IBM Software Group

Equipping Yourself for the Agile Wave

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Discussion Topics

- **Agile has gone Mainstream**
- The Road to Agility
- Best Practices for Agile Testing
- Latest and Upcoming Rational Technologies
- Summary

What is Agile?

- An iterative and incremental (evolutionary) approach performed in a highly collaborative manner with **just the right amount of ceremony** to produce high quality software in a cost effective and timely manner which meets the changing needs of its stakeholders.

- Core principles
  - Frequent delivery of working software
  - Continuous testing and validation
  - Consistent team collaboration
  - Rapid response to change
  - Ongoing customer involvement
  - “Fits just right” process

Agile has gone Mainstream

From the analyst community

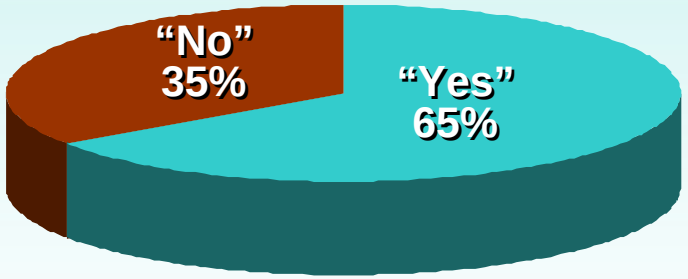
"Thirty-five percent of ….respondents have projects or pilots underway, and *only 12 percent do not see a fit* for Agile processes in their organizations.

The fact that 88 percent of these organizations (one-third of which have over 10,000 employees) are using or evaluating Agile processes proves that Agile processes have truly hit the mainstream."

- Excerpt from “And the Agile Survey Says…”
Agile Journal, March 6, 2006

Third-party research suggests even wider adoption

Have you adopted any Agile techniques?



Source: Ambler ‘Agile Adoption Rate Survey’ of over 4200 Dr. Dobb’s subscribers, March 2006

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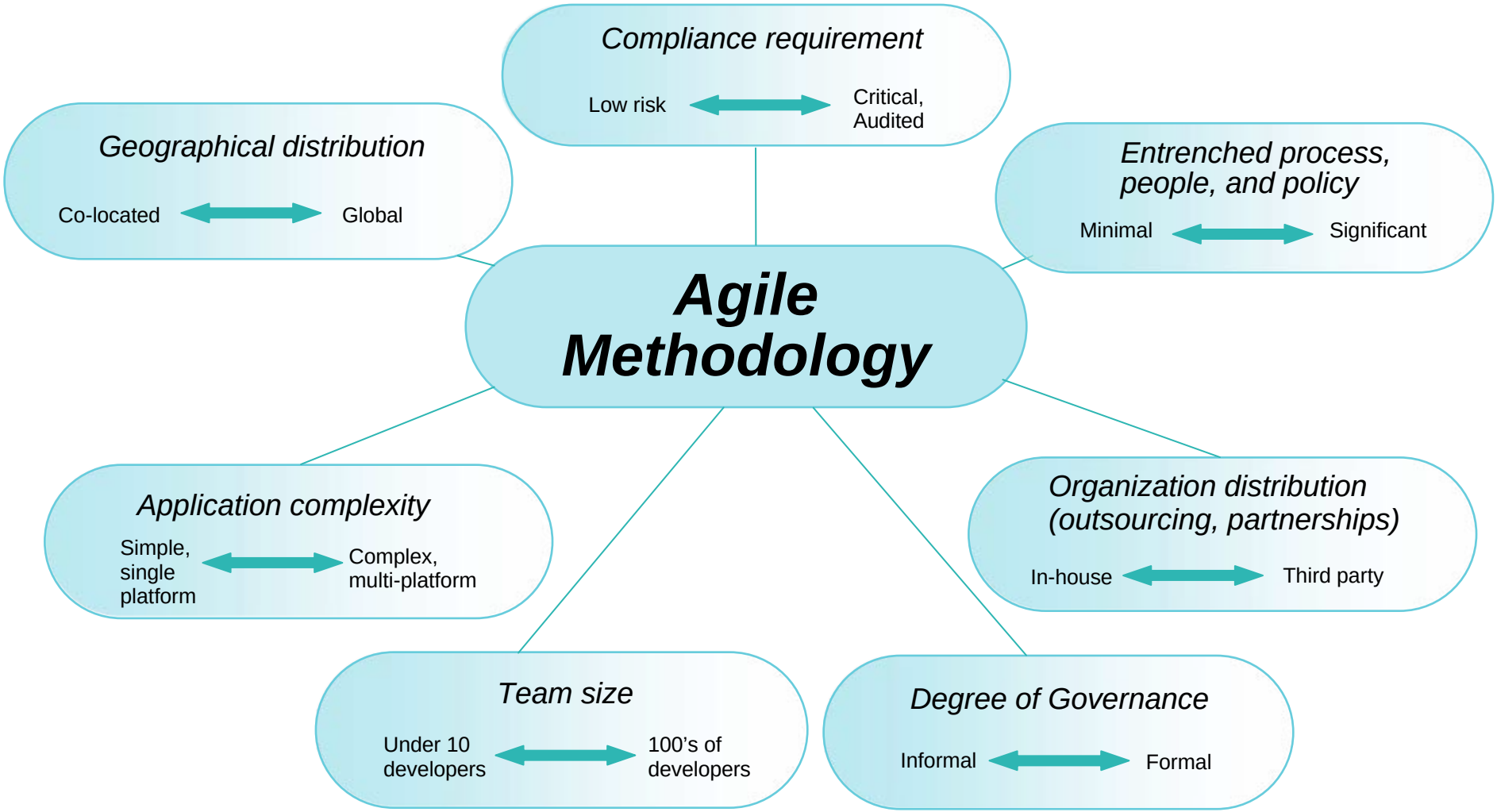
Challenges in Achieving Agility

- Following the process
- Change management
- Collecting team status
- The larger role of a tester
- Heavier testing workload
- Traditional tools do not fit well with Agile testing
- Cost of face-to-face meetings
- Why is this change in the build?

