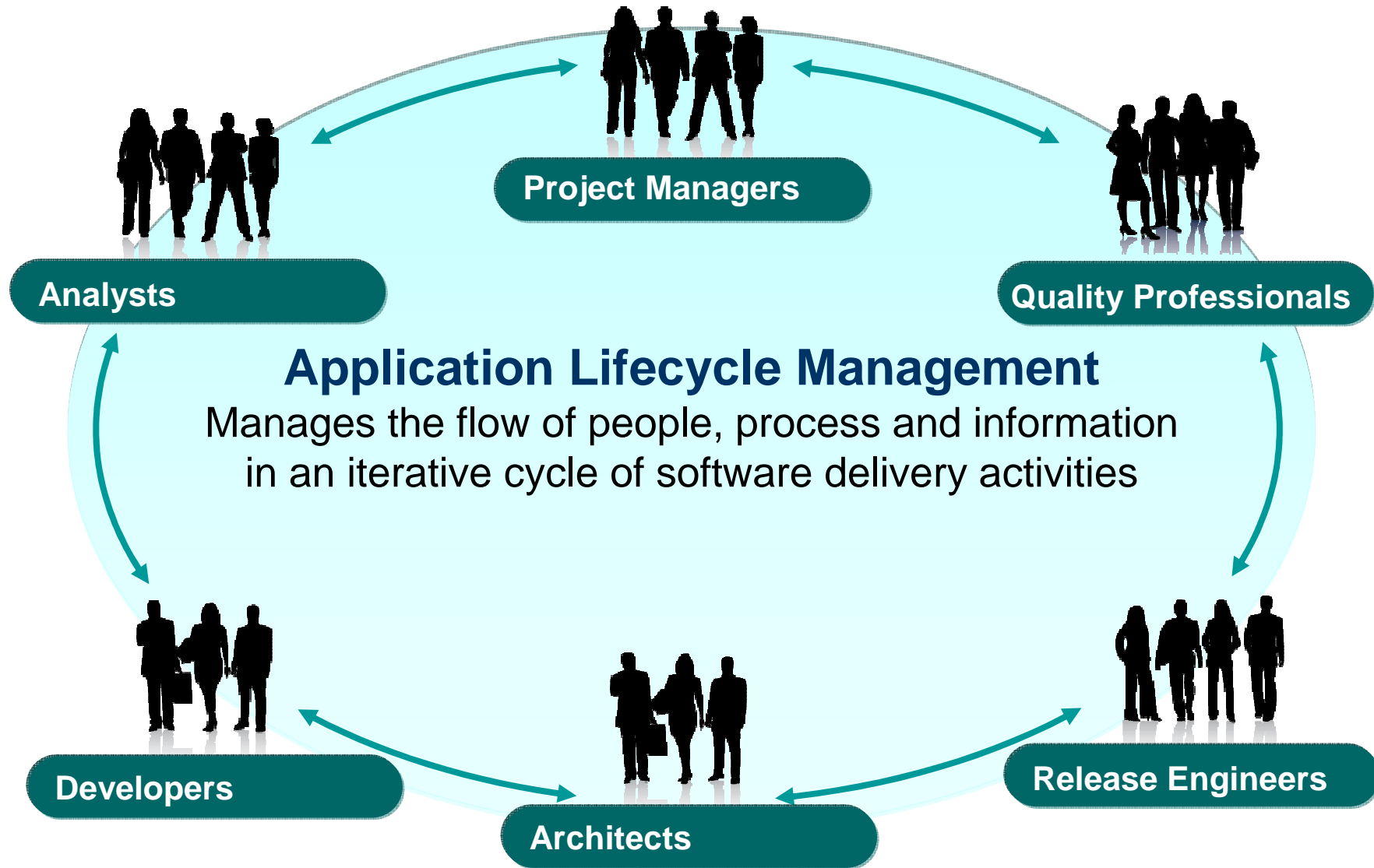

Five Imperatives for effective Application Lifecycle Management



Improve productivity with Application Lifecycle Management



What do teams do to improve their productivity?

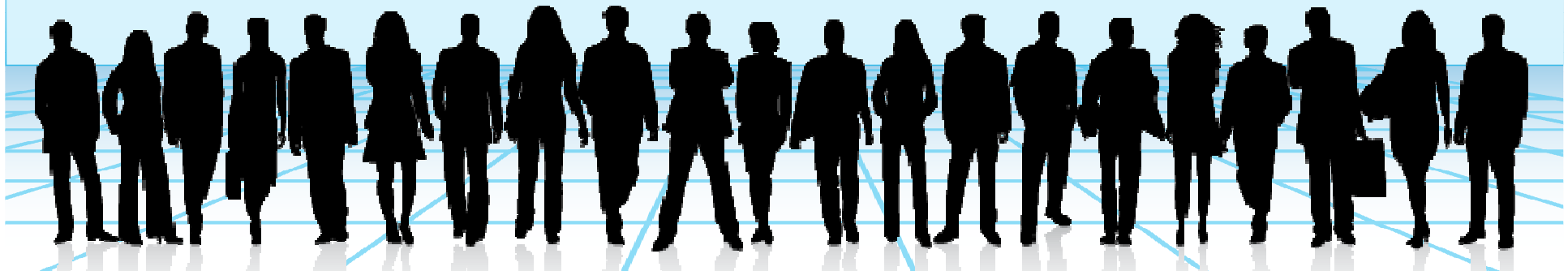


Five Imperatives for effective Application Lifecycle Management

To improve organizational & team productivity



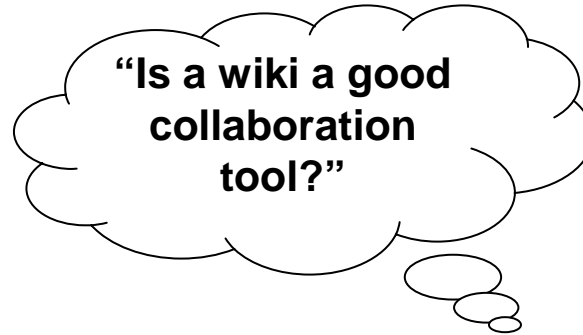
1. Maximize **product value** with **In-context Collaboration**
2. Accelerate **time to delivery** with **Real-time Planning**
3. Improve **quality** with **Lifecycle Traceability**
4. Refine **predictability** with **Development Intelligence**
5. Reduce **costs** with **Continuous Improvement**



Collaboration challenges

Can your team...

