

wipro: **intelligence**™

proof over promise.

Industrial-AssetsAI

A Guide to Predictive and Autonomous Operations



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INDUSTRIAL OPERATIONS ARE MOVING FROM REACTIVE TO PREDICTIVE TO AUTONOMOUS

Industrial enterprises are under pressure to run smarter, safer, and more efficient operations. But aging equipment, unplanned downtime, fragmented systems, workforce constraints, and rising environmental sustainability expectations stretch thin margins.

Top-quartile performers are solving these challenges through bottom-up value creation and AI-led digital interventions that improve asset performance, reliability and throughput at speed.

Wipro Industrial-AssetsAI is an AI-powered suite that moves asset-intensive organizations from reactive to predictive, autonomous operations. Supported by a unified data platform that enables comprehensive decision-making capabilities, increasing uptime, productivity, and asset reliability by accelerating real-time decision-making.

This eBook covers **Wipro Industrial-AssetsAI's** pragmatic, proven path forward: a consulting-led approach to integrating AI agents, digital twins, automation frameworks, and value-driven accelerators into a **cohesive transformation plan to improve business KPIs.**

WHY UNIFIED INTELLIGENCE MATTERS NOW

Wipro Industrial-AssetsAI addresses the following pressures affecting asset-intensive operations as interconnected challenges that need integrated intelligence.



Costly downtime

Globally, the world's 500 largest companies forfeit 11% of revenues¹ (\$1.4 trillion) to unplanned downtime. Manual interventions waste time, money and skills.



Energy costs and sustainability pressures

Asset-intensive enterprises must optimize energy consumption while driving down their carbon intensity. Inefficiently operated and prematurely replaced equipment prevent progress towards such goals.



Fragmented inefficiency

Legacy IT/OT fragmentation creates decision latency. Siloed data and processes obstruct workflows and limit visibility needed for fast, data-driven decision-making.



Reduced financial performance

Stalled Overall Equipment Effectiveness (OEE) and rising OPEX compress margins as inefficiencies accumulate. The financial impact of unplanned downtime extends beyond direct losses into the cost of delayed decisions, suboptimal asset utilization, and reactive maintenance.

Modernize your foundation, unify your data, and embrace AI - the outcome is **autonomous asset operations**.



¹[The True Cost of Downtime](#), Siemens, 2024

INTRODUCING WIPRO INDUSTRIAL-ASSETS AI

Industrial-AssetsAI is Wipro's AI-powered suite of solutions designed for asset-intensive industries. It connects equipment, processes, and teams through a unified data platform that gives users real-time visibility.

Maintenance shifts from scheduled tasks to predictive failure-prevention, issues resolve faster, and operations become efficient via these integrated capabilities:



Intelligent asset performance and reliability: AI-enabled real-time monitoring, predictive maintenance, and anomaly detection extend asset lifespan and optimize their use.



Responsive operations: Autonomous, self-regulating production systems with AI-enabled automation reduces manual dependencies and enables scalable precision control.



Digital twins: Virtual replicas of physical assets, processes and systems for simulation, predictive diagnostics, and what-if analysis for continuous improvement.



Foundation modernization and unified data platform: Standardized core systems and a unified IT/OT/ET data backbone break down organizational silos for seamless data flow.



AI Agents: A library of AI agents automate decision-making and routine tasks.



