

Global Technology Economics: Update 2010-2011

Taking Charge of your Technology Economy!



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Topics

Time Travel: 2010 – 2006/Back to the Future?

The State of the Global Technology Economy

The State of Global Technology Competitiveness

The State of Markets Through a Technology Economics Lens

Sightings

Synthesis: What This All Means

Take-Aways

2010 Did You Know? ---



Did You Know?

- 1) 50% of U.S. 21 year olds have **created content** on the Web.
- 2) 70% of U.S. **4 year olds** have used a computer.
- 3) Over **31 billion** Google searches were performed — **last month** — vs. 2.6 billion 3 years ago.



Did You Know?

More video was uploaded to



in the past two months

than if ABC, CBS and NBC had been airing new content **24/7** since 1948



Did You Know?

Wikipedia **launched in 2001**, and averages 4,300 new articles every day.

A current-generation network switch could **move all 13 million** articles ...



in **0.001 seconds**.



Did You Know?

584?
1,150?
1,812?



How many **text messages** the average American teenager sends each month?

2,282 per month

Gartner



Did You Know?

The U.S. Department of Labor estimates that **those in today's labor force will have 10 to 14 jobs**

by the age of



Gartner



Did You Know?

The computer in your cell phone today is a **million times** cheaper,

and a **thousand times** more powerful,

and about a **hundred thousand** times smaller

than the **one** computer installed at MIT in 1965



Did You Know?

In 1997, a gigabyte of Flash memory cost **\$7,870**.

Today, it costs **\$1.25**.



"So, what used to fit in a **building**,
now fits in your **pocket**,
and what fits in your pocket now,
will fit inside a **blood cell** in 25 years"

Source: Ray Kurzweil

Time Travel: 2010 – 2006/Back to the Future?



	2006	2010
U.S. President	George W. Bush	Barack Obama
U.S. GDP	\$13.0T	\$14.8T
U.S. Unemployment	4.6%	9.5%
Best Movie (Oscar Winner)	The Departed	The Hurt Locker
Best Song (Grammy)	Sometimes You Can't Make It On Your Own - U2	Use Somebody - Kings of Leon
TV's #1 Show	America Idol	Dancing with the Stars
World Series Winner	St. Louis Cardinals	San Francisco Giants
Super Bowl Winner	Pittsburgh Steelers	New Orleans Saints
iPhone Sales	0	15,800,000
Facebook Users	7,000,000	500,000,000
China's GDP	\$2.7T	\$5.1T

The Financial Services Sector: Canary in the Coal Mine



	2006	2010	Change 2010 Vs 2006
Total Net Revenue \$M	\$ 399,003	\$ 475,466	19.2%
Total Non Interest Expense \$M	\$ 238,203	\$ 271,764	14.1%
Total Employees	1,100,466	1,100,563	0.0%
Total Technology Expense \$M	\$ 33,600.00	\$ 39,300.00	17.0%
Total MIPS	507,000	848,000	67.3%
Total Servers	209,000	368,000	76.1%
Net Revenue per Employee	\$ 362,576	\$ 432,021	19.2%
Non Interest Expense per Employee	\$ 216,456	\$ 246,932	14.1%
Gross Margin per Employee	\$ 146,120	\$ 185,089	26.7%
Technology Expense per Employee	\$ 30,533	\$ 35,709	17.0%
MIPS per \$1M Net Revenue	1.27	1.78	40.4%
Servers per \$1M Net Revenue	0.52	0.77	47.8%
Technology Expense as % of Net Revenue	8.4%	8.3%	-1.8%
Technology Expense as % of Non Interest Expense	12.8%	13.1%	2.5%
Technology Expense as % of Gross Margin	20.9%	19.3%	-7.7%
IT Intensity	1.53	1.55	1.2%



	MIPS	Servers	
2006 Volume	507,000	209,000	
2006 Unit Cost	\$ 3,578	\$ 14,212	
2006 Total Cost \$M	\$ 1,814	\$ 2,970	\$ 4,784
2010 Volume	848,000	368,000	
2010 Unit Cost	\$ 1,996	\$ 9,679	
2010 Total Cost \$M	\$ 1,693	\$ 3,562	\$ 5,254
Change in Total Cost			8.9%

Revenue	Up 19%
Operating Expense	Up 14%
Margin	Up 26%
Employees	Flat
Tech Spend Per Emp	Up 17%
Computing Capacity	Up 74%
Computing Cost	Up 9%

