

BDIM Workshop – state of art and future directions

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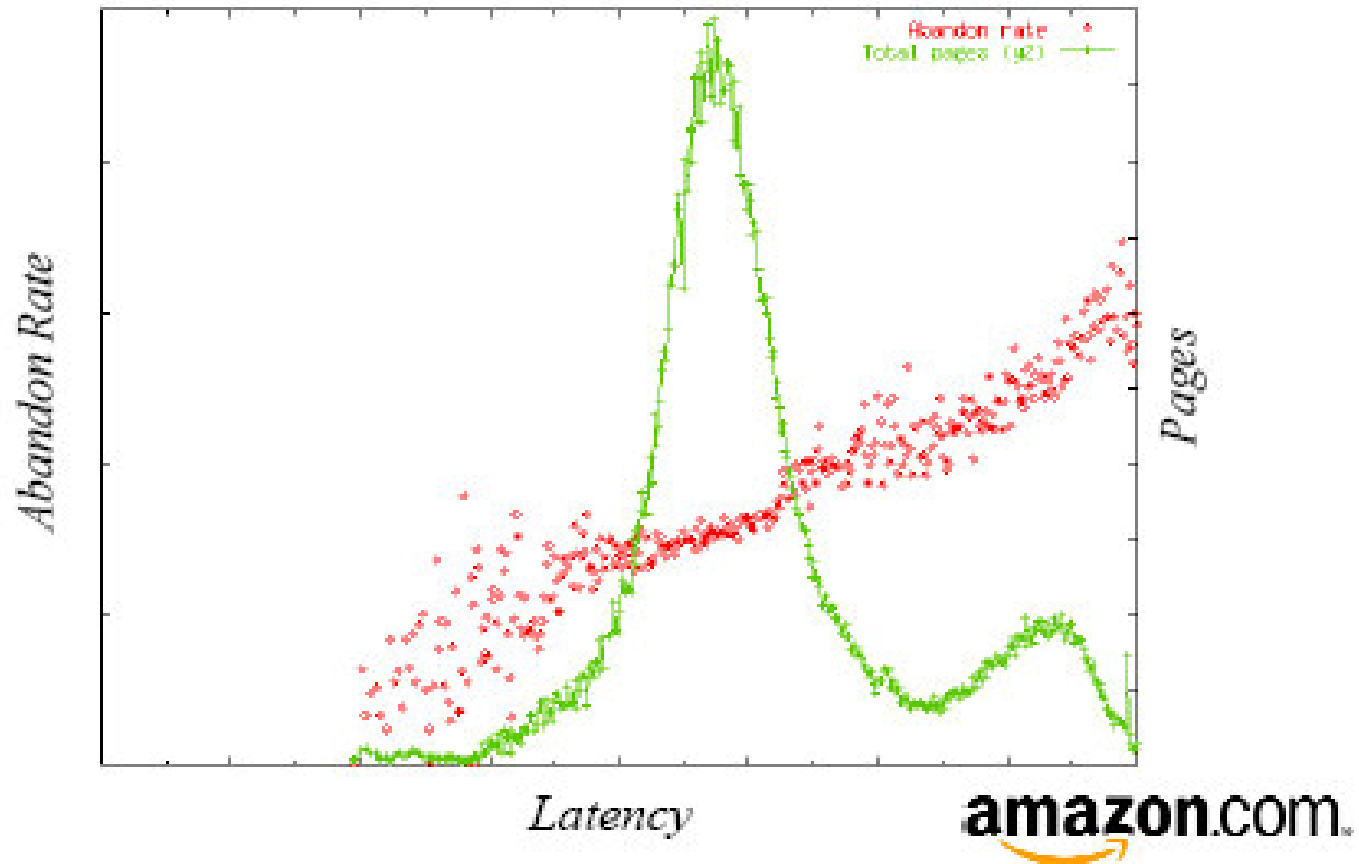
NOMS 2006– IEEE/IFIP Network Operations & Management
Symposium - April 2006
Vancouver, Canada

Initial Questions

- What is current status of business-IT alignment?
 - What is the focus of the alignment?
 - IT system development,
 - IT infrastructure management
 - IT service delivery?
 - “Type” of company
 - Some examples
- Reasons for the gap between business and IT?
 - The IT strategic impact grid
- What are future challenges to align business and IT?
 - Methods, tools and training
 - Some ideas...

Cost of Non-Alignment

Performance and abandons



“Do Web Measurements Measure Up?”, Andrew Certain, Amazon, WWW 2002
Conference, May 2002

Cost of Non-Alignment

Examples of Estimating Downtime Cost (*)

