GE Minds & Machines

Jeff Immelt
October 9, 2014

This document contains “forward-looking statements” — that is, statements related to future, not past, events. In this context, forward-looking statements often address our expected future business and financial performance and financial condition, and often contain words such as “expect,” “anticipate,” “intend,” “plan,” “believe,” “seek,” “see,” “will,” “would,” or “target.” Forward-looking statements by their nature matter that are, to different degrees, uncertain, such as statements about expected income; earnings per share; revenues; organic growth; margins; cost structure; restructuring charges; cash flows; return on capital; capital expenditures, capital allocation or capital structure; dividends; and the split between Industrial and GE Capital earnings. For us, particular uncertainties that could cause our actual results to be materially different than those expressed in our forward-looking statements include: current economic and financial conditions, including interest and exchange rate volatility, commodity and equity prices and the value of financial assets; the impact of conditions in the financial and credit markets on the availability and cost of General Electric Capital Corporation’s (GECC) funding and its exposure to counterparties; the impact of conditions in the housing market and unemployment rates on the level of commercial and consumer credit defaults; pending and future mortgage securitization claims and litigation in connection with WMC, which may affect our estimates of liability, including possible loss estimates; our ability to maintain our current credit rating and the impact on our funding costs and competitive position if we do not do so; the adequacy of our cash flows and earnings and other conditions which may affect our ability to pay dividends to GE at the planned level, which may be affected by GECC’s cash flows and earnings, financial services regulation and oversight, and other factors; our ability to convert pre-order commitments/wins into orders; the price we realize on orders since commitments/wins are stated at list prices; customer actions or developments such as early aircraft retirements or reduced energy demand and other factors that may affect the level of demand and financial performance of the major industries and customers we serve; the effectiveness of our risk management framework; the impact of regulation and regulatory, investigative and legal proceedings and legal compliance risks, including the impact of financial services regulation; adverse market conditions, timing of and ability to obtain required bank regulatory approvals, or other factors relating to us or Synchrony Financial that could prevent us from completing the Synchrony split-off as planned; our capital allocation plans, as such plans may change including with respect to the timing and size of share repurchases, acquisitions, joint ventures, dispositions and other strategic actions; our success in completing announced transactions, such as the proposed transactions and alliances with Alstom, and our ability to realize anticipated earnings and savings; our success in integrating acquired businesses and operating joint ventures; the impact of potential information technology or data security breaches; and the other factors that are described in “Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2013. These uncertainties may cause our actual future results to be materially different than those expressed in our forward-looking statements. We do not undertake to update our forward-looking statements.

This document includes certain forward-looking projected financial information that is based on current estimates and forecasts. Actual results could differ materially. This document may also contain non-GAAP financial information. Management uses this information in its internal analysis of results and believes that this information may be informative to investors in gauging the quality of our financial performance, identifying trends in our results and providing meaningful period-to-period comparisons. For a reconciliation of non-GAAP measures presented in this document, see the accompanying supplemental information posted to the investor relations section of our website at www.ge.com. In this document, “GE” refers to the industrial businesses of the Company including GECC on an equity basis. “GE (ex-GECC)” and/or “Industrial” refer to GE excluding Financial Services.

GE’s Investor Relations website at www.ge.com/investor and our corporate blog at www.gereports.com, as well as GE’s Facebook page and Twitter accounts, contain a significant amount of information about GE, including financial and other information for investors. GE encourages investors to visit these websites from time to time, as information is updated and new information is posted.

Imagination at work.
### Summary

<table>
<thead>
<tr>
<th>Execution in 2014</th>
<th>Status</th>
<th>A different company</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Execute on financial framework</td>
<td>On track</td>
<td><strong>1</strong> <strong>Much</strong> better portfolio</td>
</tr>
<tr>
<td>+ Achieve 75% Industrial by 2016 &amp; grow EPS</td>
<td>+ Alstom</td>
<td><strong>2</strong> <strong>Tangible</strong> technology advantage</td>
</tr>
<tr>
<td>+ Invest in restructuring to drive Industrial earnings</td>
<td>– Appliances</td>
<td></td>
</tr>
<tr>
<td>+ Disciplined &amp; balanced capital allocation</td>
<td>✓ $4B+ since 2012</td>
<td><strong>3</strong> <strong>Superior</strong> global position</td>
</tr>
<tr>
<td></td>
<td>✓ 2014 restructuring</td>
<td></td>
</tr>
<tr>
<td></td>
<td>✓ &gt; gains (~$.09)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>✓ Dividend +16%</td>
<td><strong>4</strong> <strong>Way ahead</strong> on analytics</td>
</tr>
<tr>
<td></td>
<td>✓ Synchrony split ...</td>
<td></td>
</tr>
<tr>
<td></td>
<td>shares to &lt;9.5B</td>
<td></td>
</tr>
</tbody>
</table>

**Much better portfolio**

**Tangible** technology advantage

**Superior** global position

**Way ahead** on analytics

**Culture of simplification**
Portfolio transformation

**GE earnings mix**

(Operating earnings\(^{\text{a)}}\))

<table>
<thead>
<tr>
<th>Year</th>
<th>GE Capital</th>
<th>Industrial</th>
<th>Specialty Finance</th>
<th>Premier Infrastructure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>56%</td>
<td>44%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>47%</td>
<td>53%</td>
<td></td>
<td>~75%</td>
</tr>
<tr>
<td>2016F</td>
<td>~25%</td>
<td></td>
<td>Specialty Finance</td>
<td></td>
</tr>
</tbody>
</table>

**Actions taken in 2014 ...**

- Acquiring Power & Grid
- Strong synergies
- Targeting close in ‘15

- Sale to Electrolux for $3.3B
- Continued use of GE brand
- Targeting close in ’15

**Actions taken**

<table>
<thead>
<tr>
<th>Rebuild Industrial</th>
<th>Divest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dist. Power</td>
<td>Media</td>
</tr>
<tr>
<td>Life Sciences</td>
<td>Plastics</td>
</tr>
<tr>
<td>Renewables</td>
<td>Silicone</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>Supply</td>
</tr>
<tr>
<td>Av. Systems</td>
<td>Appliances</td>
</tr>
<tr>
<td>Power Conv.</td>
<td>Insurance</td>
</tr>
<tr>
<td>Services + IT</td>
<td>Reinsurance</td>
</tr>
<tr>
<td></td>
<td>Global consumer</td>
</tr>
<tr>
<td></td>
<td>Red assets</td>
</tr>
</tbody>
</table>

(a- Continuing earnings adjusted for non-operating pension income/(expense) in 2003 and 2013 of $1.6B and $(1.7)B respectively)
GE Industrial enterprise advantages

**GE businesses**
- Power & Water
- Aviation
- Oil & Gas
- Healthcare
- Transportation
- Energy Management

**Enterprise scale**
- Technology/NPI (GRC)
- Growth markets (GGO)
- Service & Analytics (Services Council)
- Lean structure (Simplification)

