

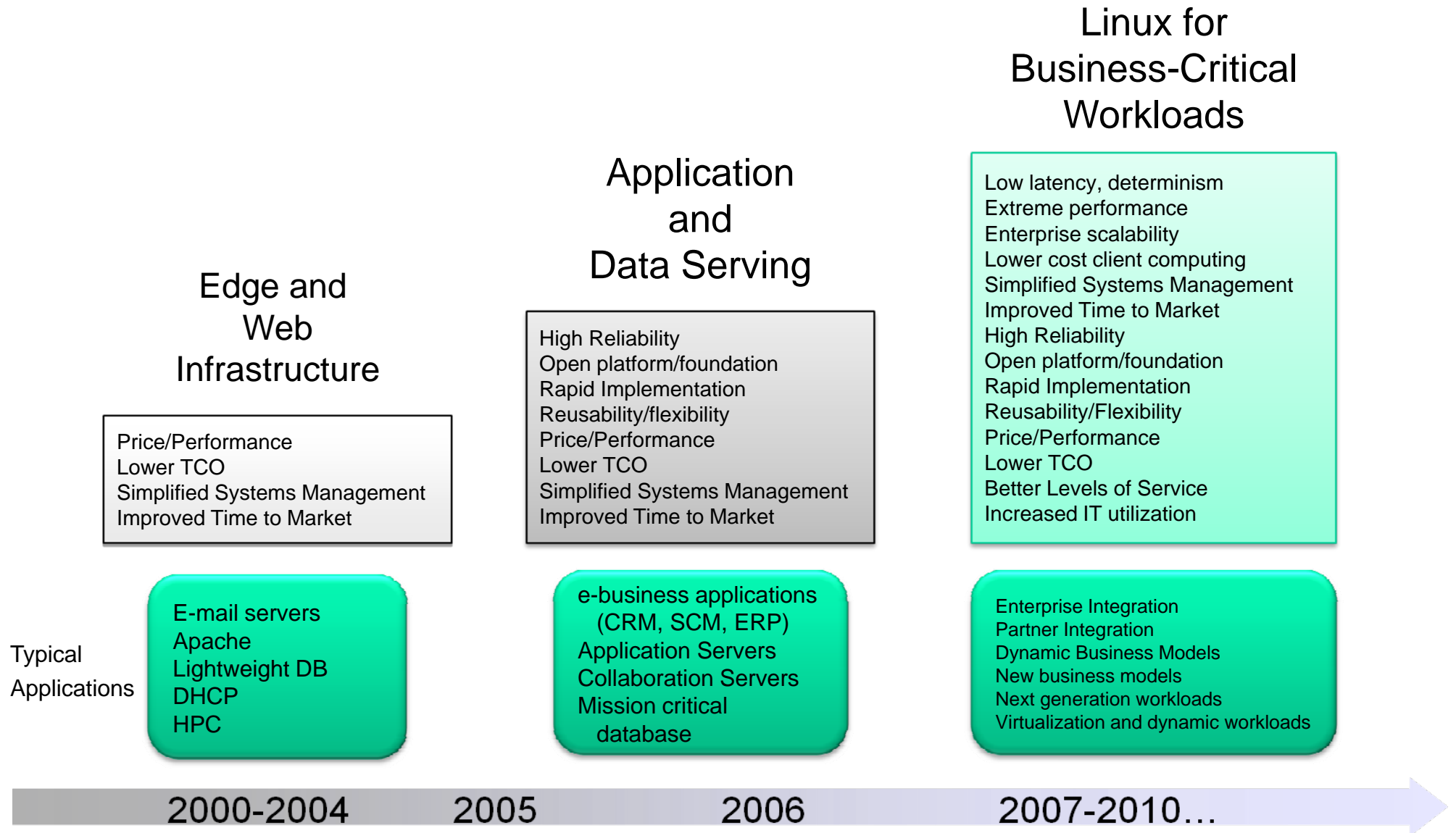


# Implementing Business-Critical Workloads on Linux

Jeff Smith  
Vice-President, Open Source and Linux Middleware  
IBM Software Group

