



“OEE gave us the data we needed to make better decisions.
No more guessing why our lines weren't hitting targets.”
Plant Manager, Global Food Processing Manufacturer



DATASHEET

Overall Equipment Effectiveness

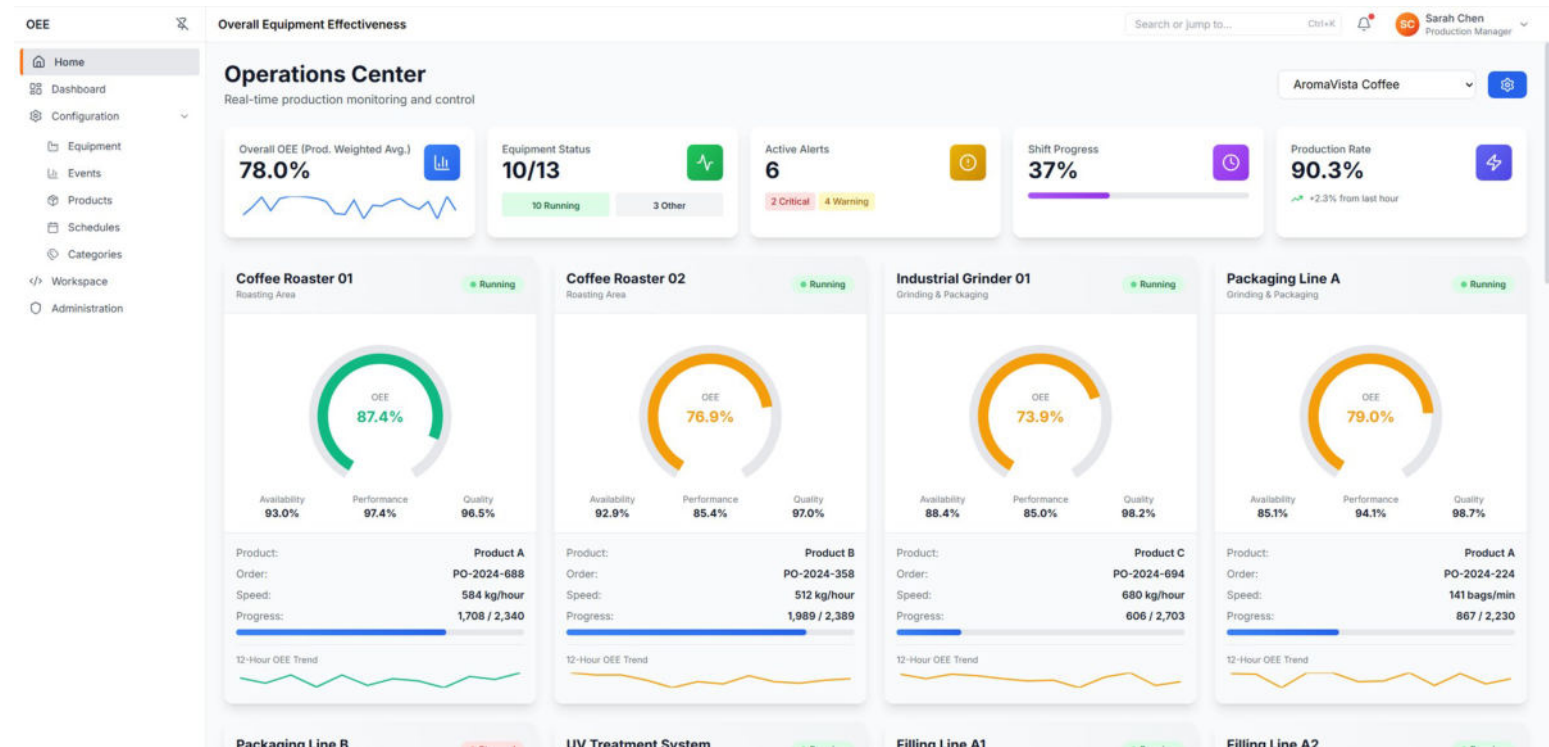
Maximize Efficiency with Real-time Monitoring & Analytics

Manufacturing operations typically operate at 40-60% Overall Equipment Effectiveness (OEE), significantly below the world-class benchmark of 85%. Every percentage point improvement in OEE directly impacts profitability. LOGICAL SYSTEMS OEE application provides comprehensive real-time visibility into equipment effectiveness, enabling data-driven decisions that maximize production efficiency.

