IBM.

RAD Deep Dive

End-2-End Development Tools

using J2EE, Portal, Web Services, Modeling, BPM, SDO, JSF, Legacy & more…

Go to http://JavaSOA.com for presentations, demos, tutorials and other resources
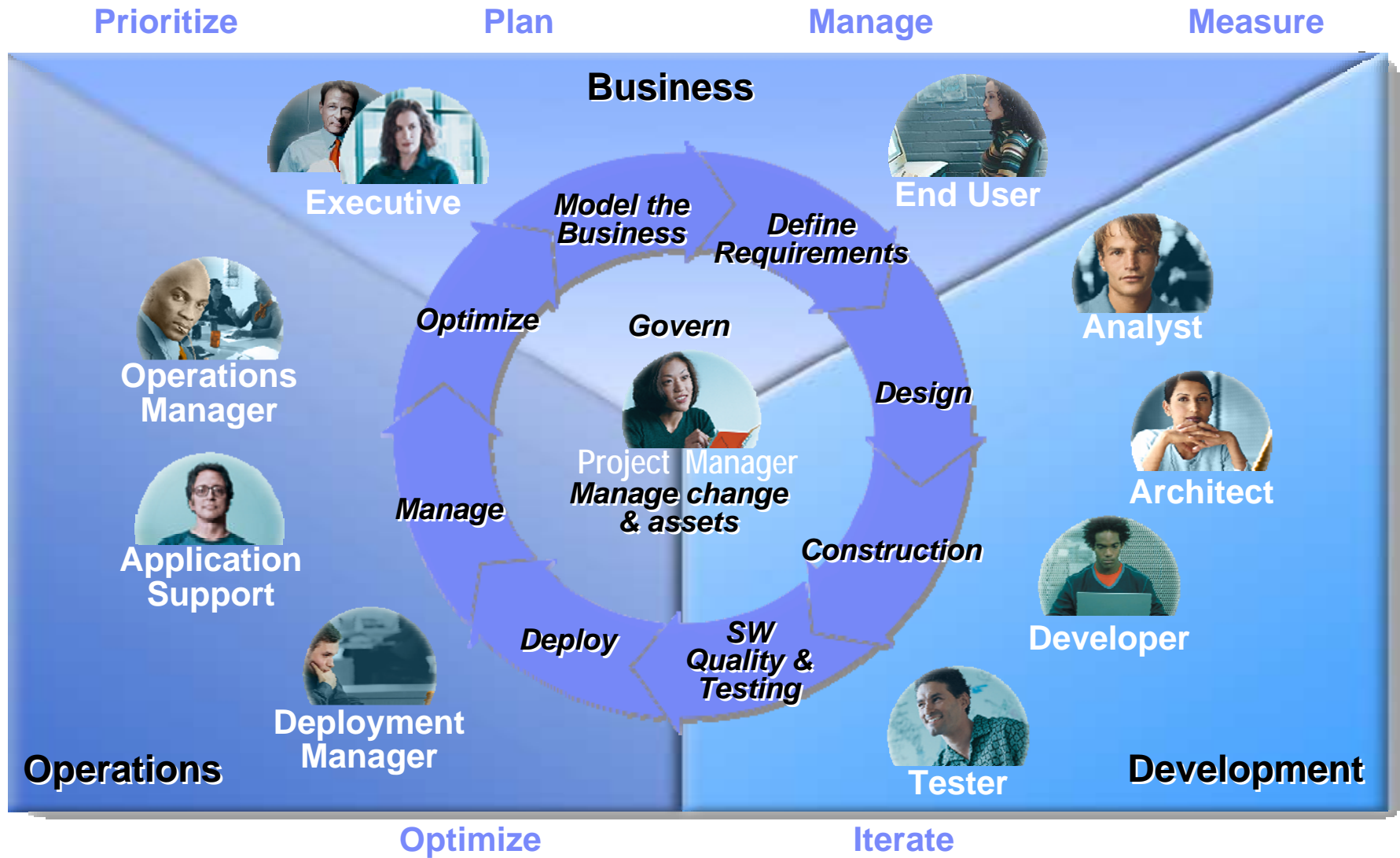
SOA on your terms and our expertise

ON DEMAND BUSINESS™

The Business Driven Development Lifecycle
IBM Rational Software Development Platform

IBM Design & Construction Offerings
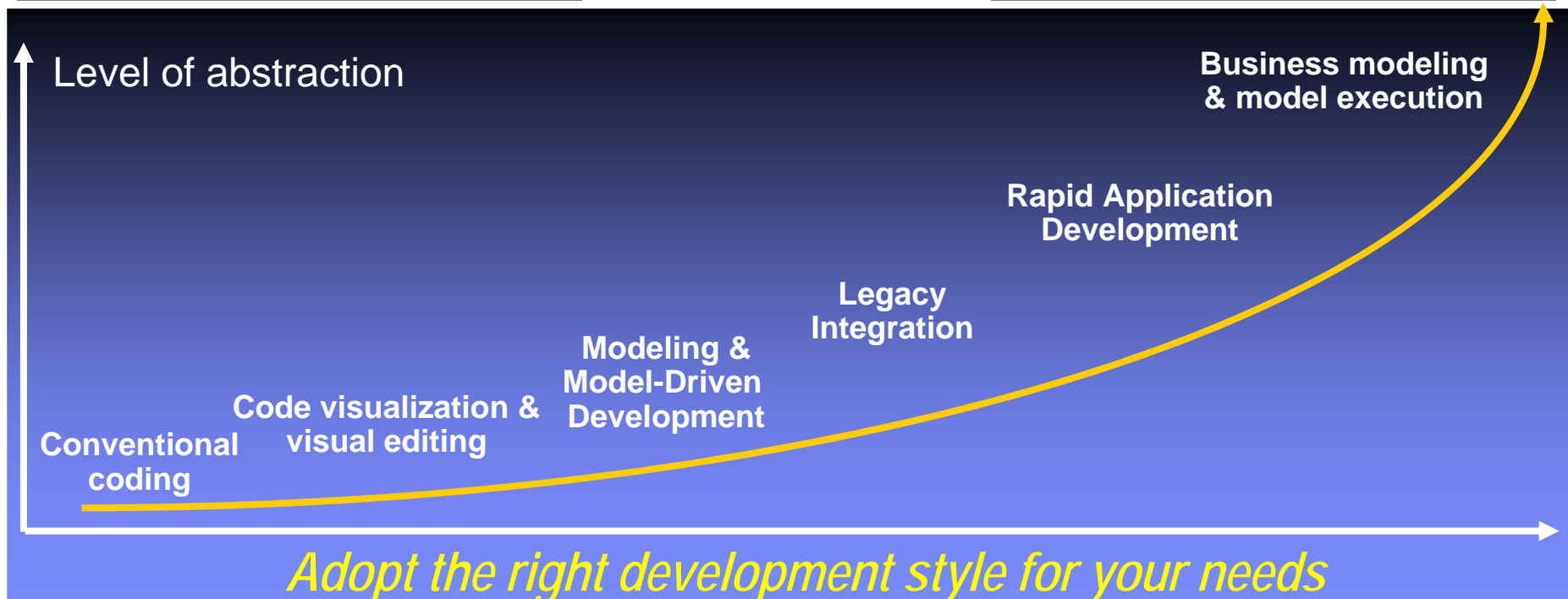
Benefits	**Capabilities**

Benefits

- Drive higher levels of productivity and time to value
- Maximize quality, robustness, reusability
- Maximize value from both code & models
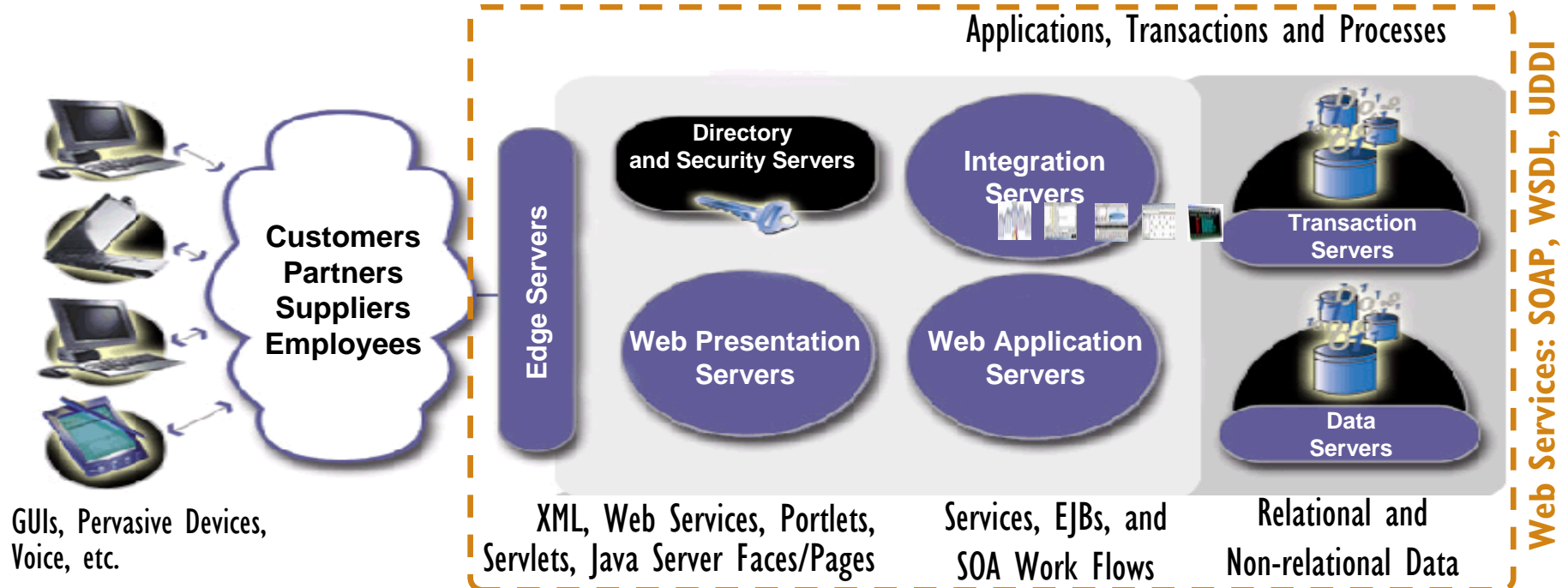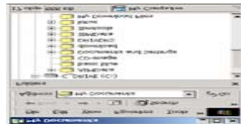- Choice of development styles

Capabilities

- Design > Build > Test > Deploy
- Code visualization & visual editing
- Modeling & round-trip engineering
- Legacy integration
- Rapid application development
- Model execution

Level of abstraction

Business modeling
& model execution

Rapid Application
Development

Legacy
Integration

Modeling &
Model-Driven
Development

Code visualization &
visual editing

Conventional
coding

Adopt the right development style for your needs

ON DEMAND BUSINESS™

Build Tools - End-2-End Design & Construction

Applications, Transactions and Processes

Web Services: SOAP, WSDL, UDDI

Customers Partners Suppliers Employees

Edge Servers

Directory and Security Servers

Integration Servers

Transaction Servers

Web Presentation Servers

Web Application Servers

Data Servers

GUIs, Pervasive Devices, Voice, etc.

