Rational. software

IBM Rational Software Development Conference 2005

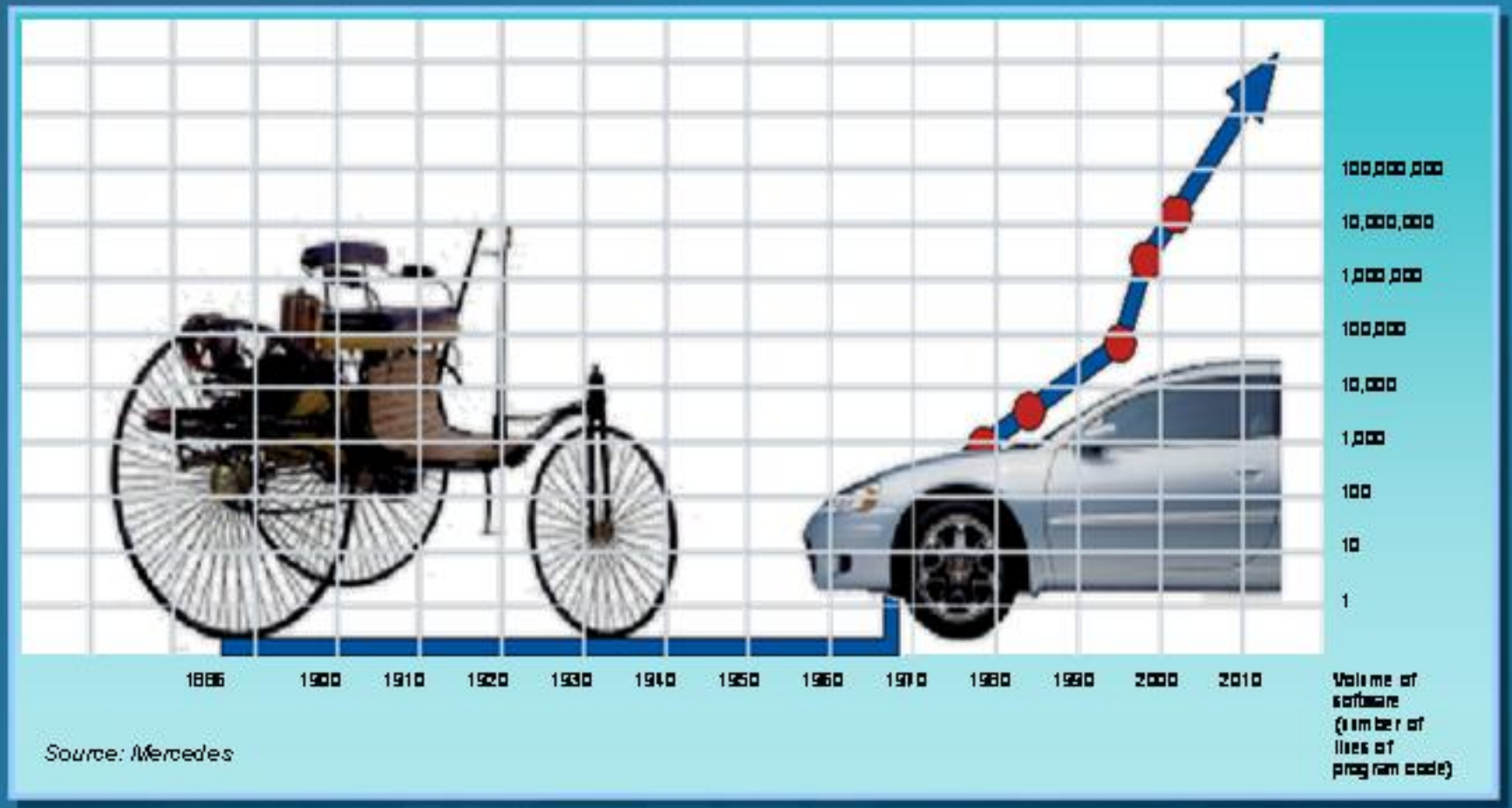
Better Software. Better Business.

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 Görtz 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
- Scaleable 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

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

51% of projects in 2004 were delayed or over budget, another 15% of projects failed outright[1]

[1] "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

Executive

Project Manager

Analyst

Architect

Developer

Tester

Deployment Manager

Business

Development

Operations

Manage portfolio & financials

Manage projects & resources

Model business process

Design new architec-ture

Implement new service

Test service

Integrate & deploy the application

SLA Violation

Analyze & fix perform-ance problem

Test perform-ance fix

What you saw...

