

# Gartner Webinar

## Technology Trends You Can't Afford to Ignore

**1 July, 2009**

**Nikos Drakos, Research Director**

**Raymond Paquet, Managing Vice President**

**Notes accompany this presentation. Please select Notes Page view.**

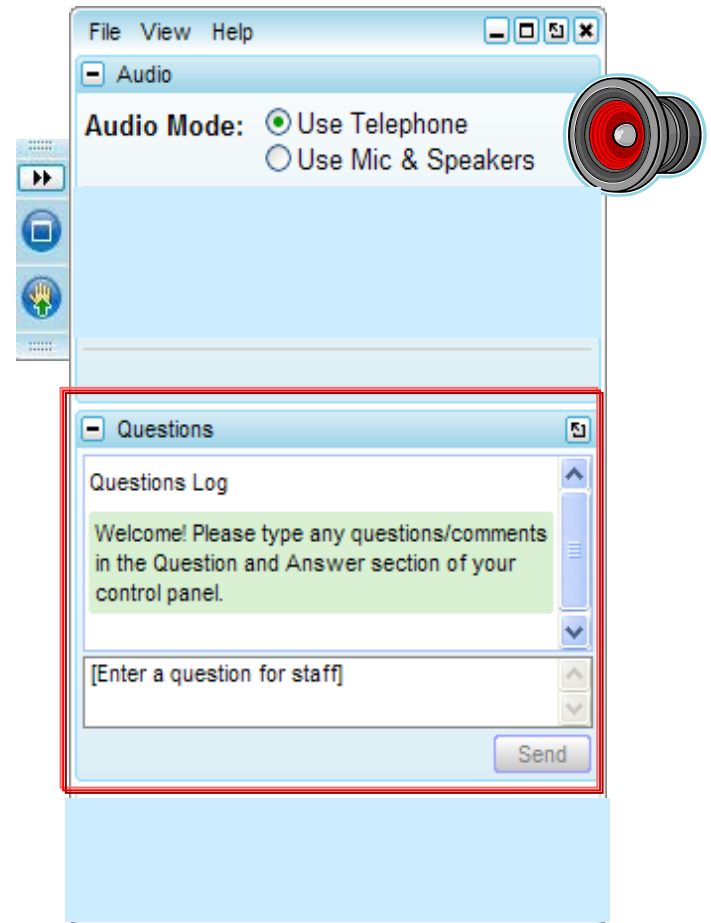
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# Gartner Webinar

## Technology Trends You Can't Afford to Ignore

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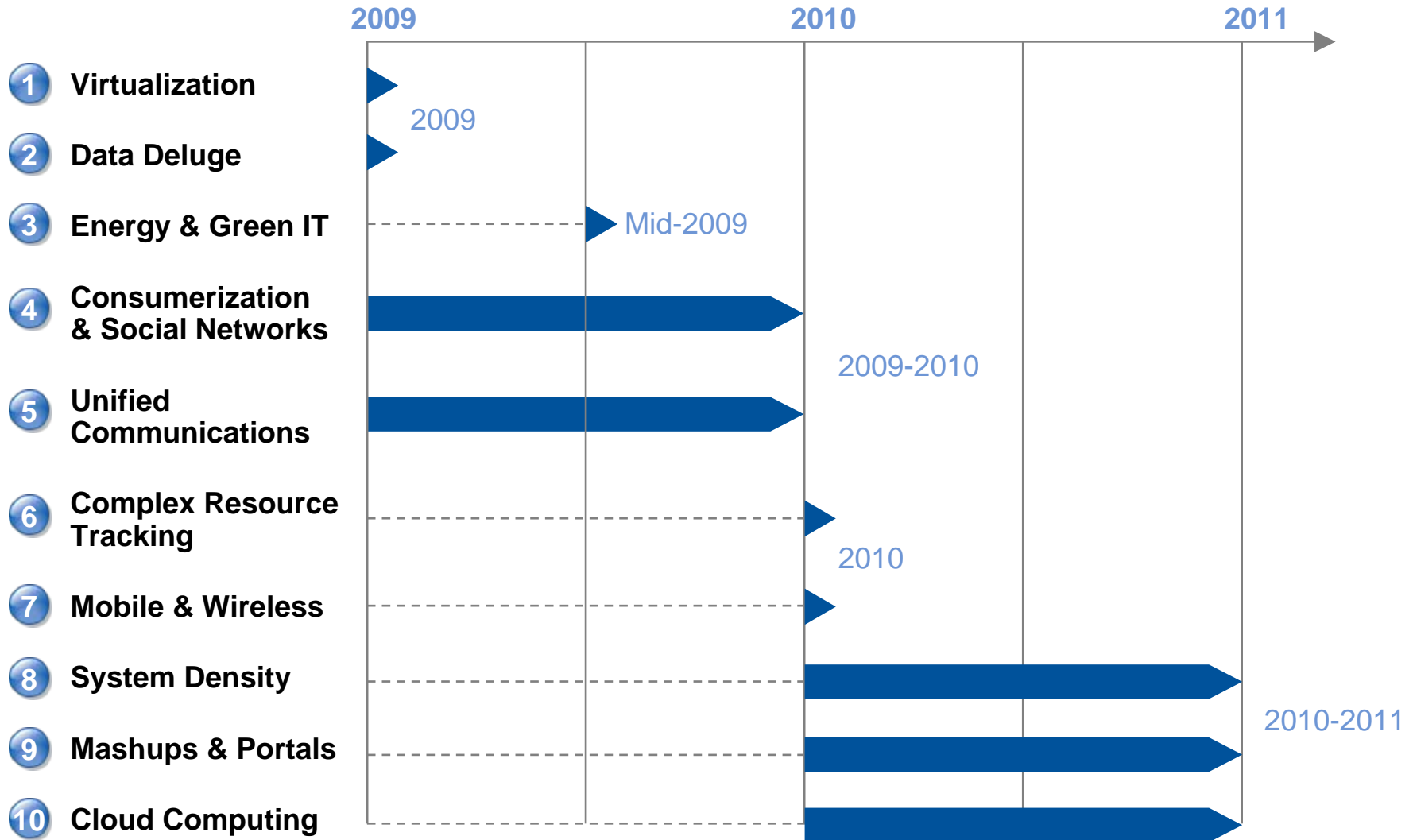
**Raymond Paquet, Managing Vice President**

