



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-forward-looking-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. to total risk-weighted assets.]

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

APM Collision Avoidance OPM



MINE

Port Optimizer



PORT

Trip Optimizer LOCOTROL GoLINC APM EdgelINC



LOCOMOTIVE

Smart Intermodal Yard Planner Smart Automotive



YARD & TERMINAL

Movement Planner Dispatch



NETWORK

TMS



SHIPPER

TMS



RECEIVER



Digital Product Families



Train Performance

Improve train handling & improve fuel efficiency

Capacity, efficiency, automation

- **~200MM gallons** of fuel saved
- **7-13% ↑** fuel savings
- **20K** Locotrol units installed

Hardware & embedded software kits
Services

Asset Performance

Connect mobile networks, edge & cloud processing

Asset reliability, utilization

- Up to **25% ↓** in mainline failures
- **10K** GoLINC kits worldwide
- **18K** locos monitored by EOA

Edge devices
Communications
SaaS applications

Network Optimization

Plan and optimize mainline, yards, terminals

Velocity, throughput

- **42%** of rev-ton miles in MP
- **10%+ ↑** in network velocity
- **20MM+** intermodal container lifts annually

Licensed software
Software maintenance
Professional services

Transport Logistics

Link shipper to rail to port to receiver

Visibility, productivity

- **40% ↑** rail volume
- **>9MM** annual carloads moved through Rail TMS

SaaS applications
Implementation

Digital Mine

Leverage data to optimize people and assets

Asset availability, safety, efficiency

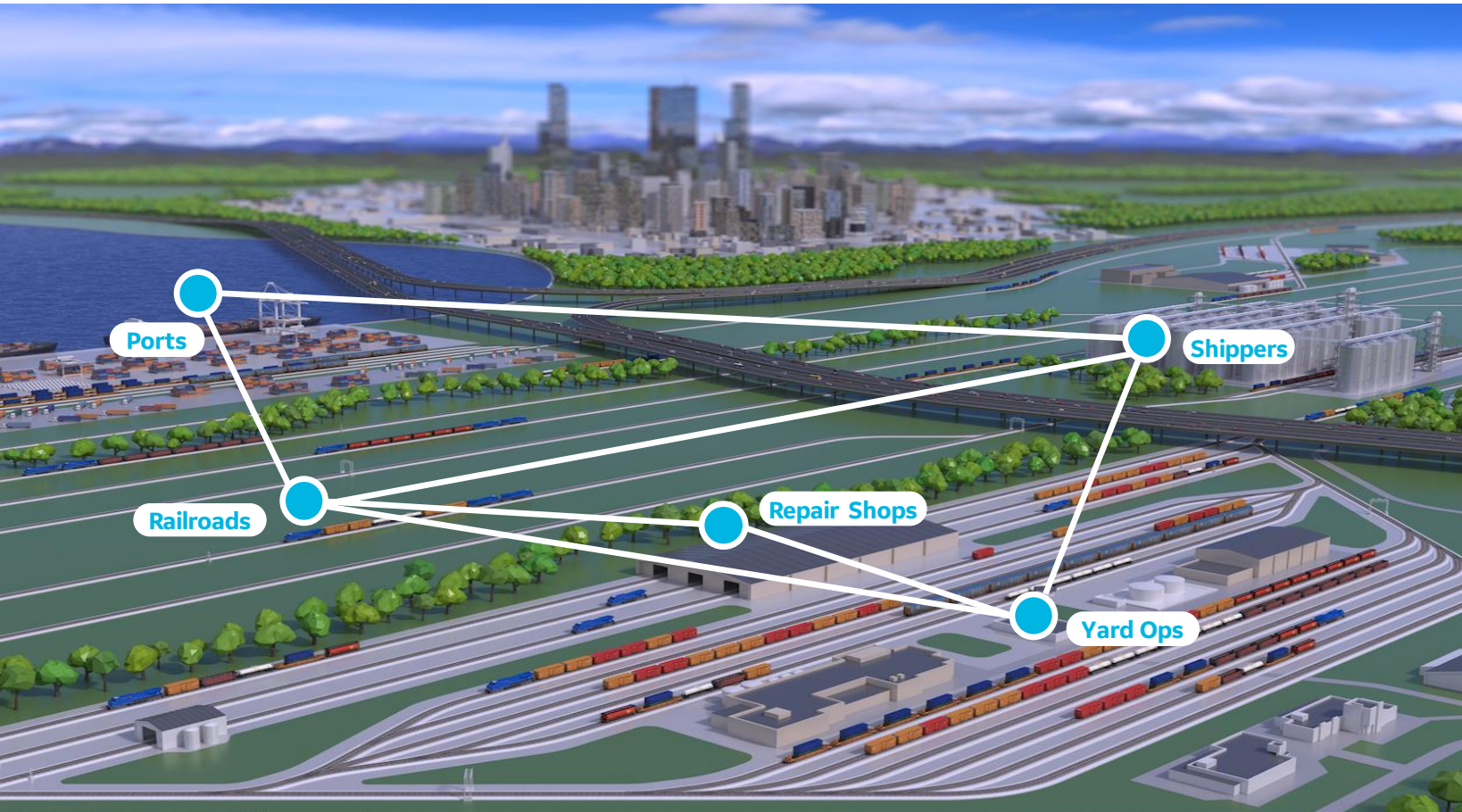
- **10K** Collision Avoidance sites
- Metal recovery **+3%**
- Fleet availability **↑ 5-10%**

