



LORDAN

BEYOND THERMAL
ENGINEERING

Success Story



LeaderMES

Lordan removes production bottlenecks and improves overall equipment effectiveness production performance with **LeaderMES** system

Highlights

- Real-time bottlenecks detection reduces production cycle time
- Real-time manufacturing visibility - key to new production insights
- Data driven decisions leads to significant improvements in efficiency
- Wireless Cisco router ensures seamless and secure operations
- Cable-free plug-n'-play setup enables fast deployment
- Cloud-based solution introduces no hassle installation and operation
- Reduced downtime is achieved through preventative maintenance



"Within two weeks we could produce OEE reports and make decisions based on real data, not assessments.

Within a month of installing LeaderMES we increased our manufacturing floor productivity by over 10%".

**Yair Avigdor,
COO, Lordan**

Challenges

- Identify real reasons for execution slow-downs
- Make informed decisions based on accurate data
- Produce effective OEE reports
- Transform Lordan into a paperless factory
- Become better equipped to deal with competitive global pricing



"In God we trust, all others must bring data."

Edward Deming

Lordan, a manufacturer of thermal engineering heating and cooling systems since 1958, built a global reputation for delivering high quality custom-made design and supply flexibility, whatever the scope.



Lordan fine tubed coils

The challenge, to scale production in a high volume industry, where material accounted for a high percentage of manufacturing costs, and margins were tight compelled Lordan to: Identify bottlenecks, reduce downtime, reduce waste and improve Overall Equipment Effectiveness (OEE).

The key to change was the ability to view and track mission-critical data feeds in real time directly from the production floor, rather than rely on periodical assessments.

A new management team led by CEO Amir Zohar realized that to compete successfully and win new business Lordan needed to improve productivity and adopt lean manufacturing methods.

Yair Avigdor, Lordan COO, specifically wanted to find out which machines were underperforming, what parameters influenced their effectiveness and what the reasons were for downtime. All these measurements needed to be compared to ideal performance rates.



Yair Avigdor, COO, Lordan



Production facility



Key considerations in choosing an MES system

The experience Lordan's new management team had in the past with Manufacturing Executions Systems (MES) enabled them to conduct a stringent benchmarking process.

The project team considered Lordan's need to outsource IT services, budget restrictions, network connectivity, infrastructure challenges and deployment constraints. Specific key considerations included:

- **A flexible solution capable of scaling up in the future**
- **A SaaS deployment model**
- **Implementation; days, not weeks or months**
- **Seamless integration with other production and finance systems**
- **Relevant real time performance metrics and reports**
- **Reduced incremental infrastructure costs**
- **A secure and stable cloud solution**
- **A commitment to ongoing service and support**



