IBM Software Story

Applications & Content

Integration

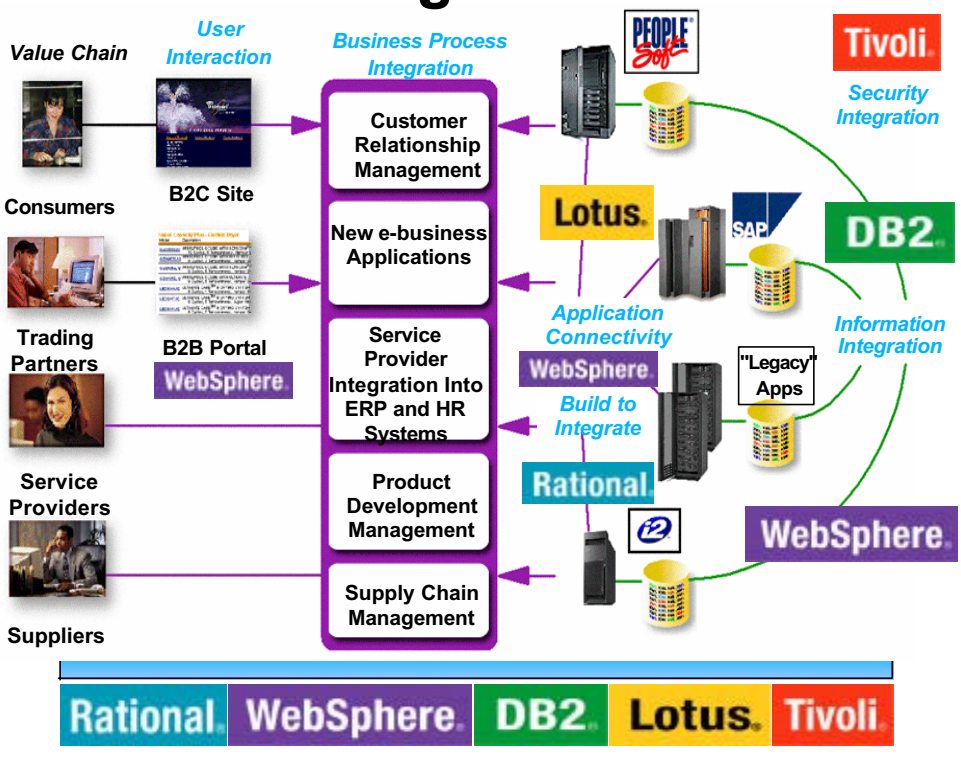
User Experience

Management & Security

Development

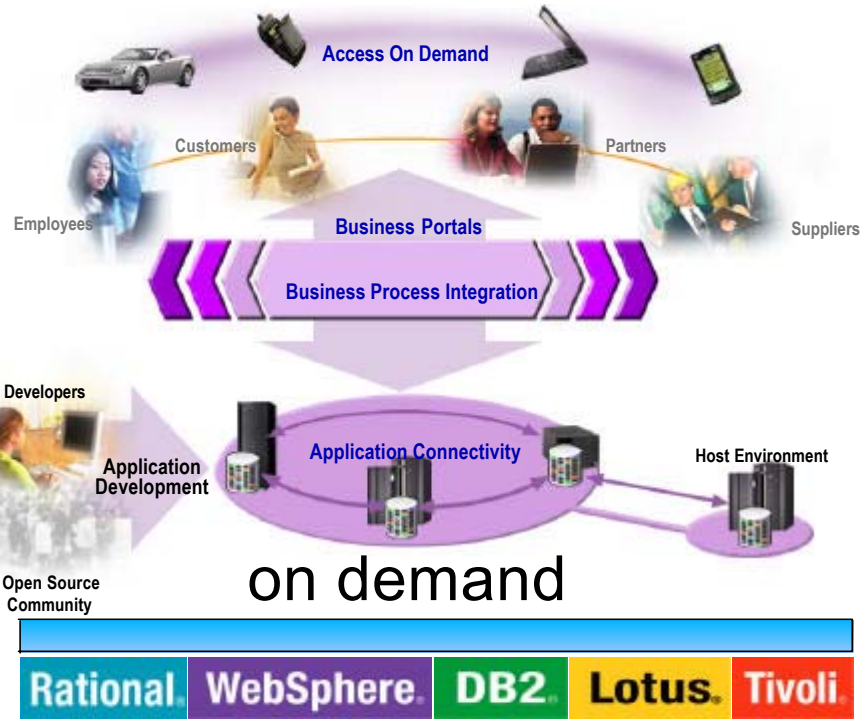
business on demand

Integration



business on demand

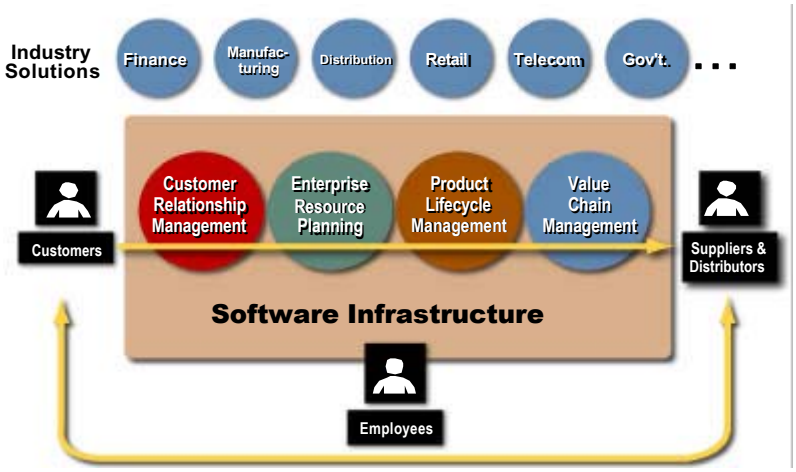
Integration



Rational. WebSphere. DB2. Lotus. Tivoli.

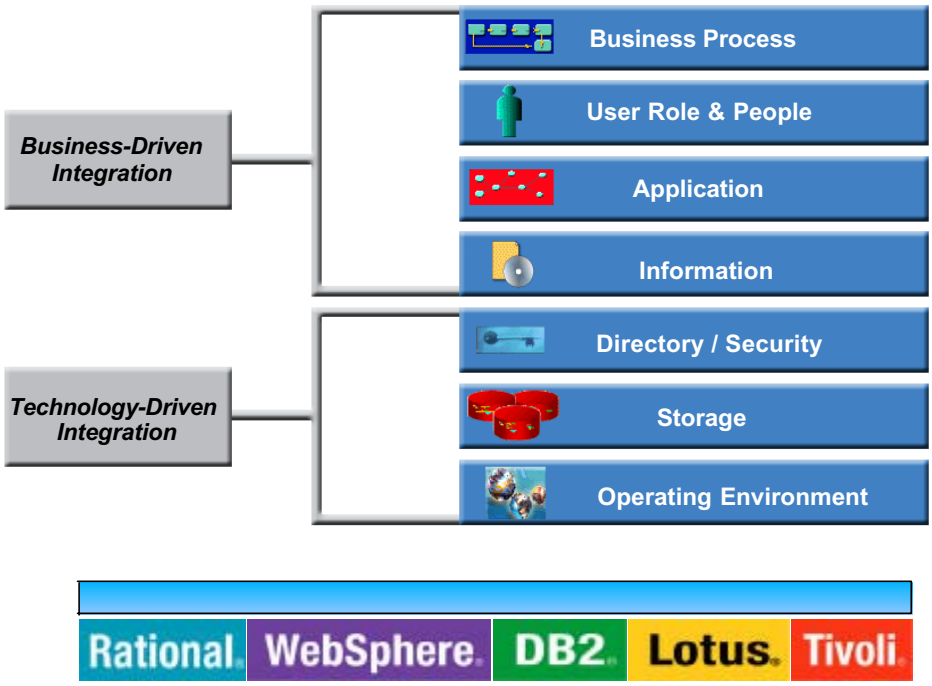
Integration

- Integrated from Demand to Delivery
- Integration for heterogeneous environments
- Infrastructure optimized for Industry

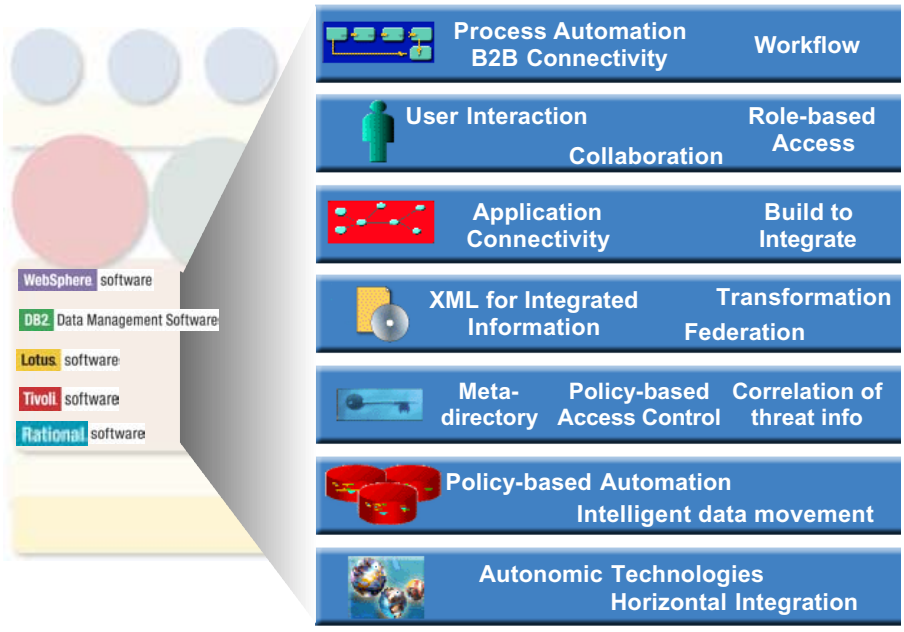


Rational. WebSphere. DB2. Lotus. Tivoli.