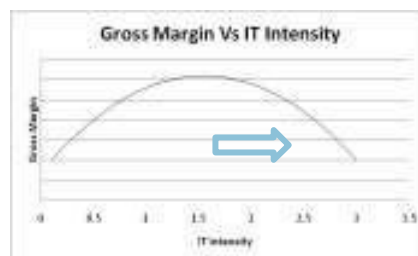


The Financial Services Sector: Canary in the Coal Mine



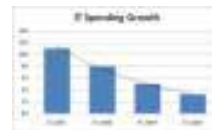
	2006	2010	Change 2010 Vs 2006	2010 w IB Impact for 3Q and 4Q (~\$33B less IB Net Revenue in 3Q and 4Q)	
				2010 Estimated	Change 2010 Vs 2006
Total Net Revenue \$M	\$ 399,003	\$ 475,466	19.2%	\$ 441,953	10.8%
Total Non Interest Expense \$M	\$ 238,203	\$ 271,764	14.1%		
Total Employees	1,100,466	1,100,563	0.0%		
Total Technology Expense \$M	\$ 33,600.00	\$ 39,300.00	17.0%		
Total MIPS	507,000	848,000	67.3%		
Total Servers	209,000	368,000	76.1%		
Net Revenue per Employee	\$ 362,576	\$ 432,021	19.2%	\$ 401,570	10.8%
Non Interest Expense per Employee	\$ 216,456	\$ 246,932	14.1%		
Gross Margin per Employee	\$ 146,120	\$ 185,089	26.7%	154,638	5.8%
Technology Expense per Employee	\$ 30,533	\$ 35,709	17.0%		
MIPS per \$1M Net Revenue	1.27	1.78	40.4%	1.92	51.0%
Servers per \$1M Net Revenue	0.52	0.77	47.8%	0.83	59.0%
Technology Expense as % of Net Revenue	8.4%	8.3%	-1.8%	8.9%	5.6%
Technology Expense as % of Non Interest Expense	12.8%	13.1%	2.5%		
Technology Expense as % of Gross Margin	20.9%	19.3%	-7.7%	23.1%	10.5%
IT Intensity	1.53	1.55	1.2%	1.58	3.2%

*Moving past
the point of
optimal
return*



The State of the Global Technology Economy 2010: Spending is Growing/Slowing

2009



3.2% Growth

2010

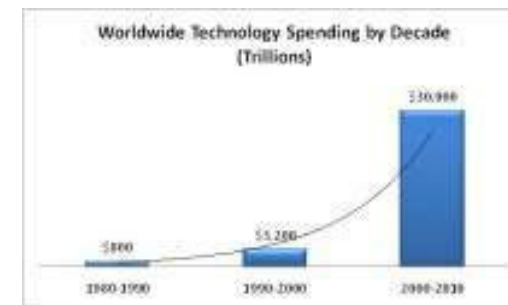
Gartner Cuts Global Technology Spending Forecast on Euro Woes

By David Lee-McKenney - Jul 1, 2010 3:36 AM ET

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Gartner Inc. lowered its growth forecast for worldwide spending on information technology this year to 3.4 percent, from a prediction of 5.3 percent, citing problems in euro area economies.

The falling euro and austerity measures to counter the sovereign debt crisis will reduce dollar spending, the research firm said in an e-mailed press release. Hardware will lead spending growth with a 9.1 percent increase, while software, services and telecommunications will advance at lower rates, Gartner said.



Finding: If the Global Technology Economy was a national GDP it would be the 4th largest nation

The State of Global Competitiveness: Who's On First?/Where is First?

The results of the latest Rubin Global Technology Index (GTI) research

- National Investment in Technology
- Technology Trade
- Investment in Scientific Education
- Distribution of Information Wealth
- Green Technology

Rank	GTI	Economist eReadiness
1	United States	Denmark
2	Sweden	Sweden
3	Denmark	Netherlands
4	United Kingdom	Norway
5	Germany	United State
6	Japan	Australia
7	Netherlands	Singapore
8	Switzerland	Hong Kong
9	Finland	Canada
10	Canada	Finland
11	South Korea	New Zealand
12	France	Switzerland
13	Norway	United Kingdom
14	Australia	Austria
15	Taiwan	France
16	Belgium	Taiwan
17	Austria	Germany
18	Iceland	Ireland
19	New Zealand	South Korea
20	Italy	Belgium