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# 10 Trends to Watch — Carefully





## Did You Know?

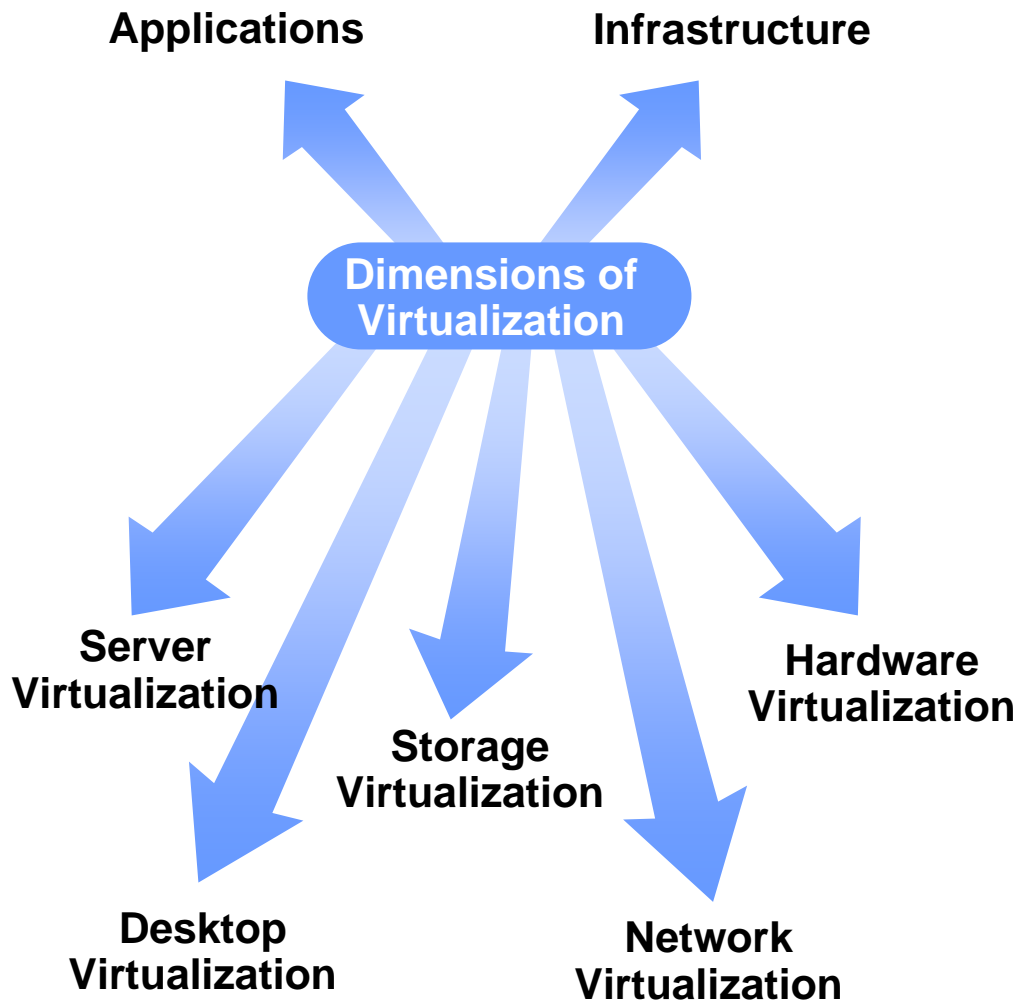
Percent Power Used: Typical x86 Server

**65%**

**Doing Nothing**

# Virtualization

1



## How does it affect you?

- IT becomes one logical system.
- Changing how IT is used.
- Additional "power" on demand.
- Mgmt. Players: VMware, Microsoft Hyper-V, Citrix.
- Plays well with Green IT
- SMBs – ease of migration

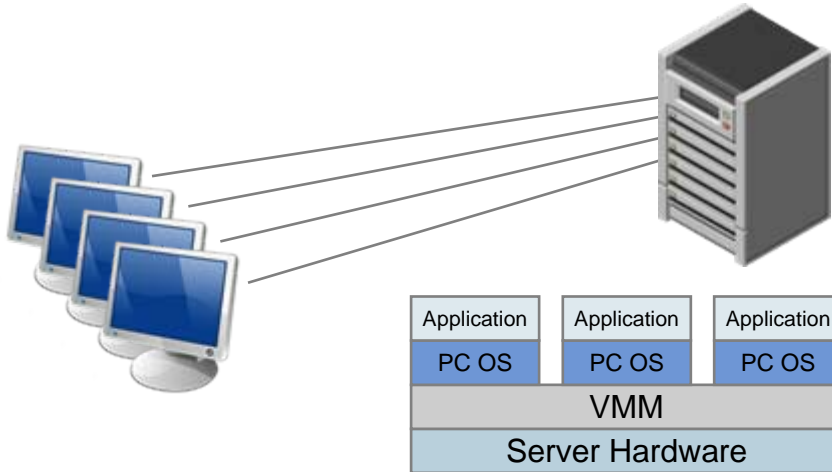
## Next Monday Morning

Review consolidation plans; can we do more? Do you have all the virtualization bases covered? Do we have a plan?

## Critical Timeframe

**Now**

# Virtualization — The New Client



## Hosted Virtual Desktops

- Architectural equivalent of the blade PC
- Full "thick-client" image, thin-client delivery model