**Performance**
- Organic growth > peers
- Margins at ~17% by ‘16
- Returns at ~17% by ‘16
- Consistent earnings growth

All businesses benefit from GE’s enterprise scale
Leadership in technology

($ in billions)

<table>
<thead>
<tr>
<th>R&amp;D spend</th>
<th>2012</th>
<th>2013</th>
<th>2014E</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5.2</td>
<td>$5.5</td>
<td>$5.5</td>
<td>=/-</td>
</tr>
</tbody>
</table>

% of revenue: 5% 5% =/-

- Best-in-class next gen products
- Advanced manufacturing solutions to grow margins
- Leadership across core & new product markets

Key wins

- World's largest & most efficient H-class ... 61.4% in combined cycle; 13 units in backlog
- First to market ... 1,000+ Tier 4 compliant locos on order for 2015+
- Won 77% of all narrowbody competitions since launch
- Industry's first 20,000-psi ... reliable performance in ultra-deep water
- Image quality & capability from low dose

FastWorks driving speed & efficiency
Innovation for cost & speed

Aviation product cost

Changing the traditional learning curve

Product cost focus areas

- Lean labs & additive technology
- Data in the factory
- Services delivery cost
- Sourcing relationships/make vs. buy
- Footprint and organizational focus

Driving cost ↓ with analytics

GE’s analytics advantage...

<table>
<thead>
<tr>
<th>Year</th>
<th>Full flight data (# of flights)</th>
<th>Data Volume (Tera Bytes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>15k</td>
<td>2</td>
</tr>
<tr>
<td>2014E</td>
<td>3.4M</td>
<td>340</td>
</tr>
<tr>
<td>2015F</td>
<td>~10M</td>
<td>1,500</td>
</tr>
</tbody>
</table>

Segment by severity of operations + Segment by part performance = Customized maintenance cycle

Scalable across other businesses
Accelerating in growth markets

($ in billions)

Driving growth

Growth market orders

<table>
<thead>
<tr>
<th>% of total</th>
<th>'10</th>
<th>'13</th>
<th>'14E</th>
<th>Post-Alstom</th>
</tr>
</thead>
<tbody>
<tr>
<td>total</td>
<td>36%</td>
<td>44%</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

- Premier scale & reach
- Best capability

AAGR:

- 17%
- $46
- $29
- ++

Strategic imperatives

1. Be first mover in localization
   - Plant new flags

2. Invest in local capability
   - Leadership
   - Manufacturing strength
   - GRC & innovation
   - Customer support

3. “Connect the dots” of GE
   - Healthcare & Oil & Gas lead
   - Every facility “multi-product”
   - Best partners, brand & risk management
   - Financing knowledge
Simplification

Lean management

Do fewer things better ... with less structure

Speed & competitiveness

Get faster & smarter & more efficient in everything we do using FastWorks

Commercial intensity

Connect every job to winning in the market while empowering the commercial team & holding them accountable

Digital capability

Modernize our information technology so we can achieve the speed & efficiency our scale should allow

World’s most competitive company

World-class structural cost

More NPI faster with less investment

Global market success

Accelerate margin enhancement
Lower cost
($ in billions)

Industrial SG&A % sales

<table>
<thead>
<tr>
<th>Year</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14E</th>
<th>15F</th>
<th>16F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>18.5%</td>
<td>17.5%</td>
<td>15.9%</td>
<td>~14%</td>
<td>~13%</td>
<td>~12%</td>
</tr>
</tbody>
</table>

Enablers:
- ERP: 90% reduction
- Shared services: 65% penetration
- Corporate: $500MM cost out

'12-'14E investment
- Gains ~$2.5
- Restructuring ~$(4.3)
Technology is evolving

**PHYSICAL**
Multiple materials in complex systems... hundreds of patents in each product
Operating with high efficiency & durability in extreme conditions

**ANALYTICAL**
1 gas turbine compressor blade monitoring potential: 500 gigabytes per day

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**Key messages**

1. Combination of physical & analytical drives **next evolution of services**
2. Customers will **value data** because it improves their **efficiency**
3. **GE is well positioned to lead** this wave of change
4. **Investors will benefit** through services growth & margins + product share + IT-driven efficiency
## Transforming services

<table>
<thead>
<tr>
<th>Era</th>
<th>Industry</th>
<th>Key Drivers</th>
<th>Power of 1%</th>
<th>Annual Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>80’s</td>
<td>Big iron</td>
<td>• Partners &amp; field technicians</td>
<td>1% fuel</td>
<td>$2-3B</td>
</tr>
<tr>
<td></td>
<td>Repair</td>
<td>• Science applied to repairs &amp; upgrades</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90’s</td>
<td>CSA</td>
<td>• Risk sharing service contract</td>
<td></td>
<td></td>
</tr>
<tr>
<td>00’s</td>
<td>Analytics</td>
<td>• Asset &amp; operations optimization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Today</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Driving customer outcomes**

- **Small changes in ... fuel, maintenance, uptime, productivity, flexibility, safety, labor effectiveness ... have a big impact on profitability**

(a - Global industry estimates based on “Industrial Internet: Pushing the Boundaries of Minds & Machines” – Nov. 26, 2012)
**GE leadership**

### What it takes to win

**Installed base**
- Connected IB
- Physics/materials
- Smart devices
- Global reach

### GE advantages
- Large high-tech installed base
- Customer trust & connection ...
- ~$180B services backlog
- Deep domain knowledge

### Enabling technologies
- Sensors
- Service robotics
- Connectivity

### GE advantages
- Large research capability
- Industry partnerships
- Collecting 50MM data elements

### Data & analytics
- Software capability
- Industrial big data
- Operating platform
- Security

### GE advantages
- Attracting new talent ...
  - “horizontal capability”
- Connecting domain & data ...
- Operating platform in place (Predix™)

---

**GE has all essential elements**
Improving the service model

Focus of innovation

Asset optimization

Operations optimization

CSA productivity

Maximize performance with no unplanned downtime

Increased system efficiency across GE & non-GE assets

Optimize material & repair cycles across IB

How we execute

CSA + Connected asset value ($/IB) + Software/outcome sales

Data-driven execution

Investments 2010-14

1. Make versus buy ... build internal team
2. Launch new offerings ... Predictivity™
3. Build on existing CSA relationships ... “win-win”
4. Develop a broader ecosystem
Asset performance management

**Impact:** for GE ... $/IB, productivity; for customers ... velocity, productivity

**SENSORS/ANALYTICS**
- On-site oil analysis
  - Predict remaining life
  - Prevent road failures

**SERVICE ROBOTICS**
- Productivity, safety
  - Remote monitoring
  - Tough environment

**AUTOMATED DECISIONING**
- Optimize yard ops
  - Reduce dwell 10%
  - Depart on time up 50%

**ADVANCED CONTROLS**
- Auto Train Operation
  - 10% fuel savings
Impacting GE’s 1%

IT investment ($2B+/year) + Analytics & security

GE’s 1%

$94B of cost

$12B of working capital

$20B of P&E investments

Impact

Reduce structure
Lower product cost
Improve margins
Enhance engineering productivity
Faster & safer

