Process and Portfolio Management Track Keynote

Improved Governance through Better Process, Project and Portfolio Management, and Reporting
Agenda

- Process and Portfolio Management Track Introduction
- Segment Overview
- Measured Capability Improvement Framework
- Process Management: looking back, looking ahead
- Reporting: looking back, looking ahead
- Project and Portfolio Management: looking back, looking ahead
- Conclusion
- Q&A
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Welcome!

Team and Speaker Introductions

- **Pawan Rewari**, Director of Engineering, Process and Portfolio Management Products
- **Per Kroll**, Chief Architect - Rational Expertise Development & Innovation
- **Eric Larsen**, Product Manager, Rational Enterprise Reporting
- **Ashok Kallarakkal**, Product Manager – Next Generation Project and Portfolio Management
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Increasing Accountability of Software

- Ultimately, on time and under budget means nothing without the right business outcomes
- Outcomes are measured in Rupees, in customer retention, in market share
- The ideal organization ensures software delivery is directly tied to business need

Only 34% of software projects are deemed successful

Software related downtimes cost the industry nearly $300 Billion annually

You’re all working hard, but are you working on the right stuff?
Fundamentals of the Rational Software Strategy

- Enabling governance
  - For oversight and accountability

- Delivering flexible architectures
  - For agility and modularity

- Leveraging communities
  - For collaboration and insight

GOAL: Delivering value in support of business outcomes
# PPM for Software and Systems Delivery

<table>
<thead>
<tr>
<th>Plan</th>
<th>Implement</th>
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<tr>
<td><strong>Process/Practice/Metrics Management</strong>&lt;br&gt;Specifies the alignment between practices and metrics used to steer projects, programs, and teams</td>
<td><strong>Process/Practice/Metrics Instrumentation and Enactment</strong>&lt;br&gt;Instrumented the software and systems delivery solution for collection and consolidation of metrics and enactment of related practices</td>
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<td><strong>Product/Project Portfolio Management</strong>&lt;br&gt;Measures and manages the degree to which <em>product requirements</em> and <em>project investments</em> meet stakeholder expectations and goals</td>
<td><strong>Integrations with Software and Systems Delivery Platform (IBM and 3rd Parties)</strong>&lt;br&gt;The context from which instrumented data required for steering projects, programs, and teams is collected and practices are reinforced</td>
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<td><strong>SSD Business Intelligence</strong>&lt;br&gt;Provides visibility and insight into the performance of the software and systems delivery processes</td>
<td><strong>SSD Project and Program Management</strong>&lt;br&gt;Measures and manages the degree to which <em>project performance</em> meets stakeholder expectations and goals</td>
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<td><strong>Practice Assessment</strong>&lt;br&gt;Assesses the capability and adoption level of practices</td>
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*Building blocks needed to plan, implement, manage, and assess the effectiveness of the software and systems delivery processes and portfolios*
Jazz based Project Management related offerings in 2008!
Expanding Collaborative Application Lifecycle Management

**Rational Team Concert**
*Innovation Through Collaboration*
Unify by “thinking & working” in unison with real-time project health

**Rational Requirements Composer**
*Business Expert Collaboration*
Elicit, capture, elaborate, discuss and review requirements

**Rational Quality Manager**
*Collaborative Business-driven Quality*
Coordinate quality assurance plans, processes and resources

**Best Practice Processes**

**Open Lifecycle Service Integrations**

**Rational Offering**

**Rational Team Concert**

**Rational Requirements Composer**

**Rational Quality Manager**

**Business Partner Jazz Offerings**

**Rational ClearQuest**

**Rational ClearCase**

**Rational Build Forge**

**Rational Requisite Pro**

**Rational Asset Manager**

**Jazz TEAM SERVER**

**Search and Query**

**Dashboards**

**Team Awareness**

**Events Notification**

**Collaboration**

**Security**

**Powered by Jazz**
The road ahead

PPM for SSD offerings beyond 2008

Rational Enterprise Reporting
Gain insight based on real-time and historical trend information

Rational Project Management
Manage global projects and resources

Rational Method Composer
Dynamic process, enactment and management

Rational ClearQuest & RequisitePro
Native Jazz Implementations

Best Practice Processes

More dynamic integration leveraging Jazz ‘Open Services for ALM” services

IBM Rational Software

Rational Integrations
- Rational Software Architect
- Rational Application Developer
- Rational AppScan & Tester portfolio
- Rational enterprise modernization including system z and i support
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What Is Measured Capability Improvement Framework (MCIF)

- A systematic approach for improving your business
  - Couple business problems to incrementally adoptable practices
  - Accelerate incremental rollout of practices (w. associated tools) through reusable assets
  - Measure effectiveness of practice adoption and business value delivered