Rank	Technology National Investment	Technology Trade	Investment in Scientific Education	Distribution of Information Wealth	Green Technology	Overall
1	United States	United States	Denmark	Denmark	Finland	United States
2	Japan	Germany	Sweden	Sweden	Sweden	Sweden
3	United Kingdom	Japan	United States	South Korea	Japan	Denmark
4	Brazil	United Kingdom	Norway	Finland	Switzerland	United Kingdom
5	Germany	France	Switzerland	Japan	Netherlands	Germany
6	France	Italy	Iceland	Netherlands	Denmark	Japan
7	Netherlands	Sweden	Finland	United States	Norway	Netherlands
8	Canada	Netherlands	Netherlands	Switzerland	Germany	Switzerland
9	Australia	South Korea	Canada	Norway	United Kingdom	Finland
10	China	Canada	Austria	United Kingdom	Iceland	Canada
11	Spain	Turkey	Belgium	Taiwan	United States	South Korea
12	Italy	Taiwan	Germany	Iceland	Spain	France
13	South Africa	Chile	United Kingdom	Germany	Austria	Norway
14	Sweden	Indonesia	South Korea	Canada	Australia	Australia
15	South Korea	Switzerland	New Zealand	Singapore	France	Taiwan
16	Switzerland	Colombia	Israel	Austria	South Korea	Belgium
17	Denmark	Slovenia	Ireland	France	Canada	Austria
18	Belgium	Slovakia	Taiwan	Hong Kong	Belgium	Iceland
19	Singapore	Lithuania	Australia	Australia	New Zealand	New Zealand
20	India	Iceland	France	Luxembourg	Taiwan	Italy

www.rubinworldwide.com

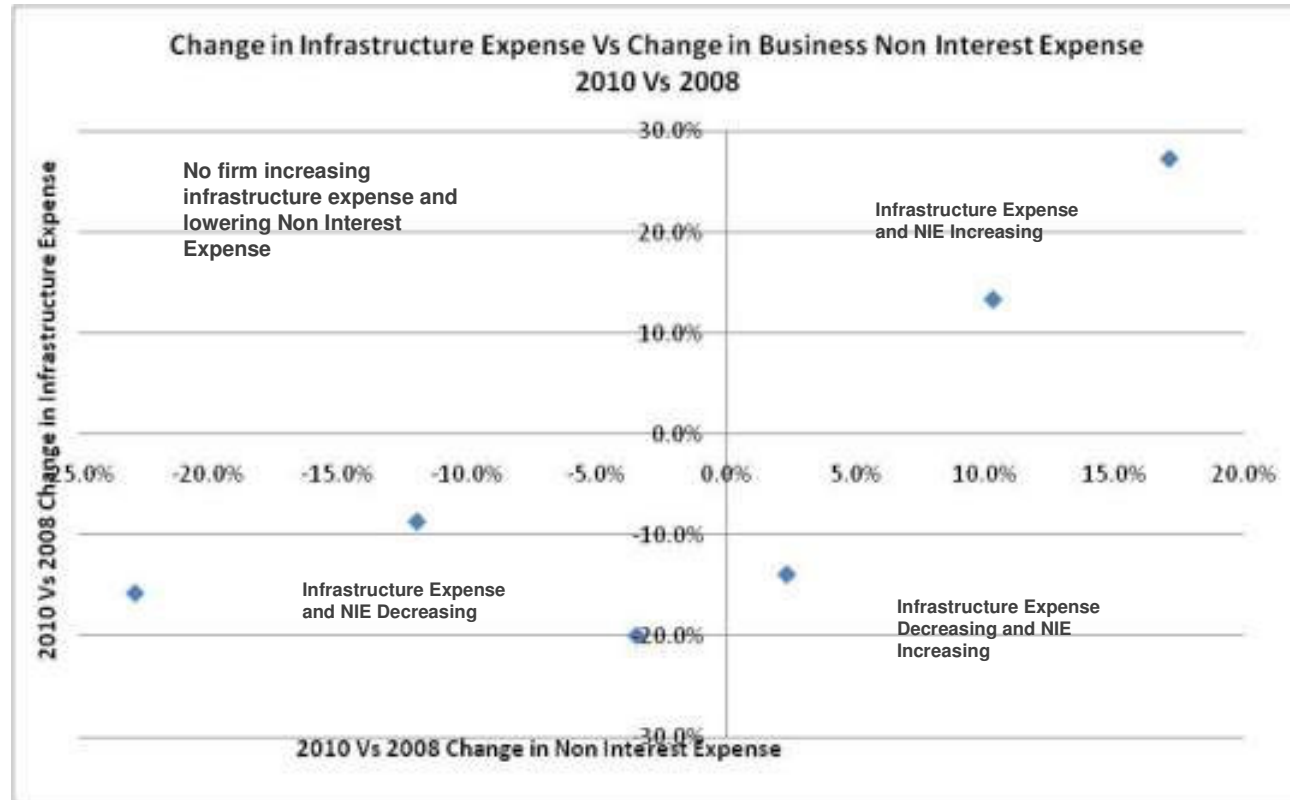
The State of Markets Through a Technology Economics Lens

