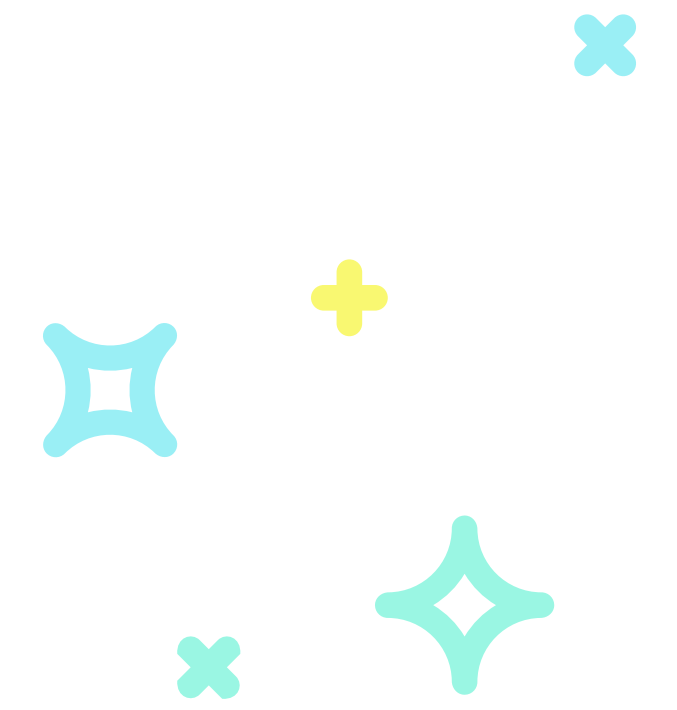# Data Master Perspectives:

Innovations in Data and AI

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Artificial intelligence (AI) is quickly becoming part of everyday life. The emergence of generative AI (GenAI) solutions such as ChatGPT, Claude, and GitHub Copilot are accelerating the adoption of AI by making it accessible to people worldwide.

Self-driving cars and AI assistants, once considered science fiction, have become commonplace. In the business world, programmers are harnessing the power of GenAI to expedite the development of code, while marketers rely on it to quickly generate content.

It's clear that AI is here to stay. But as this wave of AI offers a world of opportunity for businesses, it also presents a number of challenges ranging from the rapid promotion of misinformation to the introduction of bias and prejudice. As a result, demands for legislation focused on AI are gaining momentum, highlighting the growing need for governance around the safe and ethical use of AI. For example, in 2024, the European Union passed the **AI Act** which establishes a regulatory framework to ensure the safe and ethical use of AI technologies within its jurisdiction.

In business, AI has the power to streamline operations, enhance customer experiences, and revolutionize business models. But these opportunities come hand-in-hand with ethical considerations, potential biases and "hallucinations," data privacy and security concerns, and the emerging need to comply with AI-related legislation.
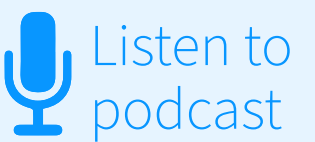
To help you navigate this uncharted territory, we've asked a number of data and AI experts to offer their perspective and advice when it comes to the strategic and holistic adoption of AI innovation. Here's what they had to say.

With Great Power Comes Great Responsibility

Salema Rice, Chief Executive Officer and Founder, CDO Today

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Generative AI is our first real inflection point in the world of AI. And while it's scary for chief data officers, they know that they must adopt AI within their organizations. Doing so responsibly requires Chief Data Officers (CDOs) to prioritize improving the quality of the underlying data. It's about protecting the data – knowing who owns it, where it's coming from, and where it's going. Because when the data is bad, the results are bad too, even if they sound authoritative (which they often do).

To address the data quality challenge, CDOs should avoid trying to boil the ocean. Instead, they should prioritize creating data products that focus on delivering the data that is most critical for making quality business decisions. By taking a product-based, dual-velocity approach, CDOs can narrow down the data needed to address a specific problem.

Further, CDOs must also integrate data from across the organization. By breaking down data silos, the business gains a more holistic view of the data that not only helps stakeholders understand not only what happened in the past, but also why it happened and what's going to happen next.

"Generative AI is a turning point for a lot of organizations. They want to use data as a product. They want to be a data-driven company. But doing so requires quality data that is protected and secure. And that needs to be top-of-mind for CDOs before they introduce these models company-wide."

What Kind of World Do We Want to Live In?

Dr. Eva-Marie Muller-Stuler, Partner EY Data & Analytics and Global Ethical AI Advisory Board Member

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Biologist Paul Ehrlich once said, "To err is human. To really foul things up you need a computer."

Advances in AI are giving humans the ability to do so many amazing things. But humans are biased. And so are the datasets we're feeding into the models we're building. That's why it is so important that we ensure the models are transparent. That they are fair,

accurate, and safe to use. That they protect our security. And that the data we're using to train them is accurate and complete.

