

Rational. software



# IBM Rational Software Development Conference 2005



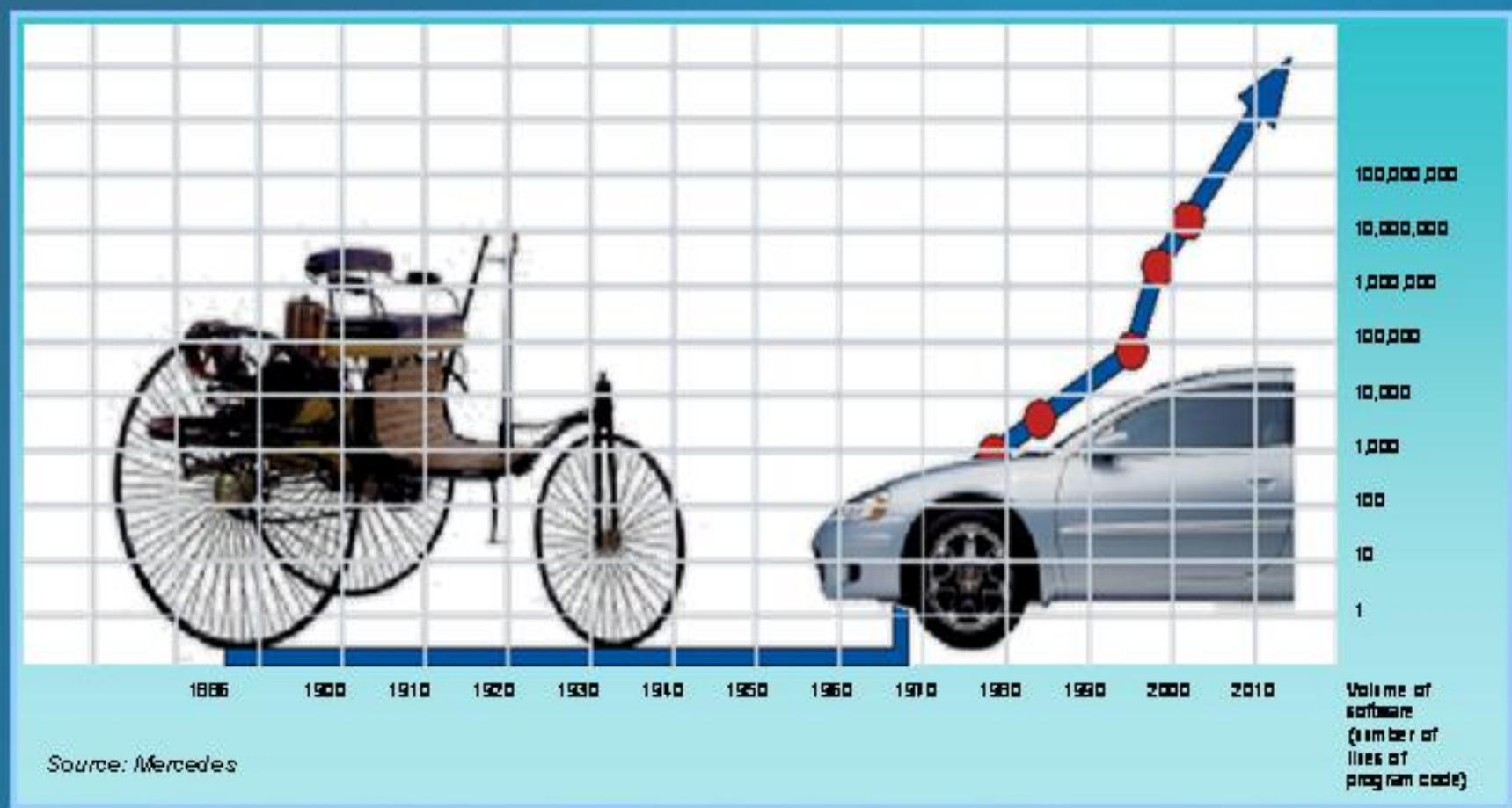
Better Software. Better Business.

IBM.

# Agenda

- Business-driven development in action
- Transforming and simplifying development
- Accelerating your success with developerWorks resources

# Software development drives innovation



Source: Gartner, April 2003, *Embedded Software Development and Management - Automotive Industry*

# What happens when you bring business and technology together?



# Better software. Better health care. **Assurant Health** *Leading health insurance provider*



## Challenge: Improve business flexibility

- Greater health care choice to consumers
- More flexible product options to agents
- Gain control over chronic “requirements creep”

## Solution: Business-driven development

- “Adoption through execution” strategy
- Starts with requirements management & business modeling

## Results:

- More flexible health care products
- Improved competitive position
- IT as a competitive differentiator

**IBM Rational RequisitePro**  
**IBM Rational Rose**  
**IBM Rational ClearQuest**  
**IBM Rational TestManager**  
**IBM Rational Robot**

# Better software. Better financial services. **PMI Group, Inc.**

*Leading international provider  
of credit enhancement products*



## **Challenge: Legacy systems restrictions**

- Innovation constrained by inflexible mainframe systems
- Systems constrained growth and diversification
- Inflexible architecture inhibited re-use

## **Solution: Modular, SOA framework**

- Extends legacy investments
- Supports offshore and distributed teams
- Embraces iterative methodology and visual design

## **Results:**

- A platform that supports innovation and growth
- Improved governance across three continents
- Architecture now a source of competitive advantage

**IBM Rational Rose/XDE Java  
IBM Rational Unified Process**

**Better software.  
Better retail.**

## **Ludwig Götz GmbH/Ethalon**

**A leading European shoe retailer — 240 shops**



**Challenge: Business process optimization**

- Inefficient document-based workflows
- Application overload
- Lack of access to mobile applications
- High administration costs

**Solution: User portal with secure mobile access**

- Portal-based architecture
- Easy-to-use, personalized user interface
- Support for mobile devices

**Results:**

- 15% improvement in document throughput
- 25% increase in employee satisfaction
- Scalable foundation

**IBM Rational  
Application Developer**  
**IBM WebSphere Portal**  
**IBM WebSphere Everyplace**

# Agenda

- Business-driven development in action
- Transforming and simplifying development
- Accelerating your success with developerWorks resources

# Patterns of success

Traditional

What's Different

Business-Driven

Technology First

*How you approach  
the problem*

Align Business  
and Technology

Waterfall

*How you organize  
the process*

Incremental  
Transformation

Silos; Monolithic

*How you architect  
the solution*

Services-Oriented

## Business-Driven Development

An integrated approach to software development that aligns line-of-business, development and operations teams to improve business performance

# IBM: Delivering all three dimensions of business-driven development

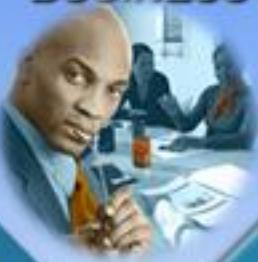


# 1. Integrating the business view



# Challenges facing business teams

## BUSINESS



- Poor governance over IT investments
- Lack of actionable information
- Blind decision-making

OPERATIONS

DEVELOPMENT

*51% of projects in 2004 were delayed or over budget, another 15% of projects failed outright<sup>1</sup>*

<sup>1</sup>"Standish: Project Success Rates Improved Over 10 Years" (Software Magazine, 1/15/2004)