Integration

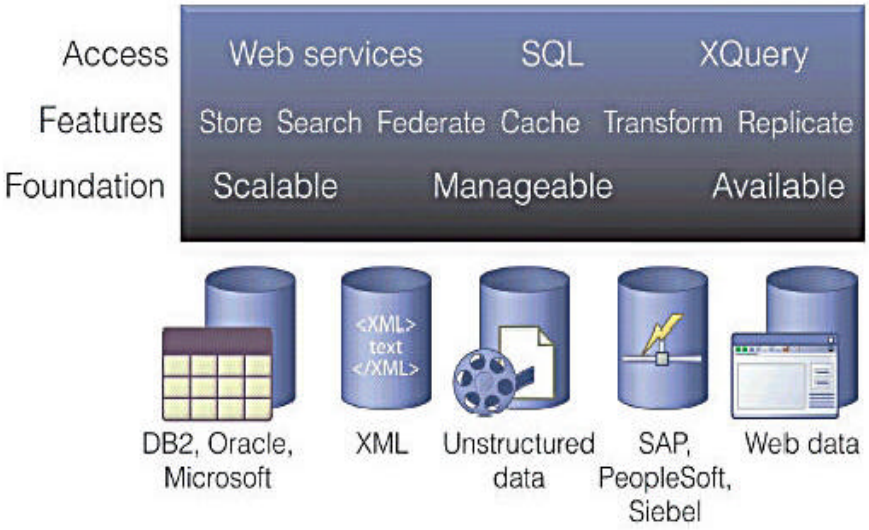


Integration Capabilities



Information Integration

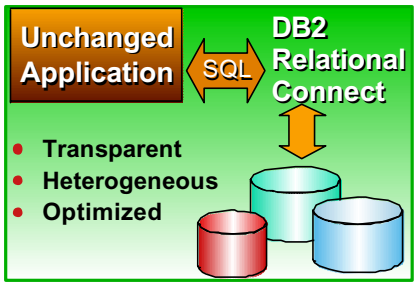
The Building Blocks

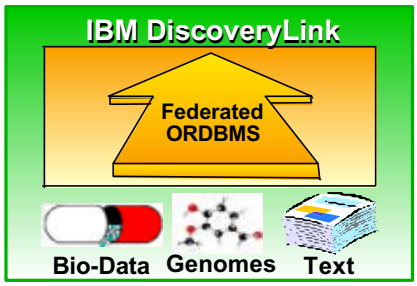


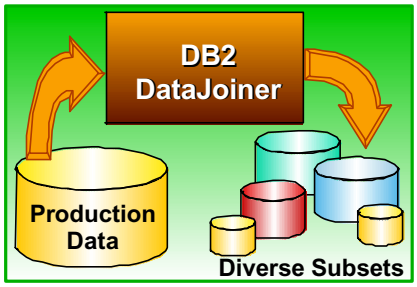
DB2

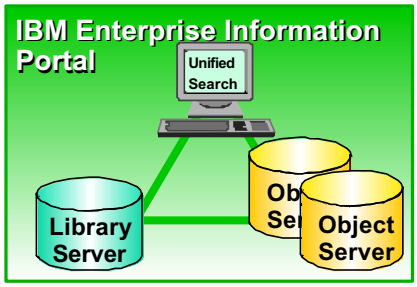
Information Integration

Information Integration





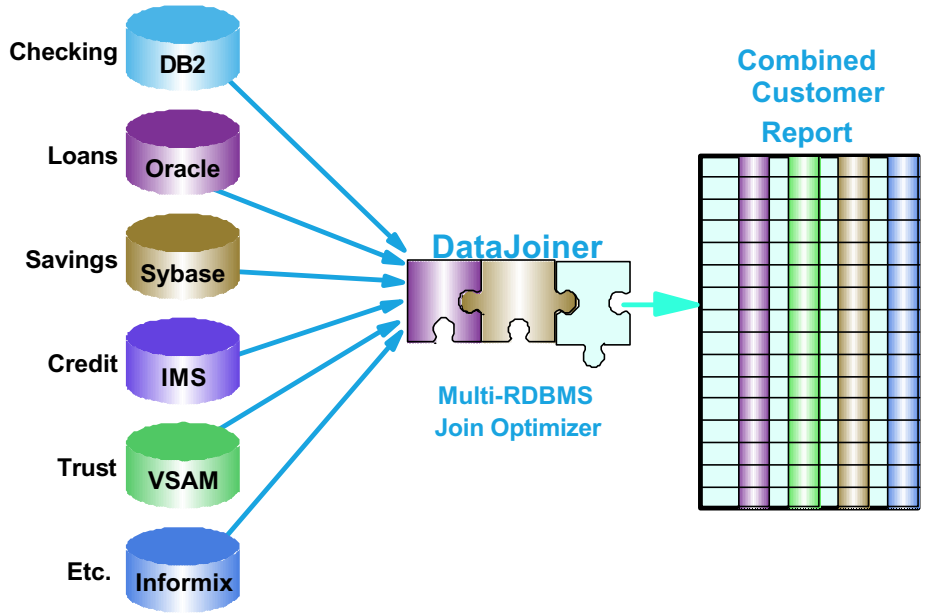




DB2

Information Integration

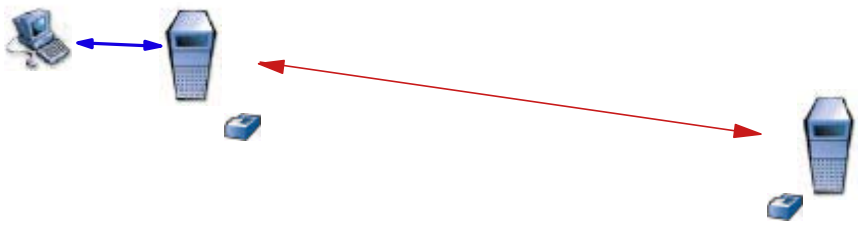
DB2 Information Integrator



Information Integration Optimized

Application Connectivity

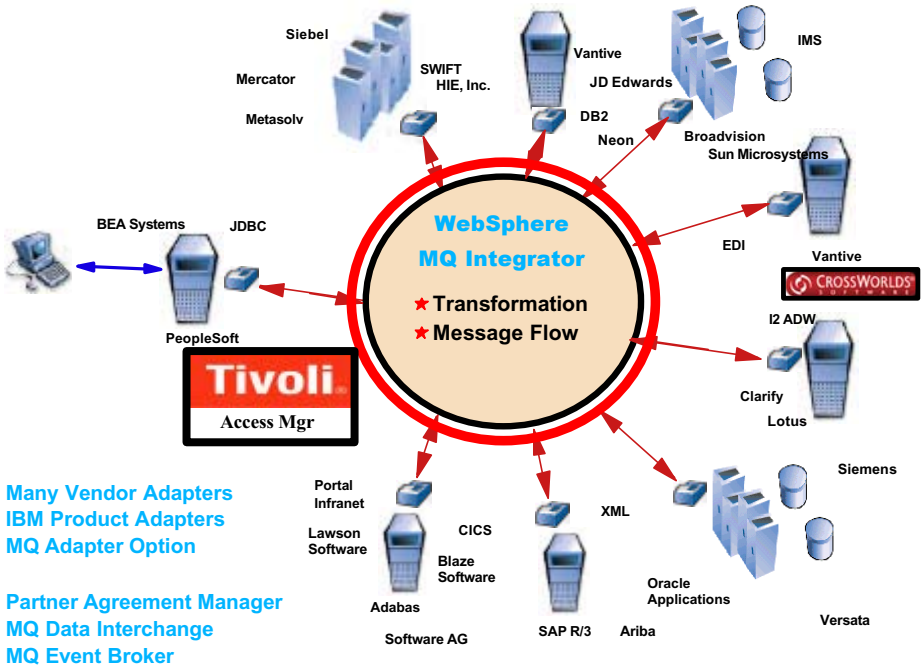
WebSphere MQ



- Message Queuing:
  - Simplifies programming
  - Asynchronous operation
  - Assured delivery,
    once and only once

Available on 39 platforms, 70% market share in the messaging market

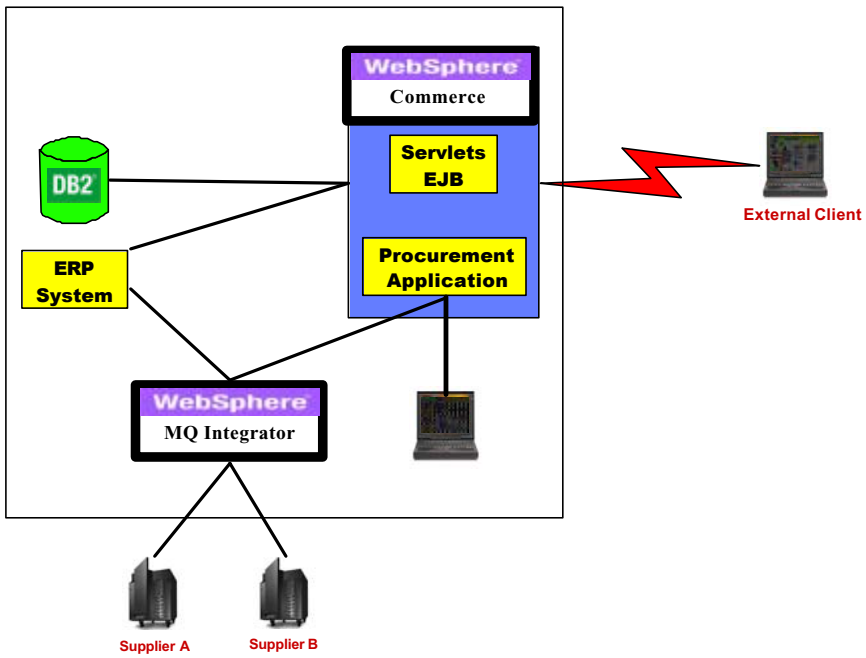
WebSphere MQ Integrator



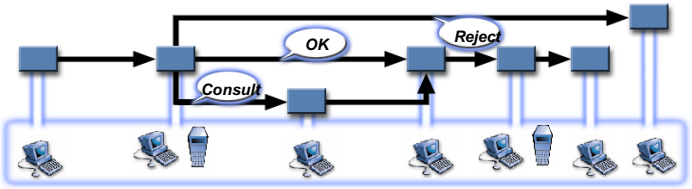
- Many Vendor Adapters
- IBM Product Adapters
- MQ Adapter Option

- Partner Agreement Manager
- MQ Data Interchange
- MQ Event Broker

Integration



Business Process Integration



- Work flows according to process rules and roles
- Business rules are enforced

Offerings

- WebSphere Business Integration for Insurance, Telco
- WebSphere Business Integration for Financial Networks
- B2B Private Procurement Solution

Partners

- Siebel
- i2
- Peoplesoft
- ...
- CGEY
- KPMG
- IGS
- PWC

Customers

- Siemens
- Nortel
- Whirlpool
- ...

WebSphere Business Integration
Industry Processes, B2B, Analyst Tools

- Business Objects
- Business Flows
- Business Monitoring and Analytics
- Business Connect
- Tools

Incorporating technology from former products and acquisitions such as:

- MQ Workflow
- CrossWorlds
- Holisofx

WebSphere Business Integration

- Automotive
- Electronics
- Financial Markets
- Government
- Retail
- Telecommunications

WebSphere Business Integration

Model | Integrate | Connect | Monitor | Manage

Model and simulate the business processes.

Integrate the islands of processing.

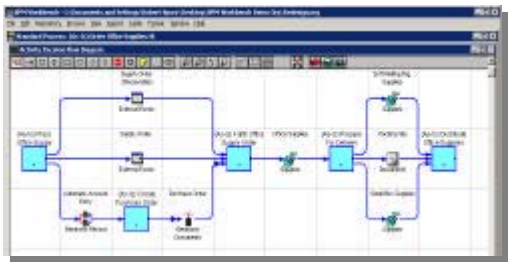
Connect customers and business partners.

Monitor the business processes end to end.

Manage the business effectiveness and improve the processes.

Deployed Separately or Together to meet project needs.

