Smarter systems for a smarter planet.

Business Agility in Action

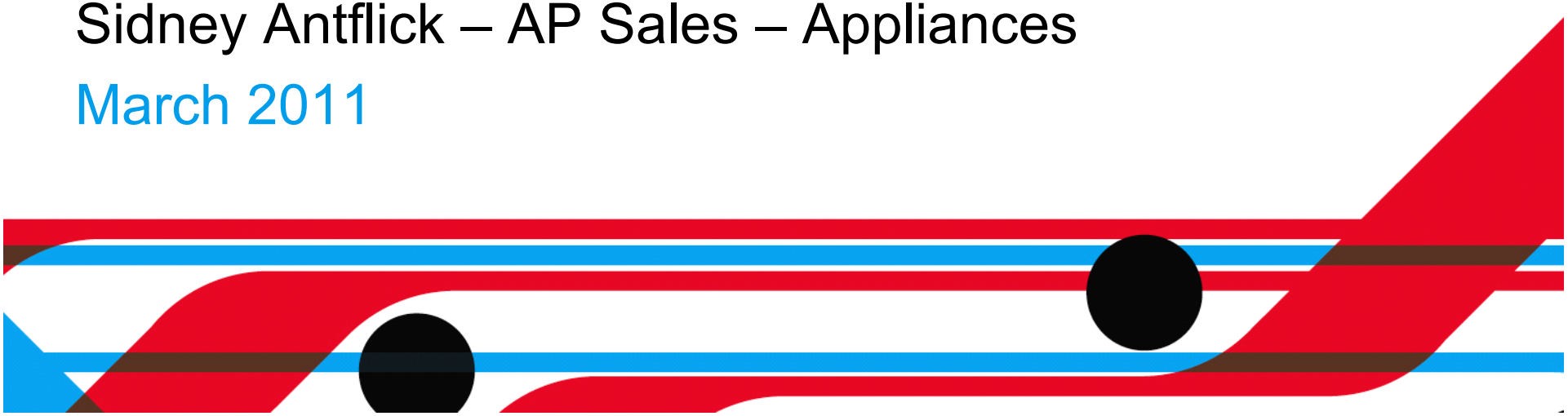
**The event series on BPM, SOA and Application Integration**

Give your business the flexibility it needs to capitalise on change.

