

WHOEVER WINS DATA, WINS AI



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ABOUT THIS E-BOOK

Whether you recognize the need for a comprehensive data strategy, or you've been told that your company is about to embark on this journey for the first time, it's time to Neil Armstrong your way through this uncharted territory. But there's a catch — some of your competitors are already ahead. They're not waiting around, and neither can you.

With 80-90% of all data being unstructured or semi-structured* and doubling every two years**, getting a handle on data is challenging enough. But real estate data? That's even tougher. Technology point solutions are abundant, and you have lots of data to do 'something' with. Layer this on top of the world's AI FOMO Imperative, and you're tasked with bringing innovation to an undefined problem — with undefined objectives, and a blanketed mission statement to stay competitive while navigating an undefined landscape.

Which **small step** do you take first? And where's the **giant leap** to Al-kind? Welcome to the future of real estate.

Wherever you may be in the daunting chess game of real estate analytics, reporting, and decision-making, many industry leaders have had huge blinders on in their efforts to be AI-ready: they have been so focused on collecting and hoarding ALL the data, that data integrity and integration strategies have been placed on the back burner as something to solve for later.

But later is now a today problem as the real estate industry will never be able to fully benefit from AI if they do not have a sound data foundation — clean data, strong pipelines, and connected architecture — as well as continuous operations and governance mechanisms to validate that data is correct and can accurately inform business strategies.

Learning Objectives

By the end of this eBook, you'll learn how to build a reliable data foundation that positions your business for AI success. You'll understand how to unlock **data confidence and trust**, which ultimately leads to more informed decisions, faster innovation, and gaining a strategic advantage over your peers. This is the capability that will differentiate your business in a rapidly evolving market.

To achieve this, you need to incorporate two critical capabilities into your operational and financial data management processes:

Data observability: Visibility into the pipelines, data, and the transformation of data going through the pipes, ultimately feeding reporting and business intelligence. Beyond visibility, observability functions offer context into your pipeline data. It offers up the "why" you get the outputs you do, and "where" (if any) problems exist.

Data validation: Calculations to confirm that data "makes sense" either at a specific point in time, or across time.

So, is this eBook about AI? Yes... kind of.

Because while AI may be the goal, it's only attainable if you first build a solid foundation of trusted insights. Keep your eyes on the stars — but make sure your feet are firmly planted in data you can rely on.



^{*} mitsloan.mit.edu: Tapping the power of unstructured data.

^{} researchgate.net:** Global growth trend of data volume chart.

CHAPTER 1:

A SHIFTING MARKET DEMANDS COMPETITIVE ADVANTAGE



The real estate industry faces significant challenges in data management and technology adoption. We know you are aware of this (otherwise you wouldn't be reading this eBook), but we're going to say it out loud to validate your frustrations... Real estate data is fragmented, often residing in disparate systems and formats across geographies, making it difficult to obtain a comprehensive view of the market.

The complexity of the real estate investment ecosystem contributes significantly to this fragmentation. Let's break down the key contributors and how they impact your ability to gain a competitive edge:

- 1. Multi-layered investment structure: Each party in the real estate value chain owns different parts of the process and the data — and, has different needs. What does this mean? Each party likely needs to modify the information they receive to fit their needs and intended use of the data. For example, Limited Partners (LPs) allocate funds to General Partners (GPs). GPs, acting as financial asset managers, invest these funds into various real estate assets. Each physical asset is then managed by separate fee managers.
- 2. Diversification leads to fragmentation: Investors typically spread their capital across multiple asset managers to diversify their portfolios. Each asset manager may invest in numerous properties across different locations and property types. This results in a web of interconnected yet separate data sources.
- 3. Disconnect between financial and physical asset management: The asset

managers handling the financial investments are often not the same entities managing the physical properties. This separation creates silos of information, with financial data in one system and property-specific data in another.

- and reporting.
- complex and time-consuming.
- storage methods.



4. Multiple management layers: Each layer (LPs, GPs, fee managers) likely uses its own systems and processes for data collection and reporting. These systems may not be compatible or easily integrated with each other.

5. Geographical dispersion: Real estate assets are spread across various locations, each with its own market dynamics and data sources — not to mention currency differences, regional regulatory requirements, personally identifiable information (PII) data requirements, and data sovereignty. Local property managers may use different tools and methods for data collection

6. Varied data formats and standards: Different stakeholders may use different software, databases, or even manual precord-keeping methods. This leads to inconsistencies in data formats, making integration and analysis challenging.

7. Historical data accumulation: The long-term nature of real estate investments means that data has accumulated over time in various legacy systems. Migrating or integrating this historical data with modern systems can be

8. Regulatory and compliance variations: Different jurisdictions may have varying reporting requirements, leading to disparities in data collection and

See? Data everywhere, all at once. This proliferation of fragmentation leads to inefficiencies in data collection, integration, and analysis, hindering effective decision-making. The pain is real. And the challenges that result from your complex data environment are significant — such as:

- **1. Unconnected, inefficient workflows:** When it's time to put a decision together, different groups like acquisitions, investor relations, and asset management are working off different "facts".
- 2. Lack of uniformity: Even when data sources are the same, the way the metrics are defined across an enterprise can vary widely. Combine that with varying formats across different systems like Yardi or MRI, all the way through PDF exports and OM's or IC memos.
- 3. Technology adoption aversion: The adoption of new technologies in CRE has been slower compared to other industries. Resistance to change, high implementation costs, and a lack of technical expertise are common barriers.

- and suboptimal data decisions.
- 5. complex.

Creating consistency across decentralized information points and gaining buy-in to transition away from these pain points is undoubtedly challenging, but it's a necessary part of staying competitive.

