

DEVELOPING MEANINGFUL SAFETY METRICS

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What do we Mean by a Metric

- Webster's on-line dictionary defines metrics as:
 - *A Standard of Measurement*

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What do We Mean by a Metric

- Is Measuring Injuries Measuring Safety?

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Measuring Safety

- Mathematics Refers to Proving the Null Case
- Schrodinger's Cat can Help us Understand

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Lagging vs Leading

- Lagging Indicators are desired outcomes
 - *Pro of Lagging- concrete item to measure*
 - *Con of Lagging- what if it's luck*

- Leading Indicators are actions that affect the probability of the outcomes occurring
 - *Pro of Leading- affects system before incident occurs*
 - *Con of Leading- what if we are measuring the wrong thing!!!*

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Lagging Metrics

- Examples
 - *First aid*
 - *Lost work time*
 - *Hospital care*
 - *Recordable*
 - *Fire*
 - *Damage*
 - *Alarms*

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Leading Metrics

- What are you doing to improve safety?
- Examples
 - *Training*
 - *Audits*
 - *Programs Completed*
 - *Programs Updated*
 - *Workers Engagement*
 - *Safety Support*
- Attendees Provide Examples

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Why are Metrics Important?

- What are metrics really about

Resources !

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Metrics- Where are they in a Safety Scheme?

- Management Systems
- Who is the Metric For?
- Will One Metric Do?
- The Doctrine of Unintended Consequences
 - *Recordable History*
 - *0/0/0 Mentality*

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Meaningful

- To be Meaningful There Must be Support and Consistency
- Bring the Issues to the Light of Day

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Bring It Together

To Develop the Metrics

- Know your audience
- Know what you want to affect/define safety
- Lagging- what results are measuring
- Leading- what programs/processes/initiatives will move the program forward
 - *What are the key element(s) of the program*
- How is it collected
- How is it published and to who

Class- Come up with one area you want to improve

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Case # 1- Corrective Actions (CA)

- First- list of audit open CA sent to CEO Quarterly
- Second- list of all open CA sent to CEO Quarterly
- Third- list of all open CA sent to all Leadership Monthly

- Open CA's went from over 2500 (22 medium facilities, 5 large) to less than 600 in 12 months

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Case # 2- Monthly Scorecard

- First- CEO wanted all sites to have a score of 90 or higher on Corporate Audit within 5 years
- Second- HSE VP realized we were looking at various individual items
- Third- Develops a scorecard to condense these items

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Case # 3- Quarterly Departmental Meeting

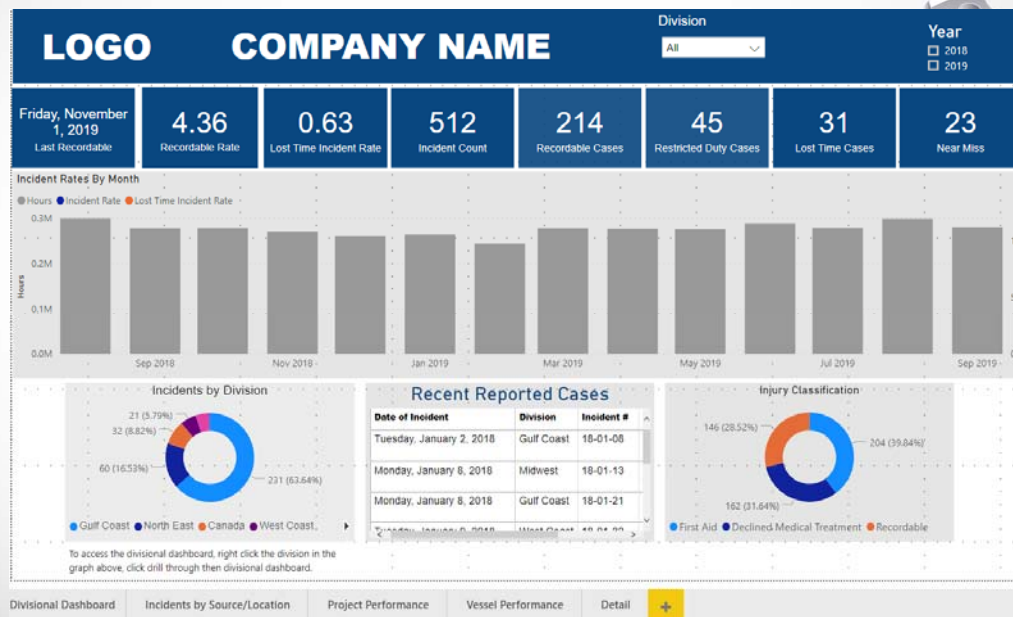
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Dashboard Analytic Services

