HP Integrity Server

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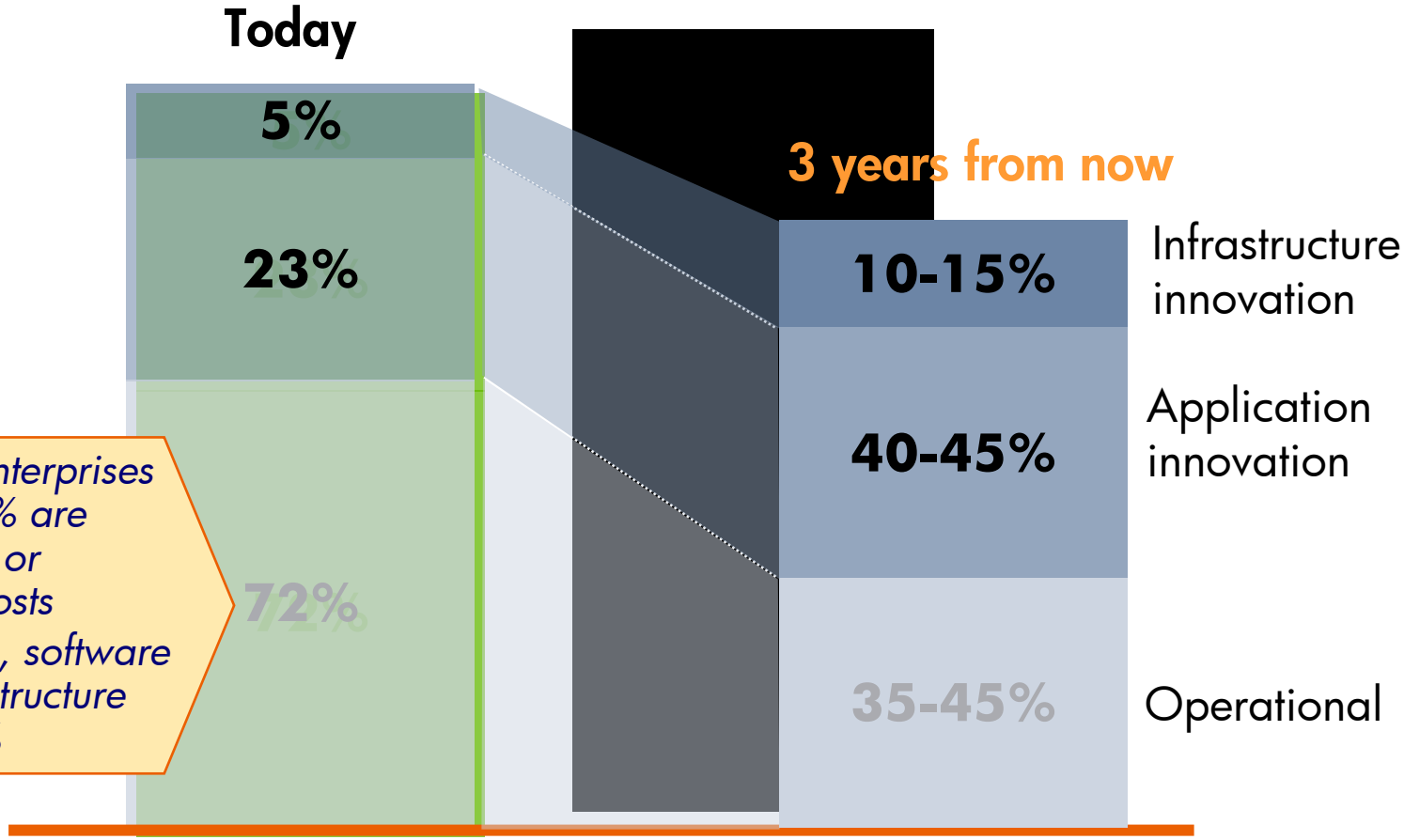
HP Integrity Server

hp

Reduce the cost AND increase the value of IT

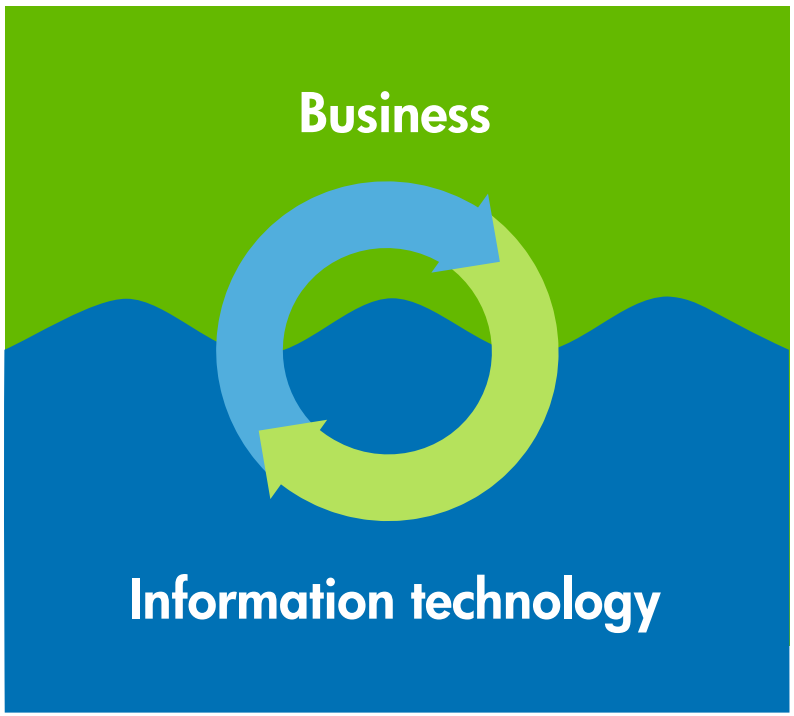


- *In large enterprises up to 75 % are personnel or services costs*
- *Hardware, software and infrastructure only 25 %*