Business Process Management



BPM Workbench

BPM Server

BPM Monitor

MQ Workflow

Create Collaborate Control Automate

business on demand

Process Management

WebSphere Application Server

WebSphere MQ Workflow

Rules

Credit Check

SOAP Request / Response

Credit Check Web Service

Work List

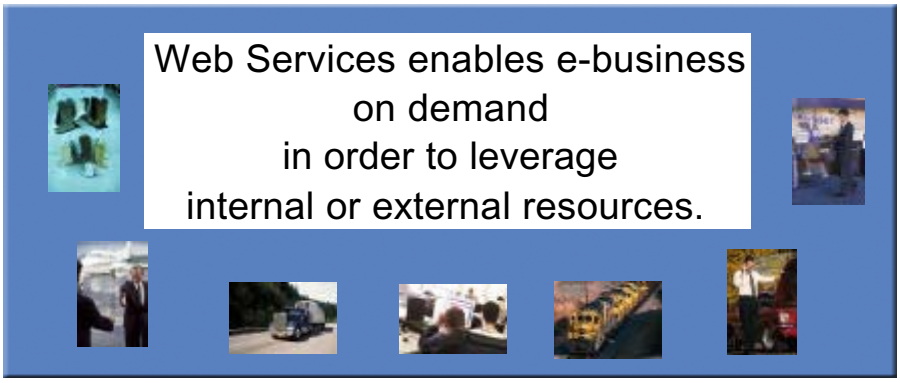
Evaluation Process

Approved Process

Rejected Process

business on demand

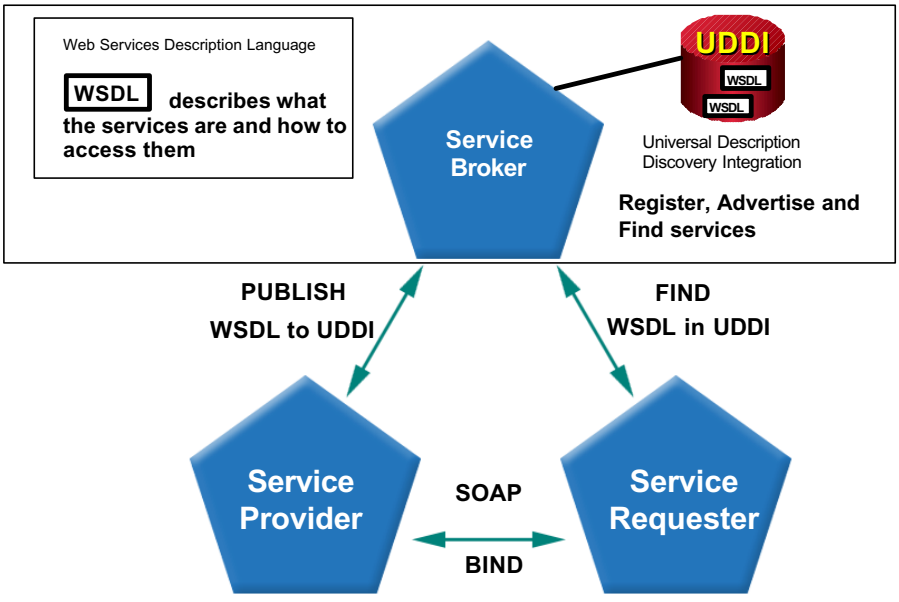
Web Services



- Dynamic integration between businesses
- Providing service to customers
- Accessing services from partners and suppliers
- Accelerate and reduce the cost of integration
- Save on infrastructure deployment and manpower
- Reduce skill requirements

Rational. WebSphere. DB2. Lotus. Tivoli.

Web Services



Applications interact with each other using Web standards

Web Services Standards

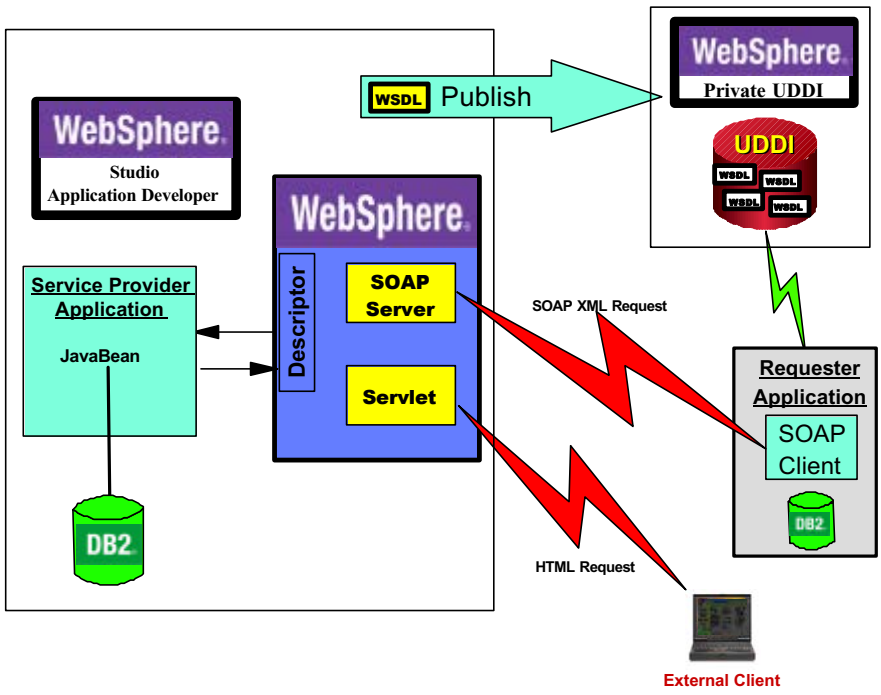
- Standardized specifications:
  - **XML** defines a universal way of representing any data, making data integration simple
  - **SOAP** uses XML as messages to define a universal Web service requests, making process integration simple
  - **WSDL** specifies all information needed for integration, making universal application assembly tools possible
  - **UDDI** is a special Web service which allows users and applications to locate required Web services
- Two important advances:
  - **WS-I.org** formed to achieve seamless interoperability
  - **WS-Security** defines message-level security for SOAP
  - **BPEL4WS** business process execution language for Web services (workflow specification)

IBM Software and Web Services

WebSphere	Development Tools and Application, Transaction and Workflow Servers	▸ Platform for Web services with SOAP, and WSDL support ▸ WebSphere UDDI Private Registry ▸ Web services enabled business process integration ▸ IBM SOAP toolkit ▸ Developer tools to build Web services
Rational	Development Tools	▸ Developer tools to build Web services ▸ Support for IBM, BEA, Microsoft, Sun, HP
DB2	Data Management	▸ XML data rendering ▸ Deliver query services via SOAP ▸ Web services access to stored procedures
Lotus	Messaging and Collaboration	▸ A XML schema project launched to create the XML schema to facilitate product interoperability for every Lotus product ▸ Web services enablement kit available
Tivoli	Systems Management & Security	▸ Tools to manage Web application servers ▸ Products that provide Web services security function ▸ Will add SOAP support

www.ibm.com/webservices

Web Services



- IBM Software Story
- Applications & Content
- Integration
- **User Experience**
- Management & Security
- Development

User Experience

- Content
- Applications
- Collaboration
- Personalization
- Presentation
- Pervasive
- Host Integration
- Administration

Lotus Software

IBM Lotus Web Conferencing

IBM Lotus Team Workplace

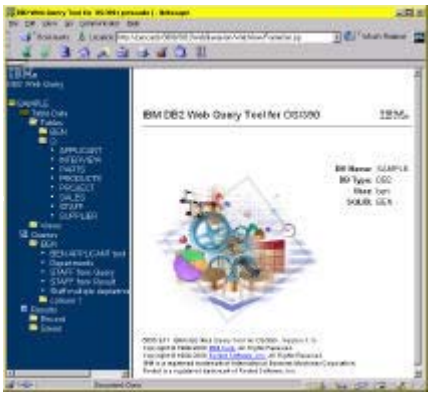
IBM Lotus Instant Messaging

WebSphere Host Integration

WebSphere Host Integration

- Host On-Demand
- HATS
- Screen Customizer
- Host Publisher
- Personal Communications
- Communications Server

DB2 Web Query Tool



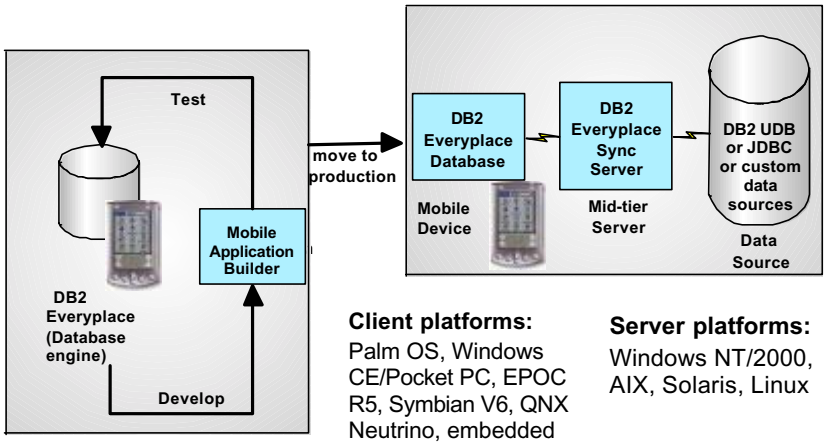
Client Environments

Web | WAP | eMail

DB2 Web Query

DB2

DB2 Everyplace Solution

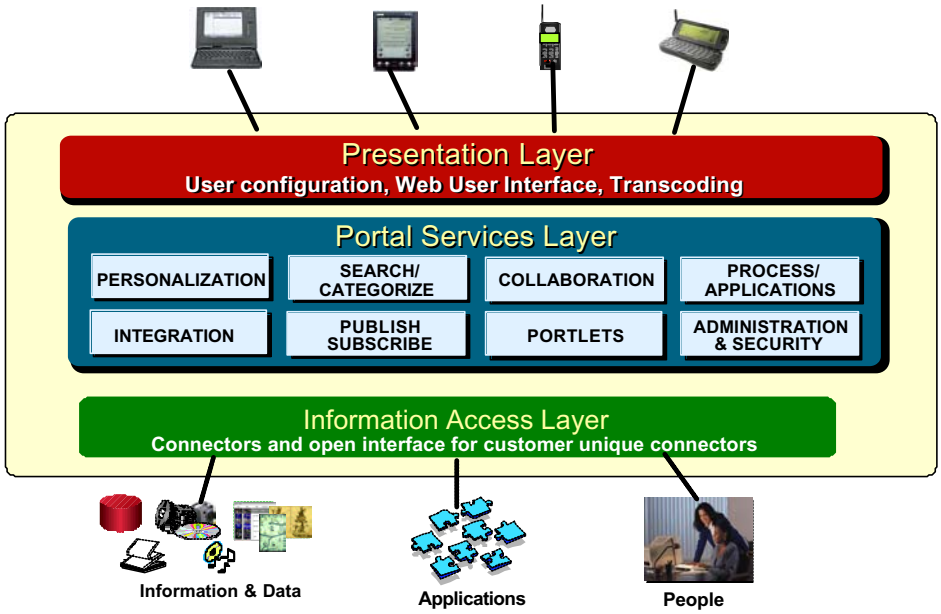


Application Development using C/C++ and Java with industry standard tools or MAB.