# Introduction to WebSphere Appliances

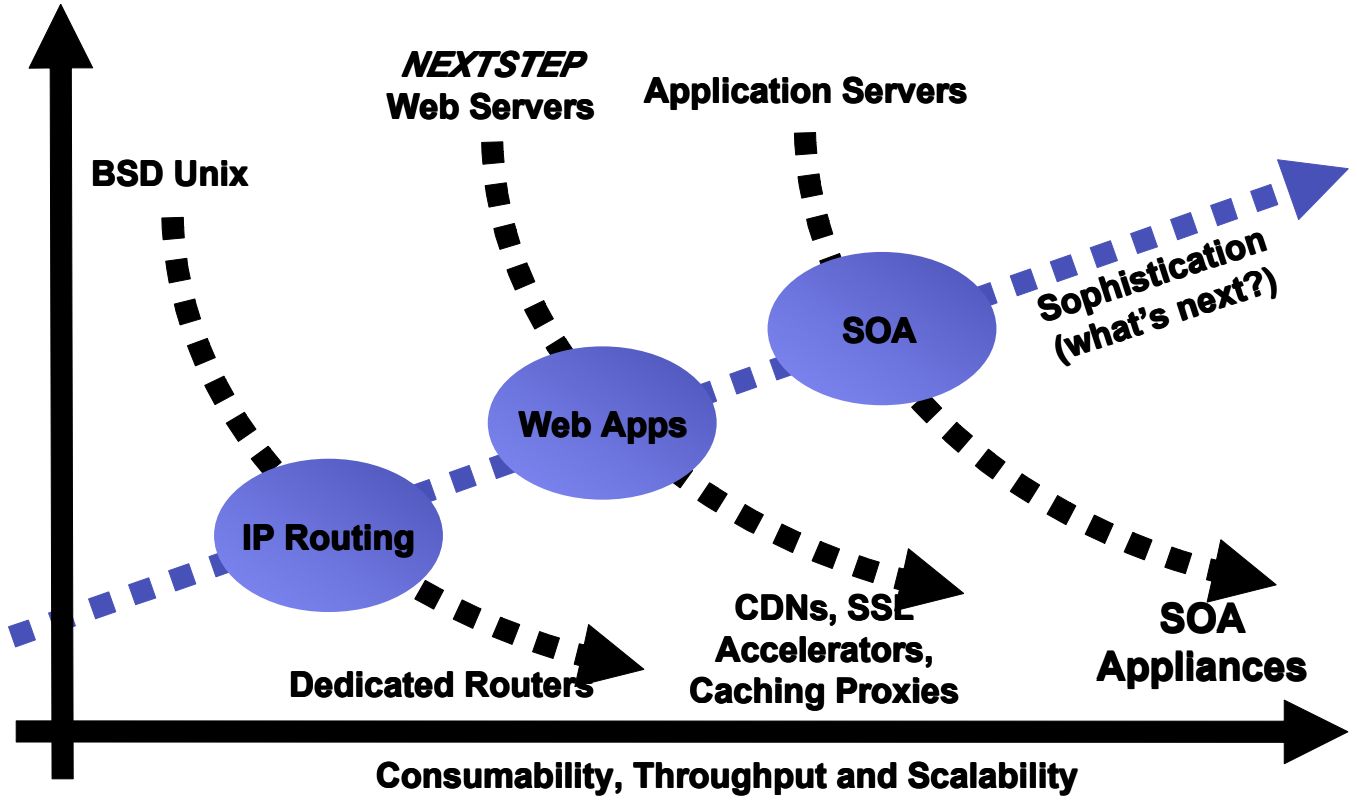
Sidney Antflick – AP Sales – Appliances

March 2011

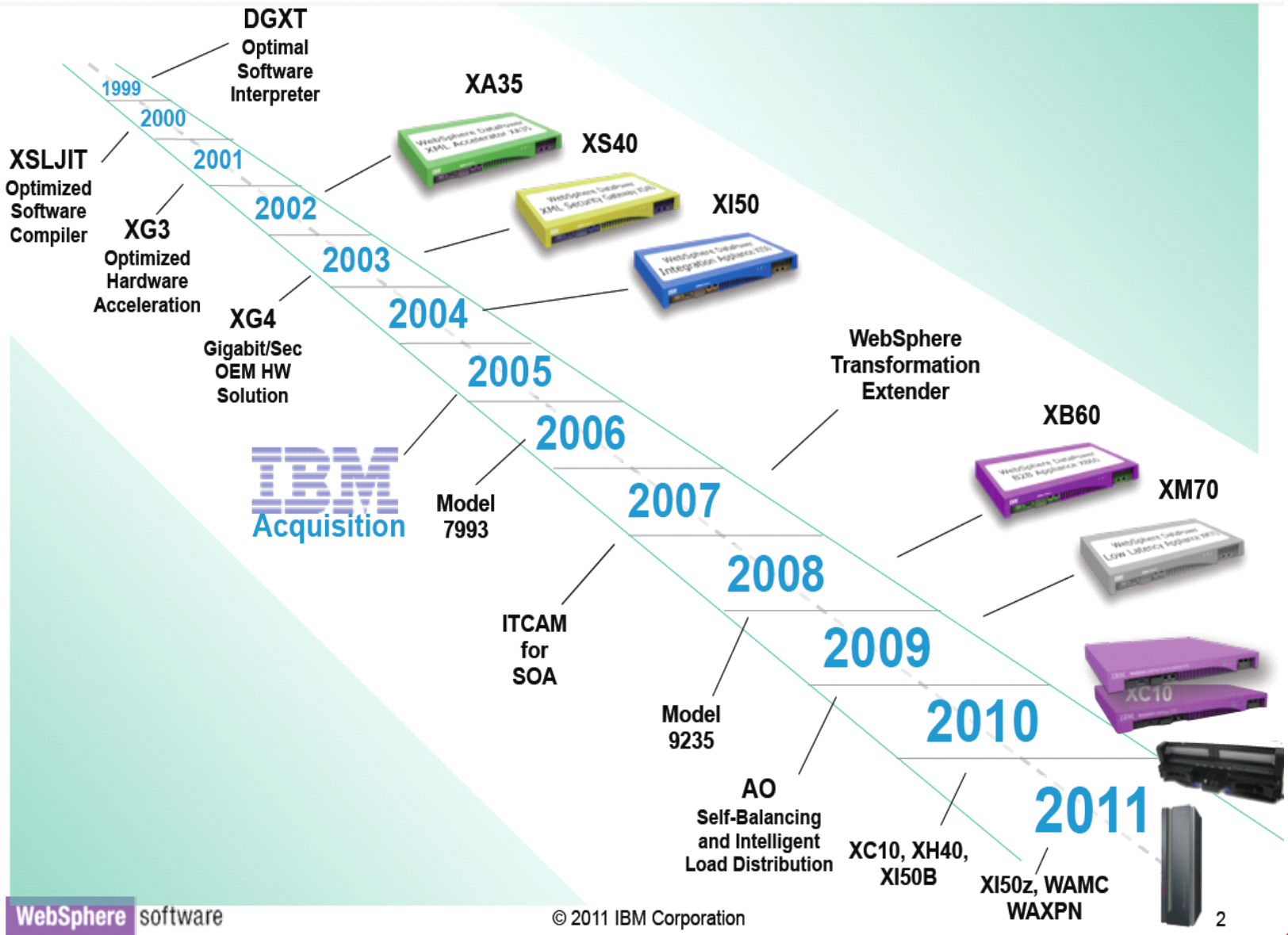


# Quick History: Appliance Origins

Successful key core IT technology migrates from software to dedicated hardware to lower cost and to increase consumability and scale



# DataPower boasts a decade of connectivity innovation:





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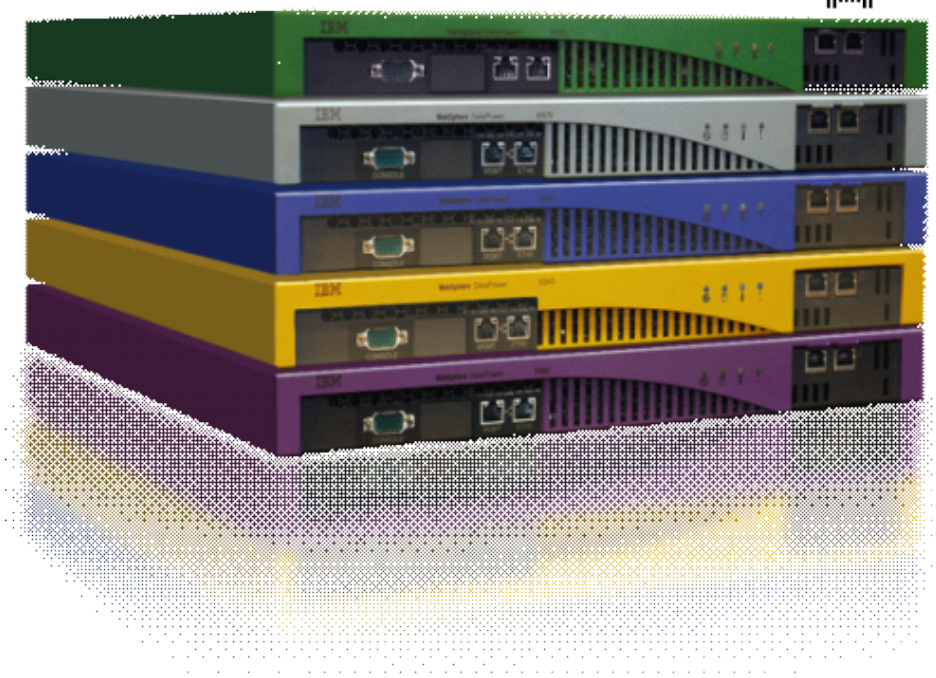
# Introduction to WebSphere Appliances