Challenges with Agile in Larger Organisations



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Testing Best Practices in Agile

- User Acceptance Testing
- Manual Exploratory Testing
- Security Testing
- Unit Testing
- Test Management and Team Collaboration

Best Practices – User Acceptance Testing

- Get educated on requirements definition/gathering
- Automate UAT
- Centralise generic test assets for reuse
- Use mainstream scripting languages
- Automate Policy Testing

Best Practices - Manual Exploratory Testing

- Used to uncover hidden requirements
- Pair up with a domain expert or a business analyst to do exploratory testing
- Keep a catalog of reusable test assets
- Automate part of your exploratory tests

Best Practice - Security Testing

- We are not security experts – get help
- Automate security tests
- Security information updates are important
- Recommendations to developers would be ideal

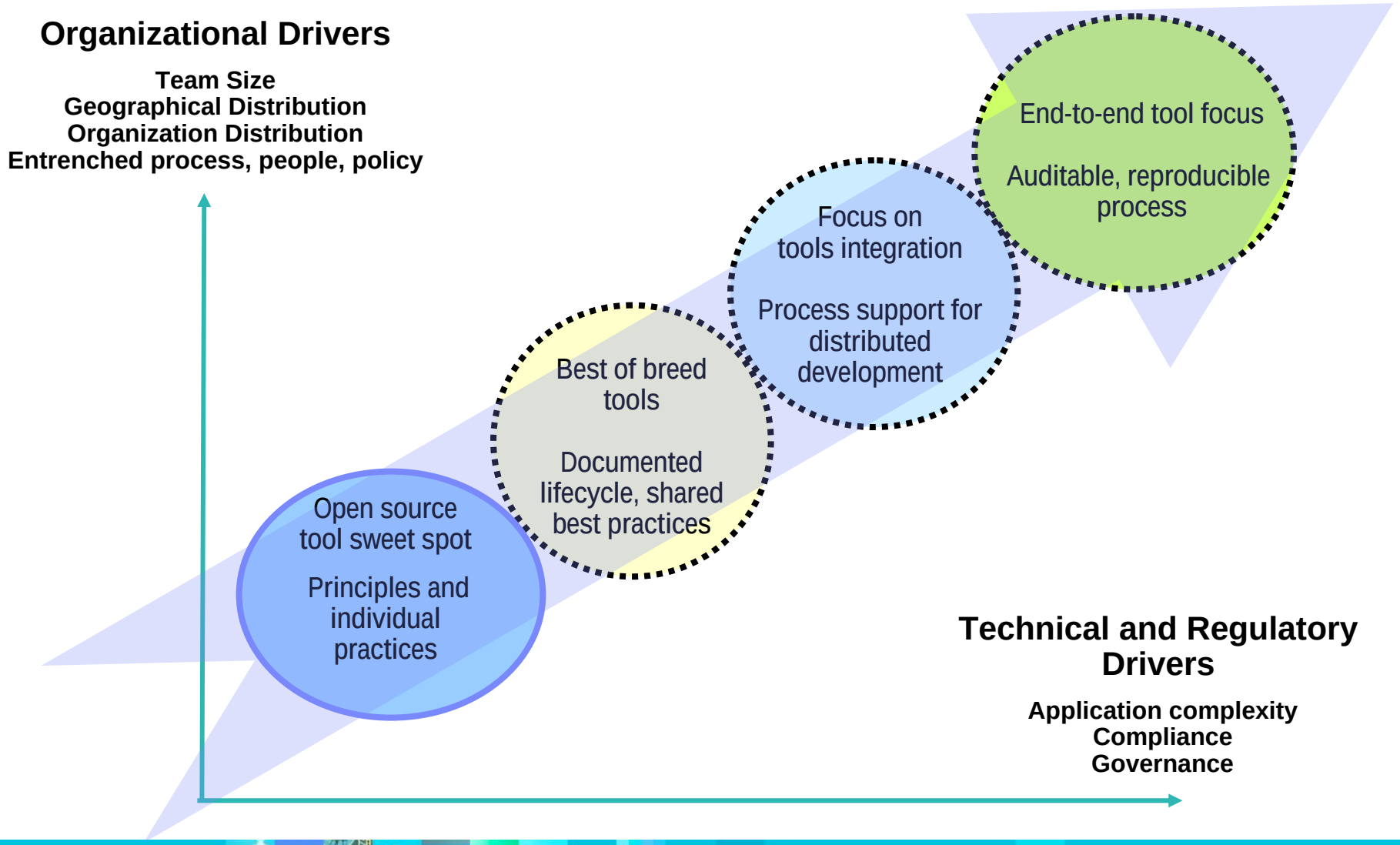
Best Practices – Unit Testing

- Pick your favourite tools
- IDE
- xUnit family
- Reuse

Best Practices – Test Management and Team Collaboration

- Clearly define and publish the process and keep it up-to-date
- Everyone keeps a task list
- Test planning for one iteration
- Generate documentation instead of writing them
- Use team collobration technologies to replace some face-to-face meetings
- End-to-end automation of regression testing

Complexity Changes the Approach for Tools & Process



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Rational Performance Tester Extension *for SAP Solutions*

