

# **VSE/ESA and Linux - Trends and Directions -**

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# Agenda

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...IT'S COOL.

**VSE Directions**

**VSE and Linux working together**

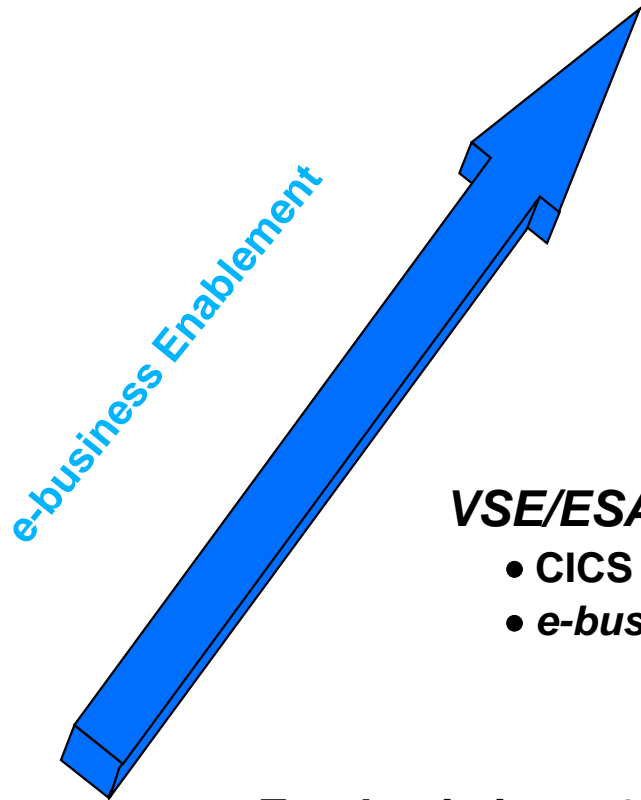
**VSE and Linux for S/390 values**

**VSE and Linux Solution Opportunities**

**Where it is today (Products on Linux for S/390) ?**

# VSE Focus - Directions

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## VSE/ESA V2.6 Dec. 2001

- ECI, SSL ....
- Continues Interoperability Focus



## VSE/ESA V2.5 Sept 2000

- Enhanced Interoperability

## VSE/ESA V2.4 1999

- CICS Transaction Server for VSE/ESA
- *e-business*



Emphasis is on 3-tier e-business enablement, *somewhat* less on traditional VSE/ESA priorities such as more capacity, quality improvements, and expansion of z/OS affinity

## **e-business connectors VSE/ESA 2.5 (SSL - VSE/ESA 2.6)**

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- ***Java-based connector (sockets based)***
  - ▶ connectivity via TCP/IP
  - ▶ implemented as long running partition on VSE
  - ▶ VSE Java beans
  - ▶ access to VSAM, POWER, Librarian, ICCF, console
  
- ***DB2-based connector (using DRDA)***
  - ▶ connectivity via TCP/IP or SNA
  - ▶ implemented as DB2 stored procedures on VSE
  - ▶ standard JDBC/ODBC calls on Web Application Server
  - ▶ access to VSAM and DL/I - as well as DB2

# VSE/ESA 2.5 'Traditional' Enhancements

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- More than 10 Dynamic Classes
- VSAM LSR Buffer Hashing
- PNET over TCP/IP
- Storage
  - ▶ Enterprise Storage Server (Shark) Flashcopy Support
  - ▶ VSAM Support for Flashcopy and IXPF/Snapshot
- eServer
  - ▶ zSeries in 31-bit mode only



# VSE/ESA 2.6 Enhancements

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- New Hardware Support
  - ▶ FICON, Gigabit Ethernet, IBM 2074
- Security Support in TCP/IP for VSE/ESA
  - ▶ Key Security Functions such as SSL
- CICS ECI over TCP/IP (CICS Transaction Gateway)
  - ▶ Access to CICS resources on VSE from a middle tier running Linux



# VSE/ESA 2.6 e-business Connectors Enhancements

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- VSE e-business connectors support for Java2 SSL
- VSAM Redirector Server
  - ▶ Redirect access to VSAM to remote systems
- JDBC Driver for VSAM
- Virtual Tape Server
  - ▶ Allows transfer virtual tapes to a VSAM Cluster