- Overcome the barriers of multiple languages and time zones when working with outsourced and distributed team members?
- Bring new team members up-to-speed quickly leveraging historical information in a single source of truth?
- Quickly grasp the “who, what, when and why” of team activities?
- Do you still view Wiki’s and email as advanced collaboration tools?



Comments on are in-context of the artifact

The screenshot shows a document editor interface. The main content area displays a list of scenarios under the heading "Key Scenarios". The fifth scenario is highlighted with an orange border:

1. Donor will receive confirmation notice that donation has been processed.
2. Once the confirmation is received, the Back Office System will initiate an email to the donor based on the primary contact information in the donor's profile.
3. If the profile indicates no email address available and or the given email address is not valid, then a hard copy of the donation will be sent to the donor's mailing address specified in the donor's profile.
4. The Donor will receive an email - mail notice affirming the donation % and amount.
 1. If in email, the donor will be provided an option to print the confirmation notice for tax purposes.
5. The printed confirmation notice must be in a format that is acceptable by country, state, and province agencies and will be mailed in their Bank Statement

Below the scenarios is a section titled "Related Features".

On the right side, there is a comment thread under the heading "Comments (2)". The first comment is from Marco to Bob, posted 1 minute ago, with 1 reply. The comment text is:

Statements must be mailed?
We need to understand if this applies to customers that have opted for electronic statements. Does paper still need to be mailed?

The second comment is from Bob to Marco, posted 2 minutes ago, with 1 reply. The comment text is:

RE: Statements must be mailed? [RE: #1]
No requirement to mail if customer selected electronic statments.

A click on the comment highlights the text under discussion.

Formal Reviews drive agreement and prevent re-work

✓ Reviews & approvals insures artifacts are reviewed and/or approved by key team members and captures compliance requirements.

Requirements

Work Items

Test Artifacts

JKE Banking (Requirements) > Approval

Participant's Review: In progress 0% completed Your role: Approver

Overall Review: Draft In progress 65% completed Pause Review

Due: Apr 18, 2011

Instructions to reviewers:
List of requirements for our second sprint. All comments have been resolved. Please review and approve requirements as written.

Participant	Type of Participant	Review results
<input type="checkbox"/> Bob	Approver	Done - 5 Approved
<input type="checkbox"/> Deb	Approver	Done - 5 Approved
<input type="checkbox"/> Marco	Approver	60% - 2 Approved, 1 Disapproved
<input type="checkbox"/> Tanuj	Approver	

18 : Dividend Allocation by Percentage

Test Case Overview | Snapshots | History

Originator: Tanuj Owner: Tanuj State: Under Review

Description: select a list of potential donations and enter percentages for each

Formal Review

List the people who will be reviewers and approvers of this content and define your review process.

View: All

Show All Items per page

Review Type	Name	Status
Approver	Bob	Pending
Reviewer	Sally	Pending

Task 41

Summary: Implement - Frequency of dividend transfer

Overview Links Approvals History

Approvals (1) - 1 pending

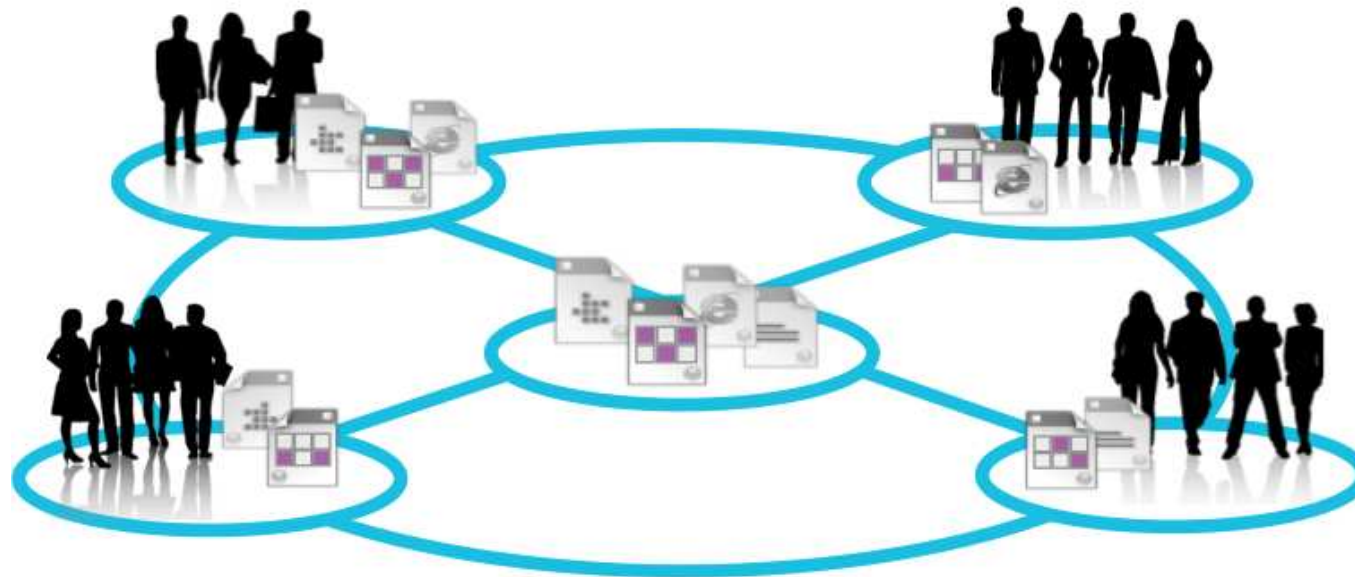
New: Approval

Type	Name	State
Review	Check of algorithm to prevent transfer on weekend	Pending
	AI	Pending
	Curtis	Pending
	Tanuj	Approved

Add Approvers...

