

Navigating the future of the workplace

Survey finds property managers and asset owners need real-time operational awareness of spaces and building conditions.

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It's hard to imagine doing anything without the help of a map these days.

Need the fastest route from a warehouse to a store? Instinctively, you pull up a **real-time map** to **plot the route** and avoid traffic. Opening a restaurant? To maximize your sales, you might conduct mobile **data analysis** and **overlay** your findings on a map to see who frequents the area around that prospective location.

But those useful insights typically end the moment you step into a building.

To manage indoor spaces, investors, tenants and property managers rely on out-of-date blueprints and well-meaning staff to guide visitors and trades. Increasingly, there is a need to visualize everything that goes on inside a building – from security to maintenance to the movement of equipment and people.

According to a Navigating the Future of the Workplace survey conducted by BOMA Canada and Esri Canada, which provides geographic information system (GIS) solutions, 42% of respondents say real-time operational awareness of spaces and building conditions is important to them.

BY THE NUMBERS

What is most important to you, personally?

42%

REAL-TIME OPERATIONAL AWARENESS OF SPACES, ASSETS & BUILDING CONDITIONS

41%

COORDINATION OF CONSTRUCTION, RENOVATION & MAINTENANCE PROJECTS

40%

ABILITY TO RESPOND AS QUICKLY AS POSSIBLE IN THE EVENT OF AN EMERGENCY



METHODOLOGY:

BOMA Canada and Esri Canada surveyed 212 asset managers, property managers and building operations managers across Canada. The online survey was conducted between January 17, 2023 and February 9, 2023.

Coordinating construction, maintenance and renovation projects (41%) and responding quickly to emergencies (40%) were just as high on the priority list. Furthermore, market indicators are showing that these numbers are on the rise.

The survey reflects the latest views from some of Canada's asset managers, property managers and building operators. Over half of the more than 200 respondents said they are responsible for more than a million square feet and represent companies with more than 50 buildings in their respective portfolios.

INDOOR INSIGHTS

Before COVID-19, you could almost predict occupancy and people movements, but today, office space is more dynamic, says Dave Monaghan, Industry Manager, IoT and Indoor GIS with Esri Canada. "For asset managers, property managers and building operators, trying to get a clear understanding of how their building is being used on a daily basis is a real significant challenge," he says. "They need a standardized platform to gather data from a variety of systems."

Interactive, real-time maps have largely focused on the outside world, but the indoor component is the next frontier. The changes inside a building due to renovations, updates and ever-evolving tenant needs are happening much faster than the changes happening outside the building, says Louise Morgan,

Executive Vice-President and Partner at Archidata. To help companies stay on top of the modifications happening indoors, Archidata transition their existing 2D building data to 3D building information management systems. Keeping up with those changes is imperative to helping maintenance teams, visitors and employees navigate spaces more efficiently.

The most effective way to manage that evolution today is to build a digital twin, which is a 3D replica of a physical space. The process digitizes all of a building's floor plans and connects the dots between systems within the building to monitor things like HVAC, lighting and occupancy. A range of sensors, including Bluetooth beacons, RFID tags, room occupancy sensors and smart devices, can bring interactive maps to life by providing real-time data and ever-changing floor plans to a mobile device. In order to make more-informed decisions, you need to visualize the special structure using an indoor GIS-generated map, says Morgan.

According to the survey, two-thirds (67%) of respondents say they currently find helping people get around properties somewhat challenging or a major challenge. Monaghan notes there is reason to believe this challenge will continue to grow due to the increasingly dynamic nature of office space planning and usage. Office occupancy is expected to continue to grow, with 38% of survey respondents expecting traffic to their buildings to climb over the next five years.

Why is monitoring real-time location of people and moving assets important to you?

53%

TRACKING OF ASSET MOVEMENTS



51%

ANALYSIS OF PEOPLE MOVEMENT PATTERNS OVER TIME

47%

SAFETY & SECURITY

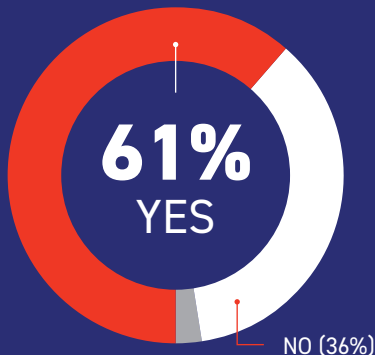


45%

WAYFINDING & NAVIGATION



Are you currently using spatial data and analysis to understand your spaces and help in your decision-making?



