Track & Yield:
A Winner's Guide to Safety and Sustainability Key Performance Indicators

May 3
1:30 AM-2:30 PM CT
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Sustainability Ambassador
BREWERS ASSOCIATION

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Safety Ambassador
BREWERS ASSOCIATION
AGENDA
**AGENDA**

**Introduction**
- SaSu commonalities
- Focus: high impact/low investment improvements
- Applicable to all sizes
- Examples
- Your participation
  - Slido Polls
  - Q&A

**Indicators Primer**
- All About Indicators
  - What are they?
  - Why use them?
  - How to use them?
- Types of Indicators
  - KPIs, OKRs, SMART
- Indicator Selection
  - Choices, pitfalls
  - Behavior modification

**Examples and Resources**
- Safety Indicators
  - Cultural/behavioral
  - Process monitoring
  - Cost/injury control
- Sustainability Indicators
  - Utilities
  - Environmental footprint
  - Cost
- Additional Resources
  - Downloads
ALL ABOUT INDICATORS
Performance Managing Indicators

Metrics that reflect how well stated goals and objectives are being achieved

What Are Indicators?

<table>
<thead>
<tr>
<th>Qualitative</th>
<th>OR</th>
<th>Quantitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leading Inward</td>
<td></td>
<td>Lagging Outward</td>
</tr>
<tr>
<td>Inward</td>
<td></td>
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Why Use Indicators?

**Scientists Say So**
- In manufacturing (Batti, et al. 2014)
- In NGOs (de Waal, et al. 2011)
- In corporate responsibility (Lyon 2004)

**Low- to No-Cost**

**Co-Benefits**
- Workforce Motivation
- Efficiency Improvement
- Quality/Big Picture Performance
- Corporate Image
How to Use Indicators?

• Measure human performance
• Track resource usage
• Assess progress towards goals
• Help improve business decision-making
• Building strategy for the future
<table>
<thead>
<tr>
<th>Types of Indicators</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Acronym</th>
<th><strong>KPI</strong></th>
<th><strong>OKR</strong></th>
<th><strong>SMART</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Key Performance Indicators</td>
<td>Objectives &amp; Key Results</td>
<td>Specific, Measurable, Attainable, Realistic, Time-Bound</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Timeline</th>
<th><strong>KPI</strong></th>
<th><strong>OKR</strong></th>
<th><strong>SMART</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Annually</td>
<td>Quarterly</td>
<td>Annually</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Outcome</th>
<th><strong>KPI</strong></th>
<th><strong>OKR</strong></th>
<th><strong>SMART</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Understanding Performance</td>
<td>Team Goals</td>
<td>Company or Dept Goals</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Order of Operations</th>
<th><strong>KPI</strong></th>
<th><strong>OKR</strong></th>
<th><strong>SMART</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Following</td>
<td>Following</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Who Creates Them?</th>
<th><strong>KPI</strong></th>
<th><strong>OKR</strong></th>
<th><strong>SMART</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Teams</td>
<td>Managers</td>
<td>CEO</td>
<td></td>
</tr>
</tbody>
</table>
INDICATOR SELECTION
Defining Sustainability

Brundtland Commission
Meeting the needs of the present without compromising the ability of future generations to meet their own needs
Defining Safety

US Department of Defense

Freedom from those conditions that can cause death, injury, occupational illness or damage to or loss of equipment or property, or damage to environment.

MIL-STD-882C ¶3.2.13
Data Quality Objectives

Think backwards from future decisions:

- Business decision-making
- Demonstrate achievement

What indicators should I use?

- What inputs (data) will answer my question?
- Are those inputs obtainable, reliable, trackable, durable?
Selecting Meaningful Metrics

Common Pitfalls
- Quantity: too much vs too little
- Complexity: easy vs difficult
- Bubble: insufficient involvement
- Value: relevance, recording zero values
- One-Track: ex. only fiscal
- Static: not tracking over period

Behavioral Measurement Challenges
- Subjectivity
- Measurement design
- Behavior is product of beliefs, values, perceptions, experience, socialization

Use both Leading & Lagging Indicators, but Emphasize Leading When Possible
Visualizing KPIs

- $K_{qt1} = \text{lbs/bbl}$
- $K_{qt2} = \$/bbl$
- $K_{qt3} = \text{lb/bbl}$
Ex: Track a New Process

- $K_{qt4} = \text{lbs/bbl}$
- $K_{qt5} = \text{pcs/bbl}$
- $K_{qt6} = \$/\text{bbl}$
- $K_{qt1} = \text{lbs/bbl}$
- $K_{qt2} = \$/\text{bbl}$
- $K_{qt3} = \text{lb/bbl}$
Safety Indicators