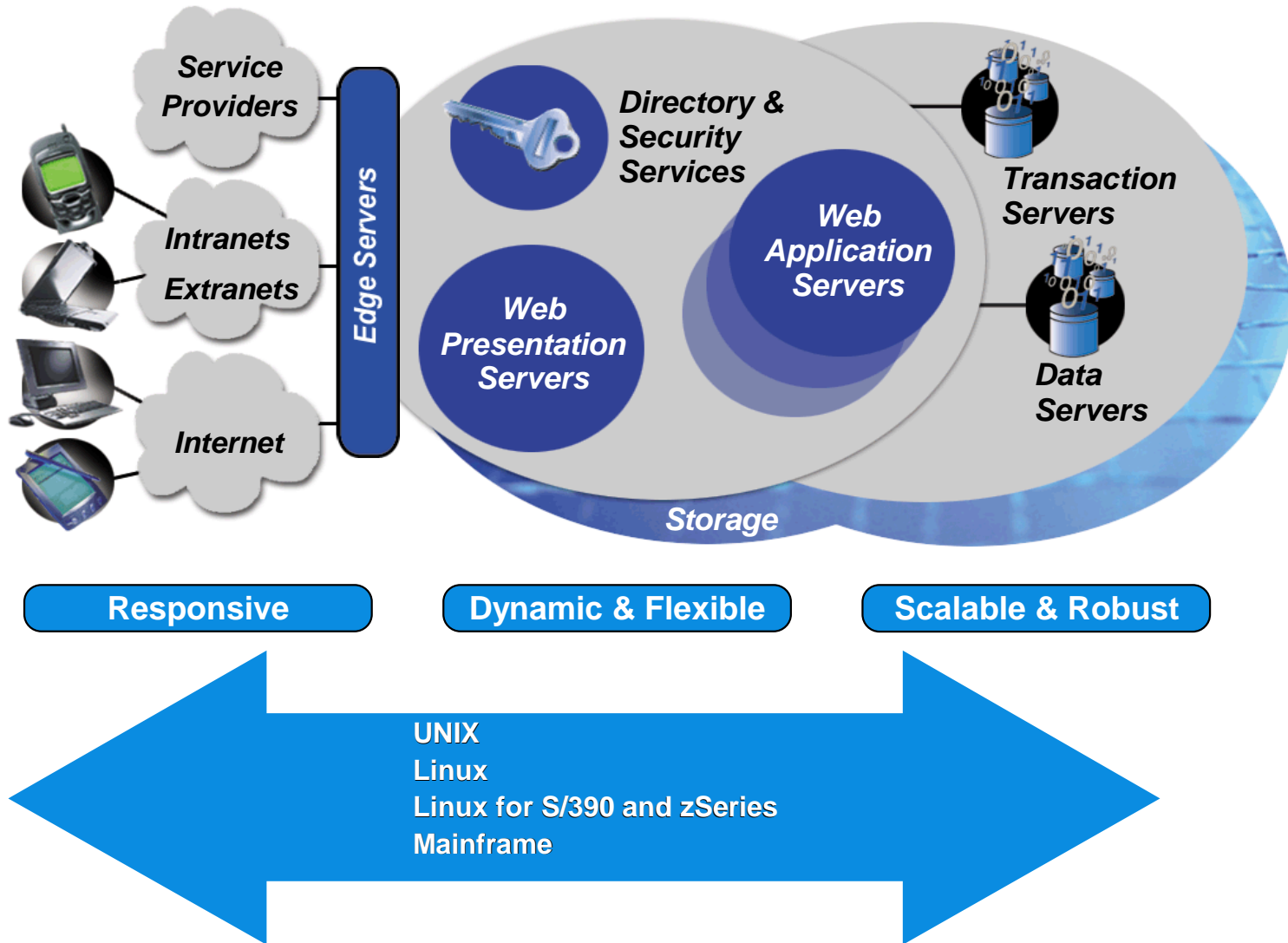
# Optional Products

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- DB2 SERVER FOR VSE AND VM V7R2
  - ▶ extended TCP/IP support
  - ▶ improved tape handling
  - ▶ delivers greater security
- MQSeries V2.1.1
  - ▶ more secure communication between MQSeries systems and clients using SSL.
  - ▶ support for JAVA clients

