iSeries Update
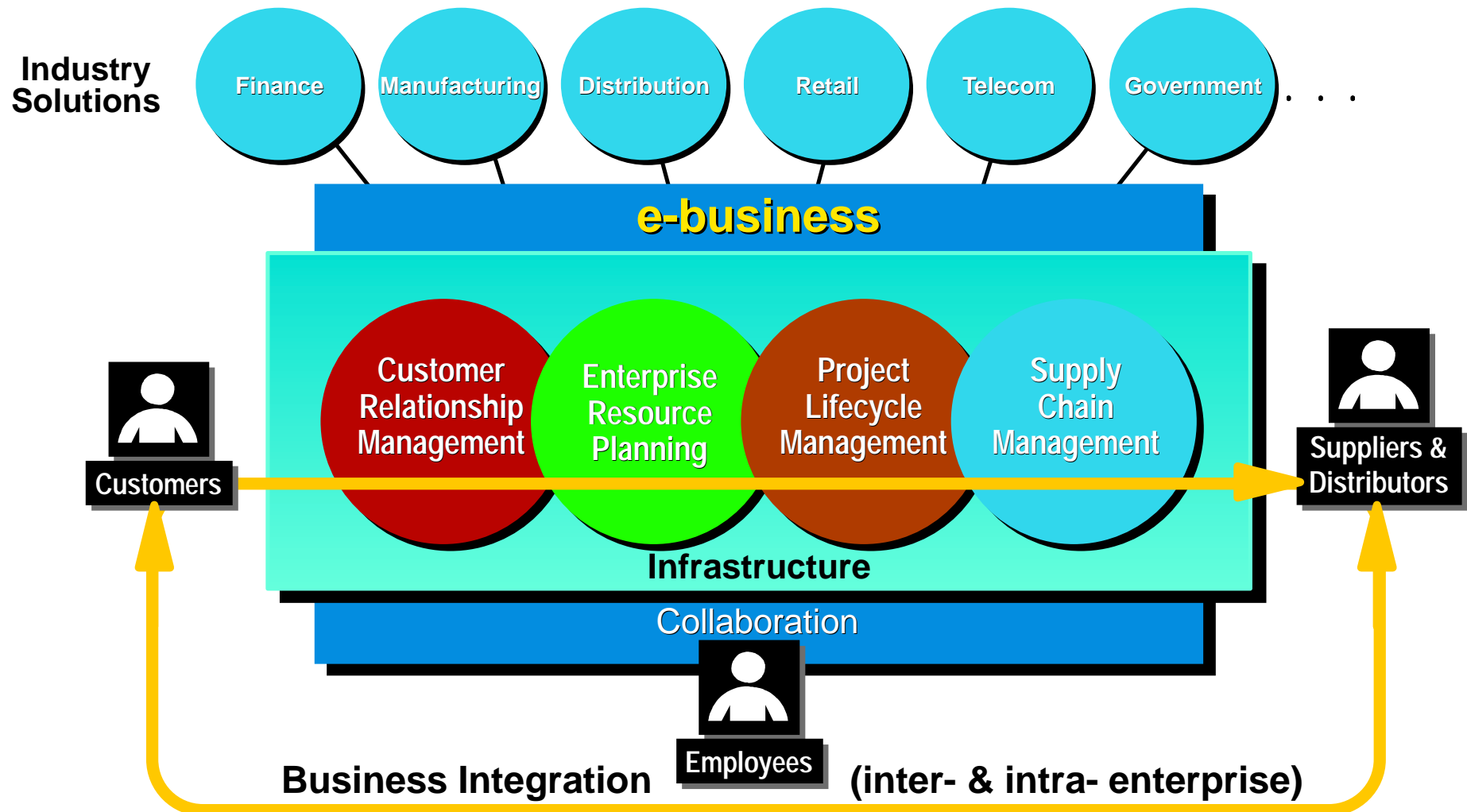# *iSeries as a Web Platform*

IBM @server iSeries

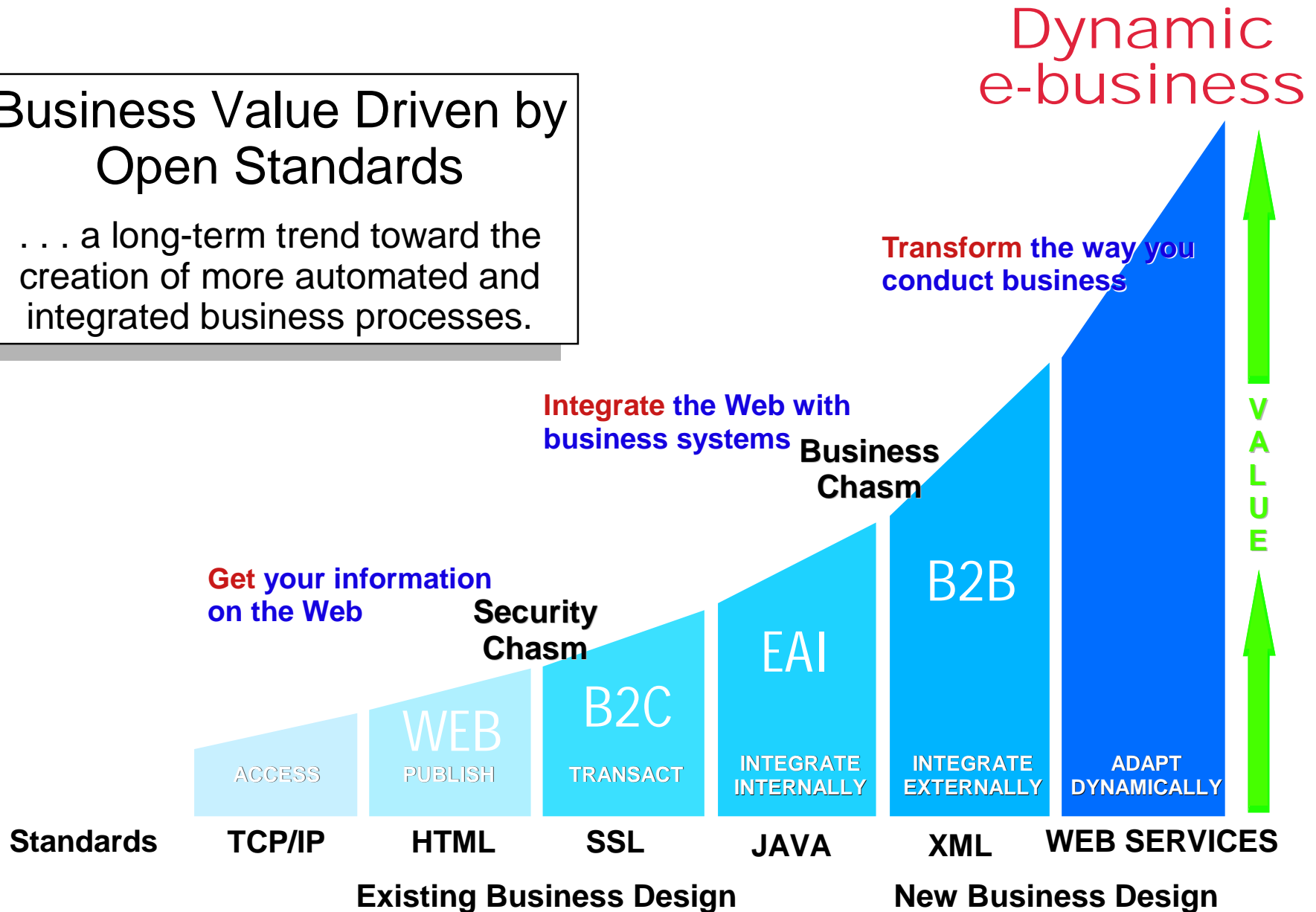# *e-business Vision*

- Fully Optimized

- Integrated from Demand to Delivery

Industry Solutions

Finance · Manufacturing · Distribution · Retail · Telecom · Government · · ·

e-business

Customer Relationship Management · Enterprise Resource Planning · Project Lifecycle Management · Supply Chain Management

