



Brochure

Unlock Value from Industrial Data for Pharma Manufacturing

AspenTech Inmation™





Unlock the Hidden Value of Production Data

Today's leading pharmaceutical companies are making better, faster business decisions using data-driven information. How? They are unlocking the hidden value of their operations data using technology from AspenTech. AspenTech Inmation connects people, machinery, plants, logistics and products so that they can better communicate and collaborate using their manufacturing data.

To connect these different strands, a unified, flexible, high-performance system provides corporate-wide, real-time, information flow. AspenTech Inmation securely streams data from manufacturing, process control and IT systems and contextualizes it to transform it.

AspenTech Inmation is a real-time, scalable OT/IT data connectivity, storage and contextualization platform with enterprise historian capabilities. It liberates and organizes operational data from multiple data sources without disrupting production systems.

Providing connectivity to operational data from multiple data sources, AspenTech Inmation enables decision-makers across the plant and around the world to have access to actionable information any time, any place and on any device they choose.



Connected Information Management without Vendor Lock-In

AspenTech Inmation technology offers real-time operations system integration. As production data proliferates, seamless integration between the control systems, MES and corporate IT is necessary. AspenTech Inmation responds with a middleware architecture that was designed with unlimited scalability in mind. The architecture of a software system consists of more than just interfaces, functions and data handling. It implements the vision and direction of the developers, ultimately defining the usability and the value proposition for the client. AspenTech Inmation's architecture is built around this vision so that organizations can leverage existing investments in servers, endpoints, interfaces while assuring that it can respond to technological changes to future-proof investments in technology today.

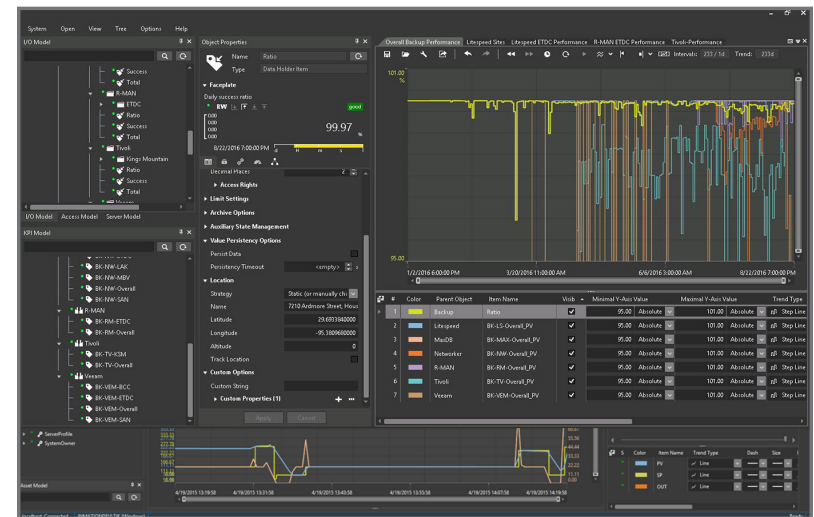


Figure 1. AspenTech Inmation DataStudio is designed to be a secure and singular interface to access your entire data source network.

What is AspenTech Inmation?

The heart of AspenTech Inmation is an engine processing all data in the background in order to execute the necessary consolidation into data-driven information. All operational components and IT systems can be connected, across the plant, enterprise network infrastructure and geographic locations.

With AspenTech Inmation, everything can be seen at a glance. You can review production and process data in real-time via integrated performance dashboards. You can visualize your key performance indicators, on the device of your choice, via desktop or mobile.

AspenTech Inmation DataStudio, the main client application for AspenTech Inmation, is designed to be a secure and singular interface to access your entire data source network. It provides full and rapid access to your real-time and historized data with a suite of dynamic and effective visualization options. The intuitive interface and customizable toolset provides both casual users and power users the ability to create, configure and control their own workspace. Management of user profiles, security settings and access to shared workspaces can all be configured through AspenTech Inmation DataStudio, providing on demand information to operational decision-makers.