WiFi LeaderMES PLC transmitting relevant data in real time



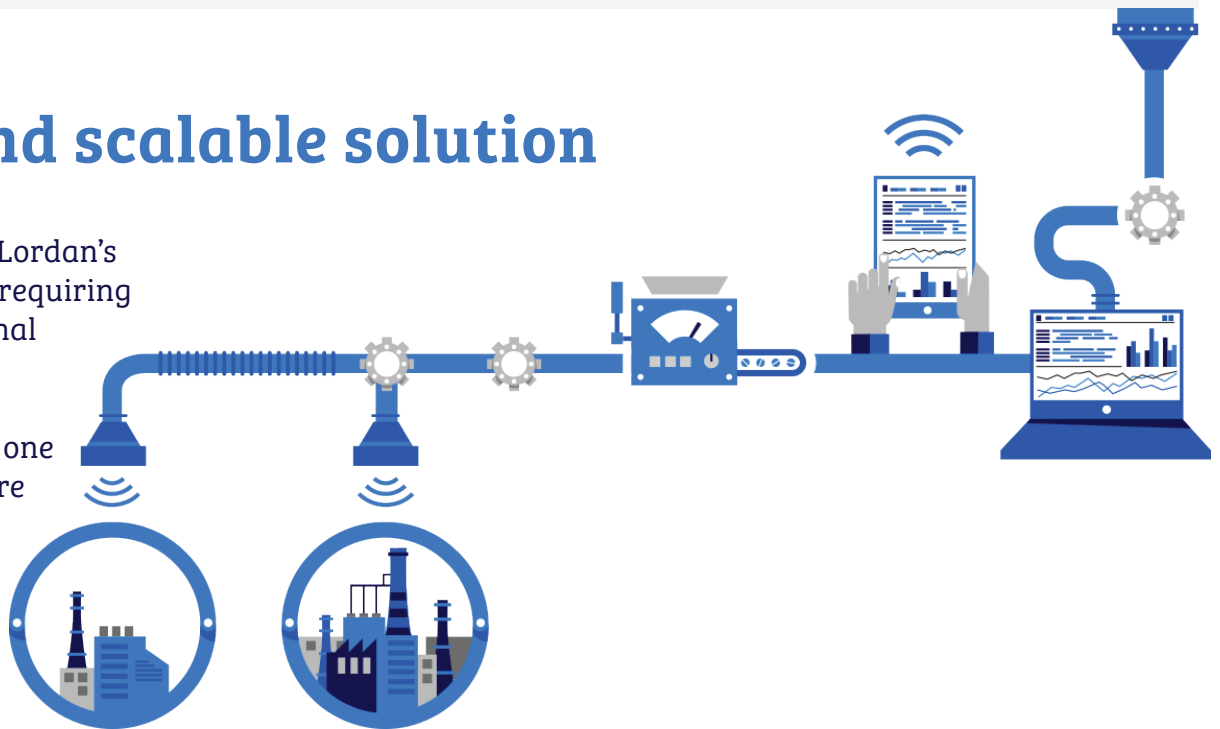
LeaderMES

Solution for Lordan

- Agile modular solution that can scale to meet client's evolving needs
- Secure cloud-based connectivity through Cisco-LeaderMES integration
- Cost saving cable-free networking using Cisco 819 M2M Router
- Visibility of production throughput and OEE
- Wireless plug-n'-play setup with no downtime
- Paper-free factory floor

Agile and scalable solution

LeaderMES met Lordan's criteria without requiring any organizational changes. Initial setup was accomplished in one day and the entire system was up and running in a few working days with minimum training. The workstation's PLCs were connected to the Cisco router through a Wi-Fi connection. LeaderMES also met Lordan's requirements to begin with a basic system and then add modules such as planning and scheduling, as well as features that can address growing needs.



- Setup accomplished in one day
- System designed to easily meet growing needs



Cloud-based wireless solution introduces significant cost savings

- **Quick and simple deployment - 80% faster than other solutions**
- **Integration completed with no machine downtime**
- **Wireless plug-n'-play setup reduces costs**
- **Savings on servers, operations and human resources**

Lordan's lean manufacturing approach necessitated new processes that improve the quality of operations on one hand while remaining affordable on the other.

The LeaderMES SaaS based solution enables affordable monthly license fees and minimum infrastructural changes. Production benefits were almost immediately evident.

Cisco-Leader integration delivers a secure and stable IoT network

- Flexible wireless connectivity
- Additional layer of TSL and SSL security
- Improved operational costs and efficiency
- Protected and isolated network

"We formed a successful partnership because each side brought to the table something unique; LeaderMES offers years of experience and expertise in manufacturing solutions, while Cisco offers security and routing expertise."

**Greg Kopels,
SVS NCE, Cisco**



The LeaderMES solution leverages Cisco's 'Connected Factory', which supports current and future needs of manufacturing through automation and wireless solutions backed by real-time data, in a bid to improve production, visibility, security and mobility.

On the floor level, the partnership between LeaderMES and Cisco provided a secure and stable wireless layer that operates as a separate and closed factory

network. Once the LeaderMES PLCs were installed, they were wirelessly connected to Cisco's 819 Router. The compact router comes with enterprise-class features including; web security services, WAN Ethernet, a web-based configuration tool and high-speed data rates. The added layer encrypts data from the LeaderMES PLCs via the 819 router to the cloud using TLS and SSL security protocols.



Cisco's router

Tighter visibility and control over the manufacturing processes

A number of noticeable changes surfaced within weeks of the system's deployment, from increased employees' throughput to detecting the real bottlenecks.

For instance, Lordan identified an opportunity to optimize night shifts saving on 600 human hours a month. System maintenance alerts also helped Lordan to delay a costly new machine purchase. Reports highlighted an ongoing electricity fault that affected production.

- Visibility and real-time measurement trigger 10% increase in productivity
- Real-time data helps to detect faults, reduce cycle times and material waste
- Improvement in production capacity predictions helps to save costs
- Progress from paper-based factory to digital factory improves productivity



Next Steps

After witnessing significant improvements in productivity and performance within a relatively short timescale, Lordan plans to:

- Extend its solution to all its workstations
- Add a QA Module
- Add Planning and Scheduling Module
- Add a Mobile Application

"Sometimes it's about changing a nut to spare a whole machine and save millions."

**Yair Avigdor,
COO, Lordan**



About Lordan

Lordan engineers and manufactures high quality custom-made fin and tube heat exchangers for the global HVAC&R market since 1958. Experts in thermal engineering,

Lordan's heating, cooling and refrigeration coils are designed to operate in extreme environmental conditions. The company specializes in applications suited to the heavy

duty, precision cooling and industrial cooling markets.



About LeaderMES

LeaderMES digital factory solutions develops and implements OEE, resource optimization and secure cloud-based systems for industrial SME's worldwide. Following years of experience and

expertise LeaderMES developed a reputation for delivering fast and simple deployments, high ROI and robust performances. LeaderMES systems connect thousands of machines 24/7, worldwide all operating in

a highly demanding production environment.

Today the company partners with leading IT corporations to provide a gateway to the digital factory world.

Contact us

LeaderMES 8 Yohanan
HaSandlar st.,P.O Box
25132, Haifa, 31250Israel

Tel: +972-4-9990705
Fax: +972-4-9990706

www.leadermes.com

info@leadermes.com

Thank You