

VERGE
SENSE

WORKTECH[™]
ACADEMY

The Self-Adapting Workplace

How predictive intelligence is shifting the office into
an adaptive system.

A report by VergeSense in collaboration with Worktech Academy

Table of Contents

Introduction: The New Logic of Workplace Planning	3
From Static Planning to Adaptive Strategy	5
From Reactive to Predictive Decision-Making	8
The Four Workplace Futures	11
The Path Forward	18
Conclusion	21

INTRODUCTION

The New Logic of Workplace Planning

Organisations today are sitting on more workplace data than ever before. From occupancy sensors and desk booking systems to badge data and environmental monitors, the infrastructure of measurement has matured significantly over the past decade. And yet, for most organisations, that data is not being meaningfully applied to make key decisions on the spaces people work in.

While organisations have the information, they often lack the strategy and foresight to apply the insights from that data. This is resulting in organisations who are 'data rich, but insight poor'. Data is being collected, dashboards are being reviewed, and utilisation reports are being produced, but the strategic leap from 'what happened' to 'what should we do next' remains elusive for most workplace teams. This means that organisations are not well equipped to anticipate their future needs.

At a time of uncertainty, especially in corporate real estate, this matters enormously right now. The workplace operates in a global environment of sustained turbulence from economic volatility, shifting workforce composition, evolving hybrid policies, and the accelerating impact of AI on how and where work gets done. In conditions like these, making decisions based on historical data becomes insufficient. What a workplace needed in 2023 may bear little resemblance to what it will need in 2026. And what it needs today may look very different again by 2028.

As Brad Golden, Workplace Insights & Advisory Lead at Vergesense said, 'Workplace analytics has historically focused on looking backwards at data, and that's still extremely relevant and useful. But there's also this new frontier where we can begin to anticipate and predict what might happen in the future using historical data as a reference point.'

Office footprints represent one of the largest fixed costs on any organisation's balance sheet. The decisions made about how much space to hold, where, and configured in what way carry long-term impacts. Getting them wrong can be costly. And those decisions are becoming harder and more complex in today's landscape of work. JLL's 2026 benchmarking data shows that global office utilisation sits at just 54%, against an average organisational target of 79%.

That 25-point gap is a business case in itself for organisations to reframe the way they think about space planning.

Organisations are beginning to recognise this. There is growing investment in analytics platforms, a rising appetite for AI-enabled tools, and a genuine desire among workplace leaders to move beyond retrospective reporting. But what most organisations currently lack is a clear strategic framework for converting intelligence from that data into confident, forward-looking decisions about future space needs.

"Historically, workplace leaders have fallen into one of two traps: too much time wrangling data and not enough on strategy, or plenty of strategic thinking that isn't actually grounded in data. The goal is to close both gaps, so technology handles the analysis and people are freed up to work through the trade-offs that data should be driving."



Kelby Green

Co-founder & Chief Technology Officer
VERGESENSE

That is what this report addresses. Drawing on expert interviews with leaders at VergeSense, and a comprehensive review of industry and academic literature, this report sets out a framework for understanding where organisations currently sit on the journey from data collection to predictive intelligence, and what it takes to move further along that path.

From Static Planning to Adaptive Strategy

Workplace data collection and analysis has given organisations a level of visibility into how their spaces are used in a way that simply did not exist before. Real estate and spatial planning decisions previously relied on assumption, experience and anecdotes.

Without insight from data the traditional reflexive response to a perceived space shortage was to lease more, build more, or expand space. But with data, real estate teams have been able to identify that often the problem lies with distribution, not supply. As Brad Golden, Workplace Insights & Advisory Lead at VergeSense, observed: 'There are still a huge number of assumptions being made in workplace planning. If you look at traditional space programming calculators... most aren't actually simulating how change impacts a workplace over time.'