## Portable Personalities

- Carry the bubble, not the hardware
- Portable media, stored on the network
- Bubbles of various sizes, some with OS, some without

## How does it affect you?

- Long term flexible workforce.
- Reduced Operating complexity
- Standards alignment, audit and control

## Next Monday Morning

Evaluate multiple options – create test environments.

Get end users involved for real world analysis

## Critical Timeframe

2010



## Did You Know?

Estimated Enterprise Data Growth in 5 Years?

**650%**

80% Will be Unstructured!



## Did You Know?

It's estimated that 40 exabytes (that's  $4.0 \times 10^{19}$ ) of unique new information will be generated worldwide this year.

# Data Deluge

2

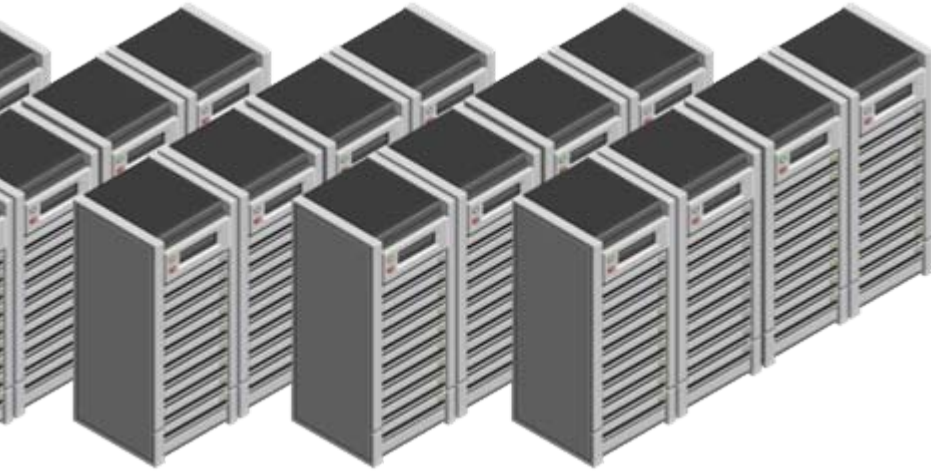


That's estimated to be more than  
in the previous **5,000** years.

