



# Digital Dashboards In Terminal Operations Management

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# What are Dashboards?

- **Technology Tools That Provide 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

## Operational

- Identifies potential operational issues as they occur
- View of current activities and frequently changing performance metrics
- Provides alerts on exception issues, and drill-through to facilitate real-time response
- Require less training than analytical dashboards

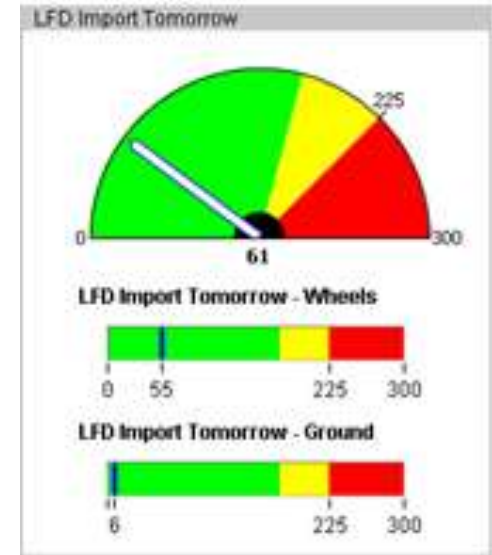
## Analytical

- Gains insights from a volume of data collected over time
- Understand what happened, why, and what changes should be made in the future
- Sophisticated models, what-if analysis and pivots to identify patterns and opportunities
- Often used by analysts and highly trained staff

*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.



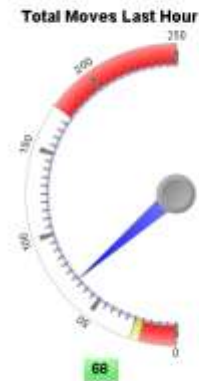
*“Operational dashboards track core operational processes and emphasize monitoring more than analysis or management.”*

*- Performance Dashboards, Wayne Eckerson*

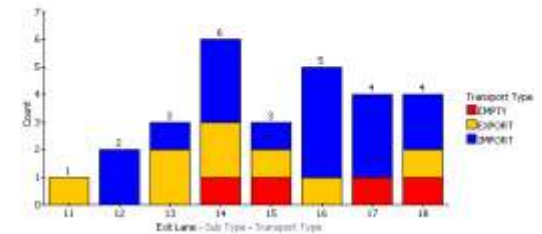
# Operational Dashboards in Terminal Ops

- Volumes
- Productivity
- S/T Demand forecasting
- Exception Event Alerts
- Technology

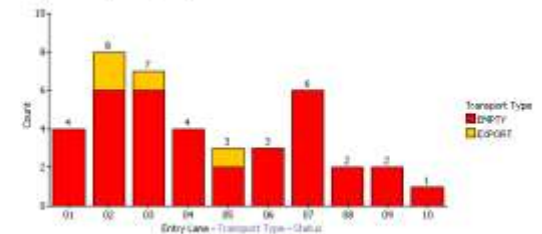
## Gate Moves in the Last Hour



Exit Lanes -by Transport Type



Entry Lanes -by Transport Type

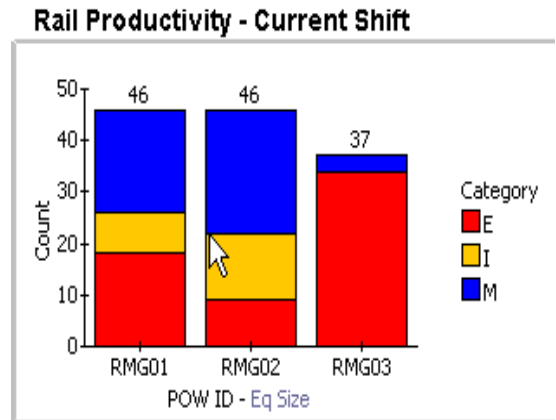


in the last HOUR:68 YARD GAIN/LOSS in last HOUR:20 IN via GATE last HOUR:40 OUT via

# Case Study APL / Eagle Marine Services

- **Business Need**

- To Manage Marine Terminals Effectively, Operations Management requires real time access to:
  - Equipment and labor productivity measures
  - Yard inventory conditions
  - Gate conditions



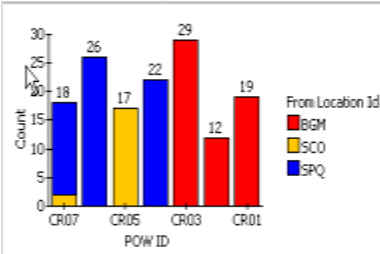
- **Current State**

- Current systems do not provide this information in an immediate and visible manner.
- Inefficiencies in production and avoidable expenses are incurred as a result.

