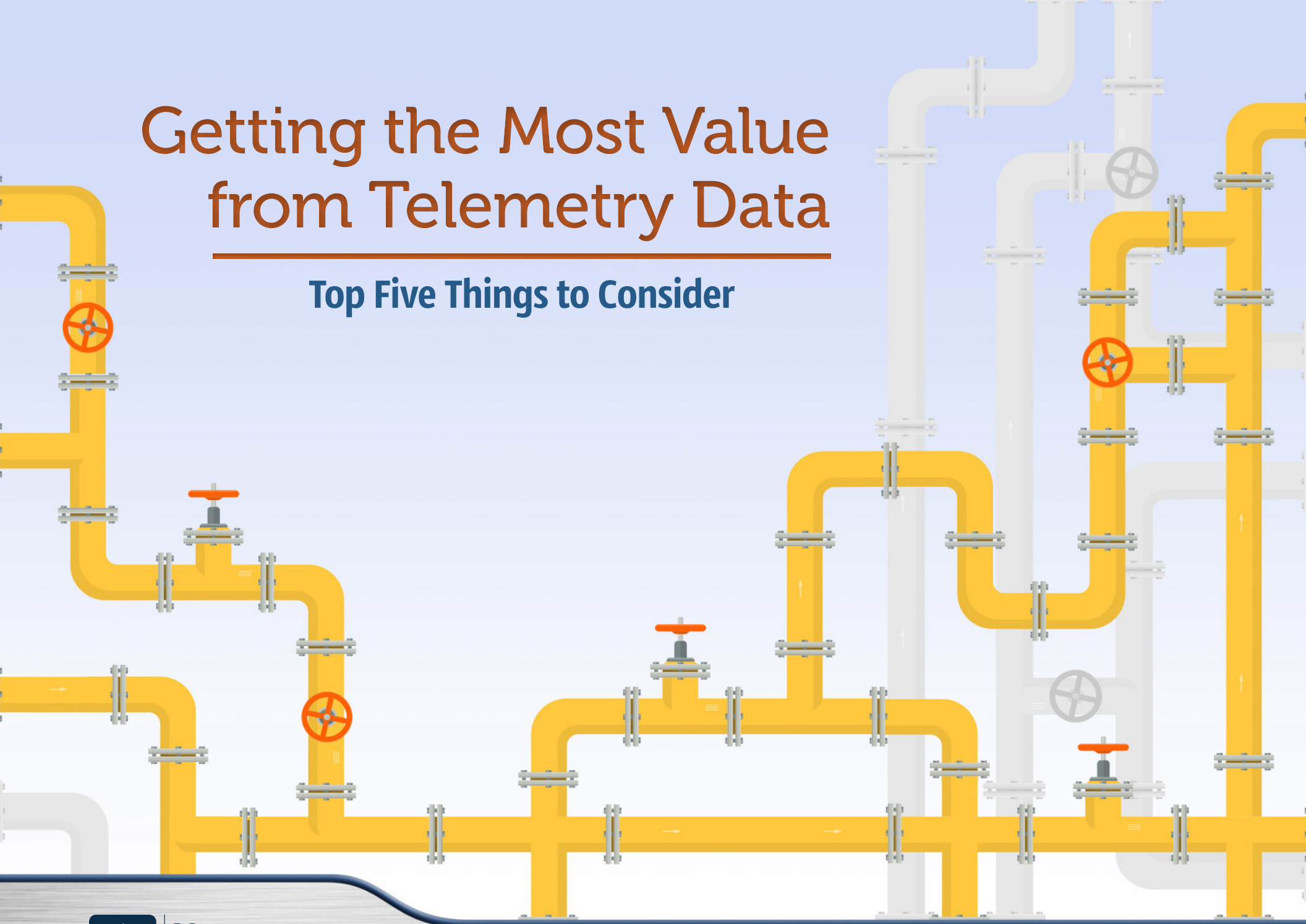
Getting the Most Value from Telemetry Data