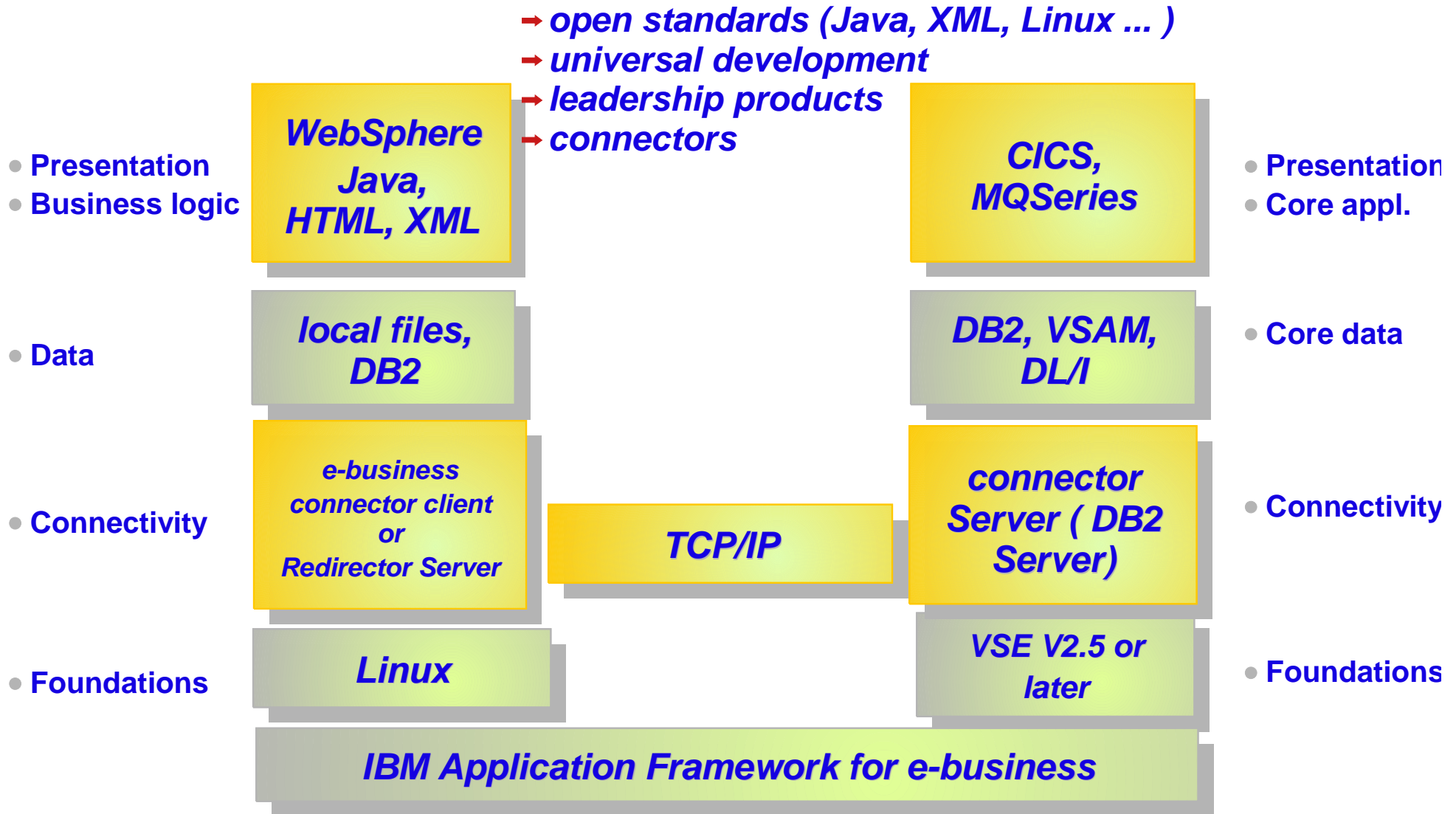


# Infrastructure for the Next Generation of e-business



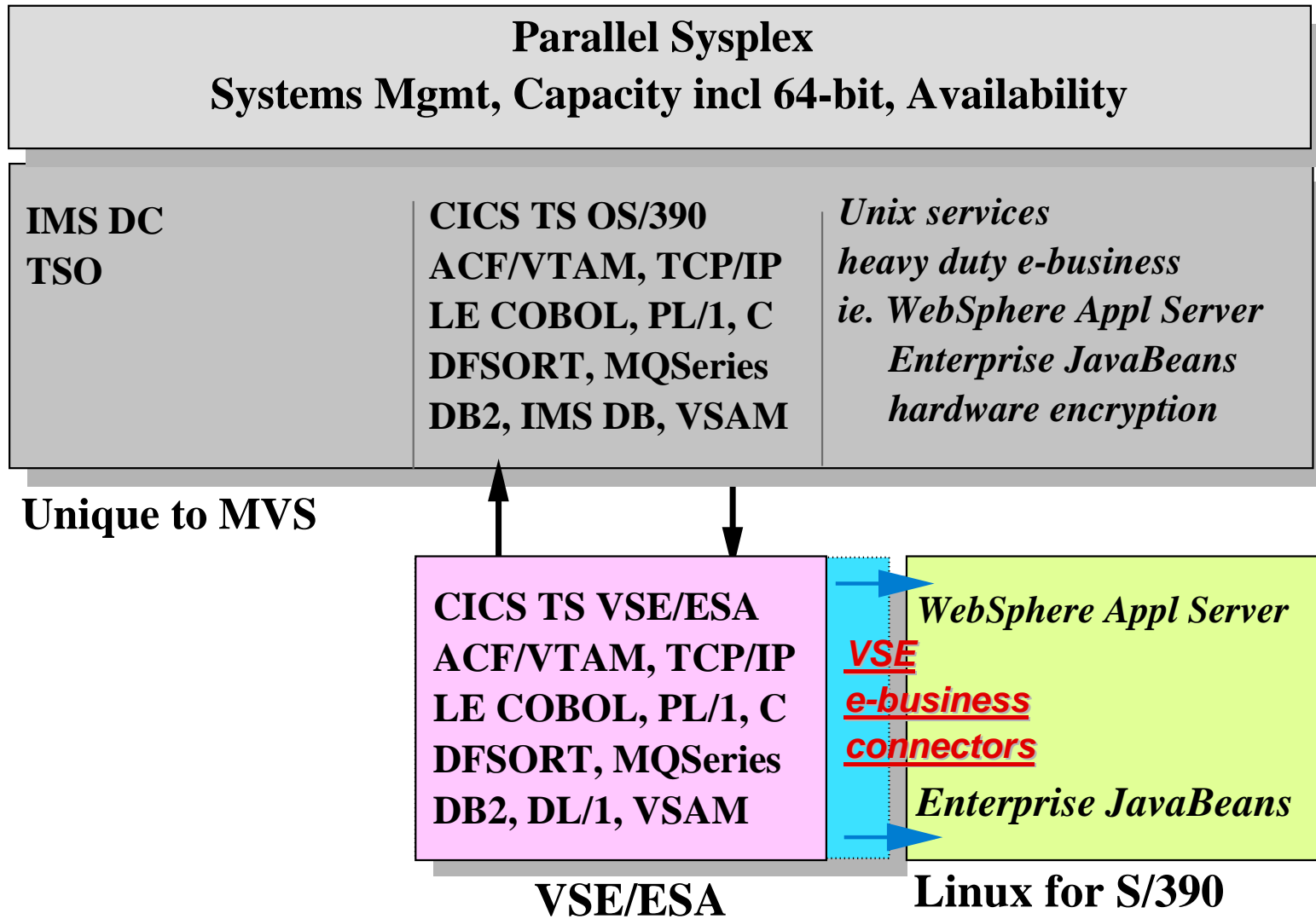
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# What keeps everything together?



