

IBM Rational 软件创新论坛



Let's **build** a
smarter planet.

开发有道
创新“智”造

Innovate**2010**





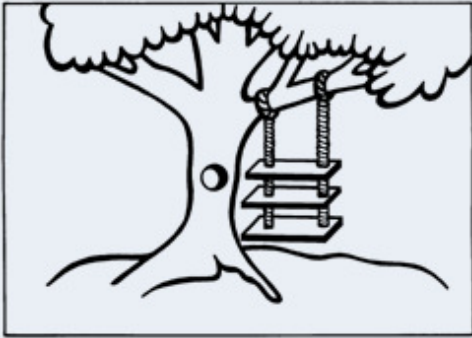
需求变更管理

与IBM Rational协同开放式集成服务平台 OLSC

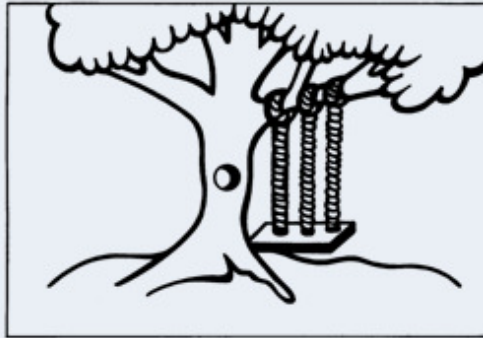
谷炼 liangu@cn.ibm.com
IBM Rational亚太地区系统解决方案及产品线经理

