

Manufacturing Data Infrastructure and Intelligence

Maximize the potential of your data to make smarter business decisions

Cognizant brings together an unmatched team of GMP experts with in-depth knowledge of Manufacturing 4.0 technologies and data strategies to drive digital transformation in data infrastructure and intelligence. As your trusted partner, we offer a wide range of services that cater to data collection, contextualization, visualization, advanced analytics, cloud ingestion and managed services, specifically tailored to meet the needs of the life sciences industry.

Our data strategies are designed to help you modernize your manufacturing systems, drive sustainable innovation, and enable access to data from a single source of truth, which in turn, delivers real-time insights and improved business outcomes.

Understanding the importance of maintaining data integrity, we provide quality assurance and validation solutions that free up your resources and help ensure efficient project delivery and regulatory compliance.

At Cognizant, we also partner with industry leading data historian and analytics companies to provide you with the best-in-class digital technology solutions that will help you maximize your manufacturing systems and software. As a Global Alliance Partner of AVEVA and an Endorsed System Integrator for AVEVA PI Systems, Cognizant brings industry expertise, PI System knowledge and a wide range of technologies to deliver value-added solutions to your operations.



Gain better access to your data

Building your industrial data infrastructure

Modernize how you source, interpret and contextualize your data to become a data-driven enterprise. We evaluate, design, and build data infrastructure to access and maximize the value of the data locked away in your pre-existing manufacturing automation systems such as SCADA, DCS, and PLC. Our team will assess and integrate your systems so you can focus on using your data to cut costs, accelerate innovation and improve product quality.

Our expertise, your peace of mind

Leverage our global network of AVEVA PI certified consultants with 24/7/365 support so you can focus on growth. Our managed services team can provide audit trail reports, routine health checks for preventative measures and prescriptive maintenance of your data infrastructure while also implementing a robust release management strategy that optimizes critical data-flow, and reduces system downtime.

Unleash the power of your data through advanced analytics

Use today's data to forecast tomorrow's success. No matter what stage you are at in your data journey, we can help you implement, scale, and support your data analytics platforms, employ artificial intelligence (AI) and machine learning (ML) solutions, or create real-time dashboards and reports. Let us help you leverage your data to accelerate innovation, improve production capabilities and reduce costs.

Data transfer made easy

Cognizant's historian data egress solution, ODIN, securely transfers real-time data to cloud-based platforms without extra burden to your existing data systems. Compatible with both AVEVA PI and AVEVA Historians, ODIN aggregates, filters, contextualizes, and delivers formatted data securely and efficiently via a webbased dashboard. Eliminate file transfer, data silos, IT implementation costs and lost productivity – with one product.

Meet quality standards, maintain excellence

Changing technological innovation and quality amendments make constant adaptation necessary. Our team delivers internal quality validation and compliance for our clients to fully comply with **ALCOA+ principles**. Let us free up your resources by providing you with effective quality assurance solutions that help ensure swift, successful project delivery, pristine data integrity and impeccable regulatory compliance.

Global AVEVA endorsed system integrator for PI systems

As a Global Alliance Partner of AVEVA, Cognizant brings industry expertise, PI System knowledge and a wide range of technologies to deliver value-added solutions to your operations. Utilize Manufacturing 4.0 initiatives through the PI System to go from datastarved to data-rich and share reliable, real-time data across your enterprise.

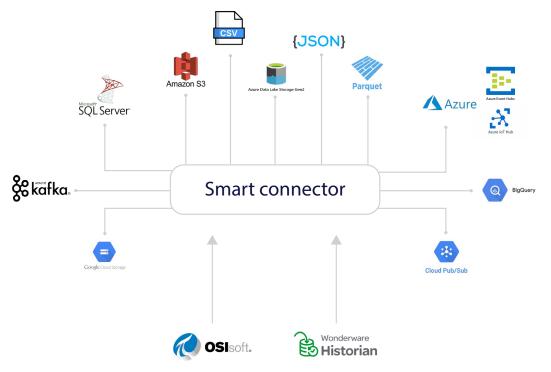
Digitally transform your manufacturing with our software products and accelerators

- 1. Learn how our visualization products can help you simplify, streamline and optimize your plant for higher efficiency and lower costs.
 - Built to ISA 18.2, Alarm Rationalization & Management (ARM) lets you monitor and configure your plant alarms in one centralized system, preventing alarm overload and misconfiguration for more control over your plant.
 - **Carbon Cost Control** allows you to visualize consumption trends, identify areas of waste and make better operational decisions.
 - Batch Cost Analyzer enables you to optimize batch production, increase throughput and reduce costs.

