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IBM Watson Works on Reinforcing a Safe Return to the Workplace

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IDC's Quick Take

IBM's recent announcement of Watson Works demonstrates increased momentum of technology vendors seeking to address the health and safety needs of employees returning to the workplace. By bundling, integrating, and extending core Watson, TRIRIGA, and Maximo Technologies, IBM is also making strides to support more responsive workplace models beyond the current pandemic.

News Highlights

On June 18, IBM announced Watson Works, a curated set of products embedding Watson AI and applications to help organizations plan for employees to safely return to their workplace. Watson Works draws upon a compendium of existing products to make critical decisions on the four core pillars of Workplace Re-entry (drawing from IBM Return-to-Workplace Advisor), Facilities Management and Workplace Safety (drawing from IBM TRIRIGA and Maximo Worker Insights), Contact Tracing and Care Management (drawing from Watson Care Manager), and customer and employee care (drawing from IBM Watson Assistant).

IDC's Point of View

Organizations across the globe, large and small, public and private, are all facing the challenge of deciding whether, when, and how to return to the workplace. As a result of COVID-19, private and public sector organizations must now prepare for the next normal and mitigate the risk of exposure to COVID-19 for occupants' health and safety. In the near term, organizations must focus on protecting the health of employees by monitoring building contamination due to infectious disease to reduce outbreaks of COVID-19. In the long term, the foundational technologies designed to protect worker safety and facilitate building management will pave the way for more resilient and agile ways of working.

Meeting Immediate Needs for Workplace Safety

The Centers for Disease Control (CDC), as with other U.S. health emergencies, provides guidance to the nation across all aspects of COVID-19 including tools to evaluate symptoms and decide the best course of action and protocols for quarantining people who have been exposed to COVID-19 and isolating COVID-19 positive patients. Contact tracing, a core disease control measure employed by local and state health department personnel for decades, is a key strategy for preventing further spread of COVID-19. Local, county, and state public health agencies must report all infectious diseases to the CDC and in many cases conduct contact tracing. Since states, counties, and cities are impacted by the availability of testing and contact-tracing personnel, IBM Watson Works embeds the latest COVID-19 CDC guidelines within the IBM Return-to-Workplace Advisor, along with the ability to configure the tool to reflect an organization's health and safety protocols, to provide individuals with a current, evidence-based source of guidance.

IBM Return-to-Workplace Advisor has two components. The first is an employee application that acts as a single source of health and workplace reentry information including company-specific policies, resources, and updates. Using Watson's natural language processing capabilities, employees can get answers to COVID-19 and HR questions. They can also self-report symptoms, learn whether or not they should report to work that day, and be directed to appropriate testing and medical resources when needed. For employers, the solution provides a command center analytics application to monitor and manage changing conditions, identify company locations where conditions for reentry have been met, surface emerging trends and patterns both nationally and locally, and analyze employee population health dynamics to identify site-specific health promotion opportunities. Return-to-Workplace Advisor is integrated with other Watson Works solutions to support a streamlined experience for employees and employers.

Contact Tracing and Care Management via Watson Care Manager

IBM Watson Care Manager is a virtual cloud-based SaaS case management solution to help employers contact trace COVID-impacted employees. Watson Care Manager is used by many local health and human service organizations and is now configured to support employers in their response to COVID-19. When employees voluntarily notify their employers of a positive test result and give consent, contact tracers can conduct interviews and use information from multiple sources to help identify individuals who should be notified of potential exposure and document all case-related contacts. It is designed to mitigate the spread of infection through contact tracing within the organization and is integrated with Return to Workplace Advisor to enable streamlined case management when it receives "red" employee details.

Watson Care Manager can also help employers assess the needs of employees who are affected and get them the care that they need to recover. Using all captured data, case managers can build a care plan with suggested support services for employees. They can then connect employees to employee-sponsored benefit programs, social services, and other resources in the community to address their needs while they recover and self-quarantine at home. Case managers can deploy automated workflows that support ongoing follow-ups and check-ins through each employee's recovery. The service is HIPAA enabled to protect employee health data and can be deployed in as little as a week to support employer reporting requirements.

