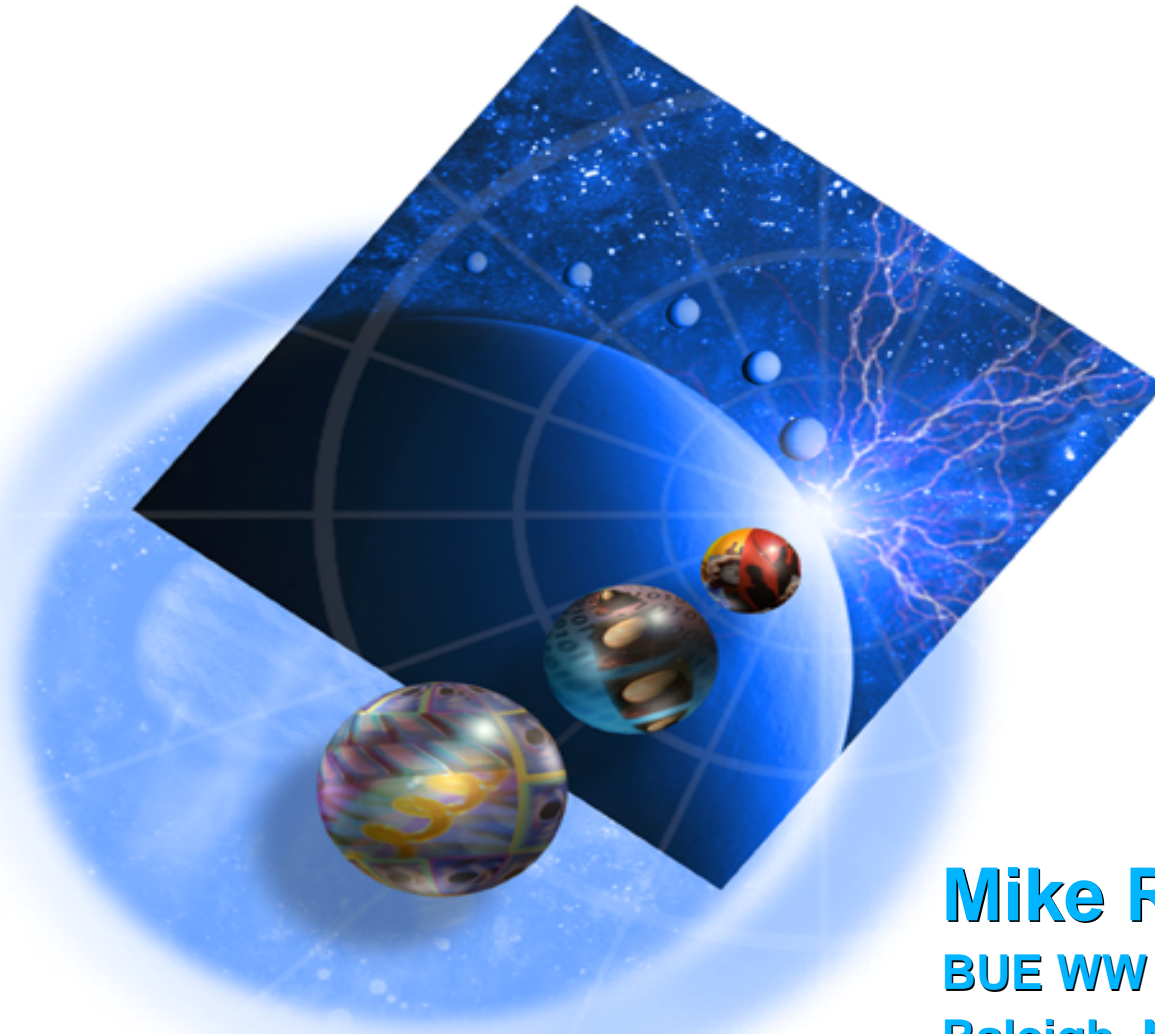


IBM WebSphere Platform Overview



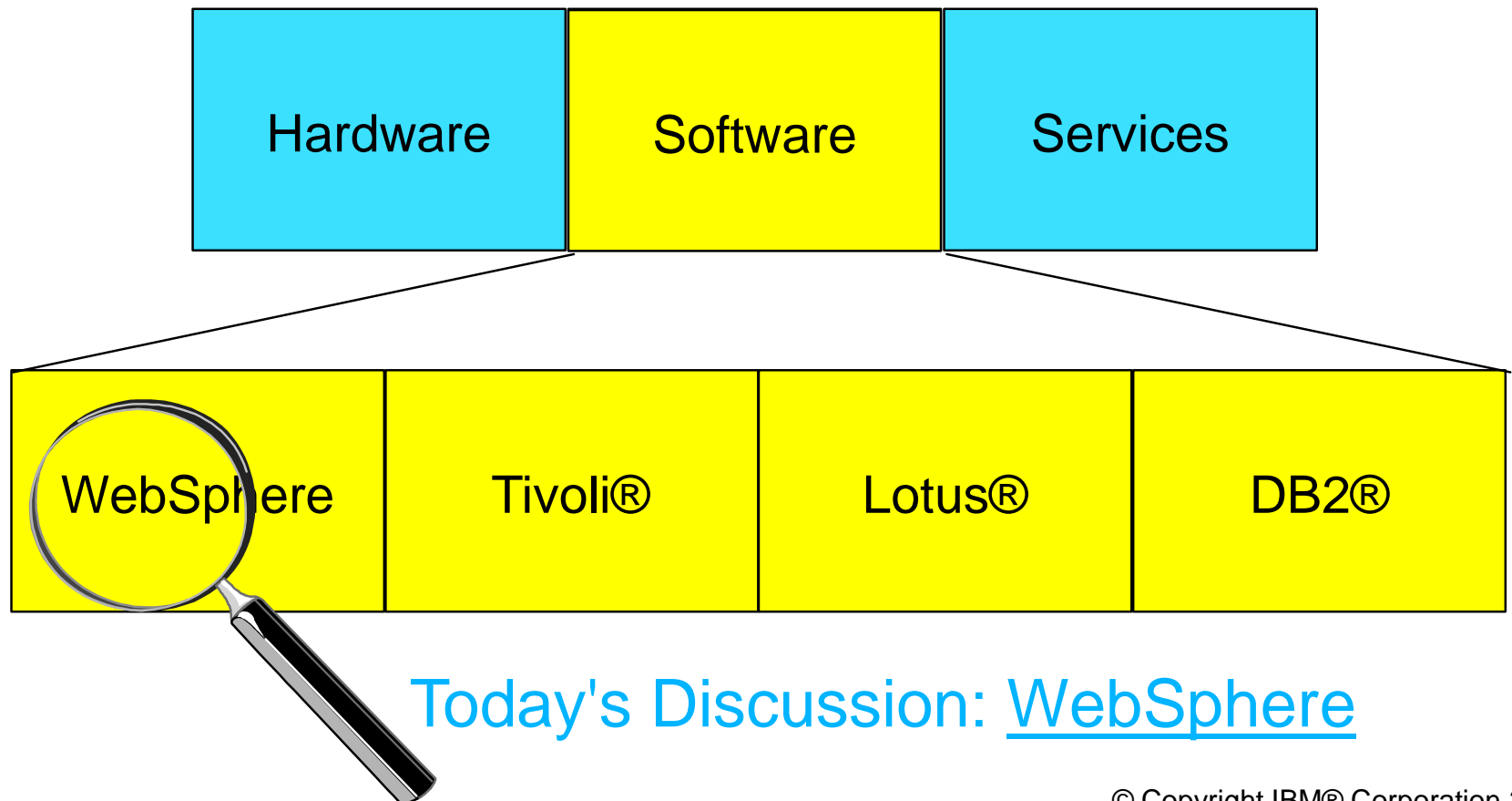
Mike Rhoads
BUE WW WebSphere Solutions
Raleigh, NC, USA

Agenda

- **Overview & Market Adoption**
- **Application Servers**
- **Development Tools**
- **Business Process Management**
- **Portals**
- **Summary**

WebSphere Positioning within IBM

- IBM helps business become e-business through HW, SW & Svcs
- IBM software is developed and sold as four software brands
- WebSphere® provides the industry's broadest set of integrated e-business middleware.



WebSphere fundamentally does three things!

**Provide any user or device
streamlined access to
customized content**



Browser



Pervasive



Employees

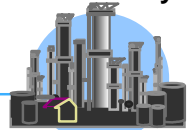


Cust/Suppliers

**Integrate and automate
business processes to
maximize agility**



Partners Sys



Suppliers Sys



Processes



Information

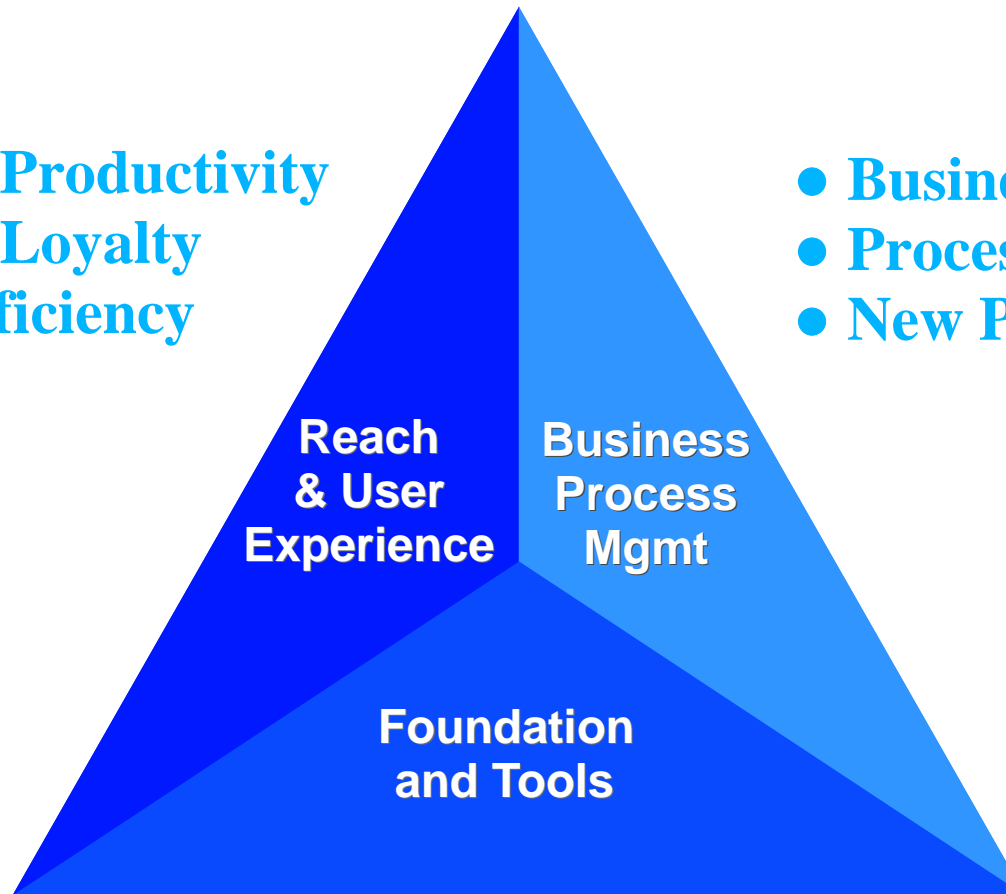
**Build, connect and manage
applications**

These three things provide unbeatable value propositions

ROI and Total Cost of Ownership

- Employee Productivity
- Customer Loyalty
- Partner efficiency

- Business Agility
- Process Reusability
- New Product Delivery



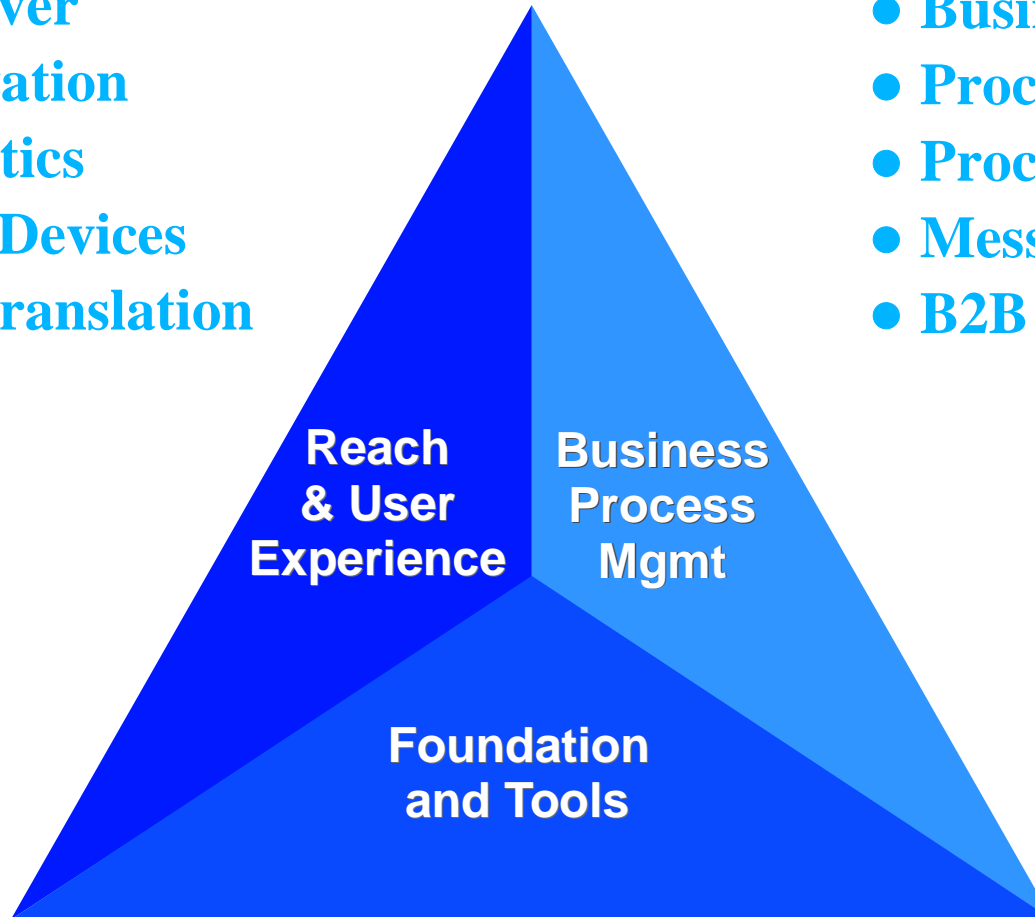
- Scalability
- Performance
- Reliability

- Integration
- Dev. Productivity
- Maintainability

Value propositions realized through "Breadth & Depth" of our portfolio

- Portal Server
- Personalization
- Site Analytics
- Pervasive Devices
- Voice & Translation

- Business Modeling
- Process Integration
- Process Automation
- Message Interaction
- B2B Integration



- Application Serving
- Assured Messaging

- Roles-Based Tooling
- Application & Data Access

Market Momentum

**Most Rapidly growing
e-business platform**

35,000 Global Customers

9,000 partners (500% YTY)

1,300 Certified Solution Providers

5,000 Trained Global Integrators

**1000 Partner / Customer Engagements
via WebSphere Innovation Centers**

9 consecutive quarters of double-digit growth

**2:1 preference by CIOs over nearest competitor (Morgan Stanley
Dean Witter survey of 150 CIOs from 15 industries - 47% WebSphere)**

10x marketshare growth vs. nearest competitor

221%

**WEBSHERE
REVENUE GROWTH
IN 2000 ON UNIX
AND WINDOWS NT**

Developer Momentum

600,000 Active, Registered Developers
growing to 1M by YE 2001 (230% yty)

1,500,000 Registered Developers
on IBM's developerWorks Portal

130 Registered WW User Groups
in over 40 Countries

20 Million WebSphere site pageviews (YTD)

156 Million developerWorks site Pageviews this Year

300,000 WebSphere Software Downloads (YTD)

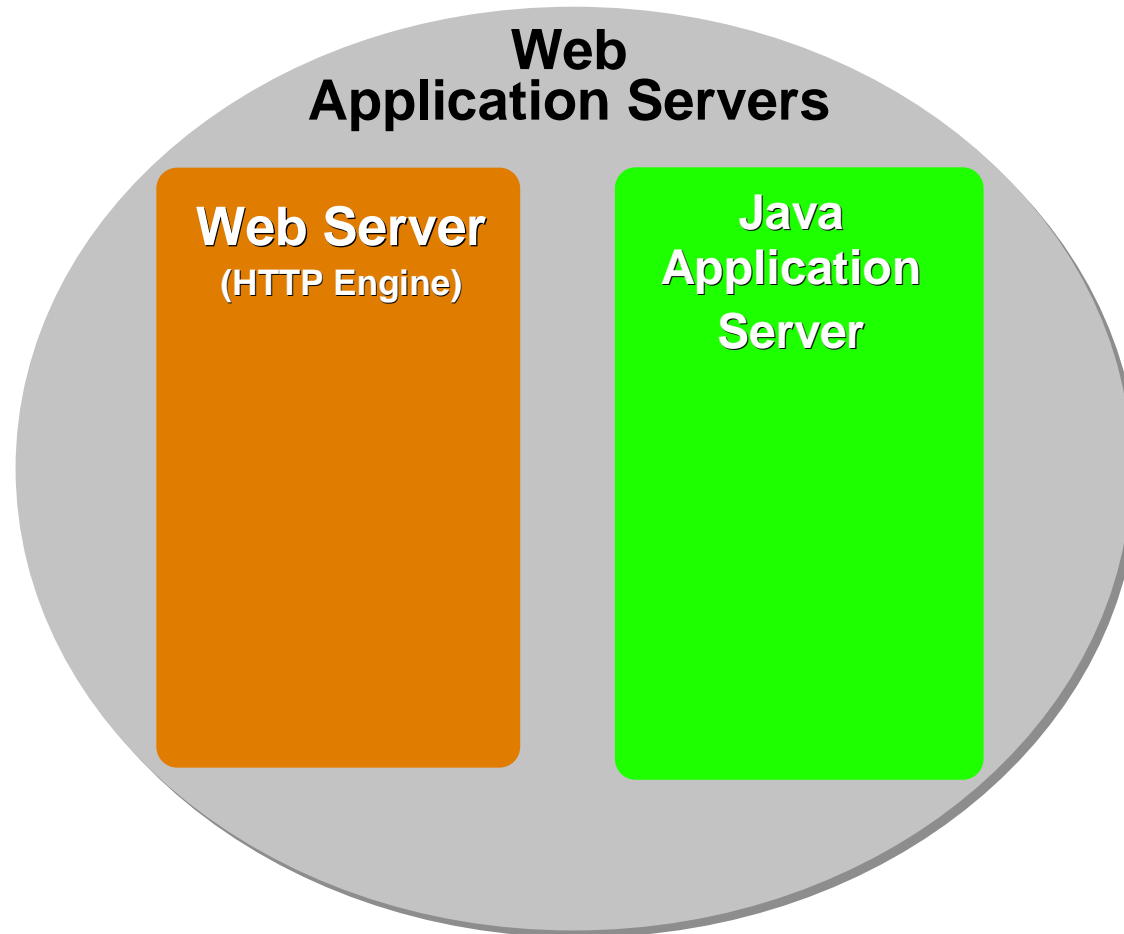
90,000 Downloads of Innovative Technology on developerworks

