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Power Shift

Accenture Technology Vision 2008

Nokios-konferansen Trondheim 15-17.10.2008
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A lot happened in 2007 …

IBM
COGNOS

Google
IBM?

Microsoft
:::fast

facebook

Google

Amazon's Risky Bet
CEO Jeff Bezos wants to run your business with his

YAHOO! WIDGETS

Market Caps

Apple $ 155B
IBM $ 137B
Intel $ 131B

Google

Self Serve
359 9/10 REGULAR UNLEADED
369 9/10 PLUS UNLEADED
383 9/10 SUPREME UNLEADED

U.S. Video Game Console Demand
(Consumers shopping for each console, weeks ending Nov. 11, '

Wii
PS3
Xbox

A lot happened in 2007 ...

IBM
COGNOS

Google
IBM?

Microsoft
:::fast

facebook

Google

Amazon's Risky Bet
CEO Jeff Bezos wants to run your business with his Web technology. Wall Street wishes he would just mind the store
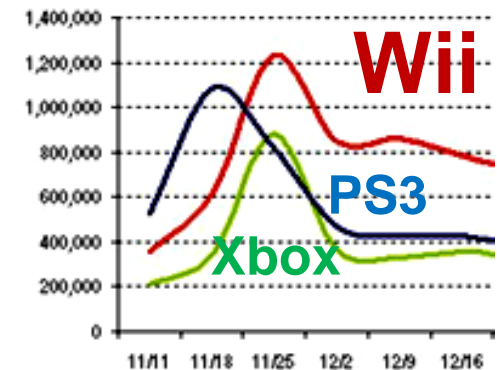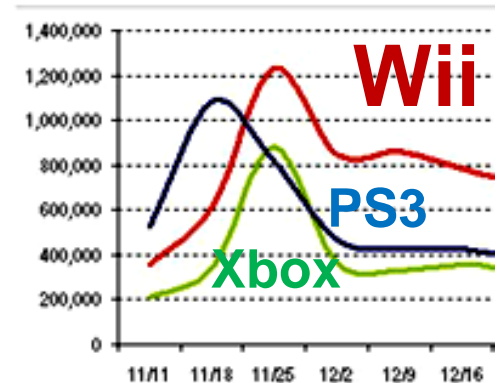
YAHOO! WIDGETS

Market Caps

Apple	$	87B*
IBM	$	119B
Intel	$	84B

Google

Self Serve
359 9/10 REGULAR UNLEADED
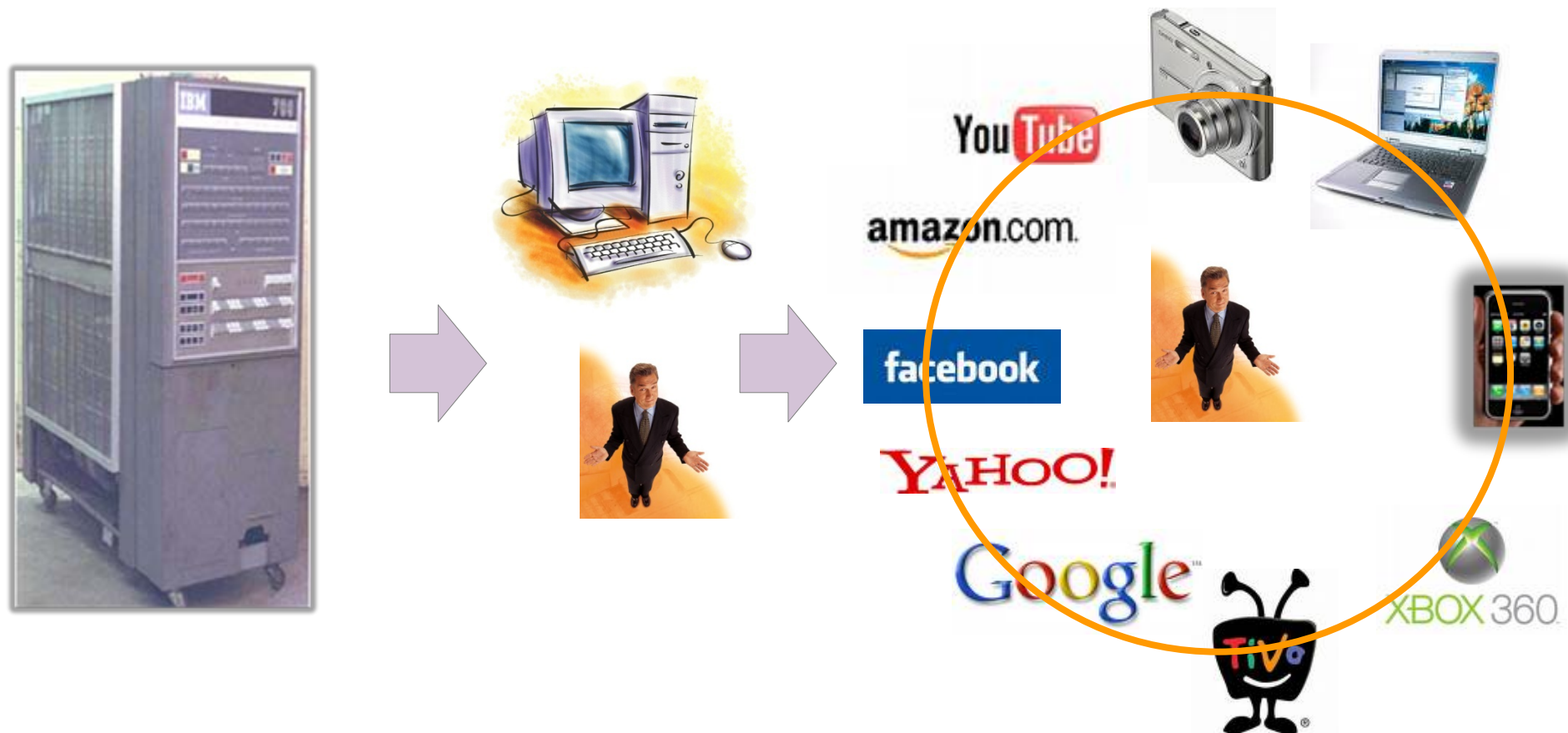369 9/10 PLUS UNLEADED
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*) Pr 15.10.2008

Power Shift
From technology to people

Eight Major Technology Trends 2008

1. Cloud computing
2. SI – Regular & Lite
3. Enterprise intelligence at scale
4. Continuous access to people and content
5. Social computing
6. User-generated content
7. Industrialization of software development
8. Green computing

1. Cloud Computing

Hardware Cloud

Desktop Cloud

Services Cloud

SaaS Cloud

Evolution of SaaS (Software as a Service)

SaaS 1.0

ASP

SaaS providers sourced software from 3rd party software providers

Ability to meet their customers' needs was limited by the third-party software

SaaS 2.0

Application-centric

SaaS providers own the software

Greater ability to customize software based on customer needs

More flexible pricing

Key Providers: SalesForce.com NetSuite

SaaS 3.0

Platform-centric

Vendors provide platforms for development, run-time, and integration as a service.

SIs/customers can customize the SaaS offerings using the platform.