# DataPower

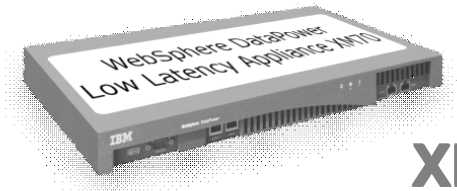
# WebSphere DataPower Appliances…

- **SECURE** your SOA, Web 2.0, B2B, and Cloud environments
- **SIMPLIFY** your connectivity infrastructure
- **ACCELERATE** your time to value
- **GOVERN** your evolving IT architecture



WebSphere DataPower Appliances provide a **low startup cost**, helping companies **increase their ROI** and **reduce their TCO** with specialized, consumable, dedicated appliances that combine superior performance and hardened security

# WebSphere DataPower Appliances meet your connectivity needs




**XM70**

- Extreme volume at microsecond latency
- Extended messaging protocol bridging
- Enhanced QoS and performance

**XB60**

- Unparalleled B2B performance
- Secure B2B messaging (AS1, AS2, AS3)
- Trading partner profile management
- B2B Transaction Viewer

**XI50 / XI50B**

**XI50z**

- Consumable hardware ESB
- "Any-to-any" conversion at wire-speed
- Dynamic routing; intelligent load distribution
- XI50B brings the XI50 capabilities to bear in an optimized IBM BladeCenter form-factor
- DataPower XI50z brings the XI50 capabilities in an optimized IBM zEnterprise zBX

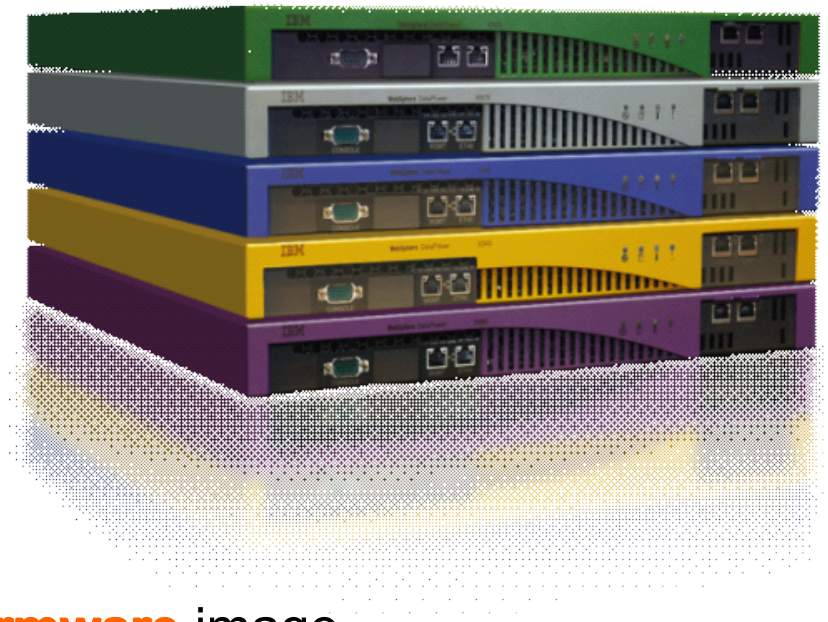
**XS40**

- Web Services security
- Rich authentication and authorization
- Centralized policy management

# Achieve unmatched security assurances with hardware and firmware

- Purpose-built **hardware** provides physical security
  - Sealed, tamper-evident case
  - No USB ports, external drives, etc.
  - Default “locked-down” configuration
  - Verbose audit log

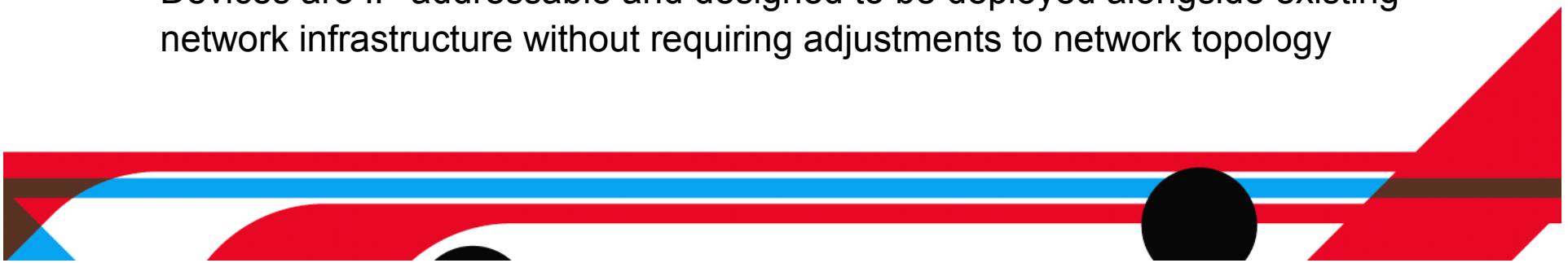
*Third party **certifications***
- *Common Criteria EAL4*
- *FIPS 140-2 Level 3 (with optional HSM)*
- *Drummond Group AS2*



- DataPower Appliances use a hardened **firmware** image
  - Signed and encrypted by IBM
  - Upgrades in minutes
  - Optimized, embedded DPOS operating system
  - Runs no arbitrary software or Java

