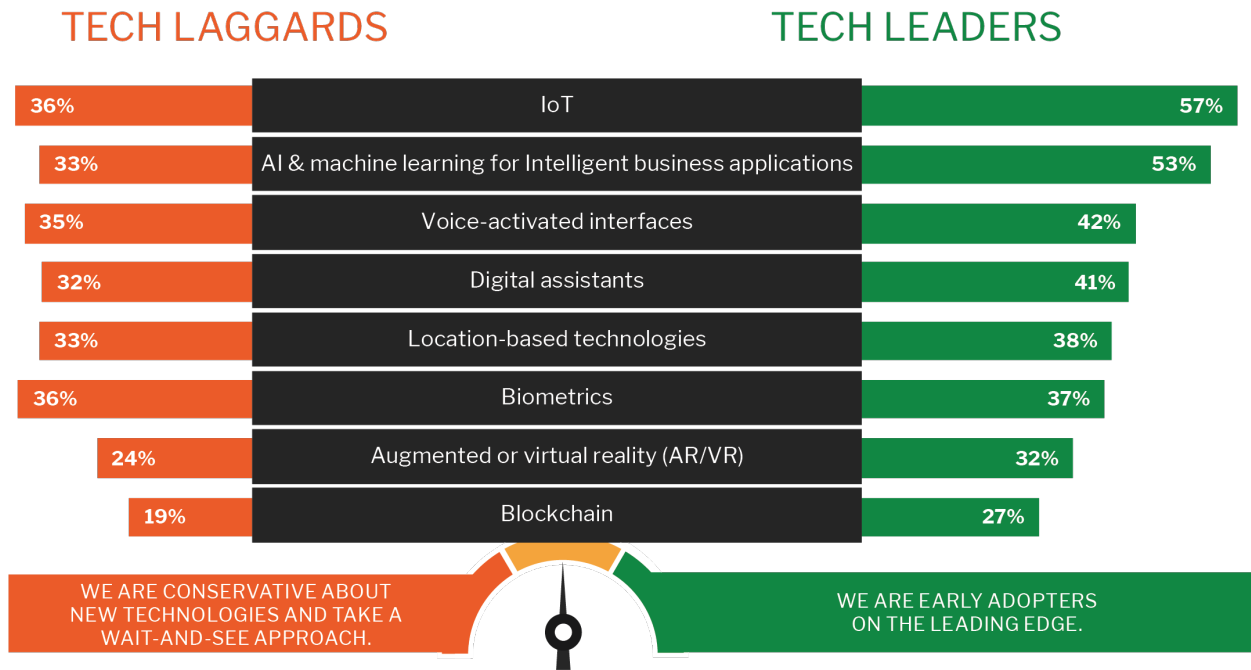
Voice and contactless interfaces

Intelligent assistants such as Amazon Alexa, Apple Siri and Google Assistant have become ubiquitous for the average US consumer. They are a standard feature on laptops, tablets, smartphones and voice-only devices such as smart speakers, which, according to our VoCUL: Endpoints & IoT, Smart Home Trends (Q1 2020) survey, are the top category for smart-home products, with 27% adoption.

Despite consumer familiarity, enterprise adoption has lagged the consumer segment. However, in the past two years we saw increased interest in the use of voice interfaces in the workplace. Our VotE: Customer Experience & Commerce, Digital Transformation survey (Q2 2019) shows that, prior to the COVID-19 outbreak, voice-activated interfaces and digital assistants were among the top disruptive technologies that organizations were looking to adopt (see figure below). Furthermore, in the past year we have seen a growing number of speech-enabled devices designed specifically for the workplace, including desk phones, meeting room equipment and hearable devices.

Voice-activated interfaces and digital assistants were top priorities for tech leaders prior to COVID-19

Source: 451 Research, Voice of the Enterprise: Customer Experience & Commerce: Digital Transformation, Q2 2019

TECH LAGGARDS   TECH LEADERS

	TECH LAGGARDS		TECH LEADERS
36%	IoT		57%
33%	AI & machine learning for Intelligent business applications		53%
35%	Voice-activated interfaces		42%
32%	Digital assistants		41%
33%	Location-based technologies		38%
36%	Biometrics		37%
24%	Augmented or virtual reality (AR/VR)		32%
19%	Blockchain		27%

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WE ARE EARLY ADOPTERS ON THE LEADING EDGE.

Integrations of voice-enabled intelligent assistants – such as AWS Alexa for Business, Cisco Webex Assistant, Google Assistant and Microsoft Cortana – with meeting room equipment and team collaboration workflows were among the first use cases for voice interfaces deployed in the workplace, beginning roughly three years ago. These integrations enable the use of voice commands for tasks such as managing meetings, controlling conference room devices and controlling conference room settings (i.e., lightning and temperature). Alexa for Business is also used outside the conference room environment, with shared devices that can be deployed in building lobbies and other common areas to provide directions, logistics information and announcements. While they may have previously been perceived as 'nice to have' features, social distancing could reposition these integrations as 'must have' capabilities for collaboration and meeting room products and services.

