



Enhance plant productivity and overall equipment effectiveness.

Movicon™ Pro.Lean™ Manufacturing Software
Identify inefficiencies and empower continuous improvement with real-time operational data collection, visualization and analysis



You need better access to information that can help you improve productivity, reduce waste, and increase profits at your plant.

In today's increasingly competitive market, manufacturing companies cannot risk becoming inefficient and non-competitive. It is essential to reduce production costs, increase uptime and availability, and improve flexibility and quality.

Production lines are subjected to a range of events that reduce performance and efficiency, including malfunctions, downtime, waste, and rejects. To meet these challenges, manufacturers are adopting Industry 4.0 and lean manufacturing principles, requiring a focus on productivity, quality, and continuous improvement.

Optimizing the manufacturing process requires comprehensive, real-time data from the automation systems. Manufacturers, therefore, need simple and efficient tools to ensure connectivity, data collection, aggregation, and analysis to deliver fast return on investment (ROI).

"Lean tools are always valid; however, today, with the onset of Industry 4.0 and the Internet of Things, lean goals can be accomplished much more quickly."

– Mark Crawford, The American Society of Mechanical Engineers



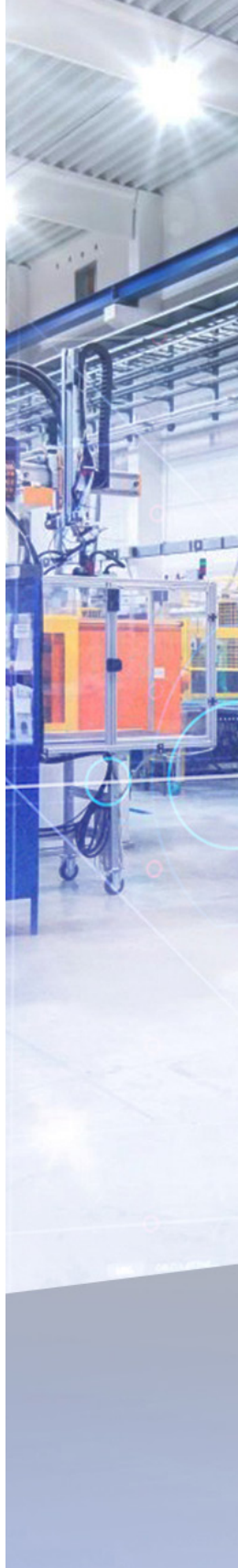
Digital lean manufacturing provides an opportunity to target hidden components of waste that often go unnoticed and cumulatively add up to higher support costs and reduced efficiency and output, resulting in tangible bottom-line impact.

– Deloitte Insights



"The combination of advanced analytics and lean management could be worth tens of billions of dollars in higher earnings for large manufacturers."

– McKinsey





Instead of reacting to manufacturing issues and emergencies, what if you could identify the weak points in your production system and implement changes that increase productivity and efficiency?

Movicon Pro.Lean delivers real-time insights for truly informed operational decisions.



Pro.Lean is a lean manufacturing solution that connects the plant floor with operational and business leaders, providing real-time key performance indicators (KPIs) that enable you to determine overall equipment effectiveness (OEE), calculate machine downtime, and track and schedule production. Automated data collection feeds powerful plant analytics, making it easier to identify production issues and bottlenecks where investment could result in significant increases to operating performance.

Pro.Lean helps close the gaps between production processes and results, where even small improvements or loss reductions can have big impacts. Pro.Lean is an open, adaptable platform that connects plant floor data to digitize production processes, minimize errors, and reduce downtime while also adding traceability, scheduling, and maintenance planning.



Pro.Lean provides the customer detailed reports broken down by batch and/or shift, which enables them to identify profit loss by means of analyzing resource availability, performance, and quality. With the ability to add downtime causes, it becomes clear very quickly where bottlenecks and constraints exist, or what may otherwise be impacting the productivity of the system. As a systems integrator, this data allows us to work mindfully with the customer and determine how to best improve the system process for maximum performance.

Zachary Roisum - PieperAutomation.com

Reduce machinery downtime and maintenance costs.

Downtime analysis allows you to identify and eliminate recurring production issues that result in increased plant downtime and maintenance costs, enabling more productive use of people and equipment.

Increase plant efficiency and capacity.

Improved production efficiency, fewer rejects, and less downtime mean greater utilization of your production assets—resulting in lower operating costs and increased ability to meet production plans without incurring overtime or the threat of delivery delays.

Enhance traceability throughout the production process.

Digitized production processes enable you to trace materials flow across the value chain—from raw materials, to semi-finished products, to the warehouse—allowing you to better manage batches, materials, quantities, and orders with an archived production record.