Infrastructure

Collaboration

Customers → Suppliers & Distributors

Employees

Business Integration **(inter- & intra- enterprise)**
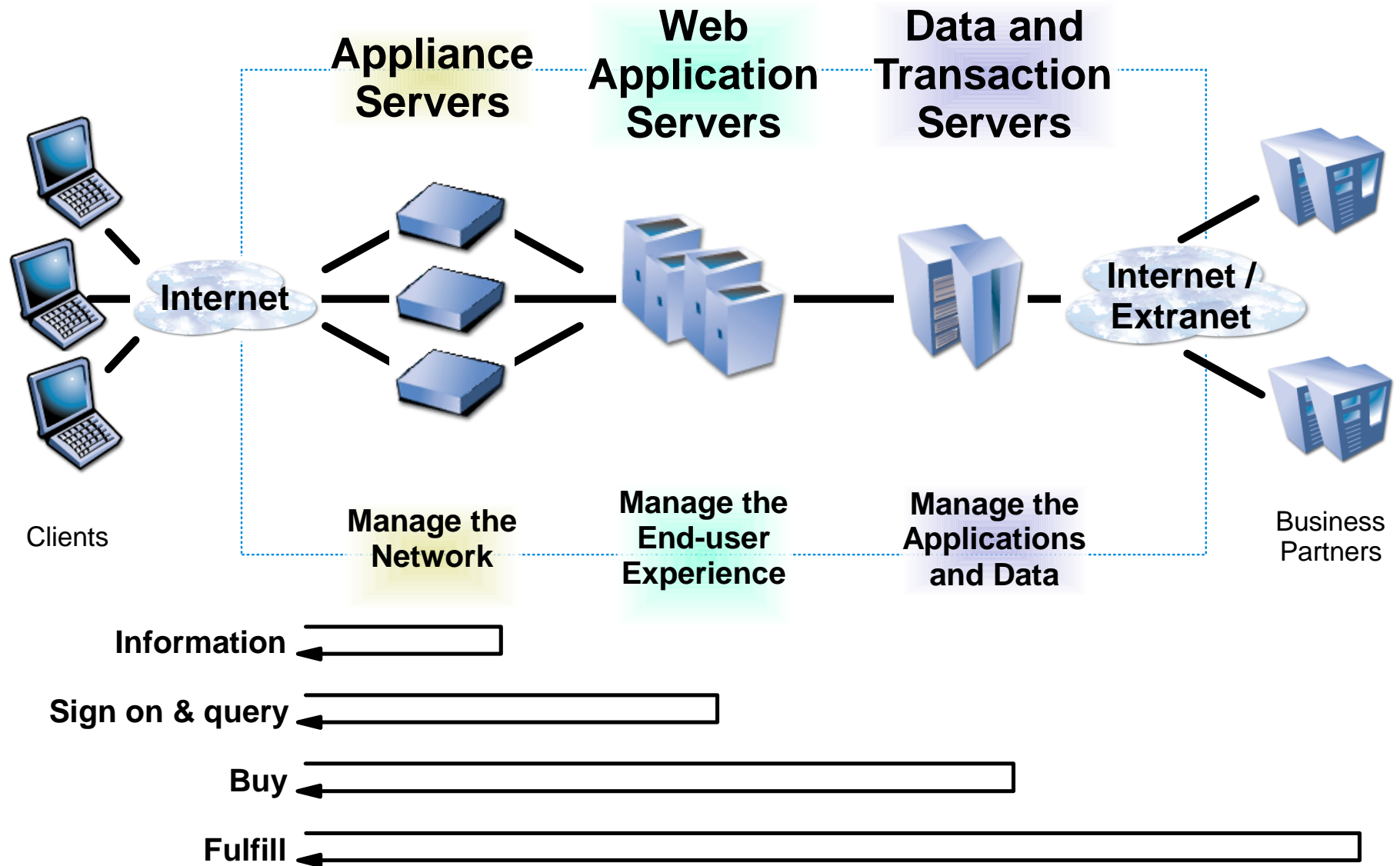
*e*server

Evolution of e-Business

Business Value Driven by Open Standards

. . . a long-term trend toward the creation of more automated and integrated business processes.
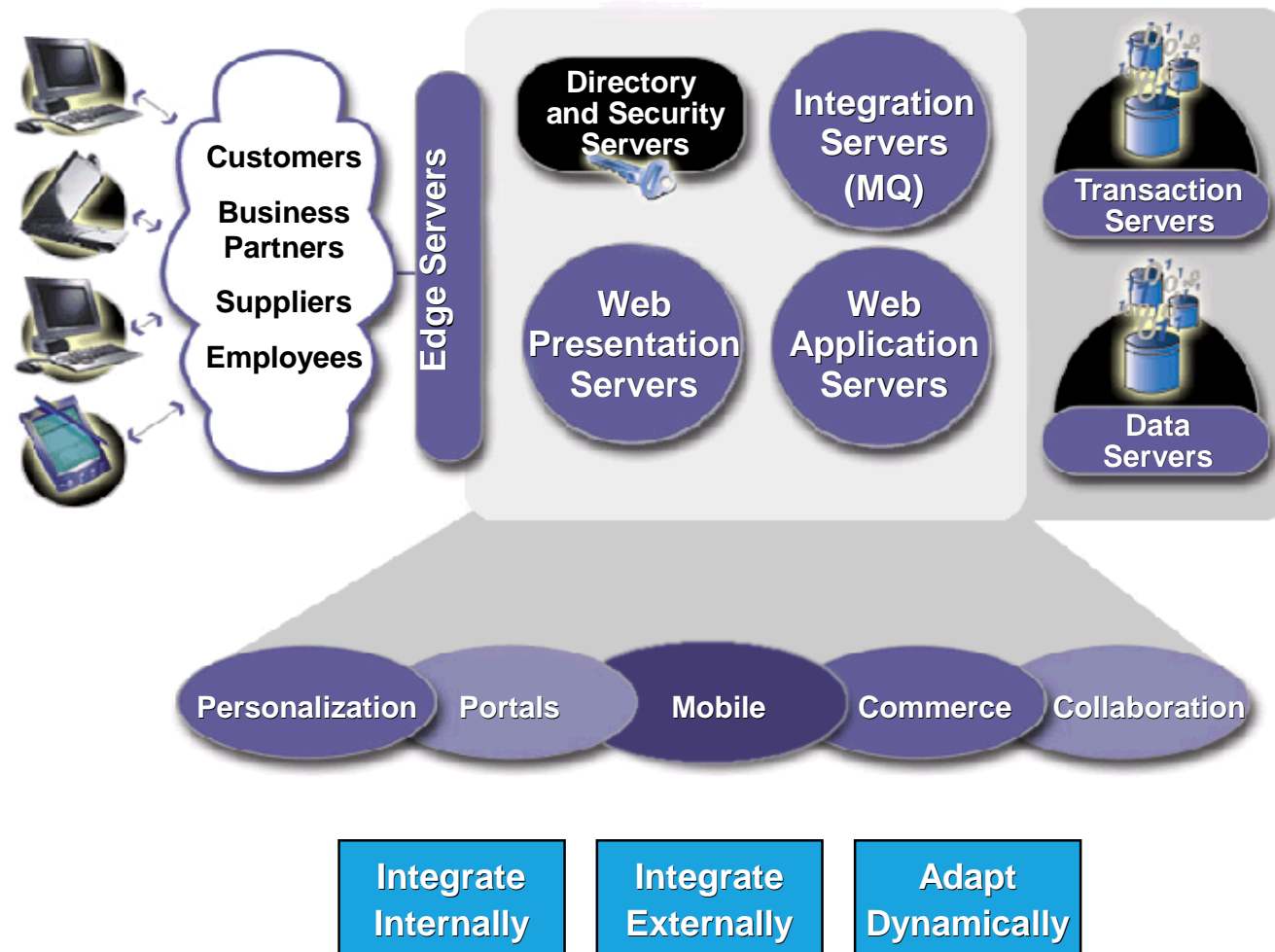
Dynamic
e-business