**Most Rapidly growing
e-business platform**

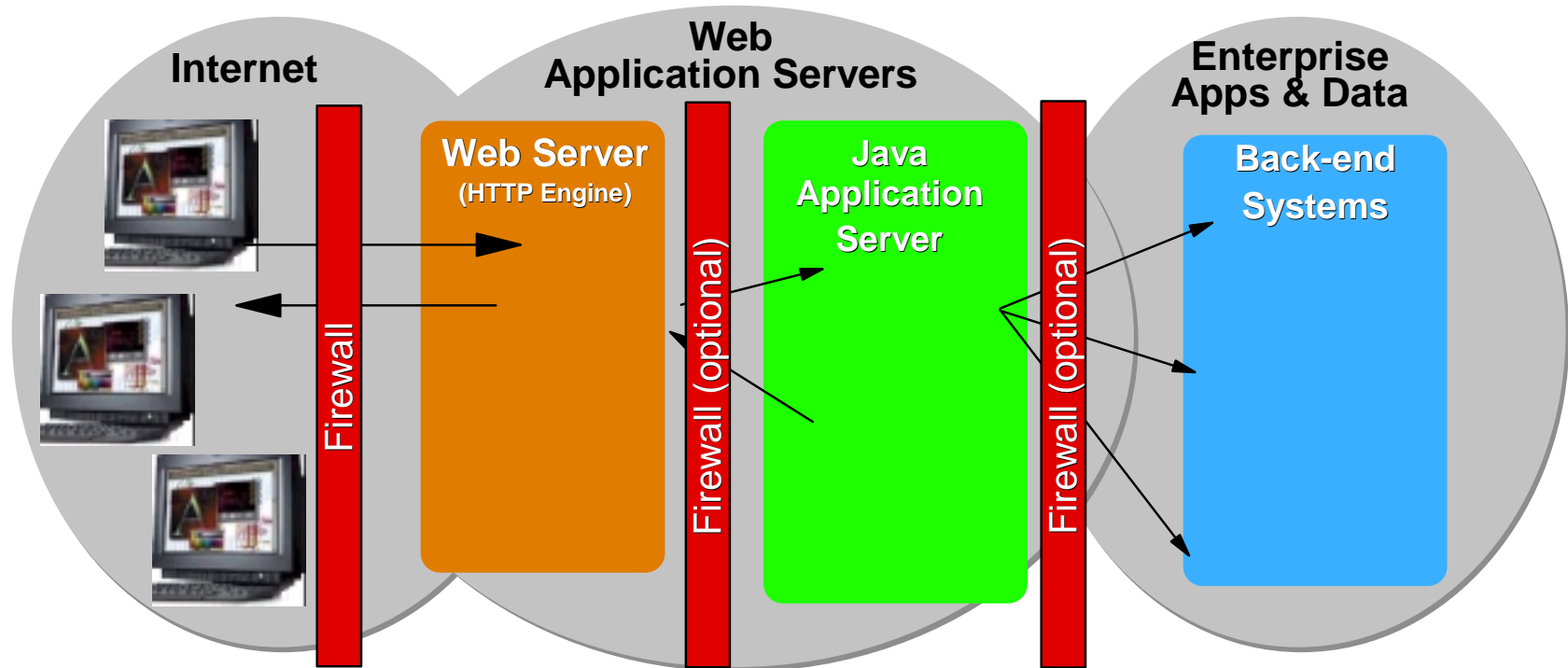
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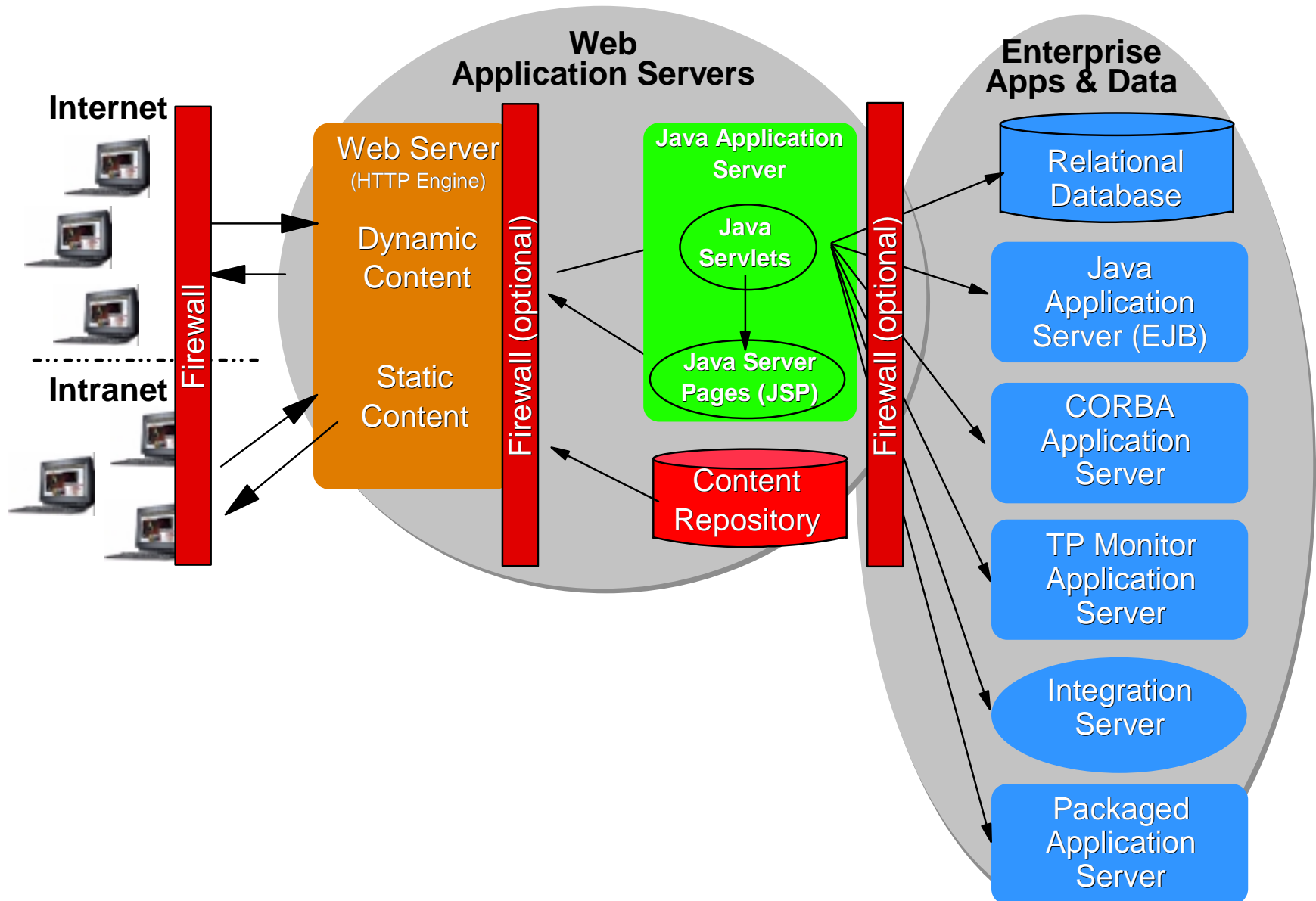
What is a Web App Server



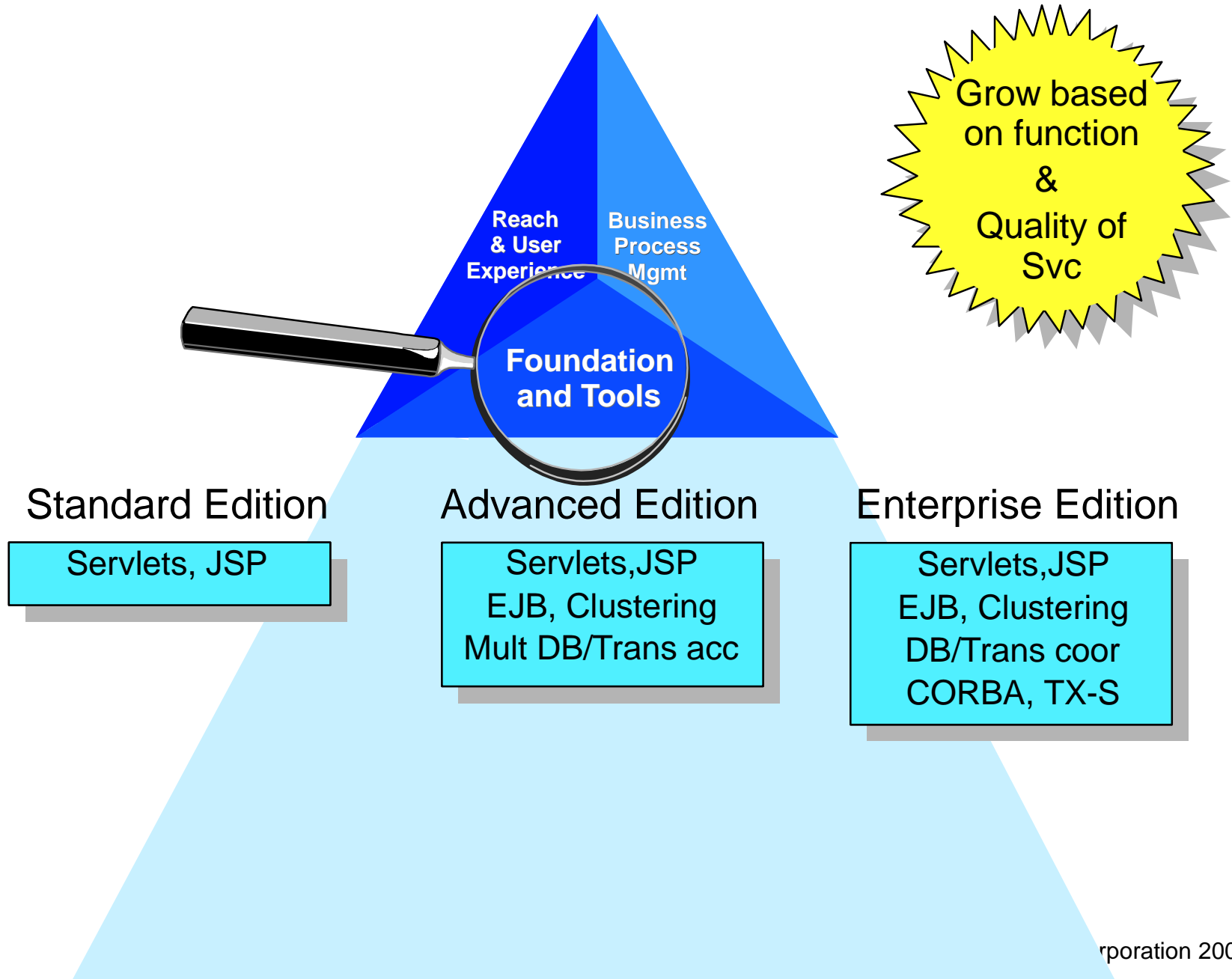
What is a Web App Server



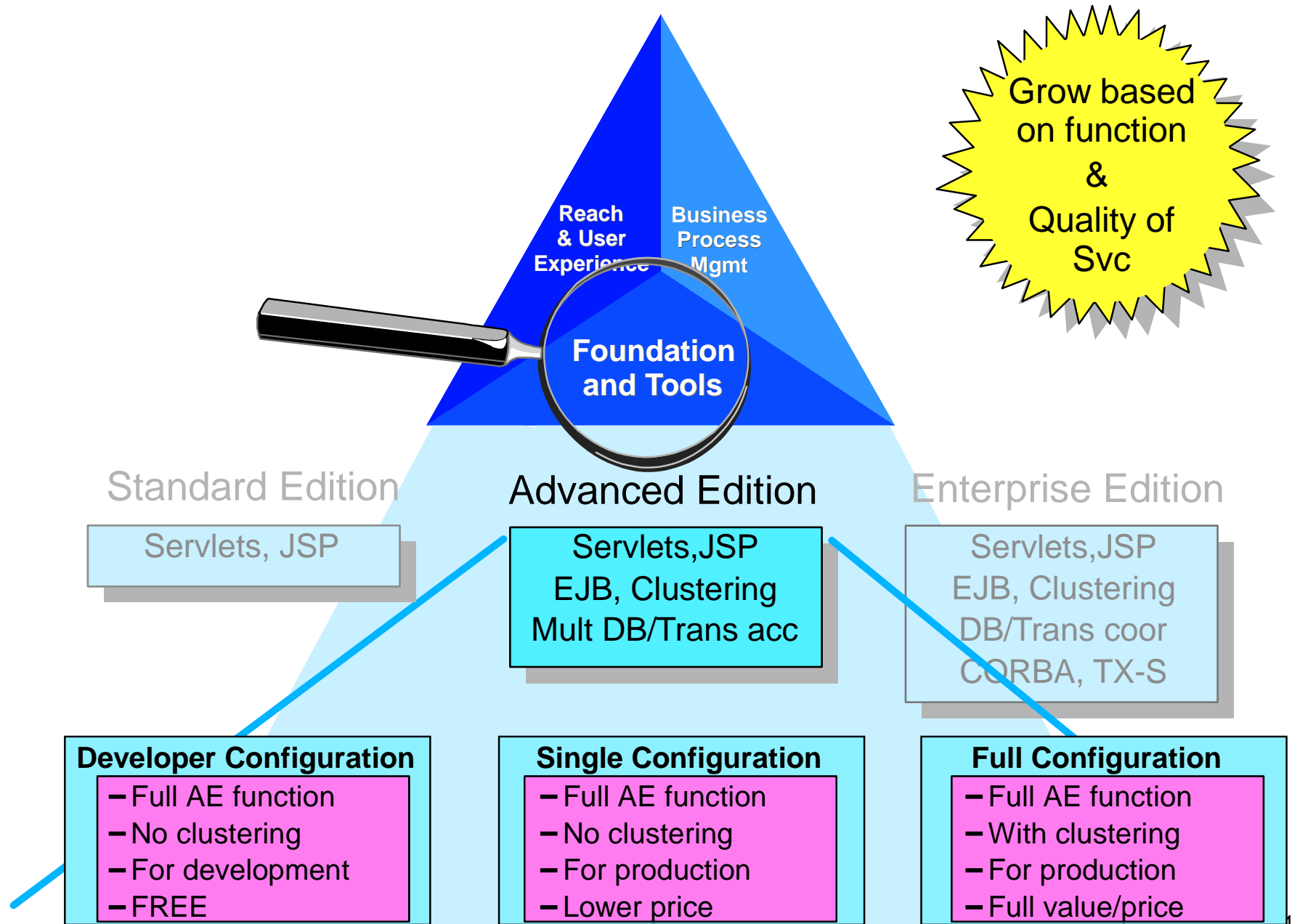
What is a Web App Server



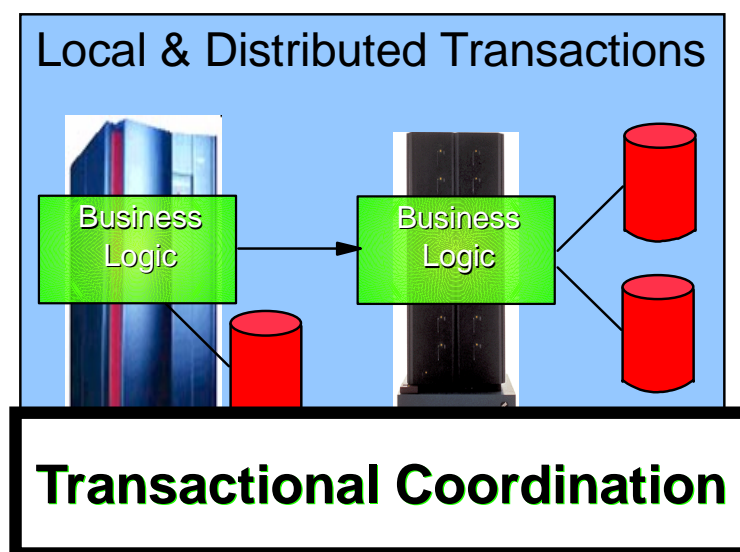
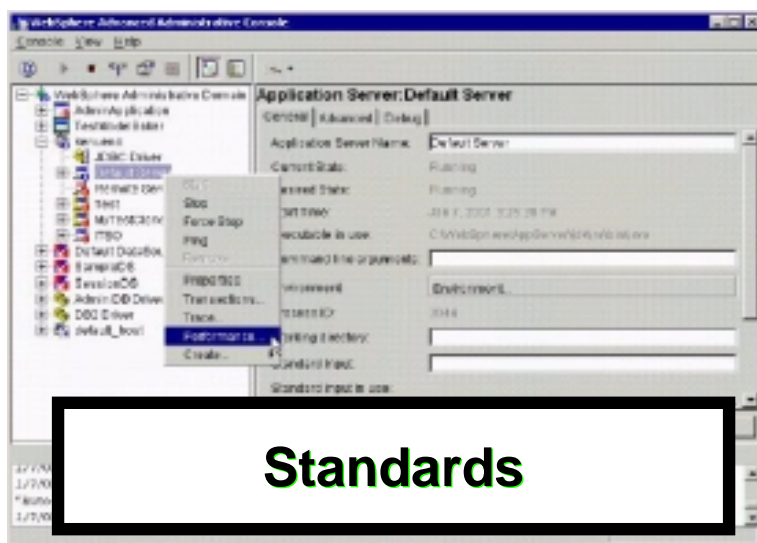
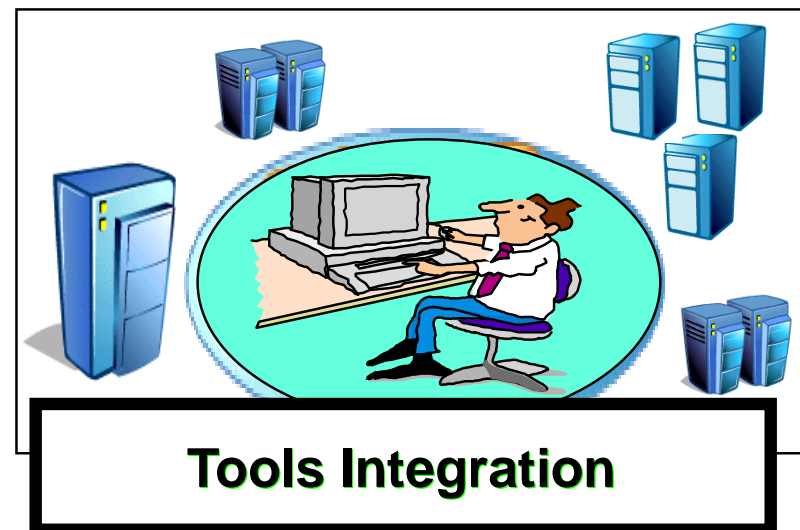
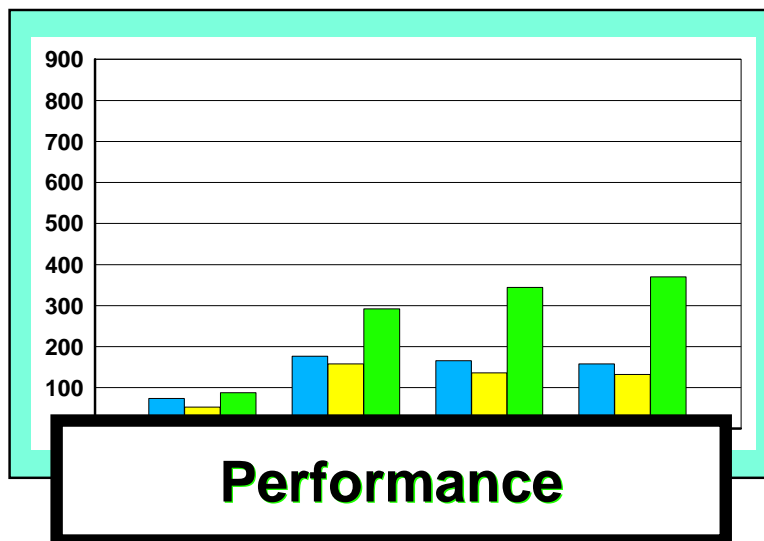
Develop, Connect and Manage on a rock-solid J2EE Foundation



Develop, Connect and Manage on a rock-solid J2EE Foundation



WebSphere App Server Differentiators



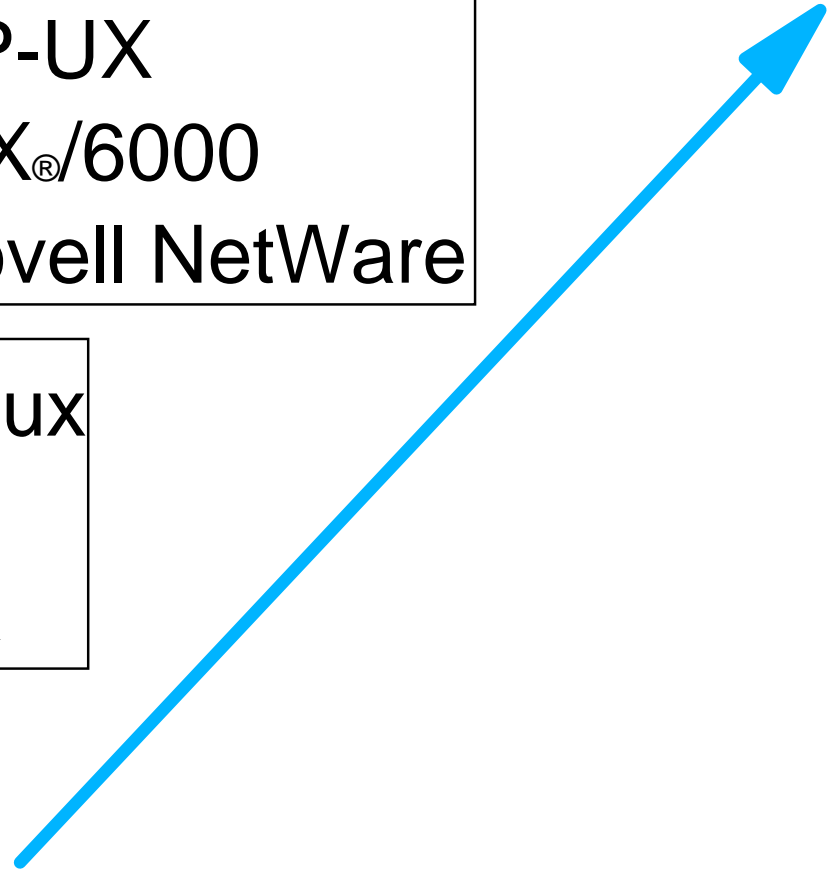
Engineered for all Major Platforms

- OS/400®
- Linux/390
- 390 and z/OS™

- Sun Solaris
- HP-UX
- AIX®/6000
- Novell NetWare

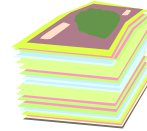
- Red Hat Linux
- SuSE Linux
- Turbo Linux

- Windows NT®
- Windows 2000



Transactional Coordination

Into Checking



Out of Savings

Full two-phase commit and recovery is provided for:

- DB2® (including DB2/390), Oracle, Sybase
- Microsoft® SQL Server, Informix (V4.0)
- MQSeries® (via JMS/XA)
- Encina®, CICS® TS 2.1 (via session EJBs)
- WebSphere Application Server V4.0 for z/OS

Fully supported J2EE Connector Architecture (JCA)

- CICS, IMS
- HOD (Host on Demand)
- SAP, PeopleSoft
- Oracle ERP Financials, JD Edwards