Powered by
Rational Performance Tester Extensibility SDK

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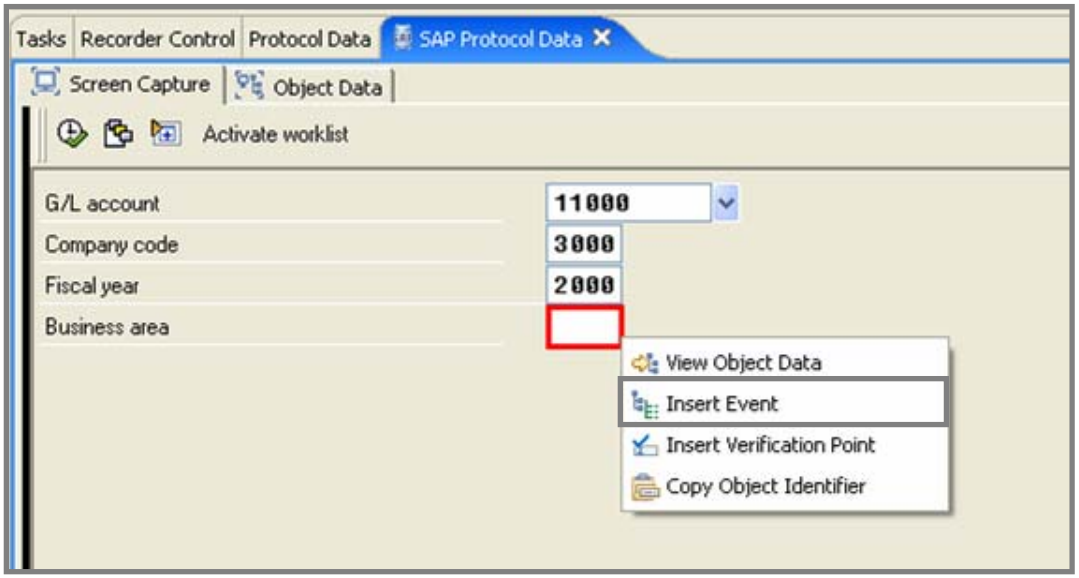
- The process of testing SAP applications
  - Follows the same steps as testing web based applications
    - Record
    - Edit
    - Execute & measure response times
  - Requires new technology to enable the process
    - SAP Recorder
    - SAP Protocol Browser for test editing
    - SAP Performance Reports

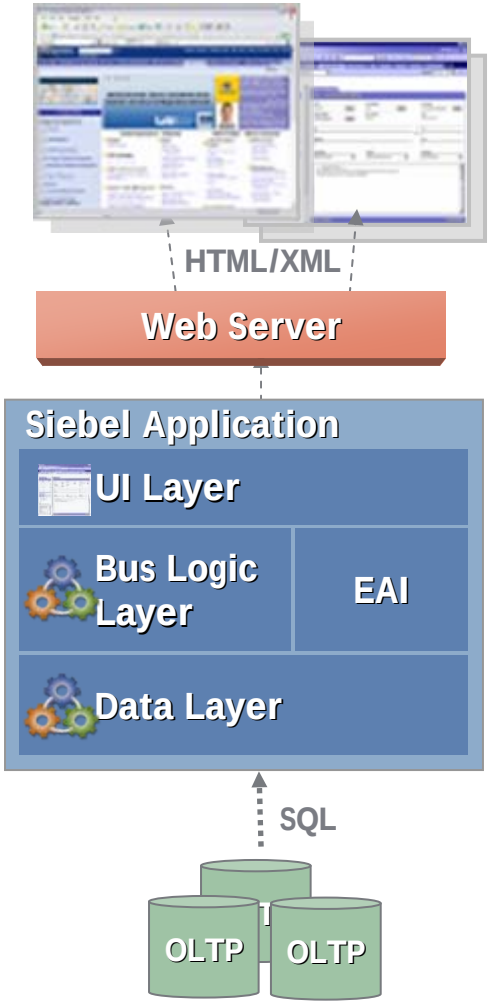
Rational Performance Tester Extension *for SAP Solutions*
SAP Protocol Browser



- Protocol Browser allows users to insert actions into the script by acting upon captured screenshots
  - No re-recording or complex test editing required
- Verification points can be inserted to validate SAP data

Rational *Functional* Tester Extension for Siebel Test Automation *Unique Features*

- Lowers the cost of functional testing
  - Recognition of Siebel custom High Interactivity (HI) and Standard Interactivity (SI) Objects
- Offers extensive customization options
  - Exposing of Siebel Script-Only methods
  - Siebel Automation Framework



