

Alberto De Angelis

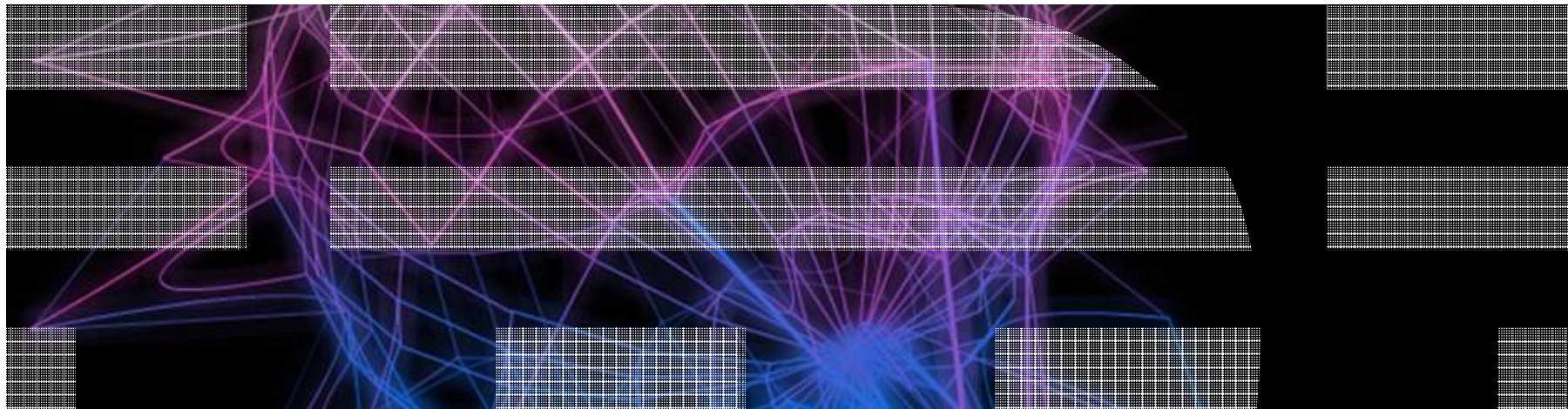
Manager of Power Systems, IBM



Venezia, 14 ottobre 2010

IBM POWER7

Grandi novità per dare potenza al tuo business

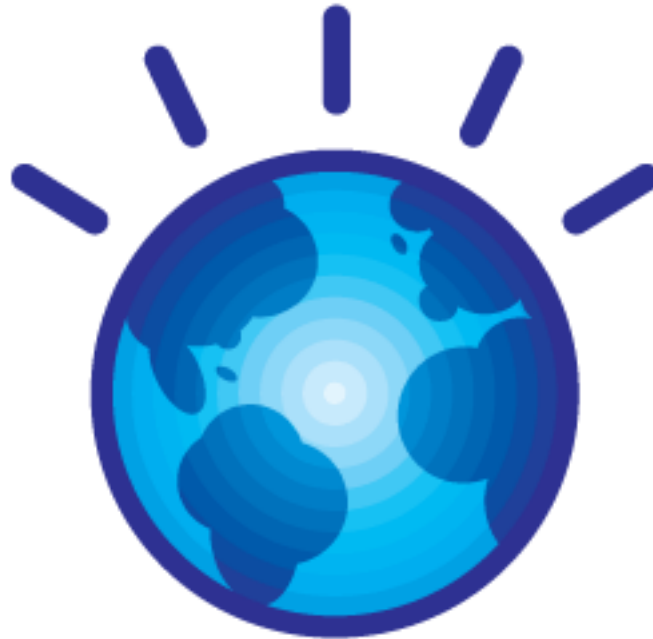


IBM SmarterSystems

Agenda

- ✓ Power System Strategic Evolution
- ✓ Power System News
- ✓ Power System Express Services
- ✓ IBM i Offerings
- ✓ Power Systems: integrated value
- ✓ Events update
- ✓ Power 795

