



Vorne XL: Improve Manufacturing Productivity

Installs in hours.

Configures in minutes.

Impacts immediately.

What is Vorne XL?

How Does XL Work?

Slide 7

What Value Does XL Create?

Slide 19

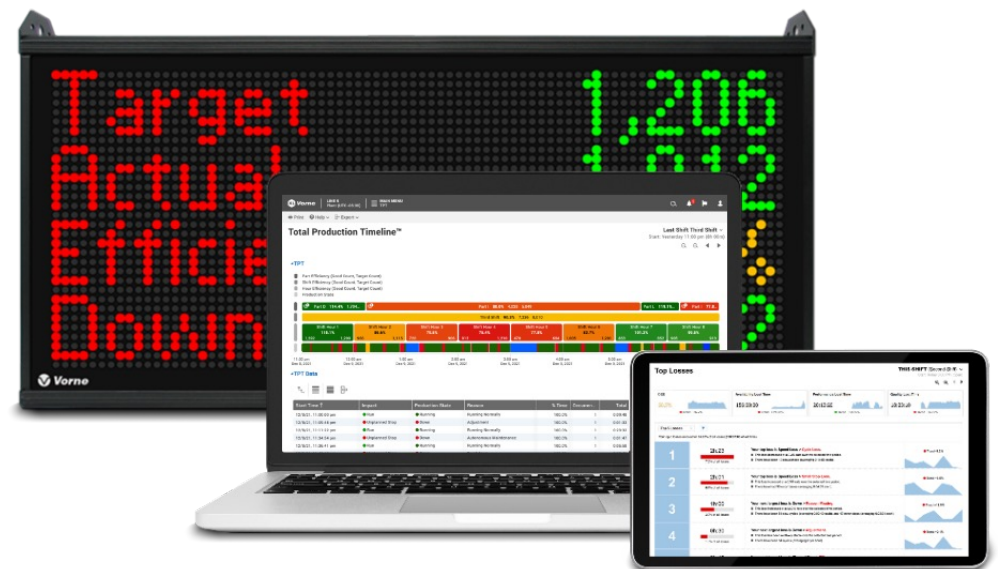
Q&A

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What is Vorne XL?

An IoT device with fully-integrated production monitoring and reporting.

- One "bolt-on" edge computing device that includes a scoreboard, I/O, historian, and reporting
- Scoreboard for your operators
- I/O to communicate with your process
- Built-in reporting for your managers



What is Vorne XL?

A tool to provide the same set of accurate data to your entire company.

- Simple to install, easy to integrate
- Centralized reporting behind your firewall with no need for servers
- A single source of accurate and precise information on losses
- Eliminates manual data collection



XL Applications

XL is simple and flexible, so it works on almost any process.

- Easily drops into any type of manufacturing process, and excels on a bagging line
- Monitor all your processes in one browser-based application
- Over 100 actionable metrics and dimensions
- Scalable – start with one work center and expand at your pace
- Fast and easy – avoids complex projects



XL Soil and Mulch

XL is extremely durable and can withstand rough environments.

- Soil and mulch is a dirty, rough-and-tumble manufacturing environment
- XL has well-sealed gaskets so that it can survive even the harshest applications
- We work with many companies who have used the same XL hardware for 10+ years
- While not certified officially, we would expect XL to test to IP44 out of the box
 - IP65/NEMA 12 achievable with aftermarket enclosure



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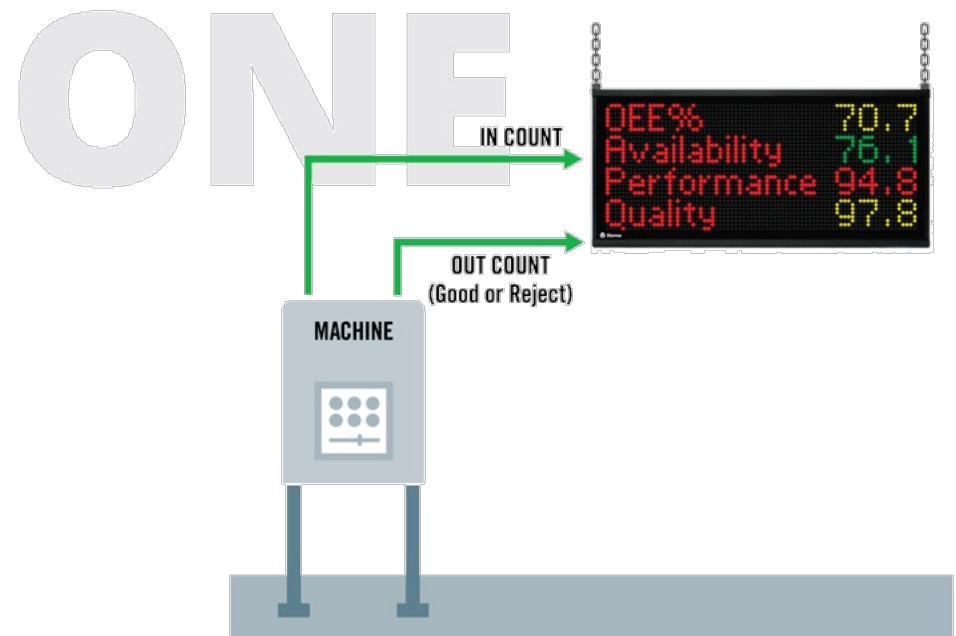
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Installation Friendly

Easily installed by your maintenance team.