Key Providers: SalesForce.com NetSuite, Oracle, Microsoft

Cloud – "everything as a service" over the Internet

Integration-as-a- service	Application-as-a-Service	Development-Platform-as-a-service
	Runtime-Platform-as-a-Service	
Infrastructure-as-a-Service		
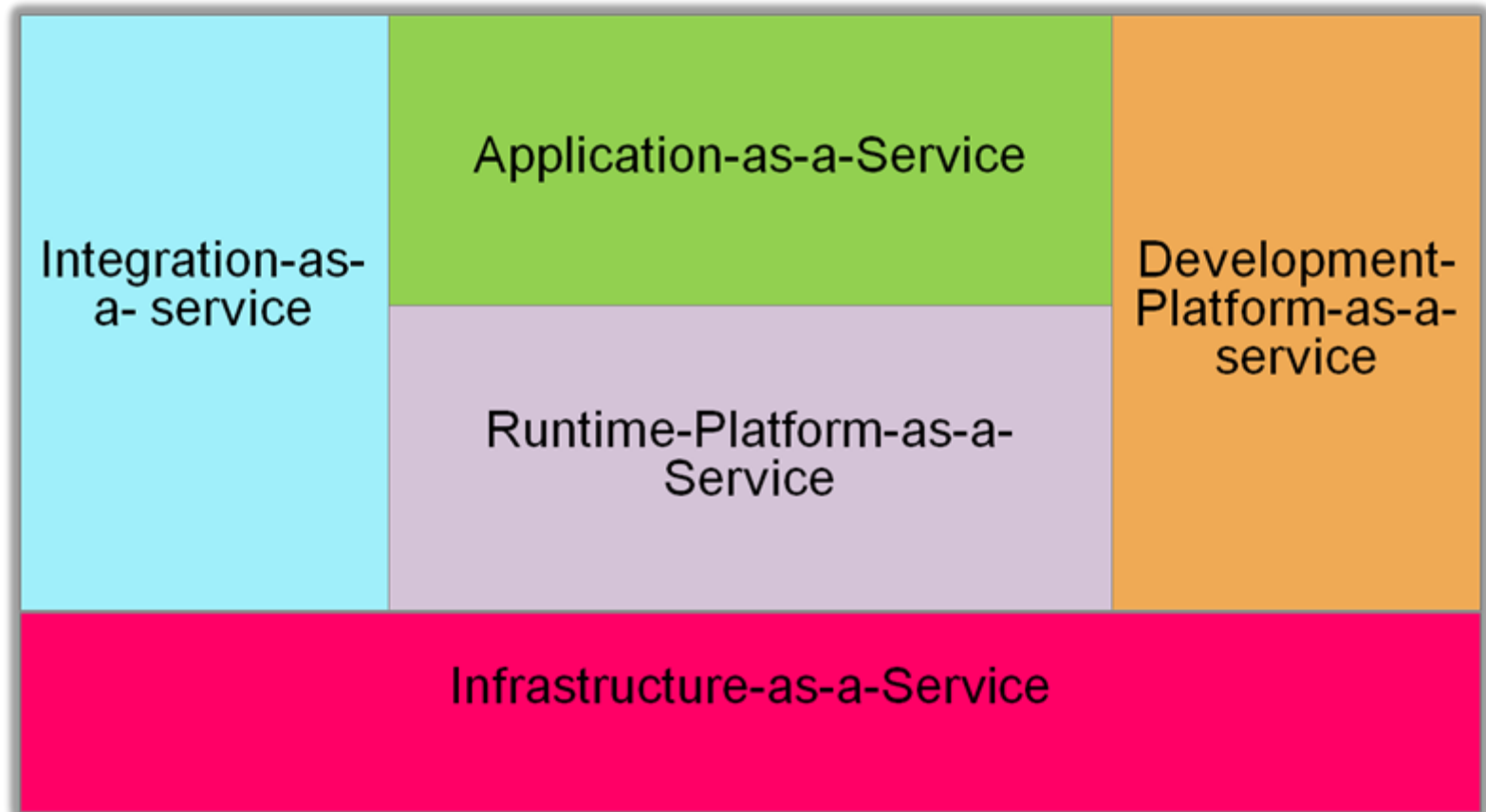
Eksempel – NAV Pensjon

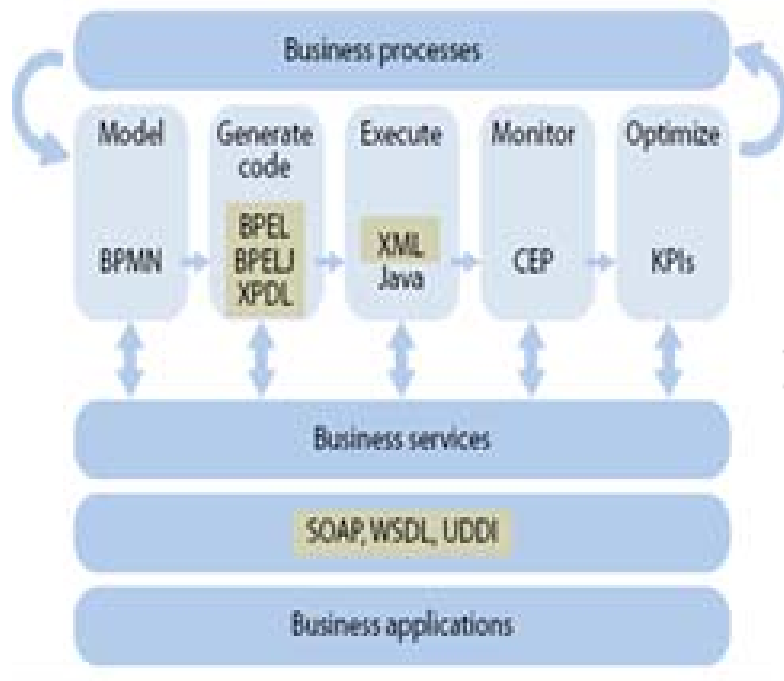CPU fysisk = 2%
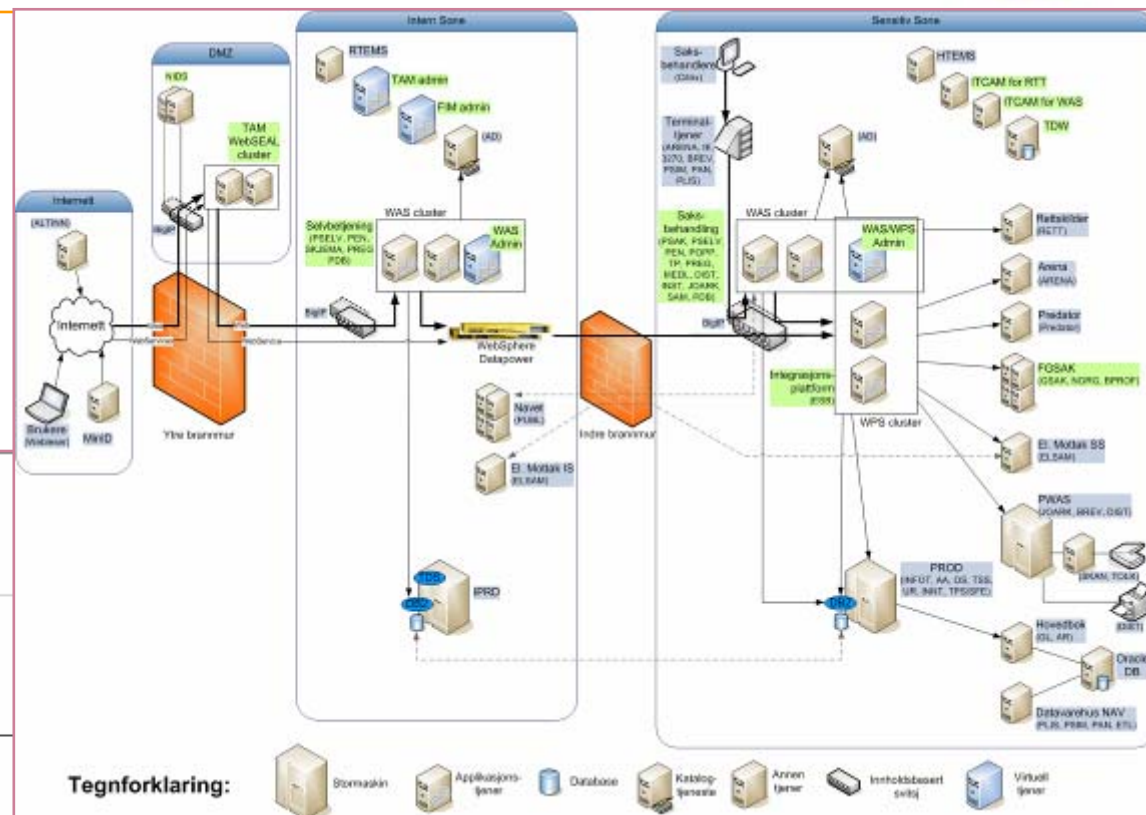
CPU virtuell = 50-70%