# **Business-driven development means you start with the business**



- Understand business needs
- Evaluate alternatives
- Make decisions based on ROI, cost, time-to-market, risk
- Monitor progress against objectives
- Manage exceptions and change

# Align priorities, projects, and people

## IBM Rational Portfolio Manager

IT &  
Executive  
Leadership



- ✓ Real time visibility into IT supply/demand
- ✓ Balance risk, reward, and investment
- ✓ Support governance and compliance

Project  
& Program  
Managers



- ✓ Leverage best practices
- ✓ Actively manage risks and issues
- ✓ Manage resource demands globally

Teams



- ✓ Communicate, coordinate  
and collaborate globally

Used by IBM on more than 10,000 projects worldwide



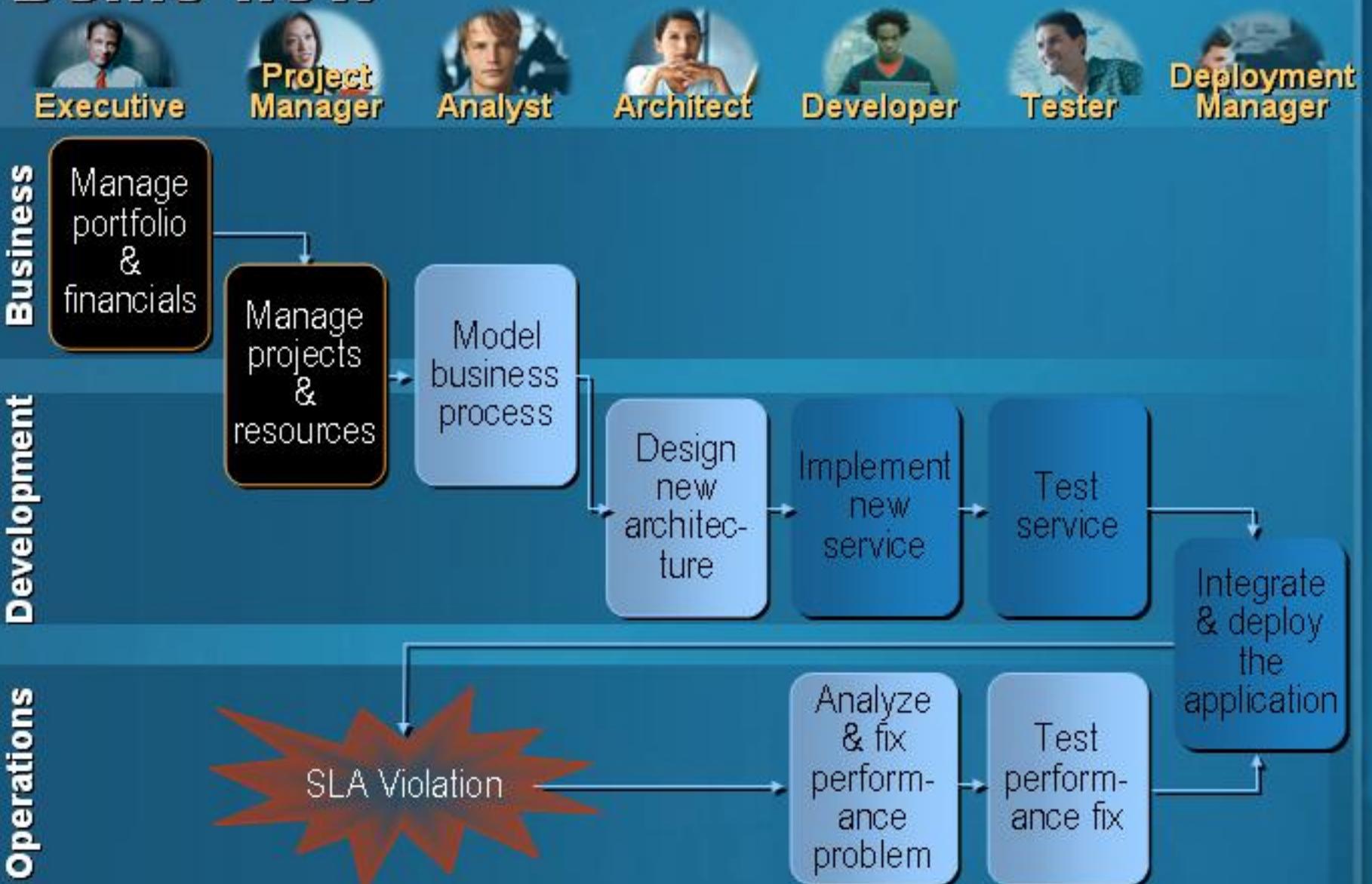
# **Introduction to JK Enterprises**

## **Leading (fictitious) insurance company**



- Poor customer satisfaction
- Losing revenue to competitors
- Must improve account management processes

# Demo flow



# What you saw...



Business

Manage portfolio & financials

Manage projects & resources

Development

Operations

## Align priorities, projects, and people

Model business process

✓ Make portfolio and resource allocation decisions

✓ Plan and manage projects

✓ Manage team workflow using Rational ClearQuest

Rational Portfolio Manager  
Rational ClearQuest

SLA Violation

# Announcing...

AVAILABLE  
NOW!



*Enhanced products and new services integrate the business view into the software lifecycle*

**Unify project management and software development project views**

**Gain objective insight into your project or program management practices**

**Integrate portfolio management with your business & technology environment**

- ✓ **IBM Rational Portfolio Manager 6.1**
  - Rational Unified Process (RUP) project templates
- ✓ **IBM Rational Project/Program Management Assessment Service**
- ✓ **IBM Fast Track Deployment Service for Rational Portfolio Manager**
- ✓ **IBM Standard Deployment Service for Rational Portfolio Manager**

## **2. Automate and accelerate development activities**



# Challenges facing development teams



*60 to 80 percent of the average company's IT budget is spent on maintaining existing applications<sup>1</sup>*

- Overwhelming complexity
- Relentless time-to-market pressure
- Geographically distributed teams

<sup>1</sup>"Optimizing Enterprise IT" (*Intelligent Enterprise*, 2/24/2005)



# The IBM Software Development Platform

*A complete, open, modular, and proven solution*



**Analyst**



**Architect**



**Developer**



**Tester**



**Deployment Manager**

Model,  
simulate,  
assemble,  
and monitor  
business  
processes

Model  
applications  
and data

Visually  
construct,  
transform,  
integrate  
and  
generate  
code

Design,  
create,  
and  
execute  
tests

Provision,  
configure,  
tune and  
troubleshoot  
applications



**Project Manager**

- Follow a common process
- Track project status
- Manage requirements
- Manage change and assets
- Manage quality

**TEAM UNIFYING PLATFORM**



# December 2004 release

2004



**Analyst**

WebSphere  
Business  
Integration  
Modeler  
& Monitor  
  
Rational  
Software  
Modeler



**Architect**

Rational  
Software  
Architect



**Developer**

Rational  
Application  
Developer  
  
Rational Web  
Developer  
  
WSAD  
Integration  
Edition



**Tester**

Rational  
Functional  
Tester  
  
Rational  
Manual Tester  
  
Rational  
Performance  
Tester



**Deployment  
Manager**

Tivoli  
Configuration  
Manager  
  
Tivoli  
Monitoring

*Customer  
Extensions*

**ECLIPSE**

*3rd Party  
ISV Tools*



**Project Manager**

Rational Team Unifying Platform (Rational Unified Process,  
RequisitePro, Test Manager, ClearCase, ClearQuest)