While a full-scale technology and data strategy overhaul might feel daunting, starting with data quality and governance improvements is a practical and manageable first step.



4. Data mistrust: Ensuring data guality and accuracy across an organization remains a persistent challenge as business groups and functions only trust the data they "own," (think any excel with someone's name in the file name, followed by final_final_v2) leading to further diabolical data spread

Data governance and compliance: With increasing regulatory scrutiny and the need to protect sensitive information, CRE firms must implement robust data governance frameworks to ensure compliance and maintain trust but this area of complexity is both functionally new and remarkably



THE PROMISE OF AI IN REAL ESTATE

But wait — where does AI fit in? Ok, let's jump to that stream of consciousness and then bring it all together.

Artificial intelligence (AI) holds immense potential for transforming the real estate industry, particularly from an asset management and investment perspective. AI can significantly enhance efficiency, improve decision-making, and unlock new value in various aspects of asset management and property investment.

At least that's the promise:

- ChatGPT and other conversational systems can read through documents, answer questions, draft memos, analyze data, talk to tenants, and so much more.
- Predictive analytics and the ecosystem of solutions built around them promise to discover and provide ways to peer into the future of the industry.
- Al systems are better at persuading humans than even humans are.
- The use of these emerging technologies is pervasive with 88% of users for ChatGPT defined as having a nontechnical discipline.





The world has seen Al's promises for tomorrow and are diving head first to test the waters. Incredible advancements aside, these systems are only as good as the data they are fed, and they are notoriously bad at handling tabular data or data that changes over time (for now).

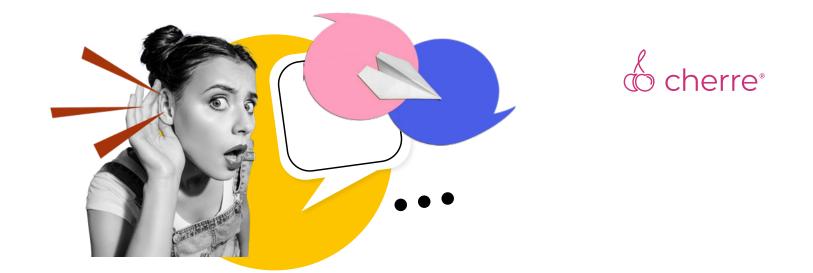
PRETTY LITTLE LIES

8

It's easy to fall into a false sense of certainty by talking to highly persuasive and articulate AI models that on the surface, regurgitate what they know from their programming or prompts, or what they can glean from documents — that may or may not contain accurate data — but without the right governance, Al can ultimately generate very pretty lies. Alright, lies is a harsh word — how about we call them "misinformed truths"?

The reality is that most foundation models were not trained specifically for the real estate industry — and likely won't be for a long time, unless companies like yours take the initiative to lead that change. Those who succeed will be the ones that pair ever-improving foundational models with connected, reliable, secure, and timely data, gaining a significant competitive advantage.

So, are you ready to tie this together in a nice bow? Al needs to be coupled with a sound data strategy that serves up all real estate's disparate sources of information. However, given the complexities of these datasets, data validation, and governance strategies must be employed to confidently make the business decisions that will propel your organization through any market.



strategy use cases emerging, including:

- human expertise.
- •

The real estate industry is already seeing Al-enabled data

Finding Assets and Markets: Before making forward-looking decisions, it's essential to understand what's already happened. Analyzing past performance — both in the market and within your portfolio — is key to identifying gaps in your assumptions and understanding why you succeeded or fell short. From there, you can begin spotting patterns and trends, leading to informed predictions about the future. Over time, this process can evolve from a decision support system (DSS) — where human and AI work together — toward more autonomous decision-making systems (ADS). While fully autonomous AI may be far off, today's AI can already reduce bad decisions and enhance good ones by supporting

Optimizing Asset Management: Al can revolutionize asset management by providing real-time insights and predictive analytics. For example, Al can forecast property values, rental income, and occupancy rates,

enabling asset managers to optimize their portfolios and maximize returns. Predictive maintenance powered by AI can also reduce operational costs and improve asset longevity by identifying potential issues before they become costly problems.

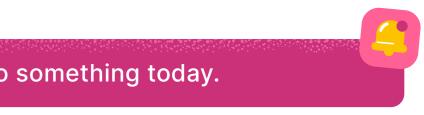
- Enhancing Property Management Data Gathering: Al-powered tools can automate data gathering from various sources, including property management systems, IoT devices, and external databases. This automation ensures that asset managers have access to accurate and up-to-date information, facilitating better decision-making and streamlined operations.
- Improving Decision-Making and Reporting: AI can enhance decisionmaking by providing advanced analytics and generating actionable insights. For instance, AI can analyze market trends, tenant behaviors, and financial performance to recommend optimal leasing strategies and investment opportunities. Automated reporting powered by AI can also save time and reduce errors, providing asset managers with clear and concise reports for stakeholders.

Coupling innovative AI use cases with tackling current data management challenges will empower you to capitalize on the massive opportunity at hand.

That means act now. Do something today.

Others might still be cautiously dipping their toes in the AI waters, but by moving faster, you'll find yourself outpacing competitors who are stuck in sync with yesterday's slower routines. Remember, hitting singles and doubles isn't just about the "Moneyball" approach — you'll be playing against synchronized swimmers while you're already running laps.

While these examples are tailored to real estate data, there are other AI use cases that have broader implications related to smart buildings, smart cities, or the economy at large... but that's a discussion for a whole other eBook.





