

Beyond Organisational Boundaries: Answering the Enterprise Computing Challenge

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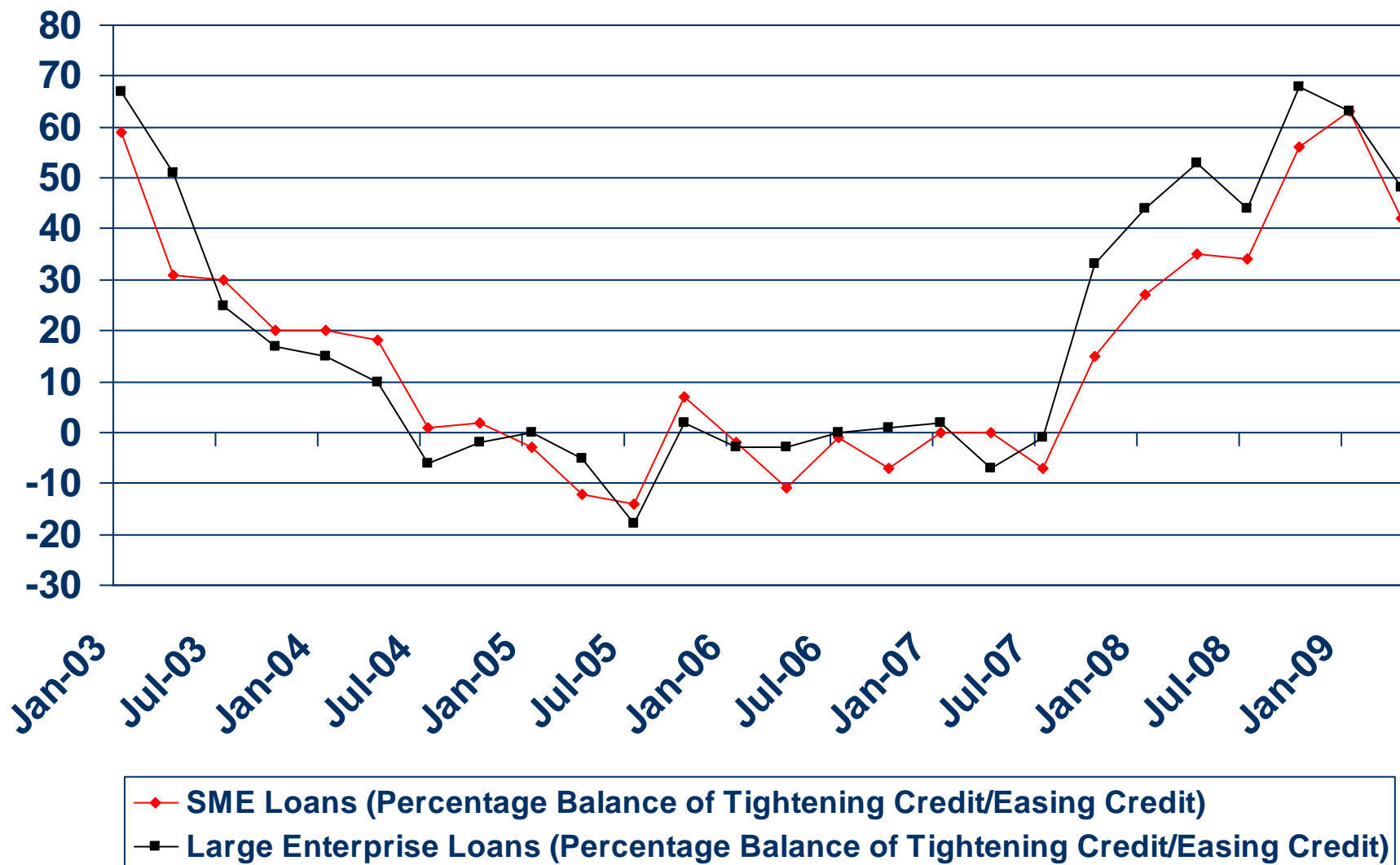
Current Economic Conditions and the CIO

Investing for Efficiency:

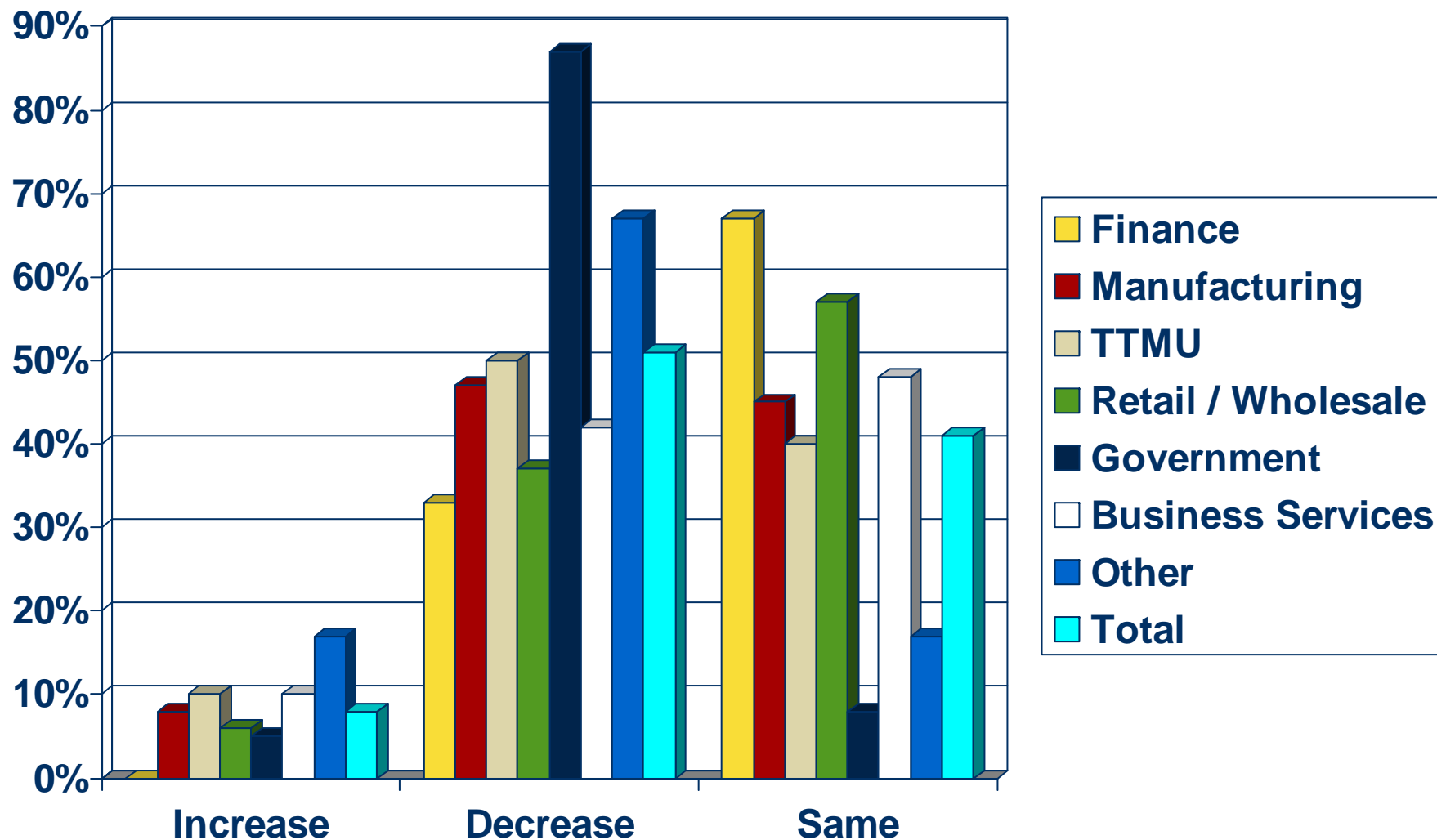
- Datacentre Design and Operations
- Virtualisation and Automation
- Is the Cloud the Answer?