WORKTECH Academy's research has consistently identified a pattern across organisations of all sizes and sectors: data is collected in silos, interpreted in isolation, and rarely synthesised into a coherent strategic view. Workplace data sits in one system; HR data in another; finance and lease data in a third. The result is that organisations develop a reliance on assumptions rather than evidence and not because the data does not exist, but because the infrastructure to connect it meaningfully does not.

"Historically, organisations approached workplace data in silos... each customer effectively operated within their own isolated environment."



Kelby Green

Co-founder & Chief Technology Officer
VERGESENSE

JLL's *Global Technology Survey* found that 32% of companies report lacking a clear strategy, skills or budget to deploy their technology effectively. They have the tools, but they lack the framework to use them well.

The onset of mass hybrid working amplified this gap. When the relationship between headcount and attendance in the office decoupled, the historical data that had informed space planning became unreliable almost overnight for many organisations. Colliers' analysis of the US market found that between 2019 and 2024, employment grew by 5.3% among office workers while occupied office space declined by 4.3%. The traditional formula of 'more people equals more space' has become almost redundant.

CBRE research found that while utilisation is rising, most organisations are still running portfolios sized for a world of work that no longer exists. Office attendance has become unpredictable and hybrid policies, even within companies, vary significantly which means that retrospective utilisation data offers limited guidance on what to do next.

"Space is still relatively static, even if it has become more flexible than it was ten years ago. People, on the other hand, are dynamic and unpredictable."



Izzy Cannell

Workplace Insights & Advisory Lead
VERGESENSE

The gap between the pace of human behaviour and the pace of physical adaptation is precisely where the data problem becomes a strategy problem.

Most organisations now have a good understanding of their utilisation patterns. They can see which floors are busy on which days, which meeting rooms are consistently overbooked, which areas sit empty for weeks at a time.

However, workplace leaders are now increasingly being asked to plan for how much space the organisation will need in 18 months, given projected headcount changes, evolving hybrid norms, and a shifting mix of work types. They are also required to make decisions on which parts of the portfolio they should hold, exit, or reconfigure. Real estate leaders are now being judged on their ability to constantly adapt to changes in behaviour, policy and technology and deliver efficient, well-managed spaces that also offer great employee experiences.

This requires a different kind of intelligence that allows decision makers to synthesise historical patterns with forward-looking variables, apply that synthesis across multiple scenarios, and then surface recommendations in a form that leaders can actually act on. The data exists, and the understanding around the data is growing, but what most organisations still lack is the strategic framework and the technology to help predict future patterns of space usage in the workplace.



From Reactive to Predictive Decision-Making

As organisations strengthen their workplace strategies amid uncertainty, there is an emerging opportunity to move from reactive to predictive decision making. While it may sound aspirational, it is already underway in a growing number of organisations, and it's driven by three converging forces.

The first force is data convergence. Platforms capable of ingesting and synthesising data across siloed sources are now making it possible to build a genuinely integrated view of workplace behaviour. This oversight can start to connect spatial patterns to organisational structure, attendance to project cycles, and space demand to workforce composition.

The second force is AI capability. As AI matures, it is able to work with spatial data specifically. General-purpose large language models have proven useful for many knowledge tasks, but they were not built to answer questions about physical space. These are questions that require not just pattern recognition but grounded prediction, anchored in the specific behavioural signatures of real buildings and real teams. The emergence of domain-specific AI models, trained on large volumes of spatial and occupancy data across diverse workplace contexts, represents a meaningful step forward. These models can identify patterns that human analysts cannot accurately detect at scale, and translate them into scenario-based forecasts that are genuinely actionable.

The third force is the scale of the decisions now being asked of CRE leaders, and the pace at which those decisions need to be made. High stakes decisions around portfolio rationalisation, headcount forecasting in a period of genuine workforce uncertainty, stack planning across multiple sites, and lease renewal decisions with long-term implications can be very costly if the wrong decision is made. JLL's 2026 research calls for organisations to move from annual planning cycles to monthly scenario planning, integrating utilisation data, booking patterns and business drivers in real time. That is only achievable with predictive intelligence.