Transform the way you conduct business

Integrate the Web with business systems

Business Chasm

Get your information on the Web

Security Chasm

B2B

EAI

B2C

WEB

ACCESS

PUBLISH

TRANSACT

INTEGRATE INTERNALLY

INTEGRATE EXTERNALLY

ADAPT DYNAMICALLY

VALUE

Standards	TCP/IP	HTML	SSL	JAVA	XML	WEB SERVICES

Existing Business Design   **New Business Design**

eserver

e-business Infrastructure

Appliance Servers

Web Application Servers

Data and Transaction Servers

Internet

Internet / Extranet

Clients

Business Partners

Manage the Network

Manage the End-user Experience

Manage the Applications and Data

Information

Sign on & query

Buy

Fulfill

eserver

WebSphere Addresses the Complete e-business
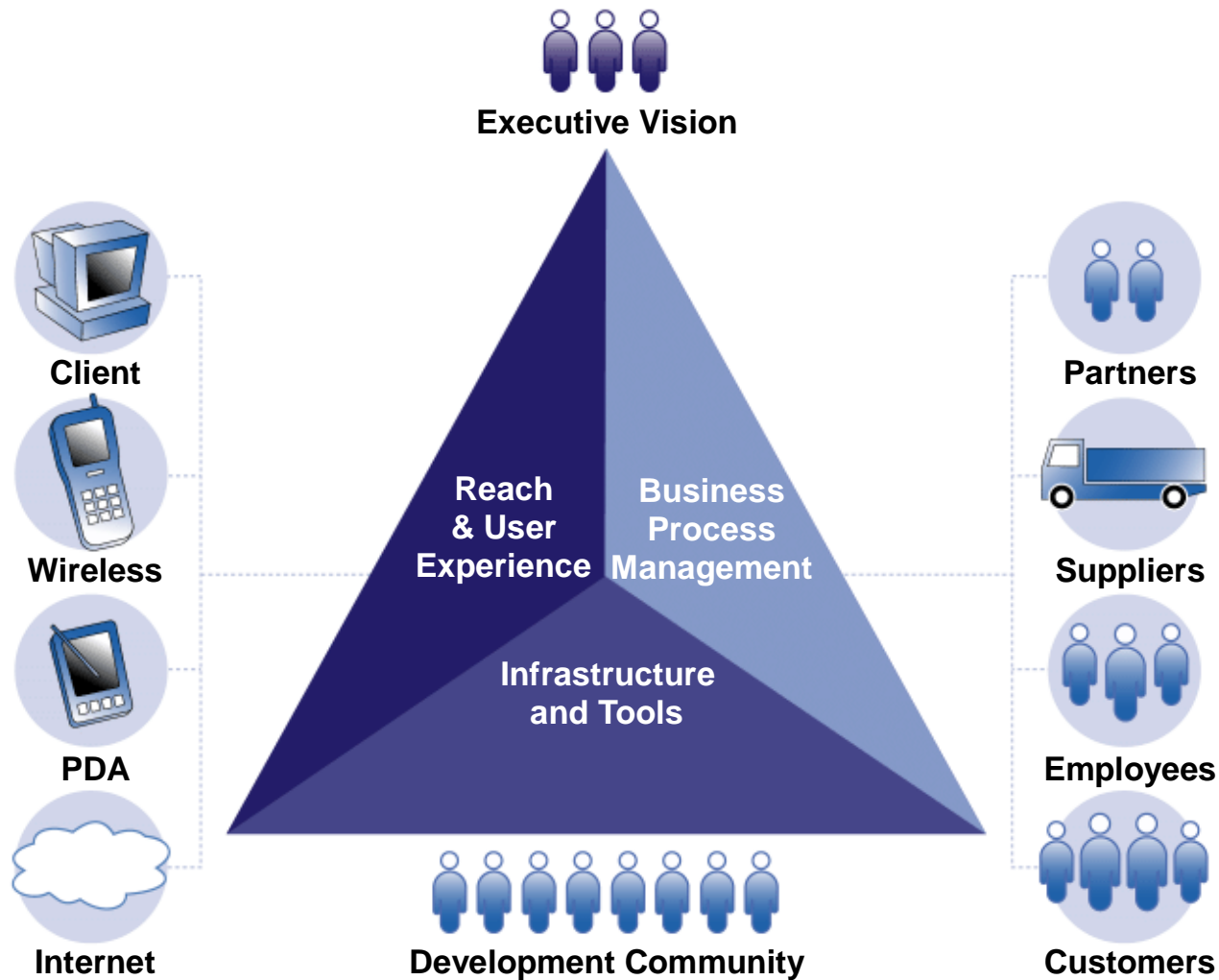
e-business Adoption

. . . to a full, open, standards-based e-business Infrastructure

Customers

Business Partners

Suppliers

Employees

Edge Servers

Directory and Security Servers

Integration Servers (MQ)

Web Presentation Servers

Web Application Servers

Transaction Servers

Data Servers

Personalization | **Portals** | **Mobile** | **Commerce** | **Collaboration**

| Integrate Internally | Integrate Externally | Adapt Dynamically |

@server

The WebSphere SW Platform Delivers

Web Services integrated in the WebSphere Application Server Family

Integrated Software Platform for e-business with Enhanced User Experience, mobile and Business Integration support

Integration of Enterprise Java, XML & the MQSeries family

Java Distributed Transactions & Tight Integration of AD Tools & App Server

Extend Core HTTP Services with Java

Dynamic e-business

Value Networks

Internal Integration

e-business Transactions

Web Publishing

*e*server

What Are Web Services...

and what is their value?

Web Services

Applications which interact with each other using Web standards

- Connect applications to applications in other businesses quickly and easily

- Establish interaction with marketplaces more efficiently

- Deliver business functions to a broader set of customers and partners

- Pursue new business models by combining applications in new dynamic ways

Web Services Standards

WSDL

Web Services Description
Language

UDDI

Universal Description,
Discovery and Integration

SOAP

Simple Object Access
Protocol
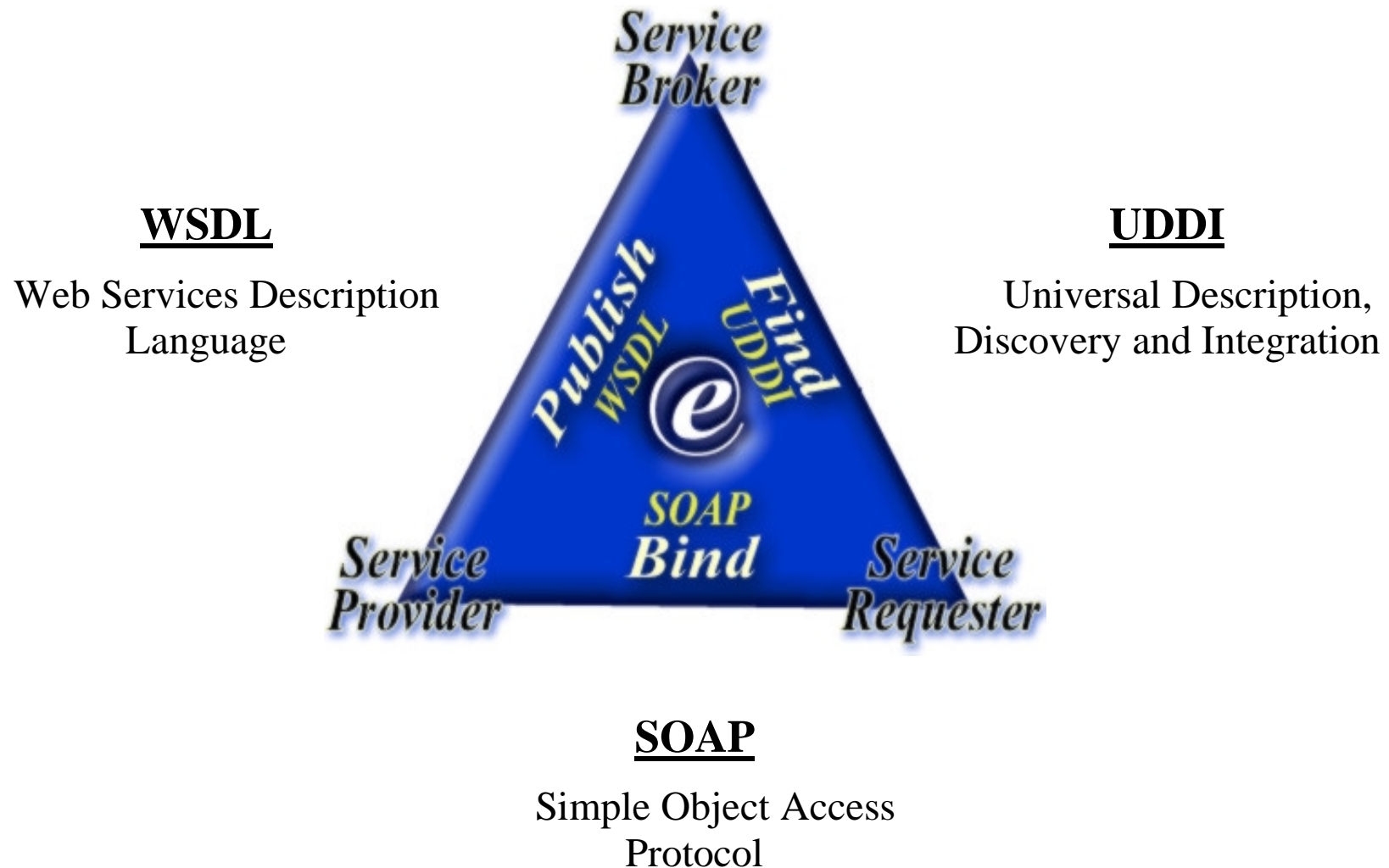
WebSphere

a complete infrastructure for dynamic e-business

Extend & Personalize your e-business
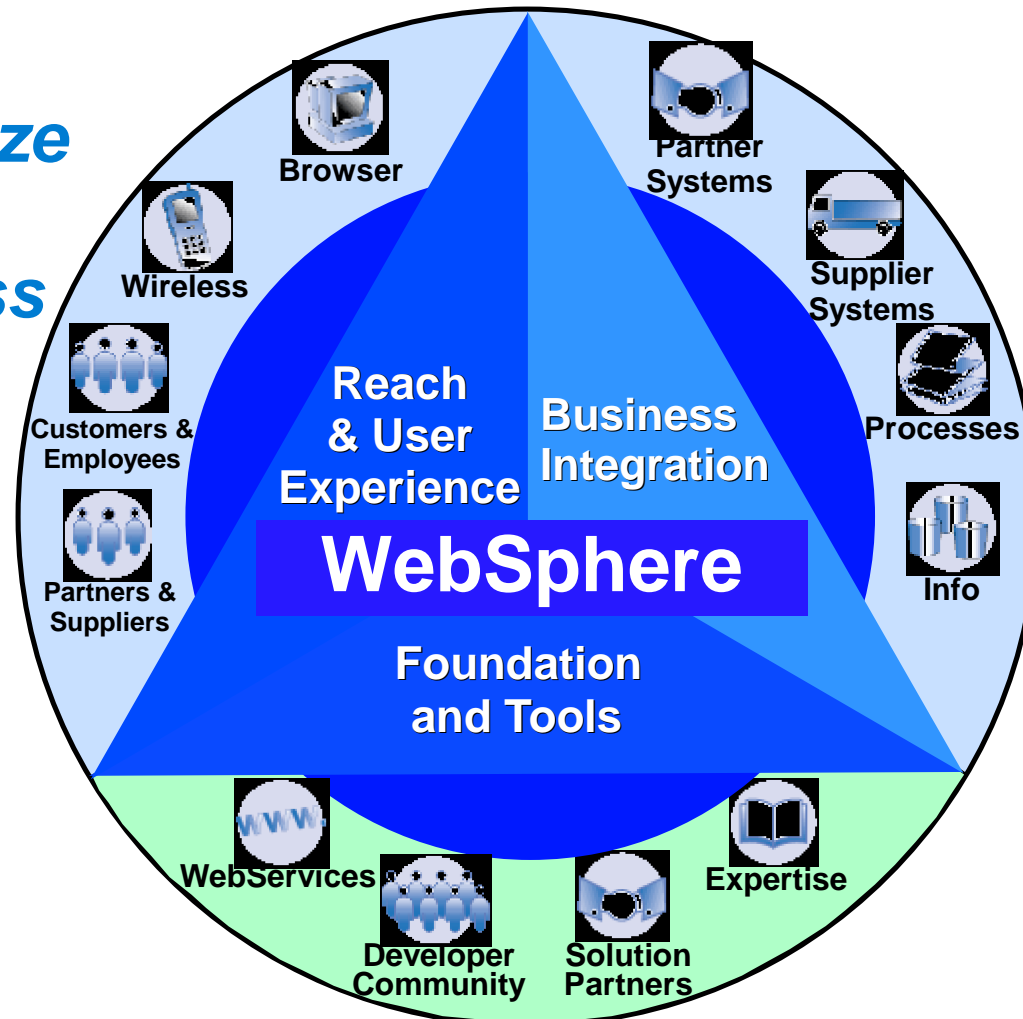
Integrate & Automate your e-business