In-Context Collaboration improves product value by:

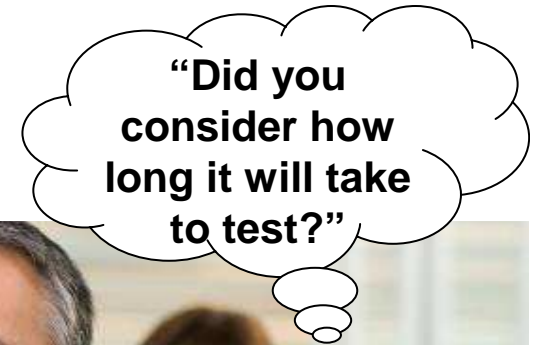
- Making **information immediately accessible** to all team members in the context of their work
- Empowering teams to collaborate on and review software development artifacts so they can **incorporate feedback early and often**
- Providing **single source of truth** hosted in a shared repository so that team members can collaborate effectively around the globe



Planning challenges

Does your team...

- View “Plan” as a noun or a verb?
- Plan for improved security and vulnerability remediation?
- Plan across the entire team, involving all stakeholders/disciplines?
- Plan for waterfall, iterative and agile environments?
- Manually collect/report status?



Real-time Planning



Ensure alignment across the business, development and test teams

The screenshot displays the 'JKE Banking (Change Management)' interface. At the top, there is a navigation bar with options like 'Project Dashboards', 'Work Items', 'Plans', 'Source Control', 'Builds', and 'Reports'. A search bar for 'Work Items' is also present. The main content area is titled 'Release 1.0 Backlog' and shows '26 items: 19 open, 7 closed' with an end date of '24 days'. Below this, there are tabs for 'Planned Items', 'Links', 'Snapshots', 'Dashboard', and 'Notes'. The 'Links' tab is active, showing a list of items: 'Product Backlog [Product Backlog]' with a progress bar and '0/0 pts', '344: Release 1 Planning', and '10: JKE Banking Release 1'. Each item has associated icons for actions like 'Add', 'Delete', and 'Refresh'.

One plan with multiple views facilitate detailed analysis

1 BRM Sprint 2 (1.0) Plan

26 items: 23 open, 3 closed | Ends in: 3 days

Plan Details [Edit](#)

Planned Items [Links](#) [Snapshots](#) [Dashboard](#) [Notes](#)

View As: Roadmap (3 items filtered) [Add Work Item](#)

Actions	Summary	Effective Estimate	Owned By
	Frequency of dividend transfer	--	Unassig
	Requests sent in form of email	--	Unassig
	Organization must identify how much money is desired	--	Marco
	Implement - Organization must identify how much money is desired	1.5 days	Marco
	Organizations may apply with an initial request	--	Marco
	Implement - Organizations may apply with an initial request	4 hours	Marco
	Customers can Nominate	--	Marco
	Implement - Customers can Nominate	--	Marco
	Organization must provide justification	--	Marco

2 BRM Sprint 2 (1.0) Plan

30 items: 25 open, 5 closed | Ends in: 6 days

Plan Details

Planned Items [Links](#) [Snapshots](#) [Dashboard](#) [Notes](#)

View As: Taskboard

Story	Open	In Progress
Donor Dividend Allocation Criteria	Implement - Donor Dividend Allocation Criteria	
Frequency of dividend transfer		Implement - Frequency of dividend transfer

3 BRM Sprint 2 (1.0) Plan

30 items: 25 open, 5 closed | Ends in: 6 days

Plan Details

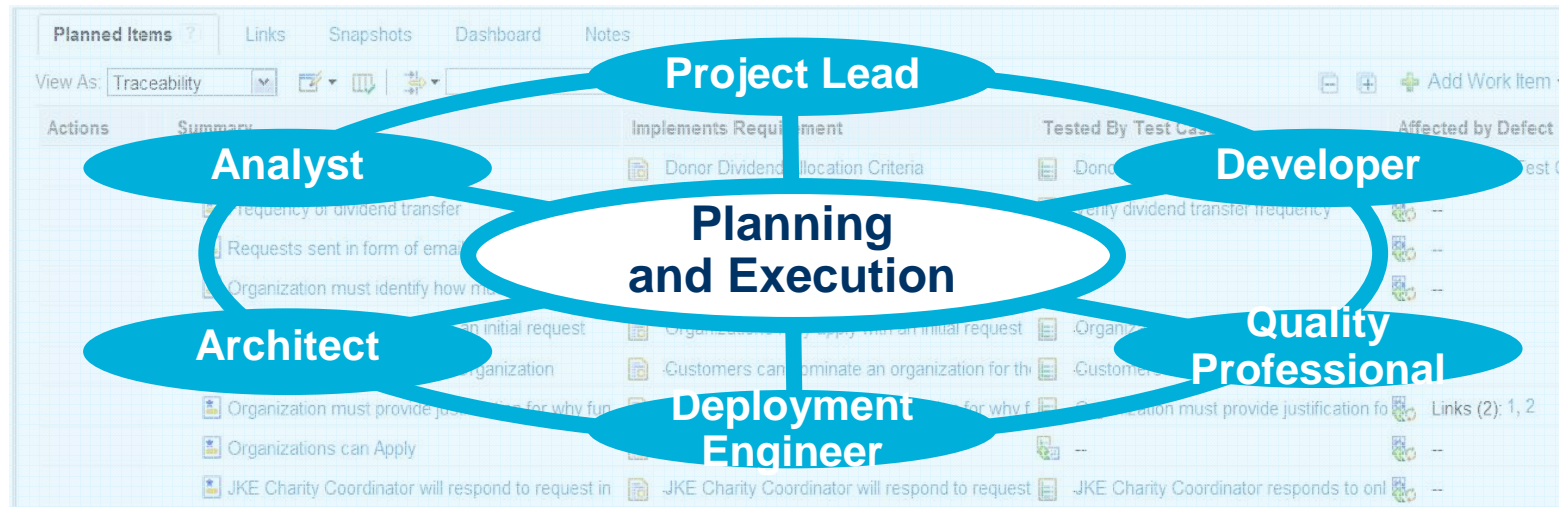
Planned Items [Links](#) [Snapshots](#) [Dashboard](#) [Notes](#)