- Captures +10 years of Rational experiences in incremental adoption
  - Key aspects have been used in agile transformation’s of +80 IBM internal projects
  - Process independent – used in conjunction with RUP, XP, Scrum and other processes
Measured capability improvement framework

Map business value to software delivery best practices

Example: Financial Service Company

Customer Business Challenges

- Create financial products more quickly
- Functionality of customer web falling behind competition

Operational Objectives

- Reduce

Software Delivery Best Practices

- Use-case driven development
- Whole team
- Continuous integration
- Iterative development
- SOA modeling
- Test driven development
- Architecture modeling
- Asset-based development
- Risk-value lifecycle
- Multi-team management
- Staged integration
- Asset governance
- Enterprise SOA

Operational Objectives Metrics

<table>
<thead>
<tr>
<th>Project</th>
<th>Time to Market (M)</th>
<th>Quality (Defect Density)</th>
<th>Innovation (Cust. Sat. Survey)</th>
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<tr>
<td>A</td>
<td>22</td>
<td>2.3</td>
<td>7</td>
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<td>B</td>
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<tr>
<td>E</td>
<td>6</td>
<td>0.4</td>
<td>10</td>
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Ongoing Adoption Assessment

Target: Phase 1
Already implemented
Outside scope
Best practices provide customizable usage models for the Rational Software Delivery Platform

Adopt Best Practice

- Use-case driven development
- Continuous integration
- Shared vision
- Whole team
- Staged integration
- Multi-team management
- Risk-value lifecycle
- Asset-based development
- Asset governance
- Iterative development
- SOA modeling

Rational Offerings

- Rational ClearQuest
- Rational Build Forge
- Rational RequisitePro
- Rational Team Concert
- Rational Quality Manager
- Rational ClearCase
- IBM Rational Other offerings

IBM Rational Software Delivery Platform

Example

Best practices provide customizable usage models for the Rational Software Delivery Platform.
MCIF Assets

- Establish roadmap
  - Value Traceability Trees: Linking Business Objective – Practice – Products & Services
  - Health Assessment for Software Delivery: Service offering - Understand where you are today, and establish a roadmap forward

- Execute roadmap
  - IBM Rational Self Check for Software Teams: Service offering - Facilitated self assessment
  - Rational Method Composer 7.5: Guidance on practices and effective usage of products
  - Objective measurements for practices and business objectives (RTC, Vega, …)
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**What is IBM Process Management?**

*Create, customize, publish, enact and measure software & systems delivery practices and processes according to business needs*

- **Governance**
  - Establish consistent processes driven by standards and best practices to support corporate governance objectives.

- **Process Management & Best Practices**
  - Leverage a rich set of practices, process assets and guidance to capture & maintain development, management, and governance processes.

- **Rational Software Development Platform**
  - Automate, integrate, and govern core business processes of software and systems delivery through an integrated set of proven, industry leading tools.

- **Rational Method Composer**
  - Manage, author, configure, and deploy effective processes tailored to project needs.

- **IBM Measured Capability Improvement Framework**
  - A systematic approach to incrementally improve your business; identify high priority business objectives, software delivery practices to address those objectives, and measure practice adoption and business results.
Process Management

Accomplishments since last RSDC

- IBM Rational Method Composer – Jazz integration prototype
- IBM Rational Method Composer (RMC) 7.2 release
- Method Authoring Method (MAM) alpha release
- Welcome Telelogic and its Harmony offerings into Rational
  - Harmony for IT Software Development
  - Harmony for Embedded Real-time Software Development
  - Harmony for Systems Engineering
Rational Method Composer v7.2 – Delivered!

Putting process best practices to work

Result: Easier, more effective deployment of customized and adaptable process best practices

New process best practices

- New IBM Tivoli Unified Process (ITUP) & Rational Unified Process (RUP) integration
- New RUP for global distributed development
- New CMMI level 2 with CMMI & RUP mapping
- New Asset Based Development (ABD) process for producing, consuming & managing reusable assets
- New Asset Governance to develop & manage asset investments

Tooling enhancements

- Improved publishing capabilities and look and feel
- Improved authoring & scaling capabilities
- New WebSphere Business Modeler integration to analyze & simulate processes
- New reporting capabilities for development metrics and compliance management
- New simplified deployment and management
IBM Rational Method Composer v7.5 – What’s Coming!

Putting best practices to work

**New IBM Practices in key solution areas**

- Agile Development
- Governance and Compliance
- Quality Management
- Requirements Management
- Configuration Management
- Architecture Management
- Method Authoring

**Tooling enhancements**

- Share, manage, and download practices as assets with Rational Asset Manager (RAM) integration
- Browse, select, and preview content more simply and intuitively
- Simply customize loosely coupled and alternative practices
- Jump start creating and extending content with plug-in templates and wizards
- Configure content in a more flexible way using tags, queries and wizards
- Provide simple update and feedback mechanisms

**Result:** Easier, more effective deployment of customized and adaptable practices and processes.
IBM Practices – New in Rational Method Composer v7.5!

