IT—the Strategic Enabler for the 21st Century Corporation
Cisco Connect Romania

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Executive Summary

Analysis

- Shareholder value is driven by quality and speed of innovation
- The advantage of the past (monetizing brand, physical assets, differentiating processes, culture) may be the inhibitors in the future

Hypothesis

- The opportunity for competitive advantage will be associated with the ability to innovative well and quickly
- Large corporations have to transform themselves to successfully compete in this hyper-innovation economy

Synthesis

- Virtualize the Corporation to Leverage Internal Resources & Eco-System Partners for increased speed of innovation
- IT with changing role and expanded mandate – from ‘fixed asset’ to contributor and driver of corporate strategy
How Did We Define Innovative Firms?

Methodology used published innovation rankings (2006–2011)

Sources:
- Forbes (World)
- Business Week (Top 50) based on Boston Consulting Group global survey of senior executives
- Booz & Company (Innovator Top 20)
- Fast Company and CNN Money

Criteria:
- Firms consistently ranked among the top (2006-2011)
- Expectations of future innovative results (new products, services and markets)
- Offer inventive products, customer experiences, business models, or processes
- Top R&D spend

“Innovation is the means by which the entrepreneur either creates new wealth-producing resources or endows existing resources with enhanced potential for creating wealth.”

Innovation Is Driving Value Creation

**Innovative Firms:** US$ 780B
**Other Firms:** - US$ 547B

- Innovation drives majority of shareholder value creation; Findings are also true industry by industry
- Top 64 innovative firms have created US$ 780B in shareholder value in the last 6 years, while rest of the firms have lost value
- Industrial sector is the key exception due to the robust growth of metal & mining firms (none considered innovative) and significant decline in GE’s market cap during 2005-11

**Change of Market Cap (2005-11)— avg. CAGR**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Innovative Firms</th>
<th>Other Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail</td>
<td>6%</td>
<td>0%</td>
</tr>
<tr>
<td>Energy</td>
<td>8%</td>
<td>-1%</td>
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<tr>
<td>Industrials</td>
<td>-1%</td>
<td>-4%</td>
</tr>
<tr>
<td>Energy</td>
<td>-6%</td>
<td>5%</td>
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<tr>
<td>Financial Services</td>
<td>7%</td>
<td>3%</td>
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<tr>
<td>Health Care</td>
<td>0%</td>
<td>-1%</td>
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<tr>
<td>Media</td>
<td>5%</td>
<td>2%</td>
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</tbody>
</table>

**Growth of Market Cap (2005-11)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>US$ B</th>
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</thead>
<tbody>
<tr>
<td>Innovative Firms</td>
<td>Other Firms</td>
</tr>
<tr>
<td>Retail</td>
<td>75</td>
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<tr>
<td>Energy</td>
<td>261</td>
</tr>
<tr>
<td>Industrials</td>
<td>250</td>
</tr>
<tr>
<td>Financial Services</td>
<td>256</td>
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<tr>
<td>Consumer Goods</td>
<td>5</td>
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<tr>
<td>Technology</td>
<td>258</td>
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<td>SP</td>
<td>107</td>
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<tr>
<td>Healthcare</td>
<td>-30</td>
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<tr>
<td>Media</td>
<td>9</td>
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Average CAGR based on the number of years for which financial data is available
Innovative Firms Account for Almost Double Their Fair Share of Market Value

# of Innovative Firms: 64
# of Total Other Firms: 222

- Out of the top 222 Global Firms analyzed, 64 = 29% most innovative represent 53% of the total market capitalization in 2011
- The results are similar when analyzed on a per employee basis
- Industrial sector is an exception due to the high market valuation of metal & mining sector

Average CAGR based on the number of years for which financial data is available

Only 24% of Firms on the 2011 U.S. Fortune 500 List Were There 25 Years Ago

- One-fourth of the 2011 U.S. Fortune 500 list same as 1987
- Of the common firms, ~80% belong to the industrial, consumer goods, and tech sectors
- ~62% of the common firms are considered innovative (among the top 59 U.S. Fortune 500 firms in 2011)