# Linux is a proven platform for business and technical innovation.

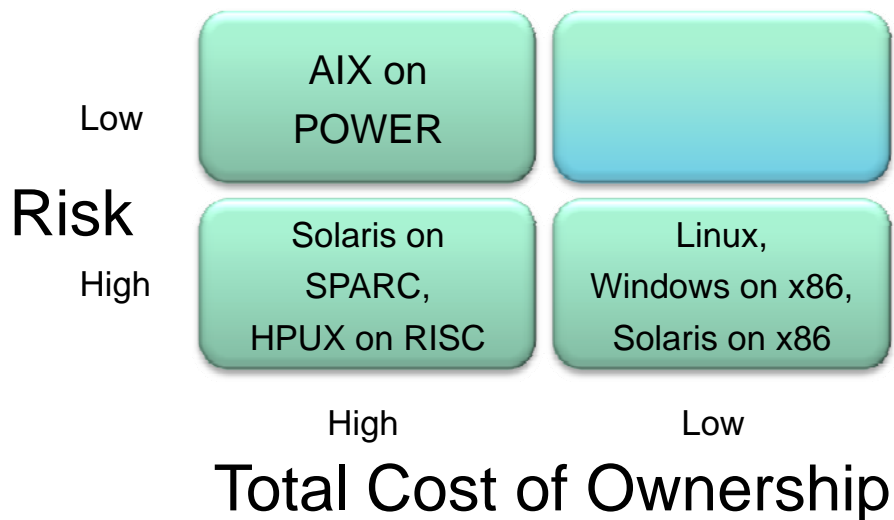
Linux has evolved to support the most demanding enterprise, mission critical workloads.



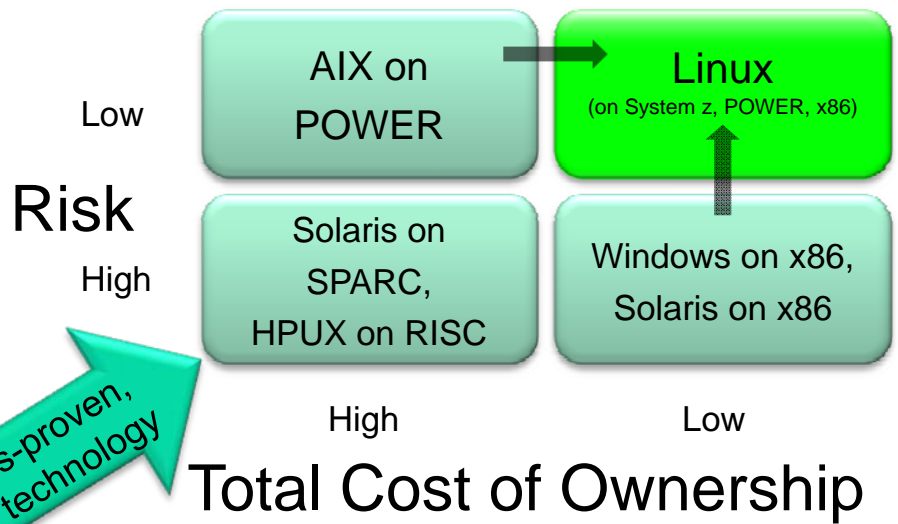
# Linux has found a “sweet spot” in the OS landscape

There has been a significant change in the “cost vs. risk” landscape: Linux is ready for the enterprise *and* available for significantly less money than the competition.

Linux has moved from “edge of network” (e.g., DNS servers, firewalls, e-mail) to collaboration and database servers, and now to the foundation for business critical applications...



Business-proven, mature technology



... but an operating system, on its own, isn't very interesting.

# Linux is *ready for your business.*

It has the attributes that we know (and that CIOs tell us) are essential for the enterprise environment.

