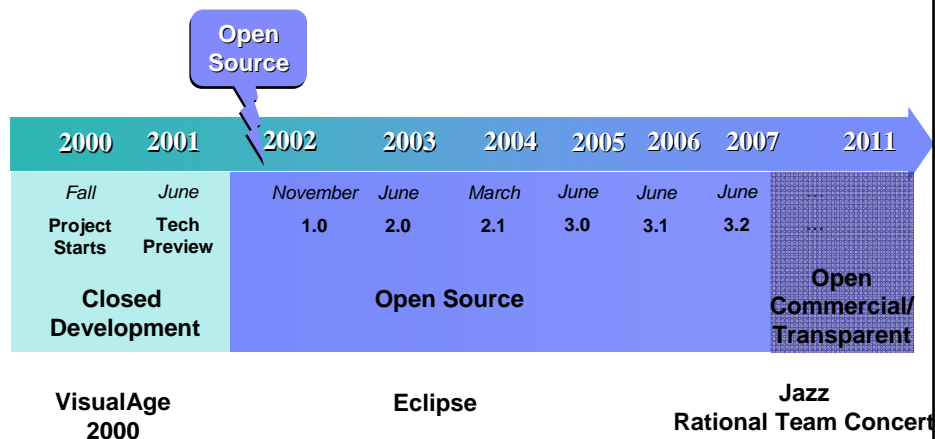


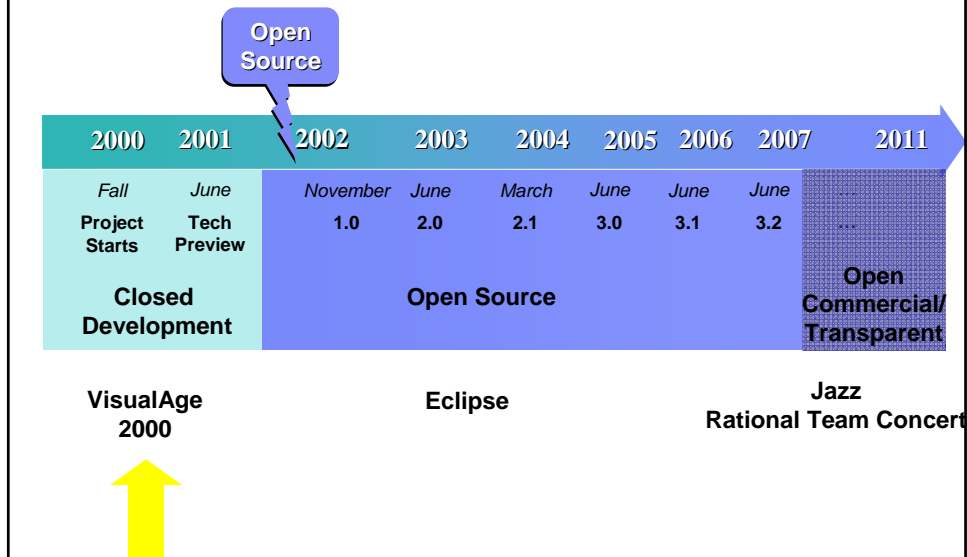
From Closed to Open to Transparent Software Development

Dr. Erich Gamma
IBM Distinguished Engineer
IBM Rational Zurich Research Lab

Eclipse Timeline

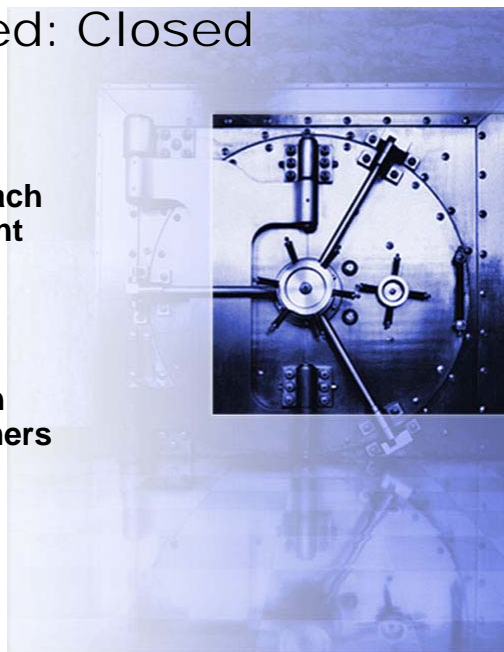


Eclipse Timeline



How we Started: Closed development

- The Swiss Bank approach to software development
 - ▶ If it hasn't shipped it doesn't exist
- Strong firewall between developers and customers