Cloud Computing: Implications

- What's the business case?

- Data – privacy & trust

- Data Integration

- Migration & Migration to what?
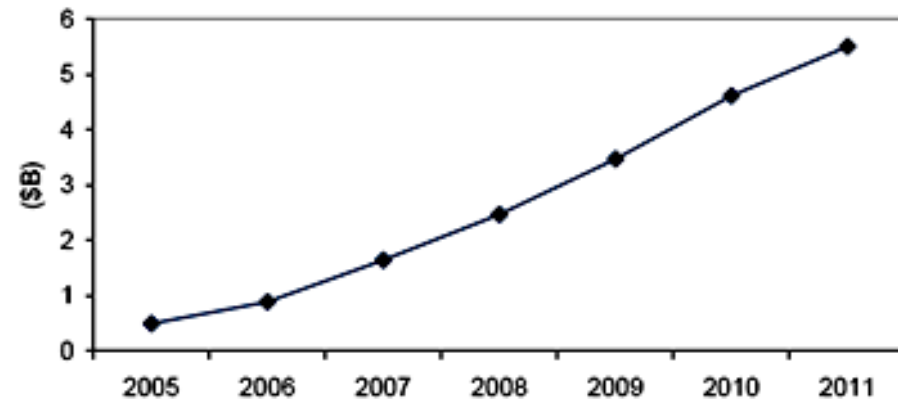
2. SI – Regular & Lite (SOA & Mashups)

## Links between BPM & SOA

BPM

SOA

Source: Forrester Research, Inc., Business Process Management Suites and SOA, March 10, 2006

Worldwide Business Process Management Suite Revenue, 2005–2011

Source: IDC, Worldwide Business Process Management Suite 2007-2011 Forecast and 2006 Vendor Shares (Doc #207954), Aug 2007

Figure 2 Forecast: Worldwide Business Process Management Market Growth, 2006 To 2011
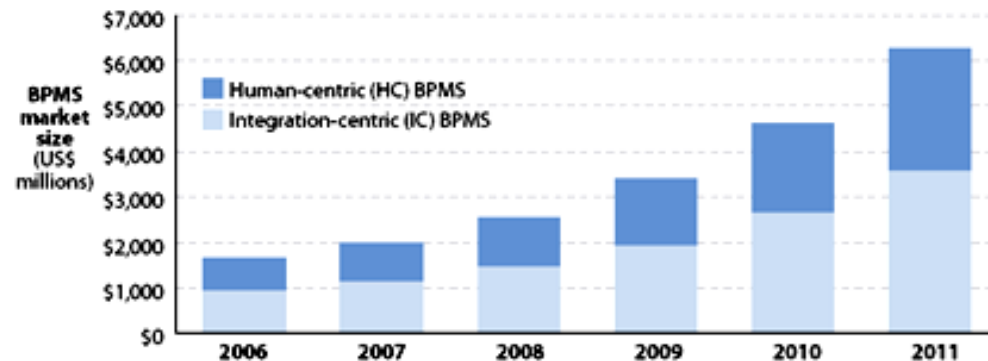
Source: Forrester Research, Inc., BPMS Revenue To Reach $6.3 Billion by 2011, July 30, 2007

SI Lite = REST + Mashups + Widgets

- **<u>REST</u>** is a lighter "protocol" for inter-operability & data extraction
  - Easier to use, 6 to 10 times faster
  - Supported by Yahoo, eBay, Amazon, del.ici.ous, Facebook, Salesforce, J2EE 5.0, Oracle and many open source software

- **<u>Mashups</u>** are a way of combining data from multiple sources
  - Originated as a way of aggregating RSS feeds
  - Today: 2500+ Mashups, MDE environments (Yahoo Pipes, Microsoft Popfly), Enterprise Mashups (JackBe, IBM, Duet)

- **<u>Widgets</u>** and **<u>Gadgets</u>** are light-weight desktop UIs that continually update some data
  - Yahoo, Google, Microsoft, Apple and others
  - 1000s of widgets exist

