Data analytics and change management are transforming the future of the workplace: The opportunity to create value-driven harmony between people, place and technology

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ABSTRACT

The idea of workplace has been painted in many different shades throughout the years. As workplace disruptors such as COVID-19 and stay-at-home orders have an impact on the industry, researchers are taking a closer look at the functionality and purpose of workplace. The goal of obtaining harmony between workplace design and financial benefit has been tried and tried again. Achieving the ‘right’ workplace solution persists to be a moving target. Until recently, organisations did not quite understand just how unique they are. Creating a successful future-proof workplace starts from within. Utilising data-driven insights and change management practices, organisations can plan workplaces that intentionally connect individual needs with space, purpose and mission. This paper explores the ways to unlock insights that both data analytics and change management practices provide. Homing in on deeper connectivity between people, place and technology becomes possible through these practices.

Keywords: data analytics, organisational value, strategy, alignment, change management, technology, physical space, talent, workplace solution

INTRODUCTION

The term ‘workplace’ is under construction. Over the course of the last 20 years, people have been grappling with the idea of workplace. From high-density to free address, the ‘right’ solution has been seemingly unattainable. Viewing things from a design perspective, the industry has provided a plethora of cookie-cutter office solutions — not to be confused with bad design; rather, attempts to solve for both deliberate design and economic satisfaction. Pairing purpose and intention with financially sound design is an industry challenge that persists; however, the disruption of COVID-19 has shed a significant light on an opportunity to achieve such harmony. In a matter of months, the universally accepted definition of workplace came into question. People all over the world starting rethinking what and where work is done, means to them.

A study conducted in 2020 by Jones Lang LaSalle revealed a wide range of
responses about future real estate needs. Out of the 100 cross-industry businesses sampled, 40 per cent of businesses plan to have all employees return to the workplace. In contrast, 21 per cent of businesses plan to allow 20–50 per cent of employees to work from home permanently. This statistic alone makes a case that there is no ‘one-size-fits-all’ solution for workplace design. Re-engaging with the purpose and mission of each individual organisation is the new guiding light to a thriving workplace. What makes company X successful is not necessarily what makes company Y successful. Analogous to how businesses choose a business model, workplace design needs to be curated in a similar fashion. It is important to level the set by understanding what is going on within the industry; however, planning for the workplace of the future becomes a very individualistic endeavour. The question organisations must answer is, what is your organisation’s DNA? From a physical, technological and talent perspective, what combination of each does your organisation need to make your place of work, work for you? Using data analysis, a workplace solution built to encourage organisational distinctions, rather than deter them, becomes possible.

Drawing conclusions from data-driven insights is half of the futuristic workplace equation. The other half is navigating the change that comes along with new ways of working. Considering the pandemic, people have proven that they are more resilient and adaptive than expected; however, engaging in a successful workplace experience requires the use of strategic change management practices. Similarly to planning for the workplace of the future, successful change practices will target individual contributors. As innovative ideas are pushed to the limit, the level of individual acceptance will be too.

**HOLISTIC VIEW OF WORKPLACE**

**Physical space**

The location of the office remains steadfast in that it is both enabling and strategic. It is no longer simply the space in which work gets accomplished; instead, it is becoming a desired destination with purposeful intent. When dissecting the physical aspect of the workplace with a lens focusing upon knowledge workers, an interdependent system made up of five intangible factors becomes clear: creativity, innovation, collaboration, strategy and productivity. These factors are defined as workplace variables/actions that happen within a place of work (Figure 1). There are three main functional categories in which these factors belong: fundamentals, generators and drivers. Creativity and innovation are the two fundamental factors of an organisation; they are the building blocks on which an organisation stands. These components build a sustainable dynamic foundation for the organisation to produce generators. Collaboration and strategy are the generators

![Figure 1 The factors which are defined as workplace variables/actions which happen within a place of work](image-url)
Data analytics and change management are transforming the workplace's future. Without the generators, future-focused work is at risk.

The most discussed and sought-after component of any workplace is the driver, productivity. To most CEOs and stakeholders, the progression of business is the most important element of the workplace. The key, however, is to understand that the workplace is not solely about productivity; rather, to achieve measurable systematic harmony. Intentionally positioning each workplace indicator within space will produce a purpose-driven workplace with deep insights to exponential workplace success.