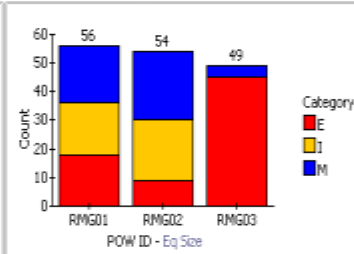
# Terminal Productivity

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

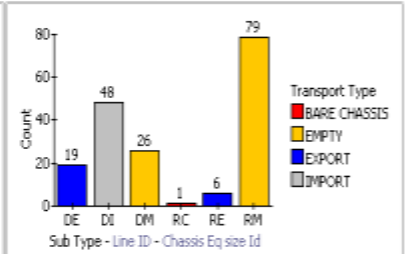
Vessel Productivity - Current Shift



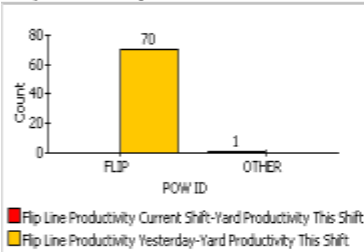
Rail Productivity - Current Shift



Gate Productivity - Current Shift



Flip Line Activity -Current Shift



Total OB Rail on Terminal 1060

ALL CTR in the YARD 8274

CTRS WHLD 6804

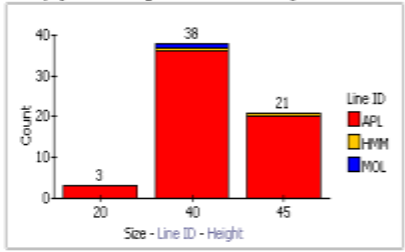
EMPTY on WHEEL 1370

CAPACITY Ground Utilization % 0.50

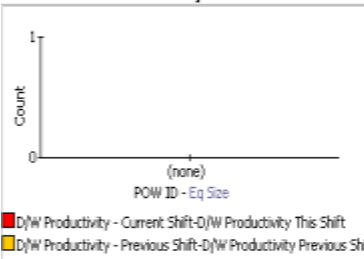
LFD Import Today 14

Import on Demurrage 47

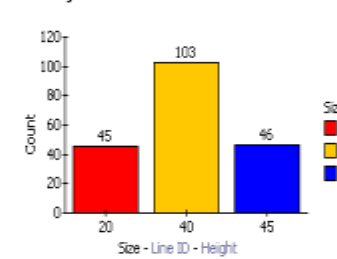
Empty Receiving Candidates - Stayed Wheels



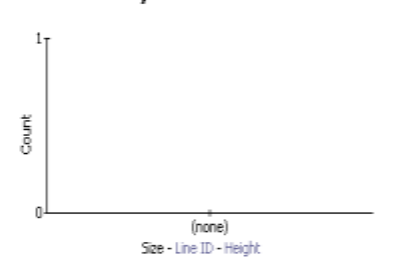
Dock-Work Productivity



RD Stayed wheels YESTERDAY-chart



R/D Productivity - Current Shift



GATE moves in the last HOUR:95

Auto Outgates % - current shift:78

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Auto Outgates % - current shift:78

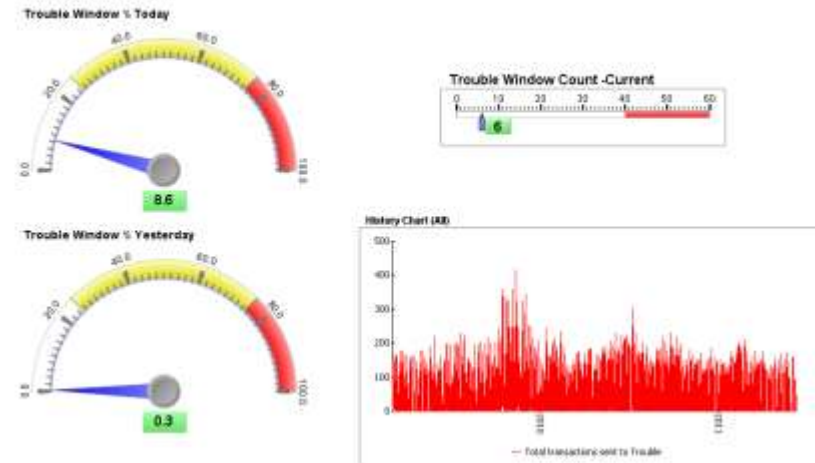




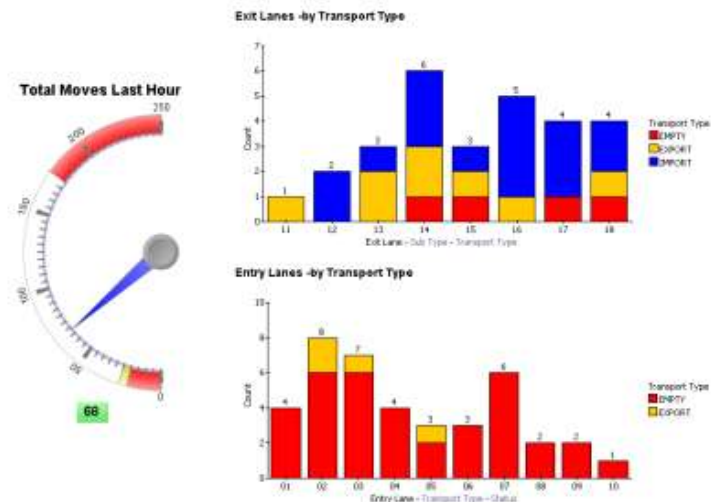
# Gate Conditions

- Labor Management
- Problem / Trouble Alerts
- Rapid Operations Response to Changes in Volume or Patterns, i.e. Load/Empty, Line, etc.

