Innovate2011
IBM 開發者大會

高效率，更要高良率

Jason Lin (林裕隆) (LinYL@tw.ibm.com)
IBM軟體事業處 資深技術顧問

創意無所不能×軟體無所不在

Software. Everyware. September 1, 2011 台北喜來登飯店

議程

1. 研發型專案開發所面臨的挑戰
2. 解決方案IBM CLM-RRC/RTC/RQM
3. RRC/RTC/RQM介紹與 Demo
4. 總結

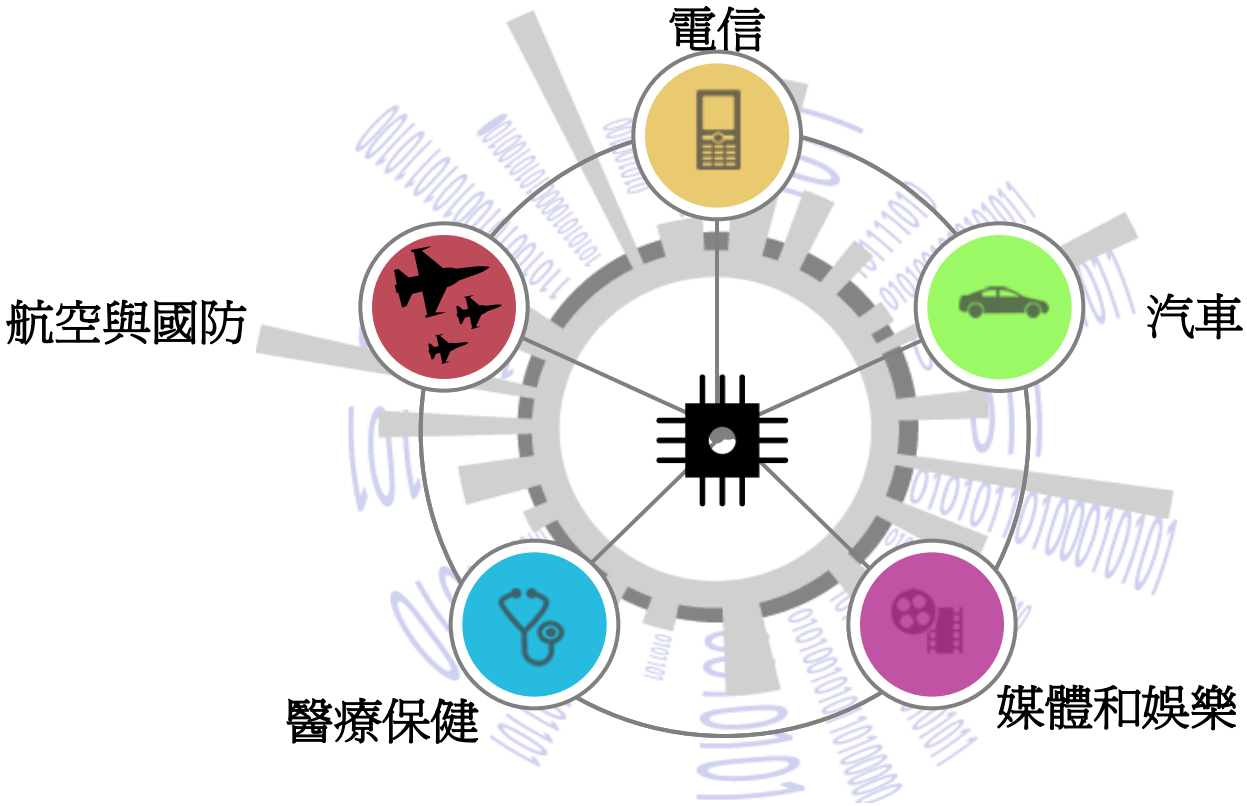
© 2011 IBM Corporation

議程

1. **研發型專案開發所面臨的挑戰**
2. 解決方案IBM CLM-RRC/RTC/RQM
3. RRC/RTC/RQM介紹與 Demo
4. 總結

© 2011 IBM Corporation

電子產品是無處不在...

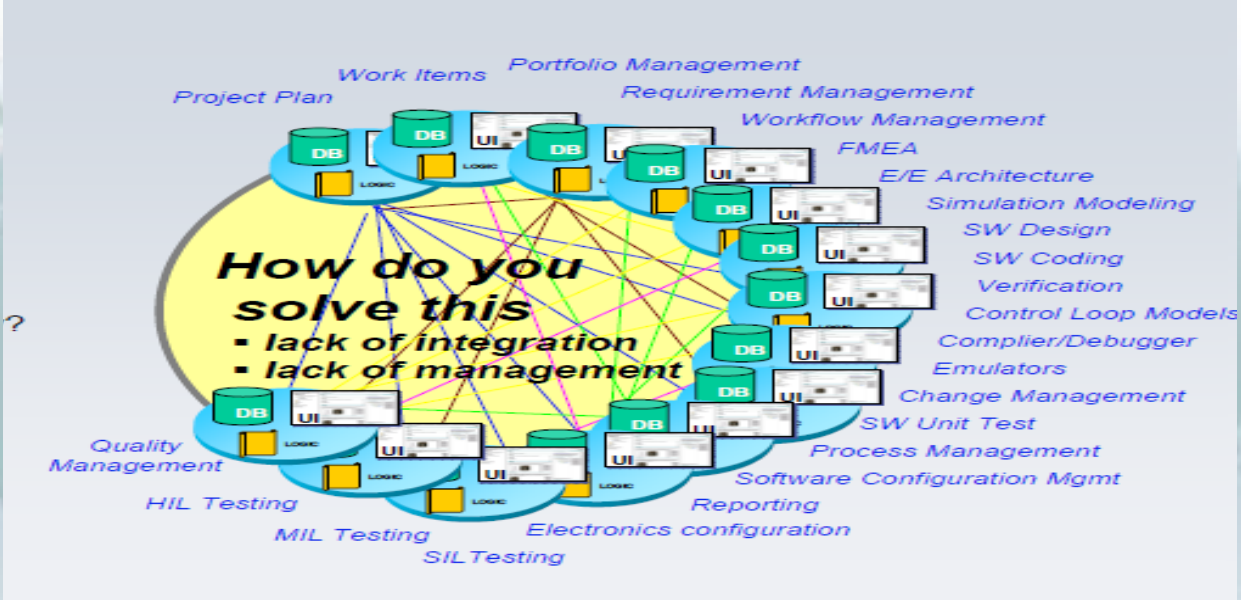


軟體管理是今天產業界不可避免的趨勢

© 2011 IBM Corporation

您對研發專案開發的速度及品質滿意嗎?

- *成員間的溝通以及工作的透明是協同開發最困難之處*



團隊成員,作業流程和專案管理的隔閡 阻礙了協同開發

地理上的限制

- 不良的溝通
- 語言文化時區的差異
- 新成員上手時間長
- 切割過細的組織

組織上的限制

- 缺乏有意義的**owner**意見參與
- 作業流程的**Gap**造成錯誤與重工
- 高階主管無法見到整體狀況
- 不佳的專案治理

基礎設施的限制

- 不相容的工具及資料儲存方式
- 無法正可靠取得一般的專案產出
- 淺薄且脆弱的工具整合

*Forrester, Gartner

© 2011 IBM Corporation

當前您正在面臨的問題—您能快速的回答如下問題嗎？

這次反覆(iteration)實作了哪些需求？

我们準備好了發佈新版本嗎？

所有的需求都被測試過嗎？

我們能做哪些折衷，保證這次版本按時發佈？

高優先順序的需求，它們的品質如何？

在這個版本中，解決了哪些缺陷？

哪些缺陷是因为測試哪些需求而發現的？

業務人員

專案經理

我們能通過稽核的審查嗎?

知道這些需求都有被測試嗎？

這次測試的品質如何？需求與測試覆蓋率如何?

開發人員

建置團隊

測試團隊

我怎樣才能重新產生最新的版本？

什麼發生了變更，需要我特別注意去測試？

上次建置發現的錯誤，被標識為缺陷了嗎？那到底還有哪些相關的測試案例要重測呢?