Business Critical systems must be:

- ✓Reliable
- ✓Secure
- ✓Available
- ✓Serviceable
- ✓Predictable
- ✓Scalable
- ✓Affordable
- ✓Flexible (e.g., Cloud, Portability, SOA)
- 
- ✓“Green”
- ✓Open

Additional Benefits

Application Layer

Data

Application  
Integration

Systems  
Management

Collaboration

Software Delivery

Operating System (Linux)

Virtualization

Determinism

Security

Hardware (x86, RISC, CMOS, Blade, Cluster, Grid, Mainframe)

# Linux is *business as usual* for IBM

Linux is certified on all IBM systems, the IBM Middleware portfolio is available on Linux, and IBM delivers on services across the entire lifecycle.

Over 6,500 ISV Partner Applications including SAP, Siebel, etc.

Information  
Management

WebSphere®

Tivoli®

Lotus®

Rational®

Linux: Red Hat, others

Xen, VMware

Real Time Linux

SE Linux

System x™, System p™, System i™, System z™, BladeCenter®, Cluster Systems, System Storage, Blue Gene®

# Linux for Business-Critical Workloads

IBM's solution isn't a part number - it's a family of solutions that encompasses what enterprises around the globe rely on to run their businesses.

## Linux for Business-Critical Workloads

### Vertical Business Applications

Finance  
Government  
Retail  
Manufacturing

### Horizontal Business Applications

ERP / Accounting  
CRM  
SCM  
e-Commerce

### SOA and Integration

- ESBs & Integration SW
- Messaging Software
- Business Process Mgt
- Application Servers

### Information on Demand

- Database Platforms
- Data Integration
- BI / Data Analysis
- Content Management

### Next Gen Infrastructure

- Virtualization
- Cloud Computing
- Real Time
- MAC Security

### Collaboration

- Email
- Instant Messaging
- Portals
- Web 2.0

### Software Delivery

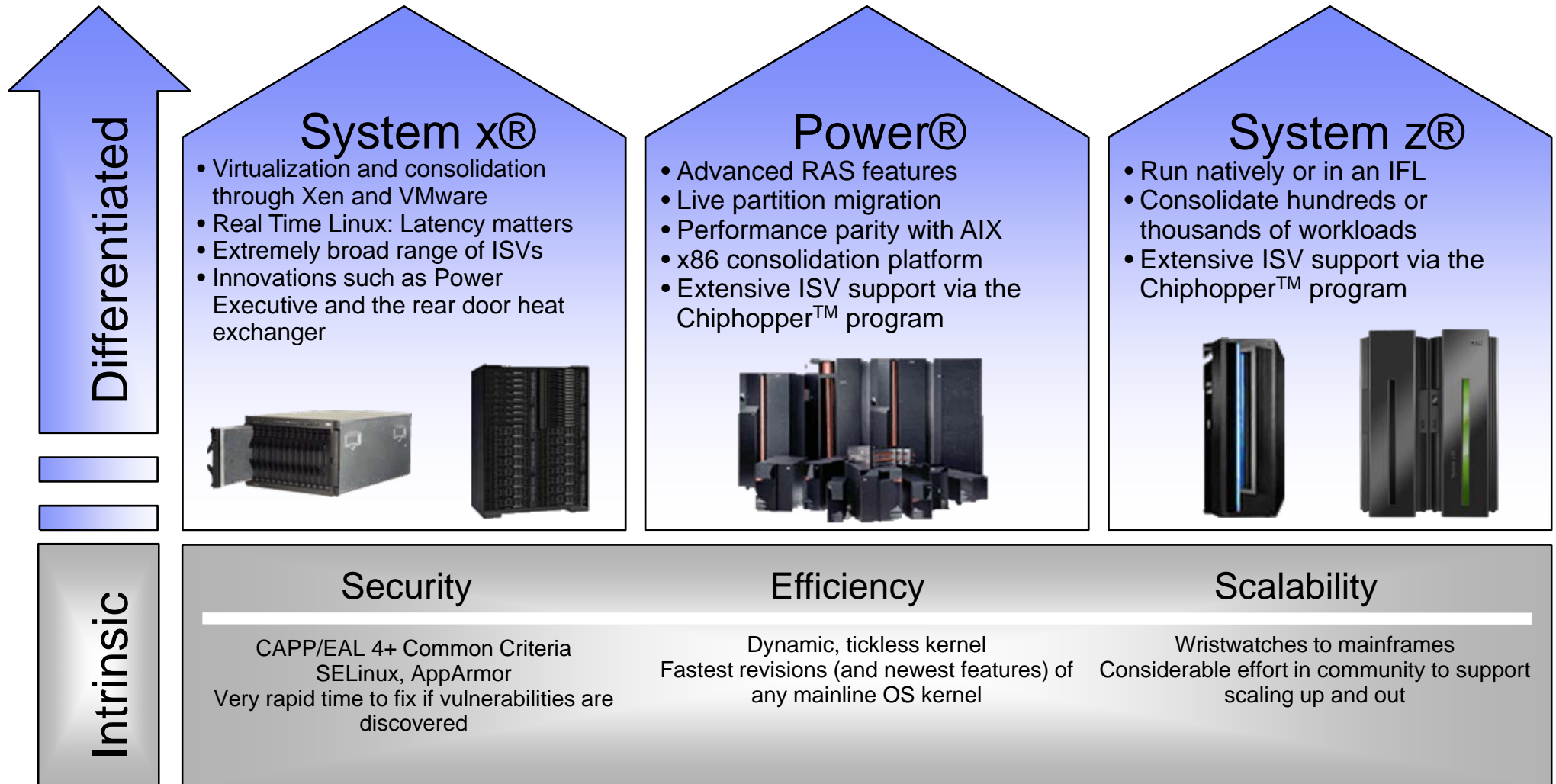
- Modelling and Design
- Application Development
- Change & Release Mgt
- Quality Management