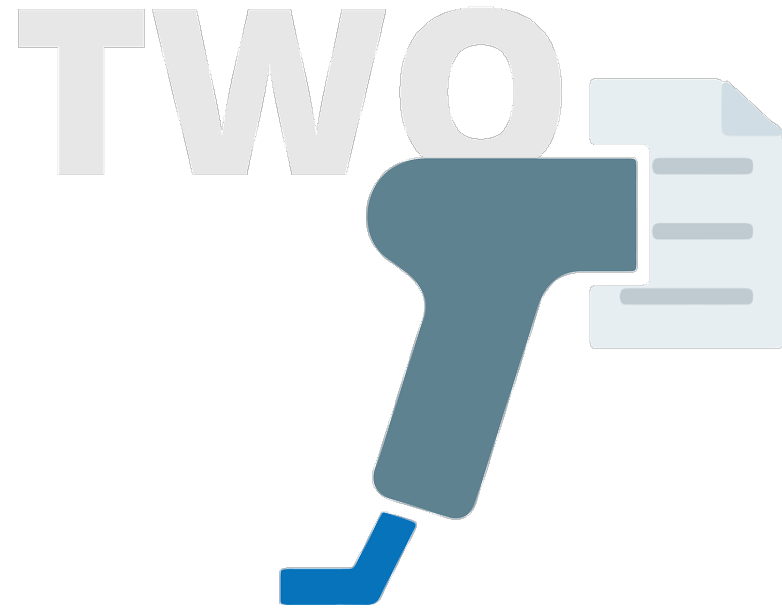
- All you need to be up and running is:
 - One or two sensors
 - Ex: photo-eye, proximity switch, through beam, relay, encoder, or output from a PLC
- 5 to 24 VDC
- NPN (sinking) or PNP (sourcing) output



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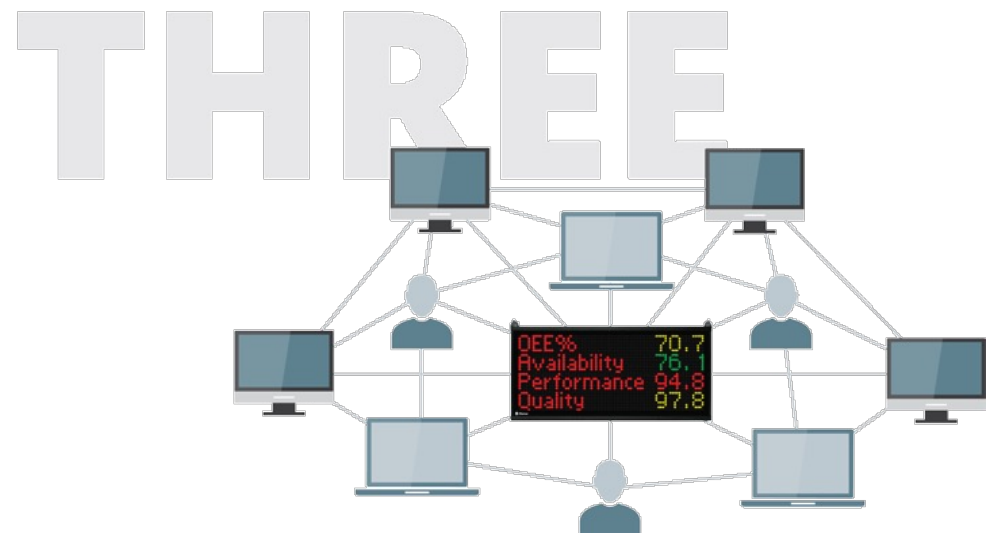
- All you need to be up and running is:
 - One or two sensors
 - A barcode scanner
 - RS-232
 - Wired or wireless



