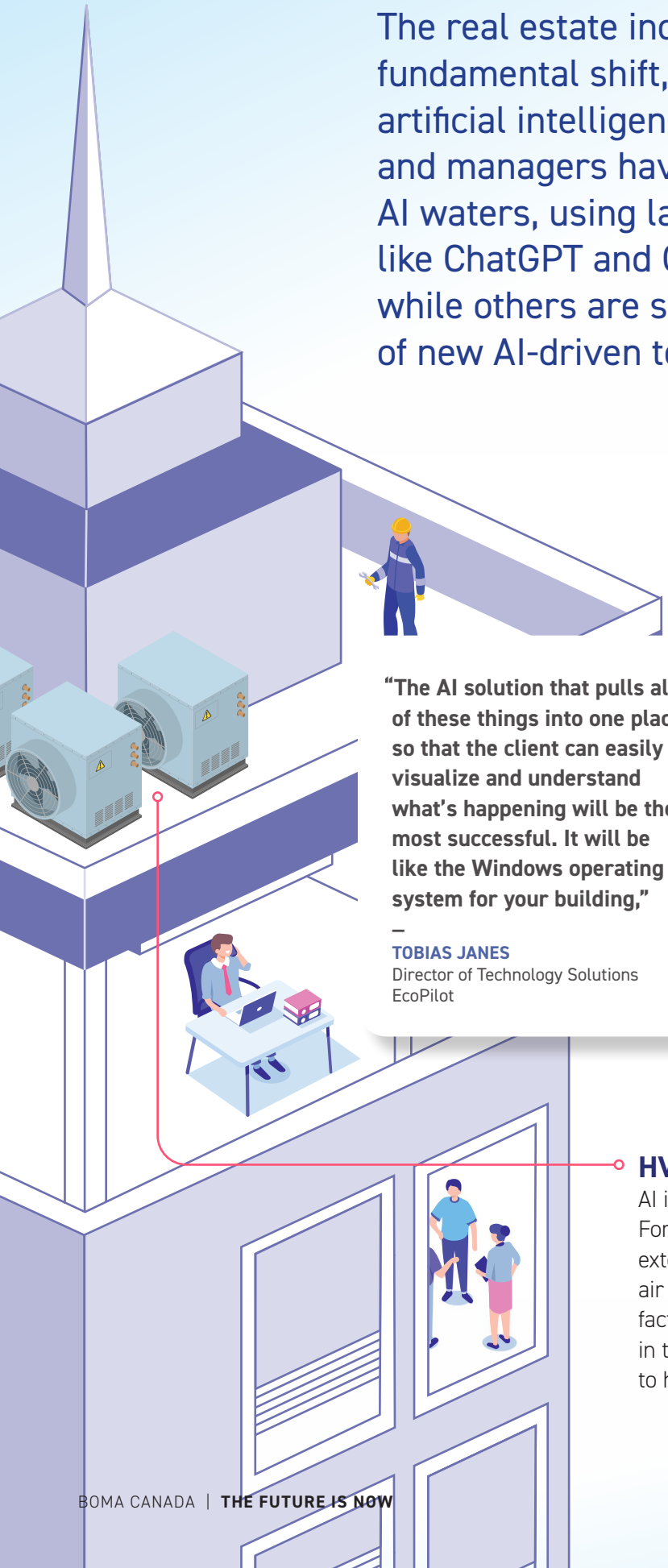
BOMA Canada

The future is now

Six areas where AI is changing commercial real estate.



The real estate industry is on the brink of a fundamental shift, thanks to the broad impact of artificial intelligence (AI). Some building owners and managers have dipped their toes in the AI waters, using large language models (LLMs) like ChatGPT and Copilot to help compose emails, while others are starting to embrace all kinds of new AI-driven tools.

"The AI solution that pulls all of these things into one place so that the client can easily visualize and understand what's happening will be the most successful. It will be like the Windows operating system for your building,"

–

TOBIAS JANES
Director of Technology Solutions
EcoPilot

According to research from JLL, AI and generative AI are two of the top three technologies real estate leaders expect to have the biggest impact on the industry in the coming years. The former uses machine learning algorithms to sort through and organize complex information, apply basic reasoning and perform actions, while the latter can generate new text, ideas, images and more with various prompts. Real estate companies are using both – whether to better understand leasing documents and rent rolls, improve ESG reporting, optimize their HVAC system or improve building security.

At the centre of any AI use case is data – using it, tracking it, democratizing it and making sense of it. Accessing and interpreting that data can increase operational efficiencies, enhance security tenant satisfaction and more. Here are some of those use cases.

HVAC

AI is dramatically changing how HVAC systems work. For instance, it's now possible to use real-time data from external factors like solar radiation, wind speed and outside air temperature, and then combine that data with internal factors like how space is used and how many people are in the office to predict how much energy will be required to heat or cool a space.

> **"If your goal is to reduce energy usage by 5% year over year to meet net zero by 2030, you can use artificial intelligence there in your trend analysis to understand whether you're going to meet your goals based on current energy consumption."**
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> **JOSEPH MARTINO**
> Vice President, Information Technology, Primaris

Lighting

Rather than relying on motion sensors and timers to control when lighting goes on and off in various parts of the building, AI lighting systems can analyze data – such as light coming from external windows, room occupancy, and the type of activity being performed – from a variety of sensors and adjust the brightness and colour temperature of the lighting. Not only can the lighting system respond to these changes in real time, it can also respond to more nebulous voice commands, like an employee asking for lighting adjustments that will reduce the glare on their computer screen.

