Global Delivery Excellence
Best Practices for Improving Software Process and Tools Adoption

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Agenda

• Organization’s Challenges from a Delivery Perspective
• Introduction to IBM Rational Software Delivery Platform (SDP)
  - Components of IBM Rational SDP
  - Key Business Benefits of IBM Rational SDP
• How to achieve Delivery Excellence
• IBM Rational’s Best Practices for Improving Software Process and Tools Adoption
• Summary
This is what most organization’s want...

- **Speed software delivery**
  - Meet organizational commitments
  - Make time-critical market windows
  - Deliver software projects to operations on time and on budget, with greater reliability

- **Improve software quality**
  - Ensure that business-critical applications meet end-user requirements and performance criteria
  - Comply with regulatory standards
  - Pinpoint critical application security vulnerabilities

- **Integrate across silos and simplify complexity**
  - Drive organizational alignment
  - Improve efficiency, reduce errors and reduce friction
  - Harness globally distributed resources for development, delivery and operations
Customer business challenges
How do I gain business value and reduce costs across the application lifecycle?

- **Reduce time-to-market**
  - 50% of applications put into production are later rolled back

- **Deliver complex software projects and satisfy quality mandates**
  - Up to 85% of problems are caused by IT changes

- **Increase innovation**
  - Even though 70%+ of IT labor budget goes to maintaining current systems

- **Increase customer satisfaction**
  - Up to 80% of problems are reported by users
Organization’s Challenges from a Delivery Perspective

• **First Time Right**
  – Bring Predictability to Software Delivery
  – Delivering On-Budget and On-Schedule

• **Quality**
  – Improve Quality of Deliverables
  – All Business Units aligned to this goal

• **Delivery Governance to**
  – To improve software capability and productivity
  – To reduce time to market
  – To improve mobility of project team members by using industry best-practices and standards and integrated toolset

• **See Best Practices and Tools Implementation as an Enabler, Revenue Accelerator**

• **Boost People Productivity & thereby reduce cost**
IBM Rational SDP - Introduction

• The IBM Rational Software Delivery Platform is a comprehensive set
  – Of tools, proven best practices and professional services.
• The IBM Rational SDP supports a wide variety of software and software-based systems
  – Including service-oriented, component-based, and pervasive and embedded architectures.
• Founded on industry standards and supporting the Eclipse framework the IBM Rational SDP
  – Enables development teams to easily leverage the right tools for the job across disparate systems and heterogeneous environments.
Customers are maturing their approach to software and systems delivery

Managing value & risk with continuous portfolio and lifecycle management aligned with business imperatives

Cross organizational process & project management with an emphasis on collaboration and asset utilization

Team productivity via change, quality & release management

Lifecycle tools integrated with best practices process guidance

Real time middleware platform including process activation

Portfolio management
- Future
- Late 90’s — Today
- 1980’s – 1990’s
- Pre-1980’s

Process management

Project Management

Resource availability

Design & construction
- Compilers & editors & simple test tools

Integrated Development Environment (IDE) including Source Code Management Systems

Software “Supply Chains”

SCOPE

STEPS

STOP
TALKING INNOVATION.

START
DOING IT.
A focus on supporting evolving value

Supporting efficiency, control and value at every level

Software and Systems Delivery Solutions
Targeted solutions with reusable methods and asset to simplify SOA lifecycle management, complex systems development, packaged applications integration and enterprise modernization.

Governance & Lifecycle Management
Best practices, processes and expertise for visibility, clarity, compliance and accountability across projects and processes.

Collaboration & Global Software Skills
Community-based collaboration for global teams and distributed assets, education, certification, and infrastructure.

Productivity & Automation
Products and best practices for improving specific development and delivery processes.

IBM Rational Software Delivery Platform

Breadth of Impact
IBM Rational Software Delivery Platform

What we offer

Solutions to help customers achieve greater value and performance from their investments in delivering software

- Enterprise Modernization and Transformation
- Organizational Governance
- Skill Development and Community
- Implementation Services
IBM Rational SDP – Key Business Benefits

- Deliver innovative solutions and services in new and faster ways enabling Organization to respond to competitive threats sooner, and creating sustainable market advantage.
- Improve operational efficiency by automating and integrating software development and software reuse.
- Drive business priorities and mitigate risk for GDD projects through a collaborative team-based development environment.
- Help Organization to align technology and business priorities across the software development lifecycle, resulting in improved efficiency and responsiveness.
How to Achieve Delivery Excellence

**From**
- Labor Pools
- Solutioning remote capabilities primarily for low cost commodity, technology resources
- Hiring global delivery resources to demand
- Different organizational models and capability alignment
- Multiple global delivery processes
- Every project is custom solutioned
- On-shore design, build

