

IT Consolidation Building the Adaptive Enterprise

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Director

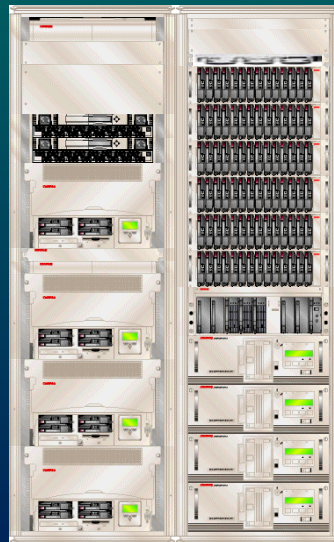
HP IT Consolidation Program



What is driving IT consolidation?

Technology enablers

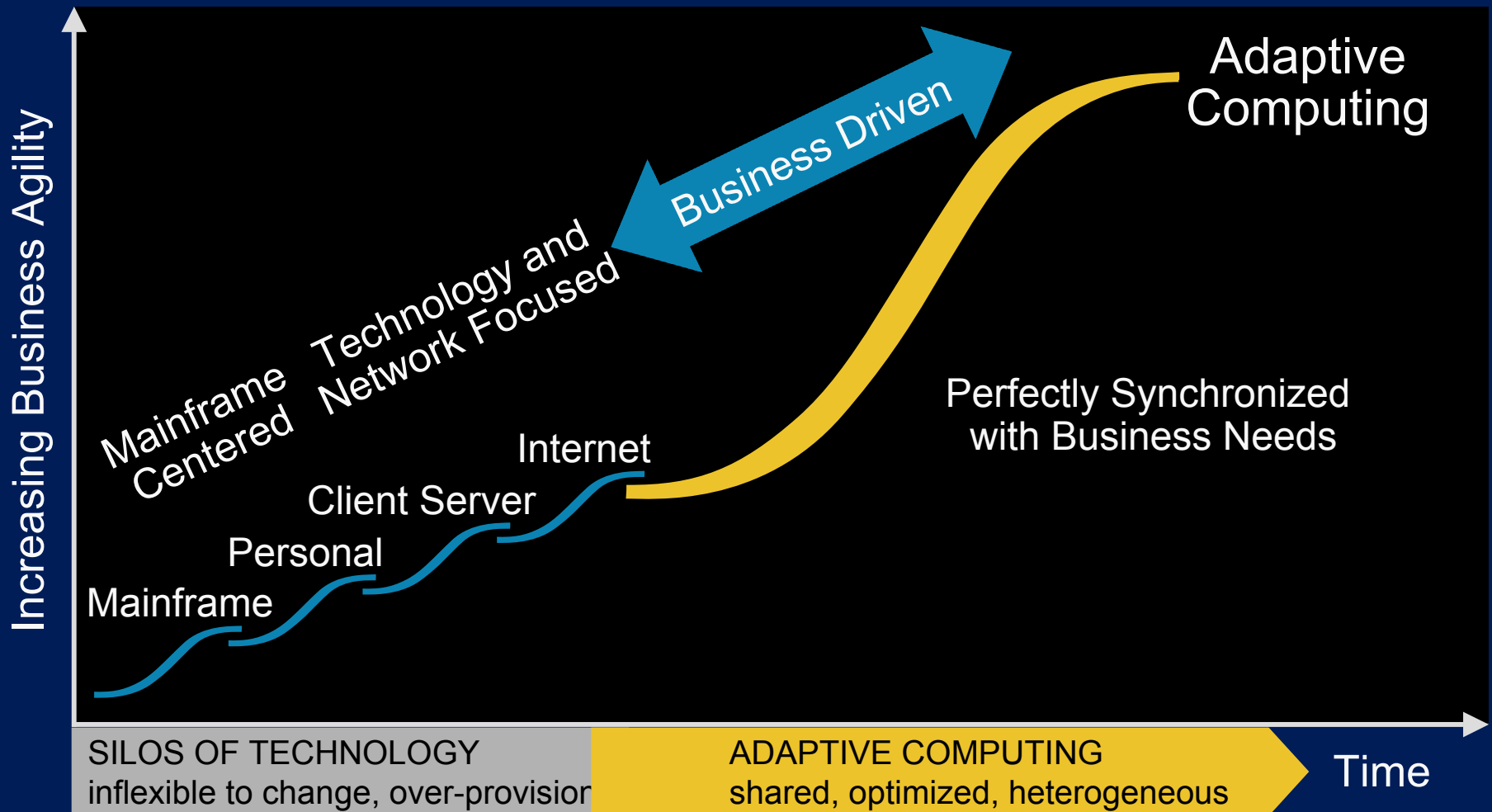
Systems and OS capabilities
Partitioning, virtualization
SAN technologies
HA clusters - blades
Management tools
Inexpensive networks



Evolution to business focus



Business needs demand a new model of computing



Why consolidate? Focus on IT economics

economics

it's all about IT features

improving quality of
service—mandatory

$$\underline{ITe} = \text{cost} \downarrow + \text{quality} \uparrow + \text{risk} \downarrow + \text{agility} \uparrow$$

customers need to mitigate risk!

enhanced business agility

MUST reduce
cost of change

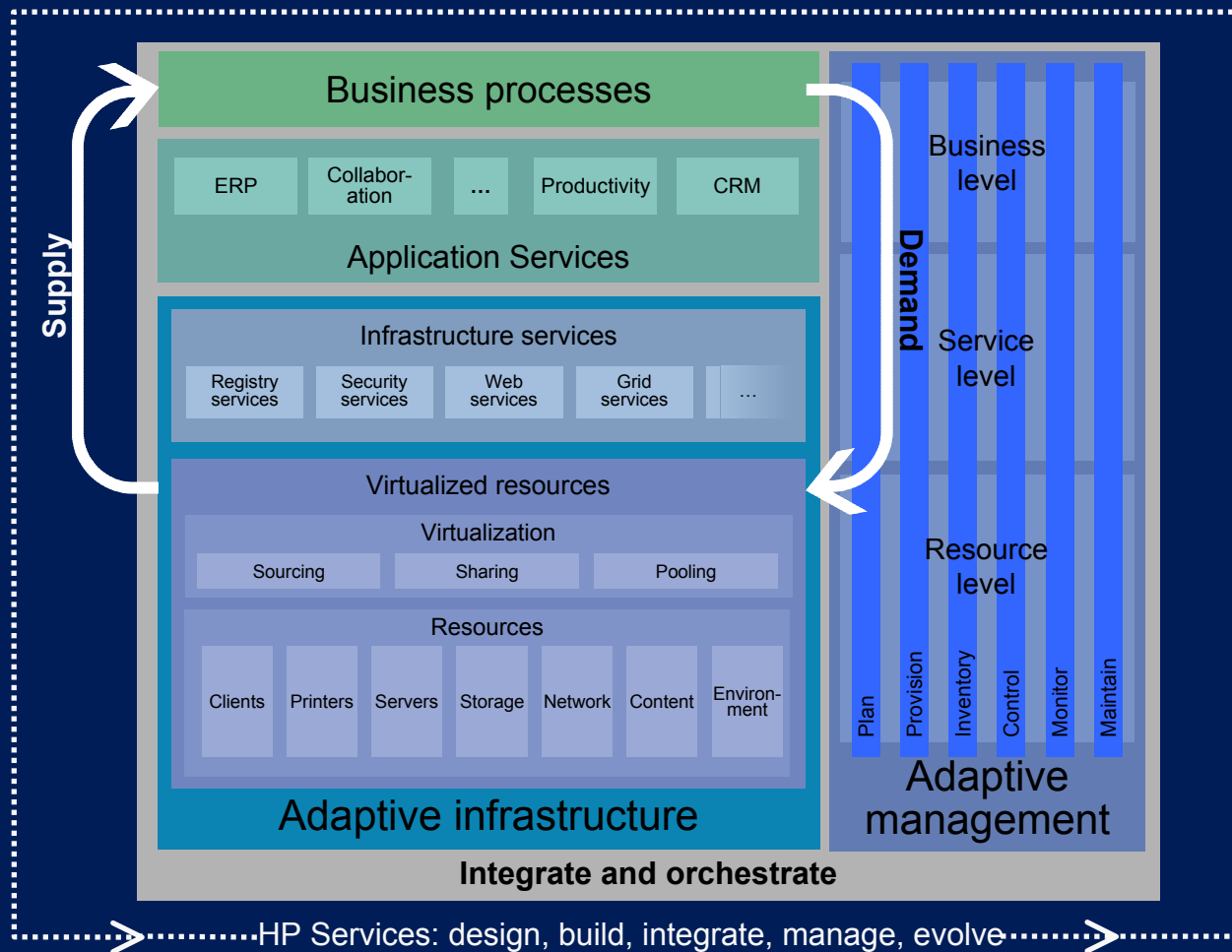
IT Consolidation

HP adaptive design principles

- | | |
|-------------------------------|--|
| <i>Simplification</i> | Drive out redundancy, simplify management, streamline IT processes |
| <i>Standardization</i> | Standardize on strategic technologies, deploy consistent IT processes based on ITIL service management and industry best practices |
| <i>Modularity</i> | Design services using common, scaleable building blocks |
| <i>Integration</i> | Integrate application and information services to simplify IT, meet changing business needs and provide a coherent view of the organization |