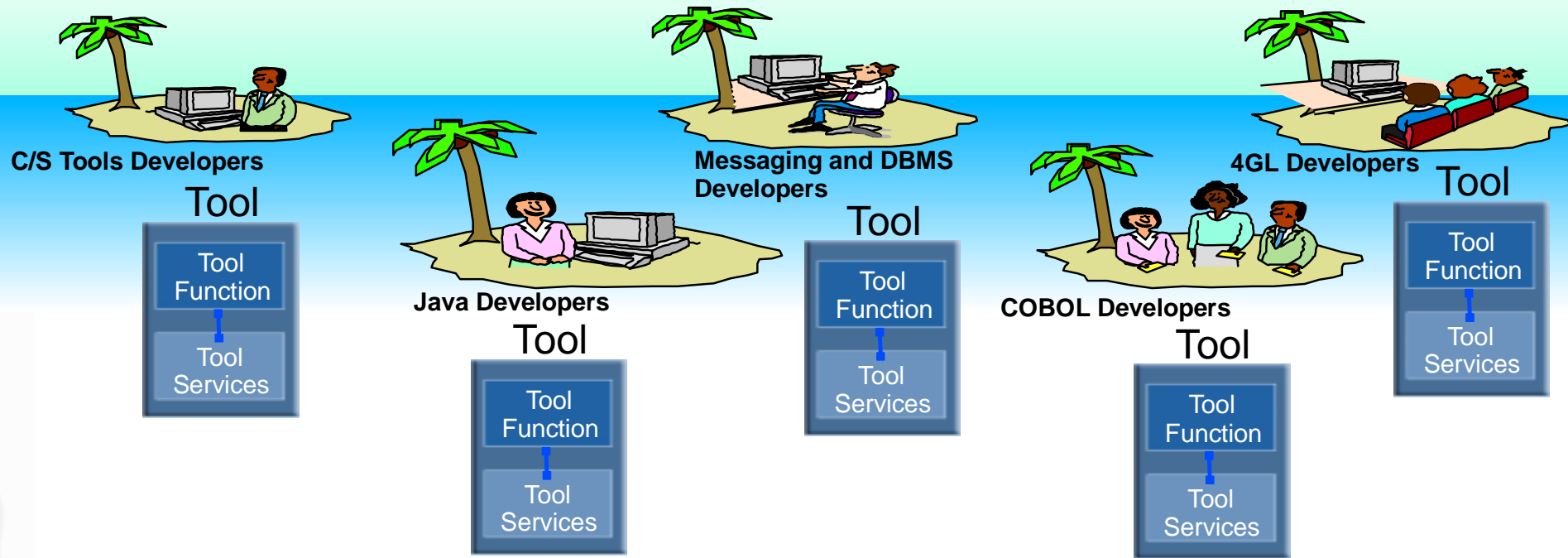
Fully supported two-phase commit connectors on OS/390

- CICS (EXCI connector)
- IMS™ (APPC connector)

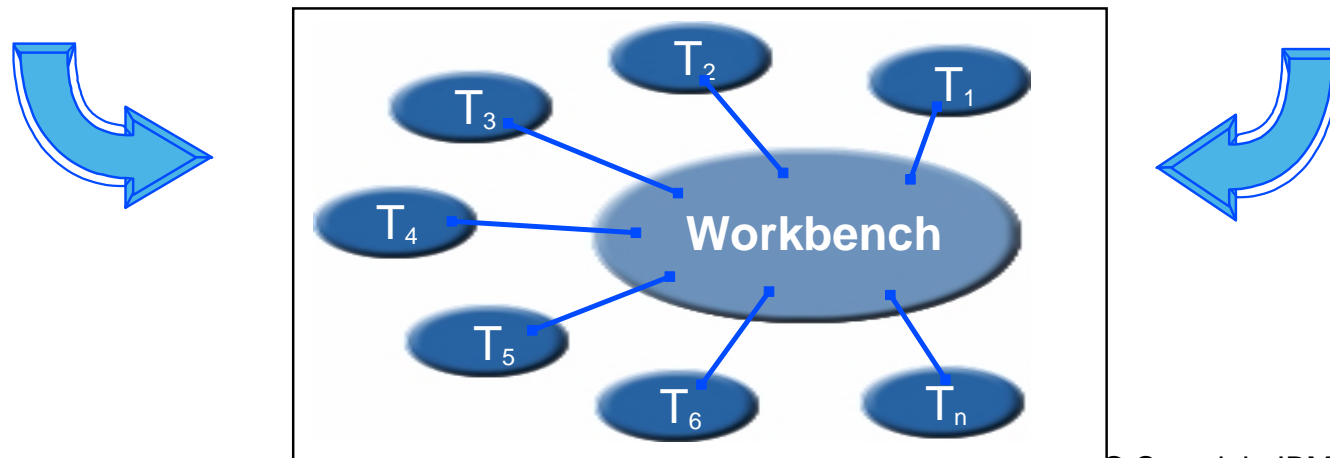
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Common AD Problem

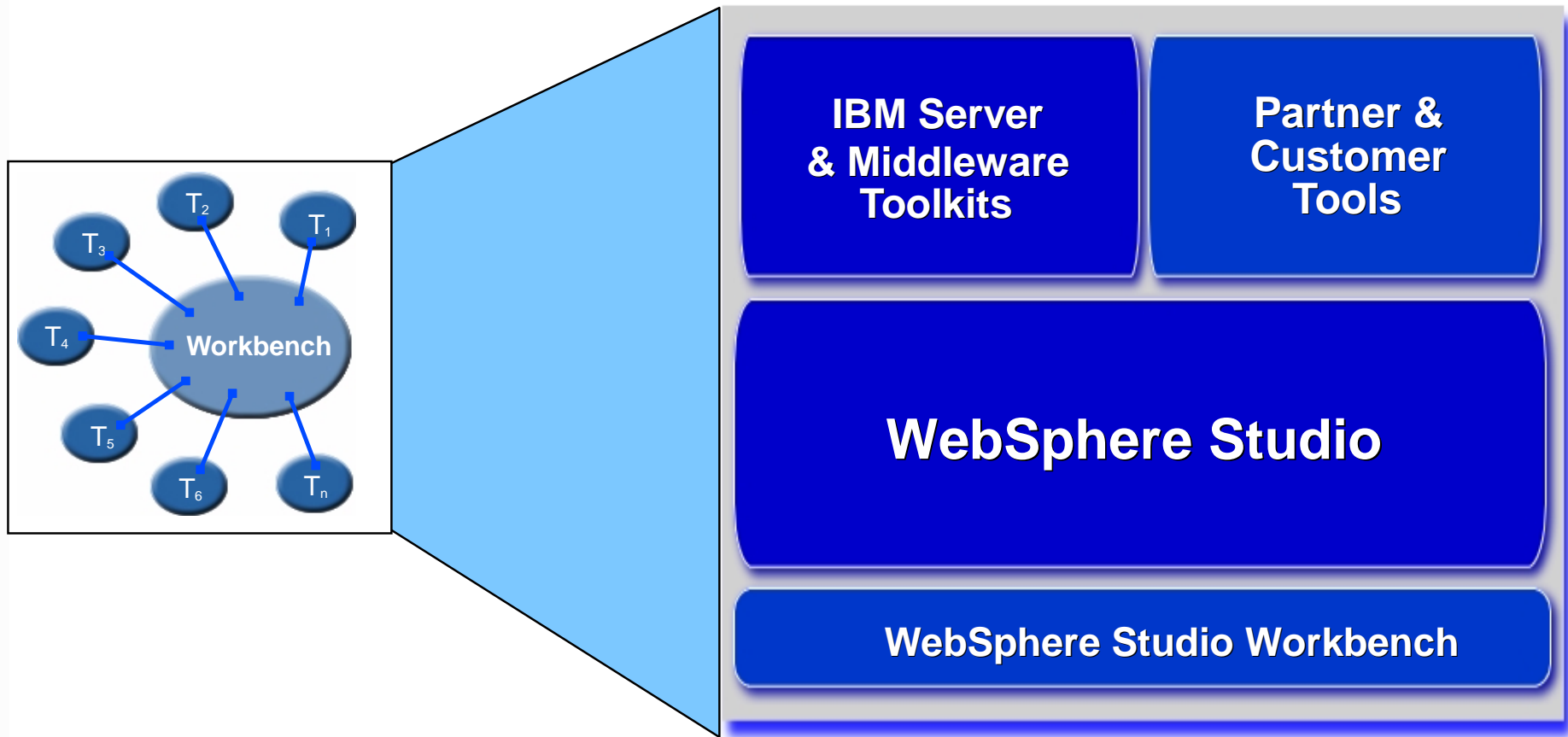


Using different tools and processes, then manually integrating
.....the solution is an integrated tools "Workbench"



WebSphere Studio Family

IBM's New AD Solution for e-business



Everyone is Integrated via a single team platform

Everyone is Connected & share common assets

Everyone has Status of tasks, artifacts, projects

Everyone is Dynamic with tools that adapt

Everyone has Perspective

Response to Launch

● **Web Based Interest**

- Over 10,000 Downloads of Studio products in the first 3 hours
- Over 31,000 Visitors to Eclipse.org Site in first two days
- Over 4,400 Eclipse Downloads in first two days

● **Press and Analyst Response**

- Over 55 articles written in first 3 days
- Overwhelming positive response from analysts quotes
- Several new, positive analysts reports

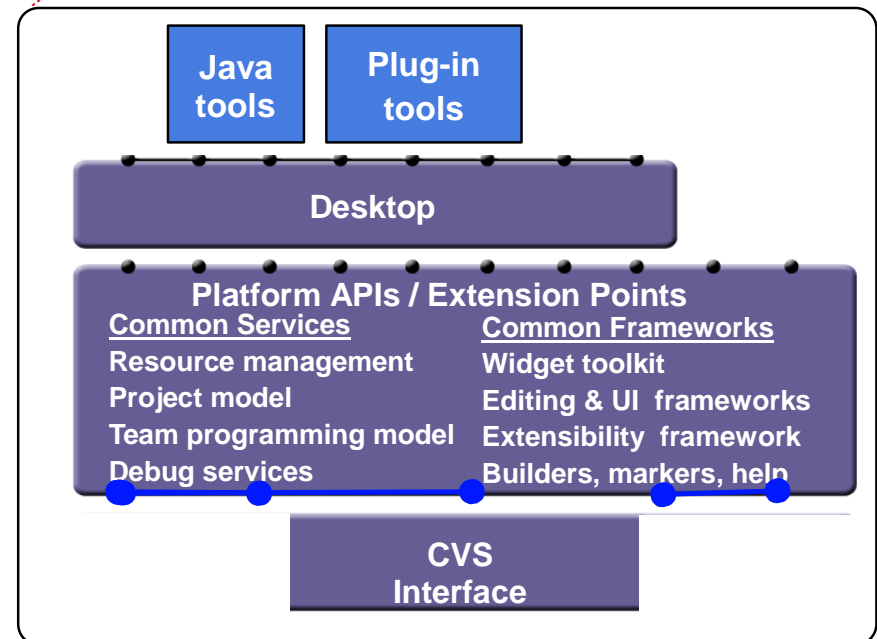
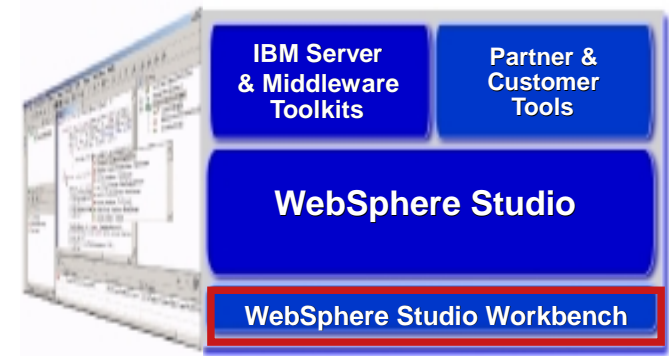
● **Sales Enablement Material**

- WebSphere Studio V4.0 Application Developer Spec Sheet
- VisualAge Enterprise Suite V3 Offering fact sheet
- WebSphere Studio Workbench White Paper
- Cost Analysis Work Sheets
- WebSphere App Developer Product Review Guide
- VisualAge® for Java Product Transition White Paper
- Application Development Vision and Strategy White Paper
- More info and & Web based demos - ibm.com/software/ad/adstudio

WebSphere Studio Family

IBM's New AD Solution for e-business

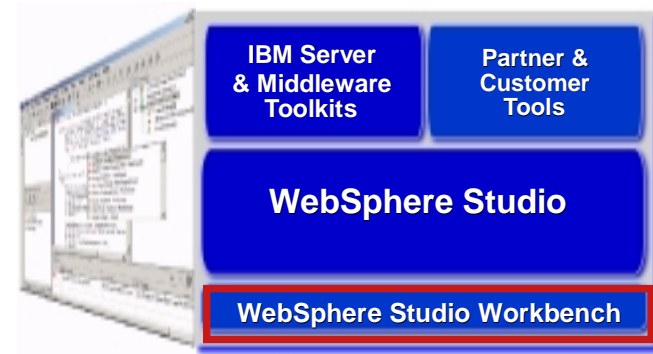
- ★ Enables unprecedented integration of tools via a common platform
- ★ Provides tools for developing, customizing and integrating tools including reuse of common services (e.g., Java IDE)
- ★ The foundation for IBM's WebSphere Studio family
- ★ Based on open source technology managed by Eclipse.org



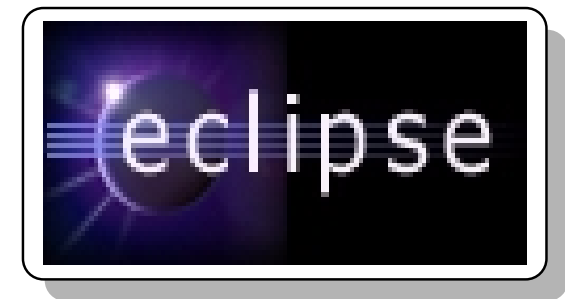
WebSphere Studio Family

IBM's New AD Solution for e-business

- ★ An open source community chartered to manage Eclipse
- ★ Managed by an open, multi-vendor organization
 - Rational, QnX, Red Hat, IBM, Macromedia, (9) ...
- ★ Publicly supported by over 50 leading tool suppliers
- ★ Technology licensed via the Common Public License
- ★ Initial Eclipse technology contributed by IBM



Technology
Contribution

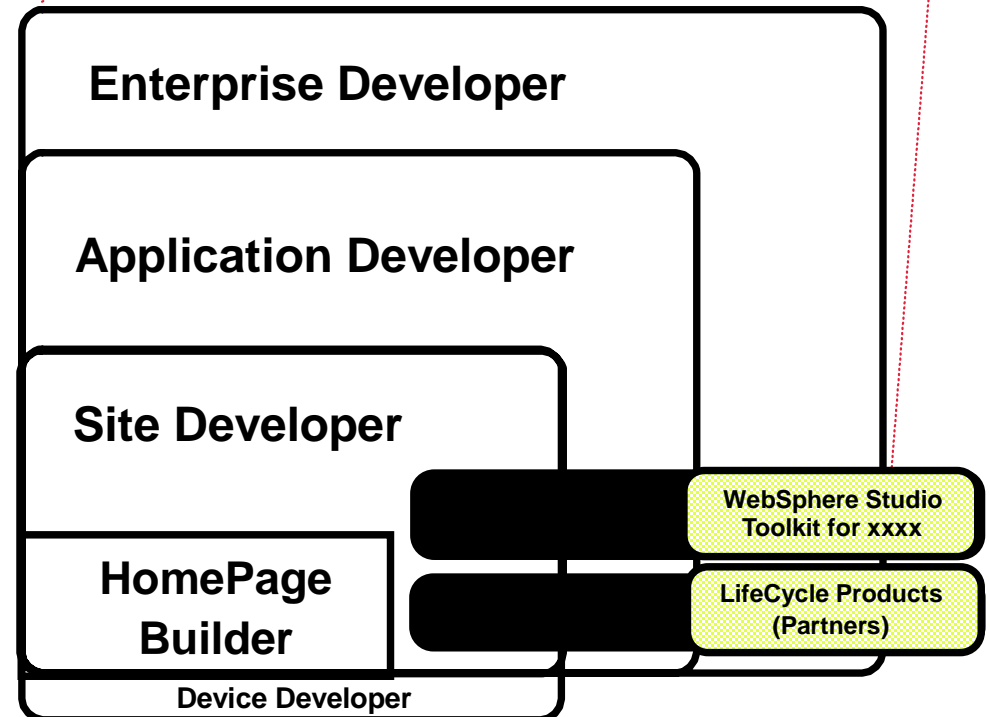
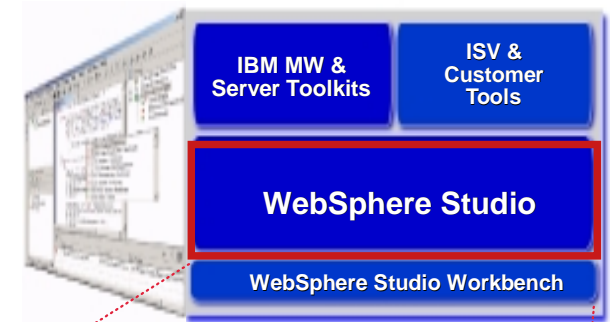


www.Eclipse.org

WebSphere Studio Family

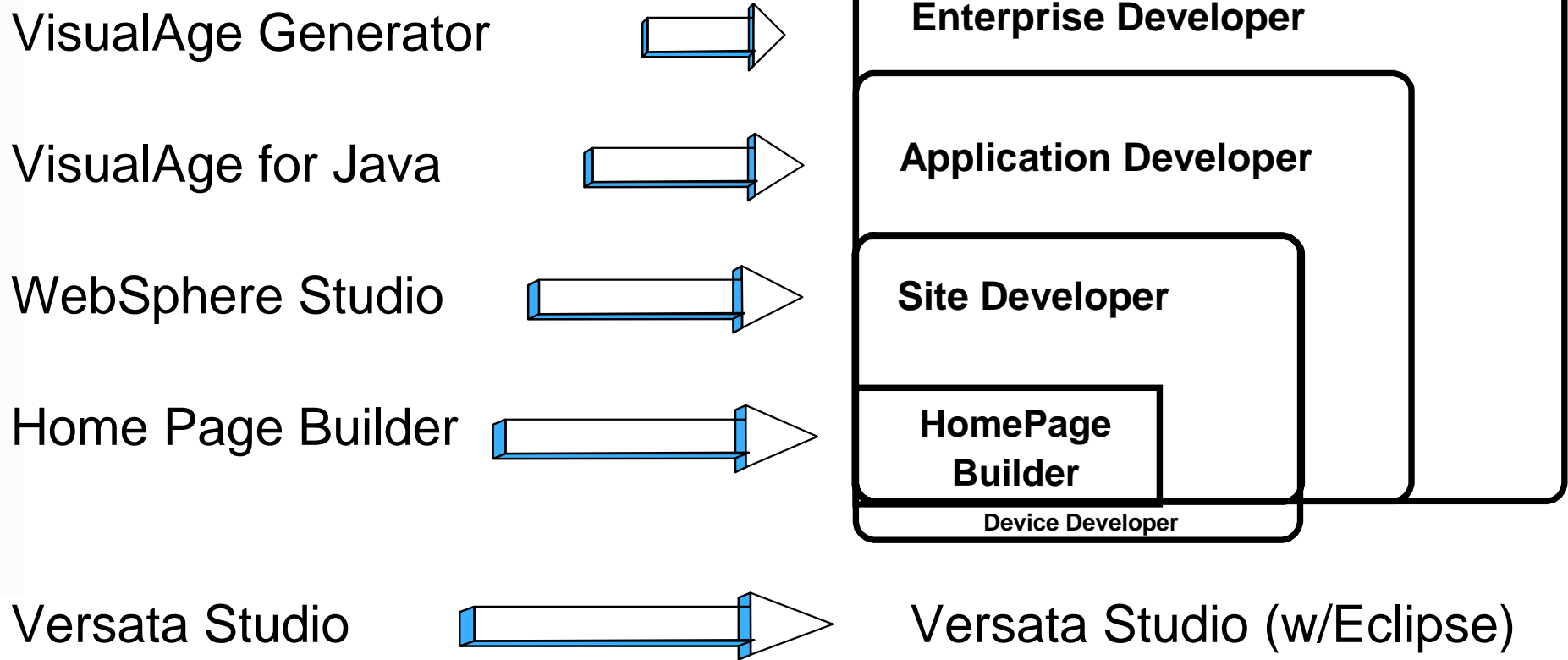
IBM's New AD Solution for e-business

- ★ A single, comprehensive IDE with unprecedented flexibility & extensibility
- ★ Configurations add or subtract "perspectives" to meet the needs of specific developer roles
- ★ Extend and customize with partner, customer & IBM Middleware Plug-ins
- ★ Common development environment across Windows® and Linux

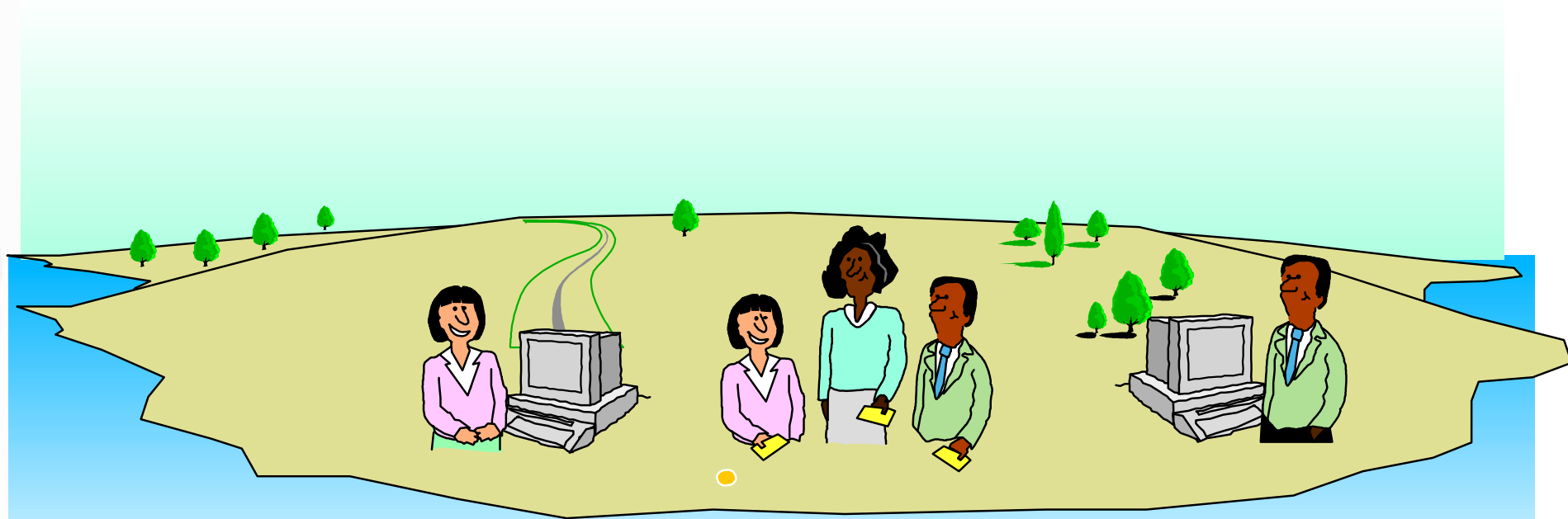


WebSphere Studio Family

IBM's New AD Solution for e-business



No more AD islands!

