



— UV KNOWLEDGE LINK PVT LTD. —

DIGITIZATION | SMART FACTORY | INDUSTRY 4.0

UVK Link Pvt. Ltd.

From Data to Decisions. From Processes to Intelligence.

UVK Link Pvt. Ltd. is a technology-driven company based in Nashik, India, specializing in Artificial Intelligence, Machine Learning, Industrial IoT, Data Science, Machine Vision, and Enterprise Solutions. We help organizations accelerate digital transformation through intelligent automation, real-time insights, and data-driven decision-making.

IT SERVICES

AI/ML

IIOT

ENTERPRISE SOLUTIONS

MACHINE VISION

AGENTIC AI

AUTOMATION

DATA INTELLIGENCE





Who We Are

UVK is a forward-thinking technology company founded in 2016 and headquartered in Nashik, India. We help organizations across industries embrace digital transformation through reliable infrastructure, intelligent automation, and scalable application development.

Enterprise Solutions
Digitizing business processes, workflows and operations

Smart Manufacturing
MES, IIoT, machine connectivity and shop-floor intelligence

AI & Industrial Intelligence
Predictive maintenance, computer vision and intelligent automation

Digital Transformation
Replacing manual processes with real-time, data-driven systems

Connect processes

Apply Intelligence

Integrate Data

Automate Operations

Leadership

Yuvraj Vadaje

Founder

With over **25 years of diverse industry experience** and international exposure across **Germany, China, Korea & India**, Yuvraj Vadaje brings extensive expertise in **Automotive & EV Development, Aerospace & Defence Engineering, Product Development, Manufacturing, and Advanced Digital Technologies**.

His journey has been driven by a strong passion for **innovation, technology, and transforming engineering ideas into practical industrial solutions**. With **multiple patents filed in India and Europe**, he has continuously explored new opportunities at the intersection of **Engineering, Manufacturing, Industry 4.0, IIoT, Artificial Intelligence, and Machine Learning**.

At **UVK**, his vision is to bring together **multidisciplinary engineering capabilities and emerging technologies** to create future-ready solutions—supporting customers from **Concept and Development to Manufacturing, Digital Transformation, and the Connected Factory**.



Vision & Mission

Our Vision

To become a leading force in intelligent digital transformation — delivering AI-driven solutions, scalable applications, and secure infrastructure to businesses globally

Innovation

Trust

Excellence

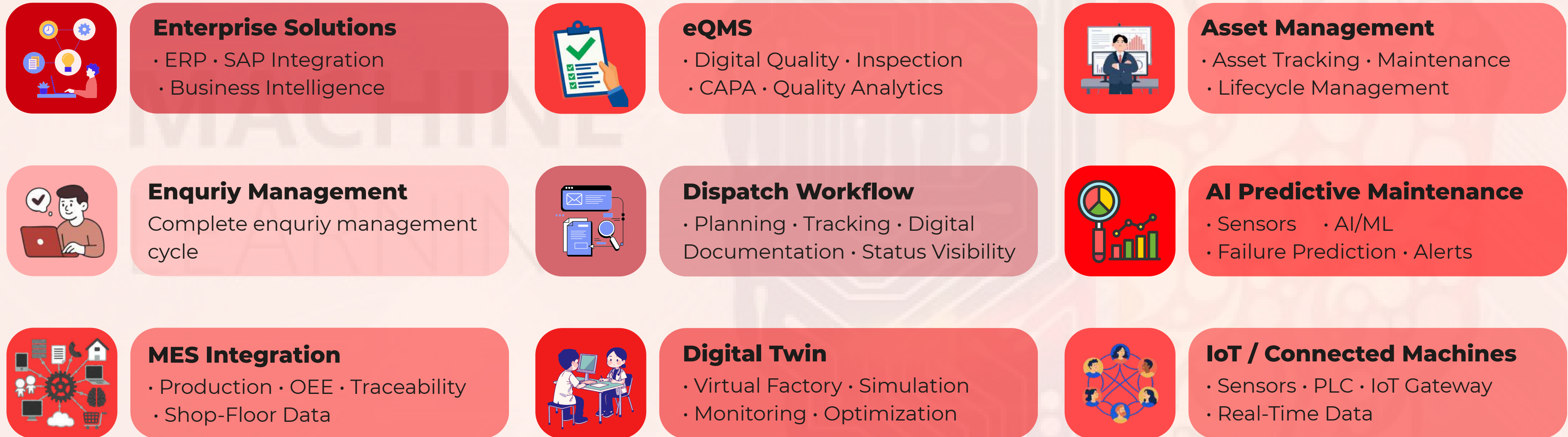
Partnership

Our Mission

→ To enable industries and enterprises to achieve operational excellence through Industrial IoT, AI, Machine Vision, and enterprise technologies that deliver real-time visibility, automation, and measurable business impact.

Smart Factory | Industry 4.0

An integrated digital ecosystem that connects enterprise processes, quality, assets, machines, and production through IoT, AI, automation, and real-time data.



Smart Factory Architecture

From Connected Machines to Intelligent Business Decisions.

BUSINESS / ENTERPRISE
ERP / SAP Enterprise Solutions Power BI

DIGITAL WORKFLOWS
eQMS | Enquiry Management | Dispatch | Asset Management

MANUFACTURING OPERATIONS
MES | Production | Quality | OEE

IIoT / CONNECTIVITY
Machines | PLC | Sensors | IoT Gateway | Edge

AI / ANALYTICS
Predictive Maintenance | Anomaly Detection | AI Vision

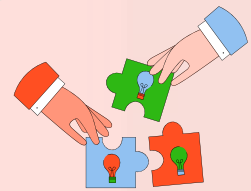
DIGITAL TWIN
Simulate | Monitor | Predict | Optimize

SMART DECISIONS

Connecting the Shop Floor with the Enterprise — Creating Real-Time Intelligence Across the Factory

Enterprise Digital Solutions

Comprehensive enterprise systems designed to centralize operations, automate workflows, and deliver real-time visibility across your organization.