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# Data Deluge

2



## Key Technologies

- Thin Provisioning
- Data De-Duplication
- Automated Tiering
- HSM Principles
- Virtual Tape

## How does it affect you?

- Complexity continues – regardless of budget constraints.
- Demand driven – more access creates more data – this will get worse.
- Compliance, Backup, Audit, Security

## Next Monday Morning

- Virtualize quickly
- Keep only what you need
- Segment and prioritize

## Critical Timeframe

**Now**

# Energy & Green IT

$$\text{DCP} = \frac{\text{Useful Work}}{\text{Total Facility Power}}$$

*How Much Work Can My IT Equipment Do, In My Facility?*

Source: The Green Grid

- Forced Review of IT Efficiency.
- Intersection between facilities and IT.
- Moved the power issue up the food chain.
- Corporate Social Responsibility.

## How does it affect you?

- Cannot be ignored
- Compute to consumption ratios critical
- EU or EPA Metrics Coming
- New KPI's based on efficiency

## Next Monday Morning

- Begin evaluation of PUE and/or DCP
- Begin continuous improvement planning
- Focus on consumption rather than technologies.

## Critical Timeframe

2009-2010

What was the fastest growing social network in 2008?

**1,382%**

twitter

**62% of New Users are between 39 and 51**

# Consumerization and Social Software

**Consumerization** is an **attitude**, not just the use of **technology**. It is a reflection of the aspirations of a generation, the need for participation, the desire to contribute and the sense of being part of a community.

## Impact on New Technology:

- Drives the use.
- Drives demand and adoption

## Examples:

- Wireless
- Smartphones
- Instant & Text messaging
- Social Networking

## How does it affect you?

- If you don't decide, your users will decide for you.

## Next Monday Morning

- Create a usability center.
- Crowd-source ideas.

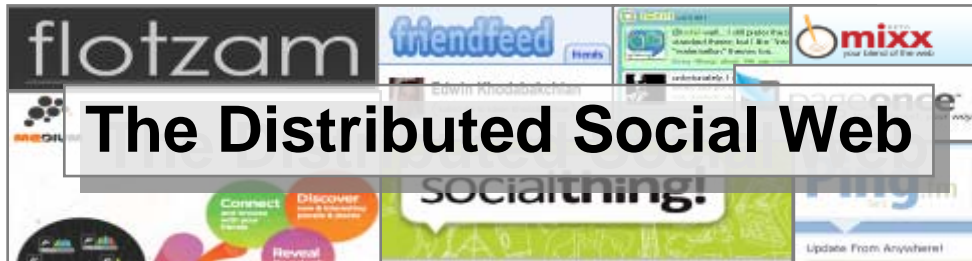
## Critical Timeframe

2009-2010



# Social Software: A Factor Inside and Outside the Enterprise

4



## Social collaboration

- Wikis
- Blogs

## Social media

- Content sharing (tags)
- Content aggregation

## Social validation

- Social rating, ranking, commentary
- Social content structure

## How does it affect you?

- It's affecting you now, and increasing rapidly.

## Next Monday Morning

- Establish rules of engagement.
- Begin monitoring.
- Begin participating
- Bring a social dimension to your internal and external web sites.

## Critical Timeframe

2010



## Did You Know?

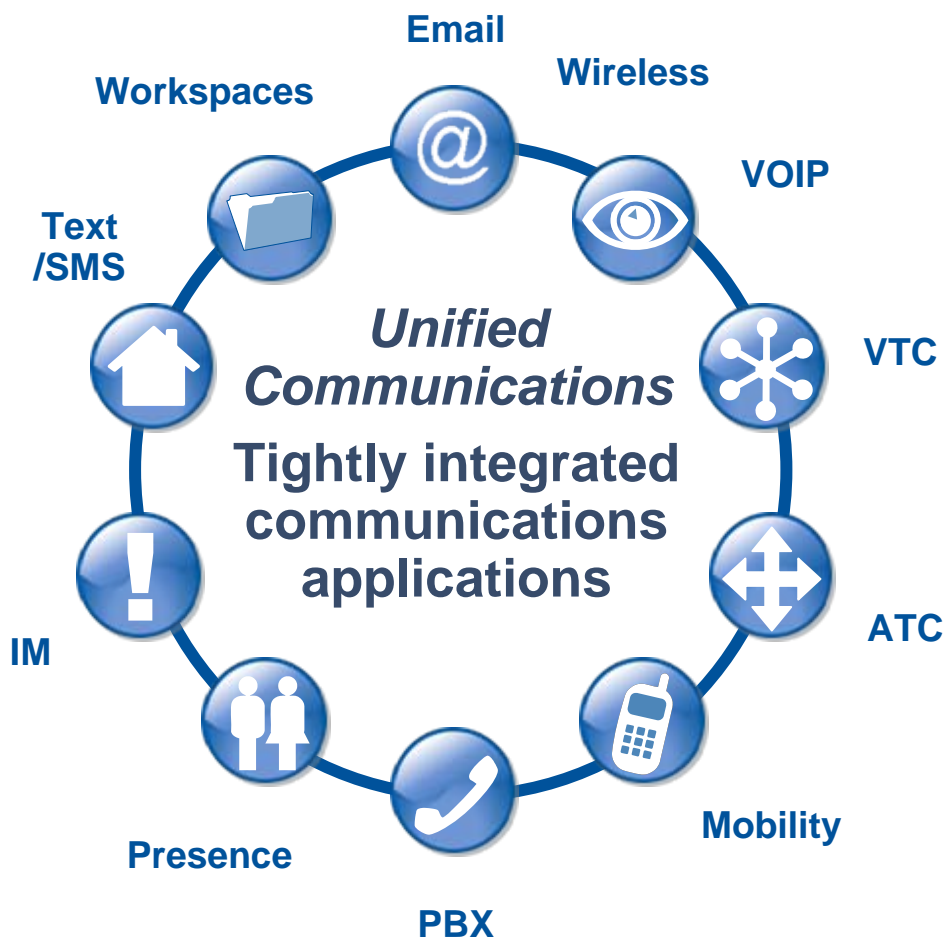
The number of text messages sent in the past 24 hours...