我開發的工作是針對哪個需求？

大家都用不同的工具，怎麼貫徹標準化？

某個缺陷，在哪個建置(build)中，什麼環境下，還有未覆蓋的測試？

建置過程中的瓶頸在哪裡？

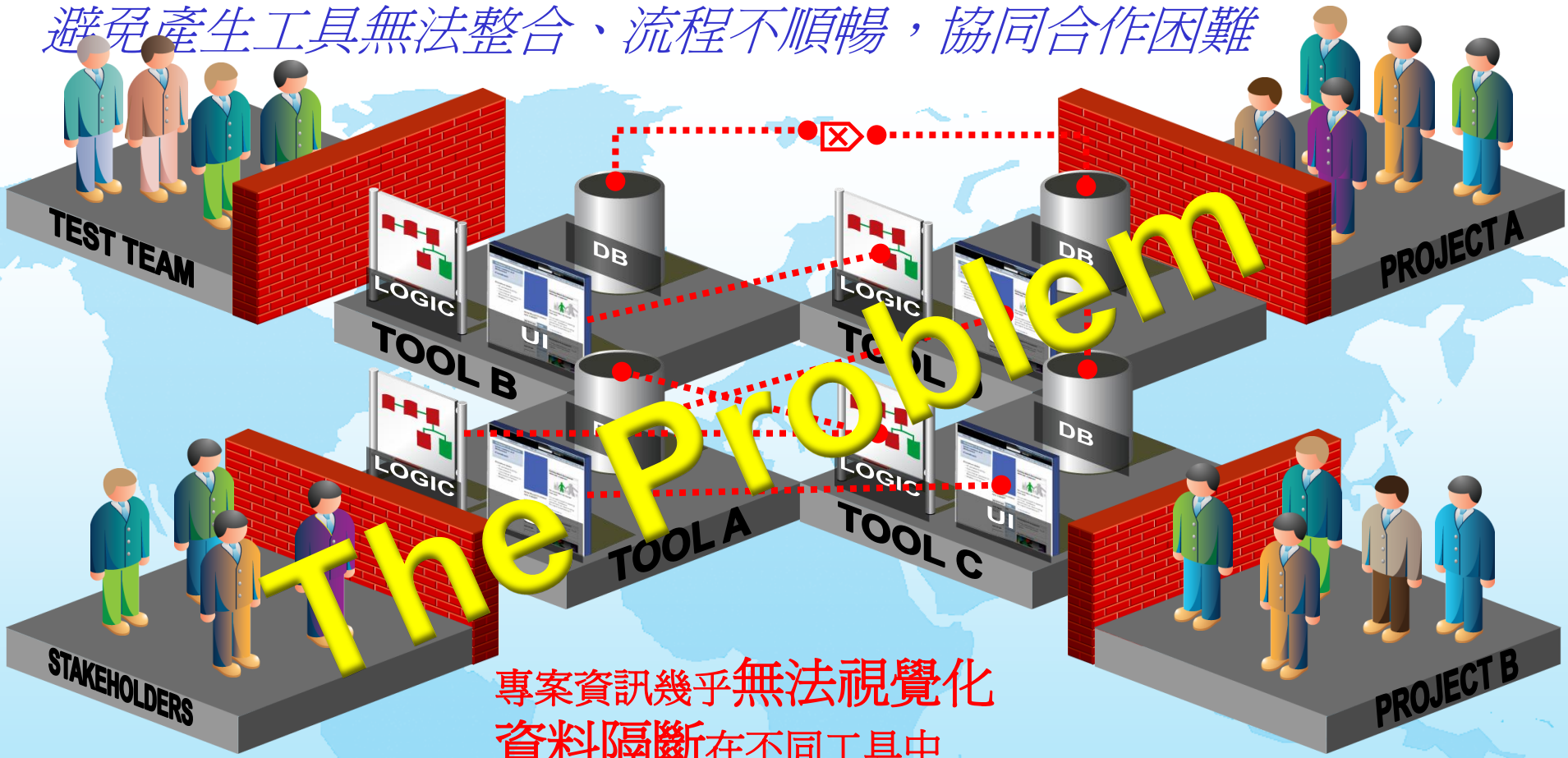
我怎樣才能加速建置？建置的時間是越來越長還是短？

每個晚上的建置都發生了哪些變化？

© 2011 IBM Corporation

挑戰: 人員/流程與資訊的孤島

避免產生工具無法整合、流程不順暢，協同合作困難



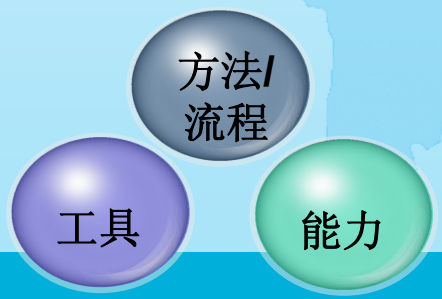
專案資訊幾乎**無法視覺化**

資料隔斷在不同工具中

很**難形成**貫穿開發**週期**的工作流程

維護和管理的**成本高**

一直存在的不同地域和不同組織**架構的壁壘**



7
© 2011 IBM Corporation

開發團隊的心聲:

如果開發工具能夠**即時**提供這些我想要的資訊.....
並且讓一些繁瑣工作**自動化**

專案狀態和成本分析隨時可以提供給所有企業贊助商

自上而下和低層次的意見可以鏈接變更、版控、缺陷和成本追踪

工作追蹤分析報告

輕鬆擴展和自動縮短反覆週期來滿足業務需求熱點

敏捷式開發方法

透過專案開發平台 可以提供

1. 作業的標準化, 並且透過後續逐步的流程調整, 進而追求高效率的開發流程.
2. 透過即時資訊分享及資訊透明化, 提高專案管理及應變能力.
3. 提高跨單位間的互相配合能力(協同開發能力)

團隊成員在世界各地多個專案在一天內而不是幾個月

快速佈建測試環境

容易提早發現軟體授權問題

各式檢測報告

無縫存取到高風險和安全漏洞

風險及弱點分析報告

© 2011 IBM Corporation

議程

1. 研發型專案開發所面臨的挑戰
2. **解決方案IBM CLM-RRC/RTC/RQM**
3. RRC/RTC/RQM介紹與 Demo
4. 總結

© 2011 IBM Corporation

建構一個平台 - 軟體交付協同合作的創新模式

一個旨在透過變革團隊協作方式，提高團隊績效、提高軟體投資回報的創新專案

- 強壯,高度可擴展可擴容
- 全球分佈的模式,適應動態變化
- 以社群爲基礎,通過 jazz.net 開發架構
- 符合OSLC (**O**pen **S**ervices for **L**ifecycle **C**ollaboration) 標準

Collaborate in Context

- **團隊工作透明**：實時知道 “誰、作什麼、何時、爲什麼”
- **加強協作**，打造高效團隊
- **自動傳遞訊息**,使團隊無縫交接任務

Right-size Governance

- **自動化工作**流提升效率
- **自動數據**收集減少管理成本
- **即時報告**提示項目風險

Day One Productivity

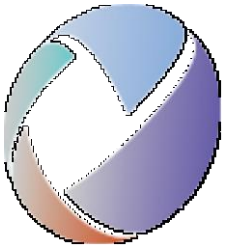
- **動態的**專案和團隊管理，快速啓動
- 即時**反覆**計畫
- **統一整合**團隊的工具

跨越軟體交付全生命週期的人、流程、專案和工具的即時整合

© 2011 IBM Corporation

Open Lifecycle Service Integrations

Open interfaces. Open possibilities.



Open Services for Lifecycle Collaboration

(OSLC)

An industry initiative

for simplifying tool integration across the software lifecycle .