Every Industrial company → a Software & Analytical company
Investor value

**Services franchise**

<table>
<thead>
<tr>
<th>Backlog</th>
<th>Revenue</th>
<th>Margins</th>
</tr>
</thead>
<tbody>
<tr>
<td>$180B</td>
<td>$45B</td>
<td>~30%</td>
</tr>
</tbody>
</table>

**Historic performance**

- Revenue growth: ~5%
- Margin expansion: ~50 bps.
- Limited by IB growth

**Value creation**

1. **Increase services growth rate**
   - More $/installed base
   - $0.8B Predictivity™ solutions revenue growing to $4-5B
   - Penetrate aged GE fleet
   - Grow beyond the GE IB

2. **Improve services margins**
   - CSA productivity
   - Improve quality

3. **Potential for industry value**
   - Scale beyond GE installed base

Software & analytics accelerate services growth, margins, & returns

Historic performance:

- Revenue growth: ~5%
- Margin expansion: ~50 bps.
- Limited by IB growth
Services overview
Services growth
($ in billions)

Revenue

Backlog

'05 $27
'08 $35
'11 $42
'13 $45

OP% ~26%
~30%

Services imperatives

1. Deliver on customer value
   - Link services to outcomes
   - Global deployment

2. Grow $/installed base
   - Drive analytics & Predix™ value
   - Penetrate aged installed base

3. Expand margins
   - Leverage analytics to manage performance
   - Invest in productivity tools

4. Improve service execution & delivery
   - Enhance commercial capabilities
   - Increase field services capability

5. Spread ideas across GE

GE advantages

- Installed base
- Footprint & scale
- Technology
- Software COE
- CSA model
- Fleet data
Services Council

Cross-business initiatives

Hardware & domain expertise
- Core growth
- Operations
- Tools + process
- CSA excellence

Software/ analytics based
- Predix™ + Cloud
- Predictivity™ solutions
- Strategic alliances + BD

Data + Outcomes

✓ 20+ services leaders
✓ Teams aligned to 9 themes
✓ Quarterly executive updates ... operational rigor

Spreading ideas ...

Healthcare → Inspection technology
- Parts inspection & measurement
- Condition-based maintenance

Aviation → Repair technology
- Additive manufacturing
- Robotic welding
- Advanced coatings

Power & Water → Global footprint
- Multimodal – service & repair shops
- Customer training centers

Pune, India

Driving differentiated advantage
Enabling technologies

**Service Robotics**
- Productivity, safety
  - + Repetitive tasks
  - + Tough environment

**Sensing & Controls**
- High tech, integrated
  - + Lower fuel usage
  - + Higher efficiency

**Advanced Manufacturing**
- Automated, adaptive
  - + Productivity
  - + Less downtime

**Inspection**
- Deployable, fast, accurate
  - + More digital data
  - + Less downtime

**Repair**
- Additive, new materials
  - + Repair vs. scrap
  - + Longer service life

**Mobile Tools**
- Connected, digital
  - + Instant expert access
  - + Lower service costs

Launch & learn ... then accelerate to all GE businesses
Increase value of CSA

$180B Services backlog

Benefits for Customers

Monitoring & diagnostics
- Optimized asset performance
- Predictive analytics – lower downtime

Fuel efficiency
- More output
- Lower costs
- Lower emissions

Hardware & software upgrades
- Better payback on hardware upgrades
- Instant software upgrade capability

Benefits for GE

Condition-based work scope
- Shorter duration outages
- Less material usage

Mobile & analytical tools
- Ask an Expert – COE
- Field Service productivity

Material productivity
- Analytics driven parts life extension + performance
- Repair vs. scrap
Segment services dynamics
(Services revenue, $ in billions)

**Power & Water**
- $12.5 2013
- + Continued AGP growth
- + Upgrades & analytics
- = Europe

**Aviation**
- $10.8 2013
- + Sustained passenger growth
- + Improving airline profitability
- + Upgrades & analytics

**Oil & Gas**
- $8.3 2013
- + Strong Subsea
- + M&C improving
- + Analytics penetration

**Healthcare**
- $8.0 2013
- + Growth markets strong
- + Improving HCIT
- - Developed challenging

**Energy Management**
- $2.1 2013
- + Marine offshore
- - Mining & motor repairs

**Transportation**
- $2.8 2013
- + North America utilization
- + Analytics penetration
- - Mining parts
Presentation

Common capability:
Software COE Analytics commercialization
Bill Ruh Kate Johnson

Business execution:
Strategy overview
Customer outcomes
Examples of analytics driving growth & productivity
Competitive advantage
Power & Water Healthcare Aviation Oil & Gas Transportation
Paul McElhinney Jan De Witte Kevin McAllister Brian Palmer Pete McCabe

Common capability:
GE’s 1%
Jamie Miller
Software & Predix™

Bill Ruh
- VP, Global Software Center
- 3 years with GE
- 32 years of industry experience

Kate Johnson
- VP, GE Commercial Officer
- 1 year with GE
- 15 years of industry experience
The Industrial Internet

1. Internet
   Hyper connectivity: a living network of the world’s machines, data & people

2. Brilliant Machines
   Increasing system intelligence through embedded software ... advanced sensors, controls and software applications

3. Big Data
   Democratization of data ... high frequency, real-time data

4. Analytics
   Predictive algorithms ... physics-based analytics ... deep domain expertise on big industrial data

5. People at work
   Connecting people at work or on the move; Supporting more intelligent design, higher service quality operations, & safety maintenance
Opex is becoming a deciding factor for IT investments as 80% of budget is allocated to managing and running complex technologies. 
*Source: Gartner*

Advanced analytics and analytical applications expected to see double digit revenue growth.
*Source: Gartner*

APM market category expected to reach $300B by 2020.
*Source: Gartner*

Customer survey: Importance of Big Data analytics relative to other priorities

- **Software outlook**

- **Customer survey:** Importance of Big Data analytics relative to other priorities

<table>
<thead>
<tr>
<th>Industry</th>
<th>Highest priority</th>
<th>Within the top 3 priorities</th>
<th>Within the top 5 priorities</th>
<th>Not a top priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aviation</td>
<td>61%</td>
<td>45%</td>
<td>31%</td>
<td>29%</td>
</tr>
<tr>
<td>Wind</td>
<td>29%</td>
<td>45%</td>
<td>31%</td>
<td>61%</td>
</tr>
<tr>
<td>Power Generation</td>
<td>31%</td>
<td>28%</td>
<td>31%</td>
<td>45%</td>
</tr>
<tr>
<td>Power Distribution</td>
<td>56%</td>
<td>56%</td>
<td>47%</td>
<td>41%</td>
</tr>
<tr>
<td>Oil &amp; Gas</td>
<td>56%</td>
<td>47%</td>
<td>45%</td>
<td>41%</td>
</tr>
<tr>
<td>Rail</td>
<td>40%</td>
<td>42%</td>
<td>45%</td>
<td>24%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>45%</td>
<td>42%</td>
<td>45%</td>
<td>24%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>6%</td>
<td>6%</td>
<td>6%</td>
<td>24%</td>
</tr>
</tbody>
</table>