Enterprise Mashups are coming ...
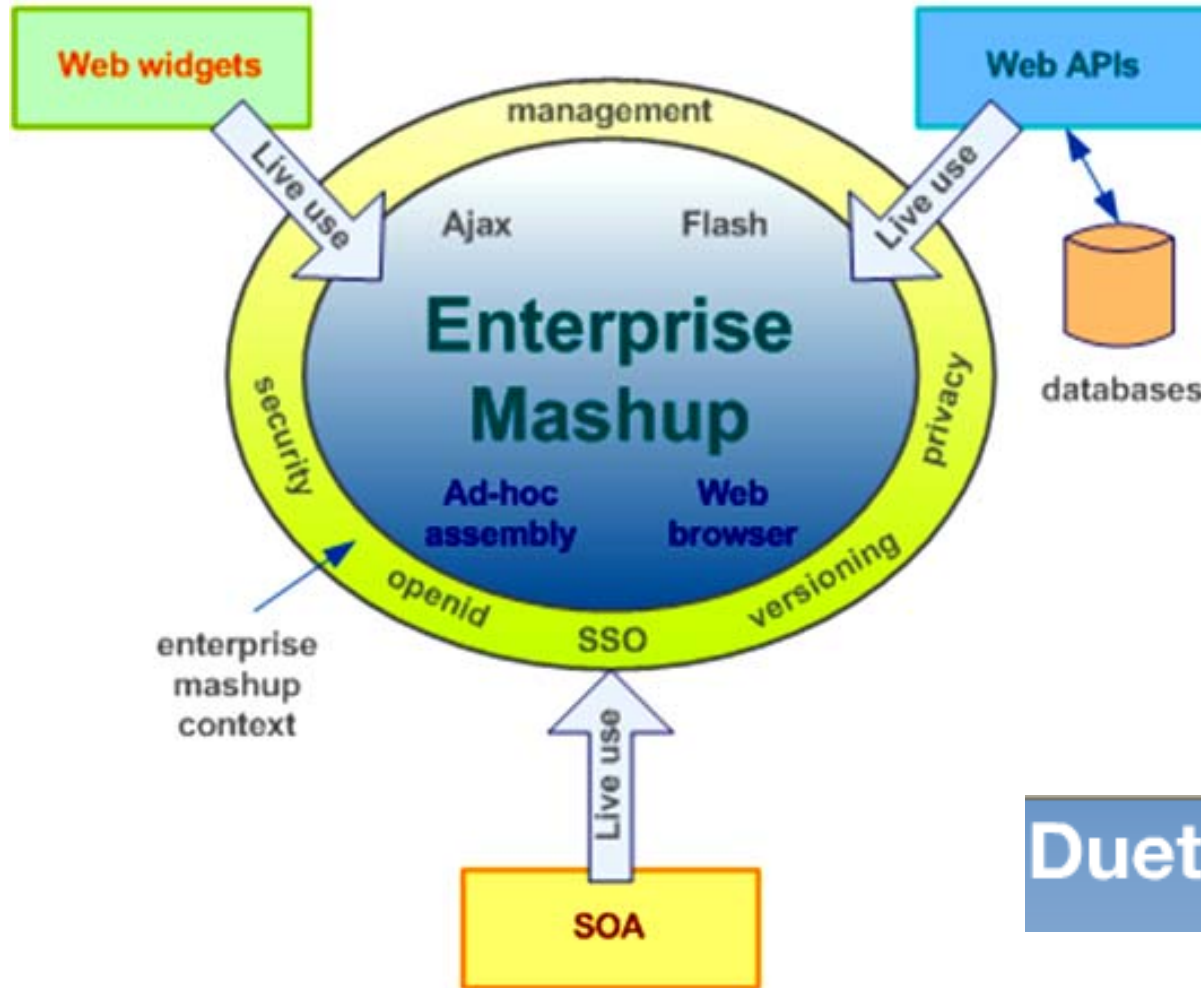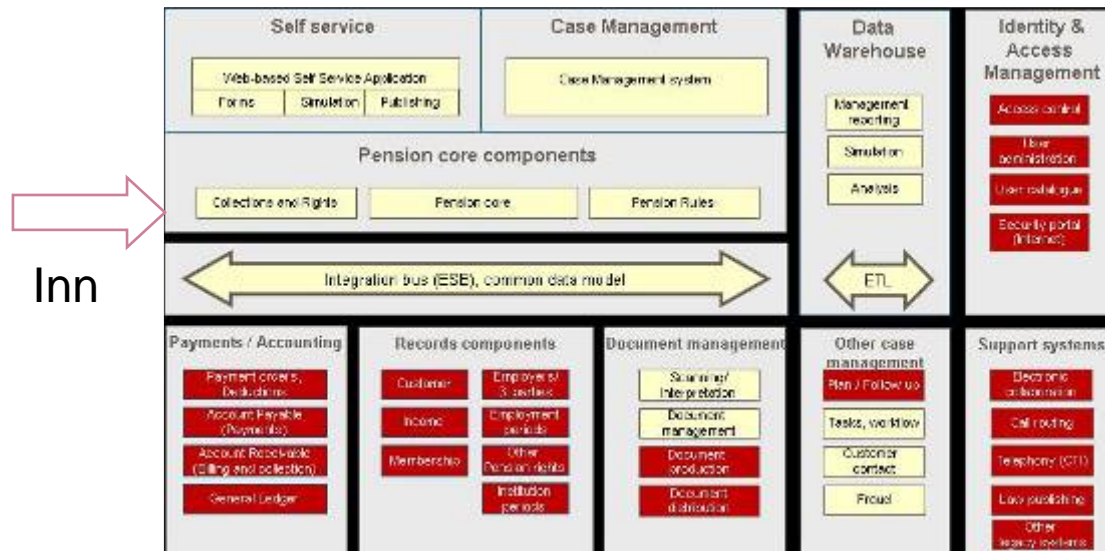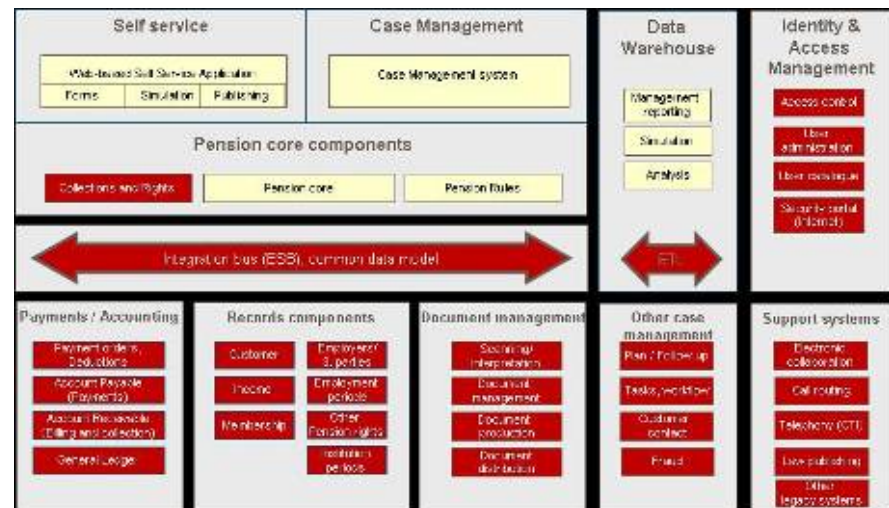
SOA = komponenter + gjenbruk

… og 8 av 18 nye komponenter (~40%) er gjenbrukbare for framtidige prosjekter

Inn

Pensjonsprosjektet har gjenbrukt 23 av 41 komponenter (~50%) …

Ut

Mashups & Widgets: Implications

- Application long tail?

- End-user integration means shift from apps to data services for IT shops

- How do users/CIOs control and test thousands of end-user mashups?

The likely co-existence of two integration ecosystems

Heavy-weight integration	Light-weight integration
Process-composition	Data-integration and consumption
Enterprise-grade w/ guaranteed security & reliability	Consumer-grade w/o guaranteed security & reliability
Slow, computationally expensive	Fast, requiring minimal computational resources
Require specialized skills, tools, & longer development time	Require little skills or tools, & short development time
Depend on a layers of standards & thus less interoperable	Depend on a small set of standards and thus more interoperable
Most appropriate for mission-critical, strategic applications	Most appropriate for tactical, quick-hit, prototyping applications

Eight Major Technology Trends 2008

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4. Continuous access to people and information

- Smart Phones
- Thin computing
- Wireless connectivity (GPRS, 3G, Wi-Fi, WiMax)
- New interface (touch, gesture)
- Voice recognition
- Syndication & web feeds
- User tracking & profiling
- Widgets/gadgets
- OLPC

- Business responsiveness
- Workforce productivity
- Marketing and sales effectiveness
- Market reach

