

[2012 IBM 開發者大會]

Rational 全面進化全新功能全速實現 CLM 4.0

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Rational 資深技術顧問

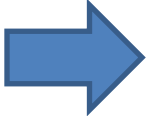
Next  NOW!



Agenda

- 軟體無所不在
- Rational CLM 4.0 for ALM
- Rational CLM 5個極重要的優點
- 結論

Agenda

- 
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無法想像的軟體應用方式

Apps for Autism: Communicating on the iPad

[32 Comments](#) [Email Story](#) [Share This](#) [Tweet This](#) [More](#)
Have Your Say Send to a Friend Tell Your Friends Tweet This Share It



10 MINUTES

MAR
12
2011

Japan Tsunami & Earthquake - Use of Twitter, Facebook, Skype & other Social Networks

1

The tsunami & earthquake that have struck Japan have affected the communication sector. Mobile phone networks have been jammed & people are finding it difficult to communicate. [Twitter](#), [Facebook](#), [Skype](#) & local Japanese social networks have come in handy for people to communicate & keep in touch with the loved ones. Social media has been playing a crucial role in times of natural disasters. In Haiti earthquake also, twitter was used to keep in touch with the world. Several people have posted on their FB wall about their experiences during the quake. The Japan Tsunami related topics have been trending in Twitter. Several videos have also been posted in Youtube.

創新是在推動軟體的發展的關鍵



到2020年前，可能更早，手機銀行 (Mobile Banking) 將成為使用最廣泛的銀行管道

在2010年，汽車所使用的軟體程式碼平均比一架戰鬥機還多

它會實現嗎？

它安全嗎？

可以符合遵規標準嗎？

Source: *Mobile banking: A catalyst for improving bank performance*, Deloitte, 2010; and *This Car Runs on Code*, Robert Charette, IEEE Spectrum, 2009.

軟體驅動創新中的現實情況

市場的壓力加劇了軟體交付的複雜性

Complex, Multi-platform Systems and Applications

62% of companies have agile projects requiring integration with legacy systems

Increasing Mandates

2010 Spending in U.S. on governance, risk and compliance was **\$29.8 billion**

Globally Distributed Software and Product Supply Chains

50% of outsourced projects are expected to under perform

Cost Reduction

70% budget locked in maintenance and **37%** of projects go over budget

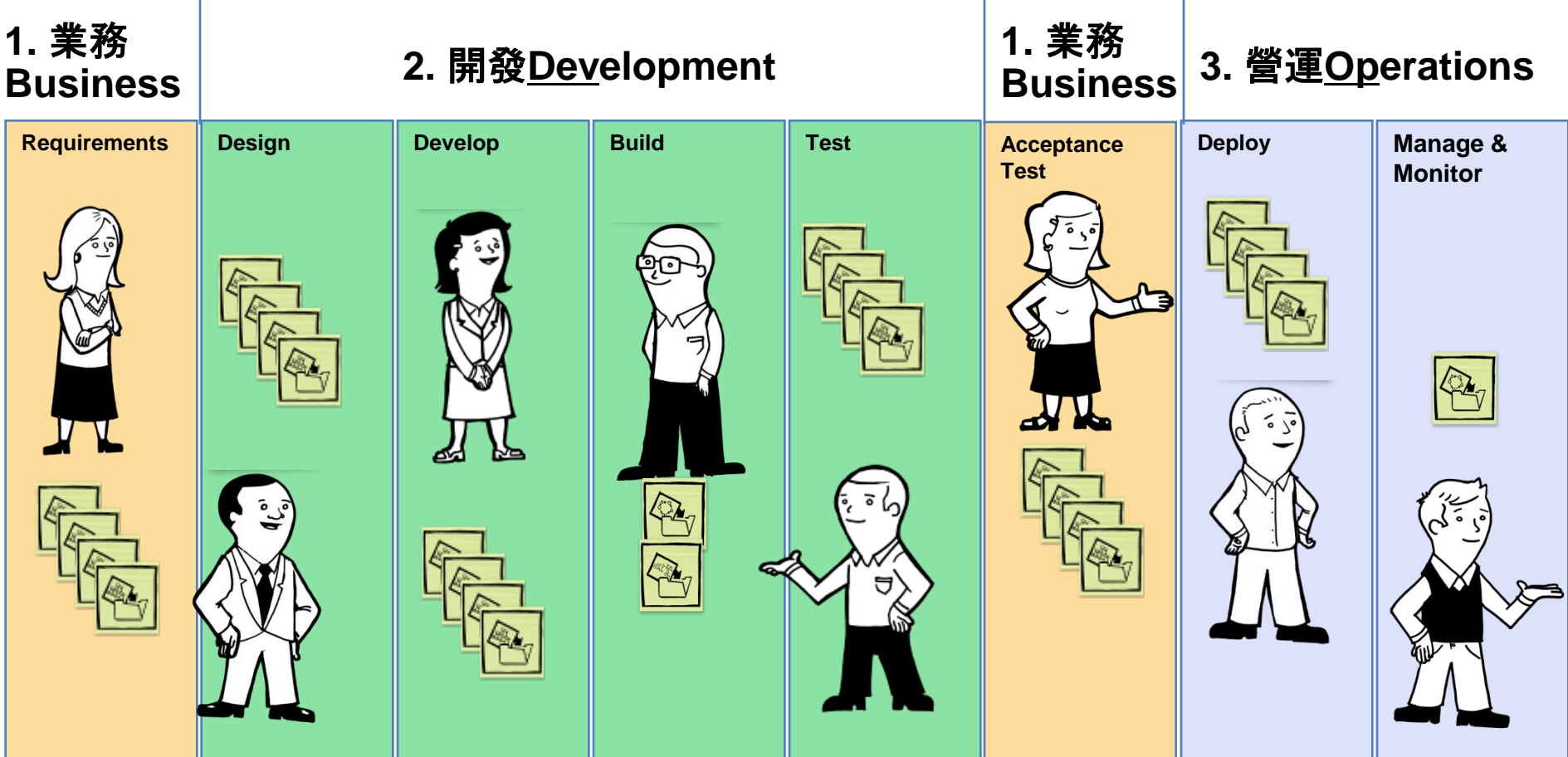
Unpredictability in Software Delivery

62% of projects fail to meet intended schedule

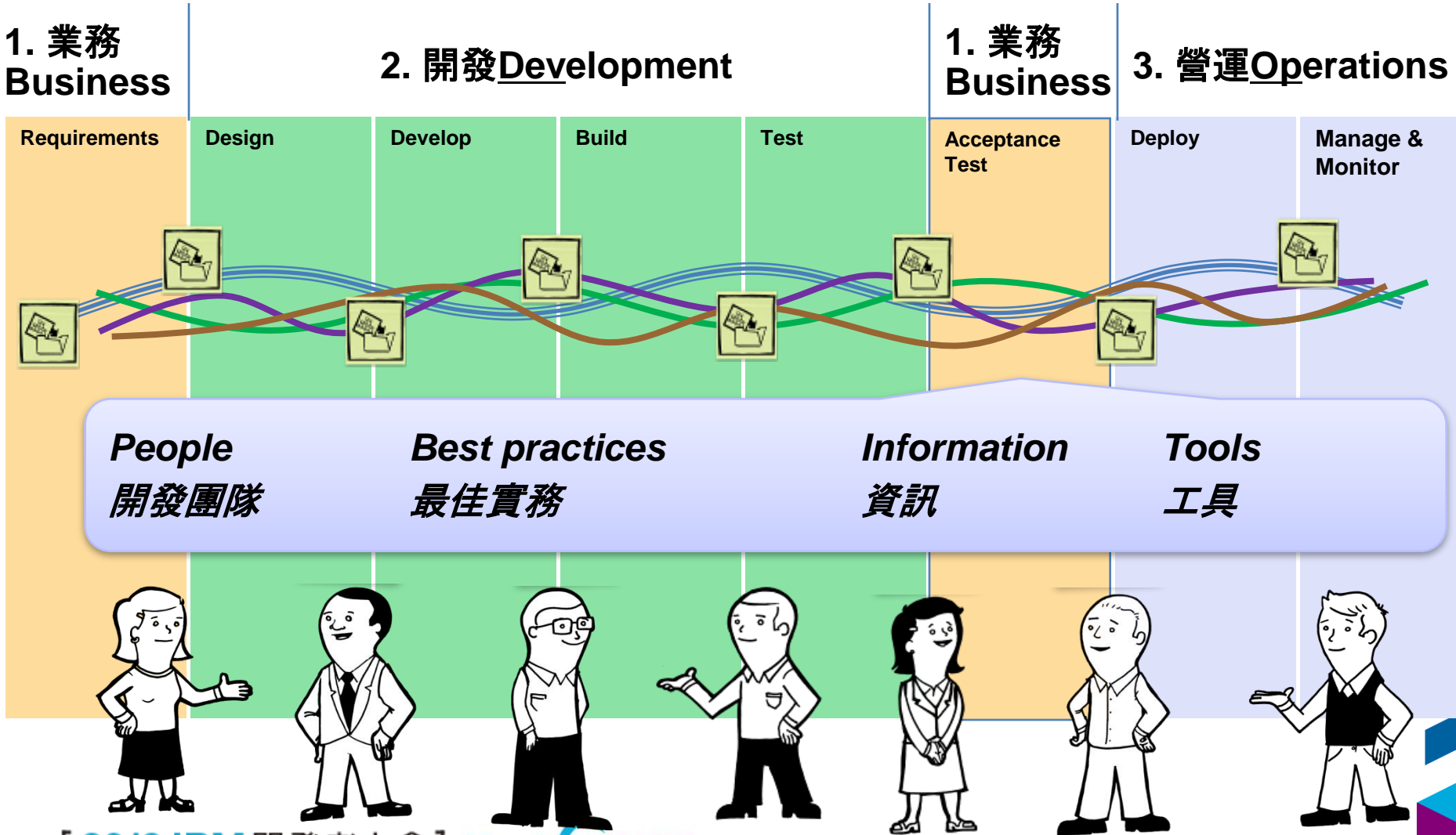
Changing Requirements and Time to Market

30% of project costs are due to rework and poor execution of requirements

從軟體開發生命週期全景圖來看

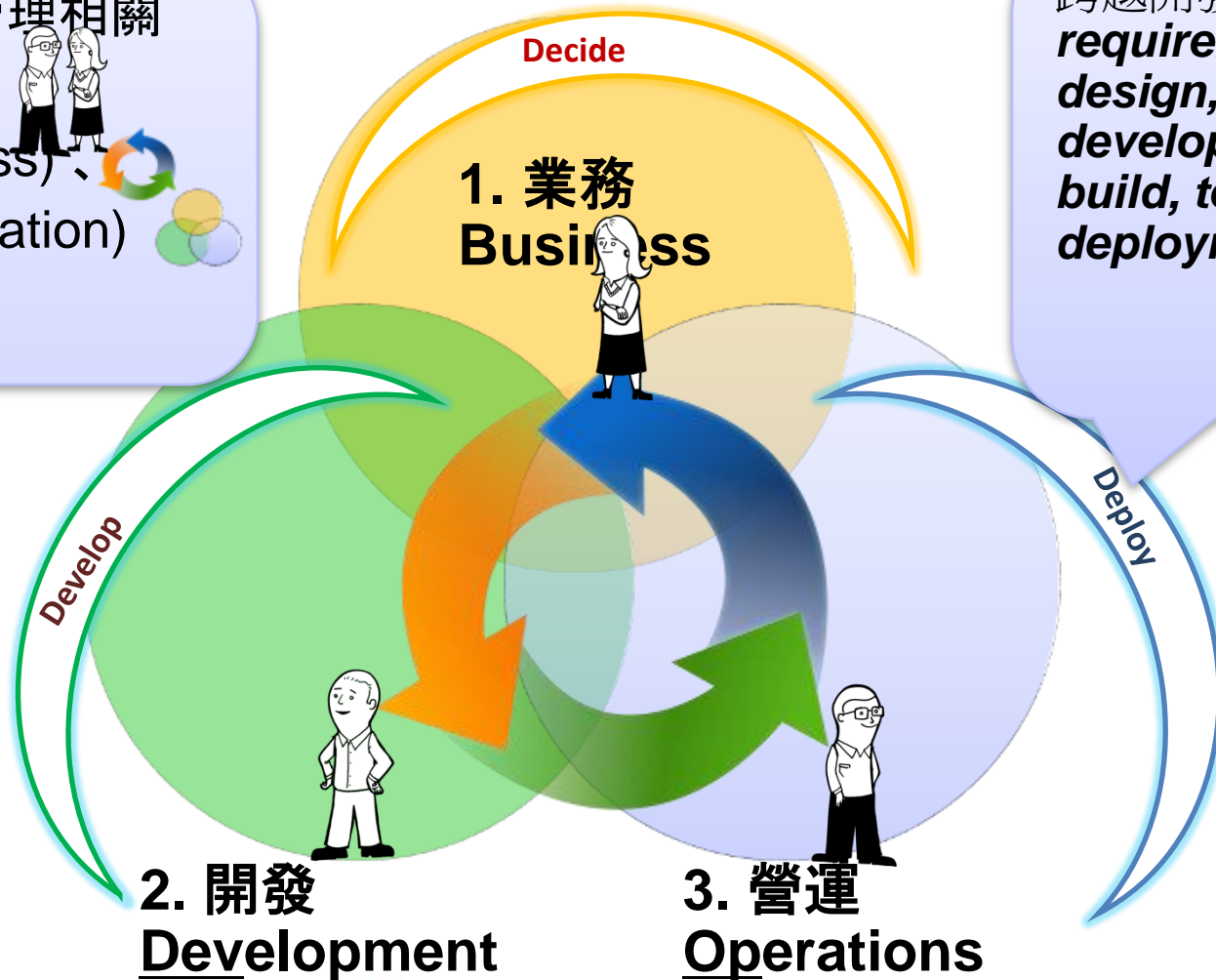


所面臨的挑戰是如何協調跨開發階段....