As AI takes hold, the topic of ethical and responsible AI is quickly emerging as one organizations must address. Are we doing the right things as we adopt and use AI – and are we doing them in the right way? Many times, we're not. And that's because there is a gap

between the AI buzzwords and true understanding of how to implement it in a responsible and transparent way.

As organizations begin to adopt GenAI and other emerging generative technologies, they need to anticipate the impact they will have on the business. Data leaders must consider how the underlying data will impact the validity of the results. And, where needed, fix

the errors and collection biases to ensure the model produces outcomes that are as fair and accurate as possible. As well, users must learn how to challenge the models when results appear inaccurate.

The significance of data quality cannot be overstated. That's why businesses must consider the skillsets they need to ensure the transparent and ethical use of AI. Data scientists are important, but, so, too, is looking beyond the whiz kid in a hoodie. Accept diversity and employ experts who may break the mold. And if you're a data scientist, here's my advice: your appearance doesn't define you. Know your strengths, be prepared, and remain authentic.
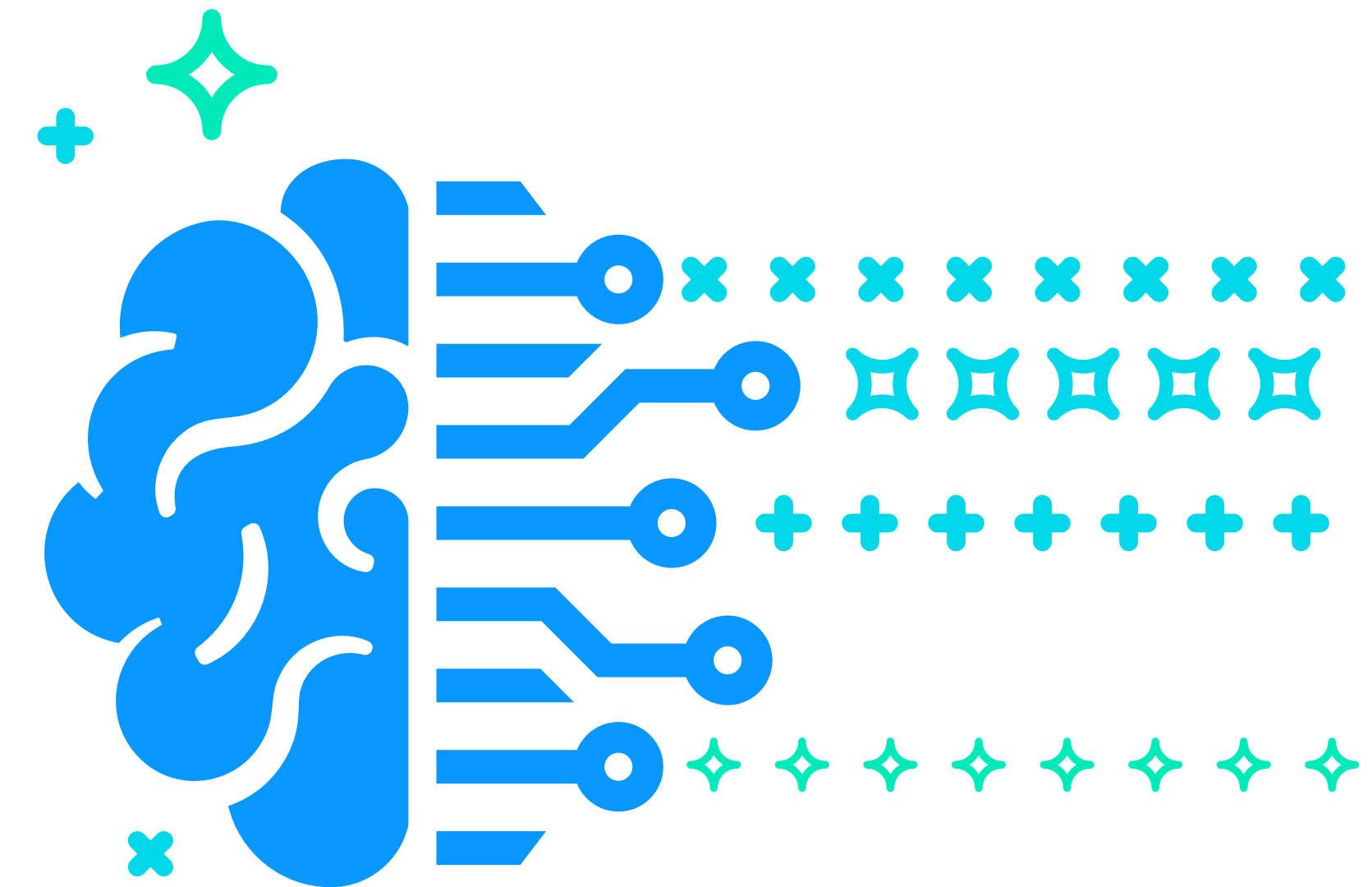
"We are in a world where we have to learn to accept our diversity. We have to learn that it doesn't matter what you look like. You can be at the top of the game technically in your field. Know your core strengths, be prepared, and know your subject better than anyone else. Stay true to yourself, and don't be intimidated by others in the room."