Continuous Access: Implications

- Mobile devices become first-class objects

- Enterprise desktop/laptop may become outmoded

- Location-based services

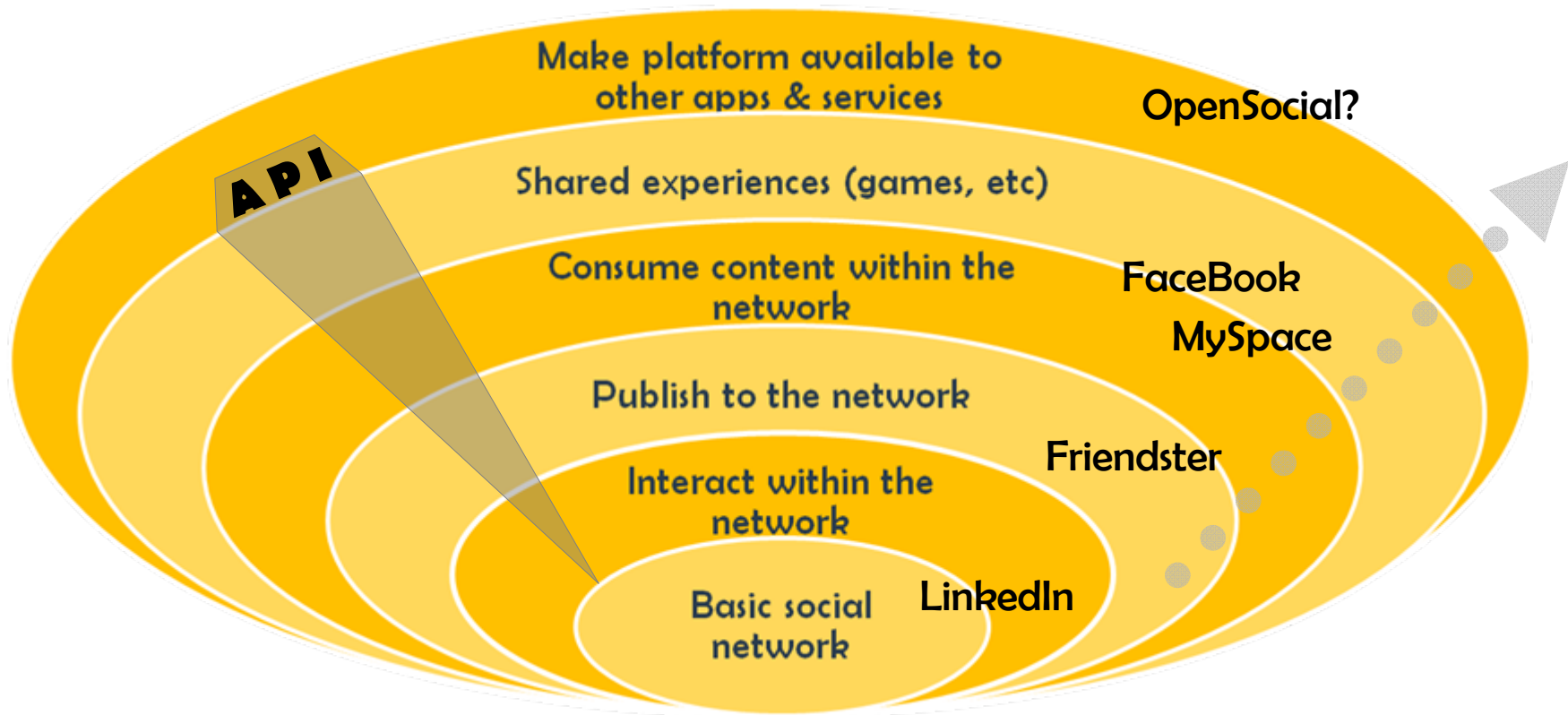# 5. Social Computing – Amplify the power of people & communities

- Unified communications
- Explosion of social networks
- SNS as platforms
- Interoperable social platforms
- Virtual identity management
- Device independent social software
- Telepresence
- Integrated cameras in devices

- Global distribution of work
- Worker productivity
- Work-life balance
- Green & sustainability
- Innovation

The case of social network services...

Make platform available to other apps & services — OpenSocial?

Shared experiences (games, etc)

Consume content within the network — FaceBook, MySpace

Publish to the network

Interact within the network — Friendster

Basic social network — LinkedIn

API

- SNS is rapidly evolving into "portals" of information, people, & applications

Social Computing: Implications

- Social computing is not just a technology problem

- New enterprise software (e.g., IBM's Lotus Connections) emerging in this area

- Facebook & MySpace are becoming "platforms" – do we know how to build enterprise apps on them?

- Will social networks define the new "portals"?

6. Explosion of user generated content

• Explosion of digital cameras, camera phones, & camcorders
• Prosumer multimedia editing SW
• Home broadband & wireless networks
• UGC aggregator market
• New distribution/consumption models
• New monetization models

• Individual prestige, reputation, and influence
• Community contribution
• Freedom of expression
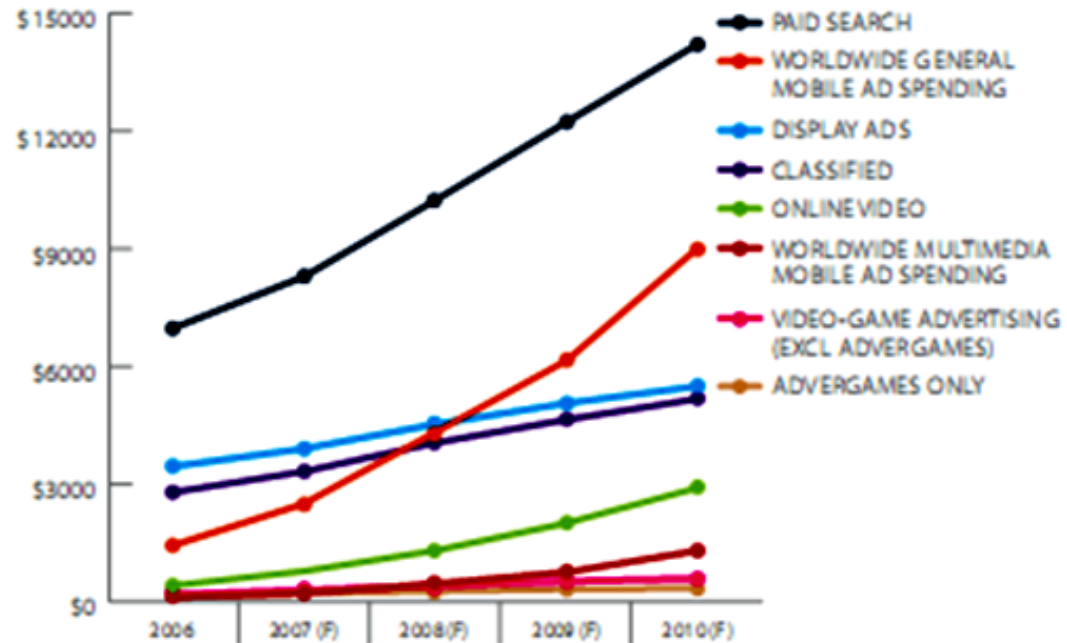•Consumer engagement
• Monetization potentials

What it means...