好的應用生命週期管理(ALM)可以提高生產力

ALM 如何管理相關人(People)、
 流程(Process)、
 資訊(Information)
 的互動



跨越開發各階段:
requirements,
design,
development,
build, test,
deployment

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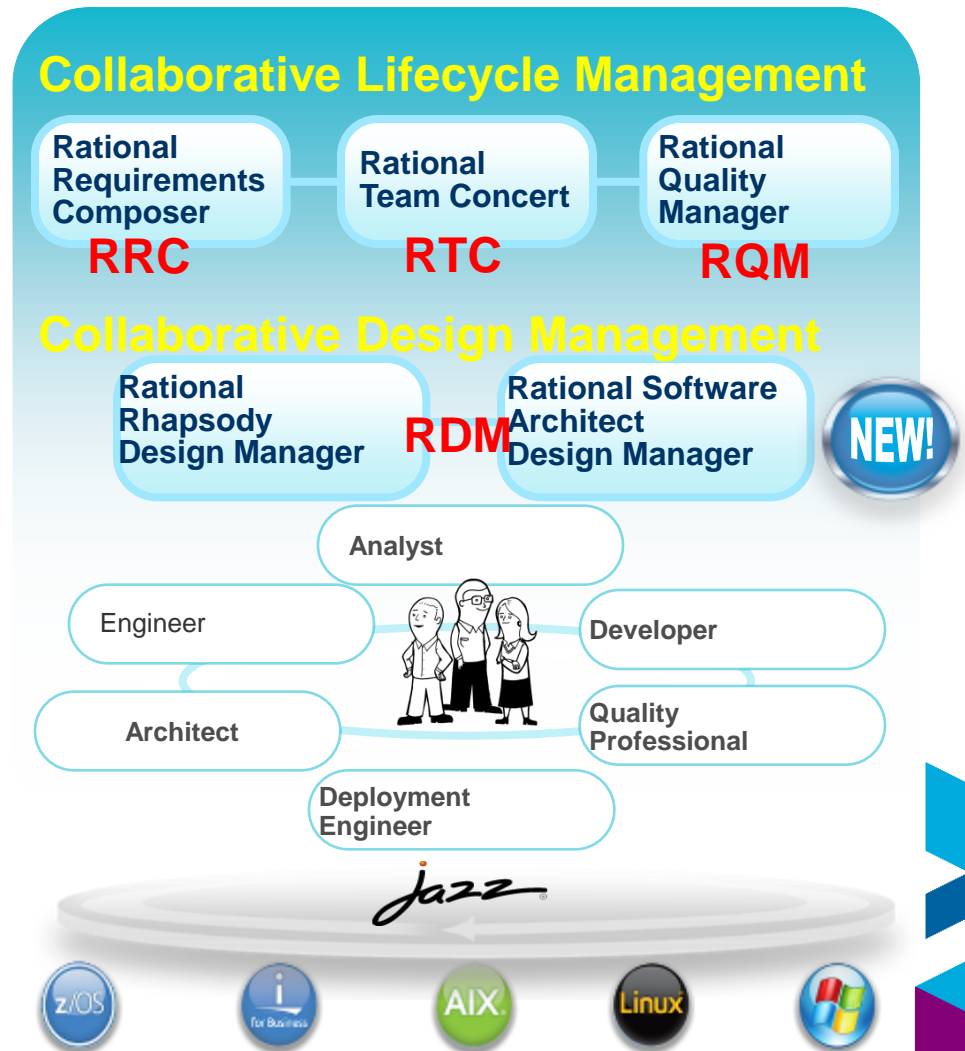
Rational CLM4.0 for ALM

IBM Rational ALM Solutions

Get Up and Running Quickly

提昇效率降低成本，支援多平台軟體開發與整合的ALM解決方案！

- 跨團隊**協同合作**，並在整個生命週期中建立的深層的整合
- 可**統一的基礎設施**和透過一個單一的、開放的、可擴展的平台來保護您當前的投資
- 擴大您的需求的不斷發展，基於不同**角色**的授權
- 具有**5個**極重要的，**優點**能使應用生命週期管理(ALM)有效率地並能提高組織的生產力




JAZZ 智慧的軟體交付平臺

- **統一的儲存庫：吸取行業的前車之鑒**
 - 所有整合圍繞一個統一的儲存庫
 - 針對該存儲庫，設計了一個涵蓋整個軟體工程領域的資料模型 (OSLC)
- **基於Web2.0技術：基於Web的開放架構**
 - 工具通過HTTP/REST訪問資料
 - 可整合大規模的資訊
 - 規模空前的協作
- **開放，可擴展 - 基於組件的架構 (OSGi)**
 - 實現生命週期管理服務的元件化
 - 定義的資料是獨立於工具的
- **完整的應用生命週期管理能力**
 - 流程的感知能力
 - 專案計畫、工作項管理、配置構建和發佈管理、報告能力



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5個極重要的優點： 能使應用生命週期管理(ALM)有效率地 並能提高組織的生產力



1. 在上下文(In-Context)協同合作以最大化地提高產品價值



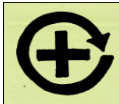
2. 提供即時規劃(Real-Time Planning)以加速交付時間



3. 加強生命週期追蹤(Lifecycle Traceability)以提高軟體品質



4. 開發智能化(Development Intelligence)以實現可預見性



5. 持續改進(Continuous Improvement)以降低成本

Learn more at [ALM Everywhere](#)



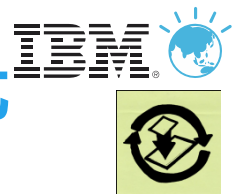
挑戰#1: 協同合作所面臨的挑戰

你的團隊可以

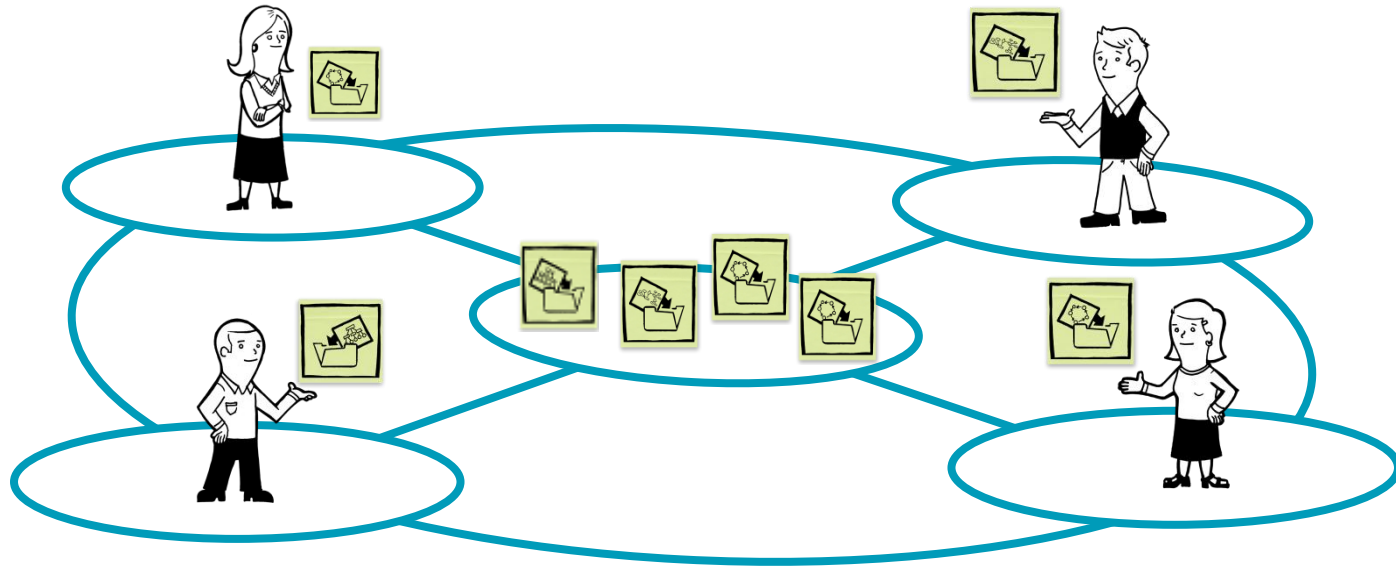
- ...尋找到一個特定的**任務與其相關**的所有訊息？
- 迅速掌握 “是誰? , 作什麼? , 何時作? 以及為什麼要作?” 的**團隊活動**？
- .. 帶給新的團隊成員**快速回應**？
- ...當有**外包**人員和分散式團隊成員一起工作時，可否克服多地、多時區的障礙？



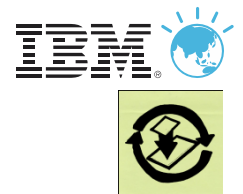
在上下文(In-Context)協同合作以最大化地提高產品價值



- 建立在一個**共享庫**以提供一個單一的來源，使團隊成員可以有效地，在全球各地協同合作、貢獻集體智慧
- 賦予團隊**協同合作**和**審查**軟體開發構件(artifacts)，使他們能夠及早加入**回饋**，並經常調整軟體交付以符合利害關係者(stakeholder)的願景
- 能讓所有的團隊成員在其工作範圍**立即存取**所需之資訊



在上下文(In-Context)協同合作始終顯示最新資訊



Comments (4)

- Bob to Deb, Marco 5 minutes ago (2 replies)

Percentage format - numer of decimal places

How many decimal places should we support for percent

Example: none - 16%, 1 decimal place 16.5%
- Marco to Bob, Deb 5 minutes ago

RE: Percentage format - numer of decimal places #1

I checked the DB table. We did not take into account decimals for this percentage. If we are going to support decimals I need to know ASAP.
- Deb to Bob, Marco Now

RE: Percentage format - numer of decimal places #2

Bob, is no decimal support acceptable to the business?
- Tanuj to Bob 1 minute ago

What is the minimum percentage?