View As: Planned Time

Person	Closed Items	Open Items	Load
Bob	0	1	0/8 +8 h
cp	0	1	0/8 +8 h
Deb	3	6	158/8 -100 h
Marco	2	14	52/8 -84 h
Tanuj	0	0	0/0 0 h

Real-time Planning accelerates time to delivery by:

- Providing a **single plan** that spans requirements, development, and test, ensuring a team understanding of the overall scope of a project
- **Integrating planning with execution** ensuring the entire team understands the true project status
- Allowing **everyone to participate** in keeping the plan current and accurate
- Helping teams **respond to the unexpected** in a timely manner ensuring the team stays on schedule



Lifecycle Traceability challenges

Can your team answer...

Analyst

Which requirements are addressed in this iteration?

Are all of the requirements tested?

What defects are affecting which requirements?

Project Manager

Can we pass an audit? Are we ready to release?

What defects were resolved in this release?

Are we aligned with the business?

Architect

Can we implement in a way that supports maintainability?

Which requirements impact the design?

Are there reusable components we can leverage?

Developer

What requirements am I implementing? What test uncovered this defect, on which environment and what build?

What changes occurred overnight?

Release Engineer

How can I standardize when teams use different tools?

Where are the bottlenecks in our processes? Are build times getting longer or shorter?

How can I speed up my builds?

Quality Professional

What is the quality of the build?

What is ready for me to test?

What defects have been addressed since the last build?



Team Leads have visibility into coverage & completeness

Tailor traceability View to highlight planning Gaps

BRM Sprint 2 (1.0) Plan
26 items: 23 open, 3 closed | Ends in: 3 days

Plan Details Edit

Planned Items | Links | Snapshots | Dashboard | Notes

View As: Traceability (17 items filtered)

Link Types (Relationships)

Actions	Summary	Owned By	Implements Requirement	Tested By Test Case	Affected by Defect
	gap Requests sent in form of email	Unassigned	Requests sent in form of email	--	--
	gap Frequency of dividend transfer	Unassigned	--	Verify dividend transfer frequency	--
	Organization must provide justification for why funds are nee	Marco	Organization must provide justification for why fund	Organization must provide justification fo	--
	Organizations can Apply	Marco	Organizations can apply	Organizations can Apply	--
	Defect Organization must identify how much money is desired	Marco	Organization must identify how much money is des	Organization must identify how much mo	Links (2): 1, 2
	Donor Dividend Allocation Criteria	Deb	Donor Dividend Allocation Criteria	Donor dividend allocation conforms to st	--
	Organizations may apply with an initial request	Bob	Organizations may apply with an initial request	Organizations may apply with an initial re	--
	Defect JKE Charity Coordinator will respond to request in the we	Marco	JKE Charity Coordinator will respond to request in	JKE Charity Coordinator responds to onl	425: Running out of SW
	Customers can Nominate an Organization	Marco	Customers can nominate an organization for the pi	Customers can Nominate an Organizati	--

Linked data is visible on all artifacts

- All roles can view the links on their artifacts.
- Each user has their own perspective and user interface for viewing links.
- Create, delete, navigate links on artifacts
- Example: Use the relationships on a defect to determine its impact
- Traceability links on defects are automatically created