Source: Accenture 2015 Trend Report, Gartner Big Data Survey
Industrial customers’ perspective
Survey of GE’s customers regarding applications

**WHAT functionality is most valuable?**

<table>
<thead>
<tr>
<th>Functionality</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real-Time Operator Intelligence</td>
<td>70</td>
</tr>
<tr>
<td>Remote Monitoring &amp; Diagnostics</td>
<td>66</td>
</tr>
<tr>
<td>Condition-Based Maintenance</td>
<td>59</td>
</tr>
<tr>
<td>Asset Lifecycle Management</td>
<td>49</td>
</tr>
<tr>
<td>Schedule Optimization</td>
<td>43</td>
</tr>
<tr>
<td>Energy Management</td>
<td>42</td>
</tr>
<tr>
<td>Process Control Automation</td>
<td>38</td>
</tr>
<tr>
<td>Field Force Automation</td>
<td>32</td>
</tr>
</tbody>
</table>

**HOW do you want to consume it?**

<table>
<thead>
<tr>
<th>Consumption Method</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tailor Pre-Built Applications</td>
<td>85</td>
</tr>
<tr>
<td>Have A Systems Integrator Build Your Apps</td>
<td>54</td>
</tr>
<tr>
<td>Build My Own Custom Apps</td>
<td>15</td>
</tr>
</tbody>
</table>

Asset performance management is *the* killer industrial app.
What industrial customers want
“Link up all my assets and devices”

Software Defined Machines (SDMs)

Predix™ powers Asset Performance Management (APM)
Predix™ ... the GE advantage

**Predix™ Platform**
- Predix™ Experience
- Predix™ Machine
- Predix™ Net
- Predix™ Asset
- Predix™ Insight
- Predix™ Core
- Predix™ Fabric

**Predix™ Machine**
- Private Cloud
- Public Cloud

**Predix™ Net**
- GE
- Non-GE

**Predix™ Asset**

**Predictivity™ Solutions**

**Asset Performance Management (APM)**
- REAL-TIME OPERATIONAL INTELLIGENCE
- CONDITION-BASED MONITORING
- ASSET LIFECYCLE MANAGEMENT
- MONITORING & DIAGNOSTICS

**Operations Optimization**
- INSIGHT
- PROCESS INTEGRATION
- AUTOMATION
- COLLABORATION

**Insights into value**

- Potential Savings: 77 gallons of fuel and 1,628 lbs. of CO₂ per approach
- 10% increase in network velocity, 50% reduction in expired crews & significant improvements in on-time performance
- Improving safety and productivity across 15K miles of interstate natural gas pipelines
- Up to 4% increase in power output across 283 wind turbines ... 40+ GWhr annual increase

Commercially available* to connect more machines, more data & more people

* Release in 2015
Predictivity™ ... app factory

Development process

- Agile & Extreme Programming
- Design Center for delivering compelling user interface
- Co-innovation process to design, build, transfer and iterate
- Cyber security Blue team to build and Red team to test

Asset optimization (28)

- Actionable insight on equipment based on physics and analytic modeling with industrial data

Operations optimization (14)

- Outcome based process improvements to plants, pipelines, fleets, fields, facilities, grids, shops

Productivity tools (77)

- Increase service throughput, efficiency, and quality at optimized cost of delivery

90-120 day service engagement to production roll out

Delivering industry apps at speed and scale
### World-class Software & Analytics organization

#### Investing in Leadership Talent

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW Research</td>
<td>Colin Parris</td>
<td>IBM</td>
</tr>
<tr>
<td>Product Dev.</td>
<td>Brad Surak</td>
<td>SAP</td>
</tr>
<tr>
<td>Software CTO</td>
<td>Harel Kodesh</td>
<td>(Microsoft, Start Up Veteran)</td>
</tr>
</tbody>
</table>

#### Co-located SW CTOs for business alignment

<table>
<thead>
<tr>
<th>Industry</th>
<th>CTO Name</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aviation</td>
<td>D. Bartlett</td>
<td>IBM</td>
</tr>
<tr>
<td>O&amp;G</td>
<td>J. Demesa</td>
<td>Siemens</td>
</tr>
<tr>
<td>EM</td>
<td>J. Stone</td>
<td>SAP</td>
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<tr>
<td>P&amp;W</td>
<td>G. Bell</td>
<td>ServiceSource</td>
</tr>
<tr>
<td>HC</td>
<td>E. Eryurek</td>
<td>GE</td>
</tr>
<tr>
<td>Trans.</td>
<td>S. Chotai</td>
<td>HP</td>
</tr>
</tbody>
</table>

#### World-class technical resources

- ~10,000 Computational & analytics scientists
- Platform developers
- Software engineers

- 1,000+ Biz
- 1,000+ COE

---

1. **Four deep core competencies ecosystem**
   - Cyber, UX, Data Science, Agile development

2. **Leading edge platform + world-class ecosystem**

3. **Advanced research for building the future**

4. **Advanced process to drive adoption & enablement**
**Wurldtech: protecting critical infrastructure**

**About:** A GE Company acquired in May 2014 providing top cyber talent

**Capability:** Assess, protect & certify critical infrastructure from cyber attack

**Key Customers:** 4 of 6 top global O&G companies; 9 of top 10 automation vendors

---

**Secure & certify industrial products**
- Security enhancements delivered through Predix™ and GE Products
- Certify GE and non-GE products and customer environments

**Assess products & operations for vulnerabilities**
- Identify vulnerabilities in OT products (GE and 3rd party)
- Assess and prioritize risks for system operators

**Protect operational environments**
- Achilles Industrial Next Gen Firewall to inspect and control Industrial network traffic
- Leverage industry leading threat intelligence

---

World-class cyber security to operate assets + operations safely
Industrial internet ecosystem

**Industry Ecosphere**

- **Partnerships & Alliances**
  - Intel, AT&T, AWS, Cisco, others

- **Venture Capital**
  - ThetaRay, Mocana, Frost

- **Mergers & Acquisitions**
  - Wurldtech, Austin Digital

- **Strategic Moves**
  - Pivotal, SoftBank, Industrial Internet Consortium

**Open Predix™ beyond GE**

- **Connected devices** + **Data Under Management** + **Performance Applications**

**GE will sell**

1. **Predix™ Machine Services**
   - Connect assets regardless of vendor or vintage and provide value-added services

2. **Predix™ Data Services**
   - Aggregate and analyze data to produce actionable business insights

3. **Predix™ Asset Services**
   - Sell horizontal apps that maximize return on assets and people