Dr. Eva-Marie Muller-Stuler

From Skeptical to Mesmerized... and Terrified!

Randy Bean, *Author Fail Fast, Learn Faster: Lessons in Data-Driven Leadership in an Age of Disruption, Big Data, and AI, and contributor to Forbes, Harvard Business Review, and MIT Sloan Management Review.*

Developments in AI are accelerating at an unprecedented rate, with GenAI tools like ChatGPT continuing to take hold. In fact, in the **2025 AI & Data Leadership Executive Benchmark Survey**, 23.9% of executives reported that GenAI initiatives are now implemented in production at scale, an increase from just 4.9% in 2024.

However, the conversation is now starting to shift to newer AI technologies. Artificial general intelligence (AGI) is a state where AI can perform human cognitive tasks better than the smartest human. And experts believe AGI will be available as a general capability within the next two to three years. When I first heard this prediction, I'll admit I was skeptical. But after hearing more, I was mesmerized, and admittedly a little bit terrified! Advancements in AI are going to be here faster than we expect. And businesses need to be ready for it.

Delivering business value from data & AI investments is a business imperative. According to the 2025 survey, nearly half of organizations – 46.4% – report significant or a high degree of business value from their data and AI investments, with 57.5% reporting exponential productivity gains.

Clearly, generative technologies offer a wealth of opportunity for businesses as they continue to become more data-driven. But

data leaders need to be thinking about how they will apply these new AI technologies – and what guardrails they must establish to safeguard the use of them. And the survey indicates that executives agree, with 97.5% saying that responsible AI safeguards and guardrails must be in place.

Because great AI depends on a foundation of great data, prioritizing data quality is critical, perhaps even more so than ever before. The integrity of the models is ultimately determined by the quality of data we feed into them. That's why data quality is so essential – it directly impacts the outcomes we can achieve.

"It's incumbent upon us as human beings and business professionals and data professionals, especially knowing what we do, to do everything that we can to safeguard the use of AI and to ensure the quality and integrity of the day that goes into these models. It's easier said than done. Companies must deepen their investments in data quality and data cleansing as a step in the right direction."
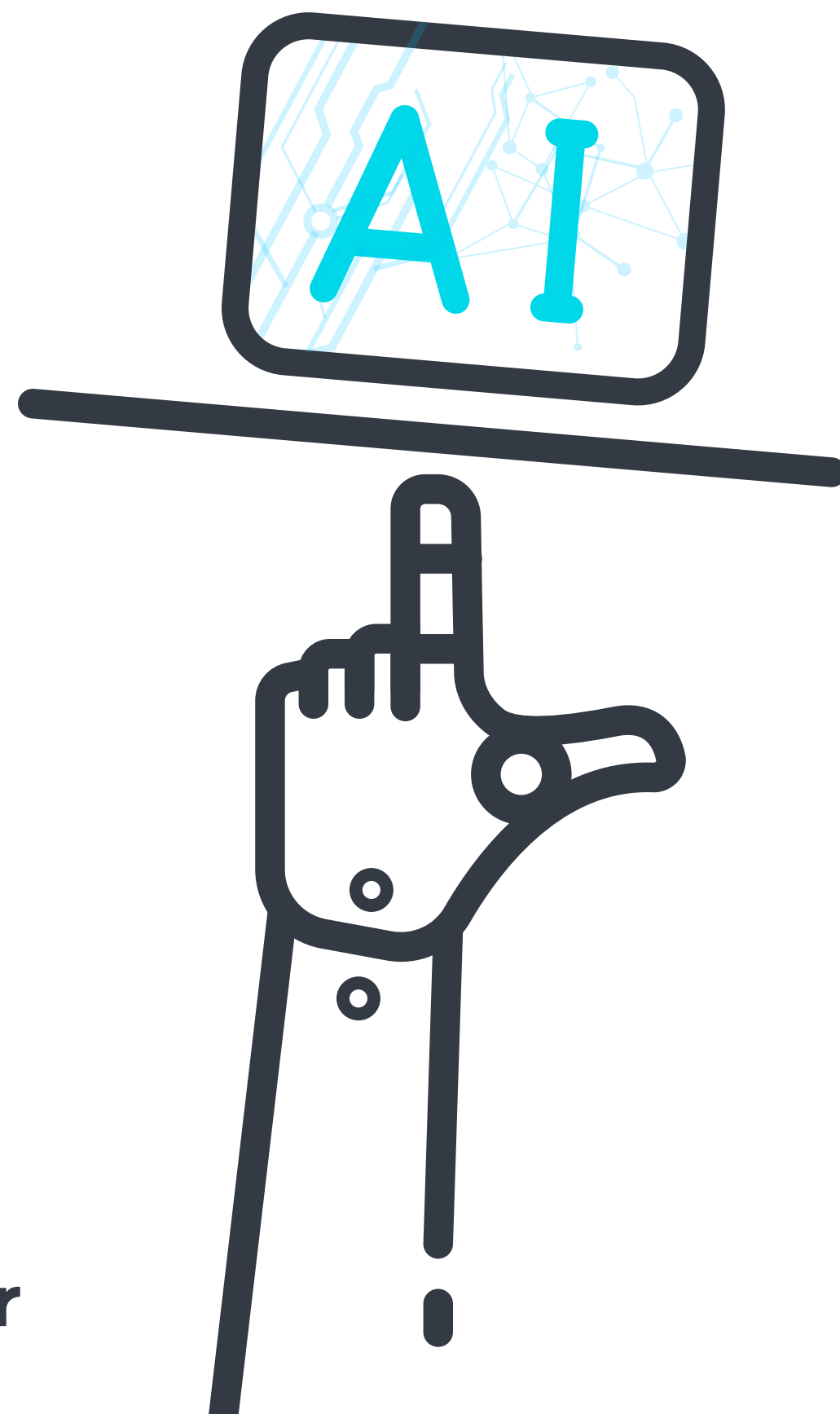
Randy Bean

