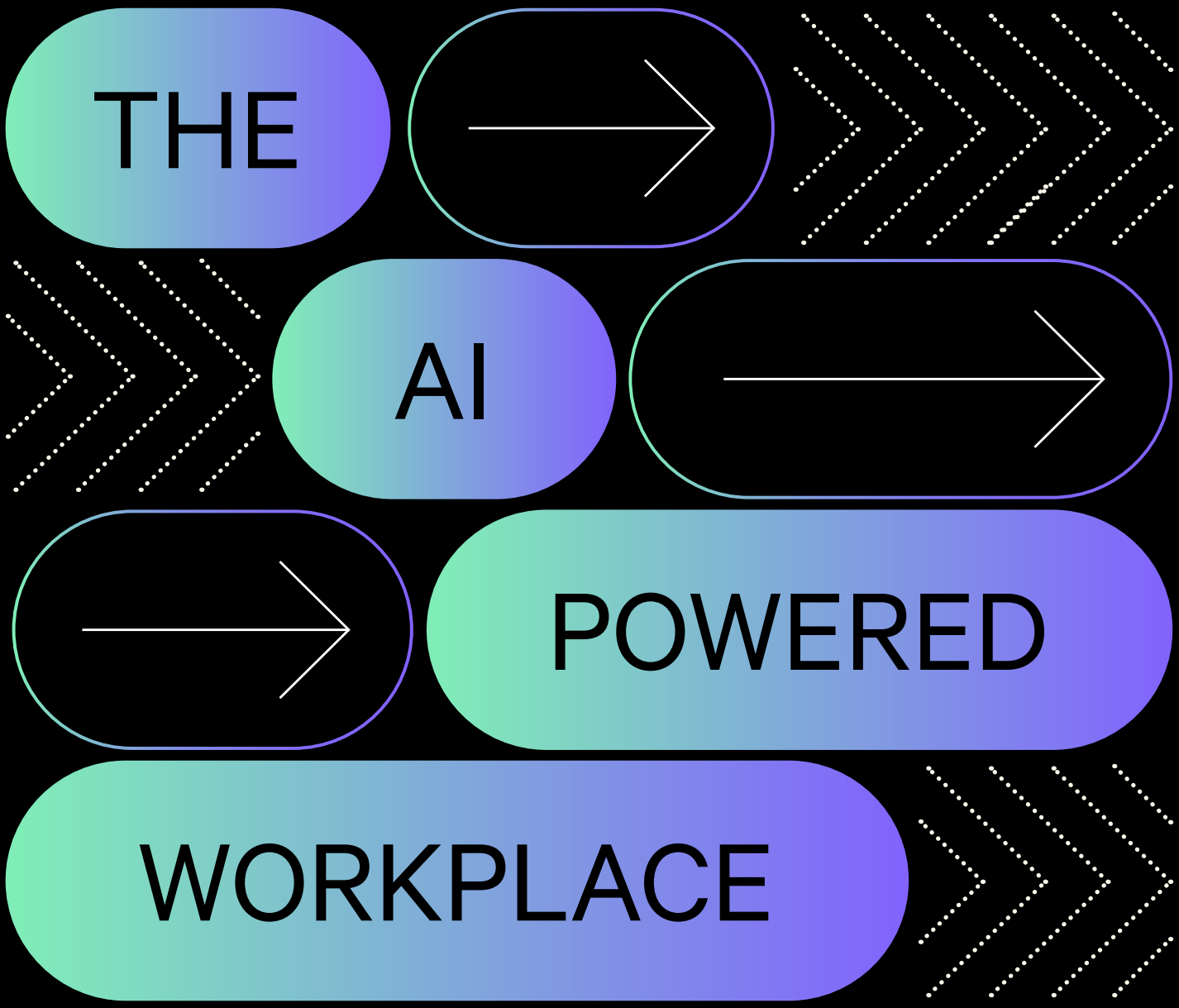


The impact of AI on the global workplace

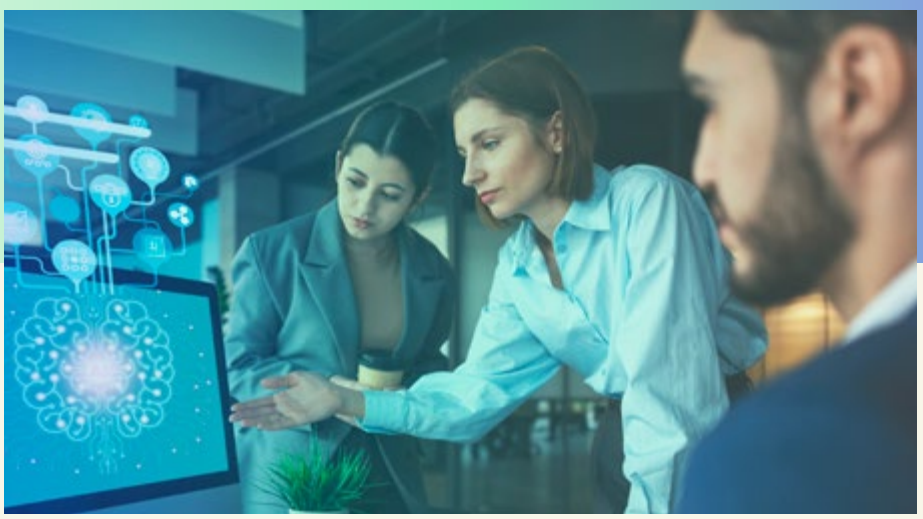
A discussion paper
by Mirvac in partnership
with WORKTECH Academy
March 2024

WORKTECH ACADEMY | mirvac

CONTENTS

01 EXECUTIVE SUMMARY

The current buzz around Artificial Intelligence has been stirred up by employees exploring Generative AI, rather than company leaders looking at its potential to transform the workplace. This report suggests that this could be about to change.



Everywhere we look, there is currently an explosion of interest and innovation in Artificial Intelligence (AI). Even though AI offers clear potential for organisational leaders to apply this exciting technology to address a wide range of organisational challenges, it is employees rather than company bosses who are leading the clamour for an AI powered workplace.

The launch of Generative AI tools such as ChatGPT and Gemini have become a part of our everyday lives, achieving widespread employee appeal. However, these tools have created a bottom-up, user-led revolution rather than a strategy driven by corporate policies.

Beyond the initial wave of public excitement, there is now a clear opportunity for company leaders to strategically transform workplace design, management and experience through AI tools and processes. This opportunity is relatively under explored and sits at the heart of 'The AI Powered Workplace' report.

This paper, the latest in a series from Mirvac in partnership with WORKTECH Academy, looks at the AI phenomenon and at how companies can apply their potential to the future of the workplace. It suggests where the key priorities for transformation lie, via case studies and interviews, with experts in the Mirvac and WORKTECH Academy networks.

Section two of this report establishes a direction of travel – from the supervisory models of 'augmented work', which we discussed in Mirvac's report of 2019, to 'symbiotic work', with machine intelligence showing far greater operational autonomy and independence. AI innovation is poised to address some of the toughest organisational challenges – from predicting future space use and driving workplace culture, to reaching 'digital maturity' in leadership decision making.

Section three explores best practice in AI adoption by companies seeking to capitalise on the enthusiasm shown by many employees. Barriers to adoption are also discussed including issues around data sharing and analysis, change management and security.

In sections four, five and six, we look ahead to the next big shifts in AI, identifying trends across three main areas of the workplace: design, management, and experience. Taking each topic in turn, we identify cutting-edge innovations and reflect upon how these new AI tools could transform their respective areas of the workplace.

Finally, we look ahead to the future, reflecting on the practices that companies will need to adopt to stay ahead of the game and offer insights for organisations that are anxiously awaiting the AI revolution. Mirvac's overarching mission is to 'Reimagine Urban Life' and AI is now clearly a part of that reimagining. Mirvac is committed to understanding and maximising the vast potential of this new wave of technological change and we hope this report becomes a useful resource to assist you in adopting such changes within your organisation.

02

INTRODUCTION

New technologies once augmented the workplace. With AI, there is now a decisive shift towards a more equal balance between human and machine intelligence to address organisational challenges.

In 2019, Mirvac and WORKTECH Academy produced a report called, 'Augmented Work' which looked at the interrelationship between the workplace and technology. It presented a set of different relationships between human workers and developing technologies such as robotics, machine learning and AI that could augment both the way employees work and the design and management of their physical workplaces.

The report explored a range of five models for those relationships in an ascending scale of machine autonomy from 'assigned' and 'supervised' (higher human input), to 'coexistent' and assistive' (lower human input). A fifth model, which we described as 'symbiotic', described a workplace where machine intelligence requires minimal human input to complete high-level tasks. Using generative design with AI as an example, we considered this to be still some way into the future.

Five years on, in the wake of the global pandemic and the release of Generative AI models to the public, it has become clear that the five models we originally identified as a linear series of step-changes have not upgraded progressively from one to the next. Instead, we have radically accelerated in the direction of a symbiotic relationship with new technology and skipped some of the intervening steps.