Innovate2010

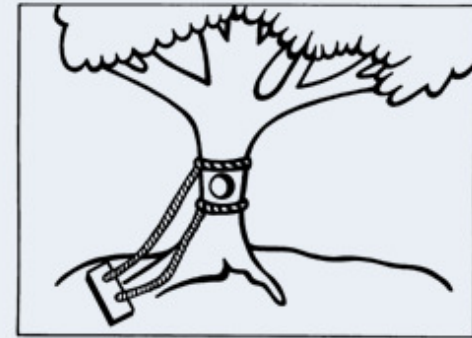
需求的满足与产品的质量



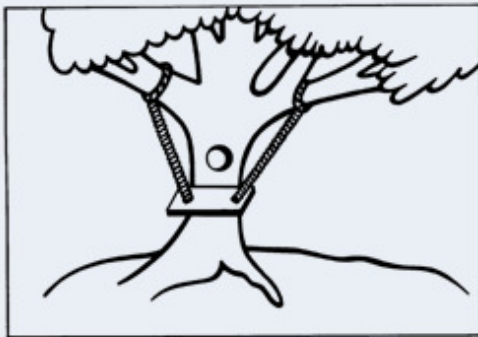
市场请求



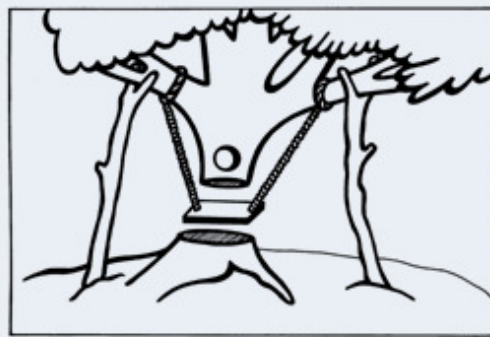
分析家所看到的



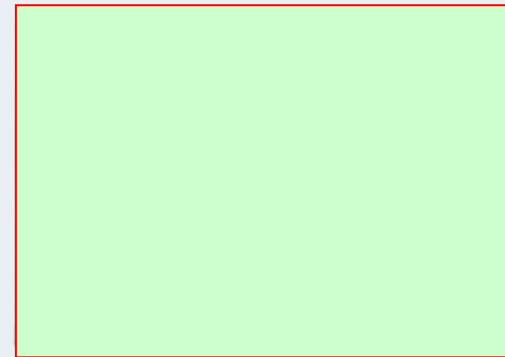
进行系统设计之后



被交付的

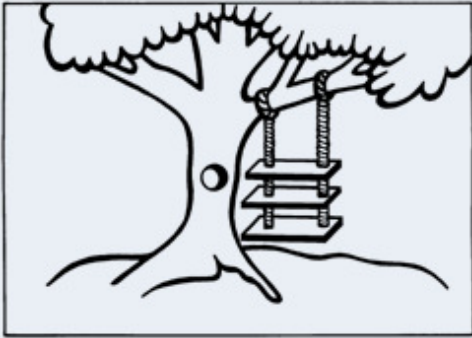


被安装之后

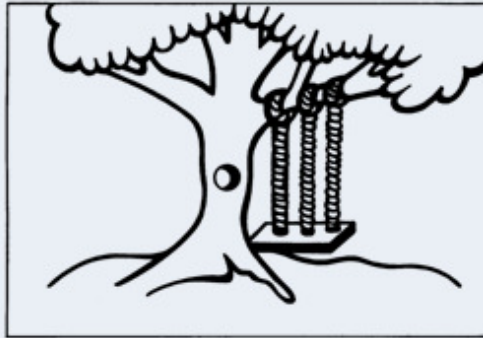


用户真正的需求

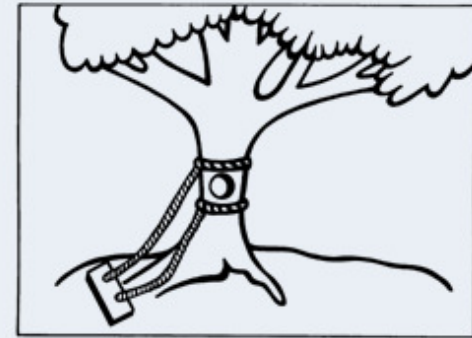
需求的满足与产品的质量



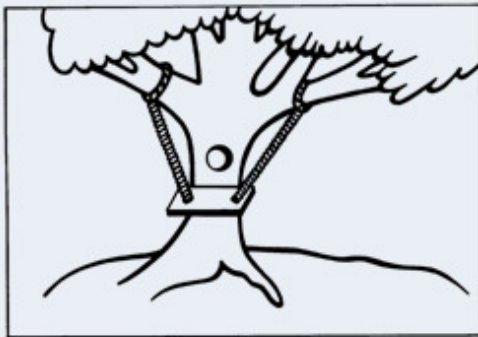
市场请求



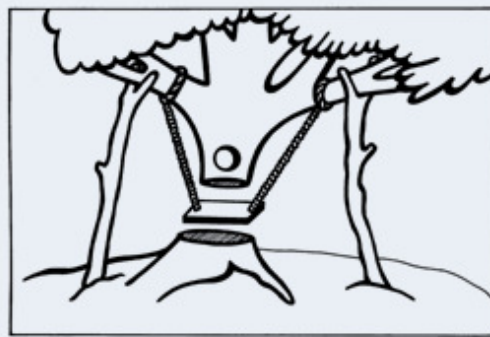
分析家所看到的



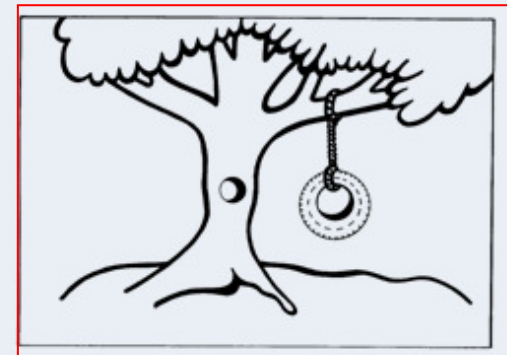
进行系统设计之后



被交付的



被安装之后



用户真正的需求

有效的变更管理是成功的关键因素

“...最终发行版本仅反映最初所分配需求的 52%。”

需求暴涨

—“Chaos Chronicles, III, 2003”
www.standishgroup.

“...据经验分析，对一个为期 1 年的项目而言，已分配需求每月会更改 1% 到 3%...总共更改将超过原先需求的 30%。”

需求回变

—“Chaos Chronicles”

变

“如果在需求收集阶段修复一个所发现的缺陷需花费 1 美元，则在设计阶段修复该缺陷需花费 2 美元，以此类推，如果甚至产品投入使用后才发现该缺陷，修复所需的费用将暴涨至 69 美元。”