In 2006, Rubin Worldwide launched the Technology Leadership Index (TLI) with the purpose of monitoring how technology creates value and assessing whether there is a link between business performance and IT investment

From January 2006 to October 2010, the TLI has consistently outperformed the Standard & Poor and, since the beginning of the year 2010, it has begun to surpass the DJIA. Since the beginning of the study, the TLI has averaged a 1.2% difference in value from the DJIA, 6.7% from the S&P500 and -2.3% from the Fortune 500. Those results highlight the importance of strategic technology investment on business performance and imply that technology leaders have overcome the hardships of the economic crisis faster and strengthens firms' opportunities in the market.



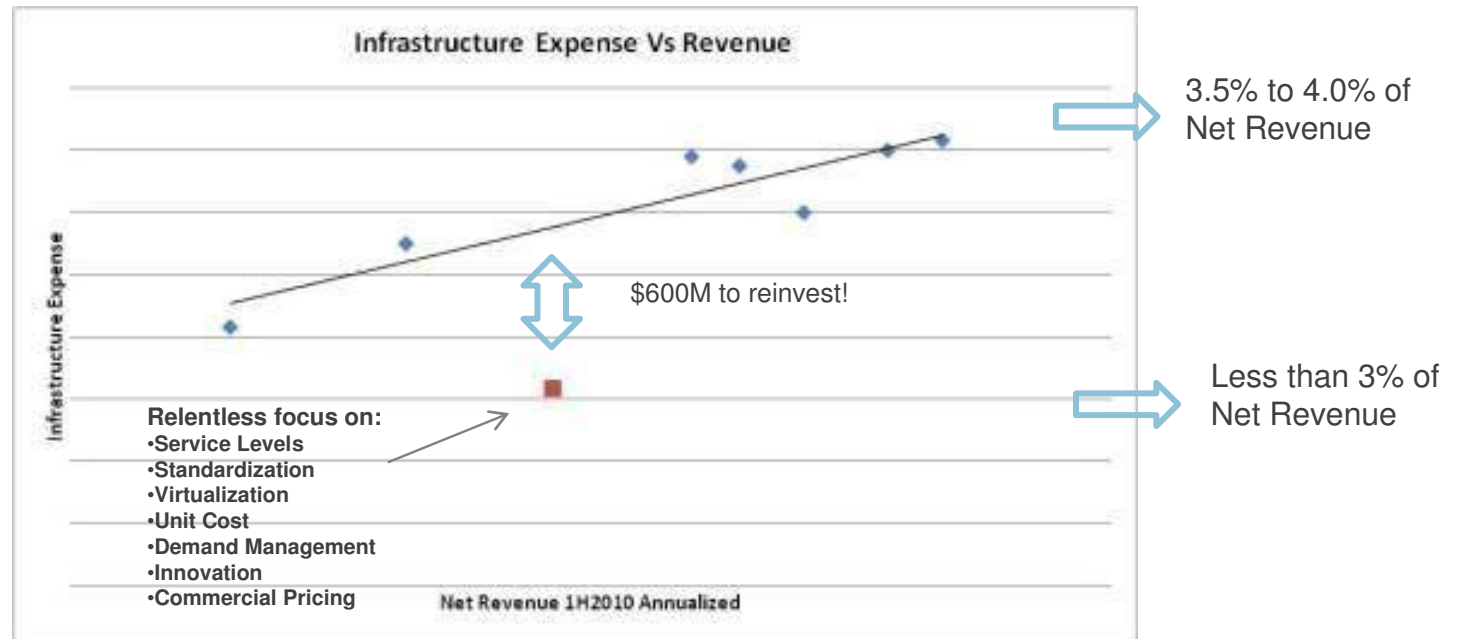
The State of Technology Economic Dynamics



Most companies have got it “wrong”. The dynamic is to invest in IT to drive down operating costs in times of revenue pressure.