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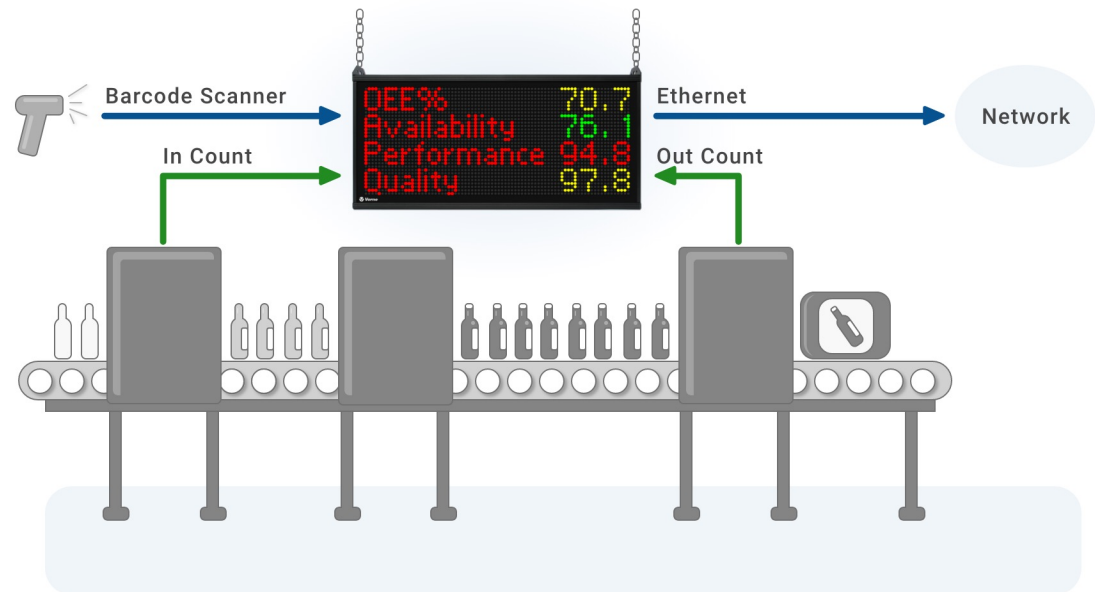
- All you need to be up and running is:
 - One or two sensors
 - A barcode scanner
 - Ethernet (or a wireless bridge) and power drop



Installation Friendly

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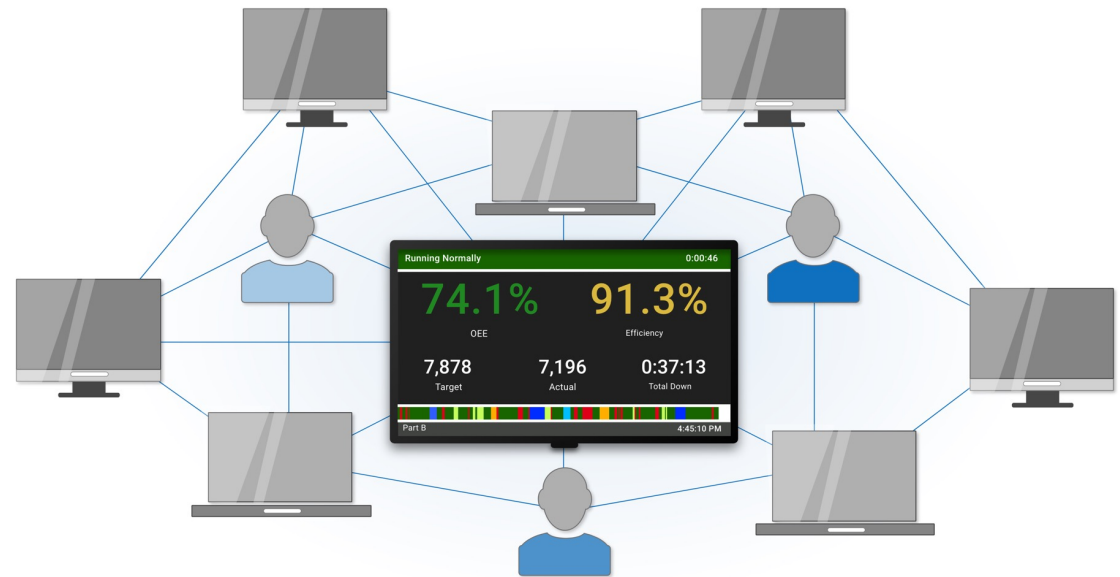
- All you need to be up and running is:
 - One or two sensors
 - A barcode scanner
 - An Ethernet and power drop
- Installation can be completed in a day
- Instant access to dozens of built-in reports, configure your own reports in an hour (or less)