Due to the disruption of COVID-19 and the stay-at-home orders, these workplace components have been more apparent. What has become clear is that the physical office space is an employee on its own — it works for us. For example, creativity and innovation require energy and communication. When employees are in the office, the energy needed to be creative becomes less. The office enables space and time for inspiration. To be innovative, new ideas need to be spread among fellow collaborators; the physical office space allows for easier access to communicate to colleagues. When employees work remotely, it takes energy to contact other employees to plan for a call or meeting to discuss new ideas. Strategy and collaboration require effort and accessibility. Working from the office requires less effort to plan for future-focused goals and inherently provides accessibility to other colleagues. The office does a lot of work that goes unnoticed but makes day-to-day tasks faster and more efficient.

Technology
As the digital age is well underway and continues to increase the advancement of all industries, technology is shifting both the functionality and meaning of commercial real estate. Historically, commercial real estate property was exclusively used for business-related purposes or to house a corporation. Due to the pandemic, society has quickly adapted to working from other locations instead of the office space. The only way that this dynamic shift is feasible is by using technology. The digital component of work is allowing for workplace to be in any location in which one has access to power, Wi-Fi and the required equipment. This expands the limitations and boundaries of where people work, when they work and how they work. Due to the possibilities that technology provides to the workplace, corporate real estate (CRE) takes on a much more functional and strategic role. Remote work is no longer an idea of what the workplace could be, but a reality.

Talent
When evaluating commercial real estate options, a great amount of time is spent understanding location, potential returns on investment (ROI), economic state, infrastructure and supply chain. When thinking about the strategic purpose of real estate, however, one thing that should get called to attention is talent. Hiring the right talent is arguably one of the most challenging facets of the workplace. According to the US Bureau of Labor Statistics, ‘4 million Americans quit their jobs in July 2021’. Over the last few months, resignations remain abnormally high with a record-breaking 10.9m open jobs at the end of July 2021.

As the workplace competition becomes stronger, attracting and retaining top talent is becoming imperative to a successful long-term business plan. Organisations that put their talent at the focal point of their business tend to reap great reward. According to a McKinsey & Company article, ‘superior talent is up to eight times more productive’. The competition for talent is fierce; employees are demanding more from their employers and much more from their workplace.

The narrative shift between employees and employers is becoming increasingly
transparent. Employees are tending to view things through the lens of ‘what can my employer and workplace do for me’ rather than ‘what can I do for my employer and workplace’. This dynamic only adds to the demand of the workplace and all features it needs to encompass. Flexibility, mobility, updated technology and spaces for collaboration are becoming increasingly more desired. These different types of employee-driven demands play a big role in the overarching shift of the workplace.

The other important aspect of talent aiding the development of the workplace is that workforces are becoming increasingly multigenerational. Each generation wants and needs different things, adding another layer of complexity. According to the Society of Human Resource Management, there are five generations currently represented within the workplace: Traditionalists, Baby Boomers, Generation X, Millennials and Generation Z. Successfully blending each generation and the workplace nuances they come with can be challenging. Understanding that each group perceives and reacts to things differently is a key part of a successful multigenerational workplace.

An idea recently developed by Megan Gerhardt, professor of management and leadership at Miami University, offers a solution for the lack of leveraging intergenerational potential.9 ‘Gentelligence’ is the idea of harnessing the insights of all generations to solve problems and create opportunities. The failure to understand what perspective each generation has can lead to interpersonal challenges within the workplace. For example, as Millennials are digital natives, using technology as a daily resource is second nature. If a Millennial is taking notes on their phone during a meeting, someone from an older generation who is not typically prone to use technology, could misinterpret this action as texting or being distracted during the meeting. That misperception could potentially lead to long-lasting negative effects in the organisation.

As any successful leader understands, where there is change there is opportunity. Over the course of 12 months, one question became more apparent than organisations may have expected: How do organisations unlock deeper workplace insights to advance their future business by better connecting people, place and technology? The answer: data analytics.

**DATA ANALYTICS**

In the general sense, data analysis is the process of evaluating raw data to find patterns and trends. There are four primary types of data analytics that can be used to solve different challenges: descriptive, diagnostic, predictive and prescriptive. When determining what type of analysis to use, the first step is to understand the challenge in question. Is the insight into what happened most critical? Why has something happened? What will happen? What should be done?

**Descriptive analytics**

This type of technique aids in understanding the history of what happened. Identifying historical trends/consistent patterns within the data set helps establish a baseline. As key performance indicators (KPIs) are standardised, descriptive analytics can determine if something succeeded or failed. This type of analysis is essential in understanding past performance.

**Diagnostic analytics**

The use of diagnostic analytics determines the reason something occurred. Understanding the cause is critical in determining whether to continue moving forward or to change the course of action. Referencing KPIs will help to further recognise why something improved or worsened.
Predictive analytics
The insight into what the future holds comes from predictive analytics. By utilising this technique to determine patterns of what is most likely to reoccur, future planning becomes easier. Establishing certainty within uncertainty is an insight that is widely valued.