"The biggest transition is moving from reactive workplace management to proactive workplace management. Traditional workplace analytics tools only tell you there's a problem after it has already happened."



Kelby Green

Co-founder & Chief Technology Officer
VERGESENSE

Where Predictive Intelligence has the Biggest Impact

Of the decision types that predictive intelligence is most urgently needed for, three stand out.

Headcount forecasting has become one of the most complex inputs to workplace planning. The growth of hybrid working decoupled attendance from headcount in ways that are still not fully understood. Now AI-driven job displacement is changing the relationship between organisational size and space need in a way that is difficult to model with historical data alone. The World Economic Forum's Future of Jobs report found that 86% of employers expect AI to transform their business by 2030. That means space demand is genuinely uncertain, and that uncertainty itself is an argument for better forecasting tools.

Portfolio rationalisation has long been one of the most consequential and least data-rich decisions in corporate real estate. Historically, it has relied heavily on periodic utilisation snapshots, broker advice and executive intuition. The ability to model future demand scenarios across a portfolio, incorporating attendance trends, project-based occupancy patterns and macroeconomic variables, fundamentally changes the quality of information available for these decisions.

The third factor where predictive intelligence can significantly impact decision making is stack planning. This includes determining which teams sit where, and how physical adjacency supports collaboration and culture. It has traditionally been treated as a periodic exercise, updated when teams move or reorganise. In a world of dynamic team structures and fluid hybrid attendance, it needs to become continuous. Predictive intelligence makes it possible to model the implications of different stacking scenarios before committing to them.

Kelby Green, Co-founder & CTO of VergeSense, commented that the ambition of predictive intelligence is to 'build a world where organisations can anticipate problems before they emerge. Ideally, workplace leaders can identify future pressure points six months in advance and proactively adjust.' For organisations that have invested in integrated data infrastructure and the right analytical tools, that six-month target is becoming a practical reality.

An important qualifier is that predictive intelligence does not replace human judgement, but sharpens it. The organisations making the most effective use of these capabilities are not those that have handed decisions over to technology. They leverage the tools to give their workplace teams better information, faster, so that the time previously spent compiling and cleaning data can be redirected toward strategy. As Kanav Dhir, VP of Product at VergeSense, said: 'The workplace team still brings the organisational nuance and strategic judgement. The system simply allows them to test significantly more scenarios and make more informed decisions, much more efficiently.'

The Four Workplace Futures

Not every organisation is on the same journey toward predictive intelligence. The distance between collecting data and acting on it strategically varies between organisations, and that's shaped by factors such as technology investment, leadership appetite, organisational capability, and a clear sense of what the data is actually for.