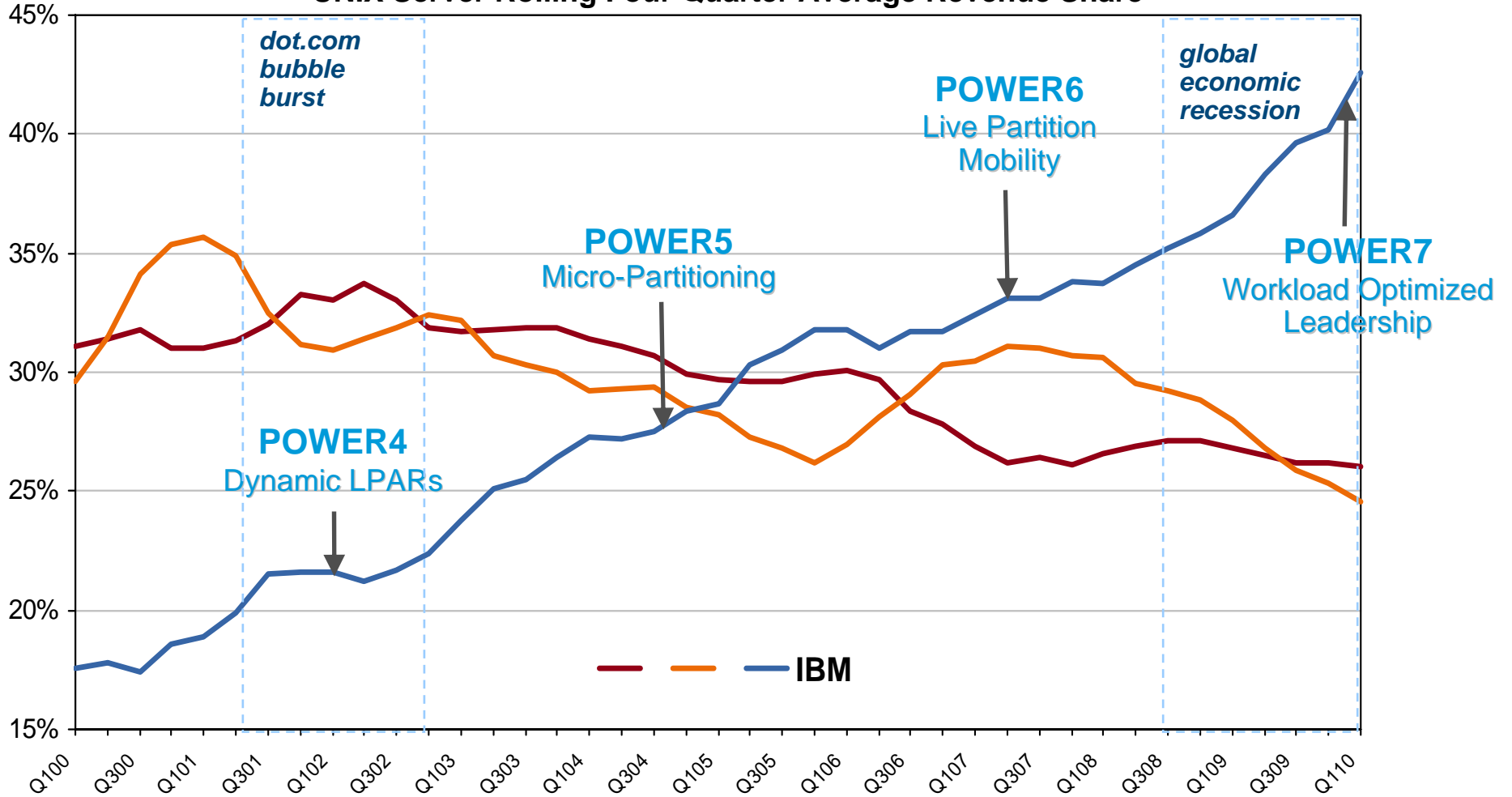
Power Systems Strategic Evolution



IBM'S 10-year march to UNIX leadership

...the largest shift of customer spending in UNIX history

UNIX Server Rolling Four Quarter Average Revenue Share

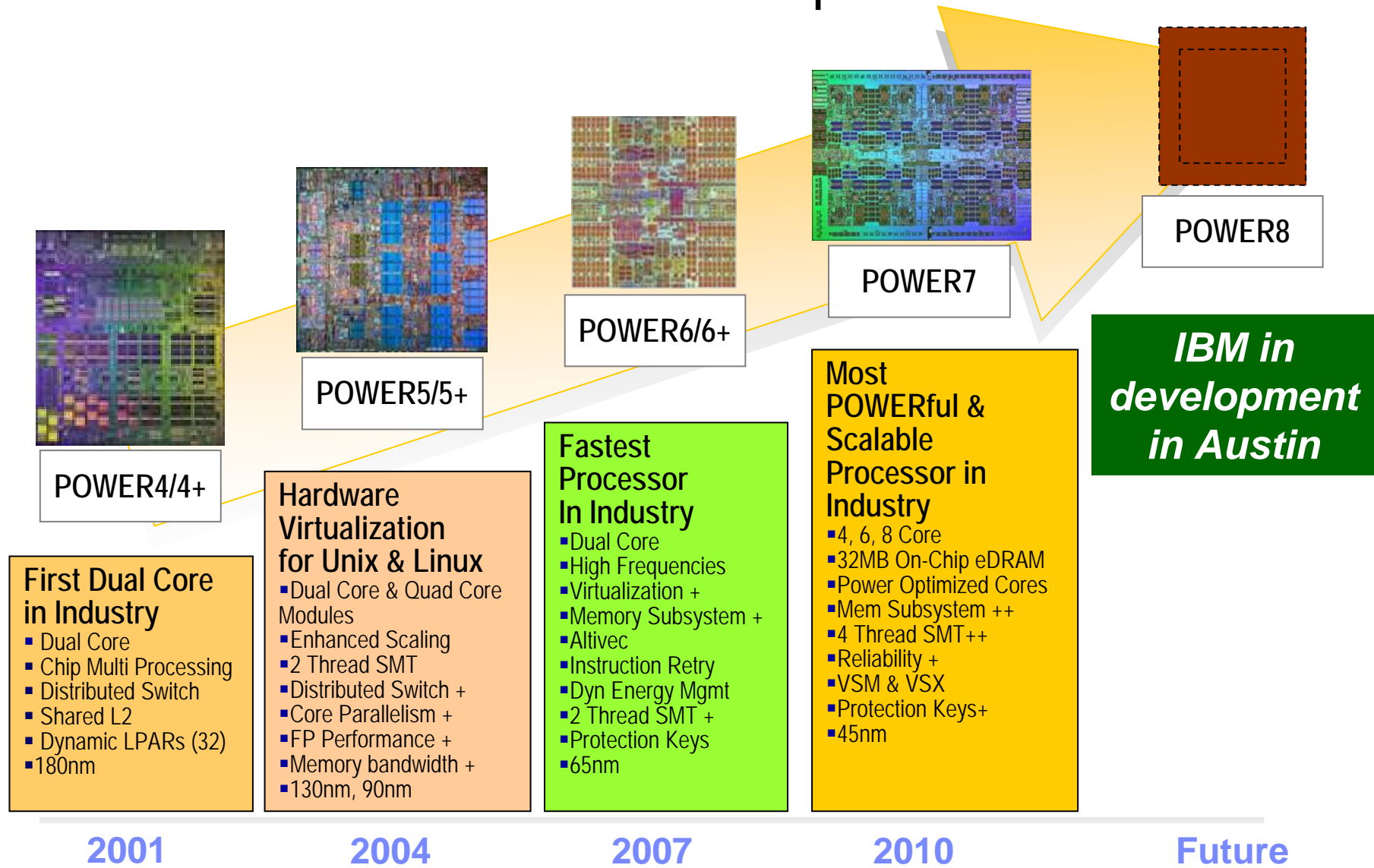


Source: IDC Server Tracker, May 2010

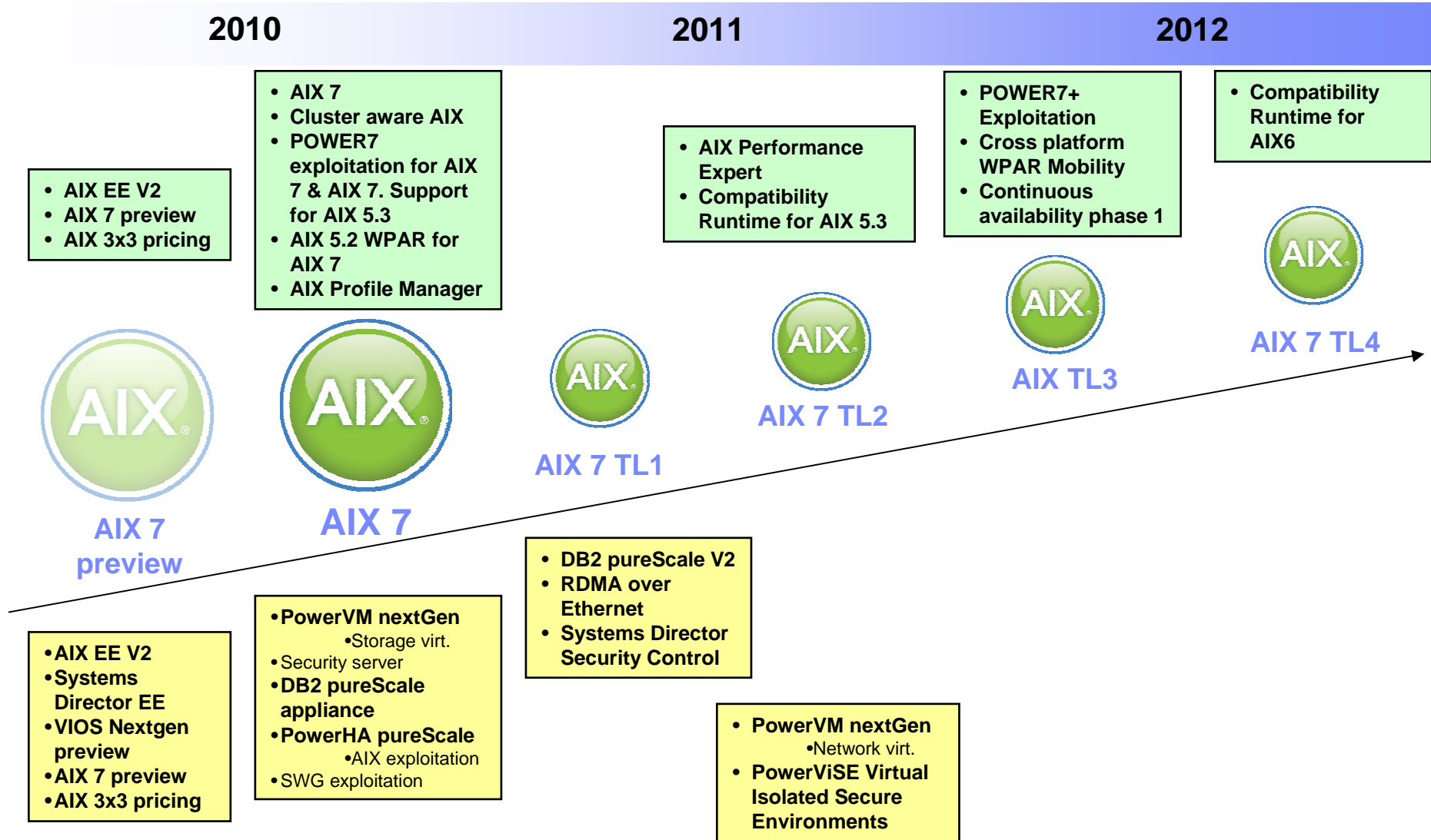
IBM Technology and Key Differentiators

- Roadmap
- Performance
- Asset Utilization: Virtualization and System Software
- Stability and Security
- Reliability, Availability and Serviceability (RAS)
- Energy Usage
- TCO

IBM POWER Processor Roadmap

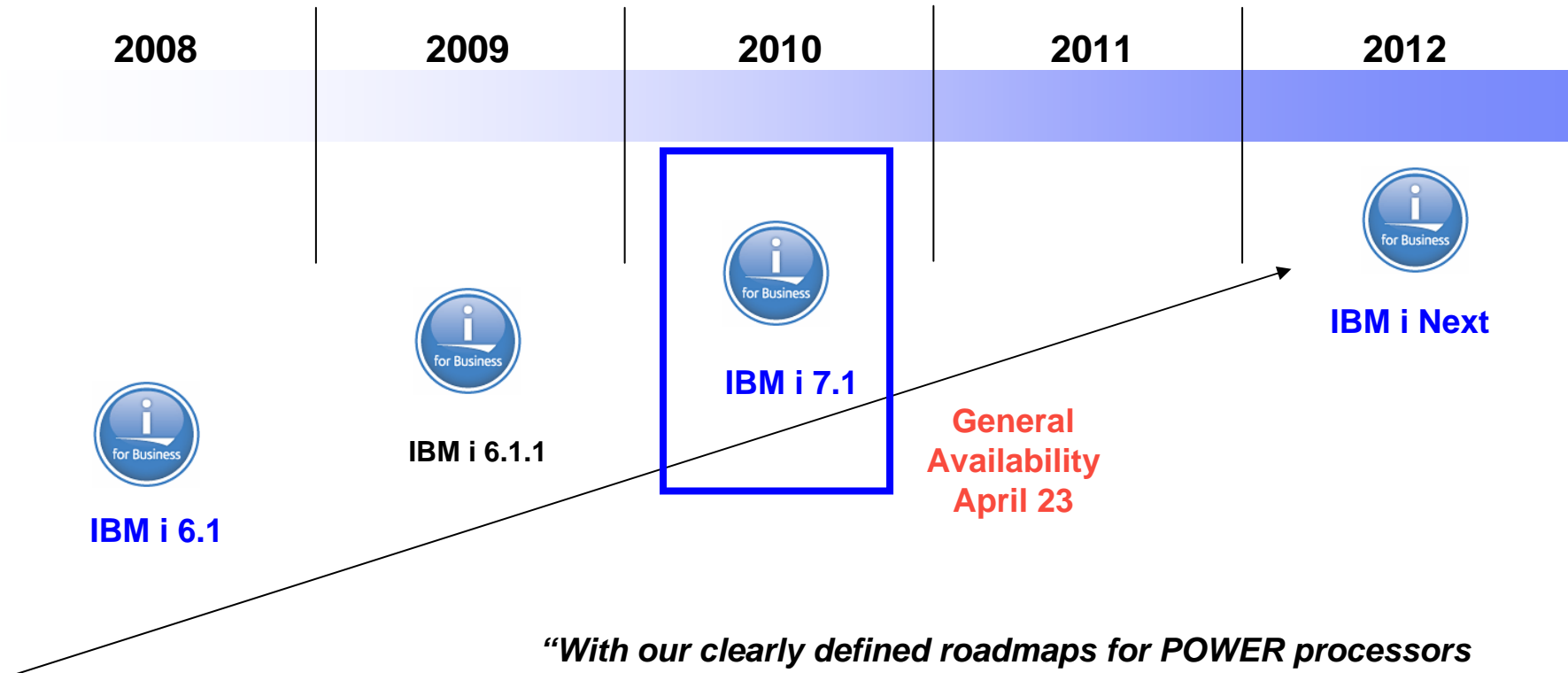


AIX Roadmap



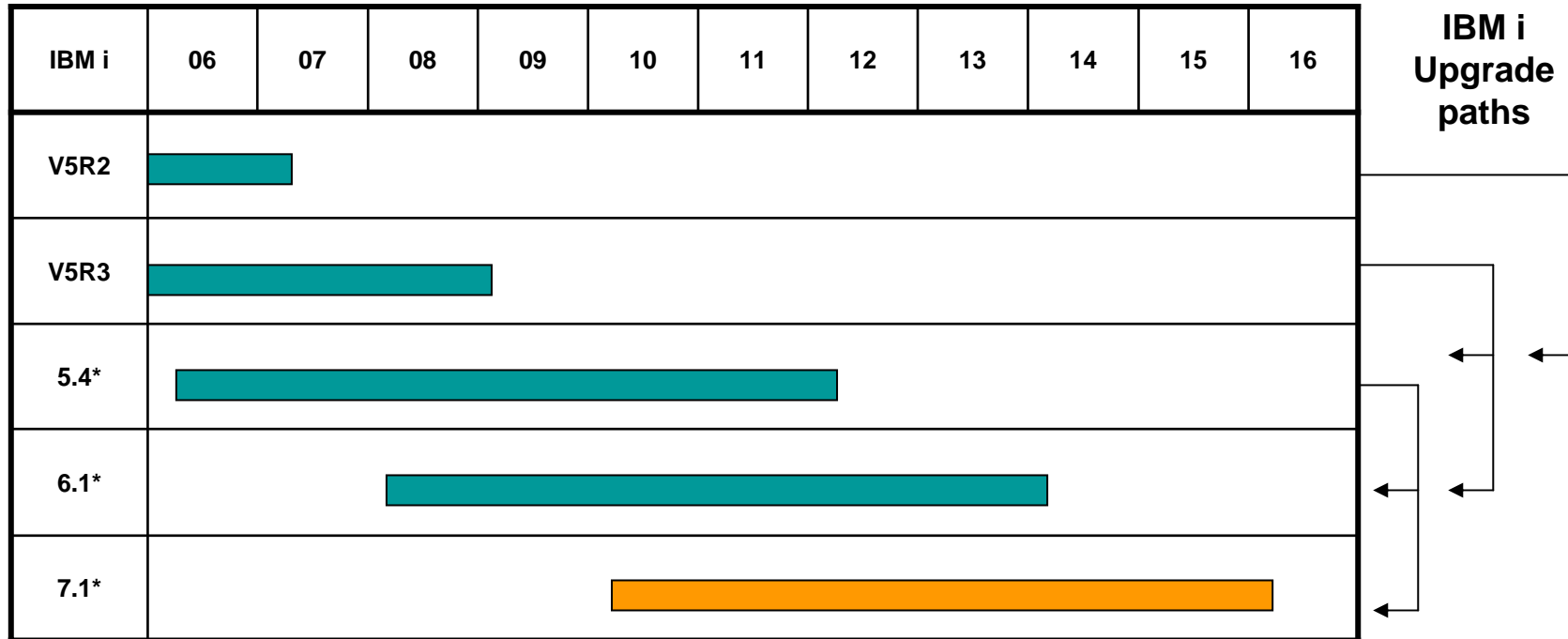
IBM i Roadmap

Delivering a major new release of IBM i every two years



“With our clearly defined roadmaps for POWER processors and the IBM i operating environment, IBM's commitment to our i clients is solid and unchanged. We are making substantial investments in the future of i as an important, strategic element in the IBM product portfolio.”

