Meeting the demands of change: A clear path to a better digital enterprise architecture

Received (in revised form): 30th May, 2023

Craig Gillespie*
Managing Director of the Occupier Division, MRI Software, USA

Carla Hinson**
Vice President, MRI Software, USA

Craig Gillespie is currently the Vice President and Managing Director of the Occupier division of MRI Software. He leads a global team with operations across APAC, EMEA and North America and is responsible for a suite of products from mid-market to enterprise solutions. From 2013–21 Craig worked for Trimble as the Managing Director of the Real Estate and Workplace Solutions division before leading a divestiture to MRI Software. Prior to Trimble Craig was the CEO of Manhattan Software. Craig is a CPA and holds a Bachelor’s degree from Bentley University.

Carla Hinson is currently Vice President of Product for the Occupier and North America Facilities Management divisions of MRI Software. Carla leads a global team and is responsible for the product management and development of a suite of products from mid-market to enterprise solutions. Carla brings over 25 years of commercial, occupier, and retail proptech experience. Carla was Executive Managing Director, GCS Global Technology, for Newmark prior to joining MRI Software. Carla served as a Chief Operating Officer (COO) and Services Director across multiple consulting and software companies prior to Newmark. Carla holds a Bachelor’s degree from the University of Houston – Clear Lake.

Abstract
The COVID-19 pandemic has brought more change in corporate real estate (CRE) than ever before. CRE teams are now working closely with human resource (HR) teams to consider not only locations and buildings but also the experiences of the employees. This change has brought forth the opportunity to reconsider the way we collect and access data as well as the limitations of entire product ecosystems currently in use. This can be a significant and daunting task, but it does not have to be. The right product ecosystem can serve a central role in the pursuit of comprehensive data to support your data governance strategy. Starting out by understanding the changes that have occurred, key technology considerations and the issues and needs facing the business will help to make the process more manageable. This paper makes the case that better strategic decisions start by committing to taking the first step towards facing change.

Keywords: corporate real estate technology, real estate data, IWMS, real estate compliance

Introduction
Change sparks innovation, but the path to innovation varies greatly. In some cases, innovation means looking back to unrealised original ideas that were ahead of their time. That original idea for the corporate real estate (CRE) industry is the ability to make data-driven decisions: three simple words that describe one of the most complex business quests in CRE. The changing landscape places even greater importance on the...
The absolute necessity of high-quality, business-specific data — data that is accessible, valid and unique to each use case is critical.

In the most recent 2022 CoreNet and MRI global survey, 79 per cent of the respondents stated that they are looking to reorganise or reduce space (see Figure 1).

Such a substantial level of change requires a significant amount of data to support key decisions.

Only 26 per cent of the same respondents can automatically track office occupancy levels and further, 26 per cent are unsure of their ability to comply with Lease Accounting FASB/IFRS requirements (see Figure 2).

CRE professionals are being asked to make impactful decisions without having the support of data or must leverage data that lacks a high level of trust in its accuracy.

---

**Figure 1** Respondents proposed space utilisation changes

**Figure 2** Level of respondents able to track office occupancy
Meeting the demands of change

consistency and transparency. Organisations such as simplesurance are already implementing new technologies to bring reliable information into their daily decision-making process. Contract intelligence was used by simplesurance to automate the process of sourcing, structuring and benchmarking critical data from a wide variety of insurance policies (i.e., motor, household, accident, etc.). The automation helped streamline price and product comparisons between available policies to deliver the most cost-efficient deals to their clients (see Figure 3).

The CRE industry experienced a once-in-a-generation shift during the COVID-19 pandemic. Headlines about remote work, hybrid work, employee engagement and the impacts of these pivots on the CRE market and organisations that manage workplaces appeared, and continue to appear, in major newspapers and countless digital media outlets. Tesla, the US EV manufacturer, was captured in the news in less than favourable circumstances when they demanded employees return to the office. This also affected the way the office was leveraged as a recruitment tool. These shifts are real and here to stay.

The need for accurate, accessible portfolio data or, more appropriately, the lack thereof has become undeniable to many organisations. This is notable because the success of any CRE portfolio strategy is more likely when you can leverage perfect information, or as close to it as possible. Perfect information, like being able to see all the pieces on a chessboard before your next move, is an aspirational goal that can be resource-intensive to accomplish. This is why access to the right property technology (proptech) applications and enterprise data is critical. As organisations continue to try to innovate how they use space, they should evaluate the data they have today and the data they will need in the future.

HERACLITUS SAID, ‘THE ONLY CONSTANT IS CHANGE’ BUT ARE WE REALLY SEEING THAT MUCH CHANGE IN CRE? LET US TAKE A LOOK

Changing users

The insights produced by CRE teams are being utilised by a much broader audience
than ever before, including HR, finance, accounting, and FM, to name a few. This expanded user base has increased the demand for easy-to-access data.