Browser

Partner Systems

Wireless

Supplier Systems

Customers & Employees

Reach & User Experience

Business Integration

Processes

Partners & Suppliers

WebSphere

Info

Foundation and Tools

WebServices

Developer Community

Solution Partners

Expertise

Build, Deploy, & Grow your e-business

WebSphere portfolio

Commerce
- Serious sell-side solutions to manage real relationships and complex business processes

Voice
- Comprehensive product line for the voice portal, contact center and service provider markets

Portal
- Scalable solutions to personalize websites targeted at specific audiences to increase relevance and relationship

Everyplace
- Mobile & wireless solutions to extend e-business services into customer & employee downtime

Application Integration
- Enable customers to flexibly integrate their business processes within the enterprise and with trading partners

Business Process Management
- Model and Automate Business processes across disparate systems and organizations

Reach & User Experience

Business Integration

WebSphere

Foundation and Tools

Studio
- E-business professional development tools based on a common workbench technology

Application Server
- High performance and extremely scalable platforms to deploy dynamic e-business applications

Host Access
- Application & Data Access to Legacy Systems

@server

What is an Application Server?

Client	Page Serving	Application Serving	Transaction Serving

Web Server ⇄ **Application Server** ↔ **Legacy Systems**

User Interface

Active Business Rules
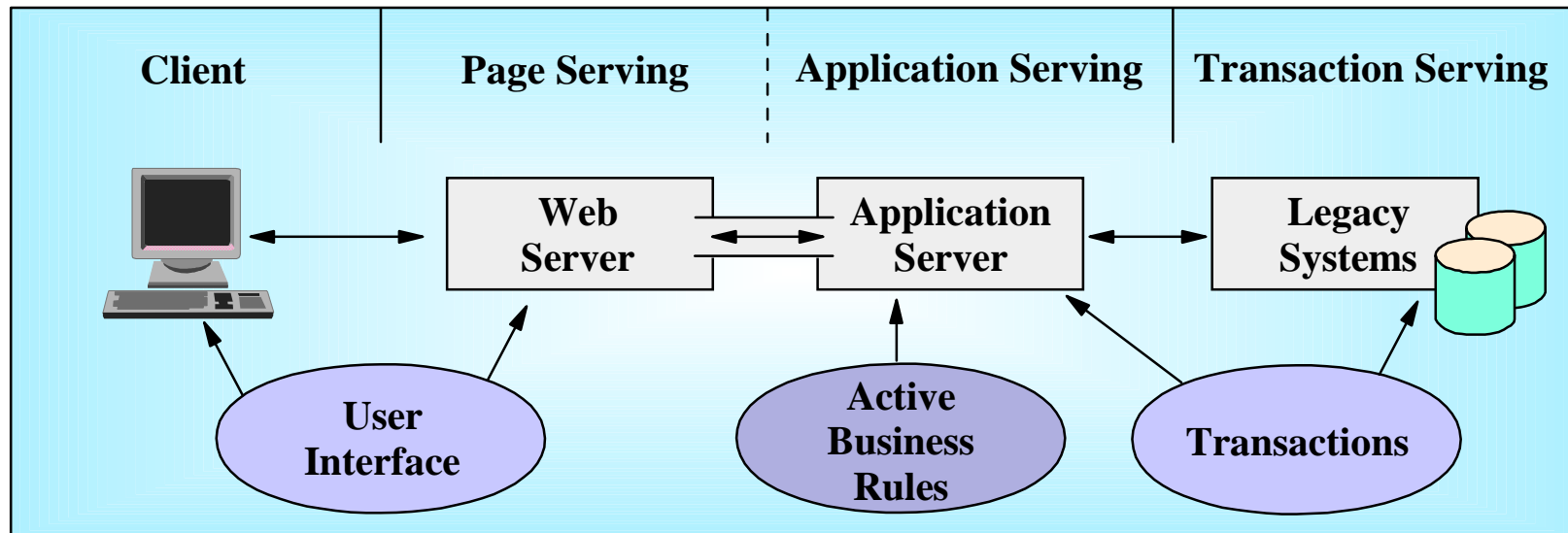
Transactions

Foundation software for creating Web applications which...

- Manage browser and Java based client sessions
- Provide server-side business logic
- Leverage server resources for data and transaction processing

Why Application Servers?

- Simplify development and deployment of e-business applications
- Support connections to existing data and applications
- Provide a complete set of visual development tools
- Deliver application deployment and management tools

Application Servers

Jakarta Tomcat

- Apache Software Foundation
- Basic, no cost web application server

WebSphere Application Server

- Robust, scalable web application server
- EJB support, J2EE compliant
- Enterprise-scale transaction processing

Lotus Domino on iSeries

- Application development
- Dynamic HTML converter
- Document management
- E-mail & Collaboration
- Workflow
- Disconnected, mobile users

Jakarta Tomcat

Getting started with Servlets and JSPs

HTTP Server (powered by Apache)

Apache Software Foundation's Jakarta Tomcat project

- Basic, no-cost web application server (*now at version 3.2.4*)
- Industry standard Java Servlet and JavaServer Pages
- Available to V4R5 and V5R1 via group PTFs

> **ibm.com/servers/eserver/iseries/software/http/services/tomcat.html**

WebSphere Application Server Version 3.5 for iSeries

ibm.com/eserver/iseries/websphere

Standard Edition no charge with HTTP Server for OS/400

Advanced Edition (EJB support)

Exploiting the integrated Java Virtual Machine

Leveraging Java-based solutions

- LDAP Directory usage
- XML parser

Net.Data

CGI Programs
(RPG, Cobol, C, Java)

HTTP Server for OS/400

WebSphere

Java Servlets

Java Server Pages

iSeries Applications & Data

Web Browser

Sockets   SSL   OS/400   Certificates
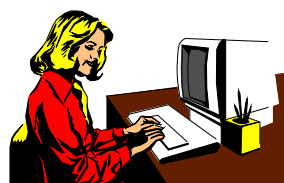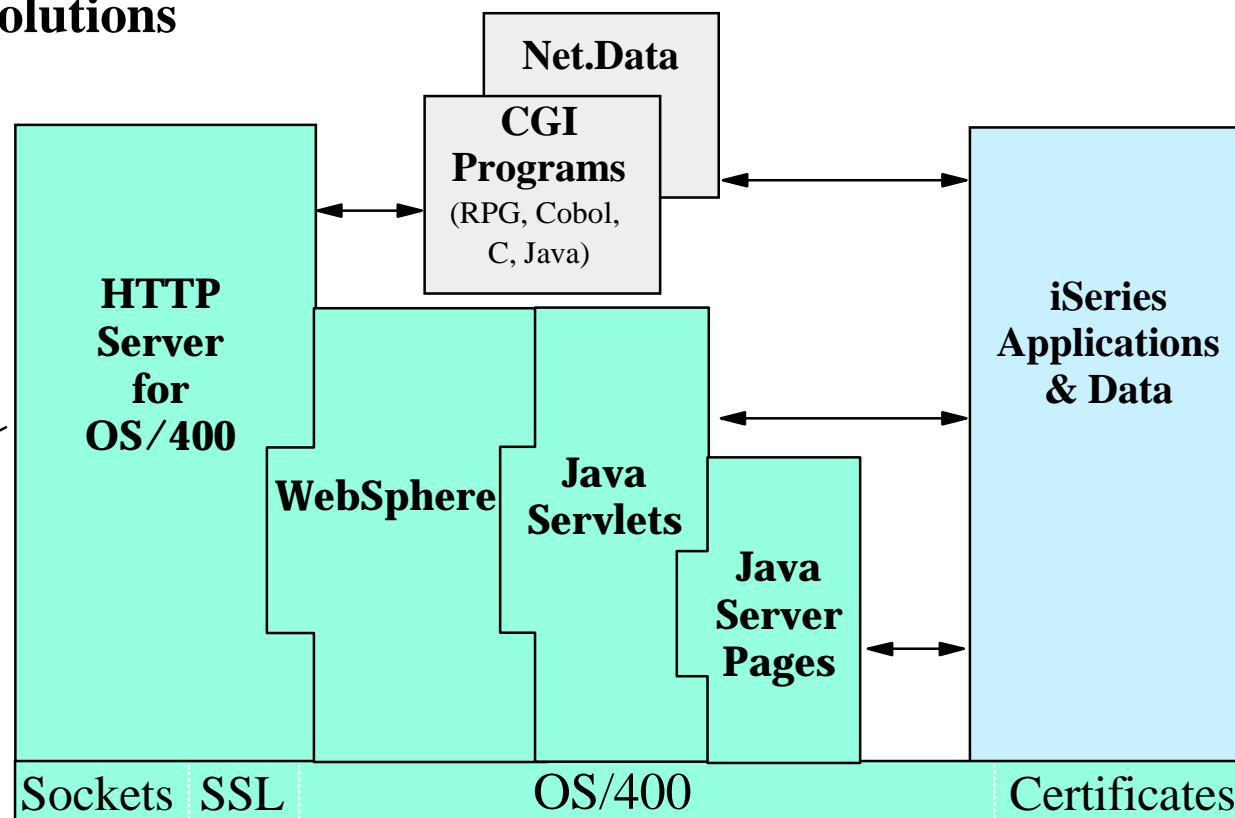
WebSphere Application Server Version 4.0 for iSeries