### Systems Management

- Systems & Network Mgt
- Security Software
- Storage Management
- Virtualization Management

# Linux for Business-Critical Workloads on IBM Systems

Leveraging the common strengths of Linux, while addressing different needs with support for differentiated capabilities across platforms



# Linux and Horizontal Business Applications

## Horizontal Business Applications

- ERP / Accounting
- CRM
- SCM
- e-Commerce

## Why Linux ?

- Lower Total Cost of Ownership
- Reliability and Security
- Cross-platform support
- Scalability and Performance
- Integration and Virtualization

## Customer Case Studies

- Pilz  
*Consolidated and high availability ERP for engineering company with SAP, DB2 and System p*
- Halfords  
*Multi-channel e-commerce website integrated with ERP system using WebSphere Commerce*

## Key Software and Hardware for Linux

- Horizontal Business Applications from ISV Partners of IBM  
*eg SAP Business Suite*
- Custom Horizontal Business Applications  
*ERP, CRM, SCM*
- WebSphere Commerce  
*Interaction platform for cross-channel and online e-commerce*
- DB2 9  
*Scalable relational database*
- WebSphere Application Server  
*Scalable J2EE application server*
- Lotus Notes / Domino  
*Collaborative application platform*
- BladeCenter  
*Powerful x86 and POWER servers using less space and energy*
- System Cluster  
*Integrated scale-out clustered servers built on x86 and POWER*
- System x  
*Advanced x86 servers built on IBM X-Architecture*
- POWER Systems  
*High performance POWER 6 servers supporting Linux, AIX, and I*
- System z  
*Scalability, reliability and Linux virtualization in a green mainframe*

# Halfords Group (UK)

## ■ Challenge

- Boost sales by providing a multi-channel e-commerce solution, integrated with core SAP systems

## ■ Solution

- New website built by Salmon (IBM Premier Business Partner) on WebSphere Commerce and running on Linux

## ■ Key Benefits

- Online sales increased by 250%, new functionalities encouraged cross and up-sell, raising average order value by 40%, integration facilitated multi-channel sales effort



# Linux and SOA / Integration

## SOA and Integration

- ESBs & Integration SW
- Messaging Software
- Business Process Mgt
- Application Servers

## Why Linux ?

- Integration and Virtualization
- Cross-platform support
- Lower Total Cost of Ownership
- Reliability and Security
- Scalability and Performance

## Customer Case Studies

- Southside Electric  
*Faster field response by integrating applications and processes with SOA and WebSphere on System i*
- Servicio Extremeño de Salud  
*Improved healthcare by integrating patient processes with WebSphere on BladeCenters and System p*