This is entirely due to the impact of AI. Its introduction into the workplace has been transformative and already the speed of adoption in the workforce is unprecedented. AI is now impacting many aspects of working life, integrating with everything from robots in manufacturing centres to data collection within workplace management software and even with audio-visual communication systems central to the hybrid work model.

Every aspect of how we work, the tools we utilise and the environments in which we work are being integrated with AI to make us work smarter, faster, and more effectively. And this has created one of the most significant impacts of technological development in the last few years – namely an increasingly AI-literate workforce, or at least one open to the need to be upskilled.

02 INTRODUCTION

Defining technology of the age

AI has stormed ahead when it comes to innovation in a way that few anticipated. Its ubiquity and ability to impact all aspects of the workplace means that it is rapidly becoming the defining technology of the era. How buildings are designed, managed and experienced will be radically different in a new era of AI – and the current state of play and the range of future possibilities has set the focus of the 'The AI Powered Workplace' report.

At Mirvac, we've been exploring the key challenges that organisations face in the new world of work (see box below). We are eager to understand our customers' priorities in a rapidly changing landscape that is seeing the workplace reinvented on many levels.

In working with and listening to their customers' perspectives, Mirvac have identified a number of key organisational challenges that AI can address:

- → Supporting sustainability targets through increased energy efficiency and reporting
- → Spatial planning/forecasting for current and future needs
- → Turning data into actionable insights
- → Optimising space utilisation within buildings and across a portfolio
- → Driving workplace culture and engagement through enhanced experience
- → Encouraging positive behaviour change in the workforce for agile ways of working
- → Creating a sense of community through predictive people management

Source: Mirvac

In each of these challenges, AI has the potential to make a decisive contribution. AI can help address people-centric issues by improving workplace culture, community, engagement, and agility, as well as place-centric issues, through the optimisation of space utilisation, enhancing the usefulness of space for employees and forecasting future space requirements.

Organisations are eager to get a grip on new technologies, to stop 'drowning in data', to integrate and analyse data streams as a basis for more effective decision-making, and to reach a state described as 'digital maturity'.

How organisations exploit the vast potential of AI will depend to some extent on how they adopt and integrate AI into other technologies. Company leaders will need to take a leap of faith to see beyond current technical parameters and grasp the potential of the future.

Using case studies and interviews with experts in the field, this report aims to build a picture of the changing landscape of the workplace in the age of AI, exploring how the design, management and experience of the workplace could be affected by new AI tools. Finally, we will offer insights for organisations on their journey towards an AI powered workplace, reflecting on Mirvac's own experience in this area.

03 A SHIFT TOWARDS AI

Unlike earlier workplace technology revolutions, the shift to AI has been driven by employees. This provides both a challenge for organisations to keep pace with innovations and an opportunity to develop new tools and ideas.

What is the current state of play regarding AI and the workplace? The entire picture is still novel. 2023 was the year that AI went mainstream. Although it had been making waves in the technology sector for years and the number of integrations with other workplace technologies had been creeping up, the recent explosion of public interest in AI tools has changed the landscape completely. This largely relates to the release of ChatGPT by Open AI in late 2022, which prompted widespread media coverage.

Since then, other publicly accessible generative AI tools have been made available to employees all over the world. This has meant that global awareness around the capabilities of different AI tools has increased alongside business investment as companies step up their symbiotic engagement with this technology.

Dr Sean Gallagher, founder of Humanova, is an expert in the future of work. He comments: "I don't know of another technology that has been so profoundly disruptive in such a short space of time. If you think about all the tech changes that have happened over the last few years, they've all been top-down initiatives and have often been very expensive to implement. This tech is unusual in many ways, but partly because it is bottom-up, 1.5 billion people across the planet are using ChatGPT and employees are ahead of their companies in terms of uptake."

> This tech is unusual in many ways, but partly because it is bottom-up, 1.5 billion people across the planet are using ChatGPT and employees are ahead of their companies in terms of uptake.

Dr Sean Gallagher, Founder, Humanova

03 A SHIFT TOWARDS AI

BARRIERS TO ADOPTION

AI is already capable of addressing workplace challenges such as space optimisation, forecasting of future space needs and visualisation of building performance data. However, our experts agreed that there are current barriers to adoption. These include uncertainty around knowing where to start with AI adoption; issues around data capture and analysis; the need to implement change management around new ways of working with AI; and concerns over data security and intellectual property rights.

DATASETS HOLD THE KEY

AI can have a transformative effect on data collection, helping companies to integrate different datasets and to visualise their data in ways that are easier to interpret. But this requires a level of data quality and an in-depth understanding of what kinds of data your organisation has access to. Doing this work on company datasets lays the groundwork for effective AI adoption and can streamline the process of integrating AI into the workplace.

One key challenge is around people being willing to share their data with their employer and technology partners, or the issue of sharing data between tenant and landlord. This is a concern that Cameron Sandell, Head of Digital at global engineering firm NDY, has highlighted. NDY works closely with clients to build and design systems which help buildings operate efficiently. To do this to the best of NDY's technological capability, high level data collection is required but data-sharing is still a sticking point.

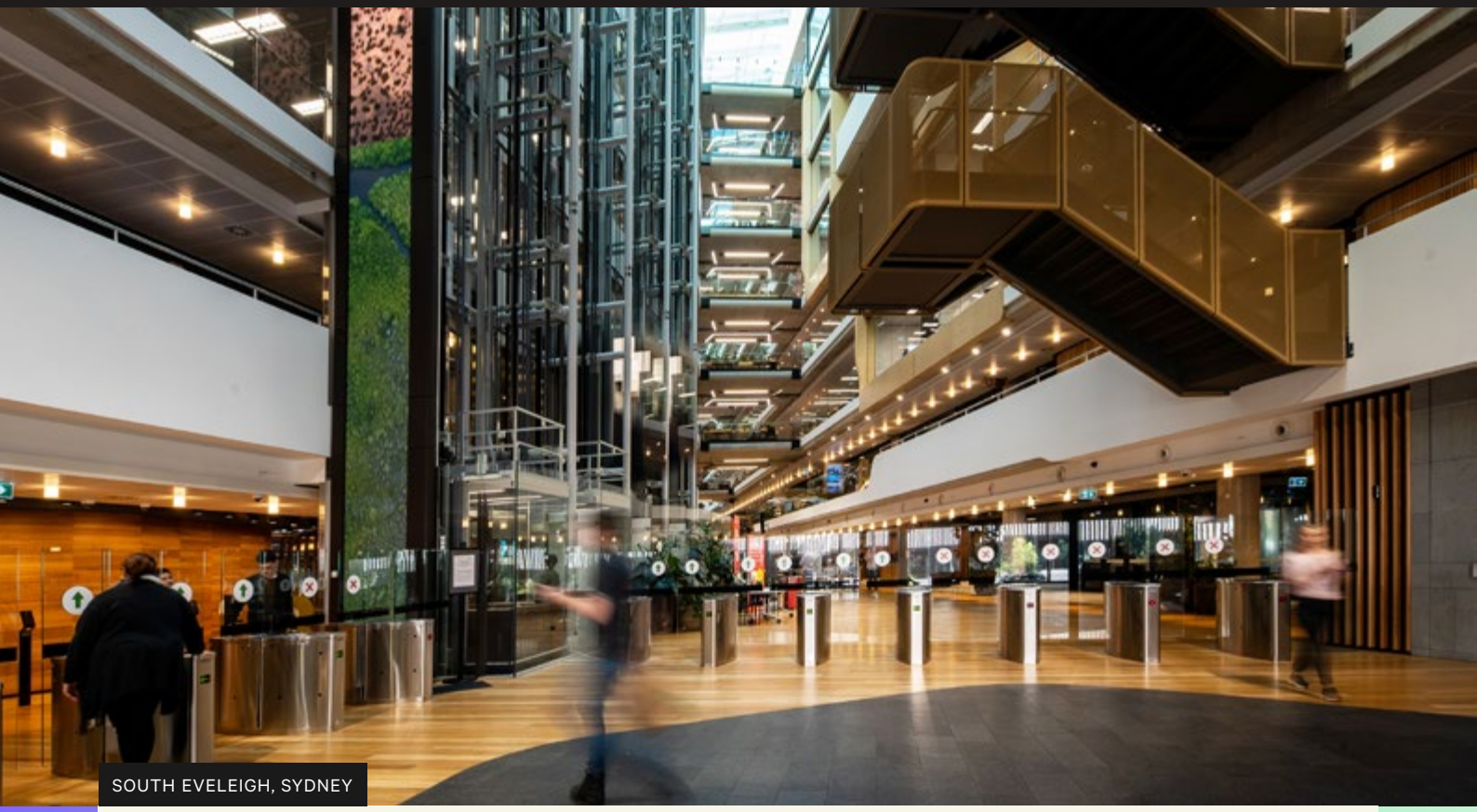
Sandell explains: "One of the issues that we come up against is that tenants don't want to share all their data and neither do landlords, so in order to make use of AI systems we need to find ways to secure that data before it can be used to provide insight."