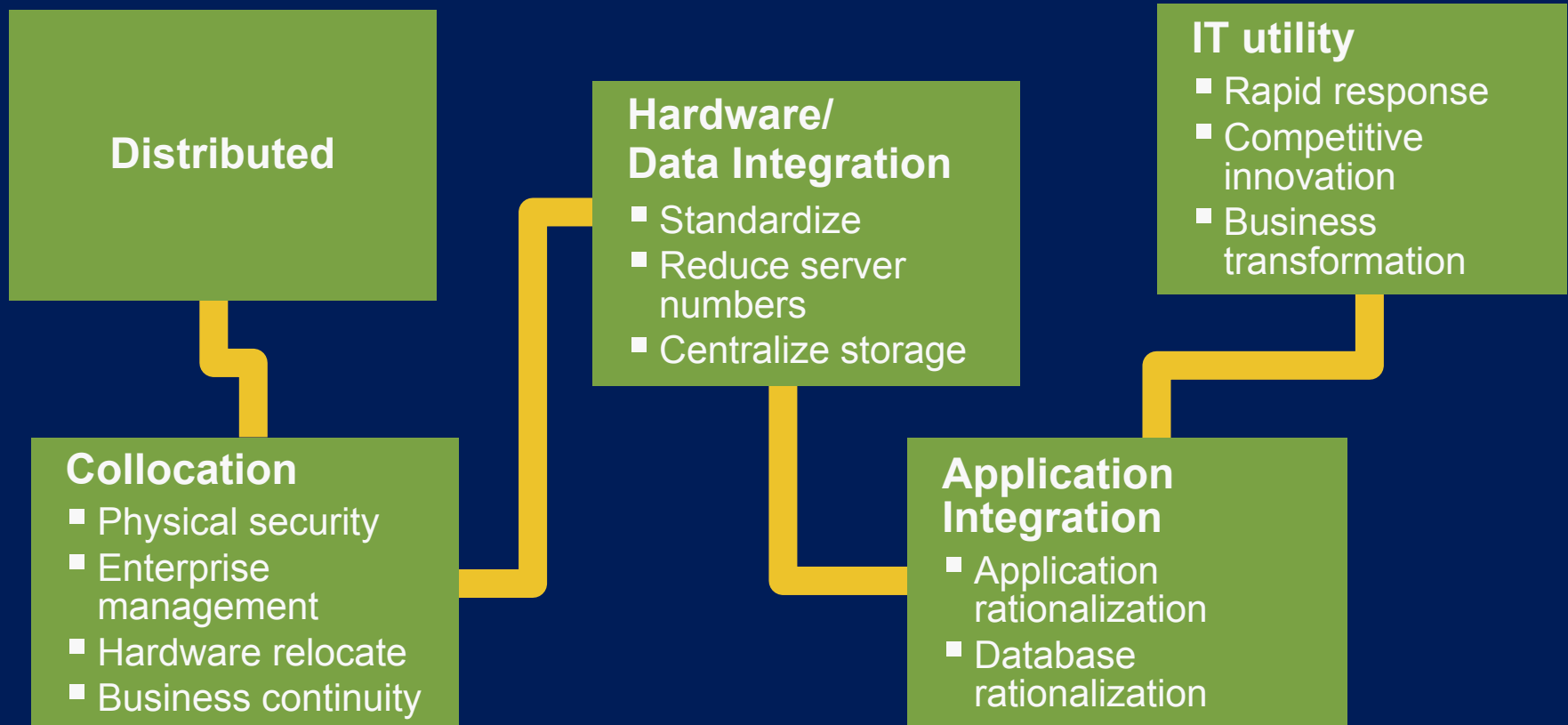
IT Consolidation and the adaptive enterprise

Its more than just fewer bigger boxes

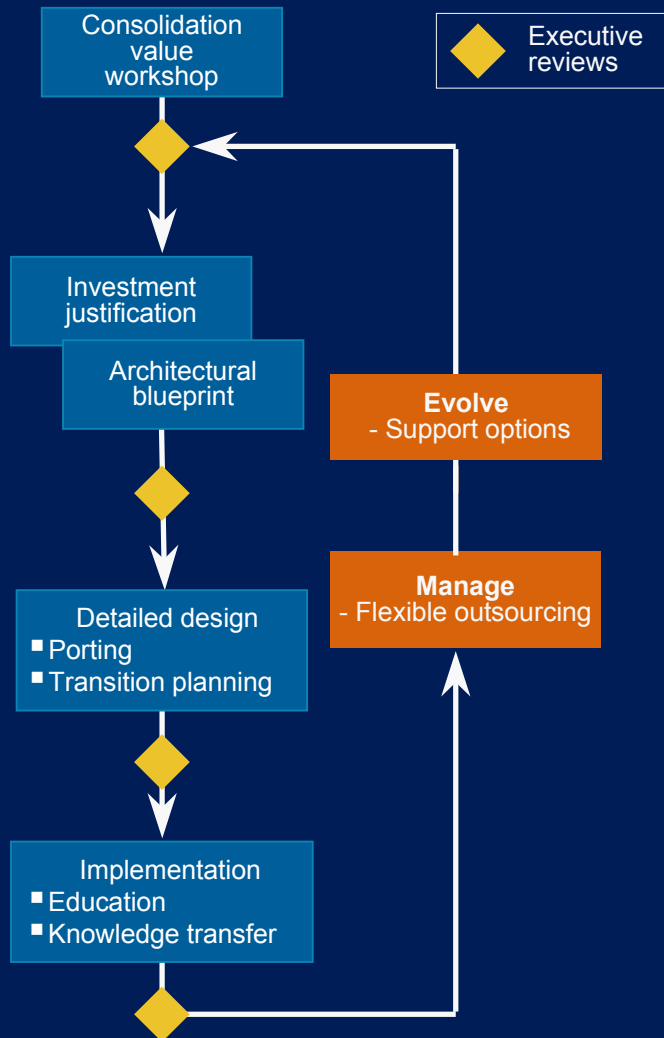


HP IT Consolidation journey

Building an adaptive enterprise

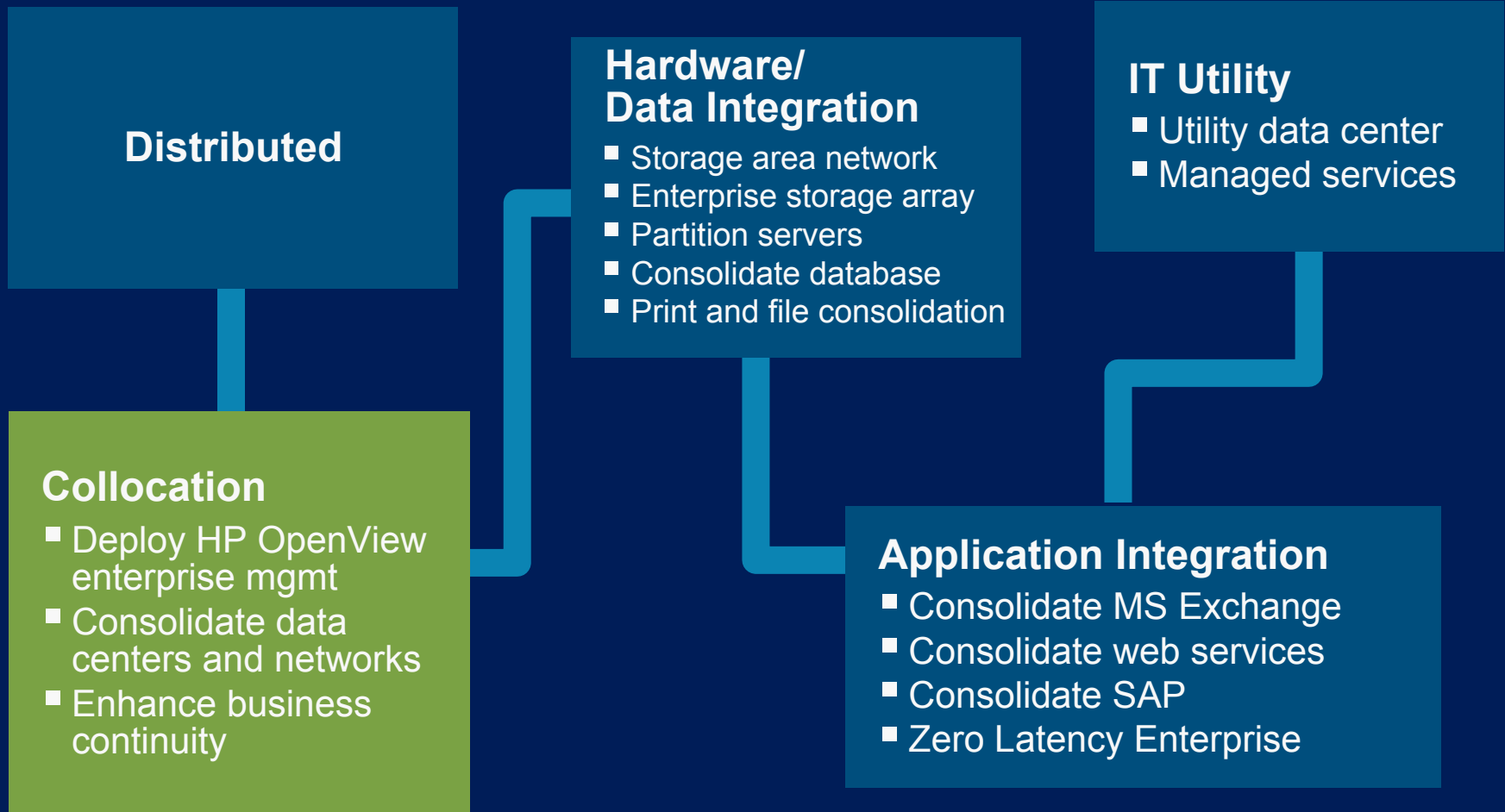


HP IT Consolidation approach



- Consensus among key stakeholders on prioritized, measurable objectives
- Areas of opportunity determine roadmap
- Iterative implementation to accelerate benefits
- Address people, process, and technology
- Ongoing executive reviews to ensure measures are met
- Flexible, your needs determine point of entry

HP IT Consolidation journey



Collocation

Situation

- Competitive pressures
- Need to significantly reduce costs
- 20+ data centers in Europe and Africa
- Business hours support
- No disaster recovery
- No standard configurations, etc.

