



fruiSCE® Manufacturing Execution System

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Achieve **Excellence** in Manufacturing Operations....

In the ever-evolving manufacturing landscape, industries face a myriad of challenges that impact their efficiency, productivity, and profitability. From discrete manufacturing sectors like automotive and electronics to process manufacturing in pharmaceuticals and chemicals, each type of manufacturing operation presents its own set of complexities.

Common challenges include maintaining quality control, reducing downtime, optimizing resource utilization, and ensuring timely delivery while managing costs. Traditional manufacturing operations often struggle with siloed data, lack of real-time visibility, and inefficient workflows, leading to production delays, increased waste, and reduced competitiveness.

The rapid pace of technological advancements and the push towards Industry 4.0 further necessitate the need for robust and flexible solutions that can integrate seamlessly with existing systems and drive continuous improvement.

fruiSCE Manufacturing Execution System (MES)—a comprehensive and scalable solution designed to address these challenges and elevate manufacturing operations to new heights of excellence. Leveraging the latest technologies such as Industrial Internet of Things (IIoT), artificial intelligence, and advanced analytics, fruiSCE MES provides real-time visibility into the entire production process, enabling data-driven decision-making and proactive management.

The system's capabilities include real-time monitoring and control, predictive maintenance, quality management, and efficient resource allocation, ensuring optimal performance and minimal downtime. By digitizing and automating key processes, fruiSCE MES enhances operational efficiency, reduces errors, and improves product quality.

Its modular and flexible design allows for easy integration with various manufacturing setups, making it adaptable to different industry needs. With fruiSCE MES, businesses can achieve greater agility, reduce costs, and ensure compliance with industry standards, ultimately transforming their manufacturing operations into a strategic advantage and paving the way for sustainable growth and innovation.

Why MES is needed for Manufacturing companies

- **Real-Time Visibility and Control:** MES provides real-time monitoring of production processes, enabling immediate detection and correction of issues, ensuring smoother operations and higher productivity.
- **Improved Production Efficiency:** By automating workflows and optimizing production schedules, MES minimizes downtime, reduces bottlenecks, and enhances overall efficiency.
- **Enhanced Quality Management:** MES integrates quality control processes within the production line, ensuring consistent product quality and reducing defects and rework.
- **Better Supply Chain Management:** MES offers end-to-end visibility of the supply chain, from raw material procurement to finished goods delivery, enhancing coordination and reducing delays.
- **Cost Management and Reduction:** Detailed cost tracking and analysis provided by MES help identify areas for cost savings, optimize resource utilization, and reduce waste.
- **Regulatory Compliance:** MES assists in maintaining compliance with industry regulations by ensuring accurate documentation, traceability, and adherence to standards throughout the production process.
- **Data-Driven Decision Making:** With centralized data collection and powerful analytics, MES enables manufacturers to make informed decisions based on real-time data and insights, driving continuous improvement.
- **Support for Digital Transformation:** MES incorporates advanced technologies such as IoT, AI, and machine learning, facilitating the transition to smart manufacturing and enhancing operational agility.

Stuck with **challenges** in managing your Manufacturing Operations?

Supply Chain Disruptions: Disruptions caused by global events, natural disasters, or political instability. Dependence on just-in-time inventory systems, leading to vulnerabilities.

Regulatory Compliance: Meeting various international regulatory requirements. Adhering to different standards across regions for safety, emissions, and manufacturing.

Cost Management: Controlling costs related to raw materials, labor, and energy. Managing fluctuations in material prices, especially metals and rare earth elements.

Supply Chain Transparency and Traceability: Ensuring transparency and traceability throughout the supply chain. Managing relationships with suppliers and ensuring ethical sourcing of materials.

Digital Transformation, Industry 4.0: Implementing digital transformation strategies across manufacturing processes. Leveraging data analytics, predictive maintenance, and smart manufacturing.

Energy Efficiency: Reducing energy consumption in manufacturing processes. Implementing sustainable energy practices to lower operational costs.

Product Life Cycle Management: Managing the entire lifecycle of products from design and development to production, maintenance, and end-of-life disposal. Ensuring products remain relevant and up-to-date through their lifecycle.

Production Efficiency: Maximizing production efficiency and minimizing downtime. Adopting lean manufacturing practices to reduce waste.

Quality Assurance: Maintaining high-quality standards in production to meet consumer expectations and regulatory requirements. Implementing robust quality assurance and testing processes.

