Port Optimizer

July 31, 2018

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CAUTION CONCERNING FORWARD-LOOKING STATEMENTS:
This document contains "forward-looking statements" – that is, statements related to future events that by their nature address matters that are, to different degrees, uncertain. For details on the uncertainties that may cause our actual future results to be materially different than those expressed in our forward-looking statements, see http://www.ge.com/investor-relations/disclaimer-caution-concerning-forwardlooking-statements as well as our annual reports on Form 10-K and quarterly reports on Form 10-Q. We do not undertake to update our forward-looking statements. This document also includes certain forward-looking projected financial information that is based on current estimates and forecasts. Actual results could differ materially.

NON-GAAP FINANCIAL MEASURES:
In this document, we sometimes use information derived from consolidated financial data but not presented in our financial statements prepared in accordance with U.S. generally accepted accounting principles (GAAP). Certain of these data are considered "non-GAAP financial measures" under the U.S. Securities and Exchange Commission rules. These non-GAAP financial measures supplement our GAAP disclosures and should not be considered an alternative to the GAAP measure. The reasons we use these non-GAAP financial measures and the reconciliations to their most directly comparable GAAP financial measures are posted to the investor relations section of our website at www.ge.com. We use non-GAAP financial measures including the following:

• Operating earnings and EPS, which is earnings from continuing operations excluding non-service-related pension costs of our principal pension plans.
• GE Industrial operating & Verticals earnings and EPS, which is operating earnings of our industrial businesses and the GE Capital businesses that we expect to retain.
• GE Industrial & Verticals revenues, which is revenue of our industrial businesses and the GE Capital businesses that we expect to retain.
• Industrial segment organic revenue, which is the sum of revenue from all of our industrial segments less the effects of acquisitions/dispositions and currency exchange.
• Industrial segment organic operating profit, which is the sum of segment profit from all of our industrial segments less the effects of acquisitions/dispositions and currency exchange.
• Industrial cash flows from operating activities (Industrial CFOA), which is GE’s cash flow from operating activities excluding dividends received from GE Capital.
• Capital ending net investment (ENI), excluding liquidity, which is a measure we use to measure the size of our Capital segment.
• GE Capital Tier 1 Common ratio estimate is a ratio of equity
Our solutions enable a DIGITALLY CONNECTED ECOSYSTEM

- ASSETS
- OPERATIONS
- NETWORKS
- VISIBILITY

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**Digital Product Families**

**Train Performance**  
Improve train handling & improve fuel efficiency

<table>
<thead>
<tr>
<th>Capacity, efficiency, automation</th>
</tr>
</thead>
<tbody>
<tr>
<td>~200MM gallons of fuel saved</td>
</tr>
<tr>
<td>7-13% ↑ fuel savings</td>
</tr>
<tr>
<td>20K Locotrol units installed</td>
</tr>
</tbody>
</table>

**Asset Performance**  
Connect mobile networks, edge & cloud processing

<table>
<thead>
<tr>
<th>Asset reliability, utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 25% ↓ in mainline failures</td>
</tr>
<tr>
<td>10K GoLINC kits worldwide</td>
</tr>
<tr>
<td>18K locos monitored by EOA</td>
</tr>
</tbody>
</table>

**Network Optimization**  
Plan and optimize mainline, yards, terminals

<table>
<thead>
<tr>
<th>Velocity, throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>42% of rev-ton miles in MP</td>
</tr>
<tr>
<td>10%+ ↑ in network velocity</td>
</tr>
<tr>
<td>20MM+ intermodal container lifts annually</td>
</tr>
</tbody>
</table>

**Transport Logistics**  
Link shipper to rail to port to receiver

<table>
<thead>
<tr>
<th>Visibility, productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>40% ↑ rail volume</td>
</tr>
<tr>
<td>&gt;9MM annual carloads moved through Rail TMS</td>
</tr>
</tbody>
</table>

**Digital Mine**  
Leverage data to optimize people and assets

<table>
<thead>
<tr>
<th>Asset availability, safety, efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>10K Collision Avoidance sites</td>
</tr>
<tr>
<td>Metal recovery +3%</td>
</tr>
<tr>
<td>Fleet availability ↑ 5-10%</td>
</tr>
</tbody>
</table>