Threaded discussions on requirements

View All Artifacts

Page size: 20

Highlight recently commented

ID	Name	Artifact Type	Last Modified By	Last Modified Date
44	Accounts Overview	Part	JTSAdmin	Mar 26, 2011 5:43:06 PM
50	Transaction History	Part	JTSAdmin	Mar 26, 2011 5:43:10 PM
53	Accounts Overview (Home Page)	Sketch	JTSAdmin	Mar 26, 2011 5:43:11 PM
55	Dividend Contribution - screen flow	Screen Flow	JTSAdmin	Mar 26, 2011 5:43:11 PM
60	Account Details	Part	JTSAdmin	Mar 26, 2011 5:43:13 PM
67	Dividend Contribution	Storyboard	JTSAdmin	Mar 26, 2011 5:43:15 PM
75	Donor must be registered user to access account details	Business Rule	JTSAdmin	Mar 26, 2011 5:43:19 PM
79	Donors will receive confirmation and receipt	Feature	JTSAdmin	Mar 26, 2011 5:43:21 PM
89	Dividend contribution - confirmation	Sketch	JTSAdmin	Mar 26, 2011 5:43:23 PM

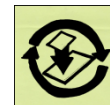
Recent discussions highlighted on requirements

Work Items Tag Cloud Problems

Found 9 work items - Stories (current sprint)

Id	Status	P	Story Points	Summary	Owned By
55	New	1	13 pts	Frequency of dividend transfer	Deb
59	Implemented	1	8 pts	Requests sent in form of email	Marco
60	New	1	3 pts	Organization must identify how much money is desired	Marco
62	New	1	1 pt	Organizations may apply with an initial request	Marco
64	In Progress	1	2 pts	Customers can Nominate an Organization	Deb
66	New	1	1 pt	Organization must provide justification for why funds are needed	Marco
69	New	1	2 pts	Organizations can Apply	Deb
70	In Progress	1	5 pts	Donor Dividend Allocation Criteria	Deb
71	New	1	1 pt	JKE Charity Coordinator will respond to request in the website trigger...	Marco

Unread work Items bolded for developers



評論需求的的細節

79: Donors will receive confirmation and receipt ?

Edit

Key Scenarios

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

Overview

Comments (2)

- 1. Marco to Bob** 1 minute ago (1 reply)

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?**
- 2. Bob to Marco** 2 minutes ago

RE: Statements must be mailed? [RE: #1]

No requirement to mail if customer selected electronic statments.

Related Features

A click on the comment highlights the text under discussion.

正式的審核可以驅動協議和防止重工(rework)

✓ 檢閱與審查，確保構件 (artifacts) 已經由關鍵團隊成員的審查和/或批准，並且符合法規遵從要求。

Requirements

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
Bob	Approver	Done - 5 Approved
Deb	Approver	Done - 5 Approved
Marco	Approver	60% - 2 Approved, 1 Disapproved
Tanuj	Approver	

Test Artifacts

Work Items

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 roles.

View: All

Show All items per page

Review Type	Name	Status	Comments
Approver	Bob	Pending	
Reviewer	Sally	Pending	

Task 41 * Implement - Frequency of dividend transfer

Summary: * Implement - Frequency of dividend transfer

Overview Links Approvals History

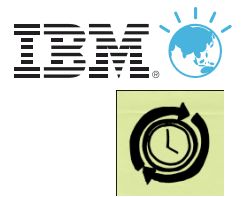
Approvals (1) - 1 pending

New: Approval

Type	Name	State	Due
Review	Check of algorithm to prevent transfer on weekend	Pending	Apr 18, 2011
	AI	Pending	
	Curtis	Pending	
	Tanuj	Approved	

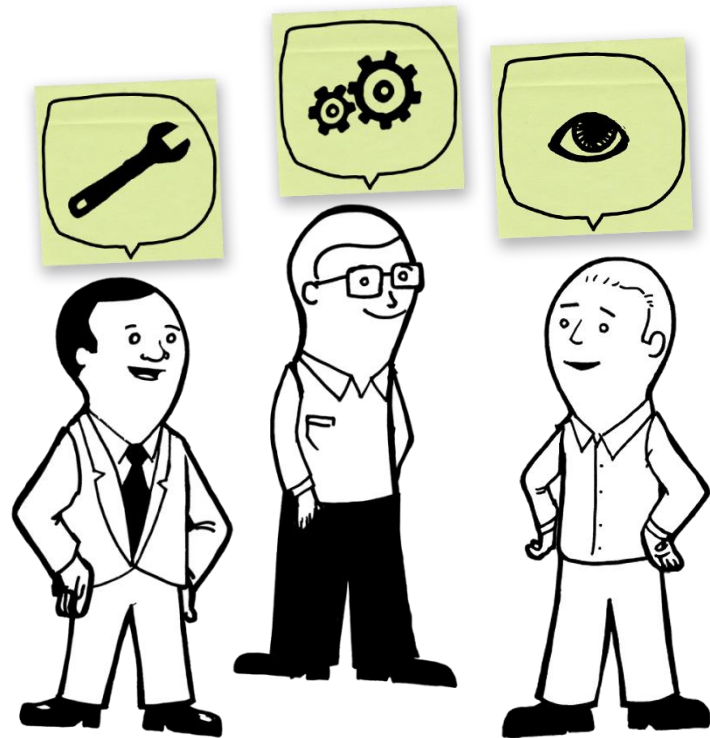
Add Approvers...

挑戰#2: 規劃(planning)所面臨的挑戰

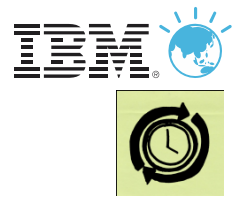


你的團隊可以

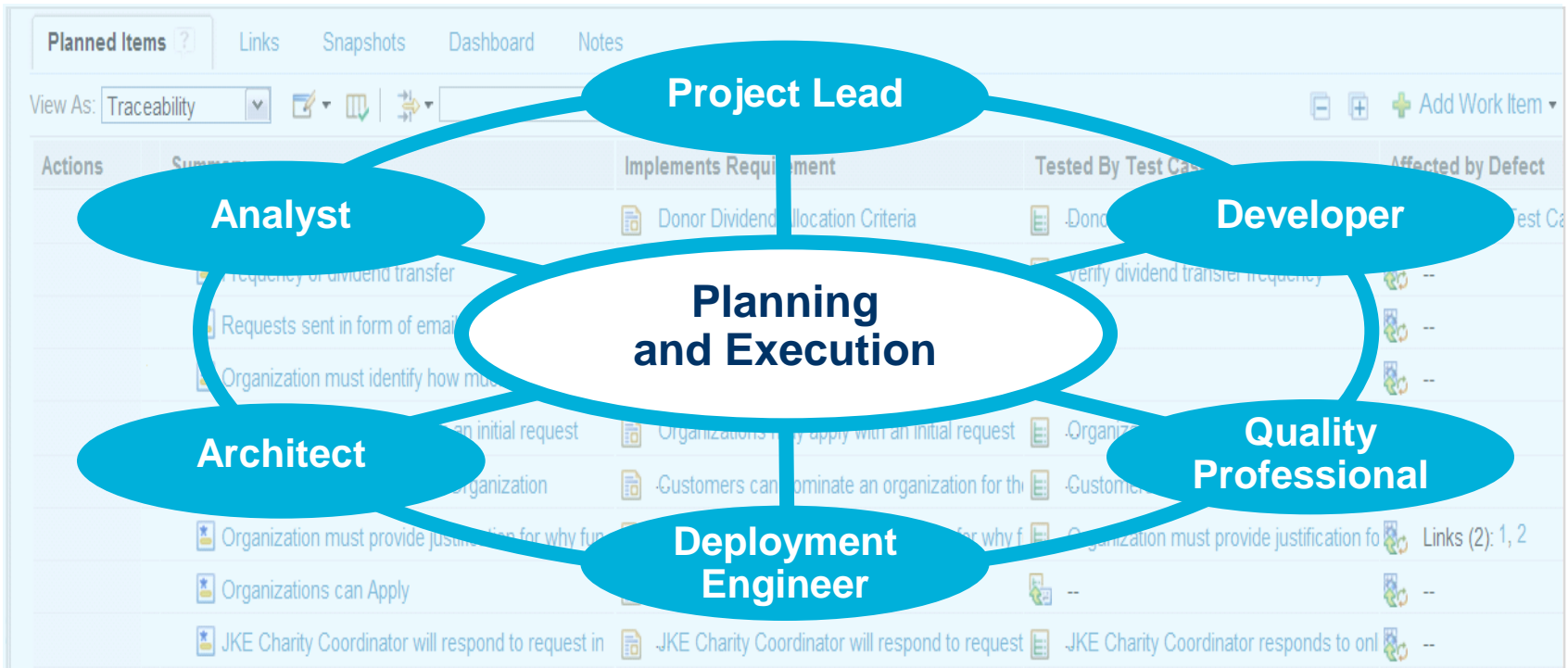
-規劃整個團隊的**計劃**嗎？
-是手動收集和報告**專案狀態**嗎？
-能立即看到在**專案的範圍**或**資源變化**的影響？
-與**結合規劃**(planning)的相關的**執行**(execution)嗎？
-可以規劃**反覆式**(iterative)和**敏捷式**(agile)的環境嗎？



即時規劃(Real-Time Planning)以加速交付時間



- 提供了一個單一的計劃能跨越需求，開發和測試階段，以確保整個團隊了解一個專案的**整體範圍**
- 整合規劃(planning)的相關的執行(execution)，確保整個團隊了解**真實的專案狀態**
- 使得每個人都參與，保持計劃為目前**最新與準確**
- 幫助團隊及時回應那些在意想不到的事件，確保團隊的**時程依然如期完成**



一個計劃 – 可提供多個視圖以便於詳細分析



1 BRM Sprint 2 (1.0) Plan

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

Plan Details

Planned Items Links Snapshots Dashboard Notes

View As: Roadmap (3 items filtered)

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	1.5 days	Marco
▼	Organizations may apply with an initial request	--	Marco
▶	Implement - Organizations may apply with an initial requ	4 hours	Marco
▼	Customer ... e an Organization	--	Deb
▶	Implement ...		
▶	Organization must ...		

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 Pro
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

▶	Bob	Closed Items: 0 Open Items: 1	Load: 0/8 +8 h
▶	CP	Closed Items: 0 Open Items: 1	Load: 0/8 +8 h
▶	Deb	Closed Items: 3 Open Items: 5	Load: 168/8 -160 h
▶	Marco	Closed Items: 2 Open Items: 14	Load: 92/8 -84 h
▶	Tanuj	Closed Items: 0 Open Items: 0	Load: 0/8 +8 h

跨專案計畫管理

- Planning Across Projects
 - 主計畫(Master Plan)追蹤跨專案工作
 - 看見跨專案所有時程

Planned Items ? Links Snapshots Dashboard Notes

View As: Project Schedule [edit] [add] [refresh] Type to Filter

Summary
▼ Wrong assumption about booleans: '1 != false'
< assertThat fails with Class tests (documentation problem)
< timeout doesn't work properly for >=2 cases in junit4.3?
▶ As user I want to get multiple project involved
▼ The product line should support clustered environments
< 10: Who's responsible to deploy in maven central repository
< 14: Tree hierarchy not created correctly
< 11: No download link to latest version
< 12: timeout doesn't work properly for >=2 c
< 13: Tests on protected methods fail

Master Plan

3 items: 3 open, 0 closed | Ends in: 29 days

▼ Plan Details

Owner: Master

Iteration: Release 1.0 [8/29/11 - 10/8/11]

Plan Type: **Cross Project Plan**

Include All Items

Planned Items ? Links Snapshots Dashboard Notes

View As: Project Schedule [edit] [add] [refresh] Type to Filter

Project Schedule

Options Columns

Display [dropdown] **Tree** [dropdown] **Contributes To -> Tracks** [dropdown]

+ More ▼

Sep 5, 2011 9:00:00 AM - Sep 5, 2011 11:00:00 AM

Using the Start and End Date of Snapshot 'Planned 1'

[Open Schedule...](#)

計劃(planning)與執行(execution)相連結



BRM Sprint 2 (1.0) Plan

28 items: 25 open, 3 closed | Ends in: 3 days

Plan Details

Planned Items Links

View As: **Work Breakdown**

Bob
Closed Items

Deb
Closed Items: 0 | Open Items: 9

Actions Summary Effective Estimate Progress Status Work Item Type Change Sets Attachments

Actions	Summary	Effective Estimate	Progress	Status	Work Item Type	Change Sets	Attachments
	Improve link colors	1 hour	0/1 h	New	Defect	--	--
	Donor Dividend Allocation Criteria	--	0/5 pts 0/20 h	In Progress	Story	--	Links (2...
	Implement - Donor Dividend A...	2.5 days	0/20 h	New	Task	--	--
	Update router module with ne...	--	0/0 h	In Progress	Task	Changes in P...	--
	create new service for validati...	--	0/0 h	In Progress	Task	Changes in W...	--
	Performance on first startup is bad	2 hours	0/2 h	New	Defect	--	--
	Some links are not working	5 hours	0/5 h	New	Defect	--	--
	Frequency of dividend transfer	--	0/13 pts 0/40 h	New	Story	--	--
	Requests sent in form of email	--	0/8 pts 0/32 h	New	Story	--	--

Marco
Closed Items: 2 | Open Items: 11
Progress: 12/52 | -33.25 h Estimated: 91%

Tanuj
Closed Items: 0 | Open Items: 0
Progress: -- No Work Estimated: --

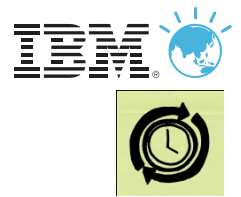
Unassigned
Closed Items: 0 | Open Items: 2

Auto-Save Save

Change Sets & Attachments are better !