Data Management and Analytics: Leveraging data analytics and digital tools to optimize production processes and decision-making. Ensuring the accuracy and security of data across all operations.



Solution for your Challenges

Key Challenges

- Supply Chain Disruptions
- Energy Efficiency
- Regulatory Compliance
- Product Life Cycle Management
- Cost Management
- Production Efficiency
- Supply Chain Transparency
- Quality Assurance
- Digital Transformation
- Data Management & Analytics

How fruiSCE MES solves the problems

fruiSCE MES enhances supply chain resilience by providing real-time visibility and predictive analytics, allowing manufacturers to anticipate and mitigate disruptions proactively.

The system optimizes energy usage by monitoring consumption patterns and implementing energy-saving measures. Advanced analytics and automated controls help reduce costs and support sustainable manufacturing practices.

fruiSCE MES ensures compliance with industry regulations through automated documentation and real-time monitoring. Traceability and audit trails simplify the process of meeting regulatory requirements and standards.

By integrating with PLM systems, fruiSCE MES facilitates seamless management of the product lifecycle, from design to decommissioning. Collaboration and streamlines processes ensure products are brought to market efficiently.

The system provides detailed cost tracking and analysis, helping manufacturers identify areas for cost reduction and efficiency gains. Real-time data allows for better budgeting and financial planning.

fruiSCE MES optimizes production processes through real-time monitoring and control, reducing waste and improving throughput. It ensures optimal use of resources and minimizes downtime, enhancing overall productivity.

The system provides end-to-end visibility into the supply chain, enabling better tracking and management of materials and products. This transparency ensures timely deliveries and enhances supplier collaboration.

fruiSCE MES integrates quality management into the production process, using real-time data to detect and address quality issues promptly. It ensures consistent product quality and reduces defects and rework.

The system drives digital transformation by integrating advanced technologies such as IoT, AI, and machine learning into manufacturing operations. It supports the shift to Industry 4.0 and enhances operational agility.

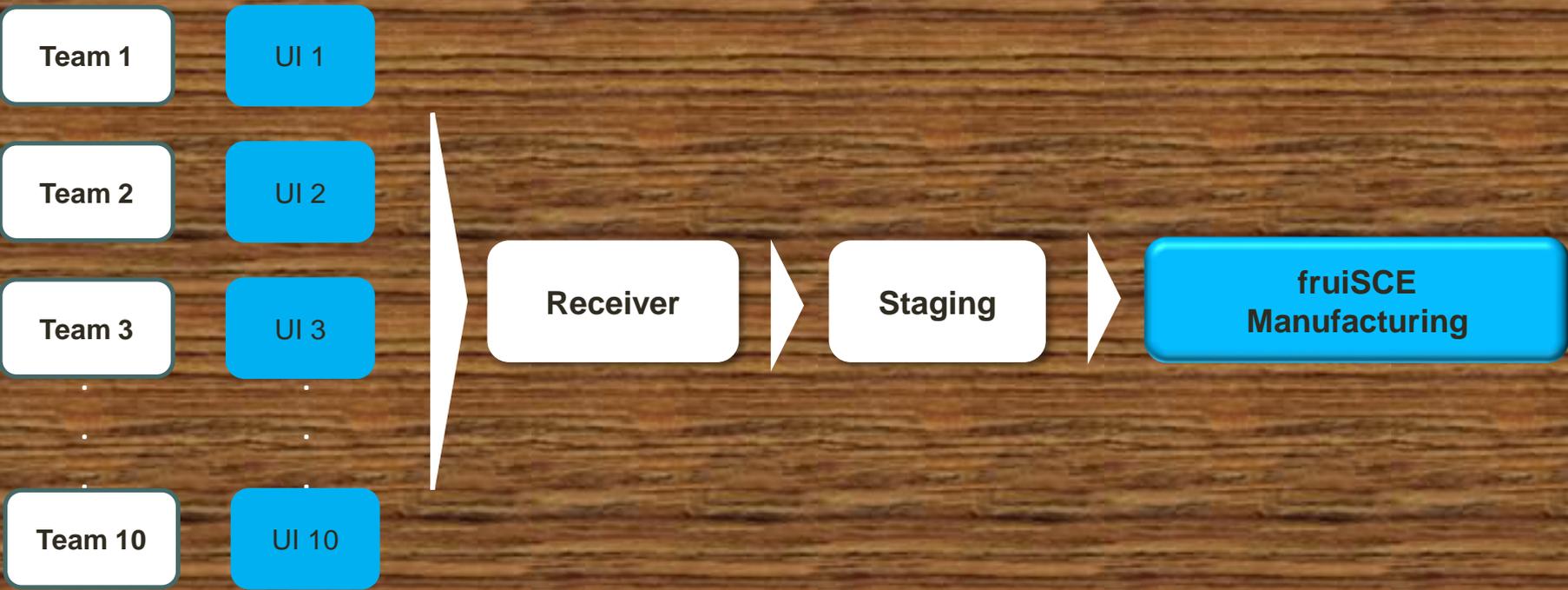
fruiSCE MES centralizes data collection and provides powerful analytics tools to derive actionable insights. It enables data-driven decision-making and continuous improvement across all manufacturing processes.