Predictive maintenance

There's nothing worse than an unexpected equipment breakdown in a busy building. Whether it's an elevator in need of replacement or a water leak, the cost of an emergency repair isn't just financial it's your tenants' trust and your building's energy efficiency. AI-powered software can use machine learning to combine historical data with current equipment functionality to effectively predict what's about to break down and flag it for preventative maintenance or even perform that maintenance on its own.

Tenant/building manager interaction

Five years ago, chatbots were incredibly limited in their ability to interact with users, but generative AI has changed all of that. If the AI-powered chatbot has access to all leasing data, building energy consumption and HVAC information, a tenant could in theory ask it a question about a clause in their lease and receive an answer in seconds, rather than the possible hours it could take a building manager. They could also file a maintenance request and be able to track updates live instead of having to call the building manager to follow up.

> **"You cannot pull information, organize, structure, analyze or visualize that data from a piece of paper. For us, the most important role of AI is in extracting data and giving it back to the owners of that data as a tool."**
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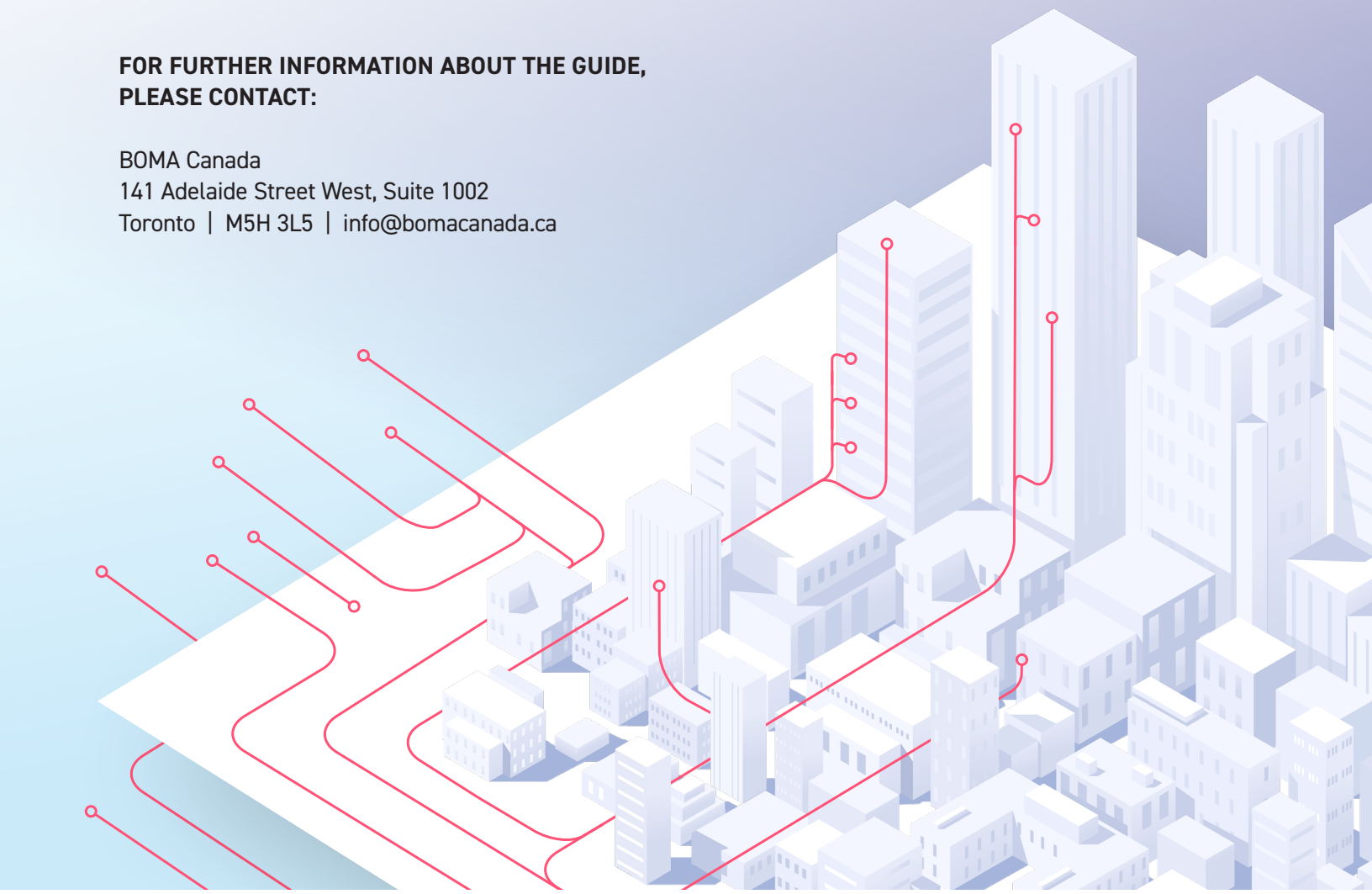
> **KALA HALBERT**
> Director of Marketing, Prophia

Lease management

Lease documentation involves an overwhelming amount of data, and many building owners and managers still manage it all using paper copies and filing cabinets. AI-powered lease abstraction can scan and digitize hundreds of pages of documentation (typed or handwritten) in seconds, categorizing data to make it accessible, as well as spotting errors and inconsistencies. In this scenario, both the speed and accuracy of AI can result in massive savings.

Security

As technology advances, so do the security threats, and for some organizations, a simple passcode, fob or key card isn't enough anymore. For these companies, AI-powered biometric security, which uses facial recognition, voice recognition or a combination of these and other authentication methods to verify someone's identity, may be the answer – either at the building entrance or the office door. The difference between this level of security and the facial recognition that's on your phone? An ever-evolving database of facial characteristics, expressions and other elements that AI algorithms learn from to improve matching capabilities that take daily and longer-term changes into account. ■



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