Solution

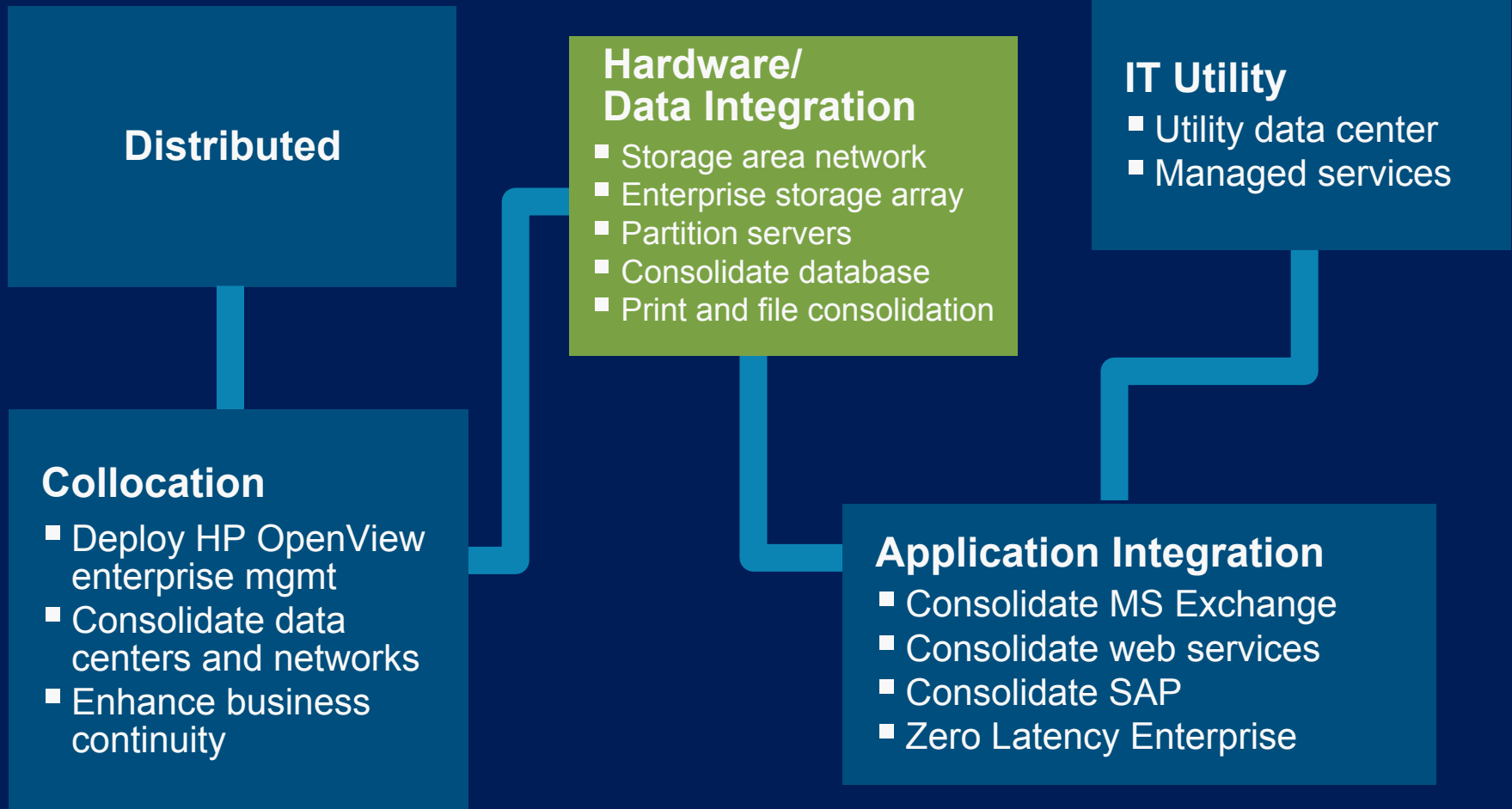
- Consolidated to two physical data centers, with automated failover—in 9 months
- Relocated servers
- Consolidated storage, backup, consoles
- Enhanced management tools
- Recommended roadmap for subsequent savings

Results

- Savings more than 10M euros per year starting at month 9
- 24x7 data center operations and support
- Resilient Infrastructure



HP IT Consolidation journey



Continental Airlines

Hardware/data integration

Situation

- Need to manage profitability in a highly leveraged business
- Cost, availability, floor space issues
- Balance business unit operations vs. need for all-in route profitability

Solution

- Provide common infrastructure, independent business unit operations
- Combine six applications into two HP superdomes with flexible “hard” partitions
- Integrate data into 10 terabyte storage area network
- Common high availability platform

Results

- Shift from fixing performance to developing new applications
- \$2.8 million one-time savings, \$1.2 million annual savings
- ROI > 100%
- Poised for growth, application integration, and future Linux/Itanium deployment



National Medical Health Card Systems, Inc



Hardware/data integration

Situation

- Fast growing business: transactions volume quadrupled in 18 months
- Need to clear pharmacy claims instantly, 7x24, with 99.999 uptime
- Desire to leverage unused storage capacity across the company
- In-sourcing strategic resources



Solution

- HP design, implementation and support services with computer design and implementation (CDI)
- HP OpenView continuous access storage appliance: heterogeneous SAN + DR
- 2 StorageWorks 7410 Virtual Arrays, XP256
- 10 HP/UX servers
- 30 HP ProLiant servers
- 11 additional ProLiant 8-way's for Oracle on Linux
- HP OpenView storage data protector
- HP Financial Services
- VMware

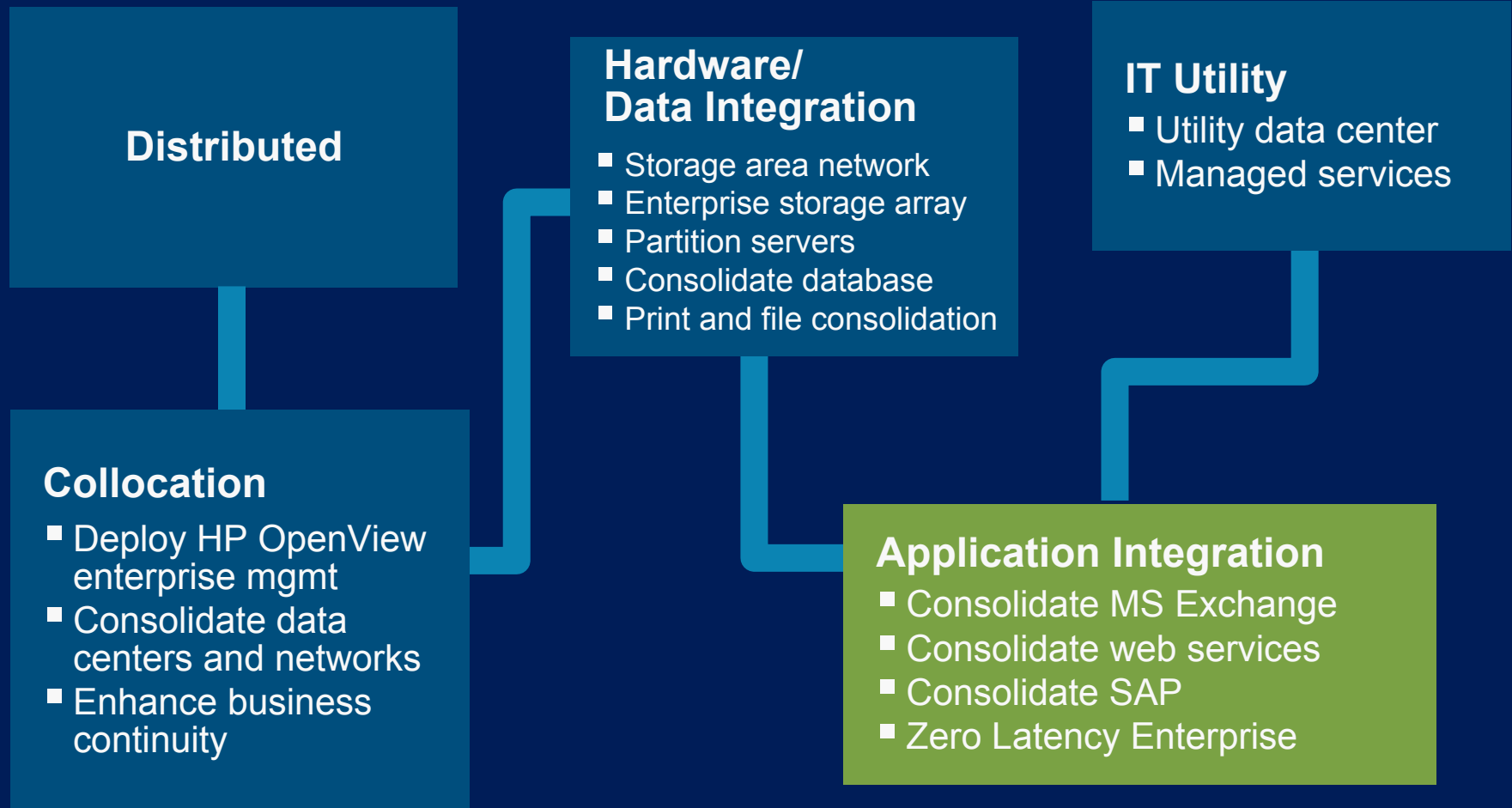
Results

- Service level delivery improved 100%
- Project completed ahead of schedule and considerably under budget
- All performance goals met
- Full disaster recovery
- Greatly simplified operations
- Unified backup across all platforms

Why HP?

