



# IRIS Foundry

## Industrial Data Operations Platform

### Unify industrial data and scale industrial AI

As industries continue to embrace digital transformation, the role of Industrial DataOps becomes increasingly crucial. Industrial organizations must unify IT, OT, and engineering data to optimize their current operations while also laying the groundwork for productizing industrial AI applications. The journey of Industrial DataOps creates new possibilities across operations by treating data as an asset, providing a scalable foundation to increase process efficiency, reduce unscheduled asset downtime, enhance connected worker capabilities, and more.

## Challenges faced by manufacturers

- **Data remains siloed and inaccessible:** Accessibility of industrial data poses a significant hurdle. Often confined within disparate systems, accessing the right data is laborious for data scientists and application builders when building, deploying, and scaling industrial solutions.
- **Volume of data is rapidly increasing:** With an exponential increase in data generation, managing industrial data at scale is becoming increasingly difficult. Current estimates suggest data generation will increase by 50% over the next 2 years.
- **Industrial data lacks context:** Current strategies to consolidate industrial data into a data lake or lakehouse result in data swaps unusable by onsite personnel or data science teams. Without context, finding and verifying trusted data becomes a near-impossible task.
- **Digital initiatives are moving too slowly:** Many digital initiatives remain stuck, unable to scale beyond pilots or one-time use case deployments. Achieving digital initiatives at scale is hampered by inconsistent naming conventions, vendor lock-in, and generations of equipment and assets with varied protocols and available information.
- **Industrial AI is missing production scale:** Predictive AI models cannot be deployed at scale without tedious manual processes to explore and clean data and time-consuming processes to test and iterate on models. AI/ML platforms lack industrial domain expertise. Generative AI chatbots are limited to search and code writing, lacking the industrial context required to solve operational use cases.
- **Manufacturing workflows remain largely unchanged:** Traditional DataOps solutions require custom applications to be developed on top of them. Even with successful industrial data management initiatives, value capture requires pre-built and composable industrial applications that onsite teams and people can easily adopt to make faster, data-driven decisions.

## SymphonyAI's innovative approach for industry

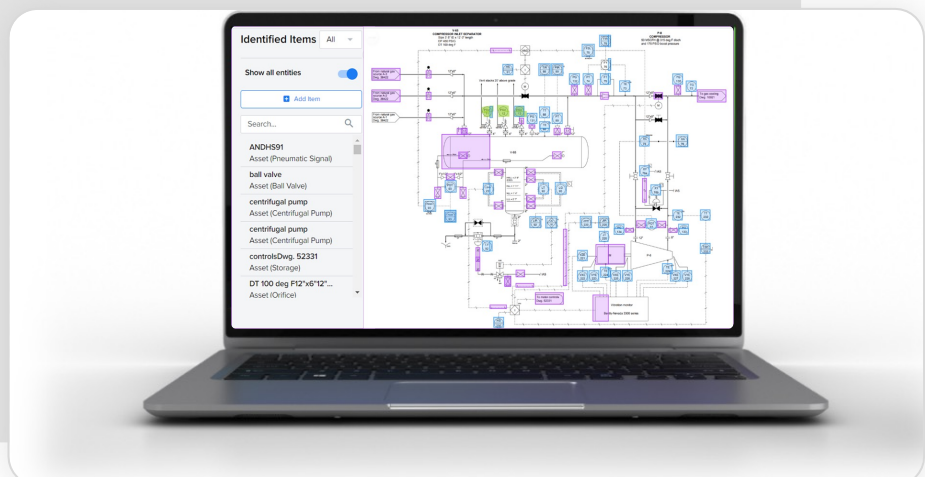
IRIS Foundry provides the differentiating building blocks of industrial data management and governance needed to deploy AI-embedded manufacturing solutions at enterprise scale. IRIS Foundry has prebuilt connectors to extract data from IT, OT, and engineering data sources into polyglot data stores to ensure versatile handling and integration of multiple data contexts.

Data is organized into a structured asset hierarchy using AI-powered P&ID ingestion or through an existing asset historian framework. This process, enhanced with sophisticated contextualization services, automatically maps data into a unified namespace. The result is a dynamic industrial knowledge graph, simplifying information access and navigation.

The IRIS Foundry knowledge graph is the foundation for enriched analysis and insights. It empowers IRIS Copilots for user-based interactions, guiding the exploration and understanding of complex data landscapes. Industrial applications built on IRIS Foundry adhere to data governance, audit, and security standards.

To adopt industrial AI, IRIS Foundry offers productized generative and predictive AI capabilities, leveraging the Industrial LLM (large language model), role-based copilots, and ready-to-deploy-and-use domain models for a wide range of manufacturing industries. Robust out-of-the-box, industrial applications use these capabilities to improve process efficiency, reduce unscheduled asset downtime, and enhance connected worker decision-making.

Additionally, IRIS Foundry offers a low-code, drag-and-drop user experience, easy integration with programming tools, and an ability to deploy in various modes ranging from SaaS to customer-hosted models in a private cloud. Built on a lightweight architecture with cloud and edge computing in scope, the install footprint is synergistic with manufacturers' operational technology (OT), information technology (IT), and external data ecosystems.



