

From complex landscapes to seamless data integrations with Sievo's scalable ELT

Extraction, Loading and Transformation

WHITEPAPER

Sievo

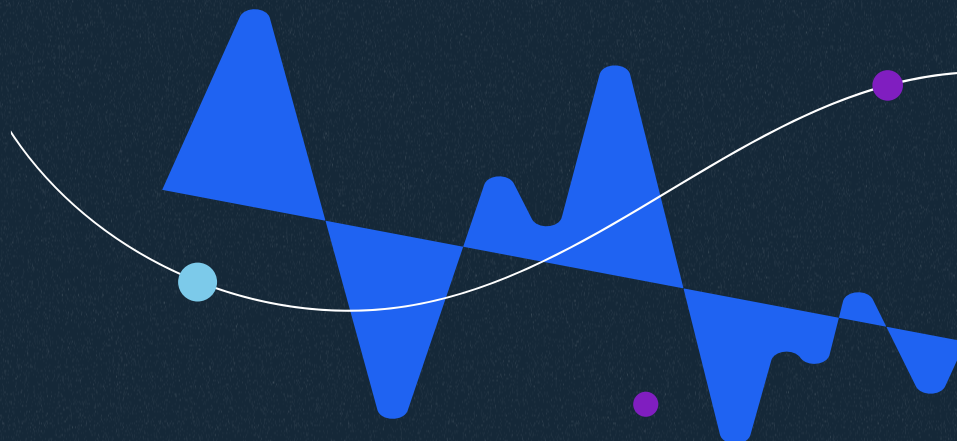


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The 5 challenges of Procurement Data Management

Procurement data management is challenged by the diversity, volume, and complexity of data sources. Organizations often use multiple ERP systems, supplier portals, third-party platforms and manual workflows, each producing data in different formats and quality levels. This results in fragmented, inconsistent, and incomplete data that obscures a clear view of procurement activities. Adding to the challenge, procurement data is highly dynamic—prices, contracts, supplier performance, and risk indicators constantly change—demanding continuous updates and enrichment to stay accurate and relevant.

1. Fragmented and Inconsistent Data from Diverse Sources:

Organizations rely on multiple ERP systems, supplier portals, and manual workflows, producing diverse and often inconsistent data that fragments the view of procurement activities.

2. Dynamic Data Environment:

Prices, contracts, supplier performance, and risk **indicators** frequently change, requiring continuous updates, adaptation, and enrichment to maintain data accuracy.

3. Handling Unstructured and Semi-Structured Data:

Documents such as invoices, contracts, and emails must be extracted, structured, and enriched—often with external data—to provide meaningful context.

4. Increased Complexity in Data Management Across Multiple Platforms:

As organizations adopt both traditional ERP systems and cloud-based platforms, maintaining data quality, consistency, and governance across these environments becomes more complex and demanding.

5. Need for Scalable, High-Performance Solutions:

Procurement teams require advanced data solutions that go beyond reporting—delivering timely, trusted, and actionable data to accelerate decision-making and drive continuous business impact.

Procurement Data at Scale Over 20 Years of Learning, Evolving, and Delivering

2%+

Global GDP

Spend data processed
yearly

100+

In-house data & ELT experts

2700+

Active system
integrations in place

1060+

Data Sources

11bn+

Rows of transactions

At Sievo, we believe data integration is where the real magic happens. For over 20 years, we've invested heavily in the expertise, tools, and services needed to master procurement data at scale—managing data amounting to over 2% of global GDP so far. That volume isn't just impressive—it's a powerful learning engine. With every new dataset, we sharpen our ability to extract, transform, and deliver procurement data that drives action.

Behind every insight is a dedicated team of well over 100 data and ELT experts—including data engineers, data managers, and data architects—supported by innovative product teams and increasingly empowered by AI. Together, as the largest R&D in procurement analytics, they work to ensure the data is accurate, meaningful, and continuously improving, even in the most complex and fragmented data source architectures.

Tackling Procurement Data Challenges with Sievo's End-to-End Data Accountability

Turning Procurement Data into Continuous Insight

Data transformation isn't a one-time event—it's a continuous process. Procurement data is always changing and making it actionable requires more than tools. It takes deep expertise, structured processes, and a flexible approach that evolves with your systems and goals.