ERP & SAP Integration

Real-time business data, order management and system integration



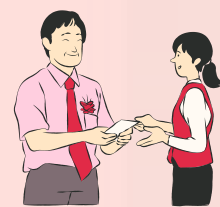
Workflow Automation

Digital approvals, task management and automated processes



Enquiry Management

Enquiry capture, follow-up, customer communication, status tracking and conversion monitoring



Sales & Dispatch Management

Order tracking, stock visibility, dispatch workflow and status monitoring



Quality & Complaint Management

Digital complaints, escalation, RCA, resolution and analytics



Asset Management

Asset tracking, maintenance history, lifecycle management and utilization monitoring

eQMS | Digital Quality Management

From Manual Quality Control to Digital, Traceable & Intelligent Quality Management

DIGITAL QUALITY INSPECTION

Capture inspection results digitally with real-time visibility.



NON-CONFORMANCE MANAGEMENT

Record, track and manage quality deviations.



CAPA MANAGEMENT

Corrective & Preventive Action tracking with ownership and closure.



DIGITAL APPROVAL WORKFLOW

Role-based approvals, notifications and escalation.



COMPLAINT & RCA MANAGEMENT

Complaint tracking, root-cause analysis and resolution monitoring.



QUALITY ANALYTICS

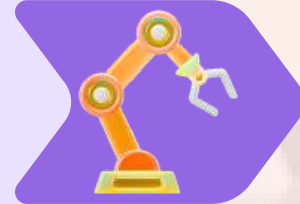
Dashboards for defects, trends, quality KPIs and improvement actions.



Robotic Cells Monitoring

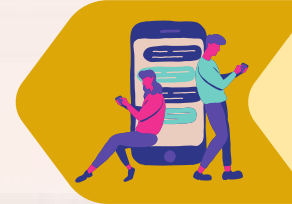
Robotic Cell Performance

- Monitor robot/cell productivity
- Cycle time and output tracking
- Robot utilization and efficiency



Cell-to-Cell Communication

- Communication between robotic cells
- Data exchange between machines
- Coordinated production workflow
- Integration with enterprise systems



OEE Monitoring

- Availability
- Performance
- Quality
- Real-time OEE dashboard



Welding Spot Count

- Number of welding spots completed
- Welding cycle monitoring
- Quality and production traceability



Sensor-Based Monitoring

- Machine and robot sensors
- Monitor operating conditions
- Temperature, pressure, vibration, etc.
- Detect abnormal conditions



Robotic & Smart Manufacturing

Production Count

- Real-time production quantity
- Target vs. actual production
- Production tracking by robotic cell



Maintenance Dashboard

- Equipment health monitoring
- Preventive & predictive maintenance
- Maintenance status and history



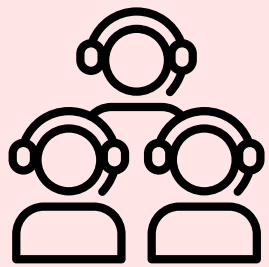
Maintenance Alert / Notification

- Automatic fault detection
- Real-time alerts
- Maintenance notifications
- Early warning for equipment failure



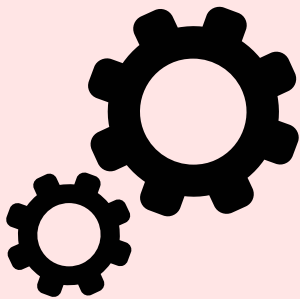
AI Solutions

From AI Strategy to Intelligent Business Solutions



Custom AI Agents

Build intelligent AI agents tailored to business processes, workflows and enterprise needs.



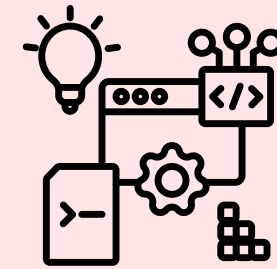
AI System Integration

Integrate AI capabilities with existing ERP, SAP, APIs, enterprise applications and industrial systems.



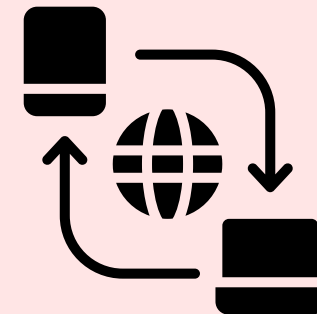
AI Consulting

Identify AI opportunities, define use cases and create practical AI adoption strategies.



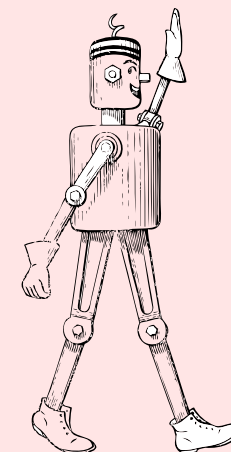
AI Software Development

Develop AI-powered applications, platforms and intelligent software solutions.



End-to-End AI Solutions

From ideation and PoC to development, deployment, integration and continuous improvement.