Barriers to sharing resources across the software lifecycle

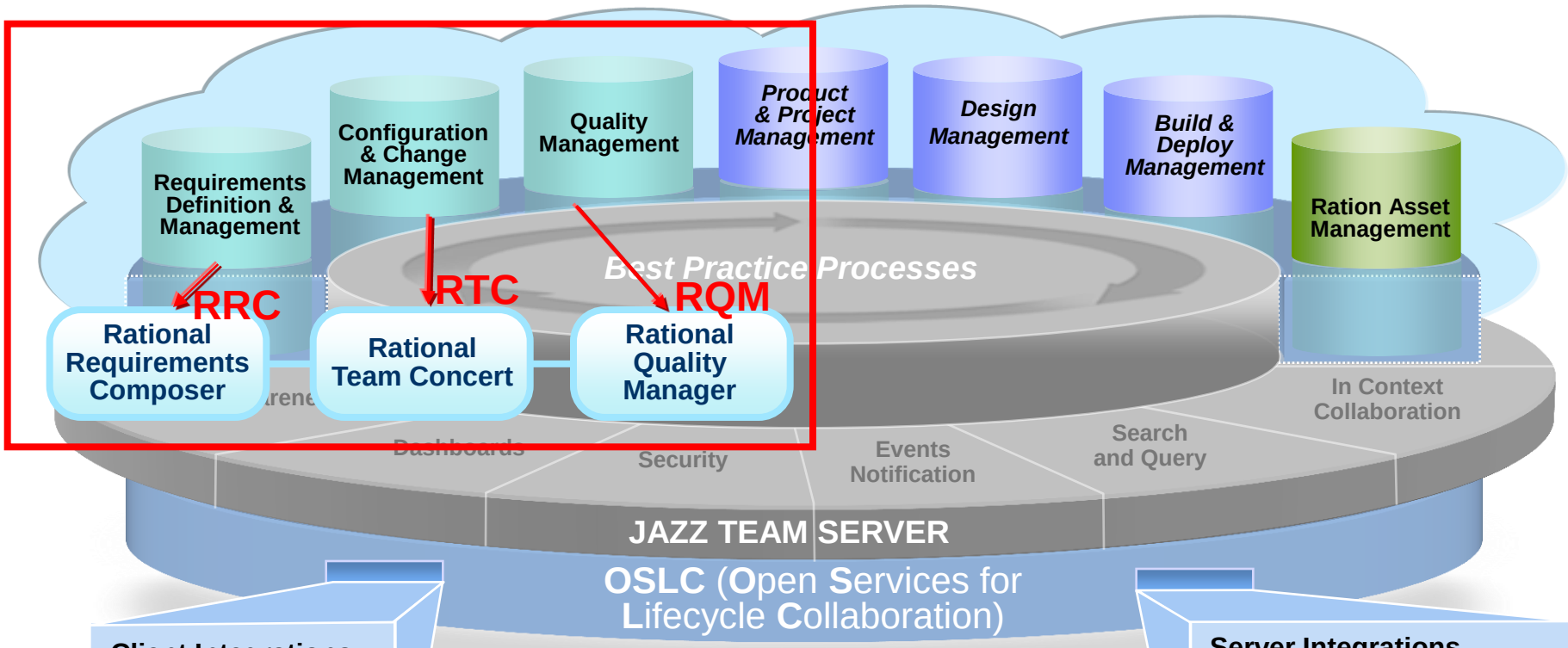
- Multiple vendors, open source projects, and in-house tools
- Private vocabularies, formats and stores
- Entanglement of tools and data

- **The Open Services initiative is**
- ***Building*** a community of vendors, open source projects, integrators and IT teams, at **open-services.net**
- ***Creating*** public specifications of resources and services, like change requests, test cases, defects, requirements and user stories
- ***Delivering*** loosely coupled resource formats and services with “just enough” standardization

SIEMENS dbMAESTRO iTKOLISA ascendant TECHNOLOGY GM BSD GROUP Better Software Development IBM Tasktop ORACLE

© 2011 IBM Corporation

以Jazz技術爲基礎的協同開發平台



Client Integrations

- Eclipse
- Web 2.0
- Visual Studio
- *Others to come…*

IBM Rational Software Delivery Services for Cloud

New capabilities will be added over time

Rational. software

Rational.

Requirements Composer

Team Concert

Quality Manager

Design Manager

jazz

Server Integrations

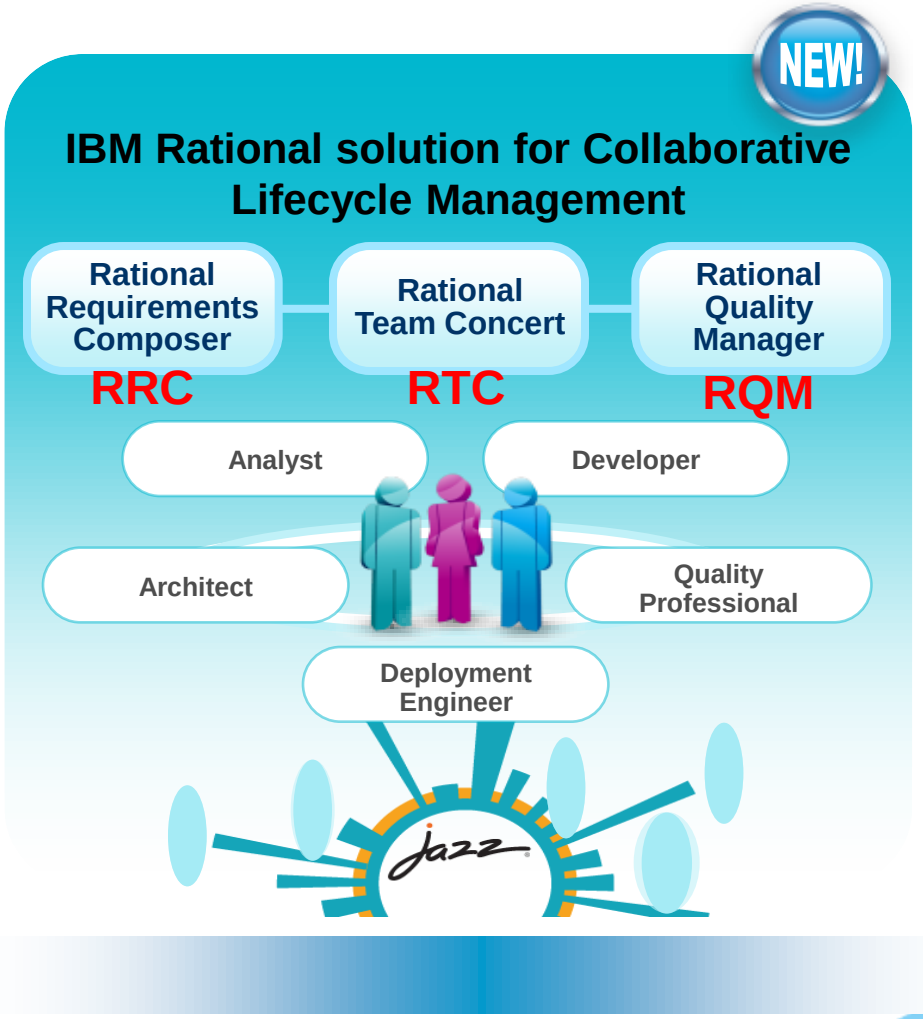
- Rational ClearCase 7.1.x
- Rational ClearQuest 7.1.x
- Rational Build Forge 7.1.x
- Rational Asset Manager 7.2.x
- Subversion

© 2011 IBM Corporation

IBM Rational solution for Collaborative Lifecycle Management (CLM)

運用整合*ALM解決方案，提高生產率4-6%的速度遞增*

- 優化您的團隊
  - Real-time planning
  - Lifecycle traceability
  - In-context collaboration
  - Development Intelligence
  - Continuous Improvement
- 獲得快速啓動和運行
- 支援所需要延伸發展
- 支持異質性跨平台開發和技術



Learn more at: https://jazz.net/projects/clm/

© 2011 IBM Corporation

議程

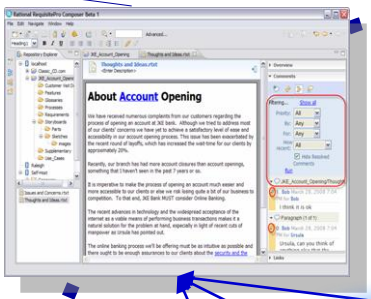
1. 研發型專案開發所面臨的挑戰
2. 解決方案IBM CLM-RRC/RTC/RQM
3. **RRC/RTC/RQM介紹與 Demo**
4. 總結

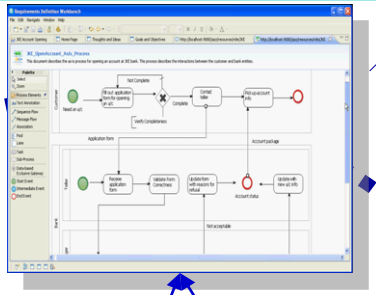
© 2011 IBM Corporation

Rational Requirements Composer (RRC) :需求管理平台

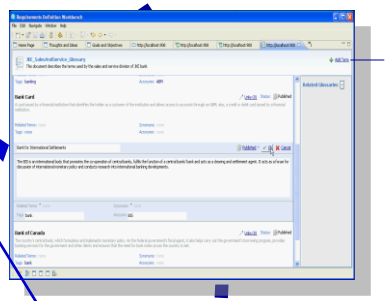
Capture, connect, organize and collaborate with the *Entire Team*

文字說明
Use **Rich-text Documents** to capture structured and unstructured information (links, images, emails)



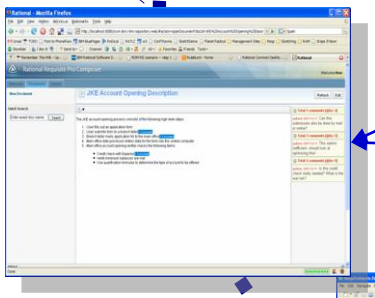


業務流程圖
Capture the Current and Propose a Future State with **Business Process Diagrams**



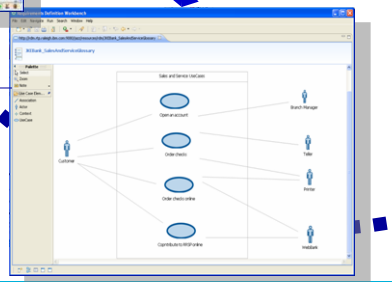
共享資料詞彙
Remove Ambiguity on Business and Technology Terminology with **Shared Glossaries**

討論知識分享區
Collaborate in real-time using **Wiki-like discussions**, to quickly achieve sign-off.