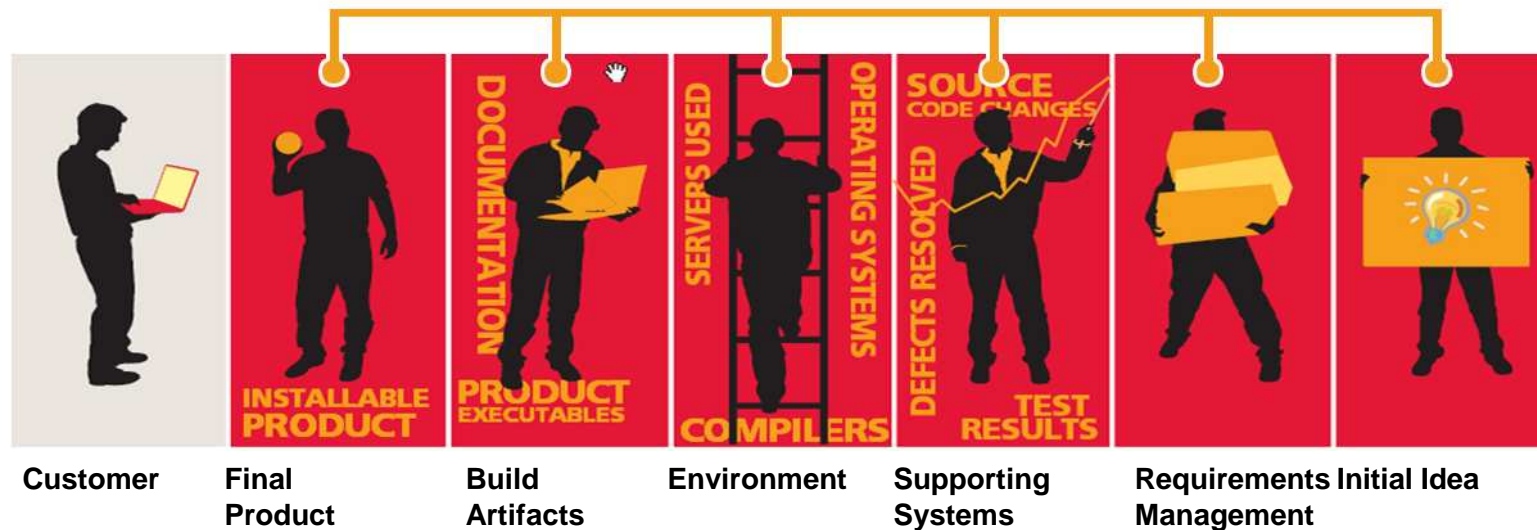
The screenshot shows a web interface for a defect titled "Defect 300". The summary is "Failing Test Case 'Allocate Dividends to Multiple Causes'". Below the summary are tabs for "Overview", "Links", "Approvals", and "History". The "Links" tab is active, showing a list of related artifacts. The list includes:

- Affects Test Result
 - 14: Allocate Dividends to Multiple Causes
- Affects Requirement
 - 444: Donor Chooses Multiple Organizations
- Related Test Plan
 - 12: JKE Banking Sprint 2
- Blocks Test Execution
 - 13: Allocate Dividends to Multiple Causes
- Related Test Case
 - 97: Allocate Dividends to Multiple Causes
- Affects Plan Item
 - 284: Donors Can Choose to Support Multiple Organizations

Lifecycle Traceability improves quality by:

- Establishing **relationships between software artifacts**
- Helping you **identify and closing artifact gaps**, ensuring **coverage** across disciplines
- Provides visibility into the **completeness** of planned items by inspecting all related artifacts
- Provides easy **access to related artifacts** ensuring everyone shares the same view
- Delivers transparency which enables everyone to make **fully informed decisions** based business priorities