XML, Web Services, Portlets, Servlets, Java Server Faces/Pages

Services, EJBs, and SOA Work Flows

Relational and Non-relational Data

Development Roles

| Application Modeling | Java/J2EE Development | Web/Portal Development | XML Web Services Development | Database App Development | Business Process SOA Integration | Cobol, CICS/IMS, 4GL Development |

ON DEMAND BUSINESS

Model Driven Development With A Focus On Architecture

- ✓ Create models at various levels of abstraction
- ✓ Implement with component-oriented and service-oriented architectures
- ✓ Visualize as-built architecture
- ✓ Validate or refine & iterate

Application

System

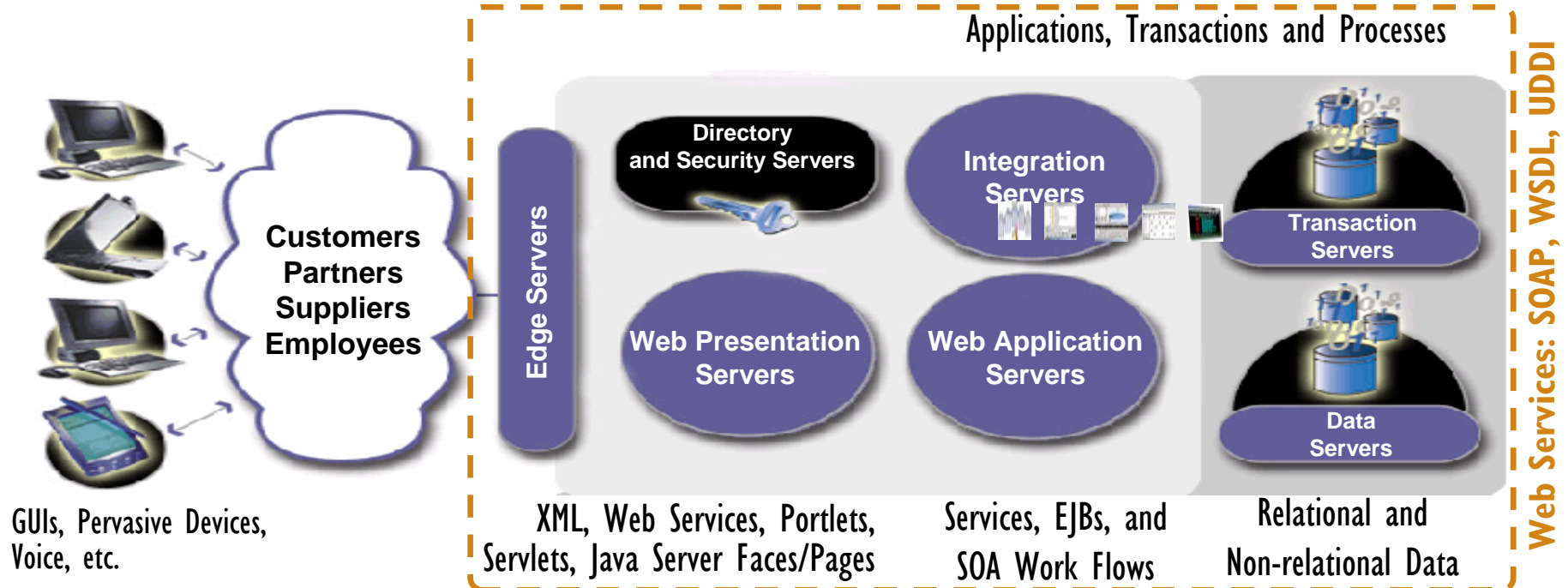**Information**

Business

Implementation
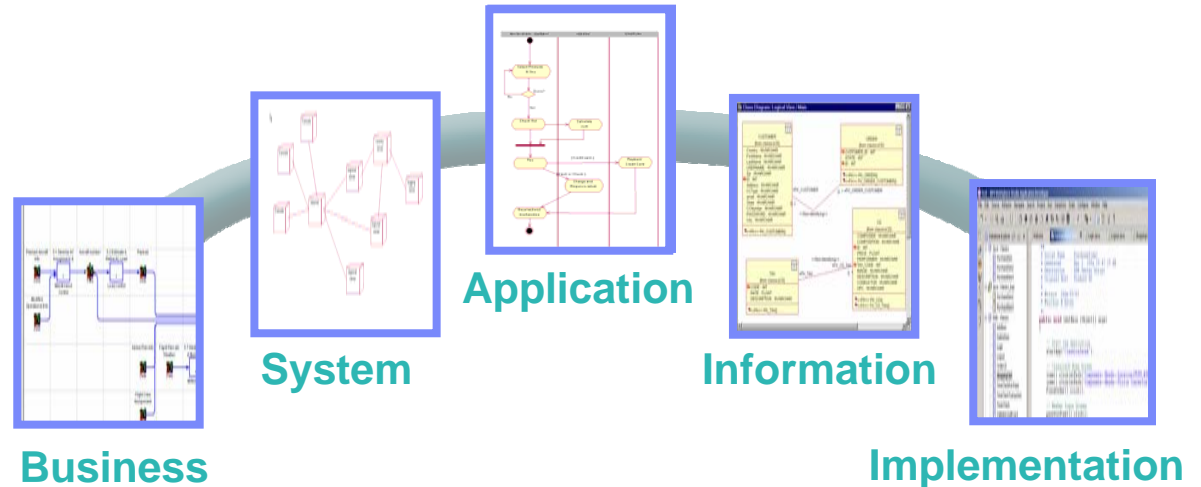
Business Benefits

- Better align projects with business needs
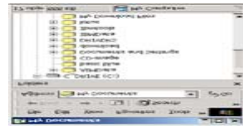- Higher-level reuse for improved productivity
- Faster, more reliable changes

Technology Benefits

- Enables model-driven architecture and development
- Scales better than focusing only on code
- Facilitates traceability across the lifecycle

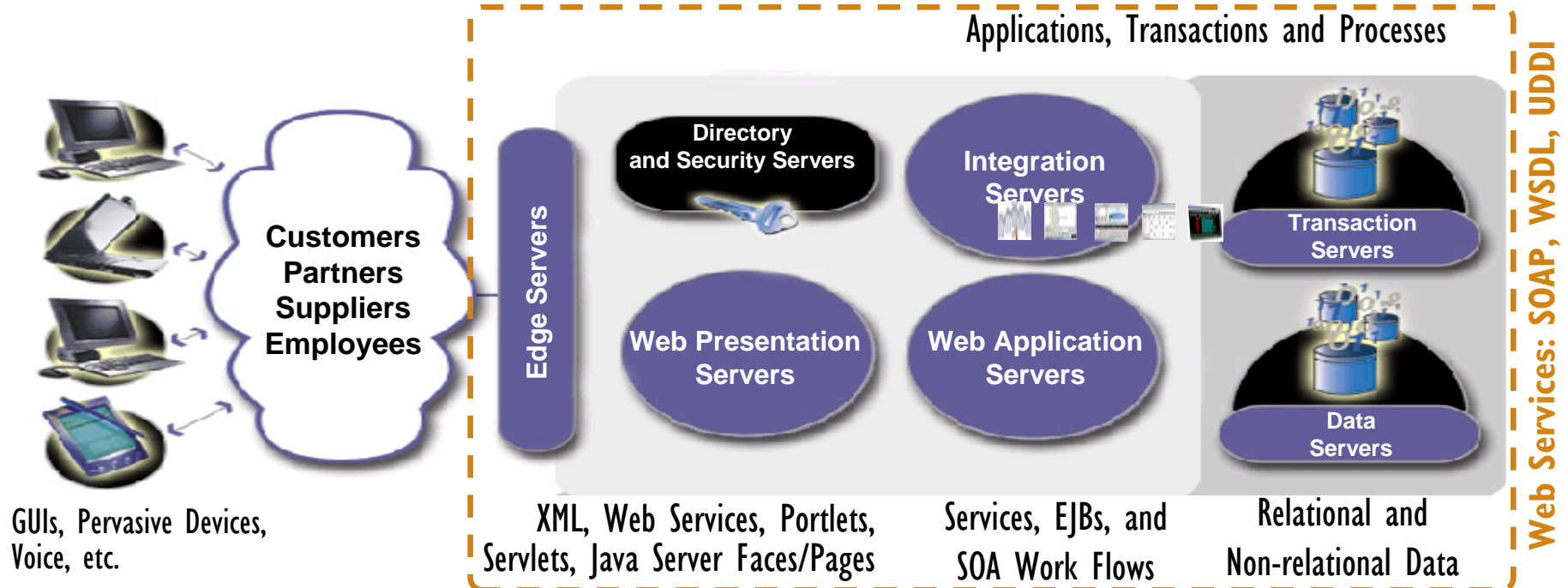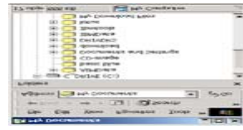# Build Tools - End-2-End Design & Construction

Applications, Transactions and Processes

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Edge Servers

Directory and Security Servers

Integration Servers

Transaction Servers

Web Presentation Servers

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Java/J2EE Development

Web/Portal Development

XML Web Services Development

Database App Development

Business Process SOA Integration

Cobol, CICS/IMS, 4GL Development

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ON DEMAND BUSINESS™

Simplifying J2EE, Web and Portal/Portlet Development

- **Data (relational and non) drag-n-drop ease-of-use** [1][2]

- **Web Services development drag-n-drop ease-of-use** [1][2]

- **Portals drag-n-drop ease-of-use** [1] [2]

Richer Thin Clients (Portal, Portlets and Web Apps)

Build Scenarios – J2EE, Web Services and Data

- Web Services – Creating, testing and consuming
- Data - Relational and non-relational data integration via Service Data Objects (SDO)
- JavaBeans and EJBs – Creating, testing and JavaServer Faces (JSF) MVC app design