IBM i Life Cycle



Service

*The projected date for the service of IBM i releases is based on current IBM planning assumptions. Note that it is IBM's current practice to support an IBM i release until the next two releases have been made available, plus twenty four months. This presentation contains information about IBM's plans and directions. Such plans are subject to change without notice.

Virtualization capabilities to improve asset utilization

1967	1973	1987	2001	2004	2007	2009
IBM develops Hypervisor that would become VM on the mainframe	IBM announces first machines to do Physical Partitioning	IBM announces LPAR on the mainframe	IBM introduces LPARs with POWER4™	Advanced POWER Virtualization with POWER5™	Partition Mobility with POWER6™	PowerVM Active Memory Sharing



Power Virtualization Today

- Fine-grained dynamic sharing of processors, memory and I/O
- Resources may be dedicated
- Shared dedicated processors
- Extreme scalability & robustness
- Integrated firmware hypervisor
- Virtual I/O Servers layer
- Hardware enforced isolation
- LPARs and WPARs
- DLPAR and Processor Folding
- Capacity on Demand
- Partition / Application Mobility

Timeline reference <http://www.levenez.com/unix/history.html#01>

Power Systems Software



Workload-Optimizing Systems



AIX - the future of UNIX

Total integration with i

Scalable Linux ready for x86 consolidation



Virtualization without Limits

- ✓ Drive over 90% utilization
- ✓ Dynamically scale per demand



Dynamic Energy Optimization

- ✓ 70-90% energy cost reduction
- ✓ EnergyScale™ technologies



Resiliency without Downtime

- ✓ Roadmap to continuous availability
- ✓ High availability systems & scaling



Management with Automation

- ✓ VMControl to manage virtualization
- ✓ Automation to reduce task time

Smarter Systems for a Smarter Planet.

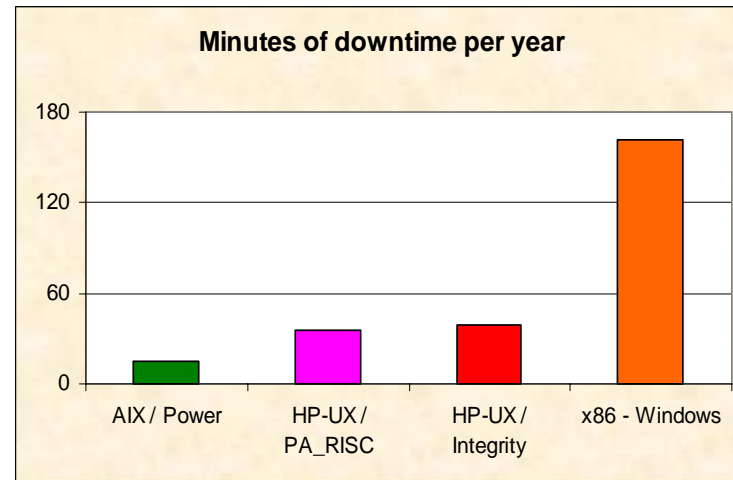
Power your planet.

Improving Systems Reliability, Availability and Serviceability - delivering 99.997% uptime

AIX & Power Systems delivers the best reliability of UNIX, Linux, and Windows

54% of IT executives and managers say that they require 99.99% or better availability for their applications

- **Reliability:** *The fewest unscheduled outages*
 - Less than one outage per year
- **Availability:** *The least amount of downtime*
 - 15 minutes a year
 - 2.3 times better than the closest UNIX competitor
 - More than 10X better than Windows
- **Serviceability:** *The fastest patch time*
 - 11 minutes to apply a patch



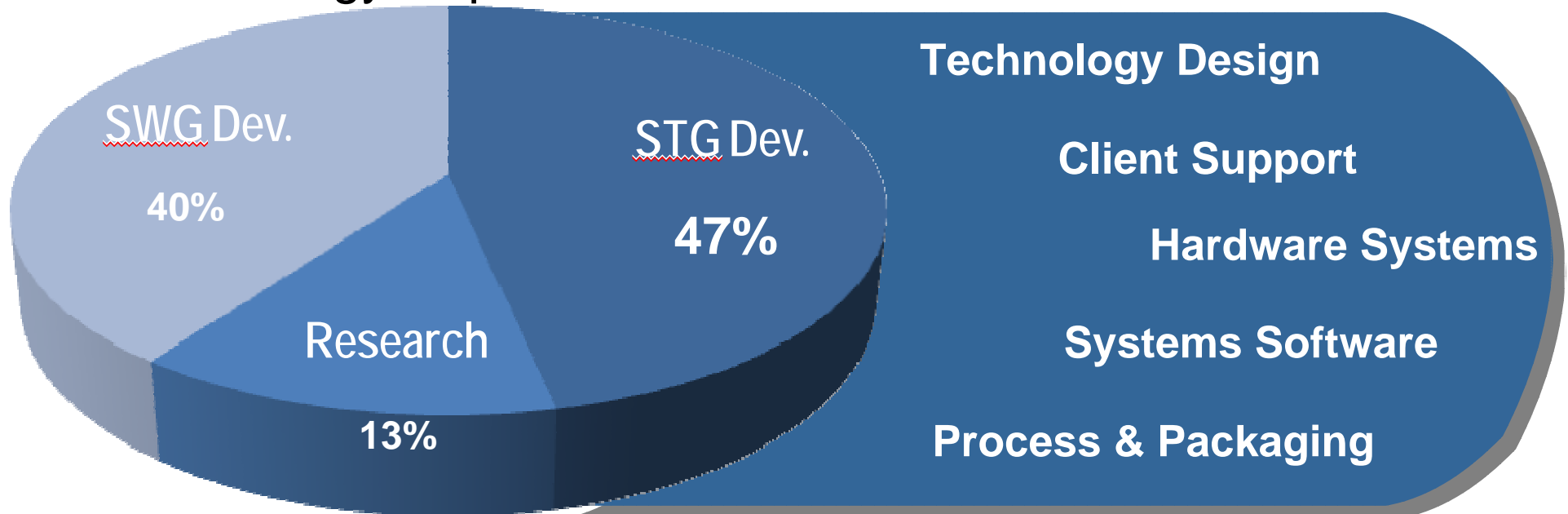
Source: [ITIC 2009 Global Server Hardware & Server OS Reliability Survey Results](#), July 7, 2009. Fully paper is available at ibm.com/aix

IBM innovation at all levels

provides a portfolio of systems, optimized for individual needs and workloads, based on:

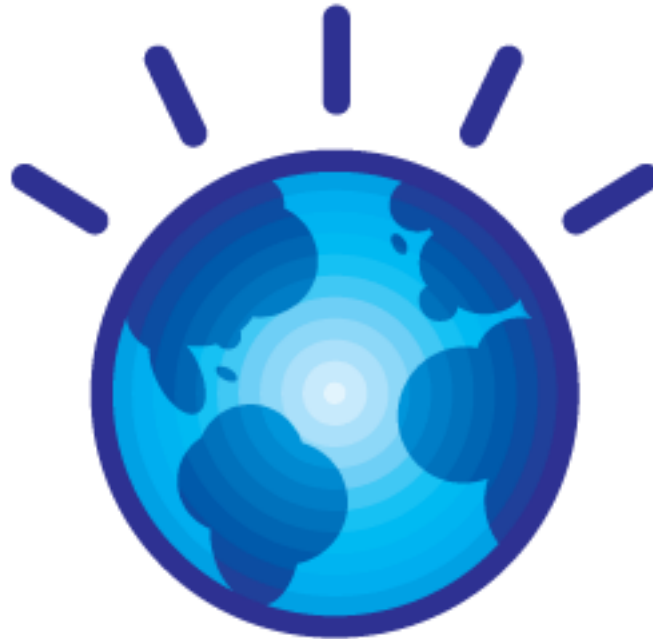
- Deep understanding of client needs
- Massive investment in technology leadership
- Robust integration of systems and software

Technology Capabilities and IBM investment in STG



Nearly 50% of IBM's R&D investment for Systems leadership

Power Systems News



Power Systems Portfolio

August 17, 2010 – GA: September, 17th

Smart Cube

Power 520

Power 550

Power 560

Power 570

Power 595

Power 710

Power 720

Power 730

Power 740

Power 750

Power 770

Power 780

Power 795

New



New



New



New



New



PCIe SSD



New



PS Blades
JS Blades



New

i Editions Express
for BladeCenter S



New



New

High Performance
Computing



New

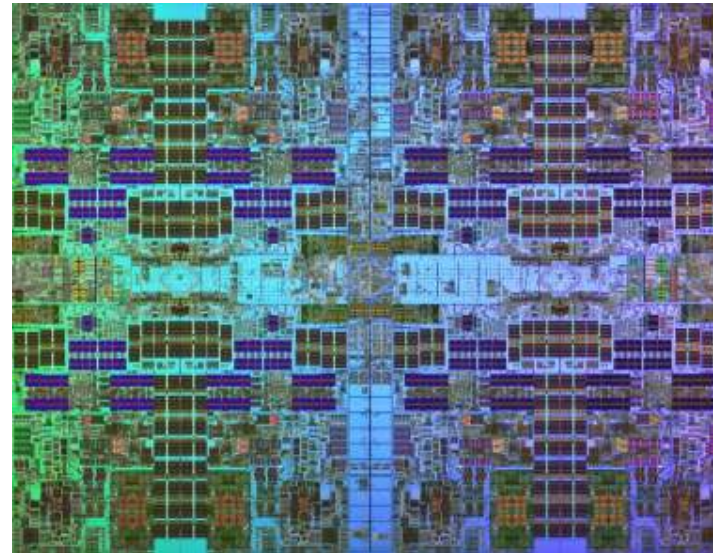


Power 755

Power 575

Power 575

Technology leadership



- ✓ 4, 6 or 8 cores per socket
- ✓ 3.0 to 4.25 GHz
- ✓ Up to 4 threads per core
- ✓ Integrated eDRAM L3 Cache
- ✓ Dynamic Energy Optimization