**Positioned to create value**
Competitive advantage

INDUSTRY

50B
Machines will be connected on the internet by 2020

2X
Industrial data growth within next 10 years

GE

$1T*
Connected Machines managed by GE

10M
Sensors collecting 50M Data Elements

$20B
Potential Annual Customer Savings

Big Iron + Big Data = Big Outcomes
New ways to sell Services

1. New Buyers and Influencers
2. Making Markets, Different Economics
3. Co-creation & Agile Development
4. Solution Architecture
5. Value Based Deal Shapes
6. New Industry Ecosystems

GE Commercial Center of Excellence

Hire/Train Community of Experts
Sales Process
Enablement Toolkit

Needs Target Architect Close
Qualification & Pipeline Management
## Accelerating time to value across channels

**GE O&G Example**

<table>
<thead>
<tr>
<th>Upgrade value in CSAs</th>
<th>APM Subscription Services</th>
<th>Enterprise Analytics Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ReliabilityMax™</strong></td>
<td><strong>FieldVantage™</strong></td>
<td><strong>Intelligent Pipeline™</strong></td>
</tr>
<tr>
<td></td>
<td>Per well subscription</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Enterprise SW deal, solution co-creation</td>
</tr>
</tbody>
</table>

### Offering:
- **RM&D in CSA, upside and productivity**
- **$2.7B**
- **Existing Services sales team**
- Expert SWAT teams to support deal
- **$2B**
- New standalone software sales specialists
- SW experts, compelling offer, target one outcome to land and expand
- New outcome sellers + existing service sales team
- Ecosystem partners, SW COE app factory

### Market Opportunity:
- **$2B**
- **$600MM**
Measuring commercial success

**Services revenue**

- **Past**
  - Assets under management: $1T+
  - Predictivity™ solutions revenue: $0.8B
  - Services backlog: $180B
- **Future**
  - Predictivity™ solutions revenue: ~$4-5B

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<thead>
<tr>
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<th>‘13</th>
<th>‘17F</th>
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<tbody>
<tr>
<td>Assets under management</td>
<td>$1T+</td>
<td>++</td>
</tr>
<tr>
<td>Predictivity™ solutions revenue</td>
<td>$0.8B</td>
<td>~$4-5B</td>
</tr>
<tr>
<td>Services backlog</td>
<td>$180B</td>
<td>++</td>
</tr>
</tbody>
</table>

- Adding more value to existing service relationships ... training team to get more out of the installed base
- Creating new revenue streams and building new commercial skills and incentive plans to accelerate growth
  - Outcome sellers, solution architects, product management & marketing
- Cultivate ecosystem to help accelerate commercially with access to CIO/CTO relationships and system integration skills
Power & Water

Paul McElhinney
- President & CEO, Power Generation Services
- In current role since May 2014
- 26 years with GE
Power & Water Services

($ in billions)

Key metrics

<table>
<thead>
<tr>
<th></th>
<th>'13</th>
<th>'14E</th>
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</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>$12.5</td>
<td>+</td>
</tr>
<tr>
<td>Backlog</td>
<td>$53</td>
<td>+</td>
</tr>
</tbody>
</table>

Services imperatives

1. Deliver on customer value
   - Develop flexible solutions
   - Reduce customer operating cost

2. Grow $/installed base
   - Maximize impact of Alstom alliance
   - Invest in new service offerings

3. Expand margins
   - Tech upgrades & software solutions
   - Outage excellence

4. Improve service execution & delivery
   - Improved customer service levels
   - Optimize field service & repair network

Installed base dynamics

- Unit growth up ~2.4X from 2008
- Strong DP & Wind growth... up ~1K/year
- ~4,000+ gas turbines in service

Growing services & delivering greater customer value
Global power industry is facing complex challenges... 
Offering innovative solutions to address customers’ needs

- ~60%+ Increase in US natural gas price since 2012
- ~(30)% Thermal capacity ↓ in Europe since ‘08
- ~15 years Average age of ~4K global GE gas turbines

Customer challenges:
- Fuel price uncertainty
- Increasing regulation
- Slow demand growth
- Aging installed base

GE Predictivity™ solutions & industry benefit*:
- Output ~$7B
- Availability ~$2B
- Efficiency ~$8B
- Flexibility ~$1B
- Reliability ~$2B

*Based on 10 year NPV

Improving customers’ outcomes while decreasing costs
Investing in technology

1. Advanced Gas Path (AGP)
   - Industry leading output ... up to +6.4%
   - Industry leading efficiency ... up to +1.8%
   - Extends asset & parts life ... 96K hours

2. Dry Low NOx 2.6+ (DLN)
   - Reduces NOx emissions by 40%
   - Delivers industry leading flexibility
   - Increases maintenance intervals to ~1,250 starts

3. Op Flex
   - Delivers flexibility to ↓ costs & ↑ revenue
   - Reduces start up time & fuel consumption
   - Expands fuel source opportunity

Addressing multiple customer value levers
Power FlexEfficiency™: Advanced Gas Path

Expanding the operating envelope

Improving customer outcomes
Average Customer Annual Value Per Unit ($MM)

- AGP (Hardware)
- AGP Predictivility™ Solution

$1.7
$3.0

✓ 125+ AGPs with software sold to date
✓ 650,000+ operating hours to date

Combining hardware and software ... creating 2X the value
Wind PowerUp ... generating more output

1. Customer opportunity
   Opportunity for up to 20% more profit from up to 5% more output

2. Software enabled
   A performance based, cooperative approach with a holistic view of the assets, system and network

3. Flexible platform
   Flexible payment options aligned to customer needs

Proven results

Customer Outcome: Up to 4% increase in power output across 283 wind turbines ... **40+ GWhr** annual increase

“The PowerUp system offers a great chance for owners like us who are investing literally billions of dollars in this market to try and get more production out of existing assets. GE took a lot of risk out of this for us.”

– Patrick Woodson, CEO, E.ON Climate & Renewables

Scale out

+1,400 turbines under contract since launch
Healthcare

Jan De Witte
- President & CEO, Healthcare IT
- In current role since 2011
- 15 years with GE
Healthcare Services

($ in billions)

**Key metrics**

<table>
<thead>
<tr>
<th>Revenue</th>
<th>'13</th>
<th>'14E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backlog</td>
<td>$8.0</td>
<td>$11</td>
</tr>
</tbody>
</table>

**Services imperatives**

1. **Deliver on customer value**
   - Asset and workflow optimization
   - Analytics around EMRs & Devices

2. **Grow $/installed base**
   - Quality and analytics offerings
   - Solutions architecture & delivery

3. **Expand margins**
   - Remote service & SaaS models
   - Field services productivity

4. **Improve service execution & delivery**
   - Remote monitoring technologies
   - Field force deployment optimization

**Installed base dynamics**

- Emerging markets infrastructure build
- Mature markets quality upgrades
- ACA & Enterprise Solutions ↑ IT penetration