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Build Scenarios – Banking & Finance (Applying End-2-End Development)

- **Account Management** - Transfer Funds, Web Services, Service Data Objects (SDO), JavaServer Faces (JSF))

- **Accounts Summary** - SDO custom queries, Portlet User session/state, personalization

- **Portfolio Management & Financial Advisor Dashboard** - Portlet wiring click-2-action, charts/graphs

- **Portal Site Design** - Themes, skins, navigation, look-n-feel

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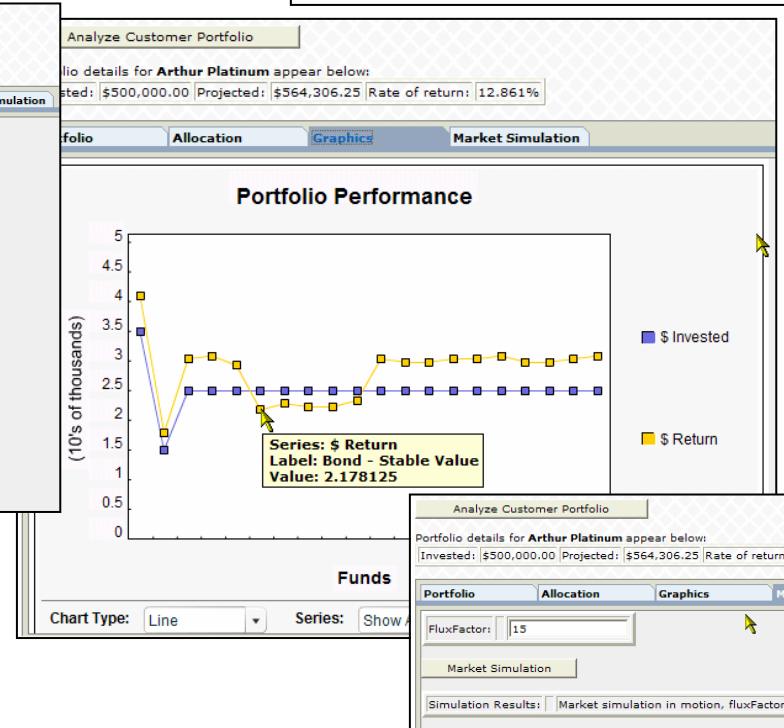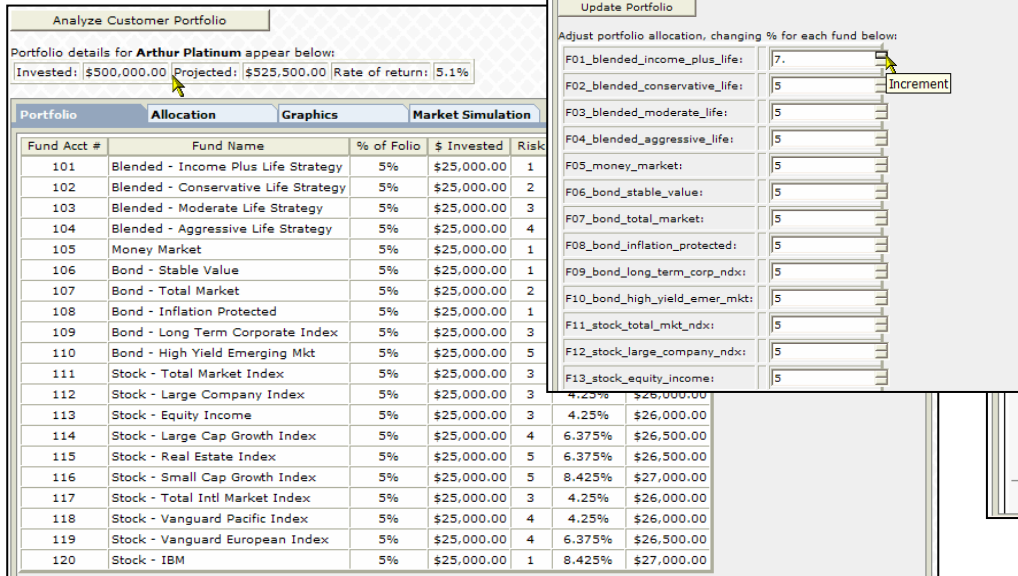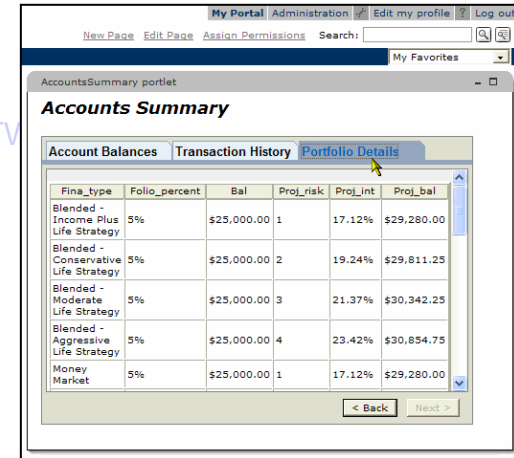
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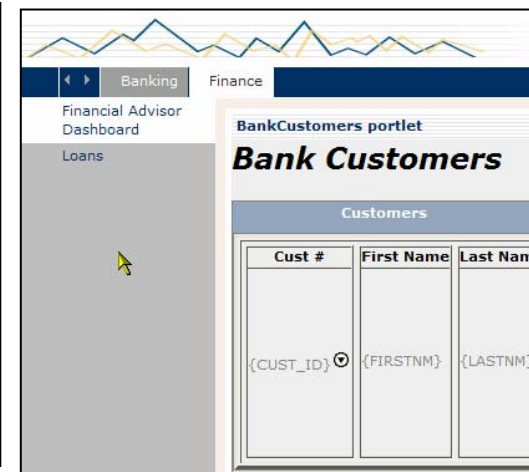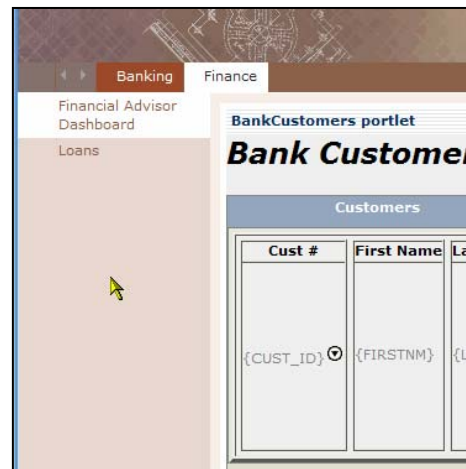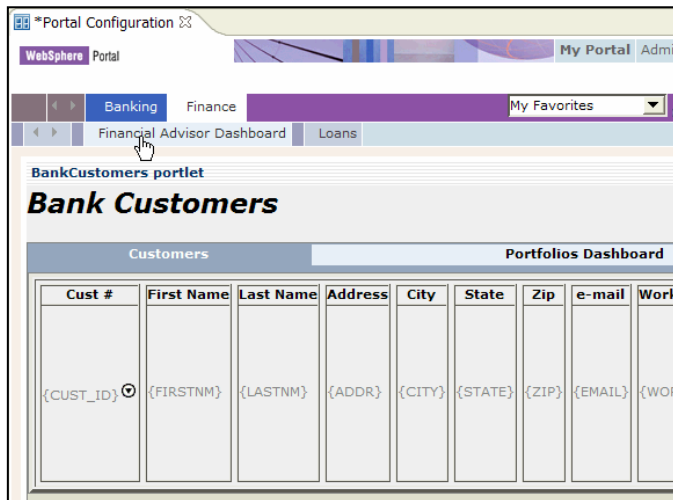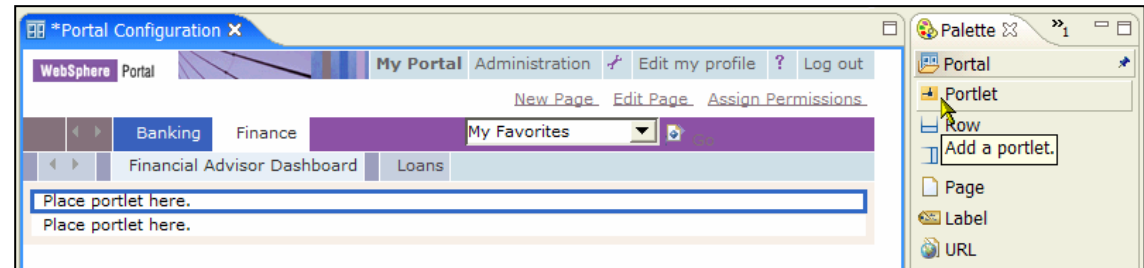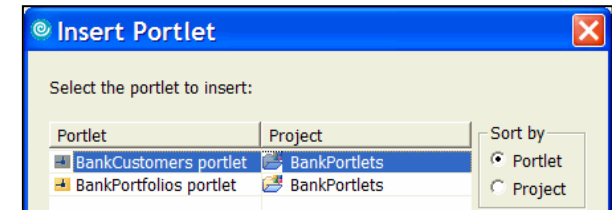
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- Portfolio Management &
  - Portlet wiring click-2-a
- Portal Site Design
  - Themes, skins, navigat
- **Dynamic Development and Debugging**

Adaptable - Eclipse-based Workbench

#1 Customizable **Perspectives** and **Views** support **roles-based** tools

Automated - IDE Infrastructure (Code, Build, Test, Debug, Deploy)

#2 **Dynamic build engine** incrementally updates and hot-deploys (on-the-fly, while you type)

#3 **Testing and Debugging** for Java, Web Services, XML, database and EJB

Accelerated - End-2-End Builders

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V6 "WebSphere Rapid Deploy" (WRD)

- To simplify the **<u>development</u>** experience for WebSphere applications by:
  - Increase the seamlessness of the iterative Build/Test cycle
  - Reduce or eliminate server restarts
    - During initial artifact creation (i.e. create Java, EJBs, Web Services, etc.)
    - During iterative build scenarios (i.e. coding the logic in Java, etc.)