IT Friendly

Little or no impact to IT

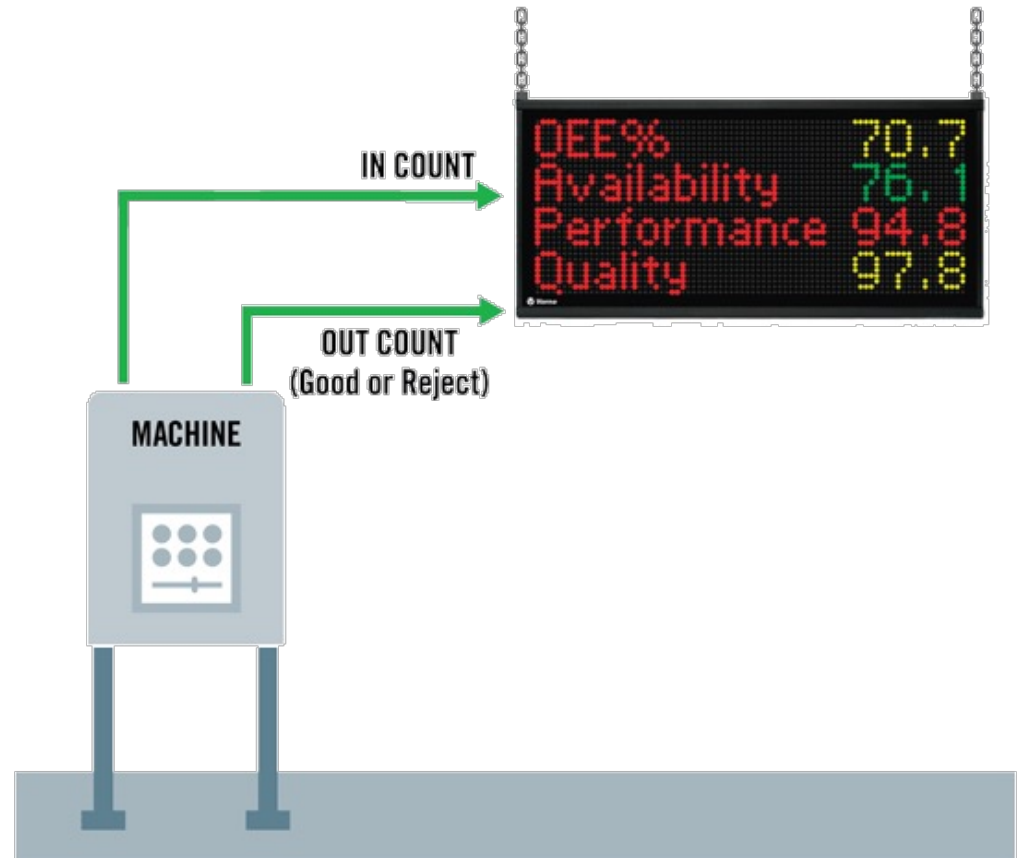
- No servers or software to install
- Operates on your LAN and behind your firewall
- Instant browser-based reporting
- Minimal impact to network traffic
- Off-the-shelf ERP/MES integration tools
- No risk of server down time since XL is not cloud-based



Measure With XL

It's as simple as In Counts and Out Counts.

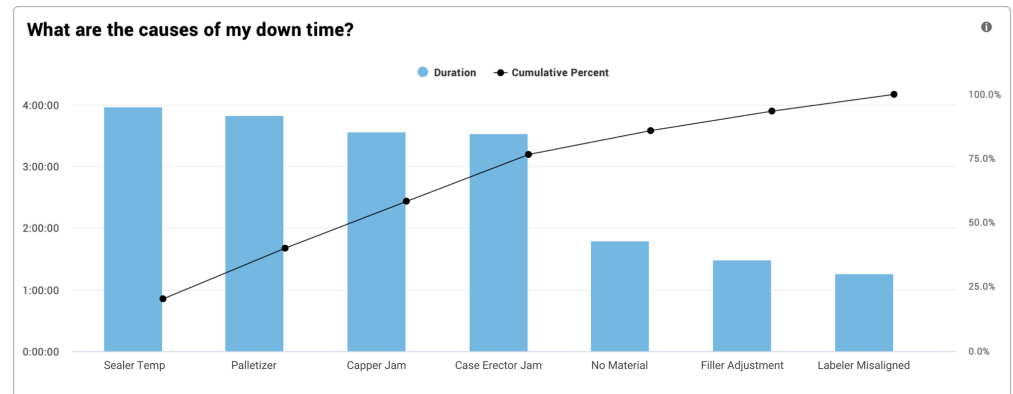
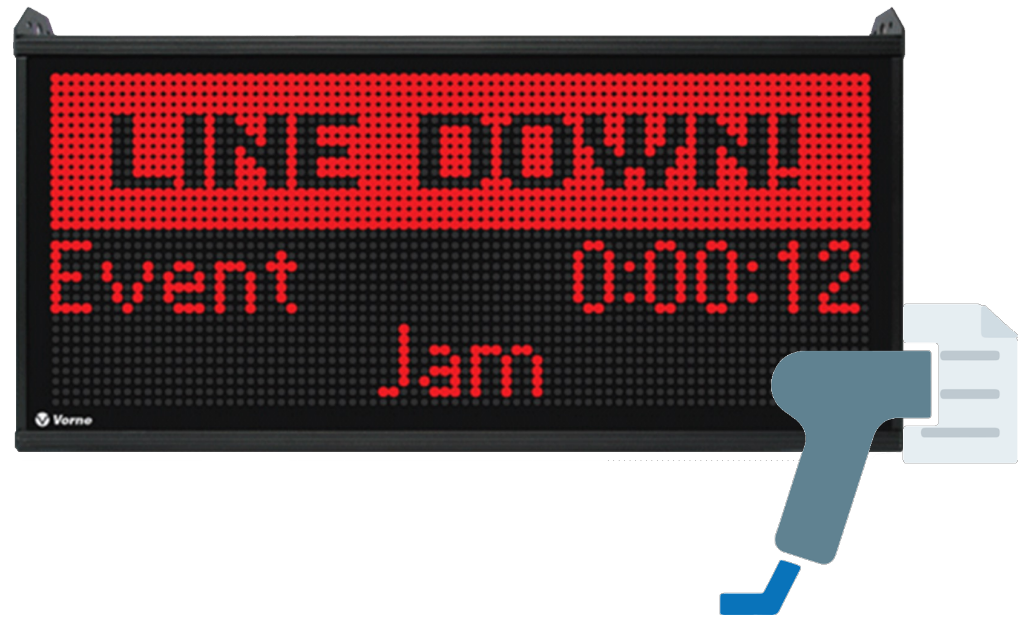
- As bags (or other pieces) move down the line, XL converts cycles from the sensor to counts
- XL uses the cycle/count data from sensors to calculate over 100 metrics
- Calculates uptime/downtime, quality, efficiency, cycle times, etc.
- Cycle/count data can be converted to various units of measure like pieces (bags), pallets, pounds, feet, etc.