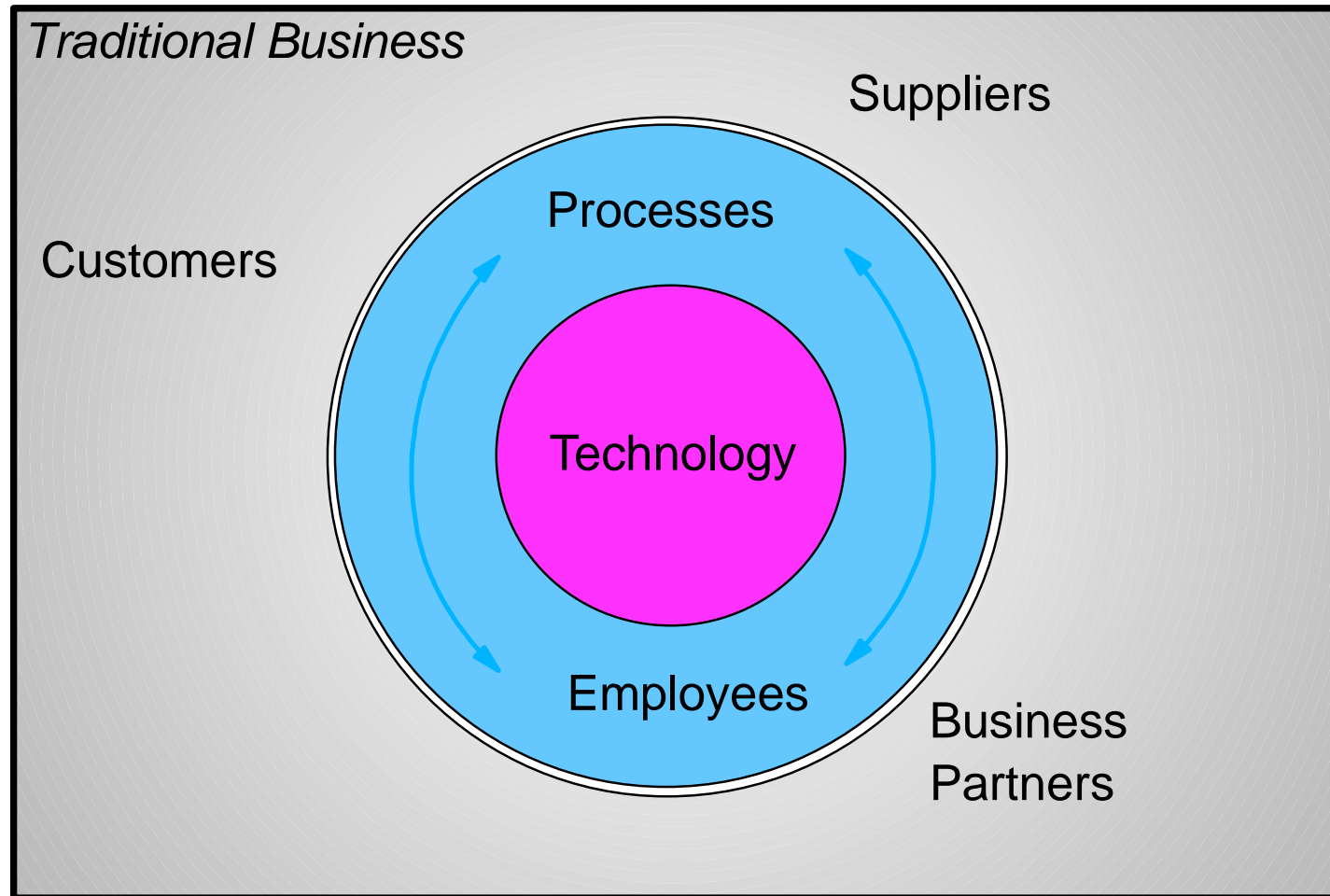


WebSphere Developers

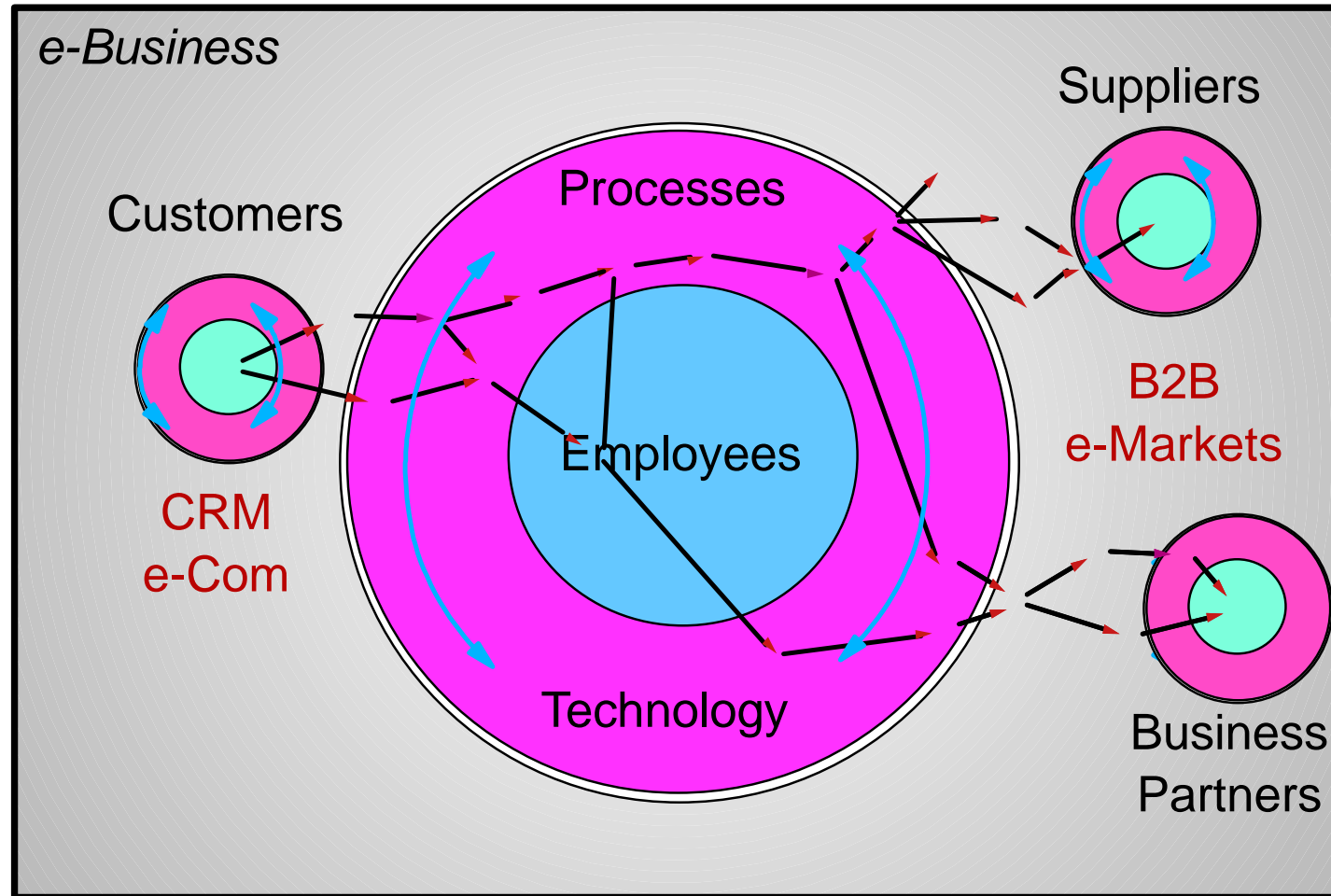
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Transforming to e-Business is not so easy...

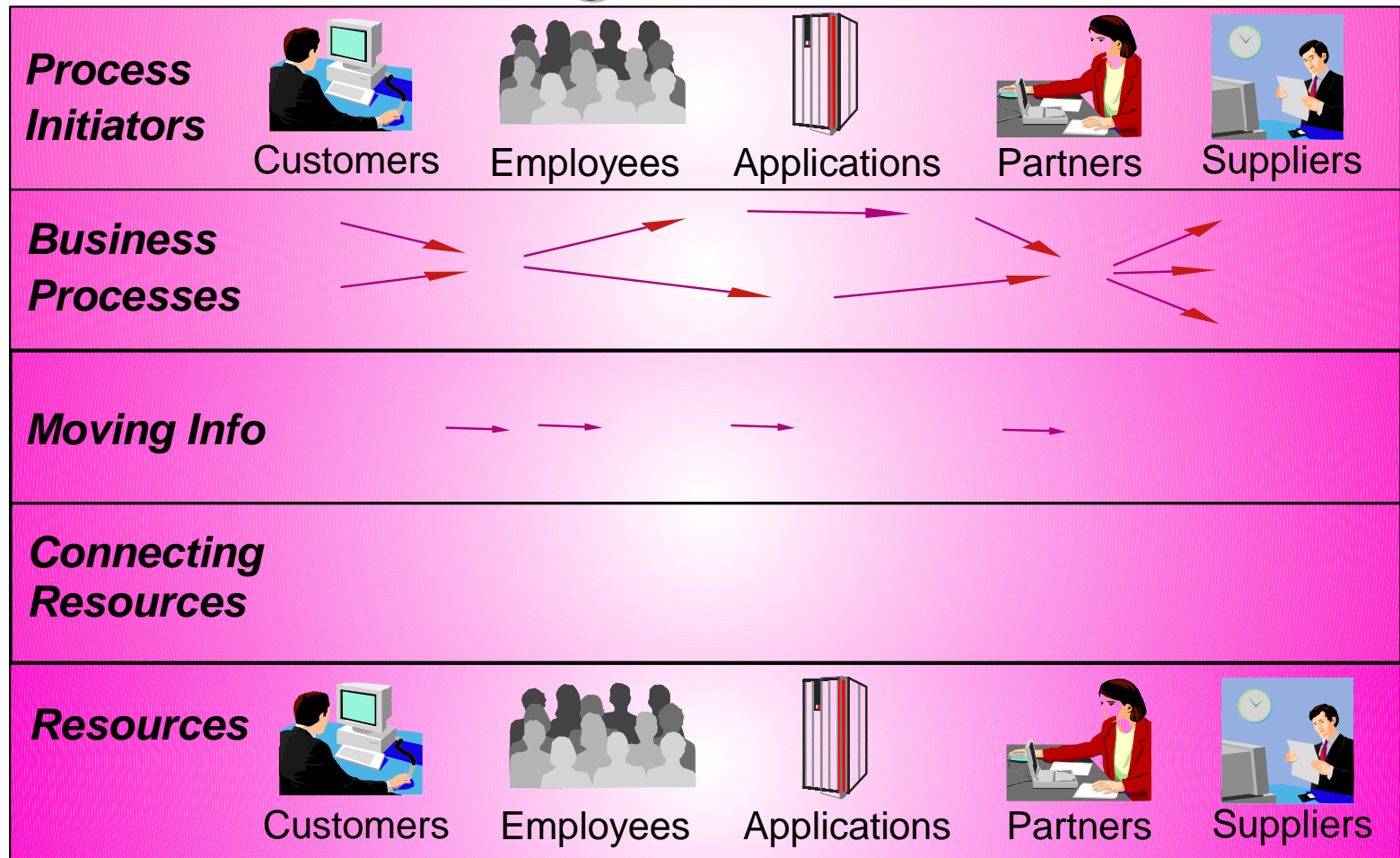


... it turns your business
inside-out!



- Processes are being put directly into IT systems
- IT systems are interfacing directly with one another

IBM's Process Based Approach to Integration



By allowing:

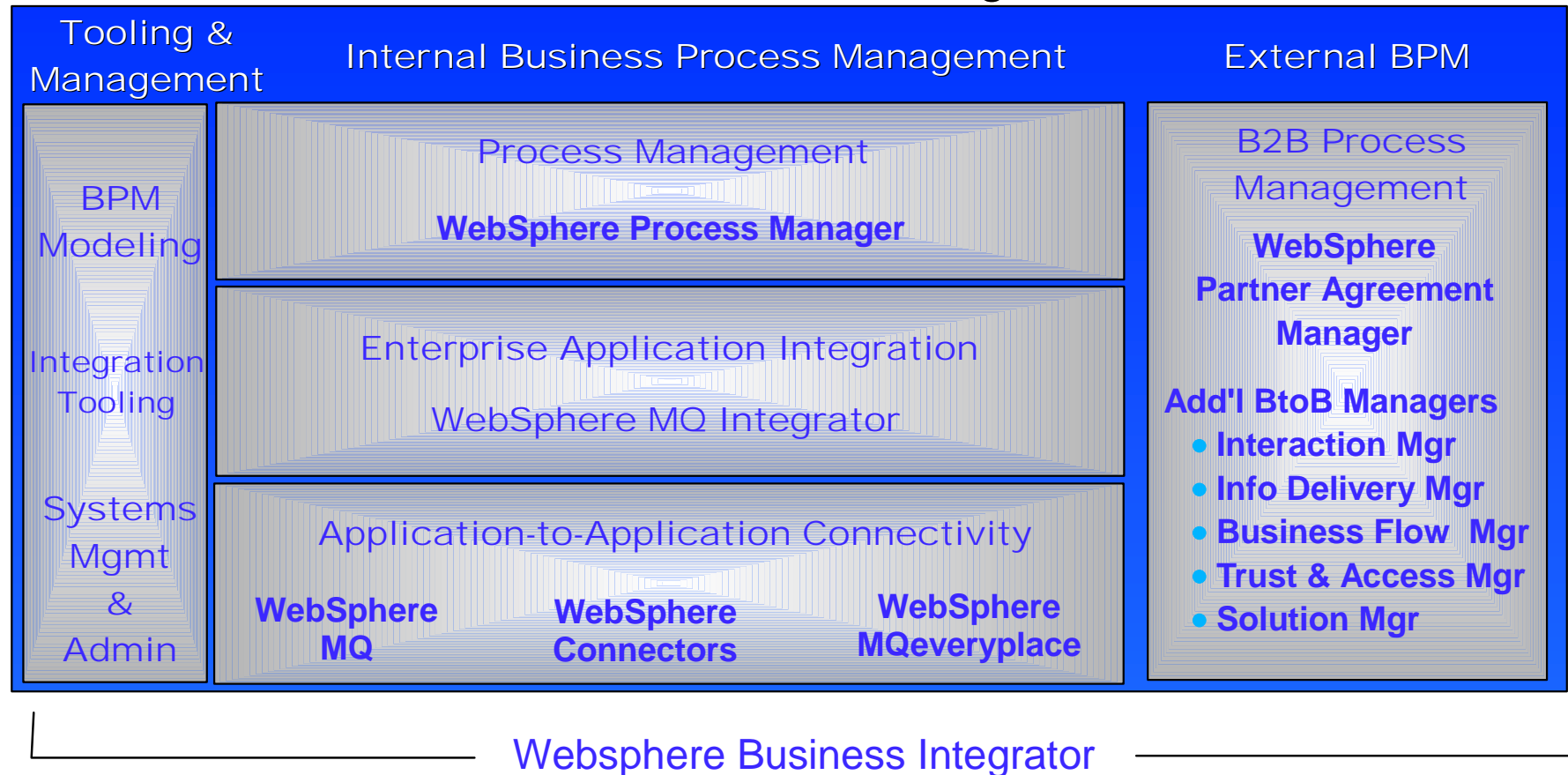
- All the resources of the company to participate
- Monitor and improve any aspect of the process
- Fast deployment, rapid change

Gives benefits of:

- Efficiency
- Consistent results
- Fast execution

Tying It all together ... Integration in the WebSphere Software Platform

Business Process Management



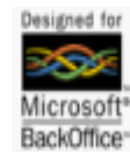
- Single view of processes and transactions within, and beyond, the enterprise
- Rapid development and deployment of high ROI solutions
- Support for new and emerging device types
- Support for legacy and new applications

What the analysts say...

- ▶ "We expect IBM to be the **largest integration middleware vendor** by 2001 because of its worldwide presence, aggressive product development plans and high penetration of the MOM market" (Gartner)
- ▶ 'IBM has taken a **leadership role in both EAI and e-Business**. MQSeries has emerged as the only pervasive messaging product.' EAI Journal Awards Panel, 2000
- ▶ IBM maintained its **#1 position in the market** with its MQSeries Integrator and Workflow products. In fact IBM grew its market share from **12% in 1999 to 14% in 2000** - WinterGreen.
- ▶ ".. virtually no vendor has the depth and breadth of IBM's middleware offering. Large, mainstream enterprises, particularly those with sizable investments in S/390-technology, embarking on strategic, systematically oriented middleware initiatives to sustain their e-business plans, should consider **IBM as one of their primary vendors..**" (Massimo Pezzini of Gartner Group)



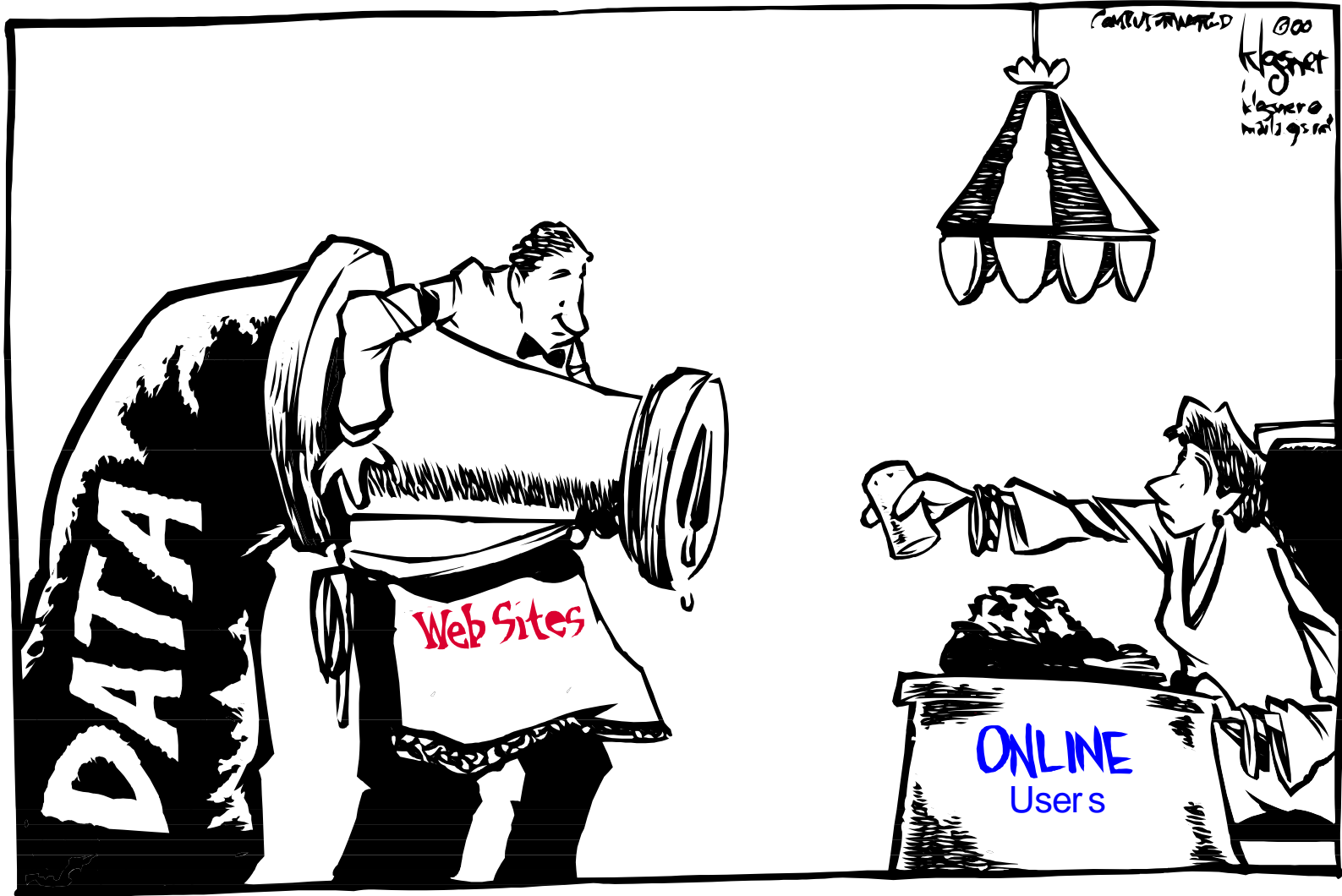
Application
Excellence
Award



Agenda

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- **Portals**
- Summary

“We have exposed more data and applications to our customers, partners and employees than ever before, and noone is any smarter because of it.”



What is a Portal

Collaboration

Federated search across multiple repositories

Personalization button

Tabs

Subscriber News Feed

Real time Statistics

Inventory data from ERP Application

URL to another web site

CRM

An Enterprise Portal

Thursday, September 28, 2000

Search: Go

My Market | My Company | My Products | My Customers | Personalize 1 Help ?

Customer Watch

[Insurance Stocks after Floyd](#)
Insurance stocks are riding the choppy wake of Floyd.

[Frontier eyes Q2 gains](#)
Frontier Group CFO told securities analysts the 2nd quarter would exceed earnings estimates.