CHAPTER 2:

THE EVOLUTION OF DECISION-MAKING IN REAL ESTATE



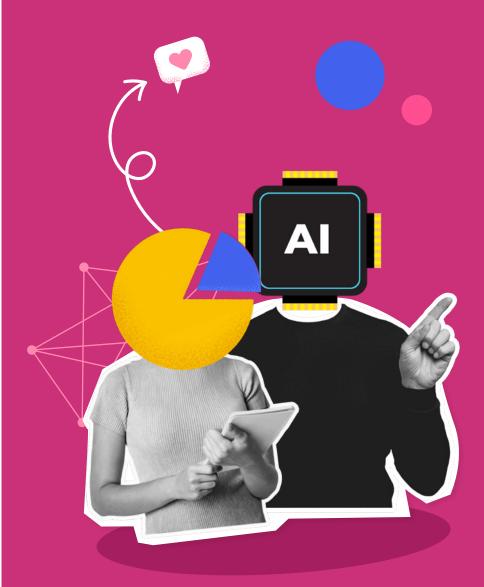
Alright, fellow real estate mavericks, let's take a trip down memory lane and then catapult into the future. We've all seen the industry change, but have you really thought about how drastically our decision-making process has evolved? Buckle up, because we're about to connect some dots that might just change the way you view your entire operation.

FROM GUT FEELINGS TO DATA-BACKED CHOICES

Remember when knowing every detail about your local market was enough? Years of experience in your backyard gave you an edge, and decisions were often made based on relationships, instinct, and a firm handshake. It was a simpler time — relying on gut feelings and local knowledge was like playing darts with a blindfold: sometimes you'd hit the bullseye, and other times you'd miss the board entirely.

But as your portfolio grew geographically, it became clear that this localized expertise had its limits. Either you leaned heavily on local partners or risked making suboptimal decisions. The introduction of spreadsheets and tools like Excel gave decision-makers a more structured way to crunch numbers and assess opportunities, but even then, we were still making educated guesses more than truly informed choices.





ADAPTING TO COMPLEXITY: NEW MARKETS AND ASSET CLASSES

As firms diversified into new asset classes or products like debt, the complexity of decision-making increased. Understanding a broader range of investments required new data sources and skill sets. Capital markets also became more unpredictable, influenced by rising rates, inflation, and major macro events like the pandemic. These changes forced us to answer more complex questions about risks taken and potential opportunities.

All of these factors made data more critical than ever — but our data infrastructure wasn't ready for the challenge. We've accumulated various data streams across multiple applications, each designed for specific needs at the time. Yet as those needs evolved, the systems that once served us well no longer keep pace with what today's market demands.

So what, you might ask? Well, here's the kicker — if you're not evolving with these changes, you're not just falling behind; you're practically moving backward. In a world where milliseconds can mean millions, can you really afford to rely on outdated decision-making processes?





THE FUTURE REQUIRES MORE THAN OLD TOOLS

It's important to recognize that the tools we've relied on, like spreadsheets and traditional big data solutions, still play vital roles. Excel remains an excellent tool, and big data continues to provide valuable insights. But both are just parts of a larger ecosystem that must adapt to increasingly complex requirements.

The rise of AI and machine learning is pushing us further into data-backed choices. Today's decision-making is no longer about simply collecting data but using it intelligently to generate actionable insights. While there's still a long way to go before we fully trust the outputs from these systems, the shift from relying on instinct to leveraging data is undeniable.

To succeed in this environment, the old ways simply won't cut it. You need to build the infrastructure that will empower you to compete in the future. And the time to act is now. While some of your peers are starting to pull ahead, most are still figuring it out. This is your opportunity to set yourself apart.

In a market where even small gains — the singles and doubles — can be massive wins, moving quickly is key. As you accelerate your capabilities while others remain stuck in legacy approaches, you won't just keep pace — you'll outmaneuver the competition and dominate the game.







You need tools, we got 'em. Scan here for a Cherre demo

THE HUMAN TOUCH IN A DATA-DRIVEN WORLD: A GENERATIONAL PERSPECTIVE

We know what some of you are thinking: "What about experience? What about institutional knowledge? What about intuition?" Great questions! Let's break it down generationally, exploring how each generation's relationship with toys and technology has shaped their approach to data in real estate:

1. Baby Boomers: The Analog Pioneers

- **Toys:** Wooden blocks, Etch A Sketch, Lincoln Logs.
- **Data interaction:** Hand-written reports, physical filing cabinets.
- Approach to data: You're the original real estate gurus. You built this industry on relationships and instinct, much like how you built structures with wooden blocks. Your reports were often handwritten or typed, meticulously filed in cabinets — a physical representation of your data.
- Your Superpower: You understand the value of tangible, real-world connections. In a digital age, this human touch is more important than ever.
- Your Challenge: Embrace new data tools as an extension of your expertise, not a replacement. Think of them as high-tech Lincoln Logs, helping you build even more impressive structures.

Gen X: The Bridge Builders 2.

- 1-2-3 and early Excel.
- traditional methods and new technology.
- of both worlds.



Toys: Transformers, Rubik's Cube, early video game consoles.

Data interaction: Lotus 1-2-3, early versions of Excel.

Approach to data: You bridged the gap between old school and new cool, much like how Transformers bridged the world of action figures and technology. You witnessed the transition from paper ledgers to digital spreadsheets, experiencing the power of Lotus

• **Your Superpower:** You're adaptable, able to transform your approach as seamlessly as a Rubik's Cube expert. You understand both

• Your Challenge: Leverage your unique position to become the ultimate translators in your organizations, helping to blend the best

Millennials: The Digital Natives 3.