Delivering value = higher quality outcomes at lower cost
Healthcare industry shifting to value-based care

GE software, analytics and services are uniquely positioned to help

29%
Healthcare spend wasted each year

$260B
Annual value creation through healthcare IT

59%
US lives covered in value-based care model by 2015

Customer challenges

- Diagnostic quality
- Patient-centric care
- System profitability
- Chronic Disease Management

Integrated Care Solutions ... turning data into actionable insight
Improving healthcare outcomes

Sources: Institute of Medicine, 2013; Porter Research; 2013; McKinsey; IHS Global Insight
GEHC Software portfolio positioned along main outcome drivers for care systems

Integrated Care Solutions

- **Enterprise Imaging**
  - Workflow
  - Archiving
  - Visualization

- **Care Delivery Management**
  - Ambulatory Care
  - High Acuity Care
  - Cardiology

- **Population Health Management**
  - Wellness & chronic disease management
  - Care coordin. Engagement

- **Financial Management**
  - Revenue Cycle
  - Risk assessment
  - Margin analytics

- **Operations Management**
  - Workforce optimization
  - Asset Management

Diagnostic speed & confidence
Productive care pathways
Wellness & chronic disease management
Risk & margin management
Cost/workforce optimization

Large GE device footprint generating clinical data
HCIT domain in clinical workflow & analytics
SW CoE/Predix™ capabilities

Providing caregivers the right actionable insight – when & where they need it
Enterprise Imaging
Improving diagnostic workflow in the cloud

**Customer Challenges**

19%  
Time spent gathering data

35%  
Cases diagnosed incorrectly

Workflow velocity ↑
Diagnostic confidence ↑

- Care quality ↑
- Cost ↓

**Cloud Case Exchange: Centricity™ 360**

~$2B segment by '18, growing 25%+

- 30% ↓ turn-around time
- 3% ↓ duplicate exams

Customer value: $10MM+ cost ↓ p.a.
Image-as-a-Service lifecycle value: $20MM+

**Solution Architecture**

Clinical Collaboration & Advanced Analytics

- Imaging Cost Control
- Archive
- Workflow

**Sample Customers**

Source: Research from the Journal of the American College of Radiology and the Journal of American Medicine
Operations Management
Optimizing workforce productivity with API Healthcare

**Customer Challenges**
- Hospital operating cost spent on labor: 54%
- Matching care-giver capacity & patient need
- Care quality up
- Labor productivity up

**Workforce management**
- ~$2B segment by ’18, growing 12%+
- 20% up Workforce productivity
- 80% down Overtime wages

Customer value: $4MM cost down p.a.
Workforce-mgmt. services lifecycle: $4MM+

**Solution Architecture**
- Real-Time Analytics
- Time & Attendance
- Staffing & Scheduling
- HR & Payroll
- Labor & Patient Workflows

**Sample Customers**
- Advocate Health Care
- Dignity Health
- VIDANT HEALTH™
- ANDERSON Regional Medical Center

Source: Becker’s Hospital Review
Population Health Management
Lowering the cost of chronic disease

Customer Challenges
- Proactive intervention ↑
- Care protocol compliance ↑
- Cents of every healthcare dollar spent on chronic disease
- Chronic disease treatment cost ↓

Solution Architecture
- Analytics → Risk Cohort → Care Mgt.

Caradigm Analytics & Care Mgt.
- ~$30B segment by 2025, growing 19%+
- 25% ↑ Patients per care manager
- 40% ↓ Hospitalization for chronic patients
- Customer value: $5MM+ cost ↓ p.a.
- Caradigm lifecycle value: $18MM+

Sample Customers
- Geisinger Health Plan
- BillingsClinic
- OCHIN
- UW Medicine
- VIRTUA
- RUSH HEALTH

Source: National Diabetes Fact Sheet
Software enabling productivity in service process

- 110k GEHC devices connected remotely
- MR ... 900 data points monitored per machine; 30k alerts/year proactively fixed
- Improves GE productivity while minimizing customer down-time
- Historically, up to 40% FE travel time ... utilize analytics to optimize allocation
- Smart dispatch with effective job-skill matching
- Optimize field force capacity and response time to customers

Healthcare Services margins improving
Aviation

Kevin McAllister
- President & CEO, Aviation Services
- In current role since May 2014
- 25 years with GE
## Aviation Services

($ in billions)

<table>
<thead>
<tr>
<th>Key metrics</th>
<th>'13</th>
<th>'14E</th>
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<tbody>
<tr>
<td>Revenue</td>
<td>$10.8</td>
<td>+</td>
</tr>
<tr>
<td>Backlog</td>
<td>$97</td>
<td>+</td>
</tr>
</tbody>
</table>

### Installed base dynamics
- Commercial IB ... 34,000 engines
- Young ... 46% haven’t had 1st shop visit
- Fuel cost driving investment ... GE well positioned ... 787, 737MAX, A320NEO, 777X

### Services imperatives

1. **Deliver on customer value**
   - Lowest cost of ownership
   - Predictivity™ outcomes

2. **Grow $/installed base**
   - Win/win providing technology upgrades and analytics

3. **Expand margins**
   - Time-on-wing for GE and customers
   - Cost productivity ... for GE

4. **Best service execution and delivery**
   - Position to support service entry for next-gen products
Solid growth fundamentals

Environment

Passengers
IATA, RPK % YoY
5.3% 5.2% 5.8%

Utilization
Avg. cycles/day, % YoY
-1% 0.9% 0.2%

Departures
GE and JV-powered flights (MM)
20 21 22

2012 2013 2014E

Source: IATA & GE analysis

Departures

Number of departures (MM)

2010
2015
2020

4% CAGR

Shop visits

4,100
4,400
2,100
2,300
2,000
2,000
3,000
2,300
200

2013 2015 2020

2 of 3 daily flights powered by GE or GE JVs

46% have not had 1st shop visit

CFM is a 50/50 JV between GE and Snecma
EA is a 50/50 JV between GE and Pratt & Whitney
Solving our customers toughest challenges

Airline direct operating costs

- Fuel: 40% (40% of $200B/yr)
- Delays and cancellations: 8% (8% of $40B/yr)
- Maintenance: 9%

Product and Services strategy

- Lead in technology
- Best-in-class fuel burn and retention

Services analytics offerings

- Flight Efficiency Services
- Performance-based Navigation
- Engine diagnostic and prognostics
- Intelligent Operations

Provide lowest cost-of-ownership through OEM technology

Analytics-enabled workscoping

Taleris is a 50/50 JV between GE and Accenture
Services technologies ... improving value through the lifecycle

A culture of technology insertion

<table>
<thead>
<tr>
<th>Installed base ('13)</th>
<th>Upgrades</th>
<th>Fuel Burn improvement</th>
<th>Time-on-wing</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFM56 ('84 EIS)</td>
<td>8</td>
<td>8%</td>
<td>2x</td>
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<tr>
<td>18,500</td>
<td></td>
<td></td>
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<tr>
<td>CF6-80C ('86 EIS)</td>
<td>8</td>
<td>3%</td>
<td>3x</td>
</tr>
<tr>
<td>3,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GE90 ('95 EIS)</td>
<td>5</td>
<td>2%</td>
<td>2x</td>
</tr>
<tr>
<td>1,500</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tailored to customer wants