All Organizations





AUTOMATION FOR DIGITAL MEASURING INSTRUMENTS TO fruiSCE MES



Problem

Lamtuf Plastics Limited, a leading manufacturer of Phenolic, Epoxy and Densified Wood Laminates, has tried all the options to automate critical data capturing of thickness measurement of the sheets but failed. The current process of manual measurement and recording is a major challenge. The process is slow, erroneous, labour consuming, and no traceability.

Solution

The digital measurement instrument was replaced by manual measurement instrument with automatic data transfer transmitter to the computer. The instrument is connected to fruiSCE, and the data is transferred to automatically once the measurement is taken.

fruiSCE Advantage

- Manpower required is eliminated
- Accuracy reached to 100%
- Traceability established
- Lead time of the task is reduced by 50%
- Performance Analytics established

Key Features of fruiSCE[®] MES



Production Order Management

Maintain and process production orders for all manufacturing environments by managing inventory movements, operational reporting, labour, and machine accountability.



Statistical Process Control

Monitor production and machine process effectiveness through Live data streaming through machine (OPC UA protocol) and take actions accordingly.



Time and Attendance

Assign jobs to the employees and monitor their work presence through leaves, holidays time-in and time-out stamps, absenteeism, to assess the effective performance.



Cost Management

Perform costing on operations through machine costs, labour costs, maintenance costs, overhead costs through recording the data manually or automatically.



Work Center Management

Perform robust work center operations with material movements, reporting of operational time stamps, safety, and automatic data flow from machines.



Maintenance Management

Maintain machines and equipment through preventive maintenance, and ad hoc maintenance by creating job orders and assigning resources.



Performance Analysis

Act proactively to detect machine faults, early diagnostics, and part replacements to increase overall productivity to do a lead time performance.



Event Management

AI/ML empowered alerts or notifications generated when production process is hindered by any disturbance in production line or machine.

Key Features of fruiSCE[®] MES



Product Traceability

Traceability of material sources, work in process, and finished products through all the stages of supply chain to enable dynamic supply chain.



Compliance and Risk Management

Identify the major inherent risks within the production area, factors in any processes, and procedures practiced by the production planning.



Data Architecture

Data availability for performing process improvement initiatives such as Lean Six Sigma, TPM, 5S, Kanban, TQM, Continuous Improvement, and others.



Integrations

Integrate with Control Systems, Machines, and PLCs through all protocols to have seamless data flows.



Quality Management

Manage quality and laboratory processes for raw materials, work in process, finished products, manufacturing, and sales processes.



Data Management

Enable automation and integrations for all data sources and link them to a data lake. Thereafter, connect to individual applications like Process Mining, AI, Analytics for feedback