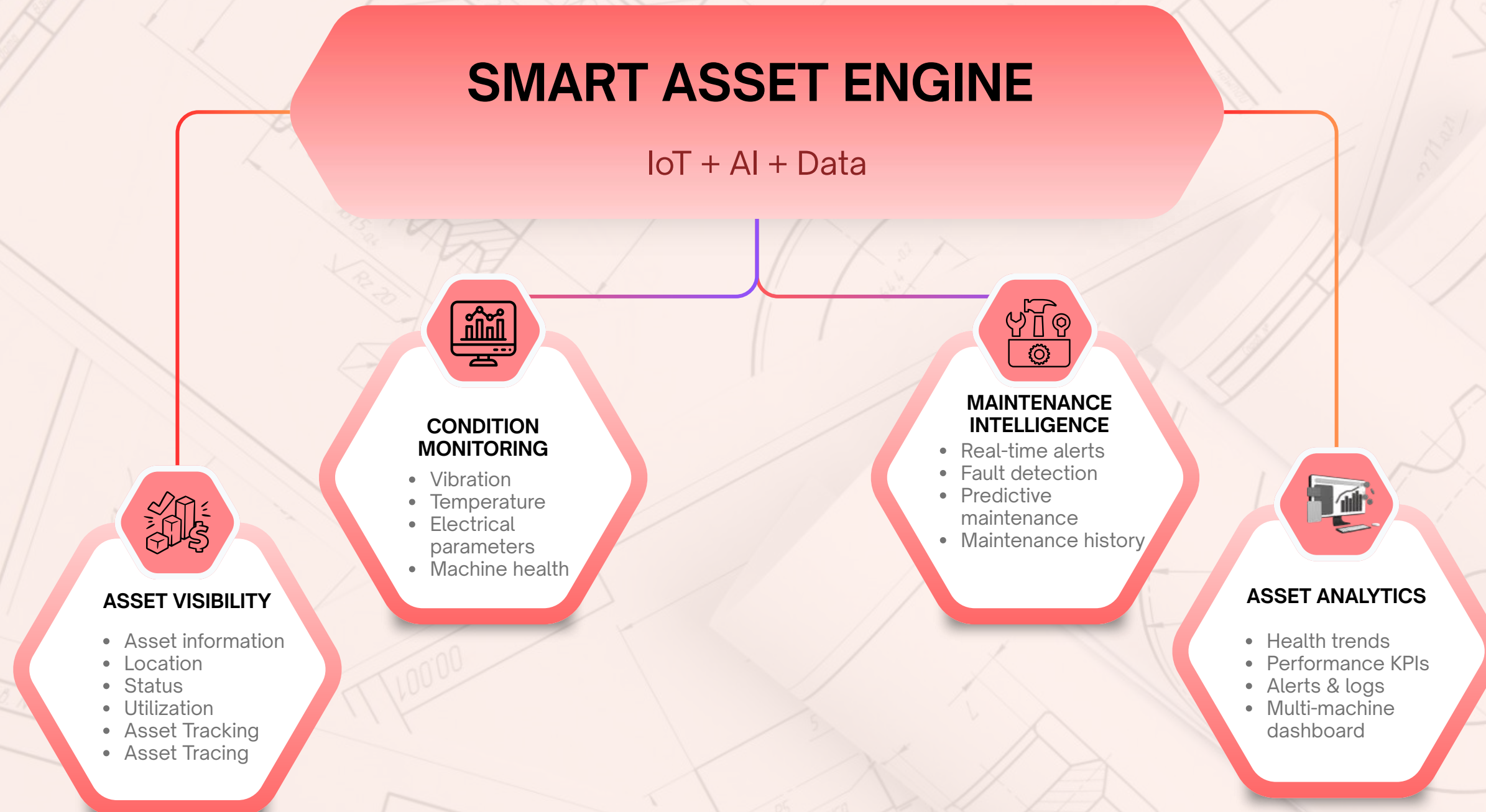
Machine AI assistant

Machine Manufacturers / Users

- Give customer an AI assistant
- Automate troubleshooting
- Machine maintenance assistant
- Reduce service cell

Smart Asset Management

- Real-Time Asset Visibility • Health Monitoring • Predictive Intelligence



Reliability



Downtime



Maintenance Cost



Asset Performance

UvK
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Digital Approval Workflow

From Manual Approvals to Automated, Traceable Decisions

Role-Based Approval

Automatically route requests to the appropriate authority.

Automated Notifications

Alerts for pending, approved or rejected requests.

Escalation

Prevent delays by escalating pending approvals.

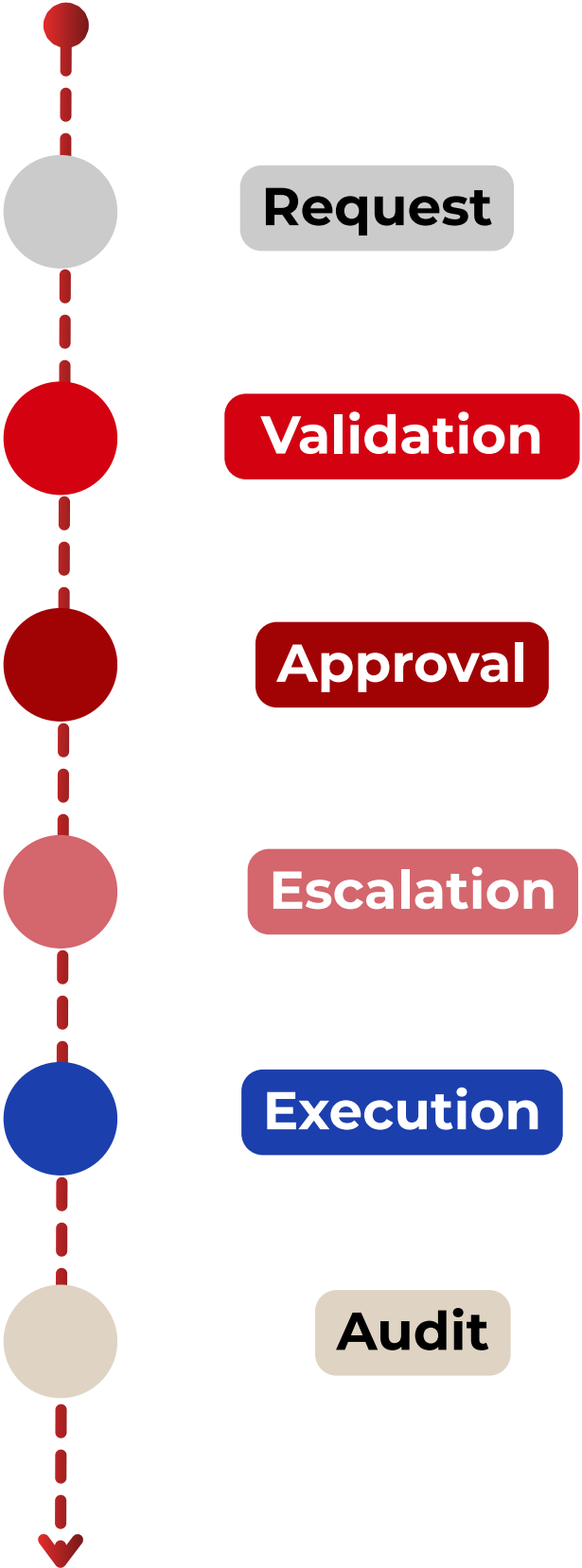
Audit Trail

Maintain a traceable record of actions and decisions.