- Toys: Gameboy, 2D Tetris, Tamagotchi. •
- Data interaction: Advanced Excel with VBA, macros, early data visualization tools.
- **Approach to data:** You grew up with data at your fingertips, much like • how you had entire worlds in your Gameboy. You've seen the evolution from simple 2D games to complex digital environments, mirroring the shift from basic spreadsheets to advanced data analysis tools.
- Your Superpower: You intuitively understand how to manipulate and visualize data, stacking and arranging information as skillfully as a Tetris master.
- Your Challenge: Don't forget the human element. Remember that behind every data point is a real person, much like how your Tamagotchi needed personal care despite being digital.

4. Gen Z: The Al generation

- **Toys:** Wearables, VR headsets, Al-enhanced games.
- estate data.
- work.
- relationships in real estate.

No matter which generation you mentally or physically belong to, the future of real estate success lies in harmonizing human insight with data-driven decision-making. It's not about choosing one over the other, but it is about trust — trust that the data used is correct, trust that the people who do

"something" with the data do the right things, and trust that the tools (such as AI) that aid in turning data insights into intelligence are working off the right assumptions. That sounds like a whole lot of trust to place in some very big downstream processes.



Data interaction: Python, R, Al-powered analytics, GitHub Copilot.

Approach to data: You're entering the field with unprecedented technological know-how. Your toys are smart, connected, and often Al-enhanced, much like the tools you use to analyze real

Your Superpower: You see technology as an extension of yourself, seamlessly integrating data analysis into every aspect of your

• Your Challenge: Learn from the veterans while pushing the boundaries of what's possible with data. Remember that while AI can copilot your coding, it can't replace the importance of human

DEMOCRATIZING DATA: WHY EVERYONE NEEDS TO JOIN THE PARTY

Stop the scroll ALERT!

Data confidence isn't just for the C-suite or the tech team anymore. Here's why:

- 1. Data Quality is Everyone's Responsibility: As access to information is democratized, ensuring data accuracy becomes a shared role across your organization. This isn't just about avoiding mistakes — it's about empowering you to make better decisions with confidence. No longer are you reliant on someone else's spreadsheet or process; now, you have the ability to directly impact the quality and reliability of the data you work with every day, allowing you to take ownership of the outcomes.
- 2. Faster, Smarter Decisions at Every Level: When everyone on your team understands and trusts the data, you can make decisions faster and with greater confidence. This means fewer delays waiting for the "data person" to weigh in, and more time focusing on strategic actions that drive results. Whether you're managing a portfolio, leading an investment team, or optimizing operations, quick, data-driven decisions can be your competitive advantage.

- uncovering insights that might otherwise go unnoticed.
- 4.
- 5.



3. Spotting Opportunities Becomes Everyone's Superpower: Imagine if you, regardless of your role, could identify potential goldmines in the data. This isn't just efficient; it's transformative. You're not just doing your job — you're actively contributing to the growth and innovation of your organization by

Building a Culture of Innovation: When data literacy becomes part of your company culture, innovation follows naturally. You're not just keeping up with industry trends; you're driving them. This culture shift means that you are more likely to be seen as a thought leader within your organization, pushing forward ideas that could lead to significant competitive advantages.

Enhancing Stakeholder Trust: In today's data-driven world, those you report to are more informed than ever. By confidently discussing and utilizing data, you build credibility and trust, not just for yourself but for your entire team. This trust can lead to greater autonomy in your decision-making processes and more support from leadership when pursuing innovative ideas.

- 6. Accessibility for the big and tall or mighty and small: Democratization of data isn't just about big corporations. You don't have to be Blackrock or Blackstone to have the latest and greatest tech. Affordable, accessible data tools mean that you can compete with the big players leveraging insights that drive strategic decisions, operational efficiencies, and growth, regardless of the size of your organization.
- 7. Beware of bias: As data democratization spreads, it's crucial to be aware of biases that may creep into data processes. Addressing these proactively ensures that the data you rely on is equitable and representative, leading to better, fairer decisions. This vigilance allows you to become a guardian of data integrity within your organization, helping to steer clear of potential pitfalls that could undermine your credibility.

Here's our challenge to you: Take a good, hard look at the flow of data through your organization, and the information that is a byproduct of your reporting and analysis. Our bet is that most organizations cannot see processes end-to-end. There are gray areas, and unknown handovers. If this is the case, you are still relying on gut instincts as a critical component of your data management process and in dire need of systematizing the flow and validation of your data.

Remember, in the world of real estate, **the future belongs to those who can combine strategic insight with data-driven precision.** And now, with democratized data, that future is accessible to players of all sizes who are willing to embrace data-driven decision-making while remaining vigilant about potential biases.









Connect with our team

CHAPTER 3: DATA CONFIDENCE – WHY DATA QUALITY MATTERS



Let's talk about something that keeps even the best of us up at night: **data quality**. We've all been there — staring at a spreadsheet, wondering if we can trust the numbers staring back at us.



In the world of real estate, **decisions based on bad data aren't just wrong** — **they're expensive and far-reaching**. Inaccurate or incomplete data can impact various stakeholders, from investors to owner/operators, leading to a cascade of costly consequences. For investors, faulty data can result in misguided investment decisions, such as overpaying for an asset or missing out on lucrative opportunities. However, the ramifications extend far beyond the investment realm.

For owner/operators, including REITs, data quality is crucial even in periods of limited acquisitions. Poor data can drive up operational costs and erode property value. For instance, inaccurate data might mask warning signs of cost anomalies in a building, allowing expenses to spiral out of control before it's too late to renegotiate vendor contracts.