- Power shift from content distribution to content aggregation

- Shorter head & longer tail – for entertainment, education

- Rapid growth in digital advertising

- New approaches to CRM

GROWTH IN DIGITAL ADVERTISING
US$ Million

Legend:
- PAID SEARCH
- WORLDWIDE GENERAL MOBILE AD SPENDING
- DISPLAY ADS
- CLASSIFIED
- ONLINE VIDEO
- WORLDWIDE MULTIMEDIA MOBILE AD SPENDING
- VIDEO-GAME ADVERTISING (EXCL ADVERGAMES)
- ADVERGAMES ONLY

Source: eMarketer in Future Exploration Network's "Future of Media Report," July 2007

24

8. Green Computing

increasing energy cost
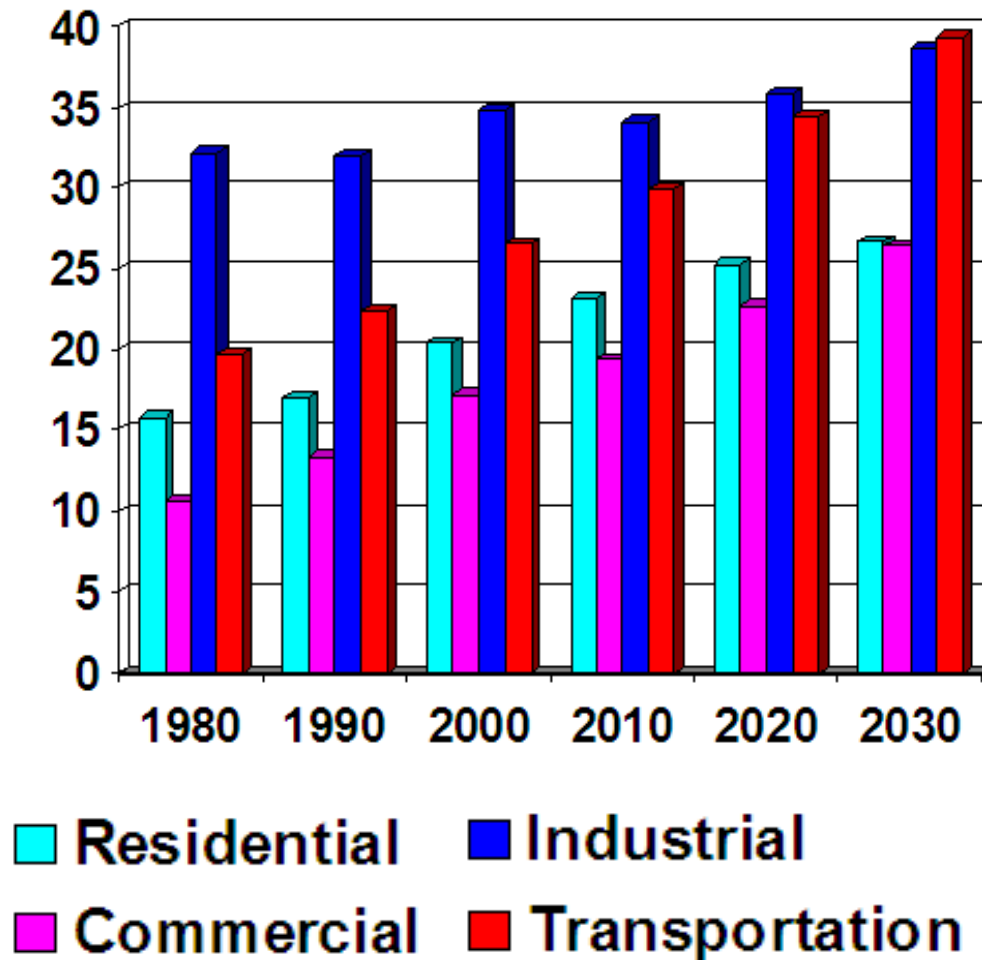
regulatory compliance

consumer pressure

company valuation

Carbon vs. Silicon: replacing energy-intensive activities with information-intensive activities

IT's role ...

green commuting

green logistics & supply chain

green manufacturing

green offices

green IT & data centers

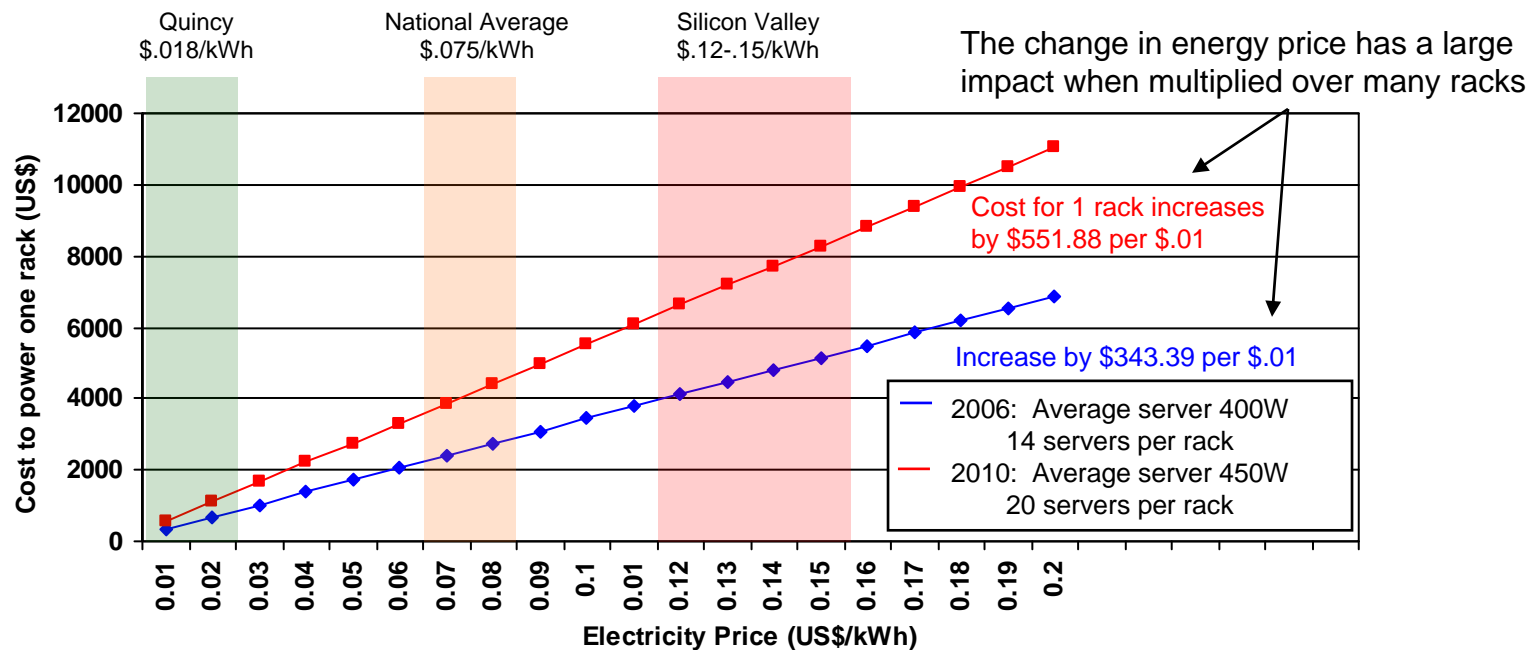green homes
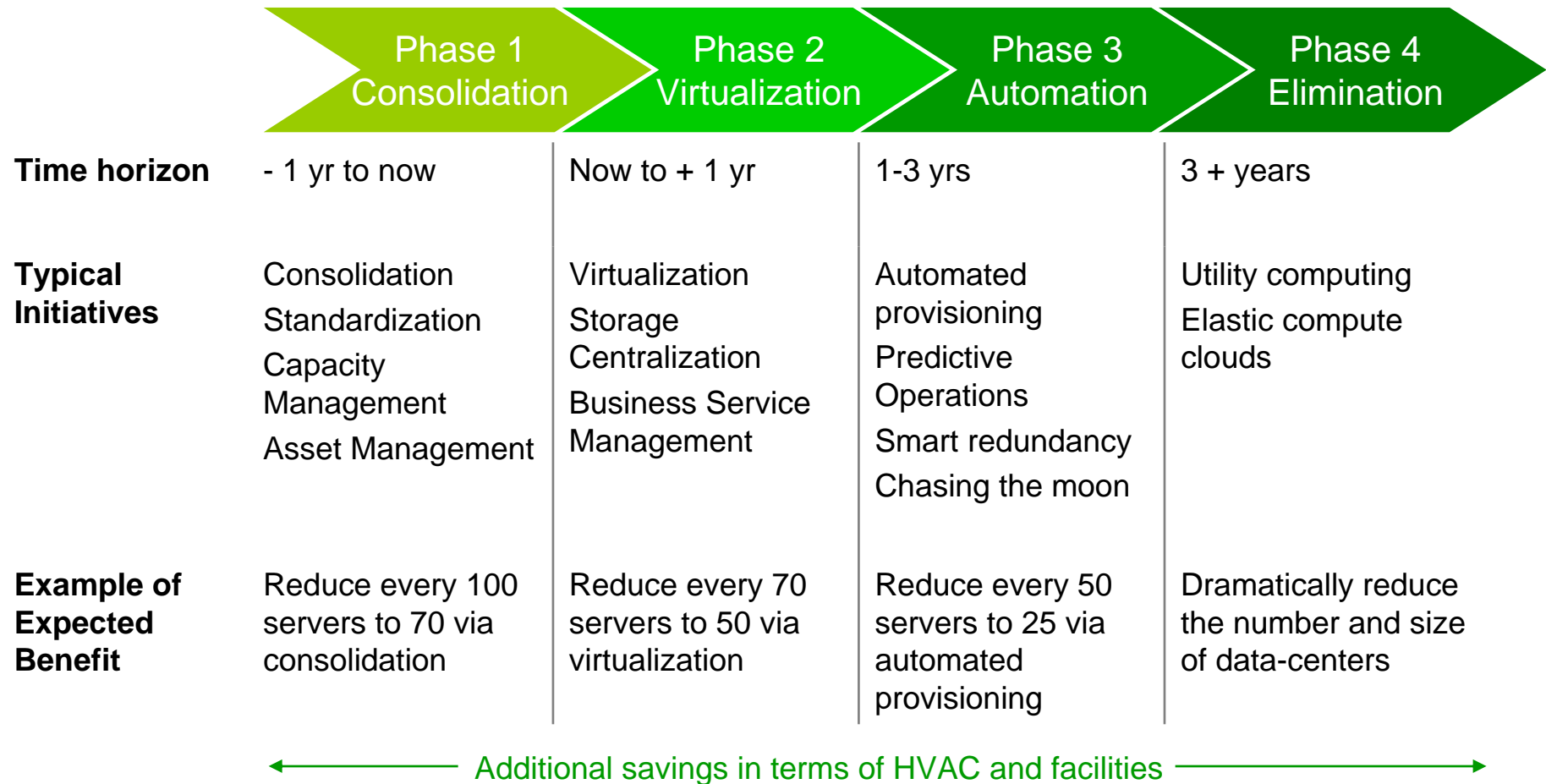
green education