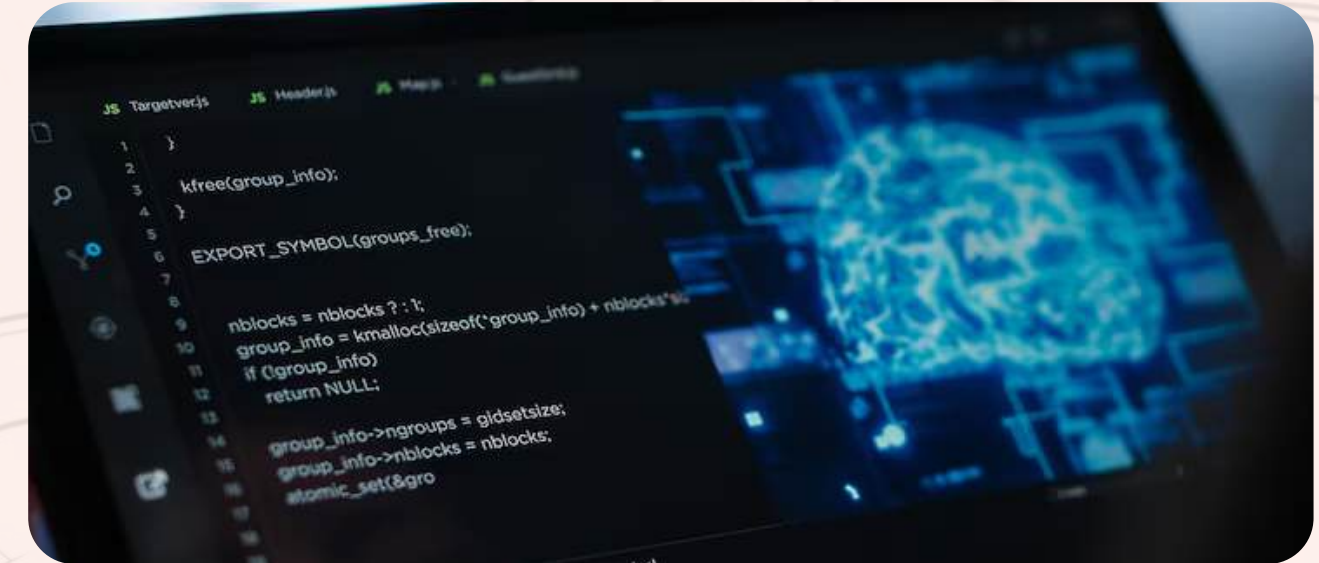
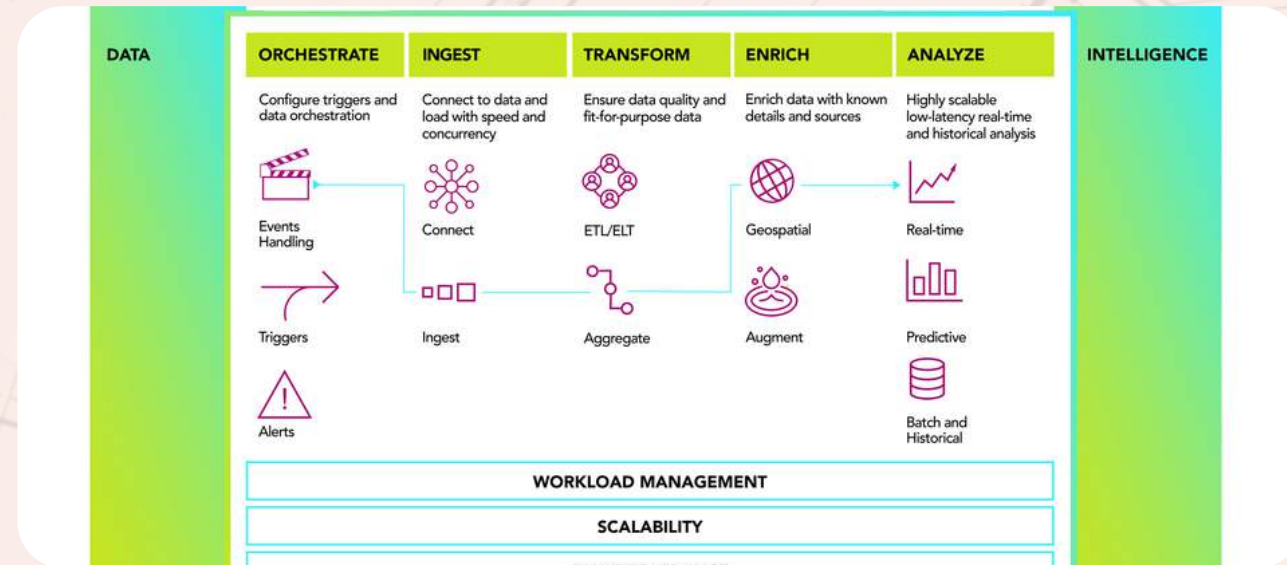
Mobile Accessibility

Enable approval workflows beyond the desktop environment.

