

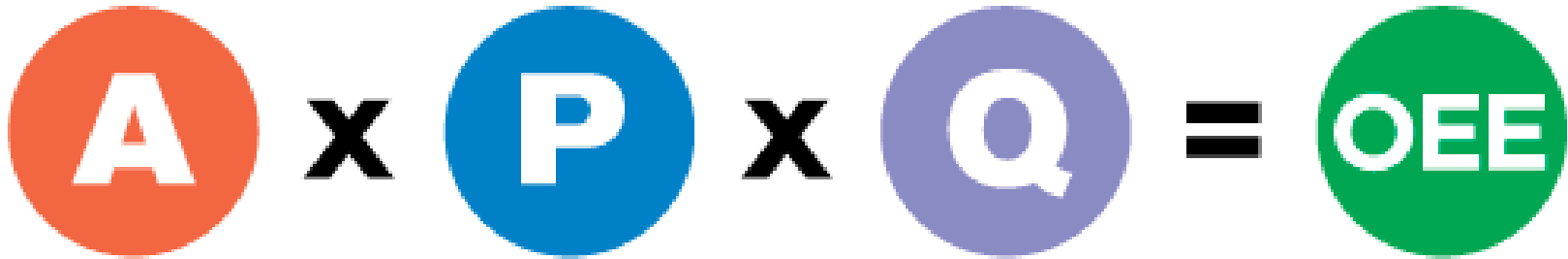


# OEE FOR EXECUTIVES

**ADAM MORAN  
V.P. SALES**

**VORNE INDUSTRIES**

# WHAT IS OEE?



## OEE Is a Manufacturing Best Practice

- OEE provides a single source of accurate and precise information on losses
- It is used worldwide
- It is scalable across your organization
- It facilitates accurate benchmarking



UNITED WE BREW.

# CALCULATING OEE?



## OEE Represents “Fully Productive Time”

- What you could have produced compared to what you did produce
- $\text{Availability} = \text{Run Time} / \text{Planned Production Time}$
- $\text{Performance} = (\text{Ideal Cycle Time} \times \text{Total Count}) / \text{Run Time}$
- $\text{Quality} = \text{Good Count} / \text{Total Count}$
- $\text{OEE} = \text{Availability} \times \text{Performance} \times \text{Quality}$



UNITED WE BREW.

# WHO USES OEE?



OEE was originally used in Japan in the Automotive Sector

- Easily applies to all of your manufacturing plants and processes
- Provides a consistent view of all your assets
- Provides one framework for seeing all loss information



UNITED WE BREW.

# APPLYING OEE

Overall Equipment Effectiveness	Recommended Six Big Losses	Traditional Six Big Losses
Availability Loss	Unplanned Stops	Equipment Failure
	Planned Stops	Setup and Adjustments
Performance Loss	Small Stops	Idling and Minor Stops
	Slow Cycles	Reduced Speed
Quality Loss	Production Rejects	Process Defects
	Startup Rejects	Reduced Yield
OEE	Fully Productive Time	Valuable Operating Time

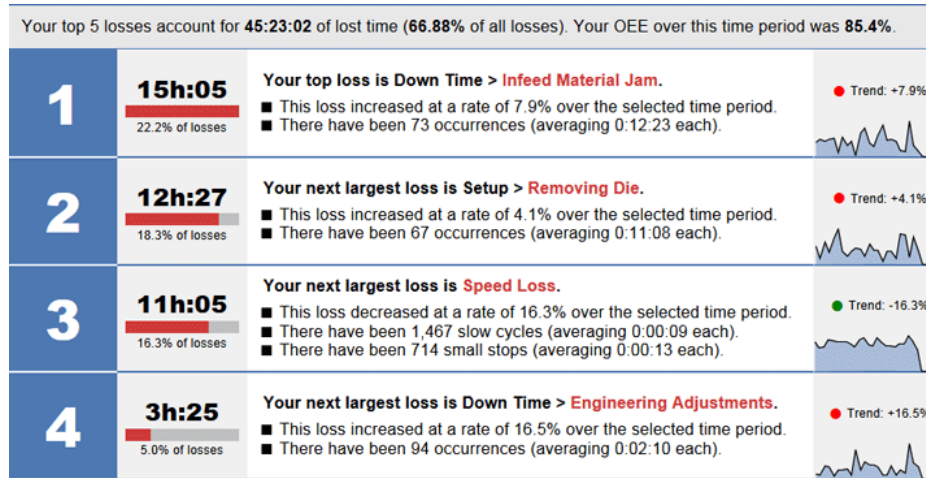
## The Six Big Losses are Your Roadmap to Improvement

- Know where to look
- Trust your data
- Drive change



UNITED WE BREW.