Our culture

We ship software

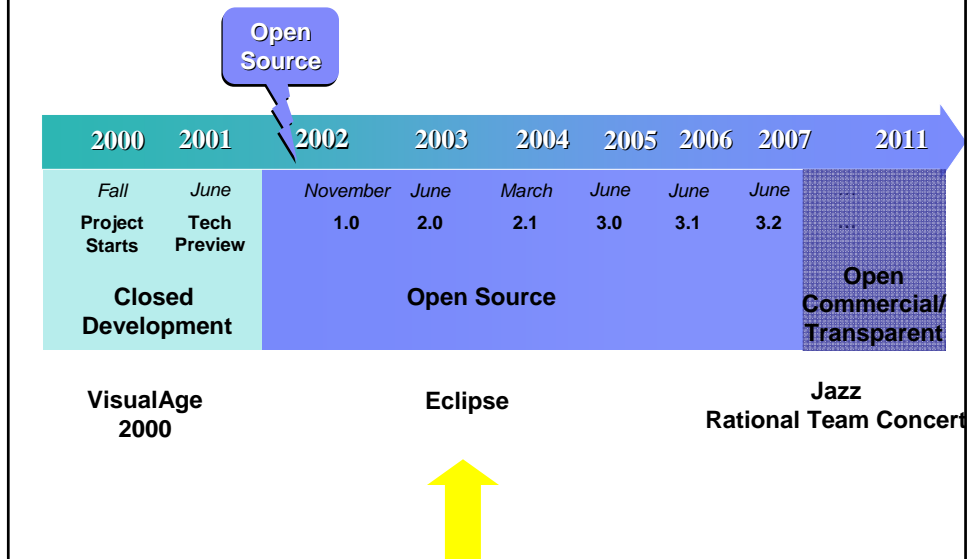
- Our objective is to ship software
 - ▶ Anything that contributes to this goal, even indirectly, is considered good
 - ▶ Anything that does not is bad
- Developer recognition is based on the ability to ship quality software on time
- Our culture: *“If you ship, then you may speak.”*
- Our question: *“Did they ever ship anything?”*
- Our insult: *“Yes, but they never ship anything!”*

Our Team

Globally Distributed



Eclipse Timeline



Eclipse vision

2001

- Industry open source tool platform
- Seamless integration of previously unintegrated tools
- A plug-in for everything
- Users can assemble tools from different suppliers to make a tool environment the way *they* want it.

Why did you open source it?

