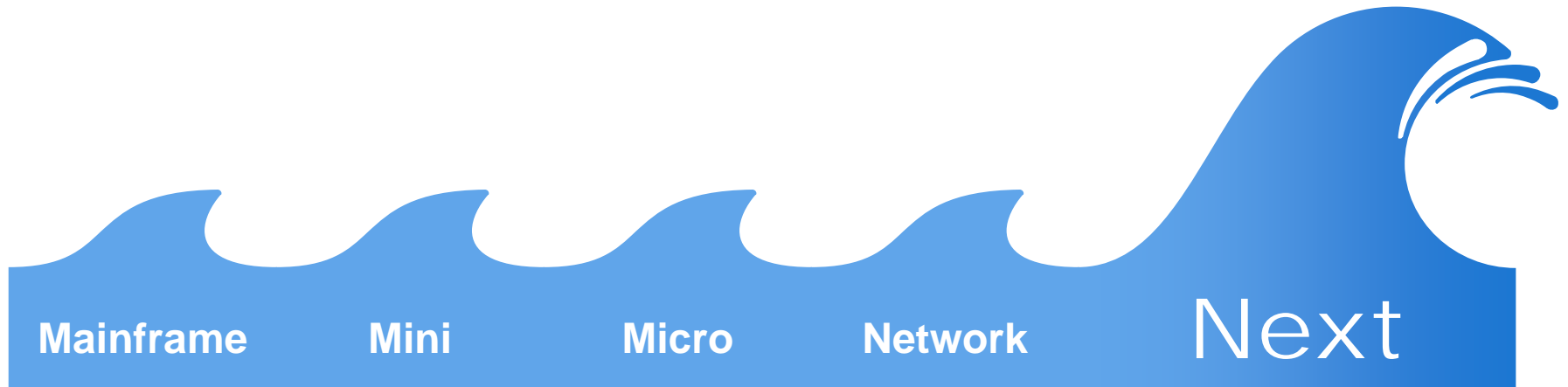


What, Why & How : Virtualization

Mark Janvier
Technology Consultant

itSMF event – 25 August 2009

Major Waves in Information Technology



Mid-'60s -'70s

70s-80s

Late 70s-'90s

Mid-'90s-Today

IBM
Burroughs
Univac
NCR
Control Data
Honeywell
NEC
...

DEC
IBM
DG
Wang
Prime
Apollo
...

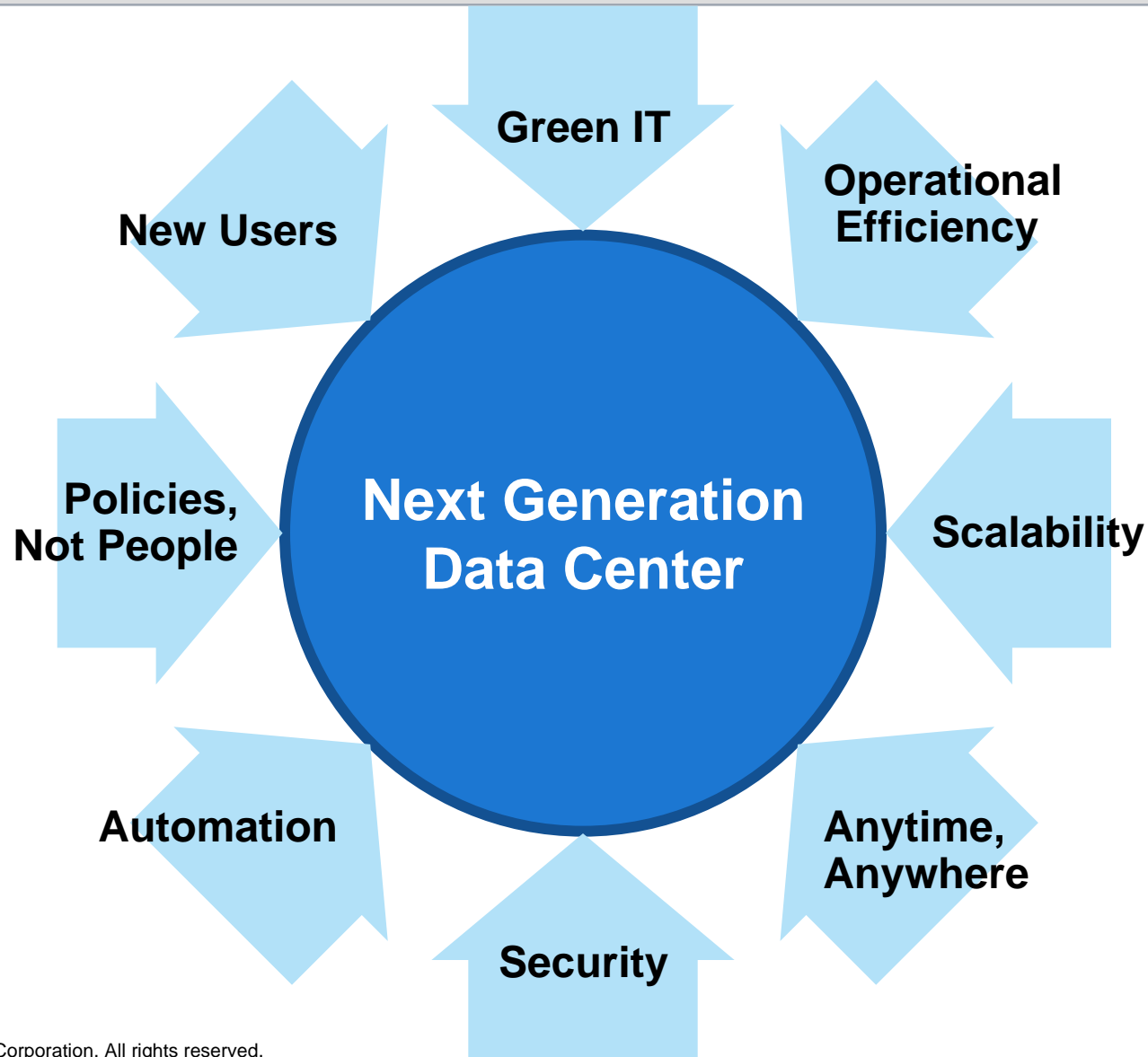
Microsoft
Intel
Apple
IBM
Tandy
HP
Compaq
...