**Executive**

**Rational Portfolio Manager**



# Supporting geographically distributed development teams

*Teams dispersed across town,  
across the border or overseas*

- Onsite
  - Internal staffing
  - Outsourced service suppliers
- Offshore
  - Direct ownership of foreign facilities
  - Wholly owned subsidiaries
  - Outsourced contract with service supplier
- Offsite
  - Internal staffing or direct ownership
  - Outsourced

**NEW!**

**ClearQuest MultiSite  
Deployment Service**



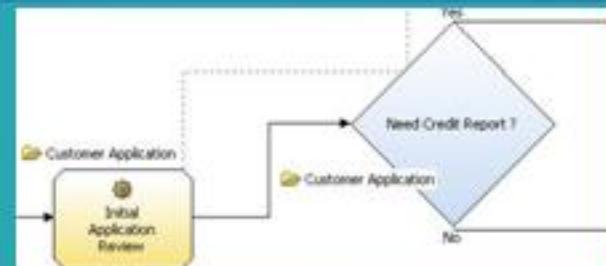
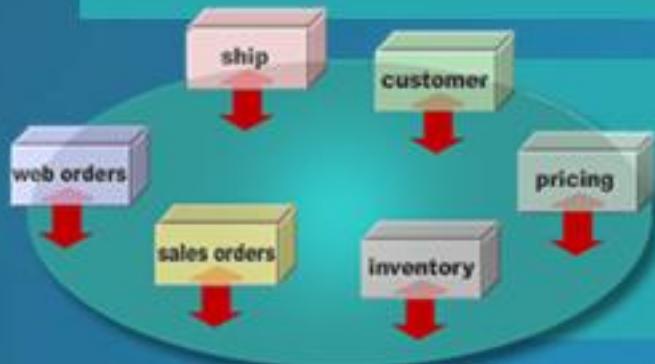
*In all cases, the company is ultimately responsible  
for delivering business results*

# Raising the level of abstraction

## Software modularity in a world of inexpensive compute power, bandwidth

1

Deconstruct your business model

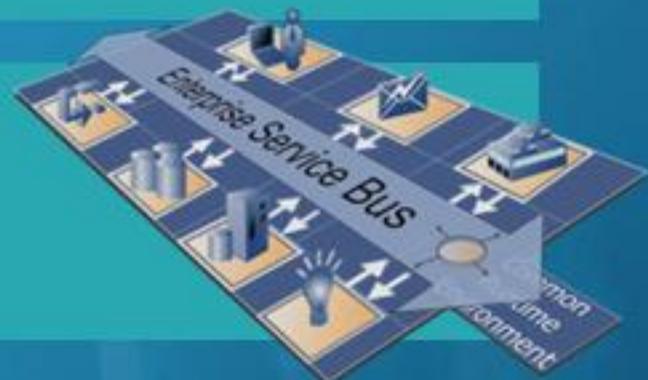


2

Create services defined as units of business logic

3

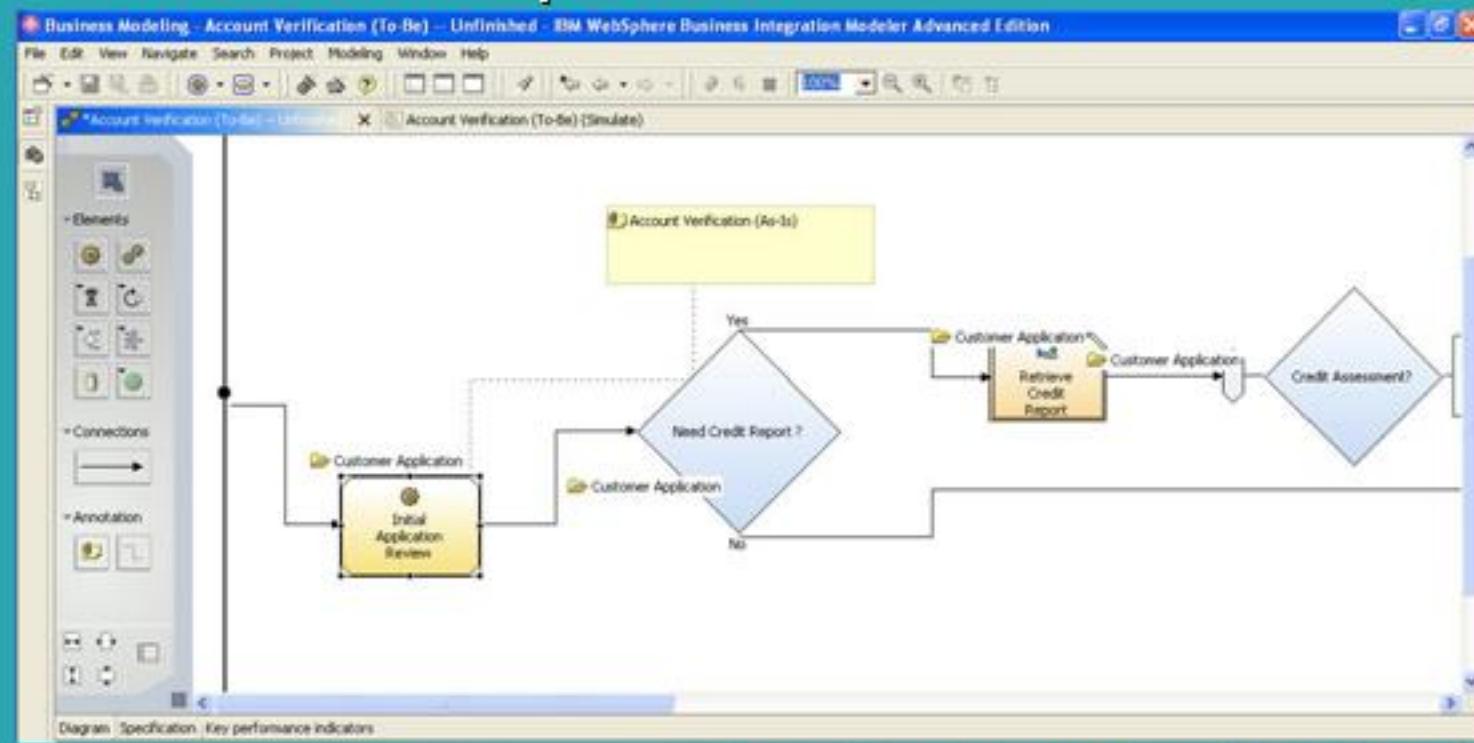
Dynamically orchestrate services



# Raising the level of abstraction Software modularity in a world of inexpensive compute power, bandwidth

1

Deconstruct your business model by breaking it down into discrete business processes, or service components