IBM's Strategic Web Application Server

Technical Highlights

- J2EE Certified
- Web Services (e.g. SOAP)
- Improved Manageability
- Increased Performance
- EJB Extensions

WebSphere Application Server, V4.0

The solution to your e-business needs.

WebSphere Application Server 4.0

Now Available!

- Single Server Edition
  - For standalone department or SMB

- Advanced Edition
  - Supports Single Server Edition functions
  - Plus multi-server capabilities such as clustering, administration, distributed security, workload management, and much more

Mission-Critical Web Application Serving for iSeries

WebSphere Development Studio for iSeries

Host Components

- ILE RPG (RPG IV)

- ILE COBOL

- ILE C

- ILE C++

- Application Development Toolset

Workstation Components

- VisualAge for Java for OS/400
  - Including Enterprise Toolkit for OS/400
  - ibm.com/eserver/iseries/java

- VisualAge RPG

- CODE/400

- WebSphere Studio

- WebFacing Tool - Convert 5250 applications to graphical web interface

server

Reduce the cost and complexity of e-business

IBM @server iSeries
Powered by WebSphere

WebSphere software

JAVA

**Java Compatible™
Enterprise Edition**

Model 270 (uni or 2-way)

Software preloaded

- WebSphere Application Server V4
- WebSphere Development Studio for iSeries

Installation wizard

Optional Services

- Installation and setup
- Consulting
- Application design / prototype

@server

WebFacing Tool

Traditional Model

Web Model

*PGM
User Interface Logic
Business Logic
DB Logic

DDS
Display File (DSPF)

Data Buffer

WebFacing Conversion

Servlets & JSPs

WebSphere

Data Buffer

Time:8:05   date:Oct 22,2000

enter customer number:_____

Enter

5250 screens

CustInterI...

Normal HTML Source Preview

Done

CustInterI...

Normal HTML Source Preview

Done

Welcome to ABC!!

Please complete this form

Customer Number

0010100

Submit   Reset

Browser

WebFacing/400

- Converts Display File source (DSPF) to JSPs & Servlets
- Applications run "as is", no need to change

Quickly web-enable many applications

@server

iSeries Access for Web

Client Access family update

Browser access to iSeries servers / resources

- iSeries resources
- 5250 applications
- No-touch-to-the-desktop deployment

Includes WebSphere Host Publisher 3.5

- Web-enable existing applications
  - Host integration via 5250
  - Data integration via SQL
- Aggregate applications into a single Web page
- No change to backend applications

WebSphere Host Publisher

Packaged with Client Access Express

Host Integration Objects (5250, 3270, VT)

Data Integration Objects (SQL)

Aggregate data from multiple sources

Browser

HTML delivery

Intranets
or
traditional
networks

Browser

Browser

Firewall

Browser

Firewall

Internet
B2B or B2C

Browser

Create
Application

WebSphere

iSeries

zSeries

**SNA
TCP/IP**

pSeries
UNIX
DB2

3270
5250
VT
JDBC

e server ®
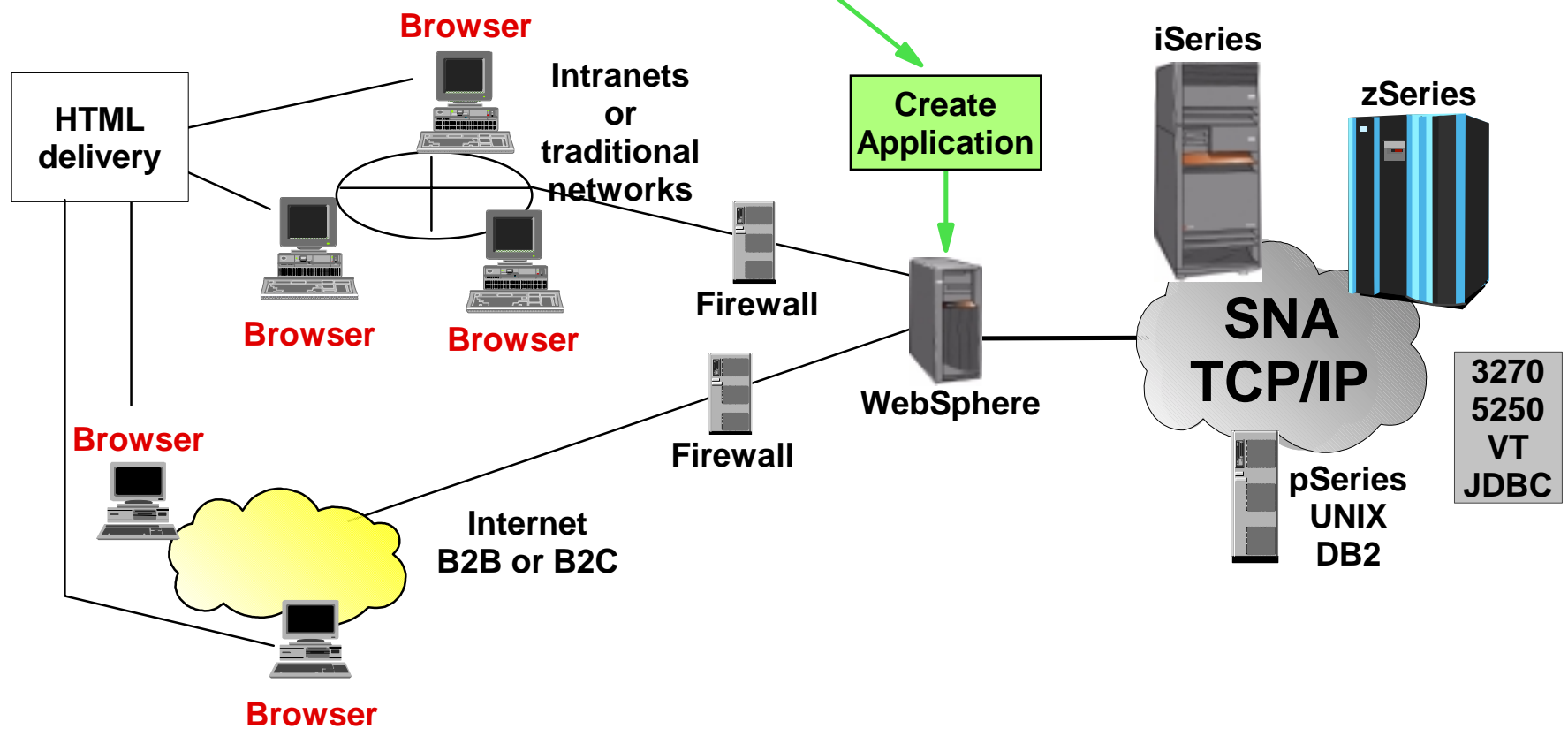
IBM Host Access Client Package