That's why we follow a proven, four-step model: Sievo's end-to-end data accountability process. It's built over two decades of experience and enriched by managing data amounting more than 2%+ of global GDP. This model isn't linear or static. It's a continuous cycle, powered by expert teams and supported by automation, ensuring that your procurement data stays accurate, enriched, and ready for impact—every single day.

This whitepaper explores how Sievo tackles Step 1: Extract & Integrate—the engine behind continuous, high-quality procurement data.

1

Extract & Integrate

Our advanced data engineering expertise involves studying and decoding diverse procurement information systems—such as ERPs—to understand both the data and the best ways to connect for continuous extraction and integration. Our incident and change management processes ensure smooth operations and continuous innovation.

2

Cleanse

Our data management expertise, empowered by AI-driven automation, applies proven taxonomy best practices—supplier normalization, material harmonization, currency conversion, translations, and unit standardization—to cleanse data at scale. This ensures clean, consistent, and comparable data that forms the foundation.

3

Enrich

Our data enrichment expertise integrates cleansed procurement data with external and contextual inputs—such as risk scores, sustainability metrics, and market benchmarks—to deepen insights and enhance strategic decision-making.

4

Act & Save

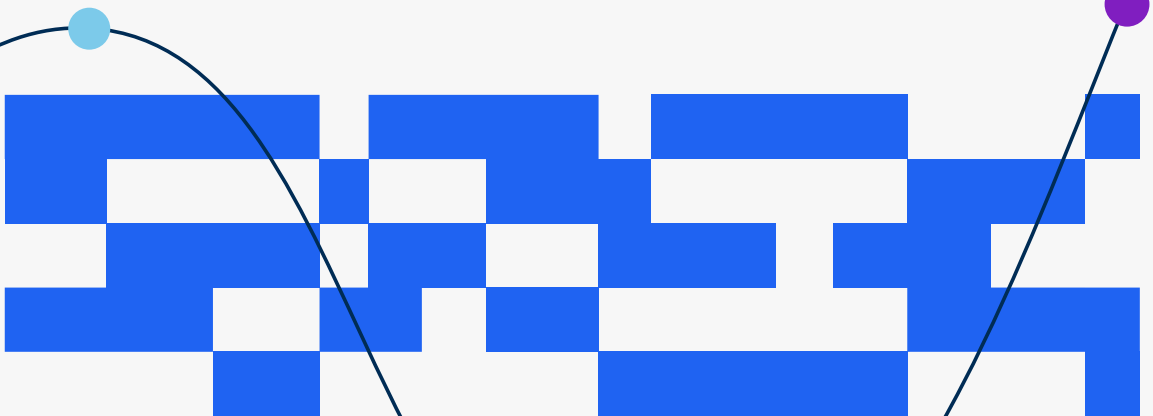
Sievo closes the data-to-action gap by providing predictive insights, Sievo IQ₊ best-practice dashboards and a full audit trail promote transparency and empower faster, smarter procurement decisions. Continuous data updates and governance ensure insights remain timely, trustworthy, and impactful.

Extract & Integrate

Procurement data is scattered across systems—ERPs, data lakes, portals, legacy tools, and spreadsheets—creating more than just technical complexity. Without a unified view, strategic decisions slow down and risks increase. To gain real visibility—and unlock the full value of your data—you need to know:

- **How to connect to each system**
- **What data to extract, how to combine and, enrich across sources**
- **How to do it continuously and reliably**

At Sievo, our proven best practices are designed to solve exactly these challenges. We know what data matters, how to extract it securely, and how to combine and enrich it—without burdening your team.



Extract & Integrate

Sievo's best practices to set you up for success

Every company's data landscape is different. To determine the **best method of continuous extraction and integration for your organization**, our data engineers study your specific data source architecture—whether it's a single global ERP or a mix of local instances, data lakes, and third-party tools.