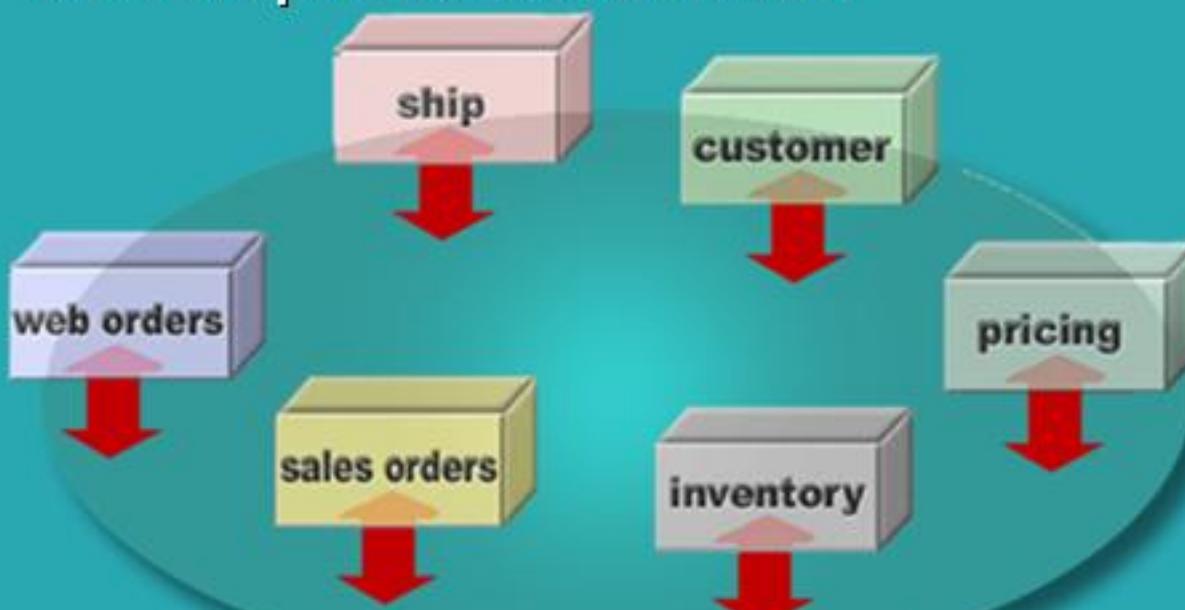
# Raising the level of abstraction

## Software modularity in a world of inexpensive compute power, bandwidth

2

Create services defined as units of business logic, separated from:

- Flow of control
- Data and protocol transformation



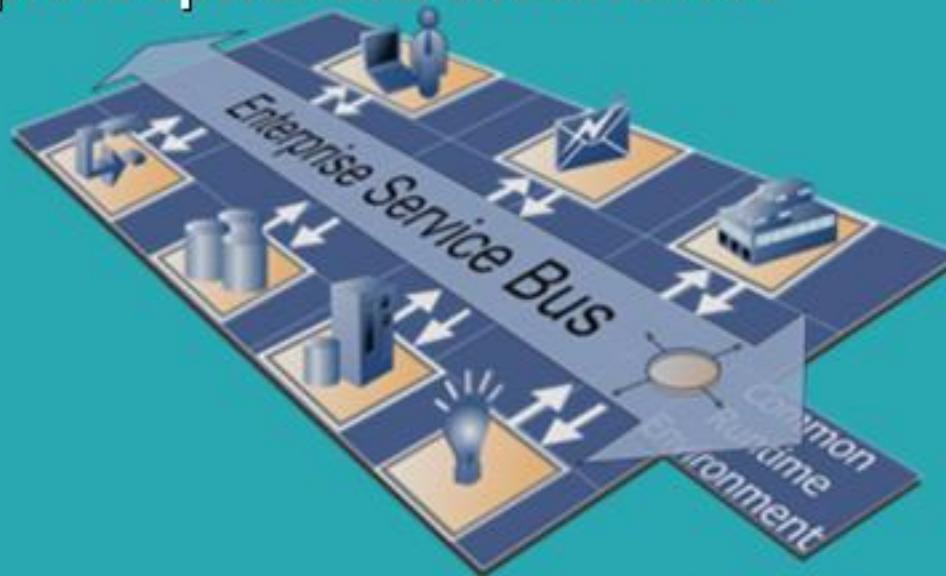
# Raising the level of abstraction

## Software modularity in a world of inexpensive compute power, bandwidth

3

### Dynamically orchestrate services

- Expand your choice of vendors and partners
- Allow quick combination of new and existing applications to address changing business needs
- Improve operational effectiveness



# The foundation Service Oriented Architecture

## Componentized

Standardized services interfaces for applications and resources

## Modular

Mix and match, add or remove, business processes and infrastructure

## Interoperable

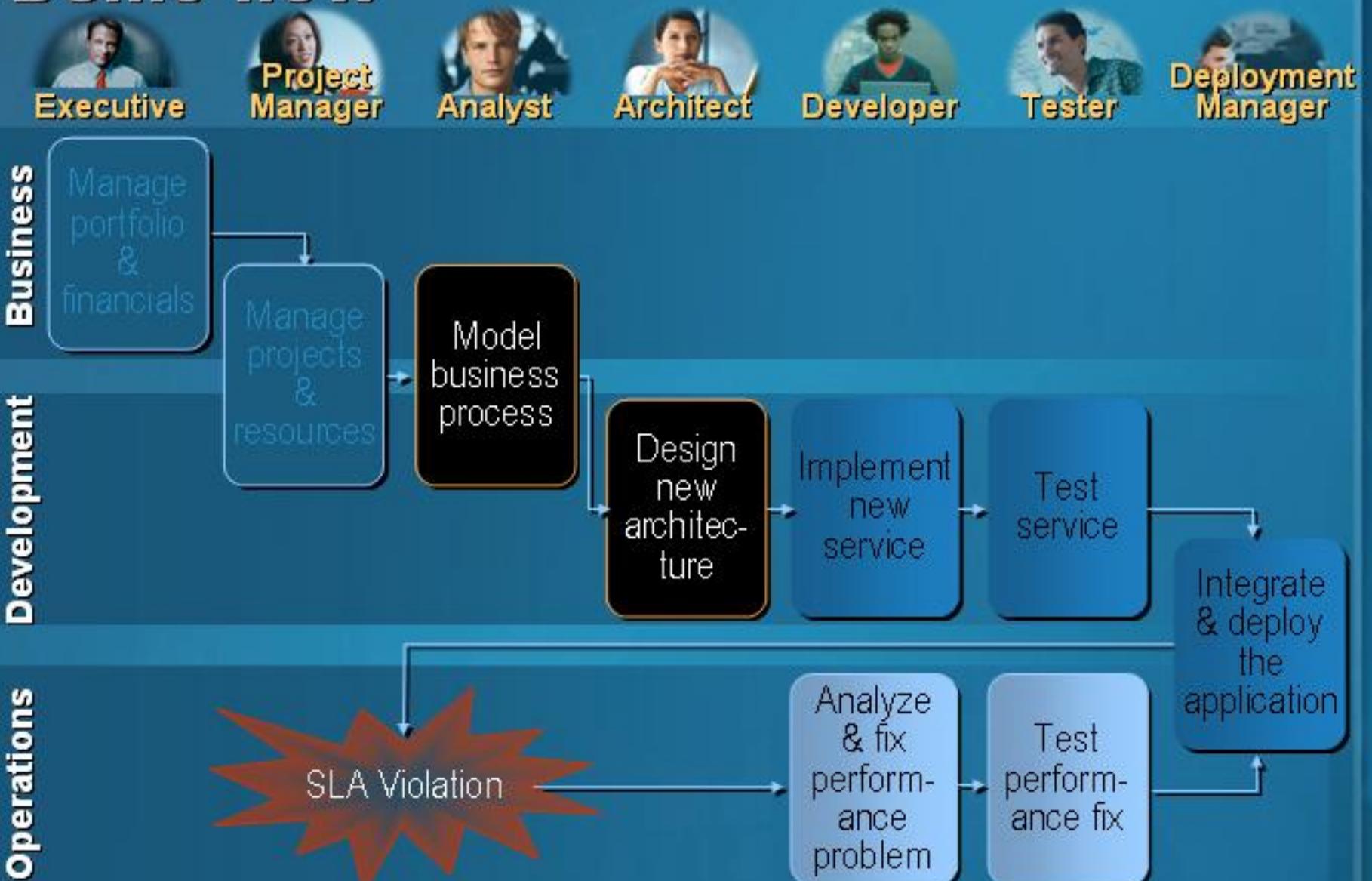
Easy information exchange between applications and/or resources