Progress & Status are good indicators of execution.

Requirement Collection為在此次所將發行的需求集合



Create Vision

View All Artifacts

Page size: 20

ID	Name	Artifact Type
16	Requests sent in form of hard copy mail	Feature
29	Customers can nominate an organization for the program	Feature
39	Organization must provide justification for why funds are needed	Feature
70	Donation by Amount	Feature
76	Organizations can apply	Feature
77	Organizations may apply with an initial request	Feature
78		
79		
81		
86		
88		
99		
108		
109		

JKE Banking (Requirements)

- Collections
- JKE Business Recovery Matters
 - Business Rules
 - Features
 - Glossary
 - Non Functional Requirement
 - Processes
 - Reports
 - Stakeholder Needs
- User Story Elaboration
 - Elaborated Stories
 - Roles - Actors
 - Storyboards
 - UI Sketches
- JKE Enterprise Project
- JKE Private Banking and Security
- Project Meetings

需求集合
(Requirement Collection)
關注在:

- ✓ Reviews
- ✓ Snapshots
- ✓ Implementation

JKE Banking (Requirements) > ... > Collections >

97: Release 1 Planning

Page size: 20

ID	Name	Artifact Type
32	Organization must identify how much money is desired	Feature
34	Frequency of dividend transfer	Feature
40	Allocate dividends by Percentage	User Story Elaboration
57	Dividend processing payment is a one time transaction.	Feature
58	Donor Dividend Allocation Criteria	Feature
61	Donors Deposit Money in a Pooled Assistance Fund	Feature
65	Allocate dividends by amount and frequency	User Story Elaboration
70	Requests sent in form of hard copy mail	Feature
82	Customers can nominate an organization for the program	Feature



調整計劃以跨越業務，開發和測試團隊

Change and Configuration Management (/ccm) One of the Client Access Licenses expires in 57 days

JKE Banking (Change Management) Bob

Project Dashboards Work Items Plans Source Control Builds Reports

Search Work Items

Release 1.0 Backlog

36 items: 31 open, 5 closed | Ends in: 24 days

Plan Details

Planned Items Links Snapshots Dashboard Notes

Add: Contributes To Plan

Actions	Link Type	Progress
	Related Plans	
	BRM Sprint 2 (1.0) Plan	0/16
	Product Backlog	0/0 pts 0%
	Implements Requirement Collection	
	97: Release 1 Planning	
	Tested by Test Plan	
	3: JKE Banking Release 1	

✓ Linked to Requirement Collection

✓ Linked to Test Plan

挑戰#3: 生命週期追蹤(Lifecycle Traceability)所面臨的挑戰



- 你的團隊可以回答下列問題嗎?

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?

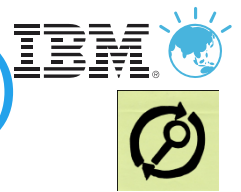
Quality Professional

What is the quality of the build?

What is ready for me to test?

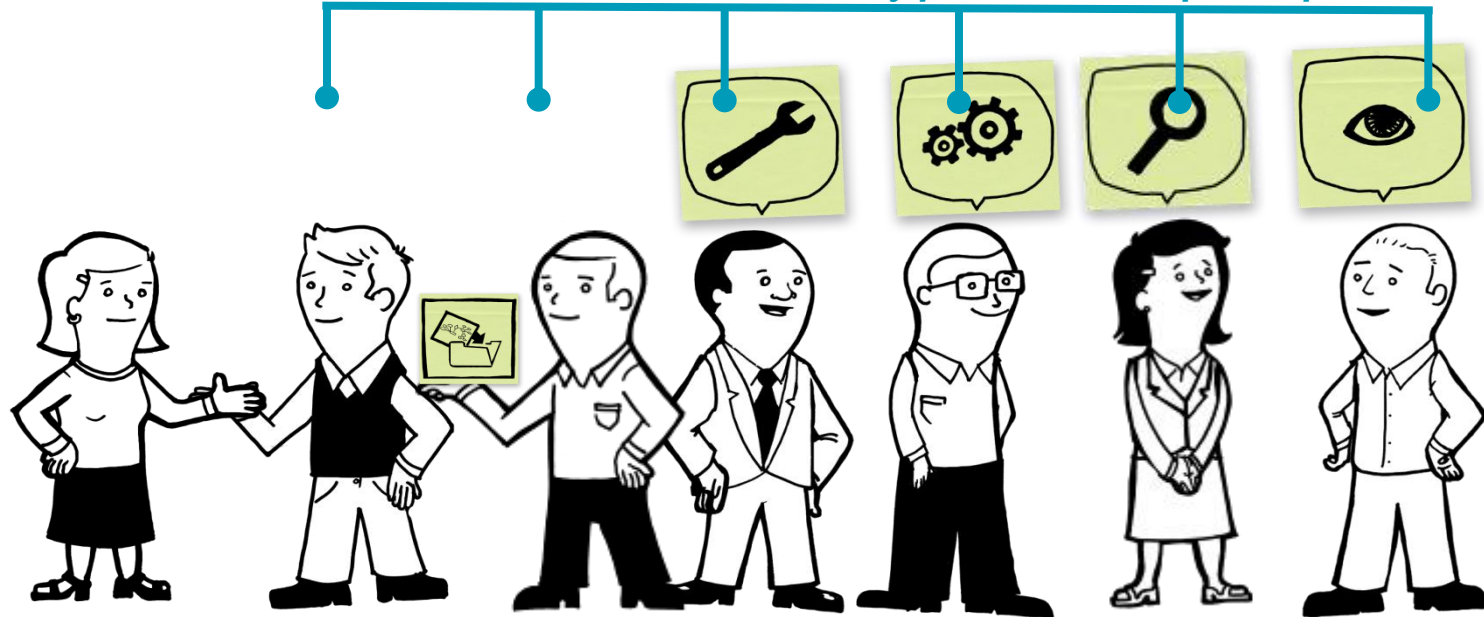
What defects have been addressed since the last build?

加強生命週期追蹤(Lifecycle Traceability) 以提高軟體品質



- 建立軟體**構件**(artifact)之間的**關係**
- 查明和消除構件的差距，確保跨開發生命週期的**覆蓋範圍**
- 藉由通過檢查所有相關構件，以提供完整性的計劃項目(planned items)的可視性(visibility)
- 提供方便的**存取相關構件**，以確保每個人能共享相同的視圖(view)
- 提供的**透明度**，使每個人都能基於業務**優先順序**，充分了解情狀而作出最好的決定

Instant access to details from any point in development process



Customer

Final Product

Build Environment Artifacts

Supporting Systems

Requirements Management

Initial Idea



以開發驅動的整個生命週期的發展

團隊負責人擁有覆蓋率和完整性的能見度

- 可以透過需求(Requirement/Story)、實作(Task)、測試案例與缺陷(Defect)之間的鏈接關係，積極應對存在的差距，並且快速的解決突出問題

BRM Sprint 2 (1.0) Plan Auto-Save Save

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

Plan Details Edit

Planned Items Links Snapshots Dashboard Notes

View As: Traceability Add Work Item

Actions	Summary	Owned By	Implements Requirement	Tested By Test Case	Affected by
	Requests sent in form of email	Unassigned	Requests sent in form of email	--	--
	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 funds are ne	Organization must provide justificatio	--
	Organizations can Apply	Marco	Organizations can apply	Organizations can Apply	--
	Organization must identify how much money is desired	Marco	Organization must identify how much money is desired	Organization must identify how much	Links (2)
	Donor Dividend Allocation Criteria	Deb	Donor Dividend Allocation Criteria	Donor dividend allocation conforms t	--
	Organizations may apply with an initial request	Bob	Organizations may apply with an initial request	Organizations may apply with an initi	--
	JKE Charity Coordinator will respond to request in the websit	Marco	JKE Charity Coordinator will respond to request in the web	JKE Charity Coordinator responds to	425: Rur
	Customers can Nominate an Organization	Marco	Customers can nominate an organization for the program	Customers can Nominate an Organi	--

開發實作

需求

測試

缺陷



以開發驅動的整個生命週期的發展 團隊負責人擁有覆蓋率和完整性的能見度

量身定做的可追溯性視圖，突出顯示計劃的差距

BRM Sprint 2 (1.0) Plan

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

Plan Details

Planned Items

View As: Traceability

Traceability

Options

Sorting

Filter

Colors

Colors

Colors

Colors

Colors

Colors

Link Type : value

gap | implementsRequirement:unset

gap | testedByTestCase:unset

Defect | affectedbyDefect:set

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 mc	Links (2): 1, 2
	Donor Dividend Allocation Criteria	Deb	Donor Dividend Allocation Criteria	Donor dividend allocation conforms to sl	--
	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	--



團隊負責人可以提升品質和可預測性

- ✓ 創建一個共享的願景，提供利益相關者想要什麼
- ✓ 整個團隊相信可以改善團隊的信任、效率和專案的焦點
- ✓ 大家都知道需要什麼樣的工作應該找誰和什麼時候
- ✓ 可追溯性提供洞察力，知道何時你將完成！

開發人員可以了解業務需求、測試標準和測試結果



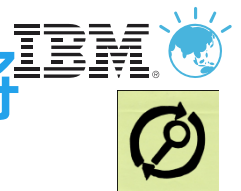
團隊小組進行協同合作和釐清的業務需求細節



測試人員基於清楚地了解需求，可以定義和執行測試案例



開發人員擁有可視性的視圖，來看他們將實作的需求



- For the Developer
 - ✓ **Rich Hovers** provides insight at your finger tips reducing time to value.
 - ✓ **Clickable links** provides valuable information on requirement

The screenshot displays a requirement hover window for '29: Customers can nominate an organization for the program'. The hover includes a description, location, and attributes. A red box highlights the 'Status: Draft' attribute. Below the hover is a 'Story 64' card with a summary and a list of links. A green line connects the 'Story 64' card to the 'Rich Hovers' text in the list on the left.

29: Customers can nominate an organization for the program

Requirement: Customers can Nominate an Organization Brief
Description Customer may nominate an organization for assistance whether a result of a catastrophic event or from some other justification. A

Location
JKE Banking (Requirements) Features
Extended Functionality, Release 1

Attributes

Type:	Feature	Format:	Text
Description:		Stability:	Medium
Origin:	Customer	Difficulty:	Medium
Status:	Draft	Business Priority:	Should

Links

- Constrained by (3): 27, 72, 84
- References Term (3): 13, 31, 102
- Implemented By (1): ...
- Link To (1): 81
- Embedded In (1): 112

Story 64 *

Summary: * Ir

Overview Accept

Attachments

Add File:

No Attachments.