Cisco
Netscape
Google
Microsoft
Oracle
EMC
VMware
...



The world of
ente~~X~~prise IT
is undergoing
dramatic
change

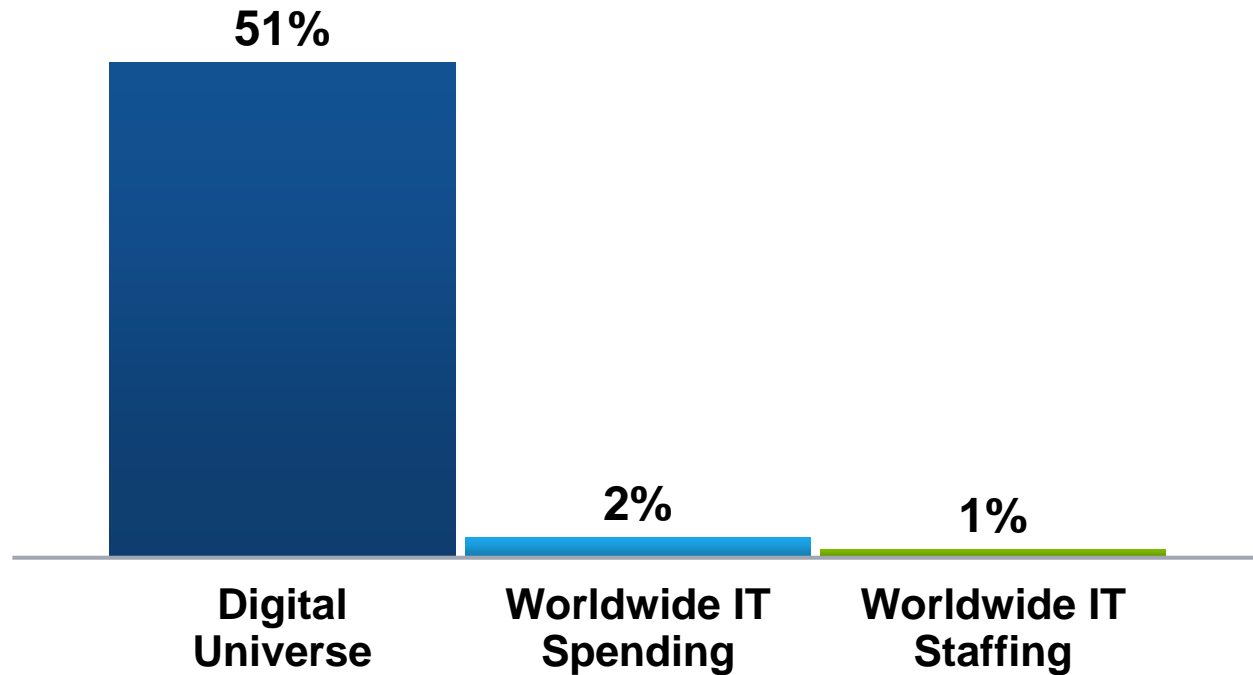
Forces Shaping the Next-Generation Data Center



Digital Universe is Growing Much Faster than Global IT Spending and IT Staffing



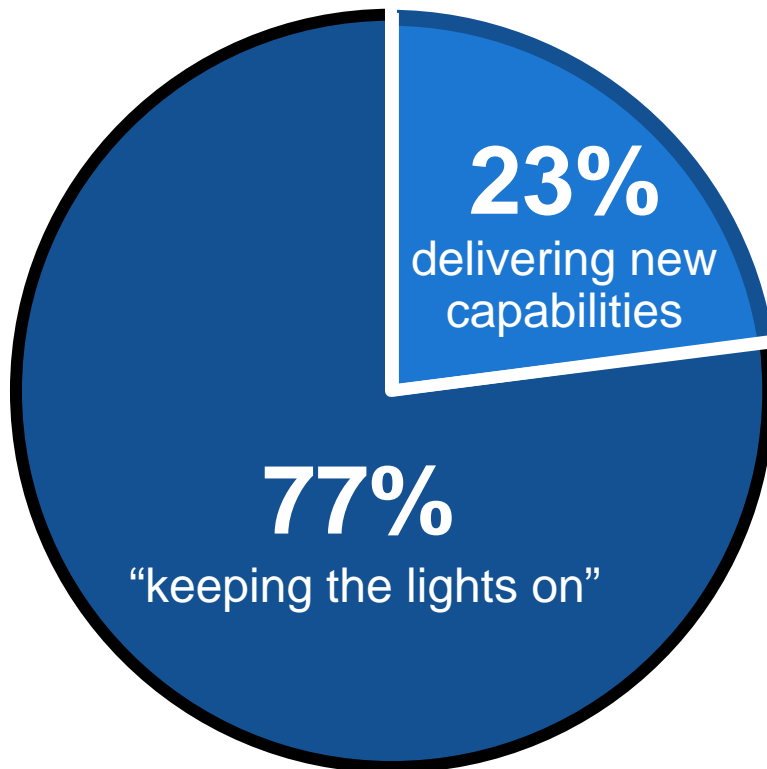
CAGR (2008 through 2012)



IT Infrastructure Must Change Too Much Complexity, Too Hard to Manage



The Traditional IT Budget



- IT spending forecast to decline 6% in 2009 (Gartner)
- Economic climate demands major reduction in percent of IT budget used to manage the infrastructure
- Goal is to make IT complexity disappear

Virtualization

is changing the very nature
of enterprise IT

Virtualization will ...