# VSE and Linux for S/390 and zSeries

## z/OS - OS/390



# What Is Linux for zSeries and S/390?

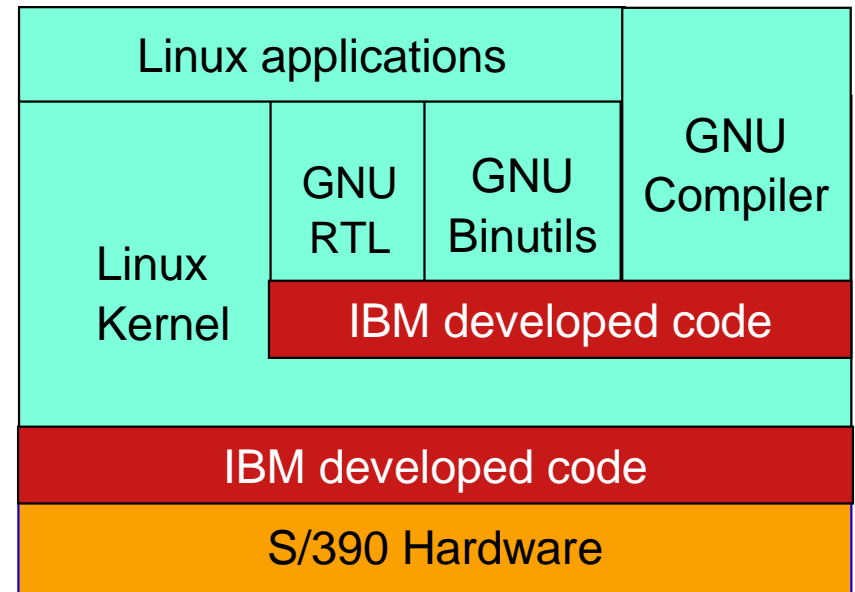
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Not a unique version of Linux  
or other operating system