**To**
- Centers of Competency
- Selling a full Global Delivery Model
  - Establishing remote resource capability in high value industry expertise, process knowledge, and leading technology skills as well as traditional technology skills
- Building capabilities ahead of demand to drive growth
- Common organizational alignment and capability alignment
- Lean delivery model
- Reuse of delivery assets managed by a high-quality/low cost offering delivery teams
- Remote design, build, run

**How**
- Common Tools
- Common Methods/Guidance
- Common Assets

**How**
- Common Tools
- Common Methods/Guidance
- Common Assets
Delivery Excellence: Improving Software Economics

Legacy system upgrades  New Developments
e-business, Web applications  New Releases
SW Maintenance  Packaged applications

Time or Cost To Build = (Complexity) (Process) * (Team) * (Tools)

- **Complexity** → Volume of human-generated code
- **Process** → Methods, notations, maturity
- **Team** → Skill set, experience, motivation
- **Tools** → Process automation
IBM’s Approach for Delivery Excellence

• **Adopt a set of Common Tools, Methods, Processes**
  – IBM Rational Software Delivery Platform (SDP)

• **Employ Reuse of Assets**

• **IBM Rational SDP enablement**
  – Training, mentoring, consulting on IBM Software Development tools
  – Creation of Subject Matter experts (SME’s) in not just tools but also Best Practices

• **Implement a Collaborative Software Delivery Platform for Effective Governance**
Best Practices for Software Process and Tool Adoption

• Adopt process & tools iteratively in projects
  – Don’t slow down project team with too much change

• Support project teams with just-in-time mentoring to accelerate learning/adoption
  – Just class room training is not enough. Without mentoring learning curve may be steep.
  – People may fall back to old-ways

• Demonstrate quick-wins from projects
  – Nothing succeeds like success. Without quick win initiative may lose traction

• Develop internal SMEs/Experts who deliver mentoring to project team via CoE
  – CoE drives adoption and institutionalization of process & tools organization wide
Approach for Process & Tools Implementation

Wave 0: Perform Gap-Analysis

- **Pre-condition:** Organization stakeholders have been identified and a project manager is in place
- **Post-Condition:** Gap Analysis completed, findings and recommendations have been shared with the stakeholders
- **Timeline:** 3 weeks
Wave 1: Train & Mentor Early Adopter Projects

- **Pre-condition:** Organization Stakeholders agree on an adoption approach based on mentoring and approve the concept of an Enterprise Mentoring Program delivered through Software Process Tools Adoption (SPTA) CoE.

- **Post-Condition:**
  - Initial project success demonstrated by applying the software best practices in Early Adopter Projects with the help of Rational Mentor
  - 3-4 mentors (SME) internal to Organization (“Internal Mentors”) have been identified to start the mentoring program
  - “SPTA CoE” team members have been identified and the organization formed.

- Timeline: 12 weeks
Approach for Process & Tools Implementation

Wave 2: Train & Mentor Secondary Adopter Projects

• **Pre-condition:** Internal Mentors (SMEs) have been identified.

• **Post-Condition:**
  – Internal Mentors have been shadowing the Rational mentors and now ready to mentor project teams.

• Timeline: 12 weeks
Approach for Process & Tools Implementation

Wave 3: Internal Mentors (SMEs) Mentor Projects

- **Pre-condition:** Internal Mentors (SMEs) are ready to mentor project teams.

- **Post-Condition:** Internal Mentors have successfully mentored the project teams under supervision of Rational mentors.

- Timeline: 12 weeks
Approach for Process & Tools Implementation

Wave 4: Internal Mentors (SMEs) Mentor Projects

• **Pre-condition:** Fully functional SPTA CoE is in place that provides mentoring support to project teams

• **Post-Condition:** No dependency on external resources

• **Timeline:** 12 weeks
Process & Tool Adoption Roadmap

**Develop Adoption Strategy**

- Create Awareness of Process
- Assess the Current Situation
- Motivate with Business Case
- Set Adoption Goals, Identify Risks and Opportunities
- Make a High-Level Adoption Plan and Develop a Communication Plan
- Identify Software Development Projects to Support
- Adapt to the Unexpected (Risks/Opportunities/Goals)
- Develop CoE for Mentoring Program

**Execute Adoption Strategy**

- Make a Detailed Plan for the Adoption Effort
- Project A Adopts Process Subset X
- Support Projects with Mentoring
- Project B Adopts Process Subset Y
- Decide upon Your Process
- Adapt to the Unexpected Risks/Opportunities/Goals
- Automate Your Process

**Enterprise Adoption**

- Evaluate the Adoption Effort
- implementation ready?
- Develop CoE for Mentoring Program