- Enable more efficient utilization of IT infrastructure
- Change how IT is consumed – IT as a service
- Greatly reduce operating costs

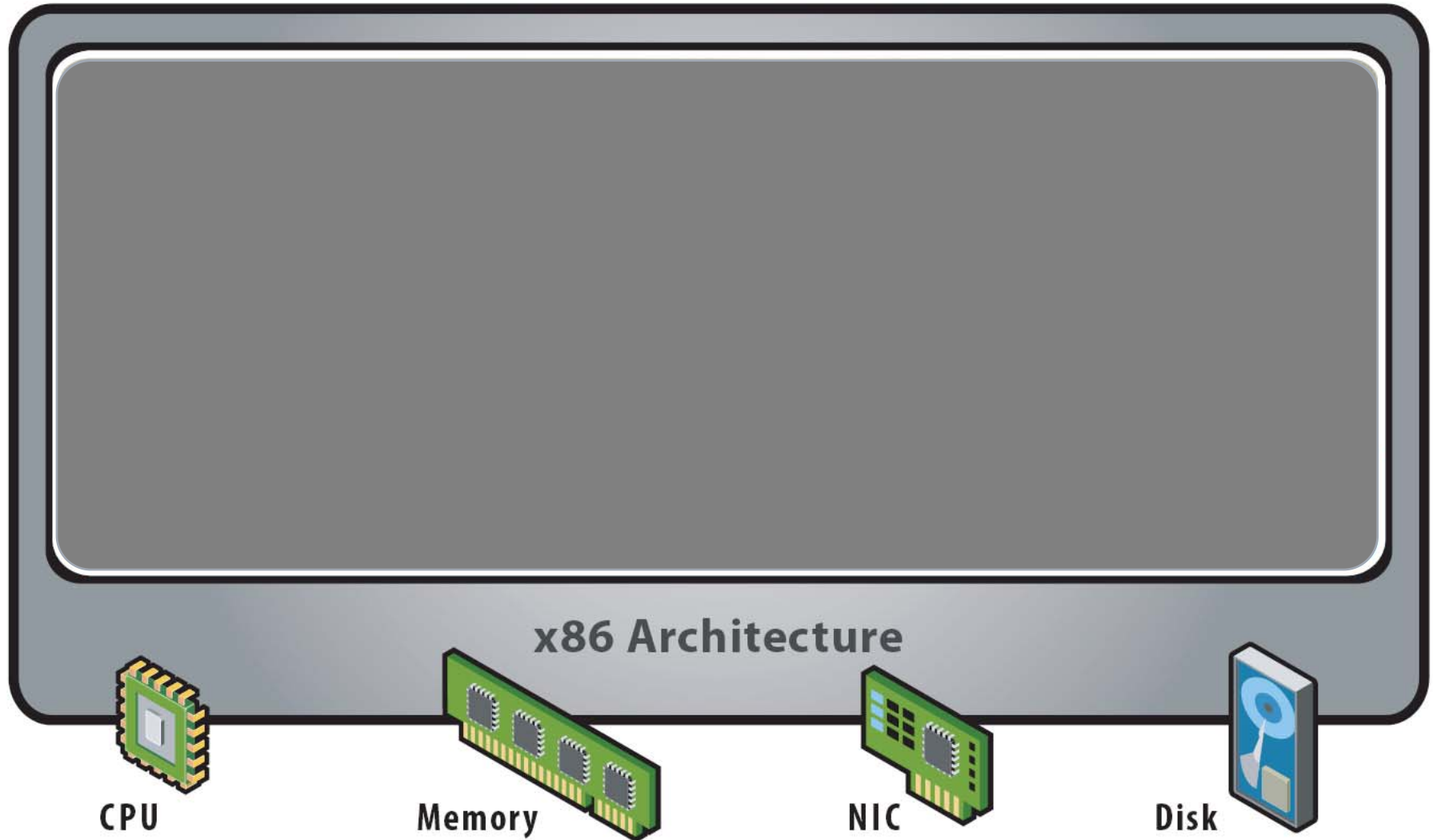
What is Virtualization ?

- Virtualization is software technology
- Powerful x86 computer hardware underutilized
- Run multiple virtual machines on single physical machine
- Run different operating systems and applications