How can we move to a sustainable cost structure?

The Adaptive Enterprise

Business and IT synchronized to capitalize on change



Delivers: Simplicity, Agility, Value

Standardization

Leverage common components and processes to reduce cost, simplify change

Virtualization

Utilization is optimized and IT supply meets business demand

Management

Automate the dynamic link between business and IT

HP Server und Storage Portfolio
Das breiteste Angebot für Enterprise-Anwendungen

Access

ProLiant DL/ML 100 & 300 series

Integrity rx5670

ProLiant BL e-Class

Integrity rx4640

Integrity rx26x0

Integrity rx16x0

rp4440

rp5430/70

rp2430/70
Rp3410/3440

AlphaServer DS series

Application

ProLiant DL/ML 500 series

ProLiant BL p-Class

Integrity rx8620

Integrity rx7620

rp84xx

rp74xx

AlphaServer ES series

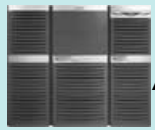
NonStop S76 series

Database

ProLiant DL 700 series

Integrity Superdome

HP 9000 Superdome


AlphaServer GS series

AlphaServer SC series

NonStop S76000/S86000

Multi-OS

HP-UX 11i

Microsoft Windows Server 2003

OpenVMS

NonStop OS

Tru64

SAN Infrastructure / Software / Media / Options

StorageWorks

CASA

Optical family

XP series

ESL series

EVA series

MSL series

VA series

Tape Autoloader series

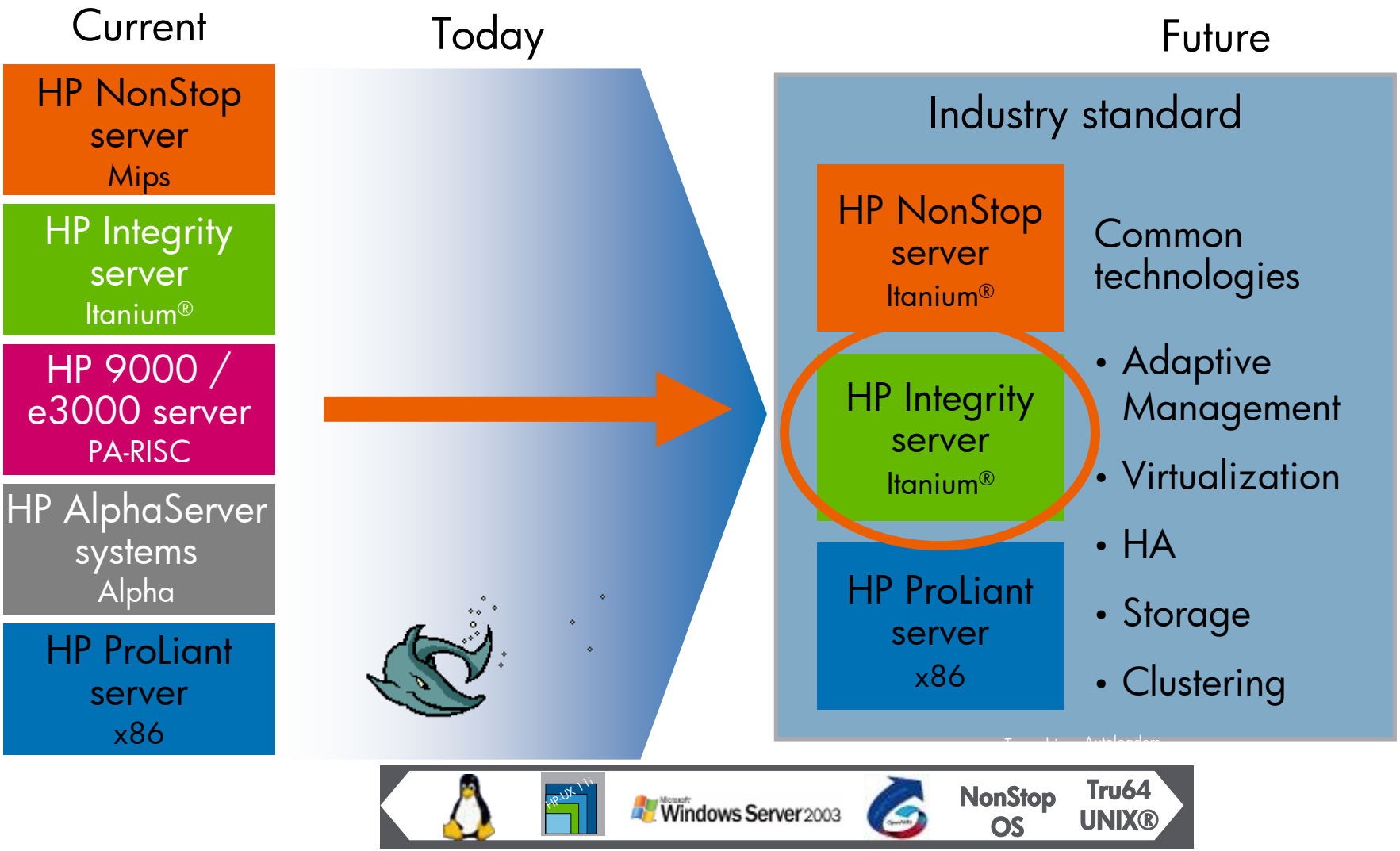
MSA family

NAS family

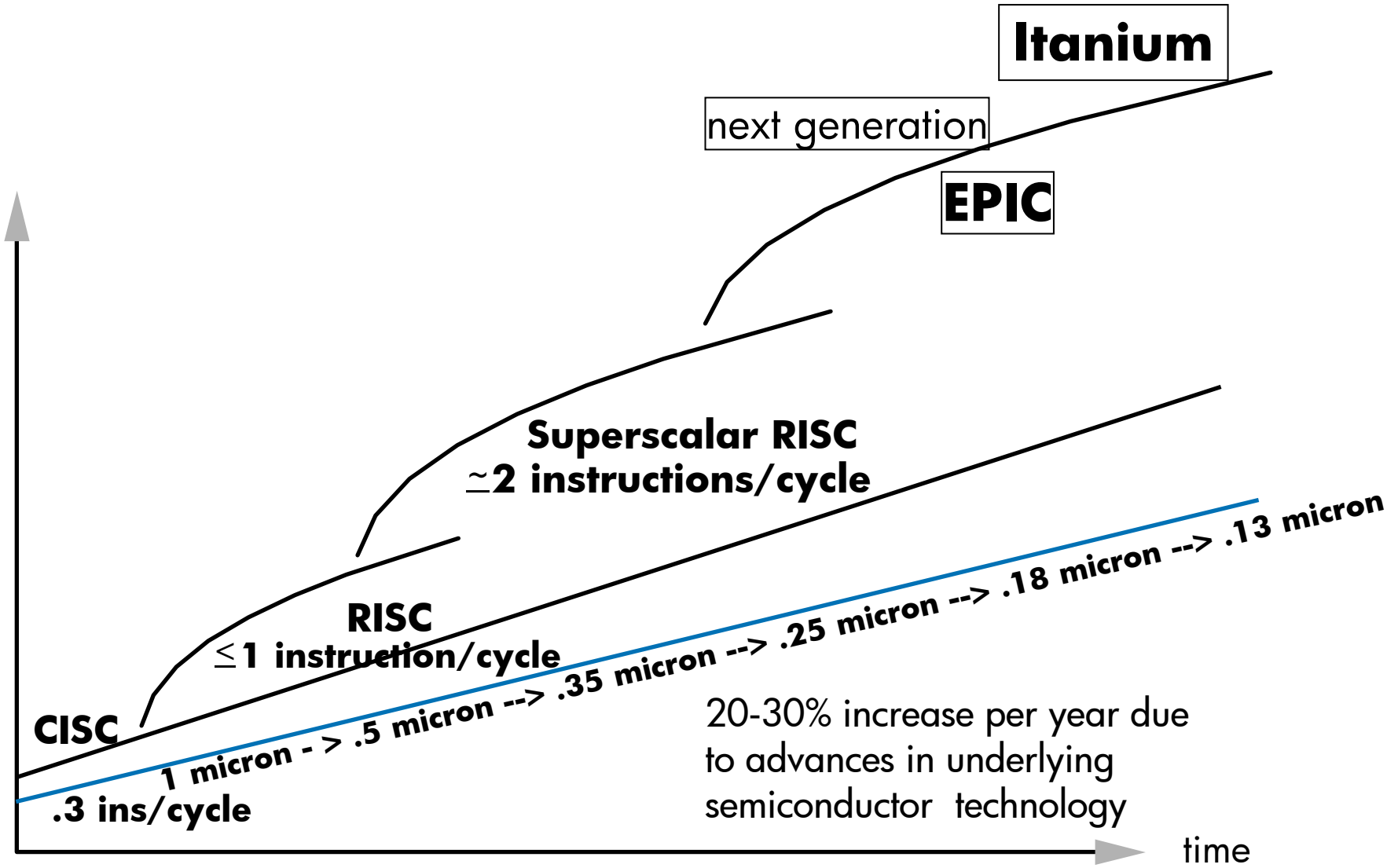
Tape drive families

BCS Migration Scenario based on Standards

Moving to 3 leadership product lines – built on 2 industry standard architectures