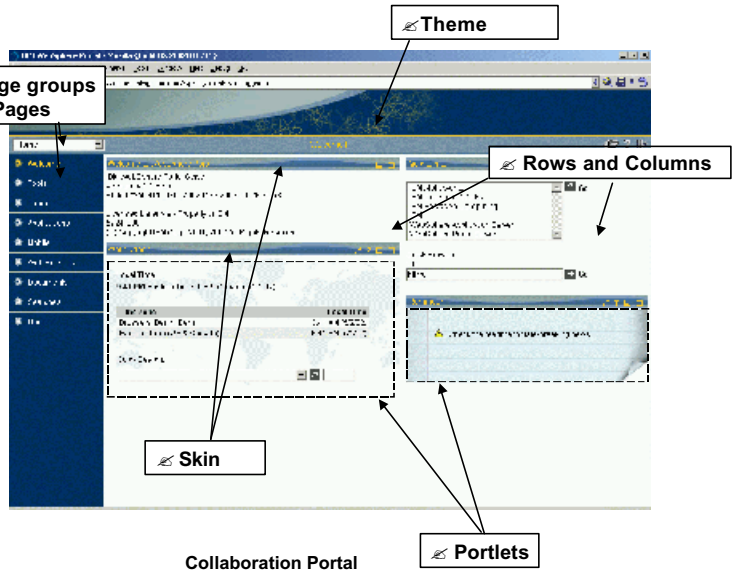
Client platforms:
Palm OS, Windows CE/Pocket PC, EPOC R5, Symbian V6, QNX Neutrino, embedded Linux, Linux, and Win32

Server platforms:
Windows NT/2000, AIX, Solaris, Linux

Portals



WebSphere Portal



The basic portal server

- presentation
- content access
- application access
- personalization
- portlets
- users and groups
- security
- web services
- multi-language portals
- accessibility

Enterprise Portal

- security manager
- enterprise content management
- IBM Lotus Instant Messaging and IBM Lotus Team Workplace licenses (emeetings, application sharing, whiteboards)

Collaboration Portal

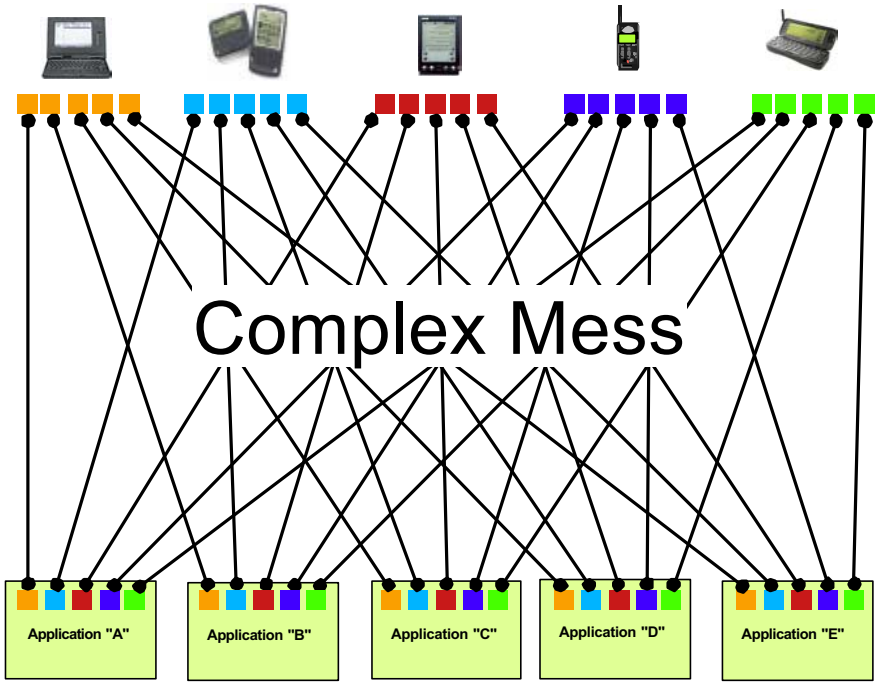
- places and memberships
- people and place awareness
- instant messaging
- team rooms
- extended search
- site analytics

Express

- User based

WebSphere Where to next?

Implementations Today



Mobile and Voice Access

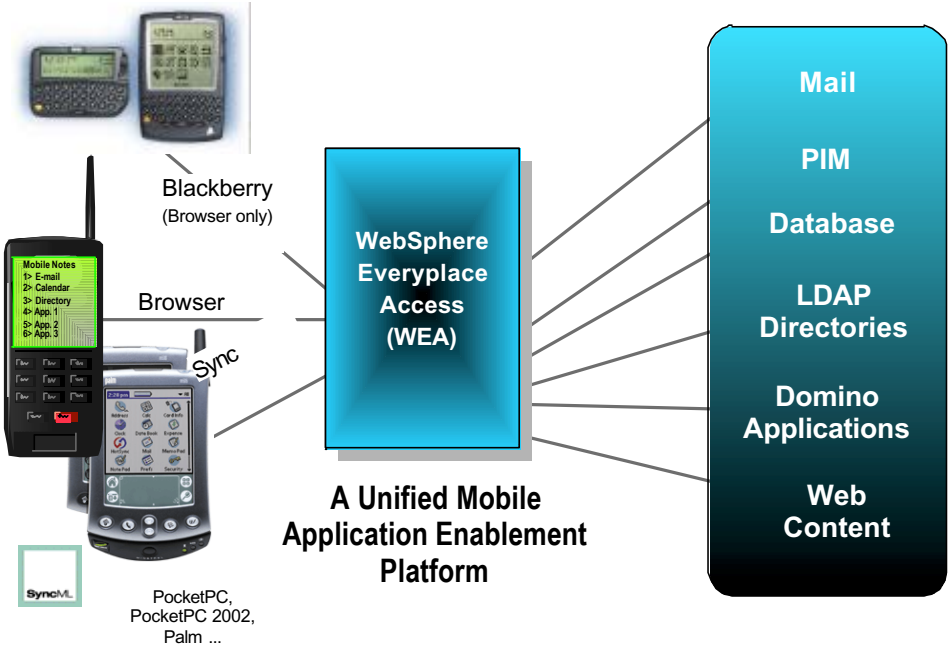
Connection Layer — WebSphere Everyplace Connection Manager; WebSphere Voice Response

Transparent Interaction Layer — WebSphere Everyplace Access; WebSphere Voice Application Access

User Inteface Aggregation and Presentation Layer — WebSphere Portal

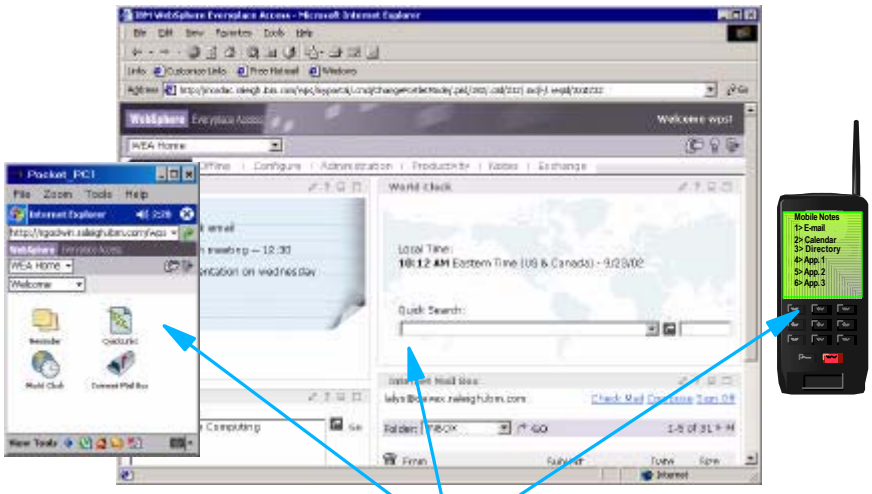
Application "A" | Application "B" | Application "C" | Application "D" | Application "E"

WebSphere Everyplace Access



WebSphere Everyplace Access

Supports both connected and offline access to portal content



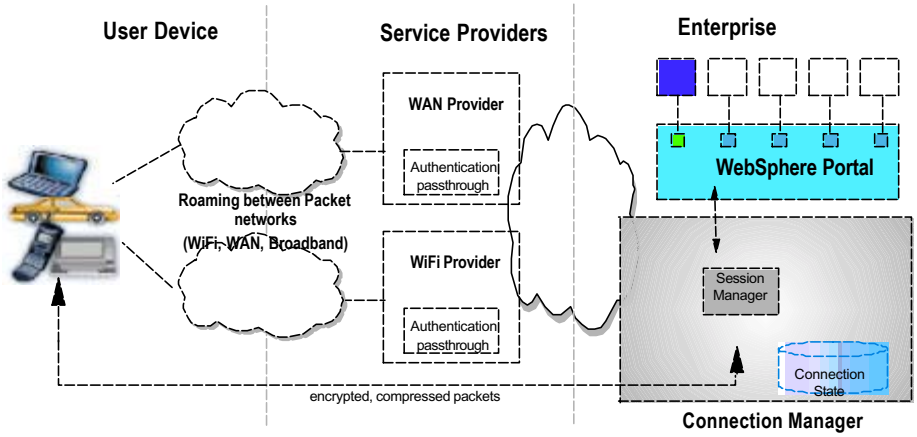
New for 4.2:

- Enhanced WEA Portlets (PIM) for Palm OS devices
- New PDA Aggregator, Markup Language and Style beans
- Icon representation of Portlets on PDAs

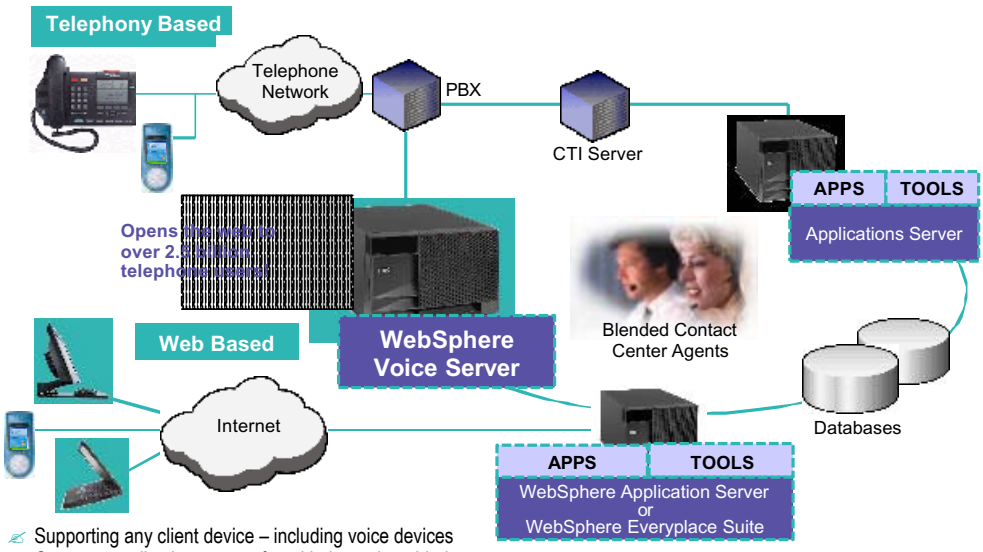
Same Portlets...
Different Views

WebSphere Everyplace Connection

Provide inter-network roaming and channel security

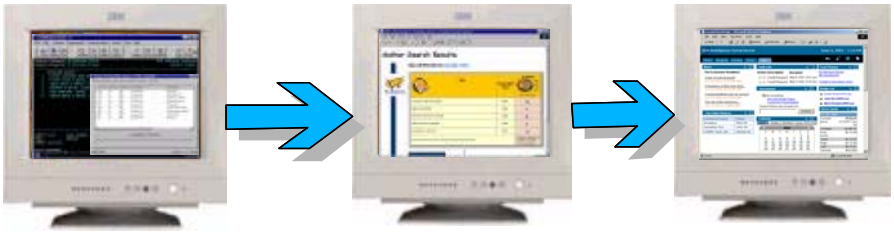


WebSphere Voice



- Supporting any client device – including voice devices
- Common application access & multi-channel enabled
- Extend access to the e-business application model, independent of deployment platforms
- Reduce CSR costs by increasing existing call center capabilities