Customer

Date	Activity	Team	Status
08/09/00	Opportunity: Competitors poor laptop performance	Denise Broslin	Open
08/11/00	Complaint: Broken hard drive on arrival	Hans Dieterbrodt	Open
08/11/00	Opportunity: Frontier merger creates new sales team	Hiro Narita	Open
08/12/00	Opportunity: New sales demo hardware needed - CDROMs	Denise Broslin	Done
08/15/00	Opportunity: Request for information from HR	Denise Broslin	Canceled

Website Hits

M T W Th F

Ship Schedule

T600X	Qty:400	9/15/00
T600E	Qty:257	9/29/00

Partner

Proton New Classes on PCMCIA 8/01/00

Martin Corp. Need Supply of ethernet cards by Sept. 28 8/03/00

Johnson Inc. Alternate supplier of docking stations 8/04/00

Why Portals - Analysts

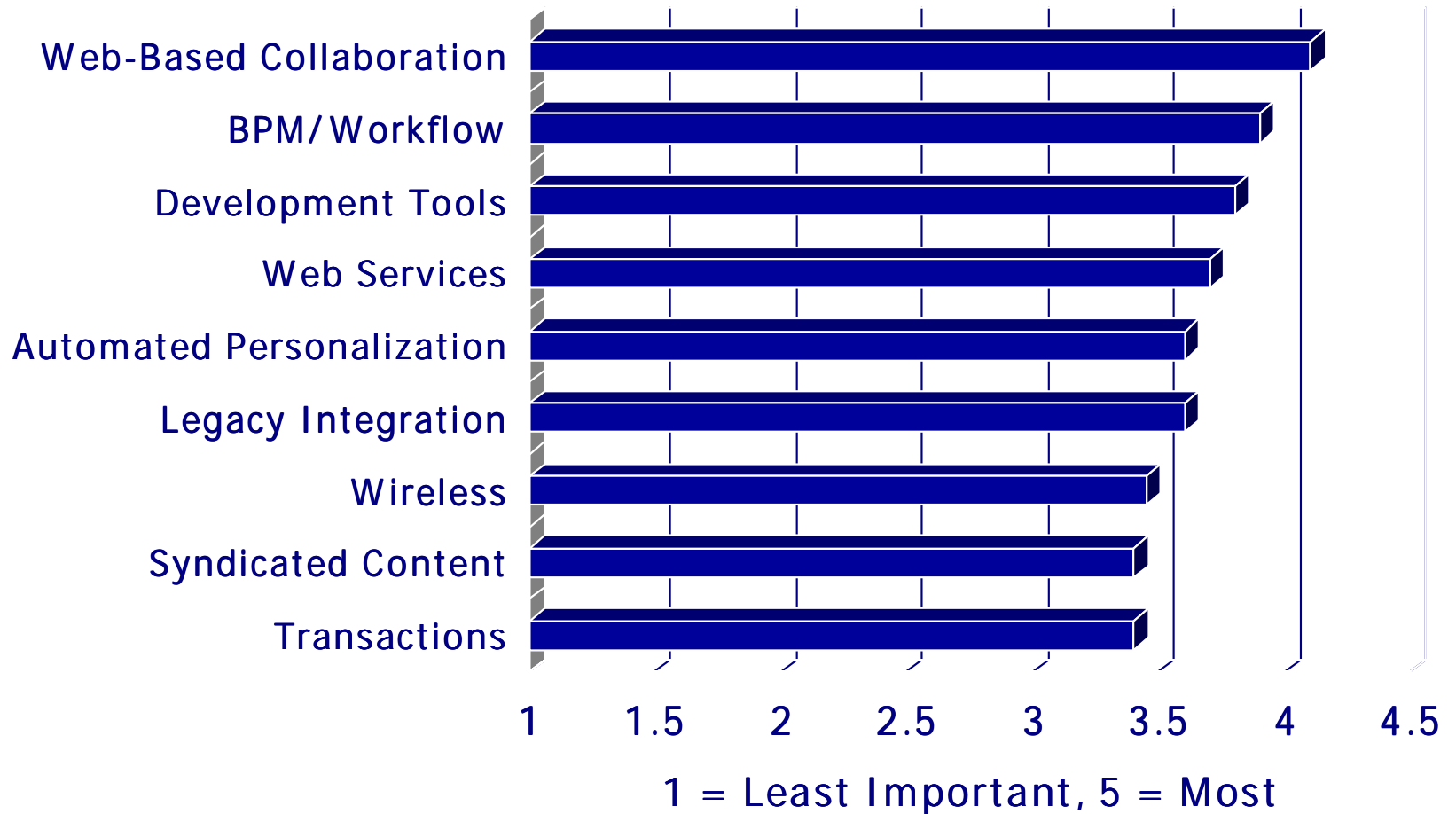
"Some 70 percent of online buyers would spend [less money](#) at a traditional retailer after having [a bad experience](#) with the retailer's online site." - Jupiter Media Metrix

"By year-end 2002, the [top priorities](#) for enterprise site managers regarding website deployment & operations will be enterprise integration and [content management](#)." - Gartner Group

Personalization "creates better cross-selling and up-selling opportunities that [result in greater revenue and increased profitability](#)." - Gartner Group

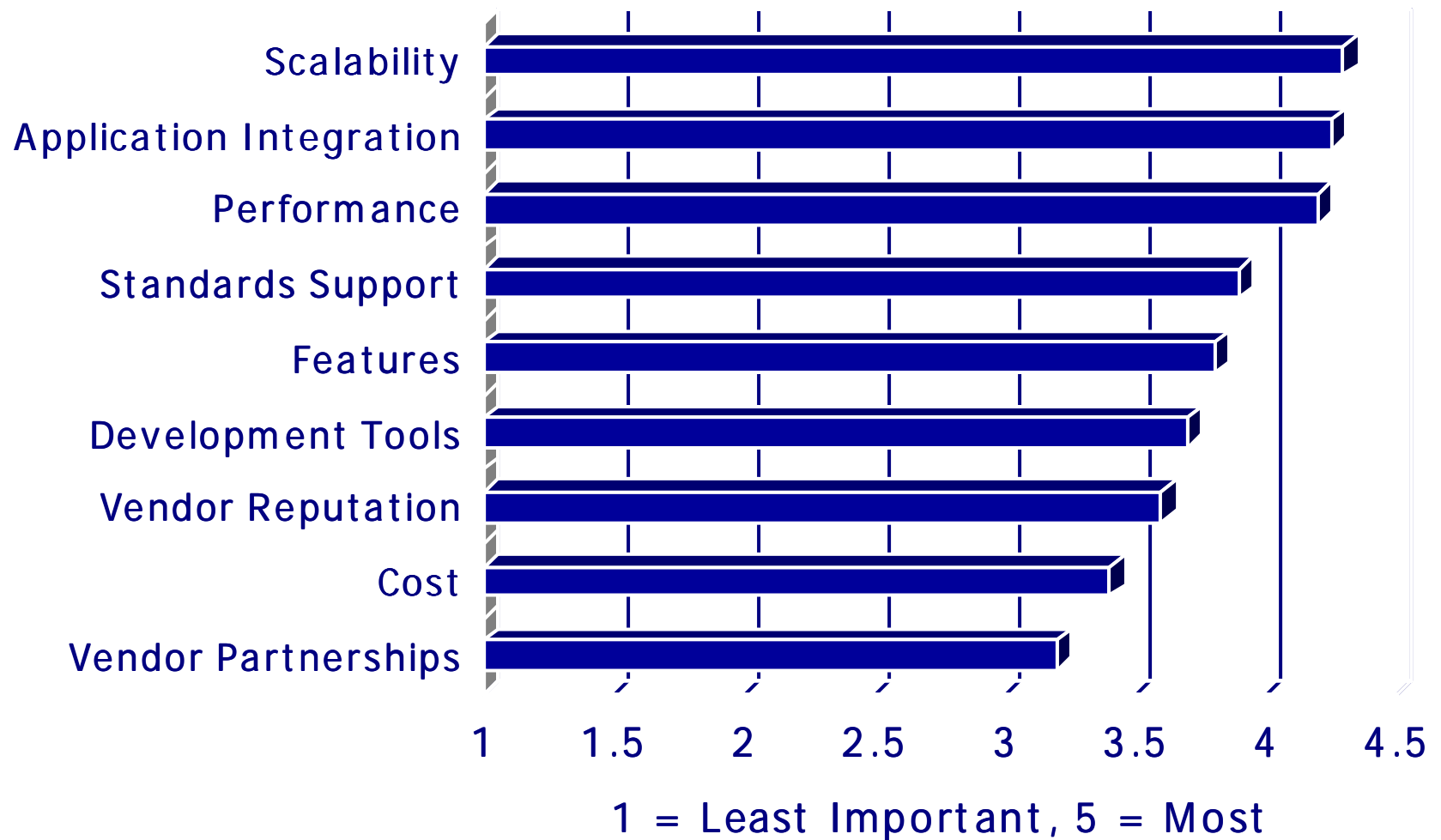
"Enterprises need to execute precision marketing, effective sales and spot-on service more than ever. For this reason, [enterprises should invest in Web analytics](#)." - Gartner Group

Most Desired Portal Features



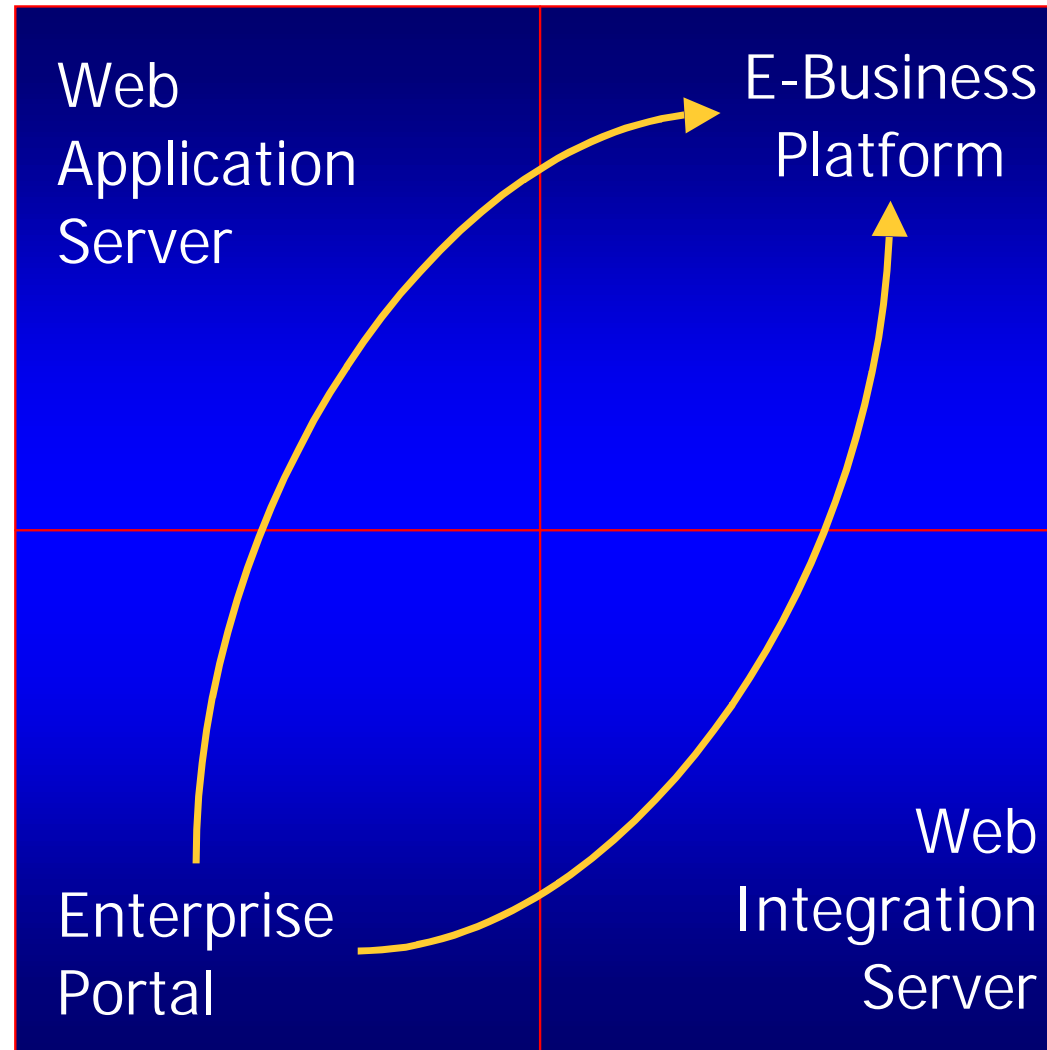
Source: Butler Group, April, 2001

Key Portal Purchasing Criteria



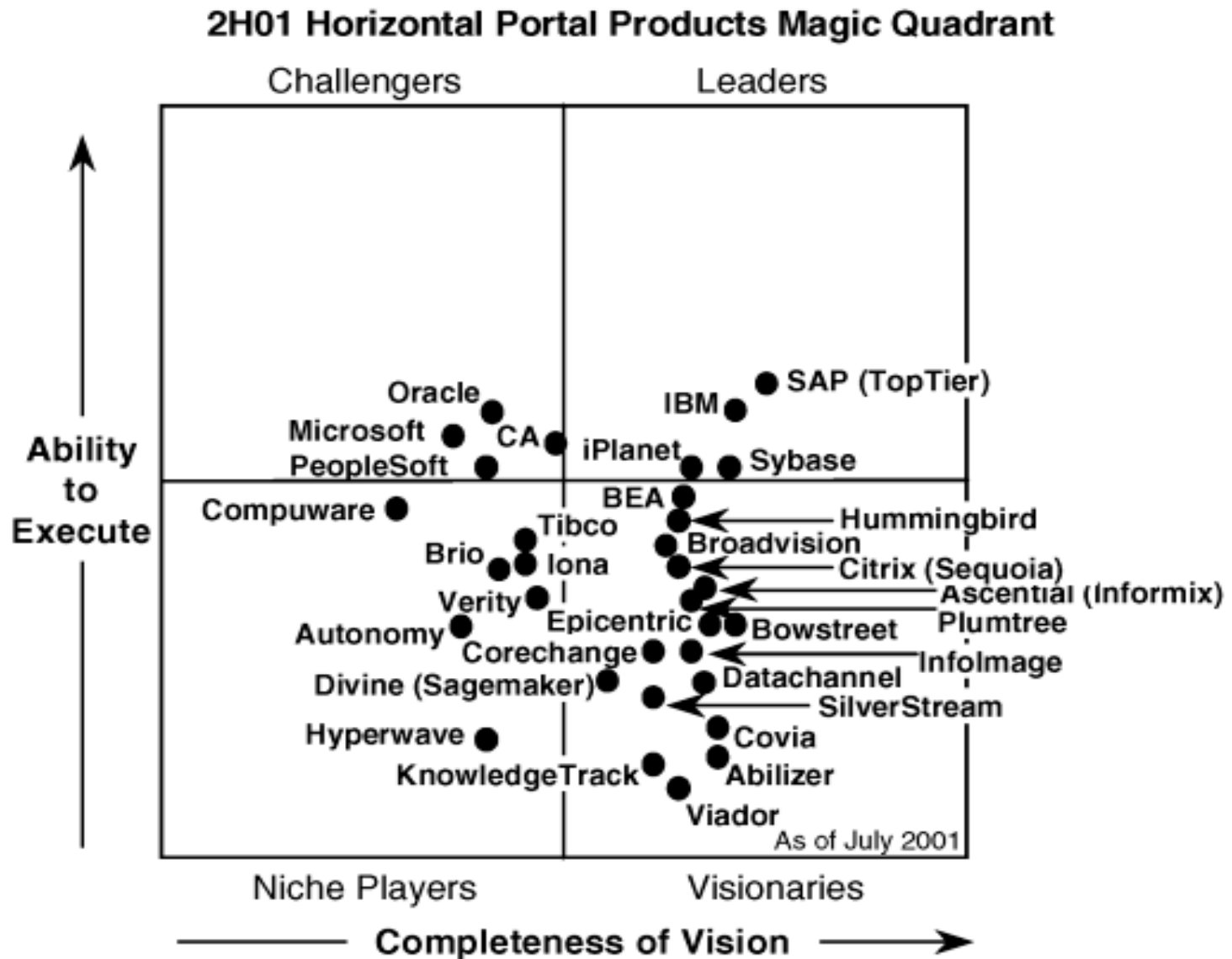
Source: Butler Group, April, 2001

Portal Industry Direction



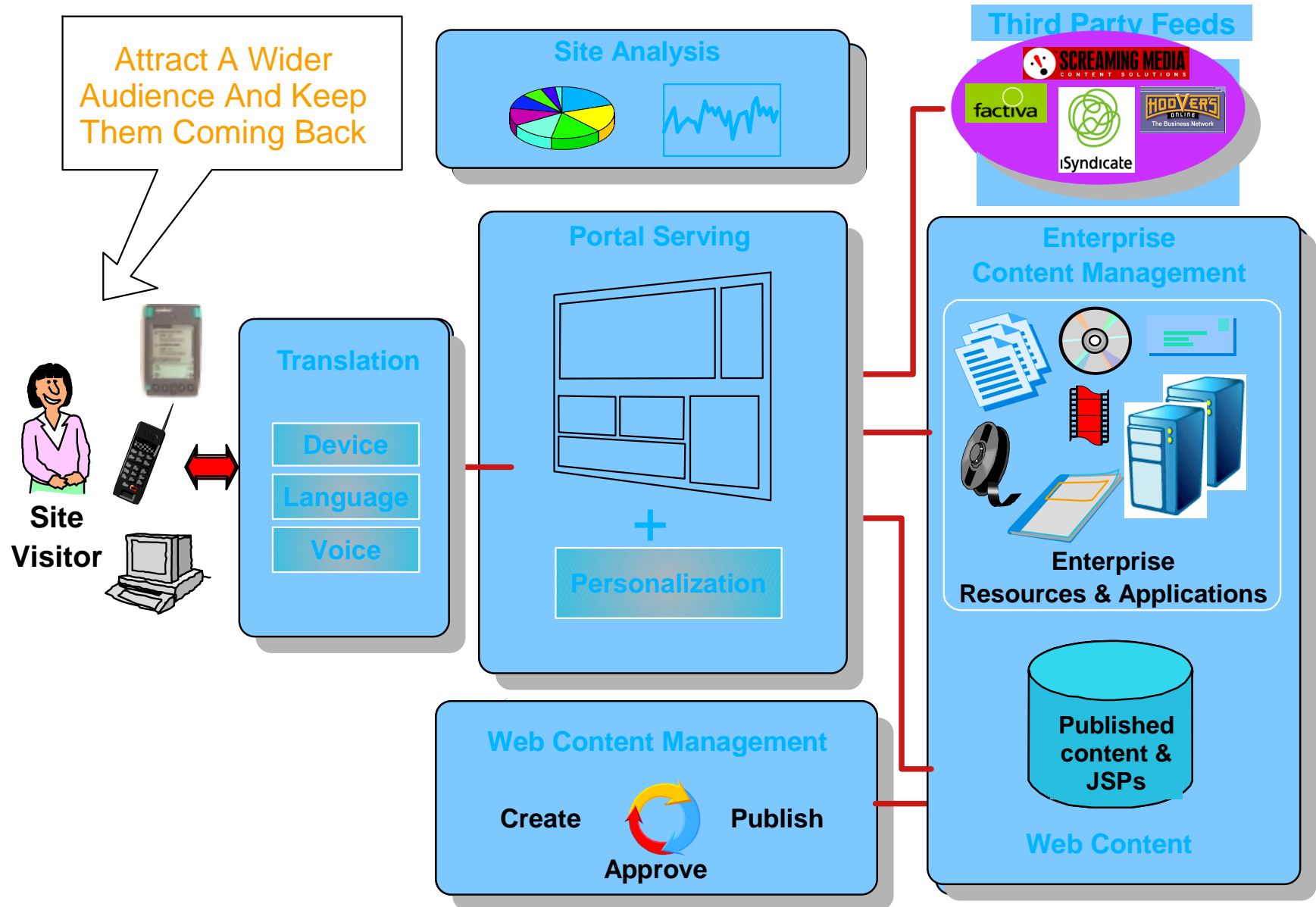
Source: Gartner Group, May, 2001

IBM Portal Leadership



Source: Gartner Research

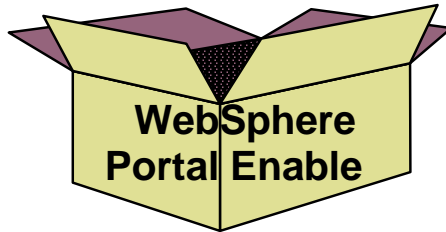
Complete Portal Solution



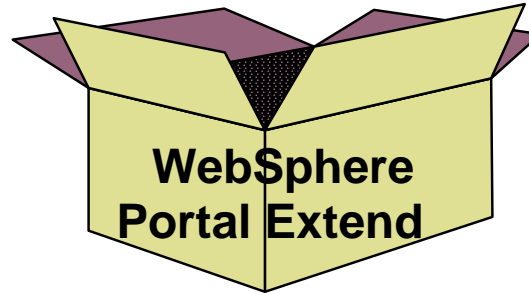
August 14 Announcement

- IBM's unified Portal Strategy
 - ▶ Merge Lotus and WebSphere Portal solutions
 - ▶ Leverage performance and scalability of WebSphere
 - ▶ Leverage collaboration and ease-of-use of K-station
 - ▶ Include best of breed complementary capability
- 20+ Partners announce integration with IBM WPS
 - ▶ Large set of Portlets available today
 - ▶ Comprehensive content aggregator enablement
 - ▶ Significant number of additional portlets coming
- WebSphere Portal Server support for Web Services
 - ▶ Publish WebSphere Portal Server Portlets as Web Services
 - ▶ Find and use Web Services from within WebSphere Portal