There are significant advantages to sharing data, with an opportunity to boost the workplace experience and reach sustainability targets. In coming years, it is likely that companies will come under more pressure from new legislation that require organisations to produce more detailed reports on their environmental impact and make them liable for the accuracy of their data.

The use of secure environments is helping to drive confidence in this area, allowing tenants and landlords to share datasets securely. This shift could also be brought about by new generations stepping into the workforce. More people will be in decision-making positions who have grown up as digital natives with data sharing as a part of their everyday lives, creating a workforce with confidence in the benefits of data-sharing practices.

If we can overcome the hurdles of gaining new competencies, building trust in data-sharing practices, increasing the quality of our data and understanding where best to leverage AI for an individual organisation, then we could be looking at an entirely new workplace landscape which could transform how commercial offices are designed, managed and experienced.

03 A SHIFT TOWARDS AI



SOUTH EVELEIGH, SYDNEY

The Mirvac Perspective

"At Mirvac, we create industry leading workplaces and we've been focusing on how to deliver the most productive workspace in a hybrid working environment. We've been testing different use cases and options to optimise and adapt spaces to provide an in-office experience that helps our customers engage, attract, and retain their employees.

A key component of this is to embed flexibility within the design i.e. power, data and furniture strategy and then overlay that with mechanisms to capture data and insights. AI can then be used to leverage these insights and elevate the office experience for employees.

There is an untapped opportunity in the greater sharing of data between landlord and tenant. A more open dialogue and increased sharing of information will drive mutual benefits and greater experience, economic and sustainability outcomes.

We know that data is key to the benefits that AI can provide, but the biggest challenge is continuing to turn that wealth of data into meaningful insights that we can act upon. The more experienced AI becomes in mining data for actionable information, the greater the opportunity to build upon our workplaces and the employee experience.

For example, imagine an office space that can gather and collate data on wellbeing through productivity outputs and sick days, overlayed with employee response and engagement with their physical environment. This could further drive organisations towards creating office spaces that better support and promote the holistic wellbeing of employees."

Elly Daziel, Manager of Strategy and Customer, Mirvac

04 IMPACT ON WORKPLACE DESIGN

This section looks at how AI might transform the workplace in terms of how commercial buildings are designed. From floorplates to video conferencing suites, there will be a new frontier of possibilities.

There are three key areas in which AI is poised to transform the workplace – design, management, and experience. In each of these areas, embracing AI tools will have a meaningful impact on how workplace teams can operate and what their best practices should be.

This section looks at the impact on the process of designing workplaces, how we plan and design offices, as well as the constraints that are put on designers by clients. It will take into consideration how these factors will shift in the wake of the introduction of new AI tools, along with the ability of AI to give us new information around utilisation of space.

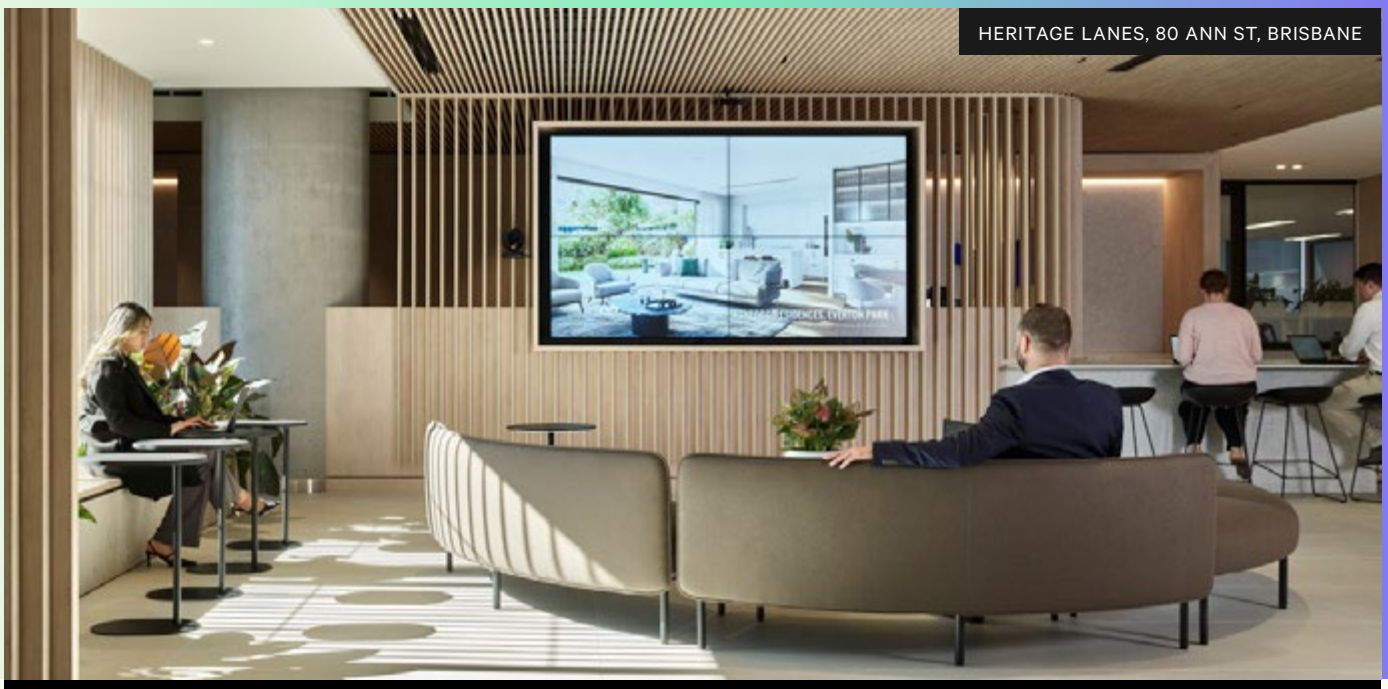
Already there have been significant experiments. Hickock Cole is a US architecture firm that has utilised Generative AI to create a design for a mixed-use tower block with office space as well as amenities and residential spaces.

Whilst the tools are not yet able to design offices without an experienced architect to guide them, the AI technology learnt quickly from its mistakes and is likely to become increasingly ubiquitous in office design, introducing new ways of imagining space as well as creating efficiencies and calculations that are challenging for humans to make quickly. These tools can also be utilised to support more junior staff in producing a higher quality of work, helping support them and elevating their foundational skill level.

Cameron Sandell, Head of Digital at global engineering firm NDY, believes the design of workplaces will be affected significantly by AI tools, but he thinks the impact will be less about the tools that support design ideation, instead arguing that "the next big thing is going to be AI... but it may not appear where we think, although it will certainly affect the building of workplaces and the design of spaces." Sandell thinks that as we start to use AI tools more effectively, there will be deeper consequences for how we understand our workspaces and what spaces there will be demand for.

> The next big thing is going to be AI... but it may not appear where we think, although it will certainly affect the building of workplaces and the design of spaces.
>
> Cameron Sandell, Head of Digital, NDY

04 IMPACT ON WORKPLACE DESIGN



HERITAGE LANES, 80 ANN ST, BRISBANE

> The workplace is the biggest piece of hardware in our workflow – we come to the workplace to solve workflow problems.
>
> John Corbett, Corporate Real Estate Consultant

Currently designers and tenants have expectations and standards around what kind of spaces they will be looking for in an office, but these don't necessarily align with the actual usage of a space. However, because of AI's data collection and integration capabilities, it can give us a much greater depth of knowledge around how spaces are used, with the ability to utilise both qualitative and quantitative data in order to develop a more well-rounded view of office space. Companies can leverage the increased data-analysis capacity of AI to understand and predict their space needs, adapting available furniture to suit different needs and providing access to a wider array of spaces to meet needs that emerge from the confluence of new data sets.

As Australian corporate real estate consultant John Corbett describes, the workplace is "the biggest piece of hardware in our workflow – we come to the workplace to solve workflow problems." With the advent of AI, it is inevitable that the places and spaces we need to perform our jobs will also undergo transformation. We could be looking at an entirely new workplace landscape which is symbiotically interlinked with AI technology.

This could be transformative for the design of workspaces as it challenges the set expectations around what type of spaces companies need. What is the use of asking for a ten person boardroom in an office plan if nobody ever has in-person meetings of more than five people? With better data around which spaces are in use, companies can make more efficient decisions around what their needs truly are and create more tailored spaces that work better for them.

04 IMPACT ON WORKPLACE DESIGN

ZAHA HADID ARCHITECTS, AI GENERATED CONCEPT PROJECT IMAGES

EARLY DESIGN ADOPTER OF AI

One firm widely recognised as an early adopter of AI in the design process is Zaha Hadid Architects (ZHA). Ulrich Blum, Senior Associate at ZHA and Professor of Architecture at Münster School of Architecture, is adamant that his firm's use of AI is all in the service of designing better office buildings that cater to workers' individual needs – and not simply to achieve economies of design production when calculating different spatial configurations of a floorplate at speed.