Similarly, flawed data in rent pricing calculations, such as using inappropriate property comparisons, can lead to mispriced units. This could result in lost revenue when, for example, new college graduates in the area secure apartments elsewhere before the pricing error is discovered. Bad data can cripple the AI and machine learning (ML) initiatives that companies invest in heavily. According to Gartner*, 85% of AI and ML projects fail to deliver ROI, with poor data quality being a significant contributor. While organizations may have built talented data science teams and developed advanced models, the absence of robust data governance, production-level processes, and the right operational mindset frequently leaves these projects unable to realize their full potential. The result? Wasted resources, missed opportunities, and a technology stack that struggles to justify its existence.

Moreover, the consequences of bad data extend to regulatory compliance and reputation management. Submitting inaccurate data to regulatory bodies can result in hefty fines and significant reputational damage, affecting stakeholder trust and future business prospects.

Bad data can severely erode trust within an organization. When asset managers and stakeholders lose confidence in the data they rely on, decision-making becomes hesitant and risk-averse, stifling innovation and strategic growth.

^{*} Forbes.com: Achieving Next-Level Value From AI By Focusing On The Operational Side Of Machine Learning.

In today's hyper-connected world, the repercussions of data mistakes can be amplified exponentially. A simple error can quickly become a viral joke or costly meme on social media platforms, spiraling far beyond its original scope. This viral nature of information sharing means that what once might have been an internal hiccup can now become a public spectacle, viewed and shared by millions.

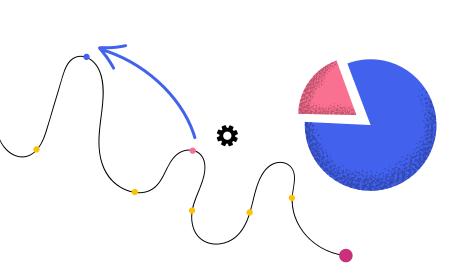
For those who have been in the industry for decades, this shift toward datadriven decision-making isn't just a trend — it's an opportunity to enhance your decision support systems. Imagine increasing your "batting average" by consistently making better-informed decisions, supported by the latest technology and insights. This evolution is about leveraging your experience with the power of data to stay ahead of the curve and lead your teams confidently into the future.

For those newer to the industry, you're stepping into real estate at the most exciting time — when the industry is transitioning from localized, relationship-driven practices to advanced, data-driven insights.

You're not just joining a legacy industry; you're becoming part of a new paradigm where technology and data are revolutionizing how decisions are made and opportunities are uncovered. Your ability to harness these tools will not only set you apart but also position you as a leader in this new era of real estate.

It's time to put those doubts to bed once and for all and ensure our data isn't just Big, but bulletproof. By doing so, you'll not only avoid costly mistakes but also unlock new opportunities, drive innovation, and maintain the trust and confidence of everyone who relies on your decisions.





CONSIDERATIONS TO ENSURE DATA ACCURACY, COMPLETENESS, AND TIMELINESS

We've said it in the proceeding pages, but in case you've skipped on over to this section, its important to highlight the following again — **data management** is the foundation for decision-making in real estate. Ensuring your data is accurate, complete, and timely is critical to unlocking reliable insights and

driving competitive advantage. The guidelines below will help you build a robust data infrastructure capable of supporting your evolving business **needs.** By following these best practices, you can confidently rely on your data to inform key decisions and adapt quickly to market changes.

Data Management Strategy Components

1. Data Ingestion: The first step is gathering data from various, often disparate, sources and consolidating it into a unified data lake or warehouse. Depending on your business requirements, you may need to choose between incremental or batch ingestion methods.

For example, during quarterly scenario planning sessions, you may need rapid updates based on small changes to upstream data points. While these sessions might be infrequent, the quick turnaround requires incremental ingestion to provide up-to-date projections.

At a minimum, implement validation checks to catch common errors, such as ensuring no single-family home is reported as having zero bathrooms or that financial metrics adhere to expected ranges. Automated tools can streamline data cleansing and improve efficiency.

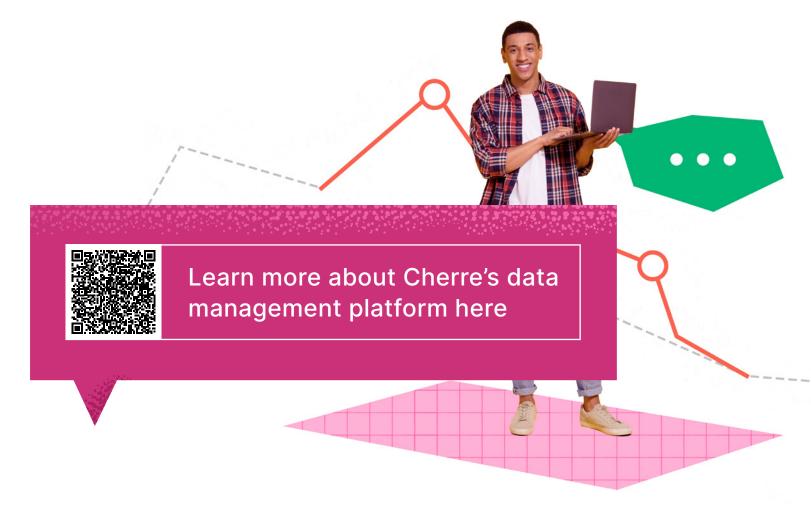


2. Data Cleansing: Data quality is paramount. Removing or correcting corrupt, inaccurate, or irrelevant data is crucial to maintaining integrity. Ideally, data cleansing should happen at the source through robust business process management, although this approach can be costly and time-consuming.