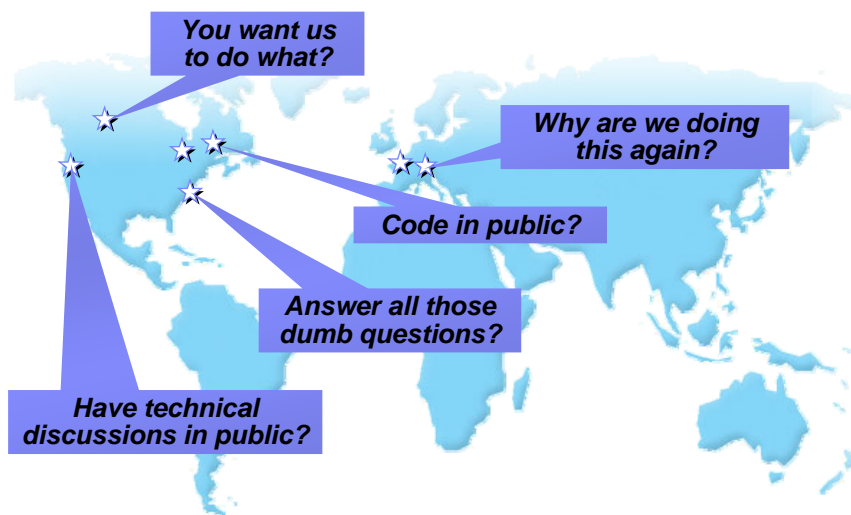
TOP 5 REASONS

5. **No one company** can deliver **all** the tool function that customers need
4. Customers don't want to be **locked in to** one proprietary technology
3. Tool builders are reluctant to invest in building tools for a **proprietary technology** they have no control over
2. Open source is a great way to **reach developers directly**
1. The large blue company realized the only way eclipse would reach its full potential as an industry platform was if the **tool builders and users had the opportunity to influence and contribute**

Conclusion: Release eclipse under an open source license and **establish an open source project** as a **community focal point** to continue to evolve the technology.

November 2001

Reaction from the development team



Transitioning to open development

Project rules defined in the project's charter¹

- **Who may change the source code?**
 - ▶ **Who is responsible for delivering?**
 - ▶ **Who decides about the architecture?**
- **Public “meritocracy”**
 - ▶ **Only a small number of developers can modify the source code: Committers**
 - ▶ **Peer pressure among committers**
 - continuous reviewing
 - ▶ **Continuous review and feedback by the community**

¹<http://www.eclipse.org/eclipse/eclipse-charter.html>

Transitioning to open development

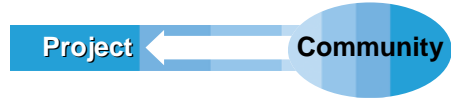
Open up

- **Learn to become more transparent**
 - ▶ **Provide visibility into the process**
 - ▶ **Make things visible even if unpleasant**
- **Invest in delivering community interaction**
 - ▶ **Prime the feedback loop**
- **Break down the firewall**
 - ▶ **Enable direct interactions between developers and customers**
 - ▶ **... and get ready for massive feedback**

Open development

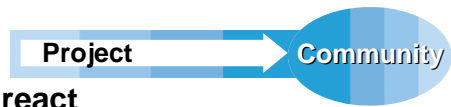
Having a community is cool!

Community gives project



- ▶ Answer user questions
- ▶ Report defects and request features
- ▶ Validate technology by extension
- ▶ Validate technology in a new configuration
- ▶ Submit patches and enhancements

Project gives community

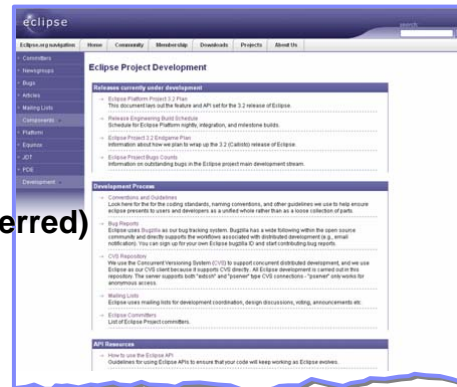


- ▶ Listen to feedback and react
- ▶ Demonstrate continuous progress
- ▶ Transparent development

Open development

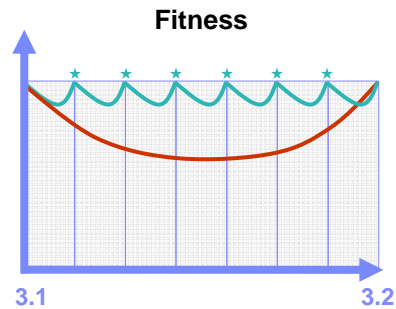
Interacting with the community

- What is going on in the project?
 - ▶ All discussion in defects/work items
 - ▶ Mailing lists (but work items are preferred)
- How can I use the project to do XYZ?
 - ▶ Newsgroups
 - ▶ A wiki
- Where do I start?
 - ▶ Project portal