Instant access to details from any point in the development process



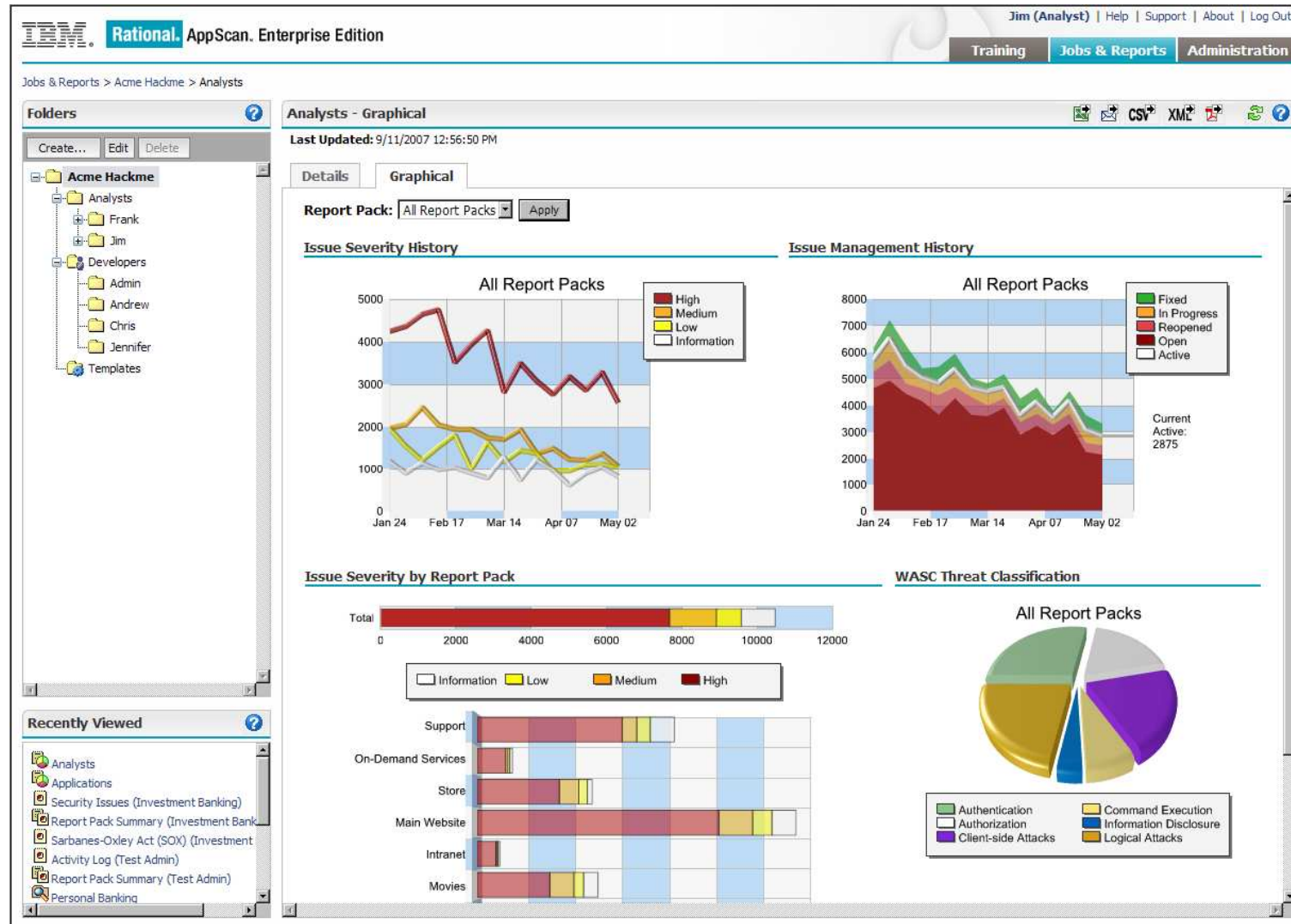
Measuring and steering challenges

Can your team...

- Track desired improvements with metrics?
- Minimize administrative overhead by relying on your environment to capture metrics?
- Provide one view of project health at multiple levels?
- Make steering decisions based on facts rather guestimates?
- We call this Development Intelligence



Track progress on vulnerability remediation progress



Information radiators provide a view of project health for all team members

JKE Banking (Change Management)* ?

Overview ▾

Time to Value (Schedule)

Product Value

Product Cost

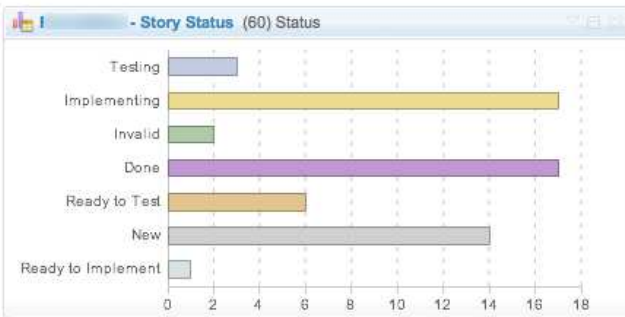
Product Quality

Reports

Stabilization +

Story Status Current Iteration

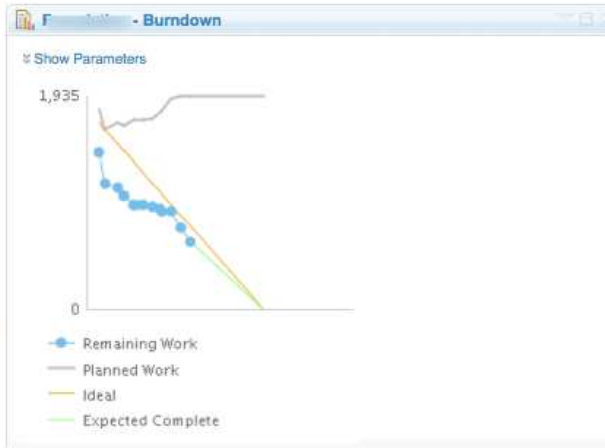
Shows the status of all stories planned for the current iteration



- #### 1 - Current Stories (60)
- 150501: Improve Web UI error reporting
 - 154382: Completion (M14) of foundation support for migrating RRC 2.x to 3.0, and JTS consolidation
 - 155918: Provide TVT testcases and testcase updates to TVT team
 - 154263: [Continuation] Create server diagnostics tests and reports that make various checks
 - 155024: Track the fixing of hangs occurring on shutdown of the CLM server
 - 155399: [Repository - M14] Performance, quality and robustness enhancements
 - 156051: Improvements and fixes for CLM migration automation
 - 154929: [Repository - M14] Address high severity defects, Reduce backlog
 - 155033: Explore servlet dispatching enablement as a backup option
 - 155486: [Repository M14] Serviceability and Consumability Improvements
- Page 1 of 6