Before vs After	
Manual Process	Digital Workflow
Emails / Paper	Digital Request
Manual Follow-up	Automated Alerts
Unclear Status	Real-Time Status
Delayed Approval	Escalation
Scattered Records	Centralized Audit Trail
Manual Process	Digital Workflow



Data Science & Data Analytics Services



DATA ANALYTICS

Business Intelligence & Interactive Dashboards – Power BI, KPI tracking & real-time reporting

Data Integration & Transformation – Clean, integrate & prepare data from ERP, SAP, IoT & Excel

Descriptive & Diagnostic Analytics – Identify trends, patterns, root causes & performance gaps

Actionable Insights & Automated Reporting – Turn data into faster, smarter business decisions

DATA SCIENCE

Predictive Analytics & Forecasting – Predict demand, performance, failures & business trends

Machine Learning Solutions – Classification, regression, recommendation & optimization

Anomaly & Fraud Detection – Detect abnormal patterns, risks & quality deviations

AI/ML Automation & Deployment – Production-ready models with monitoring & continuous improvement

Enquiry Management

- Digitize & Streamline the Complete Enquiry-to-Order Process



Centralized Enquiries

Capture and manage all customer enquiries



Lead Tracking

Track enquiry status and follow-ups



Automated Assignment

Assign enquiries to the right team



Quotation Management

Create, track and manage quotations



Follow-Up Alerts

Never miss important customer follow-ups

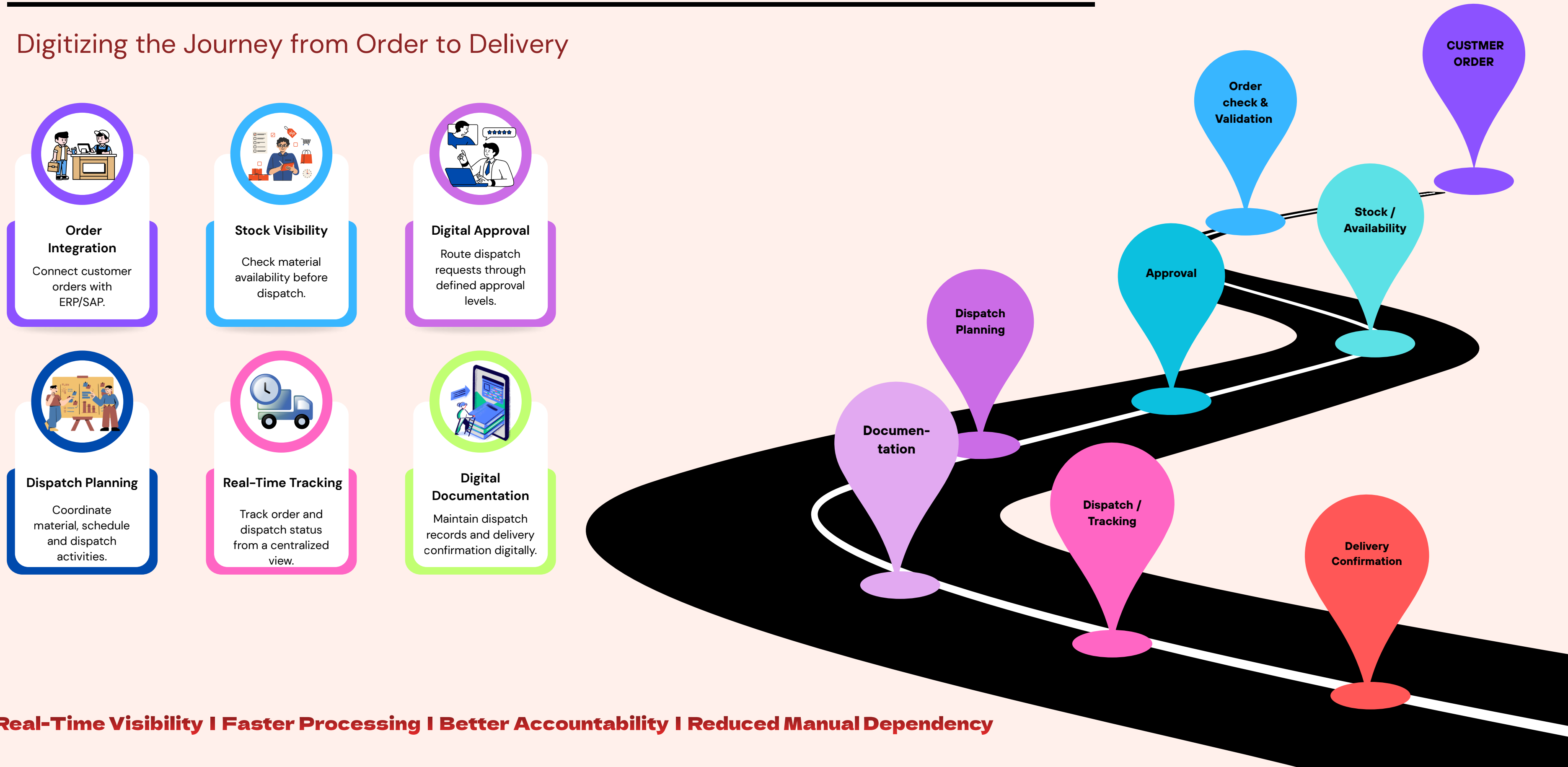


Real-Time Visibility

Monitor enquiry pipeline and conversion

Digital Dispatch Management

Digitizing the Journey from Order to Delivery



Industrial Intelligence & Automation

Smart factory solutions that bring real-time monitoring, predictive maintenance, and automated quality control to manufacturing operations.