缺陷筛选

— Software Engineering Economics

70% 的 IT 项目都因为功能缺陷或完全不具备操作性而不同程度地导致无法交付。

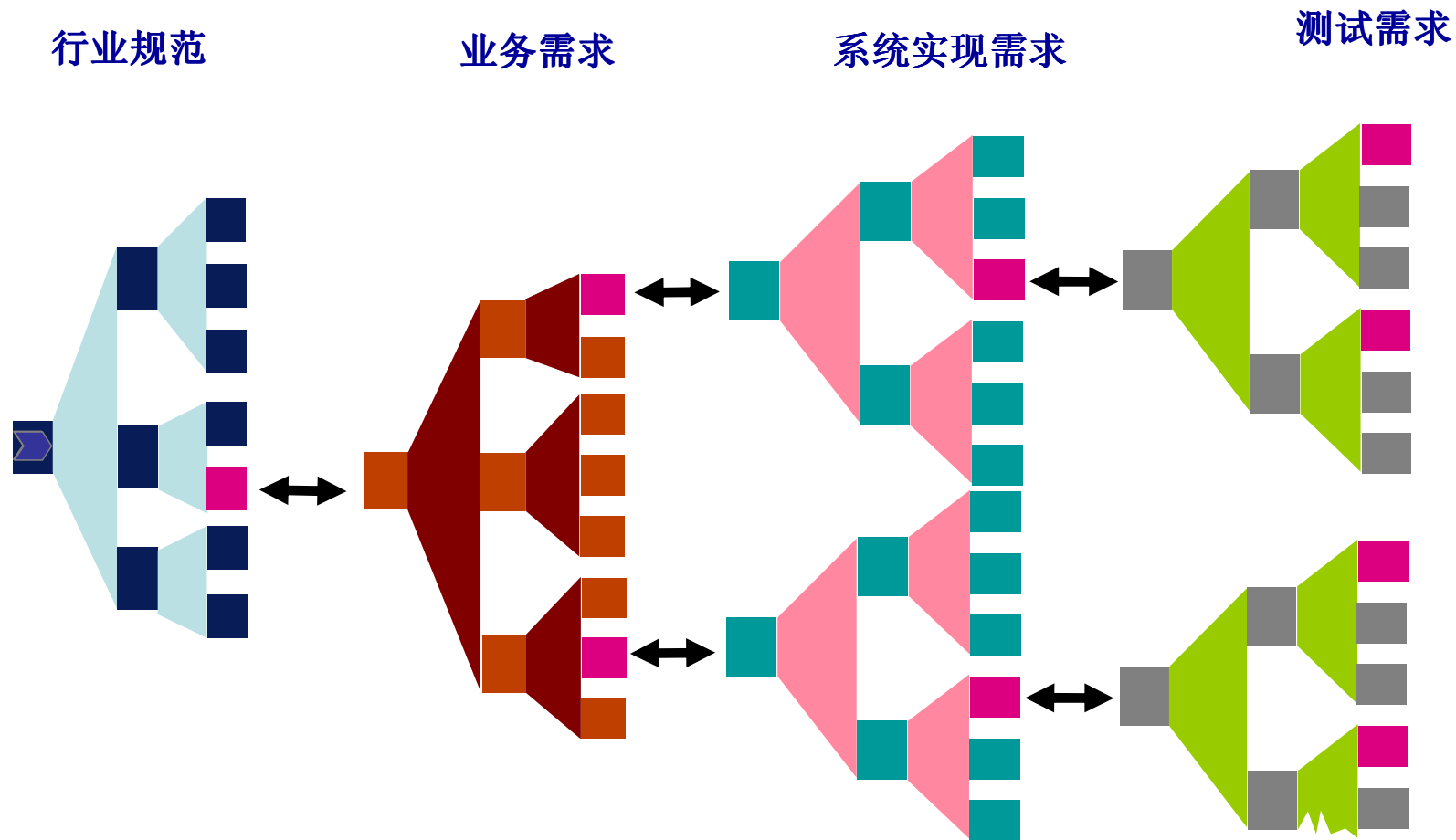
低质量

— The Butler Group, ALM Report, 2005 年 9 月



需求变更的跟踪与影响分析

从用户使用场景到最终产品的完整跟踪



需求变更的跟踪与影响分析

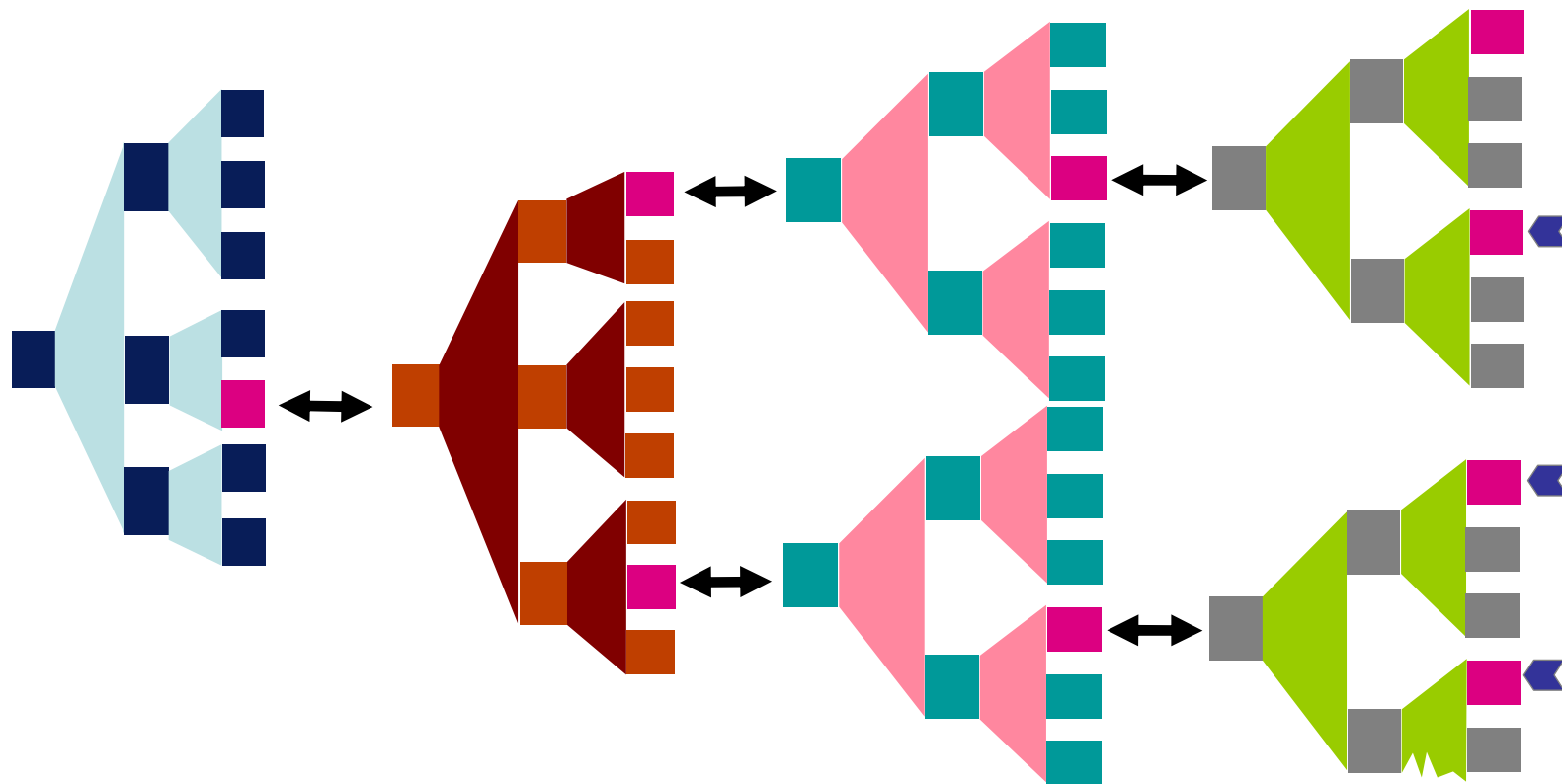
从用户使用场景到最终产品的完整跟踪

行业规范

业务需求

系统实现需求

测试需求



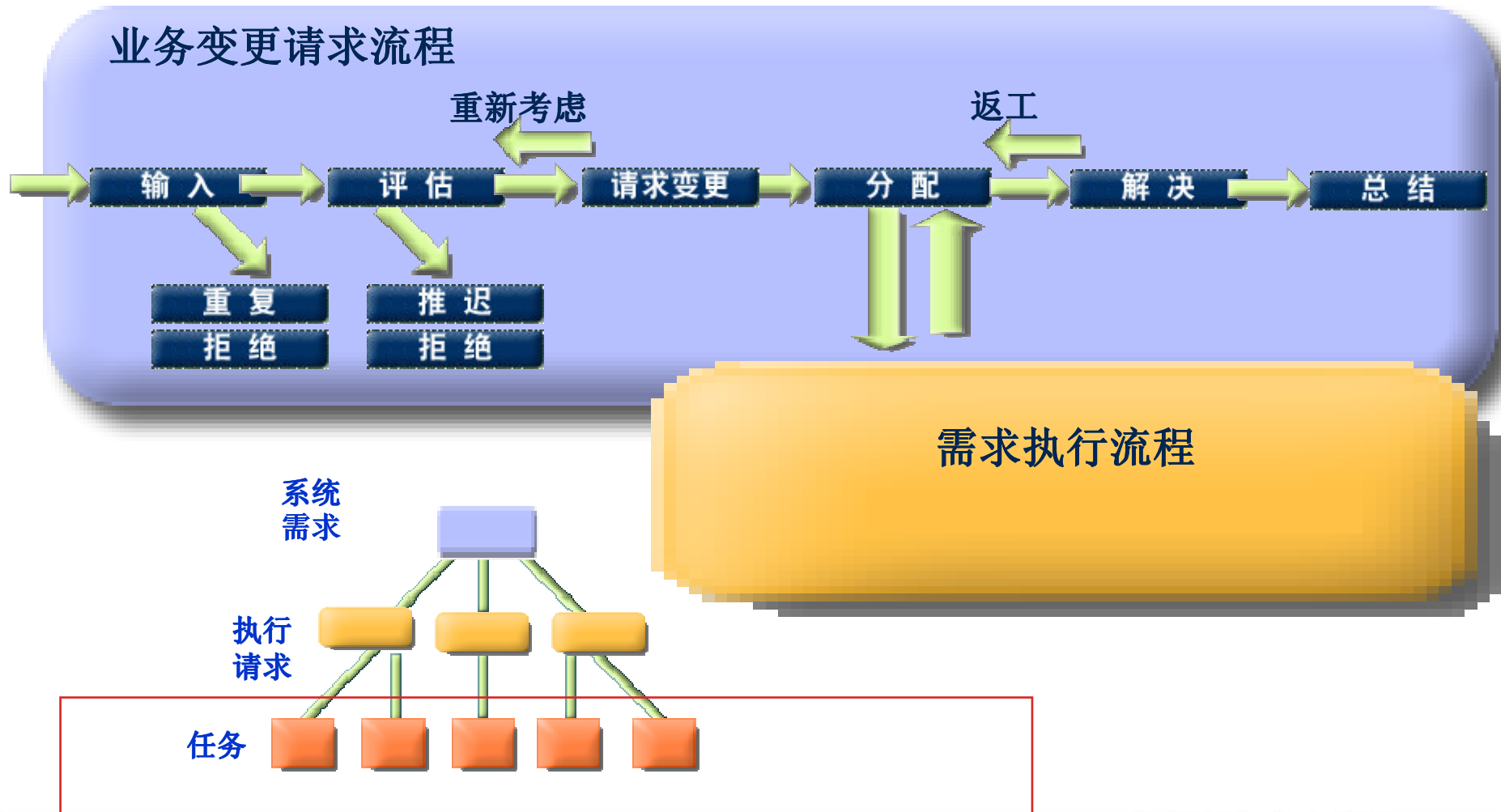
需求驱动开发 - 自顶向下跟踪变更

此方法可以确保在整个产品开发生命周期中由需求代表客户并保持稳定



自上而下法

业务变更管理流程工程和测试的实施



自顶向下的需求实施跟踪

'OCD' current 1.0 in /Bingo (Formal module) - DOORS

File Edit View Insert Link Analysis Table Tools User DocExpress Forum Analyst Change Management TAU Help

View Implementation Status view All levels

Operational Concept Description	Software Requirements Spec	Software Architecture and Design	Coding Status
<p>The new system will provide a customizable user interface to allow users to tailor the information presented by the user interface to their needs.</p> <p>操作概念描述</p>	<p>The user interface shall be customizable by the end user to display some or all of the player information.</p> <p>软件需求</p>	<p>The user interface shall be customizable by the end user through the use of user interface options toggles that determine what information is displayed to the player.</p> <p>软件架构</p>	<p>IR: 27</p> <ul style="list-style-type: none">•Synopsis: User Interface needs to be user customizable•Status: ir_assigned _Task: 71 _Synopsis: See CR 30: /Bingo/SAD/85 _Status: completed _Resolver: sgrossman _Baseline Name: Release 1.0 _Release: bluehair/1.0 <p>IR: 30</p> <ul style="list-style-type: none">•Synopsis: /Bingo/SAD/85•Status: ir_rejected _Task: 71 _Synopsis: See CR 30: /Bingo/SAD/85 _Status: completed _Resolver: sgrossman _Baseline Name: Release 1.0 _Release: bluehair/1.0 _Baseline Name: 20050927 _Release: bluehair/1.0 _Baseline Name: 20070513 _Release: bluehair/1.0 _File: ControlPane.java-2-> released <p>代码状态</p>

