

Solving Chemical challenges with IRIS Foundry

From batch to continuous processing—IRIS helps chemical teams unify OT/IT data, detect issues early, and turn insights into safe, compliant action.

! The problem

Chemical operations struggle with:



Corrosion and asset integrity risk (reactors, heat exchangers, compressors, rotating equipment) where failures create major safety, environmental, and production impact



Siloed OT/IT across plants (DCS, historians, LIMS, quality and maintenance systems) that slows anomaly detection, troubleshooting, and decision-making



Batch quality and compliance pressure — deviations drive scrap, rework, and emissions, often with uneven expertise across sites

✓ The answer

IRIS turns chemical plant data into action:



IRIS Foundry: unifies DCS/historian + sensor + LIMS/lab/CMMS data into one contextualized foundation for faster detection and root cause



IRIS Forge: builds operator/reliability apps and dashboards fast (prompt/no-code), with governed deployment and work-order support



IRIS Flows: orchestrates AI agents into workflows (detect → diagnose → recommend → route), with human-in-the-loop and auditability

Outcomes at a glance

- Fewer stoppages: predictive alerts cut **unplanned downtime 20-50%**
- Higher yield: tighter specifications and batch optimization lift **production yield 1-5%**
- Productivity: AI-driven asset insights improve **productivity 10-30%** across chemical plants and distributed teams

Time to value: first unit live in weeks using IRIS Foundry's prebuilt asset and performance templates.

The IRIS advantage: accelerated ROI, at enterprise scale

IRIS Foundry contextualizes and organizes operational data for scalable insights and future-ready AI applications, building a foundation for continuous improvement.

How it works



Connect and contextualize:

Bring operational data into one organized view using IRIS Foundry; then automatically build a relationship map of assets and processes so AI understands your operations.



Analyze and predict:

Apply predictive and prescriptive analytics with industrial models to surface risks, root causes, and next-best actions.



Orchestrate and automate:

Use IRIS Flows' AI agent builder to compose and deploy agents, connect them into multi-step workflows with human-in-the-loop, and auto-route tasks and approvals.



Engage in the flow of work:

Expose insights and actions directly inside your collaboration tool of choice, including Teams and Microsoft 365 via MCP for secure, auditable execution.

Platform components



IRIS Foundry: Industrial DataOps platform with prebuilt asset templates for your organized view, shared terminologies, and relationship map, plus connectors into OT and enterprise systems — so you don't start from scratch.



IRIS Flows: AI agent builder for industrial operations: design agents with low-code or natural language, start fast with hundreds of prebuilt agents, and orchestrate multi-agent workflows with governance and human-in-the-loop.



IRIS Forge: Studio to build intuitive dashboards, apps, and role-based copilots quickly.



Industrial LLM: AI model tuned to manufacturing that explains, recommends, and answers in plain language.

Why SymphonyAI for industrial?

- **Proven scale:** 3PB/year of industrial automation data processed across deployments
- **Contextualized AI:** Industrial LLM and role-based copilots tuned for manufacturing personas
- **Accelerated value:** Fast onboarding, flexible deployment, and blended models for actionable insights.

What's at risk if you wait?

With first value in weeks, waiting only compounds downtime, energy waste, and emissions — while faster adopters lock in a lasting performance and margin edge.

[Learn more](#)