Conclusions

Continued Economic Pressure Forces Automation and Better Cash Management

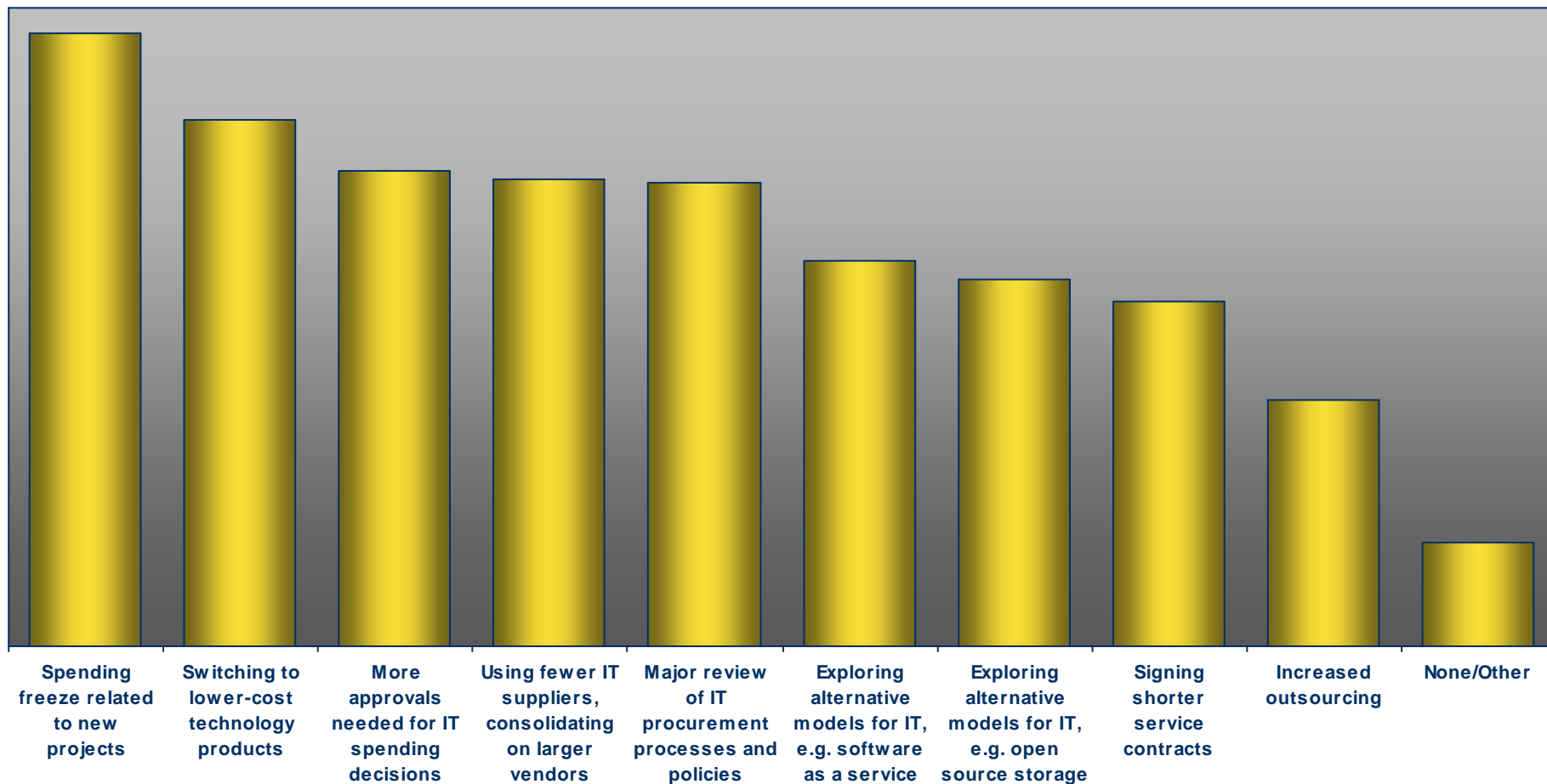


Sales / Revenue or Budget Expectations in Ireland 2009



What are CIO's Doing to Address This?