WebSphere Host Integration & Portal



Merge two or more existing applications ...

into a single composite web page

into a consolidated enterprise portal page

- Extends legacy content to the web
- Incorporate legacy content within the personalized point of access with WebSphere Portal
- Delivers the state management to enable complex interaction with legacy applications and the navigational ease of use

business on demand

business on demand

IBM Software Story

Applications & Content

Integration

User Experience

Management & Security

Development

Management & Security

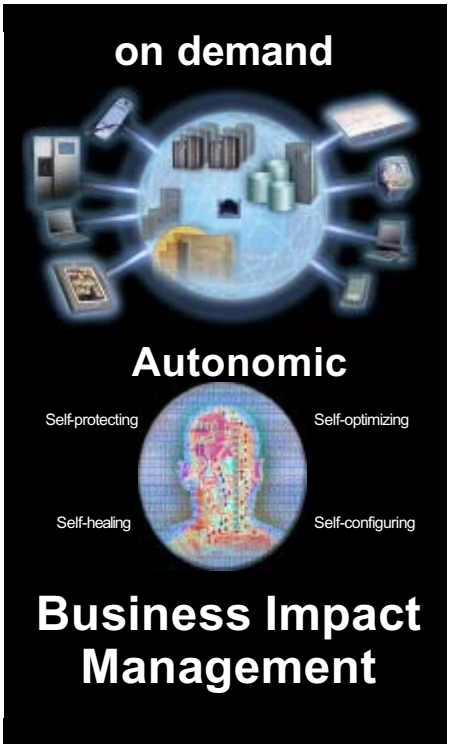
It's a new Era...

Manage a complex IT infrastructure with:

- Fewer Resources
- Higher Availability
- Greater Performance
- Improved Security
- Better Asset Utilization

Now possible...

It's a new game...



Business Impact Management

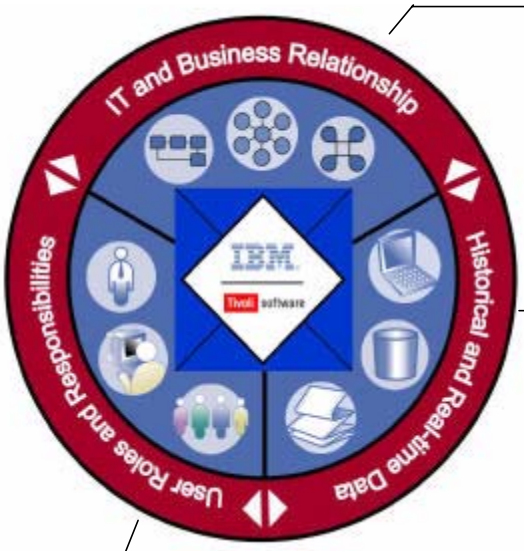
on demand

Business Success Depends on Availability

- Manage Systems
- Configure Systems
- Control Access
- Business Aligned Security
- Failure Awareness
- Machine Backup
- Business Recovery
- Policy Based Automation

on demand Management

Understanding the Technology



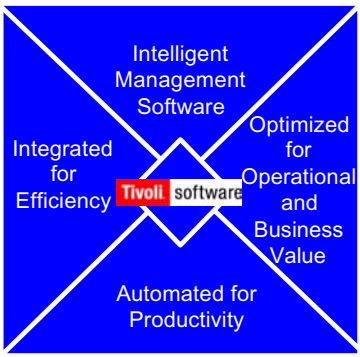
- *Manage business processes*
  - *Service Levels*
  - *Relationships*
- *Manage IT Resources*
  - *Provision IT to support business processes*
  - *Align IT resources with business policies*
- *Manage users & experience*
  - *Identity details*
  - *Security*
  - *Roles & responsibilities*
  - *Provision based on roles*
  - *Transaction performance*

business on demand

Tivoli Portfolio

Configuration & Operations
Best practices through role-based configuration
- Reduce costs
- Automate control
- Improve efficiencies

Security Management
Trusted identity management as an e-business cornerstone
- Automate identity management
- Mitigate security risks
- Maximize business efficiency and ROI

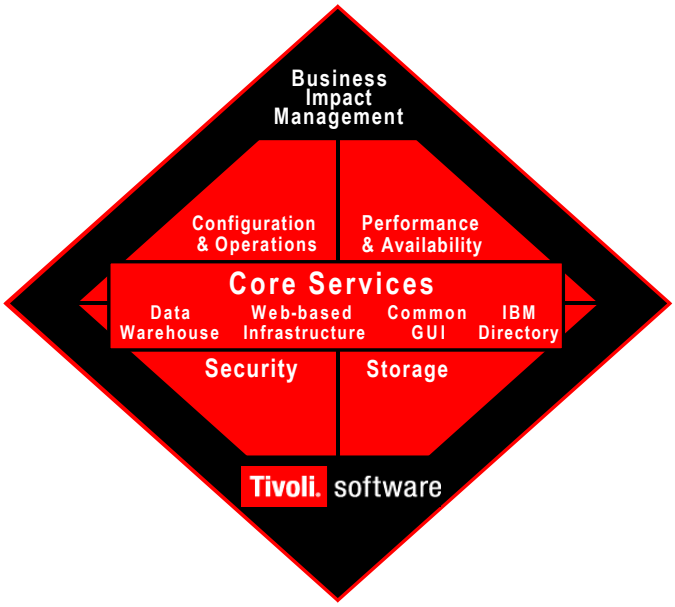


Performance & Availability
Business success based on IT alignment
- Integrated best practices & autonomic technology for rapid ROI
- Rapid deployment

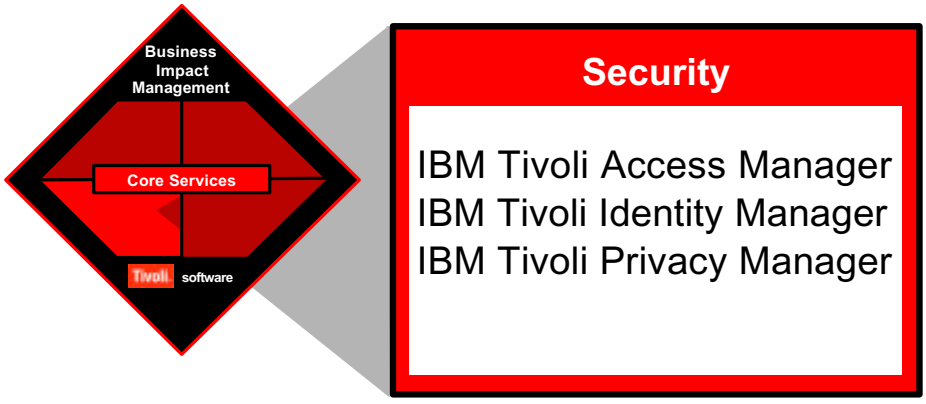
Storage Management
Business continuance
- Comprehensive management of system wide storage for ROI
- Simplified SAN management
- Backup & recovery

business on demand

Tivoli



Security



Identity Management Blueprint

Identity Federation

- Cross-enterprise provisioning
- Trust brokering
- Cross-enterprise identity mapping

Identity Lifecycle Management

- User enrollment and provisioning
- User privacy preference management
- User-care
- User profile management
- Credential management
- Policy management

Tivoli Identity Manager

Identity Control

- Access control and single sign-on to applications and Middleware
- Access control to private personal information
- Monitoring and auditing user activities

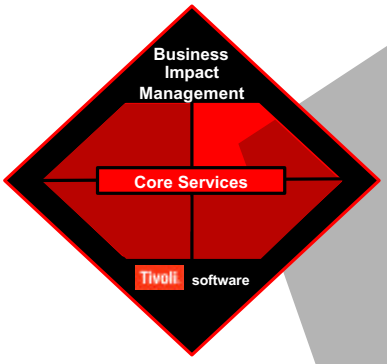
Tivoli Access Manager

Tivoli Privacy Manager

Identity Foundation

- Directory and Metadirectory
- Workflow
- Reporting
- Web technology

Performance & Availability



Performance & Availability

IBM Tivoli Service Level Advisor
IBM Tivoli Business Systems Manager
IBM Tivoli Business Systems Manager for z/OS
IBM Tivoli Enterprise Console
IBM Tivoli Switch Analyzer
IBM Tivoli Monitoring
- IBM Tivoli Monitoring for Applications
- IBM Tivoli Monitoring for Business Integration
- IBM Tivoli Monitoring for Databases
- IBM Tivoli Monitoring for Messaging and Collaboration
- IBM Tivoli Monitoring for Web Infrastructure
- IBM Tivoli Monitoring for Transaction Performance
- IBM Tivoli Monitoring for Security and Edge Services

IBM Tivoli NetView for z/OS
IBM Tivoli NetView
IBM Tivoli NetView for TCP/IP Performance
IBM Tivoli NetView Performance Monitor
IBM Tivoli Web Site Analyzer
IBM Tivoli Risk Manager

Tivoli

Performance and Availability

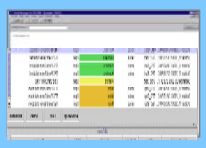
Integrated Solutions

Real-time Management	Predictive Management

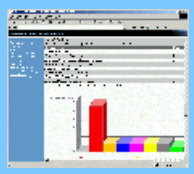
IBM Tivoli Business System Manager

IBM Tivoli Service Level Advisor

IBM Tivoli Enterprise Data Warehouse



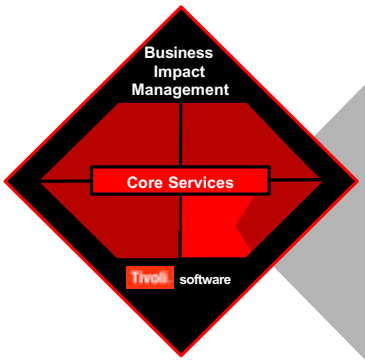
IBM Tivoli Enterprise Console
IBM Tivoli Monitoring