Guidance for incremental improvement and adoption

- **Governance & Compliance**
  - Risk-Value Lifecycle
  - Practice Authoring & Tailoring

- **Agile Development**
  - Iterative Development
  - 2-Level Planning
  - Whole Team
  - Continuous Integration
  - Test-Driven Development

- **Requirements Management**
  - Shared Vision
  - Use-Case-Driven Development
  - Requirements Management

- **Architecture Management**
  - Evolutionary Architecture
  - Evolutionary Design
  - Component Software Architecture

- **Configuration Management**
  - Iterative Change Management

- **Quality Management**
  - Rapid Testing
  - Test Management
  - Independent Testing
  - Performance Testing
  - Security Testing
Each practice is clearly called out, with information:

- Why should you use this practice?
- How do you adopt this practice?
- How do you learn about this practice? (Courses, books, etc.)

Find enablement material, sign up for courses, etc., organized by skills level and role.

Understand how Rational tools support the practice, and how to measure your adoption. Have you done a great job yet implementing the practice?
Vision: One Notion of Process for all Rational Tools

- Make processes explicit within all suitable Rational offerings
  - “When you get a Rational tool it can support your processes.”
  - All products share the same fundamental process principles

- One single notion of process
  - Defines the behavior of jazz-based tools
  - Includes human readable descriptions to capture intent and foster communication

- Allow for easily composable and customizable processes
  - Establish practices as the major organizational means for processes

- Emphasize dynamic feedback and process evolution
  - Allow for ‘tailor-made’ processes for each organization
  - Leverage the Measured Capability Improvement Framework

- Unify process and project & program management capabilities
  - Process structures and descriptions define templates for project plans
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Rational Enterprise Reporting enables an organization to...

Gain insight into software project performance and health through objective and consistent reporting

Manage & mitigate software development risks, reduce time-to-market, improve product quality

Control software project costs & improve global development efficiencies

Enforce governance & achieve compliance in a changing global environment

Integrate value in organizationally diverse environments
IBM Rational Software Development Conference 2008

Reporting Highlights – ProjectConsole and SoDA

- IBM Rational ProjectConsole (PjC)
  - Automates reporting on project status, dynamically creating a project Web site with cross product reports, metrics, and dashboards
  - Looking back: 4 releases, focused on customer satisfaction and additional platform support

- IBM Rational SoDA
  - Automates creation and maintenance of comprehensive project documentation and reports.
  - Looking back: numerous releases and iFixes, focused on customer satisfaction and additional platform support

- SoDA style document generation and ProjectConsole style reports and metrics are critical to successful deployment of the ALM suite of tools.

- Top Rational priority: invest to evolve reporting offerings
  - Support for next-generation Jazz based applications
  - Enterprise scalability and performance
  - Open framework for extensibility
Challenges and Barriers in Measuring Software Delivery

**Geographic Barriers**
- Software development teams are increasingly geographically distributed due to outsourcing, offshoring, partnering, etc.
- Language, culture, time
- Process gaps

**Organizational Barriers**
- Lack of common processes and visibility into existing processes
- Lack of common measurement and governance strategy
- Shorter time-to-market
- Lack of skilled resources

**Infrastructure Barriers**
- Higher reliance on cross-brand, open-source and 3rd party software and tools
- Increased software maintenance
- Disparate reporting solutions

*Development Managers/Team Leads require visibility into current milestone/release deliverables delivered in reports, alerts, dashboards, etc.*

*Project/Program/Release Managers require visibility into trends and operational status of cross-functional, distributed artifacts delivered in reports, dashboards, alerts, presentations, etc.*

*CxO/Portfolio Managers require visibility into the health, status, and governance of multiple projects, programs, and initiatives delivered in dashboards, scorecards, reports, alerts, etc.*
Rational Enterprise Reporting will Include…

- A Web portal, based on the **Cognos 8** reporting engine, to manage reports, queries, dashboards, portlets, alerts, users, and security
- A data warehouse (**DB2, Oracle, or SQL Server**) used to store and aggregate product data for historical and analytical reporting
- An ETL framework to **Extract, Transform, and Load** data from **Rational, SWG, and/or 3rd Party products** into the data warehouse
- An **open REST-based adapter framework** to retrieve product data in a standard XML schema
- An ODBC/JDBC driver to facilitate ETL and real-time reporting against live operational data in Rational products
- A **zero-footprint Web-based report designer**
- Comprehensive set of customizable OOTB reports, dashboards, and DW schema
Enterprise Reporting

Report viewer can display any configured project reports with full drill down/up/thru capabilities....