## Scaleable

Start with what you have and add additional resources as needed



# Demo flow



# What you saw...



Executive



Project Manager



Analyst



Architect



Developer



Tester



Deployment Manager

Business

Manage portfolio & financials

Manage projects & resources

Model business process

Design new architecture

Development

**WebSphere Business Integration Modeler**  
**Rational Software Architect**  
**Rational ClearQuest**  
**UML Profile for Business Modeling**  
**UML Profile for Software Services**  
**RUP Plug-in for SOA**

Operations

## Speed service design & development

- ✓ Simulate and optimize the business process
- ✓ Architect a service-oriented solution using UML
- ✓ Discover and exploit services

# Announcing...



*New developerWorks resources in support  
of service-oriented architectures*

**AVAILABLE  
NOW!**

**Flexible process guidance  
for implementing SOAs**

- ✓ **RUP Plug-in for  
WebSphere Business  
Integration Modeler**
- ✓ **RUP Plug-in for SOA**

**Model business processes  
and software services with  
the Unified Modeling  
Language (UML)**

- ✓ **UML Profile  
for Business Modeling**
- ✓ **UML Profile  
for Software Services**

### **3. Unify development and operations teams**



# Incentives to unify development and operations teams

*Average of 501 hours of network downtime per year<sup>1</sup>; 50% of applications put into production are later rolled back<sup>2</sup>*



OPERATIONS



DEVELOPMENT

- Inability to rapidly deploy applications
- Inadequate service levels
- Inability to triage complex, multi-tier operating environments

<sup>1</sup>Infonetics Research (IT Week, 1/12/2005)

<sup>2</sup>Gartner ("Seven Core Issues Facing IT Execs", The Star, 11/18/2004)



# What if...



... application health could be monitored in real-time?



... complex multi-tier applications could be configured without manual intervention?



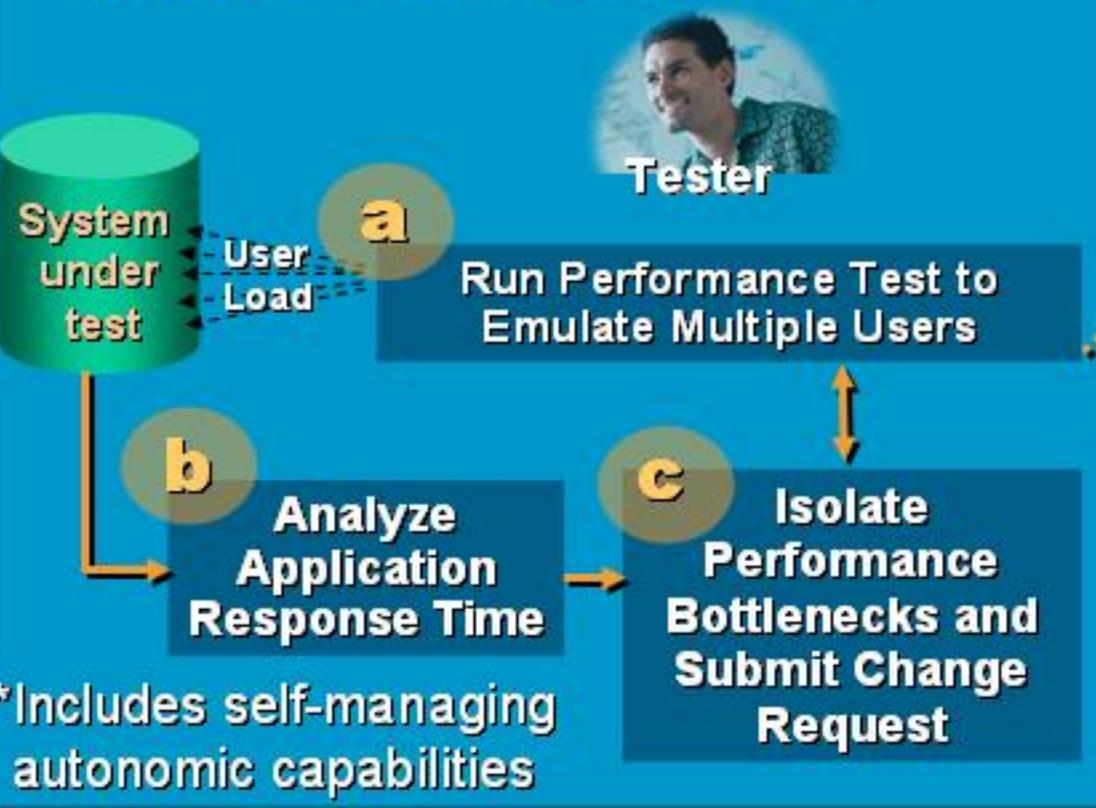
... isolating and fixing problems in production took minutes instead of days?

# Identify the root cause of performance problems

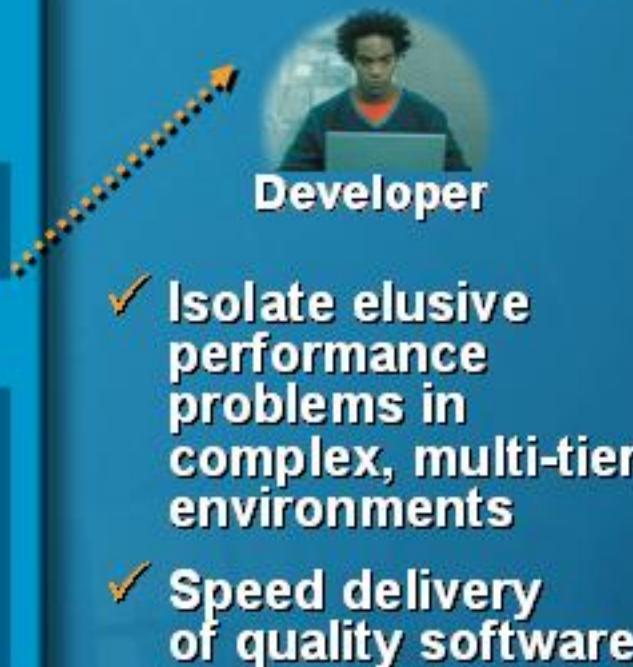
## IBM Performance Optimization Toolkit for Rational Performance Tester