Andon System

Real-time production floor Maintenance alerts and escalation

Light Guide System

Pick-to-light and assembly guidance automation

Auto Visual Inspection

AI-powered defect detection on production lines

EPC Automation

End-to-end project control and execution tracking

FOD Detection

Foreign Object Detection for aerospace & precision manufacturing

Condition Monitoring

Tracks vibration, temperature, and electrical anomalies to predict failures in advance

AI-Powered Predictive Maintenance

Predict Failures Before They Happen

Real-Time Machine Monitoring

- Collect machine & sensor data
- Monitor temperature, vibration, pressure & energy
- Track equipment health

AI-Based Prediction

- Detect abnormal patterns
- Predict potential equipment failures
- Generate early warnings

Smart Maintenance

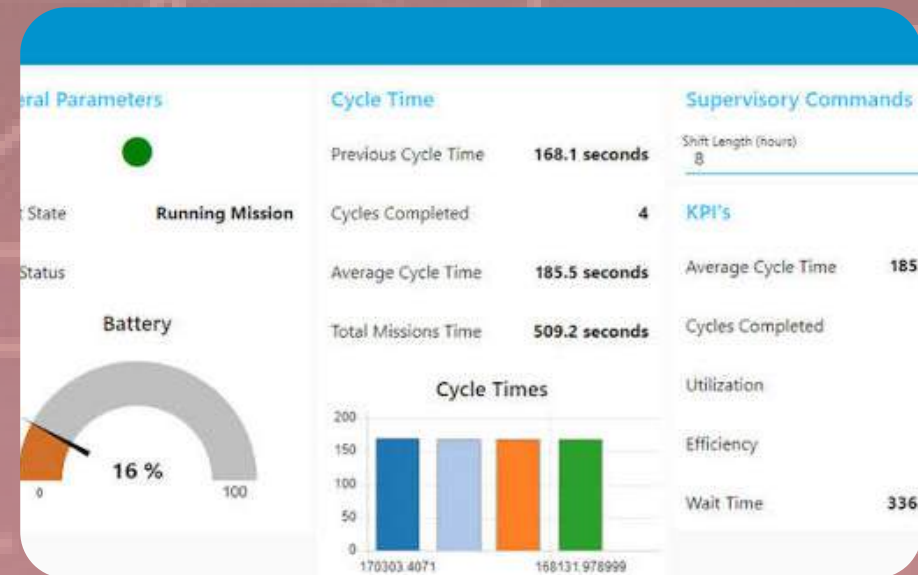
- Condition-based maintenance
- Automated maintenance alerts
- Optimize maintenance schedules

Performance Analytics

- Reduce unplanned downtime
- Improve machine availability
- Extend asset life

IIoT Sensors → Data Collection → AI/ML Analysis → Failure Prediction → Maintenance Action

Our Project overview



Robotic Cell - Dashboard

- Real-time monitoring of robotic cell operations and machine status.
- Displays production output, cycle time, efficiency and utilization.
- Tracks robot movements, operating hours and process performance.
- Provides alerts for faults, stoppages and abnormal operating conditions.
- Monitors downtime and identifies major causes of production losses.
- Helps analyze robot productivity and optimize cycle performance.
- Supports preventive and predictive maintenance planning.
- Provides historical trends for performance comparison and analysis.
- Improves visibility, productivity and overall equipment effectiveness.
- Enables faster decision-making through centralized real-time data.



M/C - Dashboard

- Real-time monitoring of individual machine performance and status.
- Displays production quantity, cycle time, efficiency and utilization.
- Tracks machine running time, idle time and downtime.
- Provides real-time alerts for machine faults, alarms and abnormalities.
- Monitors machine parameters and identifies performance variations.
- Analyzes downtime reasons to reduce production losses.
- Supports preventive and predictive maintenance activities.
- Provides daily, weekly and monthly machine performance trends.
- Helps identify bottlenecks and improve machine utilization.
- Enables data-driven decisions for higher productivity and operational efficiency.

Our Project overview



eQMS – Electronic Quality Management System

- A digital system to manage and control quality processes electronically.
- Enables document control, approvals, audits, CAPA and compliance tracking.
- Improved quality, reduced paperwork and faster decision-making.



Andon System

- A real-time visual management system to monitor production and machine status.
- Alerts operators and supervisors about defects, breakdowns or process issues.
- Faster response, reduced downtime and improved production efficiency.

Key Projects



Auto Visual Inspection System (Confidential Infra Client)

- AI + Computer Vision system that detects dents, scratches.
- Verifies part markings Delivered 95%+ detection accuracy and reduced manual QC time by 60%.



FODSystem for Aerospace Industry

- A simple controller non-invasive based image processing
- System to detect foreign objects on material conveyor.
- Enhanced product quality and reduced contamination
- Incidents significantly



Stamping Machine: Die wear, overload, unplanned downtime

- Installation of vibration, force, and temperature sensors for real-time monitoring
- Integration of die usage counters enables tracking and timely service scheduling.
- Predictive maintenance allows early detection of failures, reducing unplanned downtime by 20-30%.

Key Projects



CNC Machines: Tool Breakage, Spindle Failures, Quality Rejections

- Implemented tool condition monitoring using vibration, acoustic, and temperature sensors.
- Enabled real-time spindle health tracking with predictive alerts.
- Automated OEE (Overall Equipment Effectiveness) tracking to improve productivity.
- Increased tool life by 20–25% and reduced rejection rate by 20–30%.



Andon System - Problem, Solution, and Benefits

- Lack of real-time visibility into production line issues causes delays in identifying defects or equipment failures.
- Slow communication between operators and maintenance/team leaders hinders swift problem resolution.
- Implementation of a visual and audible Andon alert system to signal problems instantly on the production line.
- Significant reduction in unplanned downtime by enabling immediate problem identification and action