Scan With XL

Scan a barcode to enter downtime reasons for detailed reports.

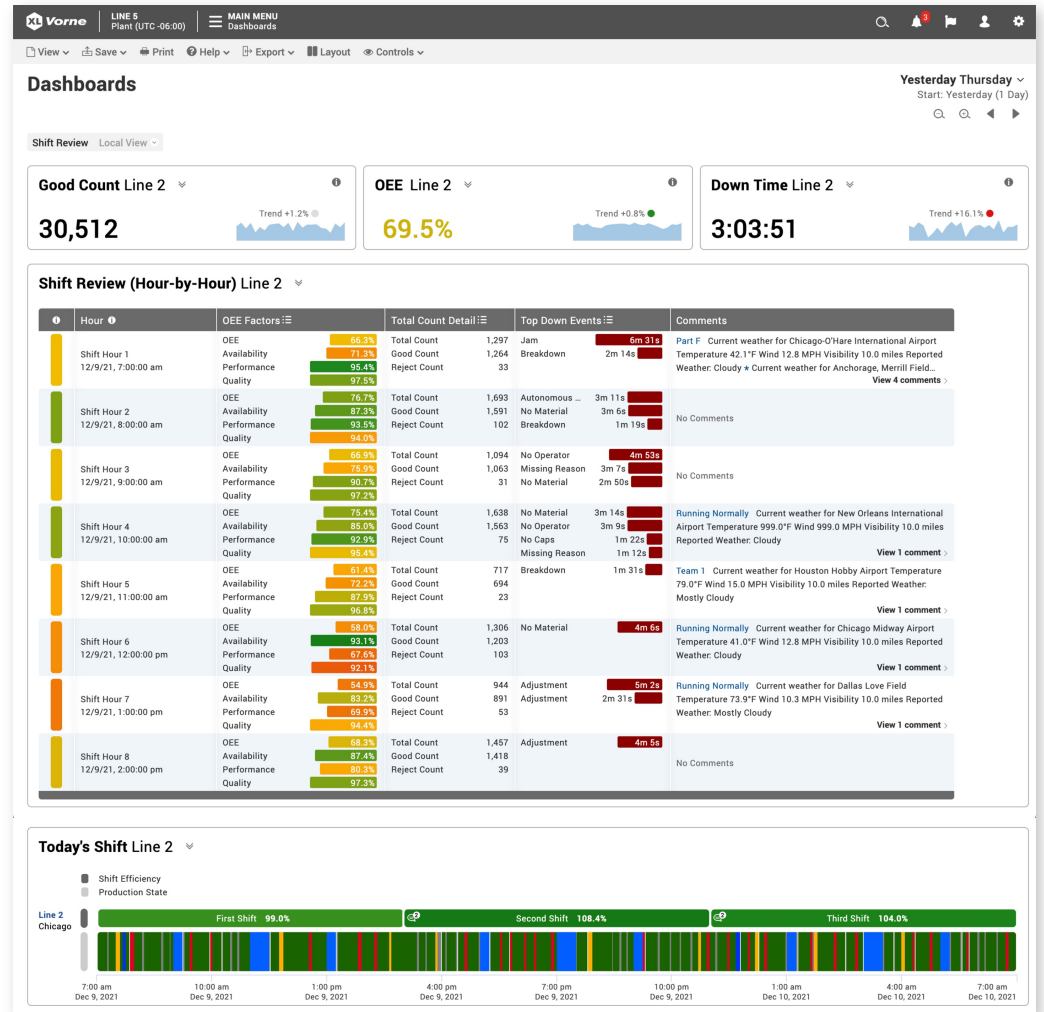
- Create downtime barcodes in the XL web interface
- Print barcodes that were created in XL and make them available to operators
- Scoreboard prompts operators to scan a reason when the line goes down
- Reasons are available for reporting, like in a downtime pareto chart