是否真的解决了问题？



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需求驱动开发 - 自底向上跟踪变更

此方法可以确保在整个产品开发生命周期中由需求代表客户并保持稳定



提高分析人员的可见性

- 有效地管理需求变更
- 评估变更的影响
- 针对变更进行协作和沟通

降低需求暴涨和剧变所带来的风险

The screenshot shows a web browser window titled "Activity Report - Microsoft Internet Explorer". The address bar shows a local file path: "C:\Documents and Settings\bstele\Local Settings\Temp\DP81_trace_rpt.xml". The page content includes a requirement titled "Requirement 1684:" with a description: "Graphical relationship browser Need a graphical relationship browser. This would provide major benefits: 1) Allow the history of an object and its related tasks and problems to be easily seen and navigated graphically. 2) Allow relationships such as between code and documentation to be viewed and assessed as part of impact analysis." Below this is a sub-section for "Change Request 10: /CMPD Enhancements/CM Synergy Enhancements/1684" with details: Type: Enhancement, Status: assigned, Release: 1.0, Resolver: bstele, Severity: Medium. A description follows: "Graphical relationship browser Need object and its related tasks and problem and documentation to be viewed and". Underneath is a task list: "Task 1: CR 10: Add relationship browser" with Status: completed, Release: 1.0, and Resolver: bstele. A red circle highlights the "Task 1" section. To the right, an inset window titled "Baseline Compare of Week 1 Build and week 4 Build - demo64 - SYNERGY/CM" shows a comparison of change requests between "Week 1 Build" and "week 4 Build". The "Week 1 Build" table has 3 rows, and the "week 4 Build" table has 4 rows. A red arrow points from the "Task 1" section to the "Change Requests" tab in the inset window. At the bottom, there is a table for "Added/Modified Files:" with columns for file name, resolver, and action.

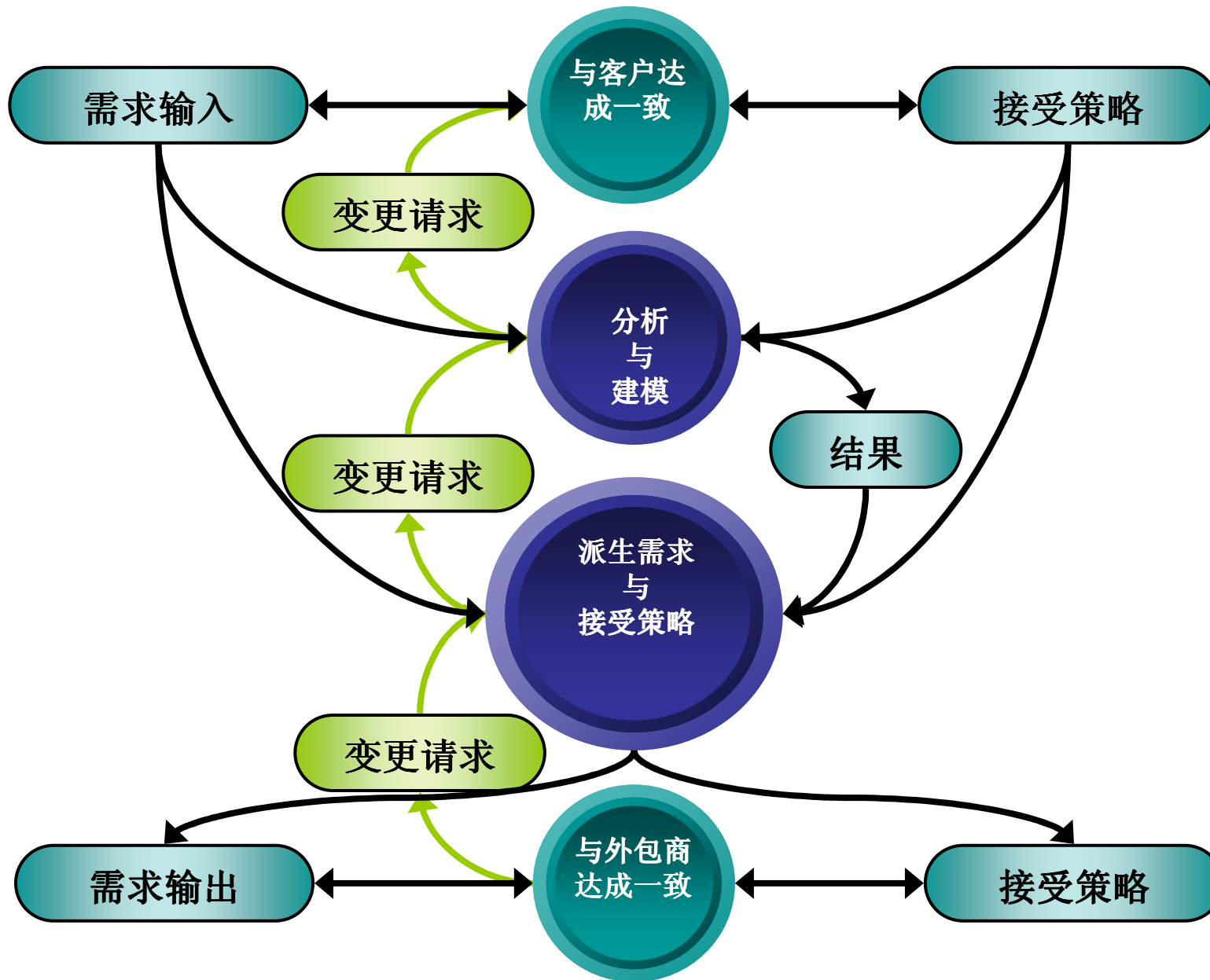
File Name	Resolver	Action
formula-1	bstele	integrate
schumacher.c-1	bstele	integrate
barrichello.c-1	bstele	integrate
montoya.c-1	bstele	integrate