IBM Tivoli Website Analyzer

business on demand

Storage



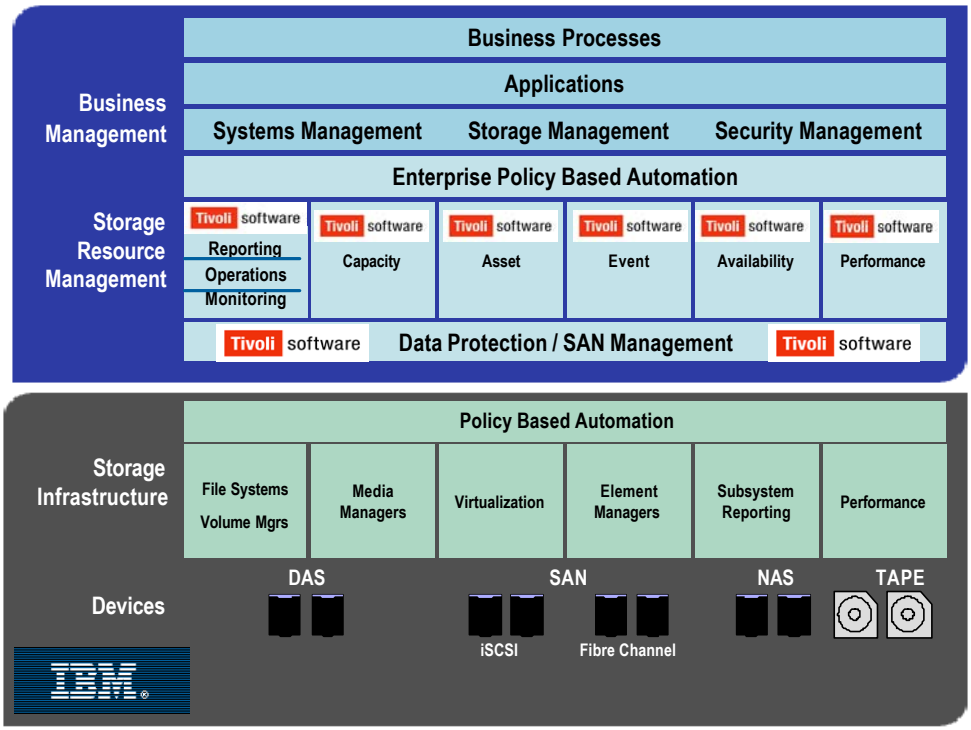
Storage

IBM Tivoli Storage Manager
IBM Tivoli Storage Manager Enterprise Edition
IBM Tivoli Storage Manager for Enterprise Resource Planning
IBM Tivoli Storage Manager for Mail
IBM Tivoli Storage Manager for Hardware
IBM Tivoli Storage Manager for Databases
IBM Tivoli Storage Manager for Application Servers

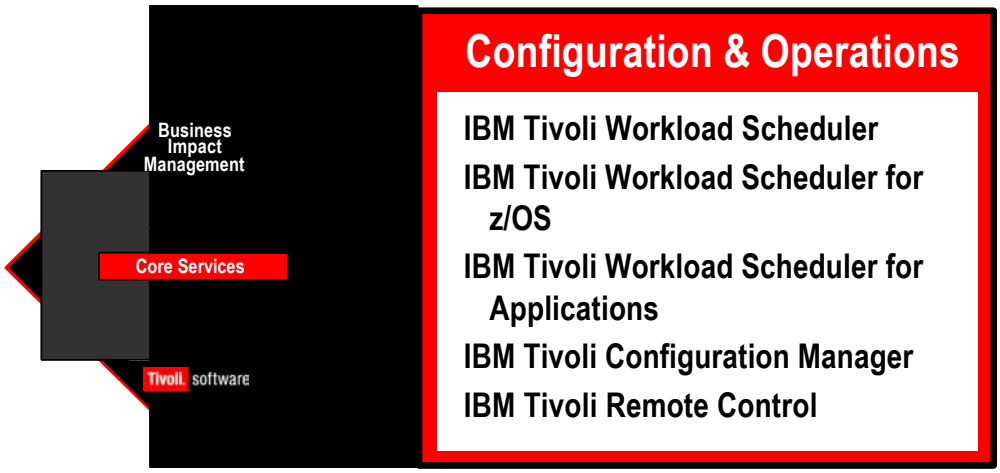
Tivoli

business on demand

Storage Management



Configuration & Operations



IBM Software Story

Applications & Content

Integration

User Experience

Management & Security

Development

Development Challenges

- Cost & Schedule
- Scalability
- Functionality
- Technology Churn
- Compatability
- Reliability
- Performance
- Security

Team Development

Analyst

Data Expert

Project Manager

eclipse

Quality Engineer

Open Source

Roles Based

Perspectives

Develop Iteratively

Teamwork

Rapid Deployment

Java Guru

Business Process Expert

JAVA XML SOAP

Web Page Builder

Web Master

Deployment Expert

Rational. WebSphere. DB2. Lotus. Tivoli.

business on demand

Develop Iteratively

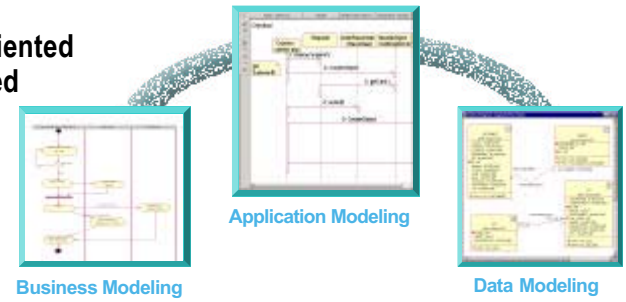
- Adopt a flexible process
- Manage requirements
- Continuously verify quality

Business applications	Adapt quickly to changing business needs	Create strategic advantage	Are reliable and scalable
Develop iteratively to...	Reduce project risk and increase predictability	Prioritize and scope projects effectively	Uncover design flaws and errors earlier to improve quality of end result

business on demand

Focus on Architecture

- Model visually
- Use component-oriented and service-oriented architectures



Business applications	Adapt quickly to changing business needs	Create strategic advantage	Are reliable and scalable
Focus on architecture to...	**Design for change**	**Reduce complexity; work at the right level of abstraction**	**Ensure architectural integrity and ultimate quality**

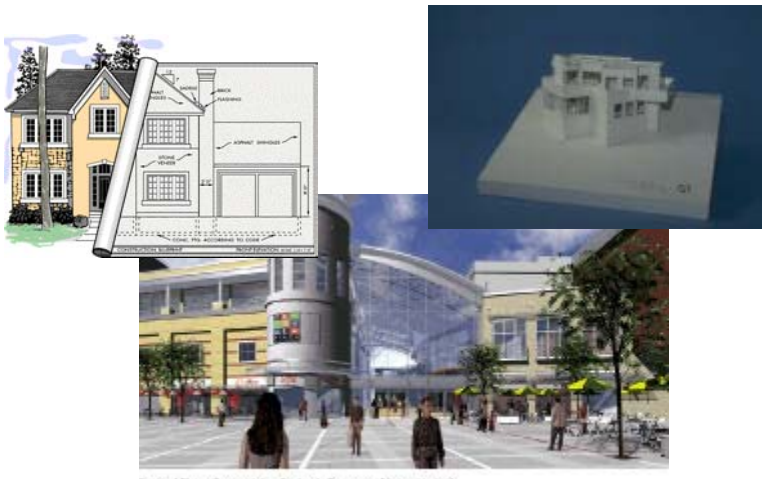
business on demand

Modeling

Modeling an application...

UNIFIED MODELING LANGUAGE™

Modeling a house...



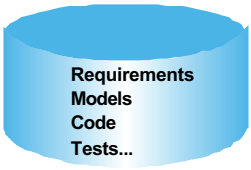
Festival Place, Basingstoke, England. Courtesy of Laing Limited.

business on demand

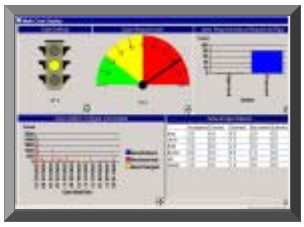
Manage Change and Assets

- Manage change
- Manage assets
- Measure progress and quality

Software Configuration Management



Metrics Dashboard



Business applications	Adapt quickly to changing business needs	Create strategic advantage	Are reliable and scalable
Manage change and assets to...	Enable virtual teams and parallel development	Protect critcal strategic assets	Deploy with confidence

Eclipse

Over 100,000 developers are participating in the Eclipse project, including these industry leading companies ...

- Altoweb
- Assist
- Bowstreet
- Borland
- BrowserSoft
- Cast Software
- CollabNet
- CommerceQuest
- Computer Assoc.
- Compuware
- Crystal Decisions
- Embarcadero
- Holosofx
- Instantiations
- Interwoven
- LegacyJ
- LogicLibrary
- Macromedia
- Merant
- Mercury Interactive
- Midcomp Intl.
- MKS
- NeuVis
- Peregrine
- QSSL
- Rational
- Red Hat
- Serena
- Sitraka
- Skyva
- Starbase
- SuSE
- Telelogic
- TogetherSoft
- Versant
- Versata
- Wily Technology
- WebGain

www.eclipse.org

Eclipse Workbench

Products built with Eclipse inherit these capabilities plus 'plug-ins' built by others

A personalized, extensible development platform organized via developer

"Perspectives"

An Open, Multi-vendor Tool Integration Platform

business on demand

IBM Rational Software

Best Practices

Develop Iteratively
Manage Requirements
Use Component Architectures
Model Visually (UML)
Continuously Verify Quality
Manage Change

Rational.

Customer Success

Tools

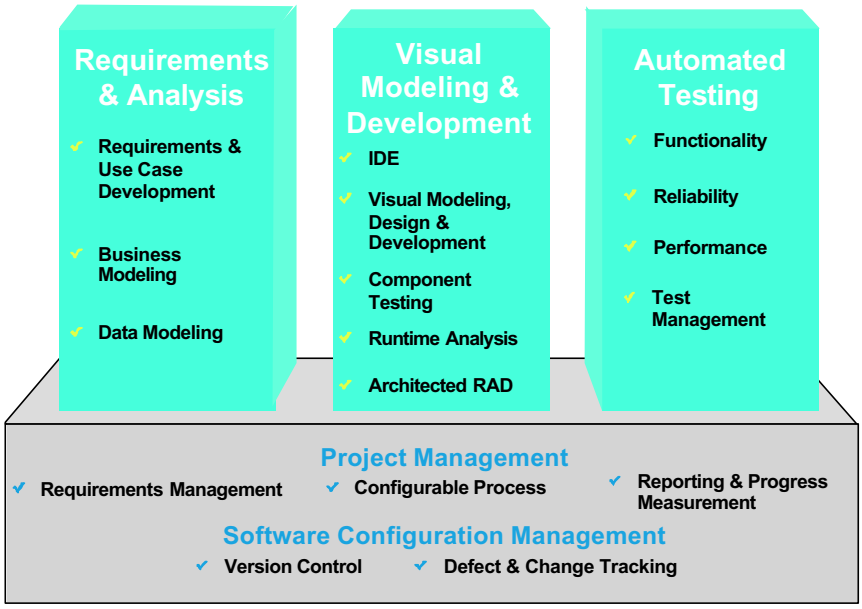
Requirements & Analysis
Visual Modeling & Development
Automated Testing
Project Management
Software Configuration Management

Services

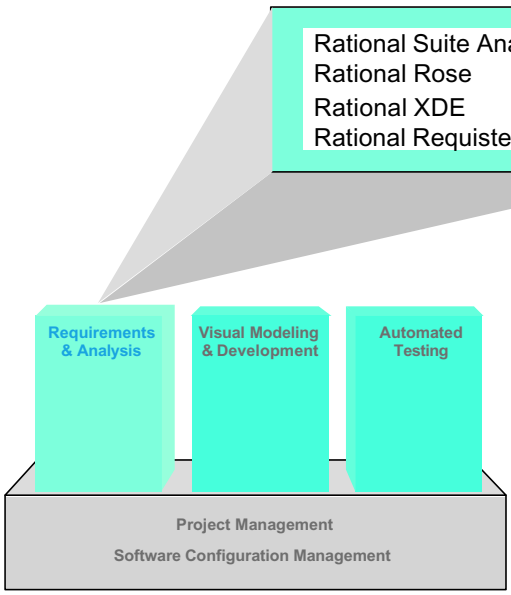
Technical Support & Tools Application
Project Implementations
Education & Training
Developer Network

business on demand

Spanning the Software Lifecycle



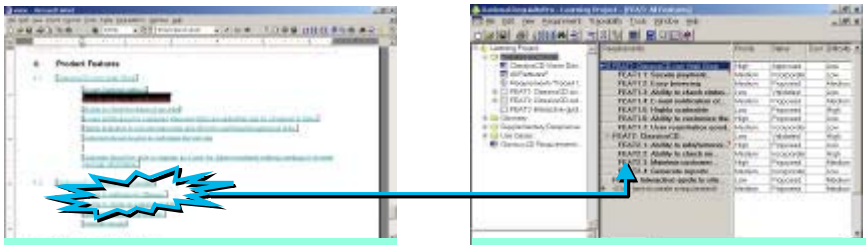
Analysts & System Engineers



- Suite Solution
  - Rational Suite AnalystStudio
- Business Modeling
  - Rational Rose
  - Rational XDE
- Data Modeling
  - Rational Rose
  - Rational XDE
- Requirements Management & Use Case Development
  - Rational RequisitePro
  - Rational Rose
  - Rational XDE