Blum believes that large office spaces are no different to cities – and, like the most successful cities, the most successful offices are those that create the greatest number of connections between people. This is an approach that can be achieved through the addition of bigger floorplates. But the process of optimising a floorplate, particularly a very large one, can prove challenging for a team of architects who have to design and discuss the merits of four or five potential floorplates under time constraints and financial pressures.

But, Arjun Kaicker, Co-Head of Zaha Hadid Analytics + Insights says that by using its 'hungry algorithms' (AI), the company can generate and assess thousands of potential floorplates and space plans and apply criteria to determine which would be the most efficient and effective for an individual company.

This means that designs can be better tailored to a company's individual needs and architects can produce more innovative and social office spaces that boost productivity and teamwork. As well as communication potential, natural light penetration and line-of-sight visibility between colleagues are key criteria at ZHA for optimising floorplates.

Elly Daziel, Manager of Strategy and Customer at Mirvac, comments:

"Where AI will be able to deliver the greatest impact is when a workplace design solution is embedded with flexibility and delivered with extensive sensors in place, and it can start collecting the datasets able to make future design recommendations on such things as sustainability and experience. This process will deliver greater efficiency and long-term value for landlords, investors and tenants."

Arjun Kaicker of ZHA describes this process as heralding the age of 'the self-learning workplace' in which AI can be utilised to analyse the needs of a building's users in real-time and come up with different spatial configurations for the space. Rather than taking an architect many hours of work, this can be done in seconds, helping organisations have more responsive environments which can be repurposed and rejigged according to changing needs.

04 IMPACT ON WORKPLACE DESIGN

DESIGN AND TECHNOLOGY

Innovation in design with AI extends from optimising floorplates to creating the right space for top-quality technology and audio-visual experiences. Anthony Nelson is Global Creative Director of place consultancy ERA-co. He notes the relationship between workplace design and technology: "Many spaces have lots of tech but these additions don't enhance the role and experience of the workplace, which lies dormant. There's room to add new layers for entertainment and connection, where spaces integrate technology more smoothly."

Our expectations for how our AV systems function in the office have changed dramatically since the pandemic. People now expect a higher level of hybrid meeting equality than they were able to achieve when we first started working from home. AV systems can now deliver with multiple cameras to offer different perspectives and better quality, more natural video.

Integrating AI with meeting and video conferencing technology will open new possibilities for where AV technologies go next, says technology expert Nigel Miller, Managing Director of Cordless Consultants. To make this happen, AV technology will integrate with AI, using facial recognition software and generative AI to improve meeting equality.

AI is already able to distinguish between useful noise and background noise, helping to make meetings in public spaces as seamless as those in meeting rooms. Additionally, AI can be utilised to make participants look like they are making eye-contact, helping people feel welcome and seen, even in an online meeting.

There is also a significant amount of data collection that will be made possible, using facial recognition to assess people's level of interest and engagement. Use of AI to record and analyse meetings automatically means companies will be able to ascertain much more clearly which meetings are effective and why. What does this mean for office design? Mike Halliday, Director of Technology for Cordless Consultants, predicts that companies will be able to offer a meeting-room quality experience anywhere, highlighting that 'the space that you have available for use within an office will open up dramatically.'

With improved AV systems and AI embedded into the workflow, we can take meetings anywhere, anytime, regardless of any background noise. Whilst there will still be a need for quieter spaces and more collaborative spaces for different types of work, how we space-plan our offices might shift towards thinking more deeply about employee needs rather than simply sectioning off space for hybrid meetings.

04 IMPACT ON WORKPLACE DESIGN

CASE STUDY

Project Starline: the AV office of the future

Google's Project Starline set out to offer a solution to the lack of engagement and connection that employees might feel with each other when communicating over standard AV software. This innovation offers you a hologram-like image of the person that you're meeting, making you think that you're just looking at your colleague through a window rather than through a computer screen. The perk of Project Starline's software is that it makes you feel like you're in the room with someone who is thousands of miles away without the need for a clunky VR headset.

However, whilst Project Starline was designed to support those feeling distant from their colleagues, the technology created problems for workplace design, requiring both participants in the meeting to have specially kitted-out booths within their office to get the full experience.

The newest iteration of this Google software has utilised AI to produce the same kind of realistic images but with half the infrastructure required. Now the size of a standard portable screen, the technology is flexible enough to fit in a standard meeting room or even to be wheeled-out to enable new spaces. This means that the future of AV technology does not have to constrain workplace design, but rather offers a high-quality experience across any number of workplace environments. In this development, AI integration offers new possibilities for office flexibility and simplification.

05 IMPACT ON WORKPLACE MANAGEMENT

Smart technology has been reshaping facilities management for two decades. But AI offers a range of new capabilities, from making buildings more resilient to optimising resources for sustainability.

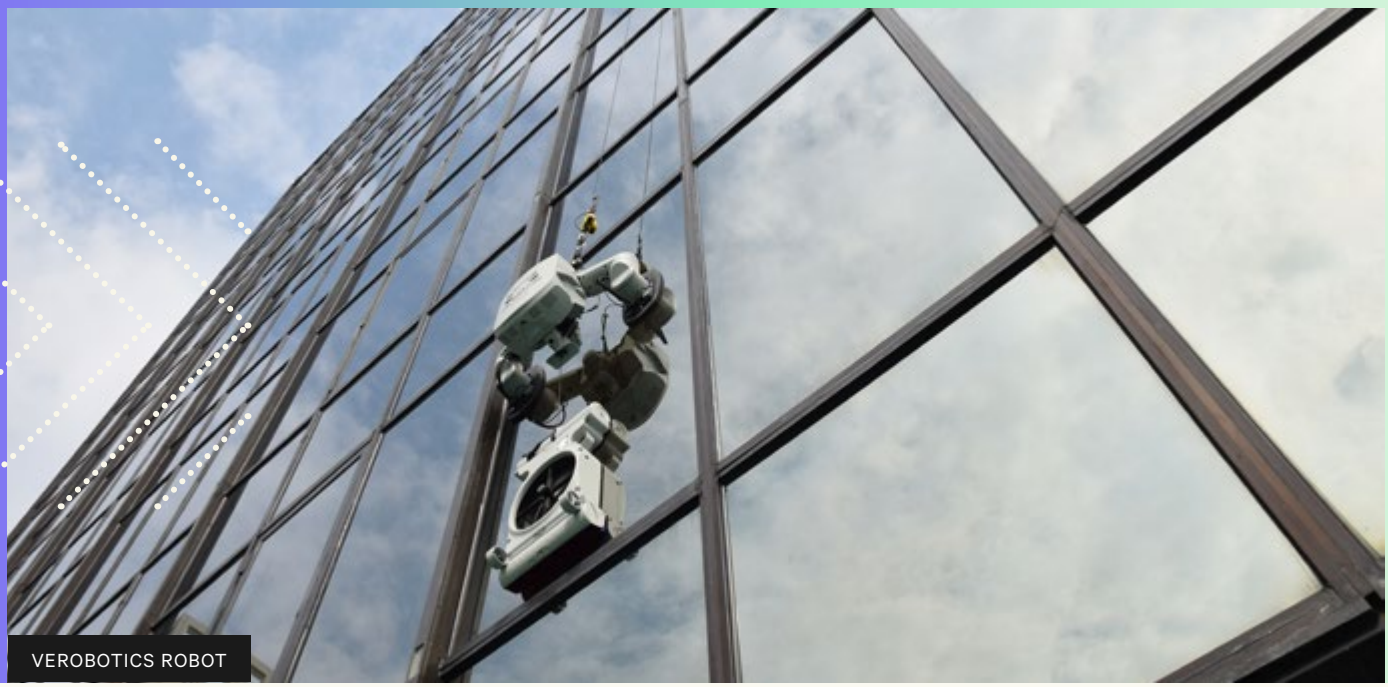
The management of buildings and workplace systems has already been revolutionised by smart technology, the use of sensors, the collection of data and the integration of datasets. This has led to great leaps forward in the efficiency of buildings – both in terms of financial cost and reduction in energy use to help meet sustainability targets. But, apart from the facilities management team, a lot of this work goes unnoticed by building occupants – until something goes wrong.

However, the introduction of a symbiotic way of working with AI could usher-in an era of workspace that is led by the efficiency of management systems – having consequences for how and where we work in the future. Cameron Sandell of NDY suggests that this revolution is close by when it comes to data collection, arguing that "the building industry has been using machine learning for the better part of ten years to identify patterns of behaviour and feed these patterns into maintenance management programs to encourage the redeployment of underused space. But to me there is a difference between machine learning and AI – machine learning is the recognition of patterns of behaviour within a space, but AI conjures up an image of cognitive thinking."

This means that facilities management teams should be able to make requests of the technology – asking, 'how do I save energy in this building or my office?' and feed in information about the floorplan and current data to get a specific solution. AI is useful in this context for speeding-up the process of data analysis and identifying under-utilised spaces and less-efficient systems without the need for internal data analysis and visualisation work. But it is worth noting that in this context the AI can only be as good as the datasets to which it has access. To capture this data, companies need to invest in the right technology and sensors to provide them with robust data sets.