Pure Linux, an ASCII  
environment

Exploits IBM S/390  
hardware, including IEEE  
floating point

Not a replacement for other  
IBM S/390 operating  
systems



# Why VSE/ESA and Linux ...

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- Protect the IT investments in your S/390 or zSeries environment
- VSE/ESA the excellent backend system partner
- Combine existing work load with new work load
- The Linux application portfolio will greatly increase the solutions available to VSE customers
- The great flexibility + openness of Linux combined with VSE/ESA qualities results in an industrial strength environment
- Over 35 years of constant innovation

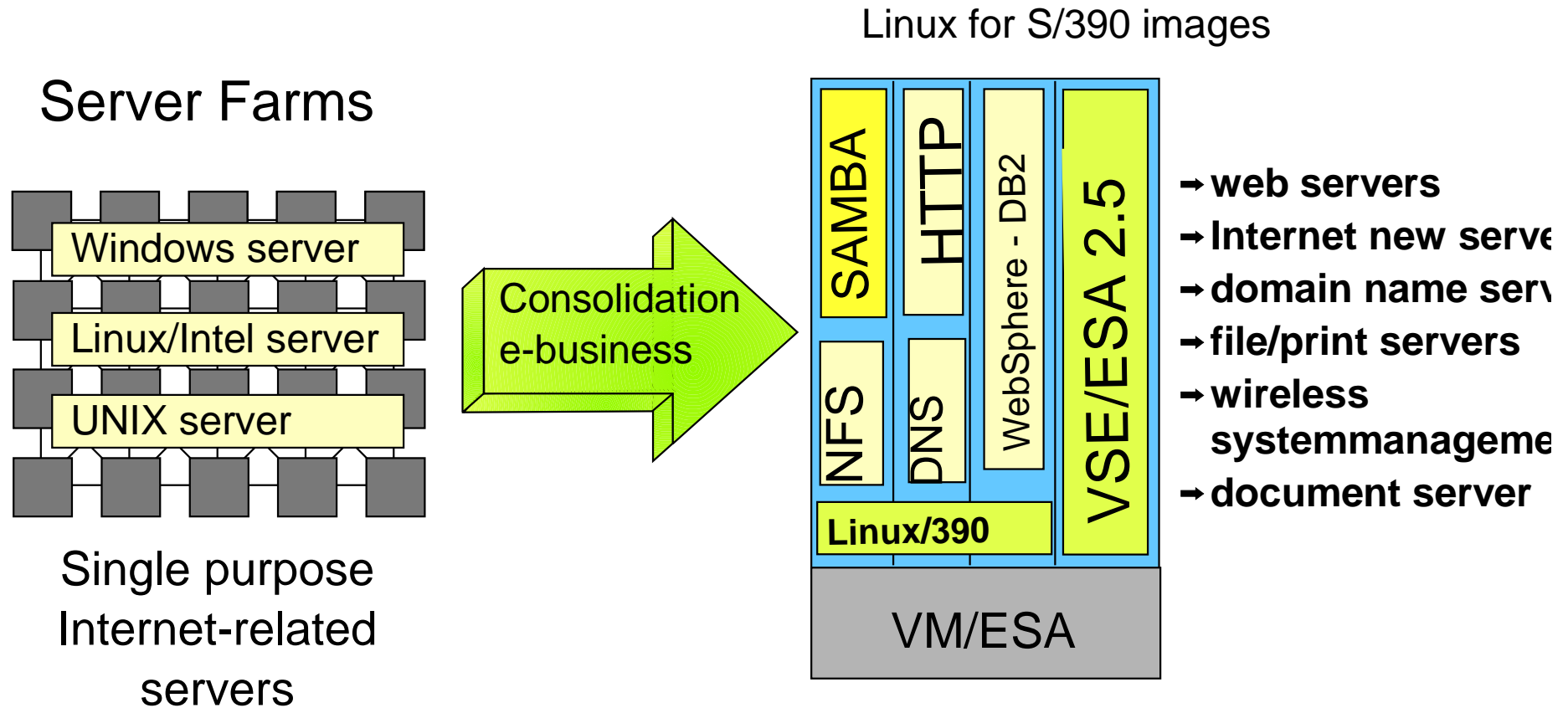
**Linux brings the e-business advantages**



*And much more ...*

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# Sever Consolidation



# IBM Software on Linux for zSeries and S/390

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- WebSphere Application Server Advanced Edition
  - Java Development Kit
- WebSphere Commerce Suite V5.1 Pro Edition for Linux on zSeries
- DB2 Universal Database
- Connectors
  - DB2 Connect
  - CICS Transaction Gateway
  - IMS Connect
  - MQSeries client
  - VSE e-business connectors
- Tivoli
  - Tivoli Storage Manager client

**Pricing consistent with Linux applications on x architecture**

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# Where it is today?