BUSINESS OUTCOMES OF WIPRO INDUSTRIAL-ASSETS AI



5-7%
revenue growth



Up to **15%**
OPEX reduction



7-8%
Operating margin improvement



80%+
Overall equipment effectiveness

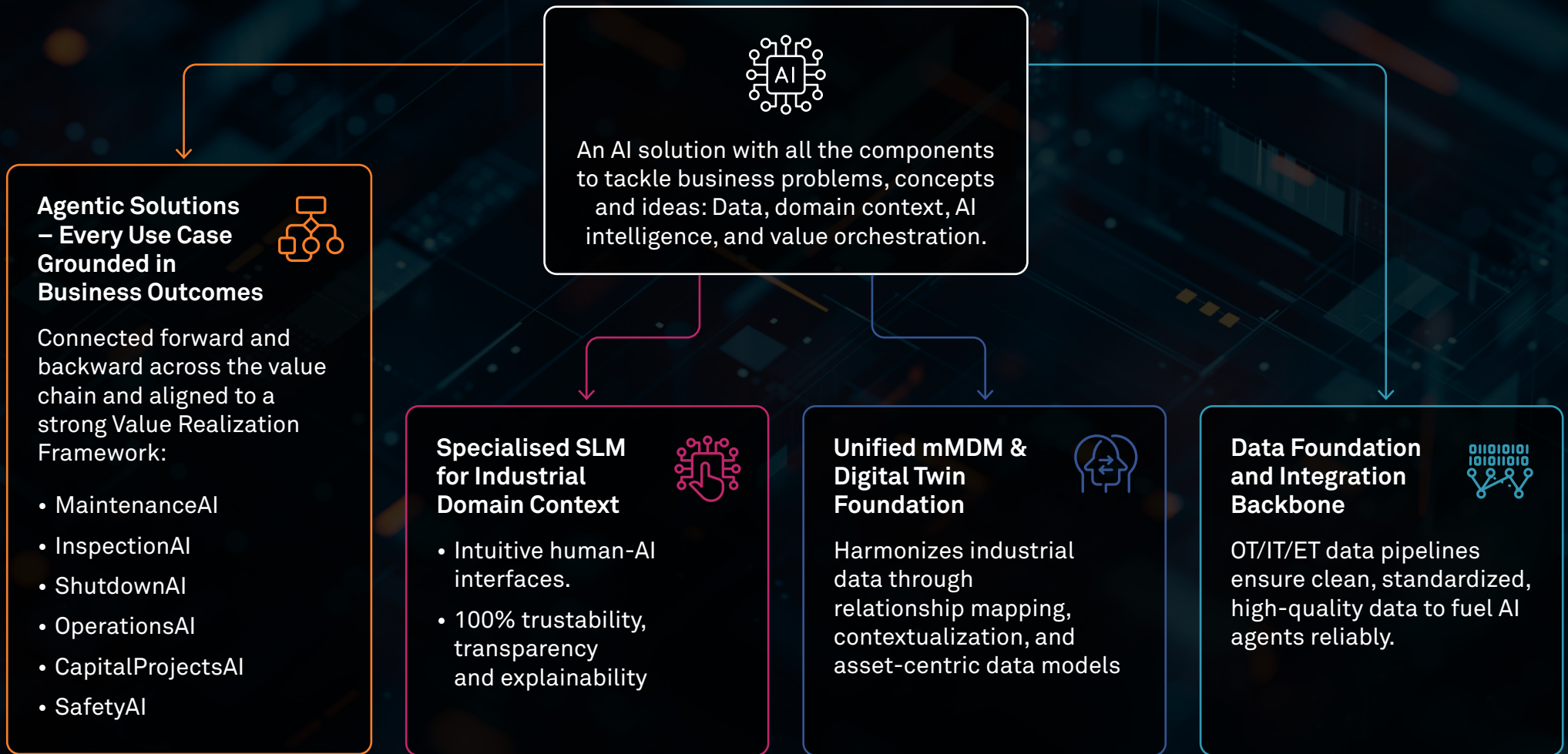


Up to **40%**
reduction in Total Cost of Ownership



HOW INDUSTRIAL-ASSETS AI WORKS

An integrated Functional Operating Platform for rapid creation of agentic, generative, and predictive AI solutions.



WHAT MAKES WIPRO DIFFERENT? AN END-TO-END SOLUTION

Industrial-AssetsAI is built on Wipro's consulting-led approach that benchmarks KPIs and maps pain points to high-impact use cases.

Outcomes-based contracts deliver OPEX reduction, uptime, and sustainability gains.



1: VALUE DISCOVERY

Approach:

A consulting-driven, persona-centric approach that benchmarks asset performance, surfaces hidden value pools, and shapes ROI-backed transformation roadmaps.

For:

A KPI-led value creation approach for Profit and Loss owners and business leads.

Outcome:

- AI/ML specialists and domain consultants with engineering talent translate complex operational challenges into clear, high-impact AI opportunities.
- Leaders have the confidence, insight, and structure needed to unlock measurable business outcomes.



2: CO-DEVELOPMENT

Approach:

Co-creation for future solutions in AI/ML with collaboration from concept to design and build. Includes context-appropriate use cases and scenarios using Industrial-Assets AI/ML solutions: digital twins, intelligent agents, autonomous workflows, and predictive systems.

For:

Business heads and CTOs.

Outcome:

- Accelerates time-to-market and value realization.



3: VALUE ACTIVATION

Approach:

Proven accelerators for maintenance, reliability, inspections, shutdowns, and connected worker ensure seamless deployment.

For:

Enterprises requiring large-scale adoption across plants, fleets, and geographies.

Outcomes:

- End-to-end rollout of Industrial-AssetsAI programs. Solutions integrate data platforms, AI models, OT/IT systems, and frontline digitization.
- Rapid value realization.

WHAT MAKES WIPRO DIFFERENT? IP, VELOCITY, AND ECOSYSTEM

Wipro uses its state-of-the-art AI platform, WEGA, which integrates our proprietary Domain Language Models, AI and Generative AI agents, along with pretrained machine learning models designed for industrial assets.

The Domain Language Models can also be hosted on-premise, giving organizations complete control over their data and ensuring compliance with enterprise security and governance standards.



Accelerators and MVPs for rapid value:

Our portfolio of ready-to-deploy blueprints, process frameworks, and project-based Minimum Viable Pilots de-risk transformation and compress time-to-value.