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**STOP TALKING INNOVATION.**

**START DOING IT.**
Why Need Mentoring?

- **Skill Level 0**: No knowledge or experience
- **Skill Level 1: Acquired**: Limited ability to perform. Has general knowledge only. Very limited experience.
- **Skill Level 2: Applied**: Can perform without assistance. Can direct/mentor others. Repeated and successful experience.
- **Skill Level 3: Mastered**: Has comprehensive knowledge with ability to make sound judgments. Can give expert advice and lead others to perform. Extensive and comprehensive experience.
- Training is important but not sufficient
  - After a training class most people will be at L1
- People need to be at L2 to apply the knowledge effectively
  - Mentoring support is needed to get people to L3
  - A mentor is a L2+ practitioner in his/her domain
Mentoring Accelerates Learning/Adoption

Productivity gain starts at Learning Level 4

Minimize T1 with mentoring
IBM Rational Services for Process and Tools Adoption

• Education: Rational training classes to enable teams in process and tools

• Consulting/Mentoring Services
  – Deployment services: Tool usage model and configuration related consulting/mentoring.
    ▶ Minimize learning curve by applying/sharing proven best practices
  – Live Project Mentoring: Provide just-in-time hands-on mentoring services to live projects.
    ▶ Demonstrate success in real-projects, Develop internal experts
  – SME Programs across the SDLC
Live Project Mentoring

• Identify early adopter projects
• IBM mentors assess the current process and tool capability within the project team
• For each project up to 10-15 person days of live project mentoring are conducted in the process and tool areas in
  – Architecture Management
  – Requirement Management
  – Testing and
  – Change Management
• IBM mentors share best practices in SDLC and tools, help minimize the learning curve and accelerate adoption
  – Adoption impact can be measured from project success
  – SME’s learn how to effectively mentor project teams
Four Patterns of Success

• **Scope management ➜ Asset based development**
  – Solutions need to evolve from user specifications AND user specifications need to evolve from candidate solutions.
  • As opposed to getting all the requirements right up front.

• **Process management ➜ Rightsize the process**
  – Process and instrumentation rigor evolves from light to heavy.
  • As opposed to the entire project’s lifecycle process should be light or heavy depending on the character of the project.

• **Progress management ➜ Honest assessments**
  – Healthy projects display a sequence of progressions and digressions.
  • As opposed to healthy projects progress to 100% earned value with a monotonically increasing and predictable plan.

• **Quality management ➜ Incremental demonstrable results**
  – Testing needs to be a 1st class, full lifecycle activity.
  • As opposed to a subordinate, later lifecycle activity.
The Value of IBM Rational’s Software Process and Tools Adoption

Business Driven Development

- Reduced Complexity
  - Semantic knowledge of SOA patterns, components, usage
- Improved Process
  - Governance, guidance and variance management
- More Efficient Teams
  - Accelerated proficiency, more engineering, less overhead
- More Automation
  - Content generation, Instrumentation, change management

Old way
Megatons

Rational way
Much Less

Human Developed Stuff

~ Cost
~ Time

Existing artifacts, practices

Custom Crafted:
- Artifacts
- Processes
- Plans
- Methods
- Tools
- Training

Automated Content Generation

Existing starting points

Project Tailoring
Improve Organizational Governance

1. Ad hoc processes, methods, tools
   - Custom defined on each project, no ROI
   - Ungoverned

2. Foundation project disciplines
   - Analysis & design, configuration and change management, planning, scope management, testing
   - Repeatable practices

3. Organizational process discipline
   - Common methods, tools and training, Objective metrics collection
   - Governance

4/5. Software economies of scale
   - Business performance optimization, Quantitative process management
   - Business driven development
Some of the Business Results Delivered

- Enabled project teams to reduce their learning curve to deploy IBM Rational Solutions and improve time to delivery.
- Reduce cost, improve productivity and increase overall profitability.
- Improve predictability of application delivery, a key metric for a Level 5 company.
- Reduce risks early enough by implementing IBM Rational Best Practices and architecture centric development.
- Attract employees due to the motivation of being identified as a SME.
- Improved ability to adapt to change faster.
Some Technical Results

- Shorter project lifecycle
- Better predictability
- Less bugs
- Better architecture
- Increased reusability
- Better testing with less time
- Better documentation
- Improved team communication
- Improved Traceability and Change Management.
IBM Rational Best Practices and Tools Adoption - Summary

- Increases individual and team productivity
- Improve business flexibility and responsiveness
- Accelerates time to revenue
- Powerful / flexible Best Practices and tools for the developer, yet easy-to-use
- Unified approach that supports all aspects of a development lifecycle
- Uses iterative deployment techniques to align the teams with the business goals and facilitate change.
THANK YOU