Q. Which of the following are likely to occur in your organisation as a direct result of current economic conditions?

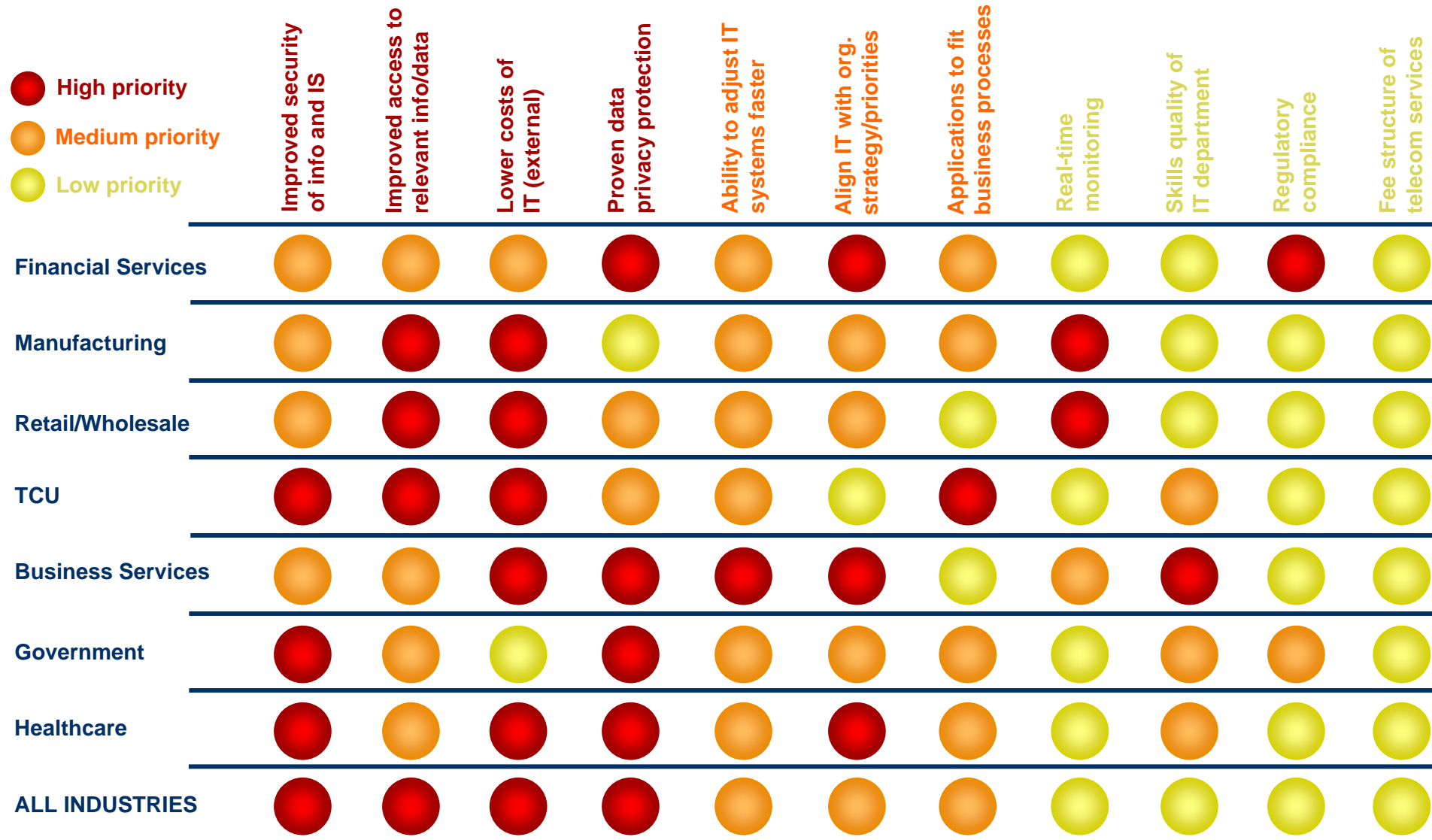


N: 1,805

Multiple responses permitted

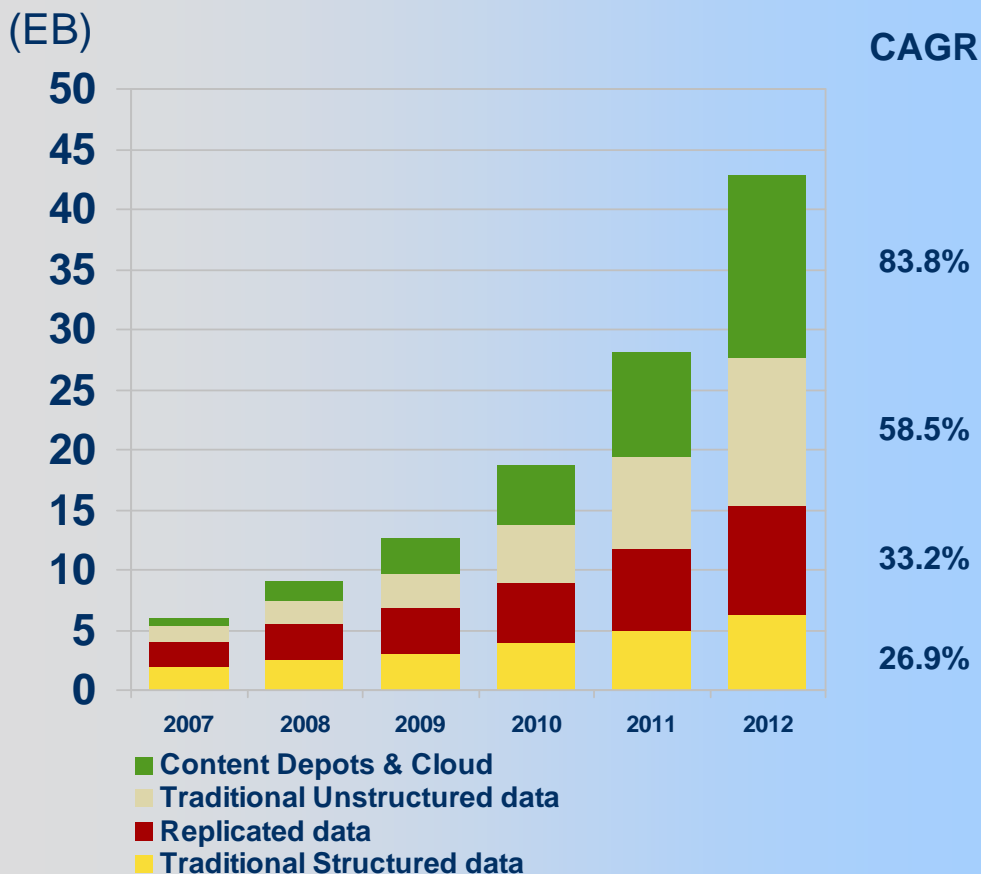
But Solution Investment Remains a Pressing Need

Q. How urgent would you rate each of the following improvements to your IT organization, to better support your business?



The First Critical Challenge – The Growing Value, Volume and Risk Associated With Data

Consumption of Enterprise Disk Capacity by Type



Structured, transaction-oriented data accounts for declining portion of storage needs

Compliance and analysis drive surge in replication

- Disk-based recovery
- Business analytics

Explosion in fixed content data

- Secondary storage is the new primary storage
 - Capacity over performance

Content Depots & cloud change the rules for data

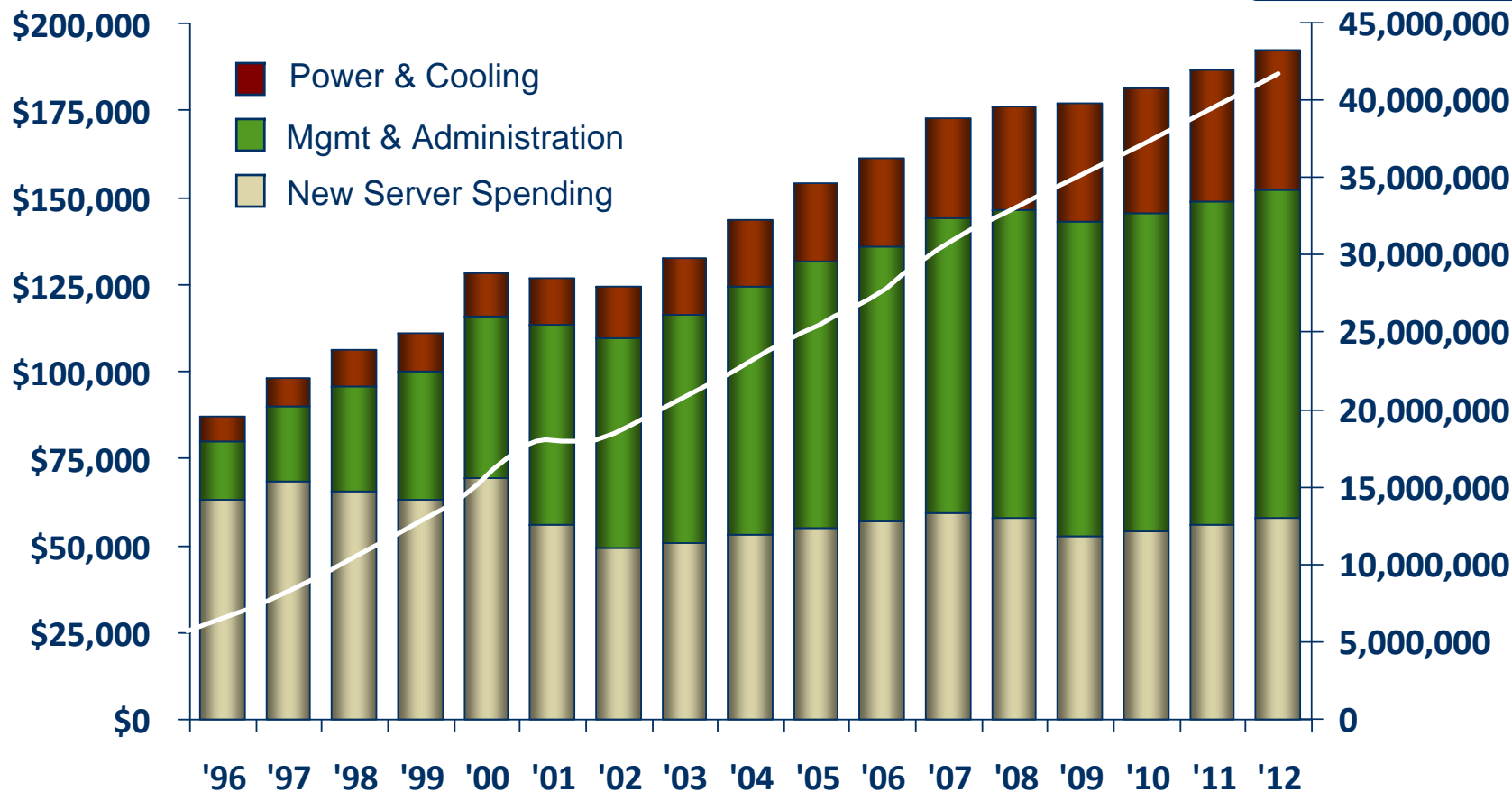
- Petabyte scale storage

The Second Critical Challenge – The Continued Failure to Control Administration Cost

WW Spending on Servers, Power and Cooling, and Management/Administration

Spending (\$M)

Installed Base



Responses – New Physical Infrastructure



Unparalleled densities

- Energy Efficiency a major design point, PUE approaching 1

Time to market is key business proposition

- Really appeals to customers with >50 racks

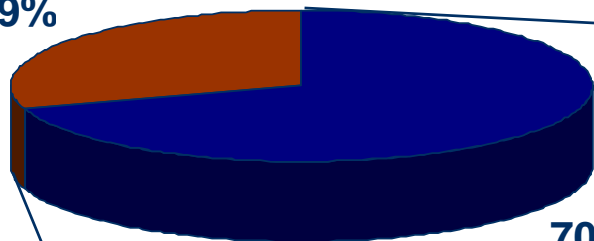
Portability/Mobility an option

Temporary use models such as disaster recovery, military, sporting events

The Role of Containers?

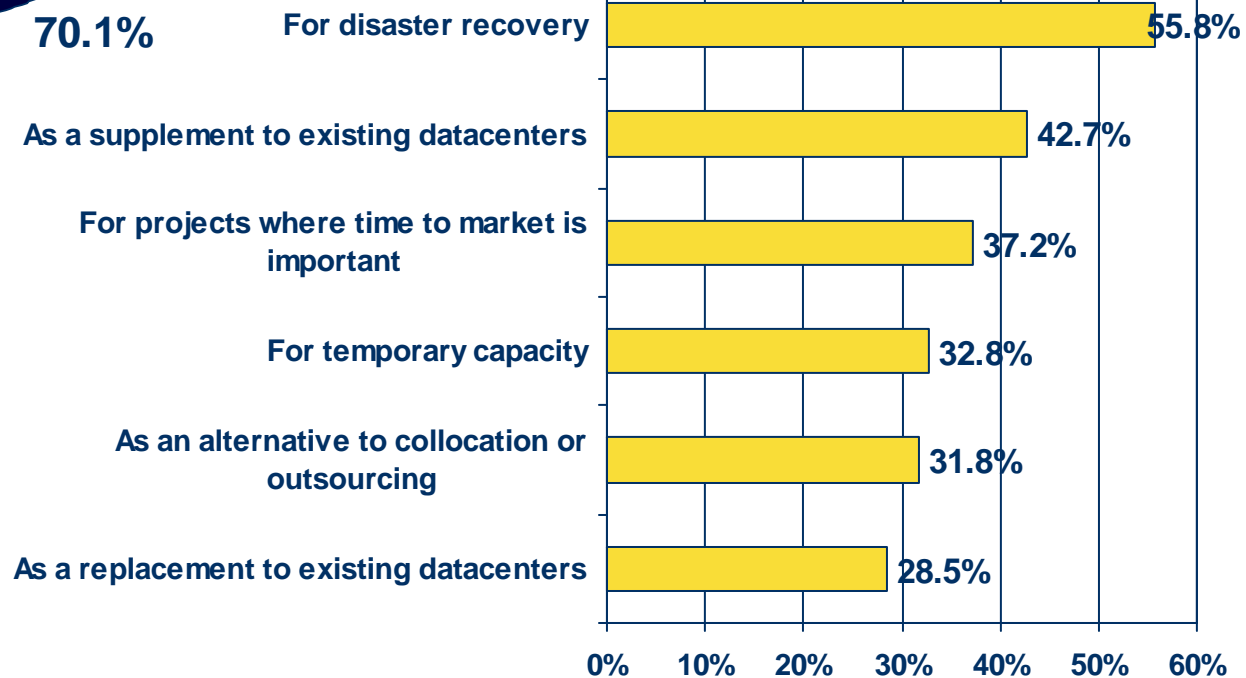
Do you believe that datacenter containers have applicability to your organization?