# PRIORITIZE WITH OEE



To Change Results We Must Address What's Driving Results

- Spend time on your top issues
- Don't fall into the "Quality Tangent"
- Rigorously measure the effectiveness of your CI activities



UNITED WE BREW.

# YOUR ORGANIZATION AND OEE

	Shift	Week	Month
Operational	✓		
Tactical		✓	
Strategic			✓

Decisions are More Effective When Made at the Right Role

- Operational 1-3 hours
- Tactical 1-3 days
- Strategic 1-3 months



UNITED WE BREW.

# CAPACITY AND OEE

$$\text{A} \times \text{P} \times \text{Q} \times \text{U} = \text{TEEP}$$

TEEP (Total Effective Equipment Performance)

- TEEP = OEE x Utilization
- Schedule Loss is Utilization
- TEEP is OEE calculated over a 24 period
- TEEP allows us to understand true capacity



UNITED WE BREW.



# HIDDEN FACTORY IN OEE



## Benefits of Tapping Into Your hidden Factory

- **Decreased Conversion Cost:** Fixed costs are spread over more output (increasing profitability)
- **Increased Flexibility:** Shorter production runs are possible, improving lead times and reducing inventory.
- **Deferred Spend:** Increase throughput on existing assets and defer spending on new equipment or facilities.



UNITED WE BREW.

# CAPTURING OEE



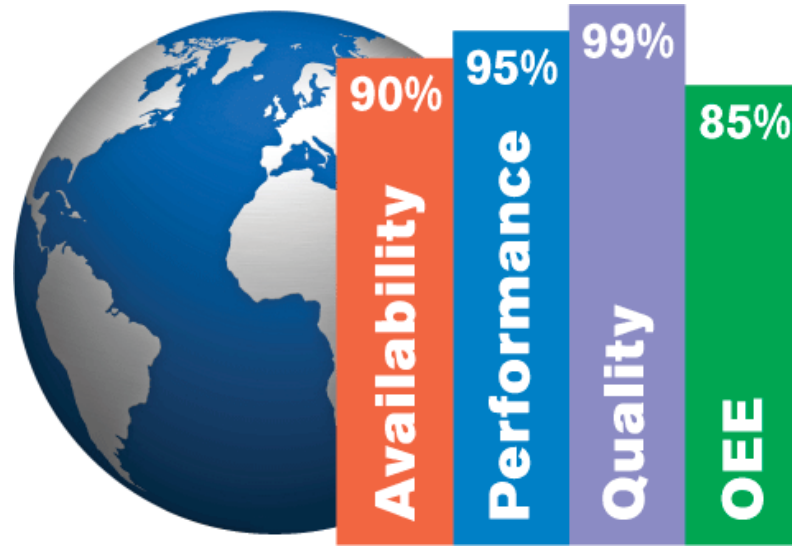
There are several ways to capture an OEE Score

- Manual - typically with a MS Excel spreadsheet
- MES (Manufacturing Execution System) - often an add on module
- OEE Tracking System - can be on-site or cloud based
- ERP system



UNITED WE BREW.

# WORLD CLASS OEE



## Should You Care About World Class OEE?

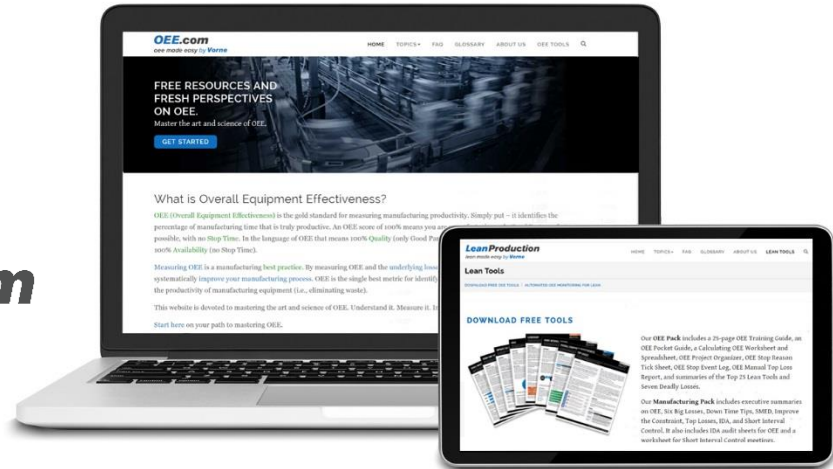
- No one has ever sold an OEE score
- A low score is better
- Focus on the opportunity not the number



UNITED WE BREW.

# RESOURCES FOR OEE

**OEE.com**  
**LeanProduction.com**



Thank you for your time

Adam Moran  
Vice President Sales  
Vorne Industries, Inc.  
630-875-3600 x 107  
adam.moran@Vorne.com



UNITED WE BREW.

District Northwest

May 10/11 2019  
Hood River, OR