Top Five Things to Consider



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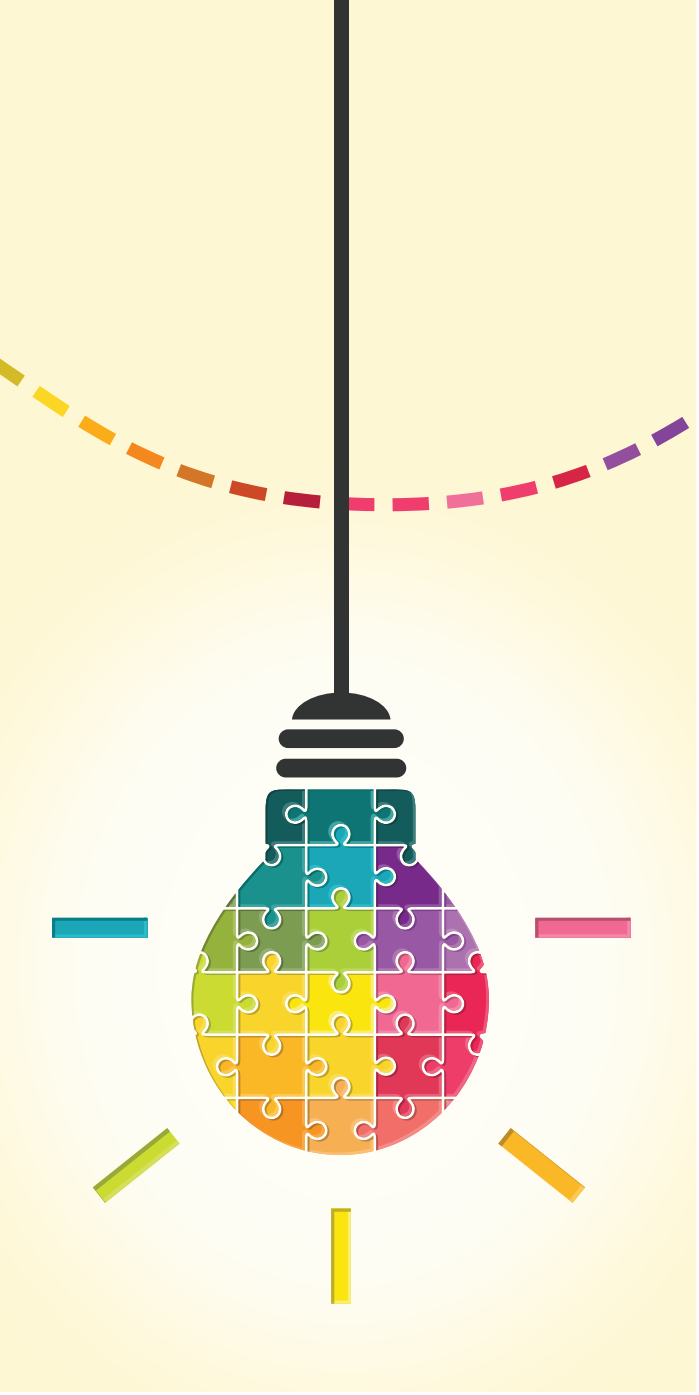


Data is Complex

Monitoring telemetry data and computing infrastructure through observability platforms is challenging but key to detecting issues and acting quickly to remedy failures and performance problems. Ventana Research asserts that through 2026, **more than one-half of organizations will increase their investment in observability technology** to accelerate the value being generated from telemetry data including logs, traces and metrics.

Unlocking the full value of telemetry data and translating it into business decisions is easier said than done, however. Data volume and complexity is growing, and with that comes challenges organizations must address if they are to unlock the full value of their data.

Takeaway: Organizations need to make better use of telemetry data if they are to enjoy the full value of observability platforms.