Sightings: Breakthrough Economics

There are now examples of organizations that can operate their infrastructures at 50% of the cost of competitors at superior services levels



Value (sighting in chart above): **\$3B** to invest in strategic development over 5 years

Sightings: Transparency 2.0

IT “Savvy” organizations manage supply and demand from a value perspective

Business view of how products consume IT resources and contribution to “cost of goods”



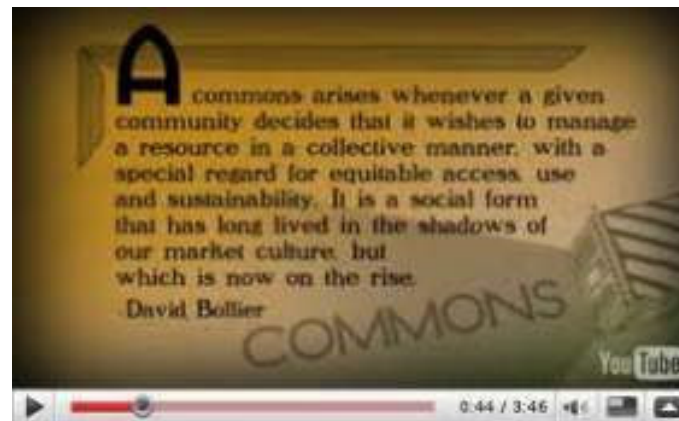
IT view of business drivers of IT resources and contribution to IT demand and unit costs



Sightings: New Organizations/New Structures

The “Commons” is taking shape

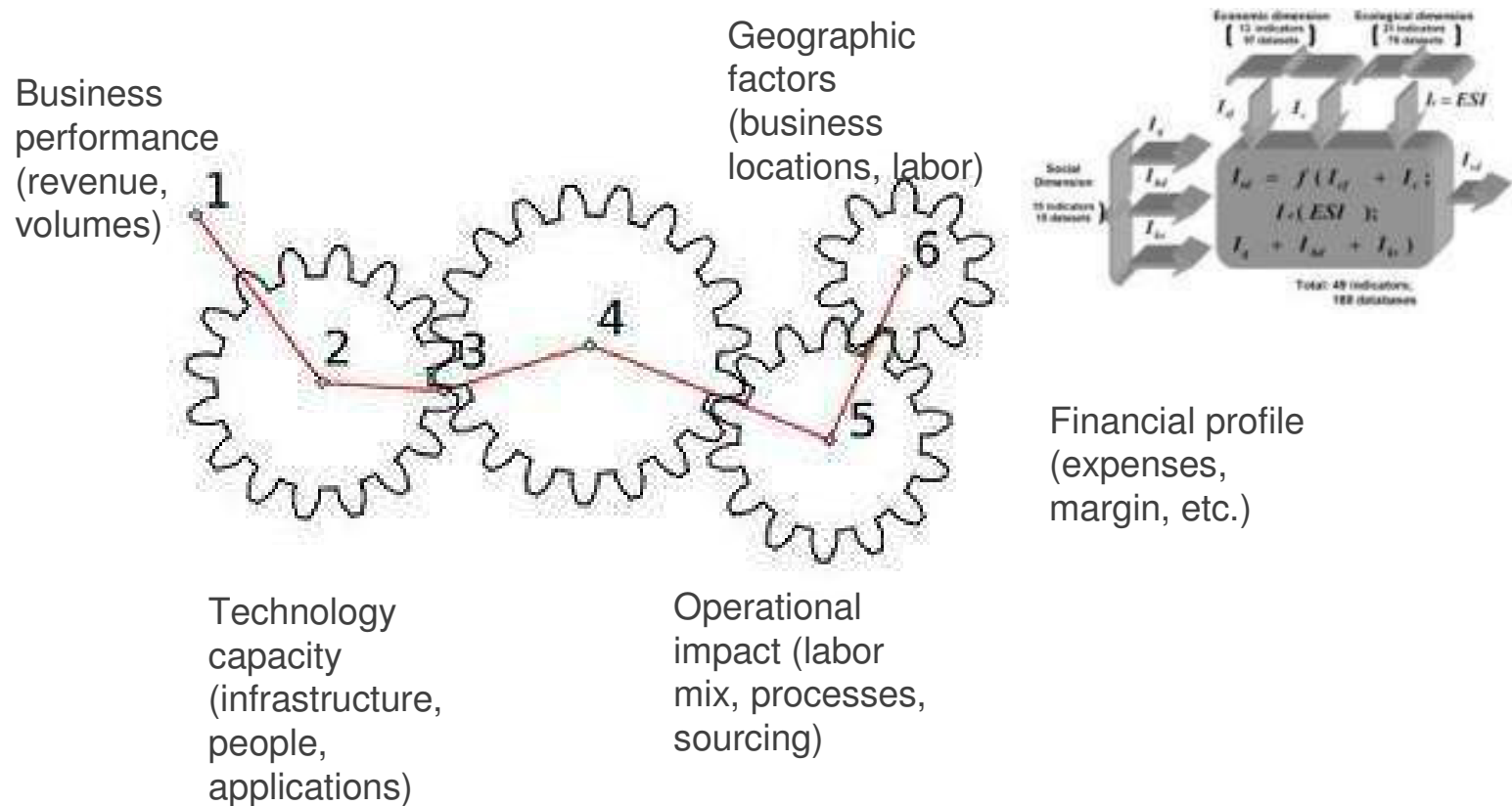
- Core IT functions supporting the enterprise for economies of scale
- Business segment specific functions managed from a business perspective for economies of yield
- Leveraging of the marketplace: the true commons