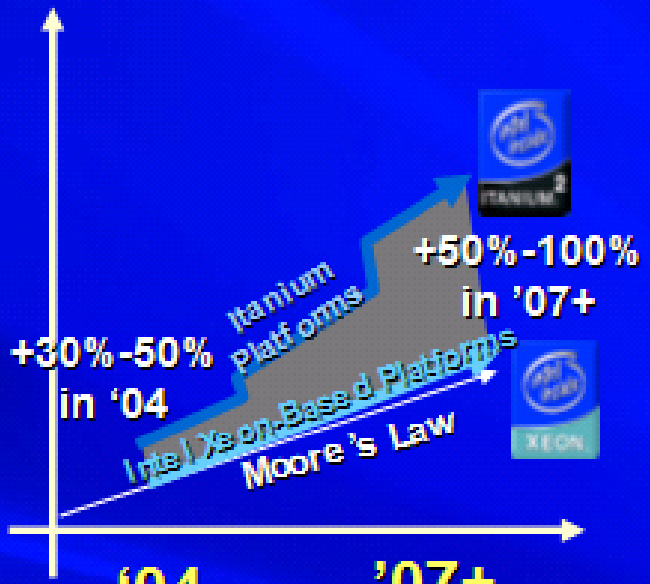


Processor architecture evolution



Itanium® 2 & Xeon™ Processor MP Comparison

Performance



*For Enterprise & Technical Computing Application Segments

Today:
30-50% higher performance

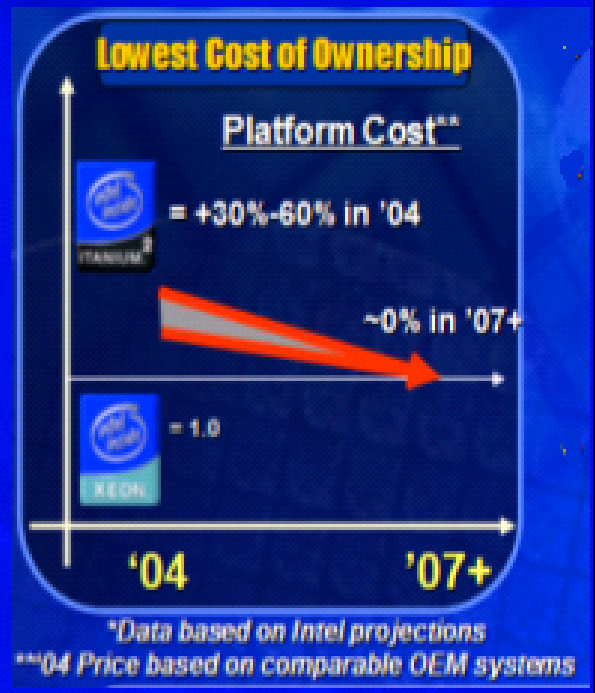
2007+:
Up to 2x performance at same system price

Reliability

Characteristic	Itanium® 2	Xeon™ MP
Error recovery on data bus-ECC	✓	
Internal soft error logic check	2005	
Machine Check Architecture	✓	
Bad data containment	✓	
Cache Reliability	2005	
Lockstep support	✓	✓
Memory SDEC, retry double-bit	✓	✓
Memory spares	✓	✓
Partitioning	✓ node	✓ node