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## Available ISV Products on Linux for S/390

### ABK-systeme GmbH

- financial systems software

### Informix

- Database

### Intercope

- FaxPlus/Open

### Macro 4

- Print Server

### SAP

- ERP

### Software AG

- Database

### Sendmail

- mail server

### VistaSource

- Office suite

### ACTS

- testing tools

### BMC

- Systems Management

### CA

- Systems management

### KAI software

- Development tools

### Rational Software

- Development tools

### Rogue Wave Software

- Development Software

### SAS

- Development tools



# Popular Applications on Linux for zSeries and S/390

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<b>Samba</b>	CIFS/Windows file and print service for Linux
<b>Apache</b>	Web server
<b>Perl</b>	Programming language
<b>Sendmail</b>	Mail server
<b>FW/1</b>	Firewall construction kit
<b>IMAP</b>	Remote mailbox access system
<b>POP3</b>	Remote mailbox access system
<b>OpenSSL</b>	SSL implementation
<b>OpenLDAP</b>	LDAP implementation
<b>PAM</b>	Authentication system

***Hundreds of Open Source applications available***

# IBM Global Services Support for Linux for S/390

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## IBM Operational Support Service Offerings

### Advanced Support

Customized Service Solution.

- Focused Support Team
- Accelerated Response
- Customized Reporting
- Proactive Recommendations/Support

### Account Advocate

Assigned Technical Specialist/Team

- Tracks, Reviews & Escalates Problems as Required
- Available 9X5
- Reviews Support Activity with Customer Monthly

### Support Line

Fee Service for How To/Usage Questions

- Telephone and Electronic Access
- 9X5 or 24X7 Coverage
- Response Time: 2 Hours Primeshift, 2-4 Hours Offshift

## IBM Consulting - Implementation Services

### Consulting & Education

- Open Source Consulting
- Linux Infrastructure Assessment
- Class room and Web-based courses
- Red-books



### Application

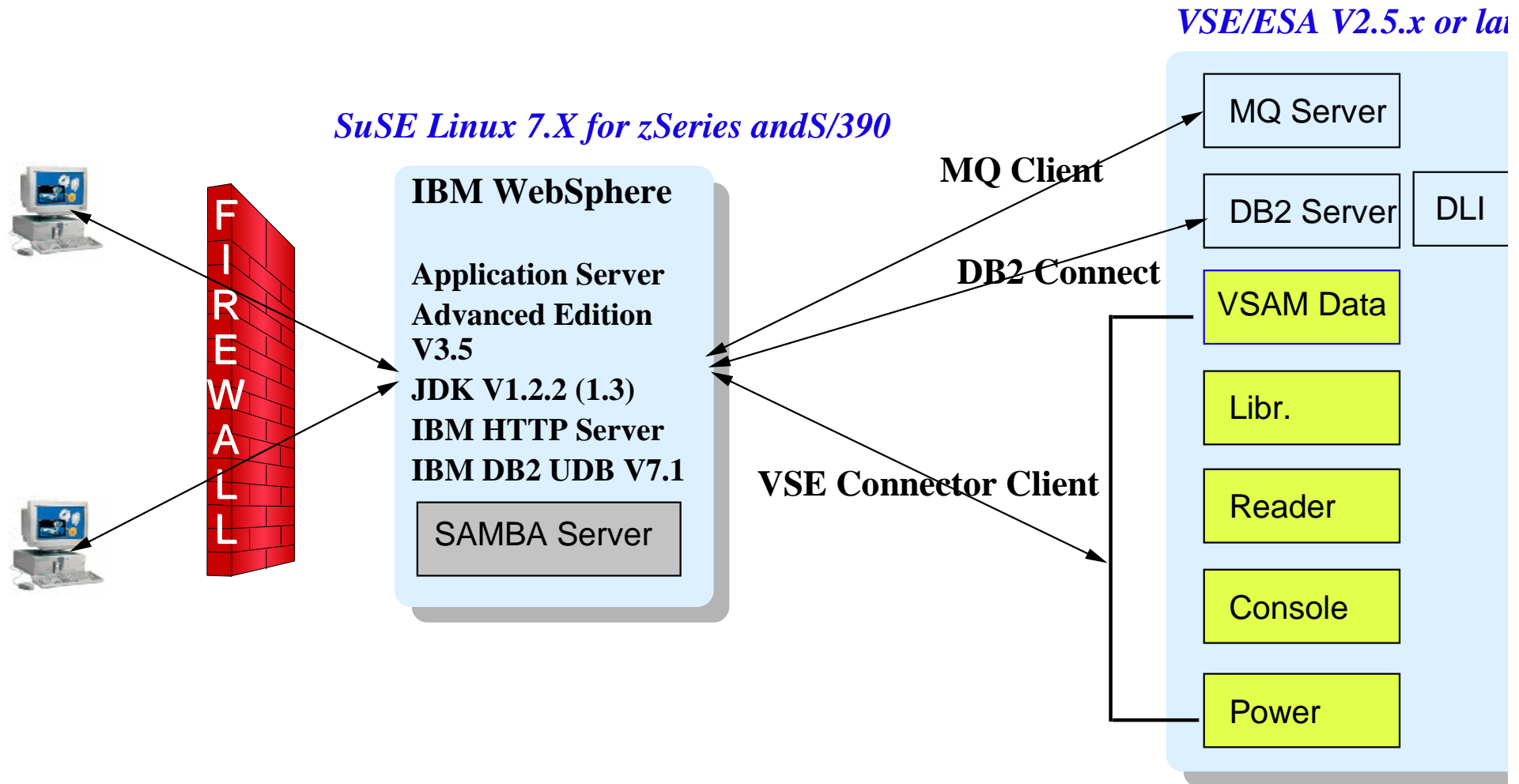
- Installation Services for WebSphere
- Installation Services for MQ Series
- DB2 Migration
- Server Consolidation