Rational RequisitePro

Collect, organize, prioritize requirements

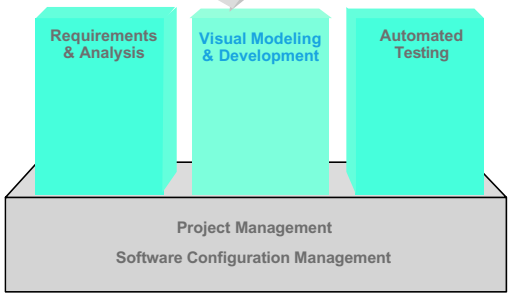


- A familiar way to work
- Contextual information
- Extensive formatting
- Scope management
- Prioritization
- Tracking and metrics

The power of a database integrated with the freedom of Word

Developers & Architects

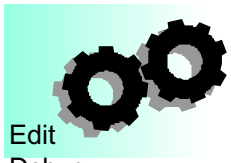
Websphere Studio
Rational Suite DevelopmentStudio
Rational Rose
Rational XDE
Rational Test RealTime
Rational PurifyPlus
Rational Rapid Developer



- IDE
  - Eclipse
  - Websphere Studio Application Developer
- Suite Solution
  - Rational Suite DevelopmentStudio
- Visual Modeling, Design & Development
  - Rational Rose
  - Rational XDE
- Component Testing
  - Rational Test RealTime
  - Rational Rose
- Runtime Analysis
  - Rational PurifyPlus
  - Rational Test RealTime
  - Rational Rose
  - Rational XDE
- Architected RAD
  - Rational Rapid Developer

XDE: eXtended Development Environment

Model, develop and test within your IDE



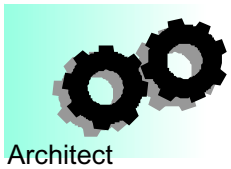
Edit
Debug
Compile
etc.

IDE

- WebSphere Studio Appication Developer
- Microsoft Visual Studio .NET

- ✓ Single user experience
- ✓ Adds value at all levels of development experience

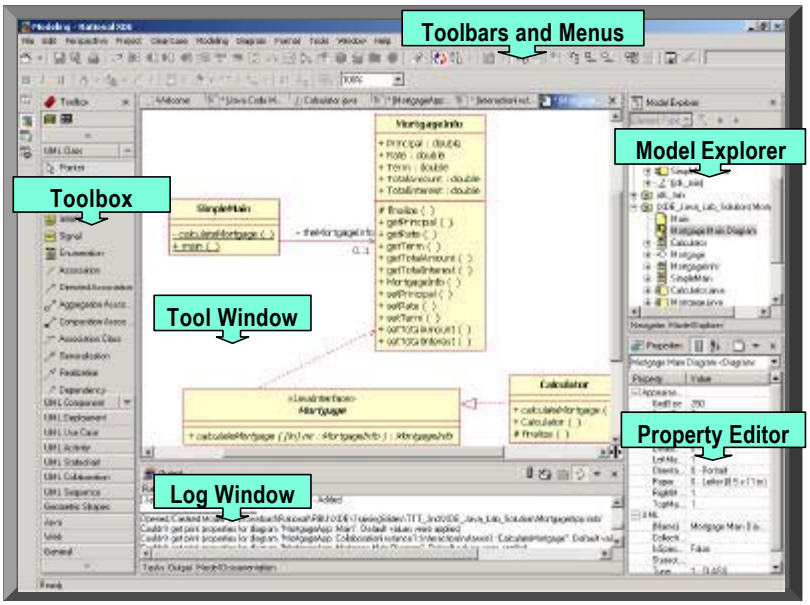
Modeling
Runtime Analysis
Automated Testing



Architect
Design
Test

- Rational XDE
- Rational PurifyPlus
- Rational TestStudio

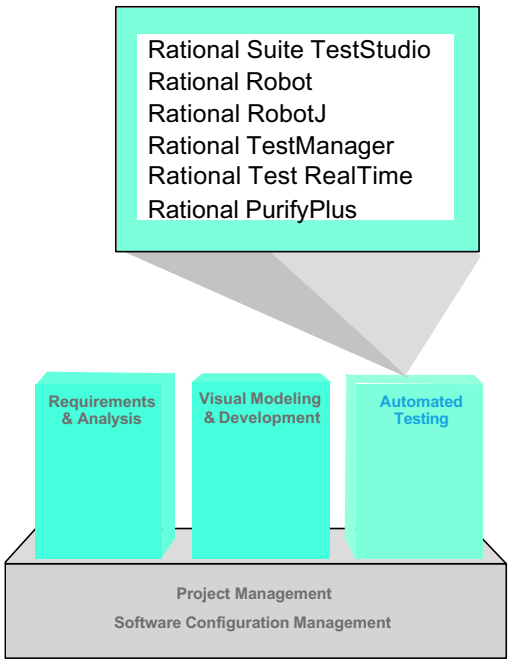
Rational XDE



Code-centric or design-centric development...
the choice is yours

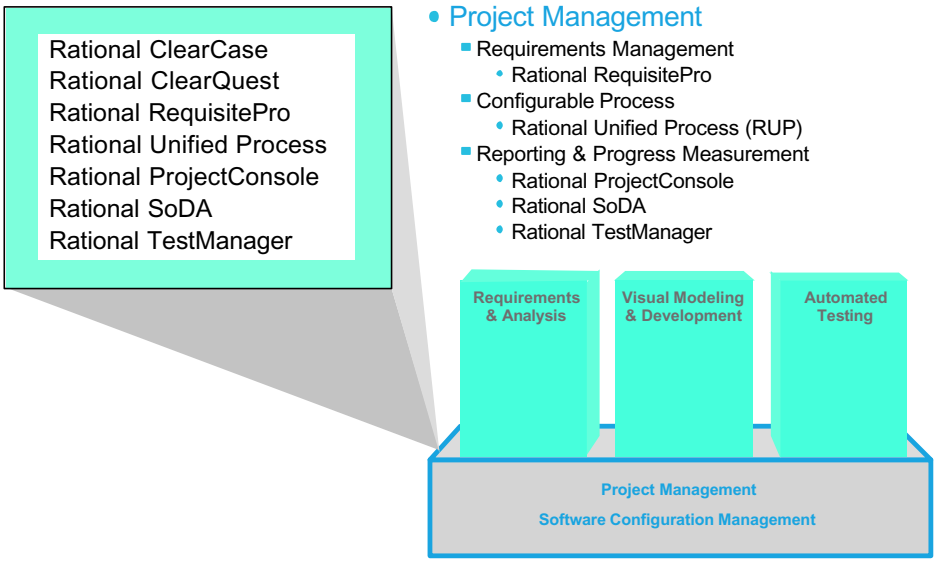
Testers

- Suite Solution
  - Rational Suite TestStudio
- Functionality
  - Rational Robot, RobotJ
  - Rational TestManager
- Runtime Analysis
  - Rational PurifyPlus
  - Rational Test RealTime
- Performance
  - Rational Robot
  - Rational TestManager
- Test Management
  - Rational TestManager



Project Teams

- Software Configuration Management
  - Version Control
    - Rational ClearCase
  - Defect & Change Tracking
    - Rational ClearQuest
- Project Management
  - Requirements Management
    - Rational RequisitePro
  - Configurable Process
    - Rational Unified Process (RUP)
  - Reporting & Progress Measurement
    - Rational ProjectConsole
    - Rational SoDA
    - Rational TestManager



Unified Change Management

Best practices, process, out of the box

- Decades of CM experience
- Hundreds of successful CM implementations
- Easy to adopt
- Optimized for team acceptance

UCM Process

Rational ClearQuest

Manages activities
- To do lists
- Workflow

Rational ClearCase

Manages artifacts
- Versioning: code, models, XML, HTML, etc.
- Parallel development

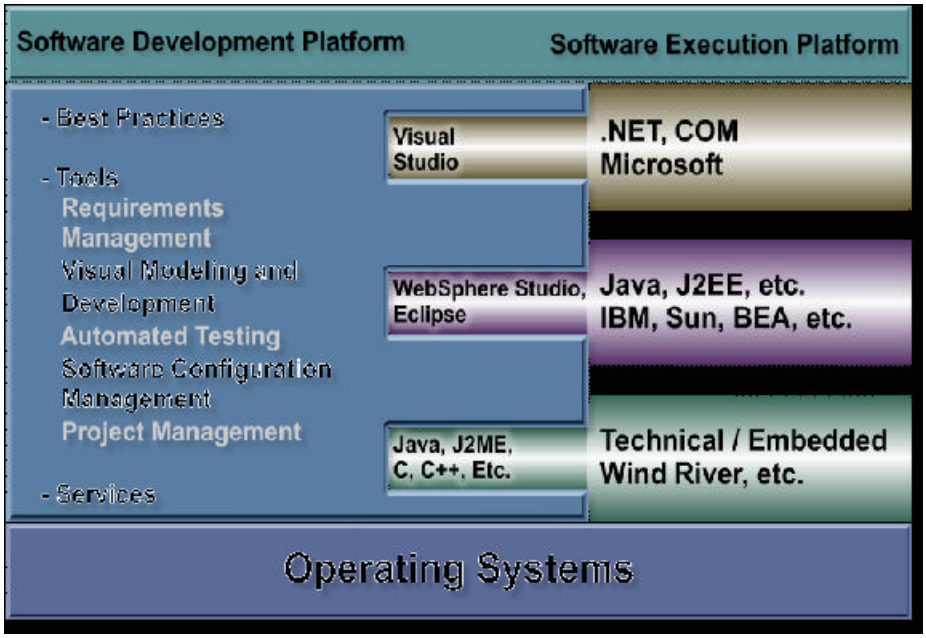
Manage high-level objects

- ✓ Components
- ✓ Subsystems
- ✓ Baselines

Activity-based configuration management

Heterogeneous World

Rational.



IBM Rational Software

Rational.