Links

Add: Related

Implements Req

- 29: Custom

Tested By Test Case

- 6: Organization must identify how much money is desired
- 7: Allocate dividends by amount and frequency
- 10: Customers can Nominate an Organization
- 9: Donors Can Choose to Support an Organization



缺陷(Defect)自動可追溯性可降低成本和提高質量

- ✓ 4-clicks to submit a defect automatically linked to impacted artifacts
- ✓ Test results are recorded and linked to test cases, and associated requirements
- ✓ Test results can be linked to software builds
- ✓ Everyone has visibility into the defects, their impact, and the action taken to resolve them



測試人員執行測試並提交缺陷

The screenshot shows a 'Failed' test result for 'Frequency of dividend transfer'. The defect details include:

- Summary: Failing Test Case "Frequency of dividend transfer"
- Type: Defect
- Filed Against: JKEBPM
- Severity: Normal
- Found In: Unassigned
- Team Area: Business Requirements - Matters JKE Banking
- Created Date: September 29, 2010 10:22 AM
- Created By: cp



開發人員可以看到確切的測試失敗結果，而不必去問測試人員，可以直接進行修復

Actions	Summary	Owned By	Implements Requirement	Tested By Test Case	Affected by Defect
	Requests sent in form of email	Unassigned	Requests sent in form of email	--	--
	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 s	--
	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 on	425: Running out of SW
	Customers can Nominate an Organization	Marco	Customers can nominate an organization for the pi	Customers can Nominate an Organizati	--

可疑鏈接 (Suspect Links)追蹤 協助進行影響評估

Requirements Management (/rm)

Suspicion Profile Administration

Suspicion Profiles for Your Applications >

Suspicion Profiles for JKE Bar

Use the Suspicion Profile Application to track suspect. Select the link types and any specific

Suspicion Profiles

- Untitled Profile

1 linked artifact has changed significantly:

Product Manager (1)

- 5: Test Increasing Agility

Developer (1)

- 5: Test Increasing Agility

Clear all

Clear for profile

Clear

Clear for profile

Clear

Suspect Links

Capability

- Use suspect profiles to track changes to linked requirements
- Use suspect notifications in many different areas
- Clear suspicion for individual/all

Benefits

- discover changes across trace links among requirements and other lifecycle elements
- Easily recognise impact to your requirements

ID	Name	Artifact Type
349	Increase agility to produce applications and services	Business Goals
356	Accelerate economic recovery	Business Goals

Links (1)

Validated By (1)

- 5: Test Increasing Agility



圖形化可追溯鏈接



Requirements Management (/rm)

JKE Banking (Requirements Management)

Project Dashboard Artifacts Collections Reports

Diagram view of related links

Graphical Traceability Explorer Capability

- Visually analyse traceability links for gap and change assessment
- Filter on relevant link types

Benefits

- Best method to see relationships from requirements to other requirements, test, development, etc.

The diagram shows a central requirement artifact '102: Allocating Dividends to a Cause' which is satisfied by three other artifacts: '144: Donor Chooses an Organization', '131: Accelerate economic recovery', and '80: Donor Chooses Multiple Organizations'. Additionally, '102: Allocating Dividends to a Cause' satisfies '134: Allocate dividend by Percentage'. The '134: Allocate dividend by Percentage' artifact is further satisfied by '102: Allocating Dividends to a Cause'. A filter is applied to show only 'Satisfied By' links.

Filter by Attribute

Artifact type: is any of Feature

Filter by Folder

79 Requests sent in form Feature Approved Should

Showing 19 of 19 Artifacts

Apply

40% 100%

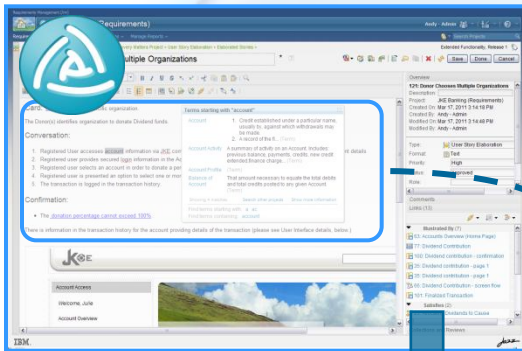
IBM. Jazz

以需求驅動的整個生命週期的發展

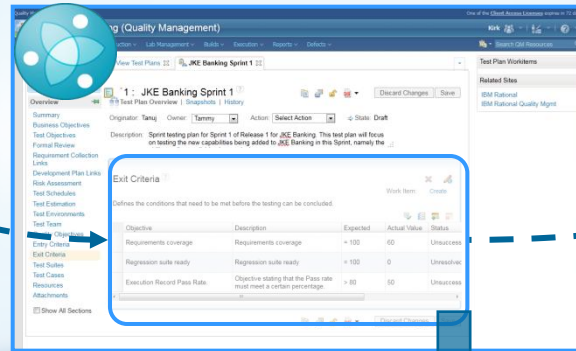


**Analysts,
Testers,
Developers**

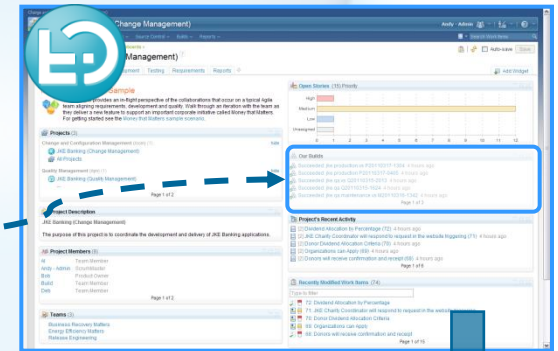
**Rational Requirements
Composer 4.0**



**Rational Team
Concert 4.0**



**Rational Quality
Manager 4.0**



ID	Name	Artifact Type	Implemented By	Validated By
8	Dividend allocation by percentage	Feature	75: Dividend Allocation by Percentage	18: Dividend Allocation by Percentage
	Requirements	Feature	6: Customers can Nominate an Organization	21: Customers can nominate an organization for the program
		Development	73: Donor Dividend Allocation Criteria	10: Customers can nominate an organization for the program
12	Donor Dividend Allocation Criteria	Feature	73: Donor Dividend Allocation Criteria	16: Donor Dividend Allocation Criteria
	Satisfied by			
23	Frequency of dividend transfer	Feature	58: Frequency of dividend transfer	1: Frequency of dividend transfer

Single View for End to End Development Needs

以測試驅動的整個生命週期的發展



Identify gaps and analyze impact with lifecycle traceability

- Traceability views for test plans, test cases/scripts, test suite/case execution records and test suite/case results showing links:
 - From test plans to requirement collections and development plans
 - From test cases to requirements and development work items
 - From test scripts to requirements
 - From test suite/case execution records (TERs) and results views show links to defects

測試案例 ?

品質作業: 建立

列出與給定計劃關聯的測試案例。您可以新增及移除關聯來測試文件，以及建立及關聯新的測試案例。移除測試案例會移除這份測試計劃的關聯，但不會刪除測試案例。

檢視方式: 追蹤性

顯示全部 每頁項目數

ID	名稱	驗證需求	測試開發項目
84	test case-1	--	--
38	捐贈者選擇組織	Donor Chooses an Organization	捐贈者選擇組織
30	依百分比來分配紅利	Allocate dividends by Percentage	依百分比來分配紅利
31	處理印刷本要求	Requests sent in form of hard c...	以印刷郵件形式傳送要求
32	處理電子郵件要求	Requests sent in form of email	以電子郵件形式傳送要求
34	依金額和週期來分配紅利	Allocate dividends by amount an...	依金額和週期來分配紅利
37	客戶可以提名組織	Customers can nominate an or...	客戶可以提名組織
40	捐款金額限制	Donation by Amount	依金額捐贈
42	組織可以申請	Organizations can apply	組織可以申請
41	捐贈者會收到確認和收據	Donors will receive confirmation...	捐贈者會收到確認和收據
43	捐贈者紅利分配符合聲明的準則	Donor Dividend Allocation Criteria	捐贈者紅利分配準則
44	「JKE 慈善團體統籌者」回應線上要求	JKE Charity Coordinator will res...	當網站觸發時，「JKE 慈善團體...
45	依百分比分配紅利	Dividend allocation by percentage	依百分比分配紅利
46	將紅利分配給單一非營利組織	(1), (2), (3), (4), (5)	依百分比來分配紅利
52	(QM 指導教學) 將紅利分配給多個非營利組織	--	--
53	顯示一致的貨幣	--	--
54	測試驗證貸款期間和金額	Validate Loan term and amount	驗證貸款期間和金額

顯示 1-17 個項目 (共有 17 個項目)

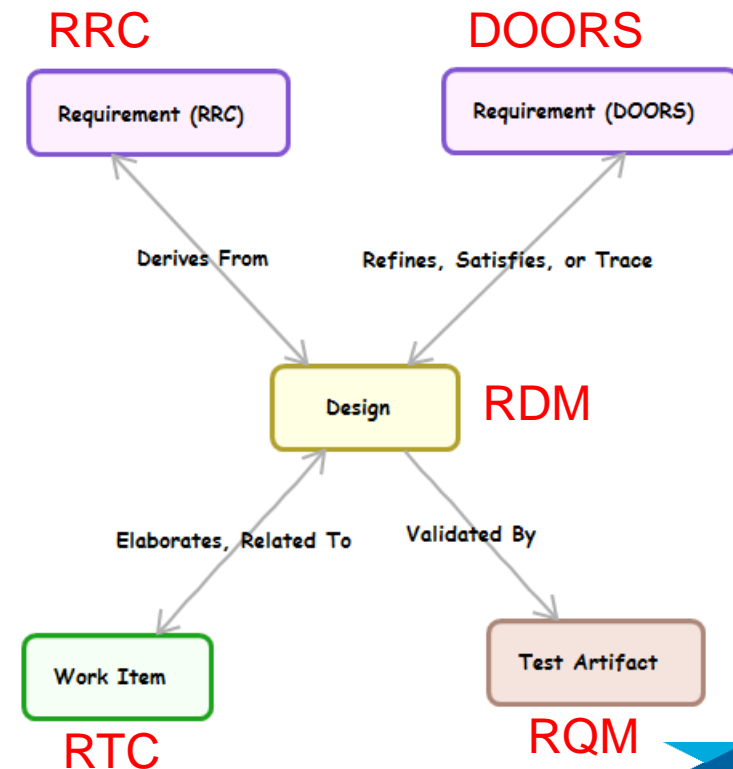
Design and Lifecycle Traceability

CLM 2012 and Design Manager 4.0 Beta

Lifecycle Integration Scenarios



- **Design and Requirements**
 - Analysis: link designs that provide the next level of details for requirements
 - Coverage: link designs that implement requirements to ensure coverage
- **Design and Change Management (Work Items)**
 - Planning: link design tasks to related designs
 - Design Changes: link design change sets to related work items
 - Implementation: link implementation tasks to related designs making it easier for developers to find design
 - Defects: link design defects back to defective design
- **Designs and Test Artifacts (one-way only)**
 - Test coverage of designs: Link from designs to test artifacts that validate the design to ensure test coverage



設計(Design)在計劃和需求呈現的視圖

<input type="checkbox"/>	206	JKE Charity Coordinator will respond to request in the website triggering..	Feature
<input type="checkbox"/>	216	Donors can choose to support an organization	Feature
<input type="checkbox"/>	217	Service for Allocating Dividends	Feature