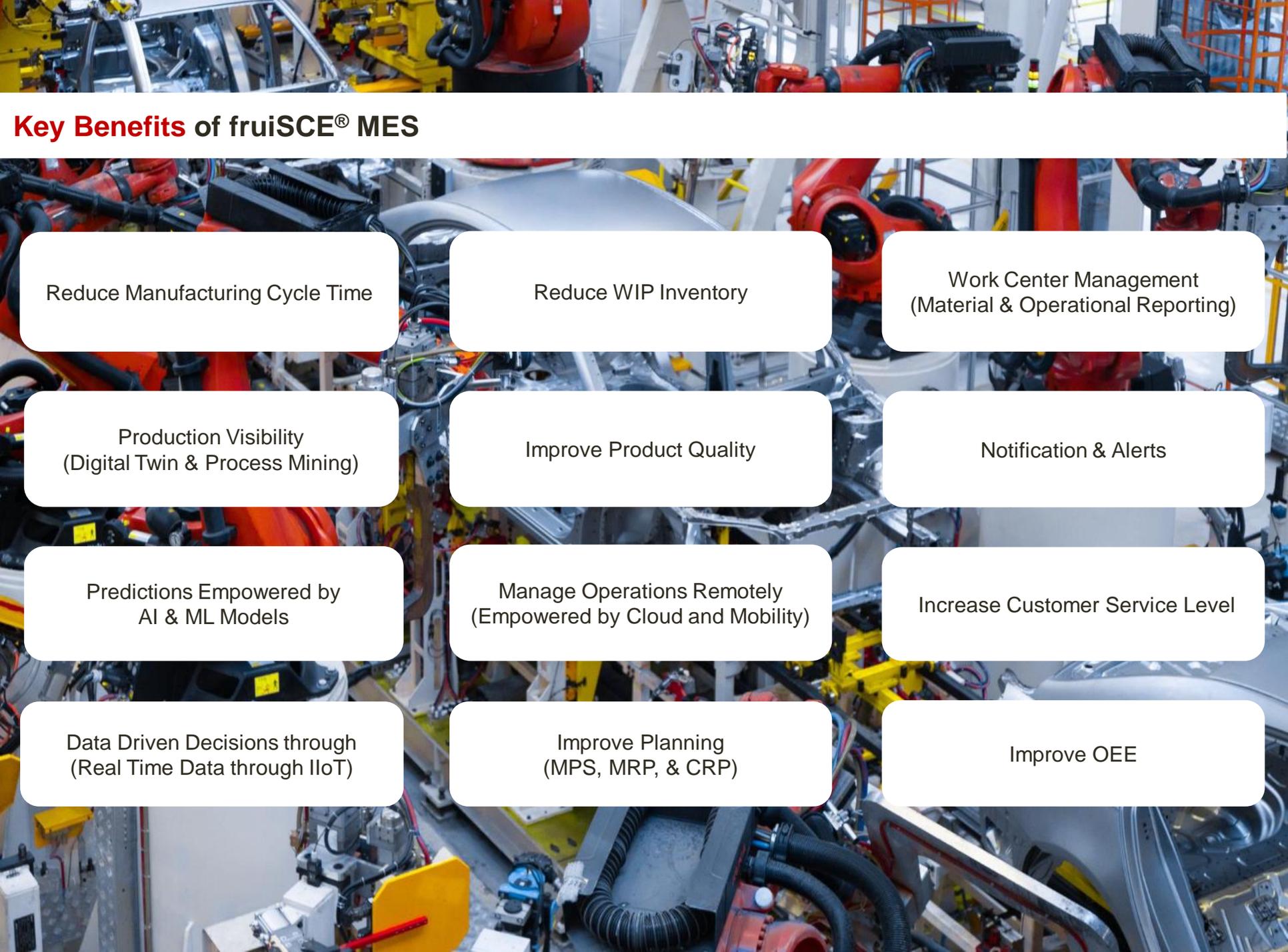
Overall Equipment Effectiveness

Define and manage OEE by measuring all the data through production order processing and automations and calculate Line level OEE, plant level OEE and global OEE.



Energy Management

Manage Energy efficiently by reporting planned energy consumption, actual consumption, and billed amount.



Key Benefits of fruISCE® MES

Reduce Manufacturing Cycle Time

Reduce WIP Inventory

Work Center Management
(Material & Operational Reporting)

Production Visibility
(Digital Twin & Process Mining)

Improve Product Quality

Notification & Alerts

Predictions Empowered by
AI & ML Models

Manage Operations Remotely
(Empowered by Cloud and Mobility)