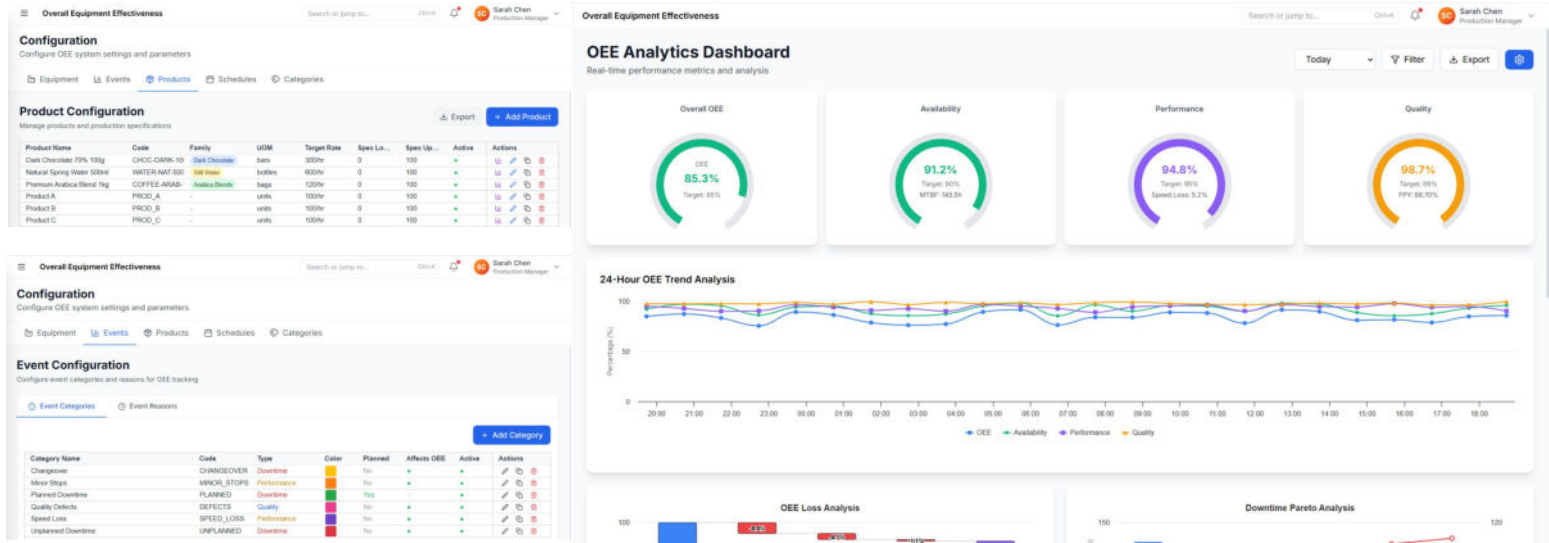
Built on the Inductive Automation® Ignition platform, our OEE solution automatically calculates and tracks critical key performance indicators while providing actionable insights to eliminate production losses. The system seamlessly integrates with existing automation infrastructure through standard protocols including OPC, MQTT, and Modbus, requiring no disruption to current operations. Transform your manufacturing performance with real-time monitoring that identifies the hidden factory within your operations. Our comprehensive dashboards provide operations teams with immediate visibility into equipment status, production rates, and quality metrics, while advanced analytics help continuous improvement teams systematically eliminate the Six Big Losses that plague manufacturing environments. With mobile-responsive interfaces and role-based access control, the right information reaches the right people at the right time to drive measurable improvements in productivity and profitability.