Derives

- 584: Service Interfaces - Overview
- 537: Logical Topology

對系統分析者而言

RRC View showing elements linked to requirements

對開發者而言

RTC Plan in Traceability view showing linked design elements

BRM Sprint 2 (1.0) Plan

34 items: 34 open, 0 closed | Ends in: 1 day

Plan Details Edit

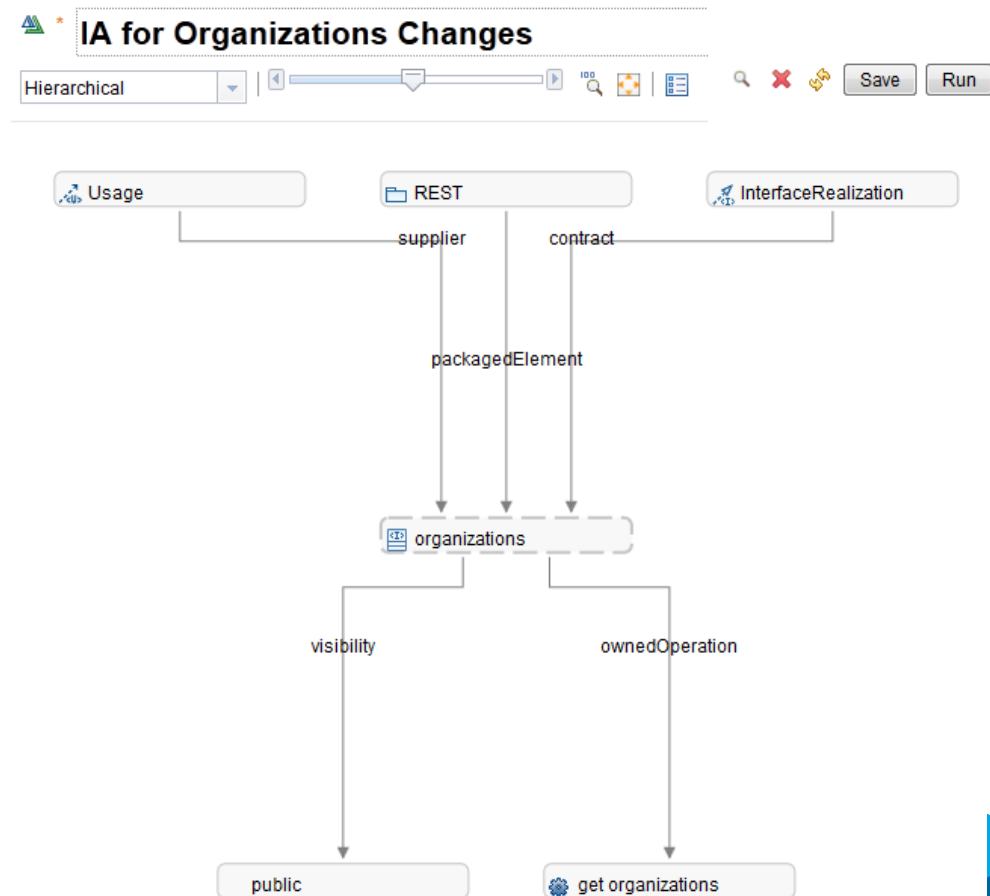
Planned Items Links Snapshots Dashboard Notes

View As: Traceability Type to Filter (23 items filtered) Add Work Item

Summary	Implements Requirement	Tested By Test Case	Elaborated by Architecture Element
Donor Dividend Allocation Criteria	Donor Dividend Allocation Criteria	Donor dividend allocation conforms to stated criteria	Allocate Dividends to Cause
Validate Loan Term and Amount	Validate Loan term and amount	Test Validate Loan Term and Amount	--
Frequency of dividend transfer	Frequency of dividend transfer	Verify dividend transfer frequency	--
Requests sent in form of email	Requests sent in form of email	Process email requests	--
Organization must identify how much money is...	Organization must identify how much money is desir	Organization must identify how much money is desir	--
Organizations may apply with an initial request	Organizations may apply with an initial request	Organizations may apply with an initial request	--
Customers can Nominate an Organization	Customers can nominate an organization for the pro	Customers can Nominate an Organization	--
Organization must provide justification for why ...	Organization must provide justification for why funds	Organization must provide justification for why funds	--
Organizations can Apply	Organizations can apply	Organizations can Apply	defined organizations
JKE Charity Coordinator will respond to reque...	JKE Charity Coordinator will respond to request in th	JKE Charity Coordinator responds to online request	--
Allocate Dividends with Web Service	217: Service for Allocating Dividends	--	Service Interfaces - Overview

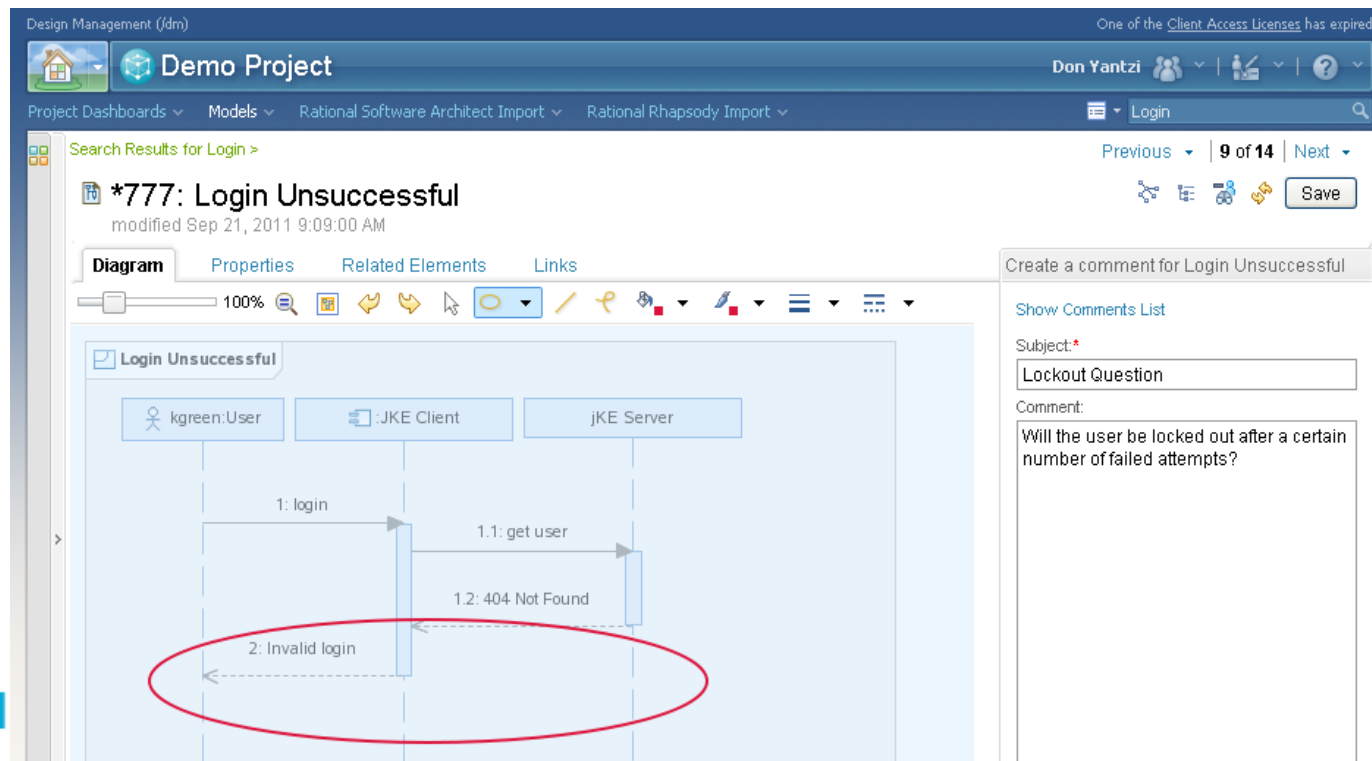
影響分析 – 以設計中心的觀點

- Design Management 4.0 Beta includes a new graphical impact analysis diagram
 - Includes both **design and OSLC linked** artifacts
- An **Analysis Configuration** defines the parameters for the analysis
 - **Upstream** level, **downstream** level, which links types to include
 - Can be used be shared by multiple analysis
- An **Analysis** applies the configuration to a selected element to perform the impact analysis
 - Add and remove elements from impact analysis diagram
 - Save and re-run at a later time



Design Collaboration

- 參與專案的團隊成員，在設計過程中可透過Web client 進行設計
- 通過評論和視覺標記，在上下文設計協同合作中可以改善品質
- 有引導流程的自動化人工和耗時間的設計審查
- 可由Web client和RSA進行張貼評論





生命週期的查詢

JKE 銀行業 (變更管理)

專案儀表板 > 工作項目 > 計劃 > 來源控制 > 建置 > 報告 >

工作項目 >

查詢 ?

我的查詢 共用的查詢

名稱	說明
▶ 預先定義 (34)	
▶ 生命週期查詢 (17)	
已備妥計劃項目以進行測試	已備妥計劃項目以進行測試，含相關的測試
已備妥測試案例的問題報告以進行測試	與測試相關聯，並且已準備好可測試的工作項目
不執行測試的計劃項目	與測試相關聯之已開啟且尚未執行的工作項目
不執行測試的計劃項目 (現行疊代)	現行疊代中，與測試相關聯之已開啟且尚未執行的工作項目
沒有測試案例的計劃項目	沒有任何相關聯測試的計劃項目
沒有測試案例的計劃項目 (現行疊代)	現行疊代中，沒有任何相關聯測試的計劃項目
沒有需求的計劃項目	沒有相關聯之需求的計劃項目
受問題報告影響的計劃項目	至少受一份問題報告影響的計劃項目
封鎖測試的問題報告	至少阻礙一項測試之已開啟的工作項目
測試失敗的計劃項目	與至少一項失敗測試相關聯之已開啟的工作項目
測試失敗的計劃項目 (現行疊代)	現行疊代中，與至少一項失敗測試相關聯之已開啟的工作項目
測試成功的計劃項目	與測試相關聯之未失敗的工作項目
測試成功的計劃項目 (現行疊代)	現行疊代中，與未失敗的測試相關聯的工作項目
開啟需求變更要求	開啟會追蹤需求的變更要求
實作需求的計劃項目	實作需求之已開啟的工作項目
影響測試的問題報告 (現行疊代)	現行疊代中，至少影響一項測試之已開啟的工作項目
影響需求的問題報告	會影響需求之已開啟的問題報告
企業重建事項 [Main Development] (0)	
個別共用 (0)	

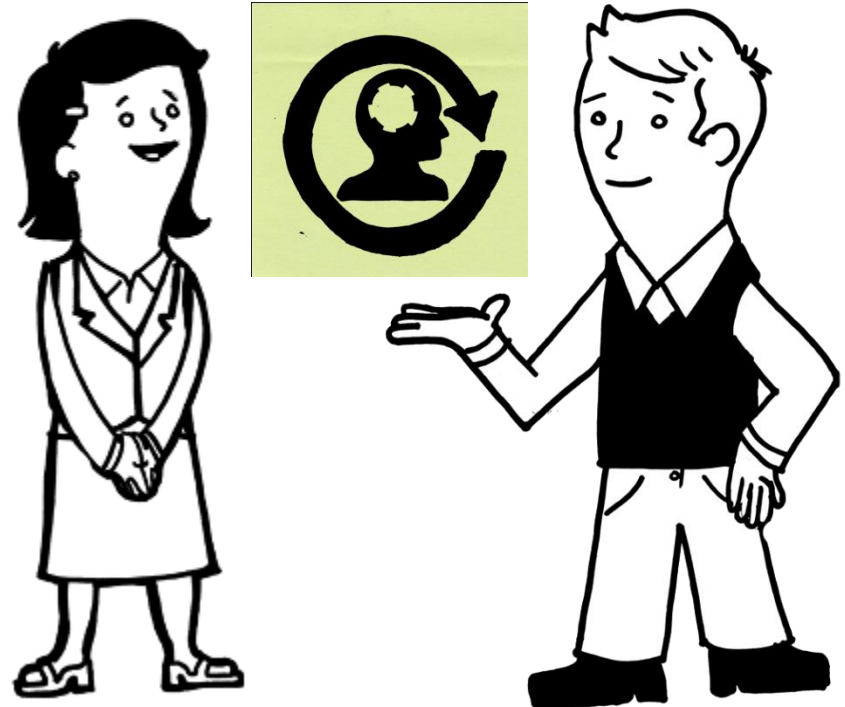
✓ 提供跨開發階段之交付問題的能見度



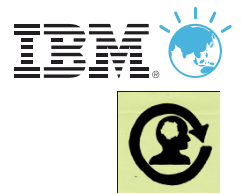
挑戰#4: 衡量指標和引導所面臨的挑戰

你的團隊可以

- ...提供一個視圖顯示多層次的專案健康狀態？
- ...基於事實，而非“guesstimates”來引導決策？
- ...追蹤度量標準與預期的改善？
- ...依賴於的環境來減少管理成本並能獲取度量分析指標？