Increase Customer Service Level

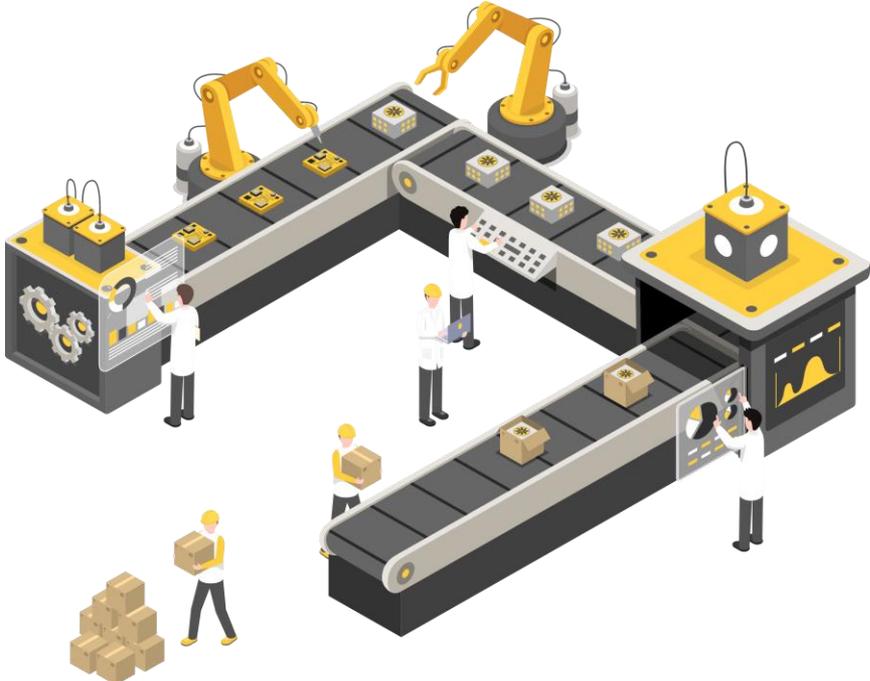
Data Driven Decisions through
(Real Time Data through IIoT)

Improve Planning
(MPS, MRP, & CRP)

Improve OEE

Approach to Achieve Excellence

- ✓ Achieving excellence in manufacturing involves addressing challenges like supply chain disruptions, energy efficiency, regulatory compliance, and production efficiency.
- ✓ fruSCE Manufacturing Execution System is a comprehensive solution designed to tackle these challenges effectively. It provides real-time visibility and predictive analytics to anticipate and mitigate disruptions, optimize energy usage, and support sustainable practices.
- ✓ fruSCE MES excels in cost management by offering detailed tracking and analysis, optimizing production processes, and ensuring end-to-end supply chain transparency.
- ✓ fruSCE MES integrates quality management, detects and addresses issues in real-time, and incorporates advanced technologies such as IoT, AI, and machine learning to drive digital transformation.
- ✓ With centralized data collection and powerful analytics, fruSCE MES enables data-driven decision-making, enhancing operational agility and supporting sustainable growth and innovation.



About Data Labs India



fruiSCE® ERP

Purchasing & Inventory

- Sales & Distribution
- Marketing & CRM
- Manufacturing & Quality
- Accounting & Human Resources
- Projects, Facilities, & e-Commerce

fruiSCE® Manufacturing

- Manufacturing Management
- Quality Management
- Maintenance & Asset Management
- Energy Management
- Planning (MPS/MRP/Scheduling)
- Machine & PCS Integrations

fruiSCE® Logistics & Global Trade

- Transportation & Fleet
- 3PL Operations
- Asset Maintenance
- Finance & Statutory
- Global Trade Management
- Operations Management

fruiSCE® Supply Chain Planning

- AI/ML Driven Forecasting
- Demand & Capacity Planning
- Sales & Operations Planning
- Resource Planning
- MPS, MRP, & Scheduling
- Historic Data Management

fruiSCE® Business Networks

- Multi-Level Order Fulfilment
- Multi-Tier Inventory Management
- Demand Sensing & Response
- Supply Chain Visibility
- ESG & Supply Chain Risk
- Close Loop Supply Chain

fruiSCE® Warehouse Management

- Putaway & Picking Strategies
- Barcode & RFID Empowered
- Mobility
- Warehouse Performance
- End-to-End Operations Management

fruiSCE® Supplier Connect

- Supplier Registrations
- RFP, RFQ, & PO
- Purchase Management
- ASN & Inbound Logistics
- Performance Evaluation

fruiSCE® Control Tower

- Visibility of Inventory & Orders
- Capacity Planning
- Collaboration
- AI/ML driven Notifications & Alerts
- Supply Chain Performance

fruiStrategy® Enterprise Strategy Management

Strategy Analysis	People Performance	Risk & Compliance	ESG Assessment
Balanced Scorecard (BSC)	Enterprise PMO	Alignment	OHI Assessment
Objectives & Key Results (OKR)	Budgeting & Planning	Organizational Performance	Performance Dashboards

- ✓ Data Labs India is an innovative IT solutions company dedicated to enhancing business excellence and competitiveness across sectors. Collaborating with industry leaders and technology experts, we specialize in manufacturing, supply chain management, enterprise performance, ERP, and business analytics.
- ✓ Our tailored solutions streamline operations, boost productivity, and maintain a competitive edge. Leveraging AI, process mining, RPA, and IoT, we drive efficiency and innovation, delivering real-time insights and seamless integration to help clients achieve strategic goals and sustainable growth.