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SLA Violation

Align priorities, projects, and people

- ✓ Make portfolio and resource allocation decisions
- ✓ Plan and manage projects
- ✓ Manage team workflow using Rational ClearQuest

Rational Portfolio Manager
Rational ClearQuest

Announcing...

AVAILABLE NOW!

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

Unify project management and software development project views

- ✓ IBM Rational Portfolio Manager 6.1
  - Rational Unified Process (RUP) project templates

Gain objective insight into your project or program management practices

- ✓ IBM Rational Project/ Program Management Assessment Service

Integrate portfolio management with your business & technology environment

- ✓ 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[1]

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

[1] "Optimizing Enterprise IT" (*Intelligent Enterprise*, 2/24/2005)

The IBM Software Development Platform

A complete, open, modular, and proven solution

Analyst

Model, simulate, assemble, and monitor business processes

Architect

Model applications and data

Developer

Visually construct, transform, integrate and generate code

Tester

Design, create, and execute tests

Deployment Manager

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

NEW!

ClearQuest MultiSite Deployment Service

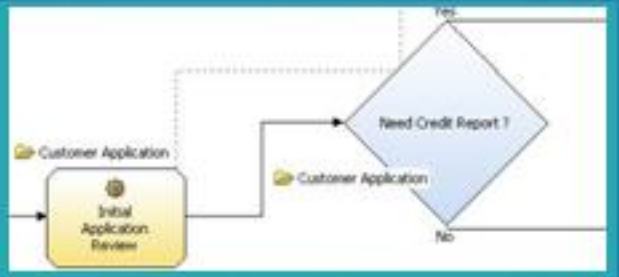
Teams dispersed across town, across the border or overseas