How Rational AppScan works

Security

Privacy

Quality

Standards

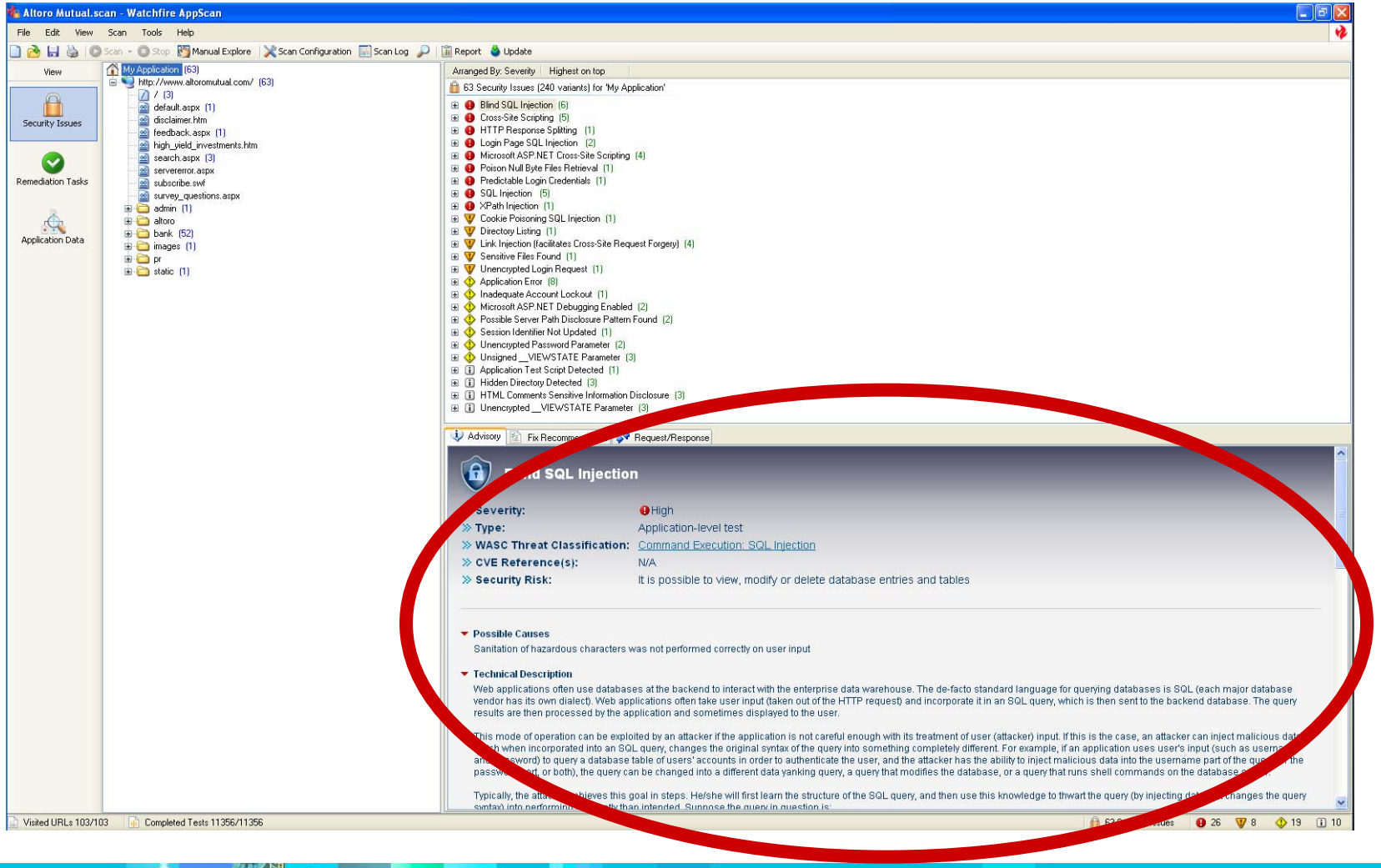
Compliance

1 **Scan**

2 **Analyze**

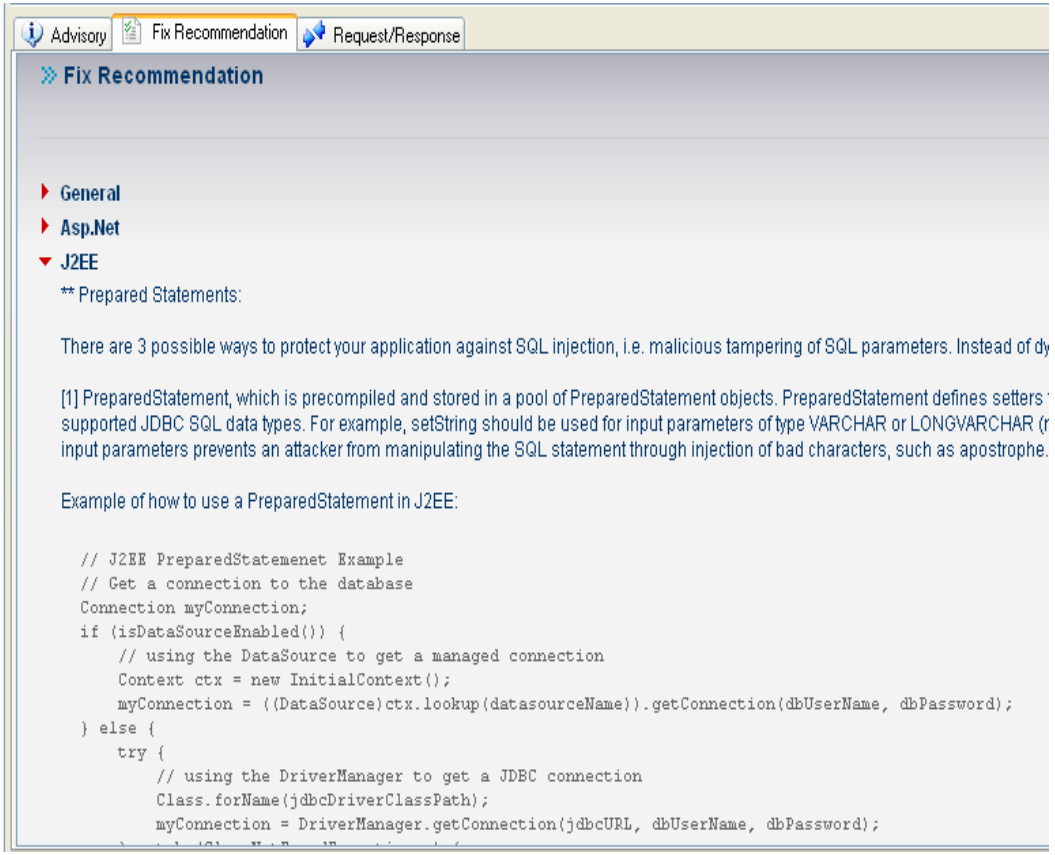
3 **Report**
Detailed, Actionable Information

Rational AppScan Screenshots



AppScan Screenshots

AppScan Screenshots



What is Jazz?

Jazz is IBM's **next-generation technology platform** for collaborative software delivery. Uniquely attuned to global and distributed teams, the Jazz platform is designed to **transform how people work together to build software**—making software delivery more **collaborative, productive and transparent.**

Innovation

A major investment by IBM to create a scalable, extensible team collaboration platform

Evolution

Many Rational products will evolve to support the Jazz technology platform over time, bringing a host of next-generation capabilities to the Rational Software Delivery Platform.