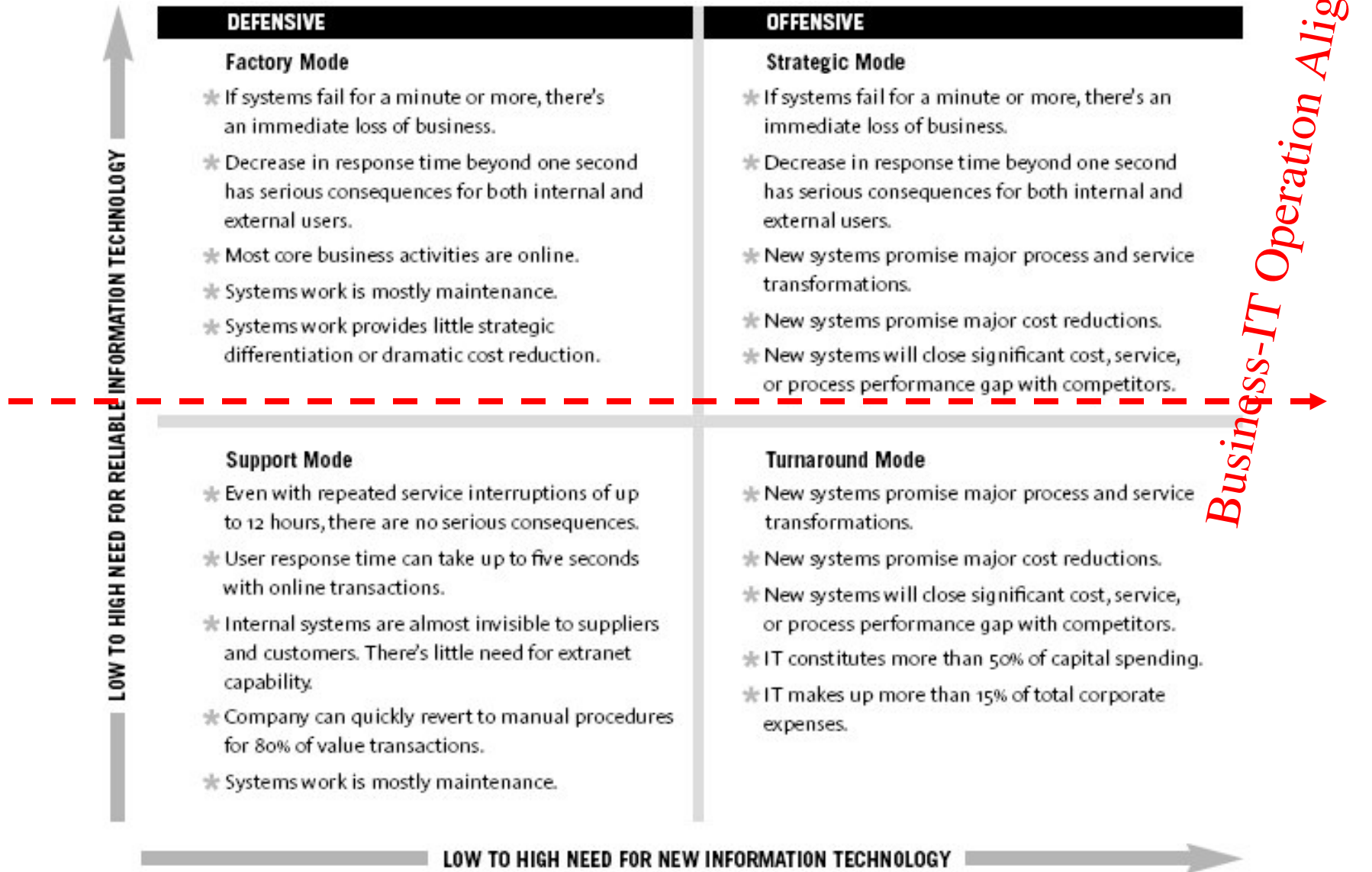
Institution	Assumptions	Estimated Downtime Cost
1. EECS Dept. U.C. Berkeley	7 hours downtime/mo affects 50% employees	\$250,000 - \$300,000/year
2. Amazon	outage affects 90% of revenue & 90% of employees	\$550,000/hour
3. SUN	outage affects 10% of revenue and 90% of employees	\$825,000/hour

(*)Patterson, D. ``A simple way to estimate the cost of downtime'' 16th Systems Administration Conference (USENIX/LISA), 2002

Virgilio Almeida, Vancouver 2006

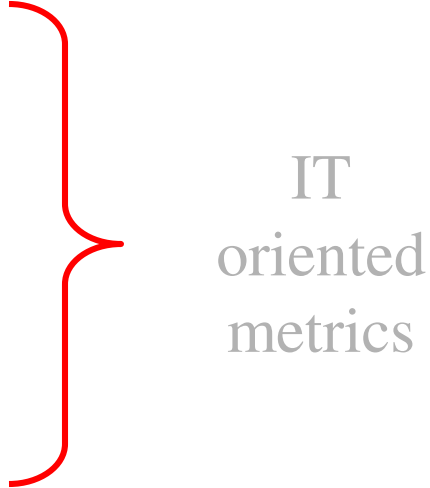
Reasons for the gap between business and IT

The IT strategic impact grid(*)



* R. Nolan, HBR 2005

Some Ideas: New Metrics for IT Performance

- Conventional QoS metrics for IT infrastructure:
 - response time, throughput
 - availability,
 - Utilization, queue length
 - Typical metrics for business on the Web:
 - Page views/day
 - Unique visitors/day
- 
- IT oriented metrics
- How can we define new metrics for new problems? E.g., quality of security? New types of Service Level Agreements (SLAs)?
 - New metrics that would represent IT alignment with business
 - revenue/sec
 - potential lost revenue/sec
 - Actual lost revenue per day (eg.: failures and service unavailability)
 - Security loss per day

Engineering-based approach for IT management?

- “The disciplined application of scientific knowledge to resolve conflicting constraints and requirements for problems of immediate and practical significance.”
- Characteristics of engineering activities:
 - Create cost-effective solutions
 - Apply to practical problems
 - Make use of scientific knowledge
 - *a basis in theory and a basis in practice*
- Traditional engineering: civil, chemical, aeronautical, etc
- New engineering disciplines that are in process of consolidation: software, Web, IT management (?)
- How can we formulate a discipline for it?

BDIM Needs Simple Models