Problem

- Production data collected & processed manually and entered into SAP ERP taking 100+ man hours on monthly
- Errors in data preparation & entry
- Delayed reporting
- Management reporting next day

Solution

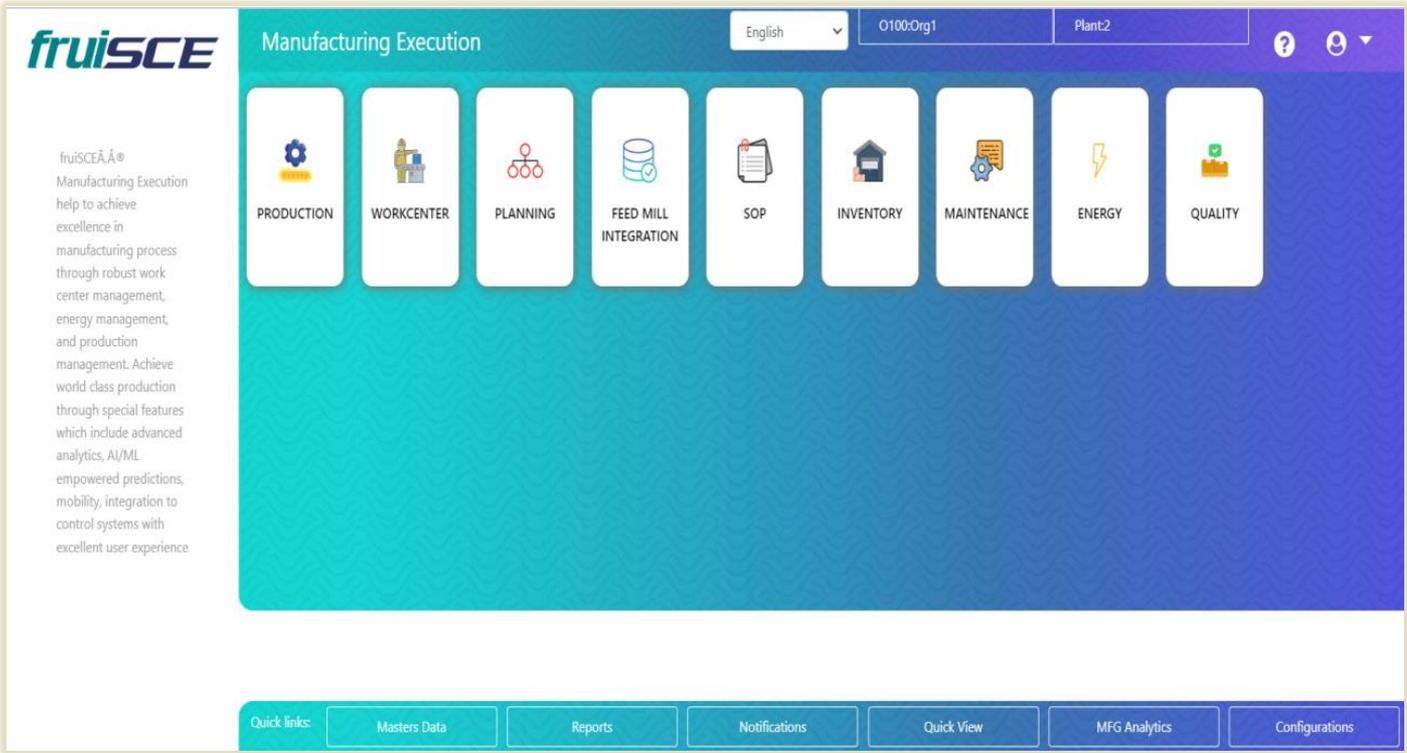
- fruiSCE MES automated the flow between PCS, Weighbridges and directly transferred into SAP S/4HANA instantly
- Manual interference is eliminated
- Automatic triggering of performance emails without any effort

fruiSCE Advantage

- Complete automation
- 100% elimination of errors
- 100% elimination of man hours
- Faster implementation
- Robust solution

Product Demonstration

- ✓ Welcome to the future of manufacturing with fruISCE MES. Seamlessly integrating with your systems, it offers real-time insights and control over production. Optimize schedules, monitor quality, ensure compliance, and automate workflows to maximize output.
- ✓ With an intuitive interface and predictive analytics, fruISCE MES adapts to your needs, driving efficiency and continuous improvement. Trusted by top manufacturers, it transforms and streamlines processes for better performance.