- Collaborative approach
- True partnership
- Technical leadership

IT Consolidation journey



Sprint

Application integration

Situation

- Consolidate data from thousands of call detail records (CDRs) issued every second.
- Enable in-depth real-time data analysis
- Optimized network services and improve customer service
- Enhance ability to fight fraud and withstand threats to the network

Solution

- HP NonStop Zero Latency Enterprise solution
- ProLiant servers
- HP/UX servers
- HP OpenView service management
- HP services

Results

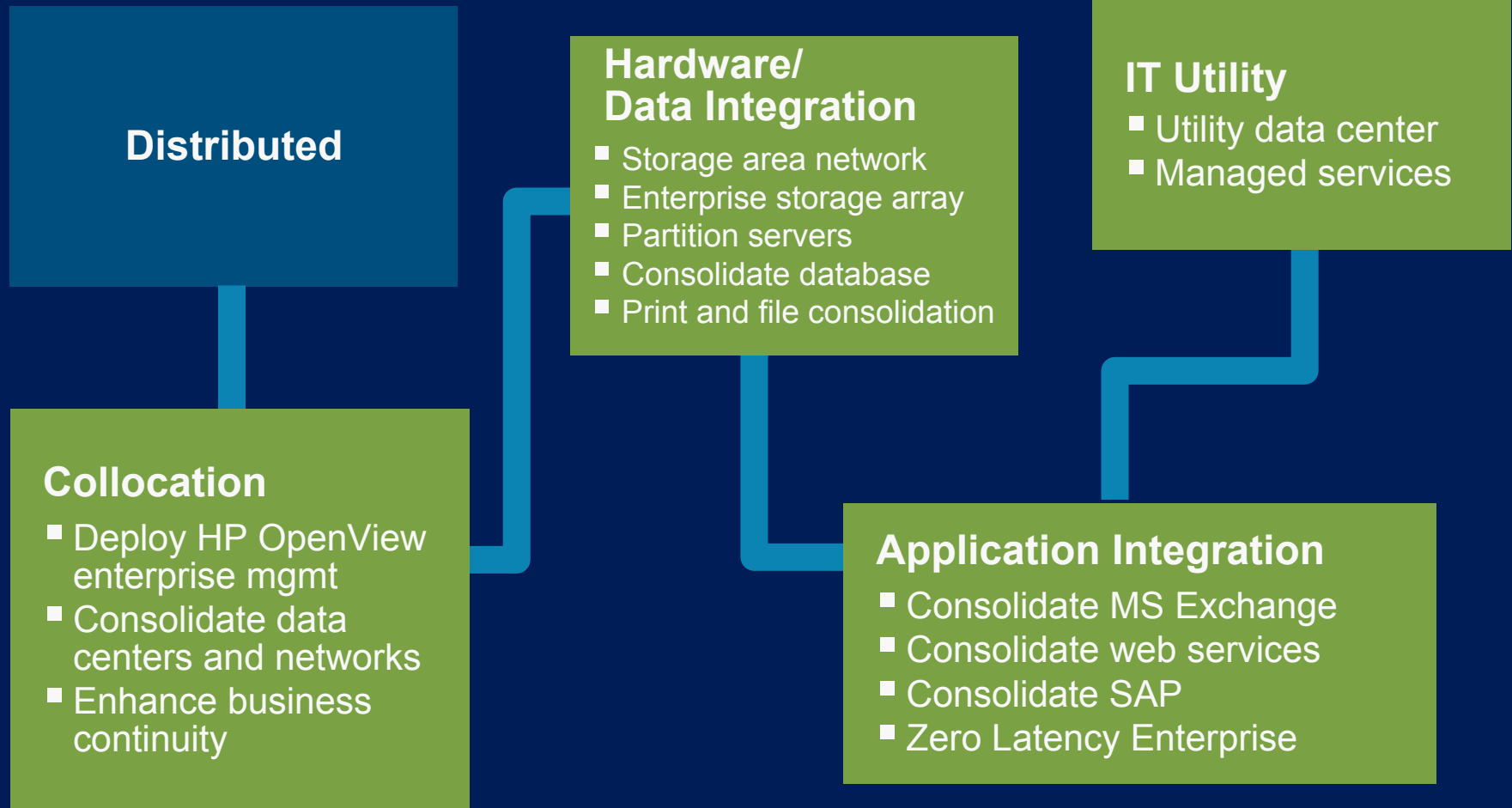
- Real time information
- Faster queries
- Reduced fraud
- Enhanced services



“HP’s ZLE architecture enables Sprint to take raw data and present it to our customers in a meaningful way.”


Kathryn Walker
SVP, Network Services

IT Consolidation journey



Delphi

IT economics – SAP: Hardware/data integration

<i>Situation</i>	<i>Solution</i>	<i>Results</i>
<ul style="list-style-type: none"> ■ Multiple SAP instances ■ Multiple data centers in multiple countries ■ Strategic focus on integrated operations ■ Out-of-date infrastructure 	<p>Adaptive Enterprise solution</p> <p>Stage 1</p> <p>Collocation</p> <ul style="list-style-type: none"> ■ Eastern and western European sites <p>Stage 2</p> <p>Hardware/Data integration</p> <ul style="list-style-type: none"> ■ 25 HP-UX and 35 HP ProLiant servers ■ 80 Terabytes of HP storage ■ HP OpenView ■ HP Enterprise disaster recovery solution <p>Application integration</p> <ul style="list-style-type: none"> ■ SAP.com and related applications 	<ul style="list-style-type: none"> ■ Substantial cost savings ■ Improved service levels ■ Flexible, integrated, secure operations
	<p>IT Utility</p> <ul style="list-style-type: none"> ■ HP Managed Services for worldwide support 	

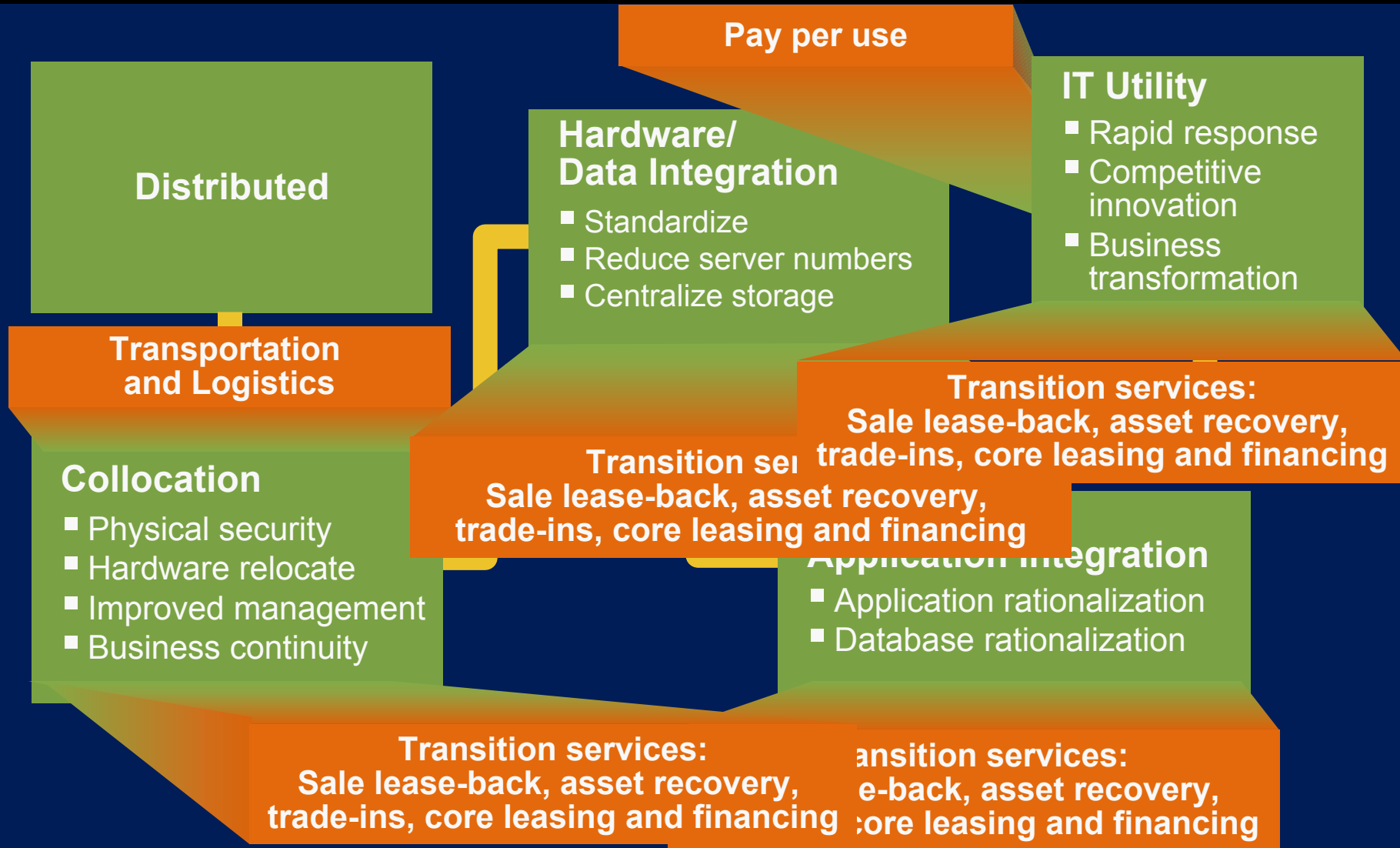
Demand More.