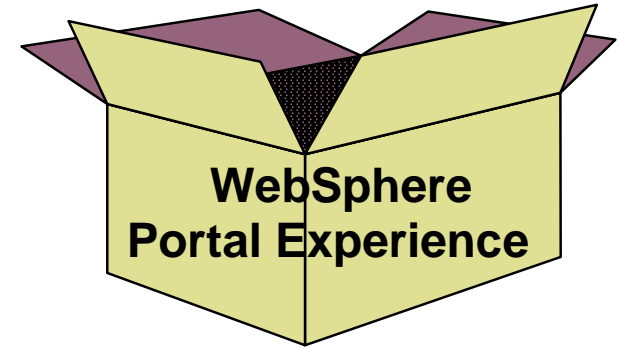
One WebSphere Portal Solutions - Family



- Maximum Flexibility
- IBM's entry level offering
- Delivers core portal framework capabilities
- Customer profile:
 - Require B2C only
 - Do not require collaboration
 - Have made strategic decisions on other components
- Base for OEM/Reseller opportunities
- Supports the broadest number of OS platforms

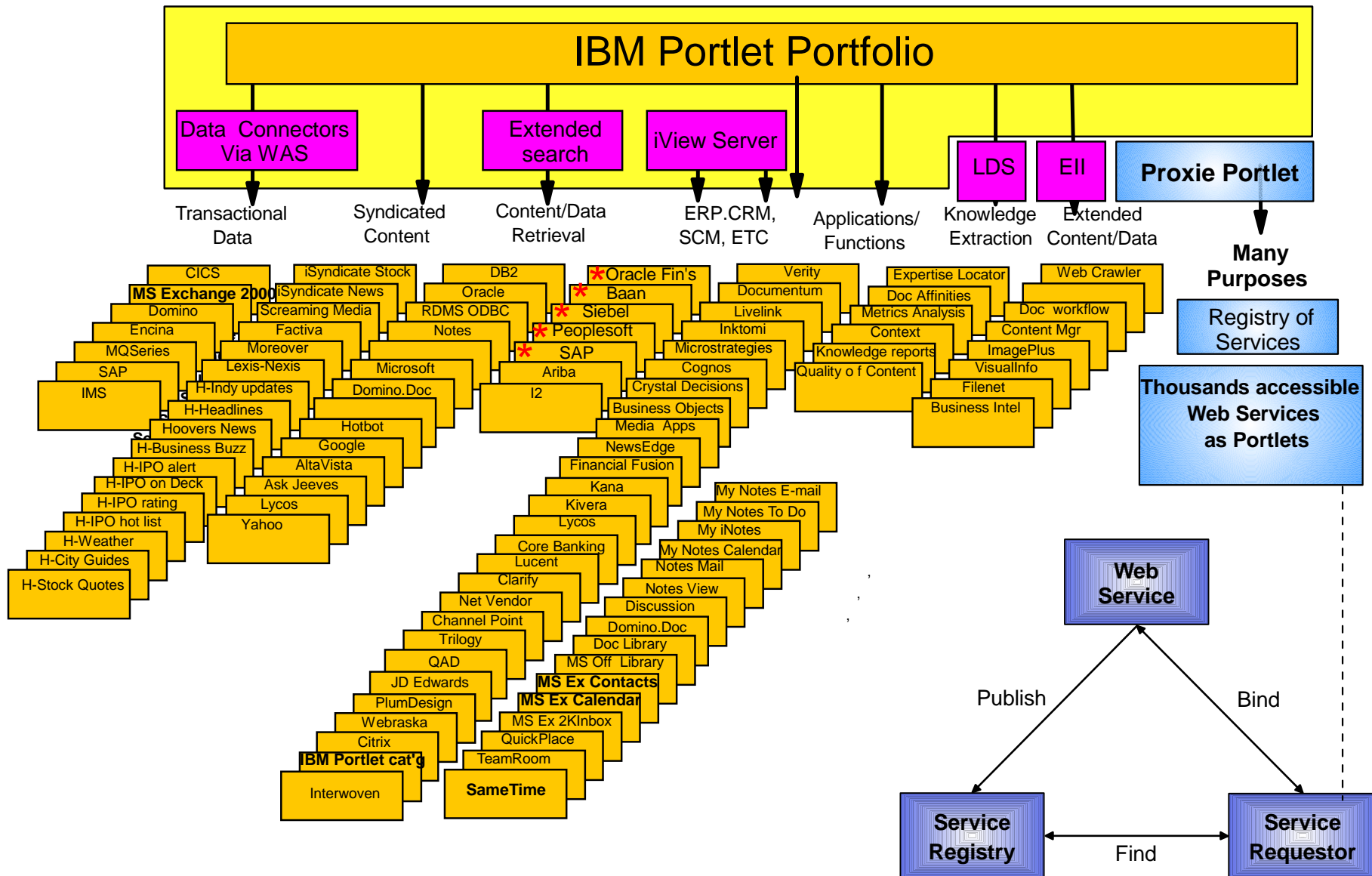


- Integrated Collaboration
- Best of breed portal capability
- Delivers:
 - Core portal framework
 - integrated collaborative tools
 - tools for dev't and analysis
- Customer profile:
 - Deploy multiple portal solutions, including B2E
 - Value integrated collaboration
 - Have made strategic decisions on other components
 - Very appealing to Lotus and WAS customer base

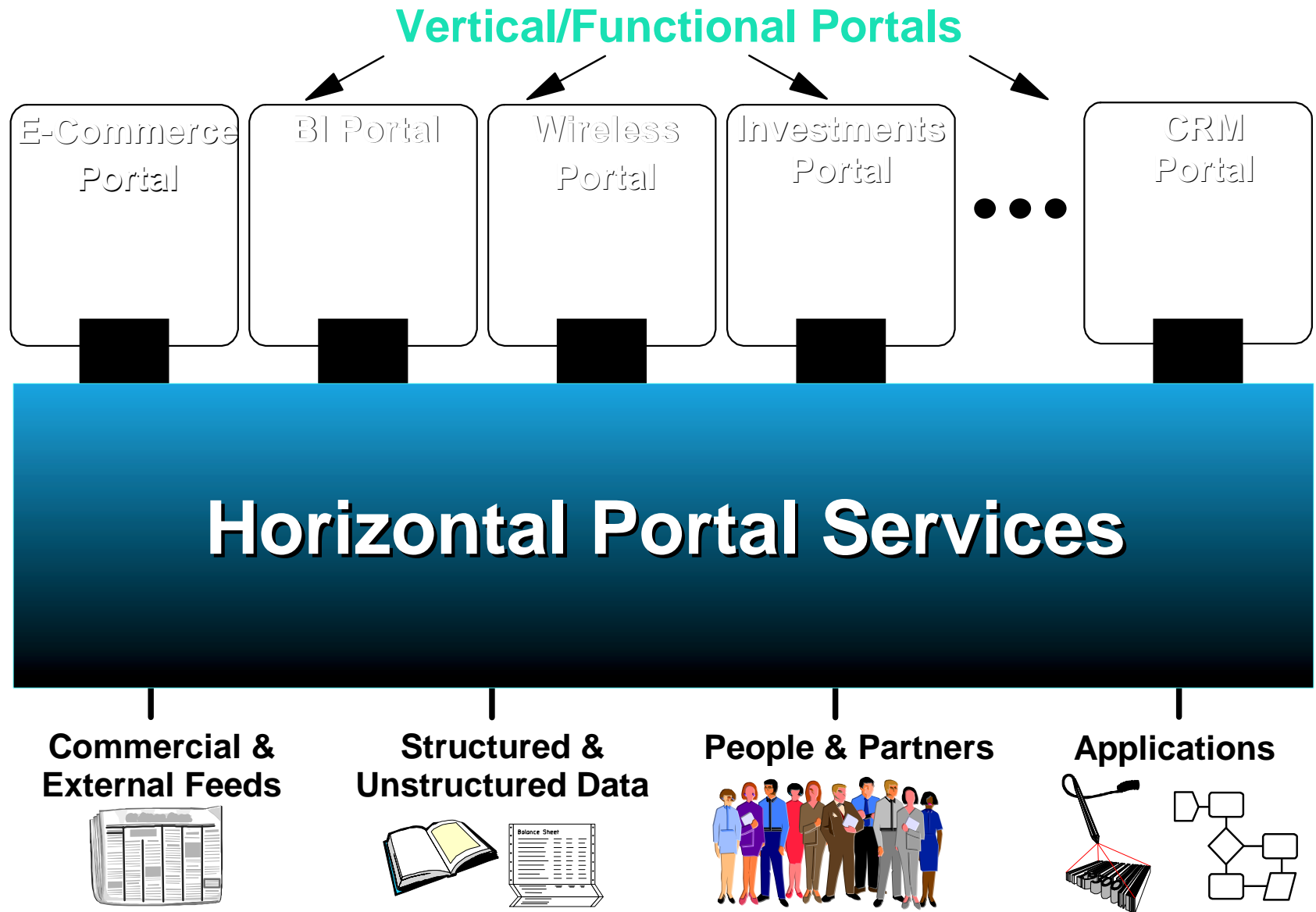


- Maximum Breadth
- IBM's flagship offering
- Delivers industry's most comprehensive solution for deployment and management of portals
- Customer profile:
 - Deploy multiple portal solutions, including B2E
 - Value being able to acquire all components from a single vendor

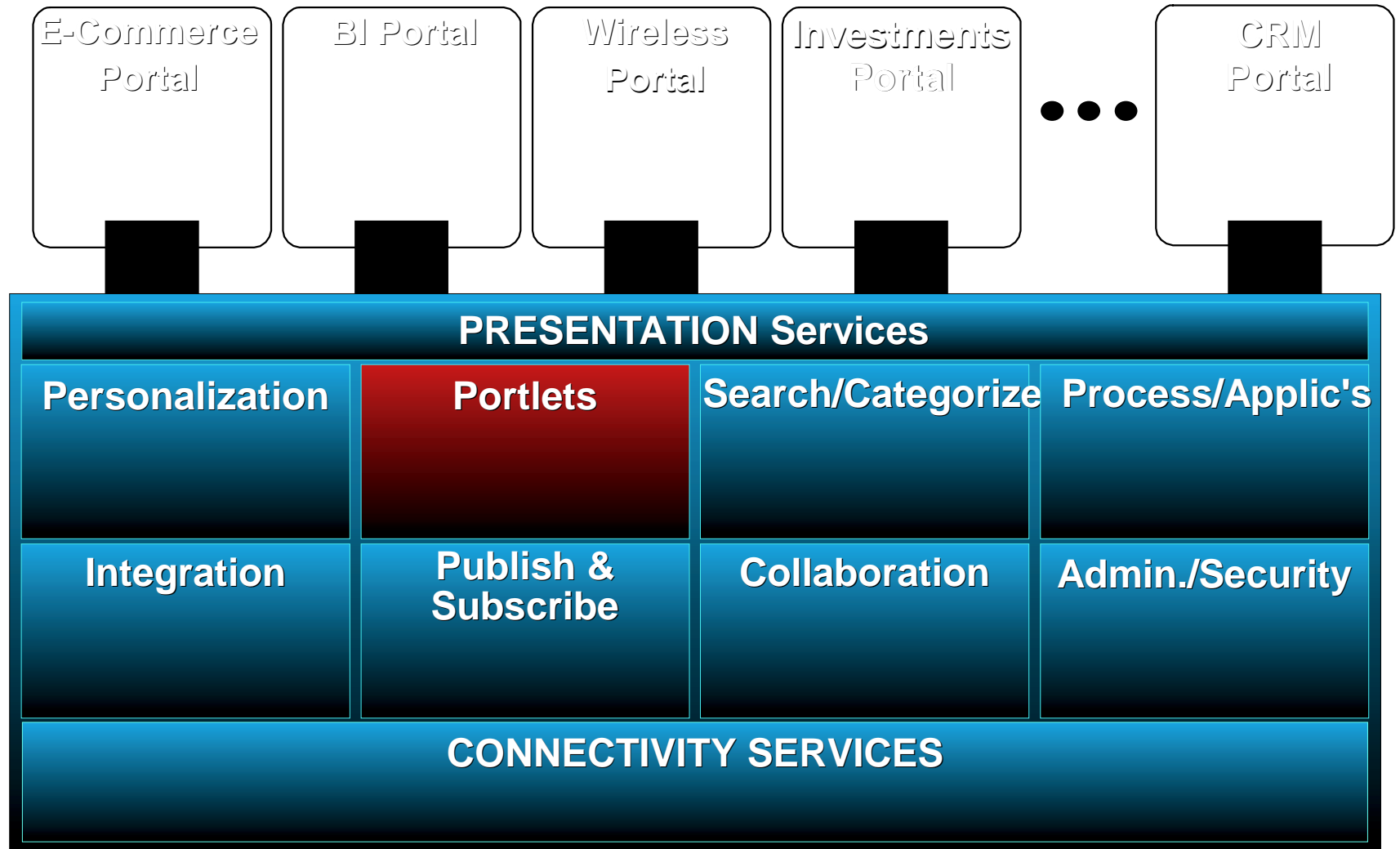
WPS Leverages the Power of Partners and Web Services



Portal Infrastructure & Instances



Portal Functions



Portal Server

PRESENTATION Layer

GUI, wireless devices, location awareness

Personalization	Portlets	Search/Categorize	Process/Applic's
Preferences/Profiles Rules engines Role based profiles Collaborative Filtering Expertise Discovery	Business Partner Solutions Syndicated Info Application objects Gadgets	Federated Search Full-Text search Taxonomy Creation Web-Crawl & Indexing Summarize/Cluster	Workflow Application interactions Transaction initiation Approval Certify
Integration	Publish & Subscribe	Collaboration	Admin./Security
Applications Create Legacy Systems Metadata sharing Directory integration Shared repositories APIs	Authoring Tools Subscriber requests & profile Delivery Scheduler License Mgmt Usage monitoring	Community Team Rooms Distance Learning Shared White Boards Team Meetings Email	Single Sign-on Authentication Metadata Mgmt Repository Mgmt Performance Mgmt User management

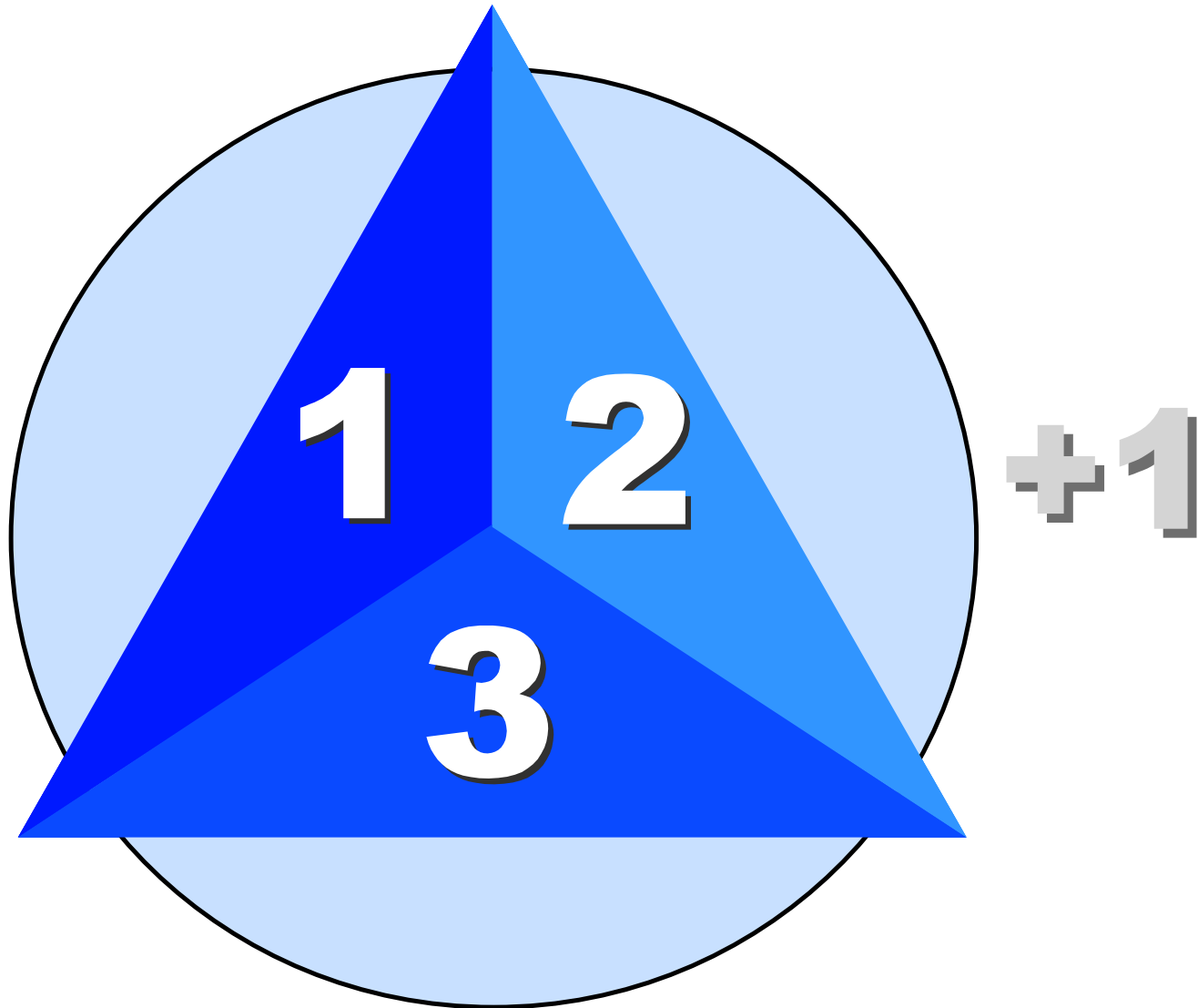
Access Layer

Connectors, transformers, EAI services, APIs

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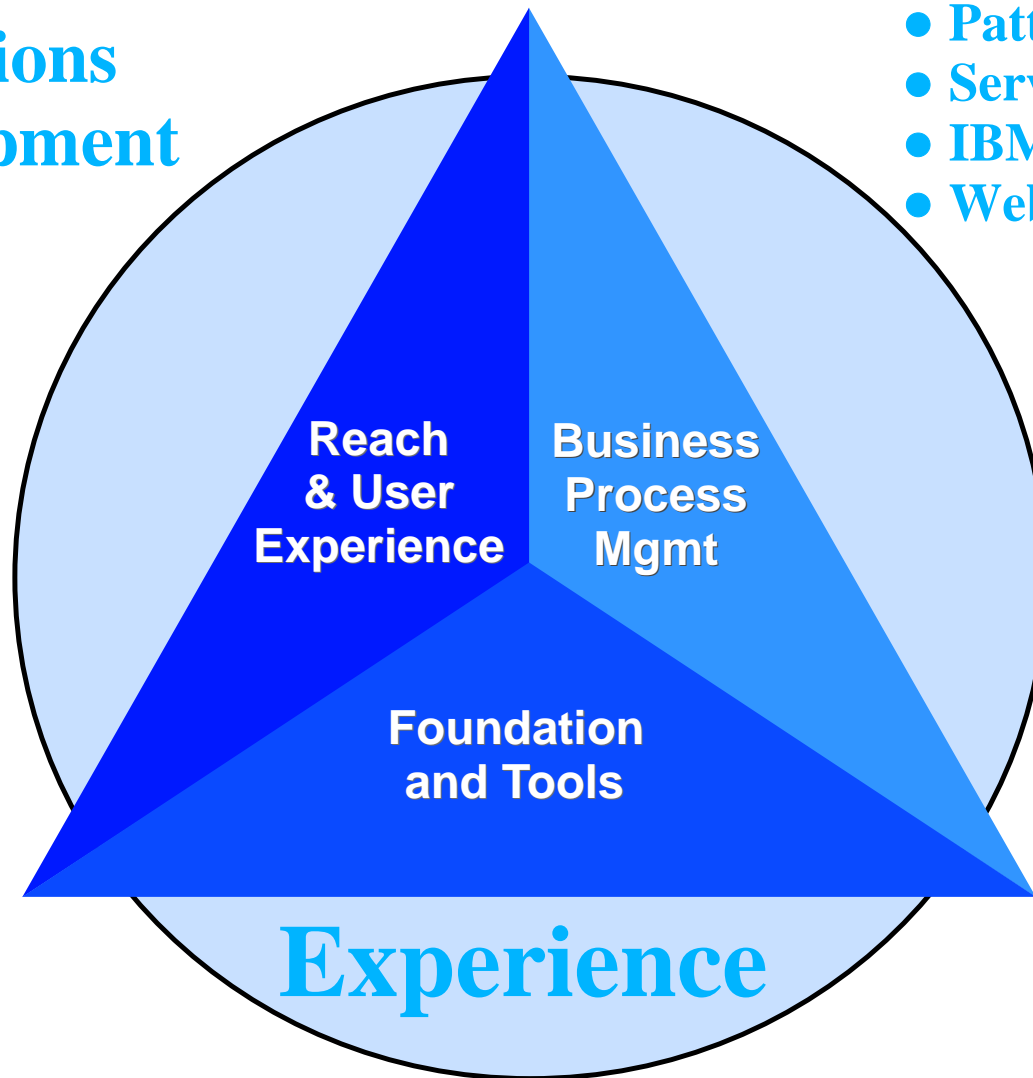
WebSphere fundamentally does three things.....plus one