From single production lines to global manufacturing networks, the LOGICAL SYSTEMS OEE app scales to meet your operational requirements while delivering consistent results. Our proven implementation methodology ensures rapid deployment with minimal disruption typically achieving ROI within six months through measurable improvements in equipment utilization, reduced downtime, and enhanced product quality. Experience the power of data-driven manufacturing excellence with a solution designed by manufacturing professionals for manufacturing professionals.

From Intuitive Configuration to Dashboards with Real-Time Insight



- Live Equipment Status:** Visual equipment cards showing real-time OEE percentages with color-coded status indicators
- Production KPIs:** Overall OEE metrics, equipment status counts, active alerts, shift progress tracking
- Equipment Performance:** Individual equipment OEE circles with availability, performance, and quality breakdowns
- Trending & Analytics:** Mini trend charts for each equipment showing performance over time
- Production Details:** Current product information, order progress, target speeds, and production counts



The Six Big Losses Framework

Our OEE app systematically addresses manufacturing's Six Big Losses.

- Availability Losses:**
1. Equipment Failures - Unplanned downtime due to breakdowns
 2. Setup and Adjustments - Time lost during changeovers and startups
- Performance Losses:**
3. Idling and Minor Stops - Brief stoppages under 5 minutes
 4. Reduced Speed - Running below optimal equipment rates

- Quality Losses:**
5. Process Defects - Scrap and rework during steady-state production
 6. Reduced Yield - Losses during startup or fine-tuning until stable production



Transform

Your Manufacturing Performance

The LOGICAL SYSTEMS OEE app enables manufacturers to increase equipment utilization by identifying and eliminating the hidden factory within operations through uncovering unused capacity. Real-time monitoring and alerts enable immediate response to equipment issues, reducing unplanned downtime that disrupts production schedules. Quality metrics tracked at the source help improve first pass yield by preventing defects from propagating downstream to costly rework or scrap. Accurate performance data enables realistic production planning and scheduling based on demonstrated equipment capability rather than theoretical capacity. Operations teams can benchmark performance by comparing OEE across shifts, lines, plants, and against industry standards to identify best practices and improvement opportunities. The system drives continuous improvement by using Pareto analysis to identify the largest opportunities for loss elimination, ensuring improvement efforts focus on the highest-impact areas.

OEE

Overall Equipment Effectiveness

Search or jump to...

Ctrl+K

Sarah Chen

Production Manager

Home

Dashboard

Configuration

Equipment

Events

Products

Schedules

Categories

Workspace

Administration

Configuration

Configure OEE system settings and parameters

Equipment

Events

Products

Schedules

Categories

Equipment Configuration

Manage production equipment and machinery

Export

Add Group

Add Equipment

All Equipment

Roasting Area (2)

Grinding & Packaging (3)

Quality Control Lab (0)

Water Treatment (1)

Filling Lines (3)

Bottle Manufacturing (0)

Cocoa Processing (1)

Chocolate Tempering (1)

Molding & Packaging (2)

Name	Code	Type	Group	Target OEE	Speed	Status	Bottleneck	Actions
Bean Roaster 01	CS-ROAST-01	Machine	Cocoa Processing	86%	500 kg/hour	Active	No	
Coffee Roaster 01	AV-ROAST-01	Machine	Roasting Area	85%	600 kg/hour	Active	No	
Coffee Roaster 02	AV-ROAST-02	Machine	Roasting Area	85%	600 kg/hour	Active	No	
Filling Line A1	HP-FILL-A1	Line	Filling Lines	87%	600 bottles/min	Active	No	
Filling Line A2	HP-FILL-A2	Line	Filling Lines	87%	600 bottles/min	Active	No	
Filling Line A3	HP-FILL-A3	Line	Filling Lines	85%	450 bottles/min	Active	No	
Industrial Grinder 01	AV-GRIND-01	Machine	Grinding & Packaging	88%	800 kg/hour	Active	No	
Molding Machine 01	CS-MOLD-01	Machine	Molding & Packaging	86%	120 molds/min	Active	No	
Packaging Line A	AV-PACK-A	Line	Grinding & Packaging	86%	150 bags/min	Active	No	
Packaging Line B	AV-PACK-B	Line	Grinding & Packaging	86%	150 bags/min	Active	No	
Tempering Line 01	CS-TEMP-01	Line	Chocolate Tempering	87%	200 kg/hour	Active	No	
UV Treatment System	HP-UV-01	Machine	Water Treatment	95%	5000 liters/hour	Active	No	
Wrapping Line 01	CS-WRAP-01	Line	Molding & Packaging	88%	200 units/min	Active	No	