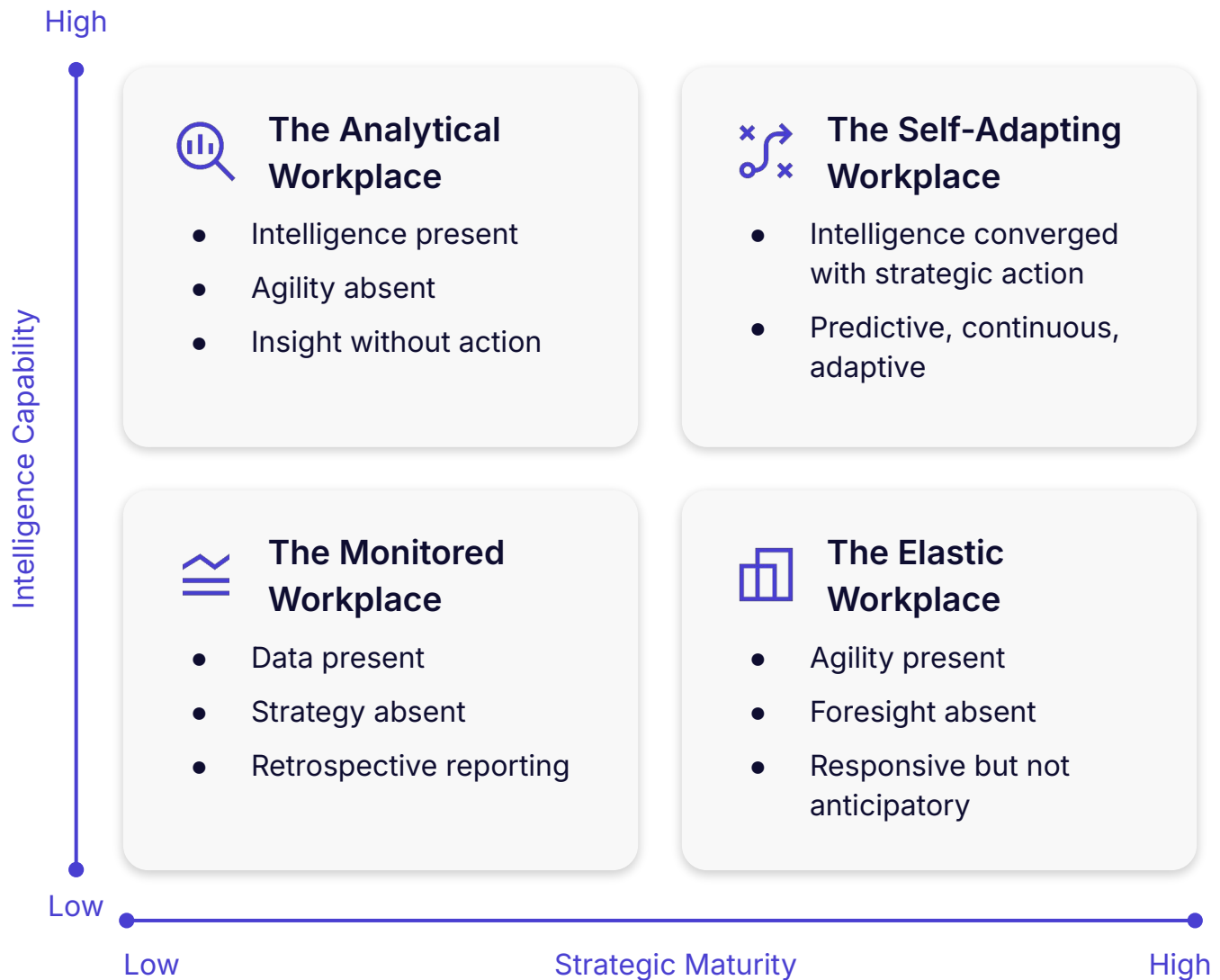
Understanding where an organisation currently sits requires a clear framework and pathway. This 'Four Workplace Futures' model maps the landscape along two axes: *Intelligence Capability*, which measures the sophistication of an organisation's data and analytical infrastructure; and *Strategic Maturity*, which measures its ability to convert intelligence into confident, forward-looking decisions.

These two dimensions are related but distinct. An organisation can have highly sophisticated data systems and still lack the strategic framework to use them well. Equally, an organisation with a clear decision-making culture may be constrained by immature data infrastructure. The most common failure is to assume that solving the technology problem automatically solves the strategy problem.

The four archetypes that emerge from this framework are not rigid categories. Most organisations will recognise elements of more than one. The value of the model lies in identifying the specific gap – either in capability, in culture, or in connection between the two – that is limiting progress.



The Four Workplace Futures





The Monitored Workplace

The Monitored Workplace organisations leverage a lot of data, but their workplace strategy is weaker. The key characteristics of these organisations include:

- Occupancy sensors and booking systems in place
- Retrospective reporting
- Siloed data streams between HR, finance and real estate
- Decisions driven by intuition, periodic reviews and external advice
- Space planning based on headcount assumptions rather than behavioural evidence

The risk of staying in this archetype is that these organisations are measuring without understanding. They may produce sophisticated-looking reports but lack the analytical framework to translate data into decisions.