Why do you use a building automation system (BAS)?



57%

TEMPERATURE CONTROL



54%

LIGHTING



43%

ROOM OCCUPANCY



Do you have any of the following devices in your buildings?

60%

WI-FI

44%

BLUETOOTH BEACONS

42%

RFID (ACTIVE AND PASSIVE)

30%

ULTRAWIDE BANDS

IMPROVING NAVIGATION

Between harder-to-predict use and an expected surge in traffic, it's perhaps not surprising that 71% of respondents say they need real-time location monitoring of people and movable assets like maintenance or IT equipment. Property managers were the most likely to say they needed that level of insight, with 86% noting they require advanced tools to understand the movement patterns of tenants and visitors as people navigate their properties.

As workers return to the office, employees at larger organizations with many different office spaces may be left wondering where they need to go. "An office space is no longer necessarily the same space that you go to every day. It could be a different building and/or room," says Monaghan, who points to governments and school campuses as examples. "It's a bit of a stress factor."

With employers adopting different back-to-work policies, understanding how space is used is the critical question in the real estate sector right now. Morgan says that employers need to understand how many people are using the space to know how to optimize their footprint.

Of the respondents who are already using real-time monitoring, 53% are using it to track assets, while another 51% are using it to analyze people movements over time. While organizations may not need to track where every chair is,

“Rather than just guesswork you can make it a **data-driven solution**. Anything that helps us understand that coefficient is extremely valuable because a lot of the times we are using people’s experience without understanding why something worked or didn’t work.”



SHAWN HAMILTON

Vice-President of Business Development at Canderel and a member of BOMA Canada’s board

real-time monitoring is important for facilities, where the need for the accurate location of specialized equipment and assets is essential as they move through the structure, Morgan explains.

CREATING A SAFER ENVIRONMENT

Security is another primary application, with 47% saying having a real-time interactive map of the floor plan is important to their safety and security measures. “Emergency preparedness, for me, is the most important thing,” says Morgan.

Having that interactive digital twin can help save lives by speeding up response times. “For emergency responders, it’s no longer enough to just have a PDF of a floor plan,” notes Monaghan. “You need real-time situational awareness and that dynamic map of where things and people are right now.”

The expected benefits should offset the cost associated with this level of insight. On an individual level, the time savings from a wayfinding tool may seem insignificant, says Monaghan, but it

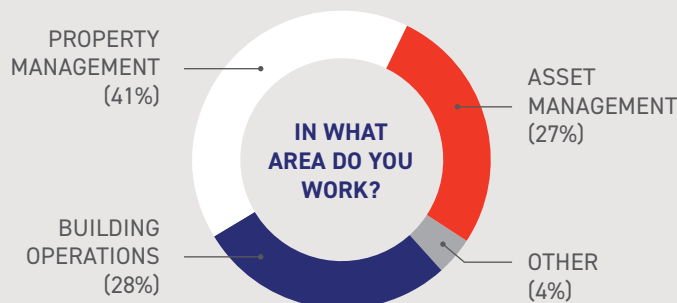
adds up. To illustrate, he uses the example of using GIS to streamline the work order management process and dispatch the closest available maintenance crew and direct them to the problem. If that newfound efficiency saves even five minutes per work order, that could translate into savings on hundreds of billable hours each year, given some companies may experience thousands of work orders annually. “That’s an immediate return on investment,” Monaghan says.

LOOKING TO THE FUTURE

Property managers like Shawn Hamilton, Vice-President of Business Development at Canderel and a member of BOMA Canada’s board, have extensive experience looking at interactive maps to understand areas around locations when making business decisions. He’s intrigued by the potential of using an indoor GIS to get those insights into a building. It’s about being able to understand what’s happening and why it’s happening in a building that makes it so successful, he says. ■

WHO RESPONDED

The survey reflects the views of some of the most senior commercial real estate leaders in Canada who manage own or operate thousands of properties, spanning well over 500 million sq. ft. across the country.



36%

HAVE MORE THAN 100 PROPERTIES

32%

MANAGE MORE THAN 5 MILLION SQ. FT.



**FOR FURTHER INFORMATION
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