Power is Workload Optimization

Power Systems™ Express servers offers balanced systems designs that automatically optimize workload performance and capacity at either a system or VM level



- **Intelligent Threads** utilize more threads when workloads benefit
- **Intelligent Cache** technology optimizes cache utilization flowing it from core to core
- **Intelligent Energy Optimization** maximizes performance when thermal conditions allow
- **Active Memory™ Expansion** provides more memory for SAP
- **Solid State Drives** optimize high I/O access applications

Workload-Optimizing Features make POWER7 #1 in Transaction and Throughput Computing



The Future of UNIX

“For the second year in a row, AIX scored the highest reliability ratings among 15 different server operating system platforms” - ITIC 2009



Total Integration with IBM i

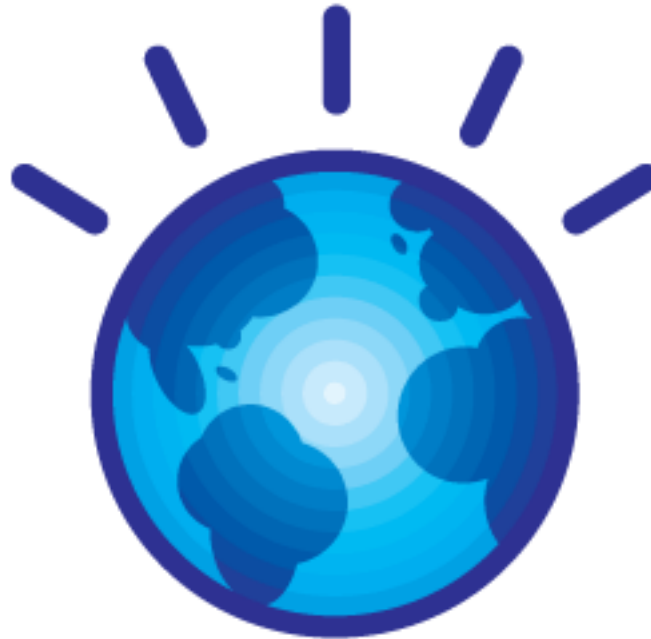
“Costs for use of Power Systems and IBM i 6.1 average 41 % less than x86 servers and Microsoft Windows” - ITG 2010



Scalable Linux ready for x86 Consolidation

Queensland Motorways replaced legacy Windows x86 traffic management systems with new SAP & Oracle DB running Linux on Power

Power Systems Express Servers



Power your planet with Power Systems Express Servers

1 Socket

Systems have 3 year warranty

Power 710 Express

2U - 1 Socket
4, 6 or 8 cores
Maximum memory: 64 GB
PCIe: 4 low profile



New



New

2 Socket

Power 730 Express

2U - 2 Socket
8, 12 or 16 cores
Maximum memory: 128 GB
PCIe: 4 low profile

New



Power 720 Express

4U - 1 Socket
4, 6 or 8 cores
Maximum memory: 128 GB
PCIe: 4 + 4 low profile
Up to 4 I/O drawers



Power 740 Express

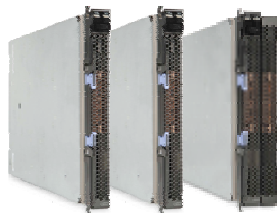
4U - 2 Socket
4, 6, 8, 12, or 16 cores
Maximum memory: 256 GB
PCIe: 4 + 4 low profile
Up to 8 I/O drawers

New



- ✓ High qualities of service
- ✓ Affordable prices
- ✓ Outstanding energy efficiency
- ✓ Easy to purchase and deploy
- ✓ Workload-optimizing
- ✓ Thousands of applications
- ✓ Choice of UNIX, IBM i or Linux

Blades



PS700, PS701, PS 702 Express

4 Socket

Power 750 Express



Power 710, 720, 730 and 740 Express OS Support

2U - 1 Socket

Power 710

4-core P05 Tier
6- or 8- cores P10 Tier
IBM i 6.1 or later

Small Tier - AIX 5.3, AIX 6, AIX 7,
(AIX 5.2 in WPAR)

SUSE Linux ES 11 SP1/ 10 SP3,
RedHat Enterprise Linux 5.5, SOD RHEL6



2U - 2 Sockets

Power 730

P20 Tier
IBM i 6.1 or later

Small Tier - AIX 5.3, AIX 6,
AIX 7, (AIX 5.2 in WPAR)

SUSE Linux ES 11 SP1/ 10 SP3,
RedHat Enterprise Linux 5.5,
SOD RHEL6



4U - 1 Socket

Power 720

4-core P05 Tier
6- or 8-cores P10 Tier
IBM i 6.1 or later

Small Tier - AIX 5.3, AIX 6, AIX 7,
(AIX 5.2 in WPAR)

SUSE Linux ES 11 SP1/ 10 SP3,
RHEL 5.5, SOD RHEL6



4U - 2 Sockets

Power 740

P20 Tier
IBM i 6.1 or later

Small Tier - AIX 5.3, AIX 6, AIX 7,
(AIX 5.2 in WPAR)

SUSE Linux ES 11 SP1/ 10 SP3,
RHEL 5.5, SOD RHEL6



IBM i System Support

Servers	i 5.4	i 6.1	i 7.1
POWER7		✓	✓
POWER6+ Smart Cube Blades, 520*, 550*, 560		✓	✓
POWER6 520, 550, 570, 595	✓	✓	✓
POWER5/5+	✓	✓	✓
800, 810, 825, 870, 890	✓	✓	

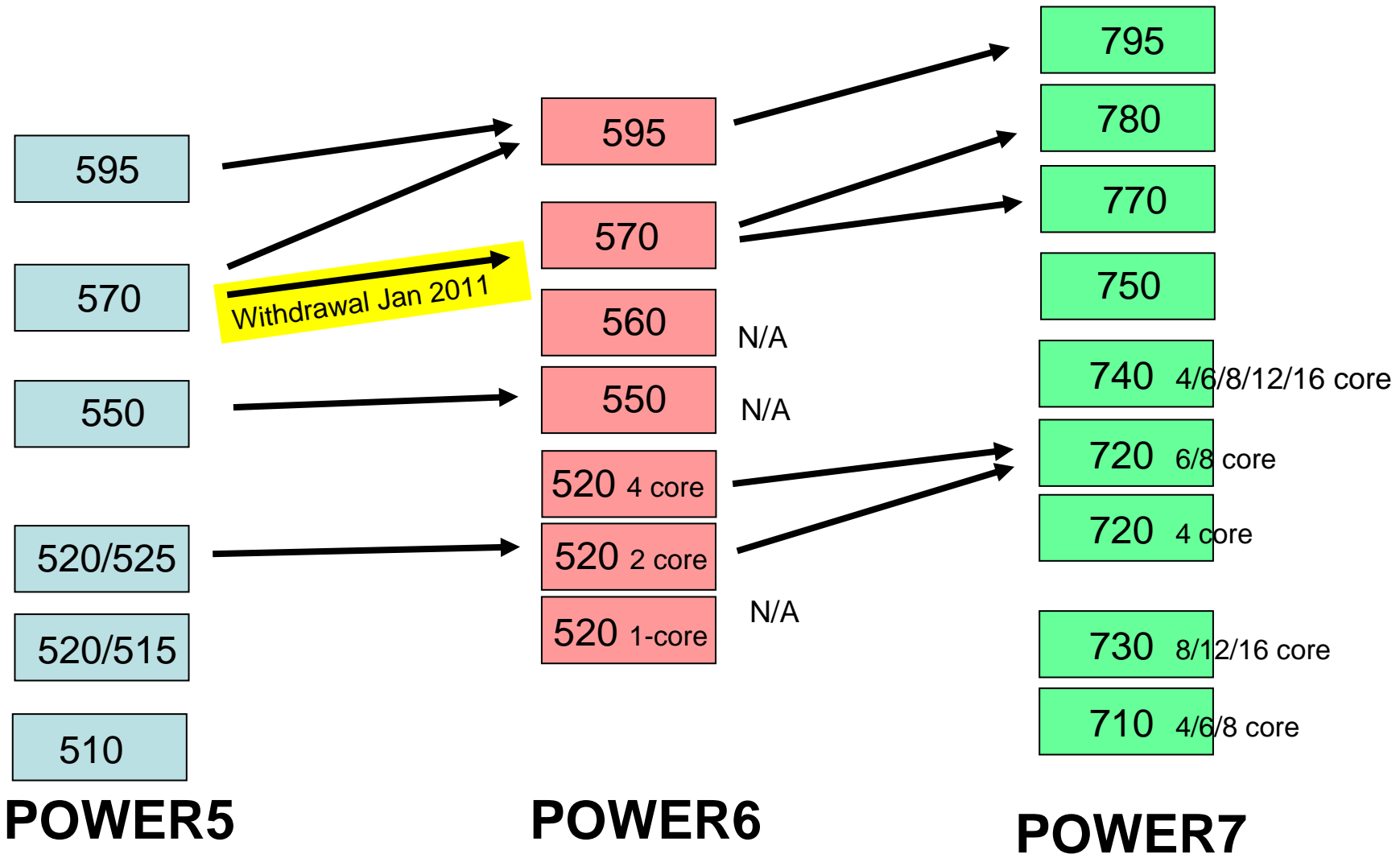
Wdfm IBM i 5.4 YE 2010
Last chance 5.2/5.3 → 5.4

Power your planet.