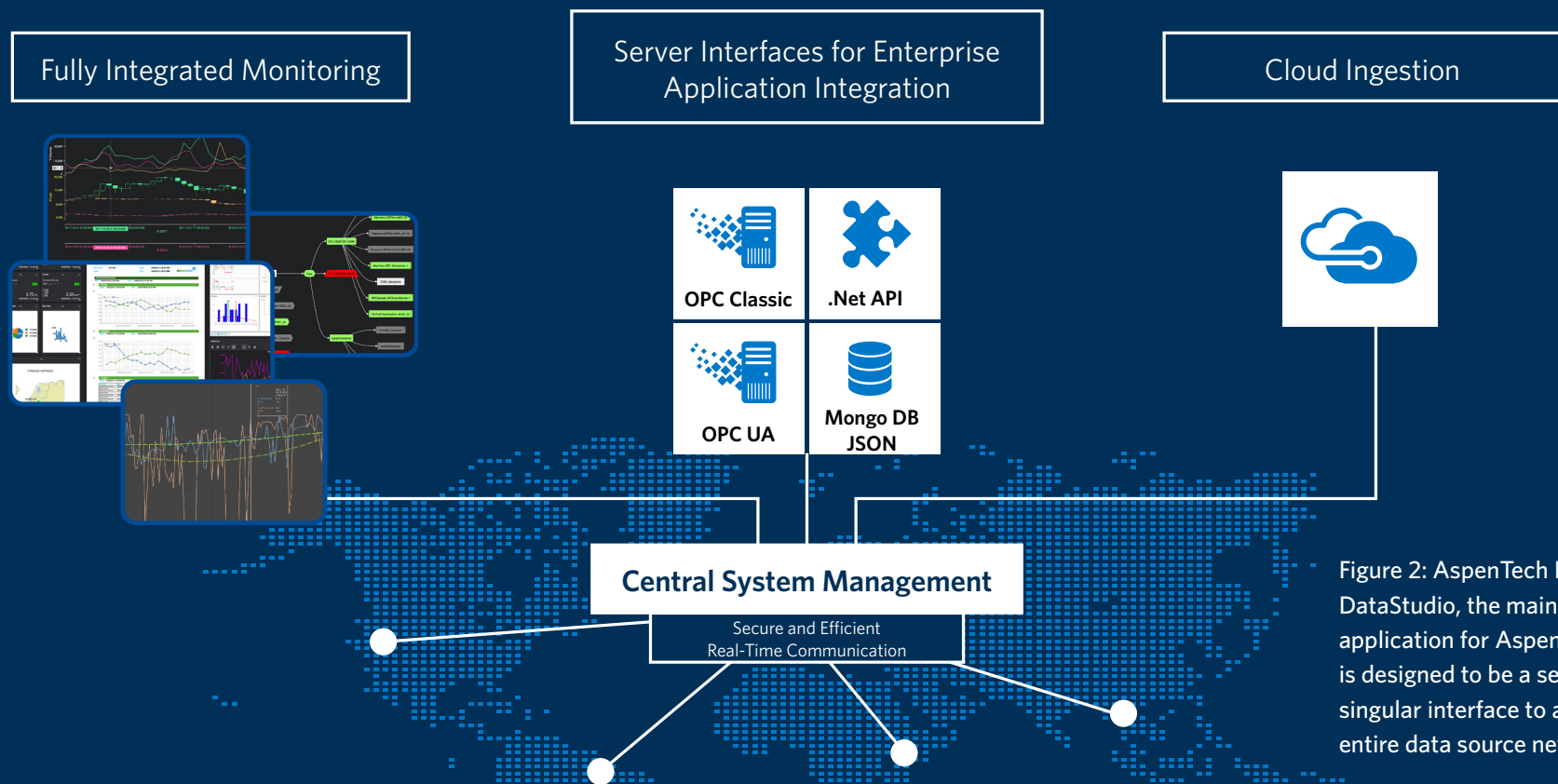


Figure 2: AspenTech Inmation DataStudio, the main client application for AspenTech Inmation, is designed to be a secure and singular interface to access your entire data source network.