**NEW!**

**1** Pinpoint performance problems in the test lab...



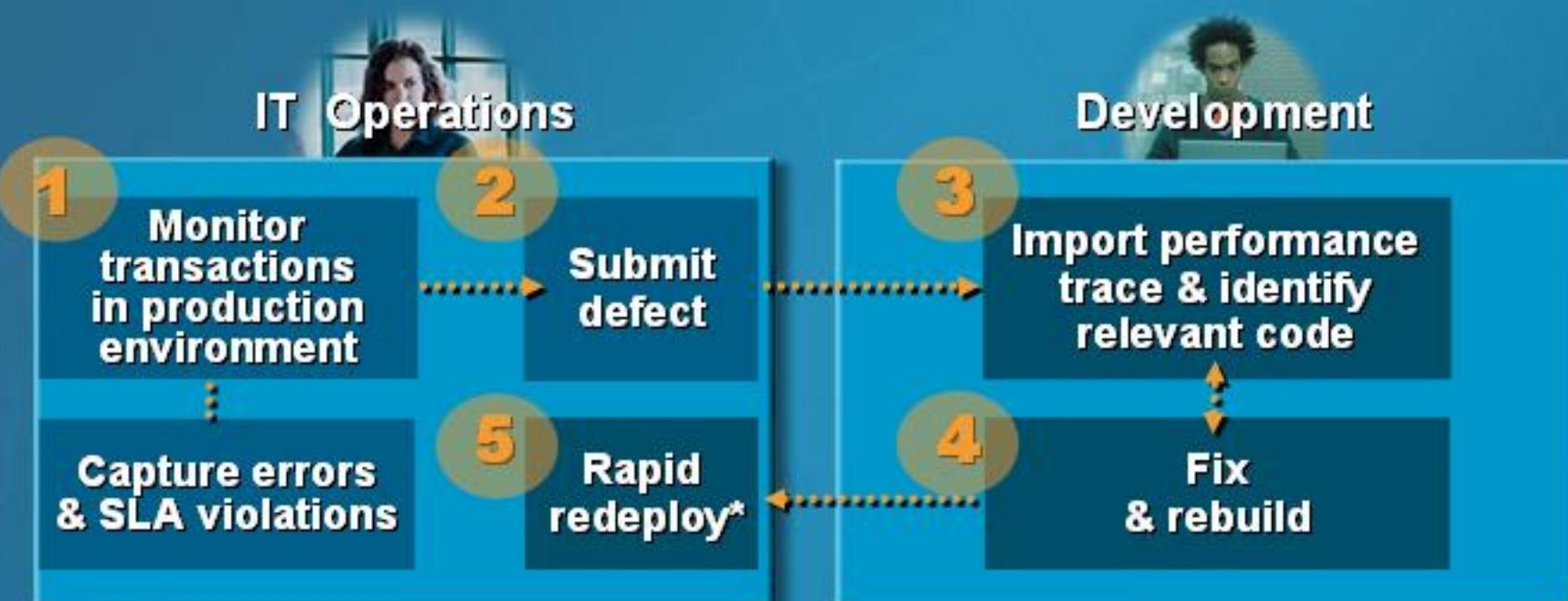
**2** Speed changes by providing detailed data to developers



# Find and fix problems across domains

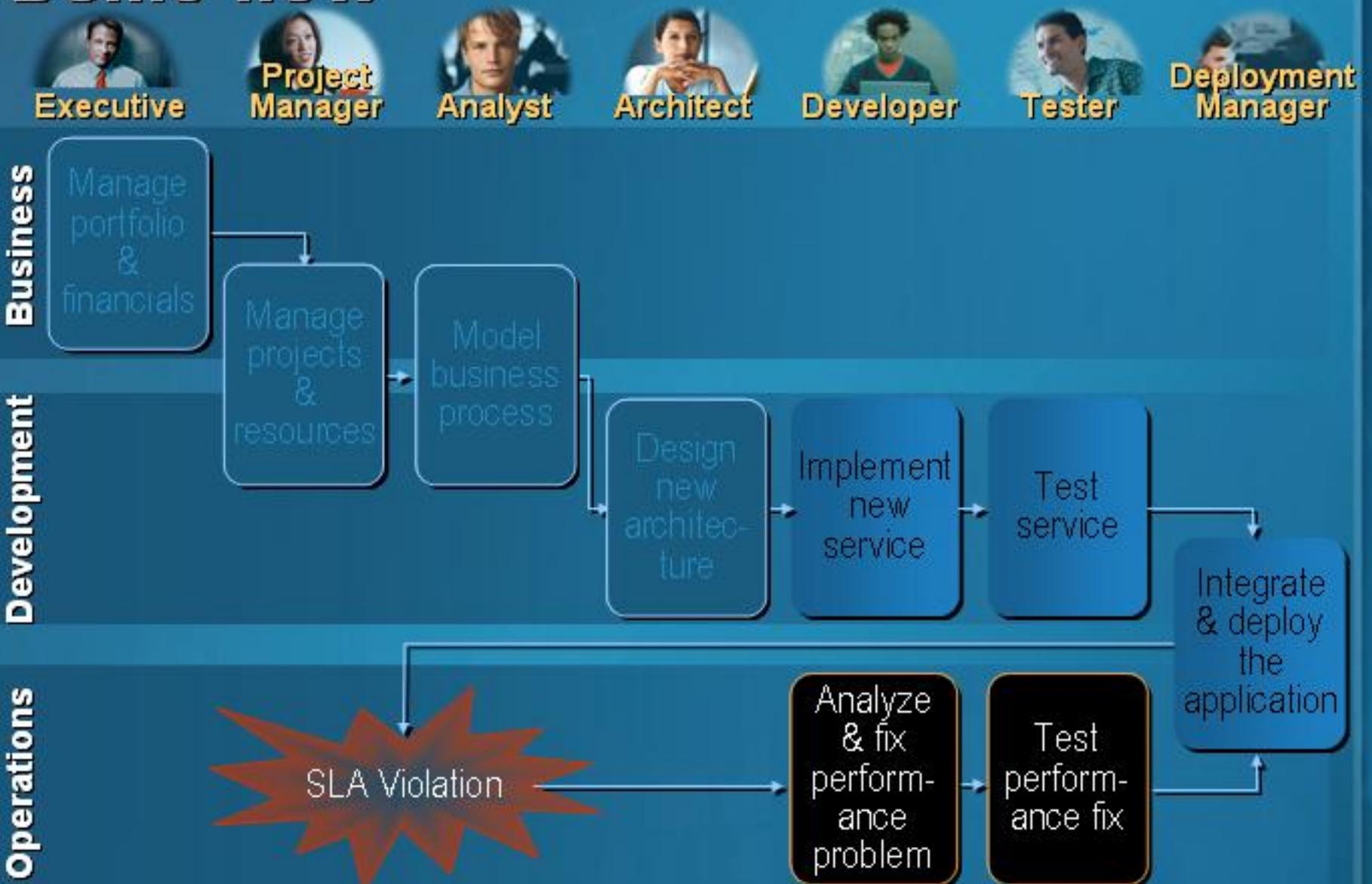
## IBM Problem Resolution Toolkit for Rational Application Developer

**NEW!**



**NEW! \*IBM Release & Deployment Service**

# Demo flow



# What you saw...



Executive



Project Manager



Analyst



Architect



Developer



Tester



Deployment Manager

Business

## Resolve production problems faster

- ✓ Monitoring event triggered development involvement
- ✓ Production logs analyzed to take developer to problem
- ✓ Performance fix verified under simulated load

Development

Operations

Rational Application Developer  
IBM Problem Resolution Toolkit  
Rational Performance Tester  
Rational ClearQuest  
Rational ClearCase  
Tivoli Monitoring for Transaction Performance

Implement new service

Test service

Integrate & deploy the application

Analyze & fix performance problem

Test performance fix

# Announcing...



*New products and services to unify development and operations teams*

Diagnose scalability and load problems

Link testers with production data in the test lab

Link developers with actual production data

Test the performance and functionality of Siebel applications

- ✓ IBM Rational Performance Tester

- ✓ IBM Performance Optimization Toolkit for Rational Performance Tester

- ✓ IBM Problem Resolution Toolkit for Rational Application Developer

**AVAILABLE JUNE**

- ✓ IBM Rational Performance Tester Extension for Siebel Test Automation
- ✓ IBM Rational Functional Tester Extension for Siebel Test Automation



# IBM: Leading focus on IT Lifecycle Management challenges



"IBM, of course, is extremely well positioned to help companies tackle the whole [ITLM] problem, given its comprehensive product portfolio, extensive partner programs, and worldwide Global Services organization"

---

Melissa Webster, IDC  
"IT Life-Cycle Management:  
Will a Platform Emerge?"