**Changing workplace expectations**
How much space do we need, what is the make-up of that space, do we leverage a co-working arrangement and, most importantly, what are the expectations of the people using that space? Workplace experience became a buzz term prior to the pandemic, but with the focus on return-to-office (RTO) strategies, it is now much more than buzz. People need to want to come into the office; they need to see the value in the inconvenience of a commute.

**Changing environmental, safety and governance (ESG) requirements**
Office buildings generate nearly 40 per cent of the CO$_2$ we produce each year. Add to this the fact that nearly a third of the energy we consume is wasted, and it is easy to see why regulators around the world are strengthening regulations and targets to reduce greenhouse gas emissions in the coming years.

**Changing portfolio strategy**
Leases remain the most expensive component of a real estate portfolio for most organisations and often provide the greatest opportunity to unlock savings as a result of the hybrid working programmes being enacted by companies.

**Changing workloads**
It can feel like team members are being asked to do more work, but innovative technologies such as artificial intelligence (AI) can turn ‘more’ work into ‘different’ work. Using AI to automate mundane tasks frees the human brain to focus on making business decisions that matter.

**Meeting the demands of change**
These changes in CRE vary across organisations, but the need for accurate and timely data remains true for all. Likewise, changes to technology continue to drive forward. The traditional model of one application ‘to rule them all’ for CRE has taken a back seat. Best-in-breed, feature-rich point solutions that are part of a product ecosystem are better suited to meet the needs of modern organisations.

And while the move to product ecosystems can seem counterintuitive, this direction provides maximum flexibility and scalability by:

- Ensuring that each functional area (lease, FM, accounting, HR, workplace, etc.) implements applications that truly support the business requirements;
- Point solutions can be implemented in a phased approach which allows for more strategic roll-outs and change management, resulting in better end-user adoption;
- Enhanced data transformation capabilities coupled with AI not only aggregate data but can also draw attention to anomalies and make recommendations based on historic performance.

The changing technology landscape also means that additional consideration needs to be given to the enterprise architecture supporting the product ecosystem. Some core principles for consideration include:

- **Cloud-based architecture:** Every modern solution is available in the cloud. Cloud applications reduce the infrastructure costs associated with maintaining an on-premise application and increase the business’ flexibility to select the right application(s). Robust security assessments and certifications are now available to minimise any risk associated with cloud applications;
- **Open and connected:** Enterprise CRE cloud applications need to be designed with an open and connected framework to
maximise the interoperability of a product ecosystem. The applications in a product ecosystem must be able to work together to eliminate duplicate data entry and increase data validity. An additional benefit to open and connected applications in product ecosystems is that they support the ability to change out applications as the business changes and grows. Siloed applications and knowledge-hoarding are outdated. Shared data increases success. Product ecosystem applications must have application programming interfaces (APIs) — no exceptions;

• Internet of Things (IoT): With the advent of IoT devices and sensors, decisions are no longer made based on static data. Decisions using near real-time data are being made. The only struggle now is the sheer volume of data that is available and defining the right business rules to support a management-by-exception approach;

• Data governance: The need for data governance and defining source systems versus systems of records versus reporting systems has never been greater. Product ecosystems can improve business efficiency, but only if they are implemented in a way that supports a data strategy that increases data validity and accessibility. Having the data is not enough: Making it accessible for decisions is critical;

• Mobile solutions: Our lives are on our phones and that is not something that will change any time soon. So, the question becomes, should our work also be on our phones? If so, how much of it? What is the line between tasks easily performed on a mobile device and those that are less efficient by using our phones? Part of considering a product ecosystem is defining a mobile strategy that works for the business.

Today, CRE leaders are often expected to use information from the past to predict the future — a crystal ball expectation that can feel very overwhelming. This is why modern proptech solutions are so critical. They can bring confidence to your CRE decision-making.

Understanding current technologies and which to leverage

Choices in the marketplace are endless, so what is the best place to start to define the ecosystem that will support the needs of a business? In this case, the best place to start is at the end. Document how the business will look when the product ecosystem is fully functioning. Does it look and function like you need it to?

Here are few helpful questions and tips to get started:

• Is the data trustworthy?: The goal of a product ecosystem is to support the business. Before implementing products, stop and ask, do we trust our data? Have there been missed lease options or missed lease and vendor payments? The degree of trust an organisation has in its data will determine the approach to handling the data in the product ecosystem. For example, if there have been missed lease options and payments, it may be time to consider a full lease abstraction project as opposed to a data migration from the current application to the new one. Lease data is an area where there has been increased AI focus. AI applications today can scan leases, pull the text into a database for review and then integrate the data into the lease administration/accounting application. This process is often considered a ‘one and done’ exercise, but modern AI applications can help maintain the data on an ongoing basis to help preserve that trust;

• Do most team members have spreadsheets where they keep ‘their’ data?: On the one hand, spreadsheets can be a symptom of a lack of data trust; however, they can also be part of the cause. Excel is
an excellent tool for quick data analysis if its limitations are realised. In a spreadsheet-focused organisation, it is important to ask, what is the system of record? How does the business know which spreadsheet is correct? Is data captured in the spreadsheet also captured in an application? If so, how often is the spreadsheet refreshed? In this type of environment, considering why the team is using spreadsheets is critical. Not only are spreadsheets an example of a lack of trust in data, but they can also point to a data accessibility issue, meaning the business cannot get its hands on the data that it needs in the required format.