Comprehensive

Data Collection and Integration

The LOGICAL SYSTEMS OEE application automatically collects real-time production data through comprehensive event detection capabilities. Production counts flow seamlessly from sensors, PLCs, and barcode scanners while equipment state changes (Running, Idle, Down) are captured directly from automation signals. Quality results from integrated inspection systems combine with speed and rate monitoring against ideal cycle times, while configurable thresholds enable micro-stops detection for complete visibility into brief production interruptions that accumulate into significant losses.

Integration capabilities ensures the system becomes the central hub for manufacturing intelligence. ERP systems provide production schedules and work orders while receiving actual production and efficiency metrics in return. Seamless Integration with Computerized Maintenance Management Systems (CMMS) automatically generates work orders for equipment failures and imports maintenance schedules to track Mean Time Between Failures (MTBF) and Mean Time to Repair (MTTR) alongside OEE metrics. Quality systems integration including Laboratory Information Management System (LIMS) contributes inspection results for accurate quality calculations while receiving quality alerts and defect tracking.



Advanced configuration capabilities support unlimited equipment hierarchy levels from enterprise down to individual machines, with each entity configured for production parameters, target metrics, shift assignments, and integration points. Intelligent downtime classification uses configurable reason trees covering planned downtime, unplanned breakdowns, changeover activities, and external factors.

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Workspace

Configure dashboards, manage production events, and customize system functionality

