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Access the full report here.

Healthy places and portfolios

Supporting healthier and more human-centric environments

The pandemic has highlighted the need for healthier, better designed and more human spaces. There is a growing recognition of the benefits presented by more healthy urban environments and workplaces, from greater mental wellbeing to increased productivity and cost savings. Organizations like WELL and FitWel now provide certifications for buildings that promote occupants' health through measures like air and water quality, thermal and sound comfort and amenities, as well as offering new ratings specifically around health and virus prevention.

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These considerations are increasingly being taken onboard at the design stage, but the most prevalent technologies currently in use revolve around tracking health-related metrics within buildings, as well as communication, occupant experience and personalized control tools. The last year has also seen increasing experimentation with touchless technologies and automation to reduce infection risks and improve confidence, as well as new tools like robotic cleaners.

• **Design and construction:** Recent research has highlighted the impact of a building's design and layout on wellbeing, physical and mental health and workplace productivity, with factors ranging from natural light to air quality, temperature, humidity and sound all playing a role. Building information modeling (BIM) and digital twin software can now be used to optimize building

Design and construction

- BIM & digital twin models
- AI-assisted digital design software
- Social distancing & adjustable layout systems

Performance tracking

- IoT & sensors
- Building analytics platforms
- User feedback systems
- Benchmarking & portfolio optimization tools

Automation and space management

- Remote access & security systems
- Cleaning & maintenance management tools
- Automated & predictive FM platforms
- Cloud-based & AI-enabled HVAC & IT control
- Autonomous & remote-controlled robotics
- 'Smart' materials
- Space & occupancy management tools

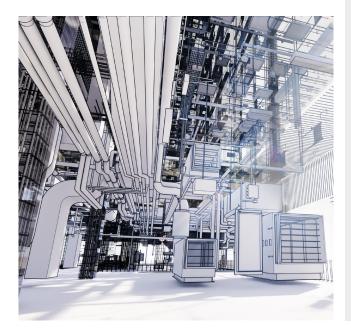
User experience

- Tenant experience & feedback apps
- Touchless access systems
- Personalized lighting & heating controls
- Automated & virtual workplace assistants
- Virtual concierge services

design and simulate performance in different environmental conditions, while the use of new materials like 'smart glass'—which can adjust the amount of light and heat passing through depending on external conditions—can markedly improve building performance.

Performance tracking: Tracking and understanding health-related metrics provides the information needed to adopt strategies that boost safety and wellbeing. Sensors and heat cameras allow information like air quality, heat and light within a building to be tracked in real time, with more advanced systems offering the potential for real-time adjustments, such as adjusting the rate of air circulation or heating depending on the number of people currently in a building.

- Automation and space management:
 - Integrating health and occupancy tracking with facilities management (FM) systems can lead to much more convenient—as well as efficient services. Touchless technologies such as voice or gesture-controlled access systems permit occupants to move around a building freely, while occupancy tracking can allow real-time cleaning schedules to be adjusted automatically; for example, triggering a cleaning order when a room has been vacated and holding bookings for that space until the cleaning is complete, or when occupancy has reached a set level. The past year has also seen experimentation with advanced robotics in facilities management, with remote-controlled and even autonomous robots able to maneuver around properties to clean or disinfect.
- User experience: Platforms such as HqO or JLL Jet enable users to book rooms or services, provide feedback and communicate with FM staff, while also providing information on occupancy, health checks and even heatmapping to better manage health. Integrating similar tools into configured 'smart buildings' can allow users to set their own preferences for light and heating in different spaces.



Key considerations

- 1. The pandemic has provided an opportunity to reimagine the built environment and workplaces to support health and wellness, comfort and productivity. Studies have shown a link between green-certified and healthier buildings and improved wellbeing, cognitive function and productivity, and workplace resets as companies plan their longer-term strategies offer the potential to ensure living and workspaces contribute to greater health. Keeping an eye on long-term goals rather than short-term, capex-heavy solutions will be key to ensuring health initiatives are aligned with the wider business strategy.
- 2. Expectations of buildings and places in terms of health and wellness are higher than they have ever been. Utilize technologies—such as sensor displays showing air quality—to showcase your initiatives and let employees and customers know what you are doing to help them. Create a 'sense of place' that supports health and contributes to belonging and productivity.
- 3. With the growth in hybrid and 'work from anywhere' strategies, healthy workplace considerations will need to evolve beyond office-based initiatives to support employees wherever they may be working. This can involve providing the technology to allow seamless health tracking and connectivity, as well as supporting employees' health needs across locations.



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