Prescriptive analytics
Action step decisions are derived from insights of prescriptive analytics. This type of technique answers the question of what should be done. Estimating the likelihood of various outcomes helps move decisions forward, in any application.

Collecting, assessing and expressing the right type of data insights aids in unlocking organisational value deeper than anticipated. Commercial real estate may be described as late to the party regarding data utilisation; however, a significant area of opportunity persists.11

HOW IS THE COMMERCIAL REAL ESTATE INDUSTRY CURRENTLY UTILISING DATA ANALYTICS?
It’s not that data and commercial real estate do not go together, but currently their interaction is broad and reactive. In learning how data is utilised within the industry today, a macro-level exploration must take place. When making any type of corporate real estate decision, data is evaluated from a wide point of view, a portfolio-centred perspective. Market predictions, property interest levels and potential investor buy-in are standard measures that are evaluated first. It is an industry requirement that each of the external variables is carefully examined before making a real estate decision. From there, transactional data is assessed. Loan data, lender data, preforeclosure data and ownership data become an important part of the conversation.

At this stage of CRE data adoption, the most granular level of exploration is tenant data, such as identifying current and past tenants. Until recently, this is the highest degree that the industry applies data-driven insights. Within the last two years, industry players such as brokers and architecture firms started scratching the surface by using data in a more proactive way.12 Reflecting all the changes that have occurred over the last two years, the workplace has become the focal point of capitalising on insights and now a pivotal factor in realigning organisations. It is evident that the industry has been exposed to a vast opportunity gap. This is the untapped organisational value the industry has been missing. Utilising deeper insights will bring exponential worth to the industry. The key to engaging with deep systematic insight is to assess internal workplace variables in a proactive controlled state.

THE OPPORTUNITY TO GAIN ACCESS TO UNTAPPED STRATEGIC INSIGHT
Spaces in the CRE industry are primarily designed with the intent to support the people conducting work within them. The irony is, however, that there is little to no statistical measurement of what employees are doing in real time within these spaces. Conversations, interviews, sensor measurements and live observation may occur, but no quantitative value of individual behaviour is captured. Historically, organisations have made decisions based on ‘knowing’ their people. While it is important to know what people desire within a space, is it essential to know what they need. The untapped value is removing the forced guess and check work that leaders are doing. Instead, aligning real estate based on real-time need should be put into practice. Removing emotion and bias from real estate/workplace planning will help increase efficiency and allow for necessary future modification. To understand how to quantify organisations, there are three main concepts that must be established in an initial data exploration: behavioural
measurement, holistic measurement and predictive measurement.

**FOUNDATIONAL MEASUREMENTS**

**Behavioural measurement**

Putting people in the centre of design has been an industry-wide goal for many years. Drawing upon conclusions of what people want/desire in a workplace experience is of value from an attraction and retention standpoint. Focusing only on human desire, however, limits the precise alignment of real estate, spatial design and interior solutions. The key to designing an organisation-specific workplace is recognising what employees need rather than what they want. Things such as individual activity, activity prioritisation and time prioritisation can be measured through behavioural analytics. Once those factors are calculated, it becomes clear what each individual contributor requires from both a current and future perspective. This information becomes useful in either factually validating what leaders were thinking or confirming necessities that organisations were failing to see. Once the type and occurrence of activities have been discovered, space types, amount of space and in-office frequency can be strategically considered. Without this level of awareness, the workplace can be wrongly deemed as unnecessary and inefficient. In applying behavioural findings, achieving efficiency, cost savings and a strongly aligned real estate portfolio become much more attainable.

**Holistic measurement**

Valuing organisations from a holistic perspective is a requirement for authentic quantification. When using holistic measurement, specific qualifications are important to understand. For each measurement or module, a correlating algorithm is associated. If only certain groups or individual contributors are measured, the validity of the data set is skewed. The algorithms that connect each module will be interrupted and output data that is misaligned. The advantage of measuring holistically is understanding how each variable interacts with one another. The study of the interaction between variables concentrates on workplace interdependence. Being informed of workplace interdependence is a very valuable insight because it is intangible and unobservable. Until recently, the challenge to understand how different workplace dynamics intermingled was not easily attainable. Taking activities and turning them into applicable efficiencies is a new study within the field. In applying holistic measurement to future workplace planning, organisations can not only capitalise on interactions between variables but can look more closely at specific groups and contributors.