Employers considering using Watson Care Manager for contact tracing must align themselves with their local department of public health to avoid duplication and confusion. The CARES Act appropriated $11 billion for states and cities for testing, laboratory capacity, and contact tracing; however, states, counties, and cities must staff up and train new hires for contact tracing. Watson Care Manager facilitates collaboration with the public sector by sharing data between employers and local public health agencies for reporting and create a hand-off to public health for contact tracing. Employers must appreciate that effective contract tracing requires training and supervision. Employers will need to provide the appropriately trained and experienced staff, which will likely present challenges in today's economic environment. A public-private partnership is needed to effectively manage COVID-19.

IBM Watson Works addresses concerns regarding employee privacy by requiring employees to opt into process and give explicit permission to share any personal health information with an employer. All personal health information is secured within IBM's secure HIPAA-compliant cloud. A best practice that IBM should share with employers is to provide clear benefits to employees for opting in. Several IBM

clients in the Health and Human Services sector adhere to this practice and provide information to recipients on the ability to have a holistic approach to receiving benefits. Similarly, employers in the private sector should provide information regarding opting into a database that benefits the worker, their family, and coworkers.

Aligning Contact Tracing with Space Optimization

IBM's Maximo and TRIRIGA enable Watson Works to give employers tools to monitor and manage facilities, based in part on inputs from optical and thermal imaging cameras, Bluetooth beacons, and mobile phones. This data, collected in a way that is designed to preserve employees' privacy, helps IBM solve customer challenges in industrial and office settings.

IBM Maximo Worker Insights processes rules to determine if there is an actual incident and then automatically triggers the incident management process within Maximo Health, Safety and Environment or any third-party system of engagement. IBM Maximo Worker Insights provides heatmaps, trend analysis, event data from IoT sensor data and prebuilt advanced analytics to monitor crowd density compliance in real time and contact event tracing. Near-real-time access to data generated from video surveillance, Bluetooth beacons, smartphones, wearable devices, and environment sensors supports worker health and safety monitoring. Optical and infrared cameras and sensors can detect if employees are wearing masks, have an elevated temperature, and are practicing social distancing. IBM TRIRIGA enables managers to quickly reallocate spaces to comply with social distancing guidelines, designate no-go zones, arrange for cleaning, and monitor crowding. Data influences Return to Workplace Advisor Command Center analytics, and it can also send mobile alerts to supervisors.

Earlier this year, IBM TRIRIGA announced a partnership with Cisco DNA Spaces to provide scalable space utilization and occupancy monitoring without requiring new devices. With an out-of-the-box native integration, IBM TRIRIGA Building Insights ingests data from a building's existing Cisco Wi-Fi networks and uses artificial intelligence and machine learning to analyze patterns and trends in how occupants use physical spaces. Cisco DNA Spaces provides a cloud service for location analytics and indoor positioning with a location-aware event stream to trigger actions and alerts as occupants move throughout a facility. Offices and industrial facilities can track crowd density and alert managers of potential social distancing compliance issues. As companies reopen their buildings, the ability to understand employees' travel patterns within the building will enable employers to pinpoint where deep cleaning needs to happen to ensure employee safety.

Unlike other contact tracing solutions, IBM's contact tracing capabilities from Watson Care Manager currently do not use Bluetooth low energy to help identify which employees may have come in contact with each other when an employee tests positive for COVID-19. However, IBM is internally piloting technologies with IBM Research that improve the reliability of BLE handshakes between employees' smartphones. Based on the effectiveness of these technologies, IBM could explore commercialization downstream. Watson Works is designed to connect to any existing source of contact tracing information to automate the workpass process for potentially exposed employees.

Near-Term Implications and Opportunities for Facilities Management

As organizations move from immediate business continuity measures at the onset of the COVID-19 pandemic and focus on a strategy for returning to the workplace, they are placing new pressures and responsibilities not only on HR but also on their facilities and real estate teams. To ensure employees

can safely return to work, organizations must adhere to rigorous government guidelines and company policies regarding physical space configuration, health, hygiene, cleaning, and sanitization.