* Specific models

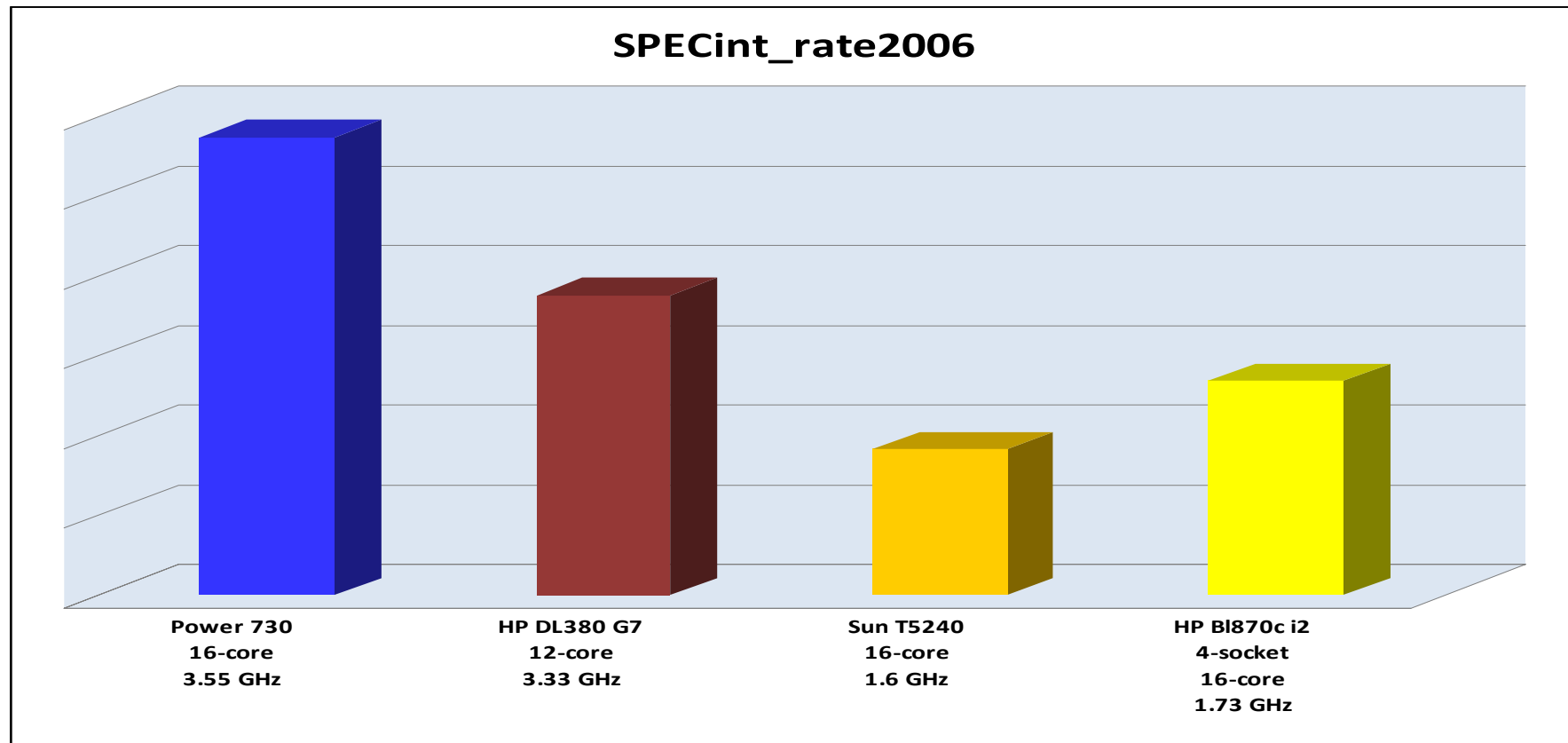


Model Upgrades (Same Serial Number)



Power 730 delivers best in class performance

- ✓ 3X better performance than Sun SPARC Enterprise T5240 server
- ✓ 1.5X better performance versus HP Proliant DL380 G7 (Westmere-EP)
- ✓ 1.9X more performance than new HP Integrity Blade BI870c



47 to 1

Number of HP Proliant DL380 G5 servers that can be consolidated into a single IBM Power 730 2-socket system.

Save 98% on energy, 83% of the cores for software licensing, and 97% on floor space.

4X less unplanned downtime than a Linux / x86 server reduces risk of lost revenue and productivity due to server downtime and lowers IT management costs



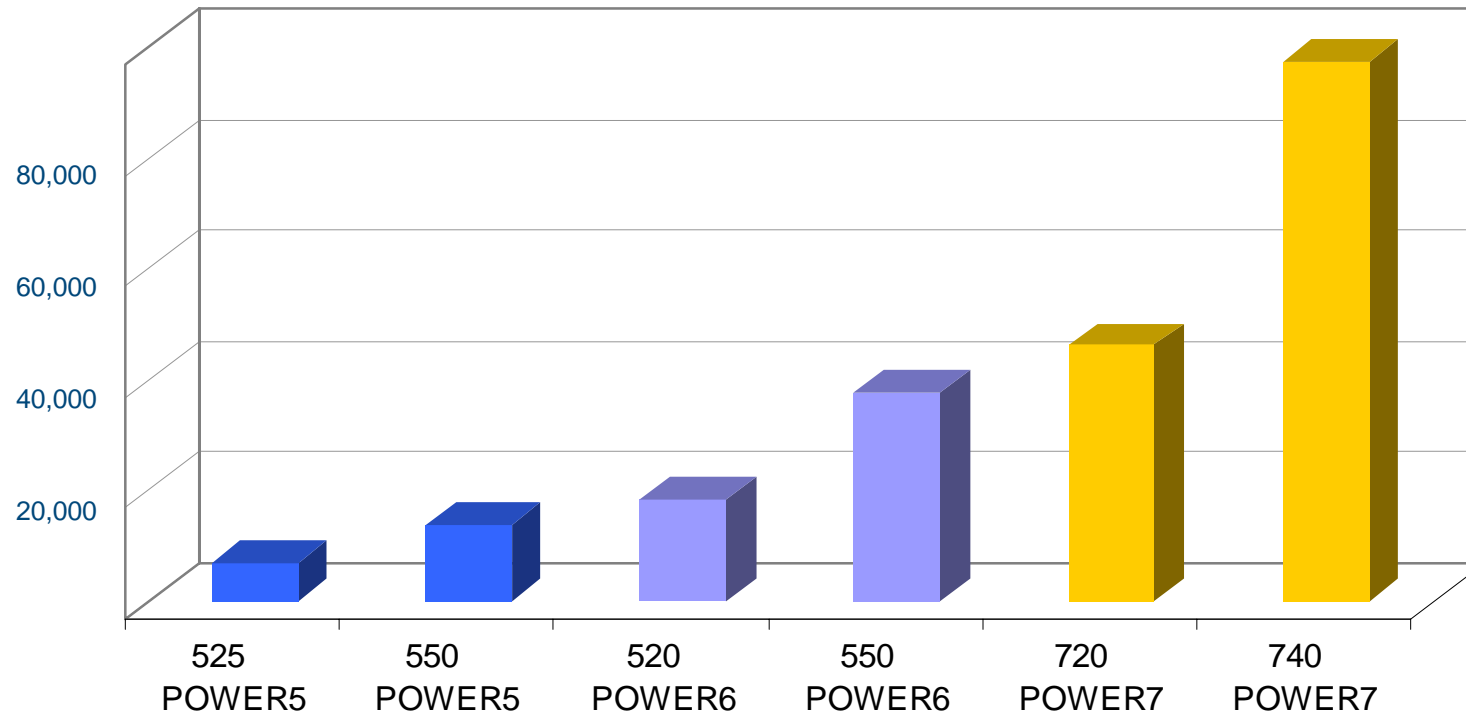
IBM Power 730 Express



Based on projected results for Power 730 Express server consolidation of HP Proliant DL380 G5 servers
Source: SPECint_rate2006. For the latest SPEC benchmark results, visit <http://www.spec.org>.

POWER7 delivers outstanding performance

CPW



Single core CPW

3800

4300

5950

Moving from an x86 infrastructure to Power Systems

52% reduction

in year over year IT costs through consolidation of x86 onto Power Systems

The challenge

NACG faced challenges expanding as a business and lacked a “single version of the truth” for decision making due to frequent outages and poor performance of its ERP application.

The solution

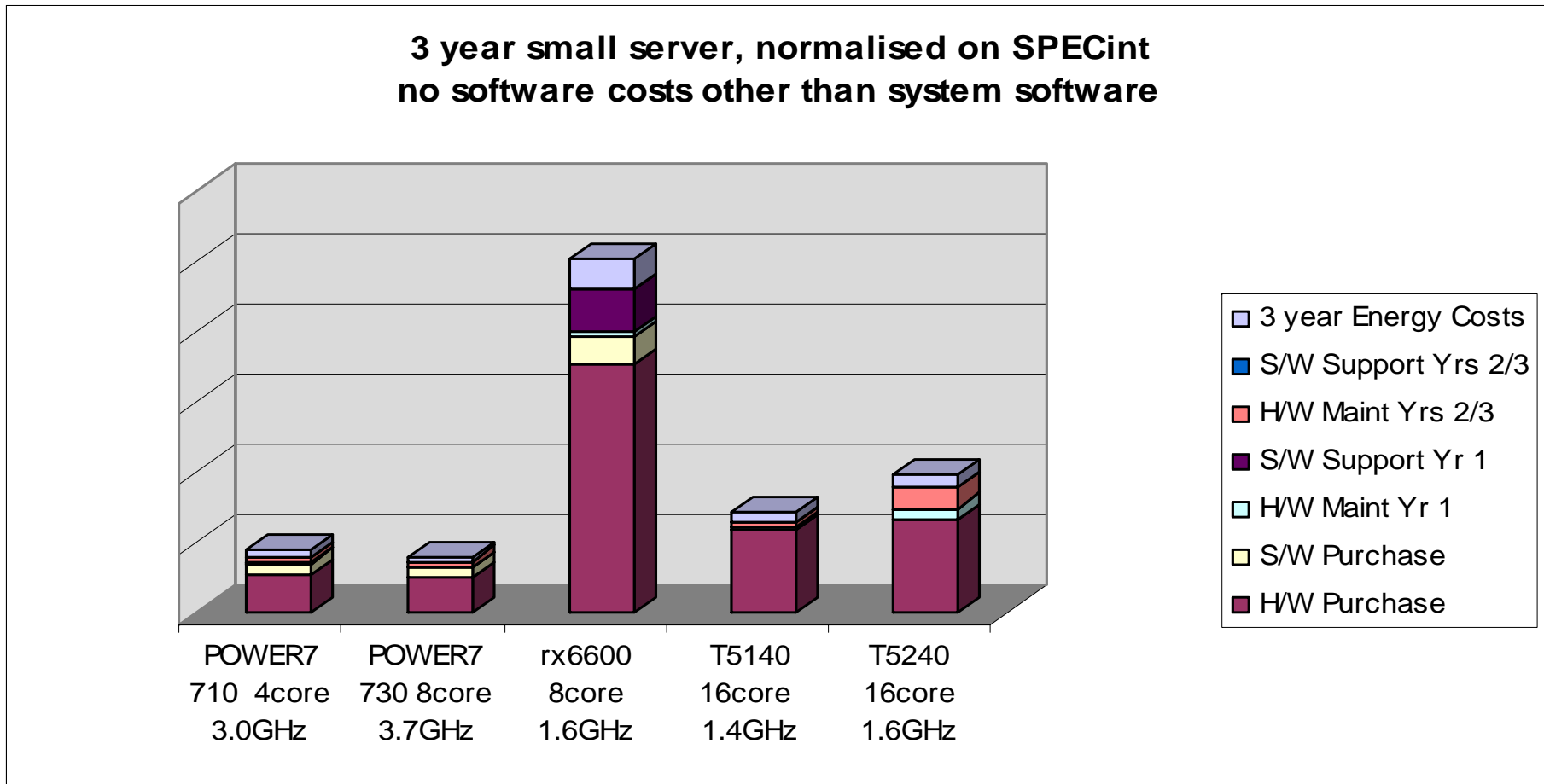
After identifying the root of the issue as the instability of Dell servers running Microsoft Windows, NACG migrated the infrastructure to two Power 570s running IBM i. ERP outages have been essentially eliminated, response times are up to 96% faster, and NACG employees can focus on productive, more profitable work.