## Key Software and Hardware for Linux

- WebSphere Enterprise Service Bus  
*Web services connectivity and JMS messaging for smart SOA*
- WebSphere Message Broker  
*Universal connectivity and transformation in heterogeneous IT*
- WebSphere MQ  
*Reliable, proven messaging backbone for SOA connectivity*
- WebSphere Business Integration Server  
*Business process integration and application connectivity*
- WebSphere Process Server  
*High performance business engine to accelerate smart SOA*
- WebSphere Application Server  
*Scalable J2EE application server*
- BladeCenter  
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# Servicio Extremeño de Salud – SES (Spain)

## ■ Challenge

- Improve quality and delivery of health-care for regional Ministry of Health in Spain, across hospitals, medical care centers and administration

## ■ Solution

- Integrated health care system managing all SES patient records and related business processes, built on SOA architecture using WebSphere Business Integration on Linux on BladeCenter HS20s and System

## ■ Key Benefits

- Up-to-date information available to all facilities, enabling healthcare professions to provide the best possible service to patients



# Linux and Information on Demand

## Information on Demand

- Database Platforms
- Data Integration
- BI / Data Analysis
- Content Management

## Why Linux ?

- Scalability and Performance
- Integration and Virtualization
- Lower Total Cost of Ownership
- Reliability and Security
- Cross-platform support

## Customer Case Studies

- MasterPack SpA  
*Improve response times and stability, position for future*
- Alberta Agriculture  
*Weather data extracted from data warehouse and easily presented graphically using DB2 Alphablox*

## Key Software and Hardware for Linux

- DB2 9  
*Scalable hybrid data server with XML support*
- Informix Data Server  
*High performance Online Transaction Processing*
- Information Server  
*Data integration across heterogeneous databases*
- InfoSphere Warehouse  
*Integrated dynamic data warehousing*
- Cognos 8 Business Intelligence  
*Complete range of BI capabilities on a single SOA platform*
- FileNet Content Management  
*Combines powerful content management with workflow*
- BladeCenter  
*Powerful x86 and POWER servers using less space and energy*
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# MasterPack SpA (Italy)

## ■ Challenge

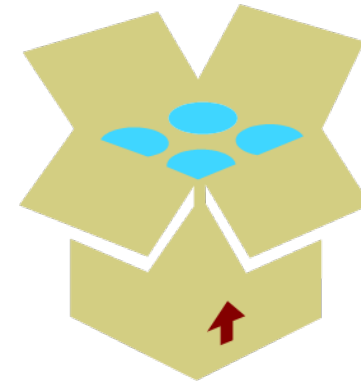
- Customer needed to improve response times and stability while allowing it to perform reliable Euro conversions

## ■ Solution

- IBM eServer xSeries 232 servers running Linux Red Hat V7.3 and DB2 V7.2

## ■ Key Benefits

- The new IBM solution has enabled MasterPack to become Euro compatible and has effectively increased response time. The IBM xSeries servers were the main force behind the improved response time, and have provided additional stability and space optimization compared to the company's previous environment. MasterPack also noted that it is enjoying the Linux environment, as it works extremely well with its business applications, providing outstanding stability and performance. Additionally, the DB2 database has been able to handle all of the company's data needs, and is scalable for future growth.



# Linux and Software Delivery

## Software Delivery

- Modelling and Design
- Application Development
- Change & Release Mgt
- Quality Management

## Why Linux ?

- Integration and Virtualization
- Cross-platform support
- Lower Total Cost of Ownership
- Reliability and Security
- Scalability and Performance

## Customer Case Studies

- Florida Department of Health  
*Rapid crisis response and flexible long-term projects with RUP and Rational tools on Linux*
- Hoplon Infotainment  
*Massively multiplayer online gaming hosted in one universe with DB2, Rational and Linux on System z*

## Key Software and Hardware for Linux

- Rational Software Delivery Platform  
*Integrated software for full life-cycle software development*
- Rational ClearQuest  
*Comprehensive software change management*
- Rational RequisitePro  
*Team-based requirements management tool*
- Rational Rose  
*Integrated visual modelling design tools based around UML*
- Rational Application Developer  
*Visual software construction tool for WebSphere built on Eclipse*
- Rational Purify  
*Runtime tools to detect programming issues and improve reliability*
- BladeCenter  
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# Hoplon Infotainment (Brazil)

## ■ Challenge

- To offer a robust, streamlined, open standards-based deployment platform for a new online game.