An agile, adaptive, open partner

- We are here for the long term
- We improve the IT Economics of the customer's business
- We collaborate to deliver personalized IT solutions
- We have the technology and services to solve the hard IT problems of today and position our customers to compete in the future
- We bring the full capability of the HP family of products, services, solutions and partnerships to make our customers successful



HP Financial Services for the journey



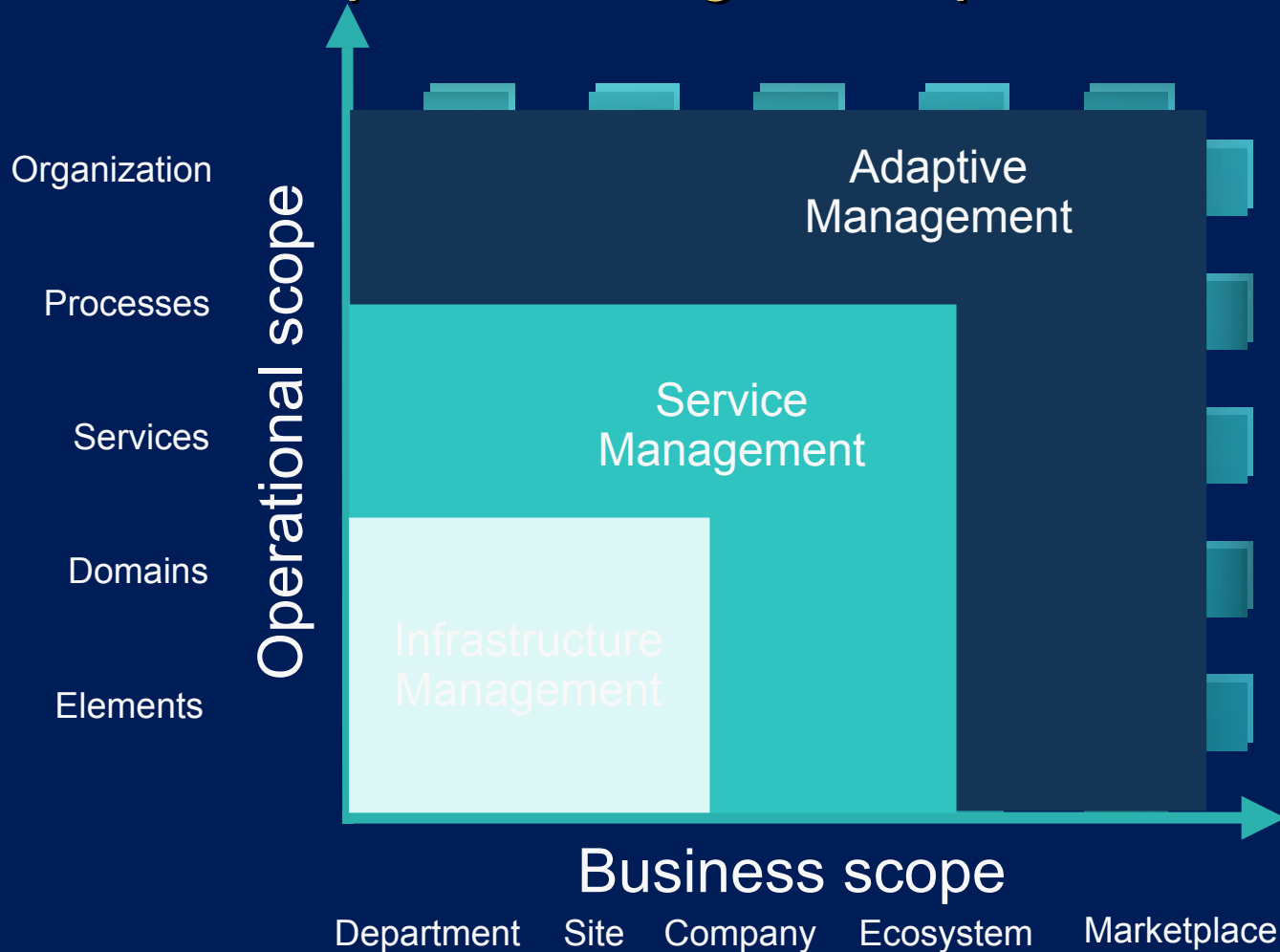
Managed Services

- Tailored SLAs to meet specific business needs
- Flexible capital investment options
 - Customer continues to own assets
 - Customer leases assets
 - Operational lease
 - Financial lease
 - Sale and leaseback
 - Assets included in service fees
- Proven capabilities
 - \$2 billion outsourcing business
 - More than 400 customers
 - More than 35,000 servers under management

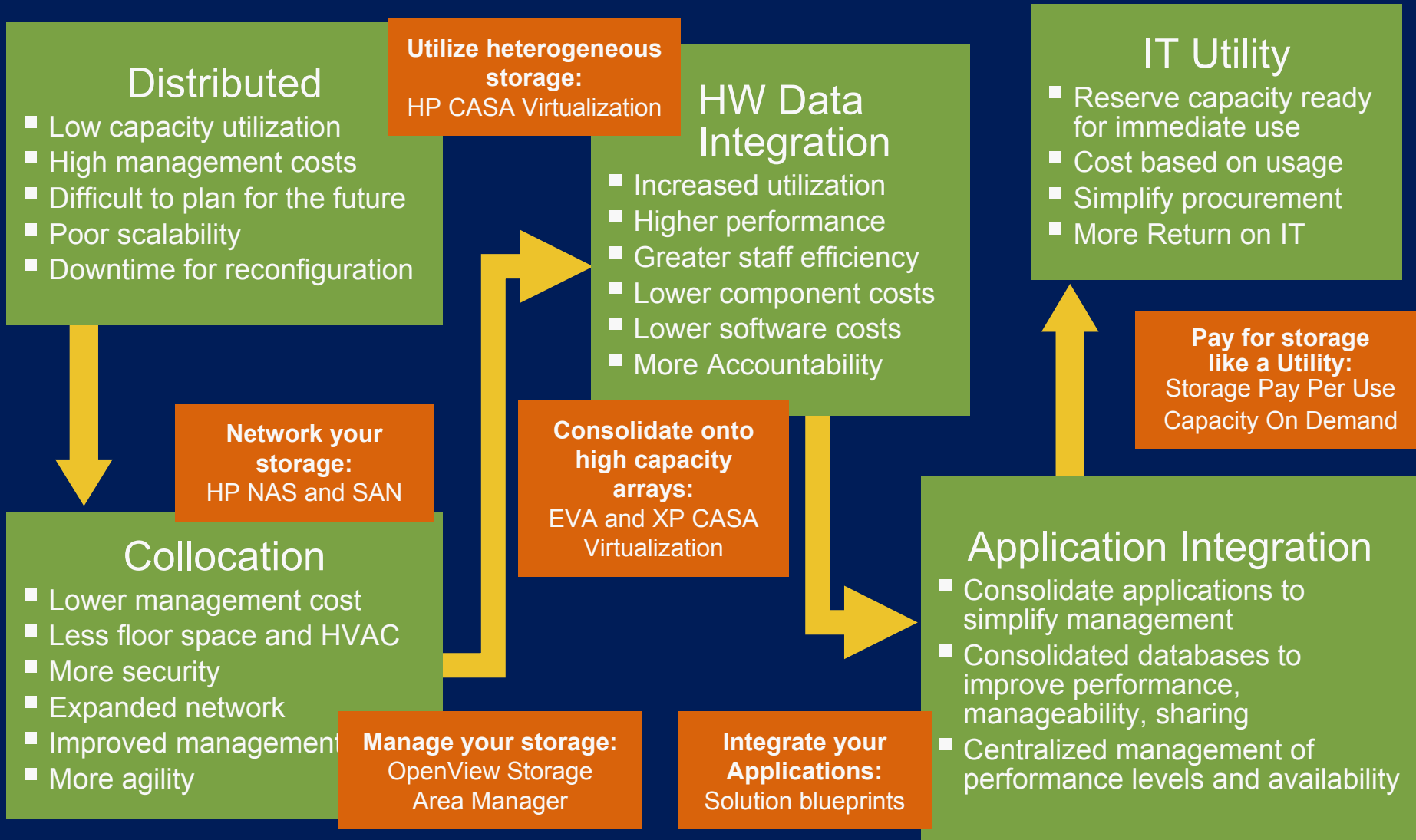


Realizing the vision...