- 2. Our business process solutions are ready-made for use to solve your operational intelligence needs.
 - Automate your **Continuous Process Verification (CPV)** and continuously validate if your process is in control, adhere to regulatory compliance, perform in-built data analysis and reporting.
 - Application Lifecycle Management (ALM) provides a framework of procedures, work instructions, design documentation and a full-spectrum electronic test library that can be used with electronic test systems.
- 3. Use our developer technologies to support your developer teams, or to accelerate your own product development.
 - **Livepoint** is an independent, secure and scalable platform for complex real-time and historical analysis of business and process data.
 - Our comprehensive AVEVA data integration library provides advanced capabilities and native support for legacy components such as AVEVA PI Batch.
- 4. Whether you need to transform your data, or acquire it with more context, our data integration products let you accelerate operational insight for fast and easy results.
 - **Event Frame Linker** allows you to create logic to correlate data from Manufacturing Execution Systems, Batch Execution Systems and custom event frames.
 - **AF Template Synchronizer** eliminates the administration burden of distributing and synchronizing data catalog and templates across all AVEVA PI Systems.

5. Get ahead with **ODIN** our Historian data egress solution

- Equipped with an easy-to-use, web-based interface, ODIN allows for real-time and on-demand data egress to enable machine learning and supports multiple source and destination platforms. ODIN is compatible with both AVEVA PI and AVEVA Historians, allowing efficient and secure transfer of valuable data from multiple historians to cloud-based destinations including Amazon S3, Microsoft Azure Data Lake Gen 2, IOT Hubs, Event Hubs, SQL Server and more.
- The complex nature of data transfer is now made easy as ODIN automatically aggregates, filters, contextualizes and delivers formatted real-time data efficiently via a user-friendly graphical user interface (GUI) that enables ease of monitoring job success. In-built auditing and distributed agent's nodes also help ensure configurations are monitored for compliance, while transfers are seamless, secure and scalable.



Key statistics:

AVEVA

Endorsed system integrator

150+ Client across

the globe

120+ AVEVA PI

Certified consultants

2,000+ Projects across over 60 countries

220+ Pl trained consultants

20

Working with the top 20 pharma companies globally

Why Cognizant?

Cognizant's Life Sciences Manufacturing group provides end-to-end digital transformation solutions to the life sciences industry that keep systems running, improve supply chain efficiencies, and support clients' Manufacturing 4.0 initiatives. We specialize in delivering solutions and services across batch automation, data infrastructure and intelligence, MES, lab automation, CSV and digital technologies to manage, control and optimize manufacturing. Our team has deep life sciences expertise, and we work closely with our clients to achieve a shared vision of advancing science and improving patient outcomes.

Cognizant's global network comprises more than 30,000 skilled life sciences professionals who work across global delivery centers in 37 countries to deliver and support our clients' digital transformation initiatives.

Through automation, MES, cloud, data and digital technology solutions, we support our clients from project conception through to completion, across the entire manufacturing lifecycle. Our suite of solutions enable better connected IT and OT systems and more informed, data-driven decision making—all while adhering to Good Manufacturing Practices (GMP).

To find out how Cognizant can help life sciences manufacturing organizations move into the digital age, contact us today.



Cognizant (Nasdaq-100: CTSH) engineers modern businesses. We help our clients modernize technology, reimagine processes and transform experiences so they can stay ahead in our fast-changing world. Together, we're improving everyday life. See how at www.cognizant.com or @Cognizant.

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