- **3. Data Integration:** Seamlessly integrating data from multiple sources is key to creating a comprehensive and unified view. Standardize data formats and establish strong pipelines that allow for smooth consolidation. While there are many data modeling approaches available, applying basic principles like third normal form (3NF) can provide a solid foundation for managing relational data.
- 4. Data Validation: Beyond basic cleansing, data validation processes verify the accuracy and consistency of your information across systems. This includes checks like schema validation, fill rates, row counts, and trend analysis. Regularly auditing your data helps catch discrepancies early and ensures that your data remains reliable. For instance, you might flag property data where the number of bedrooms is unexpectedly high or low based on the property's size and location.
- 5. Data Observability: Gain visibility into how data moves through your pipelines and where it might be transformed along the way. Implement tools that provide visualizations, allowing you to monitor the entire data lifecycle and identify potential bottlenecks or issues before they affect reporting or analytics.
- 6. Data Access: Effective data management is not just about accuracy; it's also about accessibility. Ensure that appropriate stakeholders have the right level of access to the right data at the right time. Use role-based access controls and data classification systems to address the varying

needs of different data consumers, from high-level executives needing summary dashboards to analysts requiring detailed, raw data.

7. with the same reliable information.

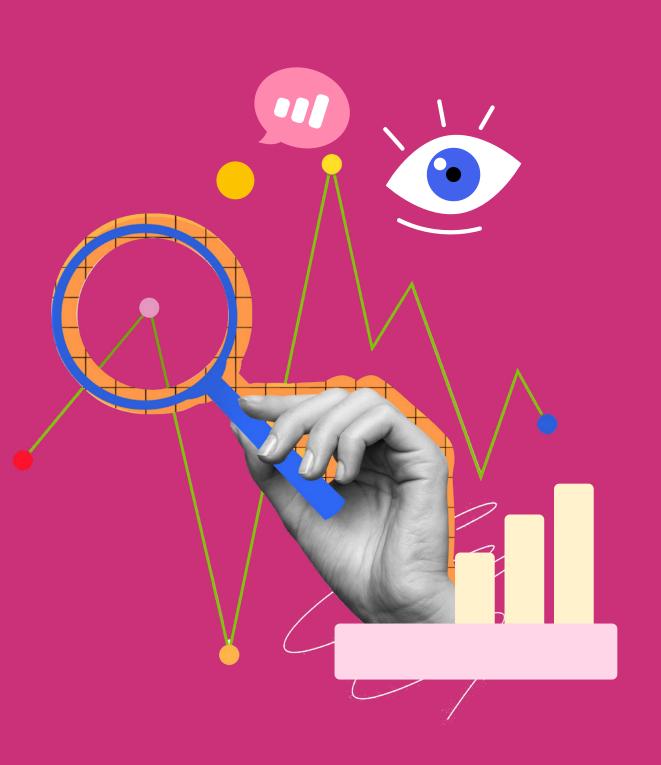




Data Quality & Governance: A strong governance framework establishes clear roles, responsibilities, and processes to maintain high data quality. This includes defining ownership and accountability, implementing data stewardship programs, and offering ongoing training on best practices. A well-governed data environment builds trust across your organization, ensuring that everyone from the C-suite to frontline employees is working

CHAPTER 4:

THE STATE OF DATA OBSERVABILITY IN REAL ESTATE



Where does the real estate industry stand when it comes to data observability?

If you won't say it, we will: we've got some work to do.

The Good

More and more firms are waking up to the importance of data. We're seeing investments in data infrastructure, hiring of data scientists and engineers, a growing appreciation for data-driven decision-making, and many other data "things".

The Bad

Despite this progress, many real estate companies are still flying blind when it comes to their data. Siloed systems, inconsistent data entry, and a lack of real-time monitoring are all too common. Companies know they have data and they're doing some things with it, but they can't really see how the sausage is made — they just show up for dinner and trust it will be delicious!

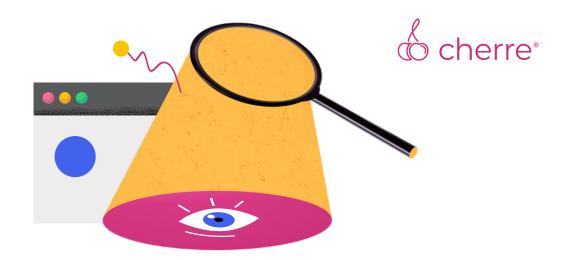
The Unfortunate

Data teams are stretched thin, spending the bulk of their time on maintenance and keeping the patchwork of existing infrastructures running. This operational strain leaves little room for growth, innovation, or the proactive development of scalable solutions.

The Ugly

In an industry where data accuracy is paramount, the challenge isn't that we're too tolerant of discrepancies; it's that achieving high accuracy is incredibly difficult. Traditional solutions often involve throwing more bodies at the problem for quality assurance, which only addresses surface-level issues. While obvious errors like decimal misplacements can be caught, the more nuanced challenges stem from data that may be technically correct but still fall short in context or usability. This issue is especially pronounced in two key areas:

- 1. lost opportunities.
- challenge that many firms are still grappling with.



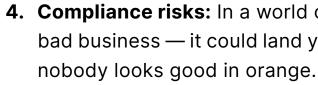
Reporting Data: There's a pressing need for a single, authoritative source of truth. Without this, companies risk basing their reports on conflicting or outdated information, potentially leading to misguided strategies and

2. Decision-Making Data: The complexity increases when multiple data sources must be integrated to inform decisions. Ensuring the accuracy, relevance, and proper interpretation of this composite data is a significant

THE HIDDEN COSTS OF BAD DATA: **MORE THAN JUST A NUMBER GAME**

We've all heard the horror stories of deals gone south due to bad data. But the costs go way beyond just botched deals. Let's shine a light on these hidden vampires sucking the life out of your business:

- **1. Lost opportunities:** How many deals have slipped through your fingers because your data told you to zig when you should have zagged? In real estate, timing is everything. Bad data? Bad timing.
- 2. Reputation damage: In an age where clients can fact-check you with a quick Google search, presenting inaccurate data isn't just embarrassing — it's reputation suicide. Trust is hard to build and easy to lose.
- 3. Operational inefficiency: How much time does your team waste doublechecking data they don't trust? It's like driving with the parking brake on — you're moving, but you're burning a lot of unnecessary fuel. Or, what about building the same "thing" over and over again, just in different flavors because workflows have not been solidified. This is text book for, "The definition of insanity."