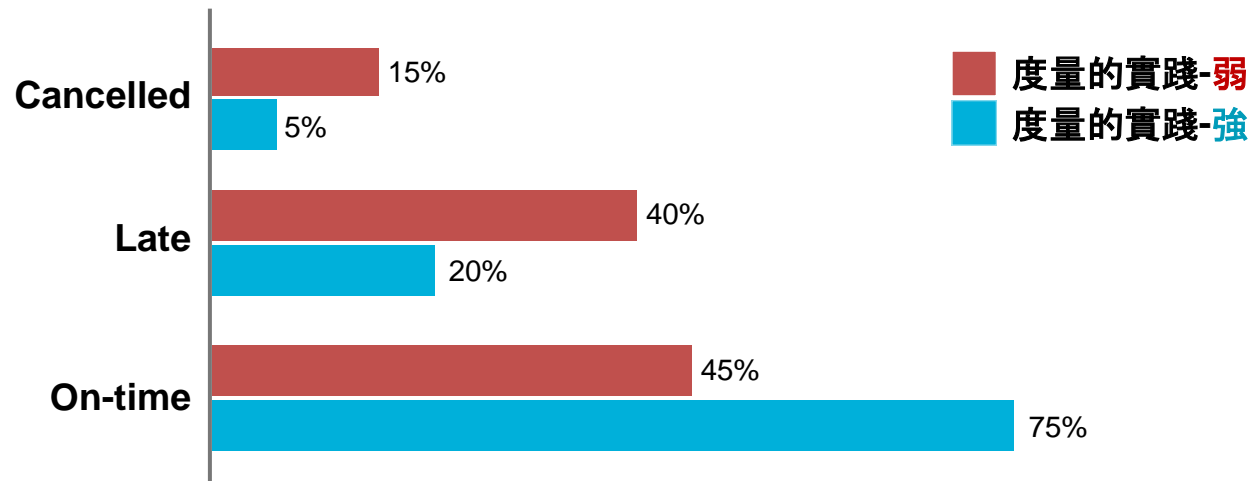


開發智能化(Development Intelligence)以改善可預見性



- 啟用基於事實的**決策**（溝通狀態，監測進展情況，診斷問題，確定的糾正措施）
- 引導專案**準時交付**
- 應用**商業智能**技術在軟體開發和系統開發

度量的實踐影響專案的成功



Sources: Capers Jones, Measurement, Metrics and Industry Leadership, Copyright © 2002-2007 by Capers Jones LLC
Capers Jones, Software Engineering Best Practices, Copyright © 2010 McGraw-Hill

使用儀表板提供統一的View查看專案的健康狀態

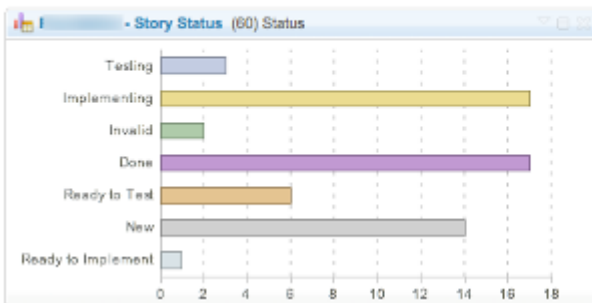


JKE Banking (Change Management)* ?

Overview | Time to Value (Schedule) | Product Value | Product Cost | Product Quality | Reports | Stabilization +

Story Status Current Iteration

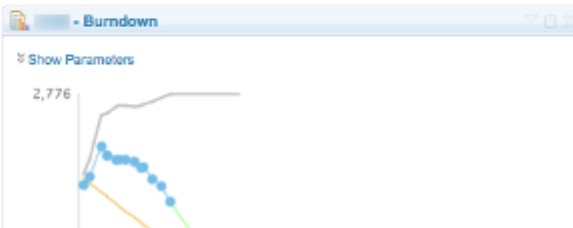
Shows the status of all stories planned for the current iteration



- #### Current Stories (80)
- 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
 - 155398: [Repository - M14] Performance, quality and robustness enhancements
 - 156051: Improvements and fixes for CLM migration automation
 - 154829: [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

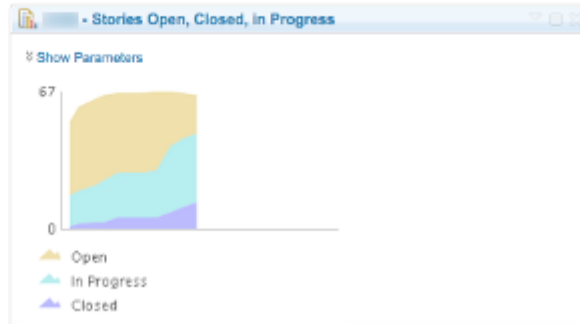
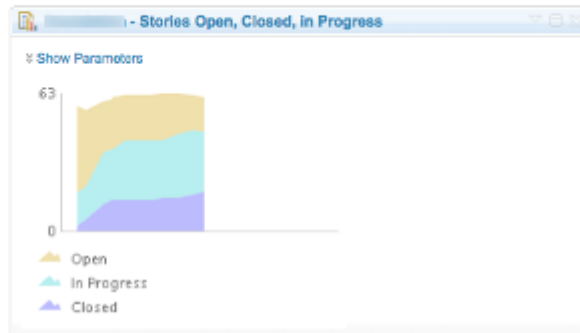
Burndown Current Iteration

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



Stories Open/Closed/In Progress

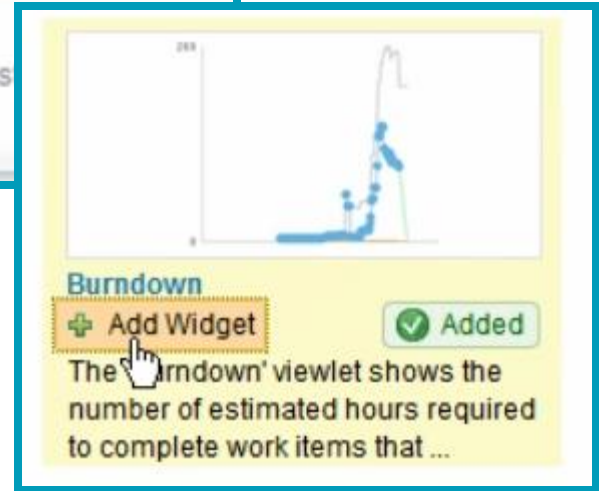
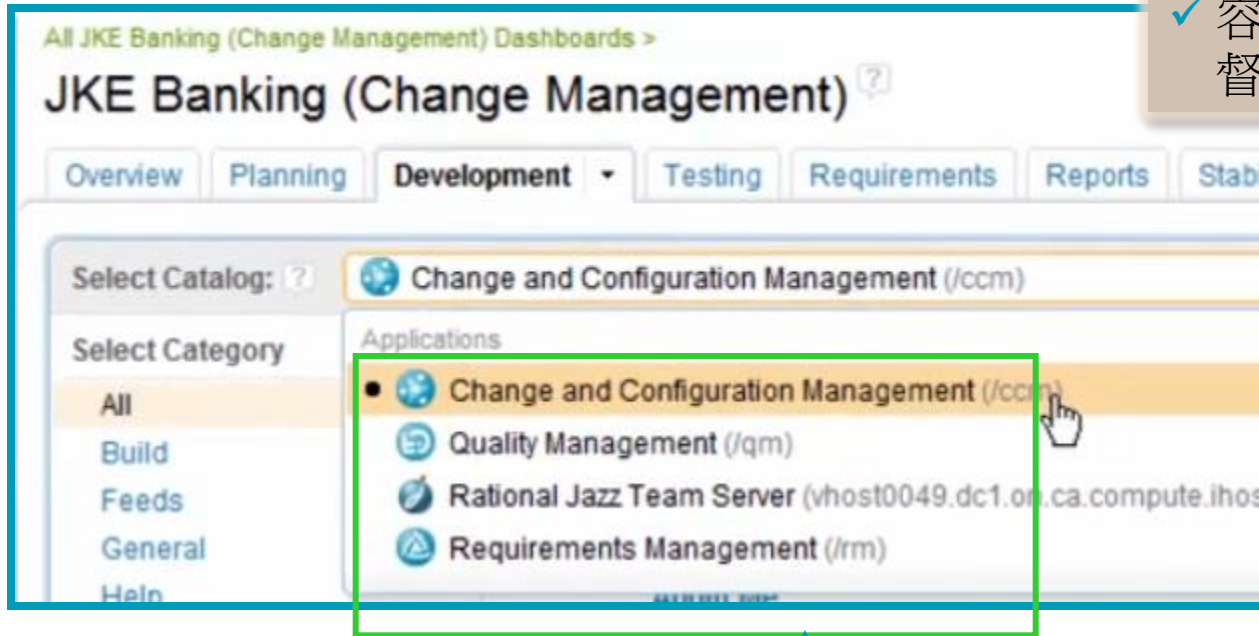
Shows the number of stories which are open, in progress, done during the iteration.



儀表板的定制

確保團隊已督導來自各開發階段的資料

✓ 容易地添加Viewlet以協助督導的完成



✓ 混搭儀表板與跨開發階的資訊



儀表板的細節

容易回答監督問題

✓ 通過點擊Viewlet就可深入分析資訊的

The screenshot shows a dashboard with a bar chart titled "Open Work Items for Current Sprint (34) Severity". The chart has five categories: Blocker (1), Critical, Major, Normal, and Minor. A hand cursor is pointing at the "Blocker" bar, which has a tooltip that says "Blocker: 1".

Below the chart is a detailed view of item 40, titled "Open for Current Iteration". The table below shows the details of this item:

Type	Id	Summary	Owned By	Status	Priority	Severity
Item	40	Credit increase request is registered against the wrong account	Unassigned	New	High	Blocker

The detailed view includes a "Summary" section with the following fields:

- Summary: Credit increase request is registered against the wrong account
- State: New
- Resolution: (empty)
- Filed Against: JKE/Web UI
- Severity: Blocker
- Found In: Sprint 2 Development
- Owned By: Unassigned
- Priority: (empty)

There is also a "Quick Information" section on the right with the following items:

- Subscribers (1): T
- Affects Test Result (1): 1

✓ 可以就地採取糾正措施



個人的儀表板

✓ Mini-dashboards: available on any page

Bob's Requirements Dashboard

General | Development

My Tasks

ID	Summary	Artifact	State
5	Improve loan calculation algorithm		
23	Search is not finding this term		
6	<u>Review TestCase: Donors Can Choose to Support an Organization</u>	6: Review TestCase: Donors Can Choose to Support an Organization	none

Summary: 6: Review TestCase: Donors Can Choose to Support an Organization Status: N

Recent Changes in All Projects (100)

- JKE Enterprise Diagram (122) Yesterday
- Allocating Dividends to a Cause (121) Yesterday
- Organization or customer response required (120) Yesterday
- Internallization (118n) (119) Yesterday
- Promote JKE Corporate Image (118) Yesterday

✓ Customized by the practitioner

Change and Configuration Management (/ccm)

JKE Banking (Change and Configuration Management)

Project Dashboards | Work Items | Plans

Mini Dashboard

Plan Items with failing... (0)

No work items found.