29.9%

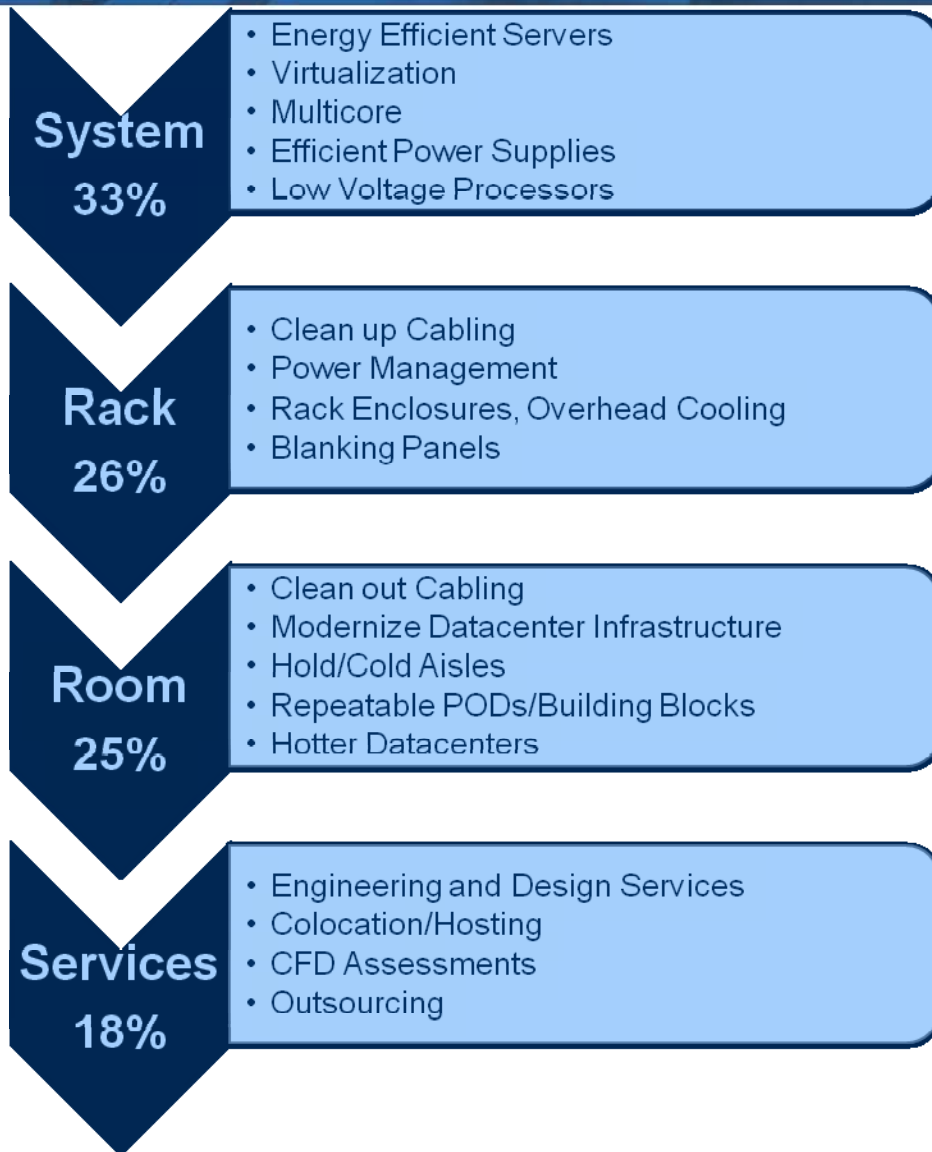


70.1%

How do you see datacenter containers being used in your organization?



Power and Cooling Solutions



- Energy Efficient designs are a necessary for the datacenter
- Virtualization and consolidation #1 solution
- A holistic approach is required
- It is NOT a cost issue, its an issue of availability
- Green IT is important in new datacenter builds, but primarily because it is perceived to be a lower cost approach to building a datacenter

Responses – Continued, Aggressive Virtualisation

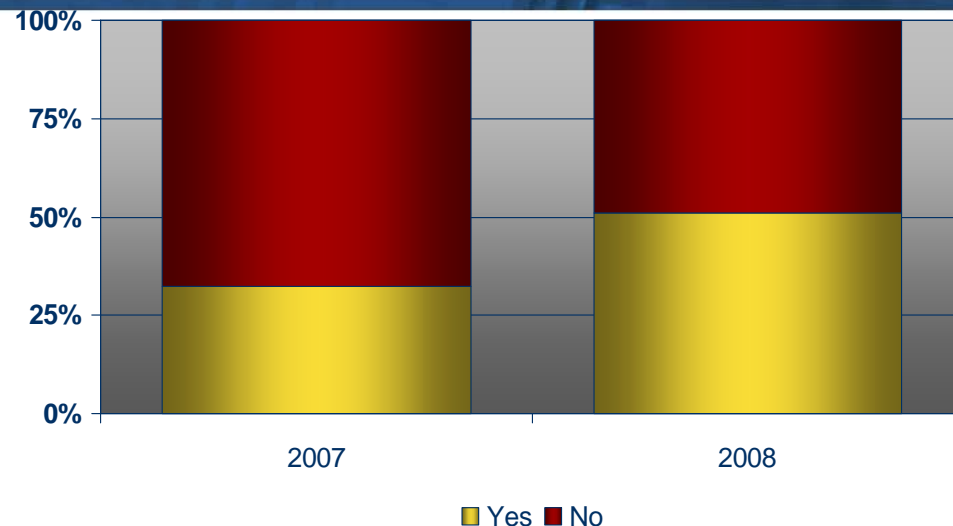
Server virtualization now considered a mainstream technology among IT buyers

- Cost saving from server consolidation
- Rapid provisioning of new servers

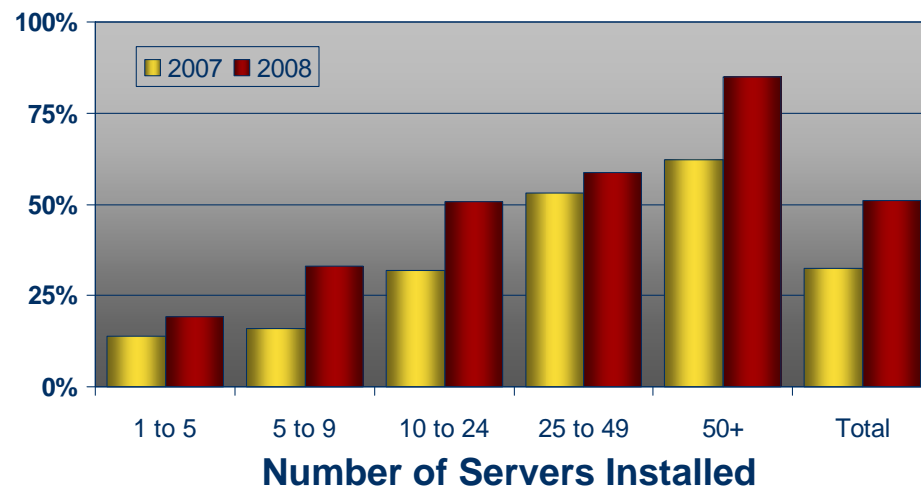
IT professionals are very bullish on future use

Core assumptions about infra. and data center strategies are being turned upside down