# IT Lifecycle Management solutions from IBM

## Ensure Functional Quality

Requirements Management, Process/Data/Architecture Modeling, Development, Unit/Functional Testing, Change Management Resource & Transaction Monitoring, Deep Dive Diagnostics

## Accelerate Deployment

Version Control/Build Management, Change Management Configuration and Provisioning Management

## Ensure System Performance

Requirements Management, Development, Load Testing, Change Management, Transaction Tracking, Deep Dive Diagnostics

## Govern IT

Project and Portfolio Management, Process and Asset Management, Value-based IT Prioritization, Service Level Monitoring



# Rational software development strategy

## Leveraging the full strength of IBM



Executive  
Manager



Analyst



Architect



Developer



Tester



Deployment  
Manager

*Business Process  
Automation*

*Services  
Development*

*Application  
Component  
Development*

*Infrastructure  
Management*

- ✓ Enhanced integrations across IBM Tools
- ✓ Improved support for IBM runtimes
- ✓ Greater efficiency, quality, & consistency of IBM tools
- ✓ Driving key industry standards

WebSphere.

Rational.

DB2.

Tivoli.

Lotus

# **Summary: The IBM Rational software development strategy**

**Deliver the most complete, open, modular, and proven solution for making software development simple, but not simplistic**

**Enable a business-driven development approach by aligning business and technology teams**

**Lead the industry by leveraging the full strength of IBM to automate and integrate the entire IT lifecycle**

# Agenda

- Business-driven development in action
- Transforming and simplifying development
- Accelerating your success with developerWorks resources

# Buell Duncan

GM, ISV and Developer Relations

IBM.



# The Challenge

YOU  
VS  
THE  
INCREDIBLE  
SHRINKING  
DEADLINE

**Rational** THROUGHOUT THE DAY, YOU'LL BE WORKING WITH IBM Rational Software Modeler, THE INTEGRATED CASE MANAGEMENT AND SUPPORTING JAVA-DOMAIN DEVELOPMENT TOOLS OF AN IBM® MIDDLEWARE SOLUTION THAT'LL HELP YOU CREATE BETTER SOFTWARE FASTER. BASED ON THE Eclipse™ open source platform, Rational Software Modeler offers features including UML, SoA and Java™ Web tools and services. And that's always been the top IBM value for you. [VISIT IBM.COM/MIDDLEWARE/TOOLS TO DOWNLOAD TRIAL VERSIONS OF RATIONAL SOFTWARE MODELER AND RATIONAL SOFTWARE ARCHITECT](#)

# Got Skills?

*Analysts*

*Architects*

*Developers*

*Testers*

*Deployment  
Managers*

*Project  
Managers*

*Java*

*Eclipse*

*SOA & Web  
Services*

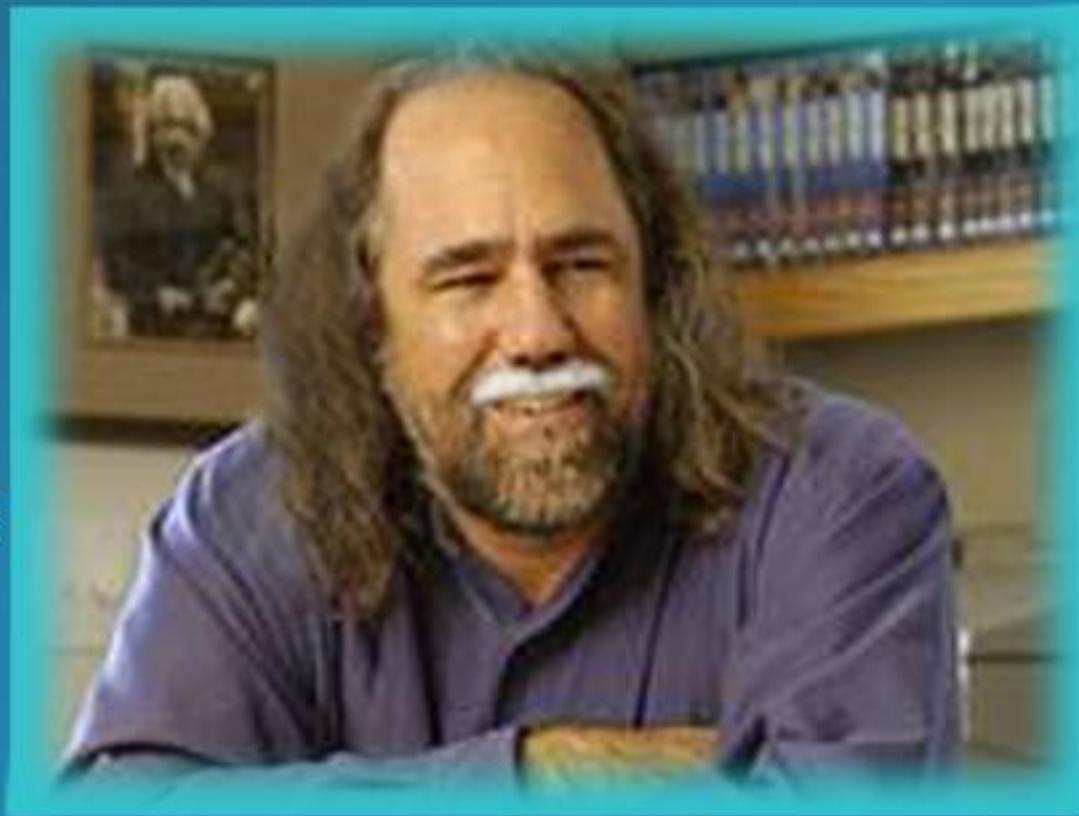
*IBM Rational  
SDP Tools*

*Linux*

*PHP*

*Cloudscape  
Derby*

*Geronimo*



# Driving Skills at all Levels

## **Skills for Tomorrow:** *IBM Academic Initiative*

**Establishing open standards,  
open source and IBM  
technologies in higher education**



## **Top-notch Tools for Today:** *ibm.com/developerWorks*

- **IBM's technical resource  
for developers**
- **Offers a range of tools,  
code, and education**

## **ISVs are a critical component of the ecosystem:** *ibm.com/isv*

- **1,000s of ISVs participate in IBM's partnering programs  
in 150 countries**
- **70% of participating SMB ISVs are enabled on Linux**
- **IBM provides marketing and sales benefits — helping ISVs  
close business**



# ibm.com/developerWorks

**NEW!**

Customized  
RSS Feeds

**NEW!**

Wikis

Software  
Evaluation Kits



Newsletters

Product  
Communities

Technology  
Zones

Product  
Downloads

alphaWorks  
Technologies

Sample  
Code

Tutorials

How-to Articles

Webcasts

Blogs



The screenshot shows the developerWorks homepage with a sidebar on the left containing links for Java, Lotus, Rational, Test, and WebSphere software, as well as developer tools and forums. The main content area features several sections: "Product Communities" with a "Building a better Z/OS server" article by Denise Brumley; "Technology Zones" with a "Welcome guest!" message; "Product Downloads" with a "Sample Code" link; "alphaWorks Technologies" with a "Software Evaluation Kits" link; "Sample Code" with a "Tutorials" link; "Tutorials" with a "How-to Articles" link; and "Webcasts" with a "Blogs" link. A navigation bar at the bottom includes links for Home, Products & Solutions, Support & Resources, and My account.