OpenView adaptive management platform

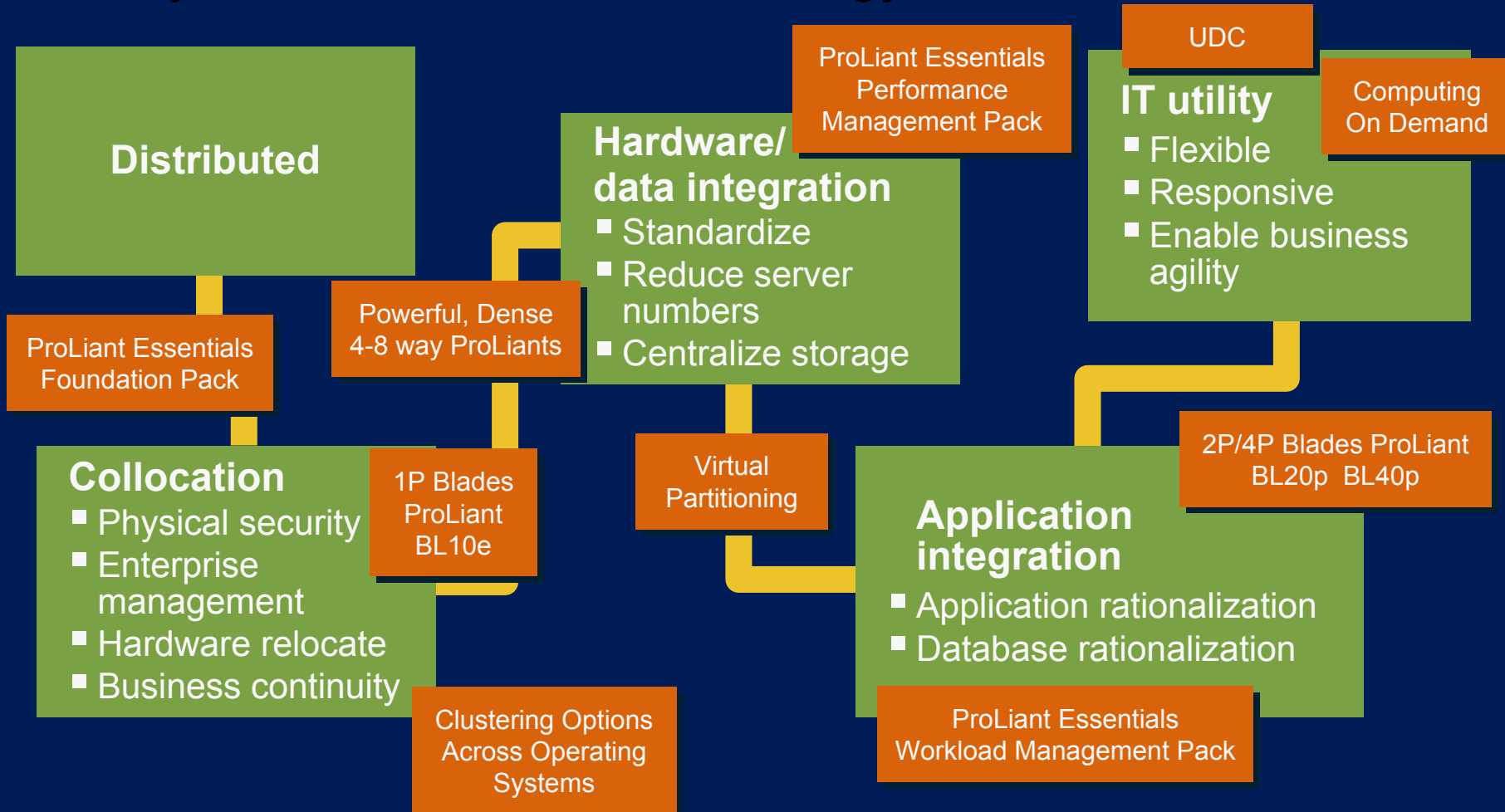


HP StorageWorks Consolidation delivers...



The IT Consolidation journey

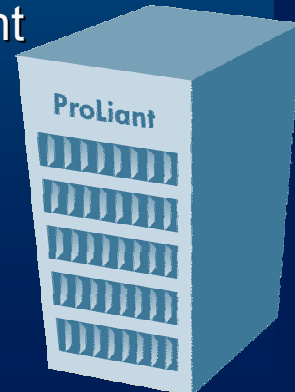
Industry standard server technology enablers



Enterprise Linux deployment

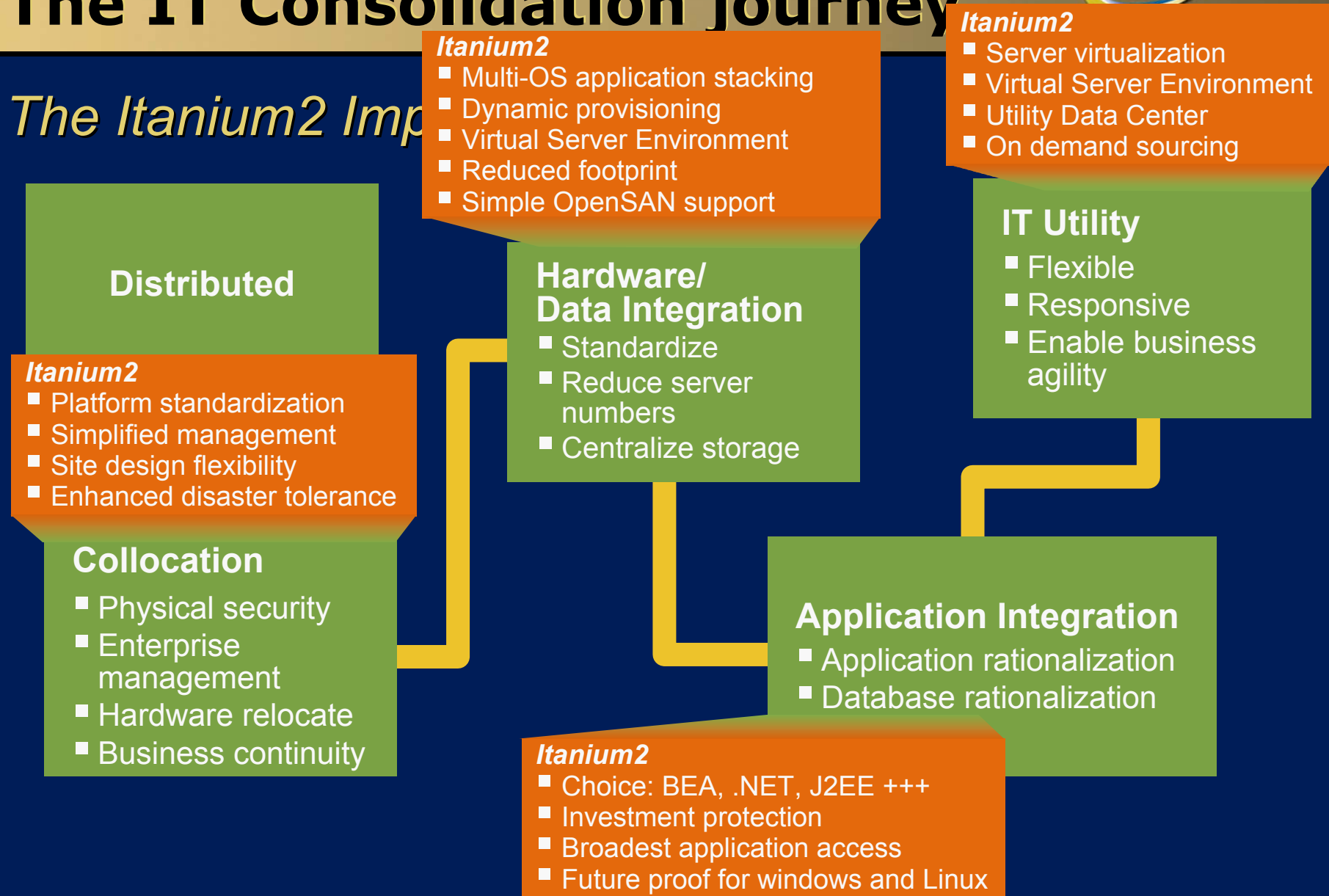
SAP and Oracle application consolidation