使用者介面圖示
Visualize the User Experience with **User Interface Sketches and Storyboards**

使用案例
Build **Use Case Models** and Elaborate on the Processes, Actors and Activities

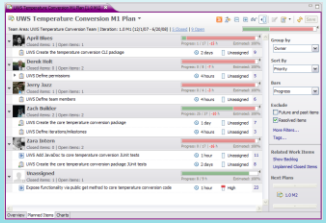


© 2011 IBM Corporation

Rational Team Concert (RTC) :協同合作平台

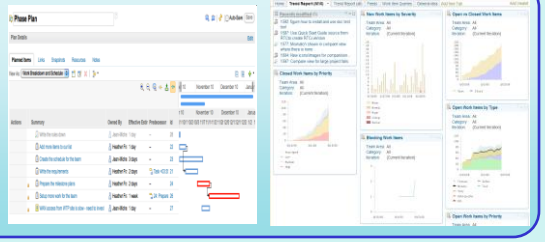
專案計劃

- 整合專案疊代計劃及執行管理
- 連結工時估算及專案哩程碑
- 內建敏捷開發流程模版



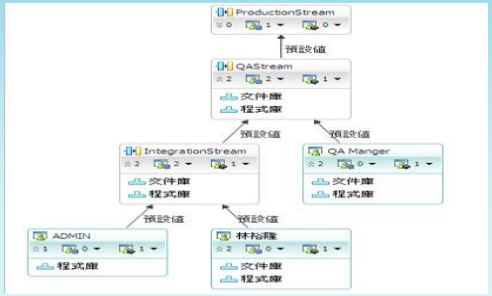
專案監控

- 可客製化的儀表板
- 即時的工作追遡資訊及報告
- 專案里程碑及工作狀態追蹤



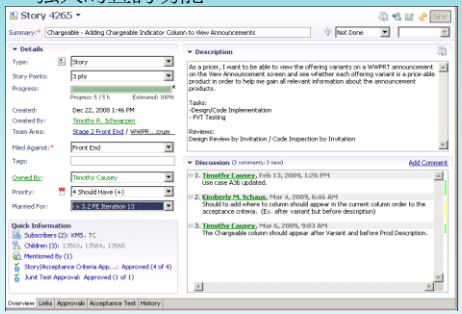
版本管控

- 整合的stream, Component, baselines 功能，提供完整的版本(version) 追遡資訊
- 支援Server-based sandboxes



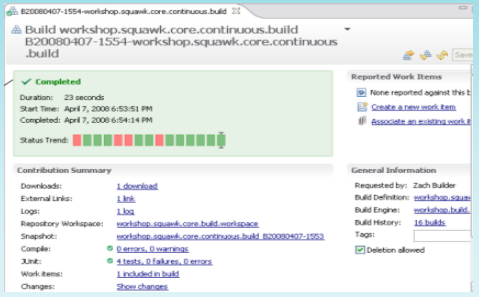
工作項目管理

- 內建 缺陷單、新需求功能單, 工作單及客製表單，及連結，簽核 ，稽核記錄
- 強大的查詢功能



建置管理

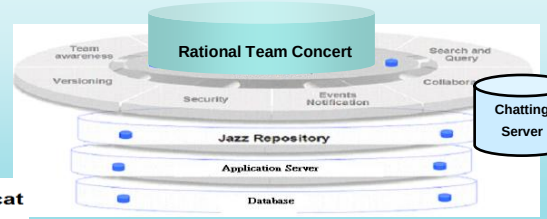
- 過版記錄可與工作表單、變更記錄追遡
- 支援本端及遠端編譯



Lotus Sametime | Google talk BETA | Jabber.org

Jazz 團隊伺服器

- 單一基礎平台支援全生命週期開發
- 世界級的專案開發組織架構，成員快速上手
- 依角色身分的權責管理，依專案規模、性質選擇專案流程模板



- Team advisor 功能，可定義專案流程規則，持續改善專案交付品質
- 可定義專案流程並強制流程落實
- 以工作產出爲基礎的協同合作，即時顯示成員的狀況及進行中的工作