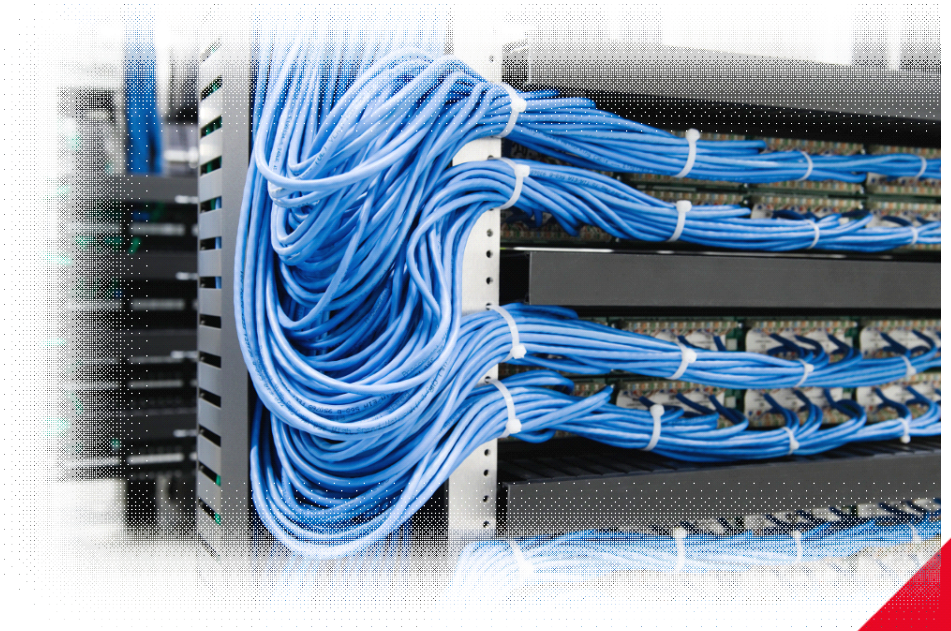
# DataPower SOA Appliances Are Not . . .

- Regular rack mount servers with some pre-loaded software
- Running a full standard operating system
- Traditional network packets (below layer 7)
- Java-based
- Application servers, which typically provide business logic for specific functions such as customer relationship management or sales force automation
  - XML processing is the common element found across these applications
  - DataPower appliances add headroom and scalability, allowing application servers to process business logic while leveraging a common platform for the heavy lifting that comes with XML processing and security
- Routers, load balancers or IP firewall replacements
  - DataPower augments existing network infrastructure by adding a layer of intelligent infrastructure to the enterprise network
  - Devices are IP-addressable and designed to be deployed alongside existing network infrastructure without requiring adjustments to network topology



# Why use an appliance for connectivity?

- Purpose-built, fine-tuned **consumable** hardware platform
- Provides high levels of certified **security** assurance
  - FIPS 140-2 Level 3
  - Common Criteria EAL4
- Achieves fast **performance** with multiple layers of specialized hardware acceleration
- Many functions incorporated in a **single device**
  - Service level management
  - Dynamic routing and load distribution
  - Edge security
  - Policy enforcement
  - Transport and message transformation
- **Simplified** maintenance model
  - Drop-in appliance form-factor
  - Secures traffic in minutes
  - Push-button flash upgrade process
  - Integrates with existing operations



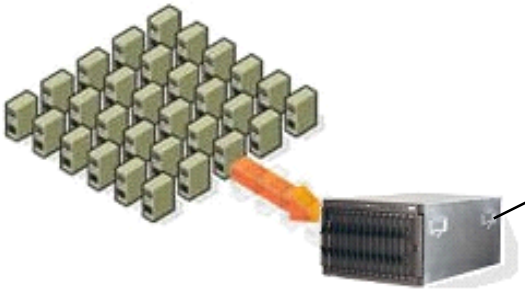
# WebSphere DataPower Integration Blade XI50B

- New DataPower Appliance Product Offering!
  - XI50 integration and ESB functions in a dense, high compute, IBM BladeCenter form-factor
  - Supports all of the same ESB, security and integration capabilities as DataPower XI50 v3.8.1
  - Generally Available June 2010
- Purpose-built Integration BladeCenter Appliance
  - Exploits latest IBM BladeCenter technology
  - Compatible with BladeCenter BCE, BCH and BCHT chassis
  - Smarter, greener IT: IBM BladeCenter technology allows you to realize innovation with flexible, scalable and highly manageable infrastructure while consolidating and reducing datacenter footprints
- Increased SOAP/XML parsing and validating providing increased scalability for SOA workloads
- Increased serviceability with multiple field-replaceable parts for faster replacement and downtime
- See the new Comment Lines editorial “Rise of the DataPower Blade” on developerWorks Tech Journal for details

# Introducing the WebSphere DataPower XI50 for zEnterprise

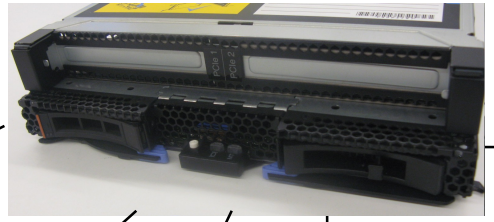
- **New Offering!**
  - XI50 features optimized in a dense, high compute **IBM zEnterprise BladeCenter Extension (zBX)** form-factor
  - Supports all ESB, Security, and Integration capabilities of **DataPower XI50** v3.8.1
- **Purpose-built** Integration Appliance
- Tightly **integrated** with zEnterprise
  - Unified hardware and firmware management through the Hardware Management Console (HMC)
  - Inherits serviceability, monitoring and reporting capabilities of zEnterprise
- **Highest capacity** DataPower appliance for SOA workloads optimized for zEnterprise environments