<i>Need</i>	<i>HP solution</i>	<i>IT economics</i>
<p>Enterprise-ready open standards computing</p>	<p>HP ProLiant Adaptive Infrastructure</p> <p>1P blades for edge of web, 2P and 4P blades for ASP, DB w/ fiber channel connect</p> <p>2, 4 and 8 way rack mount servers</p> <p>ProLiant Essentials Rapid Deployment Pack</p> <p>ProLiant Integrated Lights Out Advanced Pack</p> <p>HP Insight Manager</p> <p>SAP and Oracle</p> <p>True Linux-based utility computing – today</p>	<ul style="list-style-type: none"> ■ Linux open-standard economics ■ Lowers costs and risks while improving service levels ■ ProLiant Essentials support new levels of enterprise Linux agility <i>and</i> consistent administrative deployment practices



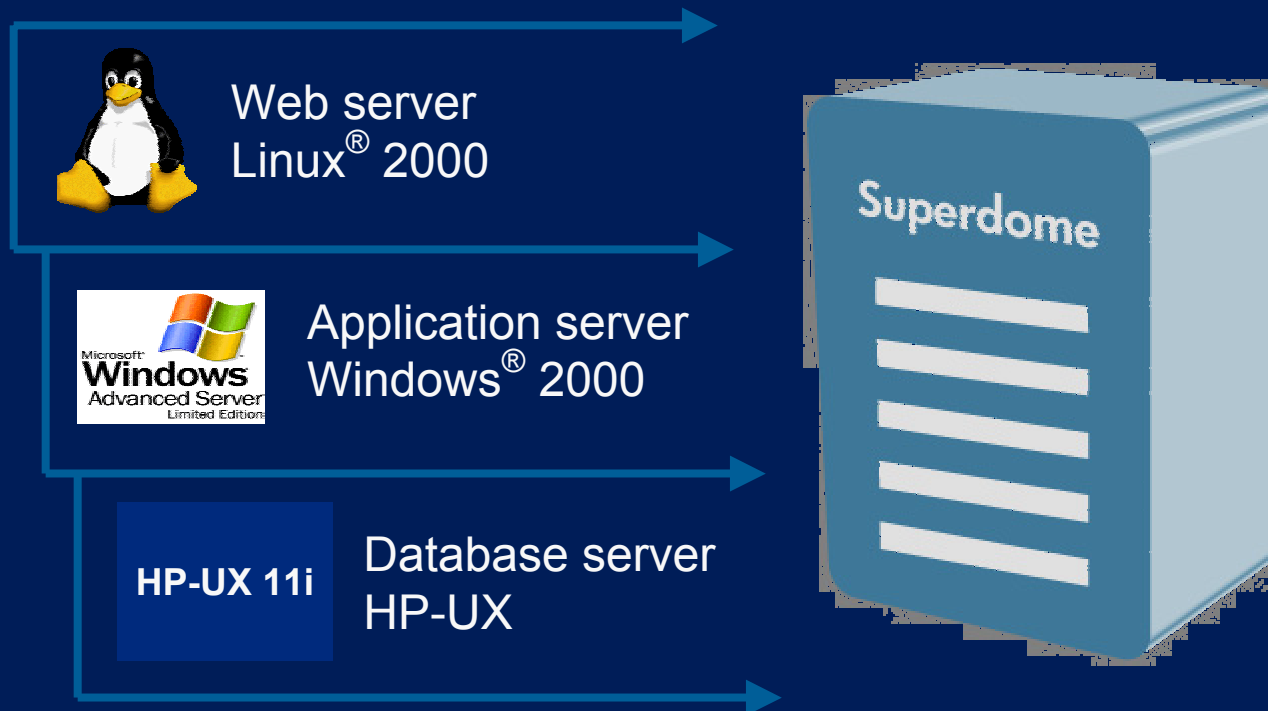
The IT Consolidation journey

The Itanium2 Impact

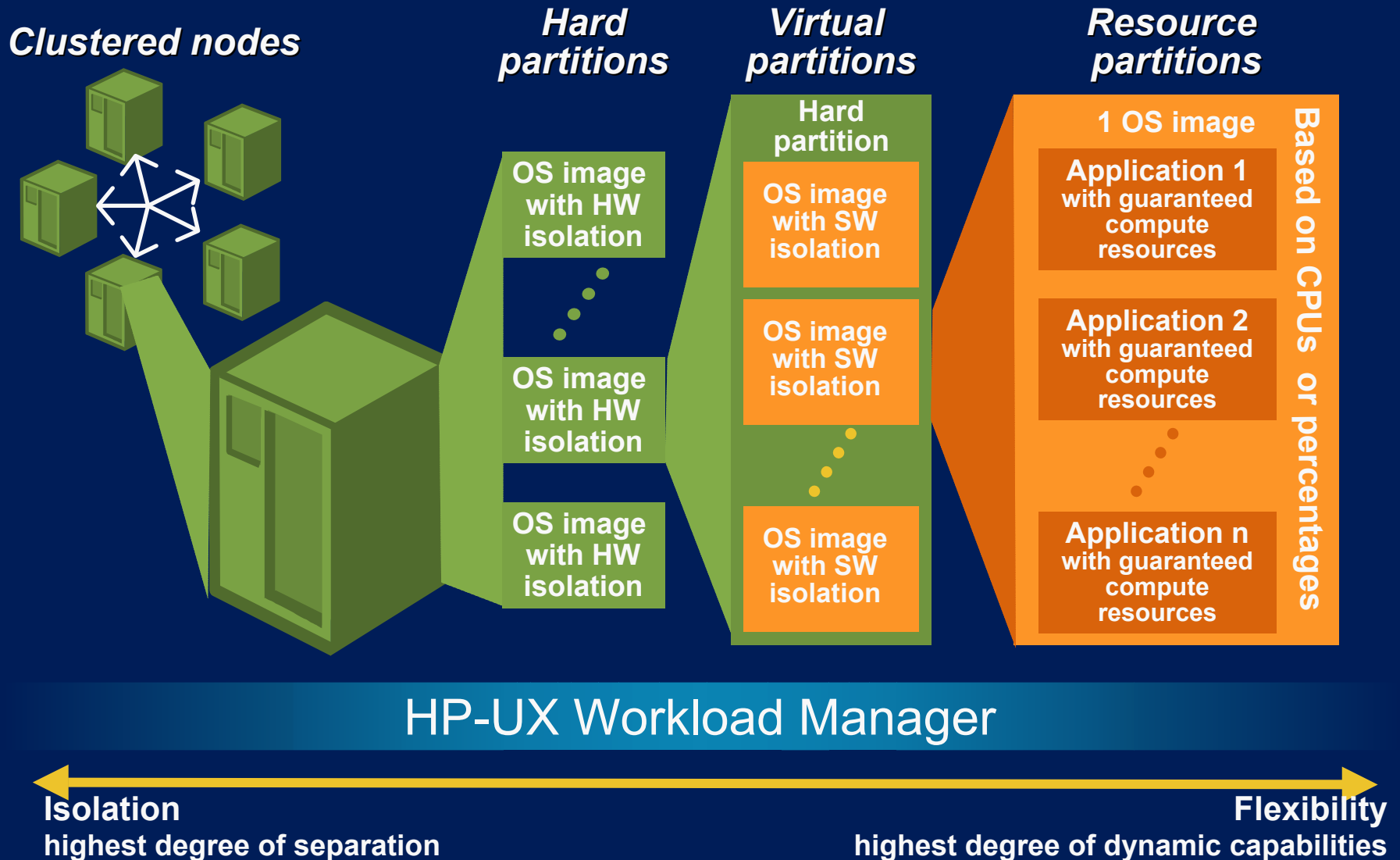


HP Integrity Superdome

A superior consolidation platform



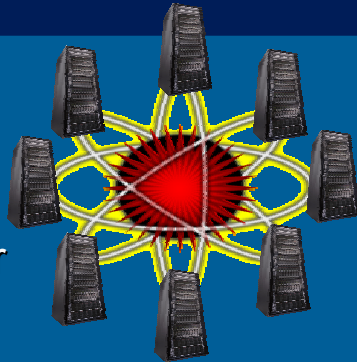
HP partitioning continuum strategy for HP-UX



Virtualization leadership in the data center

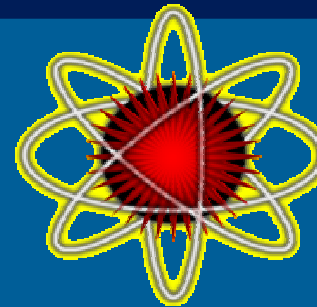
Focus on services, share resources, pay per use