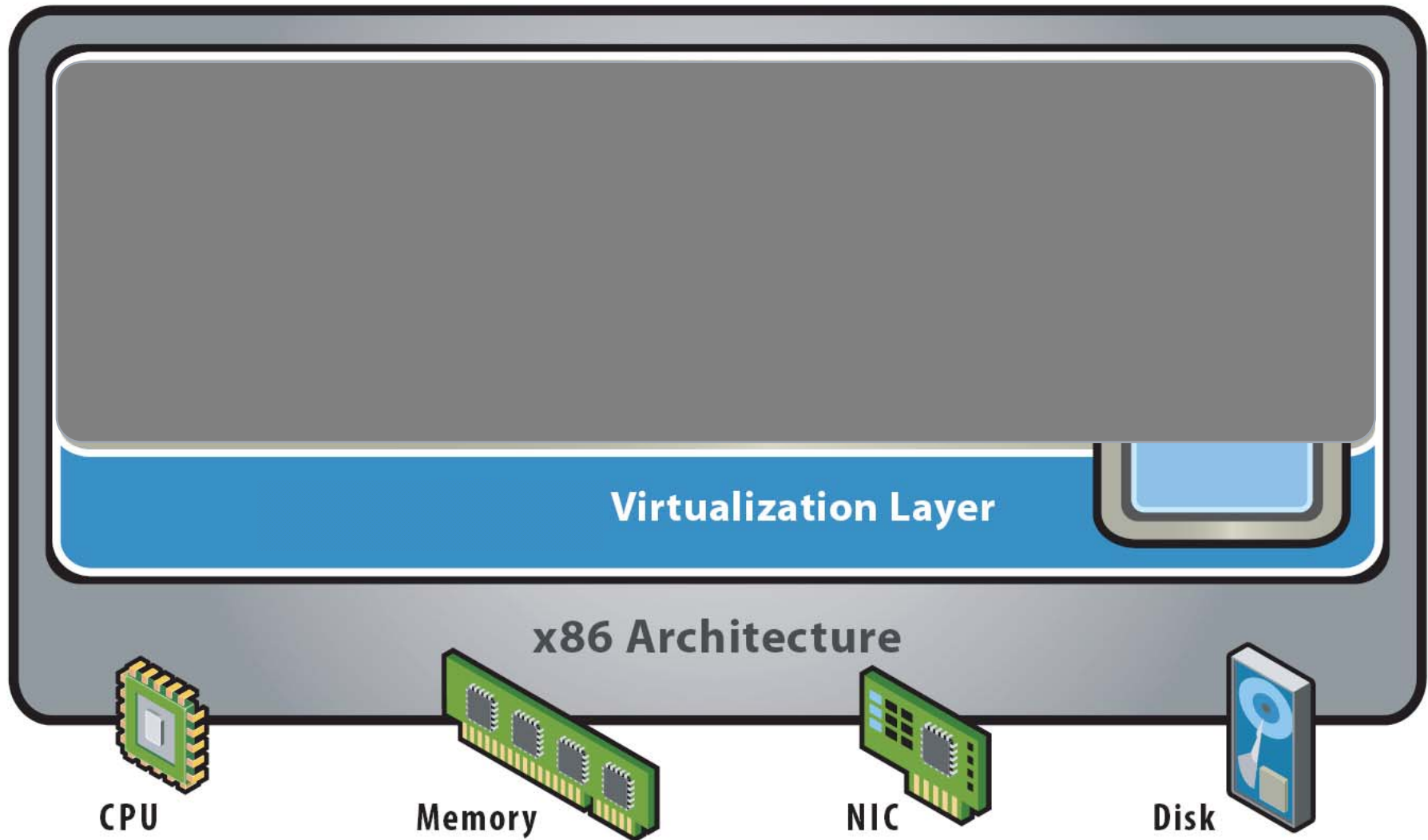
Why Virtualization ?

- Get more out of your existing resources
- Reduce datacenter costs
- Increase availability of applications
- Gain operational flexibility
- Improve desktop manageability and security

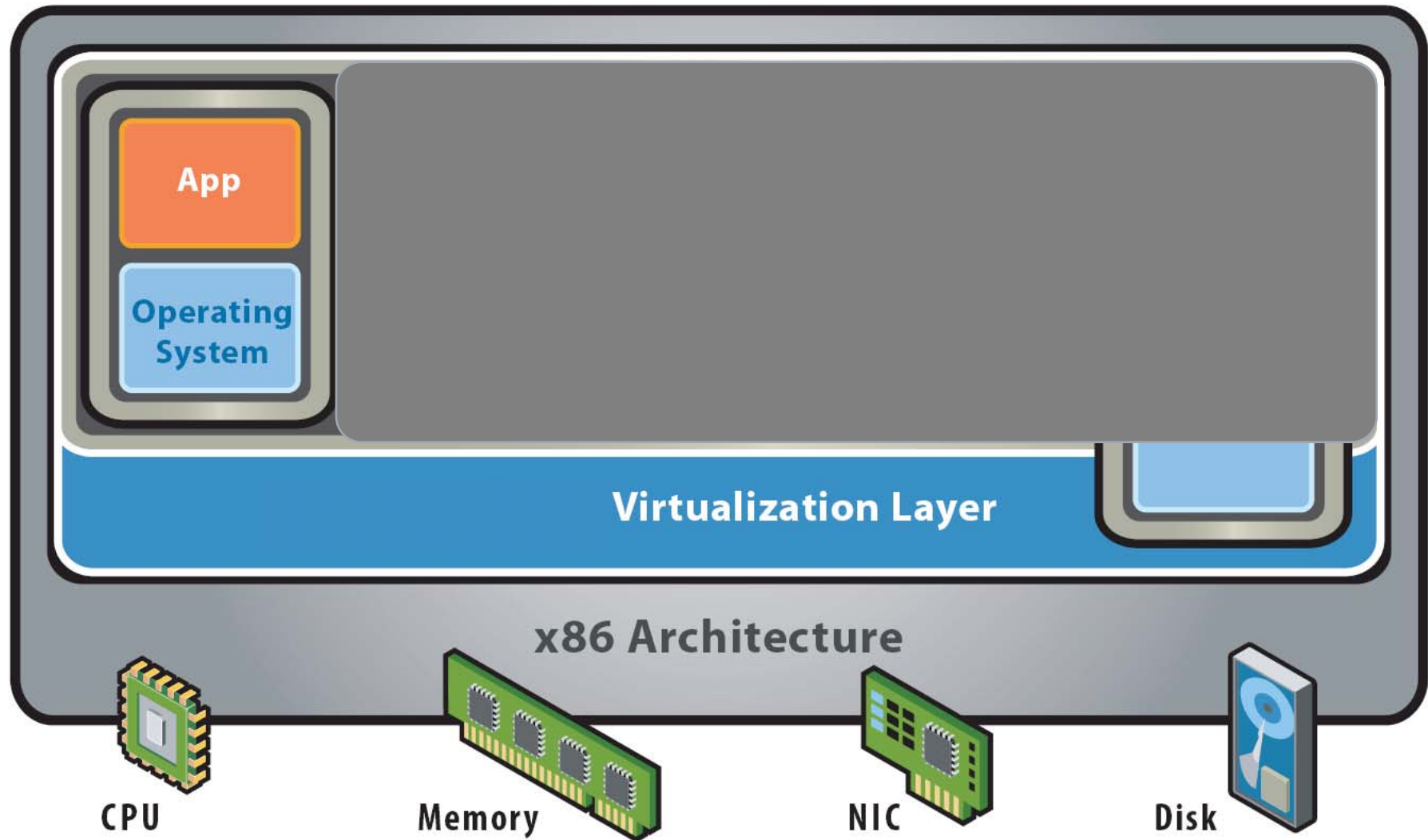
A Powerful Enabling Technology



A Powerful Enabling Technology



A Powerful Enabling Technology



The Power of Virtualization in a Next Gen Data Center



Traditional IT Infrastructure

ERP	CRM	Trading	Supply Chain	Procurement
Middleware	Middleware	Middleware	Middleware	Middleware
OS	OS	OS	OS	OS
Server	Server	Server	Server	Server
Storage	Storage	Storage	Storage	Storage
Network	Network	Network	Network	Network