Community

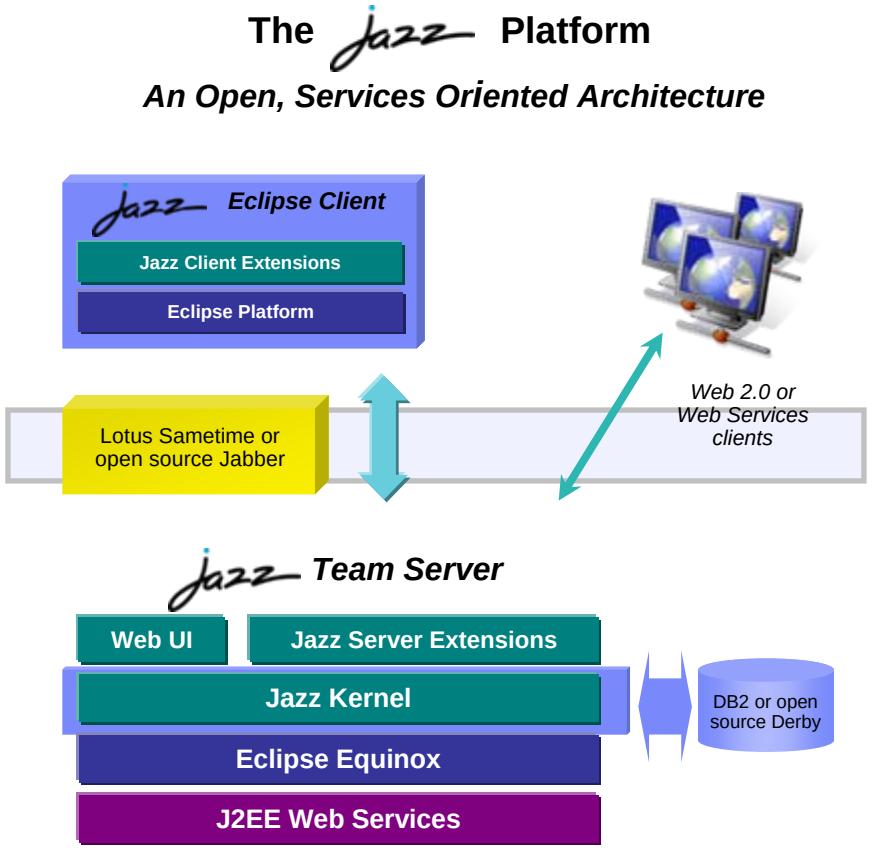
Jazz.net – an online venue for open commercial development of the Jazz platform and Jazz-based products.

Vision

Our vision for the future of software delivery -- supporting diverse types of teams and a workforce that is increasingly organizationally and globally distributed, fluid and dynamic.

The value of the Jazz technology?

- The Jazz platform enables teams to:
- **Collaborate in context** of the work they are doing. Jazz maintains the relationships between artifacts so you don't have to.
- **Right-size governance** by capturing, sharing and automating best practices at varying degrees of rigor. Fine-tune your governance process over time—avoiding the need to define everything up front.
- **Choose your own path.** An open and extensible architecture is designed to give you the flexibility to assemble your own software delivery platform, relying on your pref



What is IBM Rational Team Concert?

A New Family of Products based on Jazz Technology

- Optimized for agile development teams in midsized & large businesses
- Integrates the entire team around an integration server
- Includes Enhanced Eclipse Development environment

Primary Features

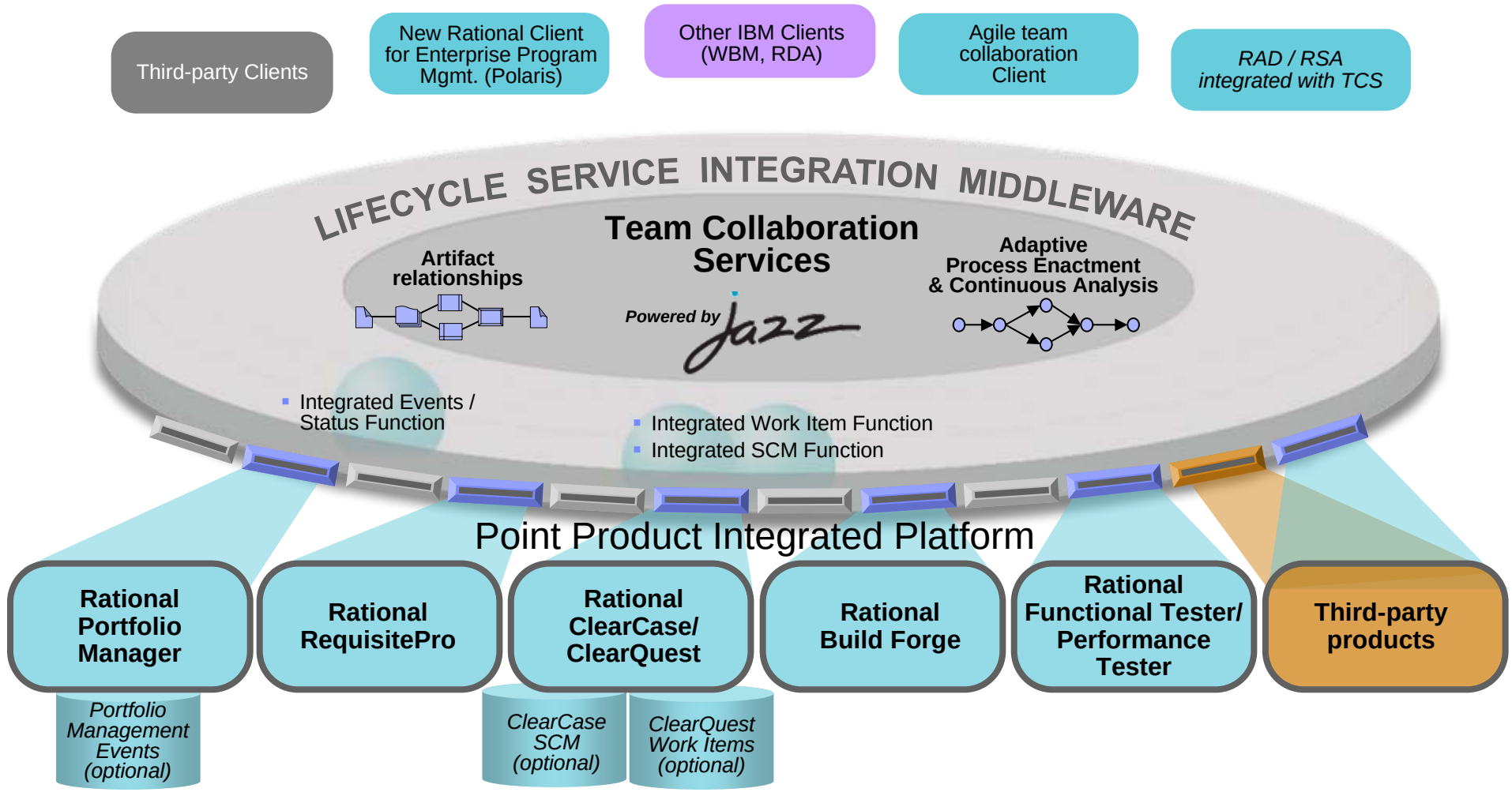
- In-place **collaboration** among team members
- Support and enforcement for development **processes**
- **Transparency** of status and trends through automated data-gathering a reporting