Report With XL

Limitless reporting options with built-in and custom reports

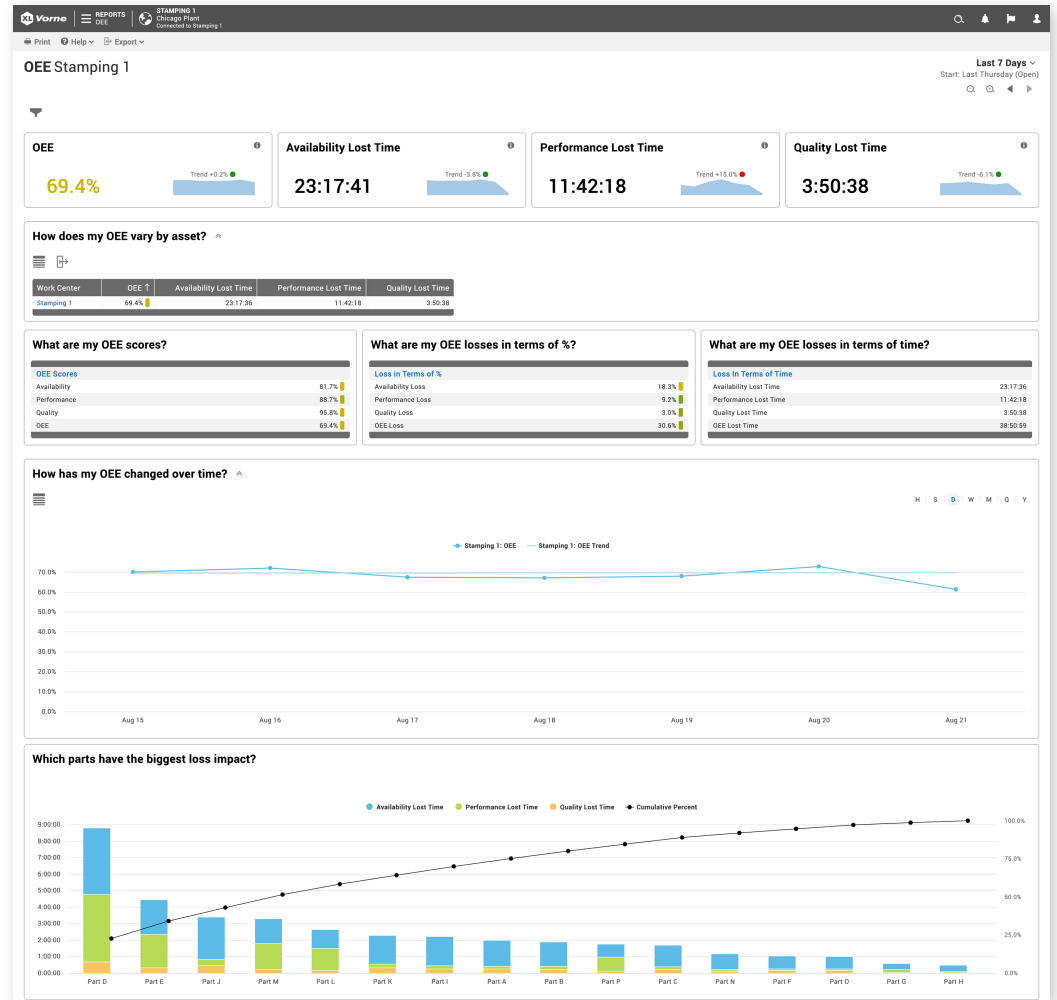
- Easy-to-build custom reports using drag-and-drop widgets
- Create local reports only available to you, or share them with your organization



Report With XL

Limitless reporting options with built-in and custom reports

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- Over 64 built-in reports



Report With XL

Limitless reporting options with built-in and custom reports

- Easy-to-build custom reports using drag-and-drop widgets
- Create local reports only available to you, or share them with your organization
- Over 64 built-in reports
- Email alerts and end of shift reports

Production Report: Stamping Press 3
ACME > Itasca > Stamping Press 3
This is the Shift 1 report for Monday, December 14th, 2021.

Shift Overview

Good Count	Efficiency	OEE
11,411	125.5% ■	75.7% ■

Shift Detail

OEE		Labor	
OEE	75.7% ■	Labor Efficiency	60.0% ■
Availability	83.3% ■	Total Labor	11:20:37
Performance	94.3% ■	Earned Labor	6:48:38
Quality	96.5% ■	Lost Labor	4:31:59

Part Runs

Start Time	Duration	Part ID	Good C
7:00:00 am	0:17:17	Part C	
7:04:05 am	2:10:14	Part X	
8:17:53 am	2:51:10	Part F	