1. The Cost vs. Value of More Data

Telemetry data is rapidly increasing in volume, and that influx is hard to manage. According to our Analytics and Data Benchmark Research, 74% of organizations are confident in their ability to analyze the variety of data and data sources available, but **only 59% are confident in their organization's ability to analyze large volumes of data**.

Furthermore, managing and monitoring data costs money in the form of time and technology, and budgets are not keeping up. Organizational pipelines centralize and transform data to reduce costs and delays, but the upfront cost is a challenge, with 59% of organizations citing the cost of technology as a barrier to improving analytics capabilities. Organizations are forced to balance the need for more data with the cost and the complexity of doing so.

Takeaway: Balance the potential for greater insight with the cost of monitoring and managing higher data volumes.

2. Wider Adoption Across Use Cases

The value of data is not fully realized unless a wider adoption across use cases is achieved. Traditional observability platforms lead to silos of IT infrastructure data that are only accessible by technology engineers. Data is often unstructured and in formats that cannot be easily used by downstream observability solutions. Business decision-makers, developers and DevOps practitioners also need access to the data to understand the business risks associated with IT incidents and deliver value across all departments.

Observability pipelines break down those silos by transforming and routing data to other destinations where it can be utilized in a variety of processes across departments and users. Ventana Research asserts that **through 2025, three-quarters of organizations utilizing telemetry data will have invested in observability pipelines** to improve time to detection and resolution based on machine logs, traces and metrics.

Takeaway: Unlock additional value by enabling access to telemetry data for workers in roles other than technology engineering.

3. Understanding Business Context

Understanding the business implications of IT infrastructure failure and performance issues is problematic for business teams.

Observability platforms handle the process of parsing data from computing equipment, sensors and applications, across multiple on-premises and cloud environments. But the resulting data lacks business context. Specialist skills are required to interpret and act upon it. Observability **data needs to be enriched and augmented** with business event data **to help organizations understand the impact of infrastructure issues** on their ability to serve customers, partners and suppliers. Close cooperation between technology engineers and business analysts and executives is necessary to provide quality customer service and avoid security risks.

Takeaway: Enrich and augment telemetry data with business event data to fully understand the implications of infrastructure issues.