Burndown Current Iteration

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



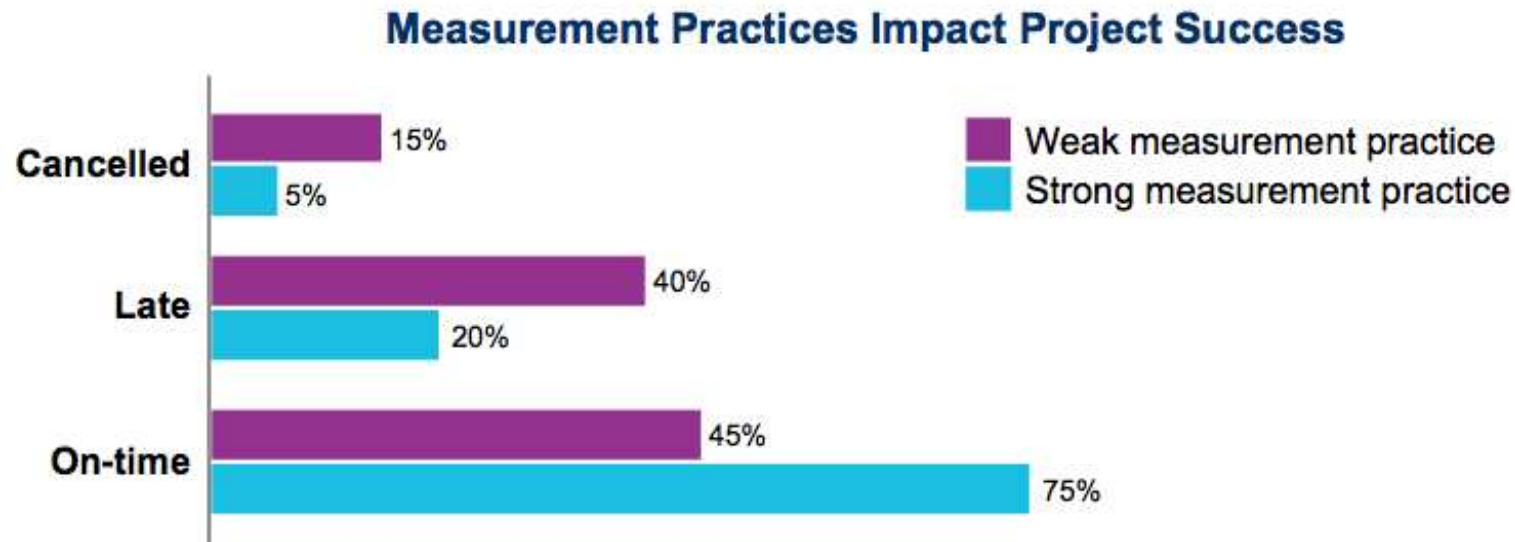
Stories Open/Closed/In Progress

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



Development Intelligence improves predictability by:

- Applying **Business Intelligence techniques** to software and systems development
- Enabling **fact-based decision making** (to communicate status, monitor progress, diagnose problems, identify corrective actions)
- **Steering projects and programs** to deliver on-time



Source: Capers Jones, Measurement, Metrics and Industry Leadership, 2009 and [Software Engineering Best Practices](#), McGraw Hill, 2010.

Continuous improvement challenges

Can your team...

- Leverage out-of-the-box templates that support traditional and agile workflows?
- Change process “on the fly” as part of a continuous feedback loop?
- Allow team leads to determine how strict or lax the “rules of the road” should be?
- Modify process enforcement over the life of a project, to encourage early-stage experimentation and end-game stability?



Team Retrospectives help identify areas of improvement

- Tracking Retrospectives help team members to collaborate on improvements.
 - Ranking of process improvements help to focus on where the team feels the biggest pain.
 - Metrics where available help support process improvements and show results.

The screenshot displays the 'JKE Banking (Change Management)' interface. The main content area shows a table of Retrospectives with columns for Id, Status, Summary, Filed Against, Planned For, and Actions. The table lists three items: a 'New' item (Id 77) about build completion, a 'New' item (Id 32) for 'Retrospective for Sprint 2', and a 'Done' item (Id 31) for 'Retrospective for Sprint 1'. A detailed view for item 31 is shown on the right, including its status, details (Filed Against: JKE, Planned For: Sprint 1), project area, owned by (Marco), resolution date (March 26, 2011 5:44 PM), and resolved by (Marco). It also shows quick information like subscribers and mentions, and a discussion thread with three messages.

Id	Status	Summary	Filed Against	Planned For	Actions
77	New	Builds are not completing as frequent as before	Build	Unassigned	
32	New	Retrospective for Sprint 2	JKE	Sprint 2	
31	Done	Retrospective for Sprint 1			

31: Retrospective for Sprint 1

Status: ✔ Done

Details

Filed Against: JKE | Planned For: Sprint 1

Project Area: JKE Banking (Change Management) | Resolution Date: March 26, 2011 5:44 PM

Owned By: Marco | Resolved By: Marco

Quick Information

Subscribers (1): M | Mentions (3)

Approve Sprint 1 Retrospective: Approved (1 of 1)

Notes

Discussion

1. Deb, Mar 6, 2011, 1:58 AM
@marco When will we have the meeting for the retrospective?
2. Sally, Mar 6, 2011, 8:10 PM
@deb I think it will be tomorrow?
3. Marco, Mar 8, 2011, 6:41 AM
Yes @deb and @sally, it will be today!

[Show More](#)

Instantiate best practices as templates for breakthrough improvement

The screenshot shows the IBM Work Items interface. The main content area displays "All Lifecycle Project Templates" with a table of templates. A dropdown menu is open over the "Share Queries" option.

Name	Summary
Quality Professional, Analyst, Developer	This template sets up work item management. The template includes change and configuration management and configuration management. OpenUP or Formal (Base, Use Case, Ag
Quality Professional, Developer - without Requirements	This template sets up work item management) work items in the change and configuration management. the Scrum, OpenUP

- Work Items
- Plans
- Source Control
- Builds
- Welcome to Work Items
- Queries
 - My Queries
 - Share Queries
- Create Query
 - Create Query
- Create Work Item
 - Defect
 - Task
 - Story
 - Epic
 - Track Build Item
 - Impediment
 - Adoption Item
 - Retrospective
- Create Work Item Set
 - Create From Template...

Tweak process definition “in-flight” to correct team actions

Problem: Story completed without all work completed

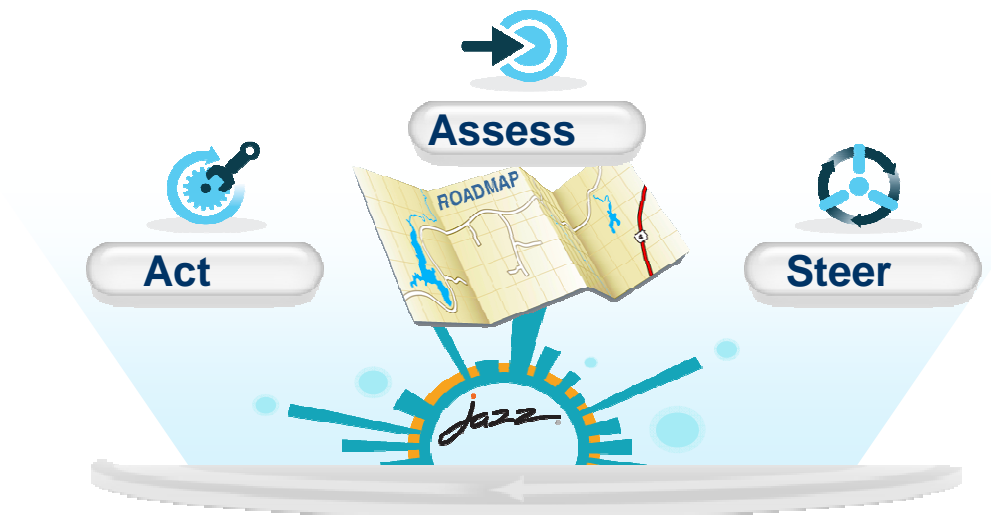
Solution: Require detailed tasks completed before completing parent