- Create interactive dashboards to provide managers with quick visual representation of crucial information on accidents, injuries, near misses, etc.
- Can be hosted on company intranet for wide spread communication of information.
- Data can be collected from many different sources, including excel, access, CSV, SQL, etc.
- Allows for analytics from multiple data sources simultaneously.
- Provides the opportunity to drill-down into more crucial data when necessary.

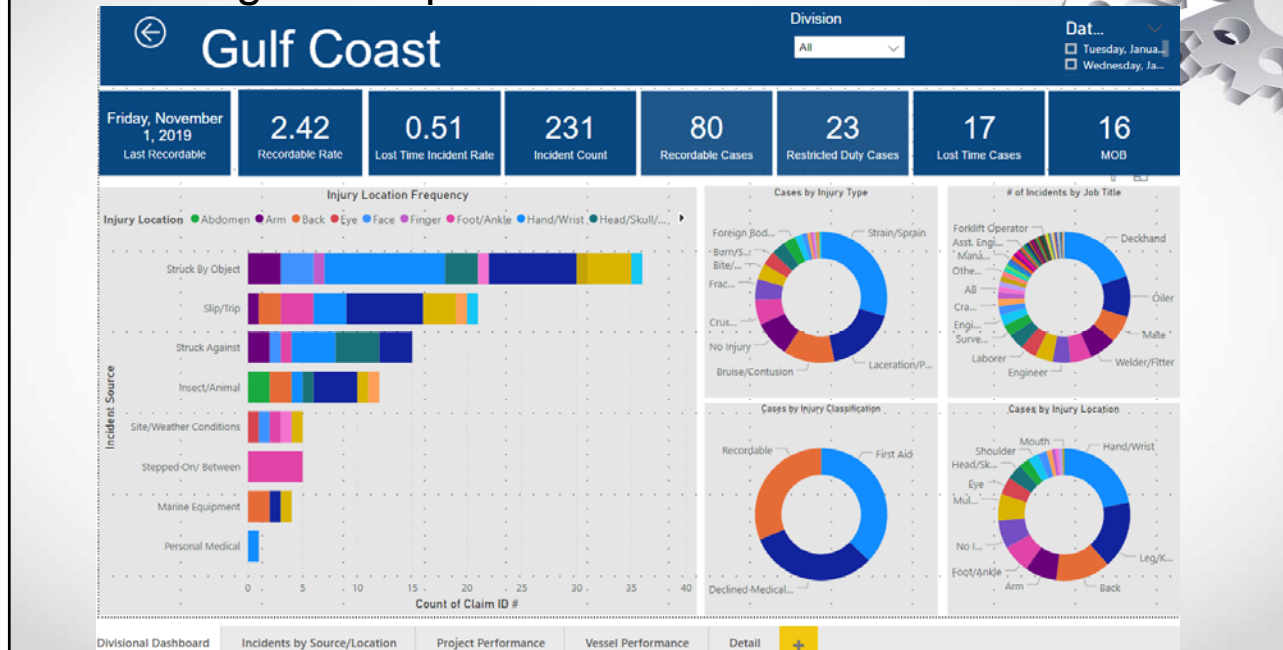
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Home Page Example



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Drill Through Example



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Bringing It Together- Better

- For your Safety Metrics to be Meaningful they Must
 - Include but not Overemphasis the Outcome
 - Include the Actions that will Help Improve the System
 - Highlight Actions Taken
 - Be Supported

- The Better Metrics will:
 - Have Data Collection in Mind
 - Be Easy to Understand
 - Be Concise

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Questions