In a recent paper for a computer science journal, University College London researcher Will Serano coined the term the 'iBuilding', likening the new depth of data collection and integration of AI into building management systems to the transformative rise of the smart phone. Whilst smart phones are the norm now, they were a revolutionary step in the technology sphere and offered users a whole new range of functionalities and access to new kinds of information at the swipe of a screen. Facilities management teams may be about to get a similar treatment.

05 IMPACT ON WORKPLACE MANAGEMENT



VEROBOTICS ROBOT

ROBOT MANAGEMENT OF BUILDING EXTERIORS

Data collection gets a lot of the press, but it isn't the only element of building management that is set to be transformed – a series of significant but often under-analysed management systems are also set for change. Take, for example, the cleaning of buildings. Use of robotics can not only create safer, more efficient practices but also allows for any structural or external damage to a building to be assessed more quickly. This is especially important in the age of extreme weather events.

Roy Amir, Chief Product Officer for Verobotics, likens his company's technology to an autonomous car needing to navigate the building and clean automatically. With each building being so different, the AI works to allow the robot to pass through different frames, obstacles and windows in a safe and efficient manner, checking and reporting on the state of cleanliness and repair in which it has left the building's exterior as it progresses. This offers significant advantages for companies looking to maintain their buildings using Verobotics technology, from protecting them from extreme weather events to opening new doors for the design of offices.

Roy Amir explains: "From a climate change perspective, there is an increasing number of extreme weather events across the globe – from typhoons and heavy rains to very strong winds moving through cities – so the risk to your building is significant, especially in big, dense, urban areas. If an extreme weather event was to interact with an underlying fault in the external building and a window was to fall, it would be a disaster from a safety and a business perspective. People want to be able to better manage such risks for themselves and their tenants, moving towards a more systematic, data-driven and informed way of managing their buildings."

Whilst the system is currently semi-automated, AI will eventually allow the product to become fully independent and adaptable to new situations, and able to identify problems or damage to the exterior, notify the landlord and convey an appropriate sense of urgency for each case. This can allow facilities management teams to respond faster to new challenges and provide them with more up-to-date data on the externals of the building – an area that is currently very challenging to assess.

Verobotics have already begun working with organisations to integrate its technology into building design. This new approach to facilities management has the potential to impact design and experience considerations in the future, helping free up roof space on buildings for gardens and outdoor spaces which has previously been reserved for maintenance infrastructure. This can boost the employee experience, increasing employee's access to new spaces, giving them an opportunity to spend time in the fresh air whilst utilising the building's floorplate to its maximum potential.

These rooftop spaces can also be supported by AI. Using data on space occupancy of the building that day as well as weather and other factors, facilities management teams can be notified to ensure that on busy, sunny days when these spaces are more popular, there are the right kinds of furniture and amenities available to encourage people to make full use of new spaces.

In the future, the adoption of AI should be an evolving process, with technologists, designers and facilities management teams working together to provide the best workplace experience to employees while increasing the quality of data to which management teams have access.

05 IMPACT ON WORKPLACE MANAGEMENT

OPTIMISING RESOURCES WITH AI

Alongside increasing the resilience of buildings, AI also has a role in increasing management efficiency to meet sustainability targets. How companies utilise their resources and manage their supply chain will have a significant impact on the carbon footprint of their workplace.

Shippit, a logistics software company based in Sydney, operates as a platform connecting retailers and couriers with the aim of achieving an optimised path to get goods to retailers with the least amount of waste. Shippit uses AI to optimise its delivery routes. This can cut the number of trips taken anywhere from 12 to 25 per cent and in turn reduce carbon emissions whilst increasing overall efficiency.

AI's ability to predict future scenarios therefore offers significant benefits, allowing companies to optimise their allocation of resources and make better informed decisions. Brad Lorge of Shippit notes that AI tools can reduce both friction and costs. He adds: "Productivity, safety and reduced emissions are going to be core workplace trends."

Moving forward, AI will provide the opportunity to completely reimagine what resource allocation might look like – for logistics, rather than the typical image of a large warehouse pumping out deliveries each day, using AI would instead enable businesses to work across a wider range of locations in near real-time. Products can be sourced more locally and warehouses in different locations can share information and make more efficient decisions about shipping and delivery than ever before.

What does this mean for the workplace? For Lorge, the impact will be significant. He argues that "as we move towards a model where AI can make an increasing number of decisions for us, we are able to move from a centralised model towards a more distributed one. We are better able to have access to amenities, products and an increased quality of life across a wider range of places. Office spaces must accommodate this shift, alongside a continued need for in-person collaboration."

BRINGING THE PORTFOLIO INTO PLAY

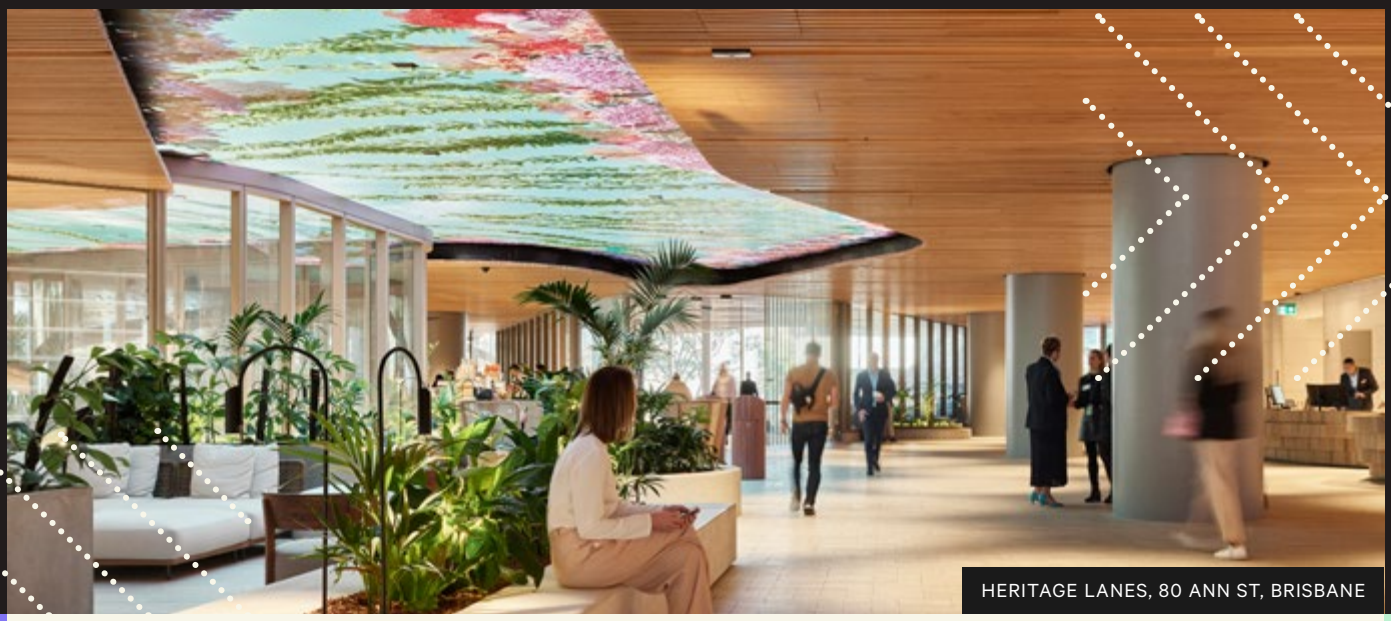
As AI becomes a part of our day-to-day lives and begins to transform fields such as logistics – often a factor in our lives that goes unseen – there might be wider consequences for how we operate. Just as AI can help us make better decisions about our resources, we can also develop our understanding for how we can best utilise the people at our disposal – arguably any company's greatest resource.

AI can help us allocate resources and distribute people across a portfolio of assets, supporting the logistics of getting employees where they need to be on any given day and enabling them to keep collaborating with their colleagues regardless of location.

In this context, landlords could work with their tenants to understand their working patterns and offer a range of options that are not constrained to one singular office. For example, if you are working remotely, the AI in your workplace app could recommend you a coworking space so you can join a client meeting, booking you a quiet space in which to take the call. This means that you can access a high level of workplace experience regardless of your location. This approach helps support the all-round workplace experience of the organisation and ensures that tenants make the most of their workplace portfolio.

For landlords, the logistics of managing more than one company's portfolio and offering each organisation the right resources is a complex one. But utilising AI allows landlords to combine datasets, allocate space according to need, and take into account a wider range of spaces, meaning that each tenant can benefit from the collaboration.

05 IMPACT ON WORKPLACE MANAGEMENT



HERITAGE LANES, 80 ANN ST, BRISBANE

THE MIRVAC PERSPECTIVE

Mirvac's customers require smart buildings and workplaces that deliver the infrastructure and backbone to accommodate flexible, bespoke and rapidly changing technology.

The shift to increased and near real time data sharing was originally driven by Mirvac's desire to integrate data and share this data with our tenants. Mirvac recognised the importance of building and workplace data, how it could be utilised and shared, and how it will be key to unlocking the power of AI to enhance and evolve the property sector.

