



GUIDE

How to use facilities data to drive toward **value-driven intelligence**

Why good data maintenance equals big cost efficiencies

The need for data

Across industries, there are many common themes. Operate efficiently. Save money. Stretch budgets. To achieve these objectives, many companies turn to the same resource: their data.

If you were launching a business from scratch, putting guardrails in place would be easy to ensure you were capturing and utilizing your organizational data correctly from square one. However, most companies are joining the data game from various entry points. For some, admitting you need to use your data is half the battle. For others, understanding the why and shifting from age-old practices is the real challenge.

Today, we're taking a closer look at why organizations need data and how they can get to a place where value-driven intelligence is possible. **This guide explores:**



The **importance of culture** in data-driven decision making



Data availability and why you need documentation



The **role of data scientists** in value-driven intelligence



Industry **examples** and applications

1. The importance of culture in data-driven decision making

Culture is a critical factor across all industries. It plays a pivotal role in data-driven decision-making as it encompasses the values, behaviors, and attitudes within an organization that determine how information is perceived and utilized.

Establishing a culture of data-driven decisions? Start at the top.

Without a supportive culture, organizations may struggle to fully leverage data's potential in their decision-making processes—so you must lead by example.

A few ways to support a data-driven culture include:

- Provide data education and training
- Define data policies
- Foster data transparency and collaboration
- Set data-driven performance metrics
- Recognize and reward data-driven contributions
- Encourage experimentation and innovation
- Promote continuous improvement
- Establish feedback loops for improvement

Folding data into daily operations and documentation

You can encourage a data-minded culture by communicating expectations, holding meetings, and adding data-related objectives to your business plans. From daily operations to teaching opportunities, your organization needs to be able to go into every day and think from a data-minded culture perspective.

Begin with the end in mind

A data-minded culture depends on clarity; you must know what you hope to achieve, and you must communicate about that objective or outcome frequently. A strong culture fosters a mindset that prioritizes evidence-based decision-making, encourages collaboration and communication around data, and builds trust in data-driven insights.

If you can give individuals the agency to ask relevant questions from the beginning and to share and analyze data effectively, everyone can make more informed choices that will drive growth, innovation and efficiency to benefit your organization for years to come.

2. Data availability and why you need documentation

Data availability is a crucial starting point for data-driven decision-making, but you need a plan - that plan is your documentation. Laying the groundwork for a culture that supports data means there's less cleaning needed when you want to analyze your information later.

Exponential data = exponential opportunities

The combination of increasing digitization, technological advancements and the expanding use of data-driven approaches across industries has fueled the exponential growth of data in recent years. According to resources at Siemens, roughly 2.5 quintillion bytes of data are produced daily, and 90% of the existing data came into existence in the past two years alone.

That's A LOT of opportunity.

You gotta get your data so fresh and so clean

Clean and structured data is the key to unlocking efficient analysis, accuracy, time and cost savings, integration and so much more. Investing in data cleaning and structuring brings valuable benefits in insights, productivity, and informed decision-making.

In short, keeping data clean and structured as possible drives faster decisions.

How documentation fits into the big picture

Documentation is essential for data cleaning and analysis—it's your proof. It records the steps taken, procedures followed, decisions made, and metadata information. It ensures transparency, reproducibility, and clarity, facilitating collaboration, result validation, and trust in the analysis outcomes.

Efficacy uses patterns that are created in analytics. Once you can find those patterns, you can now drive better decisions. Better decisions mean you operate with more efficacy and spoiler alert; it can be both strategic as well as operational.

Set your organization up for success with tech

Comprehensive technology can not only facilitate data collection and documentation, but make it much easier to do so. The companies that document better will be those that will make smarter decisions and more informed actions.

3. What do **data scientists** have to do with **value-driven intelligence**?

Data scientists, who focus on data analysis and insights generation, can actively contribute to value-driven intelligence by aligning data collection and analysis with organizational values, incorporating ethical considerations, developing relevant metrics, and facilitating effective communication with decision-makers.

The expertise of data scientists and collaboration with stakeholders helps bridge the gap between data-driven insights and value-driven decision-making. Win-win.