我们需要需求变更管理

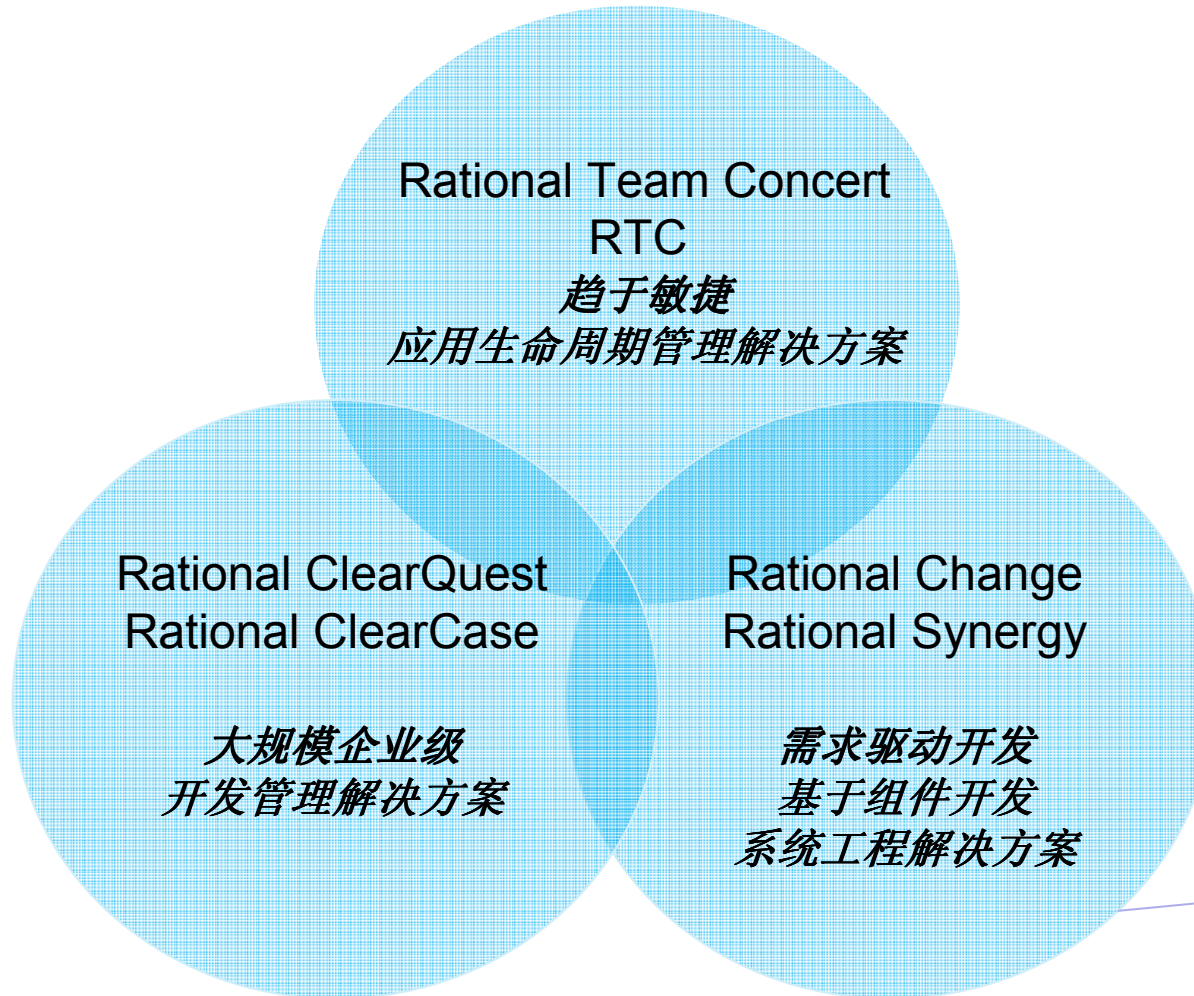


需求管理集成变更管理



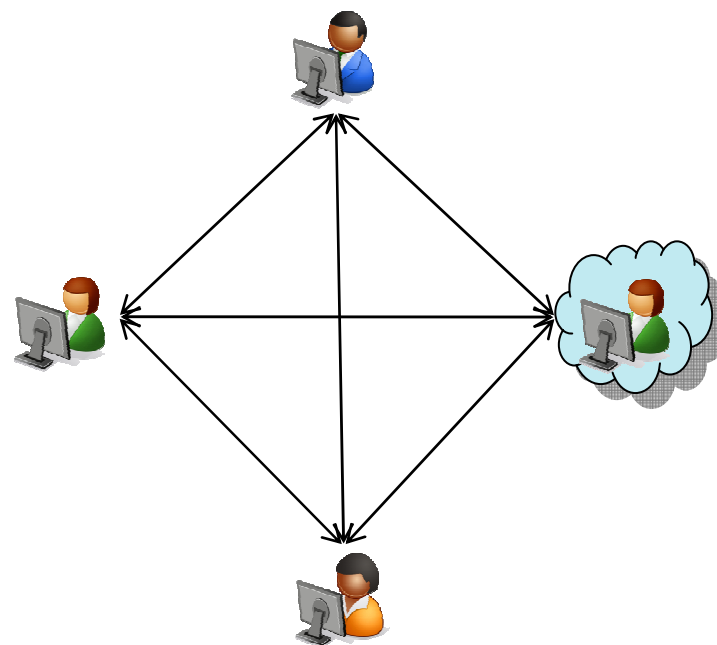


IBM Rational 变更配置管理解决方案



工具集成所带来的烦恼

- N^2 点到点的集成
- 数量有限的APIs
 - 锁定产家
- 紧密耦合的局限性
- 给产品升级带来的局限性
 - 版本间的不兼容



协同开放式集成服务平台

Open Services for Lifecycle Collaboration (OLSC)