Motivation

- Enable flexible, agile application lifecycle management
- Low administrative footprint optimized for agile teams in SMB & large businesses
- Adds value for existing **ClearCase** and **ClearQuest** customers
- Step one in the rollout of “lifecycle service integration” middleware in the Rational Software Delivery Platform

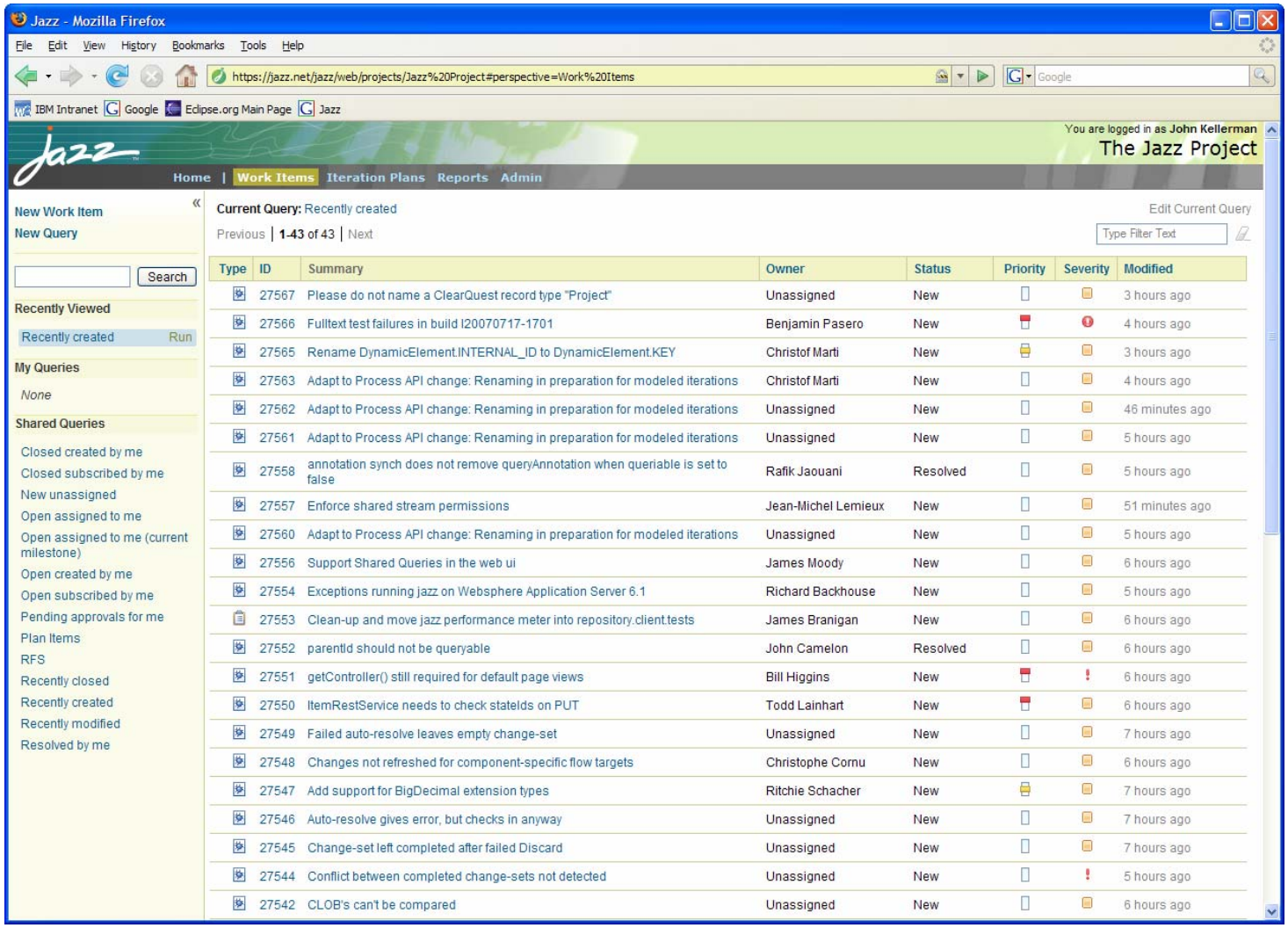
Evolving the Rational Software Delivery Platform