N: ~520



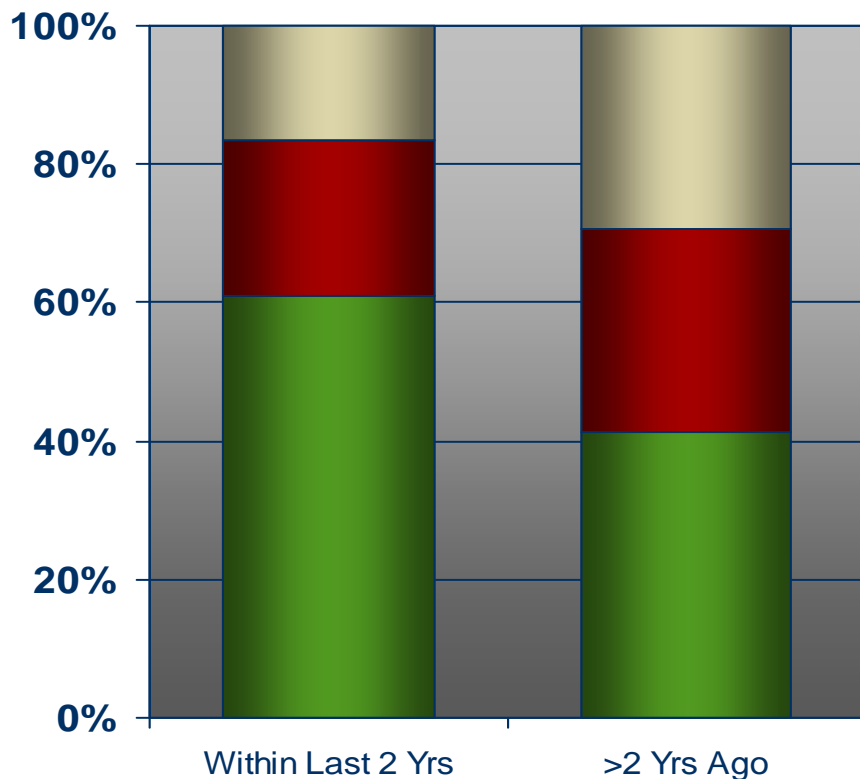
Q. Is your company currently using server virtualization products such as VMware, Xen, or Microsoft Hyper-V?



Responses – Continued, Aggressive Virtualisation

Rate of Further Deployment?

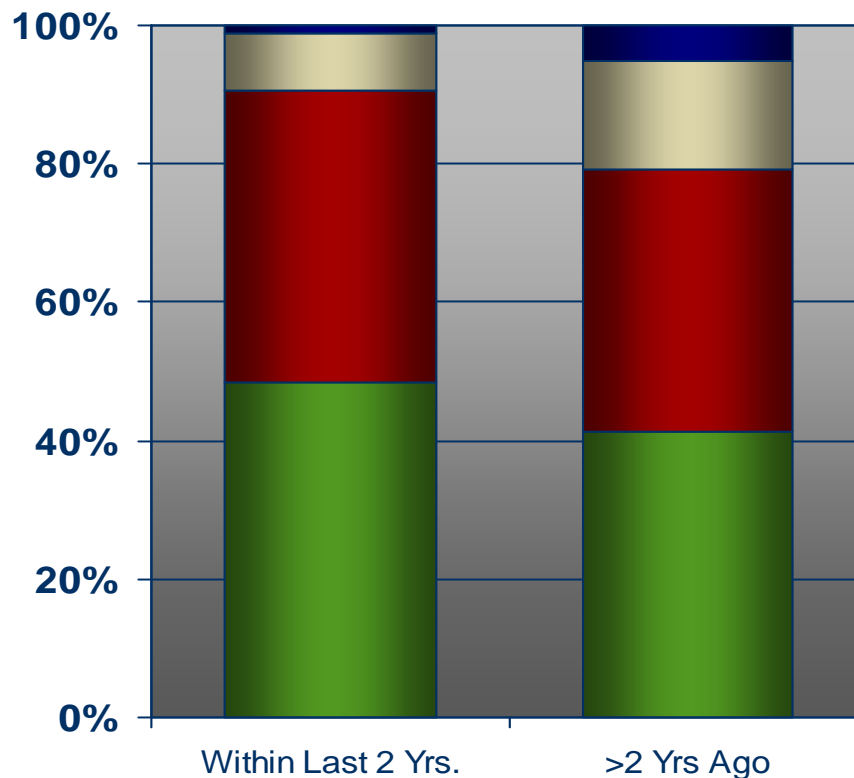
- 20+ Virtualised Servers
- 11-20 Virtualised Servers
- 5-10 Virtualised Servers



First Use of Server Virtualisation

Rate of Virtual Server Sprawl?

- >20 VMs/Partitions
- 11-20 VMs/Partitions
- 6-10 VMs/Partitions
- 5 or fewer VMs/Partitions



First Use of Server Virtualisation

N: 240

Responses – Continued, Aggressive Virtualisation

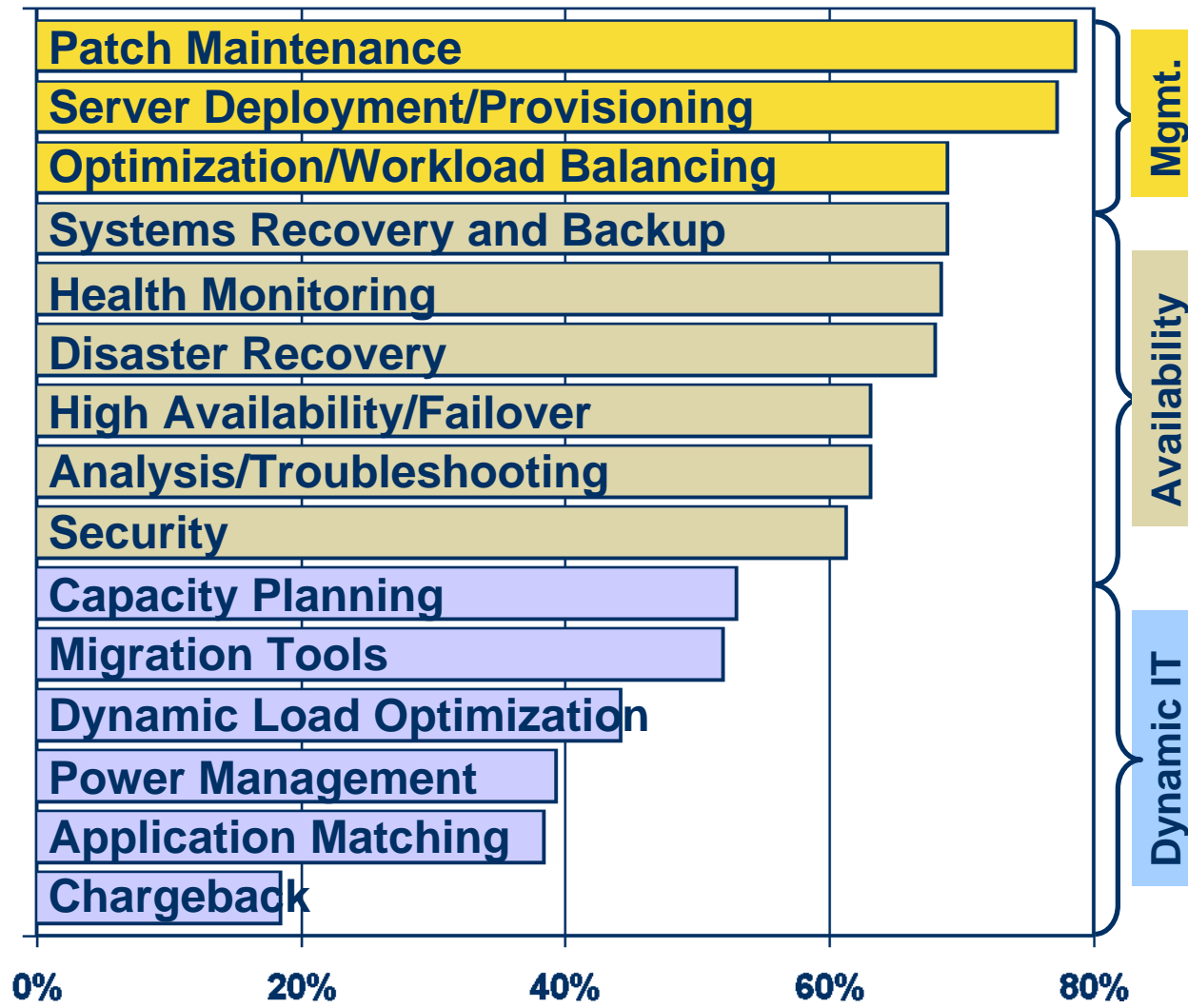
QC9. Which systems management features or tools are you using in support of your VMs?