..exceeded the total  
population of the planet.

# Unified Communications



## How does it affect you?

- Combines many overlapping areas today
- Both a technology and organizational issue.
- Strong area for managed services to take hold.

## Next Monday Morning

- Are your apps providers planning for taking advantage of Unified Communications? What's their strategy?
- What other UC business scenarios make sense in your business?

## Critical Timeframe

2011-2013

# Mobile & Wireless



Thousands of new applications coming online.

Text Messaging is not convenient – it's a way of life.

## How does it affect you?

- Mobile applications need new servers for delivery.
- Application delivery complexity.
- Immature management tools
- The next target for virtualization

## Next Monday Morning

- What's your strategy for supporting mobile applications?
- Look at mobile apps as a critical enabler of client interaction, and satisfaction.

## Critical Timeframe

2010-2012

# Complex Resource Tracking

- Monitor Energy consumption.
- Visualize power consumption of resources.
- Automate energy usage to optimal levels.
- Dynamically move workloads.

## How does it affect you?

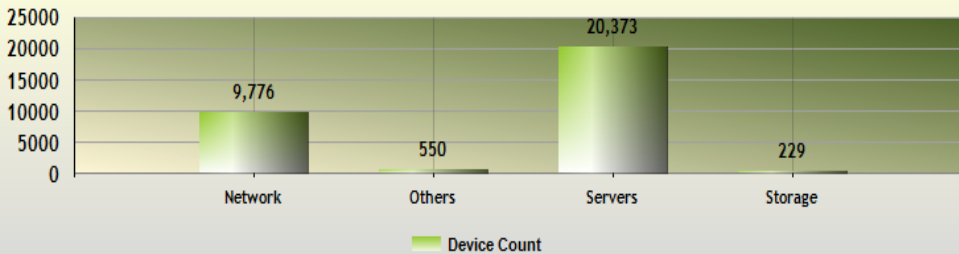
- New KPI's based on power.
- New vendors and skills needed.

## Next Monday Morning

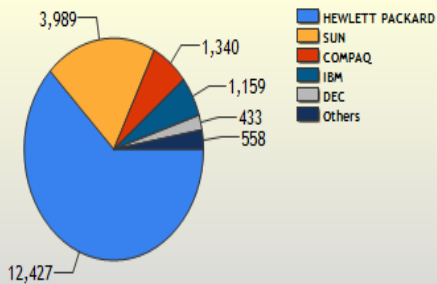
- Get to know your Facilities team.
- Begin market research
- Watch EPA and EMU Initiatives.

## Critical Timeframe 2011-2013

IT Assets



Servers by Manufacturer



Server Power Usage by Manufacturer

Manufacturer	Server Count	Power (kW)	Avg.Power (kW)
HEWLETT PACKARD	12,427	5,253.28	0.42
SUN	3,989	1,343.20	0.34
COMPAQ	1,340	502.58	0.38
IBM	1,159	346.30	0.30
Others	558	176.81	0.32
DEC	433	120.56	0.28



## Did You Know?

"At current pricing the operating expense (energy) to support an x86 server will exceed the cost of that server ...."