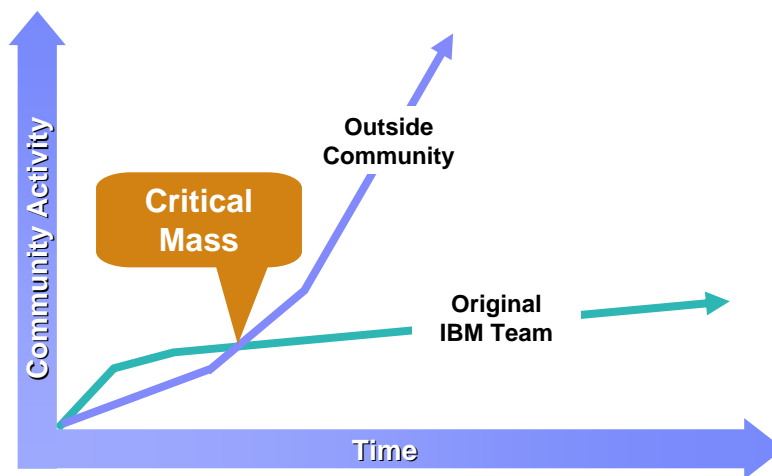


Open development *Shipping to the community*

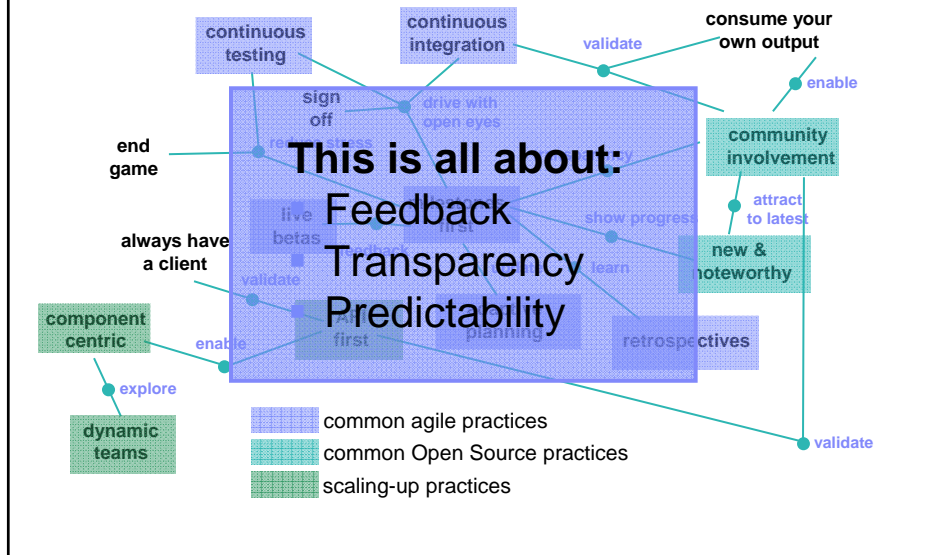
- **Live betas**
 - ▶ **Continuous listening**
 - ▶ **Continuous feedback**
 - ▶ **Continuous improvements**
- **This requires...**
 - ▶ **A healthy project**
 - ▶ **Quality any time, all the time**



A community reaching critical mass



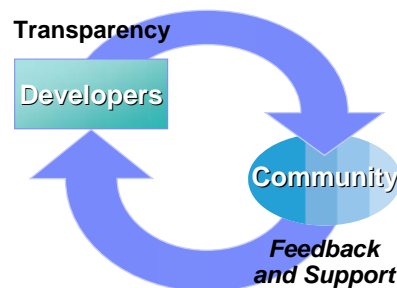
The Eclipse Development Practices



Lessons learned

Transparency and predictability enable feedback

- **Transparency helps existing development**
 - ▶ Better understanding of current status
 - ▶ Responding to feedback takes time, but pays off
- **Use same communication channels inside as outside**
 - ▶ Helped communication in our globally distributed team



Lessons learned

The "village effect"

