Introduction

Challenge:
Will COVID-19 be the catalyst for more rapid development of the autonomous workplace, where we truly leverage the potential of artificial intelligence (AI), robotics and the internet of things (IoT)?

Vision:
Looking beyond this crisis, the workplace of the future will leverage technology to provide a safer and smarter workplace while enhancing performance and experience. Automation developed as a response to COVID-19 will leverage existing technologies, result in more rapid adoption of these technologies and spur advances in cellular communication, Smart Building tech, AI and robotics to create safer, higher-performing and more human-centric workplace environments.

Autonomous Workplace
Team Number: 4
The **Technology Ecosystem** that will support our autonomous workplace is made up of three layers, starting with digital interfaces such as mobile apps and sensors that occupants will interact with, to integrated data stores, and culminating in AI.
Digital Transformation

From Silos to a Converged Experience

Traditional Disparate Approach

- IP Communications
- PACS
- HVAC
- Lighting
- Power
- Audio Visual
- Server Labs
- Elevators
- Video Surveillance
- Gas / Water Metering
- Wi-Fi
- Digital Signage
- Fire / Safety

Converged Modern Approach

- IP Communications
- IoT Sensors
- Energy Storage
- Alternative Energy
- HVAC
- Lighting
- Power
- Audio Visual
- Server Labs
- Gas / Water Metering
- Elevators
- Video Surveillance
- Wi-Fi
- Digital Signage
- Fire / Safety
- PACS
- Elevators
- Enterprise Systems / Apps
- Smart Parking

Centralized Management

Disparate Networks / Systems

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In the Palm of my Hand – Mobile First
  • The hallmark of the automated experience will be the convenience of marshalling and directing all this technology from your hand.

At my Beck and Call – Automated Convenience
  • A highly desirable feature of these technologies is the ability to expand the automated universe through intuitive design features for the user, making ease of use convenient and second-nature.
Concept Ideas

Whatever/Whenever I Want – Personalization and Wellness
  • Automation in the workplace will enable mass customization and personalization of spatial and environmental qualities.

Protect the House - Optimization and Sustainability
  • New construction provides the opportunity to gather even more granular data about the building, which will drive future automation and further refine the user and owner experience.

Position me for the Future – Predictive Analytics
  • The longest-term benefit of building and user-integrated automation is the ability for predictive analytics through multiple nested systems of use.
Automation will play a significant role in improving resilience, both for the users by increasing levels of wellness, lowering stress and building greater immunity, and for buildings and spaces by integrating cascading levels of information, enabling the mitigation of harmful events and more effective management and building controls.
View to the Future Experience

- Coffee order by phone
- Bookable Desks Through Phone
- Sound, Light & Noise Sensors
- Visitor Management And Security
- Virtual Conference Room With Occupant Preference Settings
- Individual Temperature And Light Control
- Automatic Elevator Calling
- Biometric Furniture
- Robotic Cleaning System
- Telepresence Robot
- Conference Room Location App
- Autonomous Workplace

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A Day in the Life

Integrated user experience

COMMUTE
Transit Apps, Rideshares, Weather-Informed Calendar

GETTING THERE
Parking AI, Live Maps, Digital Space Booking on Mobile

FIND A SPACE
Sensors Inform Today’s Desk Location: Levels of Sanitation, Noise, Tools + Proximities

GET COMFORTABLE
A Day in the Life

Integrated user experience

HOST A MEETING
Needs-Based Space Selection, Wireless Device Connections

GRAB LUNCH
Mobile Food & Beverage, Mobile Concierge, Virtual Office Integration

TAKE A BREAK
Circulation in Building Zones: Optimized Levels of Air Conditioning, Daylight, Etc

ANALYZE
Generate Feedback, AI Learning Informs Predictive Analytics for the Next Day