The path forward is not necessarily more data. It is to better understand what problem needs to be solved. Once that's clearly defined, organisations can determine the right metrics, the right models and the right decision-making framework.



The Elastic Workplace

These organisations are defined by their quick responses and have invested in flexibility and hybrid infrastructure. However, they still rely heavily on instinct or delayed reporting. Key characteristics include:

- Strong operational flexibility: activity-based working, neighbourhood models, flexible booking
- Culture of responsiveness: teams adapt quickly to changing attendance patterns
- Strategic decisions still rely on periodic data snapshots rather than continuous intelligence
- Portfolio decisions are reactive: responding to problems after they emerge
- Scenario planning is manual, infrequent and limited in scope

The Elastic Workplace is often seen as a destination rather than a waypoint. Organisations that have successfully introduced flexible working models can mistake operational responsiveness for strategic intelligence. The danger is that this agility operates in the short term while longer-horizon decisions such as lease renewals, portfolio rationalisation, and stack planning continue to be made on insufficient evidence.

Elastic organisations need to connect their operational responsiveness to a forward-looking analytical capability. This will offer an opportunity to model how demand will change over the next six to eighteen months under different scenarios.



The Analytical Workplace

These organisations possess sophisticated forecasting capability but lack operational agility to fully respond. Characteristics that define this group include:

- Advanced analytics platforms in place, including predictive modelling capability
- Integrated data across occupancy, HR, finance and potentially external sources
- Workplace team has strong analytical capability but limited decision-making authority
- Intelligence is produced but not consistently acted upon
- Organisational culture, political dynamics or procurement constraints limit adaptability

Organisations here have invested in the capability to know what their workplace needs to do. But structural friction prevents them from acting on it. The problem is more organisational than technical. Intelligence without authority produces insight without impact.

The path forward requires leadership alignment rather than further technology investment. The most effective workplace leaders are those who have secured a mandate from executive leadership to treat data-driven intelligence as a legitimate basis for decision making.



The Self-Adapting Workplace

In these organisations, intelligence and strategy converge into a continuous cycle of anticipation, decision and adaptation. In this future, organisations use human oversight and AI to continuously inform workplace operations, planning and design decisions. Workplace leaders are capable of making strategic decisions based on patterns of data identified by AI. Characteristics of these workplaces include:

- Behavioural, spatial and organisational data integrated into a single analytical view leveraging AI to help make future decisions
- Predictive modelling identifies future pressure points months in advance
- Scenario planning is continuous and embedded in portfolio decision-making cycles
- Workplace leaders spend the majority of their time on strategy, not data management
- The organisation can test the implications of change before committing to it
- Human judgement and machine intelligence work in an explicit, well-designed partnership

The Self-Adapting Workplace is the destination toward which the other three archetypes are oriented, but it is important to be clear about what it is and what it is not. It is not a fully automated environment in which algorithms make decisions independently. As Kanav Dhir of VergeSense notes: 'I don't believe workplace decision-making will ever become fully autonomous. Many of the challenges within corporate real estate are fundamentally human.'

What the Self-Adapting Workplace does instead is change the quality of the inputs available to human decision-makers. It compresses the time between a change in the environment and an appropriate strategic response. It enables leaders to test significantly more scenarios, make more confident decisions, and redirect the time previously consumed by data wrangling toward the strategic thinking that only humans can do.



The Self-Adapting Workplace

The Four Workplace Futures model is designed as a tool for self-assessment and strategic planning. Most organisations will find that they operate differently across different parts of their portfolio. A global occupier may have self-adapting capability in their largest, best-resourced markets while operating in a monitored posture elsewhere. The value of the framework in this context is a tool to help identify priorities.

The Path Forward

The 'Four Futures' framework acts as a diagnostic tool to understand where organisations are today, but it also charts a path to where organisations can be.

Movement along either axis of the Four Workplace Futures model requires more than technology investment. It requires the simultaneous development of three conditions: the right data infrastructure, the right organisational culture, and the right leadership alignment. These conditions reinforce each other when all three are present.