Apache Derby | Apache Tomcat | IBM DB2 | WebSphere

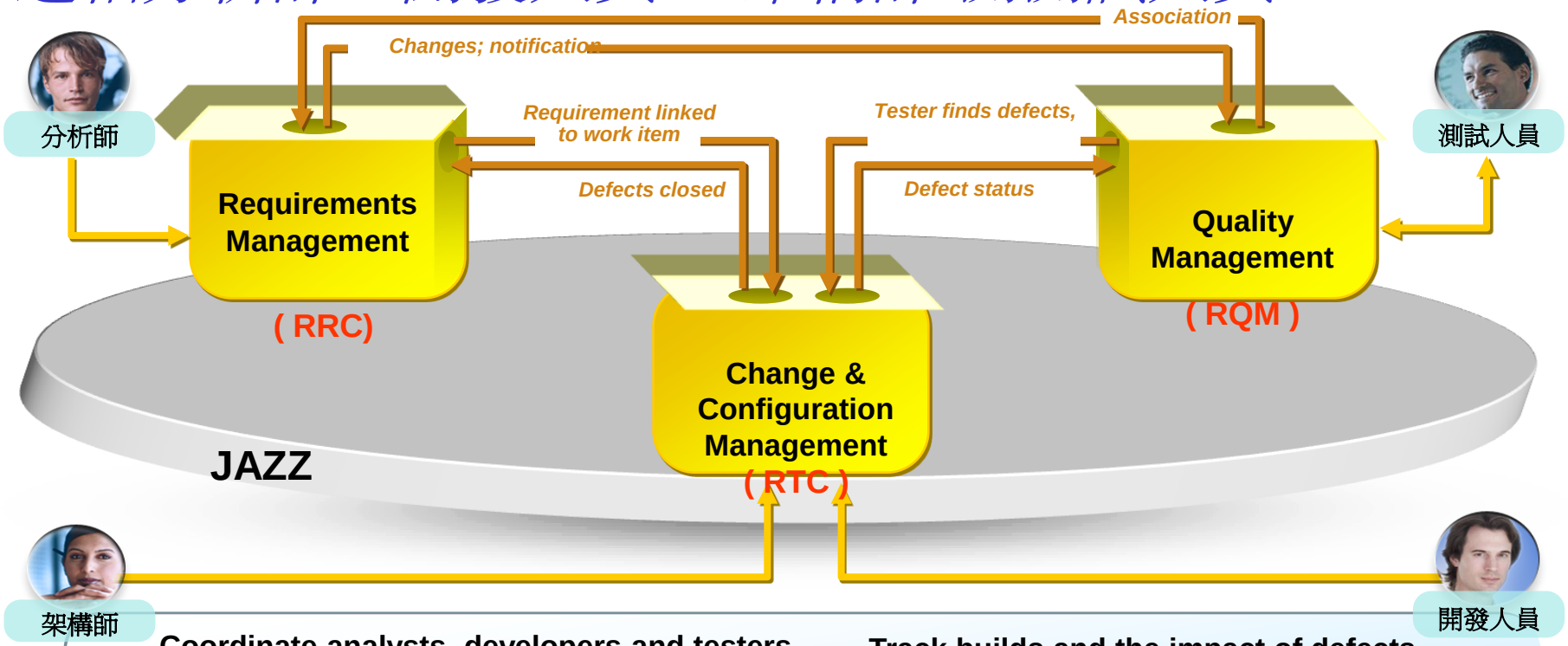
© 2011 IBM Corporation

Rational Quality Manager (RQM) :測試管理平台 支援完整的測試週期所需要之型態與平台

© 2011 IBM Corporation
17

協同合作的平台: RTC/RRC/RQM

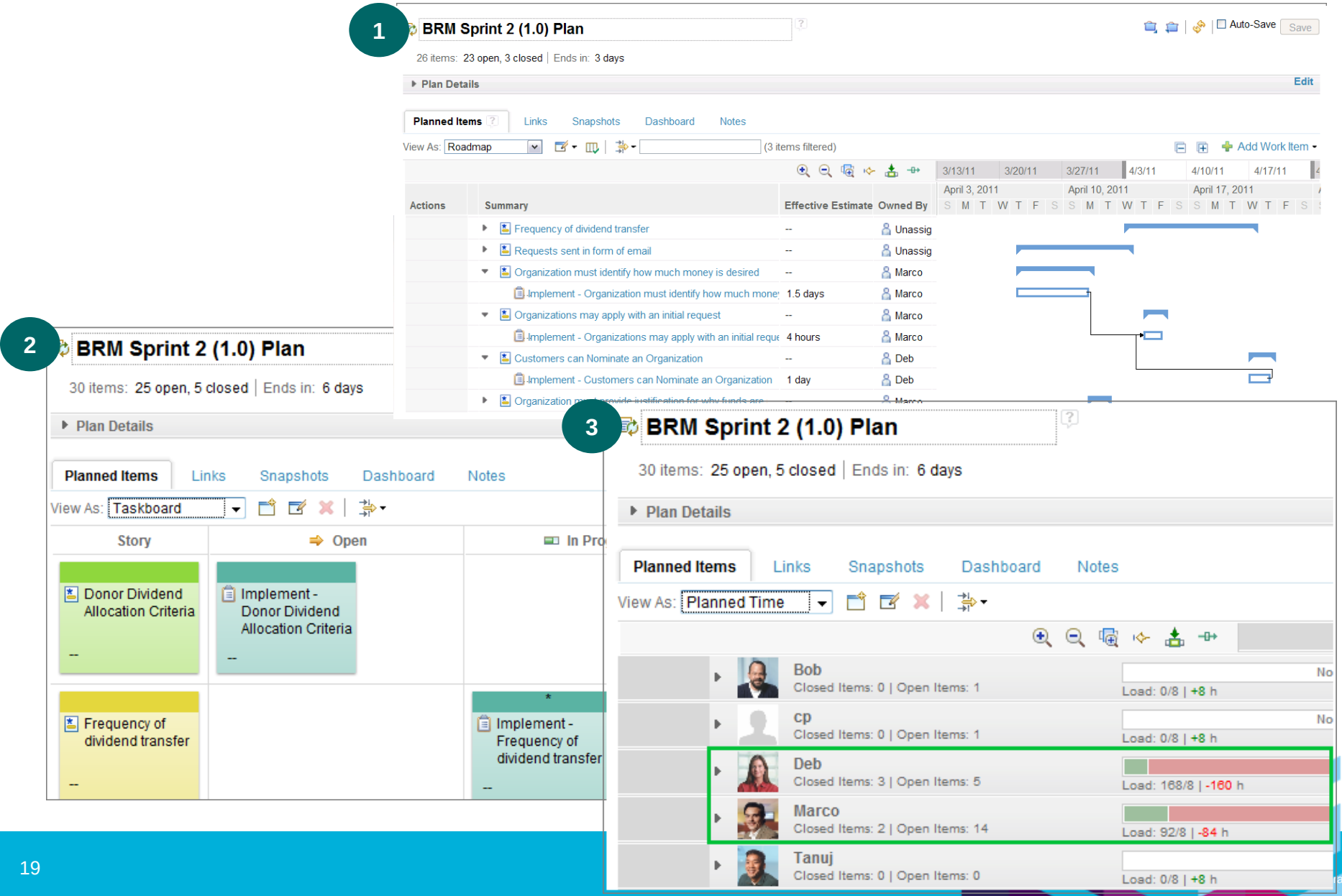
連結分析師、開發人員、 架構師 測測試人員



- **Coordinate analysts, developers and testers**
  - Collaborate in context and track status
- **Align teams on project plans**
  - Which requirements are in the development plan?