SaaS applications
Equipment
Services



Transport Logistics – Connecting the global freight supply chain

Overview



Rail Transportation Mgt.

<u>Features</u>	<u>Outcomes</u>
• Operational Execution	✓ Increased Throughput
• Car Hire Mgt.	✓ Automation
• Pricing, Contract, Billing	✓ Efficiency
• Visibility & Tracking	✓ Safety
• Car repair billing & maintenance	✓ Service level

Shipper Transport Mgt. Solutions

<u>Features</u>	<u>Outcomes</u>
• Visibility	✓ Profitability
• Collaboration	✓ Customer experience
• Inventory Management	✓ Logistics planning
• Yard / Transload	✓ Supply chain flexibility

Port Visibility Solutions

<u>Features</u>	<u>Outcomes</u>
• Real time & centralized visibility	✓ Increased Throughput
• Community collaboration	✓ Decreased dwell/turn
• Advanced Planning	✓ Velocity improvements
	✓ Productivity



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

Port Optimizer



 <p>Cargo Owner</p> <p>Visibility + Cargo Velocity</p> <ul style="list-style-type: none"> • ↑ visibility for better customer service • Better planning for dray partners → ↑ cargo velocity thru ports 	 <p>Marine Terminal Op'r</p> <p>Cargo Dwell + Cargo Velocity + Productivity</p> <ul style="list-style-type: none"> • ↓ container dwell • ↑ velocity through better planning • Reduced and improved handling (touches, etc) 	 <p>Ocean Carrier</p> <p>Visibility + Cargo Velocity</p> <ul style="list-style-type: none"> • ↑ velocity of cargo thru port • ↑ velocity of empty returns
 <p>Motor Carrier</p> <p>Turn Times + Productive Turns</p> <ul style="list-style-type: none"> • Faster truck turn times • ↑ number of productive turns per day 	 <p>Railroad</p> <p>Rail Volume + Visibility + Speed</p> <ul style="list-style-type: none"> • ↑ rail volume through ports • ↑ visibility to export dates • Improved equipment planning • ↑ speed of rail volume thru ports 	 <p>Chassis Provider</p> <p>Accuracy + Chassis Utilization</p> <ul style="list-style-type: none"> • ↑ accuracy of chassis inventory and forecast → ↑ chassis utilization • Improved planning → ↑ chassis utilization

Enabling visibility and execution across an integrated supply chain



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



Dateline Los Angeles October 2014

“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



photo © Port of Los Angeles

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

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



Outstanding IT Project Award LA Digital Gov't.



GE Digital Innovator Award: Innovating New Digital Opportunities



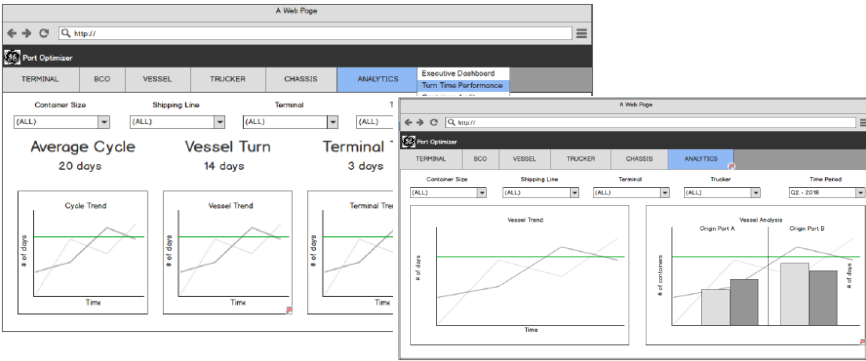
Federal Maritime Commission Recognition



Port Optimizer Roadmap



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



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.