- To simplify the **<u>deployment</u>** experience for WebSphere applications by:
  - Automating the process of installing an application on WebSphere
  - Reducing the amount of information that must be configured manually on WAS (i.e. Datasources, etc.)
  - Automating the process of activating incremental changes to an application on a running server (i.e. Add/Change code/configuration of an application)

Dynamic Development (Avoiding the "RESTART" Situations)

- **Two main stages in RAD V6 dynamic development**
  - Creating New Artifacts
  - Changing Existing Artifacts

- 🟢 **AUTOMATIC** hot re-deployment of changes

- 🟡 Manual quick **APPLICATION** level restart

- 🔴 Manual **SERVER** restart

WS Rapid Deploy (WRD) Dynamic Development Scenarios		
Development Activity	**WAS5.1**	**WAS6.0**
Create EAR Project	Plan to Restart Server	Dynamic (WRD)
Create Web Project	Plan to Restart Server	Dynamic (WRD)
Create EJB Project	Plan to Restart Server	Dynamic (WRD)
Create EJB with Logic	Restart Server (Manually)	Dynamic (WRD)
Change EJB	Restart Project EAR (Manually)	Dynamic (WRD)
Create JSP	Dynamic (Web Container)	Dynamic (Web Container)
Change JSP	Dynamic (Web Container)	Dynamic (Web Container)
Create JavaBean in Web Project	Dynamic (Web Container)	Dynamic (Web Container)
Change JavaBean in Web Project	Dynamic (Web Container)	Dynamic (Web Container)
Create JavaBean in regular Java Project and Reference from EJB or Web project artifacts	Restart Project EAR (Manually)	Dynamic (WRD)
Change JavaBean in regular Java Project	Restart Project EAR (Manually)	Dynamic (WRD)
Create Web Service (Exposing a JavaBean or EJB)	Restart Server	Dynamic (WRD)
Change a Web Service	Restart Server	Dynamic (WRD)

Design & Construction Tools End-2-End

Applications, Transactions and Processes

Directory and Security Servers

Customers Partners Suppliers Employees

Edge Servers

Integration Servers

Transaction Servers

Middleware Connectors

Web Presentation Servers

Web Application Servers

Data Servers

Web Services: SOAP, WSDL, UDDI
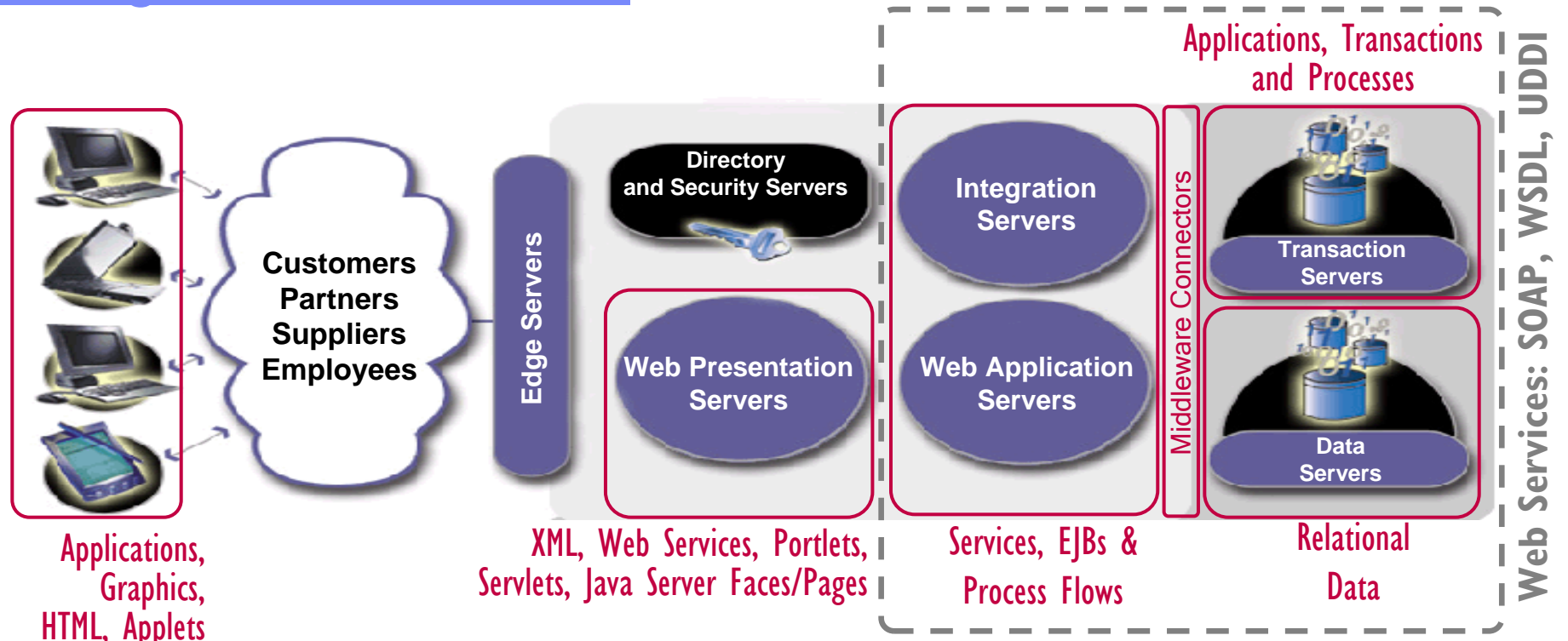
Applications, Graphics, HTML, Applets

XML, Web Services, Portlets, Servlets, Java Server Faces/Pages

Services, EJBs & Process Flows

Relational Data
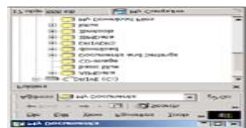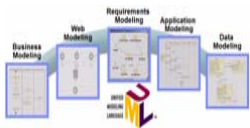
Modeler & Integration

Development Roles

Application Modeling	Web/Portal Development	Java/J2EE Development	XML Web Services Development	Database App Development	Business Process SOA Integration	Cobol, CICS/IMS, 4GL Development

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SOA Business Driven Development – Roles and Primary Tools

Business Analyst

WebSphere BI Modeler

- Defines, models Processes
- Optimizes Processes through simulations

Solution Architect

Rational Software Architect

- Defines business contract and system use cases
- Models Service Implementation

Integration Developer

WebSphere Integration Developer

- Implements Processes and Composite Applications
- Defines/Connects Services & Interfaces

J2EE Developer

Rational Application Developer

- Implements Services
- Constructs other J2EE artifacts

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Business Models Driven into J2EE Workflows

- Business process model - Simulate cost/time savings and assign business measures (KPIs)

WebSphere Business Modeler

- Re-use business process model in visual workflow tools to build SOA J2EE web services

WebSphere Integration Developer

SOA Example - Composite Application

WebSphere Integration Developer

Loan System

Loan Process

1..1
1..1
1..1
1..1
1..1
1..1

Get Customer Information

Fraud Check

Credit Rating

Approval

Additional Services

Java application

getApplicationInfo
·
·
getAmount
·
·
getInterestRate

Java Application

Sell additional services based on customer profile

Human Task

Human intervention on suspect applications to prevent fraud

PeopleSoft system with customer credit ratings

Web

Imported EIS System

Call Credit Rating service from an existing application

Personal Loan Request

Get Customer Information

Credit Rating

Approval

Not Approved   Approved

Additional Services

Reply

WS-BPEL Business Process

Flexibly building business processes based on standards

If Approved then
   Send letter offering gold

If NOT Approved
   Send letter offering Credit counseling service

Business Rules

Enable rapidly changing customer decision point

Approved

Send letter to applicant   Start monthly payments

LetterSent   PaymentsStarted

Business State Machine

Adapting to business events

Bridging the Gap between Business and IT: How?
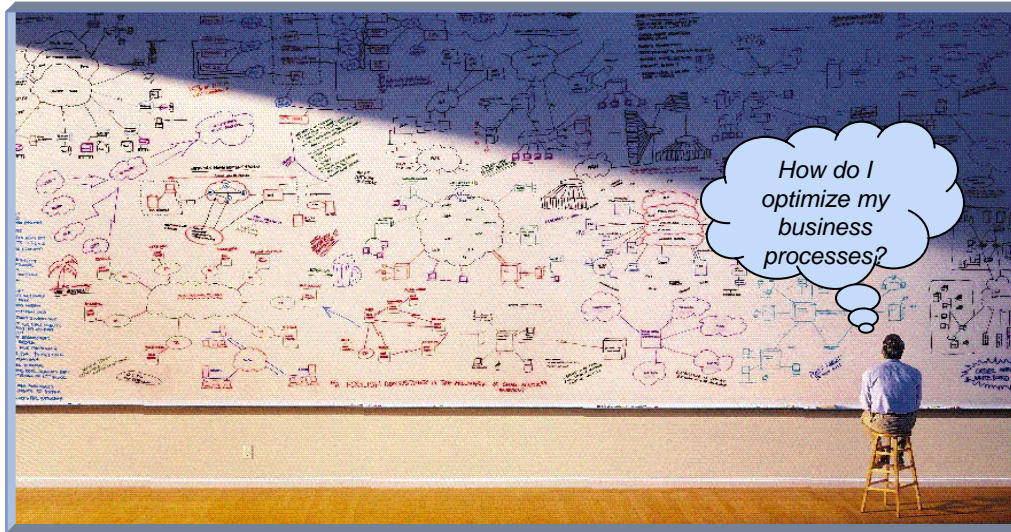
Build Tools - End-2-End Design & Construction
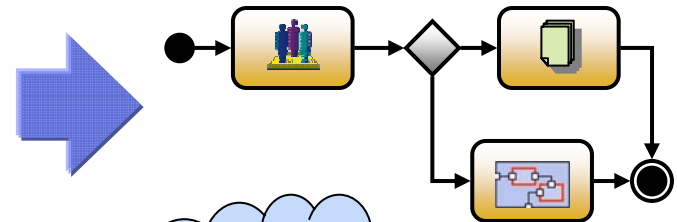
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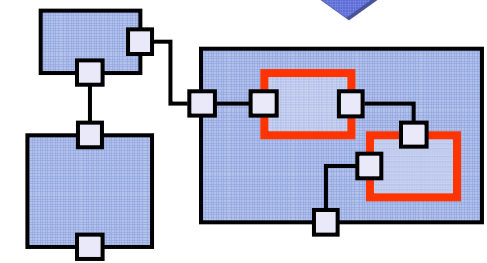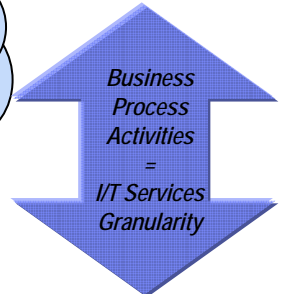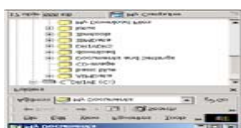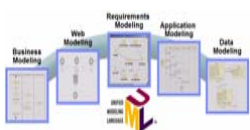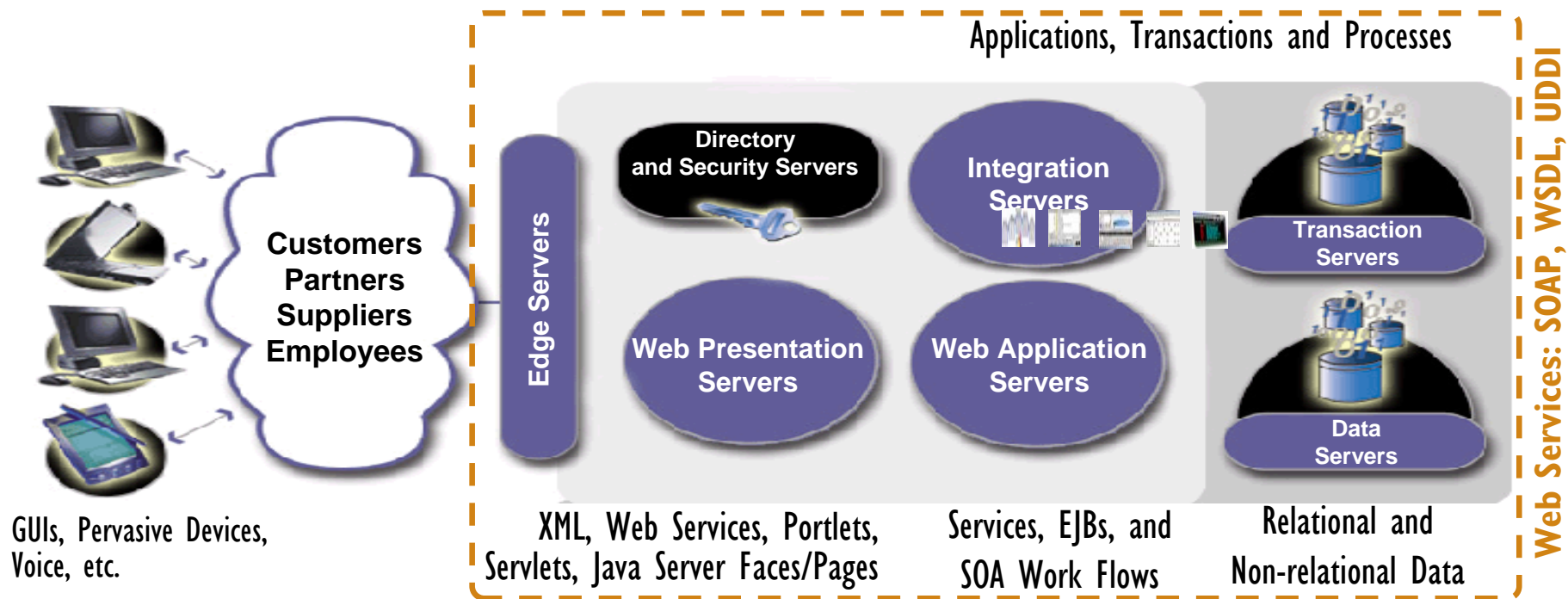
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IBM