Global innovation ecosystem:

Wipro's Innovation Network Labs collaborates with 30+ technology leaders. This co-innovation engine includes hyperscalers, OT/IT providers, and domain specialists.



SUCCESS FOR WIPRO CLIENTS

INTELLIGENT OPERATIONS FOR UK-BASED GLOBAL ENERGY MAJOR



CHALLENGE:

Fragmented data, isolated operations, inconsistent metrics, and restricted enterprise-wide visibility - limiting asset availability, hindering cost optimization, and impeding risk reduction.



SOLUTION:

- Enterprise-wide- unified data platform with equipment & material data models (100+ MVPs).
- Information management with enterprise-wide role-based performance monitoring and decision support (100+ KPIs).
- Enterprise role-based reliability-, integrity and operations dashboards with KPIs (70K+ reports).
- Use cases developed include unified lab data for centralized sample validation, crude quality assurance in pipelines, heat exchanger fouling prediction and efficiency analysis, carbon emissions tracking, bio-feedstocks lab data validation, and asset health monitoring.



OUTCOMES:

- Reduced regulatory risk, boosted safety adherence, and avoided non-compliance fines.
- Delivered ~\$74M in value over five years by speeding decisions, increasing productivity, improving asset integrity, and reducing lost profit opportunities.
- Achieved ~\$8M in productivity gains over five years through data-driven efficiencies.



SUCCESS FOR WIPRO CLIENTS

PREDICTIVE ASSET INTELLIGENCE FOR ME-BASED PETROCHEMICAL PLANTS



CHALLENGE:

Increasing maintenance OPEX, fragmented data silos, limited visibility into standardized maintenance & reliability practices across 64+ petrochemical sites, and predominantly reactive operations causing falling OEE, frequent unplanned shutdowns and production losses.



SOLUTION:

- Unified Intelligent platform integrating disparate asset data for real-time visibility, standardized KPIs, and predictive insights towards optimized performance and informed decisions.
- A comprehensive enterprise-wide digital program with a devised roadmap focused on risk-based reliability, featuring AI-powered anomaly and failure detection.
- AI-driven anomaly detection and failure prediction at scale in ~2,500 critical assets, using 6,500+ models with ~85% accuracy across plants.
- Future ready scalable, modular architecture enabling multi-site rollouts for enterprise-wide, near real-time predictive and prescriptive decision intelligence.



OUTCOMES:

- Scalable, enterprise ready digital foundation.
- ~\$10–15M per year reduction in production losses.
- ~\$5M per year reduction in maintenance OPEX (spare parts and manpower costs).
- Minimized Unplanned shutdown and improved OEE.



SUCCESS FOR WIPRO CLIENTS

DIGITAL TWINS PLATFORM REDUCES MAINTENANCE PREP BY ~80% FOR NORTH AMERICAN OIL PRODUCER



CHALLENGE:

Inefficiencies in maintenance planning and execution driven by siloed operational, engineering, and asset data.



SOLUTION:

- Created a Digital Twin solution to improve operational safety and efficiency.
- Serverless microservices-based Digital Twin platform integrating data from SAP, SCADA, IoT, and engineering systems via API-s.
- Cloud data management (Digital Twins, Data Lake, Data Factory) and Kafka for data streaming.
- Aggregated 3D and operational visualization via Visio dashboards.



OUTCOMES:

- Enables remote machine access, work planning, and digital inspections.
- Reduces maintenance preparation time for engineers by ~80%.



SUCCESS FOR WIPRO CLIENTS

IMPROVING ASSET PERFORMANCE LEVERAGING ENTERPRISE DIGITAL TWIN PLATFORM FOR EUROPEAN ENERGY MAJOR



CHALLENGE:

Inefficient scheduling of work orders makes it difficult to prevent asset failures, limiting availability, performance, and meeting of sustainability goals.



SOLUTION:

- Built an enterprise Digital Twin platform to convert engineering data into scalable models for diverse, global operations scenarios.
- Microservices architecture with dynamic ETL pipelines, asset hierarchy rules, and GIS integration.
- 3D behaviour simulations and prescriptive AI/ML models for asset performance and failure forecasting.
- Immersive view of network performance, suboptimal assets, and time-to-failure predictions.



OUTCOMES:

- Work order schedule optimization.
- Increased asset availability and performance.
- Optimized energy consumption and carbon emissions.



LOOKING FOR REVENUE GROWTH, OPEX REDUCTION AND REDUCED TCO?

We start with a **value discovery session** that benchmarks your KPIs, maps operational pain points to high-impact use cases and builds a quantified business case before you commit.

If you're not ready for that, we offer a **free maturity workshop** - a focused assessment that surfaces gaps and prioritizes quick wins.

Or, there's our **two-week digital diagnostic** that produces a concrete, data-backed roadmap.

Whatever your preference, a **Wipro Industrial-AssetsAI expert** is ready to discuss your needs