High-end "RISC"-level RAS

Price



Itanium's EPIC Architecture:
Highest Performance, Reliability, Scalability

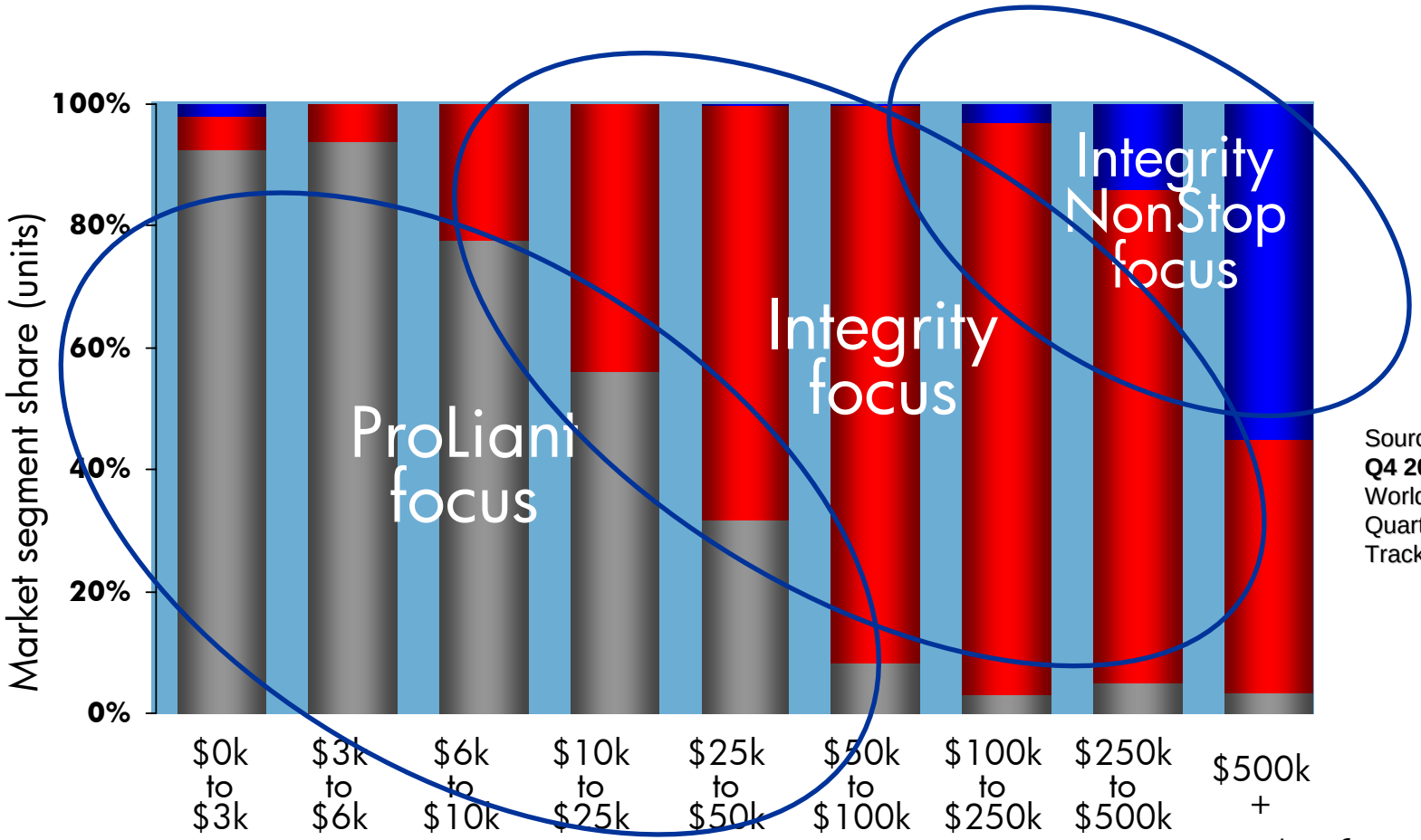
intel

*Other names and brands may be claimed as the property of others.

Enterprise Platforms Group

Customers are deploying different classes of servers

one size does not fit all needs



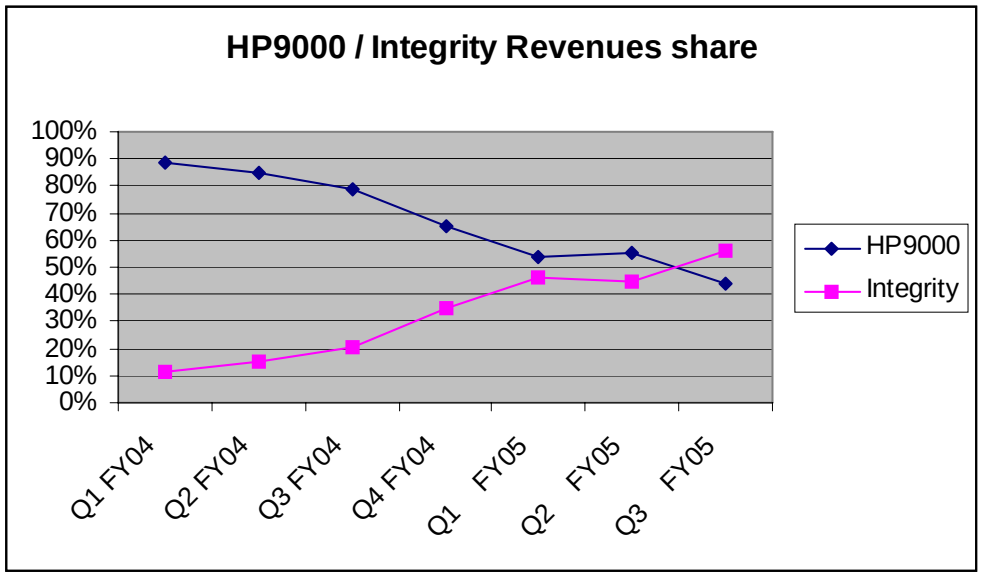
Source: IDC **Q4 2004** Worldwide Quarterly Server Tracker

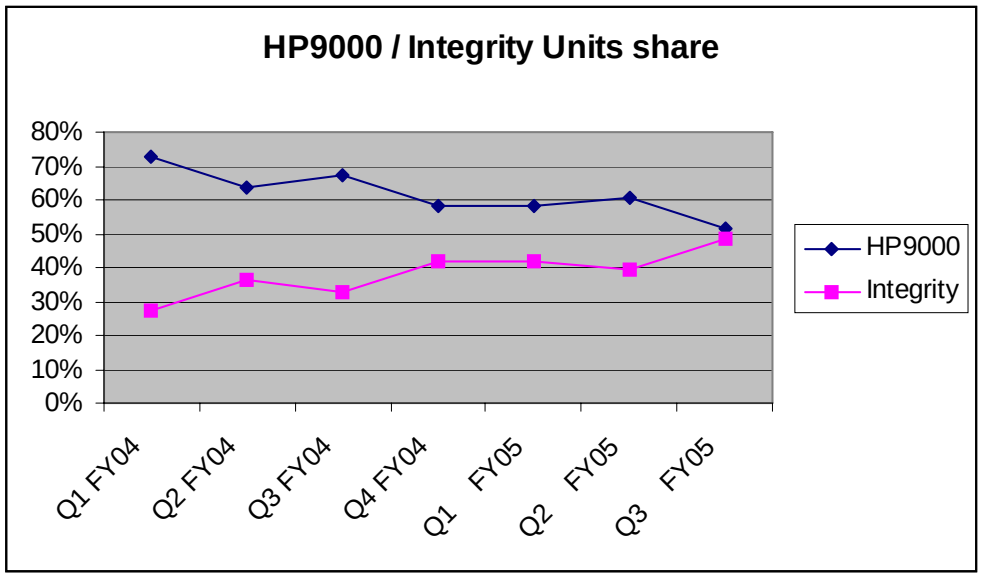
- *Based on **factory revenue***

X86: $21.8bn market *(for cy2004)*	RISC/EPIC: $19.8bn market *(for cy2004)*	CISC: $7.5bn market *(for cy2004)*