在软件交付生命周期中，以简化工具间集成为目标

开放式协同集成服务平台

阻挡共享的障碍

软件生命周期中的资源和资产

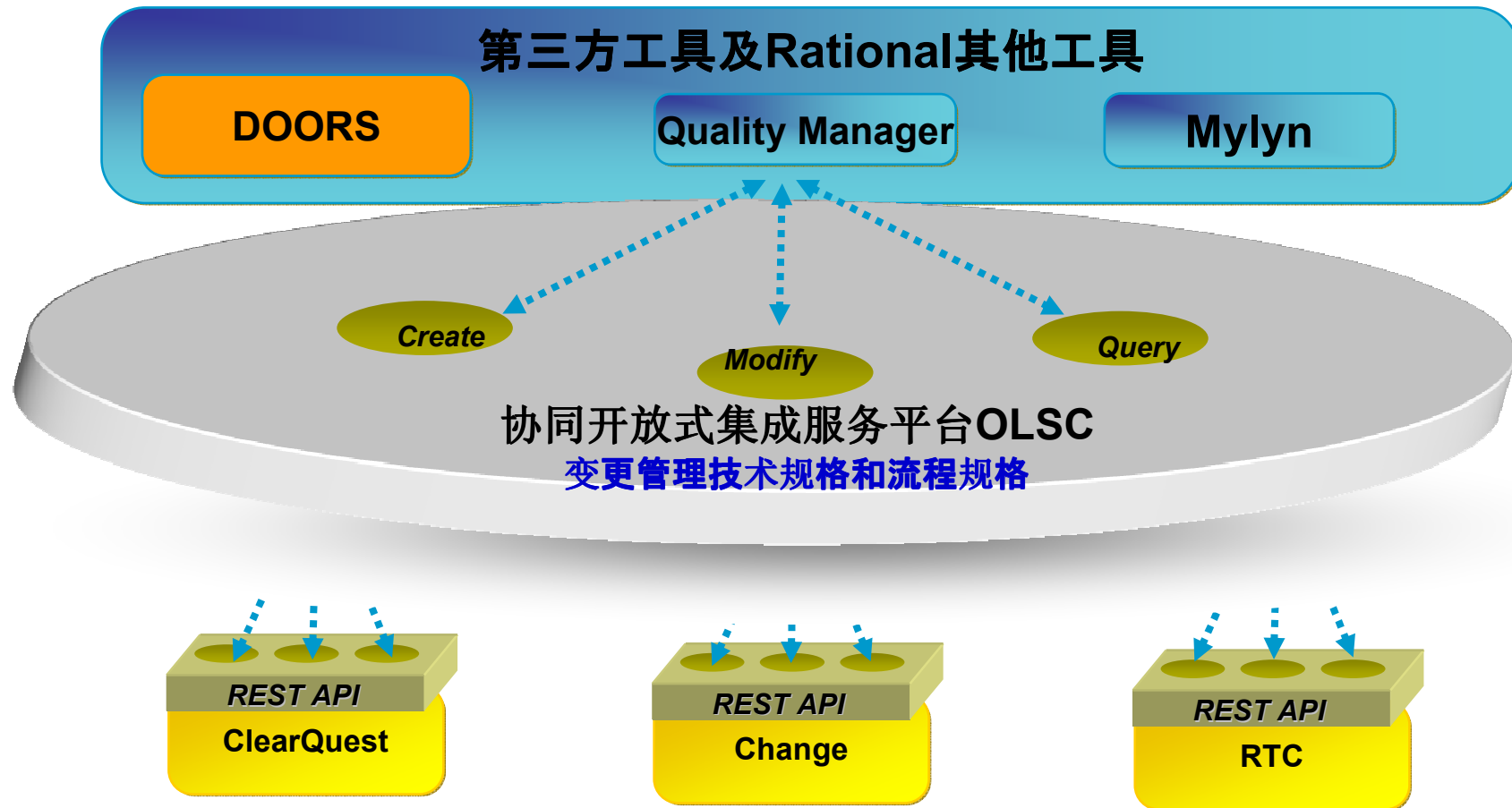
- ▶ 多个提供商，开源项目 和内部工具
- ▶ 私有的词汇表、格式和存储
- ▶ 工具之间数据的交叉

- ▶ 社区驱动 – **open-services.net**
- ▶ 用于ALM协同性的规格
- ▶ 参照互联网架构
 - 松耦合集成，以“够用(just enough)”为标准
 - 统一的资源格式和服务
- ▶ 不同的道路向业界推广