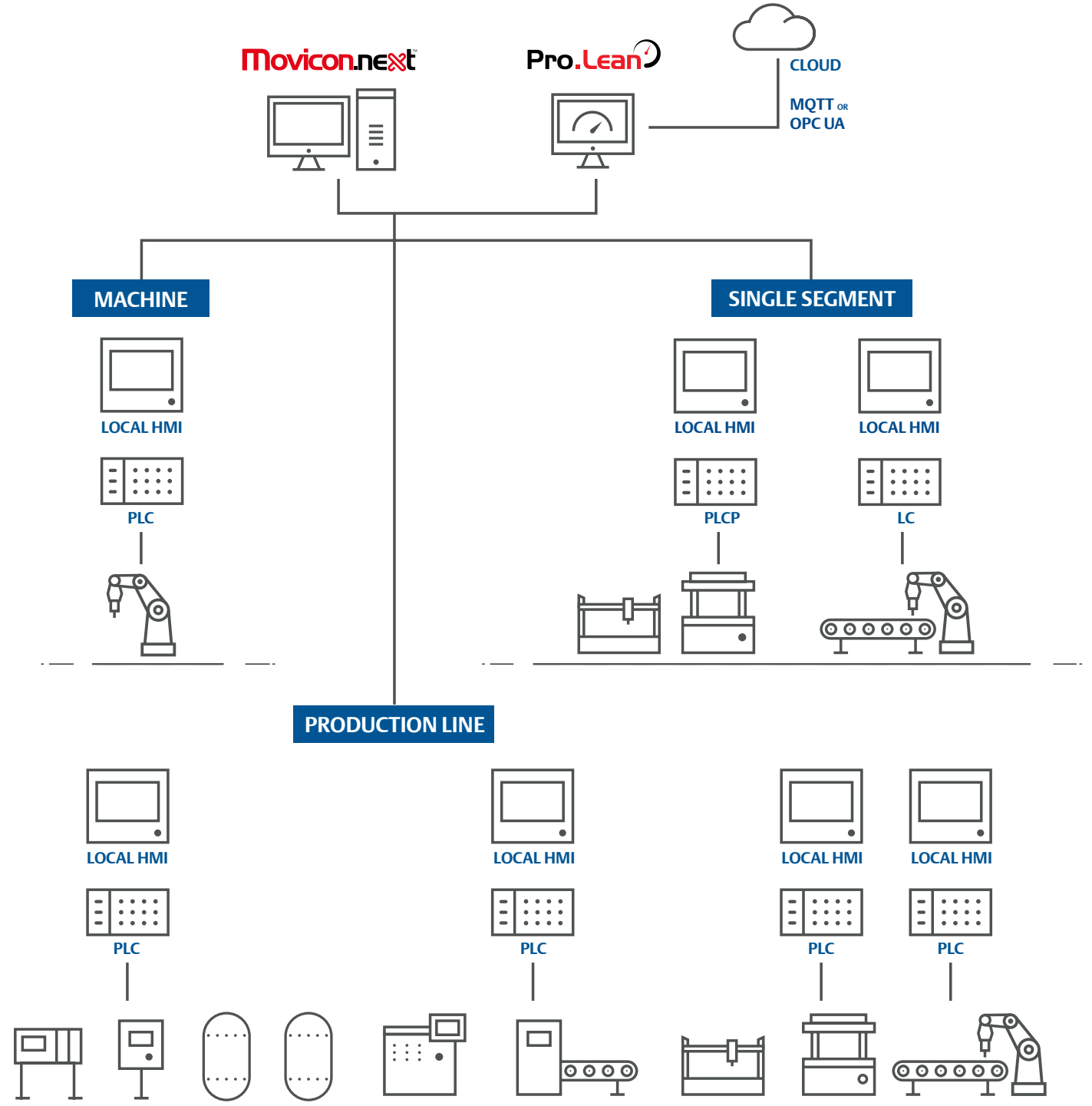
Identify production issues that impact quality.

Root cause analysis of production data allows you to detect issues and eliminate them before they impact production, reducing waste and scrap and improving product quality.

Improve the flexibility of production scheduling

Connect production lines to ERP systems to constantly monitor, manage, and prioritize operations to ensure machine availability supports production schedule needs.

Pro.Lean can be applied to one machine, a production line, or an entire manufacturing plant.



Empower operators while reducing costs with built-in dashboard and production reports.



Easy data collection and visualization

Pro.Lean uses comprehensive setup wizards to ensure users are collecting the right data to support their unique operations. Based on input into the wizards, Pro.Lean distills a wide array of collected data and distills it into highly relevant, intuitive visualizations so personnel always have the right information at the right time. Critical data can be visualized via local HMI, networks, or over the internet.



Your data, your way

Pro.Lean is highly extensible, making it easy to customize methods for generating OEE. Using the standard Movicon.NEXT™ tools, users can extend or modify the data collection techniques, analytics, reports, and screens generated by Pro.Lean's setup wizards.