HP Restricted – For HP and Partner Internal Use Only

HP9000 / Integrity Revenue & Unit Share





Intel® Itanium® Processor Family Roadmap

	2004	2005	2006	2007	Future
Leading Performance					
4S+	**Itanium® 2** Processor (Madison 9M) *1.6 GHz, 9M*	**Montecito** *Dual Core, 24MB Multi-threading*	**Montvale** *Dual Core, Multi-threading*	**Tukwila** *Multi-core*	**Poulson**
Leading $/FLOPS					
2S	**Itanium® 2** Processor (Fanwood) *1.6 GHz, 3M, DP*	**Millington** *DP, Montecito-based*	**DP Montvale** *DP, Montvale-based*	**Dimona** *DP, Tukwila-based*	**Future** *DP, Poulson-based*
Lower Power					
2S	**LV Itanium® 2** Processor (LV Fanwood) *1.3 GHz, 3M, DP*	**LV Millington** *DP, Low Voltage, Montecito-based*	**LV Montvale** *DP, Low Voltage, Montvale-based*	**LV Dimona** *DP, Low Voltage, Tukwila-based*	**Future** *DP, Low Voltage, Poulson-based*

New Technologies

- Multi-core
- Multi-threading
- Dynamic performance boost (Foxton)
- Dynamic power management (DBS)
- Cache reliability (Pellston)
- Intel® Virtualization Technology
- Multi-core enhancements
- Enhanced RAS
- Enhanced virtualization
- Enhanced I/O & memory
- Common system architecture w/ Intel® Xeon™

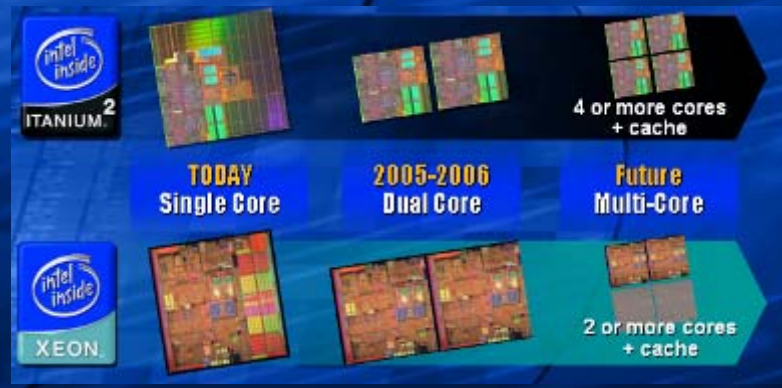
All products, dates, comparisons, and information are preliminary and subject to change without notice.

Long Term Goal: 1M Transactions per Minute

Today → In 2007

With planned performance improvements, a 4-way Itanium®-based server in '07 could deliver equivalent OLTP of a current 64-way system, delivering dramatically

- **Lower TCO**
- **Lower power consumption**
- **Higher density**



Shown are representations of 64-way system (today) and 4-way system (2007). Not to scale.