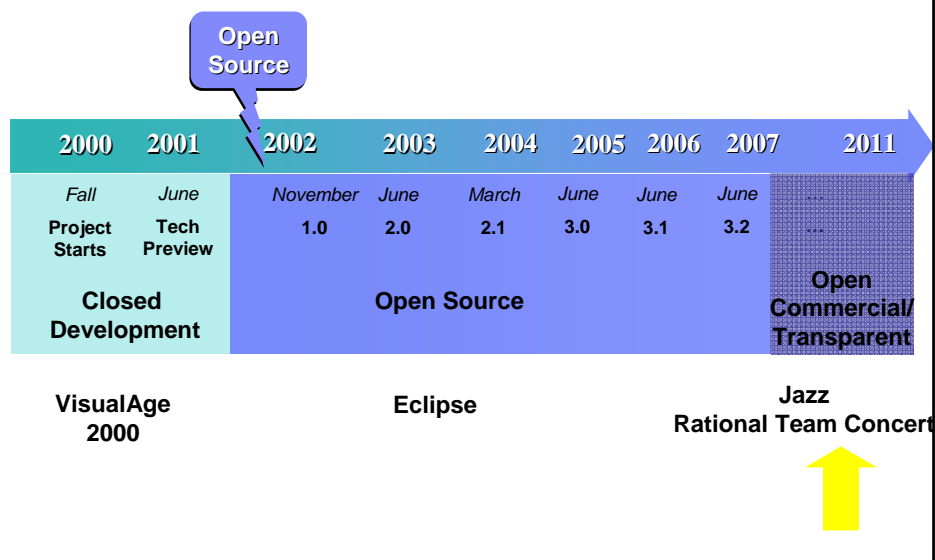
- **A large organization can act like a smaller organization**
 - ▶ Flat hierarchies

- **Visible accountability**

- **Communication flows, plans, and progress are visible for all to see**



Eclipse Timeline



Reflections from an Eclipse PMC Lead

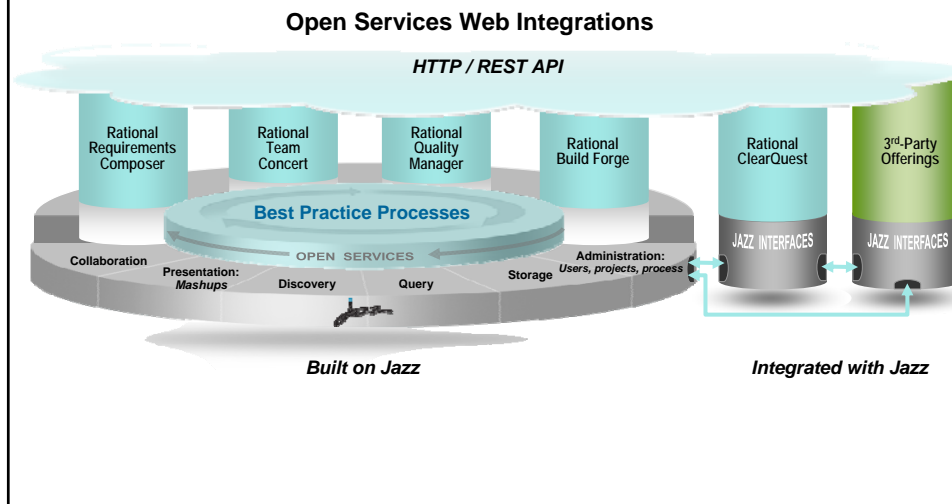
Many Eclipse observers do not realize the **amount of work/stress/human factor** involved in shipping **on time every time**.

It reminds me of the duck quietly advancing on the pond, but no one realizes that **it is paddling like crazy** underwater.