**Predictive measurement**

The advantage for which data analytics is most frequently recognised is the ability to use trends/patterns to predict what is likely to occur in the future. In gathering insights about the workplace of the future, predictive measurement can help in limitless ways. Companies can use insights to better understand what their future structural needs will look like to stay competitive within the marketplace. Understanding organisations from a competitive standpoint is critical; knowing where potential culture and operational shifts may occur is imperative. This allows businesses to respond to the ebbs and flows in a proactive rather than a reactive way. Positioning the workplace as a strategic enabler for employees is advantageous but expanding the benefit to outlast competition is where exponential data value comes into play. This allows companies to engage with foresight from both a process and people lens. Creating workplace harmony internally will overflow into external benefit.
Some could argue that this is the biggest component in revolutionising the future of workplace.

**TRANSFORMING INSIGHTS TO AN INTENTIONAL WORKPLACE EXPERIENCE**

Right now, organisations have the opportunity to build an intentional workplace experience. Re-engaging employees with the vision and mission of their workplace is critical in this moment in time. Building a purpose-driven environment allows for employee buy-in, engagement and overall business success. Designing a tailored workplace solution can be successful by measuring four different workplace components while simultaneously obtaining a human-centric approach. Understanding mobility patterns, spatial needs, networks/adjacencies and culture will create a futuristic workplace experience that encompasses all parts of the workplace.

**Mobility patterns**

Due to COVID-19 and the stay-at-home orders, companies have adapted to working from remote locations. That being said, organisations need to rethink what level of mobility best suits their workplace structure. Using data to measure where employees work and how often they work from different locations will help determine how to plan for the workplace of the future. Once the mobility DNA is captured, a level of flexibility can be understood for symmetry between in-office and remote work. Insights such as these will also be applicable in understanding what type of space and interiors solutions best support each organisation.

**Spatial needs**

Understanding insights about spatial requirements becomes an ultimate key to real estate efficiency. Being able to measure space typologies and space quantities leaves no room for speculation. Redistributing underutilised space with a variety of spaces that are shown to be statistically significant, will change the course of real estate strategy. As new spaces emerge, such as video call rooms, organisations can understand what combination of space is right for them.

**Networks/adjacencies**

Determining where value lives within an organisation is not always easy. Quantifying the synergy between individual contributors and departments is important in planning for a strategic workplace. Through the use of data analysis, determining the impact of various network connections becomes clear. Interactions between different teams can be identified as well as what type of interaction is most valued: physical, virtual, or both. This information will help to determine what groups need to be working closely with one another and how much real estate each group will require.

**Culture**

Organisational culture is the glue of any workplace and the component that is most challenging to calculate. Understanding culture and employee readiness makes all of the other insights make-or-break. Failing to understand how employees feel about change and putting the right change strategy into place is a large reason projects are not successful. Far too often, organisations spend large amounts of capital on new real estate projects that employees do not properly utilise. Gathering insight on what level of adoption the culture maintains can be critical. Discussions regarding strong culture take place daily within the CRE arena; however, the idea of putting a number to a cultural concept has never been part of the conversation. Understanding what level different groups of contributors are regarding culture will make a huge impact on successful space utilisation.
The overarching benefit and added value of data is that the insights are individualistic. Data eliminates a one-size-fits-all approach. Every organisation, regardless of industry, has specific organisational needs that affect the workplace design and real estate requirements. Looking to competitors and other players within the industry will only take companies so far. Looking inward to people, place and technology, organisations can build a better place to work that people embrace and adopt. Additionally, acquiring awareness of the right change management strategy ensures successful spatial utilisation.

PROTECTING YOUR INVESTMENT THROUGH CHANGE MANAGEMENT PRACTICES

Unlocking valuable data insights and failing to craft a tailored change management approach is similar to learning a new skill and neglecting to apply it. In the endeavour of learning a new skill, once the skill is mastered it is applied to a situation to advance further. In the context of CRE, change management practices are simply that: a set of skills acquired as an application to ensure successful space utilisation. As building the ‘right’ solution for workplace is individualistic, curating the right change management strategy follows suit. The Prosci Change Model, developed by Jeff Hiatt, explains that holistic organisational change will only be successful when individual change occurs. Focusing on each contributor within a company will increase the likelihood of ability to change.

When constructing a change strategy, it is critical to utilise the cultural data that is collected through analysis. This gives deep understanding into what change activities will be impactful and which ones will not. This will vary greatly from organisation to organisation. A successful strategy tailors change events and communication to the level of organisational readiness or adoption. Dissecting the data by organisational role, age group and tenure, insight into individual readiness becomes clear. In transforming change resistance to adoption, activities and events are put together in coordination with a timeline to give people different engagement opportunities. A detailed communication plan must follow. Not only does change require visual cues but also frequent messaging. Positioning the why behind change is critical when writing each communication. With recent workplace disruptors in mind, leadership has been warming up to the idea of change management. The value of communication and navigating change internally has been deemed important by high-level positions. Organisations understand that these real estate projects are costly and change management is a small endeavour to protect the large investment.