Re... in JKE Banking

- JKE Charity Coordinator will respond to request in the website triggering. (117) 3 hours ago
- Donors will receive confirmation and receipt (115) 3 hours ago
- Organizations may apply with an initial request (114) 3 hours ago
- Organizations can apply (112) 3 hours ago
- Requests sent in form of email (110) 3 hours ago
- Donation by Amount (107) 3 hours ago
- Organization must provide justification for why funds are needed (94) 3 hours ago
- Dividend allocation by percentage (83) 3 hours ago
- Customers can nominate an organization for the program (82) 3 hours ago
- Requests sent in form of hard copy mail (70) 3 hours ago

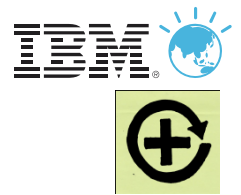
Page 1 of 2 | Next

Needs triage (8)

- 74: Allocate Dividends To Multiple Causes
- 70: Donor Dividend Allocation Criteria
- 67: Donation by amount

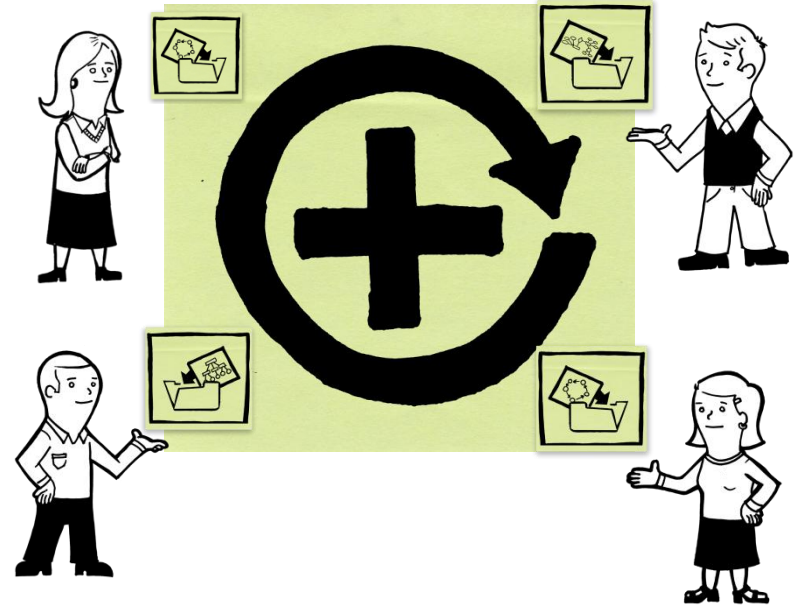
Page 1 of 3

挑戰#5: 持續改進(Continuous Improvement) 所面臨的挑戰

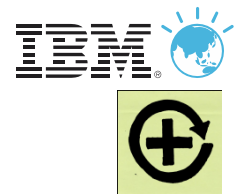


你的團隊可以

-可以充分利用的現成的**模板**，支持傳統的專案管理流程和敏捷的工作流程嗎？
-改變流程可以“飛快地進行”，並作為一個**持續的反饋循環**的一部分嗎？
-讓團隊負責人，可以**決定**如何應該是嚴格的或寬鬆的**規則**？
- ...修改一個專案的生命過程中的執行，鼓勵早期試驗，與最終流程的穩定？



持續改進(Continuous Improvement) 可以降低成本



- 通過正在進行所採納的**最佳實務做法和自動化**，以減少人工、非創造性和容易出錯的任務，來改進軟體交付
- 在需要時，推動專案的**增量改進**
- 使突破性的改進，藉由獲取最佳實務做法和跨團隊**重用** (reusing)
- 讓每一個人很**容易參與**，並採取最佳實務做法





團隊的回顧，幫助識別需要改進的地方

- 追蹤回顧會議幫助團隊成員協作改善
 - 流程的改進的排行 (ranking) 有助於集中小組所認為在開發生命週期中最大的痛苦

Change and Configuration Management (ccm)

JKE Banking (Change Management) JTSAdmin

Project Dashboards Work Items Plans Source Control Builds Reports

Work Items > Queries >

Retrospectives

Show All Items Per Page Previous | 1 - 3 of 3 | Next Type Filter Text

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

Discussion (4 comments) Add Comment

Collapse All | Expand All

1. Tanuj Sep 1, 2011 1:22 PM
I have some concerns about late-in-the-cycle deliveries causing code churn. We had some challenges with the retesting required late in the sprint.
2. Tanuj Sep 1, 2011 1:24 PM
Should've also mentioned that it's been hard to find information on the right build for the fix and to understand where to find the latest good build.
3. Deb Sep 1, 2011 1:42 PM
@tanuj - I don't think we've had a lot of disruptive changes at the end of the sprint. Let's talk about this more in depth at the meeting tomorrow. I do agree @tanuj that tracking down build status has been too hard.
4. Bob Sep 1, 2011 1:45 PM
In the meeting, I'd like us to discuss some issues where requirements were not well understood and that required some things to be reworked during this sprint (which may contribute to @tanuj's impressions in comment 1). Hopefully, as a team we can come up with some ideas on reducing this confusion.



團隊協同合作的行動

Project Dashboards ▾ Work Items ▾ Plans ▾ Source Control ▾ Builds ▾ Reports ▾

Work Items ▾

Task 76

Summary: * Determine the best use of requirements review process to ensure dev & test are clear on requirements.

Overview Links Approvals History

Details

Type: Task
Filed Against: JKE/BRM
Project Area: JKE Banking (Change Management)
Team Area: Business Recovery Matters
Creation Date: Sep 1, 2011 4:08 PM
Created By: Marco
Tags: retrospective
Owned By: Bob

Priority: High
Planned For: Sprint 2
Estimate: Correction:
Time Remaining:
Due Date:

Description [Edit](#)

See discussion in retrospective 75, comment 4: In the team's retrospective meeting, we concluded it would be useful to institute a more formal review process for requirements to flush out any ambiguities and ensure dev & test have the information needed to accurately implement any requirements.

In addition to determining a process, please plan on providing the team with a demo of your proposal.

✓ 團隊追蹤一個實施改善工作

範本/模板(Templates) 支持突破性的改進

Rational Jazz Team Server (qvmw158.ratl.uwg.usma.ibm.com:9443/jts)

Home Lifecycle Project Administration

Projects Members Templates Sample

All Lifecycle Project Templates [?]

Name	Summary
Quality Professional, Analyst, Developer	This template sets up associated project areas for quality management. The testers (in quality management) and change and configuration management) and quality management project. The change and configuration management project. The change and configuration management project. The requirements management project area can be configured to use the Base, Use Case, Agile Requirements or Traditional Requirements project template.
Quality Professional, Developer - without Requirements	This template sets up associated project areas for change and configuration management and test management work integrated with development (in change and configuration management) and quality management project. The change and configuration management project area can be configured to use the Scrum, OpenUP or Formal Project Management process template. Capabilities for Requirements are not set up and integrations will be used for this capability.
Quality Professional, Analyst	This template sets up associated project areas for quality management and requirements management. Quality requirements change requests are tracked in a separate project area. The requirements management project area can be configured to use the Base, Use Case, Agile Requirements or Traditional Requirements project template. Capabilities for Requirements are not set up and integrations will be used for these capabilities.
Analyst, Developer	This template sets up associated project areas for requirements management and change and configuration management work integrated with development (in requirements management) work integrated with development (in change and configuration management) and quality management project. The change and configuration management project. The requirements management project area can be configured to use the Scrum, OpenUP or Formal Project Management process template. The requirements management project area can be configured to use the Base, Use Case, Agile Requirements or Traditional Requirements project template.

✓ 專案範本的使用和重用是一個突破性的改進，例如：修改，以符合您的組織的流程



專案透明度協助提高團隊協同合作

✓ 持續地使容易找到正確的事情

The screenshot displays the IBM Project Dashboard for 'JKE Banking (Change Management)'. The 'Builds' tab is highlighted with a green box and a blue arrow pointing to it from the text above. The dashboard shows 'Current Builds' and 'Our Builds' sections with a list of successful builds, and a 'Build Health' section with a line graph showing the number of tests.

Build Status	Build Name	Time Ago
Succeeded	jke.production.vs P20110831-1400	3 hours ago
Succeeded	jke.production P20110831-1958	3 hours ago
Succeeded	jke.qa.vs Q20110831-1023	3 hours ago
Succeeded	jke.qa Q20110830-1716	3 hours ago
Succeeded	jke.qa.maintenance.vs M20110830-2310	3 hours ago

Build Health: Number of Tests (46)

5個極重要的優點： 能使應用生命週期管理(ALM)有效率地 並能提高組織的生產力



1. 在上下文(In-Context)協同合作以最大化地提高產品價值



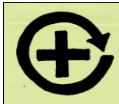
2. 提供即時規劃(Real-Time Planning)以加速交付時間



3. 加強生命週期追蹤(Lifecycle Traceability)以提高軟體品質



4. 開發智能化(Development Intelligence)以實現可預見性



5. 持續改進(Continuous Improvement)以降低成本

Learn more at [ALM Everywhere](#)

Agenda

- 軟體無所不在
- Rational CLM 4.0 for ALM
- Rational CLM 5個極重要的優點
- 結論



IBM Rational 在 ALM 領域是被認為領導者

“Efficient coordination and automation of the delivery process **requires new, collaborative approaches** to the planning, measurement, execution, control and reporting of activities.”

“These **new approaches** are what **differentiate current application life cycle management (ALM) tools**, and what make ALM processes vital to leading-edge development activities.”

“ALM is what **enables sustainable agile practices**. ALM creates a management framework providing consistent, auditable records of the decisions and activities of agile teams.”

Duggan, Jim & Murphy, Thomas E., “MarketScope for Application Lifecycle Management,” Gartner, Inc., 11 November 2010 ID Number: G00208572 , pp2,6

IBM earns “Strong Positive” — the highest possible rating

	RATING				
	Strong Negative	Caution	Promising	Positive	Strong Positive
AccuRev			x		
Aldon			x		
Atlassian				x	
CollabNet				x	
Digite			x		
HP				x	
IBM					x
Kovair			x		
Micro Focus			x		
Microsoft				x	
MKS				x	
Parasoft			x		
Polarian Software			x		
Rally Software				x	
Seapine Software			x		
Serena Software				x	
SmartBear Software			x		
TechExcel			x		
ThoughtWorks			x		
VersionOne				x	

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IBM Rational 在 ALM 領域是被認為領導者

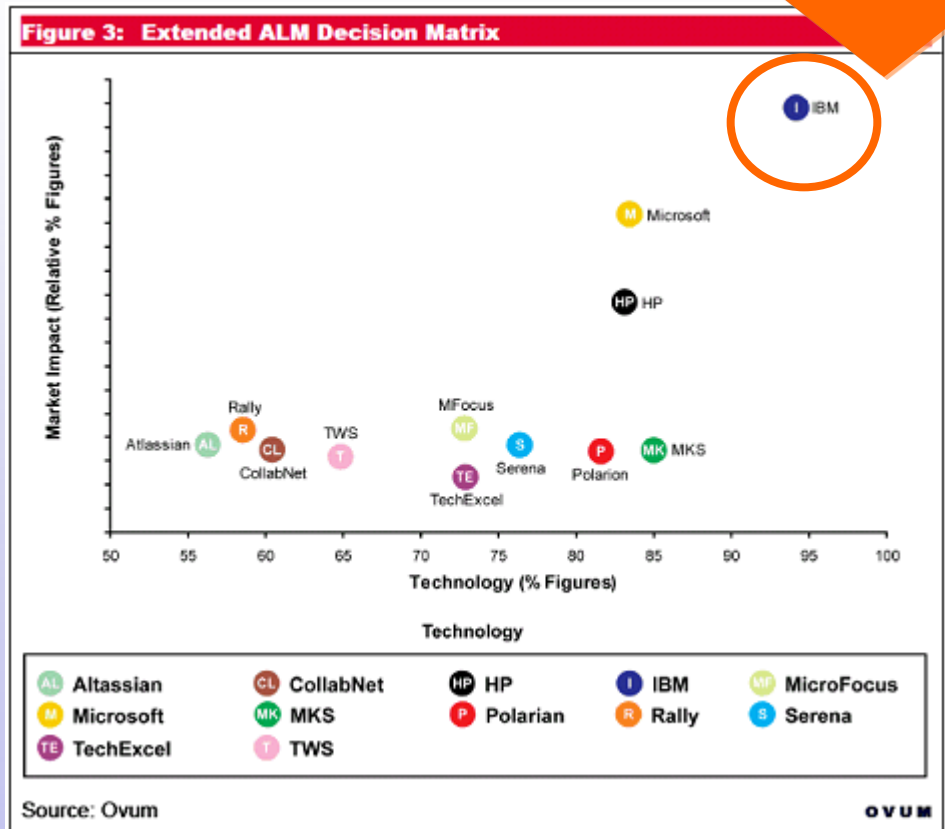
Ovum Decision Matrix: Selecting an ALM Vendor

Reference Code: OI00068-002 Publication Date: March 2011

Authors: Chandranshu Singh, Tony Baer, Michael Azoff

Report Highlights

- "IBM has the broadest and arguably the **deepest portfolio among all vendors profiled in this report.**"
- IBM's Technology Score: **94.3%**
- IBM's Market Impact score: **10/10**
 - The highest score!
 - All other vendors were ranked relative to IBM
- "Furthermore, the vendor has ensured that it stays ahead of the pack by having a **good grasp of market demand and meeting it through tool support.**"



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