- 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

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

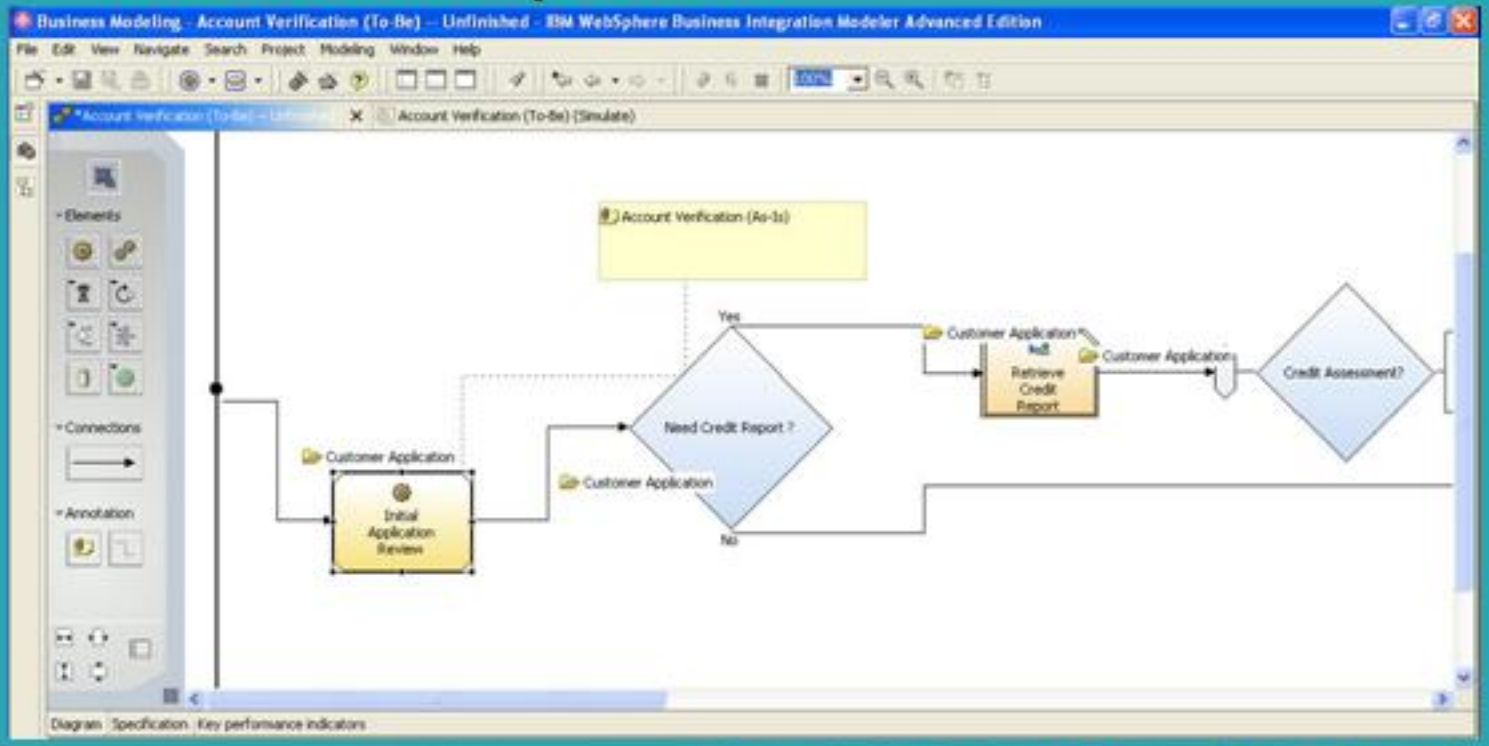


2 Create services defined as units of business logic

3 Dynamically orchestrate services

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

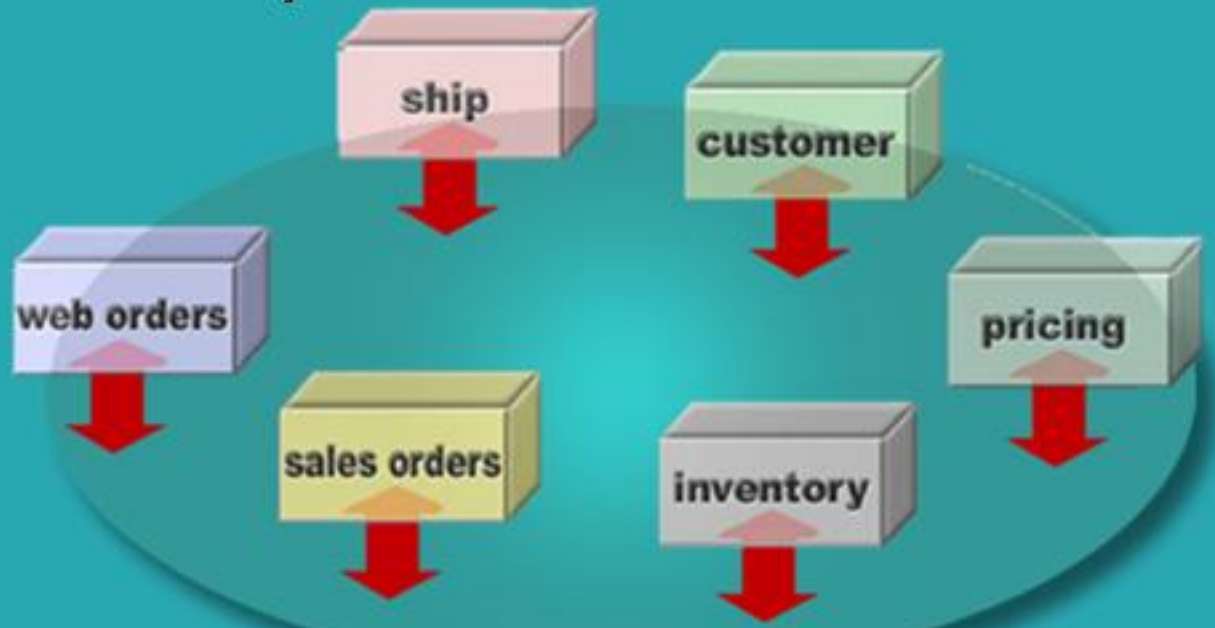
1. Deconstruct your business model by breaking it down into discrete business processes, or service components