The Power of Virtualization in a Next Gen Data Center



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Benefits of Virtualization

ERP	CRM	Trading	Supply Chain	Procurement
Middleware	Middleware	Middleware	Middleware	Middleware
OS	OS	OS	OS	OS

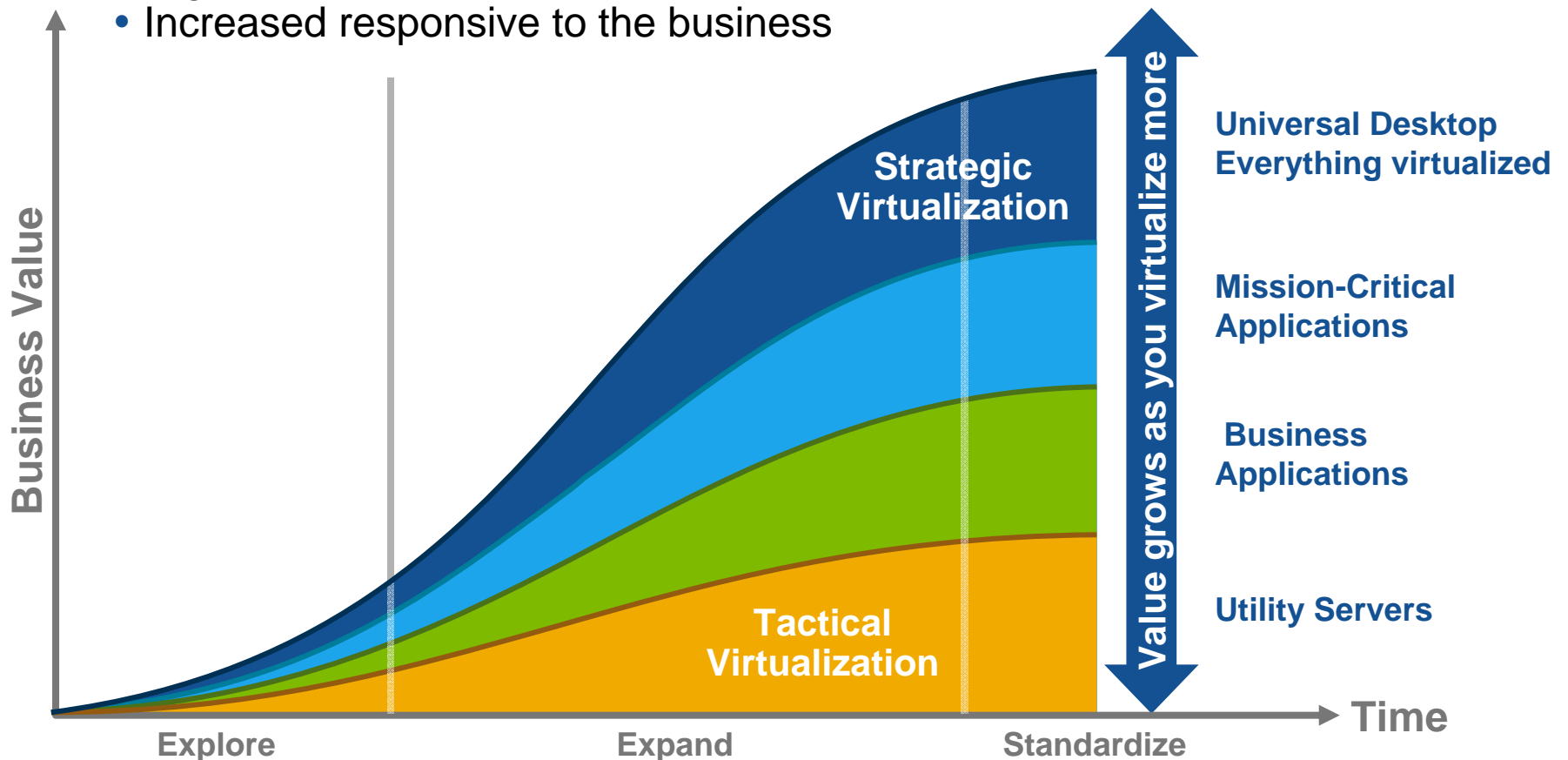
Higher utilization
Greater efficiency
More resiliency
Increased flexibility



Estimate of Benefits for Virtualized Infrastructure



- Reduced capital expenditures: up to 60%
- Reduced operating expenses: up to 30%
- Higher service levels
- Increased responsive to the business



Attributes of Current Generation Data Centers



Trusted

Control

Reliable

Secure



Data Center

Attributes of Next Generation Virtualized Data Centers



Dynamic

Efficient

On-demand

Flexible

Cloud computing provides
dynamically scalable
and virtualized IT
resources as a service
over the Internet