**...within 3 years!**



## Did You Know?

Energy Cost per Year Can Exceed:

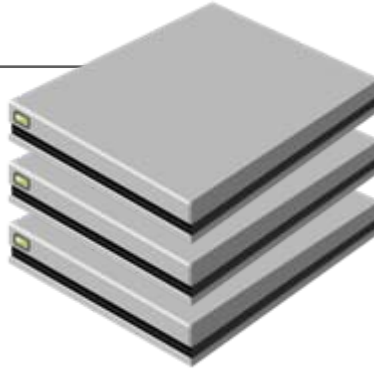
**\$105,000**

**For a Single Rack of Servers**

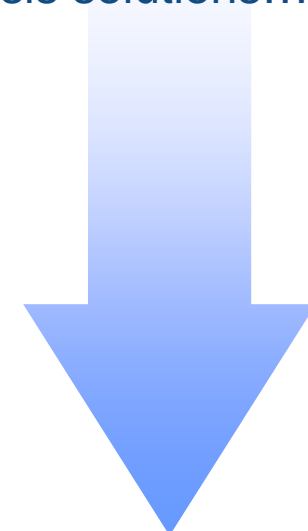
# Blades are Leading Toward Componentized Servers

**Blades = Servers**

**2009**



Today, blades are proprietary server- infrastructure-in-a-chassis solutions...



**Blades = Servers, storage switches, memory, I/O...**

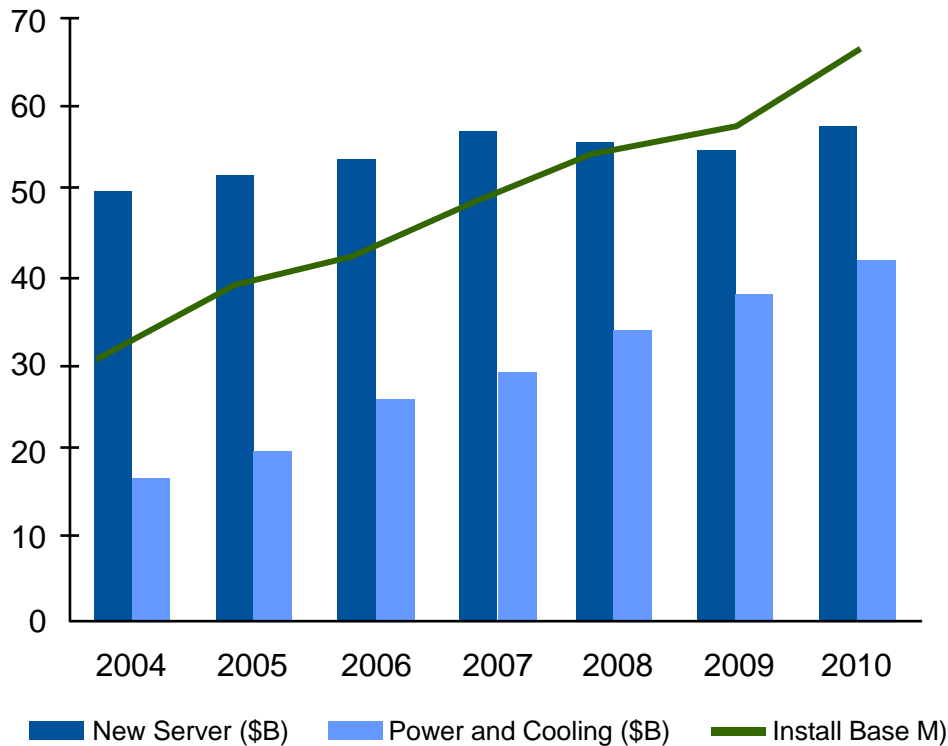
**2013+**



...but they are evolving into componentized, data-center-in-a-chassis solutions (but still mostly proprietary).

# System Density

## Server & Power Growth



### How does it affect you?

- Virtualization is critical to success
- Trend is high density, high use of floor space.
- Utilization levels and compute to energy ratios paramount by 2010.

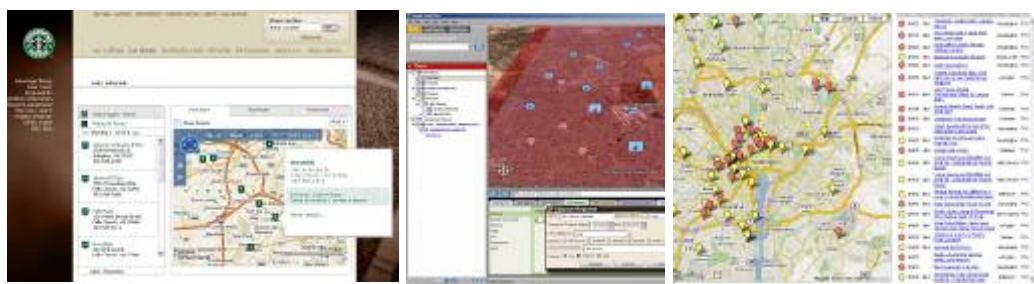
### Next Monday Morning

- Analyze asset use (highs and lows).
- Map server growth to energy and cooling required.
- Engage facilities team