“The proven reliability of the IBM Power 570 servers meant that the outages which had been an everyday experience for our employees quickly became a distant memory.”

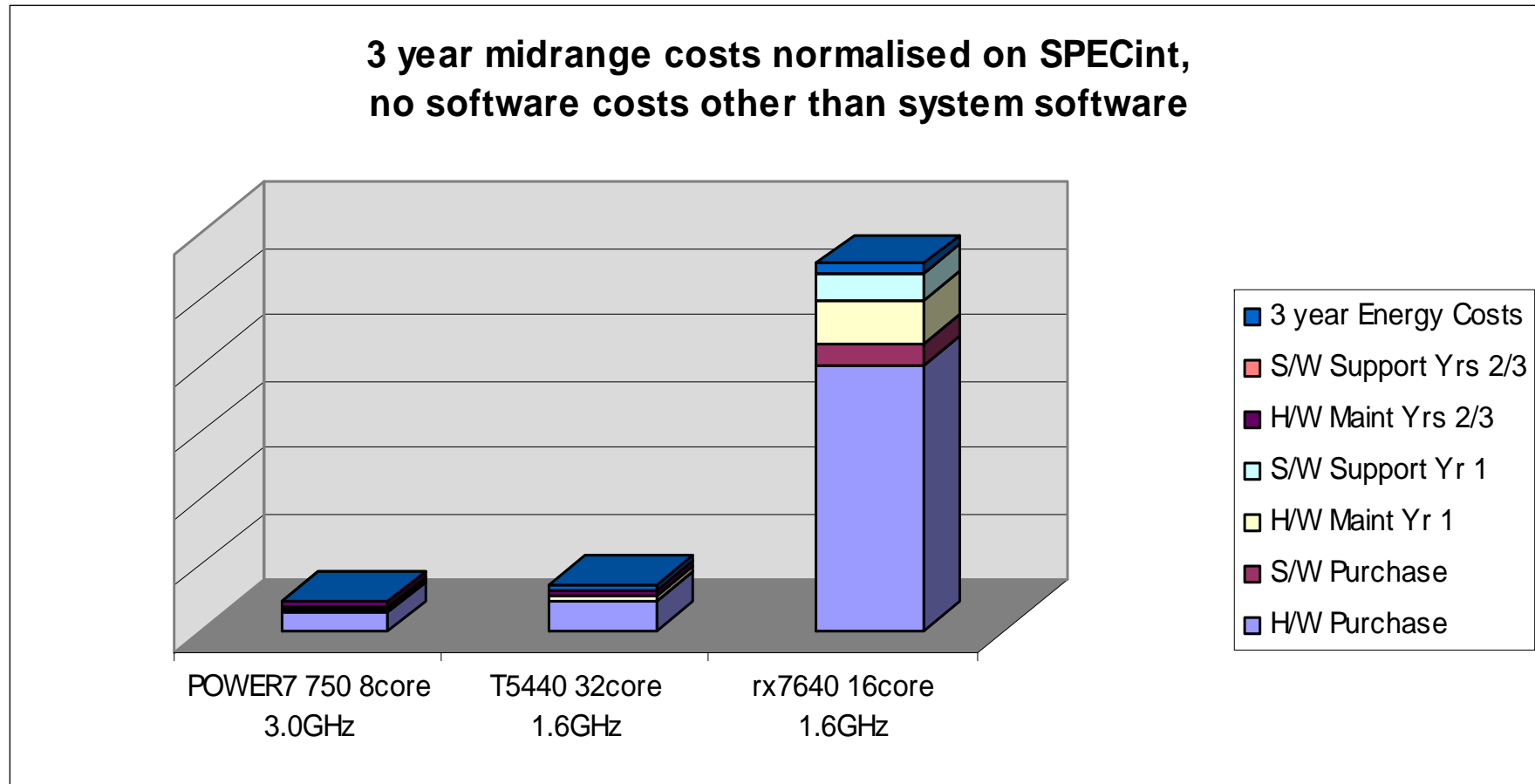
*David Booth, CIO
North American Construction Group*



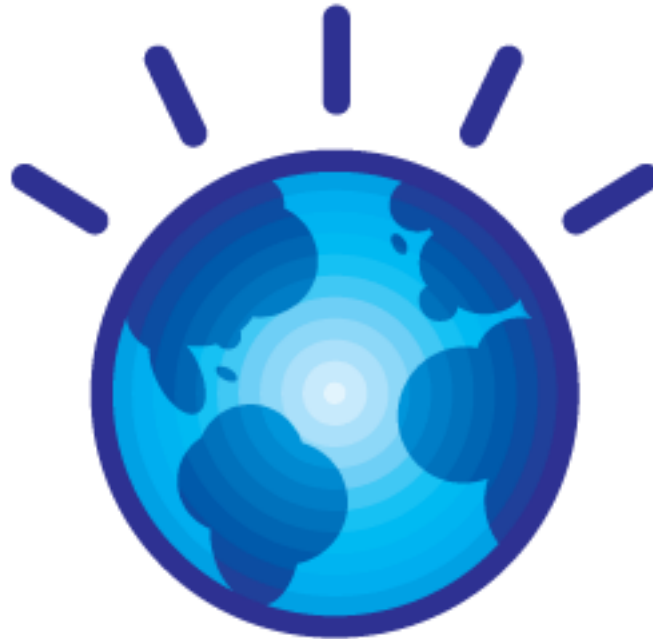
Across the entire range, IBM Power 7 offers the best price/performance and performance/watt by comparison to competitors offerings (1/3)



Across the entire range, IBM Power 7 offers the best price/performance and performance/watt by comparison to competitors offerings (2/3)



IBM i Offerings



IBM Power Systems delivers significant advantages and opportunity for clients to reduce costs and increase ROI



ITG Power i
Value Proposition vs x86

**Understand the benefits and exploit
Power Systems leading capabilities**

1. Power Systems delivers more capability than similar x86-based systems
2. Power Systems has a competitive and sometimes lower TCA
 - At the hardware/systems software level
 - At the solution level including the SW and Middleware
3. Power Systems has a lower TCO
 - Power Systems can accelerate a business' ability to reduce IT operations costs

IBM i Solution Editions for SAP, JDE, Lawson and Infor

Reduce cost, complexity and implementation time for ERP solutions

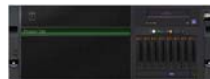


- Special offer reduces cost of acquisition by up to 35%
- Optimized install reduces implementation time
- Total integration with IBM i eliminates complexity
- IBM i delivers 42% lower total cost of ownership than Windows and x86*
- ISV optimization for Power Systems provide leading performance
- Offered in partnership with leading ISVs
- Assist clients to move up to ISVs latest release and features
- Backed by superior service and support

Power 720 Express



Power 740 Express



SAP Business All in One
Oracle JDE
Infor LX (BPCS), System 21 and XA (MAPICS)
Lawson M3 and S3



The evolution FROM the IBM Smart Business... All in one solution for the Small and Medium Business Market

APPLICATION

Find your business application on Smart Market

www.ibm.com/smartmarket/it



SmartB_Active_Report.htm

Applications



SMART DESK

Simple to manage and to administer through a single user friendly interface

CONTRACT

Simple to buy through a single contract (Hw, Sw, Application) with a monthly rate and very aggressive price

Smart Cube



Smart Business Software Pack

Lotus software

WebSphere

CONFIGURATIONS

Available in different Power6 520 configurations based on number of users available



Smart Support

SOFTWARE PACK

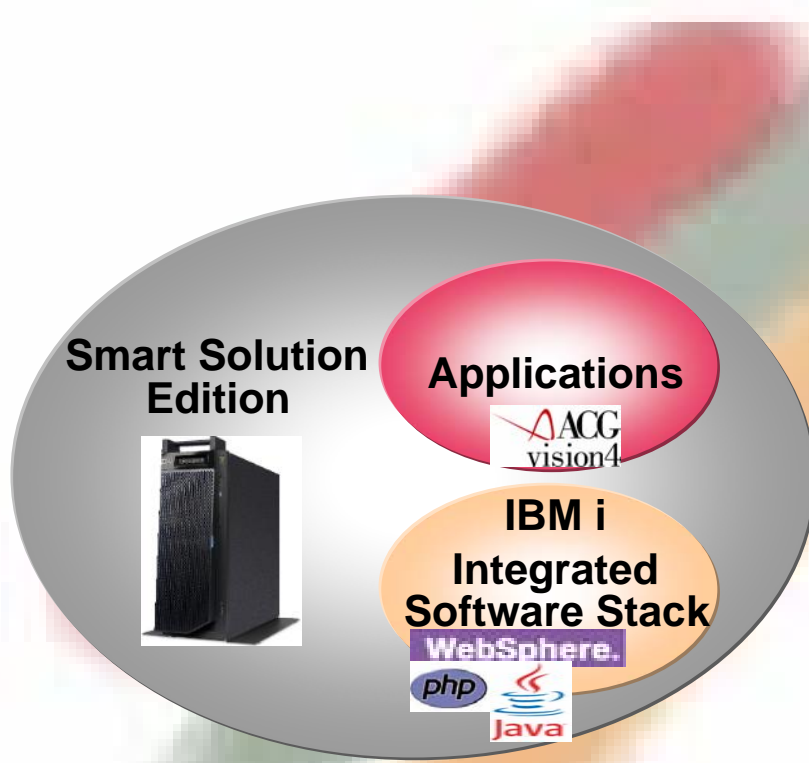
Leverage on the collaboration/application server products bundled into your Smart Business solution

SUPPORT

Integrated complete support for your all-in-one solution – 800 820 894

...TO the IBM i Smart Solution Editions for Power7

Power7 720 Solution Edition - Complete and integrated solution for the Small and Medium Business Market