An open ecosystem based on IBM middleware

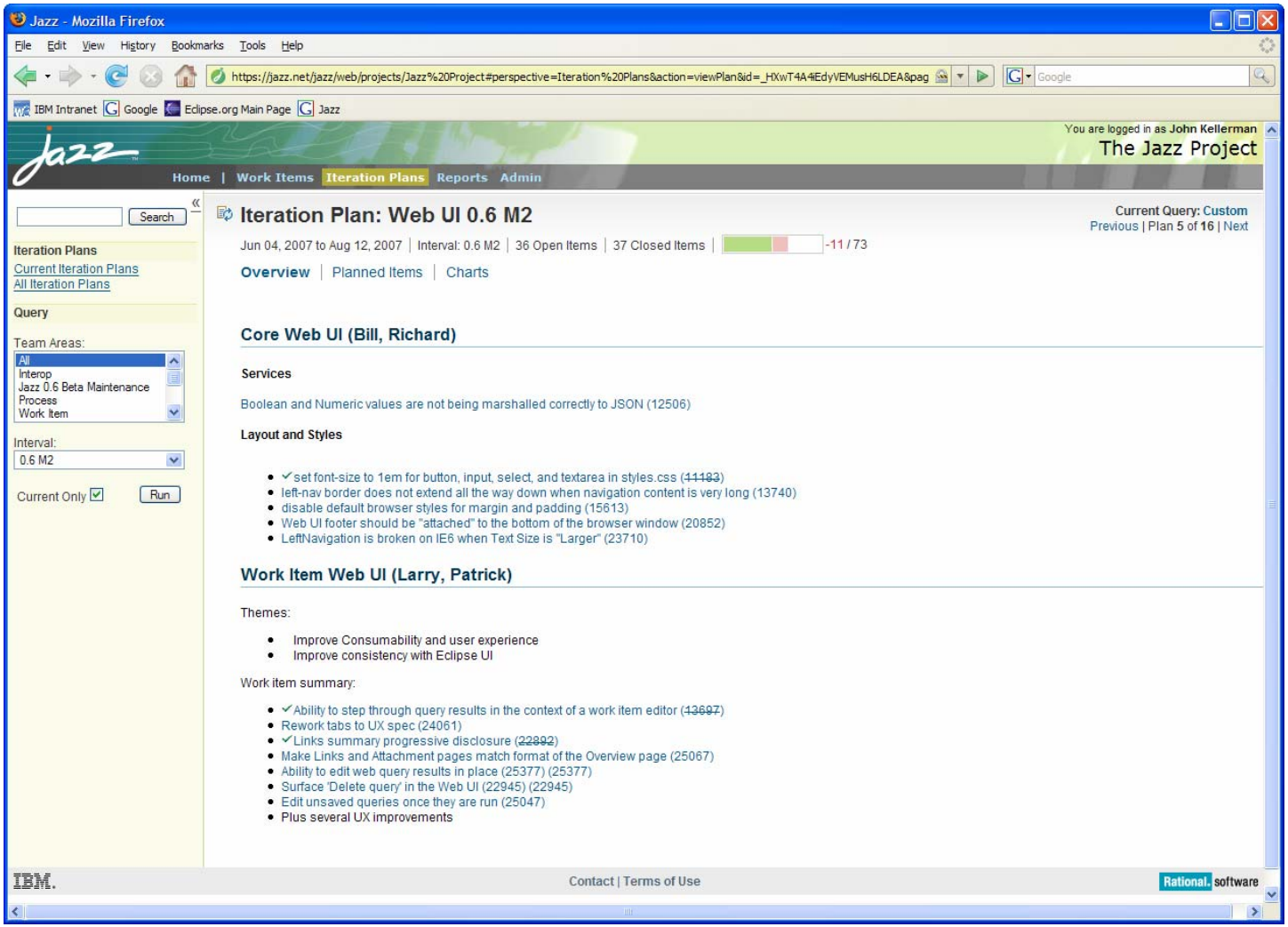


Built for development efficiency: Allows developers to innovate rather than duplicating efforts, figuring out who to hand off to, or tracking and reporting status