### Critical Timeframe

2011-2012

# Mashups and Enterprise Portals



## Enterprise value

- Private Cloud enabler
- Rapid/Flexible development

## Application types

- Packaged application extension
- Personal portal delivery
- Location awareness

## Integration patterns

- Visualization integration
- Content integration
- Gadget page space co-location

## How does it affect you?

- Customers doing this today.
- Unrecognized business processes.
- Creeping standards, uncontrolled
- Internal and external sources

## Next Monday Morning

- Evaluate use; highlight the best.
- Set clear standards – encourage innovation.
- **Critical Timeframe**  
**2010-2011**

# Cloud Computing

## Cloud Computing

A style of computing where scalable and elastic IT-enabled capabilities are delivered as a service to customers using Internet technologies

### How does it affect you?

- Common Services are available now – reduce Opex.
- Private clouds improve agility
- Focus on Service Levels
- Ignore the Hype - focus on results.

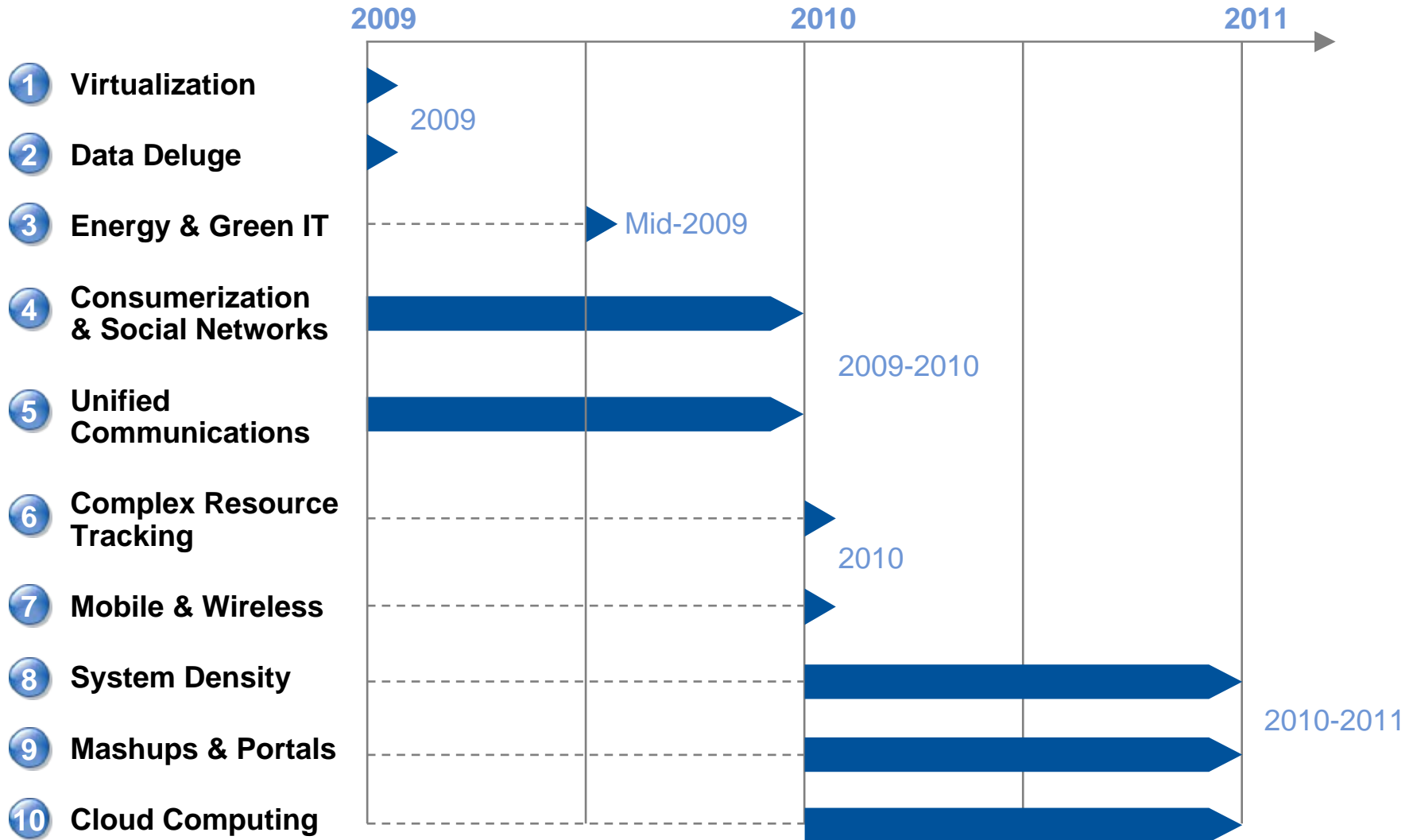
### Next Monday Morning

- Evaluate commodity services you provide and what can move to the cloud.
- Evaluate cloud delivery model for internal use.
- Categorize applications and services based on SLA's and risk before proceeding.