- **Track builds and the impact of defects**
  - What build is ready for test?
  - What defects are blocking test from proceeding?
- **Track status with CLM dashboard mashups**
  - Transparency across teams and artifacts

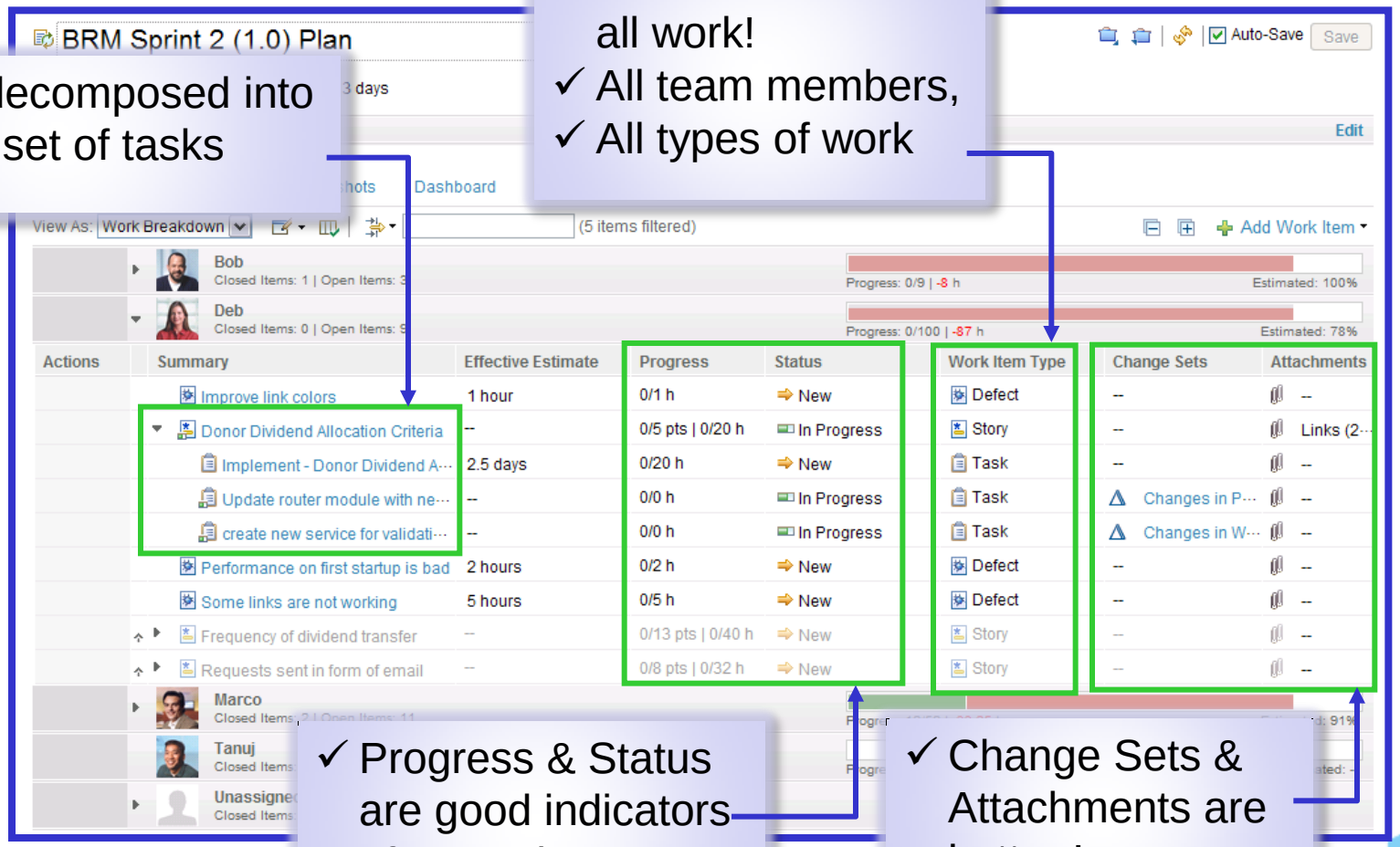
© 2011 IBM Corporation

一個計劃 – 可提供多個視圖以便於詳細分析



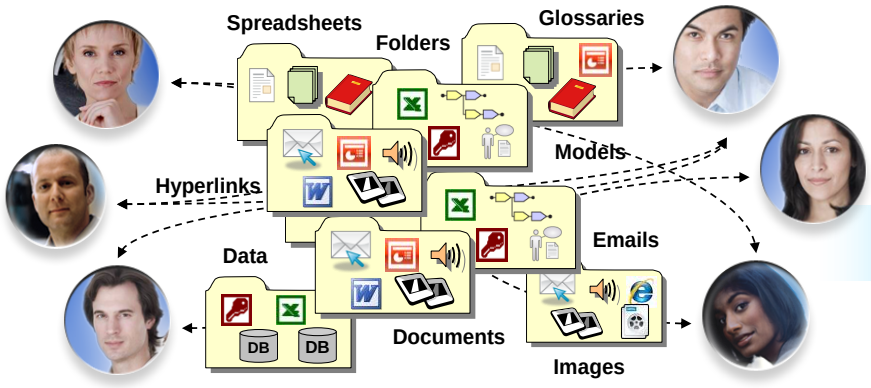
方便的專案管理

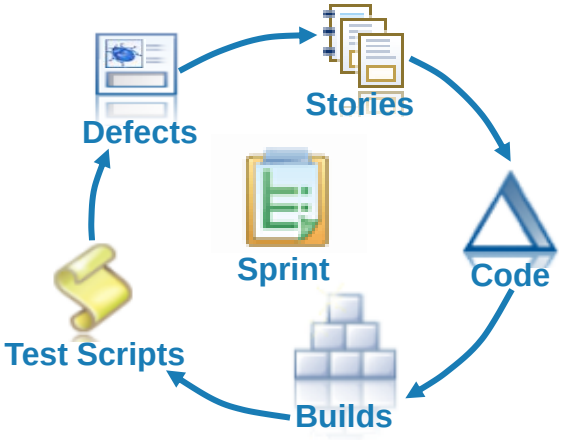
- 每個人都參與規劃
- 可交付成果和工作產品展示



© 2011 IBM Corporation

生命週期的可追溯性 (Lifecycle Traceability)