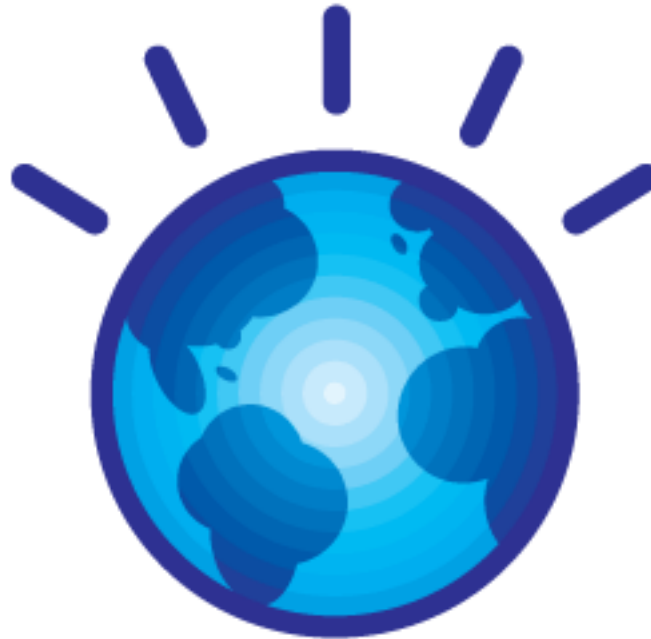


- Optimized for your business
- Rich choice of modern applications
- Scalable solution for your growing business needs

- Possibility to buy with a single contract (Hw, Sw Application) with a monthly rate
- Aggressive price
 - IBM i discounted user entitlements
 - Minimum 3 IBM i processor licenses
- Integrated and complete support for your solution – 800 820 894

- Leverage on the features of the IBM i operating system: full functional, reliable and virus resistant
- Easy to manage through web and client sever graphical interfaces
- Integrated DB for the all set of applications
- integrated Security and Backup
- Complete Web infrastructure
 - Http server, application server
 - Java and Php

Power Systems: integrated value



Power is integrated value

Turn information into insight

- ✓ Capture, predict, act on disparate data
- ✓ Attract, retain more profitable customers
- ✓ Optimize marketplace resources



IBM Smart Analytics 7700

Enterprise qualities of service for Clouds

- ✓ Elastic scaling for optimal performance
- ✓ Self-service portal for rapid provisioning
- ✓ Security for mission critical workloads

IBM Cloudburst*
IBM Service Delivery Manager*

*: Statement of Direction



Transaction resilience and agility

- ✓ Continuous availability
- ✓ Transparently scale your applications
- ✓ Respond to changing business needs



IBM pureScale Application System

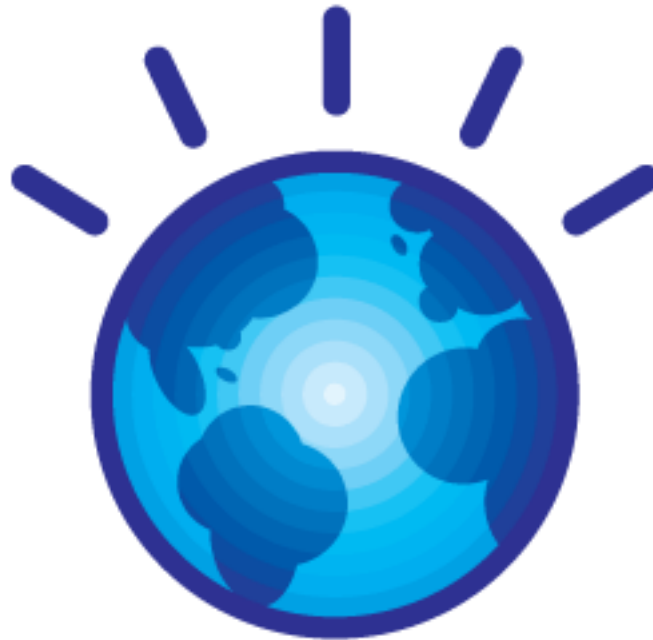
Unleash application innovation

- ✓ Accelerate development lifecycle
- ✓ Increase quality through standardization
- ✓ Reuse and optimization of core assets

IBM Rational Power Appliance



Events



IBM Technical University

IBM i Technical Conference
9 novembre - Milano



IBM i Technical Conference
11 novembre - Roma



http://www-304.ibm.com/jct03001c/services/learning/ites.wss/it/it?pageType=course_description&courseCode=IS000IT

IBM Power Systems and Storage Technical University

✓ Las Vegas, 18 - 22 October, 2010

✓ Register at <http://www-304.ibm.com/jct03001c/services/learning/ites.wss?pageType=page&c=M387632K48848U54>



IBM Systems Technical University

✓ Lyon, France, 25 - 29 October, 2010

✓ Register at <http://www-304.ibm.com/jct03001c/services/learning/ites.wss?pageType=page&c=M680996O79065K05>





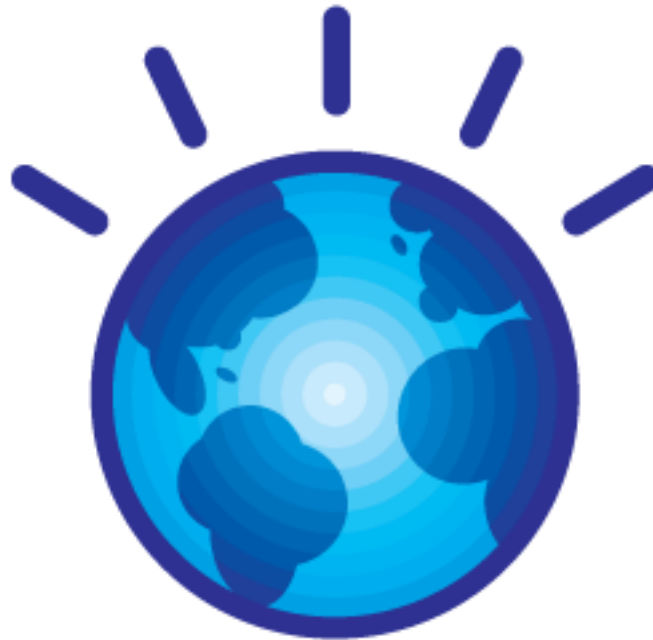
COMMON EUROPE CONGRESS

- ❑ Principale evento tecnico per la comunità Power Systems
 - ✓ 3 giorni di manifestazione con centinaia di partecipanti
 - ✓ Conferenze tecniche - Laboratori - Tavole rotonde
Incontri con gli Specialisti - Sessioni per Decision Makers
Sessioni per Studenti - Gala Dinner & Entertainment
 - ✓ Spazi espositivi degli sponsor
 - ✓ Speaker locali e internazionali
- ❑ Ogni anno ospitato in un paese diverso. Partecipanti da tutta Europa.
- ❑ A cura di Common, in collaborazione con IBM e i suoi Business Partner

MILANO, 23-25 MAGGIO 2011

<http://cec2011.common.it>

Power 795



New

Power 795

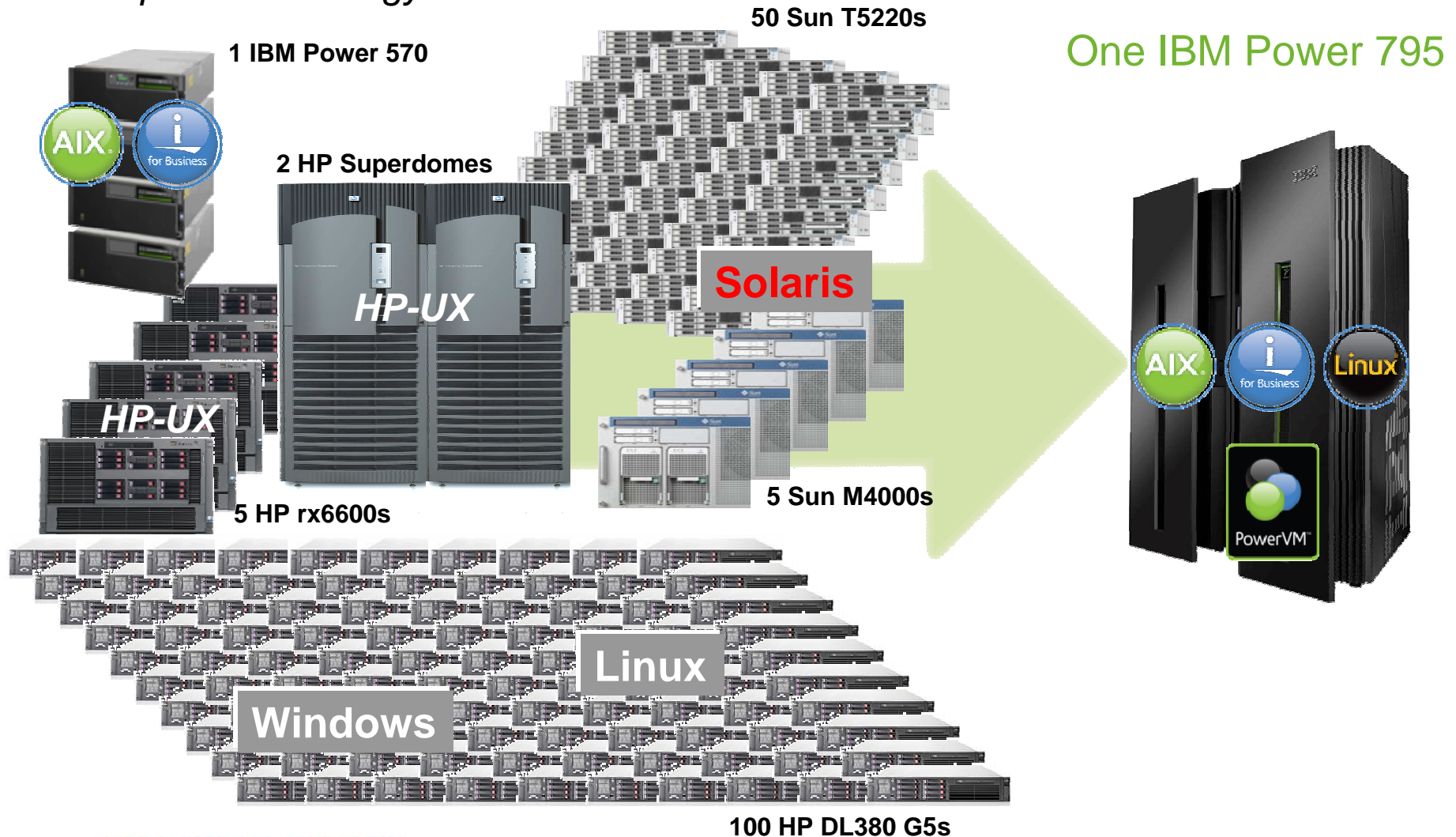
- ✓ New High-end
- ✓ 24 to 256 Cores
- ✓ 8 TB memory
- ✓ TurboCore
- ✓ 3.7, 4.0 or 4.25 GHz
- ✓ 1,000 VMs* with PowerVM
- ✓ Capacity on Demand
- ✓ Enterprise RAS
- ✓ 24x7 Warranty
- ✓ PowerCare