- **Risk transfer**
  - $/hour coverage
- **Overhaul**
  - Time and material
- **Materials**
  - New, used and repaired parts
- **Asset optimization**
  - TRUEngine™ program, diagnostics

CFM is a 50/50 JV between GE and Snecma
Minds & Machines at GE Aviation

"Analytics"

1,000+ software engineers
GE Software COE

"Physics"

6,300 applied engineers
GE Aviation

Data
Secure, continuous, accessible

Statistics
Unlock trends, segment

Physics
Apply engine expertise

Customer and GE benefits

↑ Time-on-wing

↑ Reliability and availability

↓ Fuel cost

↓ Repair and overhaul
Lead in on-wing reliability

Applied analytics to detect engines at risk of removal

Recent successes ...

- GE90
  - 120 removals saved
- CFM56
  - 40 removals saved
- Water wash
  - $7M/yr fuel savings at one GE90 operator

CFM is a 50/50 JV between GE and Snecma
Attacking fuel spend with analytics

AirAsia

$30MM/yr. savings

Flight Efficiency Services App

Performance-based Navigation App

Joint marketing ...

In the news

“Perfect flight” video
Oil & Gas

Brian Palmer
- Vice President, Measurement & Control Solutions
- In current role since 2010
- 29 years with GE
Oil & Gas Services

($ in billions)

Key metrics

<table>
<thead>
<tr>
<th></th>
<th>'13</th>
<th>'14E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>$5.8</td>
<td>$8.3</td>
</tr>
<tr>
<td>Backlog</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Strategic imperatives

1. Deliver on customer value
   - Customer co-creation
   - Outcome based solutions

2. Grow $/installed base
   - Drive analytics & Predix™
   - Penetrate the installed base

3. Expand margins
   - More software and contract offerings
   - Continue to grow backlog double digits
   - Partnerships to accelerate journey...
     Meridium

4. Improve service execution & delivery
   - Full lifecycle productivity
   - Simplifying structure

Installed base dynamics

✓ IB growing: TMS and Subsea with 13K+ units
✓ Software investments creating new IB revenue streams in addition to traditional parts and service
✓ New contractual (CSA) offerings developed/launched

Software & Services as a key differentiator
Oil & gas industry is faced with expanding challenges

**GE software, data and analytics are uniquely positioned to help**

$800B+
Annual industry CAPEX (6-8% growth per year)

$150MM
Average annual cost for mid-size LNG facility due to unplanned downtime

5-10%
Range of O&G industry's estimated downtime

Customer challenges

- Increasing complex operations
- Tighter regulations
- Skills gap
- Machines with data potential

Industrial Internet ... turning data into actionable information
Enable no unplanned downtime

Predix™ ... Unified Operations

*Improved throughput connecting people, machines, and data*

Partnering with ConocoPhillips to tackle these industry challenges and create a solution that increases production and lowers cost driving improved customer outcomes.

**Customer outcomes**

- Enhanced safety
- Increased availability
- Operational visibility
- Efficient workforce enablement

**Unified Customer Portal**

- 50% Industry retirement rate in next 10 years
- 7X Industry fatality rate above norm
- 129,000 Pieces of equipment in operation globally in the industry

Unified Operations – A customer *co-creation* success story
FieldVantage™ ...

Asset Performance Management (APM) for Onshore

Customer outcomes
- Enhanced safety
- Operational visibility
- Improved availability
- Optimized performance

...by improving
- 39% NAM O&G Upstream Vehicle Fatalities
- 116K New wells in 2014
- 5 Days Back to production (NAM Avg)
- 1MM+ Artificially Lifted Wells (Global)

Solution Overview
- Providing field level visibility and optimization across multiple forms of artificial lift technologies
- Integrated insights provided through common, single, scalable platform
- 2 year service contract on 200+ wells

APM – Bringing GE expertise from all industries to deliver system level value
Intelligent Pipeline ...

*Operations optimization software for pipelines*

---

**Customer outcomes**

- **Enhanced safety** Proactive versus reactive decisions
- **Visibility** Complete geospatial view and situational awareness
- **Optimized Ops** Effective data driven resource allocation
- **Efficient O&M** Prioritize spending for assets and resources

---

**First customer**

- 5 year **service contract**
- Setting the **industry standards** for pipelines **real-time intelligence**

---

**Moving to proactive solutions with our customers**

---

Source: 2TB - Average data volume based on GE internal analysis of multiple pipeline customers. Rest - GE O&G analysis based on Douglas Westwood, IHS CERA, FERC, CIA World Factbook, PII Pipeline Database (Summary of Infield Systems, Global Data DOT databases)
Services Optimization ...

Creating optimal value for GE equipment customers

Industry Opportunities

$1.4B
Additional opportunity driven by availability and reliability increase (1% of capacity)

GE Productivity Improvements

Outcome base service bonus
Inventory through parts flow optimization
Outage duration/frequency driven by condition-based maintenance

Customer Benefits

Zero unplanned downtime
Increased availability
Increased reliability
Decreased production losses

Journey to 100% reliability through our Contractual Services Agreements (CSA)
Transportation

Pete McCabe
- Vice President, Global Services & Solutions
- In current role since 2013
- 20 years with GE
Transportation Services
($ in billions)

Key metrics

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<tr>
<td>Revenue</td>
<td>$2.8</td>
<td>+</td>
</tr>
<tr>
<td>Backlog</td>
<td>$12B+</td>
<td>+</td>
</tr>
</tbody>
</table>

Services imperatives

1. Deliver on customer value
   + Outcomes - velocity, fuel, reliability
   + System solutions – RailConnect™ 360

2. Grow $/installed base
   + Increase penetration – Parts & Smarts
   + Extend asset life – modernizations
   + Broaden software solutions – rOS

3. Expand margins
   + Deploy advanced analytics – Predix™

4. Improve service execution & delivery
   + Enhance commercial capabilities
   + Expand domain & IT project expertise

Installed base dynamics

✓ 1,000+ Tier 4-compliant loco orders
✓ ~650 locomotives un-parking in ’14
✓ 450 new locomotives in South Africa
Railroad industry is faced with expanding challenges and customers require a solution provider.