# Customer Deployment Scenarios



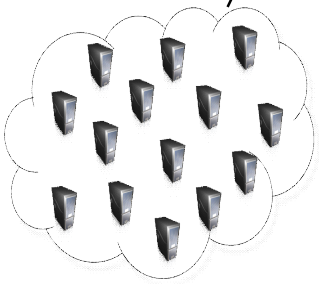
***Server Consolidation***

WebSphere. DataPower



***Telecom / Service Providers***

***SOA / Web 2.0***



***Application Optimization***

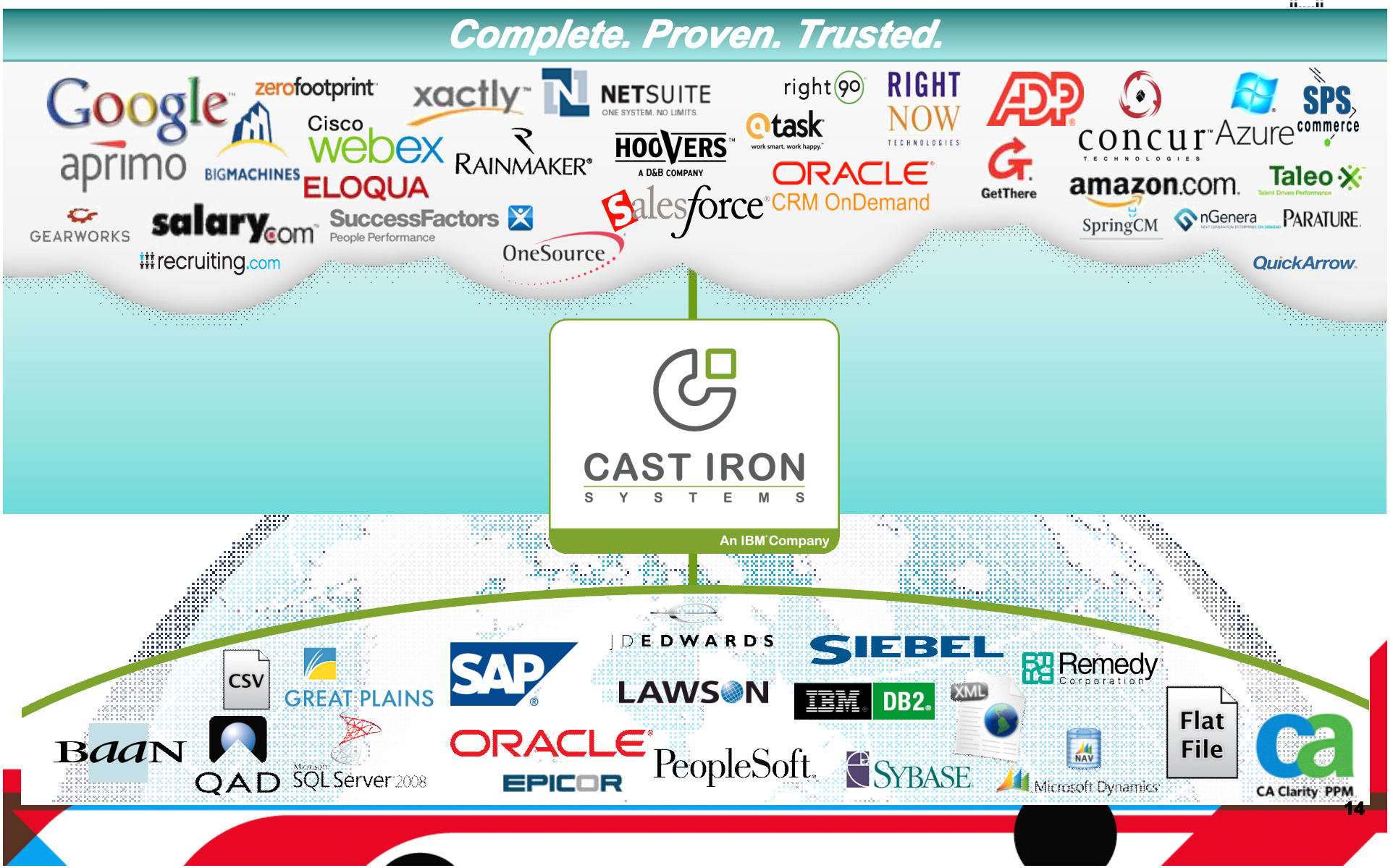
***Defense / Intelligence***

***Financial Services***

# Introduction to WebSphere Appliances

# Cast Iron

# The Cast Iron Integration Platform



# Complete Integration with Cast Iron

CAST IRON SYSTEMS

An IBM Company

## Complete Flexibility

Physical Appliances

Virtual Appliances

Cloud 2

Cast Iron Cloud2

## Total Connectivity

SIEBEL, COGNOS, Taleo, agile, Jeeves, PayPal, SYMIX, sage, right now, amazon.com, Cisco webex, HOOVERS, Google, DB2, ARAVO, SPS, Salesforce, QAD, nGenera, Informix, QuickArrow, EDWARDS, ORACLE, Remedy, GREAT PLAINS, RIGHT NOW, Certain, LAWSON, SQLServer, ADP, aprimo, MITREX, Affinity, concur, PARATURE, SAP, MySQL, task, ORACLE Hyperion, DATAN, Changepoint, Deltek, SABRIX, Microsoft Dynamics, OneSource, BIGMACHINES, MAPICS, NETSUITE, Vantage, Office SharePoint Server, PeopleSoft, ORACLE 11i, expandable, GEARWORKS, xactly

## Complete Reusability

TIP Exchange

TIP Development Kit

TIP Community

## For All Types of Projects

UI Mashups

Process Integration

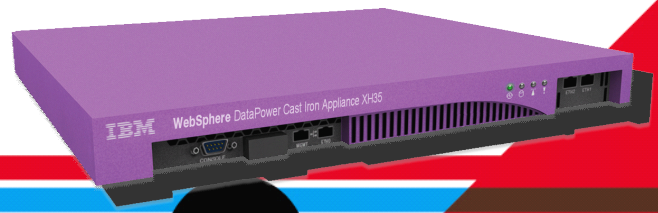
Data Migration

| Reduce risk | Save up to 50% in time and costs | Save up to 80% in time and costs | Increase return |
|---|---|---|---|