**Train Performance**  
Improve train handling & improve fuel efficiency

**Asset Performance**  
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**Transport Logistics**  
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Transport Logistics – Connecting the global freight supply chain

**Overview**

**Rail Transportation Mgt.**
- **Features**
  - Operational Execution
  - Car Hire Mgt.
  - Pricing, Contract, Billing
  - Visibility & Tracking
  - Car repair billing & maintenance
- **Outcomes**
  - Increased Throughput
  - Automation
  - Efficiency
  - Safety
  - Service level

**Shipper Transport Mgt. Solutions**
- **Features**
  - Visibility
  - Collaboration
  - Inventory Management
  - Yard / Transload
- **Outcomes**
  - Profitability
  - Customer experience
  - Logistics planning
  - Supply chain flexibility

**Port Visibility Solutions**
- **Features**
  - Real time & centralized visibility
  - Community collaboration
  - Advanced Planning
- **Outcomes**
  - Increased Throughput
  - Decreased dwell/turn
  - Velocity improvements
  - Productivity
Today, success requires:
- Eliminating silos
- Sharing information
- Predicting & optimizing data

@ Scale: \(xN\)

N = number of companies/transactions
Port Community Challenges

**Cargo Owner**
- Knowing the status of goods in transit in advance
- Time spent searching for information
- Managing inventory levels
- Dealing with supply chain unknowns

**Container Terminal**
- Cost-effectively managing vessels of increasing size while improving space planning, and resource allocation
- Eliminating blind spots

**Ocean Carrier**
- Increasing need for cost savings, asset efficiency, and economies of scale

**Motor Carrier**
- Unpredictable cargo flow impacts fleet efficiency and revenue opportunity

**Railroad**
- Visibility to ship arrival times and container details for planning
- Reducing inefficiencies for better equipment planning & railcar switching

**Chassis Provider**
- Unpredictable cargo flow makes chassis demand forecasting and asset allocations challenging
Enabling visibility and execution across an integrated supply chain

Port Optimizer

- Cargo Owner
  - Visibility + Cargo Velocity
    - ↑ visibility for better customer service
    - Better planning for dray partners → ↑ cargo velocity thru ports
  - Cargo Dwell + Cargo Velocity + Productivity
    - ↓ container dwell
    - ↑ velocity through better planning
    - Reduced and improved handling (touches, etc)
  - Turn Times + Productive Turns
    - Faster truck turn times
    - ↑ number of productive turns per day
  - Rail Volume + Visibility + Speed
    - ↑ rail volume through ports
    - ↑ visibility to export dates
    - Improved equipment planning
    - ↑ speed of rail volume thru ports

- Marine Terminal Op’r
  - Visibility + Cargo Velocity
    - ↑ velocity of cargo thru port
    - ↑ velocity of empty returns
  - Visibility + Cargo Velocity

- Ocean Carrier
  - Visibility + Cargo Velocity
  - Visibility + Cargo Velocity

- Motor Carrier
  - Turn Times + Productive Turns
  - Rail Volume + Visibility + Speed

- Railroad
  - Accuracy + Chassis Utilization
    - ↑ accuracy of chassis inventory and forecast → ↑ chassis utilization
    - Improved planning → ↑ chassis utilization

- Chassis Provider
  - Accuracy + Chassis Utilization
    - ↑ accuracy of chassis inventory and forecast → ↑ chassis utilization
    - Improved planning → ↑ chassis utilization

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Product Principals

• "System of systems" ... fits within the existing Supply Chain ecosystem to enable interoperable supply chain visibility. GE architecture / delivery mechanism is purposely flexible.

• Partnerships ... open to and actively exploring technology partnerships across the Maritime shipping / broader Supply Chain ecosystem.

• Data Stewardship ... you own your data and should define how it is used. GE role is to act as independent data stewards and software providers. Transparent & consultative about how data is used. GE is not seeking to share sensitive information.