The screenshot displays the 'Operation Behavior' configuration window. At the top, it instructs the user to select a cell in the table to configure preconditions and follow-up actions for an operation and role. Below this is a table with columns for 'Operations', 'Everyone (def...)', 'Team Member', and 'Team Lead'. The 'Work Items' category is expanded, and the 'Save Work Item (server)' operation is highlighted with a green box. Below the table, there are checkboxes for 'Preconditions and follow-up actions are configured for this operation' (checked) and 'Final (ignore customization of this operation in child team areas)'. The 'Preconditions (8 available):' section has an 'Add...' button highlighted with a green box, and 'Required Properties' is listed. The 'Follow-up actions (0 available):' section has an 'Add...' button. An 'Add Preconditions' dialog box is overlaid on the right, showing a list of preconditions with 'All Children Resolved' highlighted in green. The dialog also includes 'OK' and 'Cancel' buttons.

Operations	Everyone (def...)	Team Member	Team Lead
Reports			
Deploy Report (server)			
Deploy Report Template (server)			
Display Report (server)			
Manage Report Folder (server)			
Source Control			
Deliver (client)			
Deliver (server)			
Save Change Set Links and Comments (server)			
Work Items			
Save Work Item (server)			

Continuous Improvement reduces cost by:

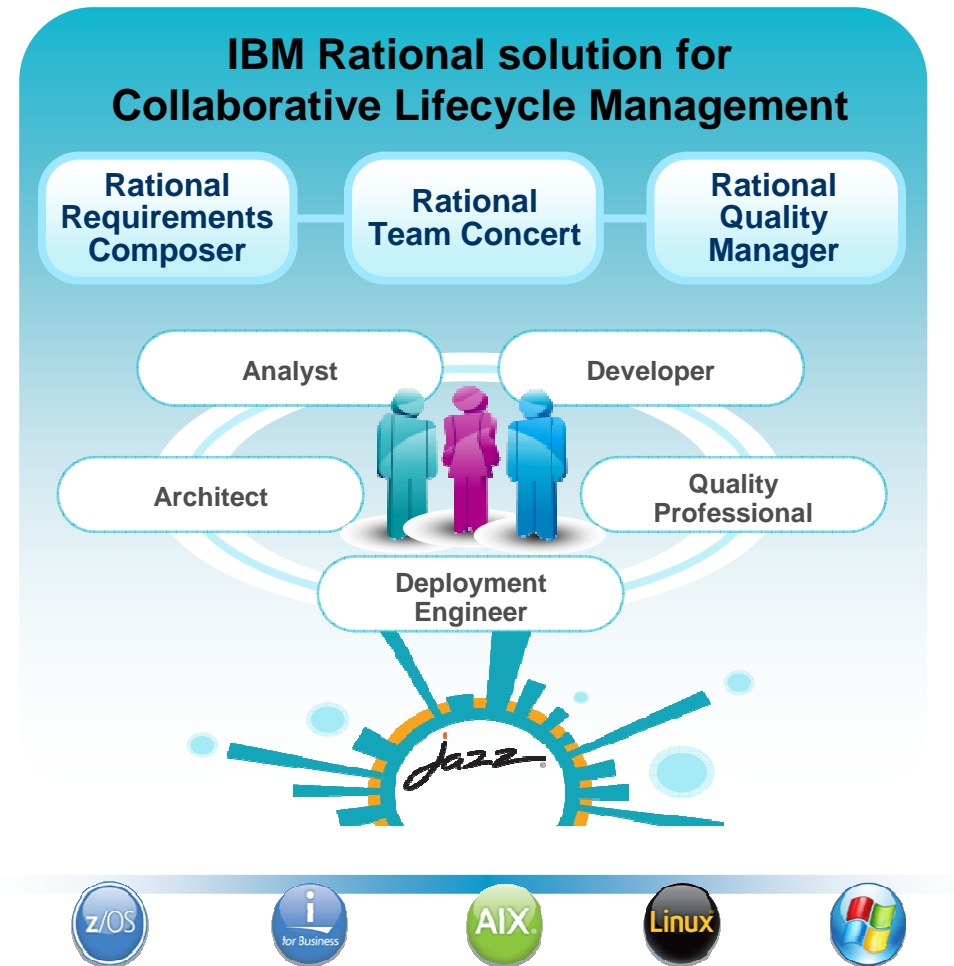
- Enabling breakthrough improvement through the ongoing **adoption of best practices and automation** to reduce manual, non-creative and error prone tasks
- Promoting **incremental improvement of a project** when needed through user interfaces that are easy to customize and ‘in-flight’ changes to process
- Allowing **everyone to participate** with easy to adopt best practices at your fingertips.



IBM Rational solution for Collaborative Lifecycle Management

Improve productivity with an integrated ALM solution

- **Optimize your team through support of the 5 ALM Imperatives**
 - Real-time planning
 - Lifecycle traceability
 - In-context collaboration
 - Development Intelligence
 - Continuous Improvement
- **Get up and running quickly**
- **Extend as your needs evolve with role-based licensing**
- **Support heterogeneous development across multiple platforms and technologies**





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