In delivering smart buildings and precincts, Mirvac are already progressed along the journey. At each smart building all the building systems are connected to a high capacity, fibre optic, Integrated Communication Network. The ICN connects the building systems to an Integrated Building Platform (IBP) which integrates the data from all the separate systems including HVAC, access control, energy management, CCTV, lighting, space utilisation and so much more.

The key design fundamentals include high speed connectivity, an open-source operating system and standard naming conventions that all come together to enable scalable solutions that can plug and play with emerging technologies whilst providing an advanced level of cyber security.

The platform brings all these inputs together in a visual integration of building services that allows the transformation of data into actionable business intelligence to identify opportunities to optimise building operations, enhance efficiency and sustainability reporting. The integration of data greatly facilitates the use of AI driven solutions, that layers AI capability across the set of comprehensive building operating data. The IBP is also designed to securely share data with tenants, providing them with their own building platform enabling choice and flexibility in their approach to accommodate and rapidly integrate different technology solutions.

Mirvac's broad intelligent infrastructure objective is to evolve from a smart asset to a connected portfolio, collecting data from an integrated network of smart and connected buildings, with the purpose to unlock value across the portfolio with data-driven insights across assets and inform decision making enabling strategic asset management to drive greater performance (financial and sustainability) and customer experience.

Source: Mirvac

06 IMPACT ON WORKPLACE EXPERIENCE

Improving workplace experience is a key part of the strategy to bring people back to the office. AI has the potential to shape community and culture as well as boost knowledge worker productivity.

SOUTH EVELEIGH, SYDNEY

Workplace experience has become the corporate catchphrase of the past three years. To bring people back to the office after the global pandemic, companies realised that they needed to do a deeper dive into the day-to-day experiences of their employees to make the office a more tempting prospect. As a result, the workplace saw a boom in experience mapping and new roles started popping up at major organisations such as Chief Experience Officer (CXO), as companies began to take the concept seriously and started investing in a series of experiential initiatives.

Elly Dalziel of Mirvac suggests that creating a frictionless connection to AI for employees will be key to improving workplace experience: 'Employees will want to walk in the door and have an instant tech connection that creates a productive experience by making recommendations on the best room to use for virtual and in-person meetings, and suggesting where they should sit given the capacity of the workplace.'

Looking into the future, Dalziel predicts that 'we will move to a world where AI can pre-empt behaviour, such as pre booking your wellness class based on a gap in your calendar, ordering your coffee and booking your end-of-trip facilities locker before you even jump on your bicycle. This would create immense efficiencies, a heightened workplace experience and ultimately help drive office attendance.'

Technology has already played a huge role in the rise of experience. Workplace apps and digital wayfinding tools, for example, help employees stay connected in a hybrid working environment and find their way around newly refurbished offices or new locations. These tools have also given employees the opportunity to learn more about their own workplace, indicating to them which spaces are free to use in real time, highlighting which colleagues are present in the office, and even keeping them abreast of the sustainability credentials of their organisations.

What does the next phase of workplace experience look like? With AI allowing systems to predict employee behaviour in advance and to collect data on them to support their day-to-day working, the future of experience technology is looking more personalised and powerful than ever before.

06 IMPACT ON WORKPLACE EXPERIENCE

SIMPLIFYING SPACE, AMPLIFYING BEHAVIOUR

How we use spaces and settings in the workplace – and when they are available to us – are critical elements of workplace experience. To do our best work, we need to be confident that we can access an appropriate environment for the tasks that we have to perform. Increasingly, the technology we use to book meetings, access the office and engage with the community around us is centred around a workplace app which can help us access support, colleagues and wayfinding all in one place. These apps can be incredible sources of data and can collect real-time information about their users, which can be leveraged to advance the workplace experience. Thanks to AI, these apps are becoming more intelligent and consequently are transforming the workplace experience.

As Cameron Sandell explains, "AI has the opportunity to make enhancements to what you already do and predict what it might think you need, offering you a range of options. It can also learn from people's patterns of behaviour and make suggestions, streamlining your use of the office more efficiently and freeing up space for others." Sandell further suggests that this technology can nudge employees towards more efficient and positive behaviours, helping companies better utilise their space and thereby addressing a key organisational challenge.

Rather than letting an employee use their app to book a meeting room for ten people when the AI has seen from previous behaviour that only four people regularly join this meeting in person, the technology can suggest a new, more appropriate space which offers hybrid and in-person attendees a better experience for the number of attendees.

This allows meeting attendees to have a more tailored experience, whilst other employees are able to utilise spaces that have regularly been booked out. AI can also support the capture and integration of new datasets, helping bring together data from public visitors and contractors as well as regular occupier data, thus supporting the creation of a better visitor management experience, an element of workplace experience which often goes under the radar.

Anthony Nelson, Global Creative Director for placemaking consultancy ERA-co, suggests that AI might usher in the digital concierge service. He says that "AI will further on-demand based services and track and predict needs across your day. This will offer a more intelligent workplace experience that anticipates your needs and helps you plan better, connect more with others, and access amenities." This could create a reality where there is a 'machine on every team' to support the working of different individuals across an organisation, says Nelson.

> AI will further on-demand based services and track and predict needs across your day. This could create a reality where there is a "machine on every team" to support the working of different individuals across an organisation.
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> Anthony Nelson, Global Creative Director, ERA-co

06 IMPACT ON WORKPLACE EXPERIENCE

Such a scenario will also create a world in which people are better connected with the building around them and can better access information to help them make decisions and guide them seamlessly though their day, levelling up their workplace experience. Nelson suggests that this will create a workplace where you can 'look at the place as a playlist', selecting the space that best suits your mood and intentions for the day rather than sitting at the same desk.

These changes could prove transformative for workplace experience, with AI embedded in apps and functioning to encourage employees towards more sustainable and positive decision-making. Companies could free up space for new uses and offer their employees a far more social experience. Instead of coming into an office that's quiet and static while colleagues work from home, employees can be encouraged to collaborate and engage, helping keep building costs and energy output low while offering the most vibrant and dynamic office space possible.

These tools also intersect with workplace management. With tools such as workplace apps providing data on who is coming into the office, AI can be utilised to predict the numbers of employees that will be in the office and make the decision to shut down a floor or a certain area of the office. This ensures that workplace experience teams can enhance the end user experience through creating a more vibrant workplace, actively removing friction points for employees and facilities management teams can cut energy costs and reduce the operational carbon footprint of the building - this is killing two birds with one AI-shaped stone.

Nick Todd, Australian Regional Lead on User Strategy at ERA-co, adds that "The positive effects of having a vibrant and activated workplace creates a snowball effect with more people wanting to work from the office. AI will be integral in helping to curate the workplace and maximise the opportunity for knowledge sharing, collaboration, and socialising."

So, when can we make AI powered workplace apps a reality? Currently workplace apps have a number of pain points: they struggle to integrate different services, to justify the costs of app development, and to become more user-friendly. The addition of AI has the power to remove these points of friction to enable apps to become a key productivity tool in the way that they were intended. And as these tools become more optimised, it is safe to predict that they will become the new standard, helping us work symbiotically with AI throughout our everyday experience in the office.

06

IMPACT ON WORKPLACE EXPERIENCE

CASE STUDY

GoSpace: AI experience meets building

New tools for workplace management are already on the rise with apps such as GoSpace harnessing the power of AI to boost the workplace experience. This tool utilises AI to support employees with room and desk bookings, learning from their preferences to streamline the booking of the spaces they prefer, offering them bookings for meeting rooms which meet their exact needs and helping them connect with colleagues to collaborate.

Tools such as GoSpace can help drive the psychological safety of employees, letting them know that when they get to the office, they will have the tools, spaces and collaborators they need to perform their role to the best of their ability. This is likely to support office attendance by ensuring that employees access a high-level workplace experience every time they enter the office.

This kind of predictive approach can also nudge employees towards greater social connection, suggesting that they come into the office on days when the office is busy and vibrant to avoid the experience of entering the office, finding nobody to socialise with and leaving feeling deflated.

This tool has perks for the management of buildings as well, with the ability to boost sustainability and make cost savings by predicting office attendance in advance and helping organisations make decisions about how to best utilise their available space. GoSpace can make sure that space is used in the most efficient manner, allowing companies to shut down whole floors when possible to make energy savings and it can even put underutilised floors or spaces up on an internal office marketplace, making the space accessible for other companies who are in need of workspace space and maximising the use of any empty space. This tech can even be used to help avoid any confusion or frustration when cleaning or maintenance is being done as it can book out spaces that are needed for cleaning and reallocate staff into spaces that suit their needs elsewhere, making building management more seamless and less disruptive to employees.

Source: GoSpace

07 LOOKING TO THE FUTURE

The future of an AI-driven workplace operating symbiotically with organisations and individuals is closer than we think. Companies need to invest in policies, systems and training to deliver transformation.