It's About Finding the Balance

Misha Advena, Head of Analytics at Miro

There is no one right way to organize a data team. To some extent, the stage and maturity of an organization will dictate the way to structure the team. However, there are a number of considerations worth noting.

To start, the roles within a data team are changing and evolving all the time. When I began my career, analytics engineers didn't exist. And today, they play a critical role in many organizations. The emergence of this role signals a shift. Analysts need to be closer to their business stakeholders. They must still have technical skills, but it's equally important that they understand what the business team is trying to accomplish, as well as their challenges in doing so. Then, using metrics, analysis, and data insights, they can be a knowledgeable partner and find a way to help them.

The question of centralized vs. distributed data teams often comes up as well. Conventional wisdom says that most organizations start with a centralized data team with a handful of analysts who do everything. Then, as the organization expands, the need for the data team to have more functional expertise grows. New data teams emerge, often as part of the business. Neither way is right or wrong. It really just depends on what the business needs.

But what I have seen in organizations with super strong functional teams is the creation of data silos. The same data points start appearing in different ways, and you find two teams working on the same thing – or nobody working on it at all. On the flip side, when data teams are highly-centralized, they become too far removed from their business counterparts. Their work becomes more oriented towards completing a task versus driving business decisions, which is the wrong mindset. The best option is balance.

"Essentially, you need people who can do it all, who are technical enough, who can write code, who can build beautiful visualizations, who truly understand the stakeholders, and who can take insight and present it in a way that your non-technical stakeholder can understand. And who can think about the data and the result. It's never conclusive – never black and white. But they need to have a point of view and have a way to combine the data with the context stakeholders have, and then connect the dots and ensure that decisions people are making are not necessarily the correct one, ones that are more likely to be correct than not."

Misha Advena

Be Problem Spotters, Not Just Problem Solvers

Listen to podcast

Joel Shaprio, Clinical Associate Professor of Data Analytics, Northwestern University's Kellogg School of Management, and Chief Analytics Officer, Varicent
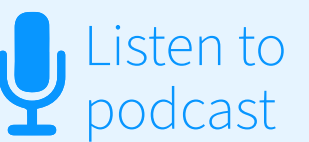
Data teams have a tendency to take on a project and go heads-down and try to solve it. This is not, necessarily, the wrong approach. But I do believe it's a missed opportunity.

When we think about increasing the value of data, we need to empower the next generation of data leaders to be problem spotters, not problem solvers. Here's why. Many times, the people in an organization who understand the data are not the same as the people with the advanced technical skills. They are the ones who have a holistic understanding and perspective on the data, making it easier to spot trends and missed opportunities. When data teams can actually surface those kinds of insights, their role shifts to one that empowers the business team.

So the onus is on the data team to understand the business. But it's absolutely imperative that this communication and understanding go both ways. Business leaders must also understand the data so they can define what it is they need to solve their business challenges. They need to give the data team clear direction, otherwise the data team will spend weeks or months working on a project they don't fully understand.