Customers that use systems management tools today implement a broad array of functions in the management of VMs

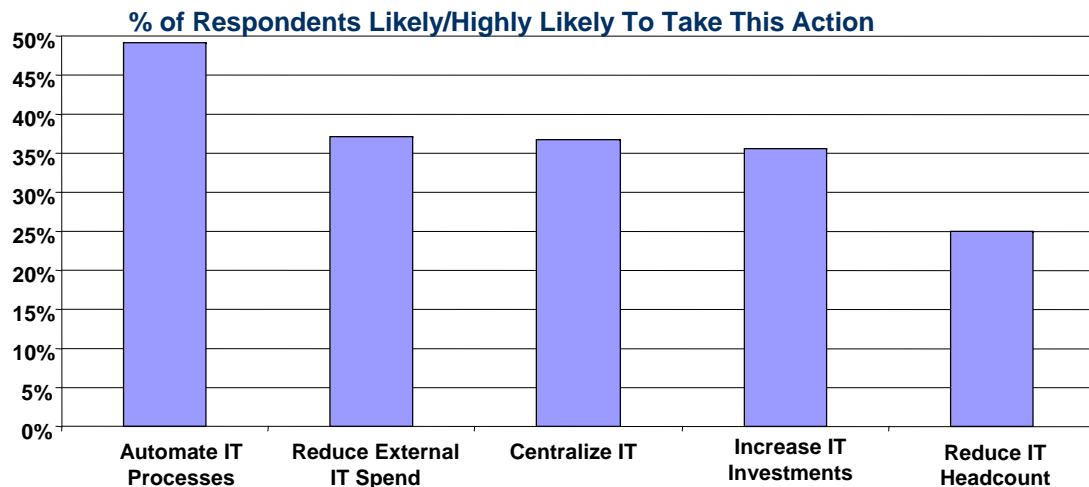
Day to day management dominates

Availability is again a second tier concern and system recovery/backup is most common

Dynamic IT features are the least common today



Responses: Automation



The 4 Key Paths To IT Process Automation Investments in the Current Crisis

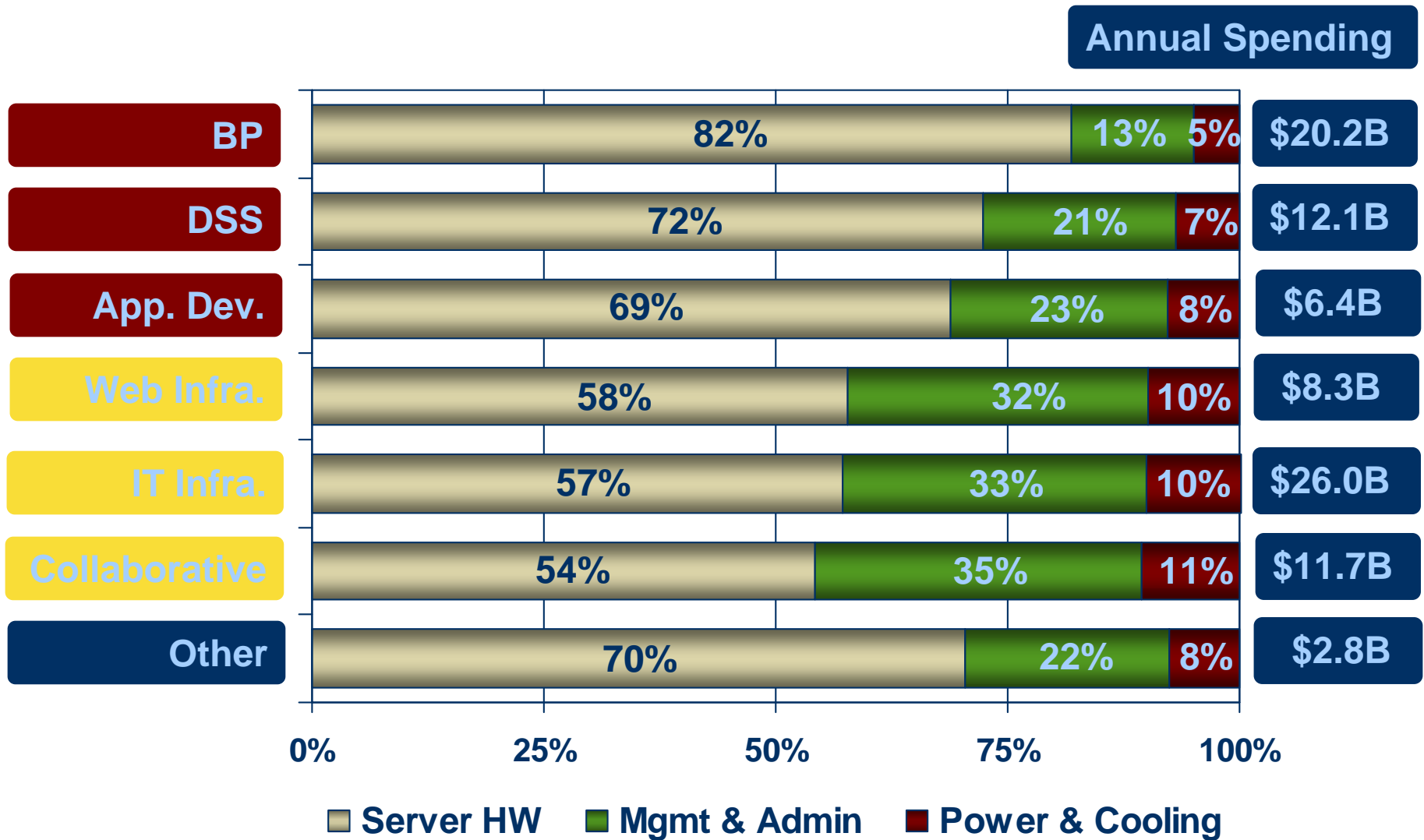
- Organizations that have decided that they can achieve better cost efficiencies through process automation, and view the current economic situation as a "good time to start".
- Organizations that will be forced to reorganize their IT delivery structure through centralization and reduction of local IT functions.
- Organizations that will be forced to reduce IT headcount but will be expected to maintain or improve levels of service and support.
- Organizations who are already on the path of IT Process Automation and will continue these investments to further improve IT efficiency and reduce cost.

Action To Be Taken	Likelihood of Taking This Action	% of Respondents Likely/Highly Likely To Implement Process Automation
Reduce External IT Spending	Unlikely/Highly Unlikely	41%
	Likely/Highly Likely	66%
Reduce IT Headcount	Unlikely/Highly Unlikely	40%
	Likely/Highly Likely	74%
Consolidate IT	Unlikely/Highly Unlikely	31%
	Likely/Highly Likely	74%
Increase IT Spending	Unlikely/Highly Unlikely	48%
	Likely/Highly Likely	58%

How will your organization react to the deteriorated economic climate in Europe? Please indicate the likelihood of each response, where 1 is very unlikely and 5 is very likely?