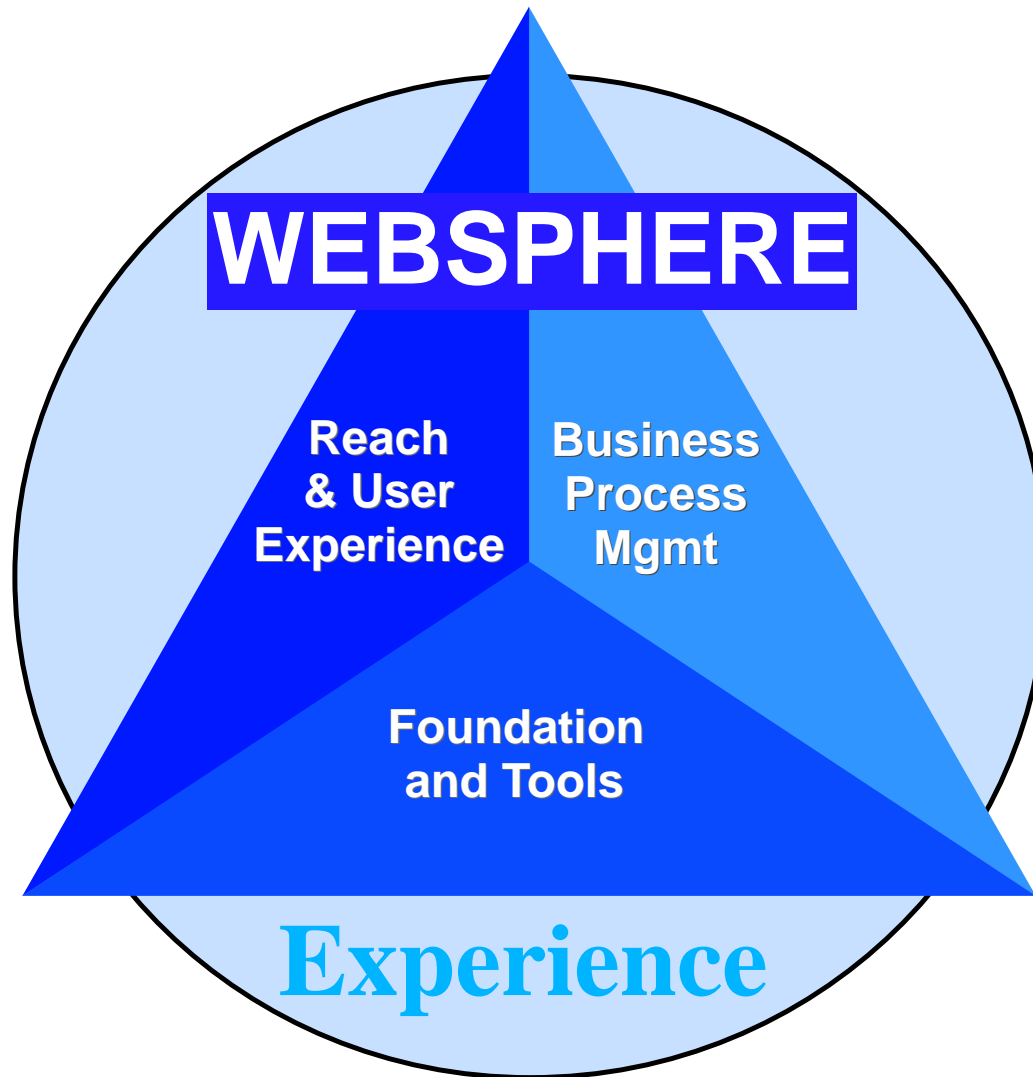
The +1 is "Experience" and it's the key to Enterprise deployment

1. Architecture
2. Operations
3. Development

- Center of Competency
- Patterns for e-business
- Services
- IBM Redbooks
- WebSphere Domain



It's a simple message...it's the WebSphere Platform



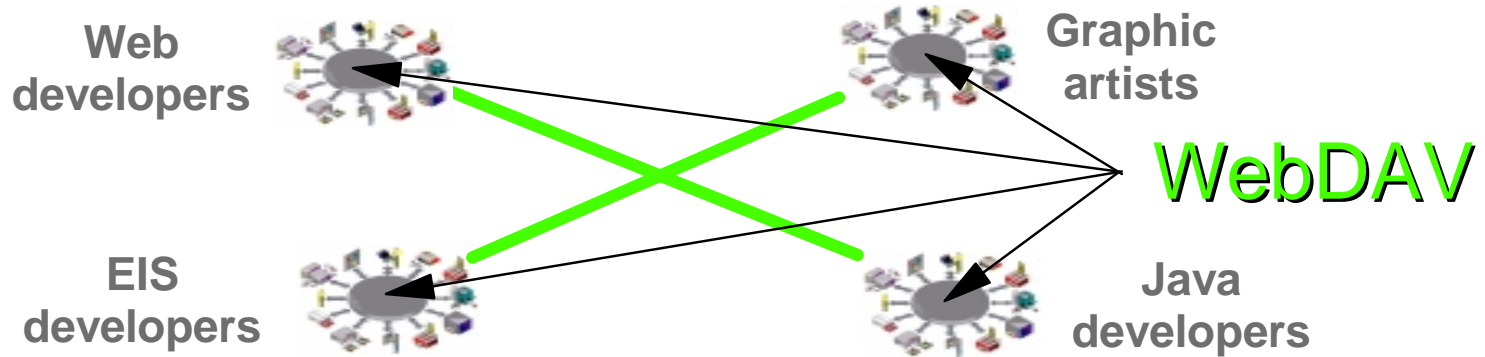
Back-up

Everyone integrates

- **Integration at a industry level allows tools to interoperate**
 - ▶ Open Standards Facilitate integration
 - Java, XML, XMI (MOF), WebDAV
 - Tool vendors create "plug ins" for the workbench
 - ▶ IBM shipping limited eclipse source - guarantees it
 - Backed by partners - big and small
 - ▶ Integration happens in vendors labs, not on developers desktop

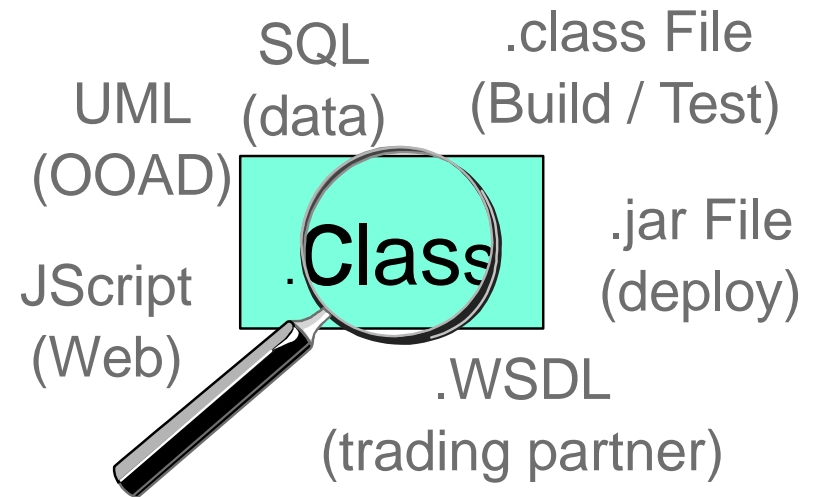
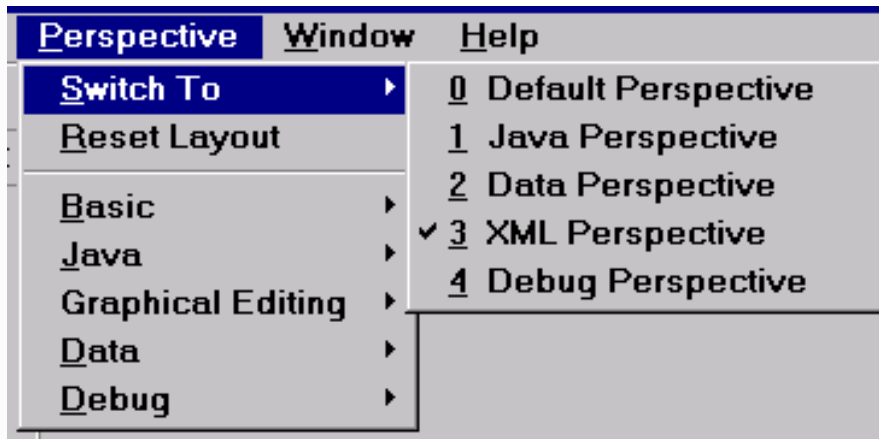
- **The entire industry can integrate and interoperate**
 - ▶ Modeling Tooling - Business Analysts / Architects
 - ▶ Content / Page tooling - Graphic Artists
 - ▶ Development Environments - Business Logic Developers
 - ▶ Scripting, Rules-based - Application Assemblers
 - ▶ Site Management - Site Administrators

Everyone is connected



- ***"Web Distributed Authoring and Versioning" - Open Standard***
- **Assets held in a WebDAV enabled store for control (ie. CVS)**
 - ▶ Developers have access to the assets they need (files, code....)
 - ▶ Stores work across multiple geographically distributed teams
- **Asset Locator provides extensive search and find capabilities**
 - ▶ Internal to the development team
 - ▶ Across federated teams (through WebDAV)
 - ▶ And the web becomes an extension of the IDE - UDDI Discovery
- **Asset Administration - Access Authority by Role**
 - ▶ Granted to groups of individuals (developer, administrator, ..)
 - ▶ Do tasks to build, change, test and deploy the application

Everyone has perspective



- **Perspective allows developers to focus on task at hand**
 - ▶ Provides "Views" into the e-business application
 - ▶ Perspective by Role (Java, data, EIS...)
 - ▶ Perspective by Task (develop, debug, deploy,...)
 - ▶ Perspectives are provided by the tools (browsers, editors, plug-ins,...)
- **Perspective also gives an overall view of the entire project**
 - ▶ What is done, what is missing, and who owns it
 - ▶ Facilitates team communication

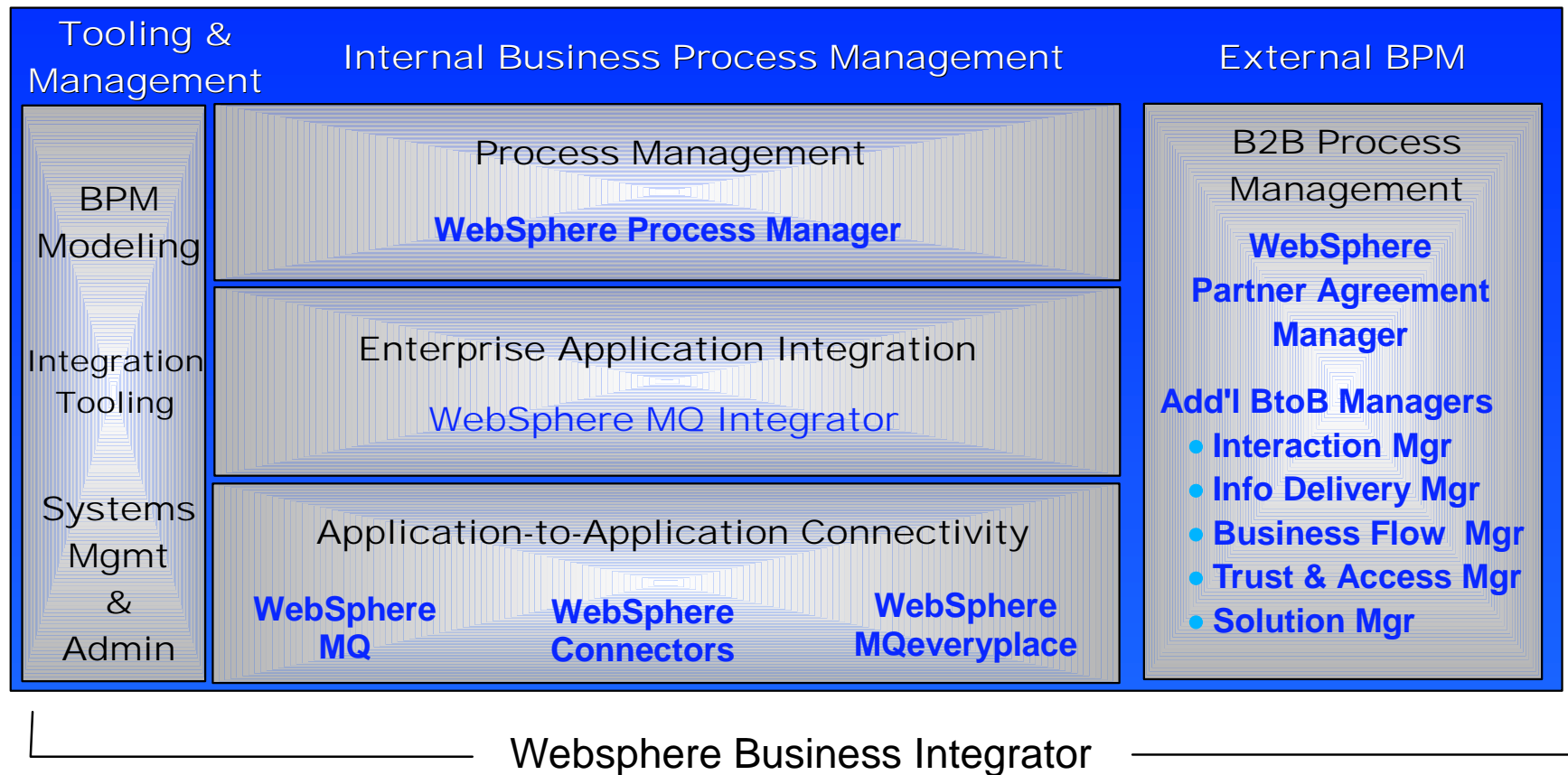
Everyone is dynamic

- **A truly dynamic development environment**
 - ▶ As one tool changes an asset, all other views change correspondingly
- **"Meta Object Framework" - Open Standard**
 - ▶ Uses OMG XML tool to tool interchange format (XMI)
 - ▶ Allows tools to interoperate "as one"
 - ▶ Dependent tools automatically respond to changes in another tool
- **Integration at an industry level, where tools "plug-in"**
 - ▶ ISVs do pre-integration so developers do not have to integrate the point tools on a developers workstation
 - ▶ MOF Model published to the industry for integration
 - ▶ IBM uses MOF internally for integration of new products
 - ▶ Tools choose level (full, MOF, asset)
- **Development environment grows as needs grow**
 - ▶ Progressive disclosure hides advanced functions until needed
 - ▶ Allows developers to explore at their own pace, within their own perspective
 - ▶ Requirements, Defect Tracking, Accountability (who did what & when)



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Business Process Management



- Single view of processes/transactions within and beyond enterprise
- Rapid development and deployment of high ROI solutions
- Support for new and emerging device types
- Support for legacy and new applications

VisualAge for Java

Developer Workbench

- Browse, Edit, Debug Java components
- Incremental Compiler
- Intgrate with design tools
- Built-in version control and config mgmt
- Distributed Debugger

Builders

EJB

Database

MQ, CICS
IMSSAP R/3
DominoIDL, RMI
Servlets

Developer SCM



Enterprise SCM

What is a Portal?

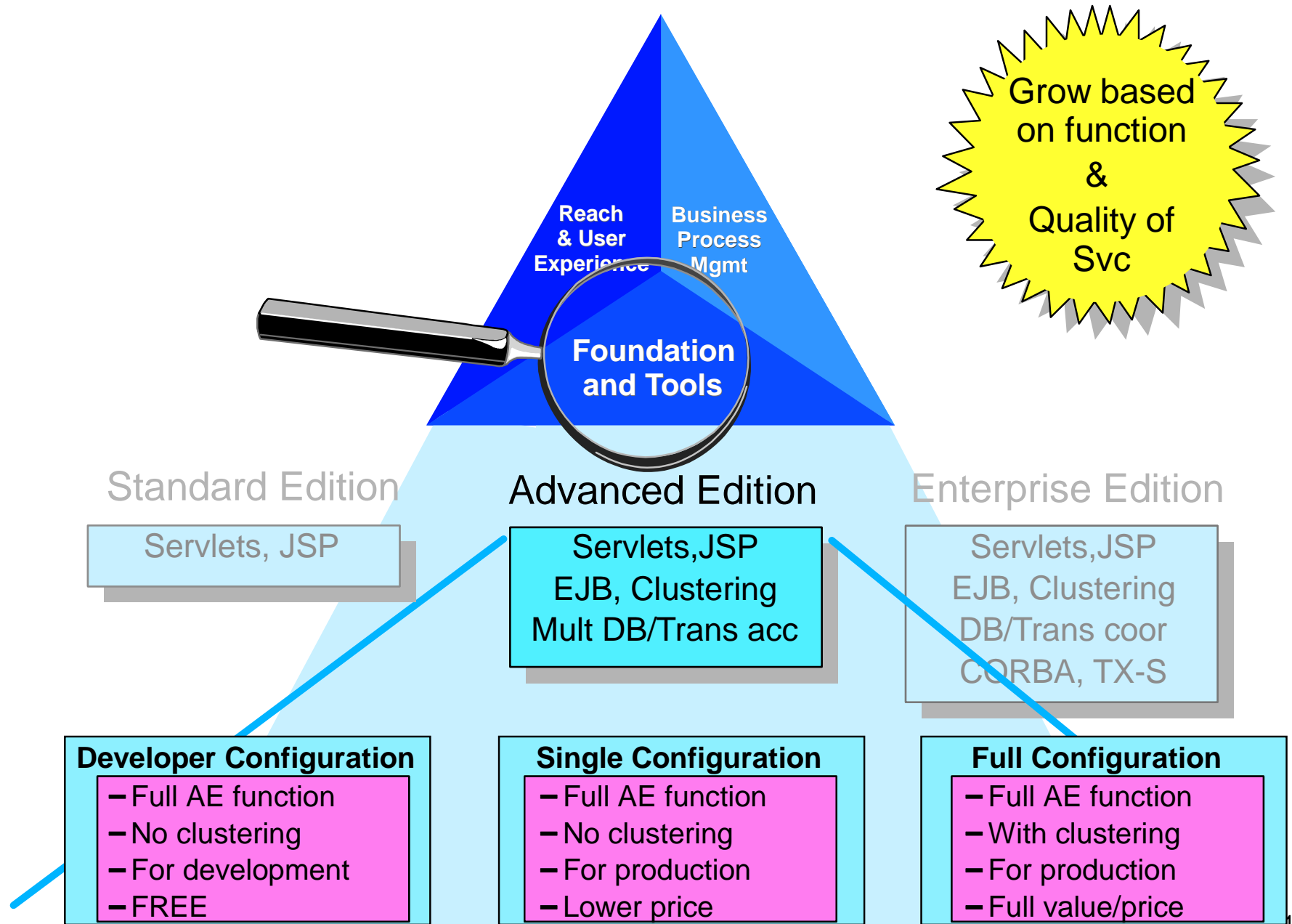
Gartner - "Portal" The most Abused Term in IT,

- Portals are Web sites targeted at specific audiences providing:
 1. content aggregation/delivery of info relevant to the audience,
 2. collaboration and community services, and
 3. services and application access for the target audience.....all delivered in a highly personalized manner.

IBM - Portal "Working Definition"

- Portals provide a secure, single point of interaction with diverse information, business processes, and people, personalized to a user's needs and responsibilities.

Develop, Connect and Manage on a rock-solid J2EE Foundation



Fundamental Mkt Shift in Usage

e-biz App Server Platform = App Servers + Integration Servers

"Convergence of the application server and the integration broker technologies into the next-generation e-business software platform empowers the user to design and deploy more flexible and powerful applications, integrating the distributed heterogeneous resources of a virtual enterprise into a new agile composite business processes."

--- **Yefim Natis, VP, Gartner Group**

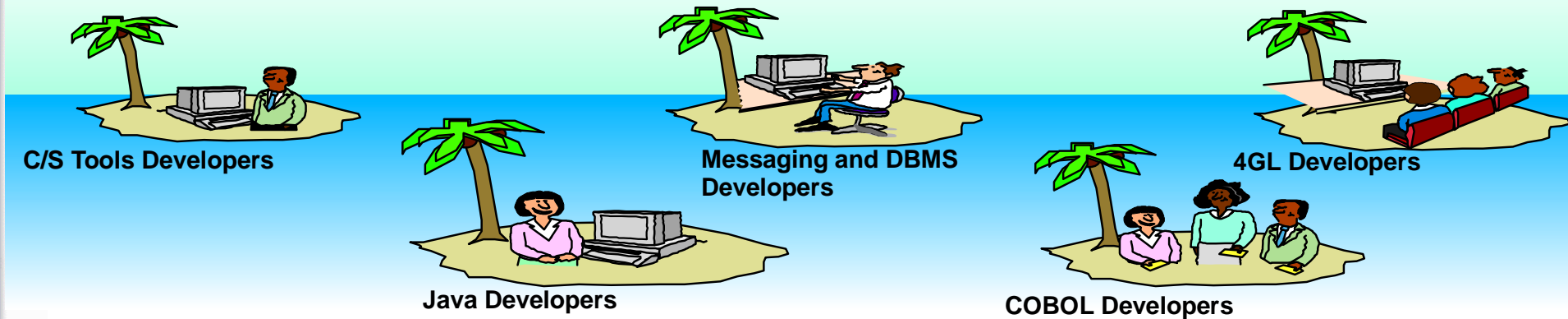
"Giga expects the role that JMS plays in J2EE will grow rapidly to become its main role..."

--- **Mike Gilpin, VP, Giga**

"The arch. that have been used to support web-based, e-biz solutions are not only applicable, but have actually become indispensable in moving to services-based integration"

-- **Steve Garone, VP, IDC**

Common AD Problem



Multiple people work on an e-business application

- Graphic artists
- Web Programmers
- Java Programmers
- EIS Programmers
- Architects
- Business Analysts
- Team Leaders, Managers
- And all must work together.

Create many different types of assets

- GIF, TIF, BMPs, Jpeg
- HTML, Web Svcs, XML, Links, Scripts, Schemas, .war files
- Beans, EJBs, Servlets, JSPs
- COBOL, CICS, IMS, MQSeries, SAP R/3, NOTES
- UML, Business model to object model to data model mappings
- Problem reports, status reports

Generation 1 & 2 Portals

Generation 1 - Content Focus

- **search** and index of a wide set of structured and unstructured information repositories
- **categorization** of content (taxonomy capabilities)
- **content management** and aggregation
- **personalized** delivery of content
- lightweight application development and integration capabilities (e.g., scripts, Active Server Pages, etc.)
- lightweight systems architecture (e.g., portal components run on Web server).