# IBM WebSphere DataPower Cast Iron Appliances XH40 Capabilities

- Rapid integration with hundreds of reusable, easily searchableTemplate Integration Processes (TIPs) and self-guided wizards
- Out-of-the-box connectivity to hundreds of cloud and custom applications
- Powerful capabilities to support data-migration for cloud applications
- Bi-directional real-time and batch integration between cloud and on-premise applications
- Graphical data transformation & rules-based workflow
- Standards-based monitoring and management of the appliance
- Secure management and data communication
- Assured delivery of transactions
- Designed for reliability across multiple projects (with built-in redundant components)
- Low monthly subscription pricing
- 24 * 7 production support
- No restriction on number of users
- **Device is tamper-resistant/tamper-evident and cannot be taken apart and deployed on other servers**

CAST IRON SYSTEMS
An IBM Company



# Introduction to WebSphere Appliances

# CloudBurst

# Accelerate time to value in virtualized environments

## *WebSphere CloudBurst Appliance*

- Secure cloud management appliance
- Reduce setup time for WebSphere environments
- Codify your infrastructure for reduced risk
- Simplified maintenance and management
- Dispenses WebSphere virtual image software

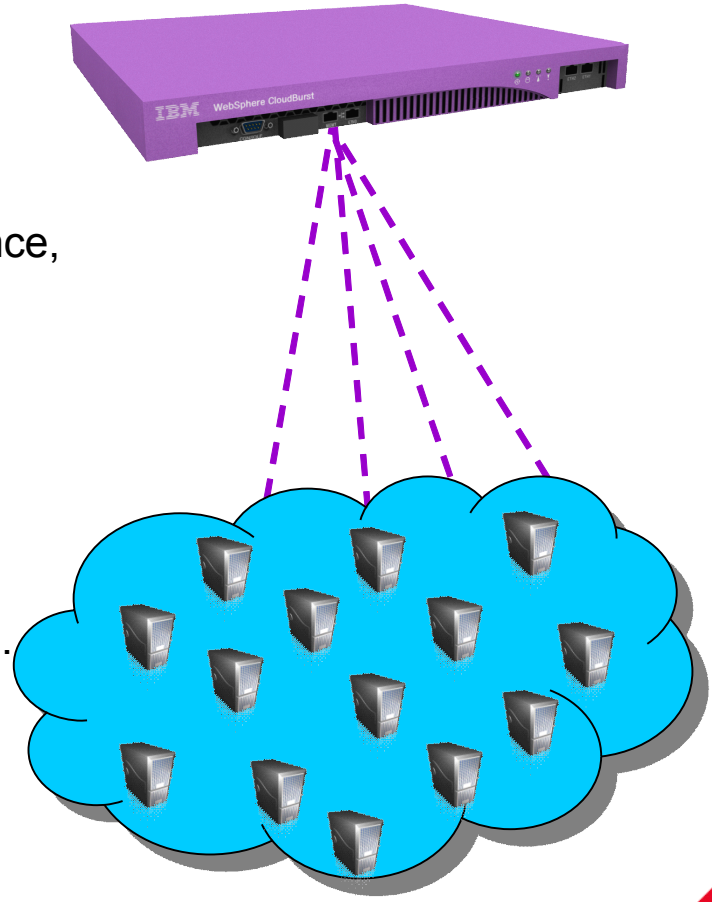
## *IBM Hypervisor Edition Products*

- New editions of products optimized for virtualized environments
- Pre-configured, ready to run on a hypervisor
- Virtual image software supported and maintained by IBM