World-class now means leveraging the scale and agility of the marketplace and even creating scale beyond the walls of your company

Sightings: The New Models

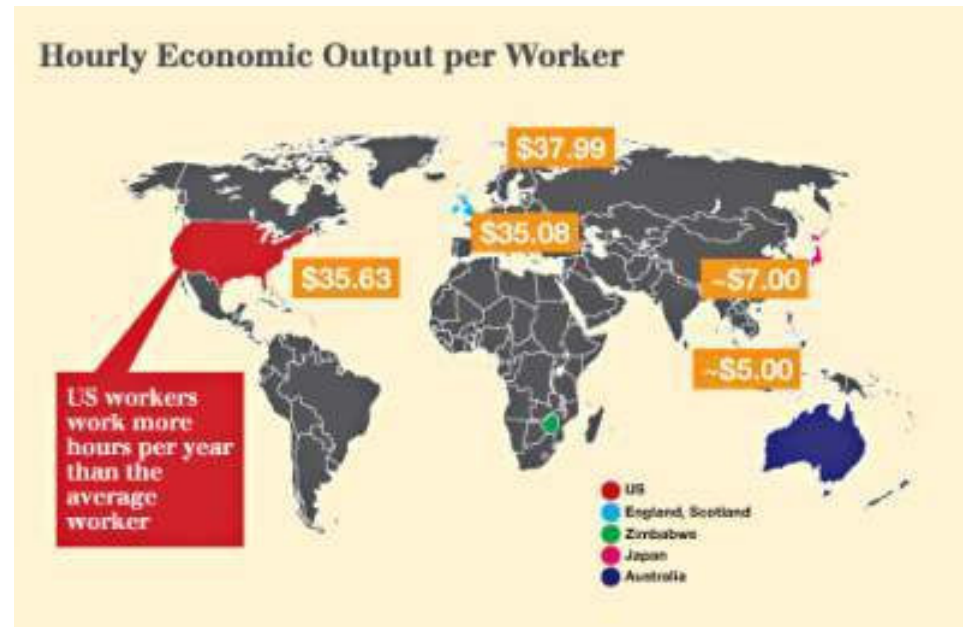
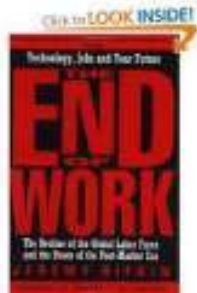
Strategic IT models now provide a few with predictive power



Sightings: Location Strategy

Global Labor.. The true story

Developing and executing an effective location strategy requires far more than focusing on labor rates and labor arbitrage. It requires mapping the new geography of our technology economy, and it requires new measures and transparency into workforce performance and outcomes.



It's the output not the labor rate, (stupid)

Sightings: Benchmarking is Back!

Business based metrics are emerging: “Technology cost of goods”