Understanding data-driven vs. value-driven

The difference between data-driven intelligence and value-driven intelligence is a matter of perspective.

- Data-driven intelligence emphasizes the role of data analysis and empirical evidence in decision-making.
- Value-driven intelligence considers a broader set of factors, including organizational values, goals and ethical considerations, to guide decision-making and maximize overall value.

The business advantages of AI

Let's be honest; everyone is talking about artificial intelligence (AI), and with good reason. AI and its algorithms have existed forever, but now it's gotten bigger (aka faster and more accurate). Some models are executed indifferently, but in the end, it's all about using the data—and the companies that do will win in the future.

Data in the driver's seat

So how is data driving value and improving business outcomes?

The companies that can capture the data and structure it to make it observable will gain the ability to create, and essentially drive, better decisions.

Efficacy in data documentation refers to its effectiveness in providing clear, accurate, and comprehensive information that is easily accessible and organized. It should be up-to-date, relevant, and searchable, enabling efficient data understanding, decision-making, and collaboration.

Trust that data knows the route

Why do we need data to drive better decisions and informed actions?

Well, you want your documentation to be up-to-date, relevant and searchable, enabling efficient understanding and collaboration. Efficacy helps organize information so it's easily accessible by using patterns; once you can find those patterns, you can now drive better decisions and operate with more efficacy, which can be both strategic as well as operational.

At the end of the day, data-driven intelligence is about confirming ideas with evidence. Companies that effectively document and structure their data will be positioned to succeed, and to do so, they need the right technology for the job.

4. Industry examples and applications

Data, documentation and decision-making transcend sectors and industries. But real-world examples are always helpful. Read on to gain a little context.

A healthcare dose of real-time data

By nature, healthcare is excellent at data documentation in the moment. In the sector, documentation happens in real-time. Most healthcare professionals have jam-packed days, and if they don't document data at the moment, it will be gone. Forever.

Healthcare is also very good at looking at the bigger picture - for example, is something in the environment affecting a particular population? Documentation helps to understand data trends and drive value-driven intelligence insights from it.

Proper data documentation helps people understand the bigger picture, keeping the end in mind for the outcomes.

Giving facilities managers the voice to speak to executives

In building management, those taking care of the facilities are either not part of the top decision-making process or, if they are, lack the language to accurately describe the needs of their department and the assets they manage. The key lies in utilizing data streams for optimized operations—and communication.

Say you have a plant supervisor who wants to replace an asset. "I want to quit throwing my teams at it." In this scenario, documentation is exactly what they need because the data will support their story. If you're not documenting failures or that it's a specific piece of equipment that continues to fail, no algorithms in the world will pick up that it's just that one component failing.

By documenting the repair work orders on frequently failing assets, executives can see that it's constantly breaking. If it costs hundreds of 1000s of dollars to maintain a year, buying a new one is more cost-effective.

Trying to justify additional staffing? Use data.

No two ways around it; staffing is a top priority, and challenge, across industries, especially when fighting for budgets to increase your teams. Hiring with the end in mind can make all the difference.

For example, picture a manager looking for dedicated preventative maintenance staff. Approached with the end in mind, the manager might ask, "How do I get this approved through the C-suite to get additional operational expenses?" The answer? Proving that preventative maintenance will way offset the cost of the new hirers via documentation.

Data is the key to demonstrating that your potential employees will extend the expected life of assets by doing preventative maintenance - and therefore save considerable money. Without that, there is no evidence that your FTEs are actually going to be able to achieve that.

At the end of the day, data drives value

With the right tools in place, there are countless opportunities for companies to implement data-driven practices to achieve specific goals. Whether optimizing maintenance schedules and resource allocation for your asset management, making the case staffing decisions, or justifying operational expenses to ensure productivity, a healthy dose of data and the capability to derive insights from it can help organizations operate more intelligently by keeping the end in mind.