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Further, data teams and business teams alike must not let perfect be the enemy of good. It's problematic when teams think to themselves "I don't have perfect data, therefore I can't move forward." Really good strategies exist to help organizations gain access to really good data. Sometimes it's about knowing where to look. Other times it's about using proxy measures when actual data doesn't exist. If you're looking for perfection, you'll always come to the point where you believe you can't move forward. Don't let that stop you. It's absolutely essential that your data is good – but it doesn't have to be perfect.
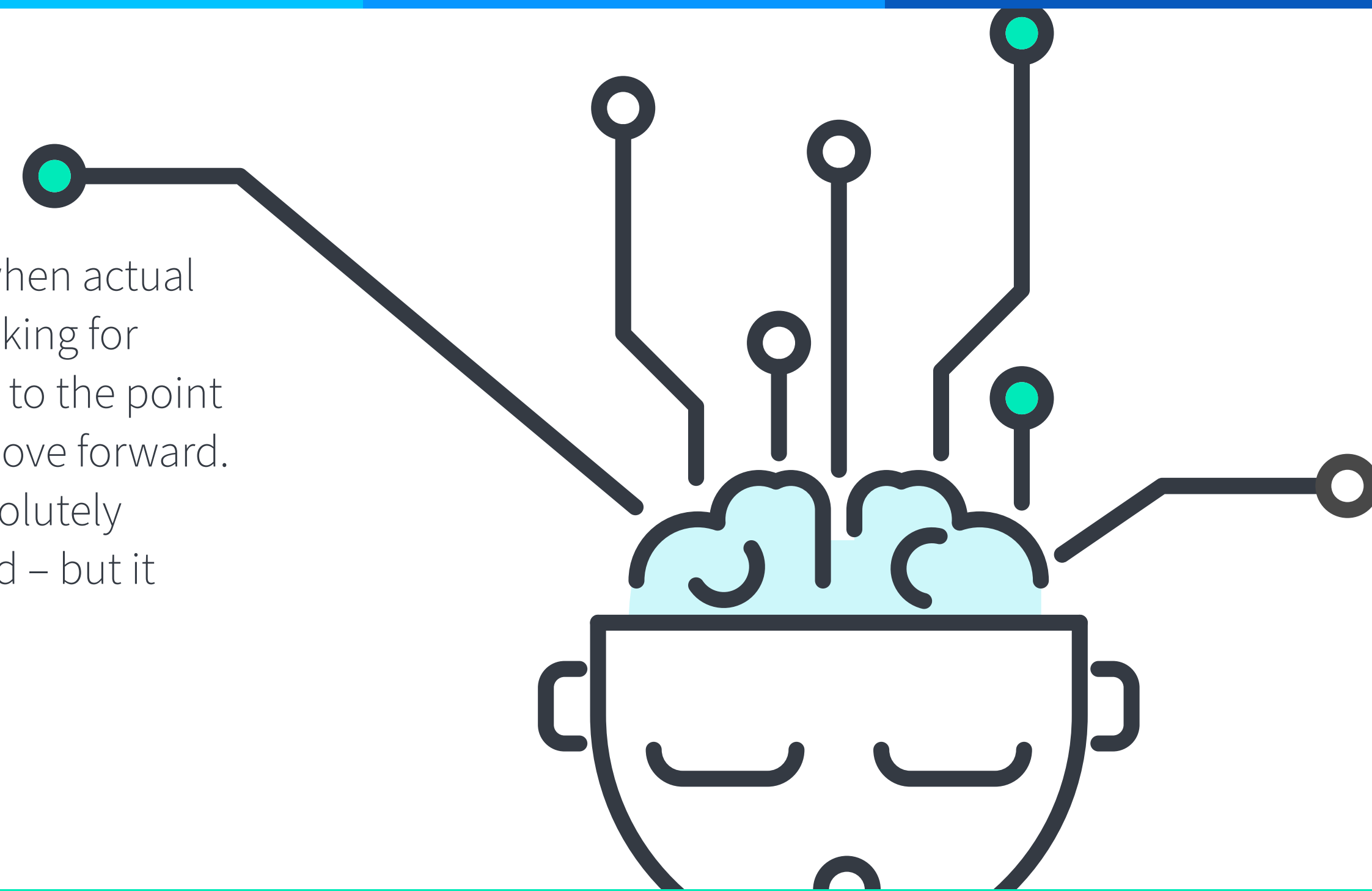
"One of the most common points at which a data project can fail is when people think to themselves, "I don't have perfect data." So I either need perfect data or I can't go forward. And that's problematic because often you don't have perfect data…[but] you can do some valuable stuff with imperfect data for sure."

Joel Shaprio

Start With the Why

Elena Alikhachkina, Data and Technology Pioneer, Global Data Power Woman

When it comes to embracing AI within an organization, it's important that you start by asking yourself "why." It's not just about implementing a solution. It's about connecting that solution to your business strategy so you can drive meaningful results.

Further, when it comes to thinking about the successful use of AI, it's critical that you consider the quality of the data. Finding quality training data is essential to your success. Many organizations invest in creating more sources. This is a road to nowhere. Instead, they should invest in improving the quality of the data they have.