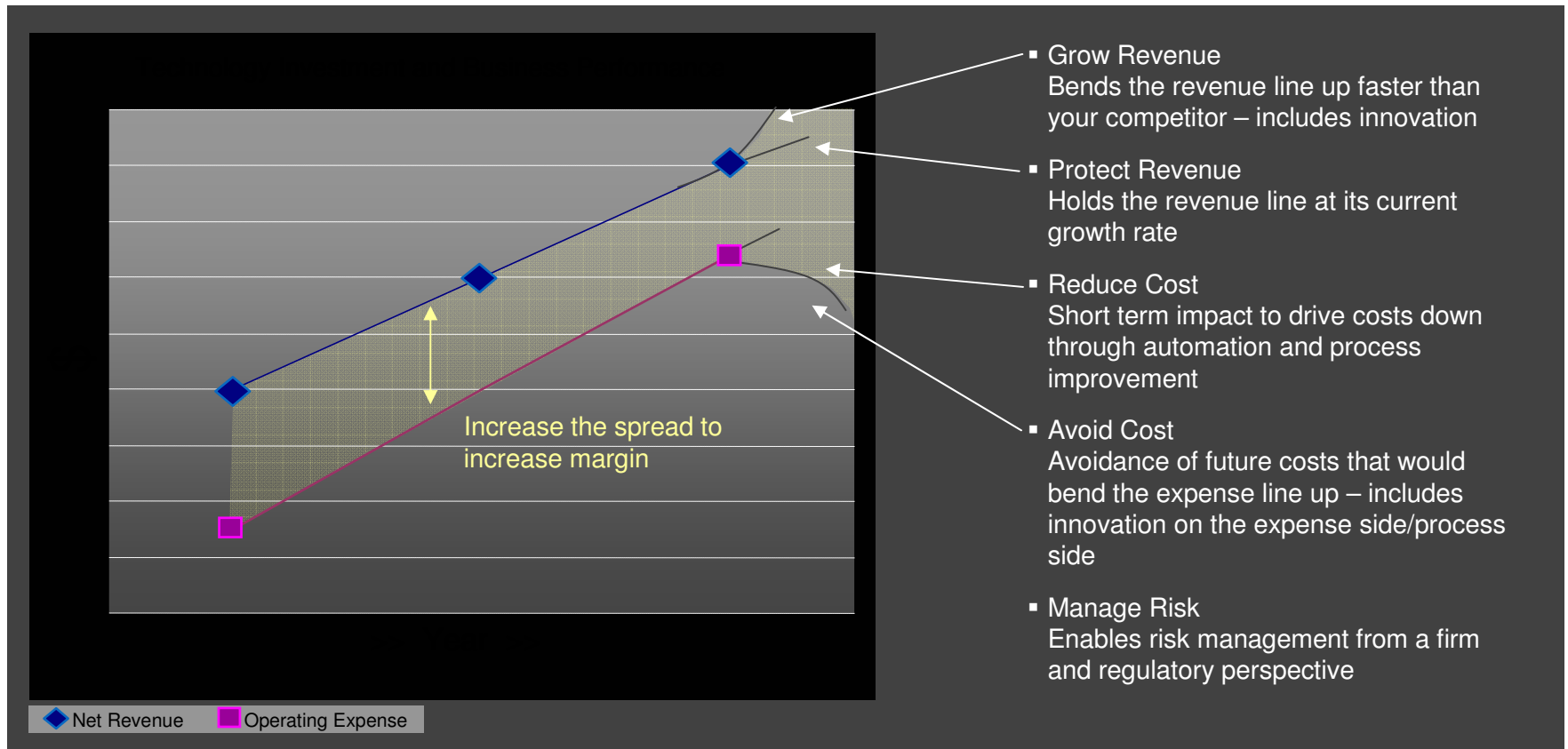
Benchmarking is going “real time” – “Bloomberg of IT”



Soon technology/processing will trade like commodities in the marketplace, across companies, within companies. The free market technology economy is the new benchmark.

Sightings: The new portfolio

The value of technology to an enterprise is more than just “Run the Business” and “Grow the Business”. We have identified 5 key technology investment objectives that define the interaction and impact of technology on business performance. This is a new way of looking at the IT investment portfolio itself.



RTB/CTB is not sufficient to manage the IT portfolio any more

Sightings: ROIT is Real



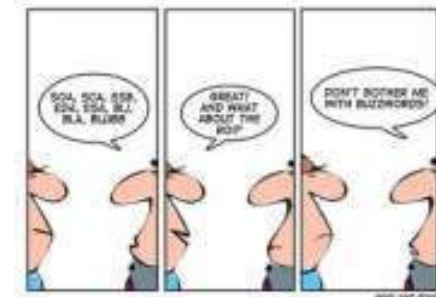
It is now possible to compute/predict the Return on IT Investment