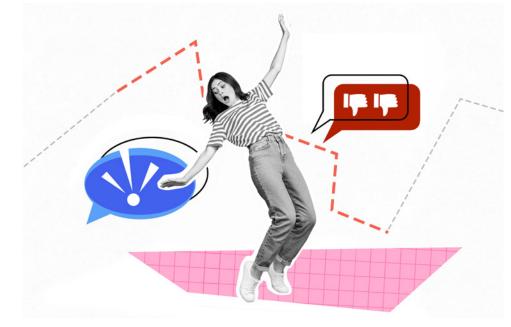
The real kicker? These costs compound over time. It's not just about the deal you lose today — it's about the ripple effect that bad data can have across your entire operation.





4. Compliance risks: In a world of increasing regulation, bad data isn't just bad business — it could land you in hot water legally. And let's be honest,

CAUTIONARY TALES: WHEN BAD DATA STRIKES

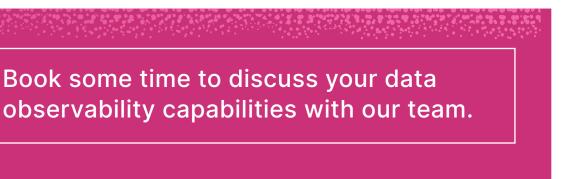


Let's face it — bad data isn't just about small mistakes; it's about the systemic issues that lead to costly consequences. Here are a few examples that serve as a reminder of why nailing your data strategy is crucial:

- 1. The ghost building: How about the time a major real estate firm included a non-existent building in their portfolio due to a data entry error? They spent months trying to lease out office space in a building that was still a parking lot. Talk about embarrassing.
- 2. The compliance catastrophe: Or the time a real estate investment trust got slapped with hefty fines because their occupancy data was off, leading to inaccurate financial reports? Turns out, the SEC doesn't have a sense of humor about these things.

These stories aren't just anecdotes; they're evidence of what happens when data quality is treated as an afterthought. The real message here isn't that these errors can be entirely prevented but rather that they can be reduced and managed more effectively with the right systems in place. So, what's the bottom line here? Data quality isn't just an IT issue — it's a business imperative. Ensuring accuracy, reliability, and timely access to your data is critical for reducing risk, accelerating reporting, and making confident decisions. By focusing on robust reporting, auditing, and automation while reducing human intervention, firms can move with speed and precision today while laying the groundwork for future growth and scalability.





CHAPTER 5:

COMPONENTS OF A ROBUST DATA STRATEGY



This part is geared a bit more to our technical side of the house, but informative to all data users nonetheless. Use the outline below as a starting point to assess each core component of your organization's data processes. Unsure how certain functions work? Consider hosting a workshop with your IT teams to map it out, and be sure to continue to the next chapter to explore the steps for implementing a comprehensive data strategy.

4M'S: MOVE, MODEL, MEASURE & MINE

Move:

Collect and transfer data to a centralized repository.

Implement a comprehensive data ingestion process that collects data from various sources, including internal systems, external APIs, IoT devices, and third-party providers. Utilize robust ETL (Extract, Transform, Load) tools and data pipelines to ensure efficient and secure data transfer. Consider movement strategies to accommodate different business needs, users, and data types.



Model:

Standardize and connect data across all sources to prime for downstream applications, workflows, and advanced analytics. Develop a unified data model that harmonizes data from disparate sources, ensuring consistency in naming conventions, data types, and relationships. This model should serve not only for real-time reporting and current applications but also for future growth and predictive analytics. Implement strong data governance practices to maintain data quality and integrity across time, allowing you to trust past data for benchmarking, current data for reporting, and predictive models for future scenarios. Utilize metadata management tools to document data lineage and create a common business glossary for improved understanding across the organization. In addition to addressing data "same-ness", the second component is your data storage solutions and ensuring your data management practices support scalability and flexibility.



Measure:

Assess the health of data through enhanced observability and configurable validation rules.

Establish a comprehensive data quality framework that includes automated data profiling, data quality scoring, and anomaly detection. Implement configurable validation rules to ensure data accuracy, completeness, and consistency. Develop dashboards and reports to provide real-time visibility into data quality metrics, enabling proactive issue resolution and continuous improvement of data assets.

Mine:

Insights as a service.

Develop a robust analytics ecosystem that enables self-service data exploration and advanced analytics capabilities. Implement modern business intelligence tools and data visualization platforms to democratize data access across the organization. Leverage machine learning and artificial intelligence techniques to uncover hidden patterns and predictive insights. Create a collaborative environment where data scientists, analysts, and business users can work together to derive actionable insights that drive business value.

DATA GOVERNANCE AND COMPLIANCE

It's important to understand that data strategy and data governance are distinct disciplines, though they work hand-in-hand. While a robust data strategy lays out how your organization moves, models, measures, and mines data to achieve business objectives, data governance ensures that these processes are conducted under controlled, consistent, and compliant guidelines. In essence, a solid data strategy determines "what" you do with your data, while governance informs "how" you do it with accountability, quality, and integrity.

Consider the following related to your data governance and compliance approaches:

Data Governance:

Establish clear data governance policies that outline data ownership, data stewardship, and data usage guidelines. This ensures accountability and maintains data integrity across the organization.