The Next Generation Data Center: It Can Be the Best of Both Worlds



Trusted

Dynamic

Control

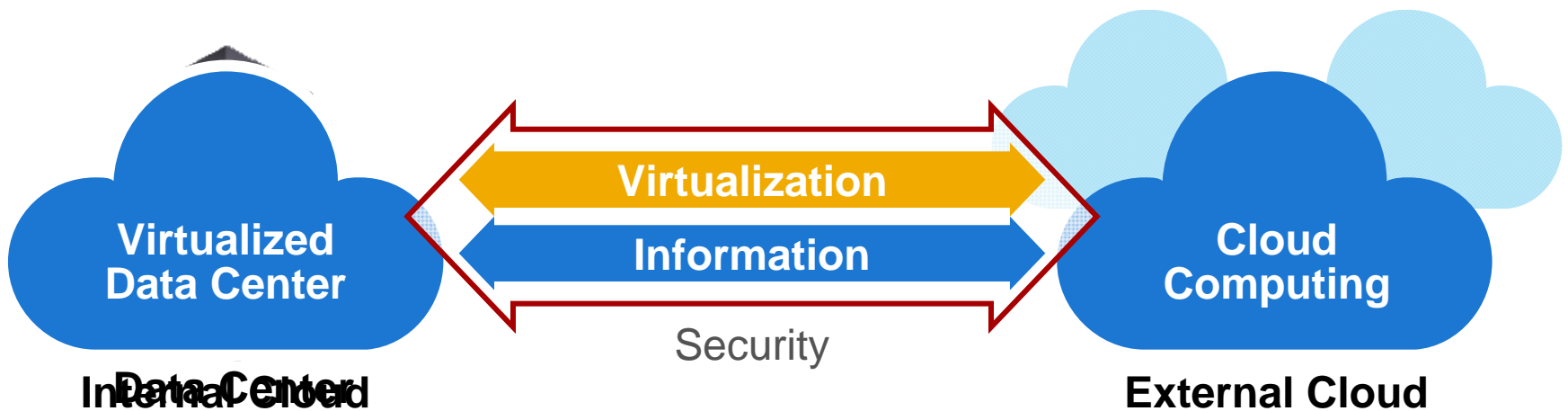
Efficient

Reliable

On-demand

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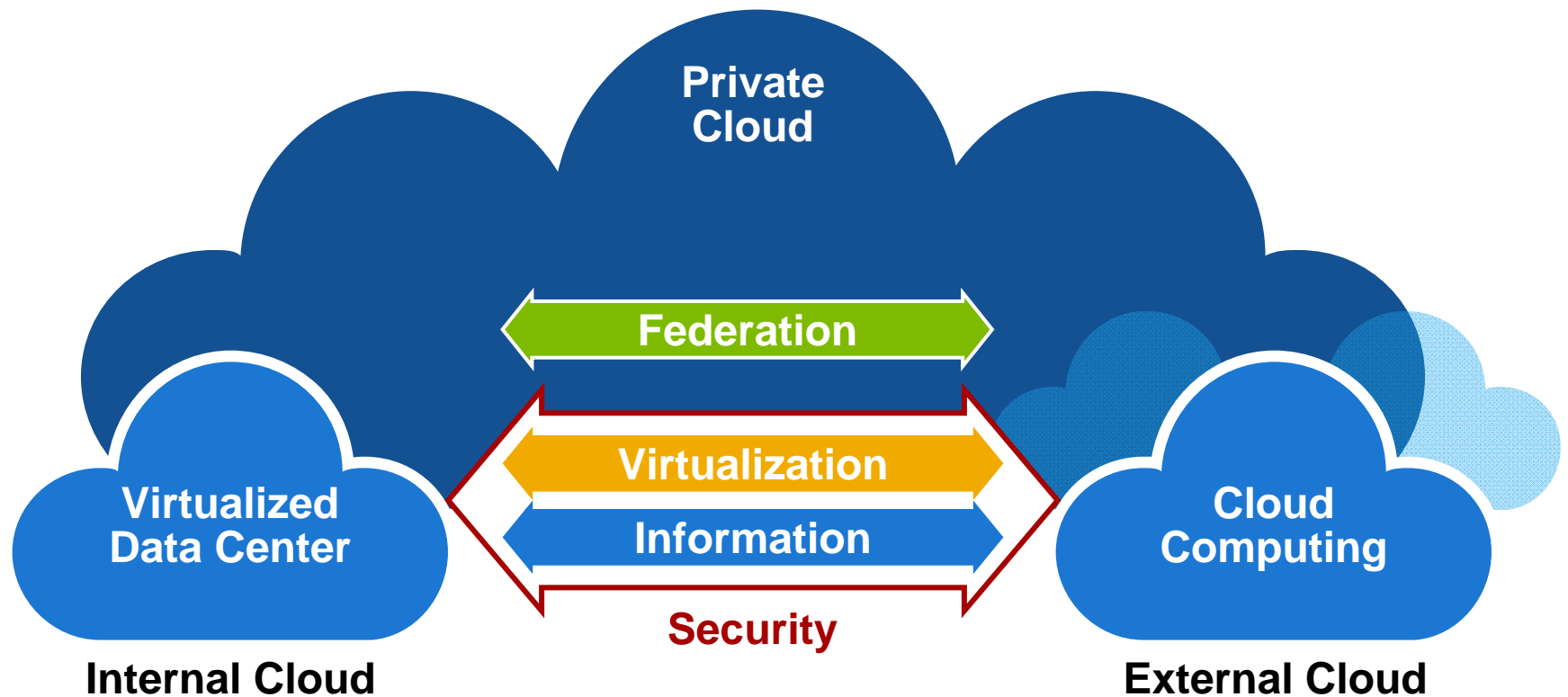
Flexible