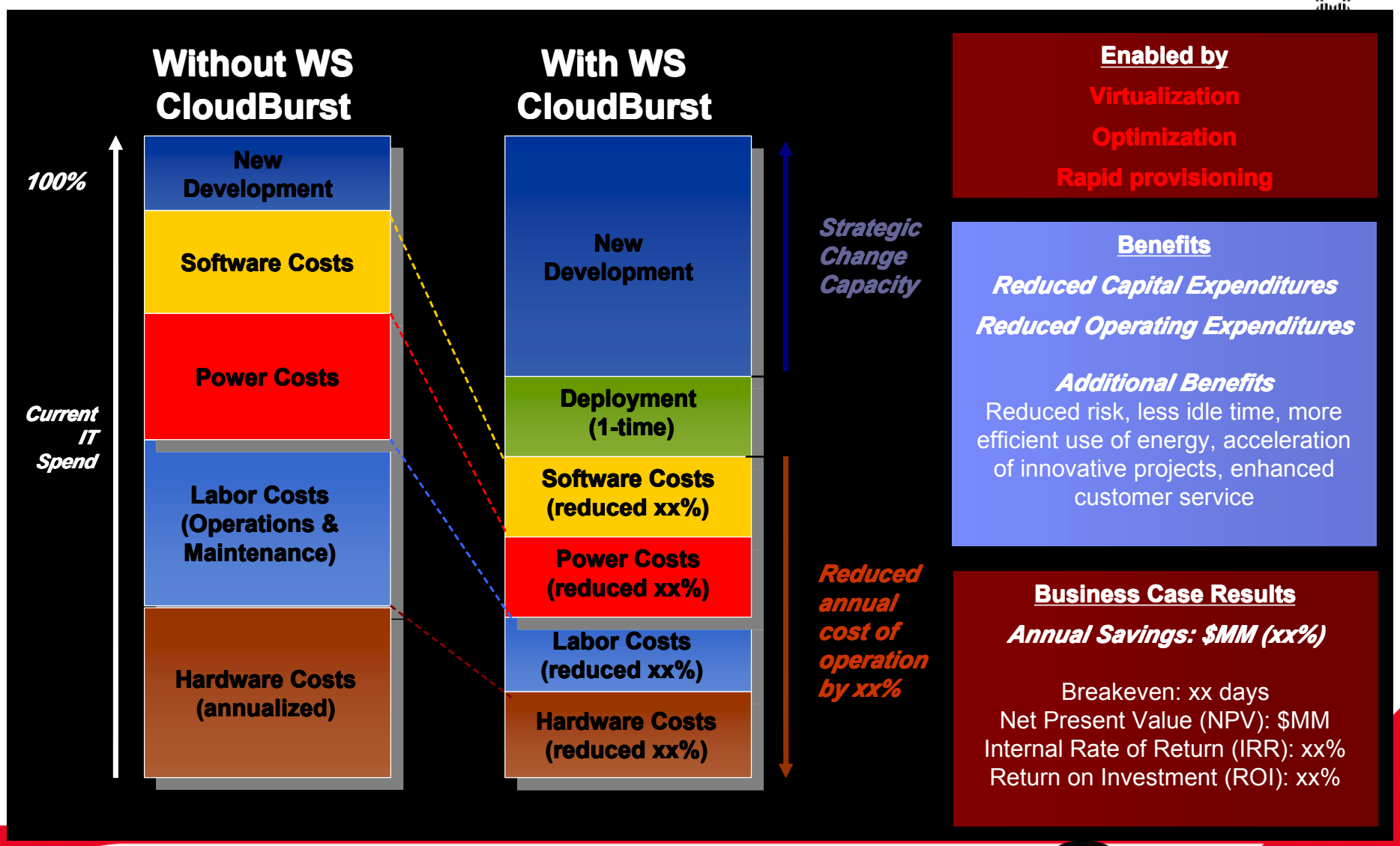
# WebSphere CloudBurst Appliance

## Accelerate time to value in virtualized environments

- Secure, self-service cloud management hardware appliance
- Unmatched WebSphere management (apply maintenance, federate cells, etc. - not black box)
- Enables consistent & repeatable deployment of application environments based on patterns
- Dispenses hardened WAS patterns into a pool/cloud of virtualized hardware running a supported hypervisor e.g. VMware ESX, z/VM, or PowerVM.
- Integrates with existing infrastructure through programmable REST APIs



# TCO Analysis Available!
# Quantifies WS CloudBurst Benefits



# Introduction to WebSphere Appliances

# XC10

# DataPower XC10 Caching Appliance

## Innovative Elastic Caching Solutions

**DataPower XC10 Appliance**

- Drop-in cache solution optimized and hardened for data oriented scenarios
- High density, low footprint improves datacenter efficiency

*"Data Oriented"*

- Session management
- Elastic DynaCache
- Web side cache
- Worldwide cache
- Data buffer
- Event Processing
- Petabyte analytics
- In-memory OLTP
- In-memory SOA