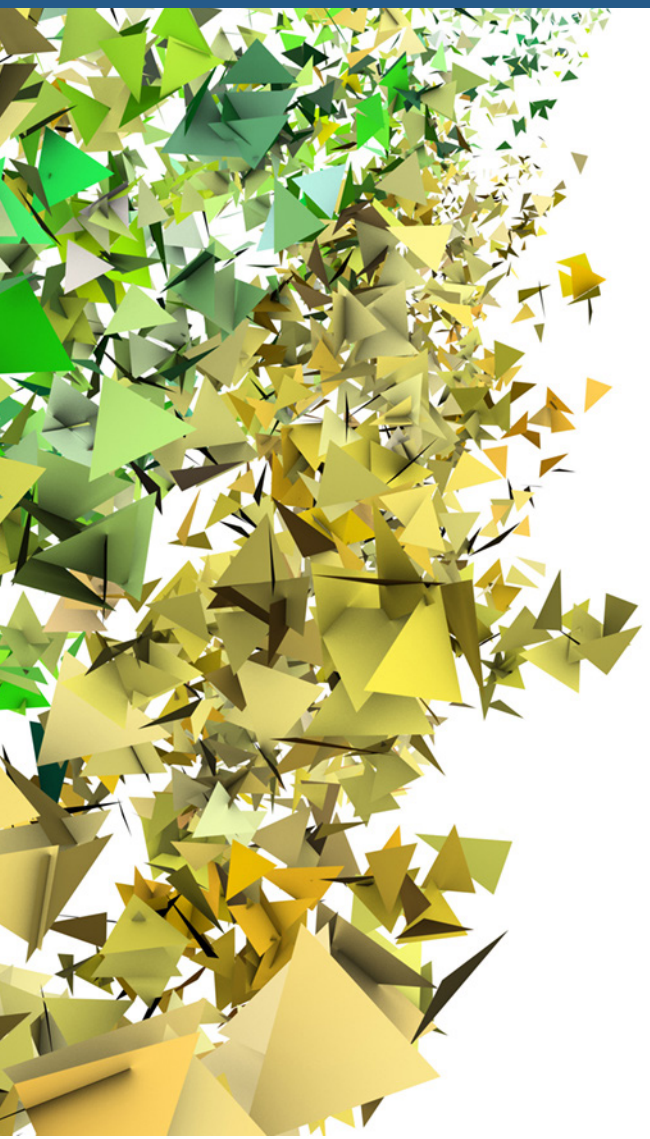
4. Ensuring Regulatory Compliance

Good data governance is vital. The complexity of modern data architecture leaves mission-critical applications exposed to compliance risks. Organizations need to be aware of regulatory and compliance requirements and factor those requirements into policies that govern how they deal with data. **The most significant data governance challenge, cited by almost three-quarters (73%) of organizations, is disparate data sources and systems.**

Not all data governance initiatives will be driven by regulatory compliance; however, the risk of falling afoul of privacy and human rights laws ensures that regulatory compliance influences data-processing requirements. Even if data is machine-generated and not customer-related—for example, transactional data from applications—there may still be privacy issues, especially when this data is combined with other data sources.

Takeaway: Multinational organizations must consider the wide variety of regional data security and privacy requirements and ensure that telemetry data is appropriately governed.

5. Data Distribution and Fragmentation



The generation, processing and storage of data is increasingly distributed across multiple data centers, both private and public, as well as across application providers. **More than one-half (56%) of organizations report using 11 or more data sources, while more than two-fifths (42%) are using more than one cloud provider.**

Fragmentation is a fundamental challenge in integrating and routing data across this increasingly distributed architecture. It is not surprising that 69% of organizations spend the most time preparing data for analysis. For larger companies especially, fragmented, unstructured telemetry data spread across a large number of sources slows down response times and delays reactions to changing market conditions. This leads to missed opportunities and decreased revenue.

Takeaway: Open standards are essential to ensuring organizations can integrate and manage data across distributed architecture.

Technology Challenges

Current technologies such as stateless observability pipelines focus on data movement and in-flight transformation but fall short of organizational needs. They offer limited use cases, cannot connect telemetry data with business decisions and lack the ability to add context to data (which would make it usable by security and analytics tools). Open-source technologies can be expensive, complicated and are not designed for the specific requirements of observability.

More advanced observability pipelines can help organizations move beyond these challenges. These **"smart" pipelines offer additional benefits by facilitating the identification of trends and anomalies through the unification and enrichment of data**, as well as the analysis of data in motion prior to it being ingested into downstream systems.

Takeaway: Stateful observability pipelines facilitate the identification of trends and anomalies through the unification and enrichment of data, and they allow for the analysis of data in motion.

Building an Effective Strategy

An effective observability strategy has three parts:

1. **Access and Control.** Manage and provide wider, real-time access to high volumes of data from a variety of sources, reducing reliance on observability platforms and costs.
2. **Actionable Insights.** Analyze, trim and augment the data in motion, adding context and correlating data for new insights.
3. **Faster Time-to-Value.** Optimized data that is available across the organization via prebuilt recipes, best practices and a user-friendly UI allows for faster time-to-value.

Takeaway: Proactively protecting the business means not just accelerating the resolution of IT problems, but also identifying and addressing related business service-level issues.

Telemetry Data and the Bottom Line

Through 2026, more than one-quarter of organizations will combine business event data with machine-generated telemetry data to provide context and generate additional business value from observability. To do this, an organization must invest in an observability platform.

Organizations should look for platforms that offer access and control to centralize data from all sources, processes that data in real time, route data to multiple destinations and automate storage; actionable insights that come from enrichment, correlation and insights; and faster time-to-value.

Whether an organization has or has not invested in observability, consider observability platforms paired with “smart” observability pipelines to generate additional value.

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