Organisations that have moved furthest toward the Self-Adapting Workplace have typically not started with technology. They have started with a clear articulation of the problem they are trying to solve, the decisions that intelligence is expected to support, and the leadership commitment to act on what the data reveals. Technology then follows the question rather than precedes it.

There are five key steps to building up to the Self Adapting Workplace.

1. Build a Connected Data Foundation

The single most common technical barrier to predictive intelligence is data fragmentation. Occupancy data sits in one system; headcount and HR data in another; lease and finance data in a third. Each stream offers a partial view. None can answer the forward-looking questions that matter. The first condition for movement is integration through an architecture that allows these data streams to speak to each other in a coherent and reliable way. This requires agreement on data definitions, ownership and refresh cycles before sensors are added or a new platform deployed.

2. Invest in Domain-Specific Intelligence

General-purpose AI tools have a role in workplace decision-making, but they are not sufficient for the specific challenge of spatial prediction. Predicting how a workplace will be used under different scenarios requires models trained on spatial and behavioural data at scale, across diverse building types, organisational contexts and geographies.

This is the insight behind VergeSense's Large Spatial Model. Trained on 250M+ sq ft of real occupancy behaviour across enterprise customers in 50+ countries, the model identifies patterns and builds a body of knowledge no single organisation could develop from its own data alone. The move from measurement to prediction depends on access to this kind of domain-specific intelligence, one that improves over time because it draws on collective experience, not just individual history.

3. Establish Leadership Alignment and Decision Rights

Data-driven intelligence only changes decisions if the people with authority to make those decisions trust it and are willing to act on it. This requires a deliberate conversation at leadership level about the role of data in workplace strategy. Organisations that have this conversation explicitly move faster. Those that leave it implicit find that intelligence accumulates without impact, as seen in the Analytical Workplace typology.