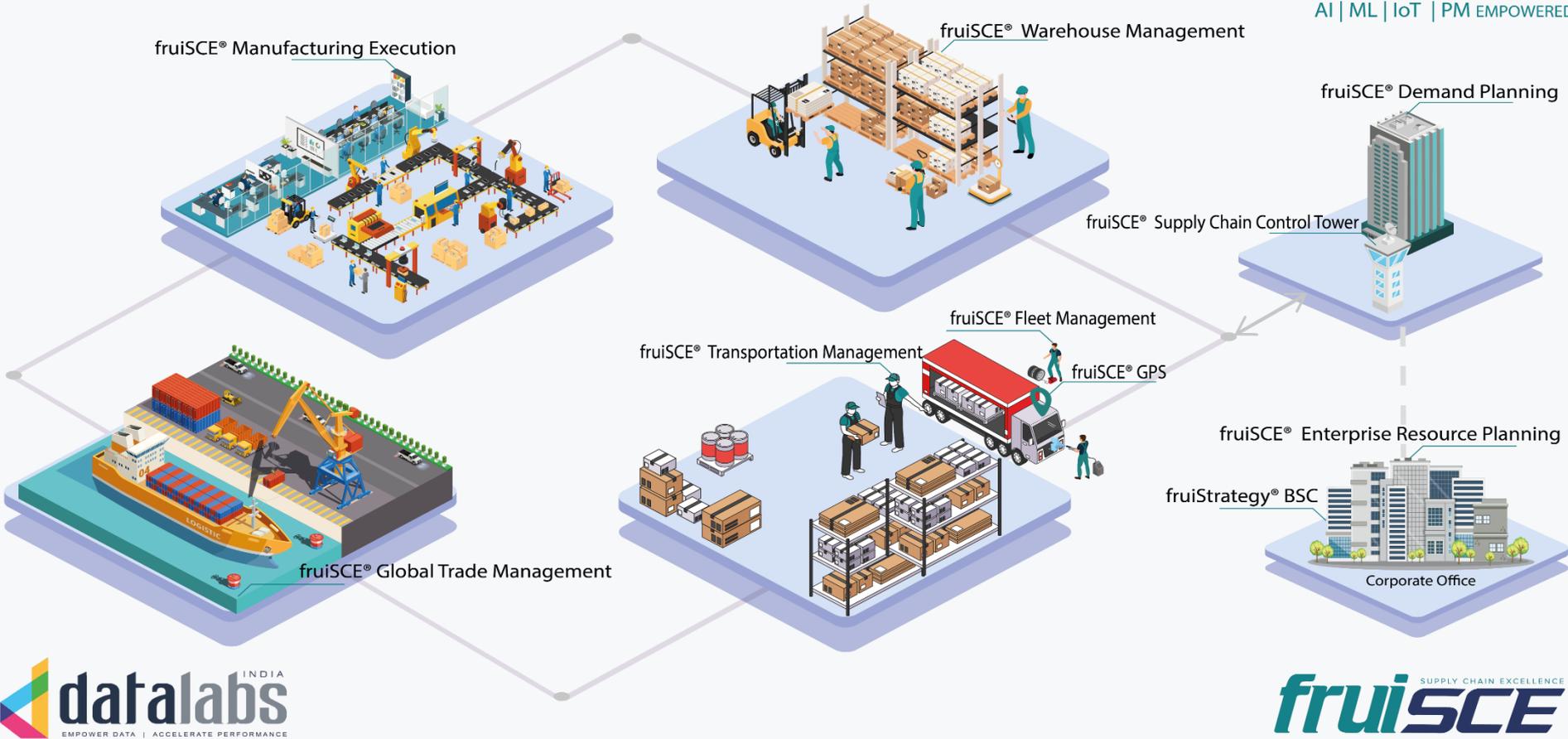


Selected Clients & Success Stories



Make your Supply Chain a competitive advantage

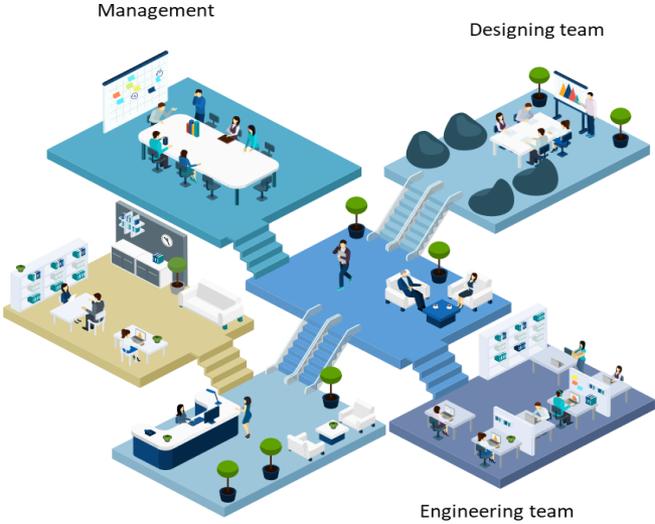
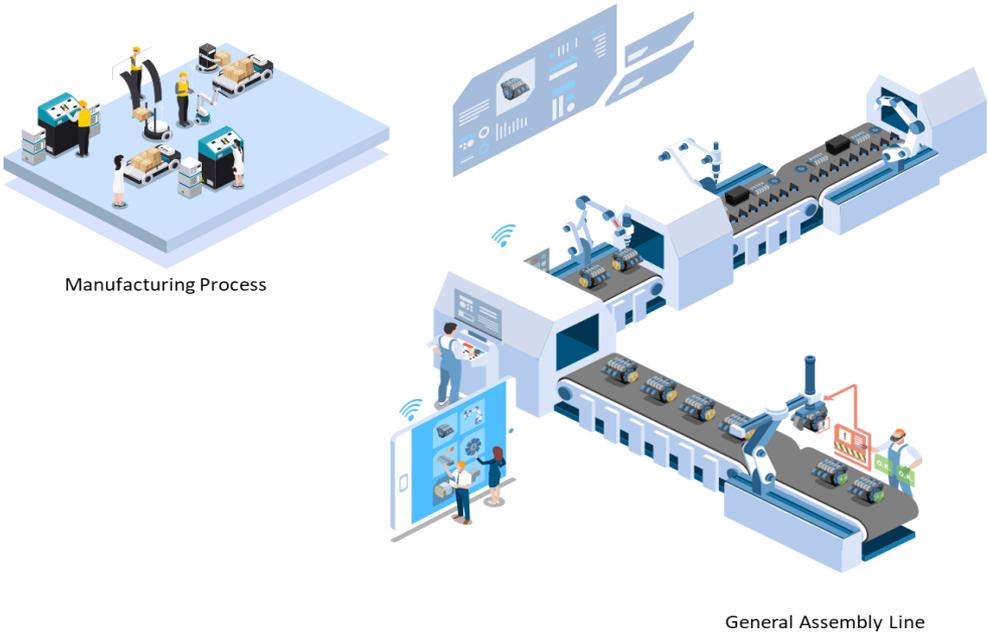
AI | ML | IoT | PM EMPOWERED



Transforming your supply chain into a competitive advantage is crucial in today's dynamic market. By leveraging AI, machine Learning, and IoT, businesses gain real-time visibility and control, enhancing efficiency, reducing costs, and improving customer satisfaction through accurate demand forecasting and streamlined logistics. Integrated supply chain solutions foster collaboration, agility, and resilience, enabling swift adaptation to market changes and mitigation of risks. Sustainable practices ensure compliance and meet consumer expectations, ultimately strengthening market position and driving long-term growth.

What Next

Contact us now for a live demo and witness how fruISCE MES transforms your Manufacturing Operations



Unlock the potential of your manufacturing operations with fruISCE MES. Schedule a demo to see how our platform can streamline processes, improve quality, and reduce costs. Whether scaling production, ensuring compliance, or boosting efficiency, fruISCE MES is your strategic partner. Contact us now to discover why industry leaders rely on fruISCE MES. Empower your team and transform your operations towards smarter, more efficient manufacturing.



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