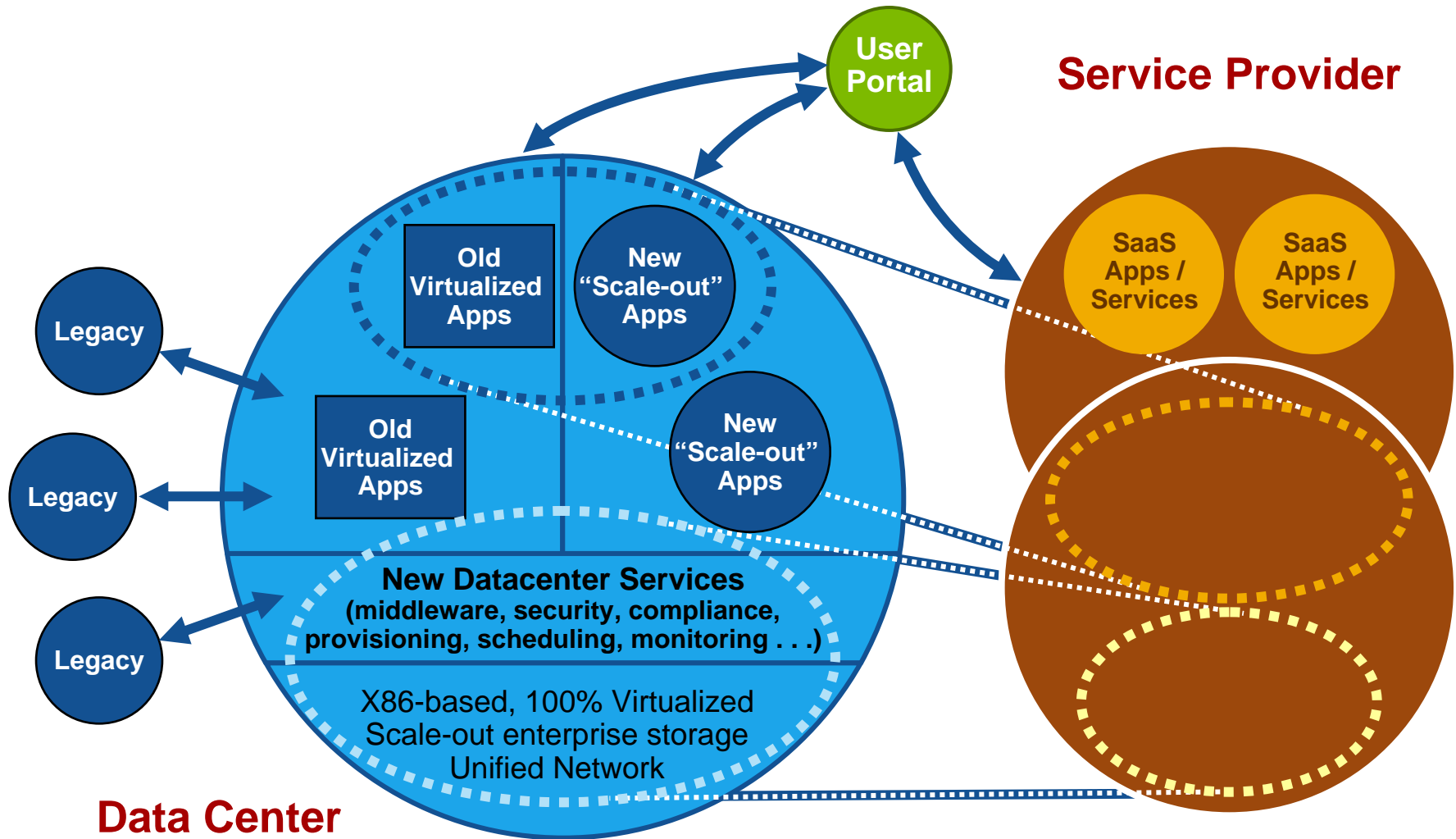
Next Generation Data Center: The Private Cloud Enables Efficiency, Choice, Control



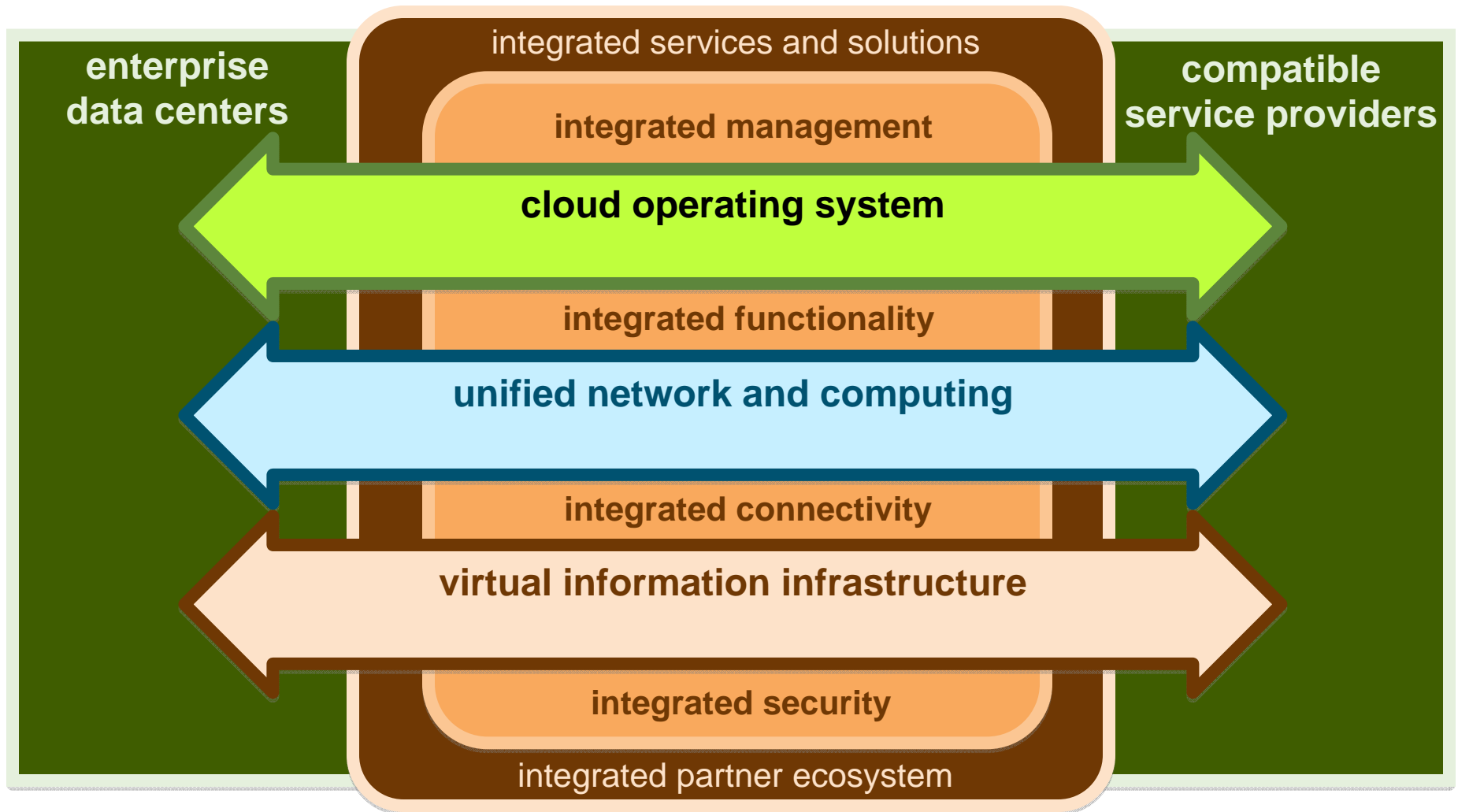
The Private Cloud – Pooled and Dynamic Infrastructure That Provides Total Control and Private Use of Cloud Resources and Legacy Resources