## ■ Solution

- The Linux- and IBM DB2-based TaikoDom game is hosted by IBM on an IBM zSeries 900.

## ■ Key Benefits

- IBM DB2 delivered a 30 percent performance increase over the earlier Oracle database system.
- IBM Rational Purify enabled programmers to quickly fix issues with game code.



# Linux and Collaboration

## Collaboration

- Email
- Instant Messaging
- Portals
- Web 2.0

## Why Linux ?

- Reliability and Security
- Scalability and Performance
- Lower Total Cost of Ownership
- Integration and Virtualization
- Cross-platform support

## Customer Case Studies

- Fischer Italia  
*Integration with corporate infrastructure, and facilitate communication among employees*
- IBM Office of the CIO  
*Cost-effective delivery of global collaboration tools using Lotus Notes on Linux, Windows and Mac*

## Key Software and Hardware for Linux

- Lotus Domino  
*Scalable server platform for e-mail, scheduling and collaboration*
- Lotus Sametime  
*Secure and integrated enterprise instant messaging*
- Lotus Notes  
*Integrated desktop client for e-mail, calendar and applications*
- IBM open collaboration client solution  
*Flexibility, choice and lower TCO with integrated Linux desktop*
- WebSphere Portal  
*B2E, B2B and B2C portal software to aggregate applications*
- iDataPlex  
*Innovative energy-saving servers for Web 2.0 workloads*
- BladeCenter  
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# Fischer Italia SRL (Italy)

## ■ Challenge

- Customer had no information technology (IT) tools in place to facilitate the communication and dissemination of information among its employees, and integrate with the Fischer Group's corporate communication infrastructure.

## ■ Solution

- IBM Lotus Domino on Linux and IBM Lotus Notes software running in a Linux Red Hat operating environment

## ■ Key Benefits

- Italian branch of a worldwide innovation company increases the speed and agility of communication and collaboration among personnel



# IBM Office of the CIO

## ■ Challenge

- Cost-effectively deliver global communication and collaboration tools in a secure and heterogeneous environment to a broad array of 450,000 IBM end users

## ■ Solution

- Lotus Notes, Lotus Domino, Lotus Symphony and Lotus Sametime software running on Microsoft Windows, Linux and Macintosh operating systems

## ■ Key Benefits

- Integrated communication, collaboration, instant messaging and business productivity tools help users connect efficiently, simplify workloads, save time and increase productivity



# Linux and Systems Management

## Systems Management

- Systems & Network Mgt
- Security Software
- Storage Management
- Virtualization Management

## Why Linux ?

- Integration and Virtualization
- Cross-platform support
- Reliability and Security
- Scalability and Performance
- Lower Total Cost of Ownership

## Customer Case Study

- Techem  
*High-resilience platform for SAP applications with Tivoli System Automation, Linux and System p*

## Key Software and Hardware for Linux

- Tivoli System Automation  
*High availability and automation capabilities for multiple platforms*
- Tivoli Storage Manager  
*Backup, archive and recovery for business-critical data*
- Tivoli Access Manager  
*Locks key applications, files and platforms to stop illegal access*
- Tivoli Provisioning  
*Automates provisioning and configuring of servers and software*
- Tivoli Intelligent Orchestrator  
*Automated triggering of provisioning and deployment of solutions*
- IBM Systems Director  
*Platform-specific management including virtualization and energy*
- BladeCenter  
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# Techem (Germany)

## ■ Challenge

- Support expansion plans by expanding and integrating business systems rapidly and effectively, securing data and protecting against disaster