• Highly elastic for easy and rapid growth:
  - Scalable to support 10 million + TEU facilities
  - Headroom for big data traffic

• Cloud based, Modular and service oriented:
  - Upgrades with no customer disruption
  - Minimized setup and maintenance cost
  - User online services
  - Easy to access/switch over

• Short release cadence:
  - Rapid production deployment
  - Experiment oriented feedback and Analytics
LA Pilot
“The twin ports of Los Angeles and Long Beach are experiencing a logistical nightmare as they struggle to ease a bottleneck that could undermine retailers' all-important holiday shopping season and threaten the competitiveness of the region's economic engine.

In the worst shipping crisis in a decade, mammoth vessels loaded with products destined for the nation's stores are sitting idle just off the coast, waiting for cargo languishing on the docks to clear.”

LA Times
October 24, 2014
Pilot Overview: Port of Los Angeles & GE

Collaborative partnership with Port of Los Angeles

Port Information Portal
- Dynamic window into port and cargo information
- Operational insights for improved planning
- Advance information; 10+ days faster access to integrated data
- Actionable; right information, right people

Pilot Scope (5 months dev, 2 months usage)
- 1 Terminal
- 2 Vessel Operators (Maersk, MSC)
- 10 BCOs, 5 Trucking Operators

Goal: Increase supply chain performance
- Visibility
- Predictability and reliability
- Throughput
Pilot Results

93% agree that the data in the portal is easy to understand and valuable

94% agree that the portal is easy to access and visually appealing

8-12% Projected efficiency increases, as the solution is scaled @ Port of LA

2017 Accolades

American Association of Port Authorities

94%

Projected efficiency increases, as the solution is scaled @ Port of LA

GE Digital Innovator Award: Innovating New Digital Opportunities

Federal Maritime Commission Recognition
Port Optimizer Roadmap

1. **Scale up: Port of LA & Port of Long Beach**
   - All shipping lines, all terminals @ Port of LA
   - Pilot at Long Beach
   - Expand stakeholder engagement – all users
   - Feature/function build-out

2. **Enhance**
   - Advanced Analytics: predictive ETAs
   - Landside Optimization
   - Rail Capabilities: equipment planning, block planning, visibility in/out, empty railcar availability, train arrival visibility
   - Imports + Exports

3. **Expand**
   - Predictive Analytics: Ship arrival time, gate traffic
   - IoT Devices & asset tracking
   - Truck turn time/queue optimization
   - Ship stowage visualization
   - Track & Track beyond Port
   - Global Growth

**Now**

**Aug 2018+**
New Feature highlights

**LBCT Integration with Landside community**
- MTO and landside community integration for better gate transactions
- Increasing visibility for better planning of containers coming back to the Port
- Better marine terminal and trucking companies interactions

**Matchback and Dual Transactions**
- Imports and exports matched inland to optimize shipping line and trucking companies transactions
- Cost savings to shipping lines making the port more attractive to ocean carriers
- Landside operations reach and business growth

**GeoStamp and Truck Congestion**
- Advanced analytics with predictive capabilities, based on Geostamp IoT data
- Truck congestion improvements to reduce CO2 emissions
- Traffic improvements for the safety of the community
- Marine Terminal better truck queue management
Transport Logistics Software & Customer Footprint

Connecting the transportation landscape - US example

- **520 Shortline & Regional RRs**
- **Example shipper customers**
- **Product Penetration**
  - **Rail**: 92% Shortlines on TMS product suite
  - **Ports**: 40% US imports on Port Optimizer platform today ... targeting 60% this year.
  - **Shippers**: 110 Forest Products, 50 Energy, 33 Chemicals, 30 Minerals, 28 Agriculture, 18 Metals, 12 3PL, 11 Leasing, 5 Transload, 40 Other on Shipper product suite.

**GE Transportation Role**

*Provide industry data visibility solutions*

- **Rail**: Assist with SL-C1 visibility; provide advanced import cargo visibility at Ports.
- **Ports**: ↑ rail utilization, customer service and throughput.
- **Shippers**: ↑ rail utilization through better visibility.

**Strong NAM foothold. Growth in LATAM and Asia.**