The case for green data centers …

"Under current efficiency trends, energy consumption by servers and data centers could nearly double in the U.S. by 2011 to more than 100 billion kWh"

–U.S. EPA Report to Congress
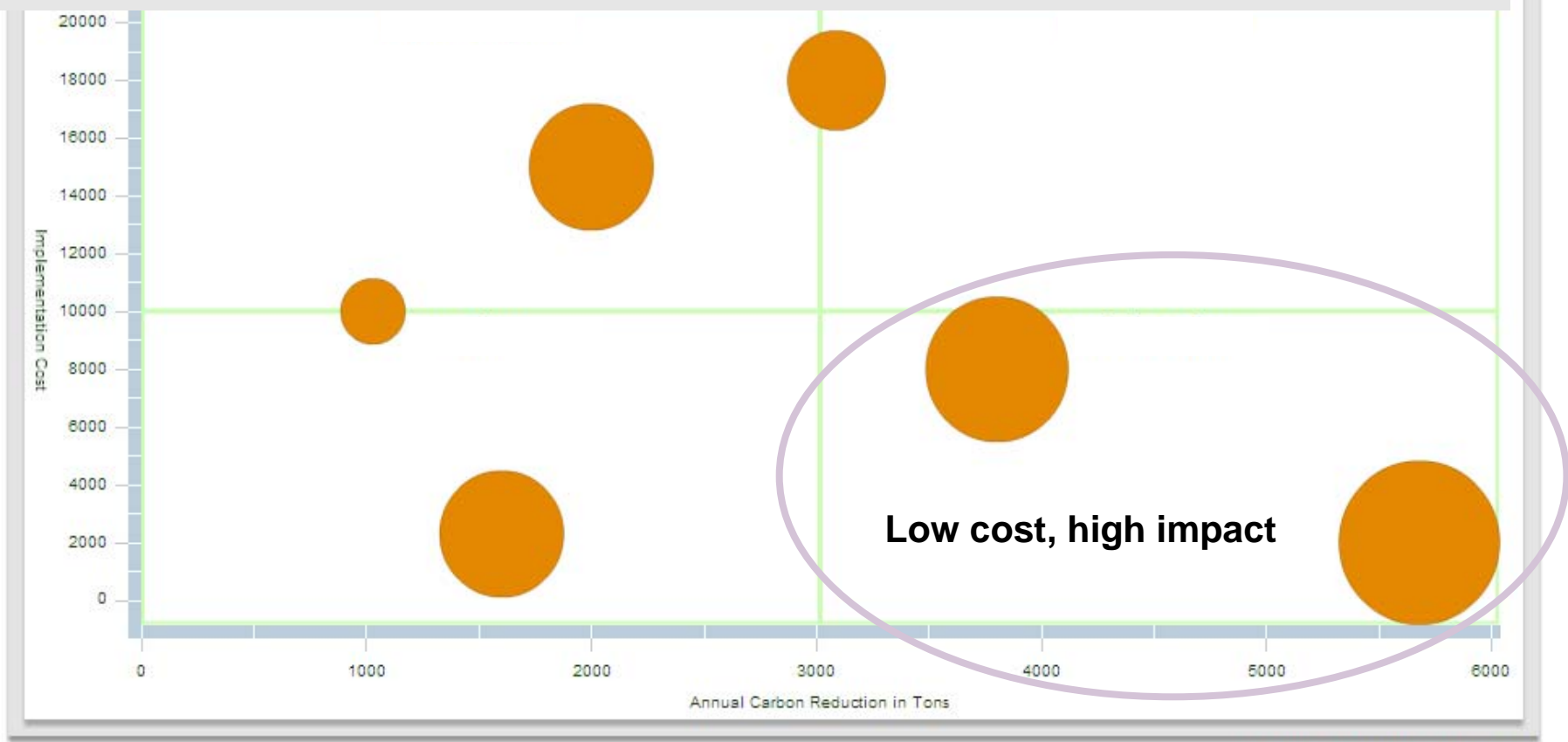
Green data centers – roadmap

	Phase 1 Consolidation	Phase 2 Virtualization	Phase 3 Automation	Phase 4 Elimination
Time horizon	- 1 yr to now	Now to + 1 yr	1-3 yrs	3 + years
Typical Initiatives	Consolidation Standardization Capacity Management Asset Management	Virtualization Storage Centralization Business Service Management	Automated provisioning Predictive Operations Smart redundancy Chasing the moon	Utility computing Elastic compute clouds
Example of Expected Benefit	Reduce every 100 servers to 70 via consolidation	Reduce every 70 servers to 50 via virtualization	Reduce every 50 servers to 25 via automated provisioning	Dramatically reduce the number and size of data-centers

← Additional savings in terms of HVAC and facilities →

Accenture's Green Data Center Calculator

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Conclusion

- Dramatically-changed role of IT & CIO
  - IT: From standardization & control to empowerment
  - CIO: Data-Fort Commander? Chief Intelligence Officer?