Implementing a data product strategy will help you improve the quality of your data for use in AI. Start with consumption end points – not sources. And hire a data product manager to implement and manage your data product strategy.
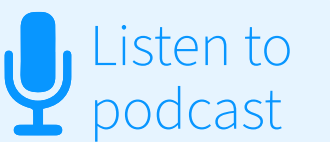
> *"The majority of data management organizations are treated like cost centers. I don't like this. Data product managers should have the same mindset as product managers for items that are sold in stores. Think about the users of your data products as paying for them. What is the ROI? It's a really different mentality."*

Looking Ahead –
Key Trends to Keep an Eye On

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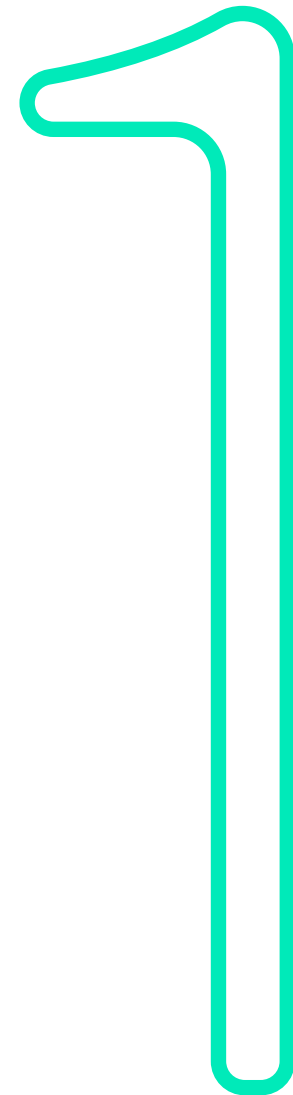
## AI is Here to Stay... So Now What?

We're in an era where AI is transforming the way we live, work, and interact with the world around us. And as we embrace this new technology, it's critical that we learn not only how to harness the power of AI, but also how to navigate the complexities it introduces into our lives.

Today, the **AI market globally** is worth over $279 billion. And, it's expected to reach $1.81 trillion by 2030, representing significant growth in the coming years.

Adopting AI is no longer a question. It's an imperative. Using AI, organizations can future-proof their business by:

- Boosting operational efficiency and driving greater ROI
- Powering exceptional customer experiences
- Spotting new opportunities to grow the business
- Safeguarding the business from unforeseen risks

Organizations that fail to embrace AI in a responsible way will fall behind or go out of business. It's that simple.
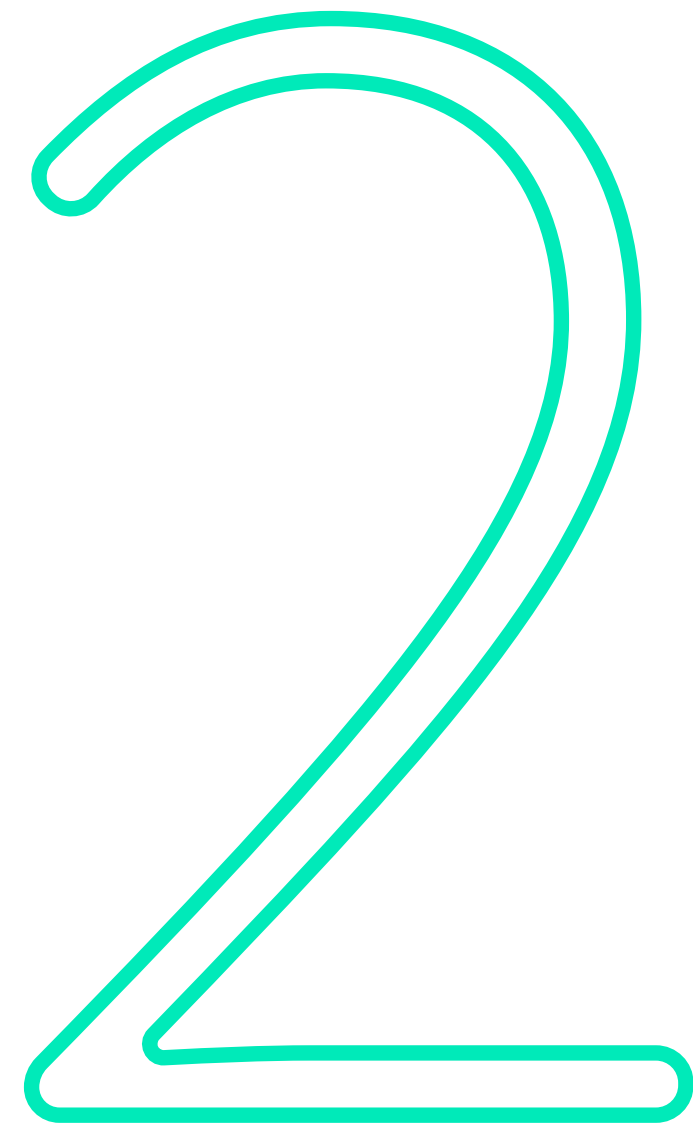
Data Quality (Still!) Matters

Data is the driving force behind AI. And when faced with challenges related to responsible and ethical use of AI, it's imperative that organizations prioritize improving the quality of their data. When AI models use high-quality data, their results will be accurate. And accurate results lead to better, more trustworthy decision-making. Consequently, businesses can grow their revenue, deliver outstanding customer experiences, and improve operational efficiency.