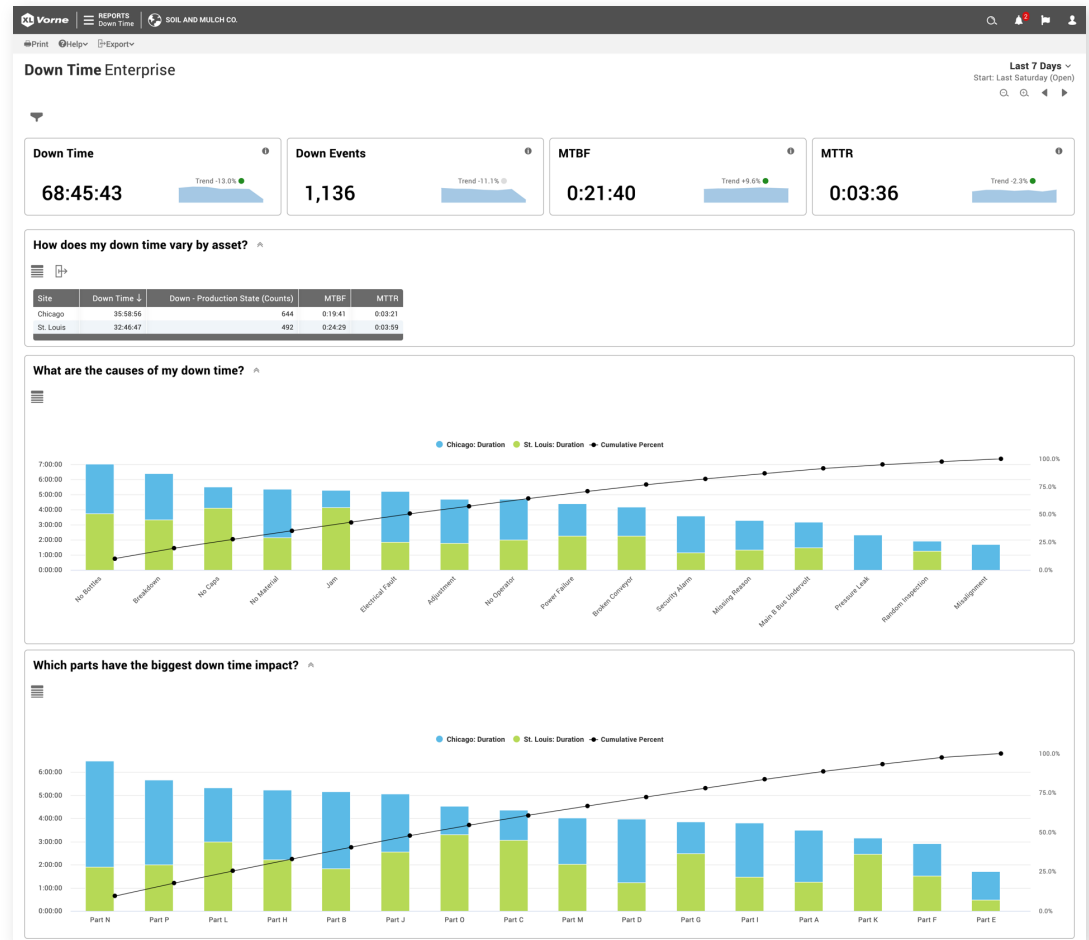
Sent by [XL Enterprise](#) on behalf of ACME.

Mobile Phone Overlay: 11:30 AM, XL Enterprise, Text Message Today 10:25 AM. Alerts include: Stamping Press 1 - Alert! OEE is less than 50%; Stamping Press 1 - Alert! Down (Gate Jam) for over 15 minutes.; Stamping Press 1 - Alert! Changeover (Color Change) is 5 minutes before target.

Report With XL

Access XL reports by typing the IP address into your browser.

- Example:
<http://new1.vorne.com/#!/analyze/down-time/down-time>



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Operational Value

Empower Operators to take charge of their shift.

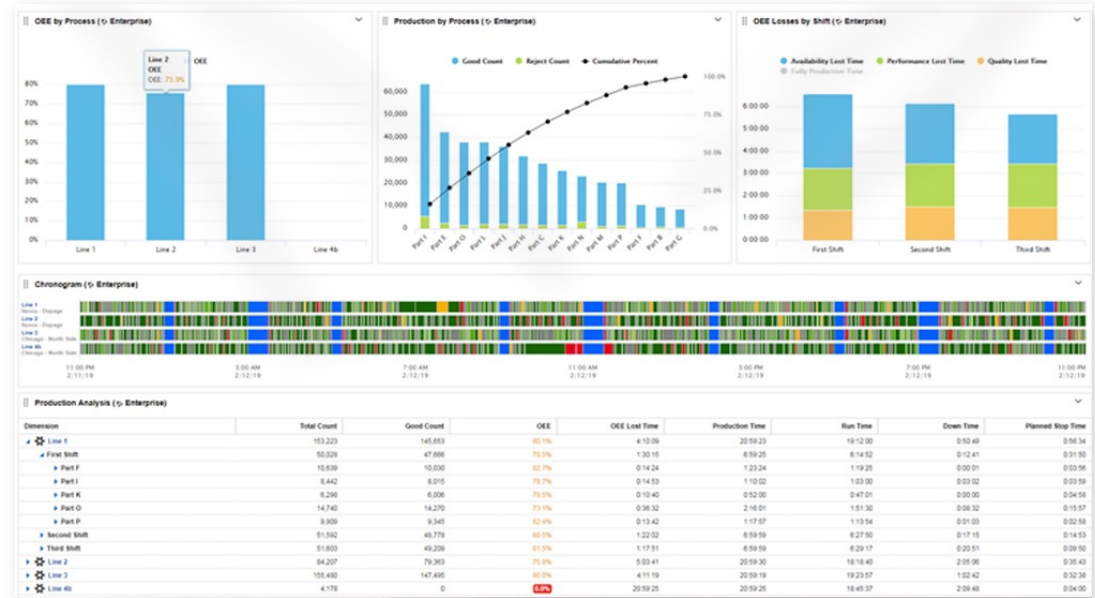
- See real-time target and actual counts for the shift
- If Efficiency is over 100%, operators are “winning the shift”
- Operators are instantly notified of a down event so they can get the line back up and running