Compliance:

Stay abreast of regulatory requirements and ensure that your data practices comply with relevant laws and standards, such as GDPR, CCPA, and industryspecific regulations. Regular compliance audits and updates to policies are essential to avoid legal repercussions.



WHAT TO VALIDATE? KEY METRICS **AND AREAS IN YOUR DATA ECOSYSTEM**

Not all data is created equal, and in real estate, some data points can make or break your business. While every organization's validation needs differ based on business models and objectives, below are just a few examples of critical areas to consider. Remember, this is only a starting point — your specific requirements may vary.

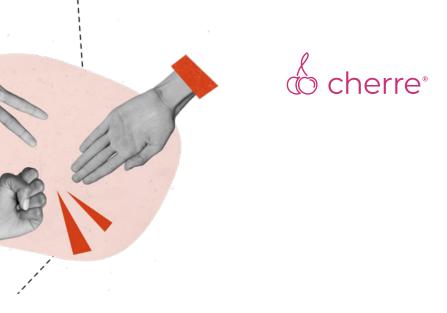
- **Financial metrics:** Whether it's cap rates, NOI, or debt service coverage ratios, your financial data needs to be spot-on. One misplaced decimal can throw off your entire investment strategy.
- **Client information:** In a relationship-driven business like real estate, having accurate client data is crucial. Regular cleansing and updating of client information should be a top priority.
- **Property valuation data:** This is your bread and butter. Ensure your comps are recent, your square footage is accurate, and your improvement values are up to date.

- across all your data sources?
- a necessity to avoid hefty fines.

While this list highlights key validation areas, remember that every organization's priorities and challenges will differ. Tailor your data validation efforts to what drives value and reduces risk within your unique operating model.

Now that you've gained insight into the core components of a data strategy and the critical role of governance and compliance, its time for a roadmap to operationalize these practices and align them with your business goals.

Move on to the next chapter for exactly that...



Market trend data: Validate your proprietary market data against multiple sources. Is that uptick in downtown commercial real estate values reflected

Regulatory compliance data: With regulations constantly evolving, keeping this data accurate and up-to-date isn't just good practice — it's

CHAPTER 6:

IMPLEMENTING A DATA STRATEGY: A STEP-BY-STEP GUIDE



Consider the following your cliffsnotes to strike up a conversation with your Cherre point of contact or any other trusted advisor regarding your challenges and pain points when it comes to your organization's current data strategy.

1. Define objectives

Start by clearly defining your data strategy objectives. What do you hope to achieve with your data? How will it support your business goals?

2. Assess current state

Conduct a thorough assessment of your current data capabilities, including data quality, data management practices, and technology infrastructure.

3. Identify gaps

Identify gaps between your current state and your desired future state. What are the key areas that need improvement?

4. Develop a roadmap

Create a detailed roadmap that outlines the steps needed to bridge these gaps. This should include timelines, resource allocation, and key milestones.

5. Select tools and technologies systems, and analytics tools.

6. Implement solutions

Roll out the chosen solutions in a phased manner. Start with pilot projects to test the new systems and processes, and gradually scale up.

7. Monitor and adjust

Continuously monitor the performance of your data strategy. Use key performance indicators (KPIs) to measure success and make necessary adjustments to improve outcomes.





Choose the right tools and technologies that align with your data strategy objectives. This may include data integration platforms, data management

THE CHERRE CHALLENGE

Here's our challenge to you: Take a hard look at your data quality processes. When people talk about data strategy today, they're normally at the tip of the iceberg — figuring out ways to **move** their data from place to place or **model** it in such a way to support their decision-making processes. But market disruptors, leaders, and survivors know that you need more out of your data. You need to **measure** the health of your data through enhanced observability and configurable validation rules. It is once this data confidence is enabled that you can then apply advanced analytics and AI technologies to **mine** your data for the insights that will drive true competitive advantage to your organization.

Now What? Taking the Next Step in Your Data Strategy Journey

You've made it through this eBook, and now you're equipped with insights that go beyond just understanding data strategy — you know what it takes to build one that works. You've gained clarity on how a robust data strategy ties directly to your business goals, from improving data quality to unlocking competitive advantages through advanced analytics.



So, what can you do now that you might not have felt confident about before? You can define clear objectives for your data initiatives, pinpoint gaps in your current data environment, and map out a step-by-step plan to improve. You also know the importance of not just moving and modeling data, but measuring its health and mining it for the insights that set you apart.

The next step is to explore how this knowledge translates into action. Maybe you'll take a closer look at your own data strategy, or dive into assessing your current capabilities. Perhaps you'll visit the Cherre website to explore additional resources and see how our data management and intelligence platform can help bring your strategy to life.

We challenge you to keep the momentum going. Your path toward true data-driven success starts here — but where you take it next is up to you. Ready to learn more? Explore our platform, read case studies, and see how Cherre has already helped firms like yours achieve measurable results. Access our complete Data Confidence Bootcamp for more useful tools to assess and improve your data strategy.



SCHEDULE YOUR PERSONALIZED DATA STRATEGY CONSULTATION

At Cherre, we've been at the forefront of this data revolution in real estate. Our Platform isn't just about aggregating data — it's about making that data work for you. We've helped companies like yours transform their operations, from streamlining property submission workflows to uncovering hidden market opportunities.

You've read this far, so you clearly understand the importance of getting your data strategy right. But understanding is only the first step – now it's time for action.

We're offering a complimentary, personalized data strategy consultation. This isn't a sales pitch — it's a chance for us to dig into your specific challenges and opportunities so you can take either a first step or one giant leap toward true data-driven success in real estate.





Schedule a Data Confidence Strategy Session today



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