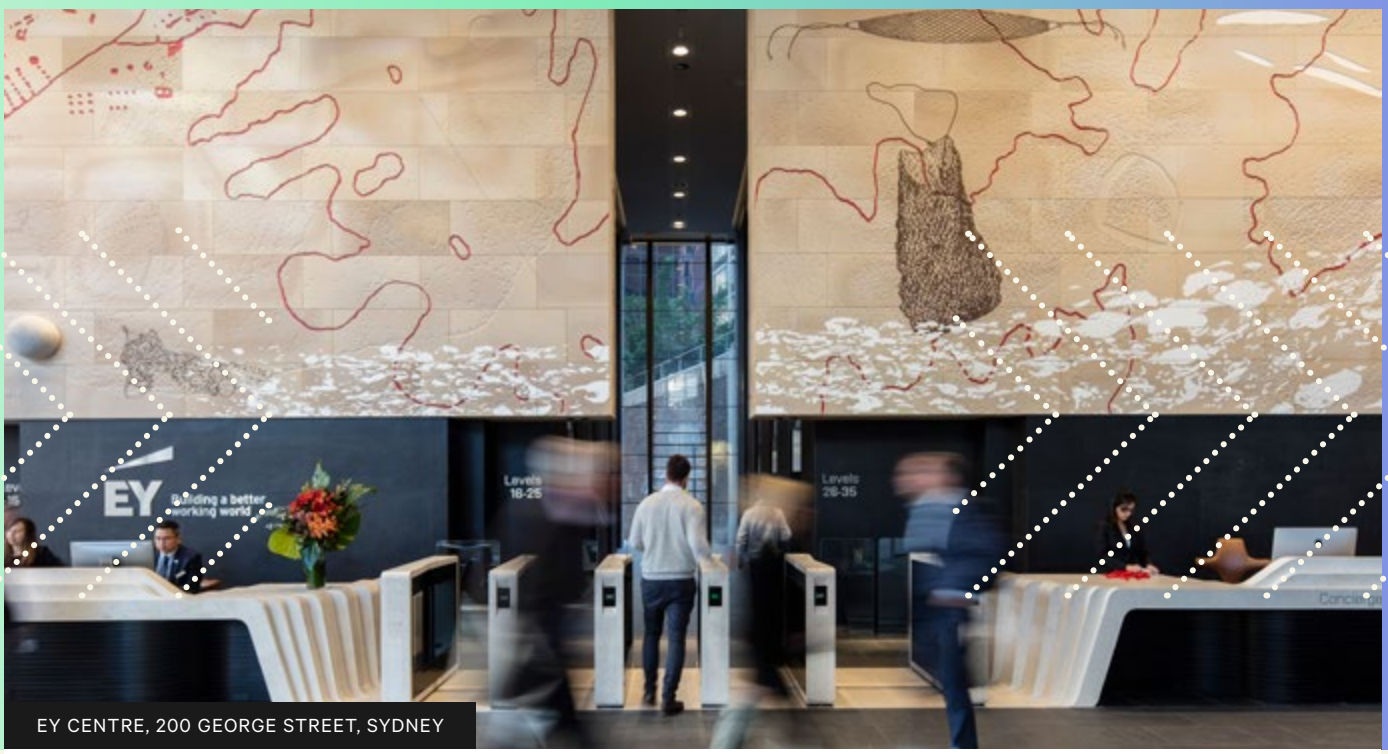
HERITAGE LANES, 80 ANN ST, BRISBANE

This report has highlighted just some of the bright ideas and best-in-class technologies that are emerging onto the scene today and creating an AI powered workplace. The examples and expert comments included here represent the future of AI usage within the workplace. But for many companies, this reality still feels quite distant. In such a fast-moving industry, it can be challenging to know where to invest your time and money to ensure that you get a positive return.

However, as AI becomes integrated into more of the everyday technologies that support our working lives, organisations cannot afford to sit back and take a wait-and-see approach, or they run the risk of playing catch-up.

According to McKinsey's 'The State of AI in 2023' report, a lack of preparedness may be impacting companies, with only 21 per cent of respondents reporting that they have policies in place to govern employees' use of Generative AI technologies within their work. So how can we bridge this gap and help organisational leaders to be more prepared? And how can companies exploit the potential of AI in workplace design, management and experience?

07 LOOKING TO THE FUTURE



EY CENTRE, 200 GEORGE STREET, SYDNEY

BUILD THE FOUNDATIONS

Brad Lorge of Shippit believes that "in order to be ahead of the curve with AI adoption, every business would benefit from having a robust view of what their value is, why they do what they do, and what they offer. This will help guide the approach to AI."

Lorge's advice to companies wanting to adopt AI is to "start small and get used to having the AI running as a co-pilot to familiarise the teams in working side-by-side with these systems. The data piece is also key; being able to understand the effectiveness of your data and so is having a robust change management system that is able to understand what the challenges are to collecting high-quality data."

Companies can be unclear around which parts of their business should be looking to adopt AI. These uncertainties can be allayed through clear planning and a company-wide understanding of the shared values that surround the business. Issues with data collection can be more complicated. In recent years, more companies have been collecting data on their buildings and employee needs and preferences, but they've struggled to transform this data into actionable insights.

Companies need to start by building their foundations – putting in place formal policies and arranging structured training for their employees. Without this learning, workers will continue to be divided into two camps with some storming ahead under their own steam and others languishing behind with a lack of confidence in AI. Training and formal implementation will help to bridge this divide, empowering employees while supporting the company and allowing each organisation to put in place programs that protect their data and sets out guidelines for employee behaviour.

The next step is normalisation of use. Companies need to create space for employees to trial tools in real time, to experiment and share their learnings together in an environment where everyone can benefit. This creates space for peer-to-peer innovation and can spark new ideas for how the technology can best be leveraged in each individual company, whilst also normalising the use of AI tools. As Sean Gallagher of Humanova argues, "because of the speed of innovation in the AI space, if you are not constantly getting to the next level of the game then it's going to be very difficult to get the full benefit of each new capability, so that workers are ready for it."

Taking these steps to proactively educate the workforce on the possible impact and uses of AI, and to normalise the use of Generative AI and other AI tools within the company, can keep organisations ahead of the curve when it comes to embracing technology innovations in the workplace itself.

07 LOOKING TO THE FUTURE

NOT JUST ROUTINE WORK

A key aspect around training and reskilling is that AI is not just targeting routine or repetitive work. Professor Lynda Gratton of London Business School argues that the transformative power of AI in the workplace stems from the fact that "it's a technology with the potential to hit at the heart of non-routine analytical work. This is knowledge work, such as forming a hypothesis, creating content, recommending medical diagnostics, or making a sales pitch."

So how might these tools transform work? Google and Microsoft have released Duet AI and Microsoft Copilot respectively – tools aimed at improving workflow and productivity. Both utilise Generative AI to conduct tasks such as generating report summaries, writing draft emails or proposals and integrating image-generation into your workflow to help your ideas come to life.

There are tools provided by Zoom and Teams to summarise meetings that you are unable to attend, offering you a report on what was said. There is even the suggestion that in the near future AI could create an avatar of you and attend meetings on your behalf – responding to questions in your voice, with your own opinions.

AI powered spaces might also help design-in diversity and inclusion into the workplace. With AI enabling a new range of workplace tools, the office can become a place where there are no barriers to participation. State-of-the-art tools for speech-to-text transcription in real-time can be utilised to support participants in meetings who may struggle to hear their colleagues, making meetings increasingly accessible to them regardless of whether they are online or in-person.

> Unlike previous workplace technologies, Generative AI is not being positioned as a substitute for routine tasks...Instead, it's a technology with the potential to hit at the heart of non-routine analytical work.
>
> Professor Lynda Gratton, London Business School

07 LOOKING TO THE FUTURE

THE MIRVAC PERSPECTIVE

Mirvac recognise the value of AI and how it is a potential game changer in how people work and engage with each other, shareholders, investors, customers, and the physical environment around them, to drive business optimisation and create the best customer experiences.

Mirvac's AI journey began some years ago with more 'traditional' AI (carefully curated data, machine learning, targeted algorithms) with use cases focused on supporting design decisions and data analytics. The latest iteration of this technology, Generative AI, has introduced an exciting pathway to rapid adoption and far wider application where we see tremendous opportunity, and some risks. As an organisation Mirvac's focus is on striking a careful balance between exploring the art of the possible whilst applying the right safeguards and controls given the known (and unknown) limitations.

Mirvac's approach is one of 'learn by doing' and 'demonstrate by showing'. Practically this has meant setting up AI tools in a safe space within the organisation where employees can experiment with the technology across a variety of use cases. Last year, Mirvac launched GAIA (Generative AI Assistant), an AI Chatbot deployed within Mirvac's private cloud tenancy. GAIA is a secure, data privacy-compliant chat assistant that offers an intuitive chat experience along with a unique capability of integrating chat functionalities over organisation data and files. To date, they are seeing their employees experiment with GAIA to improve productivity using the tool for tasks such as content creation and analysis, information search, research, and problem solving. They have also seen employees developing their own capabilities, accessing support for learning coding and the upskilling of soft skills as well as developing skills to self-support and improving the quality of work correspondence.