No matter how complex or unique your data landscape is, **Sievo can automatically extract procurement data from virtually any source system**, with no manual effort required from the customer. This is how we do it:

We combine

Deep expertise in ERP structures and procurement logic



Library of proven connectors and templates



Clear data requirements



Continuous monitoring and improvement of the data pipelines

This enables

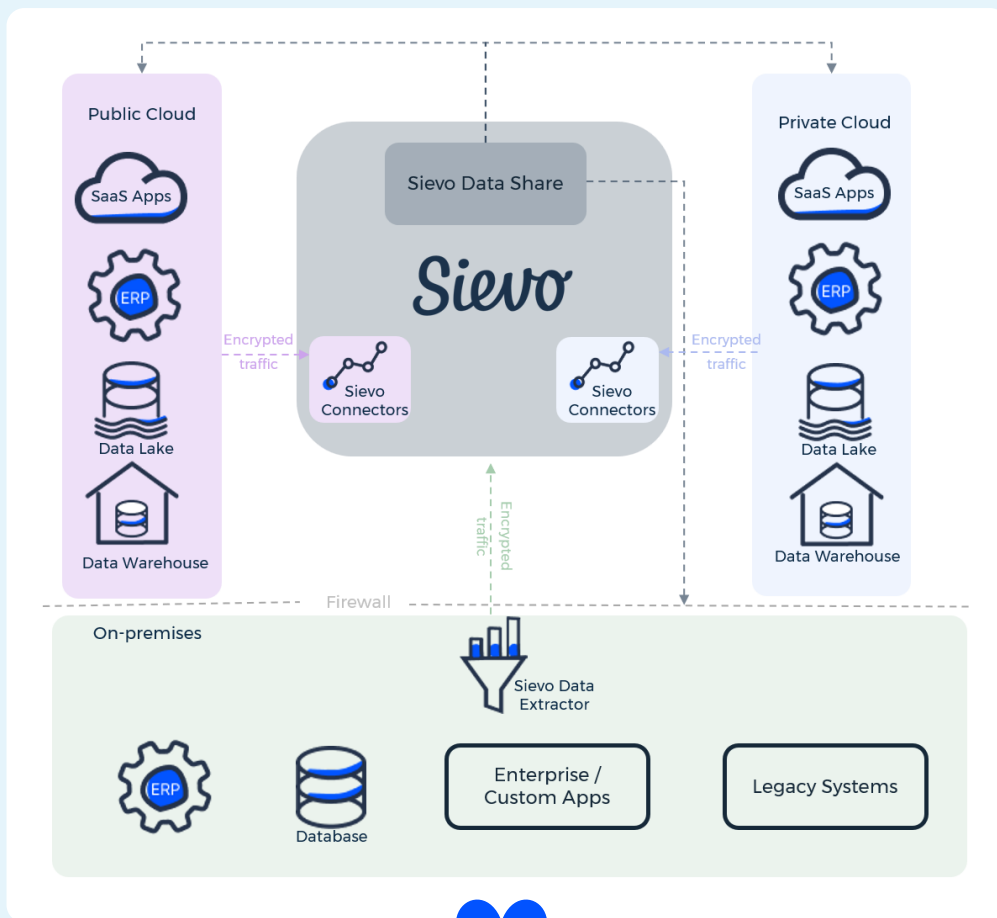
✓ fast implementation

✓ low maintenance

✓ seamless scaling
even when your systems evolve

Automated Data Extractions from all your data sources

- ✓ No data errors, no delays
- ✓ Weekly/monthly refreshes
- ✓ No manual effort by the customer



Don't see yours?
Having integrated with 1060+ different data sources, we are positive we know it.

How to connect to each system

Sievo Extractor & Connectors

Procurement data can be generated and stored across a variety of systems—ERPs, cloud platforms, supplier portals, and more. The first step is understanding where your data lives and selecting the right connector to seamlessly access it.

As IT environments grow more complex, Sievo continuously develops and updates its Connectors. Our dedicated teams ensure compatibility with new systems and technologies—aiming for near one-click implementation across many platforms. This helps you stay ahead with scalable, future-proof data integrations.

For every Connector we develop, we follow a consistent set of core principles to ensure reliable and secure data access:

- **Full Data Control:** No changes are made to your source systems, preserving their integrity and stability.
- **Zero Performance Impact:** Extraction processes are designed to avoid any negative effect on source system performance.
- **Security and Compliance:** All connectors undergo rigorous security assessments to meet enterprise standards and protect your data.
- **Flexible Scheduling:** Customize extraction frequency to match your operational requirements—from real-time to batch processes.
- **Robust Connectivity:** Utilize well-established drivers to ensure stable, high-performance connections to your source systems.
- **Auditability:** Maintain a complete audit trail of all extracted data for transparency and regulatory compliance.