Don't

建立與斷開連接的資訊孤島和不兼容的工具和術語

電子郵件副本交付到遠程團隊成員之間的聯繫，打破

通過複製資料整合

Do

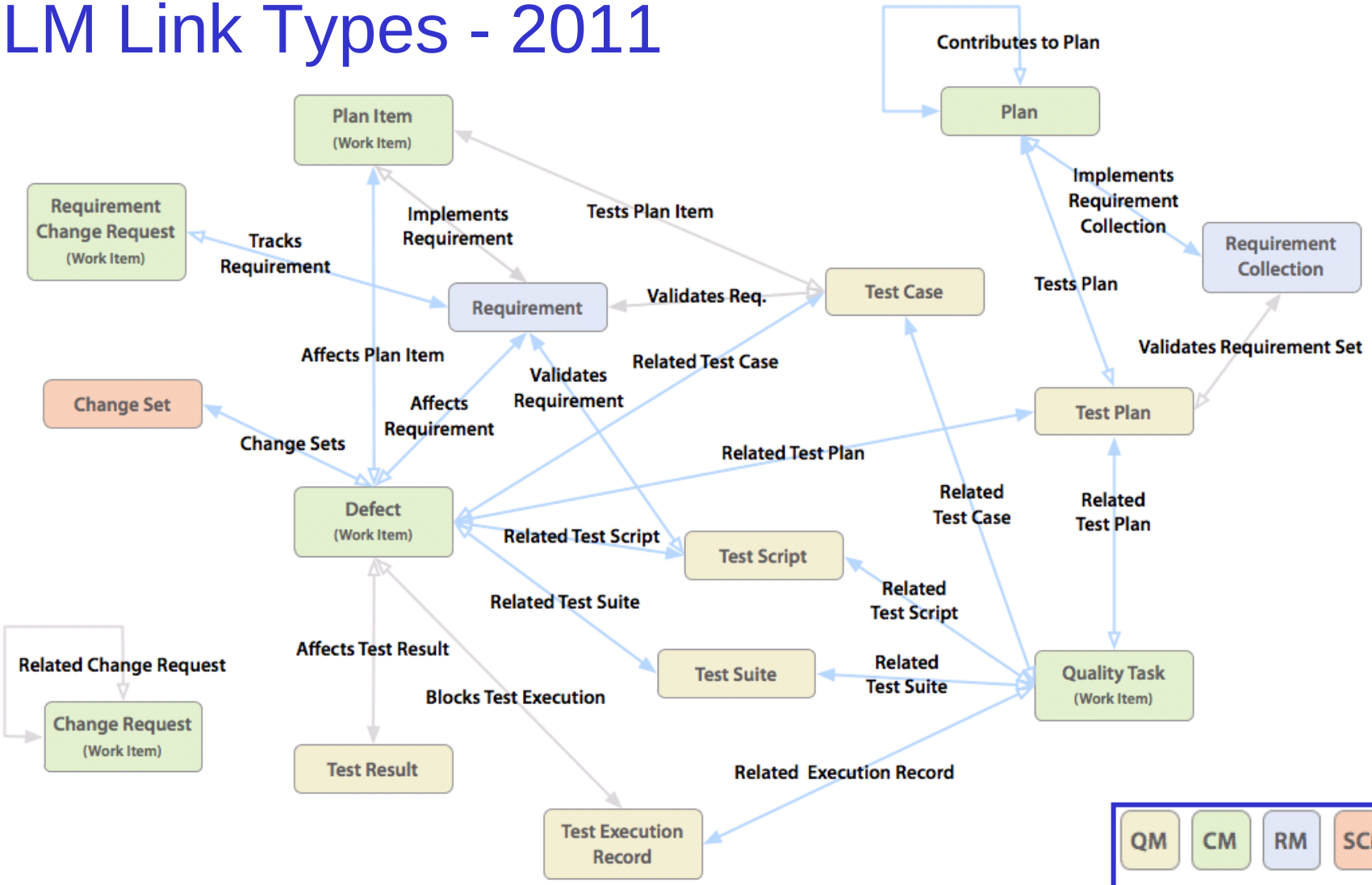
鏈接交付和連接點，所以每交付具有正確的上游和下游的關係

分享鏈接到交付，包括來自其他團隊成員交付上下文相關評論和意見

關鍵鏈接專案交付，使整個團隊能夠獲得最新版本

© 2011 IBM Corporation

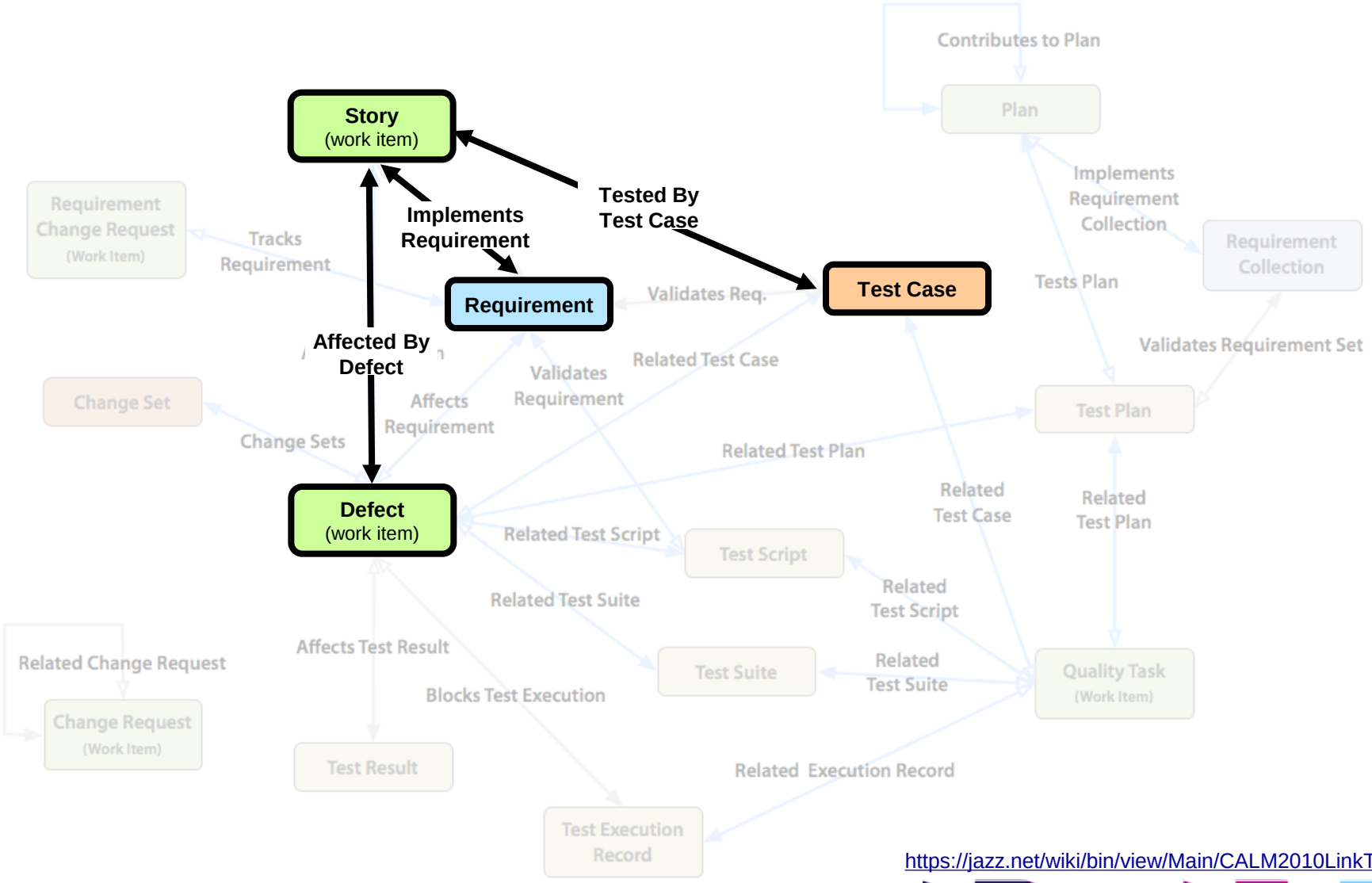
CLM Link Types - 2011



Learn more at: https://jazz.net/wiki/bin/view/Main/CALM2010LinkTypes

© 2011 IBM Corporation

SCRUM process Template

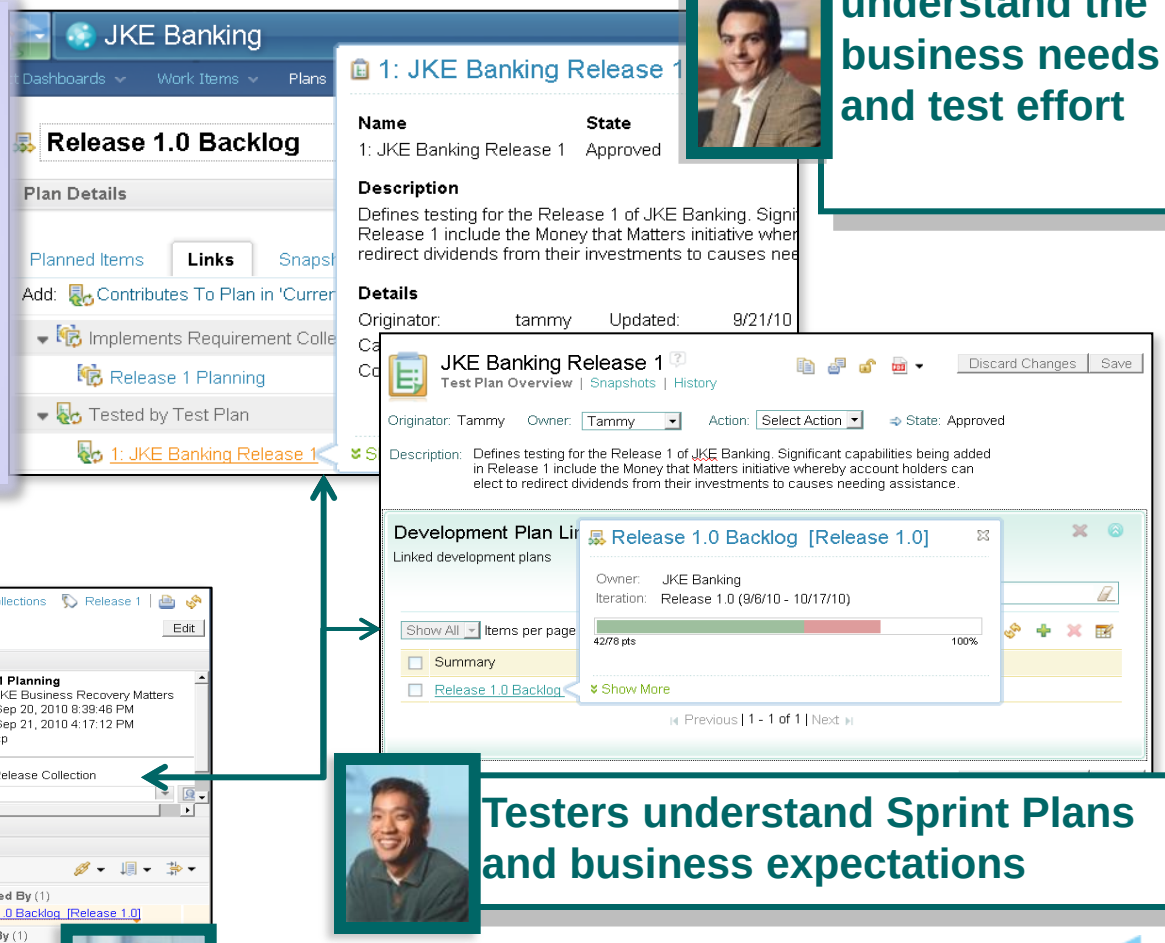


https://jazz.net/wiki/bin/view/Main/CALM2010LinkTypes

© 2011 IBM Corporation

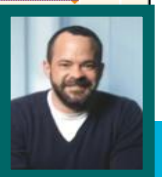
依據計劃以改善專案的交付時間

- ✓ 沒有白費的工作 – 開發可以在同意的的時間內完成
- ✓ 品質保證 - 測試團隊確切地知道需求與功能，有沒有經過測試
- ✓ 整個團隊相信改善團隊的信任，效率和重點