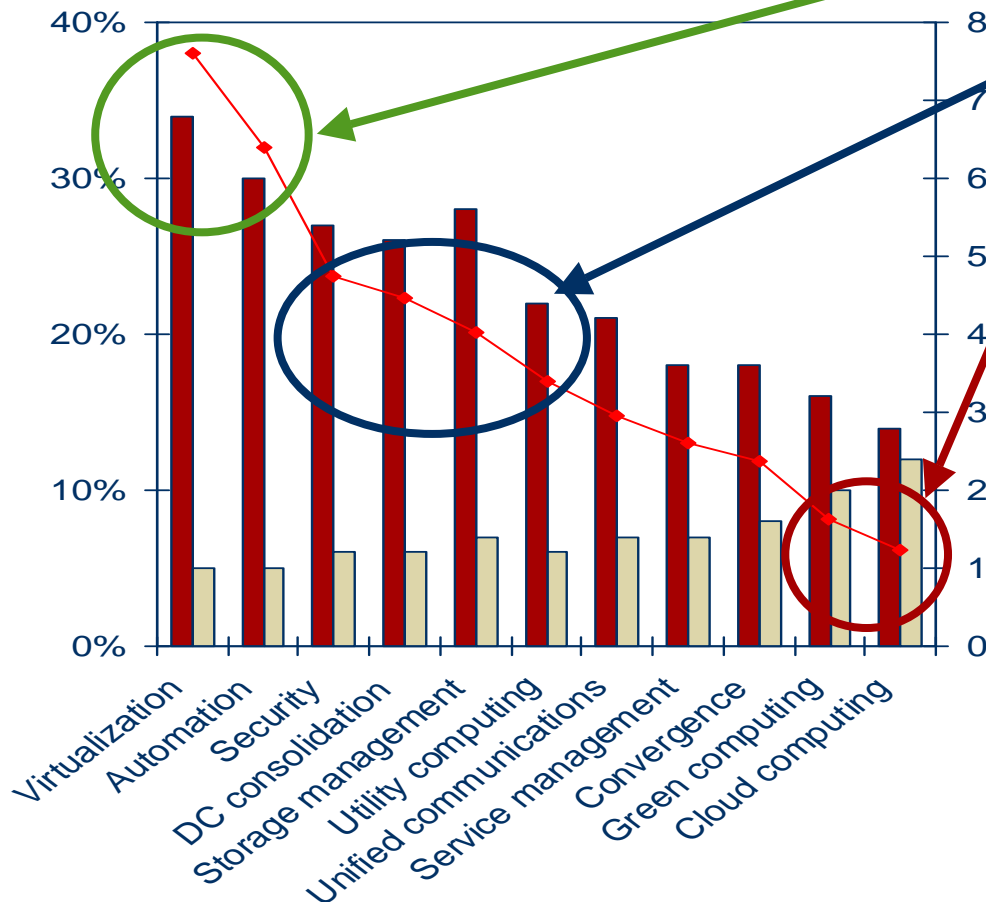
N = 515

Reducing Cost Through Choosing The Right Tool for the Job



Summary of Responses: Critical Infrastructure Investments

Q: How has the current economic environment influenced your plans for investing in the following types of initiatives?



■ Increase ■ Decrease ◆ Accelerator (increase/decrease)

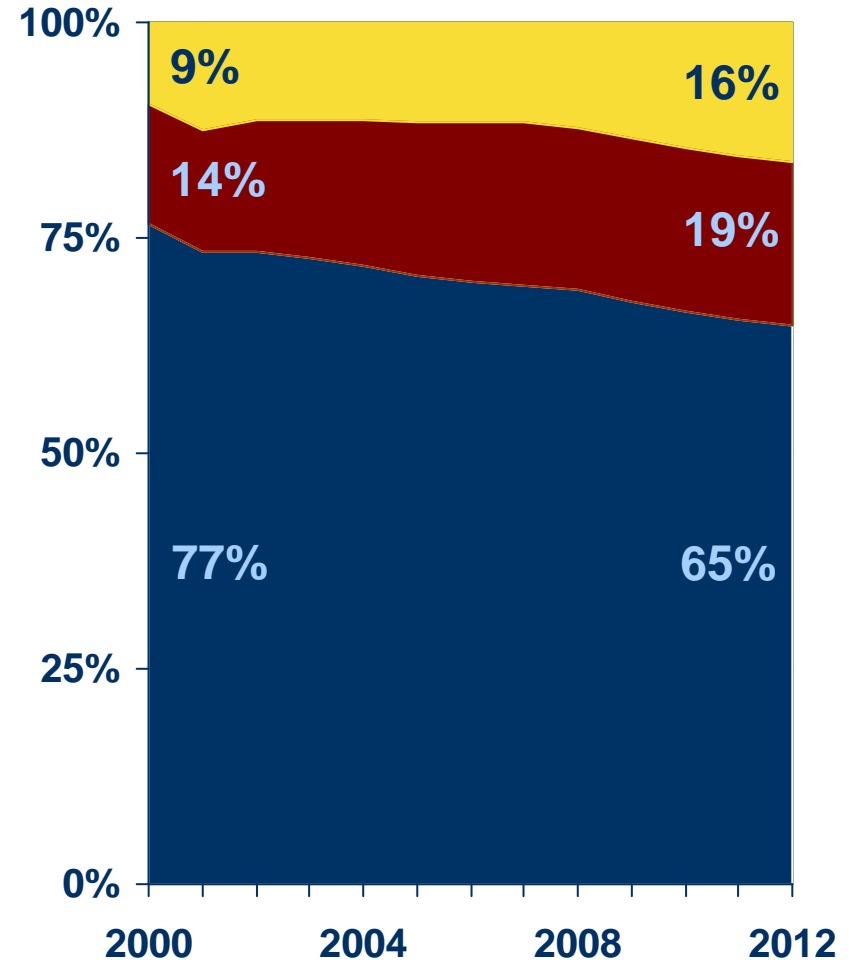
n = 553

- **Virtualization and automation** will benefit the most from the downturn.
- **Back to basics:** new focus on security, storage management, and DC consolidation.
- **New models** such as green and cloud computing "stall" in the face of this global crisis.
- Whereas most spending goes into applications, enterprises want to invest in **infrastructure**: immediate savings through efficiency.

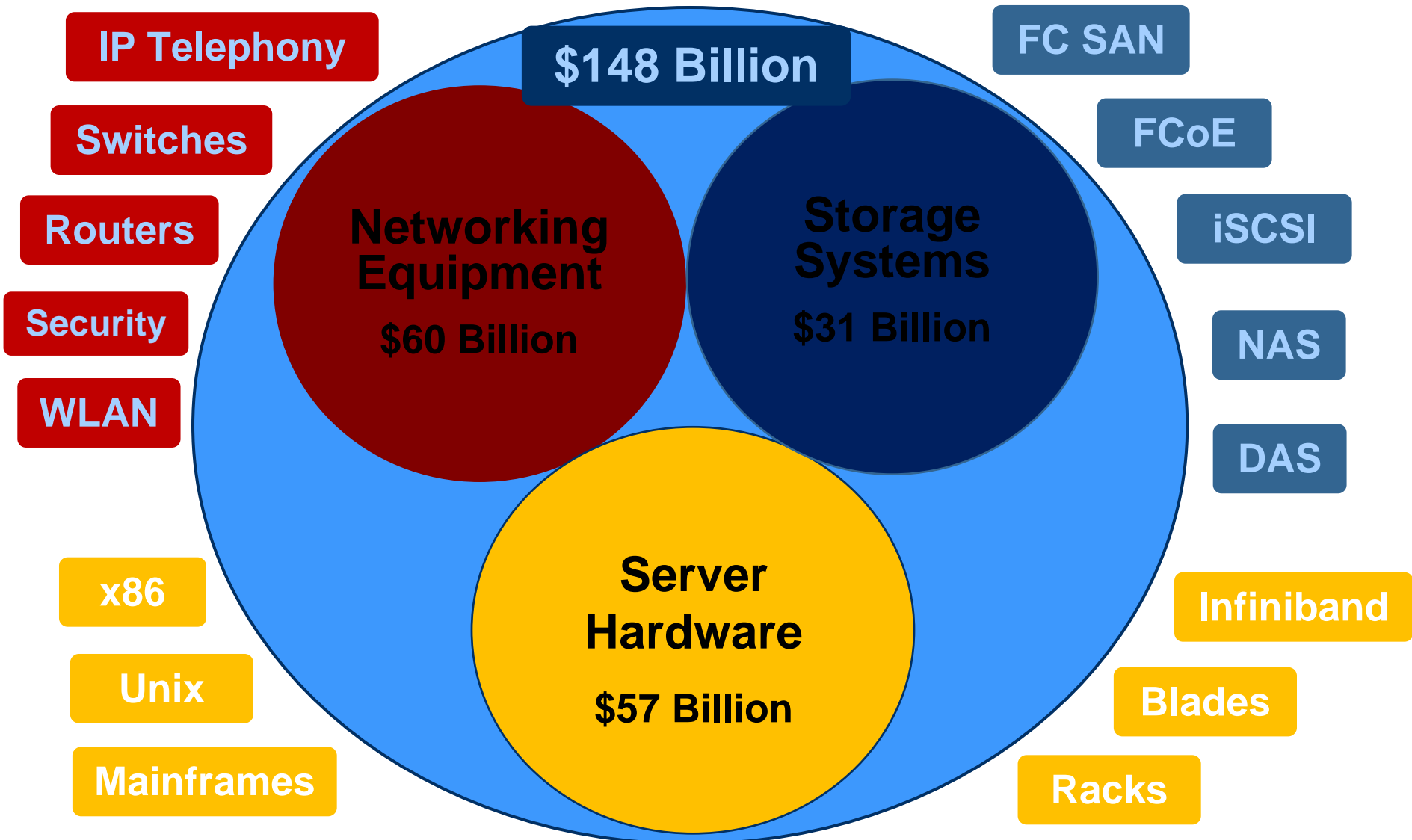
What Will the Datacentre Look Like?