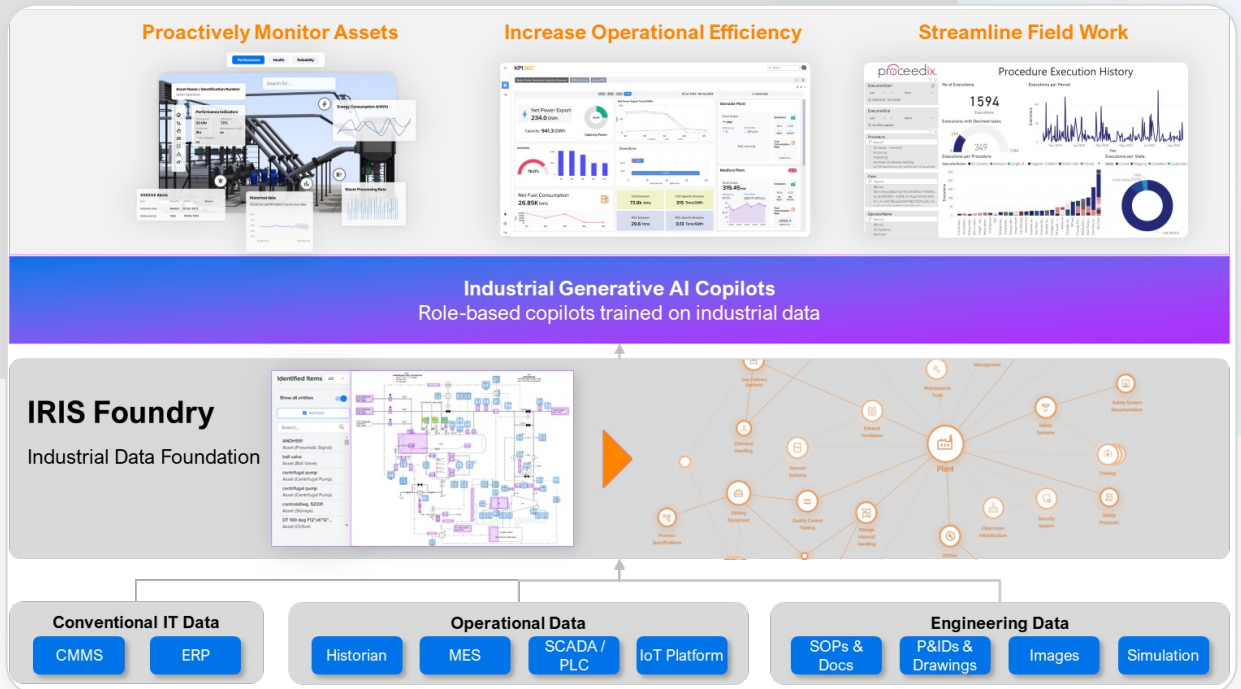
*P&ID Ingestion in IRIS Foundry*



## Solution highlights

- 1. Industrial workflow applications:** Prebuilt applications for connected workers, operational efficiency, and asset performance are available out of the box. Tailor applications to the specific needs of each site with a composable architecture.
- 2. Industrial data connectors:** Connect seamlessly to various data acquisition systems with prebuilt connectors to common industrial sources.
- 3. Asset and process templates:** Use AI-powered services to give context to industrial data by rapidly mapping industrial data to relevant assets and processes.
- 4. Automated P&ID Ingestion:** Recognize and interpret drawing symbols, text, and process patterns in P&IDs with machine learning and vision AI algorithms to identify machines, sensors, piping, and other components. Create an asset hierarchy from this intelligence.
- 5. Unified namespace:** Create a single digital representation of operations and provide a foundation for adopting pre-built solutions or building tailored applications through a robust and open API.
- 6. Industrial knowledge graph:** Interact with unified data in a way that is easy to understand, facilitating data-driven decision-making and insights through charts, graphs, and other visual representations.
- 7. Real-time KPI monitoring:** Stay informed about operations with real-time Key Performance Indicator (KPI) monitoring. Send instant alerts, enriched with contextual information, in a unified dashboard.
- 8. Industrial Copilot with generative AI:** Simplify the interaction with plant data using the world's most potent, explainable, and reliable Industrial Copilot. Using natural language prompts, ask questions and generate visualizations, forecasts, and reports in your language.
- 9. MLOps, continuous integration, continuous deployment:** Ensure hassle-free integration of updates and feature enhancements without burdening end-users or IT staff, maintaining a continuous improvement cycle.
- 10. Built for enterprise-wide collaboration:** Enhance collaboration across your organization with seamless features and integrations, eliminating bottlenecks and communication gaps.
- 11. Composable and non-disruptive:** Synergistic to existing ecosystems in an open environment. Deployable on-premises, in a private cloud, or hosted as a SaaS for full deployment flexibility.

# IRIS Foundry solution overview



## About SymphonyAI

SymphonyAI is building the leading enterprise AI SaaS company for digital transformation across the most critical and resilient growth verticals, including retail, consumer packaged goods, finance, manufacturing, media, and IT/enterprise service management. SymphonyAI verticals have many leading enterprises as clients. Since its founding in 2017, SymphonyAI has grown rapidly to 3,000 talented leaders, data scientists, and other professionals. SymphonyAI is an SAIGroup company, backed by a \$1 billion commitment from successful entrepreneur and philanthropist Dr. Romesh Wadhvani.

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