## ■ Solution

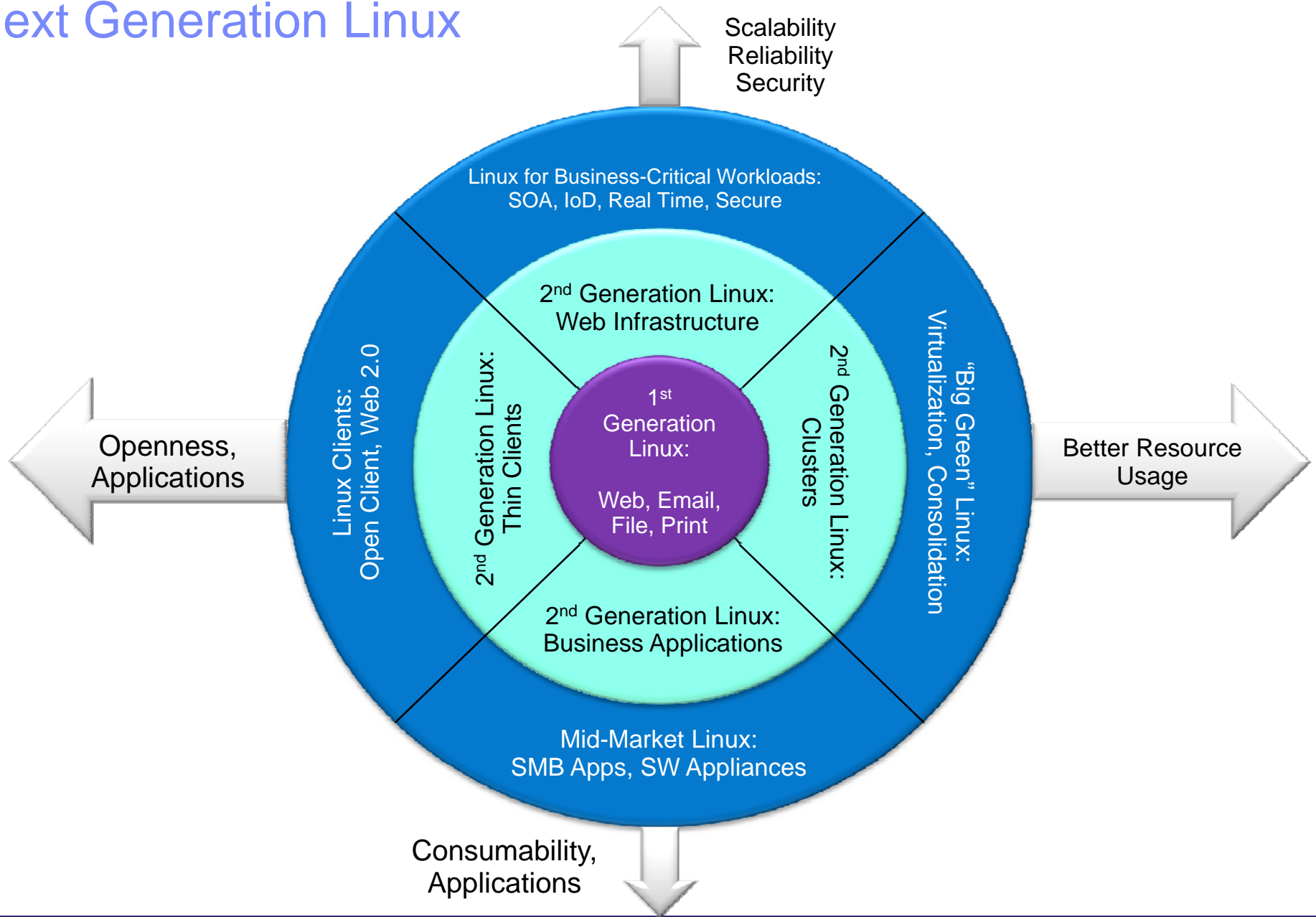
- SAP software running on Linux on System p servers using IBM virtualization to share workload efficiently, combined with Tivoli Storage Manager and managed by Tivoli Systems Automation for Multiplatforms

## ■ Key Benefits

- Simplified operating system environment reduced administration costs, and advanced storage software and hardware provided a highly resilient infrastructure



# Next Generation Linux





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