Philippe Mulet - former Eclipse PMC Lead

Jazz: Open, extensible, web-centric, integration architecture



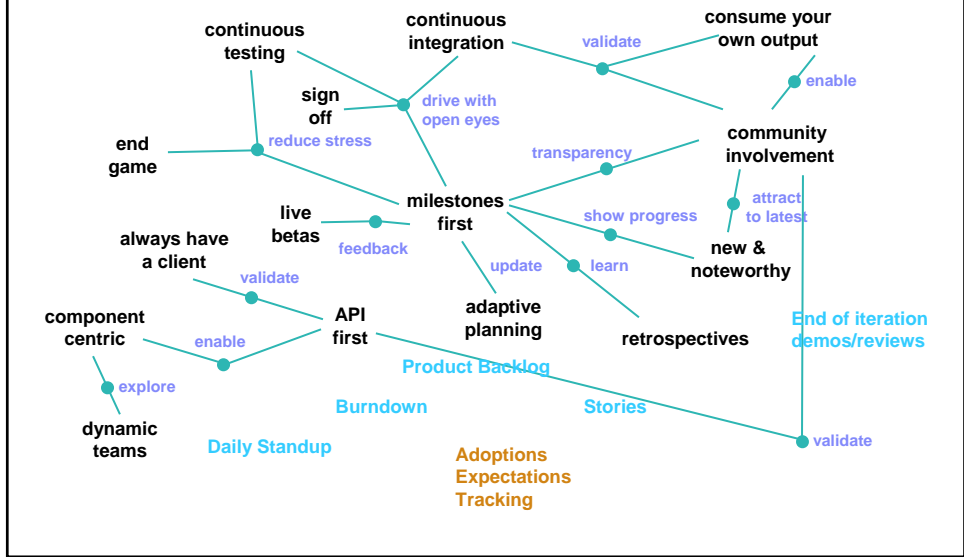
Open Commercial Development

- Products use a **commercial** license but development is done in the **open**
- Open, **transparent process**, from feature requests and planning through delivery
- **Same communication channels** for inside and outside of the projects
- **Direct access to developers**

Open Commercial Development

- **What can the community members do:**
 - ▶ **Download milestones, try them, and provide feedback on betas and incubators, including source code**
 - ▶ **Access, create, and comment in defects, enhancement requests**
 - ▶ **Access milestone and component iteration plans**
 - ▶ **Access the development wiki**
 - ▶ **Participate in discussions on the development community newsgroups**

Our Expanded Practices Today



Demo Transparency

www.jazz.net

Jazz Collaborative ALM

Project Dashboards | Work Items | Plans | Builds | Reports

General | **Commitments, Risk** | Release | Current Iteration | M13D1 Iteration | Defect Trends | Builds | FVT | CLM Blockers | CLM Must Fix Defects | CLM May Fix Defects | Defects Blocking SVT | SVT Open Defects

Foundation Adoption | **TYT Defects** | Accessibility Must Fix Defects | Other Must Fix Defects | Other May Fix Defects | CLM Defect Backlog | Enhancements | CLM PNC

Plan Commitments and Risks

This page summarizes the CLM 2011 progress for stake holders. The detailed plan can be found here CLM 2011 Plan.

Detail on system prerequisites here Adding Platforms for CLM 2011

Schedule details: CLM 2011 Schedule (public) and CLM 2011 and RTC Schedules (private)

Plan commitment slides: CLM 2011 Common Content Slides (private)

Obstacles

The current list of obstacles

CLM 3.0 Obstacles (12)

- 149295: Need resources for Functional Testing of CLM 3 next
- 150117: Need to ensure to have sufficient FVT resources to cover CLM reporting
- 150118: Need help to accelerate the RRD1 integration testing
- 152270: Need decision on packaging for Practice Library application and EA license
- 153212: Need public-facing RRD1 server
- 153365: Need to close on pen testing for ROM, RRC, RTC
- 153443: Need to close gaps on iOS and IBM testing
- 149350: RRC 3.0 plan scope isn't finalized yet
- 151039: Need to resolve question about permissions for Developer for WG
- 151851: ROM right on resources to address UI polish/performance items
- 148994: Resources for Star Schema ETLs
- 149351: Need to close on delivery schedule - SMPe parts

Commitments

Development commitment status

Ongoing Explorations (5)

- 153655: Improve Web UI Error Reporting to enable better defect reports
- 150958: JF - CCM Address Process Specification Sharing limitations (work item type)
- 148495: CCM - Synchronization time per change should be linear in the number of changes when file size is consistent
- 148441: Add new platforms for CLM 2011
- 151357: CCM - Rich text improvements in work item

Explorations Due this Milestone (5)