* Statement of Direction

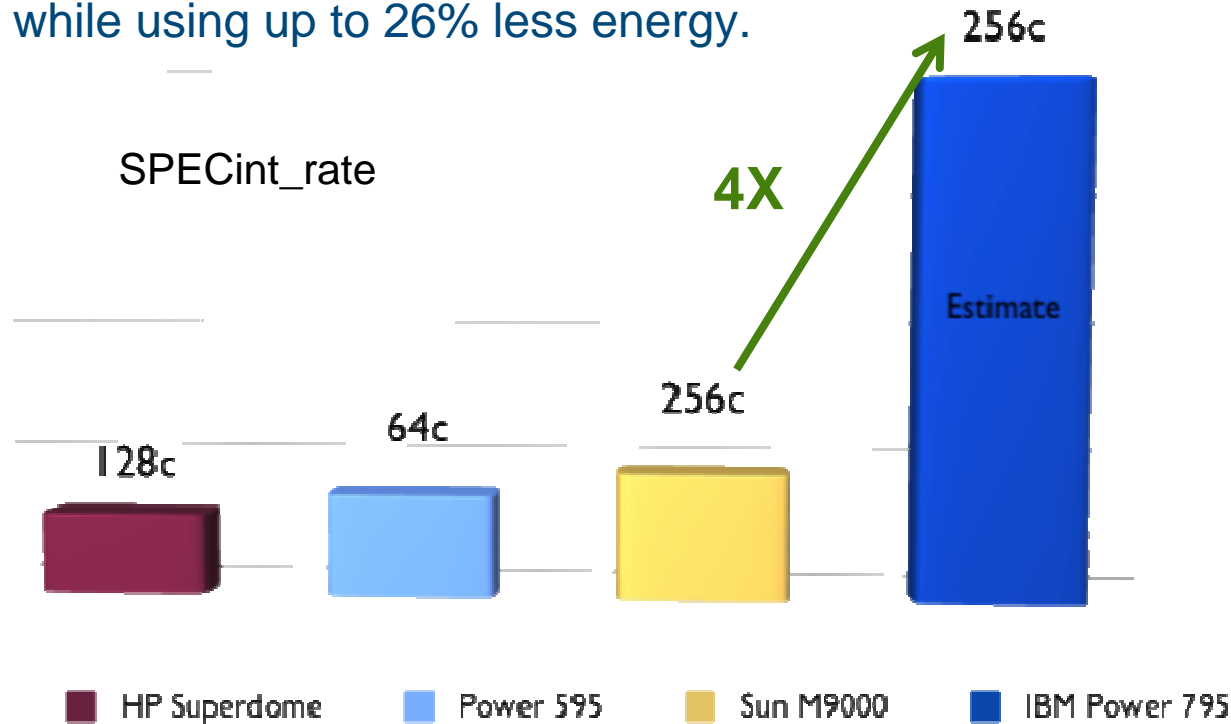
Reduce cost and simplify with massive consolidation

Consolidating into the Power 795 substantially reduces costs, floorspace and energy




4 times more scale

Than the largest Sun systems enables telecom companies to grow without disruption as their customer base explodes – while using up to 26% less energy.



Serious scale.

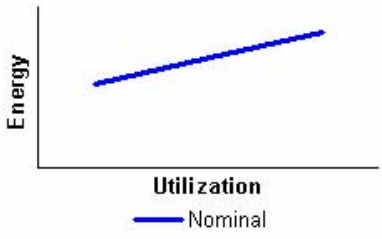
Example of Energy Estimator output

System Information	
	Model: 795-9119-FHB
	Cores: 96 cores of 8-256
	Processor: IBM® POWER7
	Clock speed: 4000 MHz
	Configured Memory: 1536 GB

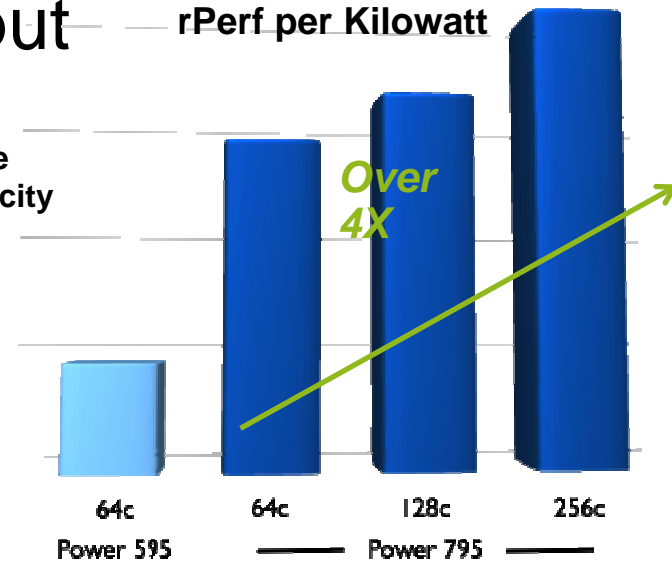
Very high performance
Very high capacity

Energy Estimate

Nominal Mode
The following estimation was made without enabling any power saver modes. Thus the cores are running at the published frequency and the system capacity is as published. In Active Energy Manager this is described as "no power savings mode." Using Active Energy Manager to specify power saver modes may significantly reduce energy consumption.



Estimated energy at full utilization: 7,920 Watts
27,031 BTU/hr



Maximum energy required

(2 drawers with 32 adapters included)

IBM Active Energy Manager can significantly reduce real consumption

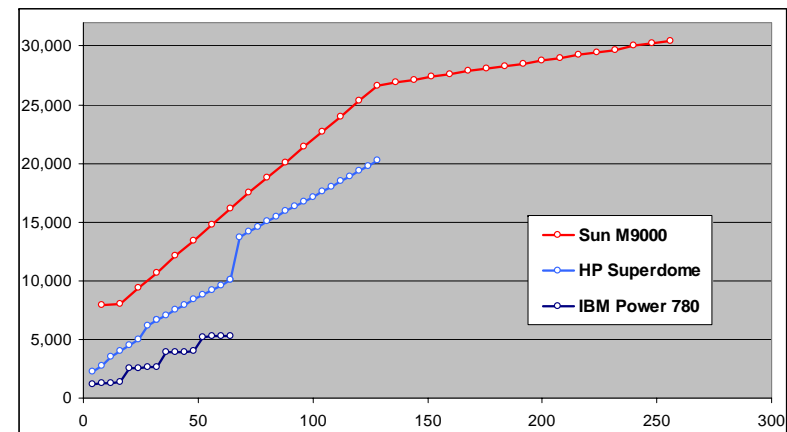
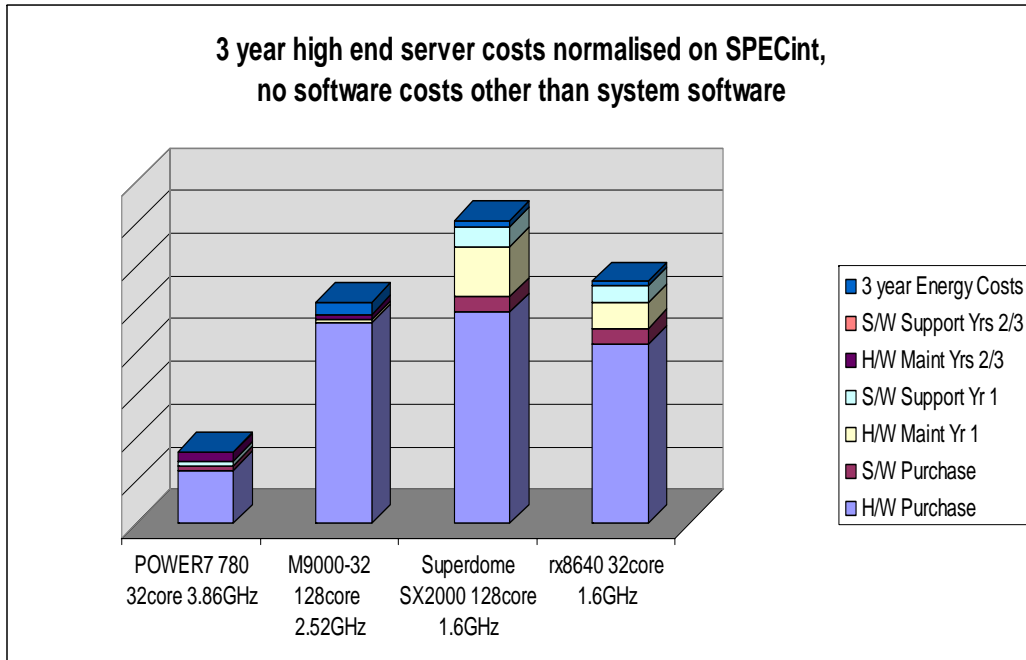
Use "IBM Systems Energy Estimator" for all Power Systems

<http://www-947.ibm.com/systems/support/tools/estimator/energy>

Google search: "energy estimator site:ibm.com"

Power your planet.

Across the entire range, IBM Power 7 offers the best price/performance and performance/watt by comparison to competitors offerings (3/3)



Watts consumed against core count



Power your planet.

Smarter systems for a Smarter Planet.



Workload-Optimizing Systems

Virtualization without Limits

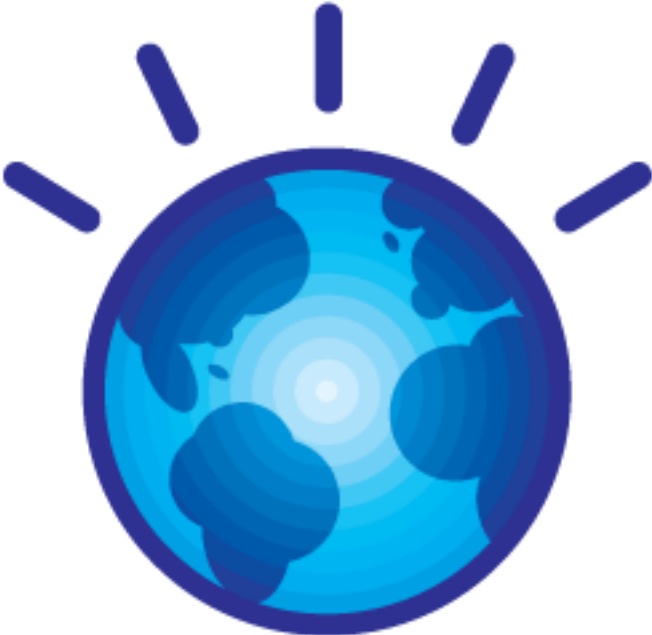
Resiliency without Downtime

Dynamic Energy Optimization

Management with Automation

Integrated Value

Power is... our planet.



THANKS!