Physical distancing could also lead vendors to replicate the voice-first/voice-only product design used in smart speakers, incorporating contactless interfaces – including voice interfaces and gesture recognition – to replace remote control devices and touchscreen interfaces for meeting room and office equipment. Biometric authentication is another example of how physical distancing expands the use cases for contactless interfaces. NEC's biometric solutions, which include contactless technologies such as facial recognition, iris recognition, voice recognition and ear acoustic authentication, have been deployed to address a wide range of use cases, including corporate building entry and exit management. NEC is now developing facial recognition technology that can identify people even if they are wearing a mask, allowing building access without the need to remove it or touch any surface.

Frontline digital experience

Enterprise use cases for voice interfaces also include those involving frontline workers (i.e., those that deal directly with customers or are closely involved in the production process). This category includes healthcare providers such as nurses and doctors, first responders (e.g., paramedics, medical technicians and firefighters), and factory line workers. It also includes grocery store employees, drivers, and food and grocery delivery gig workers, which have become essential workers during the pandemic. These workers play a critical role in the distribution of goods and services, highlighting the relevance that the digital experience and real-time communications can have in the front lines.

Vendors such as Deltapath, Infinite Convergence and Orion Labs are using voice user interfaces and real-time communications to enable the digital experience for the frontline workforce, including healthcare organizations. Infinite Convergence recently announced the integration of its NetSfere mobile messaging service with Nuance Communications' Dragon Medical Server SDK to provide healthcare professionals with speech-recognition and speech-to-text capabilities.

Orion Labs provides capabilities that include voice user interfaces, real-time communications and location management services to support organizations in verticals such as transportation, services, retail and healthcare; it also provides integration with voice-enabled intelligent assistants to enable a 'heads-up, hands-free' user experience. The combination of these capabilities is particularly relevant for frontline and deskless workers. For example, transit operator Transdev, the largest private operator of transit in North America, and transit agency MBTA, one of the largest public transit systems in the US, utilize voice dispatch through Orion's web-based Dispatch Console, instant team communication and location management services to enable dispatchers to work from home to coordinate paratransit services, which are critical for seniors and members of the disability community.

Unified communications provider Deltapath supports hospitals, urgent-care centers and clinics with a vertical-focused approach that combines UC capabilities, such as presence, team collaboration, real-time texting and video calling, and push-to-talk (PTT) communications, with third-party integrations that include nurse call systems and sensors for real-time patient monitoring. Gunma University Hospital in Japan integrated Deltapath Acute to its medical record and nurse call systems. When a nurse call button is used, healthcare professionals receive real-time information on their smartphones – including critical information such as which button was pressed, the patient's name and room number, and immediate access to a patient's clinical records – allowing for a faster response time and reducing the number of steps required to accomplish a task.

Beekeeper, a digital workplace communications platform targeting dispersed work environments, is another example of how the combination of voice user interfaces with real-time communications can support the digital employee experience for frontline workers. The company recently announced a partnership with speech technology startup Whispr, which uses voice and mobile app technology as an augmented-reality component to improve the productivity of hotel housekeepers with voice-guided checklists. Similarly, Orion Labs is supporting frontline workers in hospitality with real-time communications and capabilities that include speech recognition and real-time language-translation integrated into their workflows.

These use cases exemplify how voice user interfaces and real-time communications can enhance the digital experience to support the frontline workforce, and how these features can be particularly useful during a crisis, when workers might be working long shifts to deal with a sudden and unexpected surge in demand.

Conclusions

- **COVID-19 will change the workplace.** For many employees, the pandemic will permanently change how and where they work. For those that cannot work remotely – and for those that eventually return – their workplace will be significantly different post COVID-19. The need to provide a safe environment will require measures that reduce interactions between people and maintain physical distance between them.

- **Voice and contactless interfaces will play a key role.** Physical distancing also entails avoiding contact with commonly touched objects, making the use of contactless interfaces in public places and common areas such as elevators and restrooms, quick-service restaurants, cafes, and building lobbies more compelling.

- **The pandemic will accelerate digital transformation initiatives.** The response to the COVID-19 outbreak and the need to provide a safe workplace will lead organizations to accelerate digital transformation initiatives, driving adoption of voice interfaces, biometrics and real-time communications.

- **The digital experience will extend to the frontline workforce.** The use cases featured in this report show the digital experience is equally relevant on the front lines; they also highlight how voice user interfaces, real-time communications and location management services can support frontline workers and help organizations further automate and optimize their operations.