Dashboards

Create and manage pages and dashboards

12 panels, 1 dashboard defined

Navigation

Organize sidebar menus and equipment subsystems

3 sites active

Functions

Manage calculation logic, KPIs and reusable functions

8 scripts running

Events

View and edit events - insert, split, merge or delete

247 events today

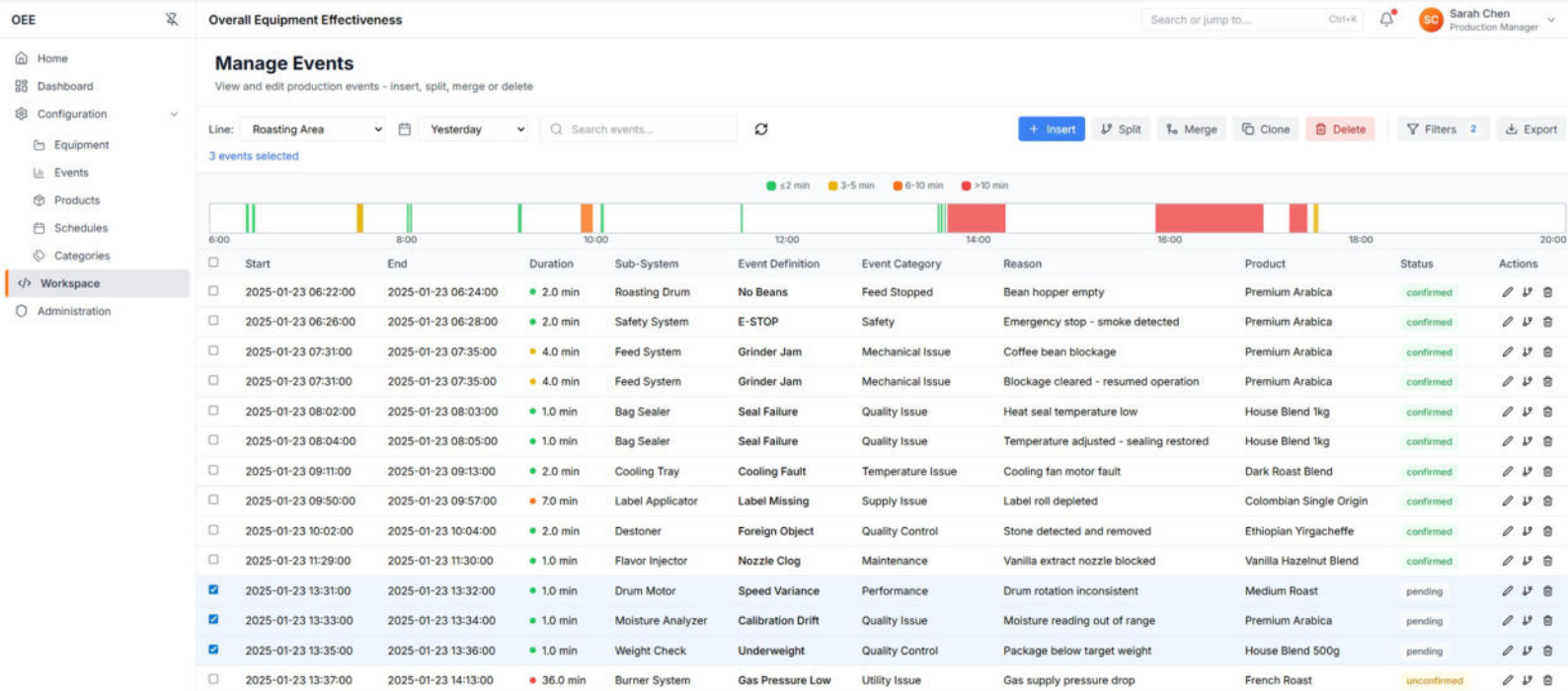
Orders

Manage production orders - import, create, start, stop or delete

18 active orders

Import/Export

Edit configurations externally



Key Features and Benefits

Features

- Automatic OEE calculation from real-time equipment data
- Configurable downtime reason trees with operator validation
- Shift-based performance tracking and reporting
- Mobile-responsive dashboards for anywhere access
- Integration with existing automation and business systems
- Multi-level equipment hierarchy modeling
- Automated notifications for performance thresholds
- Historical trending and analytics
- Event management with timeline visualization
- Comprehensive configuration tools for equipment, products, and schedules
- Low-code logic engine for event workflows
- User and Role Management with RBAC and site-level restrictions
- Theme management, quick export tools, and CI/CD-ready deployment options

Benefits

- 10% OEE improvement = 10% more production from existing assets
- Reduced overtime costs through better equipment utilization
- Lower quality costs via reduced scrap and rework
- Decreased maintenance costs through proactive intervention
- Improved on-time delivery from accurate capacity planning
- Typical ROI within 6 months through downtime reduction (20-30%), speed recovery (10-15%), and quality improvement (5-10%)

Technical Requirements

System Requirements

Ignition® (8.1.+) Core Modules, Quad-core processor, 16 GB RAM, 10 GB free disk space

Supported Operating Systems

Windows Server 2019/2022/2025, Windows 10/11, macOS (X, 10.16+), Linux (Ubuntu, CentOS, RHEL)

Supported Protocols

MQTT, OPC UA / OPC DA, REST API (JSON Payloads) Kafka (via connector), Snowflake (via pipeline, data bridge)

Supported Databases

Microsoft SQL Server, Oracle, MySQL, MariaDB, PostgreSQL, any database with JDBC driver

Supported Browsers

Chrome, Firefox, Safari, Microsoft Edge



LOGICAL SYSTEMS
OEE

Unlock the hidden factory within your operations.

LOGICAL SYSTEMS OEE App transforms equipment effectiveness from a monthly Excel calculation into a real-time driver of operational excellence by providing the visibility and insights needed to achieve world-class manufacturing performance.