IBM Watson Works integrates IBM Return-to-Workplace Advisor with IBM TRIRIGA to offer facilities management and workplace safety solutions. Customers can create space plans that accommodate social distancing, monitor workplace occupancy, enhance space reservations, manage cleaning and maintenance schedules, and monitor inventory of critical supplies by location — including all the new supplies to control the pandemic like face masks, hand sanitizer, plexiglass shields, high-efficiency air filter, and antiviral coating and surfaces. It automates work order creation to temporarily disable badges for "red" employees who have been flagged as potentially ill and initiates cleaning policies as needed. The software also enables workspace reservations for "green" employees. IBM TRIRIGA can help building managers track and maintain new projects, such as installing high-efficiency air filters, hand-sanitizing stations, no-touch trash cans, and barriers between desks or workstations.

There are a variety of software applications on the market with similar capabilities to help organizations with COVID-19-related space utilization, facility management, and maintenance. What distinguishes IBM's offering is integrating these functions with corporate communication, HR, health, and care management capabilities. The alternative is to string together point solutions from specialized vendors, relying on APIs to share data. With Watson Works, IBM is taking advantage of its strengths by combining its artificial intelligence technology, expertise in public heath, and market-leading enterprise asset management and integrated workplace management system to deliver a comprehensive return-to-work suite. Customers can use this solution to solve fluctuating use cases during and after the pandemic, giving it more staying power than best-of-breed vendors solving a narrow problem. Long term, real estate teams can use predictive AI to rightsize their portfolios in a post-COVID world where work from home will likely be more prevalent. IBM Watson Works is designed to become an ongoing part of an organization's enterprise application portfolio to help organizations navigate future workplace disruptions.

The Future of Work — An Iterative Approach to Building Business Resilience

While percentages may vary as to how many workers will ultimately return to the workplace, there is little doubt that the future of work will be defined by far more integrated, agile, and hybrid models of employee engagement. According to IDC's May 2020 *Quickpoll,* 40% of organizations are not planning to bring at-home employees back to offices, while another 40% are planning for a phased return of at least some workers. As workers return to facilities, companies are deploying a range of new technologies to protect and track the health of employees. These technologies will require new investments in network, storage, and analytics infrastructure as well as new policies and procedures to ensure employee safety. The IDC *Quickpoll* found that 49% of organizations planned to invest in touchless fixtures and temperature sensing or other health monitoring technologies to address social distancing and/or contact tracing during the next 12 months. Organizations are also making changes to the physical facilities themselves. Beyond increased cleaning and disinfecting, initiatives include reconfiguring workspaces and meeting rooms and creating modified, staggered, and/or flexible work schedules. Now imagine all these transformations taking place outside the context of the immediate pandemic, and it becomes clear that there are more enduring shifts at play. The physical and technological reconfiguration of the workplace and ways of working introduce much more holistic ways to envision employee engagement with and beyond current COVID-19 health safety measures.

Key changes to workplace policy and physical infrastructure and the development of enhanced analytics to address current health concerns will extend beyond the current pandemic and pave the way for enduring work transformation. Of the many inquiries IDC receives on how to prepare for a return to the workplace, most are not just concerned with immediate questions of how to implement contact tracing, space management, touchless technologies, and thermal imaging; they also want to be prepared to quickly and seamlessly reinstate onsite workers to be remote again should the need arise. This flexibility, born of a need to meet immediate health concerns, is a core tenet of future work transformation. Organizations not only want to understand how to manage safe physical transformations of the workplace but also want to understand how to calculate the costs associated with making these changes to ensure business resiliency. IBM Watson Works has an opportunity to lay the groundwork for meeting both immediate and long-term workplace needs if it can effectively evolve and iteratively expand its offerings in, through, and beyond the current needs of the COVID-19 pandemic.

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