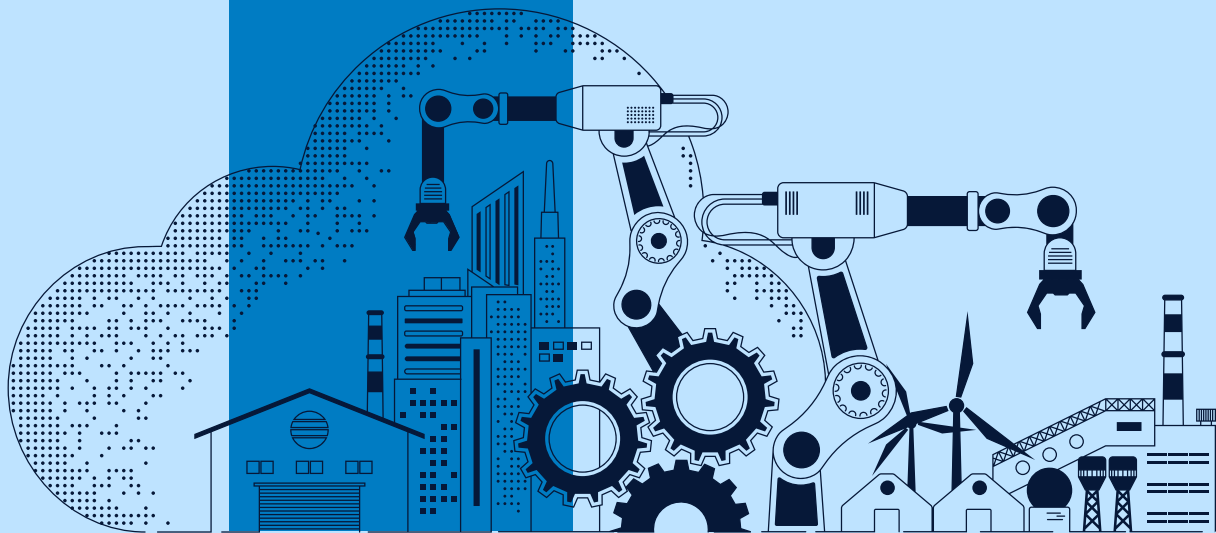# INFOSYS CONNECTED OPERATIONS ON CLOUD

Harmonized Cloud-based Landscape for Manufacturers to Bring Stability, Reliability, and Visibility into their Operations

Infosys®
Navigate your next

Cloud is Empowering Manufacturing Enterprises to Reimagine a Connected Future

Manufacturers have traditionally leveraged the cloud as the stepping stone to enhanced agility, scalability, and cost effectiveness. Now, it is time to scale this transformation further, by optimizing the operations through modern solutions that harness the potential of cloud to unlock stability, reliability, and visibility. It is also about energizing the core and innovating at scale, thereby driving business resilience.

The Pathway to a Smart Factory

Within the manufacturing ecosystem, connectivity is not a new concept. Amidst an increasing convergence of the digital and physical realms through Industry 4.0 adoption, however, connected operations have become one of the most crucial differentiators. The COVID-19 pandemic has accelerated the need for digital production operations across the supply chain even further.

To transform traditional shop floors into a future-ready smart factory, manufacturers require the inherent materials, machines, and processes to collate and anaylze real-time data and support data-driven decision-making. More and more manufacturing enterprises are leveraging connected operations solutions to:

- Navigate remote operations and monitoring at ease

- Facilitate connected processes with higher degrees of automation

- Optimize asset and resource utilization

- Predict the possible impact on operations proactively

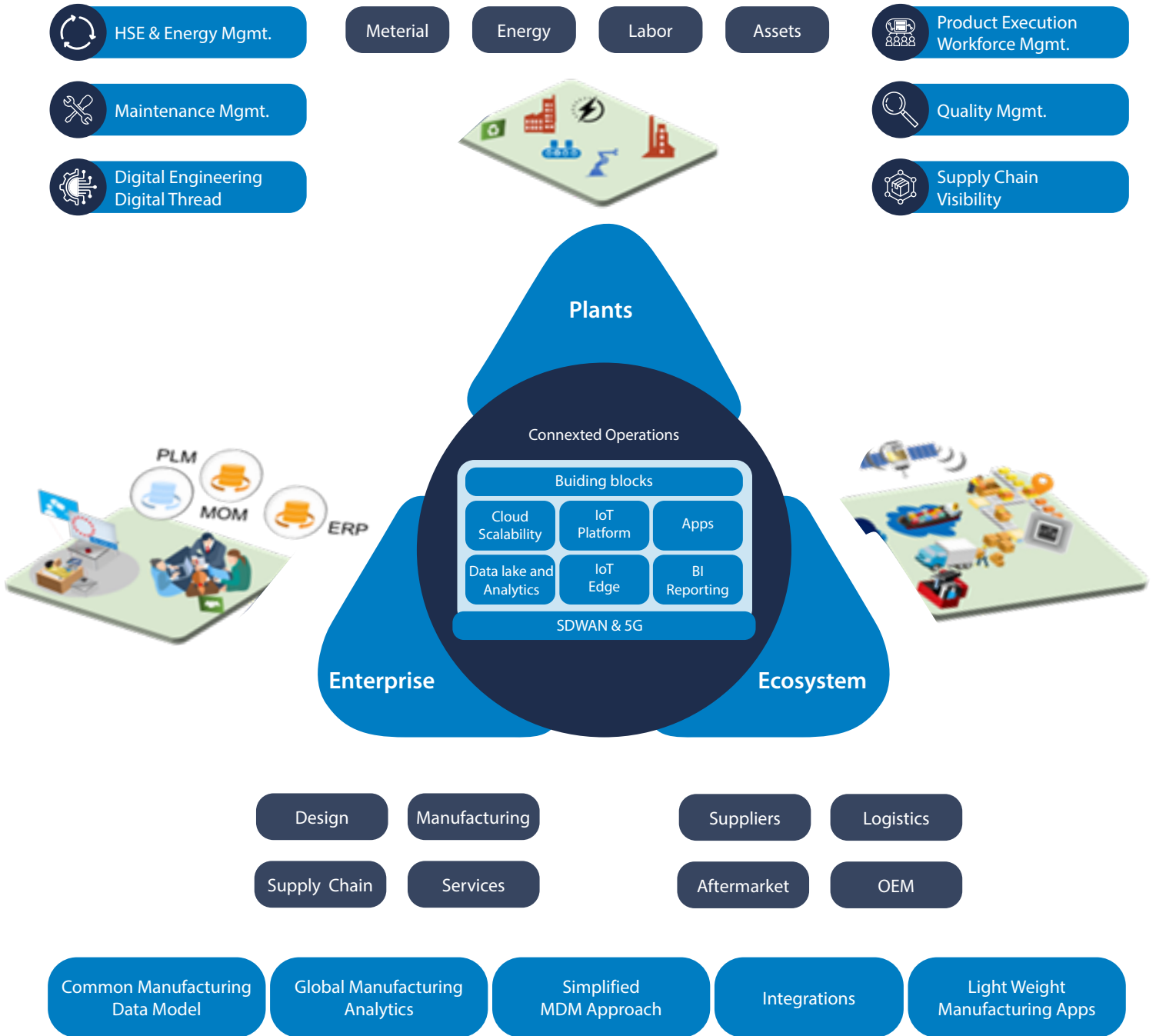- Help respond to changes in real-time

Industry Challenges

On their journeys towards building Factories of the Future, organizations face several barriers that could lead not only to high operating expenses but also disruptions in operations. The most significant challenges include:

Disconnected Systems	Uncertainty in Demand	High Cost of Quality	High Operating Expenses
• Siloed data leads to limited visibility into operations and lack of process harmonization	• Demand fluctuations due to the pandemic and evolving market dynamics result in uncertainties	• Poor traceability and compliance • Failure to meet delivery schedules • Customer returns	• Manufacturing operations and support personnel spend too much time to locate, extract and combine data from disparate systems

Infosys Connected Operations on Cloud

Infosys Connected Operations on Cloud facilitates seamless integration of Engineering Technology (ET), Operational Technology (OT), and Informational Technology (IT). These applications enable process harmonization at a factory and/ or across an enterprise, thereby facilitating scalable, real-time, data-driven transparent operations with predictive and self-healing processes.