Drive more value from data

End users can quickly and easily locate key metrics, KPIs and OEE status, categorized by date, shift, operator, machine, product, and batch in real time. Information is easily filtered and displayed as histograms or overlapped. The information is available no matter where you are, using secure mobile apps and the web client tools.



Ensure availability with redundancy

Pro.Lean offers optional redundancy, automatically synchronizing historical data to ensure there is always a backup for mission-critical information.

Open architecture seamlessly connects to your systems while configuration wizards guide you through setup.



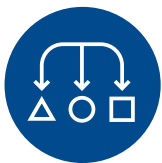
Timesaving tools are built in

Users save time with the configuration wizard by selecting pre-populated field variables to develop real-time dashboards, powerful plant analytics, calculations, and reports. Unlock rapid ROI, completing installation and configuration in much less time than with a traditional MES.



Reliable, scalable, modular

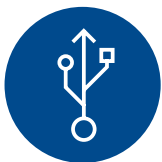
- Pro.Lean offers an open system architecture that enables integration with any control device, production line, and machine management system.
- Pro.Lean collects data from any PLC/PAC, CNC or field device and shares critical information with existing business systems.
- Pro.Lean can be run standalone or as a standard available option with the Movicon.NExT™ industrial software platform.



Flexible configuration

- Pro.Lean can be implemented at the asset/machine, production line, or plant level.
- For facilities without a main supervisory system, Pro.Lean can integrate screens and manage production information to minimize total investment.

Easy connectivity to existing systems and devices



Fast Communication Protocols Integration

Integrated I/O drivers support a vast selection of fieldbus protocols such as Modbus TCP, PROFIBUS, PROFINET, and Ethernet/IP, enabling broad connectivity to a range of automation devices.



Open Data Communication

Maximize data integration and openness through the standard OPC UA client and server.



Easy Connection with the Cloud

Connect IIoT Devices to the cloud more easily with built-in support for OPC UA, MQTT, and other protocols, as well as Azure, PubNub, and other platforms.

Bridge the IT/OT gap to improve visibility across the enterprise.

Enterprise visibility

Pro.Lean offers real-time data management and structured data analysis management to improve data integrity. Built-in functionality to handle big data helps unlock improvements whether they come from the control room or the board room. Open-architecture and web-enabled reporting tools make it easy to provide data to IT systems such as ERP or CMMS.

Turn downtime data into action

Statistical analysis of downtime causes can be based on configurable criteria that enables production teams to create targeted action plans.

Display data your way

Data is captured, stored, and presented graphically by date, duration, or event frequency. Displays are fully customizable to help operators immediately identify critical information.

Fully customizable reports—from anywhere

Pro.Lean provides a wide variety of out-of-the-box report templates available immediately after setup. Those same reports can be used as-is, or customized to meet specific business requirements—and users can securely access them on the server or from any mobile device or internet browser.

Identify bottlenecks and improve operational efficiency

Built-in tools collect and analyze real-time production data using powerful algorithms to help identify the root cause of performance and operational issues.



Visualize production performance from anywhere.



Pre-built dashboards and reports ensure operational teams have the information needed to reduce downtime, reduce scrap, and drive equipment efficiency. Users can easily customize the dashboards to meet individual organizational needs without developing the OEE formulas and dashboards from scratch.



Stay ahead of performance reduction

KPI dashboards displaying information necessary to reduce production losses and increase business performance are easily viewable in any HTML5 web browser, or local mobile app, providing real-time awareness.



Enhanced awareness, even when remote

Emerson's Movicon.NEXT platform drives powerful KPI dashboards that can be viewed, on a wide range of devices—local monitors, remote workstation browsers, mobile devices—putting data in the user's hand no matter where they may be.



Visibility that fits your needs

Pro.Lean dashboards are ergonomically designed and completely customizable, allowing easy integration of additional display screens, data, and plant visualization.

Stay ahead of problems to keep operations running at peak performance.



Today's lean resources and smaller teams mean operators and technicians are pressed to do more with less. When they have the right tools, even small teams are empowered with the ability to plan, collaborate, and document maintenance activity—all key to maintaining peak performance.



Easily access maintenance records

Pro.Lean delivers a comprehensive digital toolset for keeping maintenance personnel informed on the status of current, past, and future tasks. Work completed in audit archives for future reference, trending, and analysis.



Planning ahead

Planned maintenance is easily managed with statistical information that is automatically available to schedule set points or plan activity times in calendars.



Instant awareness

No matter where they are, personnel gain real-time awareness of maintenance alarms or other events with notifications provided by email, voice, or push notification.

Improve productivity and efficiency with better production insights.



Pro.Lean

Emerson Pro.Lean along with Pro.Energy represent a new class of Plant Analytics focused on reducing waste, conserving energy, and increasing profits by empowering operators to run processes with greater visibility, efficiency, and throughput.

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