Personal Communications - traditional emulation

Host On-Demand - Java emulation

Screen Customizer - Graphical refacing
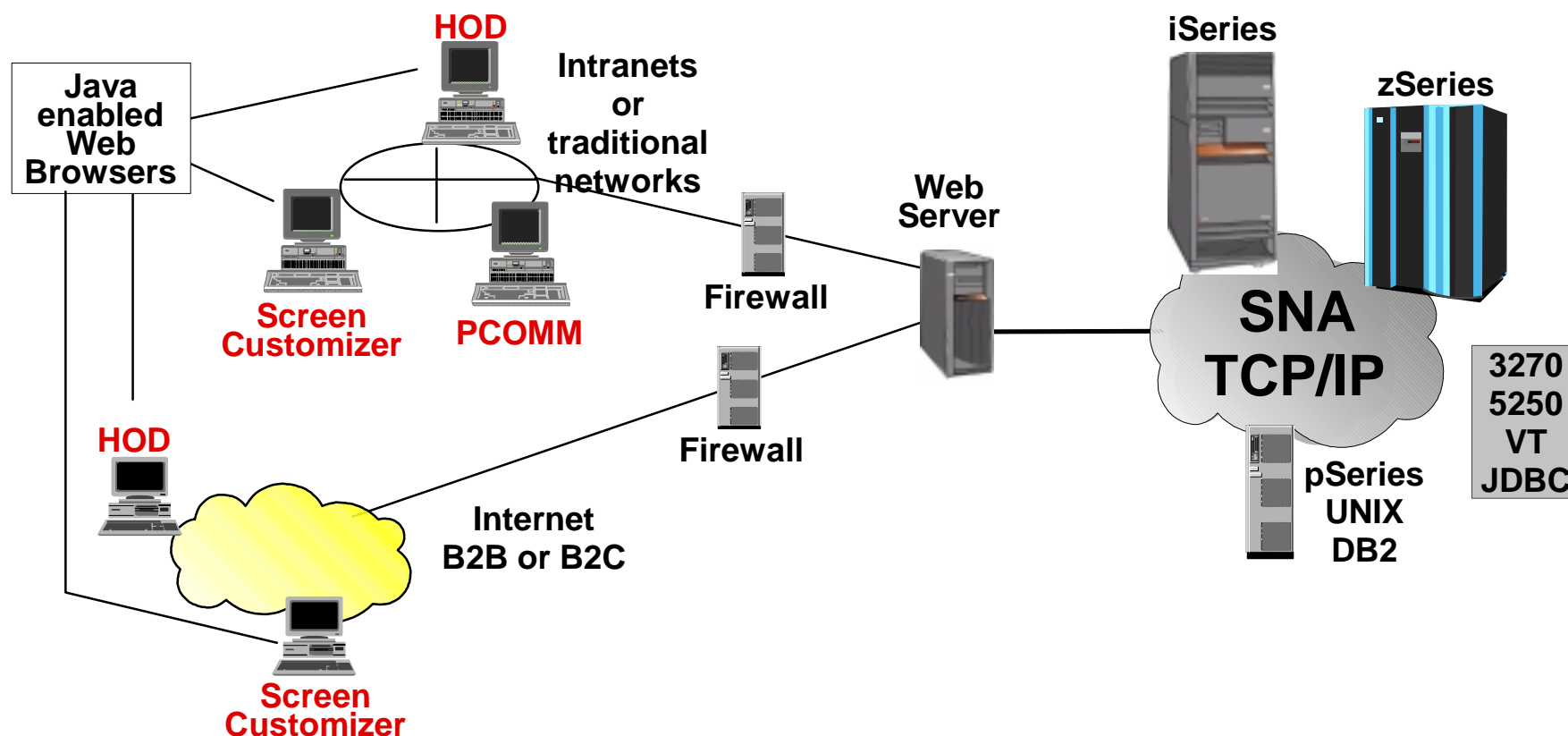
How embedded is the presentation layer?

Monolithic Program Design, 5250 cannot be EASILY bypassed

- Host Integration tools
- WebFacing

Modular Program Design, can either use or bypass 5250

- Host Integration tools
- WebFacing
- CGI or Net.Data (non-Java)
- WebSphere (Java with non-Java)
  - WebSphere Studio, Web Interaction Wizard

*PGM

5250 Display Presentation
Business Logic
Data Access

Other Presentation

5250 Display Presentation	*PGM

synchronous
or
middleware

0
interactive
feature

Business Logic	*PGM
Data Access	
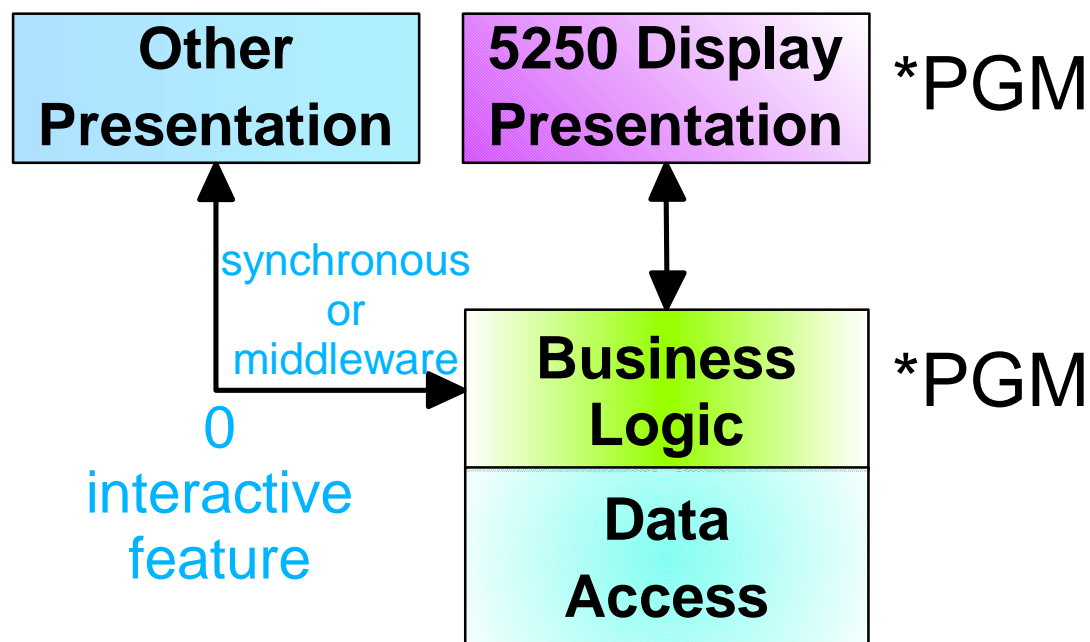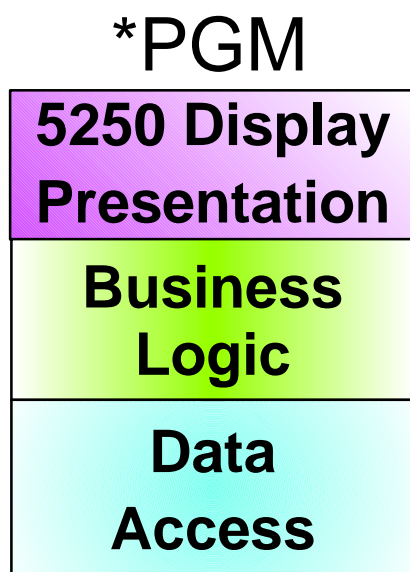
WebSphere Commerce Suite

Version 5.4 strengthens relationships and streamlines interactions
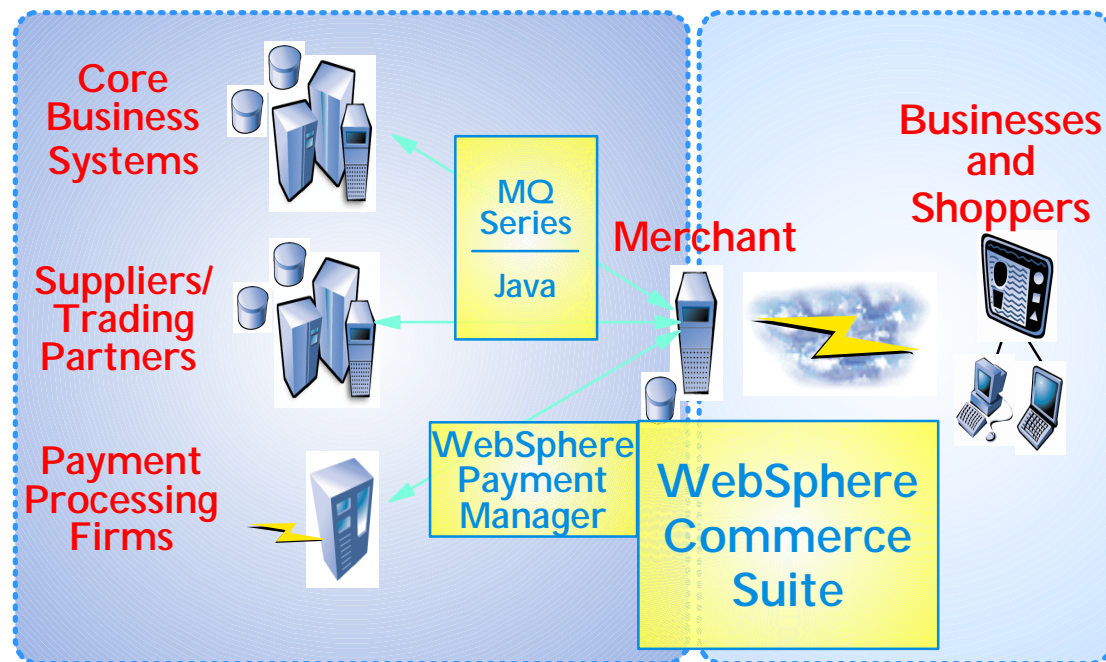
Secure and scalable commerce site

Advanced order management, dynamic collaboration, multi-cultural and more

Includes:
- WebSphere Application Server Advanced Edition
- WebSphere Payment Manager
- Catalog Manager

*WebSphere Portal Server for iSeries**

Secure access to dynamic information, applications, processes and people

- Single point of interaction
- Industry leading personalization technologies

Open framework for creating highly scalable portals

- Business to Employee (B2E)
- Business to Business (B2B)
- Business to Commerce (B2C)
- Ideal for application portlets, syndicated content and collaboration

Enables access anytime, anywhere, using any device - wired or wireless

*GA planned for 2nd half of 2002

IBM Connect for iSeries

B2B Integration Framework

Tools to configure, develop, deploy & manage

Trading Partners

Network

e-marketplace
(Ariba,
Metiom...)