The Next Generation Datacenter



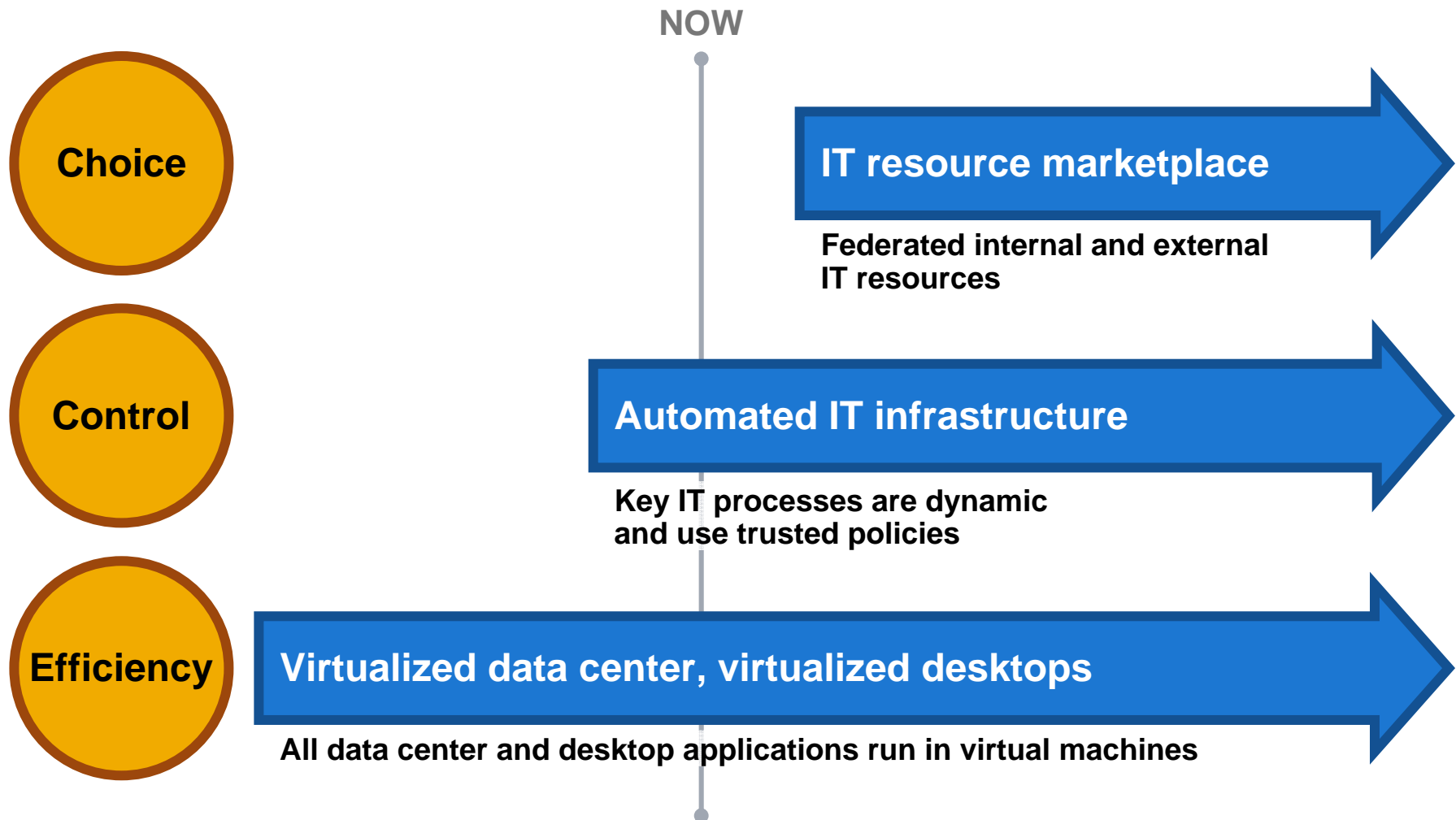
Next Generation Virtualized Data Center Architecture



The Journey has Begun



What IT is Looking For



Next Generation Virtualized Data Centers are Arriving Fast



Current economic slowdown has spurred a major decrease in IT spending

Businesses are moving rapidly to cloud computing to reduce cost and increase efficiency

Private clouds are likely to become the model for enterprise IT and transform IT into a service

The business impact will be considerable

Valuable to IT organizations large and small

Clear and logical pathway to implementation is required

Getting Started on the Journey to Next Generation Data Centers



Convey the leader's commitment

- Communicate the vision and its importance
- Establish the strategic plan
- Define the desired behavior
 - Virtual IT – encouraged
 - Physical IT -- discouraged

Demonstrate the value of the virtualized data center

- Build a small, internal private cloud
- Focus initially on unmet needs
 - Test and development, prototyping, virtual desktop, etc.
- Encourage experimentation

Rethink and redesign the IT organization

- Establish the next-gen 3 Ps – People, Processes, Policies
- Develop new skills
- Establish new roles
- Design new workflows

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