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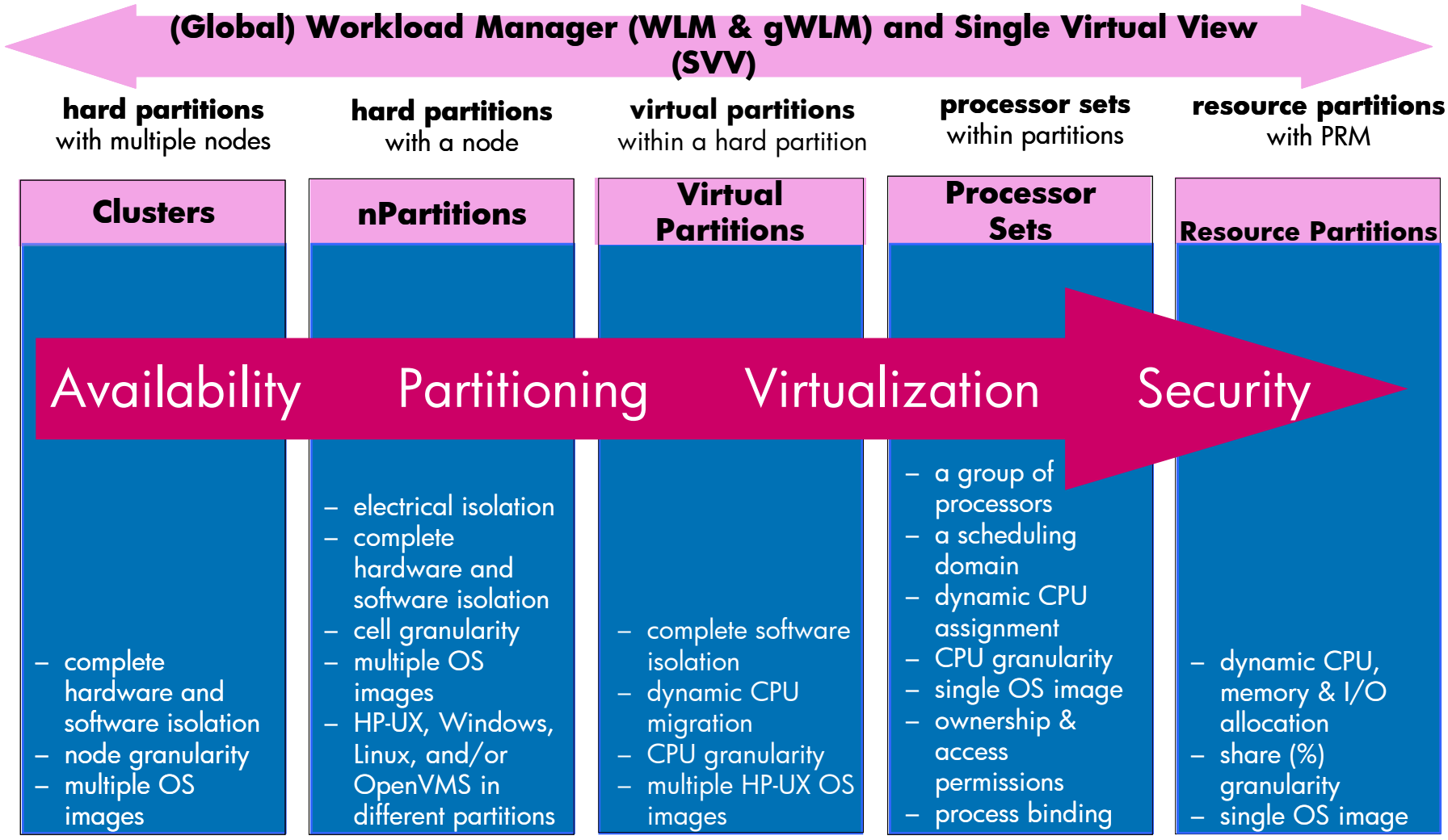
HP Virtual Server Environment