HSE & Energy Mgmt.

Meterial Energy Labor Assets

Product Execution Workforce Mgmt.

Maintenance Mgmt.

Quality Mgmt.

Digital Engineering Digital Thread

Supply Chain Visibility

PLM MOM ERP

Plants

Connexted Operations

Buiding blocks

| Cloud Scalability | IoT Platform | Apps |
| Data lake and Analytics | IoT Edge | BI Reporting |

SDWAN & 5G

Enterprise **Ecosystem**

Design Manufacturing Suppliers Logistics

Supply Chain Services Aftermarket OEM

Common Manufacturing Data Model Global Manufacturing Analytics Simplified MDM Approach Integrations Light Weight Manufacturing Apps

Infosys Connected Operations on Cloud is a suite of cloud-agnostic modular applications that act as the connective tissue between machines, processes, systems, and people – to achieve operational excellence.

Infosys Connected Operations on Cloud is a set of pre-configured and ready-to-deploy micro applications that are provided 'as-a-service'. The solution tenets are built on the principles of Infosys Live Enterprise Framework, which introduces strategic thinking for sentience in the enterprise. In addition, we have also taken into account the heterogeneity of technology stack, across organizations.

Enhancing Operations to Build Efficiencies and Make Businesses Profitable

Smart factory capabilities at scale with process harmonization

Real-time data acquisition from machines with **normalized data model** across standard OEMs

Industry reference frameworks

Retrofitting and enabling data from legacy infrastructure

Operational intelligence, operations management, schedule and planning management **on cloud**

Hybrid edge/cloud architecture delivering application and operations SLAs

AI/ML-powered automation for predictability in operations

Secure practices across layers, including OT and automation

Bidirectional closed-loop operations through autonomous systems

The Infosys Advantage

Faster Time to Market
Reduce NPI by 15%

Optimal Resource Utilization
Increase OEE and improve asset utilization by 10-15%

Better Quality Assurance
Reduce scrap by 5-10%

Agile and Flexible Operations
Achieve 20% higher on-time delivery and reduce inventory carrying cost by 10%

Growth and Co-innovation
Innovate to reduce operator time by 10%

Connected Operations on Cloud Canvas App Store

Realtime Plant Operations

Quality Control

Energy Analytics

Monitor Machine Health

Machine Predictive Maintenance

Digital Twin

Smart Fault Tree

Predict Defects

Process Optimization

Production Scheduling

Energy Consumption Forecast

● Application Currently Developed ● Currently WIP *All applications to be ready by March 2022*

App Functions

Process Monitoring	Productivity	Prediction	Optimization
Machine Integration	**KPI Monitoring**	**Dynamic Scheduling**	**Process Correction**
Machine status morning information	KPI monitoring with drill down dashboard	Dynamic production planning & optimization	Real time process & operation analytics
Energy Consumption Data	**Operator Effectiveness**	**Energy Forecast**	**Process Optimization**
Machine energy consumption data	Work introduction and guided ops | Remove assist | Worker safety	Dynamic production planning & optimization	Closed loop process control
Asset Discovery	**Condition Monitoring**	**Predictive Maitenance**	**Digital Twin**
Template based asset identification & data setup	Real time insight into machine condition & process parameters	Machine/asset drill down on reasons with root cause & resolution	Machine/process digital twin for simulation and remote monitoring
Quality Monitoring	**Quality Analytics**	**Defects Forecasting**	
Real time insight into quality defects	Persona specific representation of defects	Forecasting of defects	

For more information, contact askus@infosys.com

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