4. Embed AI Governance and Human Oversight

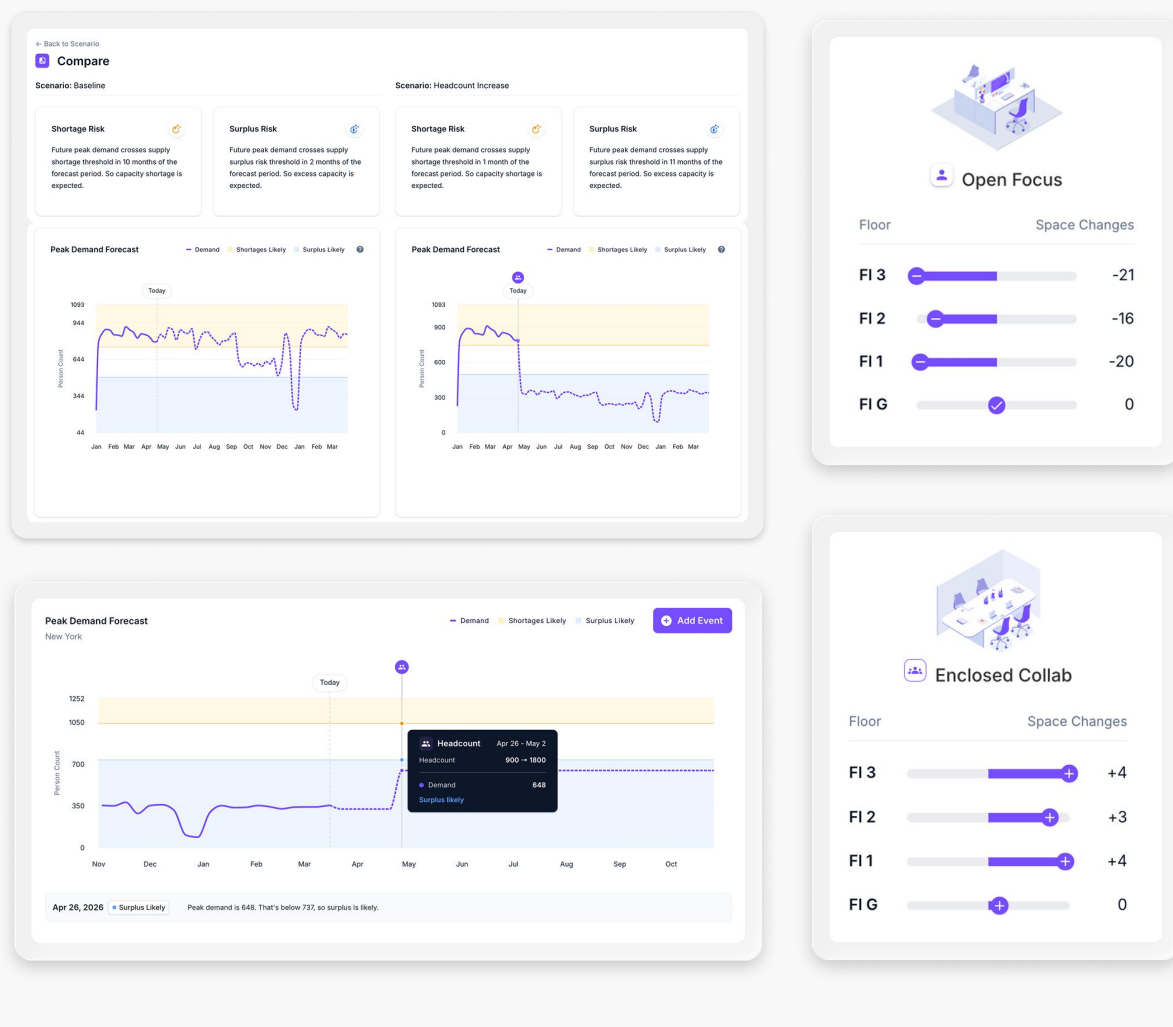
As predictive intelligence becomes more capable, the question of how decisions are made – and by whom – becomes more important. The most effective organisations treat human oversight as the governing factor. It's important to make intentional choices about which decisions can be informed or shaped by algorithmic output and which require human judgement to resolve. A governance framework for AI-supported workplace decisions does not need to be complex but it needs to be clear.

5. Shift the Culture from Reporting to Forecasting

The final condition requires a cultural shift in how workplace teams relate to data. In organisations that have successfully made this transition, the change is visible in how meetings are run, how decisions are framed and how success is defined. The question shifts from 'what does the data say happened?' to 'what does the data say is likely to happen, and what are we going to do about it?' This cultural shift can be modelled by leaders who ask forward-looking questions, or by teams that present scenario-based recommendations rather than backward-looking reports.

Predictive Intelligence in Practice

VergeSense's Predictive Planning capability synthesises occupancy sensor data, desk and room booking patterns, badge access records and headcount projections to model future space demand across multiple scenarios. Rather than reporting on average utilisation, it identifies upcoming pressure points such as days or periods where space shortage or surplus is likely, and surfaces these as actionable forecasts. Workplace leaders can adjust input variables (headcount growth, attendance policy changes, seasonal patterns) and see the implications modelled in real time, enabling genuinely forward-looking portfolio and space decisions.



Conclusion

The self-adapting workplace represents a fundamental shift in how organisations make decisions about space, people and future organisational needs. For decades, workplace planning has largely operated as a retrospective discipline, using historical utilisation trends and static assumptions to guide long-term real estate decisions. But in an environment defined by volatility, behavioural unpredictability and accelerating technological change, that model is becoming increasingly difficult to sustain.

The organisations moving ahead are those beginning to treat the workplace as a dynamic system rather than a fixed asset. They are recognising that the challenge is no longer a lack of data, but a lack of predictive capability. The question facing workplace leaders is not simply what their portfolio looks like today, but how it may need to evolve six months, two years or even five years from now.