How to connect to each system

Sievo Extractor & Connectors

At Sievo, we tailor our approach based on your unique IT landscape, ensuring fast, reliable, and secure data extraction no matter the source.

On-premise



Enterprise /
Custom Apps



Database

Legacy Systems

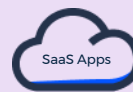
AUTOMATED



Sievo Data Extractor (SDE)

SDE is a mature, proven tool developed by Sievo for efficient and reliable data extraction from a wide range of on-premise ERPs and procurement systems. It pulls raw transaction-level and master data directly from source systems without altering them, ensuring data integrity and minimal impact on system performance. With built-in scheduling, auditing, and security features, SDE provides a seamless, transparent way to collect the detailed procurement data needed for advanced analytics.

Cloud



Data Lake



Data
Warehouse

AUTOMATED



Sievo Connectors

As organizations increasingly leverage cloud ERPs, data lakes, warehouses, APIs and other advanced data products, Sievo continuously develops new Connectors to integrate with these evolving environments. These Connectors enable seamless access to diverse procurement data sources, supporting hybrid IT landscapes and future-proofing data integration strategies. By expanding beyond traditional on-premise ERP systems, Sievo ensures comprehensive procurement data coverage that empowers smarter decision-making across complex, multi-source ecosystems.

What to extract, how to
combine, and enrich across sources

Sievo Data Requirements

Data is extracted by Sievo in its **raw form**, table by table, without linking, or merging at the source. This approach ensures:

- ✓ **Preserved Data Integrity & Traceability:** Original data remains intact, making it easy to track back to its source for accuracy and audit purposes.
- ✓ **Better Adaptability:** All data transformations occur within Sievo's platform, allowing quick and accurate alignment with evolving business needs.
- ✓ **Improved Data Quality & Efficiency:** Fast issue resolution by Sievo experts reduces repeated access requests to source systems when issues arise, minimizing operational impact.

Expert Teams and Data Privacy

Sievo's specialists continuously oversee your procurement data extraction, classification, and consolidation to ensure accuracy and consistency.

Data privacy is a top priority—our processes include anonymization and strict compliance with data protection regulations to safeguard sensitive information at every stage.

What to extract, how to
combine, and enrich across sources

Sievo Data Requirements



✓ **We follow the Procure-to-Pay process to ensure extracted data is relevant**

✗ We do not extract transactions involving financial movements
e.g., intercompany charges, goods transfers, payroll, and settlements

Sievo provides source system-specific requirements where available, or generic requirements that typically include the following key data points:

- **Purchase Orders** (headers, lines, distributions): Enables detailed spend categorization and links invoiced amounts to POs for insight into open commitments.
- **Invoices** (headers and lines): Connects invoices to POs and receipts, providing visibility into payment terms.
- **Purchasing-Related Accounting Transactions**: Captures invoices, credit/debit memos, aligns with

accounting timelines, and consolidates direct and indirect spend.

- **Invoice Payment Transactions**: Links payment details to accounted invoices.
- **Master Data**: Enriches transactions with descriptions and attributes (materials, vendors, accounts), supporting classification, spend analysis, forecasting, supplier management, and sustainability insights.

Enriching across sources: To enhance procurement data further, Sievo applies various enrichment sources, including supplier details (from D&B, Supplier.io, Quantum SBS), CO2 emissions via HS codes, AI-driven payment insights, web-sourced supplier details, and other key attributes.