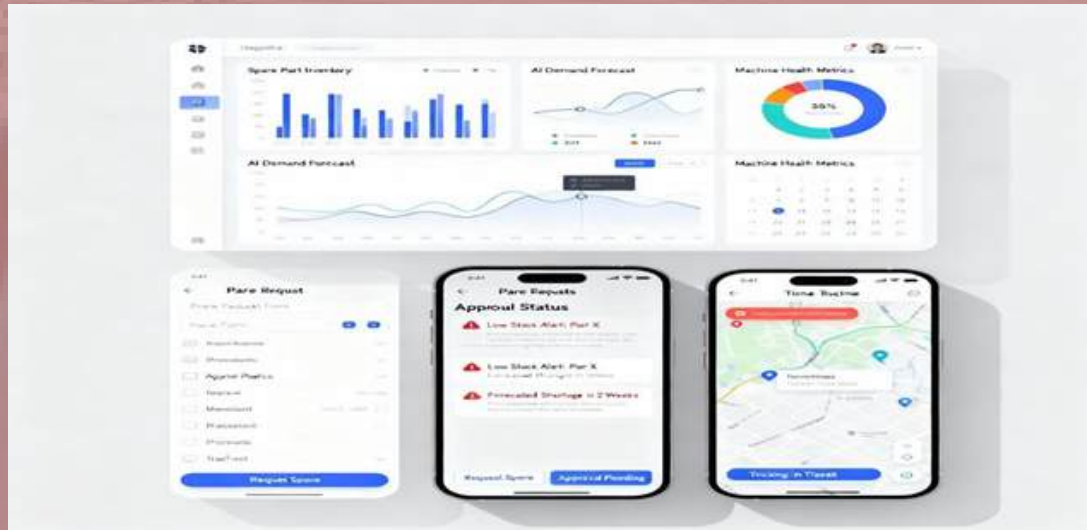
Predictive Maintenance for Naval Vessels

- Unplanned failures of engines, pumps, gearboxes onboard.

Solution:

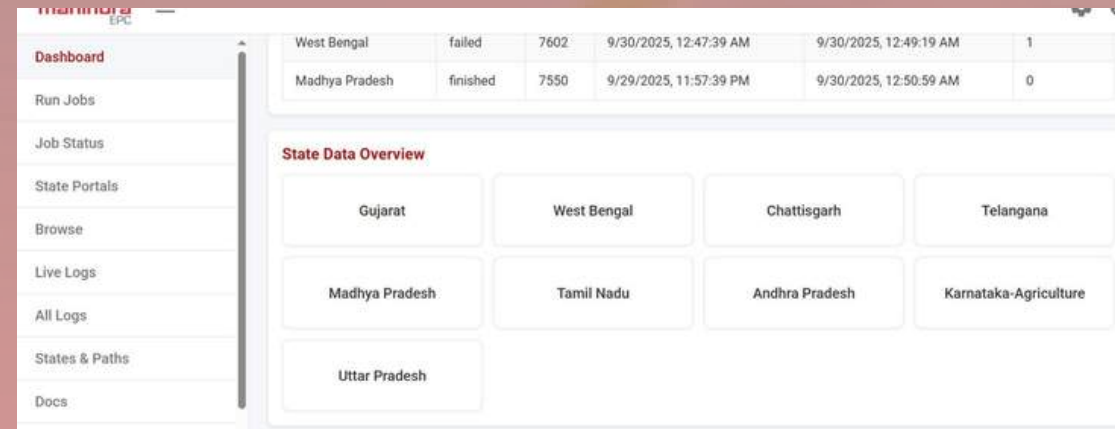
- AI-based condition monitoring (sensors + edge Computing + fleet dashboard).
- Reliability increased, downtime reduced by 30–40%, optimized maintenance costs.

Key Projects



Inventory & Spare Parts Management

- Spare part shortages cause machine downtime.
- Overstocking leads to high carrying cost & wastage.
- IoT + ERP integration to auto-update spare consumption from maintenance logs.
- AI-driven forecasting of spare demand based on machine usage & health data.
- Mobile app for technicians to request, approve, and track spares in real time.
- Dashboards for inventory status, critical spare alerts, and usage trends



Integrated Digital Platform for Subsidiary Business

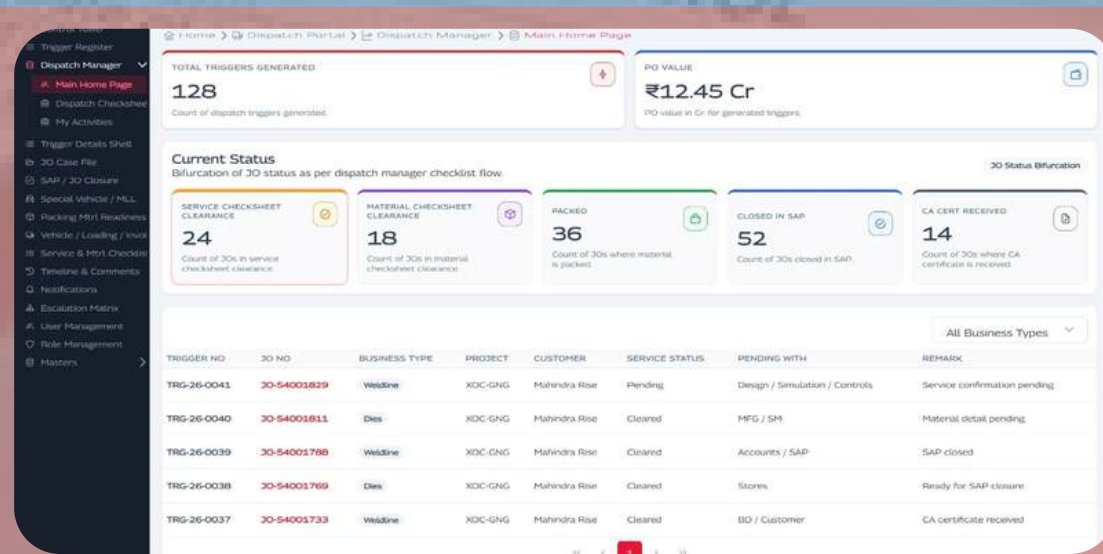
- 100% visibility of receivables & collections → faster decisions.
- Digitized project workflows → reduced delays, improved compliance.
- Automated subsidy data capture → zero manual effort, improved accuracy.
- Field → ERP integration via mobile → no silos, faster reporting.
- One platform combining Finance, Projects, Government data & Field



Power BI - Real-time Business Intelligence

- Large Excel files (50-60MB) slowing down reviews.
- Manual consolidation of production, receivables, and campaign data.
- Replace bulky Excel with interactive dashboards.
- Real-time data visibility across functions.
- Faster decision-making during reviews.
- Single source of truth for management & teams.