Percentage of common firms considered innovative
(analyses of top 59 U.S. Fortune 500 firms in 2011)

Source: IBSG analysis, Fortune 500 (2011, 1987)
Advantage of the Past (Assets, Location, Scaled Process) May Be Future Inhibitors

87% of companies experience a severe revenue stall, only 11% recover

**Uncontrollable Factors (12% of Total)**
- Regulatory Actions
- Economic Downturn
- Labor market Inflexibility
- Geopolitical Context

**Controllable Factors (88% of Total)**
- Strategic Factors (70%)
  - Failed Acquisition
  - Premature Core Abandonment
  - Key Customer Dependency
  - Strategic Diffusion/Conglomeration
  - Failed International Expansion
  - Adjacency Failures
  - Voluntary Growth Slowdown
- Organizational Factors (18%)
  - Talent Bench Shortfall
  - Organization Design
  - Incorrect Performance Metrics
  - Board Inaction

46%

Source: Olson and Van Bever, *Stall Points*, 2008
“Adaption is not a requirement, unless you want to survive.”
How Will a 21st Century Enterprise Compete
Virtualize the Corporation to Leverage Your Internal Resources & Eco-System Partners

“Business Virtualization refers to the ability for corporations to engage and disengage with internal resources and/or ecosystem partners in a dynamic and real-time fashion, without regard for ownership and location of physical and human assets.”

Almost Everything as a Service

Source: IBSG, 2012
Business Virtualization Ground Rules

**From: “Physical” Business**

- Company value determined primarily by tangible assets, large fixed capacity, and constrained by physical location
- Business value is mostly driven by “tangible” assets: physical, financial
- Scaling and agility depend on large, capital intensive physical assets. Provisioning capacity ahead of needs leads to significant excess capacity
- Relationships with employees, suppliers, partners, and customers dictates a location-centric approach

**To: Business Virtualization**

- Company value increasingly driven by innovation—virtual & variable assets, people-centric collaboration, agile and on-demand
- “Innovation” driven company value: speed to market, intellectual property, differentiated customer experience
- Costs directly tied to usage, optimize asset utilization; reduction of fixed costs with “XaaS.” Businesses can “right size” their own operation.
- Location agnostic—leverage experts to drive scale and scope, effective collaboration anywhere / anytime

Source: IBSG, Cisco, 2012
## Example Companies Embracing Some Principles of Business Virtualization

<table>
<thead>
<tr>
<th>Value chain</th>
<th>R&amp;D</th>
<th>Sourcing</th>
<th>Production</th>
<th>Logistics</th>
<th>Regional</th>
<th>Stores</th>
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<tbody>
<tr>
<td><strong>IBM</strong></td>
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<td>As a services firm, focusing on positioning itself as an indispensable part of its customer's value-creation process—not simply by providing a valued service, but by helping the customer create more value overall</td>
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<td><strong>TESCO</strong></td>
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<td>Launched its F&amp;F clothing brand by partnering with e-commerce expert as cloud provider</td>
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<td><strong>P&amp;G</strong></td>
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<td>50% of NPD ideas from outside the company's R&amp;D arm, using open innovation and Connect + Develop site</td>
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<td><strong>CISCO</strong></td>
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<td>I-Prize and I-Zone are Cisco's innovation programs that tap into innovative ideas within and beyond the company walls; it involved greater use of video and introduced the concept of an 'idea market' that uses intellectual property points to invest in ideas</td>
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<td><strong>RENAULT</strong></td>
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<td>Renault and DHL collaborate to develop a comprehensive solution that provides visibility of the batteries during warehousing and transport by identification number, temperature control and part level visibility at production level</td>
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<td><strong>Google</strong></td>
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<tr>
<td>Fostering partner ecosystems to co-develop innovative products and redefine customer experience</td>
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Sources: IBSG analysis, annual reports, Forrester Research, 2012
Example: Three Best Practices in IT

1. Virtualize Data Center to Maximize x86 Processing Value
   - 85-90% of today’s x86 servers underutilized (1 app per server)
   - Substantial reduction in physical servers and related power usage
   - Before: 7 servers per store
   - Now: 2 servers per store