Why AspenTech Inmation?

AspenTech Inmation supplies a true real-time information infrastructure to companies and organizations of any size and operational complexity.

Any industry, manufacturing, processing, supplying goods and services, can leverage existing data sources from any location to form a global data backbone for human and machine analysis, ultimately creating fast data systems and real-time business intelligence.



Figure 3. The AspenTech Inmation DataStudio Engineering Workbench.

Key Features

- Centrally managed for easy upgrades, support
- Supports cloud-based or mixed architectures
- Works in any cloud environment
- Open Interfaces: WebAPI, OPC-UA interfaces enable connectivity to visualization and analytics tools
- Embedded scripting for computing at the edge, data contextualization and more
- Designed by OT professionals for modern IT to avoid disrupting OT systems
- Created using a 'service-based' architecture with modern information technology
- OT data source and system vendor agnostic: DCS, PLC, historians, Lab systems, maintenance systems, etc.
- Supports most data types/structures: Process data, alarms/events, files, documents, ODBC, XML, TCP streams, video/image, text, etc.
- Scalable from very small (a few CPU cores) to enterprise scale (1000s of CPU cores)
- Supports fast, high-resolution data (sub millisecond, if required)
- CPU core-based

AspenTech Inmation Success Stories



AspenTech Inmation provides the technological backbone to support the smart manufacturing initiative for all of Boehringer Ingelheim's worldwide operations. AspenTech Inmation guarantees to enhance its product according to the challenging requirements of GxP in the regulated environment of pharmaceutical production, facilitating Boehringer Ingelheim's feature requests in particular.



AspenTech Inmation forms the "digital glue" required to integrate any equipment, automation system, MES and other operational data sources. It acts as a single, real-time data platform for the entire business unit. Bayer has seen a reduction of downtime, waste and other inefficiencies.



AspenTech Inmation supplies full data integration for SIG's next generation food packaging lines. Full standardization by using OPC UA across all equipment components, partially composed of third-party supplies. Creating a holistic packaging line address space in real-time, including full data historization for hundreds of thousands items produced per day, different analytics and reporting.



AspenTech Inmation facilitates full integration of all of Philips' manufacturing equipment for shaver head production. Our historian with highest performance and throughput capabilities enables in and out of process analytics of high volume discrete manufacturing data (involving sub second and even sub millisecond sensor data).



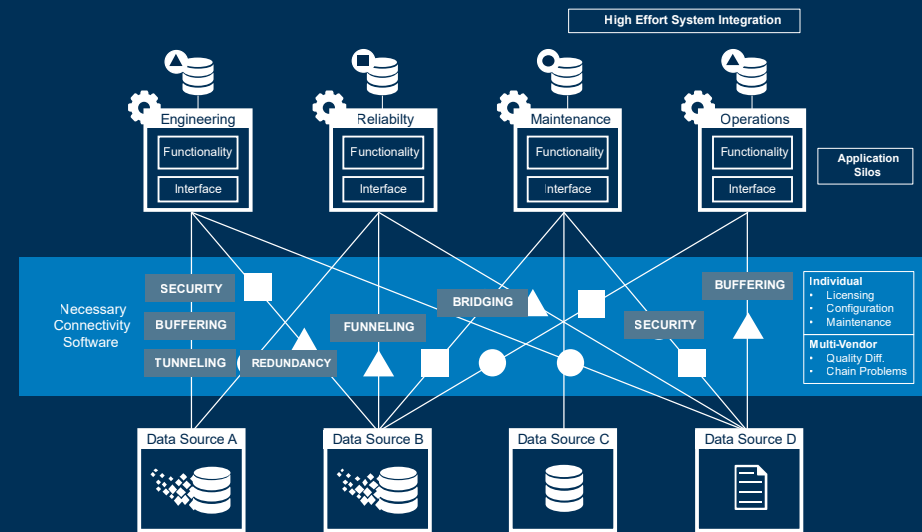
AspenTech Inmation securely streams real-time data from hundreds of connected interfaces into a centrally managed cluster. AspenTech inmation's endpoints provide pre-cleaned and contextualized data to various Analytics and Visualization tools. The central approach empowers many value added use cases, such as Predictive Maintenance, Asset Effectiveness, Reliability Center and Augmented Reality.