The Four Workplace Futures framework illustrates the scale of this transition. Some organisations remain focused on visibility and retrospective reporting, while others are beginning to build the predictive capabilities required to model future demand, test scenarios and adapt more continuously to changing conditions. Moving further along this maturity curve requires more than technology investment alone. It requires organisations to rethink decision-making structures, planning cadences and the relationship between workplace strategy and business strategy itself.

This is where predictive intelligence becomes strategically significant. VergeSense's Predictive Planning solution demonstrates how occupancy data, booking systems, badge access, headcount projections and broader behavioural signals can be brought together into a unified layer of intelligence. Powered by its Large Spatial Model, trained on workplace data across industries and geographies, it enables organisations to identify patterns and anticipate outcomes at a scale that would be impossible through isolated datasets alone. Importantly, the solution also makes that intelligence more accessible, helping workplace leaders spend less time gathering evidence and more time evaluating strategic options.

"AI provides the clarity and structure; humans provide the judgement and strategy."



Kelby Green

Co-founder & Chief Technology Officer
VERGESENSE

The urgency behind this shift is growing. The gap between office utilisation and portfolio targets points to a structural mismatch between how workplaces are planned and how organisations actually operate. At the same time, AI adoption, workforce transformation, economic uncertainty and evolving hybrid behaviours are accelerating the pace at which workplace assumptions become outdated. Planning cycles that once operated annually are increasingly being compressed into continuous reassessment.

At the same time, a competitive divide is emerging between organisations experimenting with AI and those embedding it directly into operational and strategic decision-making. As predictive capabilities mature, the advantage will not simply come from having more workplace data, but from being able to act on that intelligence faster, more confidently and with greater precision.

Ultimately, the self-adapting workplace is not about creating perfectly autonomous buildings. It is about building organisations that are better equipped to navigate uncertainty. The workplaces that succeed in the years ahead will be those capable of continuously learning, anticipating change and adapting before disruption forces their hand.

Appendix

Interviews with VergeSense subject matter experts:

Brad Golden, Workplace Insights & Advisory Lead

Izzy Cannell, Workplace Insights & Advisory Lead

Kanav Dhir, VP of Product

Kelby Green, Co-founder & Chief Technology Officer

Sources:

Anthropic (2026). Economic Index: AI's Impact on the Workforce. Anthropic.

CBRE (2026). 2026 Global Workplace and Occupancy Insights. CBRE.

Colliers (2025). Return to Office 2025: A Shift in Balance Between Mandates, Flexibility, and Evolving Workplace Needs.

Gartner (2025). Human-AI Collaboration: Gartner's 2030 IT Work Forecast. Gartner.

JLL (2025). The Future of AI in Corporate Real Estate. JLL.

JLL (2026). 2025 Global Real Estate Technology Survey.

Journal of Corporate Real Estate (2025). Navigating Uncertainty in CREM: Quantitative, Qualitative and Location-Related Adaptation of Offices in Times of Structural Change. Journal of Corporate Real Estate.

McKinsey & Company (2025). Superagency in the Workplace: Empowering People to Unlock AI's Full Potential at Work. McKinsey & Company.

ResearchGate (2025). AI-Driven Predictive Analytics for Workforce Planning and Optimization.

WORKTECH Academy and Zoom and HP (2025). The AI Advantage: Integrating AI into Workplace Strategies.

World Economic Forum (2025). Future of Jobs Report 2025. World Economic Forum.

About VergeSense

[VergeSense](#) helps the world's largest enterprises make confident, defensible real estate decisions, replacing static, episodic planning with continuous, AI-powered intelligence. Built on the Large Spatial Model and trained on 250 million square feet of real occupancy data, VergeSense's Predictive Planning and Occupancy Intelligence give Fortune 500 teams the evidence to right-size portfolios, design space that matches how people actually work, and reduce real estate spend with measurable ROI.

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 14,000 individual subscribers and more than 90 corporate, design and technology organisations around the world to deliver content on the latest trends, research and best practice in work and workplace.