WCS
MQ Series
Domino
etc.

Core
Business
Applications

B2B Enablement
Framework with
downloadable plugins

B2B Backend
Integration Framework
with downloadable
connectors
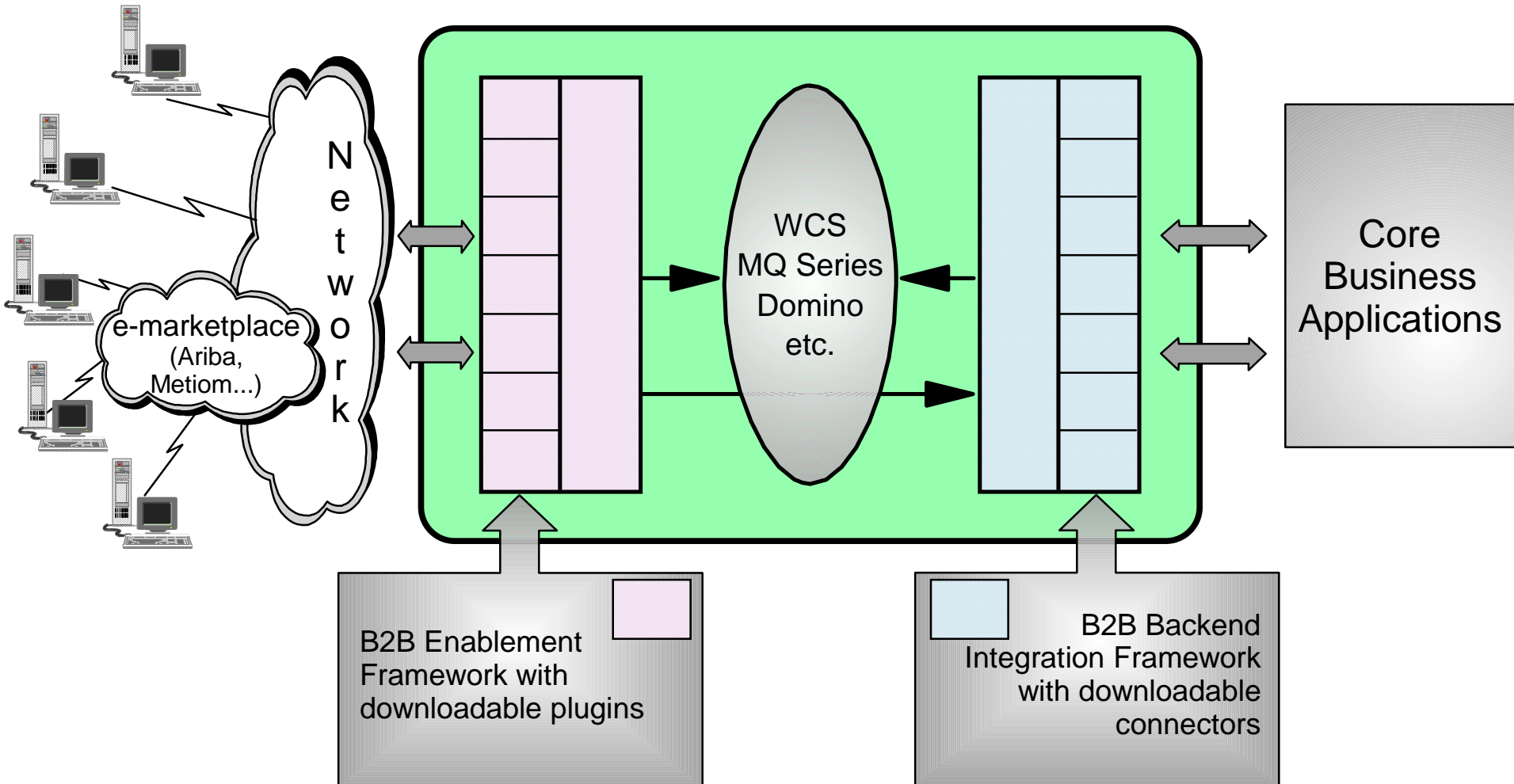
WebSphere Transcoding Publisher

Addressing Wireless Internet Complexity

Extends Content

Streamlines Delivery

Customizes Presentation

Bridges markup languages and image formats

HTML -> WML

GIF -> WBMP
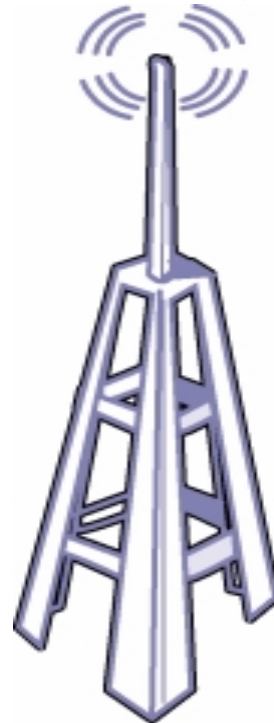
Simplifies content in response to wireless network constraints

Adapts display to end user device capabilities

eserver

Transcoding at work
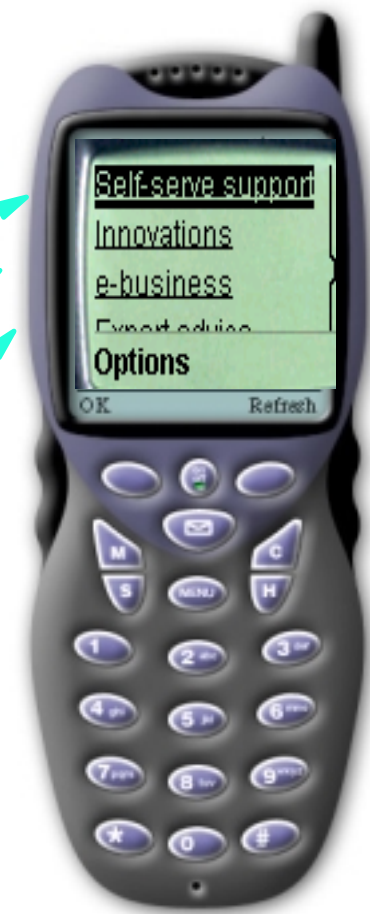
Domino

Domino: An integrated development environment...

World class messaging

Calendar and scheduling

Replication

Discussion groups

Access to relational data

Java

LDAP

Workflow

Extend existing applications

HTTP Server

XML

SSL

Web Application Server

Dynamic HTML conversion

128 bit encryption

You've just been selected.....
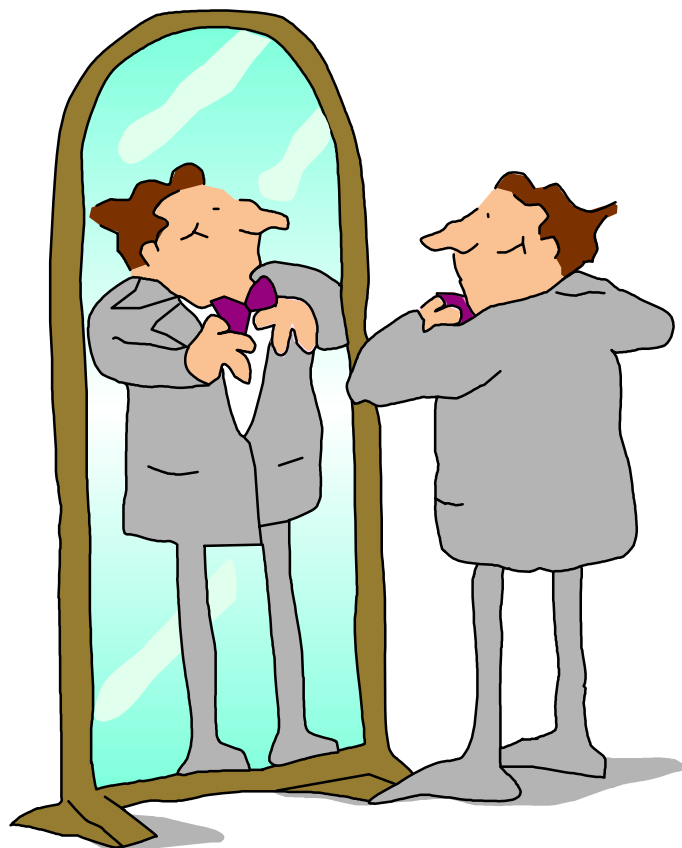
✓ **To lead the new project...**

✓ **You have 8 people on your team...**
- 4 company employees...
- 4 outside consultants...