- Is there duplicate entry of data?: Duplicate entry of data can happen in a product ecosystem where the functions of each application have not been considered and the source system versus system of record versus reporting system have not been clearly defined. Here are few definitions to help tackle duplicate data entry:
  - **Source system**: The point where data enters the ecosystem. In a standard lease process, this would be either the AI application that abstracts the leases or the application used by lease administrators for manual data entry;
  - **System of record**: The application that holds the single, right answer for any piece of data. Continuing with the lease process, the system of record for payments is typically the accounts payable application. When questions arise about actual lease payments, it is the accounts payable application that will be referenced;
  - **Reporting system(s)**: The place(s) where data is made available for viewing only. Reporting systems may be applications holding data from other applications refreshed regularly or involving a data lake or data warehouse. The key is that the data is never edited in a reporting system.

Once the distinct types of applications that exist in the product ecosystem are defined, a clear data governance model should be created. A data governance model defines the owning application for each critical piece of data and will be used to ensure that data can only be edited/updated in the appropriate application. The combination of system definition and data governance will ensure that duplicate data entry is not happening and that users of the data know how to find the single source of truth and the processes to follow to have the data issue corrected.

The result of the considerations above will be used to create a set of data requirements. These data requirements can be refined to include key reporting metrics. Understanding reporting requirements upfront will help make sure that the data is not only trusted and accessible, but that it fully supports the business needs.

**GETTING IT DONE WITH CHANGE MANAGEMENT**

Change management is a critical factor to consider when implementing new technologies due to its crucial role in ensuring a smooth transition and maximising the benefits of the technological advancements. Implementing new technologies often brings about significant shifts in processes, roles and responsibilities within an organisation. Change management provides a structured approach to guide individuals and teams through these transformations, mitigating resistance and fostering acceptance. By addressing the human side of change, change management helps alleviate fears, uncertainties and doubts, enabling employees to embrace new technologies with confidence. Moreover, it promotes effective communication, stakeholder engagement and training initiatives, ensuring that employees understand the purpose and value of the technology and are equipped with the necessary skills to leverage it effectively.
Through change management, organisations can minimise disruptions, optimise adoption and achieve the desired outcomes, ultimately driving innovation and maintaining a competitive edge.

The following list represents the minimum information that should be part of a change management implementation:

- **Data**: Definition of the data to be collected. This should take the form of clearly defined data ownership and governance as described above;
- **Current product ecosystem**: A list of the applications in the current product ecosystem. The list of applications should include descriptions of the data included in the application as well as the application owner and users. A diagram demonstrating the flow of data through integrations (automated or manual) will increase the understanding of expectations for the future state product ecosystem;
- **Required approvals**: A list of approvals required throughout the business process. The list should note if the approvals are performed in an application or are completed manually;
- **Corporate data and document retention requirements**: Documentation of the corporate data and document retention requirements. Data and document retention requirements define future archiving requirements of the product ecosystem;
- **Gaps**: A list of current pain points and technology gaps that hinder business processes. This list should note business process steps that require an elevated level of manual work or application steps to complete;
- **Stakeholders**: A list of key users and process owners who will need to have input and sign off on process and application acceptance. Early engagement of key stakeholders helps to ensure that the final product ecosystem meets the business expectations.

Many teams expecting a large amount of change consider engaging a consultant. Consultants bring expertise that can be useful in evaluating both business processes and applications. Collecting the information listed above prior to engaging a consultant will help to get any product ecosystem project off to a strong start.

**NO TIME LIKE THE PRESENT**

The COVID-19 pandemic has brought more change in CRE than ever before. CRE teams are now working closely with HR teams to consider not only locations and buildings but also the experiences of the employees. This change has brought forth the opportunity to reconsider the way we collect and access data as well as entire product ecosystems currently in use. This can be a significant and daunting task, but it does not have to be. Starting out by understanding the changes that have occurred, key technology considerations and the issues and needs facing the business will help to make the process more manageable. These challenges are common across CRE teams and there are many vendors already working with organisations to address them. Additional support and ideas may be as close as your current network.

The main thing to remember is that realising a new product ecosystem does not mean that all changes will be made at one time. In fact, phased approaches are often the most successful, because a business can only successfully take on a certain amount of change at any given time. It is also important to remember that a product ecosystem will never be static, it should continue to grow and change with the business. Implementing regular application and process evaluations will be critical to keep the product ecosystem relevant and useful. Better strategic decisions start by committing to taking the first step towards facing change.
REFERENCES


