Digital Solutions in the Workplace

Digital advances are affecting everything, from the way we buy groceries and socialize to the way we consume news and work. More and more, devices are talking to devices, sensors are getting smaller, and data streams are getting more accessible. These trends, along with advances in software, data mining, machine learning, and artificial intelligence (AI), promise a deeper understanding of the link between not just facility and human performance, but also organizational performance.

Organizations that embrace these changes now will have an edge in future decades. Our research and experience show that updating workspaces and investing in digital solutions can play a crucial role in supporting changing workstyles, unifying offline and online communications, and enhancing the employee experience.

Digital Workplace Tech

By 2024

50% of organizations will support employees' mental well-being with emotion AI technologies.

By 2025

70% of digital workplace service transactions will be supported or completed by automation.

By 2030

25% of organizations with >1,000 employees will invest in either physical or cognitive augmentation (or both) to improve productivity.

Source: Gartner, 2021

Where Did All the Desks Go?

Over the last decade, the role of the office has shifted to support both an analog and digital experience—as more employees are able to work from disparate locations thanks to technologies like Slack, Google Docs, and Bluescape®. These technologies allow employees to work together even when they're geographically apart. Yet, even as virtual collaboration tools enable cross-continental communication at an unprecedented scale, we are still social beings. Humans still require physical connection and community. People across generations require face-to-face interaction, especially younger workers who are building their careers and seeking mentorship. And research shows that teams perform better when they have a designated, physical workspace.

Moving forward, workers will continue to come to the office to:

• Connect socially
• Collaborate, create, and innovate at peak effectiveness
• Leverage tools that help them perform at their best
• Reap the inspiration of knowledge-sharing and impromptu interactions

For these reasons and others, the office will continue to be the hub for what makes work happen, with home and third places playing a strong supporting role. In this Work from Anywhere ecosystem, the floorplate needs to respond, creating environments that prioritize authentic human connection and adapt for differing occupancy levels. Digital technologies will also need to support workers better than in the past, accommodating a continuous flow of work in multiple environments.

Evolving Technologies in the Workplace

Today's digital solutions offer many benefits:

• Enable an evidence-based approach to understanding how facility, human, and organizational performance interconnect
• Open the door to new and deeper understandings of how work environments can influence culture, collaboration, creativity, and well-being
• Enhance employee performance, hiring and retention, creativity/innovation, well-being, and work/life balance by offering workers greater autonomy and flexibility
• Provide organizations the elasticity to react to short-term, unplanned events, which helps manage uncertainty for both leaders and employees

For designers, this has necessitated a new way of thinking about flexible office space to accommodate teams working in the office and remotely. Overlaying the physical workspace with the virtual takes into consideration:

• Conference rooms equipped with video conferencing systems
• Touchscreen walls that display documents, spreadsheets, images, and notes
• Devices talking to devices, either directly or through the cloud
• Sensor devices to monitor and control occupancy, use of space, and environmental metrics such as air quality, sound, and temperature
• Video games for training, skill/team building, or combatting stress
• Spaces that support the digital use of sound to enhance the audio experience
• Spaces that adapt to support equitable virtual connections

Equitable Experiences for Virtual Collaboration

Providing employees with equitable collaborative experiences is imperative in a work from anywhere culture. Collaborative technology that offers high-performing teams persistent "conversational workspaces" (with communication among people, applications, chatbots, AI, etc.) enables efficiency, clarity, and the alignment of team goals.

Designing a shared workspace where all team members can contribute—whether they are together in the office or on screen—means every team member needs access to technology without compromise to see, hear, and interact with each other. They also need shared information and documents, paying special attention to:

• Workstream collaboration platforms
• Tables and seating to optimize screen viewing
• Acoustics
• Lighting

Sensing Our Way to a More Optimized Future

Emerging technology places us on the cusp of real-time optimization for both workspace and employee performance. Not only can today's automated sensors replace the manual occupancy survey by capturing space use at a finer level of detail and greater level of accuracy, they can seamlessly monitor and control inputs across three domains:

1. **Physical** – use of space, enclosure, and furniture
2. **Environmental** – lighting, air, sound, and temperature
3. **Personal** – employees' physical, emotional, and cognitive state through physical cues

Eventually, sensors may soon be integrated to enable environmental systems to react to user needs in real time.

For instance, the system of the future may monitor a meeting and determine that most people have been sitting for 20 minutes with little major posture change, or that there has been a single dominant speaker for the past 10 minutes, or that the level of carbon dioxide has exceeded a threshold. Facial muscle strain and skin temperature may be evaluated to confirm participants' attention is waning. In response, the system may adjust light intensity and color, slightly lower the temperature, increase airflow, and/or add specific scents in the air in an attempt to bring the occupants back to a state of attention.

If this sounds like science fiction, it is not. These capabilities exist today with systems already available on the market. All that is missing is the ability to fully integrate these systems into a master system with a sufficiently intelligent controller to optimize energy use and increase employee effectiveness.

Leveraging the Internet of Things (IoT)

The IoT is the network of physical objects—"things" that are embedded with sensors, software, and other technologies for the purpose of connecting and exchanging data over the internet.

Companies that succeed in deploying IoT at scale take 7 main steps:

1. **Decide who owns the IoT in the organization.**
   Assign a clear owner who could come from any number of functions, business units, or levels.
2. **Design for scale from the start.**
   Ground IoT in business outcomes and avoid getting caught up in the technology and focusing only on pilots.
3. **Don't dip your toe in the water.**
   Deploy multiple use cases at the same time to force transformation of operating models, workflows, and processes to ensure value capture.
4. **Invest in technical talent.**
   Recruit data engineers and scientists and upskill your current workforce in data science.
5. **Change the entire organization, not just the IT function.**
   Tech alone will never be enough to unlock the potential of IoT. Instead, the core operating model and workflow must be redesigned.
6. **Push for interoperability.**
   Specify interoperability as a buying criterion and push vendors for it to ensure seamless integration.
7. **Proactively shape your environment.**
   Diligently build and control your IoT ecosystems. Consider the implications to designing the physical environment.

Source: McKinsey Digital, 2021

Digitalizing the Workplace
for Future Growth

While the promise of new technologies can be intoxicating, the real test of any new technology is this: Will it actually help people? Human capital is the one constant in the ever-evolving digital age.

We don't know for sure what the future will look like, but we can still prepare for change and help future-proof spaces by considering people-centered organizational needs. Designers can take a holistic approach by:

1. **Researching systems** to ensure full integration with design intent.
2. **Maximizing free span** to provide for flexible enclosure and partition systems.
3. **Designing for raised access flooring** and underfloor air with an 18-inch depth to allow flexibility in distribution of HVAC, electrical, and data systems, and to avoid duct runs that may impede reconfiguration.
4. **Designing data systems** to maximize bandwidth, provide many access locations, and minimize interference of the working bands for Wi-Fi, NFC, RFID, and Bluetooth.
5. **Designing flexibly distributed power systems,** such as modular wiring with expansion capacity.

Each space in the new ecosystem of work has its advantages, but spaces designed before the pandemic might not be the right fit for the future. The past few years have given us a better understanding of what works well and what does not. Applying this knowledge will allow us to rethink the design of the office, home, and third places to maximize their potential for the future of work.

Want to learn more?
For more information to help ensure your workplace is optimized to support existing and emerging technology, people, and engagement, please contact your local Haworth sales representative.