### Critical Timeframe

2010-2012

# 10 Trends to Watch — Carefully



# Action Plan

- **Today**

- Focus on virtualization and green IT for immediate cost and flexibility benefits.
- Look at storage virtualization, de-dup and thin-provisioning.
- Evaluate Web social software to transform customer/employee interactions.

- **The Next 18 Months**

- Exploit mashups and cloud-based services to address immediate user needs.
- Link UC to collaboration and enterprise applications to support growth initiatives.
- Establish a Green strategy to support business transformation efforts.

- **Longer Term**

- Public and Private cloud services together with new servers and specialized systems promise to minimize costs and maximize agility.
- Apply more-sophisticated resource analytics to support ongoing improvement in operational costs and energy efficiency.
- Look for opportunities emerging from cloud computing, social networking and new approaches to infrastructure.

# Looking to reduce your IT costs? Gartner can take the cost out of IT in four ways

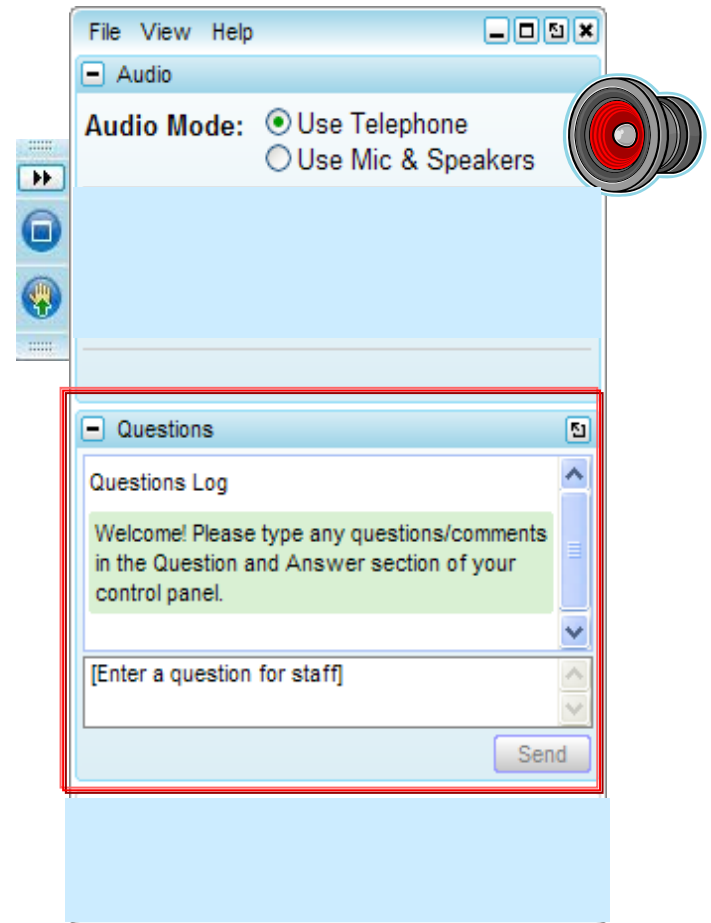
The screenshot shows a Gartner website page with a blue header. The main title is 'IT and The Economy' with a subtitle 'Cost Optimization'. A featured video section shows Kurt Potter, Research Director, discussing the 'Four Levels of Cost Optimization' framework. Below this, there are several sections: 'Cost Optimization Spotlight' with a link to a methodology article; 'Cost Optimization Fundamentals' with links to articles on budgeting and preparing for business growth; 'Key Issues for Cost Optimization, 2009' with a link to a report; and 'Webinars' with a link to a webinar on modernizing IT on a budget. On the right side, there is a 'Join the Dialogue' section with social media links, a 'Stay Connected' section with analyst insights, a 'Stay Up To Date' section with event listings, and a 'Set up Email Alerts' section with various topic options.

- Get the best pricing and terms for your IT purchases
- Identify major cost-saving opportunities
- Implement cost-saving technologies
- Implement cost-saving process improvement

# Thanks for participating!

## Do you have any questions?

- If you haven't done so already, please type your questions into the Questions pane.
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