IBM Software Group

Application Development Tools

➔ V6 Product Features Stack Charts ⬅

Name
Title
Company

Design and construction tools

IBM Rational
Software Architect

IBM Rational
Software
Modeler

IBM Rational
Application Developer

IBM Rational
Web Developer

Eclipse
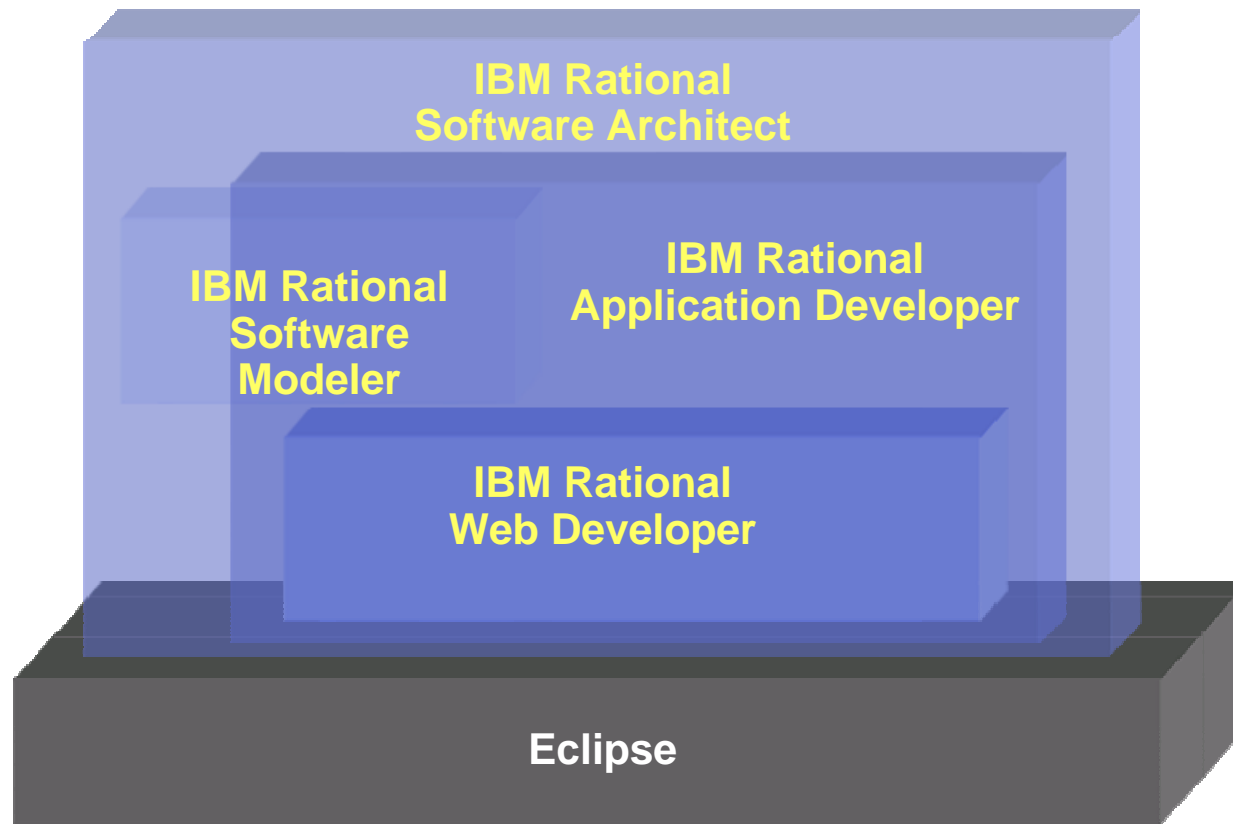
IBM Rational Web Developer

Follow on to WebSphere Studio Site Developer
New Rapid Application Development capabilities focused on ease of use

Web UI construction
- Visual site layout tools
- Drag-and-drop web client construction supporting range of web client technologies:
  - HTML, JSP, Servlet
  - Struts, JSF
  - Service Data Objects

Database tools
- Explore and design database schema
- SQL Query Builder
- Stored procedure builder

EGL

- Simplified 4GL for Web Application Development
- Text User Interface Programs Support (3270, Curses)
- VisualAge Generator -> EGL Migration Tool
- Java Runtime Targets

IBM Rational Web Developer

Web UI construction

Data tools

Rich Client UI construction

Enterprise Generation Language

Web Services Tools

XML Tools

Eclipse Java Dev Tools

Rich Client UI construction
- Visual Editor for Java for rich client composition
- Service Data Objects (SDO) Support
- Supports Swing, AWT, SWT widgets

Web Services Tools
- Create/manipulate services
- WSDL visual editor
- UDDI Registry browser

XML Tools
- XML, XSD, XSL, etc. tooling support

Eclipse Java Development Tools

- J2SE development tools
- Code completion, search, refactoring
- Extensible Team APIs to support CM integration (CVS, ClearCase, and many others)
- Plug-in Development Environment for extensibility

IBM Rational Application Developer

Follow on to WebSphere Studio Application Developer

IBM Rational Application Developer

- Component/Unit Test
- J2EE/EJB Tooling
- Portal/Portlet Design Tools
- Code Analysis Tools
- UML Visual Editors
- **Rational Web Developer**
- **RUP Configuration for J2EE**
- **ClearCase LT**

J2EE/EJB Tooling
- J2EE construction tools
- Supports WebSphere and WebLogic
- Supports J2EE 1.3 and 1.4
- Rapid Deployment for WAS v6
- Integrated WAS test environments
- O/R mapping

Code Analysis Tools
- Both static source code analysis and dynamic runtime analysis
- Source code analysis for rule violation detection: Globalization, J2EE/J2SE Best Practices, Private API Usage, Performance
- Sequence diagram runtime trace with performance, thread and code coverage annotation
- Advanced memory leak detection
- Remote data collection across multiple servers
- User-defined run-time probes
- Interactive reports and metrics
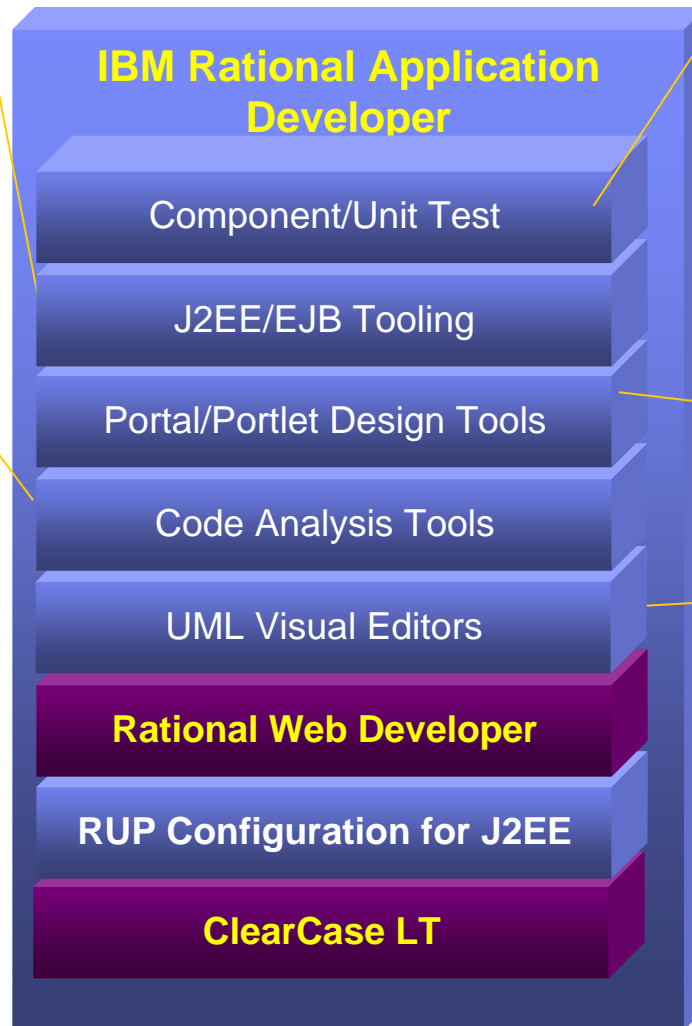
Component/Unit Test
- JUnit-based testing of Java components, EJBs and Web Services
- Test prioritization recommendation based on code analysis
- Automated test case generation through usage of test patterns
- Datapool editor for data-driven testing
- Optimized unit testing through a set of metrics in the test creation wizard
- Test creation wizard offers a set of test patterns to automatically generate test