*"Application Oriented"*

WebSphere. software

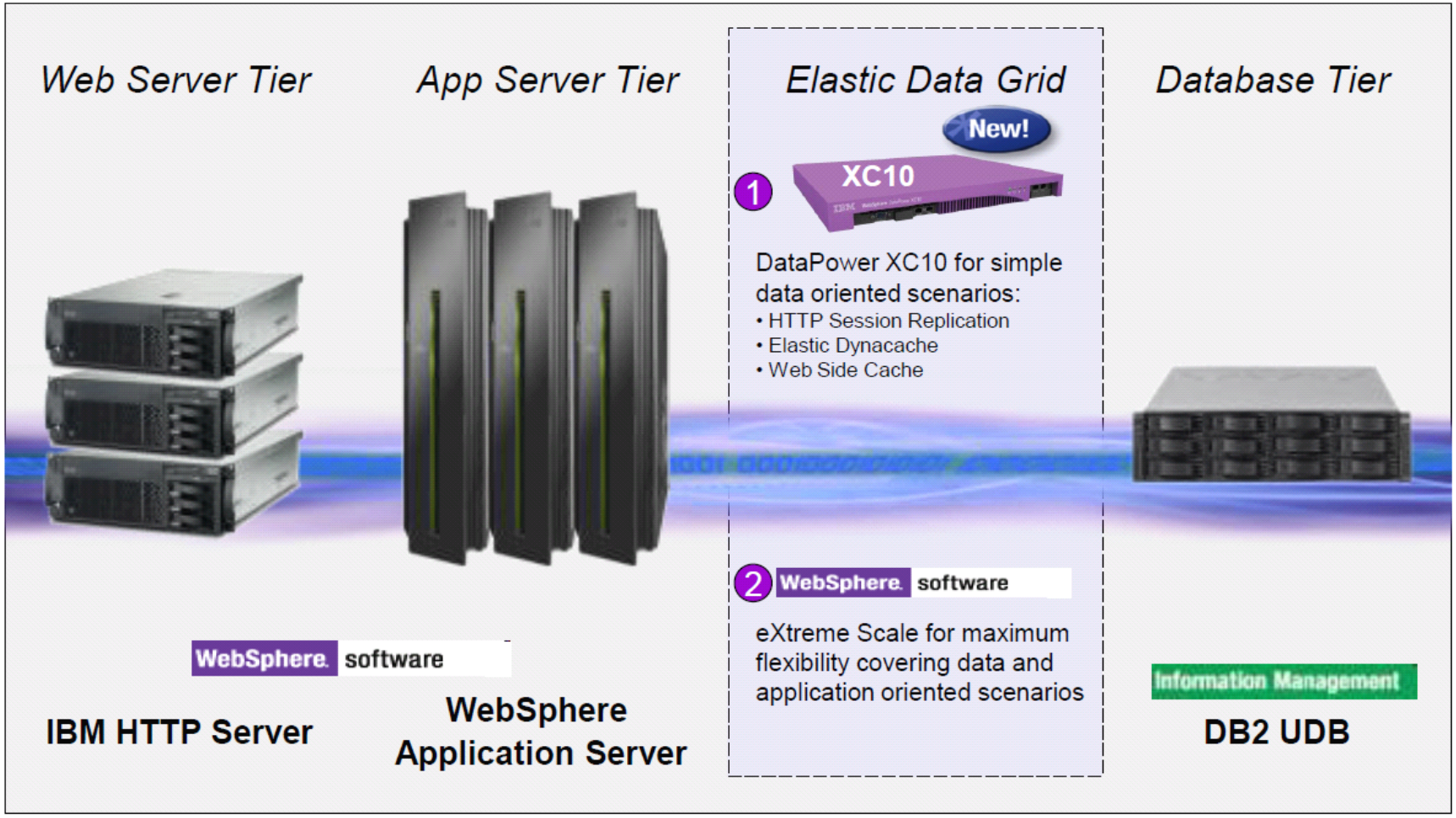
**eXtreme Scale**

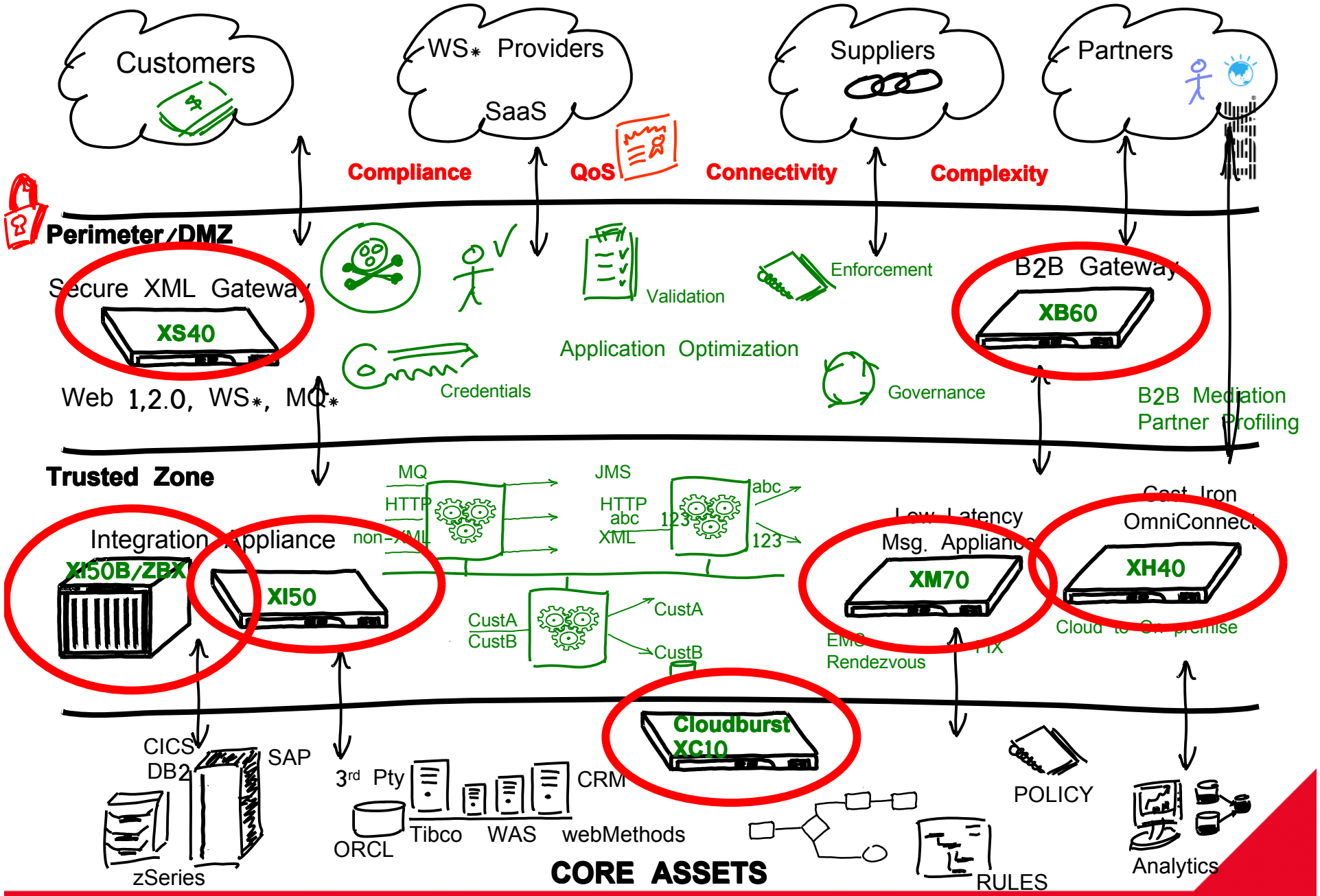
- Ultimate flexibility across a broad range of caching scenarios
- In-memory capabilities for application oriented scenarios

*Elastic caching for linear scalability*
*High availability data replication*
*Simplified management, monitoring and administration*

# DataPower XC10 Caching Appliance

## Modern Application Infrastructure Topology




Customers
WS* Providers
SaaS
Suppliers
Partners
Compliance
QoS
Connectivity
Complexity
Perimeter/DMZ
Secure XML Gateway
XS40
Web 1,2.0, WS*, MQ*
Validation
Enforcement
Application Optimization
Credentials
Governance
B2B Gateway
XB60
B2B Mediation
Partner Profiling
Trusted Zone
Integration Appliance
XI50B/ZBX
XI50
MQ
HTTP
non-XML
JMS
HTTP
abc
XML
123
abc
123
CustA
CustB
CustA
CustB
Low Latency
Msg. Appliance
XM70
EMS
Rendezvous
FIX
Cast Iron
OmniConnect
XH40
Cloud to On-premise
Cloudburst
XC10
CICS
DB2
SAP
zSeries
3rd Pty
CRM
ORCL
Tibco
WAS
webMethods
CORE ASSETS
POLICY
RULES
Analytics