- **Mega Datacenter**
 - Homogeneous
 - Dense/Low Cost
- **Small Site (SMB/Branch)**
 - Low Cost
 - Ease of deployment
 - Ease of management
- **Enterprise Datacenter**
 - Heterogeneous
 - Complex
 - Legacy

% Server Spend



And the Suppliers: Hardware Infrastructure Market, 2008



Convergence Around Workloads Is the Next Stage in Driving Down Infrastructure Cost

2012 Mkt
Not \$158B
But \$123B

CAGR (08-12)
Not 1.6%
But -4.5%

Security

Web

Caching

Networking

Networking Equipment
\$66 Billion

Storage Systems
\$34 Billion

\$15B

\$20B

Server Hardware
\$58 Billion

Streaming

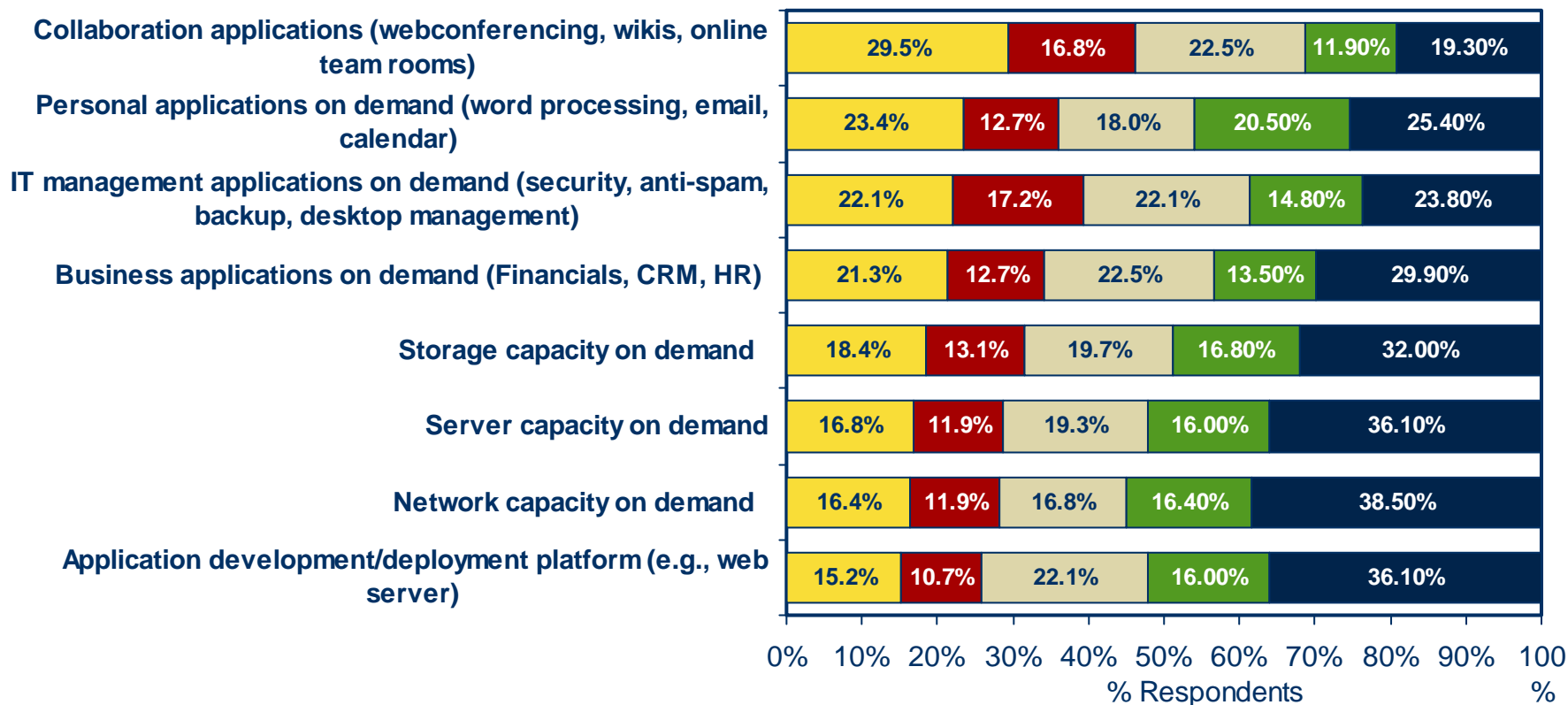
eMail

File&Print

Workgroup

Closing Thoughts on Cloud Computing

For these same types of cloud offerings, what do you think the level of your organization's usage will be in three years from now?

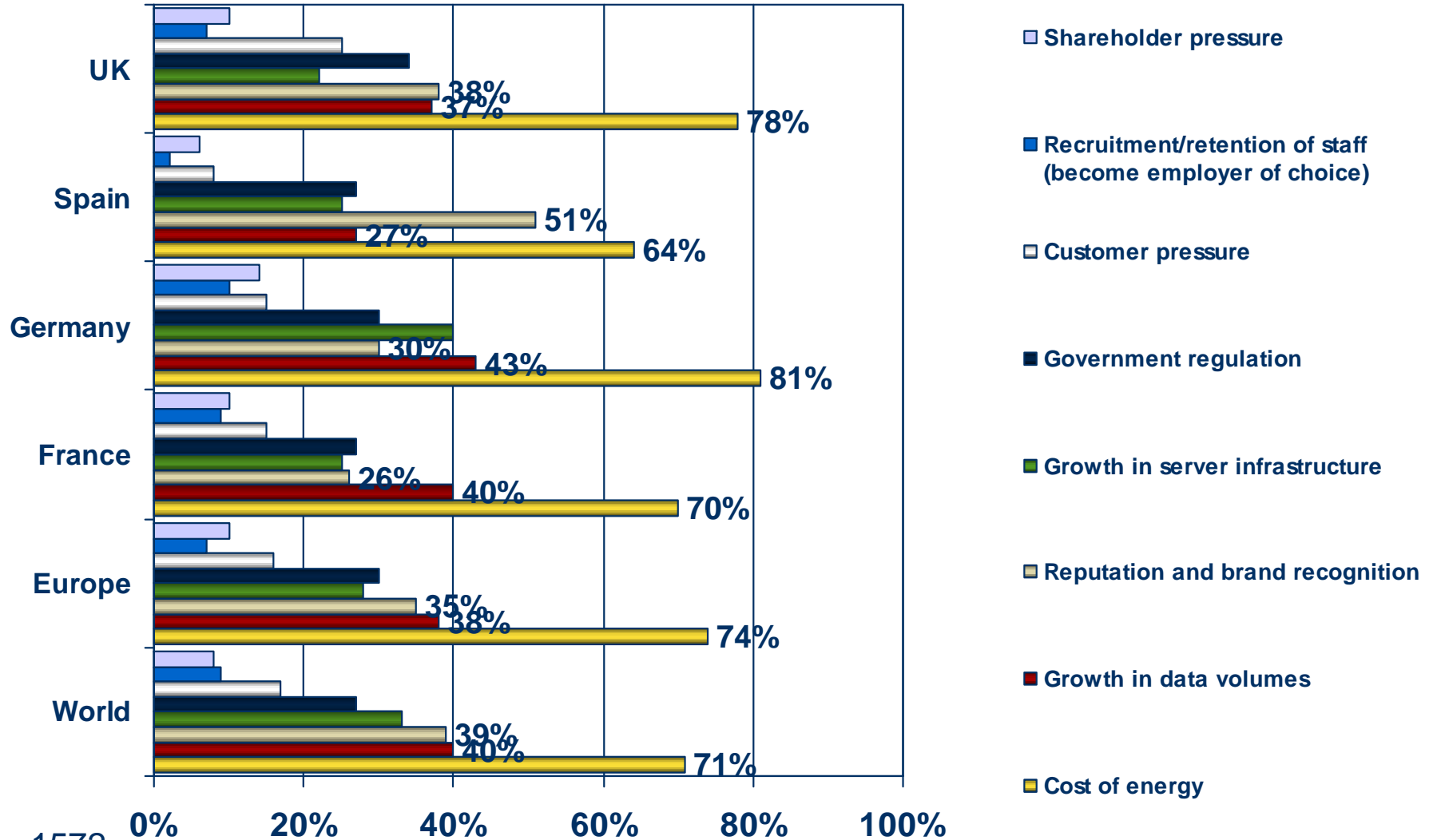


N=244

■ Widespread usage
 ■ Rating 4
 ■ Rating 3
 ■ Rating 2
 ■ No usage

And Sustainability

Q: What are the most pressing reasons impacting your company's adoption of Green IT?



N = 1572

It's All About Data:

- Volume growth and disparate types.
- Securing that data.
- The coming battle is owning that data: "One reason you should not use Web applications to do your computing is that you lose control", Richard Stallman.

And Operational Efficiencies

- Taking advantage of new datacentre designs and equipment convergence.
- The opportunities from aggressive virtualisation, automation and third party services are there.