This report contains a number of KPIs...

Report navigator provides instant access to key project reports...

Search portlet can find reports quickly using keywords and attributes...

URL navigator can be configured with project specific links...
From here, we see that most of the defects for the GUI component were reported by customers. Clicking on the bar drills thru to a detail level report on the customer reported defects.

From here, we see that the GUI component has most of the reported defects. We now want to see whether these defects were caught by our internal QA team or by our customer(s). Clicking on the bar drills thru to a detail level report on the GUI defects for March.

The “Time-enator” notices a spike in the defect arrival rate in March and wants to get a bit more information on the situation. Clicking on the spike drills thru to a detail level report.
Rational Enterprise Reporting Architecture Summary

Open Data Architecture
- relational DB access to data warehouse (JDBC/ODBC)
- REST get for accessing operational product data

Rational Data Warehouse
- optimized for analytics and queries
- enables cross-product correlation reports
- enables historical trending reports

Enterprise Reporting Server
- Zero footprint, single point of access to reports and dashboards viewing and authoring
- OOTB best practice metrics enables immediate insight into software projects

Align IT and business goals enabling greater business flexibility
Manage and mitigate risks and improve project management thru objective and consistent reporting
Control costs & improve global operational efficiencies (GDD)
Ensure security and compliance in a changing global environment

Ensure regulatory compliance in a changing global environment
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Project and Portfolio Management
Accomplishments since last RSDC

- **Rational Portfolio Manager v7.1.1.1**
  - Fixpack to improve RPM quality and performance

- **RPM v7.1.1.2**
  - Fix pack with few features and Performance Improvements
  - Resource Contour related features
  - Improved handling of Capital Costs
  - Offline Data entry (Timesheets, Scope elements) and Network Diagrams
  - Updated platform/tool support (DB2 9.1, Birt 2.2, IP v6)

- **IBM published over half a dozen articles/demos relating to Project and Portfolio Management**
  - Integrating IBM Rational Portfolio Manager with IBM Rational ClearQuest
  - Best Practices (using Rational Method Composer and Rational Portfolio Manager)
  - Integrating IBM Rational RequisitePro with IBM Rational Portfolio Manager etc.
Project and Portfolio Management
Accomplishments since last RSDC (Contd.)

- Key IBM partner offerings
  - Galorath, Inc.
    - Integrated the SEER suite of estimation tools with RPM to produce an initial project plan Focusing on a staffing
  - QSM
    - Integrated the SLIM suite of estimation tools with RPM to produce an initial project plan Focusing on the schedule and effort

- Acquisitions
  - Telelogic – Product Portfolio Management (Focal Point)
  - Cognos - Business Intelligence and Performance Management
Project and Portfolio Management

Looking Ahead

- Evolution of IBM Project and Portfolio Management capabilities built on the Jazz Technology Platform

- Extends capabilities of other Jazz offerings such as Rational Team Concert, Rational Quality Manager, etc..

- New scalable architecture for globally integrated enterprises
  - Sustainable, scalable performance to meet “ERP for IT” requirements

- Optimized for Governance of Software and Systems Delivery
  - Tightly integrated with the Rational software and systems delivery platform to support alignment and visibility across the lifecycle
Project and Portfolio Management
Looking Ahead (contd.)

- Tight alignment with Next Generation Reporting to provide powerful and extensible reporting and dash boarding capabilities.
- Automates project and program data collection, improves collaboration, and facilitates measured capability improvement by execution of projects and programs associated with MCIF
- Supports traditional and Agile project management methodologies

- Bottom Line: Focused on Integration, Collaboration, Scalability and User Experience
Project Manager views
Gantt chart in the web client
Project Manager creates new Task
New task created
Task appears in developer’s RTC Eclipse client.
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Sample Scenario: Improved Development Governance through Integrated Process, Execution, and Reporting

1. Incrementally select practices based on business needs
2. Define process to provide governance control points
3. Align planning with process / governance control points
4. Facilitate execution and status visibility
5. Support retrospective and ongoing improvement
6. Aid compliance audits
Conclusion

GOAL: Delivering value in support of business outcomes

- Enabling governance
  - For oversight and accountability

- Delivering flexible architectures
  - For agility and modularity

- Leveraging communities
  - For collaboration and insight

Enterprise Reporting

Process Management

Project and Portfolio Management
QUESTIONS
THANK YOU

Learn more at:
- IBM Rational software
- IBM Rational Software Delivery Platform
- Process and portfolio management
- Change and release management
- Quality management
- Architecture management
- Rational trial downloads
- Leading Innovation Web site
- developerWorks Rational
- IBM Rational TV
- IBM Rational Business Partners