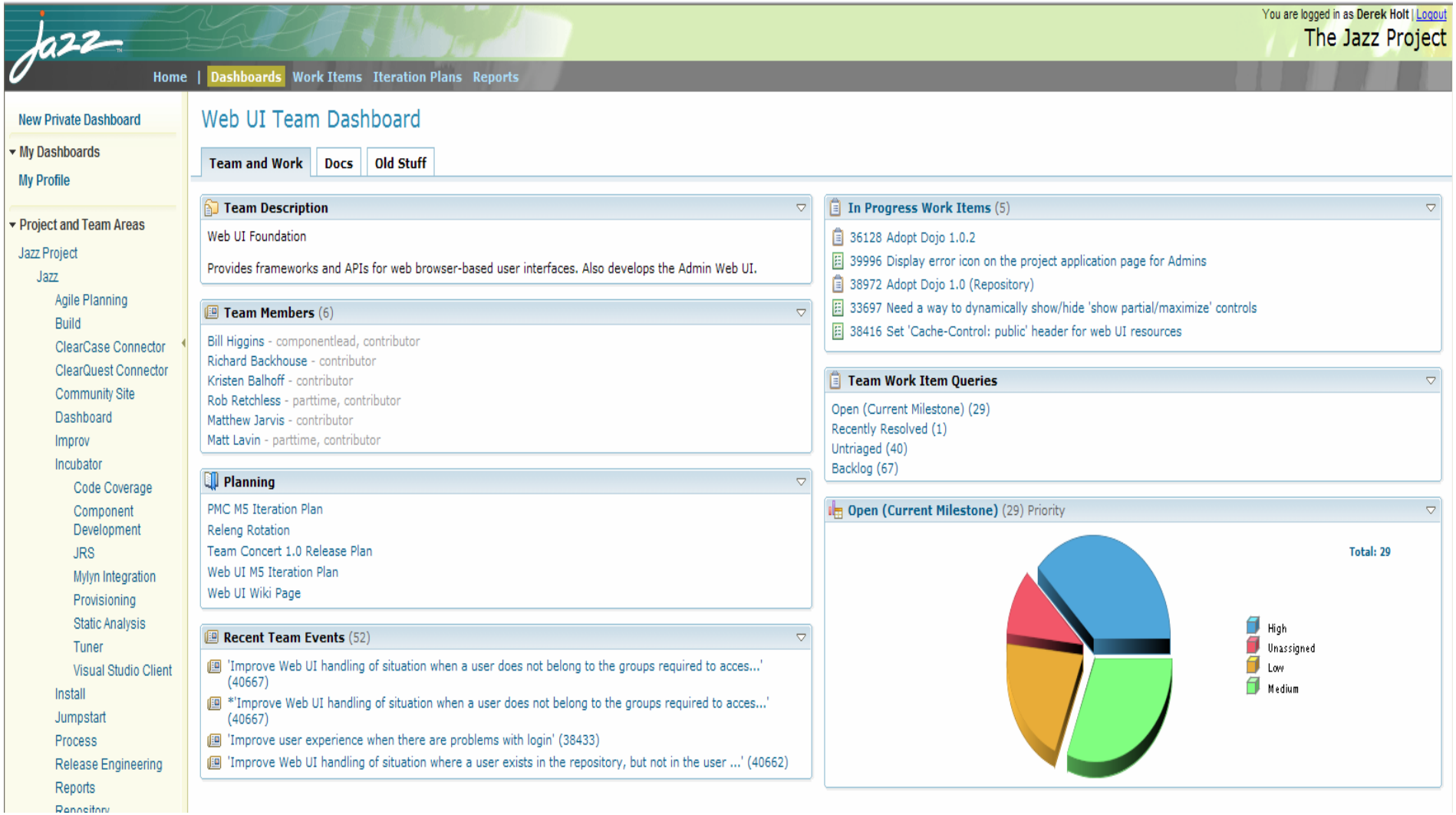
Work items at jazz.net



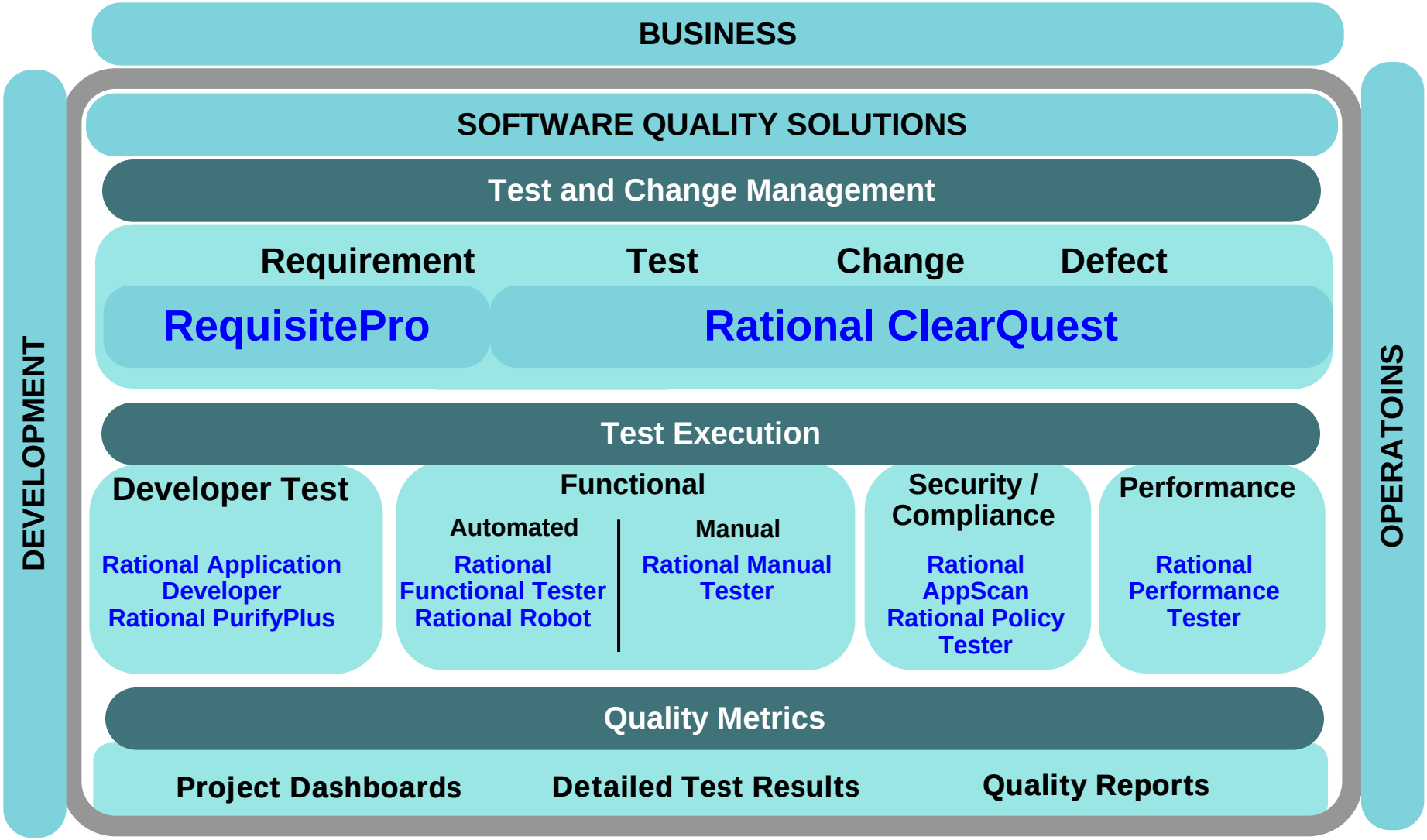
Iteration plan at jazz.net



Dashboards at jazz.net



Software Quality Solutions



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Summary: Succeeding with Agile

- **Agile Development is transforming how development is done**
  - Placing greater demand on people, processes and tools
- **Following best practices, Agile can scale to accommodate technical and organizational complexity**
  - Automation is a must
  - Equip your testers
- **There are a lot of cool Rational technologies**
  - Rational AppScan
  - Rational testing tools for SAP, Siebel
  - Jazz.net
  - Rational Team Concert – read Agile!

Resources

- Agile Community http://www.agilealliance.org/
- Manifesto for Agile Development http://www.agilemanifesto.org/
- Scott Ambler http://www.ambysoft.com/
- Crispin, L. & Hourse, T. (2002) Testing Extreme Programming. Addison-Wesley.
- developerWorks http://www.ibm.com/dw/
- Jazz or Rational Team Concert http://www.jazz.net
- Alan Kan, alankan@nz.ibm.com

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