In contrast, when organizations use incomplete, incorrect, or outdated data, the models are more likely to return inaccurate results. And these results cost organizations a lot of money in missed opportunities and inefficiencies across the business. In fact, according to **Gartner**, bad data costs organizations, on average, over $12 million annually. Even worse, inaccurate results increase the potential for making decisions or taking actions that could cause reputational harm.

Simply put, the success – or failure – of AI depends on the quality of the data. But as the volume and complexity of data continues to grow at an exponential rate, ensuring its quality becomes increasingly difficult. That's why organizations must rethink how they deliver clean, trustworthy data at scale.

Data Quality in an AI-Driven Era: Why Rules-Based MDM is No Longer Sufficient

Traditionally, organizations have used rules-based master data management (MDM) as a way to improve the quality of their data. Today, that's no longer sufficient. Traditional MDM solutions simply can't keep pace with an organization's need to deliver clean, trustworthy, consumable data at scale for use in AI. Here's why.

- **They're rules-based:** Traditional MDM solutions use rules to clean and master data. But when data changes, rules must change, too. Not only is the effort to write, modify, and maintain rules time-consuming, but it also requires significant human effort. And that makes it difficult for traditional MDM to keep up with the volume and complexity of modern data.

- **They're manual:** Humans play a significant role in the configuration, curation, and maintenance of rules in traditional MDM solutions. However, as data continues to grow and evolve at an unprecedented pace, relying solely on human-driven approaches is not only expensive, it's inadequate in meeting the ever-increasing demands of the business.

- **They're built for static data:** Traditional MDM solutions work best when data is static. But data today is dynamic, causing traditional MDM solutions to struggle when it comes to mastering the ever-growing, complex nature of modern data.

- **They're centralized:** Traditional MDM relies on centralized control, where data governance and management are tightly controlled by a central authority or department. This approach leads to bottlenecks and inefficiencies, making traditional MDM a poor choice when it comes to improving data quality and staying agile.

3

The good news is, there is a better way to make your data better. AI-native MDM delivers the advanced AI capabilities you need to create golden records. **AI-native MDM** is dynamic, enabling agility and iterative development based on use cases that are important to your business. And when those use cases or the data that supports them changes, AI-native MDM can adapt, ensuring that the golden records it creates always reflect the most current and accurate version of your data.

AI-native MDM gives businesses what they need to deliver consumption-ready sets of high-quality, reliable, and accessible data that people across the business can use to solve business challenges. By employing advanced AI capabilities, AI-native MDM masters the entities that matter most to your business in **real time**, ensuring that everyone has immediate access to your company's best data.

Using AI-native MDM, organizations can drive better business outcomes by delivering the clean, accurate, continuously-updated data needed for decision-making and ongoing operations. By uniting AI with human intelligence to improve data quality and enrich data with first- and third-party data, businesses can revolutionize customer experiences, drive greater ROI, boost operational efficiency, and avoid risks.