集成策略

协同开放式集成服务平台OLSC 变更管理2.0



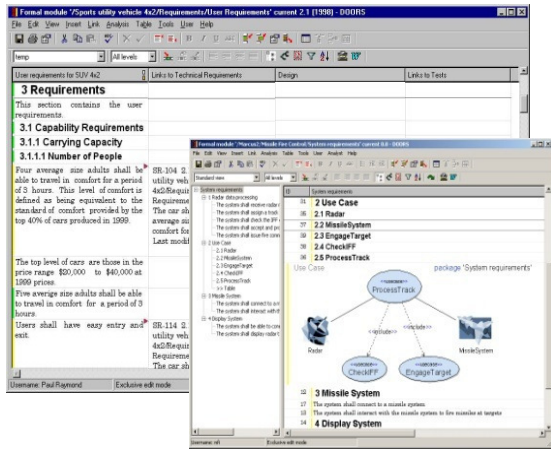
Visit us at: <http://www.open-services.net>

DOORS变更管理与 Change, RTC和ClearQuest的集成

- 提供统一集成功能如下：
 - 转化已有的DOORS-Change集成界面为共性集成界面
 - 尽可能多的支持
 - 纳入DOORS安装组件的一部分
- 我们能得到什么？
 - 需求变更请求的跟踪
 - 需求驱动开发: 将需求分解成不同的开发任务，实施任务开发的原则。通过监控需求实施的状况，而帮助监控项目或产品进度的状况， 辅助项目管理。
 - 需求实施问题跟踪: 将测试后所发现的问题或缺陷与需求相关联，跟踪实施的质量以及帮助分析产品问题对整个项目和产品的影响。
 - 需求变更管理
 - 建立有效的、自动化的需求变更评审和流程跟踪体系。

部分场景展示 - 需求驱动开发项目和产品管理

需求分析和分解

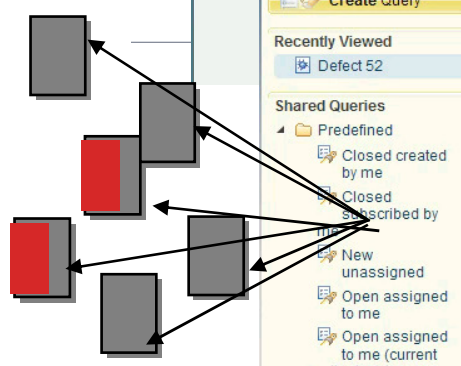
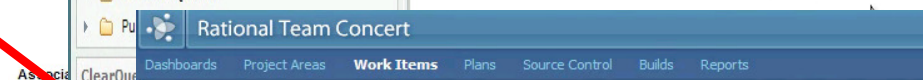
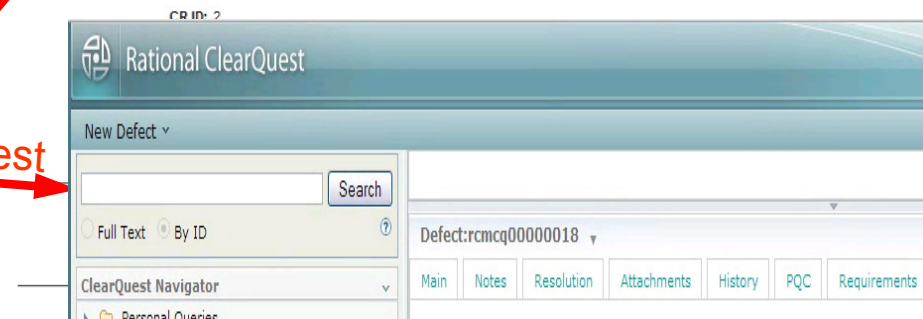
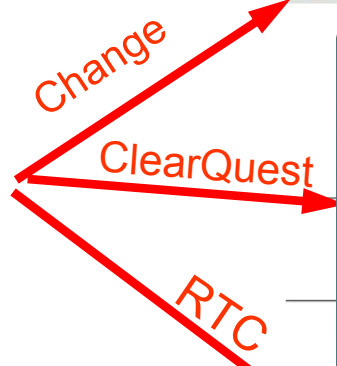
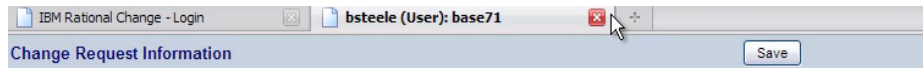
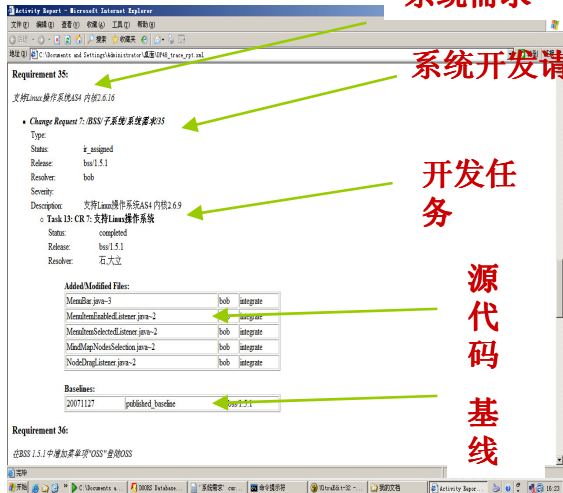


系统需求

系统开发请求

开发任务

源代码
基线



CC/Synergy/RTC

总结

- 需求管理做不好，项目和产品管理就做不好！
- DOORS与 IBM Rational基于OSLC需求变更集成管理解决方案，为用户提供了完整的需求驱动项目闭环跟踪管理框架，它可以帮助用户：
 - 最佳实践流程一拿来就用！
 - 可按需定制和配置
 - 并非强迫“改变”，可适应于已有的配置管理体系
- 按需提供需求及项目进展报告体系
 - 提供例外管理
 - 帮助通过审计过程

THANK YOU

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