2. Network-Centric Architecture for Ubiquitous App / Content Access
   - 35% of IT budget dedicated to place servers, apps, and content near users
   - Reduction in cost of hardware, software, and content duplication
   - Reduction in management complexity, break-fix cost of distributed computing
   - 2,500 stores, 12k clients, Thin-store approach saves $2,400 per store
   - Central Server client software upgrades

3. Capability Sourcing Cuts Costs, Lowers Risk, Increases Flexibility
   - Assembling IT stacks slow, costly risky
   - Pre-built services reduce TCO, risk
   - Faster time to capability by focusing on use / value creation, not assembly and operation
   - 200 product launches per month
   - Food PLM SaaS now best-in-class spec. / stage gate control
   - Partner collaboration
Scaling Organization Capabilities Using Technology

WebEx Meetings and Events
- Interact with Customers
  - Demand and Collaborative Planning
  - Order and Commerce Experience
  - Satisfaction Surveys

TelePresence
- Improve Supplier and CM Relationships
  - Supply-Demand Synchronization
  - Collaborative Design
  - Proposals
  - Negotiations / Reviews

Integrated Workforce Experience
- Extend Value Chain to Channel Partners
  - Inventory Optimization
  - Packaging Improvement
  - Lead Time Attainment
  - Order Holds

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Cisco Eating Its Own Dog Food: Business Virtualization Accelerating R&D & NPI

**Situation/Challenge**
- Cisco ASR 9000 development disrupted mid-cycle by competitor product introduction
- Needed to enhance planned features (4X capacity) and compress time to market
- Achieving targets required dramatically improving internal and partner collaboration

**Solution**
Virtual infrastructure to mobilize engineers, R&D and manufacturing partners:
- Single workspace collaboration across internal R&D groups working 24/7 across time zones
- Identify relevant technology and expertise across business units to reuse technology
- Reuse and closer internal and partner collaboration
- Accelerate manufacturing ramp-up by connecting experts with production facilities

**Benefits**
- Reduced prototype iterations from 3 to 2 and manufacturing introduction cycle time from 15 months to 6 months
- Reduced time to market from 4 to 3 years
- Lowered manufacturing cost by starting in low-cost country rather than migrating late

**Benefits (continued)**
- Reduced R&D costs by $70M
- Accelerated revenue by $151M
- Increase margin by $97M

Sources: Stanford Graduate School of Business, 2009; Cisco Engineering, Cisco Manufacturing, Cisco IBSG, 2012
The Technology Enablers for Creating the Virtualized Corporation

21st Century Corporation: the Virtual Corporation

Technology underpinnings

“Work Your Way” environment with flexible IT consumption models, BYOD

Many Clouds

Mobility

Collaboration effectiveness:
virtual, visual, social, mobile

Network centricity:
Moving decision-making to the “edge”
CIO and IT-Organization Evolution

Chief Information Officer
- Cost of IT-organization
- Reliability of IT-services
- Information quality
- Information usage
- Value derived from information leverage
- % employees with data quality objectives

Chief Operations Officer
- Processing cost per transaction
- % automated processes
- % operations in low-cost countries
- Operational efficiency

Chief Transformation Officer
- % of Value Add in Core vs. Context
- Speed to engage/disengage
- Ability to deliver transformation according to plan

Chief Digital Officer
- % revenue and % growth from new products & services
- % sales through digital channels
- % sales leveraging ‘big data’
In Summary:

- Research shows: Old-school competitive advantages not sustainable
- Need for agility and innovation meets new technological abilities
- Human talent is the most scarce resource – and will decide about success
- Go from 'physical business' to 'business virtualization'
- Todays best practices are just the beginning:
  - Asset virtualization - Network-centric architecture - Use of Service
- Key task: scale organizational capabilities and abstract from location
- Future: Engage and disengage with internal resources and/or ecosystem partners in a dynamic and real-time fashion, without regard for ownership and location of physical and human assets
- IT is the key enabler for this transformation
- CIO and IT-organization have to change and drive change