- Servers
- Partitions
- Blades
- Virtual server environment



Virtual Server

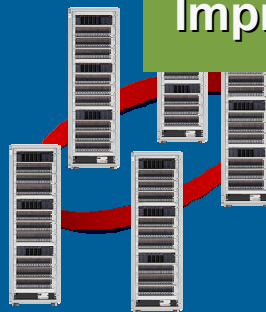
- Hubs/routers
- Switches
- VLAN



Virtual Network

**Reduces Risk
Increases Quality
Improves Agility**

- Server
- Array
- Network



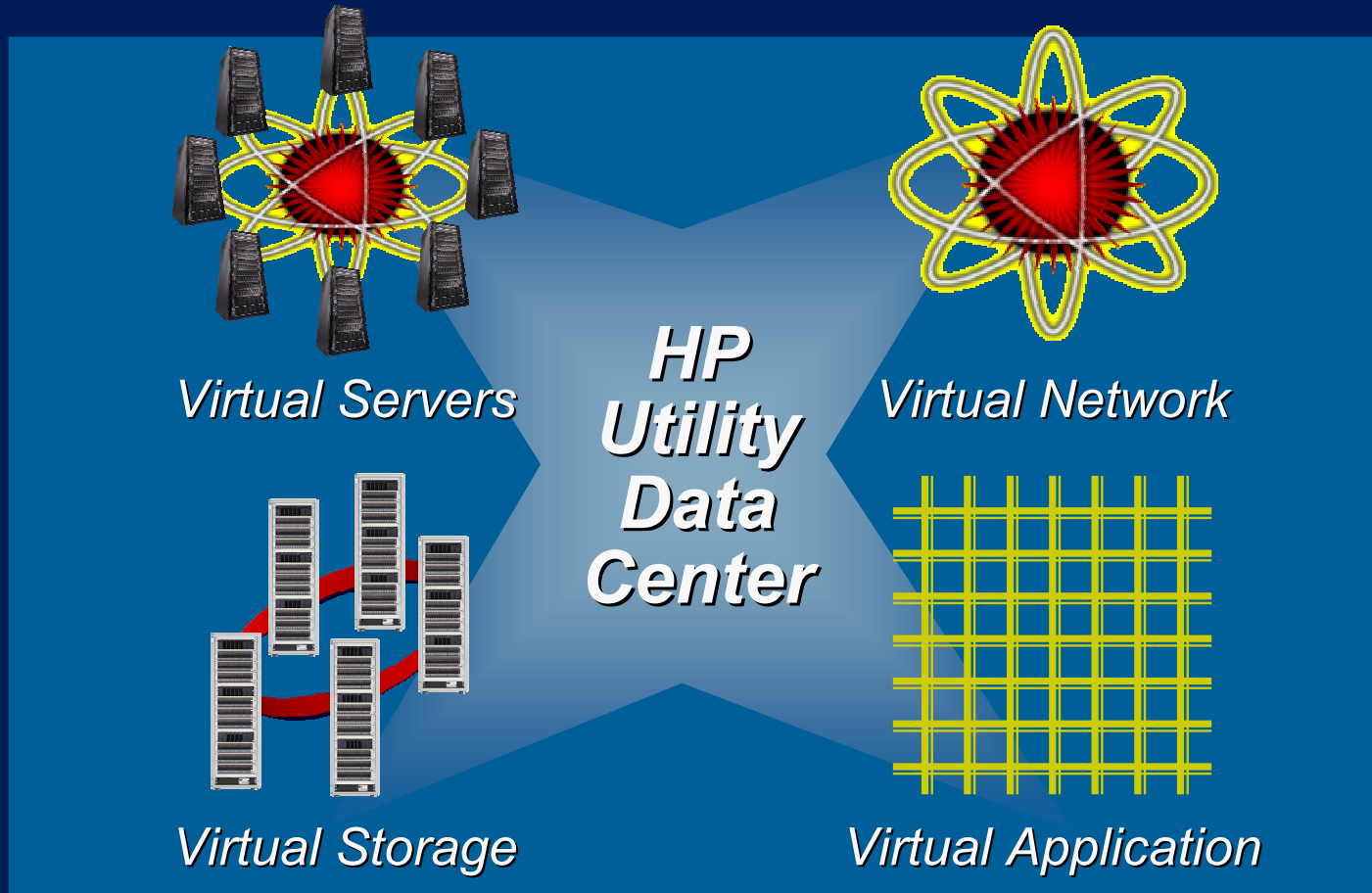
Virtual Storage

- Monolithic
- Client/server
- Web services
- OGSA
- Grid



Virtual Application

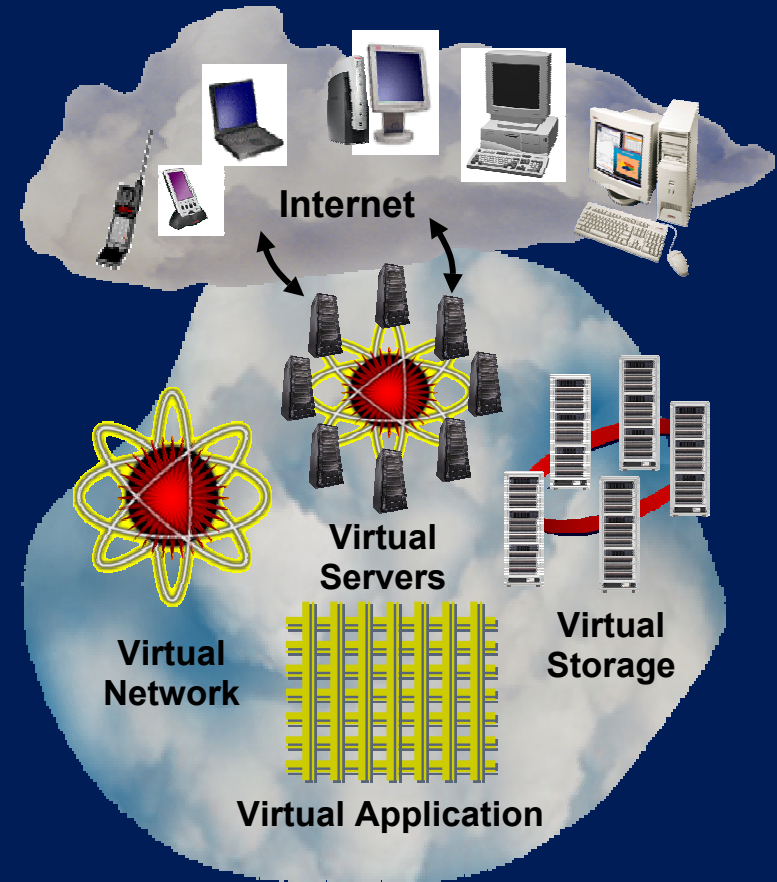
HP delivers industry-leading virtualization data center solutions



HP delivers industry-leading virtualization component solutions

- Shipped over 10,000 iCOD and PPU solutions
- Shipped over 20,000 Blade servers
 - Shipped over 50,000 Rapid Deployment Pack licenses
- Sold over 6,000 vPar licenses
- Shipped over 8,000 storage virtualization products
- Virtual server environment
 - Over 65,000 workload management and 70,000 Serviceguard licenses
- Procurve and Cisco VLAN capabilities
- BEA, Oracle, GRID standards

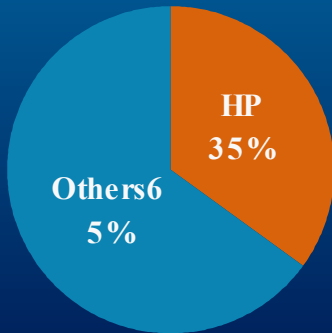
Virtualized computing



HP is the #1 partner for leading consolidation application vendors

Oracle*1

DB server



Market share by OS

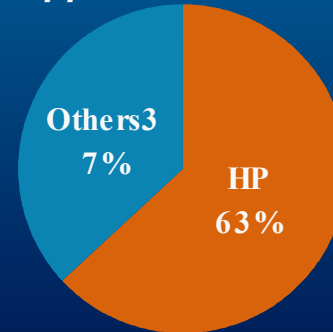
- UNIX (31%)
- Windows (49%)
- Linux (30%)

Leading database platform partner

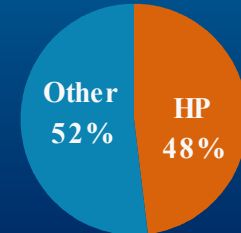
Siebel

Growth Driver

Application server



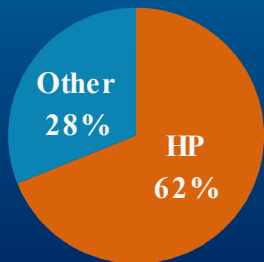
DB server



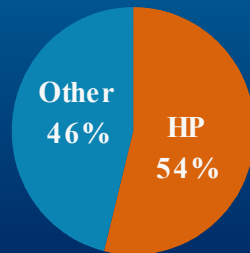
Leading share of application server license revenue in Q302

Microsoft*2

SQL server



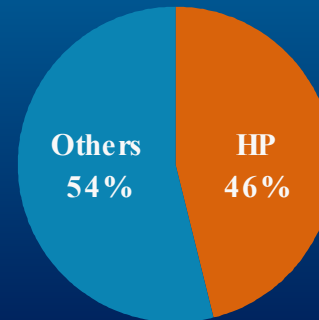
Exchange



+

SAP

All products



Market share by OS

- UNIX (39%)
- Windows (54%)
- Linux (40%)

HP leads in all product categories and OS for Q302 installations

*1 Source: December 2001 report. Application server and recent data will be available soon.

*2 SQL Server as of 12/01, Exchange as of 2/02. Share data not available for recently acquired SMB applications.

A global partner with a collaborative approach

Everywhere you need us

- 65,000 IT professionals in 160 countries around the world
- #1 in services across open IT environments
- #1 in enterprise Microsoft® services
- #1 ranked outsourcing company
- #1 in mission-critical services



IT consolidation... why HP?

Business-value driven

- Cost, service level, agility

Infrastructure expertise

- Across the journey

Open, industry standard

- Open Servers, OpenSANs
- Linux, UNIX, Windows 2000, OpenVMS, HP nonstop
- Microsoft, Oracle, and SAP

Virtual resources

- Servers, storage, networking

Comprehensive

- Management, security, availability, business continuity





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