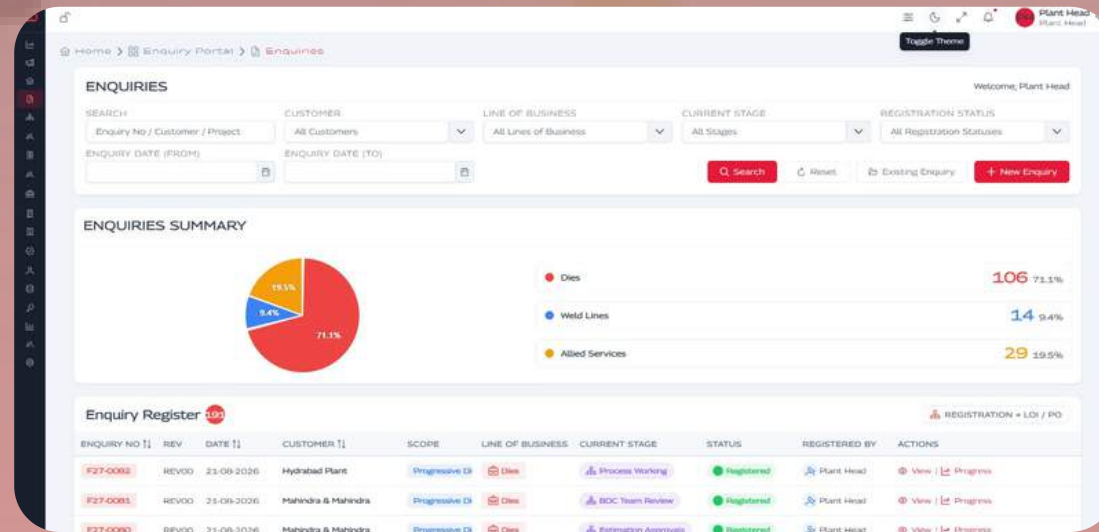
Key Projects



Dispatch Portal

End-to-End Digital Dispatch Management

- Real-Time Tracking of dispatch activities
- Automated Workflow from RFD to Final Dispatch
- Role-Based Dashboards for Teams & Management
- Digital Check Sheets & Approvals
- Alerts, Reminders & Escalations
- SAP / Excel / Ariba Integration
- Reports & Analytics for better decisions
- Complete Traceability & Audit Trail



Enquiry Management Portal

A digital platform to streamline the complete enquiry lifecycle — from enquiry registration and process working to estimation, approvals, customer communication, and final closure.

Key Benefits:

- Centralized enquiry management
- Automated workflow & approvals
- Document and attachment management
- Real-time enquiry tracking
- Email notifications & alerts
- Dashboard and reporting



Indoor Asset Tracking & Location Intelligence System

A smart indoor tracking solution designed to provide real-time asset visibility, location tracking, movement traceability, and utilization monitoring within industrial facilities.

Key Capabilities:

- Real-time indoor location tracking
 - Asset movement & status monitoring
 - Web & mobile application
 - Location history & traceability
 - Location mismatch alerts
 - Maintenance & utilization monitoring
 - Integration-ready architecture
 - Management dashboards & analytics
- Eg. Dies, Fixtures, Machines, Trolleys etc.

Our Tech Stack



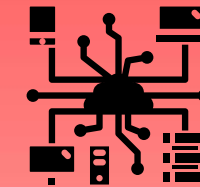
Backend Development

ASP.NET Core, Python (Django, Fast API), Node.js, Java, (Laravel, CodeIgniter), API integrations (REST, SOAP, SAP CPI), JAVA



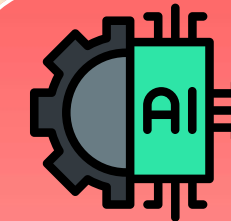
Frontend & UI

Angular (up to v18), React.js, Bootstrap, HTML5, Flutter/ Native for cross-platform mobile apps



Cloud & Infra

Azure, AWS, Google Cloud, Azure App Services, Blob Storage, Function Apps, Jenkins, GitLab CI/CD, Docker, Nginx



AI/ML & Data

TensorFlow, PyTorch, OpenCV, Scikit-learn, Pandas, NumPy, Matplotlib, Jupyter, MLFlow, Edge AI models

Our Tech Stack

Security & Storage



AES + RSA Hybrid Encryption MS SQL Server, PostgreSQL, MongoDB, Firebase
IndexedDB, Secure Local Storage, Azure Key Vault

DevOps & Monitoring



Jenkins, Docker, GitLab Pipelines, Prometheus + Grafana for infra monitoring
Azure Monitor, Visual Studio App Center

Why Clients Choose UVK



AI-First Thinking

Every solution is designed with intelligence at its core



Deep Domain Expertise

Industry-specific knowledge across manufacturing, aerospace, and enterprise



End-to-End Ownership

From discovery to deployment and beyond — we own the outcome



Proven Track Record

Delivering measurable results across complex enterprise environments



Custom-Built

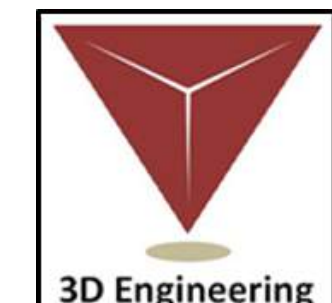
Tailored solutions — never cookie-cutter



Reliable & Responsive

Always-on support with rapid response times

Our Clients



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THANK YOU

| We appreciate the opportunity to present our engineering capabilities and innovative solutions. At UVK, we remain committed to delivering excellence through precision, quality, and continuous innovation. We look forward to building long-term partnerships and creating value through our expertise.