Digital Dashboards In Terminal Operations Management

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What are Dashboards?

- Real-Time Visualization of Critical Business Indicators to Help in Decision Making
  - Provide a Visual “Snapshot” of Key Performance Indicators
  - Gain total visibility of multiple systems or measures instantly

- Benefits of Digital Dashboards include:
  - Ability to make more informed decisions
  - Align strategies and organizational goals
  - Ability to identify and correct negative trends
  - Measure efficiencies/inefficiencies
  - Ability to drill down into underlying causal indicators and details
  - Saves time compared to running multiple reports
## Operational vs. Analytical Dashboards

<table>
<thead>
<tr>
<th>Operational</th>
<th>Analytical</th>
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<tr>
<td>• Identifies potential operational issues as they occur</td>
<td>• Gains insights from a volume of data collected over time</td>
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<td>• View of current activities and frequently changing performance metrics</td>
<td>• Understand what happened, why, and what changes should be made in the future</td>
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<td>• Provides alerts on exception issues, and drill-through to facilitate real-time response</td>
<td>• Sophisticated models, what-if analysis and pivots to identify patterns and opportunities</td>
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<td>• Require less training than analytical dashboards</td>
<td>• Often used by analysts and highly trained staff</td>
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Operational, or KPI dashboards tell you if you’re on target today. Analytical dashboards set targets for tomorrow.
Characteristics of Operational Dashboards

- **Visual Indicators and Alerts**
  - Graphics convey information “At-a-Glance“

- **Real-time Data**
  - Enables Right-Time Decision Making
  - Aggregates Multiple Data Sources into Composite Views

- **Alert System**
  - Visual Indicators and Alerts (Including Email, SMS, etc.)
  - Event-based or Scheduled Reports with Data

- **Actionable**
  - Identify in real time that action needs to be taken.
  - Drill-down and Causal Analysis to identify what action is needed

- **User-customizable (highly desirable)**
  - Operational dashboards are both “top-down” and “bottom-up” tools.

“Operational dashboards track core operational processes and emphasize monitoring more than analysis or management.“
- Performance Dashboards, Wayne Eckerson
Operational Dashboards in Terminal Operations

- Volumes
- Productivity
- S/T Demand forecasting
- Exception Event Alerts
- Technology
Case Study APL / Eagle Marine Services

- **Business Need**
  - Operations Management
  - Fast and Accurate Decision Tools, with Real-time access to:
    - Equipment and productivity measures
    - Yard inventory conditions
    - Gate conditions

- **Current State**
  - Current systems do not provide this information in an immediate and visible manner.
  - Inefficiencies in production and avoidable incurred as a result.
Terminal Productivity

- One Central View
  - Vessel
  - Rail
  - Yard
- Eliminates Reports, Saves Time
- Facilitates Communication & Collaboration
**Gate Conditions**

- **Staffing Needs**
- **Problem / Trouble Alerts**
- **Rapid Operations**
  - Response to Changes in Volume or Patterns, i.e. Load/Empty, Truck Queue, etc.
Short Term Demand – Last Free Day

- Measures Import Containers at or Approaching Demurrage, for:
  - Gate Manning
  - Yard Manning
  - Equipment Need
Technology

- Automation Technology
- How is it Performing?
- Rapid Response to Exceptions
- Minimize Operational Impact
Value of IT Goes Beyond Providing Tools

Users Often Do Not Know *Exactly* What they Want

- **IT Provides**
  - Visibility to Wealth of Data Repositories
  - Institutional Knowledge of Data Relationships

- **Business Provides**
  - Business Context of Data Value
  - Insight into Business Drivers

- **Better Overall Value Added, More Rewarding**
  - Less Structured, but not Necessarily Longer
A Few Words About Implementation

• Executive leadership
  – A dashboard project must have direction from the leadership.

• Information Technology
  – Unless all the data for the dashboard comes from non-IT administered systems, it is imperative to have IT support.

• Viewers
  – There are few if any successful ROI stories for dashboards that do not have viewers for whom an integral part of their professional success is supported by the dashboard.

• Choosing Metrics
  – The goal is to uncover the metrics and KPIs that lead the user to a specific decision or action.
Thank You