### Implementation

- System installation and configuration
- e-business e-server solutions
- Cluster solutions
- Platform Migrations

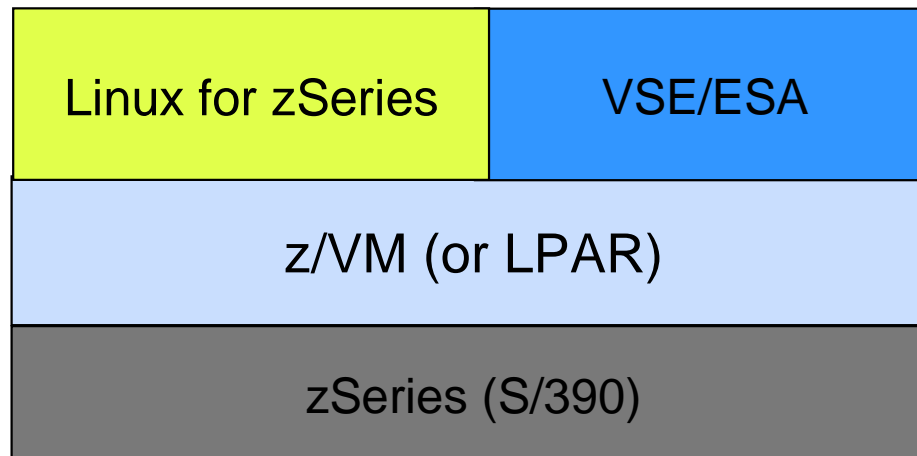
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# Preferred Installation