**Customer challenges**
- Asset utilization
- Capacity limited
- Resource constraints
- Ops. Complexity

**Key statistics**
- N. American operating revenue (~4% growth): $80B+
- Traffic volumes require unparalleled investment: 7 year high
- Annual industrial benefit through 1% improvement: $5.6B

**RailConnect™360, delivering customer focused outcomes**

Sources: American Association of Railroads (AAR) 2013 industry statistics
Asset optimization – fuel efficiency

Customer Dynamics

- $1M diesel loco/year, 22K GE locos
- Emissions
- Huge operating variation: operators, trains, topography

RailConnect 360 – Trip Optimizer

- Real-time embedded optimization algorithms
- Advanced data acquisition enabling train health monitoring
- Automated train handling reduces wheel & rail wear

Trip Optimizer with CSX

Implementation on 1,500 CSX locomotives:

✓ Reduced fuel use by 7% on average
✓ Decreased 3rd largest operating expense
  - CSX Sustainability Report 2013
Operations optimization – velocity

Customer Dynamics

- Systems problem... beyond human capabilities
- Majority single track
- Point solutions have plateaued

RailConnect 360 - Movement Planner

- Integrated suite of day of operations software apps
- Predix™ platform - connectivity, big data, and security
- Advanced algorithms and automatic routing
- Proven in class 1 revenue service

Norfolk Southern and Movement Planner*:

- Automated routing decisions
- 10%+ increase in velocity
- 50%+ reduction in expired crews
- Significant improvement in schedule adherence
- 1MPH = ~$200MM estimated annual savings in capital & expenses

*Based on 3 year study in NS GA division
CSA – shared productivity

**Lifecyle Cost Dynamics – Engine Overhauls**
- 20K+ overhauls in backlog
- OH interval based on average expected condition
- $1B+ capital expenditure in North America every year

**RailConnect 360 – Advanced Analytics**
- Co-development GE Transportation & GE Intelligent Platforms:
  - Enhanced sensor coverage
  - Improved data acquisition, higher resolution
  - Advanced analytics
- Asset specific insight drives fault reduction and enables CBM

**Impact:**
- Reduced unplanned downtime & avoid road failures
- Reduce unscheduled material consumption
- Extended periodicity and associated expenses
GE’s 1%

Jamie Miller
- Senior Vice President, Chief Information Officer
- In current role since 2013
- 9 years with GE
Digital opportunity

<table>
<thead>
<tr>
<th>Simplifying structure</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERP/manufacturing † 90%</td>
<td>~$94B IT plays</td>
</tr>
<tr>
<td>Data Centers † 80%</td>
<td>+ Utilize data from products</td>
</tr>
<tr>
<td>Applications † 30%</td>
<td>+ Field services tools</td>
</tr>
<tr>
<td>Shared Services 65%</td>
<td>+ CRM / configurators</td>
</tr>
<tr>
<td>Cloud\textsuperscript{a) } 70%</td>
<td>+ Brilliant Factory</td>
</tr>
</tbody>
</table>

More valuable GE resources with fully integrated approach

\textsuperscript{a) Target percent of new applications that are Cloud enabled}
Three opportunities to power manufacturing

1. **Digital Foundation**
   - 90% reduction in ERPs

2. **Unlocking Big Data**
   - Sourcing
   - Productivity

3. **Powering the Brilliant Factory**
   - Design for manufacturing
   - Sensor enablement
   - Plant/supply chain optimization

$63B+$

GE manufacturing spend

~400 Global factories and shops
Product Cost: ERP investments paying off

### GE Water

- **# of ERPs**
  - 2008: 22
  - Today: 1

- **% of revenue on target ERP**
  - ~75%
  - ~95%

- SG&A % of sales ↓ ~10 pts.
- Past dues ↓ 60%
- Finance headcount ↓ 50%

### GE Healthcare

- **% of revenue on target ERP**
  - 2009: ~75%
  - Today: ~95%

- Inventory turns 6x → 7x
- Shipment on time ↑ 58% → 85%
- Foundation for business to deliver $1B+ savings over past 5 years

---

**Today: 219 ERPs → 2016: 34 ERPs**

---
Product Cost: Using big data to run GE

1 O&G data lake, $8B direct materials buy

- **Ingest**: Real time
- **Store**: More, cheaper
- **Clean**: Faster, GE-wide
- **Consume**: Analytics, Data science

**Oil & Gas**

- 23 source systems
- Full visibility – 3 weeks
- Commodity, part, supplier

- Data lake technology
- Machine learning for data cleansing
- EM, P&W underway (Alstom)

$60B total material buy across GE ... $1B+ cash & deflation opportunities
## Product Cost: Technology powering the Brilliant Factory

<table>
<thead>
<tr>
<th><strong>Aviation Machining</strong></th>
<th><strong>FastWorks approach</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual design for manufacturing</td>
<td>Wilmington, NC</td>
</tr>
<tr>
<td>✔ 30%↓ NPI cycle time</td>
<td></td>
</tr>
<tr>
<td>✔ Eliminated quality escapes</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Transportation Remanufacturing</strong></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Sensor Enablement</td>
<td>Grove City, PA</td>
</tr>
<tr>
<td>✔ ↓ machine downtime</td>
<td></td>
</tr>
<tr>
<td>✔ 25%↓ opportunity</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>P&amp;W Nozzle Cell</strong></th>
<th></th>
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<tbody>
<tr>
<td>Factory optimization</td>
<td>Greenville, SC</td>
</tr>
<tr>
<td>✔ 25%↑ productivity</td>
<td></td>
</tr>
<tr>
<td>✔ P&amp;E avoidance</td>
<td></td>
</tr>
</tbody>
</table>

### 20/20 Vision
- 20%↓ NPI cycle ...
- 20%↑ efficiency
- 16 pilots launched ...
- Fastworks

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**Note:** The text contains bullet points and images related to technology implementations and their benefits in various manufacturing contexts.
Changing the way we deliver Services

Smart Outage: Full deployment at PGS

Accelerating productivity

Field services optimization

Predictive workscope

Next generation modeling

Advanced technology

Predictive Workscope: Aviation 4 customers, full roll-out mid-2015

On track for $1B CSA productivity over 3 years and 10% ↑ customer uptime
We can do more “S” with less “G+A”

QuickQuote

- 45% ↑ win rate
- 80% ↓ in quote time
- 5,400+ ↓ Sales/Comm Ops hours/week

40K+ GE Commercial FTE
Highly manual, long-cycle-time
More “shots on goal”, lower cost

Investing in digital tools for commercial teams
Wrap up
Value for investors

Scale & intellect

GE Software COE

+ COE can accomplish scale ... none of our businesses could do this on their own ... attract talent & spread ideas

+ Advantage to being an early mover ... right partnerships & scale

+ Changing GE Industrial DNA ... greater impact from digital & analytical investments

Return on investment

1. Payback through most reliable revenue source: Services
   + Increase revenue growth
   + Improve margins
   + CSA productivity

2. Funded software & analytics through simplification & reallocation

3. Potential upside beyond the GE installed base
Why GE?

+ More valuable portfolio ... 75% Industrial while growing EPS

+ Tangible evidence of winning NPI ... Tier 4, LEAP, etc.

+ Strong & diversified global footprint ... best-in-class

+ Transforming service for next generation of growth

+ Culture of simplification impacting every part of GE

LEAP is a trademark of CFM International