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Automated Testing
Project Management
Software Configuration Management

Services

Technical Support & Tools Application
Project Implementations
Education & Training
Developer Network

WebSphere Studio

A single, comprehensive development environment with unprecedented flexibility & extensibility

Extend and customize with IBM eServer & IBM middleware tools

Extend and customize with partner & customer tools

An integrated environment for the application lifecycle – from discovery through development to deployment

An open, industry-supported development platform

WebSphere Studio

Enterprise Developer

Application Developer- Integration Edition

Application Developer

Site Developer

- Professional Web Developers
- Java, XML, Rich Media & Web services
- Rational ClearCase LT

- J2EE Developers
- Relational DB tools
- Embedded WebSphere Application Server

- Advanced J2EE Developers
- Flow Composition
- Visual Adapter Creation
- Business Rule Support

- Enterprise Development Organization
- Web Services based enterprise modernization
- Enterprise Modeling & RAD
- Apache Struts

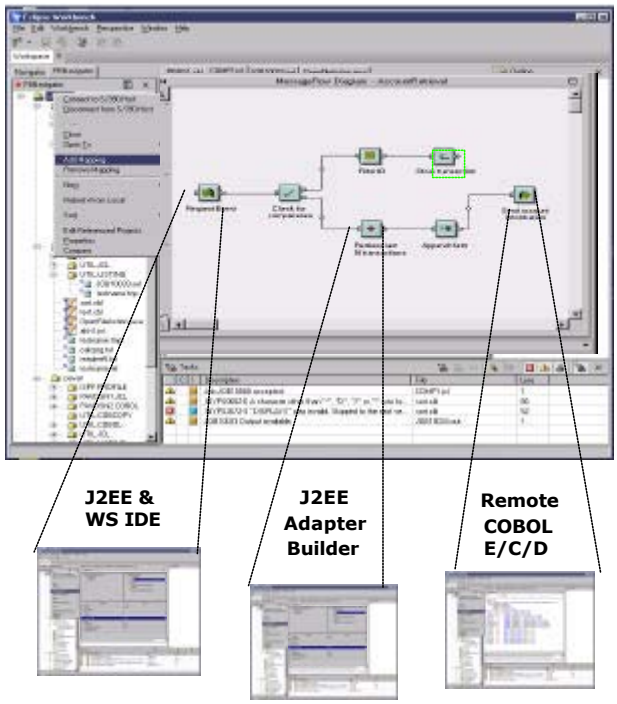
WebSphere Studio Workbench & Rational

IBM's Commercially Supported version of the Eclipse Workbench

eclipse Workbench

business on demand

WebSphere Studio



business on demand

IBM Software Story

Applications & Content

Integration

User Experience

Management & Security

Development

business on demand

IBM Software Story

e business *Live*!

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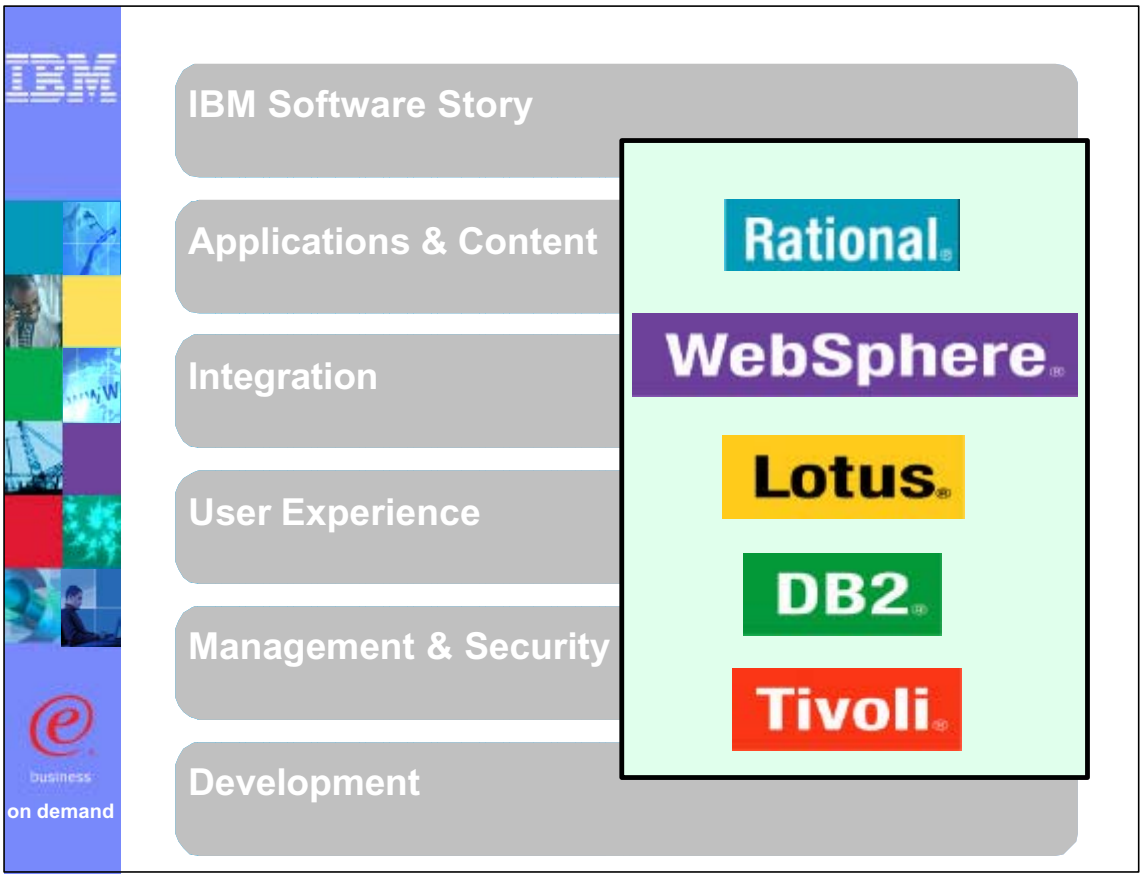
business on demand


IBM Software Story
Applications & Content
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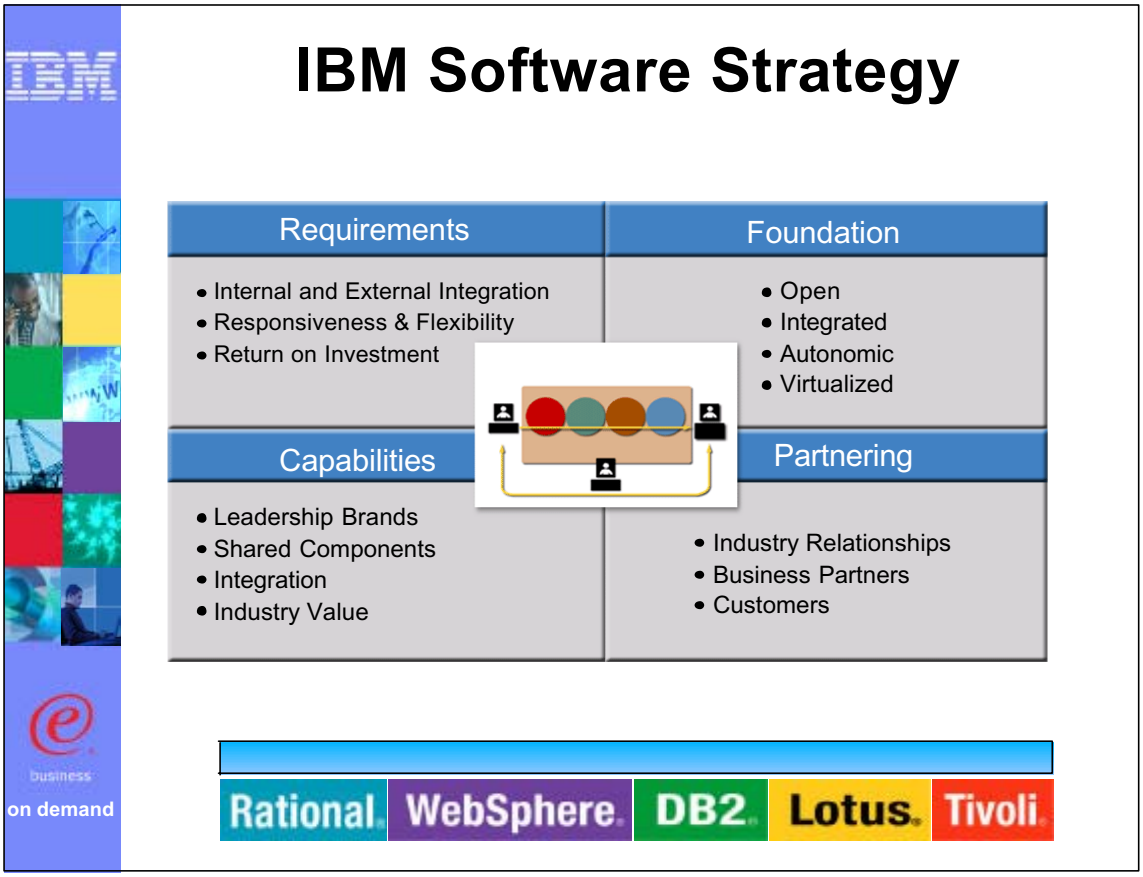
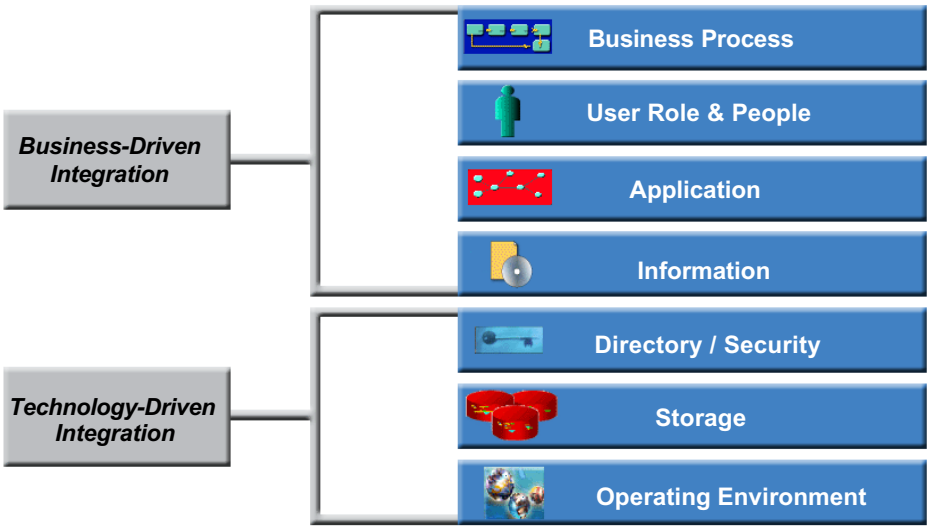
Lotus
DB2
Tivoli
business
on demand


IBM Software Strategy
Requirements
Internal and External Integration
Responsiveness & Flexibility
Return on Investment
Foundation
Open
Integrated
Autonomic
Virtualized
Capabilities
Leadership Brands
Shared Components
Integration
Industry Value
Partnering
Industry Relationships
Business Partners
Customers
Rational
WebSphere
DB2
Lotus
Tivoli
business
on demand

Integration



Rational. WebSphere. DB2. Lotus. Tivoli.

Value Proposition

Key Customer Requirements:

- Internal and External Integration
- Responsiveness & Flexibility
- Return on Investment

Integration

- Provide on demand responsiveness
- Leverage existing technology investments
- Business and technology integration capabilities
- Extensive business partner enablement

Infrastructure

- Leadership products
- Open standards based
- Platform independence
- Customer-centric development & support culture
- Scalable, reliable, secure, high-performance

Innovation

- Shared components - Rapid time to market of offerings
- Visionary in e-business evolution to on demand
- Driving industry to virtualized & autonomic solutions
- Accelerated adoption of research technologies

Rational. WebSphere. DB2. Lotus. Tivoli.

IBM Software Story

Thank you.

Rational. WebSphere. DB2. Lotus. Tivoli.

business on demand