# ibm.com/developerWorks/rational

IT Lifecycle Management  
Resource Page

**NEW!**

**Support**

**Demos**

**Webcasts**

**Web-based Training**

**The Rational Edge e-zine**

**Downloads and CDs**

**Plug-ins**

The screenshot shows the Rational Edge e-zine page on the developerWorks site. The top navigation bar includes links for Home, Header ID, Previous & Next, Support & Downloads, My account, and a search bar. The main content area features a large image of a car, with the heading "Rational Edge e-zine" and the sub-headline "Resources and best practices for the Rational software platforms". Below this is a "Top story" section about "RUP for SOA Plug-In V3.0". The page is divided into several columns: "Products", "Techniques", and "Rational Edge e-zine" (which is currently selected). Under "Products", there are links to "Design and construction", "Requirements & analysis", "Software Quality", and "Software configuration management". Under "Techniques", there are links to "Functional Test", "Performance Test", "Test Automation", and "Test Message". The "Rational Edge e-zine" column lists several articles: "Running your first performance test using IBM Rational Performance Tester 6.2", "Configuring IBM Rational Software Architect for Modeler for Transformational Development", "Handling invalid test data using IBM Rational Functional Tester", "Using IBM Rational Functional Tester 6.2 to run your first functional regression test", "Developing IBM WebSphere with Rational Application Developer 6.0 and Rational Portal Server 5.1, Part 2", and "Using Toolsoft software distribution with Rational ClearCase 10.0". A sidebar on the right contains sections for "Software download", "Software guest", and "Spotlight".

# developerWorks Open Source Resources

Geronimo content **NEW!**  
for WebSphere users

UML 2.0 content  
for Rational users

Eclipse content  
for Rational, WebSphere  
and Workplace users

PHP and Cloudscape/Derby  
content for DB2 users

Linux content  
for all IBM software  
& server users

The screenshot shows a web page from developerWorks. At the top, there's a navigation bar with links like "Home", "Member ID", "Previous & current", "Support & Downloads", and "My account". Below the navigation is a search bar and a "Search" button. The main content area has a sidebar on the left with categories such as "IBM", "Software", "Hardware", "Mathematics", "Computing", "Java™ Technologies", "Home", "Open source", "How to Learn Java", "Projects", "Project News", "Performance Tuning", "Training", "Technical offices", "Power Architectures™", "IBM and Linux", "Web Information", "Business Technology", "Eclipse", and "Downloads". The main content area features several news articles:

- Open source**: Resources for open source development and implementation. Updated 15 May 2005.
  - Building a better J2EE server.** Jerome Bresser, Apache Geronimo contributor and principal founder of Geronimo Software, tells us why an assemblage of open source projects combined with close adherence to Java standards makes for a great middleware framework. ([Read more](#))
  - Create, deploy, and debug Apache Geronimo applications.** Step by step, see how to use the new Eclipse WTP plug-in to develop and deploy Web applications to the Apache Geronimo server. ([Articles](#))
  - Find your way around JavaServer Faces 2.0.** Explore the range and depth of Geospatial Information Systems tools and libraries for GWT and Linux. ([Articles](#))
  - Secrets of distributed development success, Part 1: Core technologies and abstractions.** This first article in a series sets the groundwork and defines lightweight development. ([Articles](#))
  - PHP accounts, Part 1: How to set up PHP5.** Walk through the register\_globals setting in Part 1 of this series that investigates PHP security issues. ([Articles](#))
  - A primer user's guide to multilingual editors.** Learn how Unicode-encoded character sets make multilingual editing possible and how today's Unicode editors can truly stack up. ([Articles](#))
  - Python's Python.** Python's built-in numerical types: One of Python's main cool features is that everything is an object, including data values. Here's how to understand Python's unique approach to handling data types. ([Articles](#))
- Java 6 API snapshot ready!** The universal playground for Java (JGIG) Project works to deliver a production-quality API and Java protocol stack for Linux. Snapshots are released biweekly. The current is Jakarta Commons Net 1.3.0 release candidate. Jakarta Commons Net implements the client side of many basic Internet protocols. This release candidate adds a configurable date-format parsing mechanism for the FTPClient component, among other features.
- ApacheCon Europe 2005 registration opens, registration now online!** Event will be held in Stuttgart, Germany, 18–21 July. The full program is available online. Early registration deadline is June 17.
- Apache w3p Request Library 2.0.2-dk3 now available.** libxml2 is an API-based shared library used for parsing XML content, query strings, and POST data. This package provides V2.1.0 of the libxml2 library, including XSLT, XSL, SAX, and DOM support.
- Java Object Base, release 2.0.1, and source code 2.0.0.** Open Object Base is the open source version of IBM's Object Broker Interpreter. V2.0.1 of either (Windows) has installation issues with source 2.0.0. Linux, Test Project test suite, and fix. The Linux Test Project released 119-20050526. Additions include a GZIP test suite and a new compression test.

On the right side of the page, there's a sidebar with sections for "My developerWorks", "Recent resources", "Spotlight", and "News".

# Technical Briefings

IBM developerWorks **Live!**

- 400 developerWorks Live! Technical Briefings worldwide
- 20,000+ developers and customers in attendance since January!



- 11 different technology topics including:
  - Building better software faster with SDP
  - IT lifecycle management competitive briefing
  - Process and portfolio management
  - IBM Workplace



# Software Development Platform (SDP) Ecosystem Expands with Ready for IBM Rational

SINCE  
JANUARY!

- Vibrant, growing ecosystem – 20+ solutions available in first 6 months
- Test drive the “Ready for IBM Rational Software” plug-in solutions in the Partner Pavilion
- Attend “SDP27 Plug-in Power” on Wednesday at 11 a.m.
- Look for our “Ready For IBM Rational Software” partners in the SDP Resource Catalogue



Instantiations



# Next Steps



- Visit the Solution Center and learn more!
  - alphaWorks Solution Center Demo Area
  - developerWorks
    - Pedestals 9 - 12
  - PartnerWorld Industry Networks
    - Pedestals 33 & 34

- Visit developerWorks
  - [ibm.com/developerWorks](http://ibm.com/developerWorks)



- Try out the Software Evaluation Kits
  - Free Trial!



Rational. software



# IBM Rational Software Development Conference 2005



IBM.