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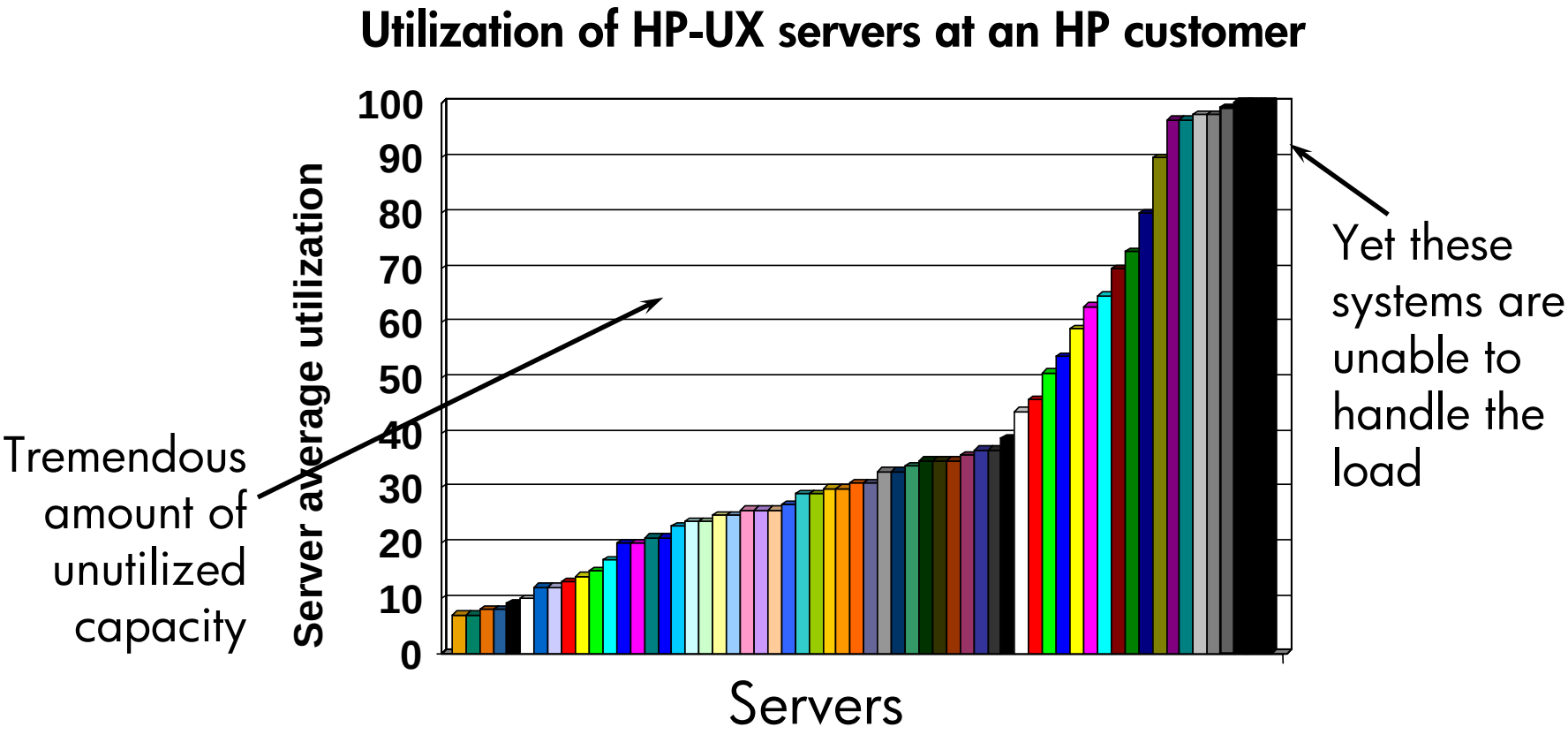
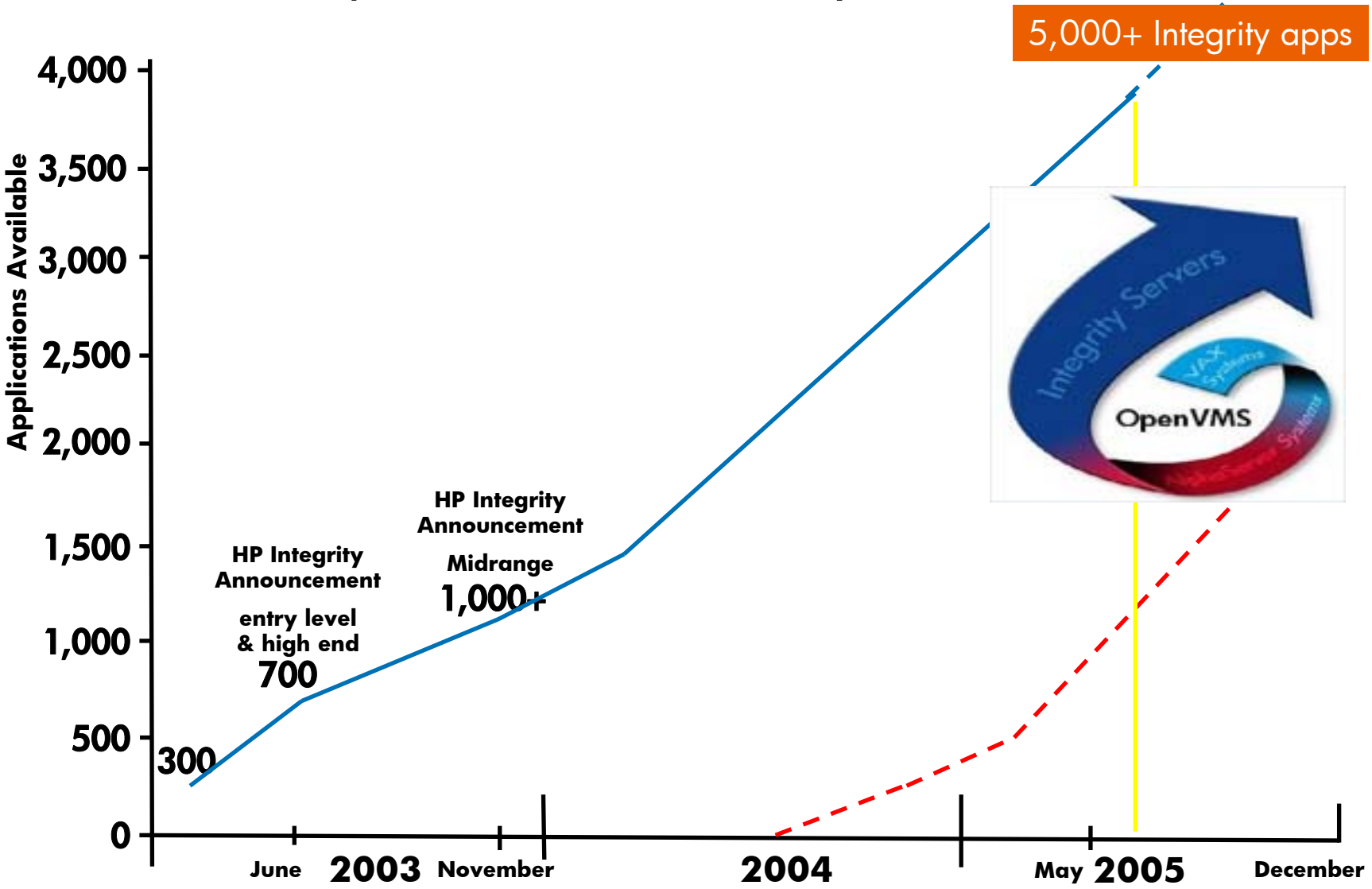
Challenge

Enterprises have unused server capacity yet still can't meet demand



Most reports put average utilization at approx 25% - 30% for Unix servers

ISV momentum for HP Integrity servers
Itanium ISV portfolio availability now 5.000+