Portal/Portlet Design Tools
- Visual Portal site and page layout tools
- Visual Portlet layout and preview
- Integrated Portal test environment

UML Visual Editors
- Class diagrams for Java/EJB structure
- Sequence diagrams for method body visualization
- IDEF1X/IE diagrams for Database and XML schema
- Dynamic topic diagrams
- Javadoc integration
- Visual refactoring

IBM Rational Software Modeler

IBM Rational Software Modeler

Lifecycle Integrations

Reusable Asset Browser

Pattern/Transformation Authoring

Report Generation

UML 2.0 Modeling

ClearCase LT

Reusable Asset Browser
- Browse and import assets from a repository
- Package model and development artifacts into a RAS bundle

Report Generation
- HTML and XML based data extraction and reporting
- Extensive printing
- Model traceability reporting and custom queries

Lifecycle Integrations
- Drag-and-drop association of RequisitePro requirements with models
- Interface to CM tools
- Visual compare/merge
- Document generation with SoDA

Pattern/Transform Authoring
- Sample UML-to-code transforms for EJB, Java, and C++
- Selective language to UML harvesting
- Pattern content
- Pattern/Transform authoring framework and services

UML 2.0 Modeling
- UML 2.0 Diagrams for Class, Communication, Component, Composite Structure, Deployment, Activity, Sequence, State, and Use Case
- UML Profile Editor
- OCL Support
- Automatic diagram generation
- Extensive open API
- Java-based "scripting" for extensibility using the Eclipse JDT

IBM

IBM Rational Software Architect

Application Analyzer

- Automatic anti-pattern and pattern detection
- Architectural discovery, analysis, metrics, and stability reporting
- Implementation level architectural rules

Modeler

- UML 2.0 Diagrams for Class, Communication, Component, Composite Structure, Deployment, Activity, Sequence, State, and Use Case
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- RAS tools

IBM Rational Software Architect

Java Structural Analysis

UML Language Transforms

Software Modeler

C/C++ Development Tools

Application Developer

RUP Configuration for SW Architects

ClearCase LT

Transformations
- Sample UML-to-code transforms for EJB, Java, and C++
- Selective language to UML harvesting

C/C++ Support
- C/C++ editors and build management
- Compiler and debugger integration
- UML code editors

WSAD v6

- JSF, SDO, Struts
- Java GUI editor
- Web diagram editor
- Site designer
- Web Services development tools
- Database editing tools
- EGL
- EJB development tools
- UML code editors: EJB, Java, Data
- Static Analysis
- Runtime Analysis
- Component test automation
- Portal/Portlet development tools

IBM

Software quality tools

IBM Rational Performance Tester

**IBM Rational
Functional Tester**

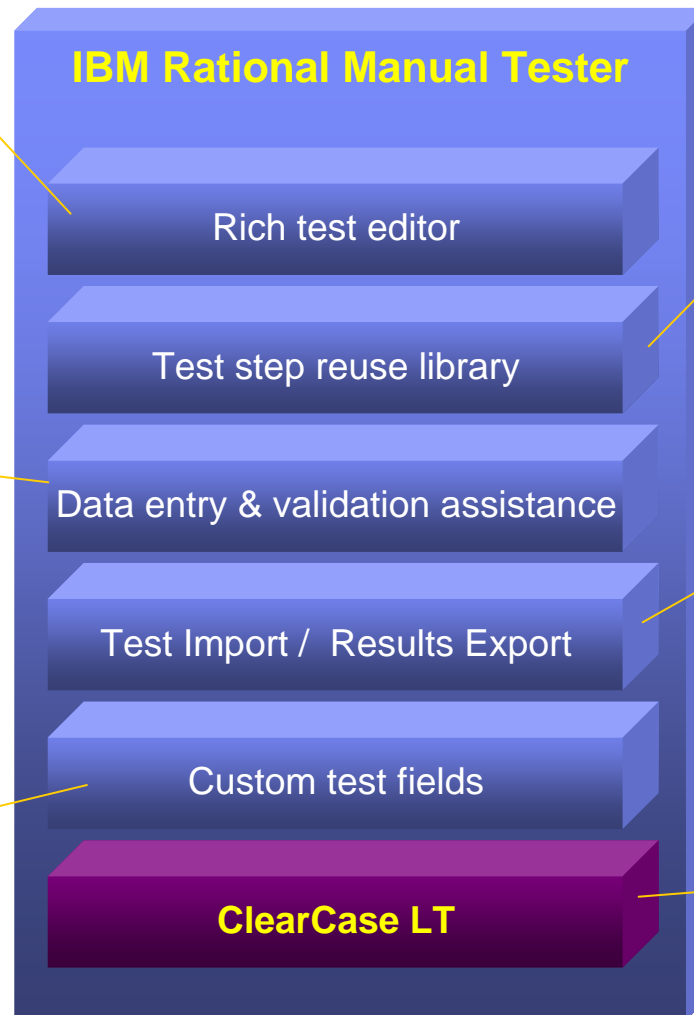**IBM Rational
Manual Tester**

Eclipse

IBM

IBM Rational Manual Tester

Manual test authoring and execution

Rich Text Editor
- Modify test font, size, color; attach images and files
- Supports creation of both test steps and verification points
- Ensures clarity of test step direction and consistency of test execution

Tool Assistance
- Automated data entry
- Automated data comparison and results storage
- Reduces opportunity for manual error during test execution

Customizable
- Add new data fields to individual test steps
- Apply internally-defined naming conventions

IBM Rational Manual Tester

Rich test editor

Test step reuse library

Data entry & validation assistance

Test Import / Results Export

Custom test fields

ClearCase LT

Reuse Library
- Library for common test procedures
- Drag-and-drop construction of new tests
- Automatic global update when modifying any one instance of linked content

Import/Export
- Imports manual test source files from Microsoft Word, Microsoft Excel and Rational TestManager
- Exports test results to CSV format for additional analysis

ClearCaseLT "in the box"
- Supports parallel development of manual tests
- Enables remote test access for distributed teams

IBM Rational <u>Functional</u> Tester

Automated functional regression testing

IBM Rational Functional Tester

GUI Technologies
- Automates regression testing of Java, .NET, Web and terminal emulator-based applications

Tests Java, .NET, Web and terminal emulator-based apps

Java and VB.NET-based test scripts

Data-driven Testing
- Simplified data-driven testing enabled by wizards and Excel-like data tables

Wizard and table-assisted data-driven tests

Linux-based test authoring

Eclipse availability
- When using Java scripting, runs inside Eclipse/RSA/RAD shell
- Full Eclipse JDT features are accessible
- Accessible to developers from within their IDE

Eclipse Java Dev Tools

Manual Tester

ClearCaseLT "in the box"
- Supports parallel development of manual tests
- Enables remote test access for distributed teams