- Disruptive "Cloud"

- Data. Period.

Additional Slides
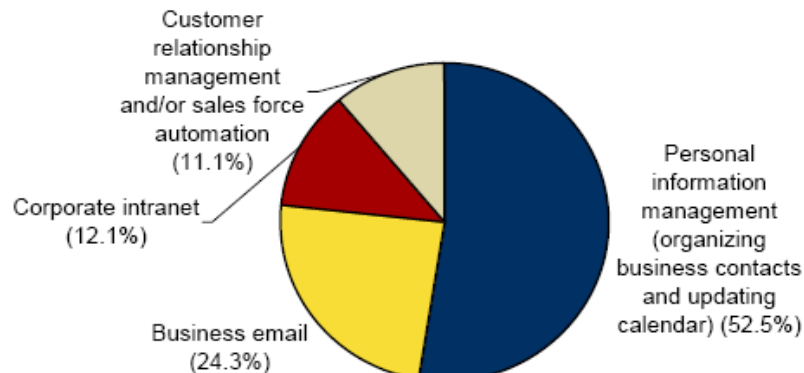## (for augmenting specific trends)

The case of iPhone ...

- ~0.09% of all Web traffic just 5+ months after release, more than that of all Windows Mobile devices

- Despite being a consumer device...

Business Applications Used with iPhone

Q.   Which business applications do you use, or will you use, with your iPhone?

Customer relationship management and/or sales force automation (11.1%)

Corporate intranet (12.1%)

Personal information management (organizing business contacts and updating calendar) (52.5%)
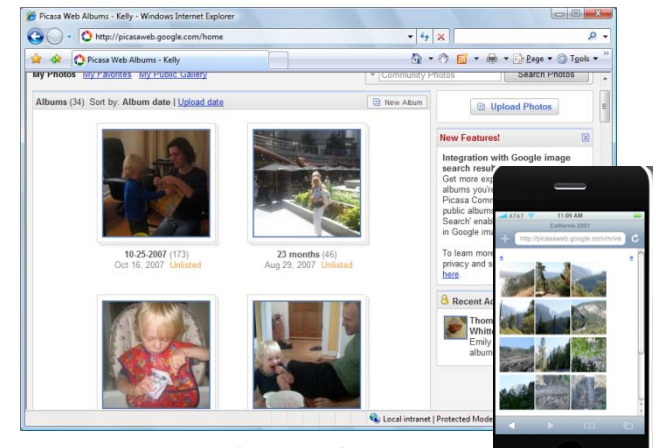
Business email (24.3%)

N Value = 351; N Values represent individuals that either currently use (as of Sept 2007) or intend to purchase an iPhone in the 12 months following the polling of respondents.

Source: IDC, The iPhone Appeals to Business Users, Implies Issues for Enterprise IT Departments (Doc # 209030), Nov 2007
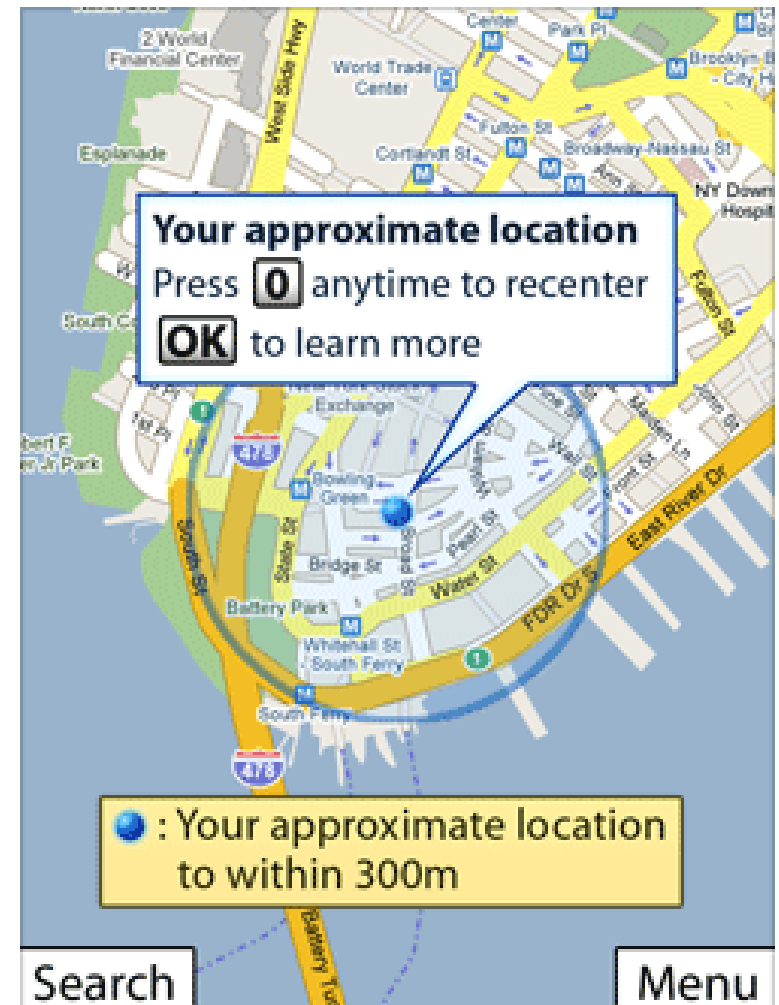

Facebook on web or iPhone

Picasa on web or iPhone

The killer app for location-based services

- So far, the biggest barrier for adopting LPS
  - only 15% of handsets today have built-in GPS

- Here comes Google My Location
  - "Where am I" without requiring GPS receiver
  - 500-1000m resolution
  - Available now on iPhones, Blackbarry and Windows Mobile devices

- Location-based search
  - "Show me all Italian restaurants nearby..."
  - "Where should Walgreens open its next drug store?"

Your approximate location
Press 0 anytime to recenter
OK to learn more

● : Your approximate location to within 300m

Search   Menu

Evolution of social computing

Phase 1

Coordination centric

Focus on coordinating structured tasks within a well-defined process & group

Emphasize on automation & group efficiency

Example: workflow software

Phase 2

Communication centric

Focus on characteristics of communications channels, eg, fidelity, synchronicity

Proliferation of point tools supporting different communication modalities, w/ latest trends on unifying them

Examples: IM, video, audio, web conferencing

Phase 3

Social-network centric

Focus on association & interaction among broad, open, & changing groups

Support continuous, granular, & rich awareness of group member activities

Focus on social rather technical affordance

Examples: Facebook, MySpace, LinkedIn