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

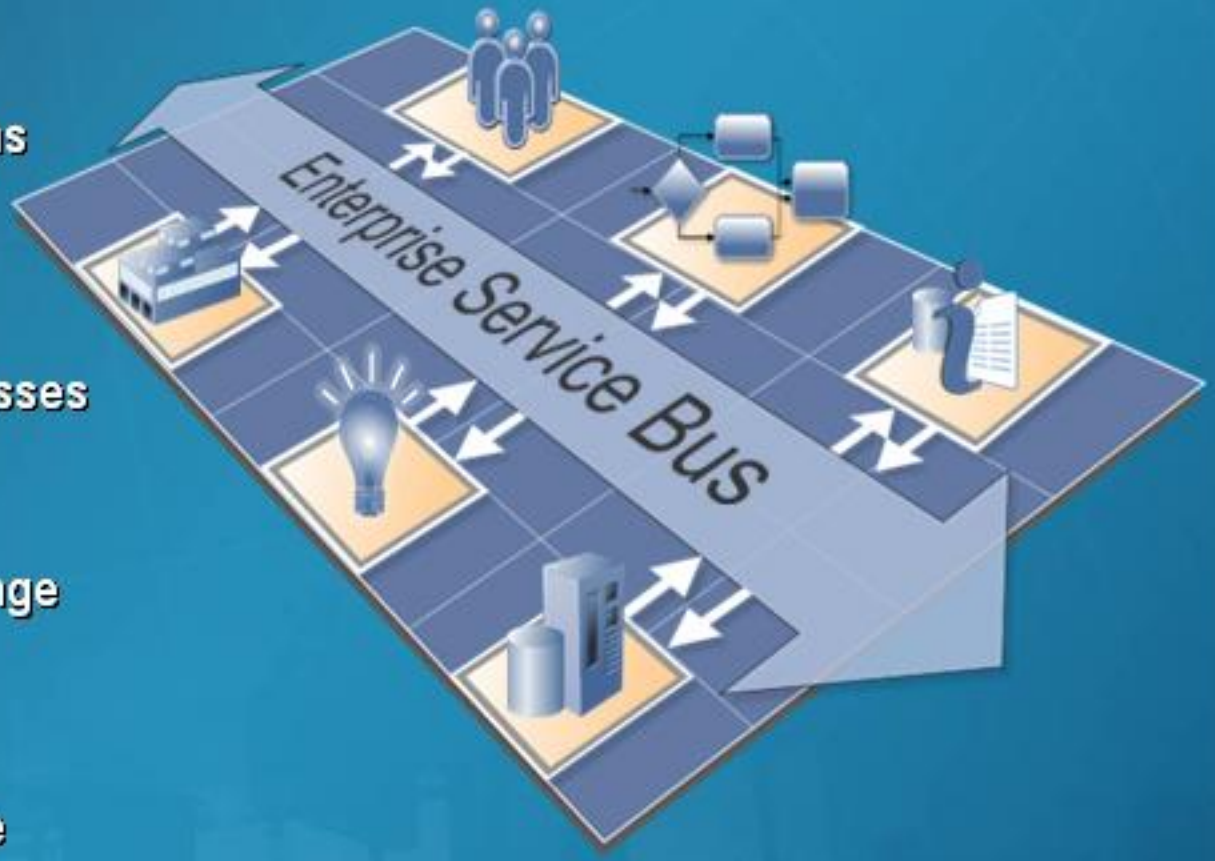
The foundation
Service Oriented Architecture

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



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

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

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[1]; 50% of applications put into production are later rolled back[2]

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

OPERATIONS

DEVELOPMENT

[1]Infonetics Research (*IT Week*, 1/12/2005)
[2]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...

Tester

System under test

User Load

a Run Performance Test to Emulate Multiple Users

b Analyze Application Response Time

c Isolate Performance Bottlenecks and Submit Change Request

*Includes self-managing autonomic capabilities

2 Speed changes by providing detailed data to developers

Developer

- ✓ Isolate elusive performance problems in complex, multi-tier environments
- ✓ Speed delivery of quality software

Find and fix problems across domains

IBM Problem Resolution Toolkit for Rational Application Developer

NEW!

IT Operations

Development

1. Monitor transactions in production environment
2. Submit defect
3. Import performance trace & identify relevant code
4. Fix & rebuild
5. Rapid redeploy*

Capture errors & SLA violations

NEW! *IBM Release & Deployment Service

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Development

Resolve production problems faster

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

Operations

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

Analyze & fix perform-ance problem → Test perform-ance fix → Integrate & deploy the application

Announcing...

New products and services to unify development and operations teams

Diagnose scalability and load problems

- ✓ IBM Rational Performance Tester

AVAILABLE NOW!

Link testers with production data in the test lab

- ✓ IBM Performance Optimization Toolkit for Rational Performance Tester

Link developers with actual production data

- ✓ IBM Problem Resolution Toolkit for Rational Application Developer

Test the performance and functionality of Siebel applications

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

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
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Buell Duncan

GM, ISV and Developer Relations

IBM.

The Challenge

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

Product Communities

Technology Zones

NEW! Wikis

Product Downloads

alphaWorks Technologies

Software Evaluation Kits

Sample Code

Tutorials

How-to Articles

Webcasts

Blogs

Newsletters

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

developerWorks Open Source Resources

Geronimo content for WebSphere users NEW!

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

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

- 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

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

- Try out the Software Evaluation Kits
  - Free Trial!

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