ClearCase LT
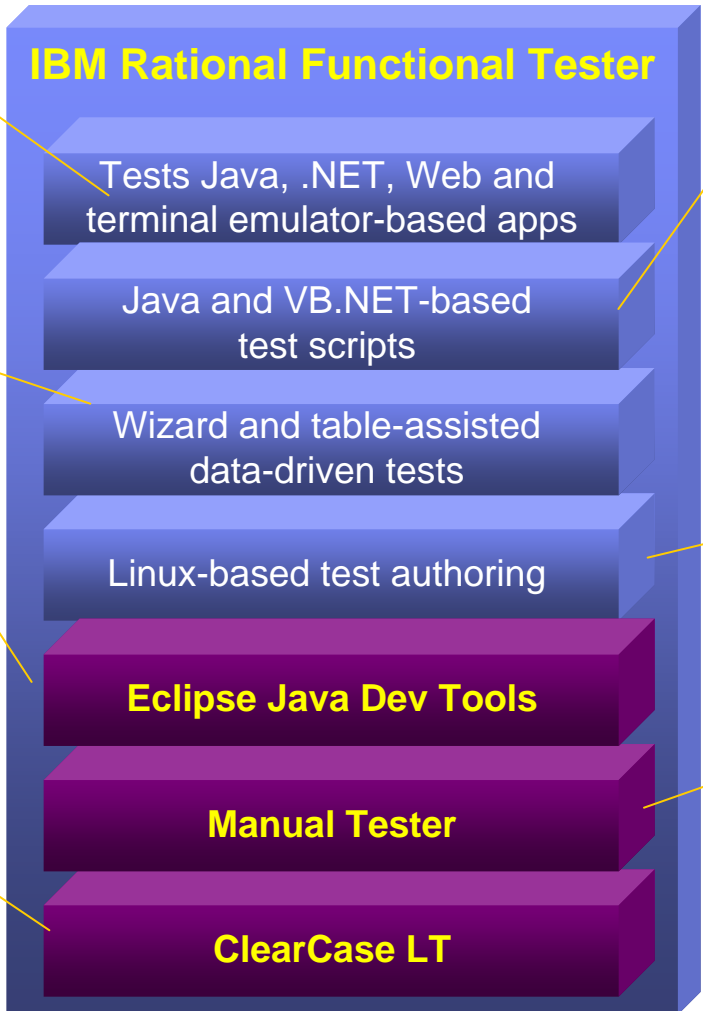
Test Script Language
- User has choice of two test script languages – Java and VB.NET
- Use of Java implies editing and debugging in Eclipse/RAD/RSA-based editor
- Use of VB.NET implies usage of Microsoft VS.NET-based editor/debugger
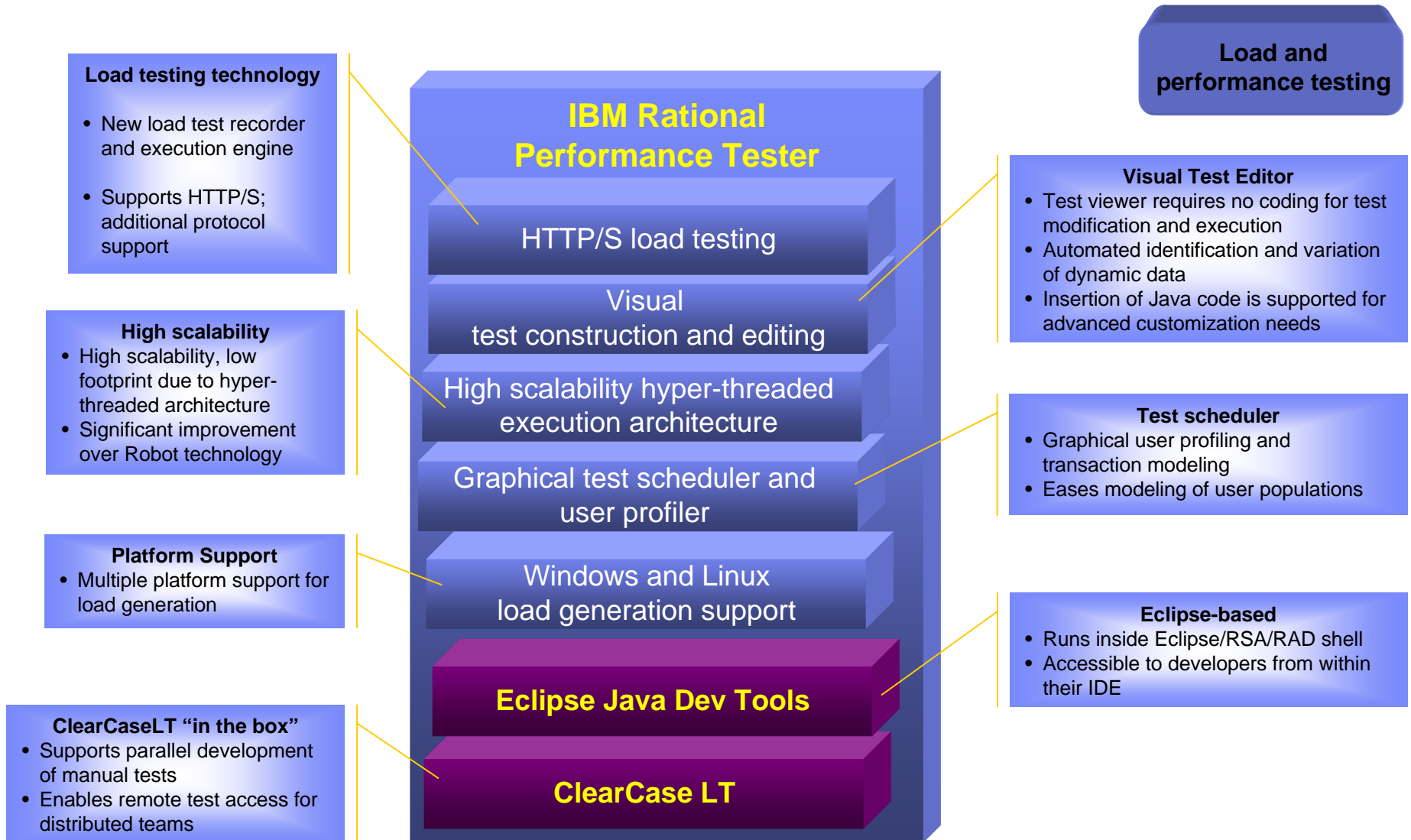- Identical capabilities in both editors

Improved Linux support
- Users can author and modify test scripts on Linux (no script recorder)
- Scripts can also be executed on Linux

Manual Tester in the box
- Customers receive one Manual Tester license per Functional Tester license
- Improve return on manual testing efforts while adopting automated test methods

IBM Rational Performance Tester

Load and performance testing

Load testing technology

- New load test recorder and execution engine

- Supports HTTP/S; additional protocol support

High scalability
- High scalability, low footprint due to hyper-threaded architecture
- Significant improvement over Robot technology

Platform Support
- Multiple platform support for load generation

ClearCaseLT "in the box"
- Supports parallel development of manual tests
- Enables remote test access for distributed teams

IBM Rational Performance Tester

HTTP/S load testing

Visual test construction and editing

High scalability hyper-threaded execution architecture

Graphical test scheduler and user profiler

Windows and Linux load generation support

Eclipse Java Dev Tools

ClearCase LT

Visual Test Editor
- Test viewer requires no coding for test modification and execution
- Automated identification and variation of dynamic data
- Insertion of Java code is supported for advanced customization needs

Test scheduler
- Graphical user profiling and transaction modeling
- Eases modeling of user populations

Eclipse-based
- Runs inside Eclipse/RSA/RAD shell
- Accessible to developers from within their IDE

IBM Software Group

Application Development Tools

➔ RAD V6 Accelerated Learning ⬅

Name

Title

Company

New Infocenter, including "Education Assistant"

- **New Infocenter**
  http://ibm.com/software/
  webservers/appserv/
  infocenter.html

- **Education Assistant**

  - Presentations narrated with sound

  - Tutorials

  - Reference information

- **Installed with WAS and on ibm.com**

"Education Assistant" – RAD V6 – Modules

IBM Education Assistant
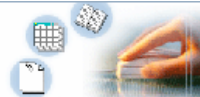
Select your configuration:
IBM ® Rational ® Application Developer V6.0

Select how to display results:
Task based view

Go

Click on links below to view educational material.

Application development	IBM Rational Application Developer V6
Getting started	Tool overview Eclipse overview
Installation and migration	Installation and migration
J2EE™ application development	Developing Java™ and J2EE applications with Unified Markup Language (UML) Analyzing coding practices in Java and J2EE applications J2EE Web and EJB™ development
Web application development	Developing Web applications (including J2EE Web applications) Developing Web applications with JavaServer™ Faces (JSF)
Portal application development	Developing portal applications

Data application development	Developing applications with Service Data Objects (SDO) Developing applications for databases
XML application development	XML application development
Web services applications	Developing Web services applications Securing Web services applications Testing Web services applications
Test, debug and profile applications	Testing applications with WebSphere Application Server V6 Component testing applications Debugging Java and J2EE applications Profiling Java and J2EE applications
Applying security	Applying J2EE security to EJBs and Web applications

- New Infocenter
  http://ibm.com/software/webservers/appserv/infocenter.html
- Education Assistant
  - Presentations narrated with sound
  - Tutorials
  - Reference information

RAD V6 Tutorial Demo Series (http://JavaDevTools.com)

Executives and Managers

- *Watch and Learn*: Simply view the "Tutorial Demo" movies to see ROI in action…in just minutes!

Architects and Developers

- *Watch and Do*: Use the "Tutorial Demo" movies to build the reference applications from scratch!

#1 *End-2-End Application*

#2 *Quick Success Apps*

#3 *Banking & Finance*

RAD V6 Tutorial Demo Series – How They Work…

- *The embedded movie player has playback controls like a DVD player.*
- *The SLIDER allows accelerated forward/reverse playback control.*
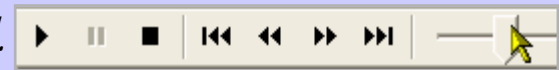
Magnified View of Slider

- BankCustomersV

Toolbar Insert

Web - Web Browser - IBM Rational Software Development Platform

File   Edit   Navigate   Search   Project   Run   Window   Help

BankCustomersView.jsp   BankPortfoliosView.jsp   Web Browser

http://localhost:9081/wps/myportal/!ut/p/_s.7_0_A/7_0_407/.cmd/ad/.ar/1847068225/.pm/-/.c/6_0_3T3/.ce/7_0_40A/.p/5_0_3T1/.d/

BankCustomers portlet

Bank Customers

Customers   Portfolios Dashboard

Cust #	First Name	Last Name	Address	City	State	Zip	e-mail	Work Phone
1	Arthur	Platinum	123 Easy Street	Long Island	NY	11101	Cash.A.Plenty@mail.com	773-123-1111
2	Betsy	Golden	45 Plush Circle	Arlington	VA	22202	Gold.P.Lated@mail.com	773-123-2222
3	Charlie	Silver	67 Humble Avenue	Fort Lauderdale	FL	33303	Simply.E.Nuff@mail.com	773-123-3333
4	Denise	Copper	89 Trailer Park Drive	Burghill	OH	44404	Always.N.Debt@mail.com	773-123-4444

BankPortfolios portlet

Bank Portfolio Management

Customer #   3

Analyze Customer Portfolio

Portfolio   Allocation   Graphics   Market Simulation

Fund Acct #	Fund Name	% of Folio	$ Invested	Risk	% Return	$ Projected
301	Blended - Income Plus Life Strategy	5%	$25,000.00	1	2.125%	$25,531.25
302	Blended - Conservative Life Strategy	5%	$25,000.00	2	4.25%	$26,062.50
303	Blended - Moderate Life Strategy	5%	$25,000.00	3	6.375%	$26,593.75
304	Blended - Aggressive Life Strategy	5%	$25,000.00	4	8.425%	$27,106.25
305	Money Market	5%	$25,000.00	1	2.125%	$25,531.25
306	Bond - Stable Value	10%	$50,000.00	1	2.125%	$51,062.50

Paused   00:59/01:06

End-2-End Application

Demo

"Accelerate development…
    increase productivity…
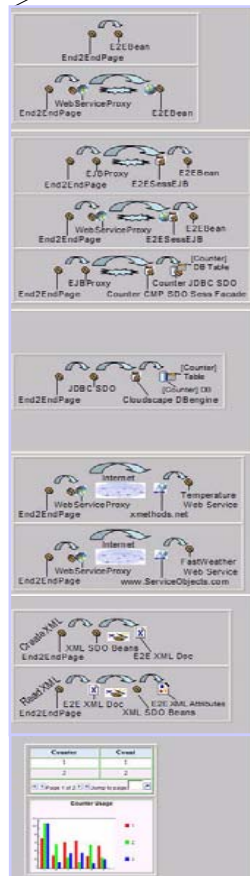   maximize ROI !$! "