Tactical Value

Equip Supervisors with powerful daily meeting reports.

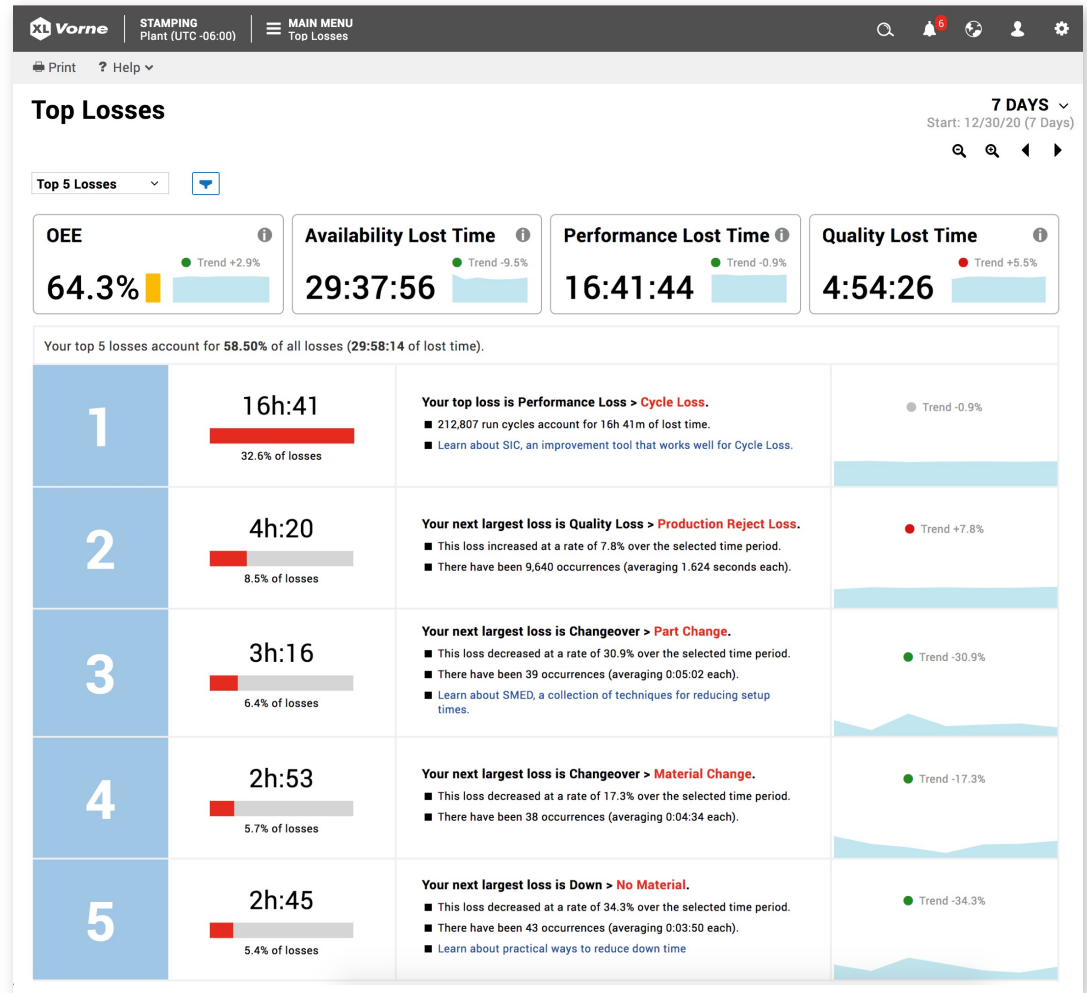
- Effective meetings can change the course of production
- For this, you need actionable, accurate, up-to-date data
- Supervisors can curate a report that is tailored to their production goals



Strategic Value

Provide managers the data they need to set goals.

- Managers can see the top losses for a work center, or even the entire enterprise
- See which losses are improving, and which are getting worse
- Allocate resources where you will see the largest improvement for the least effort



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Does anyone have any **questions?**



Thank you

Email ?

Call ?

Visit www.vorne.com