A Solution for the Digital Transformation of Industrial Organizations

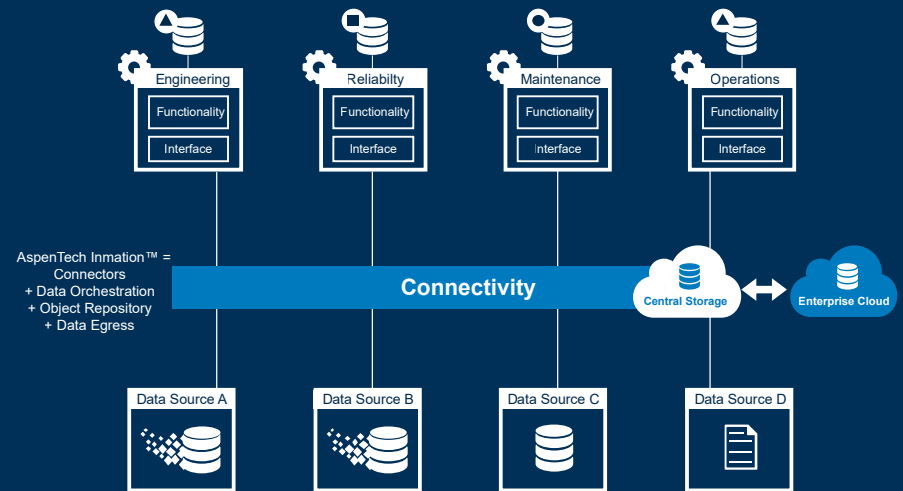
AspenTech Inmation effectively abstracts or disconnects the data from the consuming applications via the object data store. This is a scalable data architecture for industrial organizations, eliminating much of the complexity associated with data connectivity. Where cloud integration is required, AspenTech Inmation addresses all OT data connectivity challenges, resulting in straightforward connectivity for operations.

With this architecture, the largest installed systems in the world are greater than 1000 computer cores and ingest millions of data streams spanning global enterprises. The BASF implementation spans 200 operations consolidating ~10 million independent data streams from their industrial sites spanning four continents. This said, small systems can be comprised of fewer than half a dozen computer cores and ingest a few hundred data points from a single data source. Unlike traditional layered software architectures, the micro-service-based architecture of the platform makes the system very easy to scale.

AspenTech Inmation fits firmly as a middleware solution between industrial OT and enterprise IT environments which eliminates the connectivity challenges industrial organizations have when scaling their digital programs across their enterprise. Today, in most industrial organizations, there is a bottleneck in the data flow between the OT data systems and the enterprise cloud. Our solution addresses these issues specifically and is differentiated in this manner.



Example Legacy OT Data Architecture



OT Data Connectivity Concept using AspenTech Inmation

Figure 4: Legacy OT data architecture vs data connectivity using AspenTech Inmation.



About AspenTech

Aspen Technology, Inc. (NASDAQ: AZPN) is a global software leader helping industries at the forefront of the world's dual challenge meet the increasing demand for resources from a rapidly growing population in a profitable and sustainable manner. AspenTech solutions address complex environments where it is critical to optimize the asset design, operation and maintenance lifecycle. Through our unique combination of deep domain expertise and innovation, customers in capital-intensive industries can run their assets safer, greener, longer and faster to improve their operational excellence.

[aspentech.com/pharma](https://www.aspentech.com/pharma)