HISTORICAL, CULTURAL, PROCESS, COST
# Example Safety Indicators

<table>
<thead>
<tr>
<th>QUALITATIVE</th>
<th>LAGGING</th>
<th>LEADING</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA citations</td>
<td>📈 Missed training deadlines</td>
<td>🌟 Preventive maintenance schedule</td>
</tr>
<tr>
<td>💴 Employee perception of management commitment</td>
<td>📈 Near miss reports</td>
<td>💗 Employee perception of management commitment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>QUANTITATIVE</th>
<th>LAGGING</th>
<th>LEADING</th>
</tr>
</thead>
<tbody>
<tr>
<td>📈 Sick rate or overtime rate</td>
<td>📈 Total recordable injury rate (TRIR)</td>
<td>🌟 Training investment per capita, i.e., Total training hrs/yr x pay rate</td>
</tr>
<tr>
<td>📈 Worker’s comp premiums (EMR)</td>
<td>📈 Frequency of safety meetings, toolbox talks</td>
<td>💗 Percent of management with safety training</td>
</tr>
</tbody>
</table>

**KEY:**
- 🌟 Highly Recommended
- 🌟 Recommended
- 📈 Use with Caution
Wellness to Wellbeing Relationship
Sustainability Indicators

RESOURCES, FOOTPRINT, COST
### SUSTAINABILITY INDICATORS

<table>
<thead>
<tr>
<th><strong>Utility Indicators</strong></th>
<th><strong>LAGGING</strong></th>
<th><strong>LEADING</strong></th>
</tr>
</thead>
</table>
| Normalized Utility Usage (monthly) | • Electricity (kWh/bbl)  
• Natural Gas (therms/bbl)  
• Water (bbl/bbl)  
• CO2 Usage (lbs/bbl)  
• Solid Waste (lbs/bbl) | One point of contact to collect data, plug into analysis tool, and report out |
| | | Regular Green Team analysis meeting |

**KEY:**  
🌟 Highly Recommended  
➕ Recommended  
🚫 Use with Caution
SUSTAINABILITY INDICATORS

Electricity (kWh/bbl)  
- Median: 182  
- Best in Class: 15  

Fuel (therms/bbl)  
- Median: 8.1  
- Best in Class: 3.8  

Water (bbl/bbl)  
- Median: 18.6  
- Best in Class: 6.1  

CO2 (lbs/bbl)  
- Median: 8.7  
- Best in Class: 3.5  

Waste (lbs/bbl)  
- Median: 8.8  
- Best in Class: 0.7  

Key:  
- Median  
- Best in Class

Source:  
2014-2021 BA Benchmarking Data
# SUSTAINABILITY INDICATORS

<table>
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<th>LAGGING</th>
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</table>
| **Direct Environmental Indicators** | + GHG Emissions (CO₂e)  
  • Scope 1: Direct  
  • Scope 2: Indirect  
  • Scope 3: Supply Chain | + Supply chain miles  
  + CO₂ recapture |
| Wastewater | Volume (gal)  
  + Strength (BOD,COD,TSS) | |
| **Cost Indicators** | + Utility Fees (Normalized & Actual)  
  • Energy Fees  
  • Water/Wastewater Fees  
  • CO₂ Fees  
  • Waste Disposal Fees | + Investment/reinvestment in sustainability projects  
  - Contributions to environmental partners |

**KEY:**  
🌟 Highly Recommended  
様々 Recommended  
⚠️ Use with Caution
Water Use to Efficiency Relationship
Water Use to Efficiency Relationship
WRAPPING UP
BA Resources

BrewersAssociation.org
- Presentations
- Guidance
- Manuals
- Benchmarking
- Videos
- BA Forum
- More!

#CraftBrewersCon
Other Industry Groups

Sustainability - Trade Groups

- National Barley Growers Association
- Hop Growers of America
- MBAA - Sustainability

Safety - Trade Groups

- National Safety Council
- American Society of Safety Professionals
- MBAA - Safety
- ASBC – Lab Safety
Sustainability – Government Resources

- Database of State Initiatives for Renewables & Efficiency (DSIRE)
- Pollution Prevention Institute (SBEAP)
- Local Utility Incentives

Safety – Government Resources

- OSHA
  - Safety and Health Programs Bulletin
  - Find Free OSHA Consultation
- NIOSH/CDC
  - Well-Being Tools
  - PPE Resources
SUMMARY
KPI Review

- Setting the Baseline
- All About Indicators
  - What, Why, & How
- Types of Indicators
  - KPI vs. OKR vs. SMART
- Indicator Selection
  - Quantity, Complexity, Bubble, Value, One Track, Static
- Safety Indicators
- Sustainability Indicators
- Resources

Come meet us at the BA Booth!

Matt G: Tue 3-4 PM & Wed 11 AM – Noon
Matt S: Wed 2:30-3:30 PM & Thu 1-2 PM
THANK YOU!

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