Developers understand the business needs and test effort

Testers understand Sprint Plans and business expectations

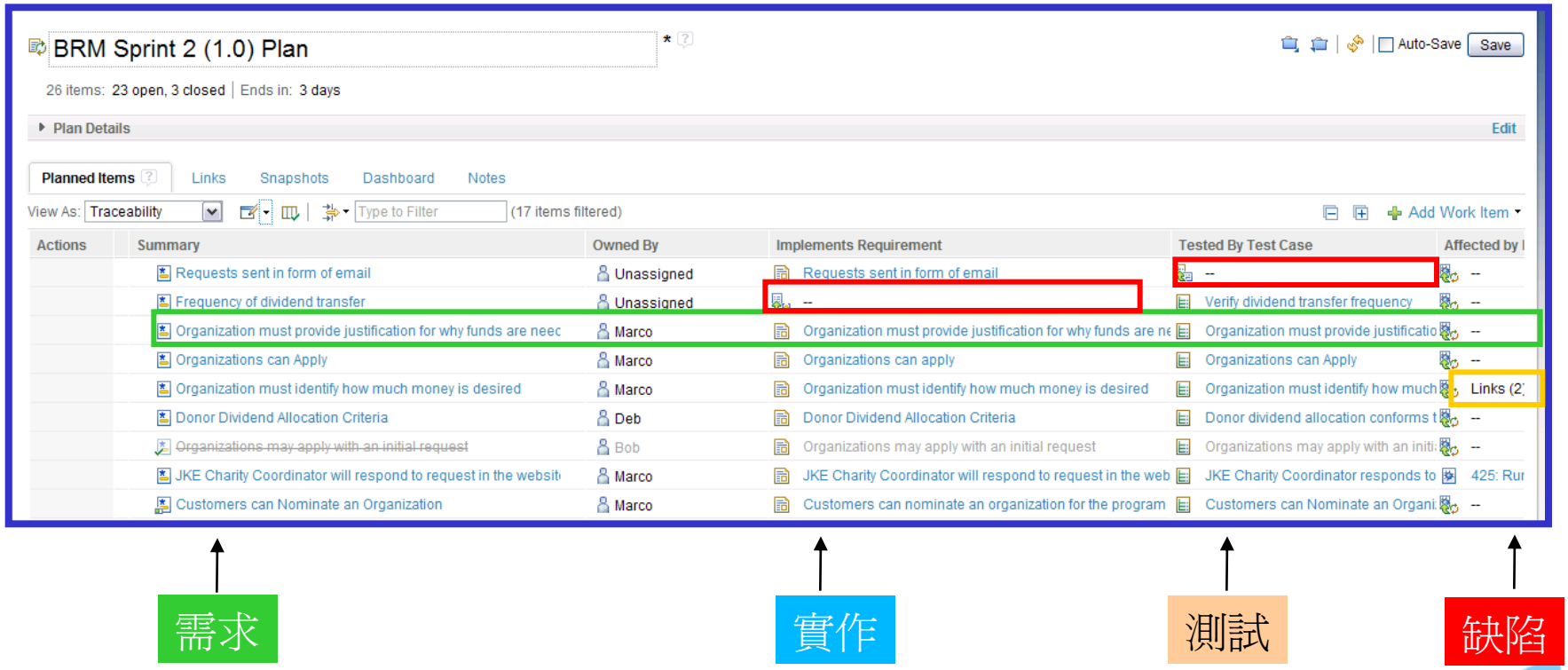


Requirements owners clarify the business needs in a collection

© 2011 IBM Corporation

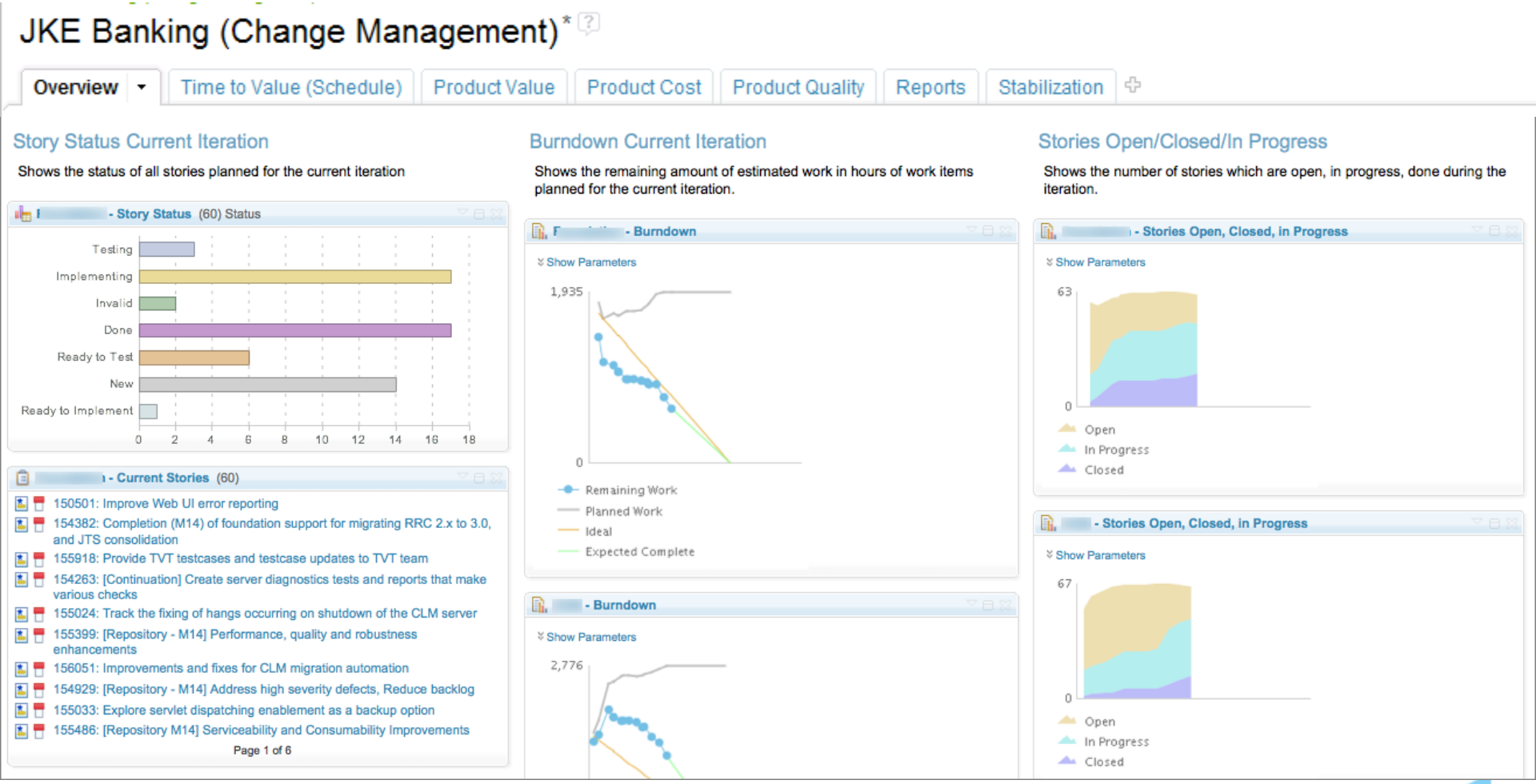
Team Leader 有可視性覆蓋和完整性

- 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



© 2011 IBM Corporation

使用儀表板提供統一的View查看專案的健康狀態



© 2011 IBM Corporation

各種預設之統計圖 (58種)

選取種類

- 一般
- 來源控制
- 全部
- 報告
- 專案/團隊
- 工作項目
- 建置
- 程序編寫
- 計劃
- 說明
- 資訊來源

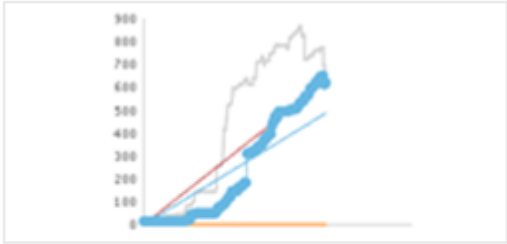
新增外部小組件

- 新增 OpenSocial 小工具
- 新增 IBM iWidget

工作項目統計資料

新增小組件

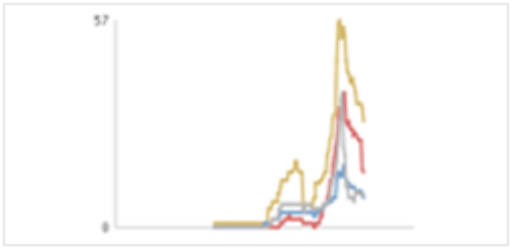
「工作項目統計資料」小組件是以報告方式來呈現工作項目查詢，依可配置的準則分類。不同於「趨勢」報...



完成進度

新增小組件

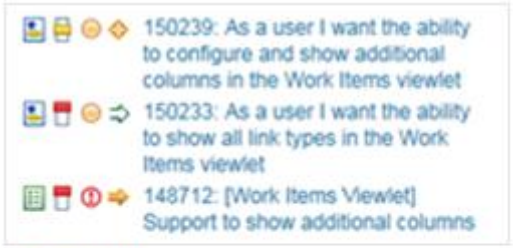
「完成進度」Viewlet 顯示已完成的工作超過每日間隔的時數。



已開啓的工作項目（依優先順序）

新增小組件

「已開啓工作項目（依優先順序）」Viewlet ...



工作項目

新增小組件

顯示執行單一工作項目查詢的結果。查詢選自一份適合現行範圍的清單。

© 2011 IBM Corporation

www.ibm.com/software/rational

© 2011 IBM Corporation

議程

1. 研發型專案開發所面臨的挑戰
2. 解決方案IBM CLM-RRC/RTC/RQM
3. RRC/RTC/RQM介紹與 Demo
4. **總結**

© 2011 IBM Corporation

有效率的生命週期管理標準

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

Learn more at: https://jazz.net/library/article/637

© 2011 IBM Corporation

調查報告: Gartner MarketScope for Application Life Cycle Management (11/Nov/2010)

*IBM earns "**Strong Positive**" – the highest possible rating*

"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

Approved for external use by Gartner

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	

© 2010 Gartner, Inc. and/or its affiliates. All rights reserved. Gartner is a registered trademark of Gartner, Inc. or its affiliates. This publication may not be reproduced or distributed in any form without Gartner's prior written permission. The information contained in this publication has been obtained from sources believed to be reliable. Gartner disclaims all warranties as to the accuracy, completeness or adequacy of such information and shall have no liability for errors, omissions or inadequacies in such information. This publication consists of the opinions of Gartner's research organization and should not be construed as statements of fact. The opinions expressed herein are subject to change without notice. Although Gartner research may include a discussion of related legal issues, Gartner does not provide legal advice or services and its research should not be construed or used as such. Gartner is a public company, and its shareholders may include firms and funds that have financial interests in entities covered in Gartner research. Gartner's Board of Directors may include senior managers of these firms or funds. Gartner research is produced independently by its research organization without input or influence from these firms, funds or their managers. For further information on the independence and integrity of Gartner research, see "Guiding Principles on Independence and Objectivity" on its website, http://www.gartner.com/technology/about/ombudsman/omb_guide2.jsp

© 2011 IBM Corporation

www.ibm.com/software/rational

© 2011 IBM Corporation

www.ibm.com/software/rational

© **Copyright IBM Corporation 2011. All rights reserved.** The information contained in these materials is provided for informational purposes only, and is provided AS IS without warranty of any kind, express or implied. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, these materials. Nothing contained in these materials is intended to, nor shall have the effect of, creating any warranties or representations from IBM or its suppliers or licensors, or altering the terms and conditions of the applicable license agreement governing the use of IBM software. References in these materials to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. Product release dates and/or capabilities referenced in these materials may change at any time at IBM's sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way. IBM, the IBM logo, Rational, the Rational logo, Telelogic, the Telelogic logo, and other IBM products and services are trademarks of the International Business Machines Corporation, in the United States, other countries or both. Other company, product, or service names may be trademarks or service marks of others.

© 2011 IBM Corporation