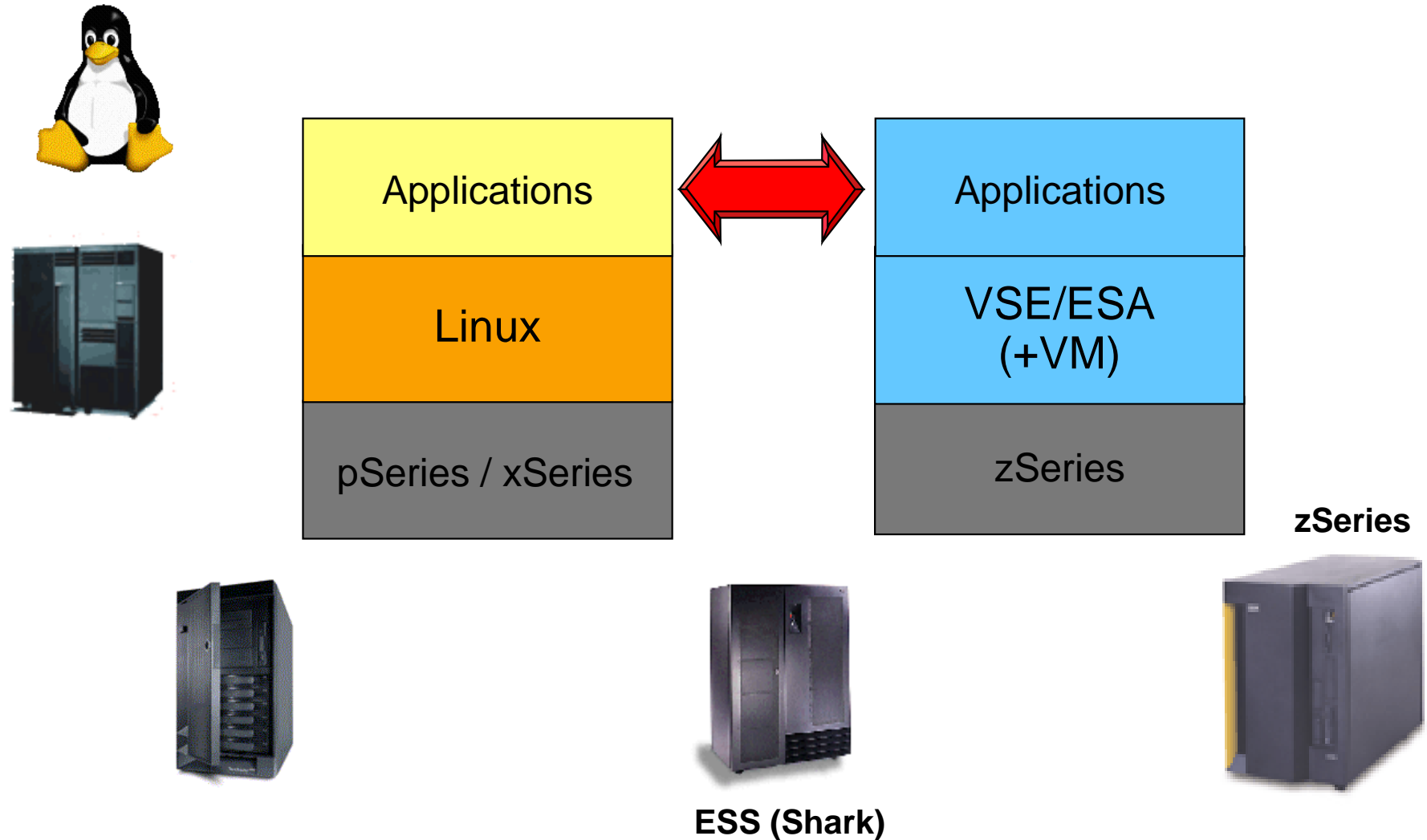
# Linux for S/390 - 3-tier logical / 2-tier physical

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ie. Multiprise 3000 + IFL

# Linux - 3-tier logical / 3-tier physical



# Summary of Customer Values

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## ■ Reduced TCO

- Environmental savings - single footprint vs. hundreds of servers
- Consolidation savings - less storage, less servers, less sw licenses, less server management/support
- Integration core applications and core data

## ■ Improved Service Level

- Systems Management (single point of control)
- Reliability, Availability, Security of S/390 hardware and VSE

## ■ Speed-to-Market

- Capacity-on-demand capability on S/390
- Dynamic allocation of on-line users, resources
- fast launch of e-business tools / applications

# Summary Linux for eServer Strategy

## *The Point of Consolidation - Where Linux Ascends to the Mainframe*

### Flexible Design

- Runs native, in an LPAR or on VM/ESA
- New Virtual Image Facility supports hundreds of images with familiar interfaces
- New Integrated Facility dedicates incremental processing for Linux
- Linux for S/390 - 31 bit
- New Linux for zSeries - 64 bit

### IBM Support & Services

- IGS defect and how-to support for SuSE and TurboLinux distributions of LINUX for S/390, zSeries
- Service offerings



### IBM Middleware

- DB2 UDB EE V7
- MQSeries Client V5.2
- WebSphere Advanced Edition V3.5
- Connectors (DB2, IMS, CICS)
- Tivoli TSM Client

### Applications

- BMC
- Computer Associates
- CompuWare
- Software AG
- Hundreds of open source software applications

### Commercial Distribution Partners

- SuSE - Internet download or CD-ROM
- TurboLinux - Internet download or CD-ROM
- Linux for S/390 - available now
- Linux for zSeries - available 2001
- Red Hat Linux for zSeries - 2001

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# Recommendations

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- **Protect Core VSE Investments**

  - modernize using

  - **VSE e-business connectors**
  - CICS TS VSE/ESA
  - MQSeries 2.1.1
  - DB2 Server, Visual Tools, etc.

- **Follow IBM Application Framework for e-business**

  - for significant replacement and new applications

  - **WebSphere Application Server**
  - IBM Servers including zSeries (S/390)
  - **Linux for S/390 and zSeries**



# VSE/ESA - It Gets Better

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After 35 Years Providing Cost/Effective Solutions to IBM Customers the World Over, VSE Doesn't Get Older - It Gets Better. Now, following the IBM Application Framework for e-business, *you can be as competitive as you want to be!*