## Trouble Window Activity



## Gate Moves in the Last Hour

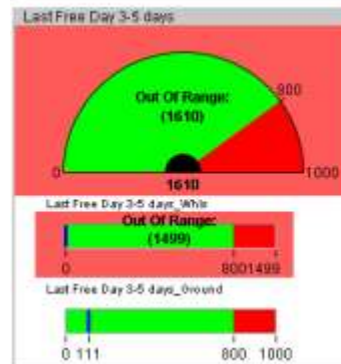
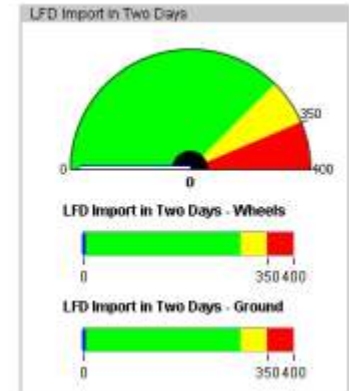
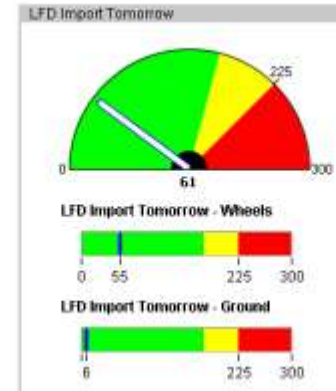
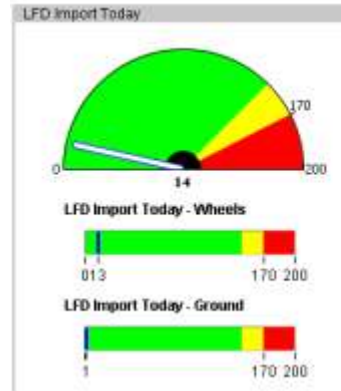


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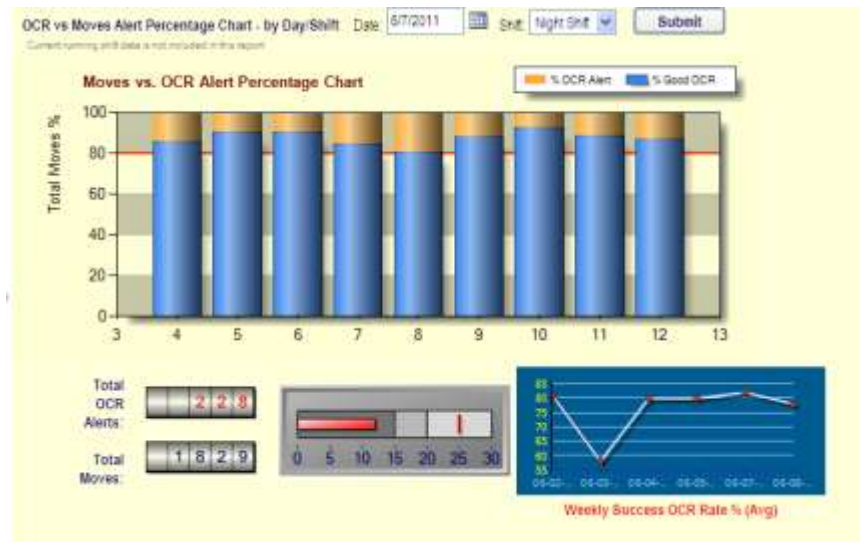
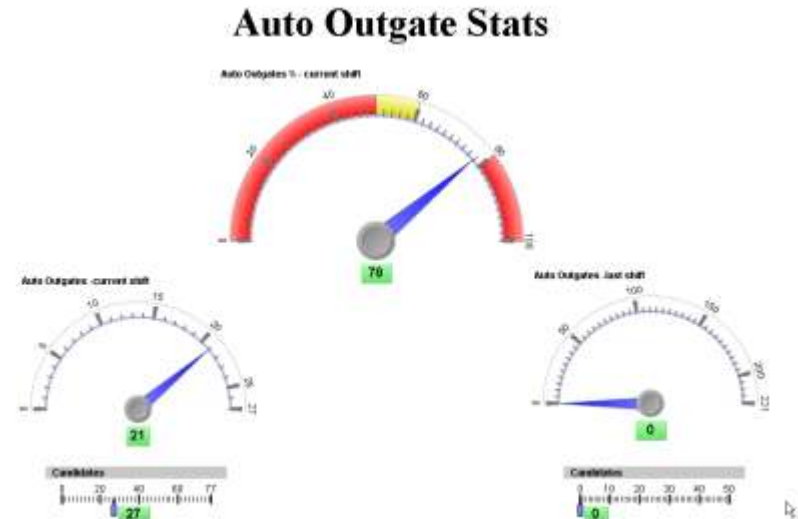
# Short Term Demand – Last Free Day

- 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



# 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.