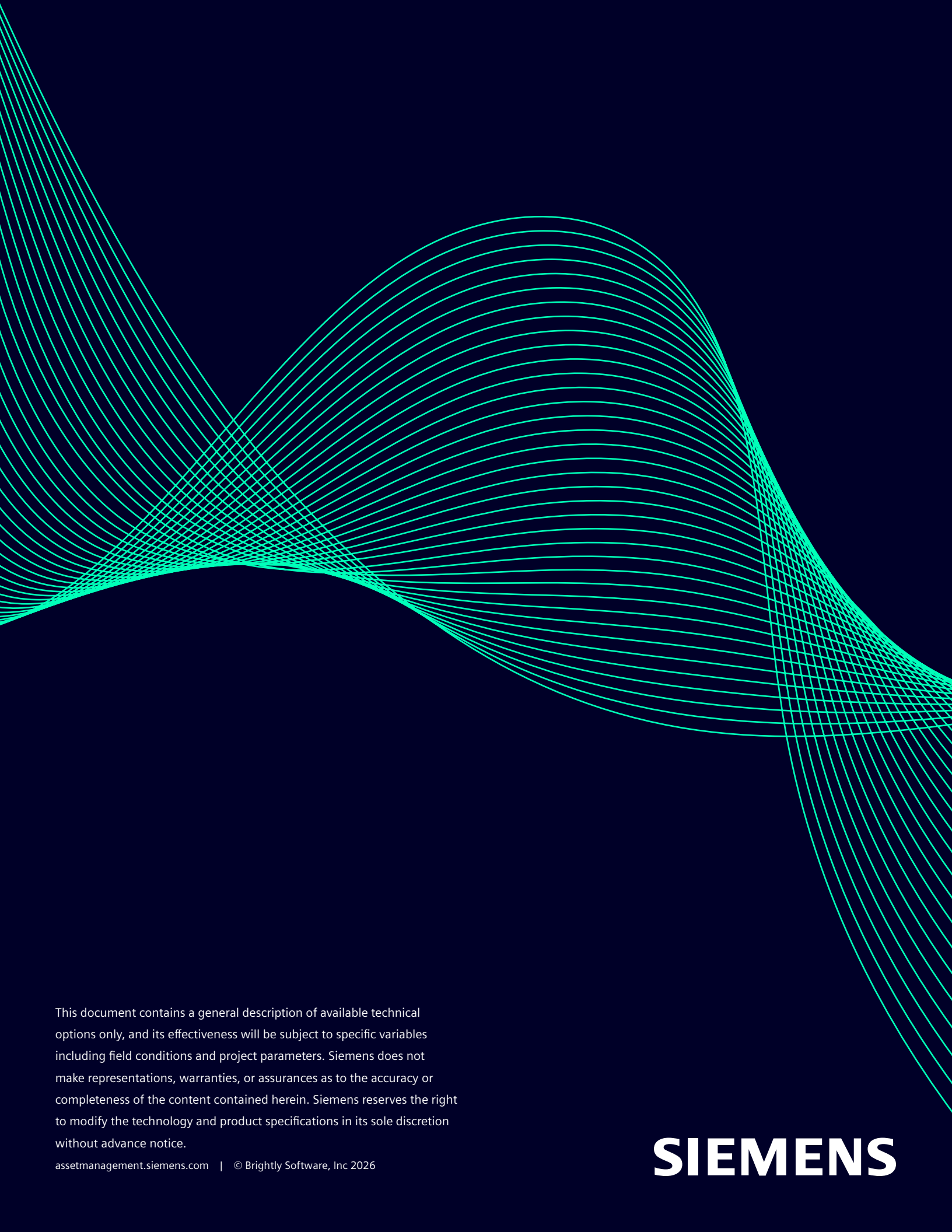
How Siemens can help you **shift from data-driven intelligence to value-driven intelligence**

Knowing what you want to achieve is the most important first step of any plan; the next step is having the capability not only to capture, but utilize the data to get you there. Remember, this transition from data-driven intelligence to value-driven intelligence requires a combination of technical expertise, cultural shifting, and strategic thinking.

It's an ongoing process that requires continuous learning, adaptation, and innovation to stay aligned with changing business needs and market dynamics—and it's easier with the right technology in your toolbox.

At Siemens, we operate on a philosophy of keeping the end in mind, always. We've created powerful, cloud-based solutions that help organizations, and the maintenance and operations professionals who care for them, improve efficiency, prolong asset life and cut costs, all by utilizing data.

Learn more: assetmanagement.siemens.com



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