Mirvac's strategy to demonstrate the value potential of AI by showing its application is based around identifying small, targeted use cases, where joint business and technical teams can work together to build proof of concepts and then showcase these to the broader organisation. This helps both with their own learning of what these tools are capable of, and the wider education of the organisation, as well as their external stakeholders.

There is no doubt AI is a pivotal technology that creates both opportunity and risk for organisations. It is also evolving incredibly fast which requires caution in how it is approached to drive the maximum value for an organisation. That being said, Mirvac are excited by an AI enabled future!

Source: Mirvac

FOCUS ON THE FUTURE

What does the workplace of the future look like if companies can develop a symbiotic relationship with AI? To move ahead, this change will require a significant number of shifts in perspective from companies – including new approaches to in-house training and upskilling, confidence-building work in terms of data sharing, and the development of a digitally mature perspective through learning and education for leaders.

The AI powered workplace will be more efficient, sustainable and optimised for business goals and employee experience than has ever been possible before. The introduction of AI into existing systems can help reduce the need for purpose-built spaces and usher in a new era of flexibility in terms of furniture and workplace design, supporting companies in adapting their space as employees' needs change.

There are also significant sustainability advantages to be gained from AI as these tools allow companies to allocate resources more efficiently and be more responsive when it comes to new and existing datasets. This will allow organisations to cut their carbon footprints without compromising on employee experience.

Management systems will be simplified, allowing companies a greater degree of control over their spaces without overwhelming facilities management teams with data or complex visualisations. The workplace experience will also be transformed as companies are able to continue to build a successful and strong company culture, ensuring that teams are co-located when they need to be together and have access to the spaces that best suit their needs day-to-day, making the office a vibrant and exciting place to be.

Put simply, an AI powered workplace of the future is not as far away as many business leaders think, given the rate of research and development that we are seeing currently. As companies start to build confidence with their AI knowledge, they can move towards building relationships with tech-savvy partners and position themselves to benefit fully from the AI workplace revolution.

With AI functioning as the behind-the-scenes team member, supporting every aspect of the workplace, a symbiotic future is not science fiction. Mirvac is ready to be a part of this latest workplace revolution.

07

LOOKING TO THE FUTURE

THE MIRVAC PERSPECTIVE

What practical steps can companies take to prepare themselves for the AI revolution?

Re-evaluate your space and success metrics.
The focus of metrics should be on the experience and level of employee engagement with the spaces rather than desk or meeting room utilisation. This approach can then determine the value of the office and inform companies and landlords as they consider how to maximise the employee experience within their buildings. To do this they will need to have the right sensors in place to support the collection of data which can drive more meaningful solutions.

Start having conversations around data sharing.
Companies can drive greater value from their space when both the tenant and landlord are able to share insights. Senior Managers need to start having discussions around the barriers to data sharing and how these might be overcome.

Establish what datasets you have and where you can create value.
The true advantage of AI in building management is in the ability to integrate multiple datasets, so companies need to establish what data they have, what they need and where it comes from to be able to understand where they can gain advantage from these new tools.

Upskill leaders.
It is critical that Senior Managers have a certain level of digital maturity to make informed decisions on company policies around technology and data to drive better decisions. Companies should evaluate their level of in-house knowledge and further upskill their senior leadership teams to achieve this.

Empower staff to engage with technology and understand the benefits.
To get the full advantage of AI, staff should be encouraged to undertake a 'learn by doing' approach within controlled environments. Companies need to implement robust change management practices to ensure that staff are prepared for the changing nature of work.

Embed flexibility into design.
Companies should look to embed flexibility early when considering workplace design and strategy. Instead of designing with a one-size-fits-all approach, they should consider designing in a kit of parts that can respond to suit the changing needs of the business, teams, technologies and environment. This approach means that when AI matures and more insights can be derived about a space, companies can adapt their furniture, meeting rooms and even provision of third spaces to further enhance employee experience and generate cost and environmental savings.

Source: Mirvac

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Note:

Within this report we are utilising the following definitions:

Artificial Intelligence: computer systems which are able to perform tasks that would normally require human intelligence, this may include the ability to reason, generalise or learn from past experiences.

Generative AI: a type of artificial intelligence which is able to generate images, text or other creative outputs based off user prompts.

Robotics: the study of or use of machines to perform tasks autonomously, without continuous human input.

Machine Learning: the creation of systems that are able to learn and adapt without the need for specific instructions from a human being, instead using algorithms and models to extrapolate from data.

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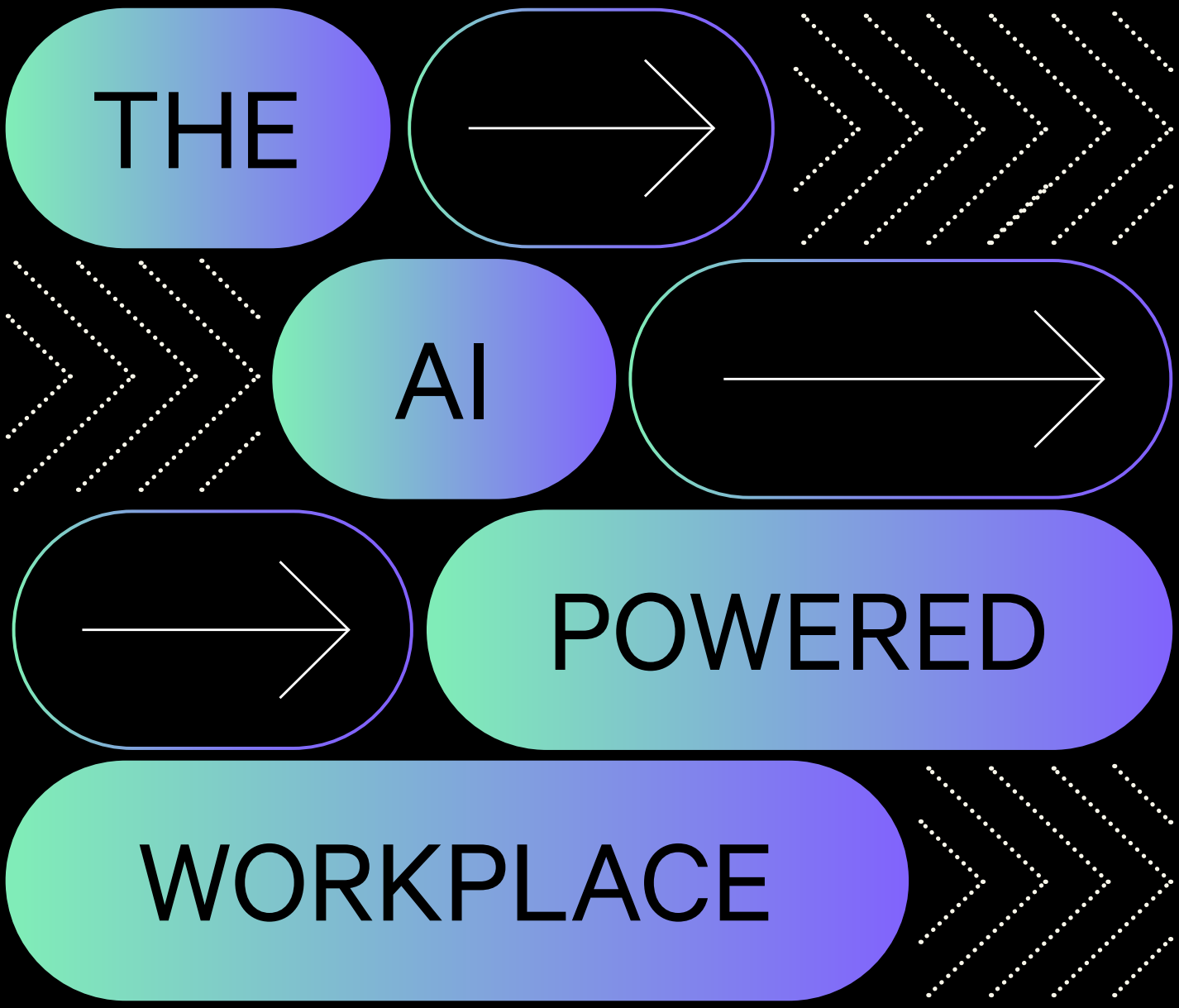

About Mirvac

Mirvac is an Australian Securities Exchange (ASX) top 50 company and one of Australia's most innovative property groups. We have been making a positive contribution to our cities and urban landscape for over 50 years, through the residential communities, office precincts, industrial facilities and shopping centres we create, own and manage. Our purpose, to Reimagine Urban Life, inspires us to create solutions that enable our customers to live more connected and sustainable lives, and our This Changes Everything sustainability strategy is a roadmap for how we can continue to be a force for good.

About WORKTECH Academy

WORKTECH Academy is the leading global research platform and member network exploring how we'll work tomorrow. We look at innovation in the world of work and workplace through five key streams: people, place, technology, design and culture. We engage with our powerful network of over 12,000 individual members and more than 80 corporate, design and technology organisations around the world to deliver content on the latest trends, research and best practice in work and workplace. Mirvac is a Corporate Member of WORKTECH Academy.

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