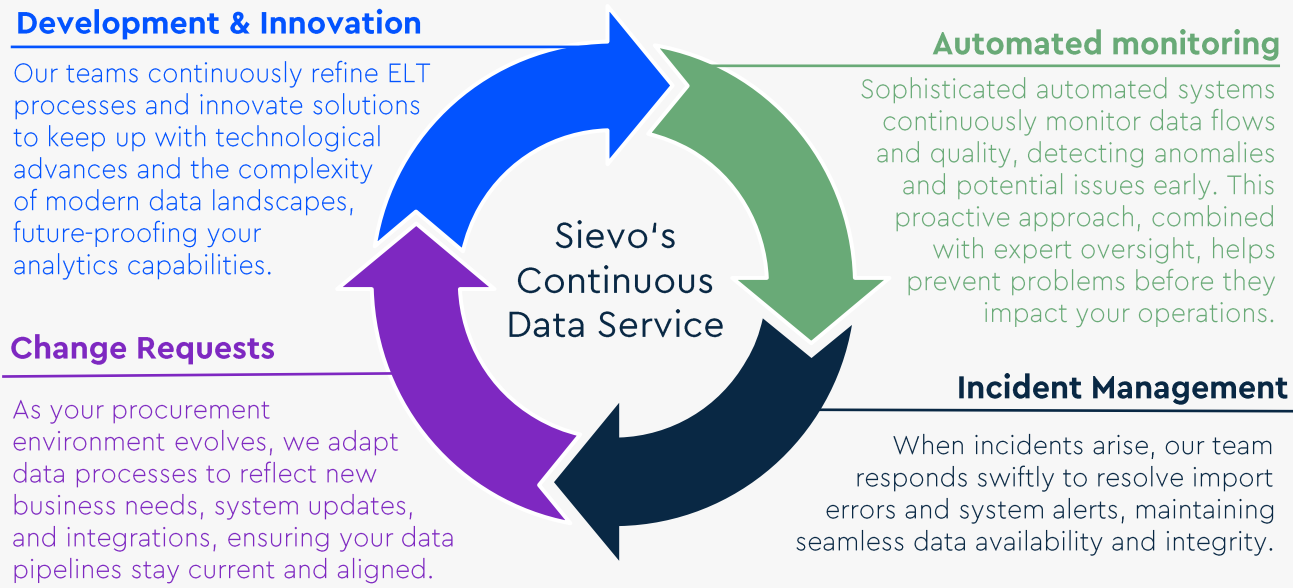
How to do it continuously and reliably

Sievo's Continuous Data Service

Keeping Procurement Data Dynamic and Reliable: Procurement data is constantly evolving, driven by living, ever-changing source systems that generate new, updated, and edited data continuously. Effective management demands ongoing commitment and agility to keep pace with these dynamic data flows. Our continuous data service ensures your procurement data remains accurate, consistent, and actionable—whether

through real-time streaming or scheduled batch updates—tailored precisely to your operational needs and business value.

Together, these pillars create a robust, factory-like operation that guarantees data quality and reliability—empowering smarter procurement decisions in a fast-changing world.



FAQ

Can you integrate with both modern APIs and older systems like on-premise SAP or Oracle EBS?

Yes, Sievo can connect to a wide variety of systems—from modern cloud-based platforms and APIs to legacy systems like on-premise SAP and Oracle EBS. Our approach is flexible and system-agnostic.

Before selecting a method, we always assess your specific environment to determine the most efficient and reliable extraction strategy. For example, while APIs may sound like the ideal solution, they aren't always the best fit—especially in high-volume scenarios or when dealing with data quality or performance constraints. In some cases, traditional file-based or direct database connections provide faster, more stable results.

Our goal is to find the right balance between performance, maintainability, and scalability—tailored to your system landscape.

How much of the extraction is automated vs. manual? Do I need IT involvement, or can business users trigger or schedule extractions?

At Sievo, the extraction process is designed to be as automated and low-touch as possible. Once the data integration is set up, extractions typically run on a fully automated schedule—no manual intervention needed.

Initial setup may require some

collaboration with your IT team to ensure secure access to source systems, but after that, ongoing maintenance is minimal. And clear list of tasks will be provided to your IT teams.

Business users don't need to manually trigger extractions—data is pulled, processed, and refreshed automatically based on agreed schedules.

That said, in some cases where the data is delivered manually by the client, the responsibility to meet delivery timelines and fulfil all data requirements falls fully on your team. This option is technically supported, but not recommended, as it introduces a higher risk of delays and failures—something we've consistently observed across projects over time.

What's the typical time to implement a new data connector?

The time to implement a new data connector depends on the complexity of the source system and the availability of access. For widely used systems—such as SAP, Oracle, or common cloud platforms—our pre-built connectors help accelerate the process, often enabling setup within just a few days. We prioritize fast, efficient, and repeatable integration. Once access is granted and credentials are in place, much of the process is automated—minimizing manual effort and reducing time to value.

At the same time, we recognize that

FAQ

every environment is different. That's why we start by evaluating your specific system landscape to determine the most reliable and scalable extraction method. This ensures we deliver a stable, high-quality integration tailored to your needs—without relying on a one-size-fits-all approach.