Generation 2 - Application Focus

- a robust application execution environment (e.g., portal components run on an **application server**)
- powerful, flexible application **development tools**
- a robust application integration **framework**
- enterprise-class capabilities (e.g., redundancy, automated failover, load balancing and management tools)
- **collaborative** features
- mobile/**wireless** support
- more robustness in than Generation (1)

Source: Gene Phifer, Gartner Group, *Generation-Two Portal Products Emerge*

What is a Portal?

IBM Knowledge Portal -
Netscape
File Edit View Go Communicator Help

An Enterprise Portal

Thursday, September 28, 2000 Search: Go

My Market | My Company | My Products | My Customers | Personalize 1 Help ?

Customer Watch

[Insurance Stocks after Floyd](#)
Insurance stocks are riding the choppy wake of Floyd.

[Frontier eyes Q2 gains](#)
Frontier Group CFO told securities analysts the 2nd quarter would exceed earnings estimates.

Customer Activity

Date	Activity	Team	Status
08/09/00	Opportunity: Competitors poor laptop performance	Denise Broslin	Open
08/11/00	Complaint: Broken hard drive on arrival	Hans Dieterbrodt	Open
08/11/00	Opportunity: Frontier merger creates new sales team	Hiro Narita	Open
08/12/00	Opportunity: New sales demo hardware needed - CDROMs	Denise Broslin	Done
08/15/00	Opportunity: Request for information from HR	Denise Broslin	Canceled

Website Hits

Ship Schedule

T600X Qty:400 9/15/00

T600E Qty:257 9/29/00

Partner Requests

Dixon New Classes on PCMCIA 8/01/00

[Martin Corp.](#) Need Supply of ethernet cards by Sept. 28 8/03/00

Johnson Inc. Alternate supplier of docking stations 8/04/00

Fingerhut 1500 Thinkpads ordered for

NETFLIN
Rent all the DVD movies you want.
Your 100 favorites in seconds. No late fees.
It's Simple! Here's How It Works...
Super Selection! Create a list of movies you want to rent. We'll have it ready when you're ready.
Our Range-Over Customer Satisfaction
Remember you added items to your home movie collection!

What is a Portal?

Collaboration

Federated search across multiple repositories

Personalization button

Tabs

Subscriber News Feed

Real time Statistics

Inventory data from ERP Application

URL to another web site

CRM

The screenshot shows the IBM Knowledge Portal interface. At the top, it says "An Enterprise Portal" and "Thursday, September 28, 2000". There is a search bar with a "Go" button. Below the search bar are tabs for "My Market", "My Company", "My Products", and "My Customers". To the right of the tabs is a "Personalize" button with a "1" and a "Help" button with a "?".

The main content area is divided into several sections:

- Customer Watch**: A section with a purple border containing news items like "Insurance Stocks after Floyd" and "Frontier eyes Q2 gains".
- Customer**: A table with columns "Date", "Activity", "Team", and "Status". It lists various opportunities and complaints.
- Website**: A section with a black border containing a line graph titled "Hits" showing website traffic over time.
- Ship Schedule**: A section with a green border containing a table of ship schedules with columns for ship name, quantity, and date.
- Partner**: A section with a blue border containing information about partners like "Dixon" and "Martin Corp.".

Annotations with arrows point to various features:

- Collaboration** points to the "My Market" tab.
- Federated search across multiple repositories** points to the search bar.
- Personalization button** points to the "Personalize" button.
- Tabs** points to the "My Market" tab.
- Subscriber News Feed** points to the "Customer Watch" section.
- Real time Statistics** points to the "Website" section.
- Inventory data from ERP Application** points to the "Ship Schedule" section.
- URL to another web site** points to the "Partner" section.
- CRM** points to the "Partner" section.

Top customer requirements

1. *Search & Categorization*
2. *Web hosting of applications*
3. *Consistent interfaces for all applications*
4. *Web access to Data Warehouse*
5. *Personalized delivery of content and apps.*
6. *Real-time collaboration services*
7. *UI customization*

IBM WebSphere Portal Server

- Provides an open framework for creating many kinds of portals
- Provides sample portlets including news, weather, stocks, file access, and search
- Accepts many standard content sources and makes it easy to customize for other sources
- Removes much of the overhead of developing user interfaces for multiple browsers or mobile devices

Why is a portal framework needed?

- Simplifies many tasks in building complex web sites
 - ▶ overall page structure only needs to be defined once
 - ▶ portlets are defined independently
 - ▶ visual design changes without changing the portlets
 - ▶ Multiple channels much faster as retarget limited # of portlets
- The framework is based on Java and XML
 - ▶ portlets use XML and XSL
 - ▶ or JSP with Java beans
 - ▶ or Java
 - ▶ or several other web templating technologies
 - ▶ or just plain HTML

Portlet Based Connectivity

■ SAP (ERP)

- ▶ Customer credit exposure, Daily product sales graph, Expiring sales contracts, Sales hot list, Material available, Shipments due, ...

■ PeopleSoft (HR, ERP)

- ▶ 401K at limit, EEO exposure, Job postings, New hires, Late increases, payroll summary report, Training schedule, Turnover, ...

■ Baan (ERP)

- ▶ Past due purchase orders, Slow moving items, Revenue drop, Top outstanding payments, purchase price variance, returns from customer, ...

■ Siebel (CRM)

- ▶ Accounts by status, All billable projects, All projects, Opportunity forecast, Incomplete deliveries, Open sales orders, ...

■ Oracle Financials (ERP)

- ▶ Inventory availability, Asset location, Invoices received, Overdue receipts, Asset invoices, Delivery performance, Requisition history, ...

New WPS Partner's

- Media Apps
- MoreOver
- Netonomy
- NewsEdge
- Nikkei
- OnePage
- Plum Design
- PluriMedia
- SAP Portal
- Verity
- VIP Ltd
- Webraska
- YellowBrix
- Alta Vista
- Autonomy
- Business Objects
- Correlate
- Crystal Decisions
- En Technologies
- Google
- Intranet
- Interwoven
- IntraNet Solutions
- Kivera
- Lexis Nexis
- Lycos

Analyst Momentum - 3Q 2001



Giga

- ★ Tech Sector Worries Accelerates Trends to J2EE Leaders (April 2001)
- ★ Planning Assumption "IBM AD Promises Big Changes (August 2001)
- ★ IBM WebSphere v4.0: A Major Step Forward (June 2001)



IDC

- ★ App Server SW Platforms Mkt Forecast & Analysis, 2001-2005 (July 2001)



Summit Strategies

- ★ Will System Vendors Become Spoilers in the App-Server Market (Aug 2001)



Gartner Group

- ★ New WebSphere Release Aims at Much Broader Audience (July 2001)



DHBrown:

- ★ IBM Delivers Web Services for Dynamic e-biz (August 2001)



Solomon Smith Barney

- ★ CIOs Application Server Survey (August 2001)

Forrester Research

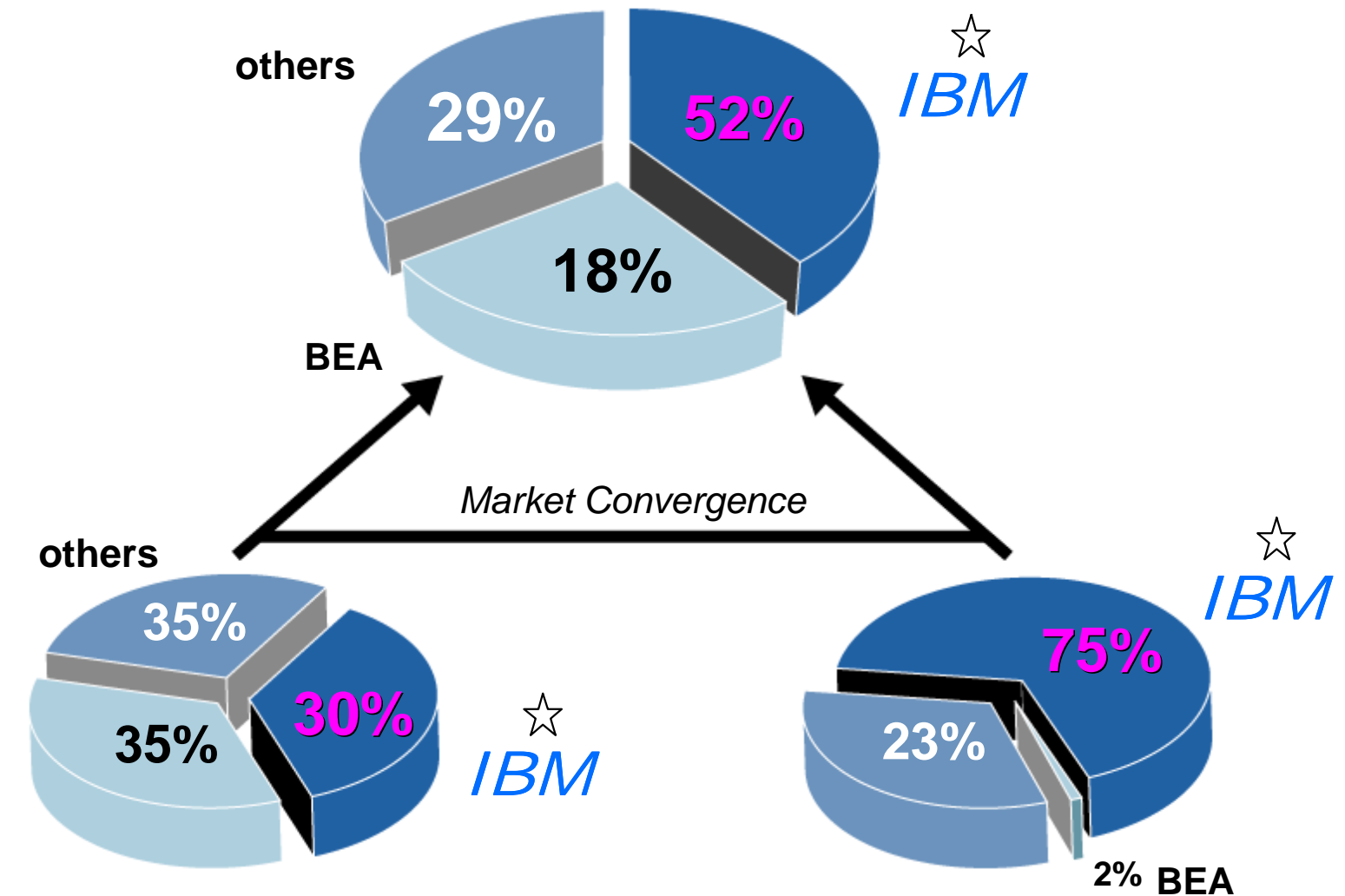
- ★ Application Server MarketView, TechRatings (May 2001)



Other Favorable (2Q/3Q 2001)

- ★ Meta Group, Hurwitz, Illumina, Zona Research, Wohl Associates, etc.

Market Share: e-biz Application Servers



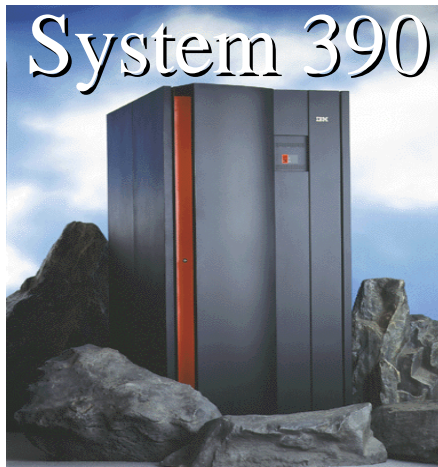
J2EE Application Servers
(\$1.0B, CGR 30% 2005)

Messaging & Integration Brokers

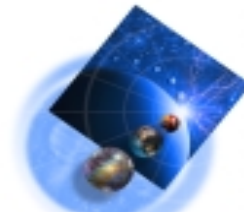
(\$1.0B, CGR 30% 2005)

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WebSphere Leverages zOS and 390



**Business
Applications**



WebSphere

Security

Resource Recovery

Workload Management

Data Sharing

**Coupling
Technology**

Parallel Sysplex

Enterprise Server

Exploiting Quality Of Service of zOS

- **Parallel Sysplex exploitation**
- **Work Load Manager (WLM) exploitation**
- **Automatic Restart Manager (ARM) exploitation**
- **Optimization of connection and communication protocols between WebSphere Application Server, CICS Transaction Server, DB2 and IMS**
- **Security integration with RACF**

A vertical banner on the left side of the slide. It features the IBM logo at the bottom, a stylized image of a hand holding a pen, and the text 'WebSphere software' and 'the fastest way to dynamic e-business' at the top.

Response to Launch

● **Web Based Interest**

- Over 10,000 Downloads of Studio products in the first 3 hours
- Over 31,000 Visitors to Eclipse.org Site in first two days
- Over 4,400 Eclipse Downloads in first two days

● **Press and Analyst Response**

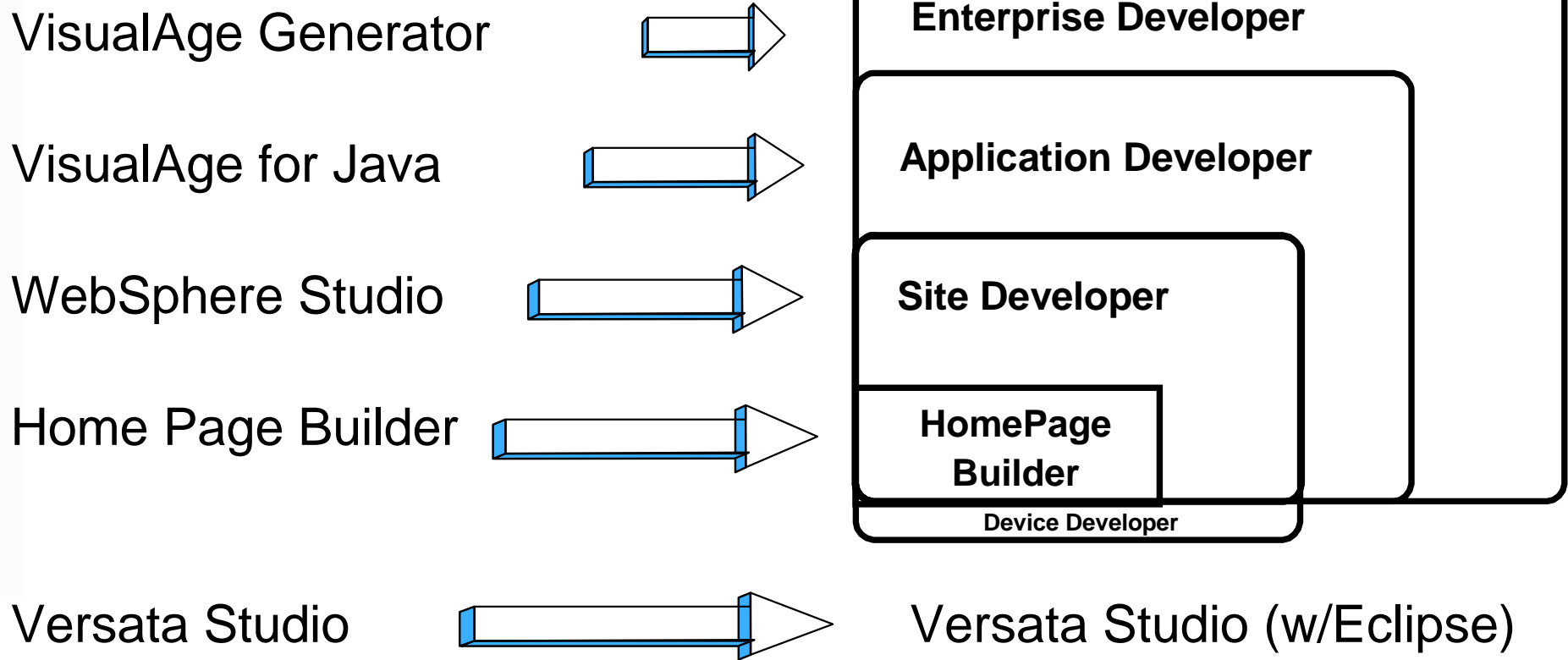
- Over 55 articles written in first 3 days
- Overwhelming positive response from analysts quotes
- Several new, positive analysts reports

● **Sales Enablement Material**

- WebSphere Studio V4.0 Application Developer Spec Sheet
- VisualAge Enterprise Suite V3 Offering fact sheet
- WebSphere Studio Workbench White Paper
- Cost Analysis Work Sheets
- WS App Developer Product Review Guide
- VisualAge for Java Product Transition White Paper
- Application Development Vision and Strategy White Paper
- More info and & Web based demos - ibm.com/software/ad/adstudio

WebSphere Studio Family

IBM's New AD Solution for e-business



WS Studio builds on VisualAge leveraging customer investment

Franchise Features

VisualAge for Java

- ★ Incremental Compiler
- ★ Unit Test Environment
- ★ Dynamic Debugger
- ★ Code Assistant
- ★ Scrapbook
- ★ EJB Development
- ★ Enterprise Access
- ★ Tight UML Support
- ★ ...Other features

WebSphere Studio

- ★ Page Editing (HTML/JSP)
- ★ Link Management
- ★ Page Performance
- ★ Advanced Publishing
- ★ ...Other features

+

New Features

- ★ Vendor Plug-in
- ★ XML tooling
- ★ Web Services tooling
- ★ Pluggable JDK Support
- ★ New File based IDE
- ★ Performance & Trace tooling
- ★ Flexible, Open Team Development Environment
 - ★ CVS support included
 - ★ CC LT ships in box
- ★ Much more!

=

WebSphere
Studio
Application
Developer

Over 40 Major Industry Awards!

.. and that's not just IBM's view

"Applications must work together to deliver on business imperatives like Internet commerce and customer relationship management. **As the value of applications working together surpasses the value of individual apps, users will demand solutions that manage enterprise-scale processes more effectively.**"

Eric Brown, Forrester Research

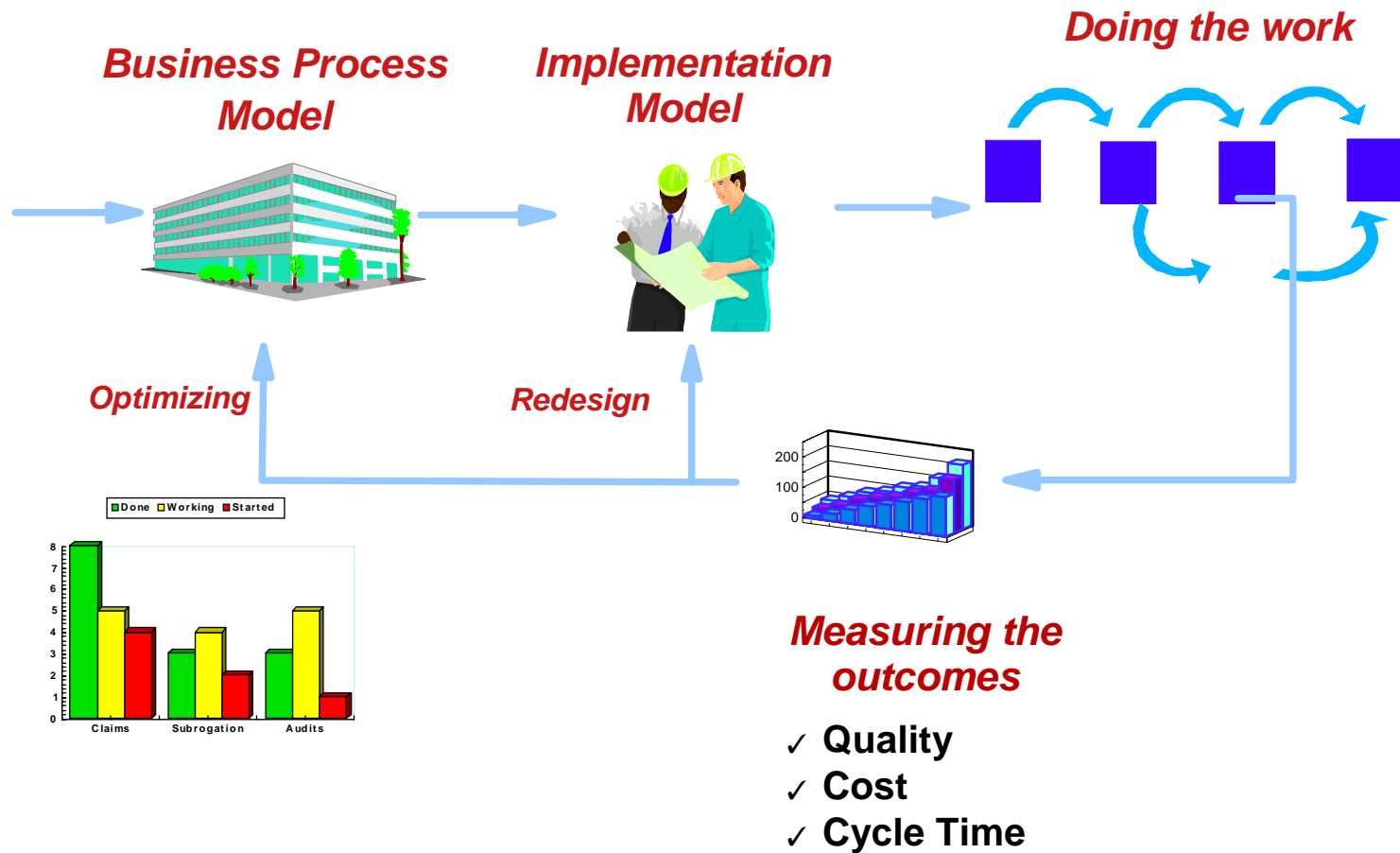


Pierre Mitchell,
AMR Research

"The ultimate reward of BPM lies in the improved management of competitively differentiated end-to-end process, from early innovation of the product to after-sales service. **By adopting a focused strategy to improve business process integration and business process control, companies can begin to unlock the potential of their processes and the people who enable them**"

BPM Vision

Incorporate Business View into the Infrastructure



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