PRACTICAL APPLICATION OF DATA ANALYTICS AND CHANGE MANAGEMENT

Company X was trying to determine a strategic return to office strategy as a lease renewal was quickly approaching. The overarching idea was to create a workplace of the future that consisted of flexibility, collaboration and re-engaging with the company’s vision and mission. The law firm had three main goals when approaching the real estate strategy: 1) to understand all working needs; 2) whether the current real estate fulfilled all working needs efficiently; and 3) to gain a measurement of culture/organisational readiness for change (Figure 2).

Through data analytics and change management, the company was able to craft a successful forward-thinking workplace plan. Utilising descriptive analytics, the company could reflect upon past real estate application. Better understanding spaces that were being utilised and those that were not helped to determine current/future workplace needs. Predictive analytics highlighted the trends and patterns that were most
likely to reoccur within space. Specifically, a data point that came from this set was that large conference rooms had been utilised five days a week in the past; however, the frequency of future use was predicted to reduce greatly. This aided in the decision to reallocate space in the current lease rather than attaining additional space within a new lease.

Digging deeper into why conference rooms would not be as frequently utilised, diagnostic analytics revealed that the need for 8–10-person-sized rooms would be decreasing as many employees would be working from various locations, whether at home or different office locations. The working needs of the firm allowed for employees to successfully work remotely. Perspective analytics helped provide insight to move the project forward. Since the data showed that the current space was not being fully utilised, the firm decided to resign the lease, but reduce the space from two floors to one. The analysis determined that the firm could go from 33,000 usable sq. ft to 22,500 usable sq. ft while maintaining all working needs. Through the process of using data to help inform real estate decisions, the company confidently reduced its overall footprint by 33 per cent. In addition, the analysis determined that the organisation was ready for change and was desiring a push toward innovation, both in culture and space.

Once the cultural data was calculated, a strong change management strategy was created. It focused on re-engaging the mission and vision of the firm. Understanding that the company was united with little to no (statistical) cultural change variance, a plan was devised to boost awareness, communication and excitement. In cases that lack insight into organisational change readiness, the strategy is centred around moving resistance to adoption. Using data made it clear that there was little to no change resistance, which allowed for a more impactful strategy. Activities and events were put on monthly.

The data reveals that the culture currently is sitting in a controlled state. This means that populations in this state work hard for accuracy and that they value timeliness, consistency and uniformity. The organization is looking for a shift to a creative state. This means that these populations tend to innovate, want to be first in the market with new ideas and have great agility and transformation. This seems to be in line with a lot of the drivers for change.

Figure 2  The law firm had three main goals when approaching the real estate strategy: 1) to understand all working needs; 2) whether the current real estate fulfilled all working needs efficiently; and 3) to gain a measurement of culture/organisational readiness for change.
to allow for individual awareness and opportunity for questions. In tandem with each activity, a regular cadence of communication followed. Project updates, frequently asked questions (FAQs) and progress photos were included in every digital communication. The focus of each communication was to reunite employees since they left the office 20 months earlier. The reuniting glue was the company’s mission: pride in client satisfaction, reliability, innovation and creative approach to problem solving, all designed to exceed the high expectations of its clients. Re-engaging with the mission set the stage for how employees were encouraged to behave in the new space, fostered a smooth transition to show that nothing about the company had changed and preparing employees to continue to maintain a strong firm-wide united voice.

CONCLUSION
Engaging in an individualistic data discovery is critical to a successful workplace strategy and complements traditional programming tactics and tools. By using data analytics, companies can leverage their unique organisational attributes to confidently and more decisively renew leases, renovate and build. Connecting people with place through change management practices not only creates symmetry between where work gets done and who does it, but also brings meaning and purpose to the future workplace. While workplace may always be under construction, the CRE industry can now use proactive data to prove there is power in place.

INSIGHTS/KEY TAKEAWAYS
• The workplace is an interdependent system made up of five different workplace components: creativity, innovation, collaboration, strategy and productivity;
• Curating the ‘right’ workplace solution is an individual endeavour and should not be a one-size-fits-all approach;
• Proactive data utilisation is becoming more valued and incorporated into workplace decisions in the CRE industry;
• Well-defined change management approaches consist of visual cues and strong consistent messaging strategies;
• The physical workplace is not going away, it is becoming a dynamic organisational efficiency for companies.

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