- 153655: Improve Web UI Error Reporting to enable better defect reports
- 148495: CCM - Synchronization time per change should be linear in the number of changes when file size is consistent
- 151358: CCM - Improved work item customization - dynamic computation of required attribute properties
- 150958: JF - CCM Address Process Specification Sharing limitations (work item type)
- 149441: Add new platforms for CLM 2011
- 151357: CCM - Rich text improvements in work item

Pending Stakeholder Review (3)

- 153655: Improve Web UI Error Reporting to enable better defect reports
- 153188: CCM - Support component attribute in work items
- 150958: JF - CCM Address Process Specification Sharing limitations (work item type)

Deferred Items (20)

- 151164: CCM: Work item mail importer
- 141309: Command Line Support on pJOG
- 140933: RM - Migration from RequisitePro
- 141305: RDC: Integration for Local Projects/Currency
- 152605: CCM - Improve team based query support
- 141288: New link type for support Development linkage to IT Operations

Risk

Items with a risk status red or yellow

CLM 2011 Risk Items - Red (1)

- 99050 (Finish) CLM reporting

CLM 2011 Risk Items - Yellow (3)

- 140802: CM - RegPro integration improvements
- 140930: RM - Performance improvements
- 141059: RM - Support migrating RRC 2 to 3.0

Find:

Jazz Collaborative ALM

Project Dashboards | Work Items | Plans | Builds | Reports

General | **Commitments, Risk** | Release | **Current Iteration** | M13D1 Iteration | Defect Trends | Builds | FVT | CLM Blockers | CLM Must Fix Defects | CLM May Fix Defects | Defects Blocking SVT | SVT Open Defects | SVT Triage

Foundation Adoption | TYT Defects | Accessibility Must Fix Defects | Other Must Fix Defects | Other May Fix Defects | CLM Defect Backlog | Enhancements | CLM PNC

Story Status Current Iteration

Shows the status of all stories planned for the current iteration

Foundation - Story Status (46) Status

Foundation - Current Stories (46)

- 151889: Continue LPA UI clean-up and polish
- 111646: User can validate consistency of configuration information across contexts
- 147846: Fork JFS baseline creation in background
- 141322: Avoid JFS index corruption
- 149204: Improve flow for process descriptions in the process area editor
- 150445: Improvements to Rich-Header support
- 149706: gather data for JFS install platform OS prereq checking
- 87356: installer to have pre-req checking for platform OS level for Jazz Team Server
- 103059: Enable advanced Java locking support by default
- 110045: Security and access control for process authoring resources

Page 1 of 5

CCM - Story Status (8) Status

Burndown Current Iteration

Shows the remaining amount of estimated work in hours of work items planned for the current iteration

Foundation - Burndown

CCM - Burndown

Stories Open/Closed/In Progress

Shows the number of stories which are open, in progress, done during the iteration.

Foundation - Stories Open, Closed, In Progress

CCM - Stories Open, Closed, In Progress

RM - Stories Open, Closed, In Progress

28

Summary - Our Journey from Eclipse to Jazz/RTC and ALM

We developed Eclipse...

Started to reflect practices that worked for us

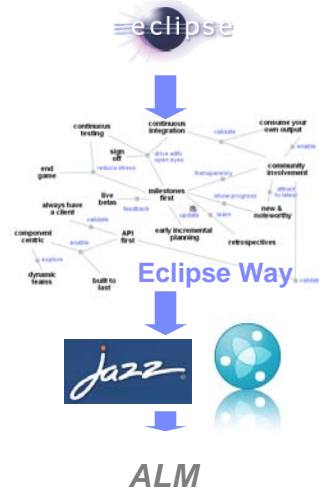
⇒ the “Eclipse Way”

Then we started to tool the Eclipse Way

⇒ **Jazz & Rational Team Concert**

and integrated other Jazz tools across disciplines

⇒ **Application Lifecycle Management**



See it live at jazz.net

- Transparent development
 - Jazz architecture
 - Jazz products
- Self-hosting
 - Using Jazz products...
 - ... to develop Jazz products
- Learn about Jazz at jazz.net
- Try it
 - Sandbox available
 - Free small teams