VS

AI
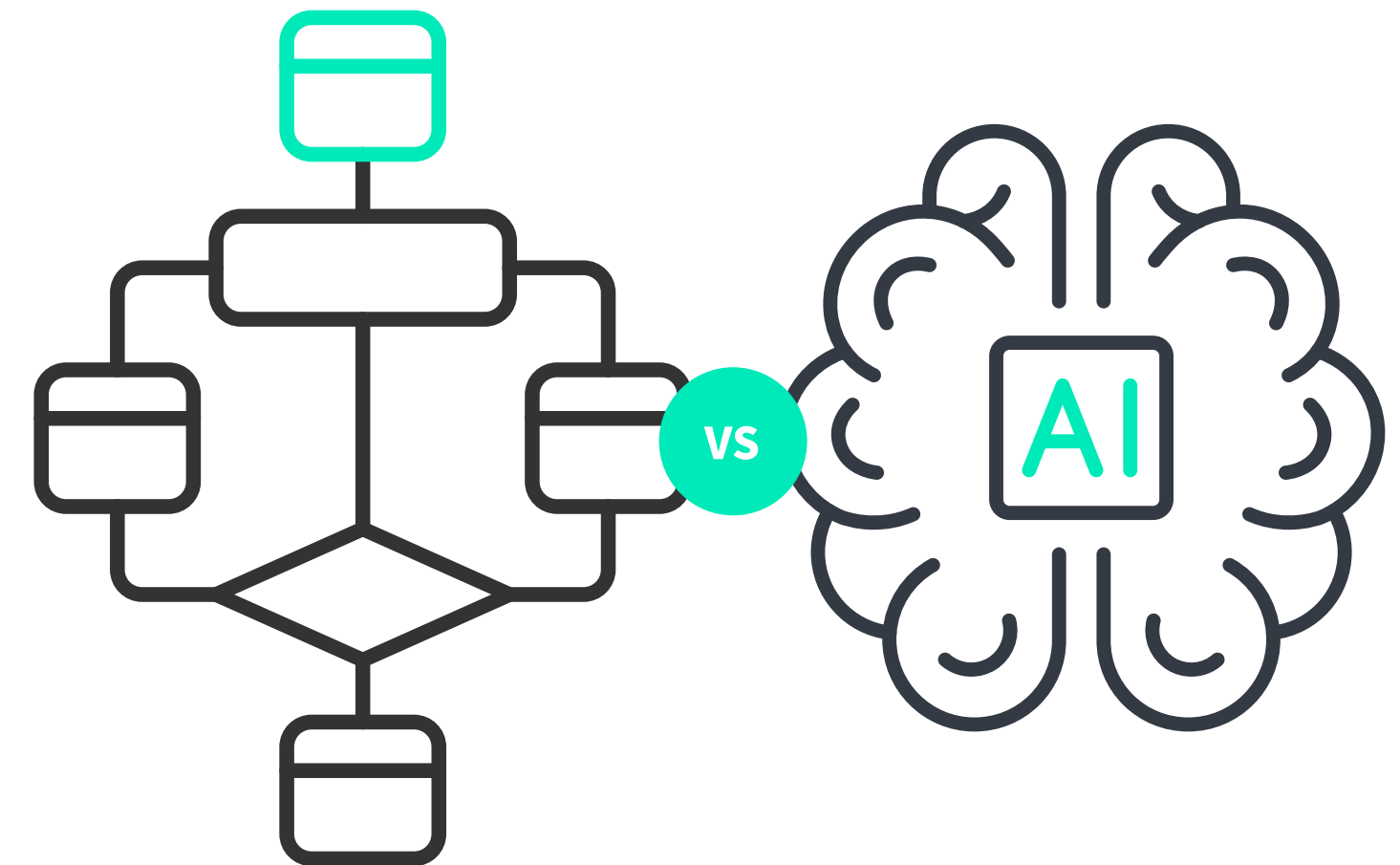
The New Data Culture

As AI takes hold, organizations must also consider its impact on their overall data culture. From new roles and increased collaboration to ethical considerations and the need to comply with emerging regulations, it's clear data cultures are evolving.

Because AI requires human oversight, collaboration across the organization is becoming increasingly important. It's no longer acceptable for data to live in silos, with access limited to a select group of individuals. Instead, organizations must break down data silos and integrate their data so users can work together to spot opportunities, reveal vulnerabilities, and increase efficiencies.

To help foster a stronger sense of collaboration across the business, savvy organizations are hiring data professionals

who can bridge the gap between technical data teams and business needs. These professionals oversee the lifecycle of **data products**, prioritizing user-centric development, ensuring alignment with the organization's data strategy, maintaining data quality and governance, facilitating cross-functional collaboration, and optimizing products based on feedback and metrics. They also explore monetization opportunities, manage data-related risks, stay informed about industry trends, and play a crucial role in leveraging data products effectively to create business value.

Finally, as ethical concerns grow and new, AI-related legislation emerges, organizations must increase their focus and take the necessary steps to safeguard the business from harm.

The Tamr Advantage

Tamr has spent more than a decade focused on using AI/ML to tackle the hard problem of performing accurate, enterprise data entity resolution and golden record creation at scale. Our technology has been proven in the market over scores of customer engagements with some of the most recognizable brands in the world. With **18 patents** behind the technology, there's nothing else like Tamr in the market.

Get a **free data assessment** from Tamr so you can see for yourself why leading companies are embracing AI-native MDM to deliver data everyone can trust.

And if you want more insights on the future of data and AI from the industry's leading experts, **subscribe** to the **Data Masters podcast**.

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Tamr provides the only AI-native Master Data Management (MDM) solution that delivers real-time master data for every dashboard, application, and person in your business. Tamr accelerates the discovery, enrichment, and maintenance of golden records, enabling informed decision-making, improved revenue growth, and better customer experiences.

Tamr's patented, AI-centric approach – with human refinement and oversight – delivers value in days or weeks, not months or years like traditional rules-based MDM and DIY solutions. And with intuitive Customer 360 pages, your business can improve data accessibility across the organization and leverage the best, most accurate data to support analytical and operational use cases in real time.

Learn more at **tamr.com**