How secure is the data during extraction and transfer? Are there built-in encryption, access control, and compliance standards (GDPR, ISO, etc.)?

Data security is a top priority at Sievo throughout the entire extraction and transfer process. We use industry-standard encryption protocols—such as TLS and AES—to protect data both in transit and at rest, ensuring your sensitive information is safeguarded against unauthorized access.

Our products enforces strict access controls and authentication mechanisms to limit data access only to authorized personnel. Additionally, Sievo complies with major data protection regulations and standards, including GDPR and ISO certifications, to meet your organization's governance and compliance requirements.

By combining robust technical safeguards with ongoing security audits and best practices, Sievo ensures your data is handled securely at every step. You can read our Information [Security Commitment](#) for more details.

Can clients get their data back?

Sievo's Data Share provides a simple and reliable way for clients to further utilize cleansed and enriched data outside of Sievo.

This includes both transactional and master data enriched with Sievo categorizations, supplier parenting, CO₂ emissions data, and other value-added attributes.

Through Data Share, clients automatically integrate the data provided through SFTP or Azure Data Share, — daily, weekly or ad-hoc bases, pushing manually. This capability supports you in leveraging Sievo's data across different functions—such as finance, procurement, and supply chain—ensuring consistent, high-quality data is available enterprise-wide to maximize the impact of your procurement insights.

What are Sievo's capabilities in handling multi-ERP environments or company mergers?

Sievo is built to handle complex, multi-ERP environments with ease. Whether your organization operates multiple ERP systems across different business units or is going through a merger or acquisition, our products and teams can extract, consolidate, and harmonize data from diverse sources into a unified view.



FAQ

Our flexible connectors and scalable architecture allow seamless integration across various ERP systems—on-premise or cloud-based—ensuring consistent, accurate data aggregation regardless of system complexity. This enables you to gain a comprehensive and consolidated understanding of spend and procurement performance across your entire organization.

In what ways does Sievo's approach to data integration accelerate time-to-value compared to building in-house?

Integrating multiple data sources, combining and enriching them continuously requires significant expertise and investment. At Sievo, we have over 100 skilled experts dedicated to managing diverse data sets and connectors. Building this capability in-house often takes months of development plus ongoing updates, especially as new data sources and technologies constantly emerge.

We're passionate about diving into the complexity of procurement data—because we genuinely love solving the untangling intricate challenges so your IT team doesn't have to. By taking on the heavy lifting, we help you cut unnecessary costs and minimize risk. While we focus on delivering clean, enriched, and reliable procurement data, your team is free to chase bigger goals, drive strategic initiatives, and unlock faster, more actionable insights that deliver real value—sooner.

Still have questions? Let's talk!

BOOK DEMO

About the authors



Burcu Ser

Product Manager, ELT

Burcu is a Product Manager for Sievo's ELT, the backbone of Sievo Data. With a strong focus on continuously adapting new technologies, she champions the ELT approach to ensure data integration is flexible, secure, and high-performing. Burcu is passionate about demystifying the "black box" of data integration and delivering solutions that are both powerful and easy to adopt.

Mira Lindroos

Head of Data Engineering

As Head of Data Engineering, Mira has extensive experience navigating complex customer data landscapes, from on-premise systems to modern cloud environments. Mira's expertise covers the full data lifecycle, from designing integration architectures and methodologies to ensuring the security, effectiveness and efficiency of data pipelines utilizing modern cloud technologies like Azure and Databricks.

About Sievo

Sievo provides actionable procurement analytics based on data you can trust.

Designed for large enterprises with \$1B+ in revenue, loved by global companies featuring Mars, Levi's, and Deutsche Telekom, and praised by key analysts, we provide a future-proof solution with immediate ROI.

We empower Procurement, Finance, IT, and Sustainability teams to overcome their data chaos and capture all insights, drive bottom-line savings, improve ESG performance, and streamline budgeting and forecasting.

Sievo goes beyond world-class analytics and dashboards. We help our customers close the data-to-action gap with reliable insights, recommendations, and benchmarks by combining internal, third-party, and cross-customer data.

By processing spend data equivalent to 2% of the world's GDP annually, we enable fast, informed decision-making and deliver the industry's highest data quality with end-to-end data accountability.

We call it procurement excellence – but you can call it Sievo.

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Learn more at sievo.com