✓ **In 6 different time zones...**

✓ **With some big reports to send...**

✓ **That will require collaboration...**

✓ **With a deadline in 2 months!!!!**

✓ *How will you get the job done???*

What You Need Is...

QuickPlace
Instant Team Collaboration

Lotus QuickPlace

Spreadsheets   Calendar

Documents

Presentations   Project Tasks   Drawings
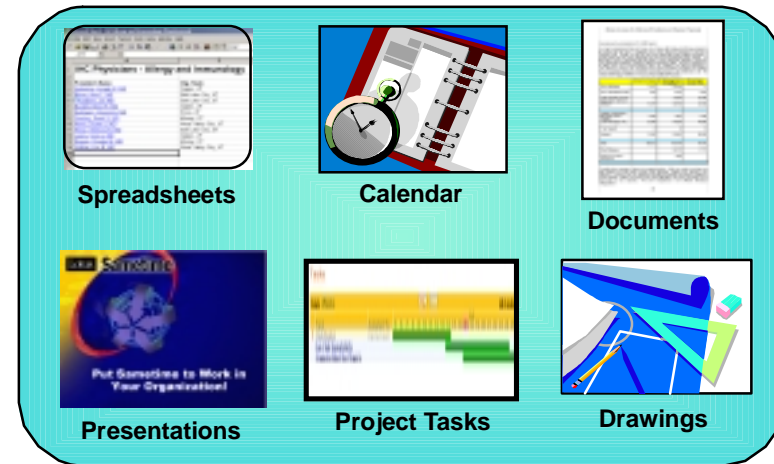
✓ **A secure and central <u>Web-based workspace</u>...**

- Requiring only a browser to access

✓ **That is <u>easy</u> to create, use and customize...**

✓ **Providing <u>robust</u> collaborative options...**

- more than e-mail

✓ **Created and <u>deployed in minutes</u> for instant access!!**

e server

What if....

✓ **...you knew whether remote colleagues were available for a conversation as easily as if they were standing in front of you?**

✓ **...you could show presentations or demonstrate applications to anyone in your organization regardless of location... at the same time... securely?**

✓ **...you could train your field work force on-line instead of flying them to headquarters?**

✓ **...you could speed up marketing or sales or design processes to get your products to market more quickly?**

@server

Sametime: Real-time collaboration that's fit for business

Foundations of real-time collaboration

Awareness

Find others online and create personalized lists of team members & colleagues

Conversation

Send an instant message, start a chat or launch an instant online meeting

Shared Objects

communicate ideas more clearly by application-sharing or white-boarding

Complete Awareness

Who is Online?

Static User List

Users by Community

Users Associated with a Document

Collaborate with Shared Objects

Interact with Text, Audio & Video

**Share ideas and collaborate in a
whiteboard or application session**

Sametime @ Work with WestSphere Equity

Empowering a global workforce

"We needed a real-time technology solution to allow our distributed investment teams to collaborate together more effectively in a timely manner." John Lugar, Executive Vice President

Challenge

With six offices dispersed across North and South America, WestSphere found timely communications to be a costly challenge. Intra-company communications were unruly and expensive

Sametime Solution

Sametime saves WestSphere Equity over $10,000 per week in long distance phone charges and reduced travel costs. In addition, users are more satisfied and feel more in touch with their colleagues
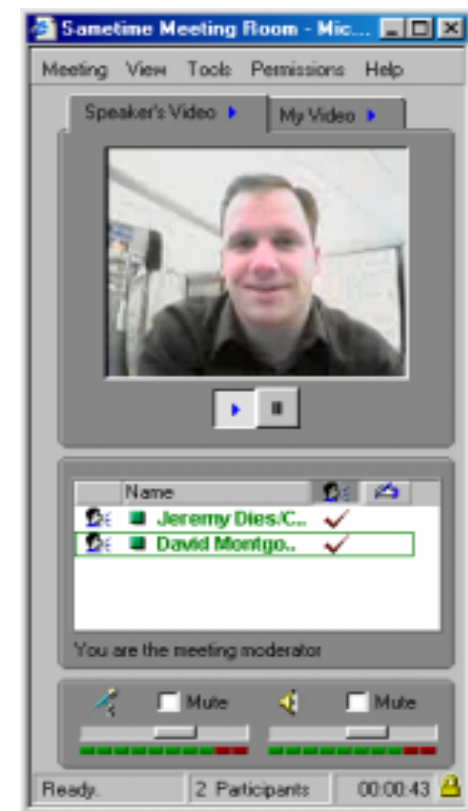
The IBM Example

Sametime is crucial to how IBM conducts its business

"We went from no users to over a quarter of a million users ... on word of mouth alone. It's become a way of life - if we turned it off, I think we'd have a mutiny." *John Patrick, IBM Vice President, Internet Technologies, PCWorld Magazine, 8/2001*

The numbers for June, 2001:
- **86,168 "man-hours" of e-meetings**
- **4,745 total meetings (avg. 160 per day)**
- **22 meetings with > 75 attendees**

If 10% of those meetings would have required travel, IBM saved $1.9M in June alone just in reduced travel related expenses.[1]

[1]Assuming average meeting had 5 participants and travel cost each employee $800.

@server

iNotes Web Access Features Beyond WebMail

Enhanced user interface

Web-based Welcome Page

Sametime integration

New mail on top/bottom user preference setting

Check for new mail button

Archiving of mail/documents

Read/unread mark support

Spell check

Unlimited attachments

Out-of-office auto reply

Group Calendar

Work hour differentiation

Enhanced Calendar printing

Alarms (Calendar & To Do)

To Do Gantt chart

Personal Journal

Context sensitive Help

Secure log off

Change password from browser

Extending Your Reach

Commerce Suite, Payment Manager, Webserver Search

Internet

Extranet

Business support, applications & data

Intranet

Consumers

Partners

Organizations

Teams

Individuals
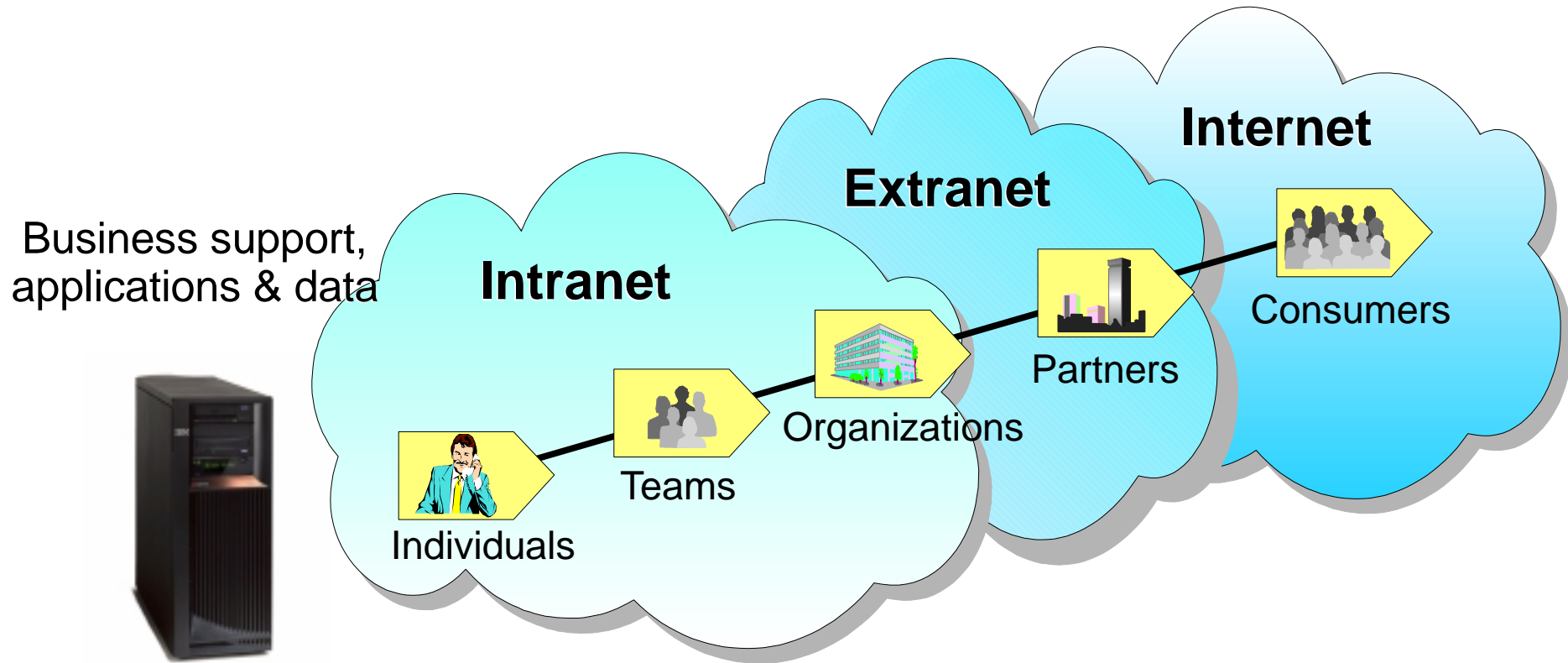
Java, WebSphere, Domino, Net.Data

Trademarks and Disclaimer