Iterative Development Demos

➜ Model, Build, Test, Debug, Deploy

- UML Model Visualizations

- Dynamic Development

- Automated Deployment

J2EE+ Builder Demos

➜ Includes JSF, SDO, Web Services

- Java

- Databases

- Web Services
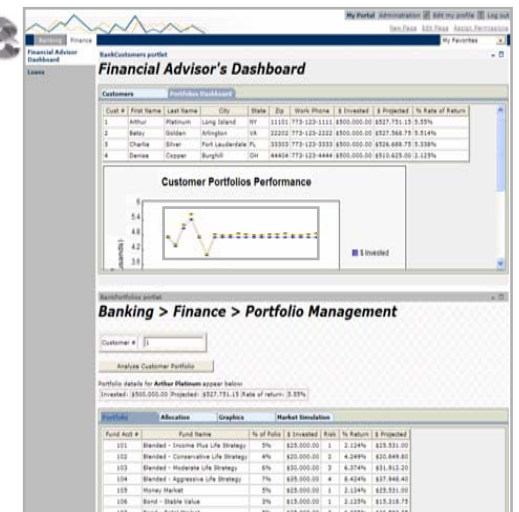
- Drag-n-Drop GUI
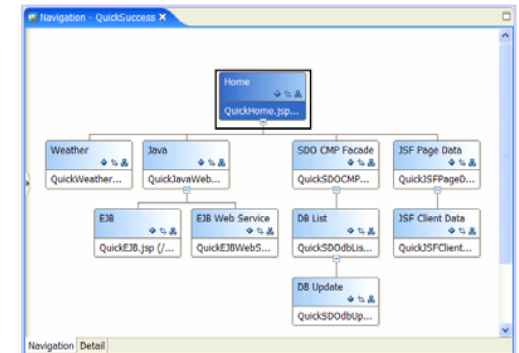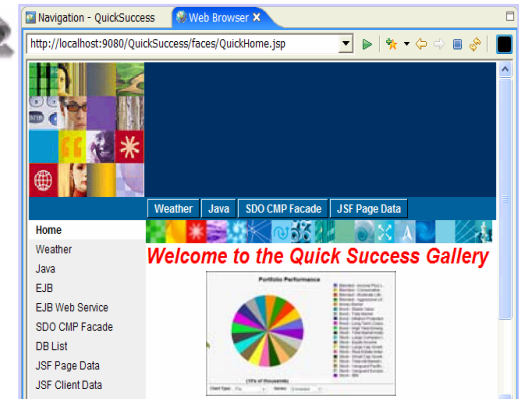
Quick Success Applications

Demo

- Easy build scenarios

- You watch or build

- < 10 minutes each

Banking & Finance Web/Portal Applications

Demo

- Banking Accounts

- Portfolio Management
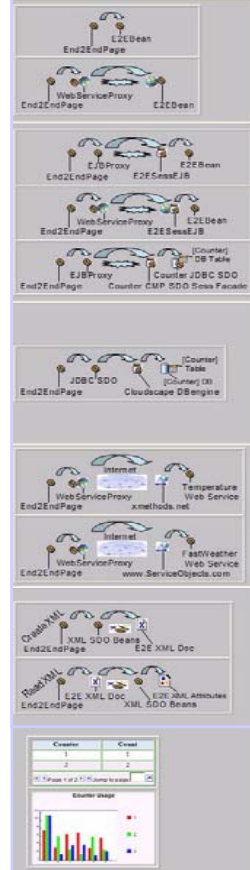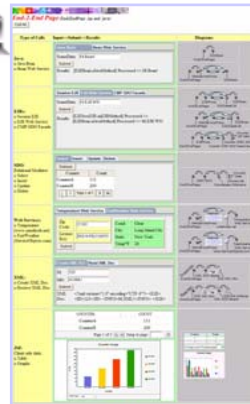
- Financial Advisor Dashboard

End-2-End Application

"Accelerate development…
increase productivity…
maximize ROI !$! "

Iterative Development Demos

➔ Model, Build, Test, Debug, Deploy
- UML Visualizations
- Dynamic Development
- On-the-fly code changes
- Incremental build engine
- Testing for Java, EJBs, Web Services, etc…
- Dynamic Interactive Debugger
- Automated Application Packaging and Deployment

J2EE+ Builder Demos

➔ Includes JSF, SDO, Web Services
- Java and EJBs (Session, CMP)
- Service Data Objects (SDO)
- SDO CMP Session Facades
- XML and XSD Schemas
- XML SDO JavaBean Bindings
- JavaServer Faces (JSF)
- Database and SQL
- Web Services Creation and Consumption

Quick Success Gallery Applications

- Easy J2EE build scenarios
- Internet Weather Web Service
- JavaBean Web Service
- EJB Web Service
- Service Data Objects (SDO)
  - Database Mediator: Select, Insert, Update, Delete
- Java Server Faces (JSF)
  - Rich UI Controls, Charts/Graphs, drag-n-drop
  - Custom coding, Event Driven, MVC Framework
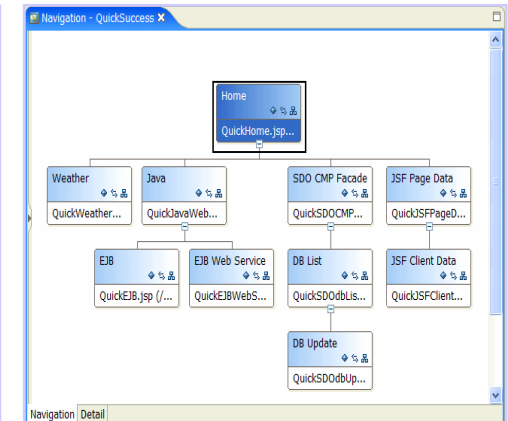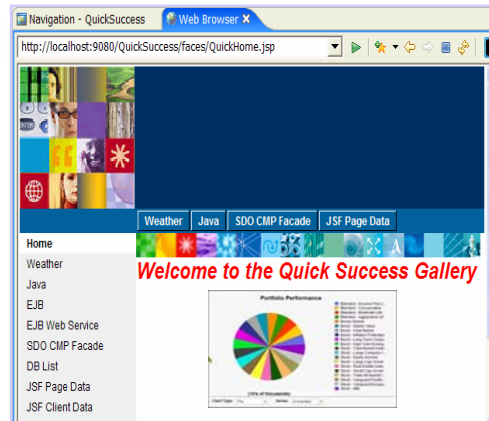
Banking & Finance
Web/Portal Applications

- Transfer Funds
- Transaction History
- Account Management
- Portfolio Management
- Asset Allocation
- Graphical portfolio analysis
- Stock Market Simulation
- Mutual Funds, Stocks, Bonds, Money Mkt

#2

Navigation - QuickSuccess | Web Browser ✕

http://localhost:9080/QuickSuccess/faces/QuickHome.jsp

Weather Java SDO CMP Facade JSF Page Data

Home
Weather
Java
EJB
EJB Web Service
SDO CMP Facade
DB List
JSF Page Data
JSF Client Data

Welcome to the Quick Success Gallery

Navigation - QuickSuccess ✕

Home
QuickHome.jsp...

| Weather | Java | SDO CMP Facade | JSF Page Data |
| QuickWeather... | QuickJavaWeb... | QuickSDOCMP... | QuickJSFPageD... |

| EJB | EJB Web Service | DB List | JSF Client Data |
| QuickEJB.jsp (/... | QuickEJBWebS... | QuickSDOdbLis... | QuickJSFClient... |

DB Update
QuickSDOdbUp...

Navigation Detail

#3

My Portal Administration Edit my profile Log out
New Page Edit Page Assign Permissions

Banking Finance

My Favorites

Financial Advisor Dashboard
Loans

BankCustomers portlet

Financial Advisor's Dashboard

Customers | Portfolios Dashboard

Cust #	First Name	Last Name	City	State	Zip	Work Phone	$ Invested	$ Projected	% Rate of Return
1	Arthur	Platinum	Long Island	NY	11101	773-123-1111	$500,000.00	$527,751.15	5.55%
2	Betsy	Golden	Arlington	VA	22202	773-123-2222	$500,000.00	$527,568.75	5.514%
3	Charlie	Silver	Fort Lauderdale	FL	33303	773-123-3333	$500,000.00	$526,688.75	5.338%
4	Denise	Copper	Burghill	OH	44404	773-123-4444	$500,000.00	$510,625.00	2.125%

Customer Portfolios Performance

6
5.4
4.8
4.2
3.6
(thousands)

■ $ Invested

BankPortfolios portlet

Banking > Finance > Portfolio Management

Customer # | 1

Analyze Customer Portfolio

Portfolio details for **Arthur Platinum** appear below:

Invested: $500,000.00 Projected: $527,751.15 Rate of return: 5.55%

Portfolio | Allocation | Graphics | Market Simulation

Fund Acct #	Fund Name	% of Folio	$ Invested	Risk	% Return	$ Projected
101	Blended - Income Plus Life Strategy	5%	$25,000.00	1	2.124%	$25,531.00
102	Blended - Conservative Life Strategy	4%	$20,000.00	2	4.249%	$20,849.80
103	Blended - Moderate Life Strategy	6%	$30,000.00	3	6.374%	$31,912.20
104	Blended - Aggressive Life Strategy	7%	$35,000.00	4	8.424%	$37,948.40
105	Money Market	5%	$25,000.00	1	2.124%	$25,531.00
106	Bond - Stable Value	3%	$15,000.00	1	2.125%	$15,318.75
107	Bond - Total Market	5%	$25,000.00	2	6.375%	$26,593.75

Resources

- **http://ibm.com/developer**
  (IBM developerWorks for technologies and/or products)
  - Java, J2EE, Web Services and other technology zones are on the left hand side
  - WebSphere Zone: http://ibm.com/developer/websphere
  - Rational Zone: http://ibm.com/developer/rational
  - Free Education Portal: http://ibm.com/developer/training

- **http://www.redbooks.ibm.com**
  (How-To Step-by-step Practical Implementation Books)

- **Sun Java/J2SE/J2EE Tutorials:** Java Tutorial Online , J2EE Tutorial Online , J2EE Tutorial BOOK

- **http://JavaSOA.com** (a.k.a. JavaDevTools.com, RationalCentral.com, WebSphereCentral.com)
  (Tutorials, Links, Presentations, White Papers, Articles, etc.)

developerWorks
DB2 ▶
eServer ▶
Lotus ▶
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Tivoli ▶
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Java™ technology ▶
Linux ▶
Open source ▶
Power Architecture™ ▶
SOA and Web services ▶
Web architecture ▶
Wireless technology ▶
XML ▶
Feedback

Related links
- ISV resources
- alphaWorks (emerging technologies)
- Academic program
- IBM Redbooks
- IBM Press books