7 Pillars of Making ROIT a Useful Tool

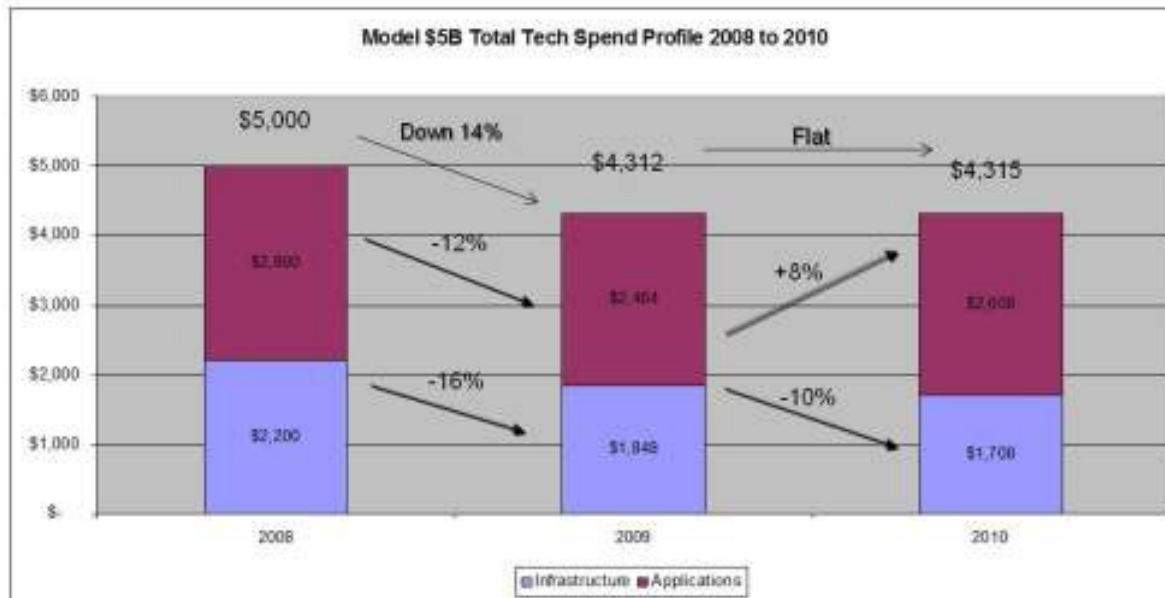
1. Adoption of an enhanced "run the business/build the business" model providing advanced transparency with a focus on the value levers of technology in terms of business contribution — protect revenue, grow revenue, avoid cost, reduce cost, market innovation/leadership, compliance/risk management, etc.
2. Creation of a strategic technology-business scorecard based on key performance indicators (KPIs) that provide a window into technology performance by linking to business performance objectives with underlying status and progress indicators.
3. Development of a complete model/schematic detailing product business performance (profitability, growth, risk, etc.) tied in two dimensions to business processes and IT value.
4. Formulation of an ROIT current-state map showing at a product level current "coverage" of IT investment in supporting product-level operational efficiency, product leadership/differentiation and customer intimacy.
5. Construction of a product-level consumption and resource model linking products to applications to IT resource consumption and highlighting key capacity planning drivers.
6. Implementation of an overall IT investment portfolio management process that allows modeling of IT investment strategy and assessment of alternative strategies in pure business terms.
7. Establishment of a full communications program to broadcast and share the concepts across the enterprise.

ROIT Evaluation Tools

- Implement IT investment strategy/refine and expand with changes in business environment/Test continuously via benchmarking
- Determine optimum investment mix
- Determine ROIT
- Assess contribution of each lever to performance
- Determine IT competitive levers
- Assess IT Criticality
- Obtain and understand business strategy



Sightings: The New Economics of IT



Benchmark model created from data collected from 6 of the 10 largest global banks.

Those companies that can understand the workings of Technology Economics and master and take charge of their own internal Technology Economy microclimates today – before such learnings are documented and taught in the standard B-school curricula – will be the winners.

1. Breakthrough infrastructure economics
2. Surgically precise investment in applications
3. Resulting Increase in Total Technology Investment



Synthesis:

What does this mean for IT leaders?

What does this mean for business leaders?

What does this mean for national leaders?

What does this mean for you?



“Take-aways”

- ***Most companies have got their technology economic model “wrong”. The dynamic is to invest in IT to drive down operating costs in times of revenue pressure...not to cut IT***
- ***There are now examples of breakthrough organizations that can operate their infrastructures at 50% of the cost of competitors at superior services levels***
- ***IT “Savvy” organizations manage supply and demand from a value perspective – Transparency 2.0***
- ***Strategic IT models now provide a few with predictive power***
- ***It’s the output not the labor rate, (stupid)***
- ***Soon technology/processing will trade like commodities in the marketplace, across companies, within companies. The free market technology economy is the new benchmark.***
- ***RTB/CTB is not sufficient to manage the IT portfolio any more***
- ***It is now possible to compute/predict the Return on IT Investment***

The Most Important Take-Away

“The only sustainable competitive advantage is to be able to learn faster than your competitors”

Peter Senge, Fifth Discipline

Those companies that can chart the workings of their Technology Economy and then master and take charge of it – before such learnings are documented and taught in the standard B-school curricula – will be the winners for the next decade and beyond.

Howard Rubin, Technology Economics