Enabling reuse of assets across the globe using RSA and RAM

Bhawana Gupta bhawana.gupta @in.ibm.com

Innovate2010

The Rational Software Conference

Let's build a smarter planet.

The premiere software and product delivery event.

June 6–10 Orlando, Florida





Table of Contents

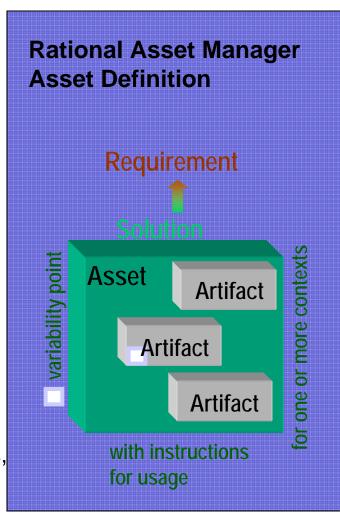
- Introduction to Asset Management
- Challenges faced during Asset Management
- What does one need for Asset Management
- What do we recommend?





What is an Asset?

- An Asset is
 - a collection of Artifacts
 - which provides a solution to a requirement or business need
 - for one or more contexts
 - with instructions for usage
 - and variability points
- What are Artifacts?
 - Workproducts from the software process
 - Requirements, Designs, Models, XML, XSD, Source code, Data, Tests, User Interfaces, Documentation, Service Interfaces, Estimates and so on...
- Kinds of assets
 - Applications, components, business process, information model, patterns, services, frameworks, templates, ...





Asset management helps address delivery challenges

Asset warehousing is critical to success

- Increase quality from reuse of well-tested assets
- Increase the ROI on assets
- Lower cost from asset reuse
- Lower risk from reuse of proven assets

Software asset management is all of the infrastructure and processes necessary for the effective management, control and protection of the software assets within an organization, throughout all stages of their lifecycle



Benefits of managing assets of an enterprise

Enterprise Architects

To reduce risks, automate reviews and EA adoption With System Architect

> **Business Process**

> > WebSphere Service Registry

Endpoint Tivoli **CMDB**

Service

Administrators in **Operations**

To reduce outages by understanding the impact of operational change on business & technical assets with Tivoli **CCMDB & WebSphere**

Architects

To reduce costs by sharing data models, business processes & proven reference architectures With Rational Software Architect, Data Architect and WebSphere Business Modeler

> Test Data Mo

> > Software Image

Portfolio Manager

Notes, Wikis & Sharepoint

Business People

To save time finding solutions in docs like Viso, Word, PDF in Sharepoint and Wikis or assets that meet requirements in Reg Pro & Doors

Testers

To reduce defects by sharing the correct test data & virtual environments With Rational Testing Solutions

> Rational Asset Manager

Encryption Build 🕅 Rational Forge Component

Team ClearCase **Concert**

Build

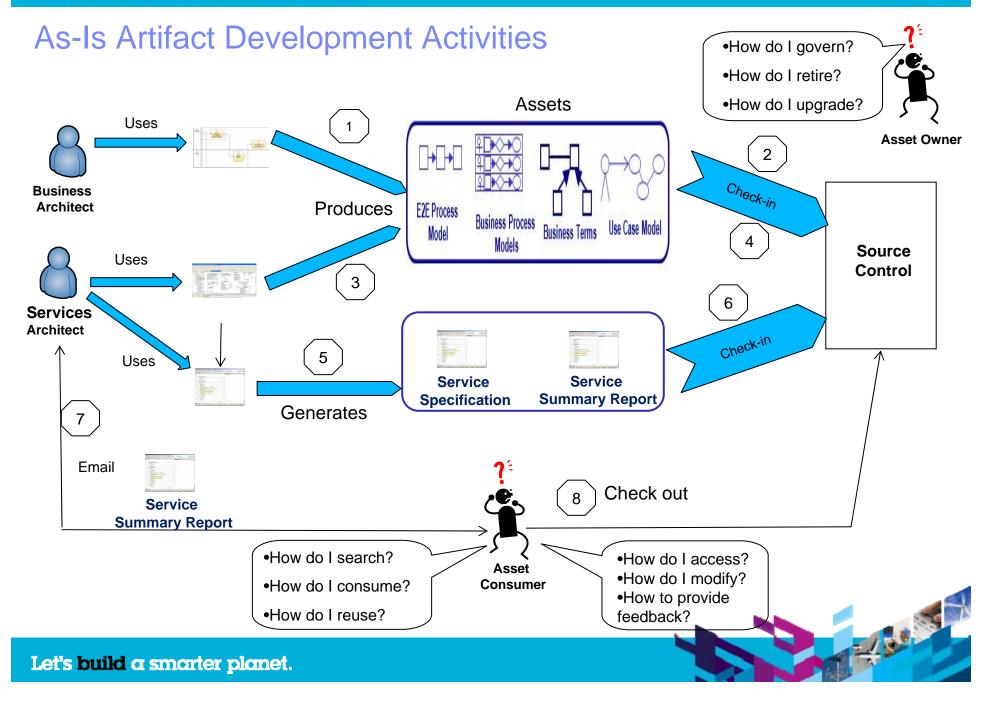
Subversion

Developers

To reduce costs and legal risks by re-using only approved components With Eclipse, Build Forge & Rational Team Concert

Let's build a smarter planet.







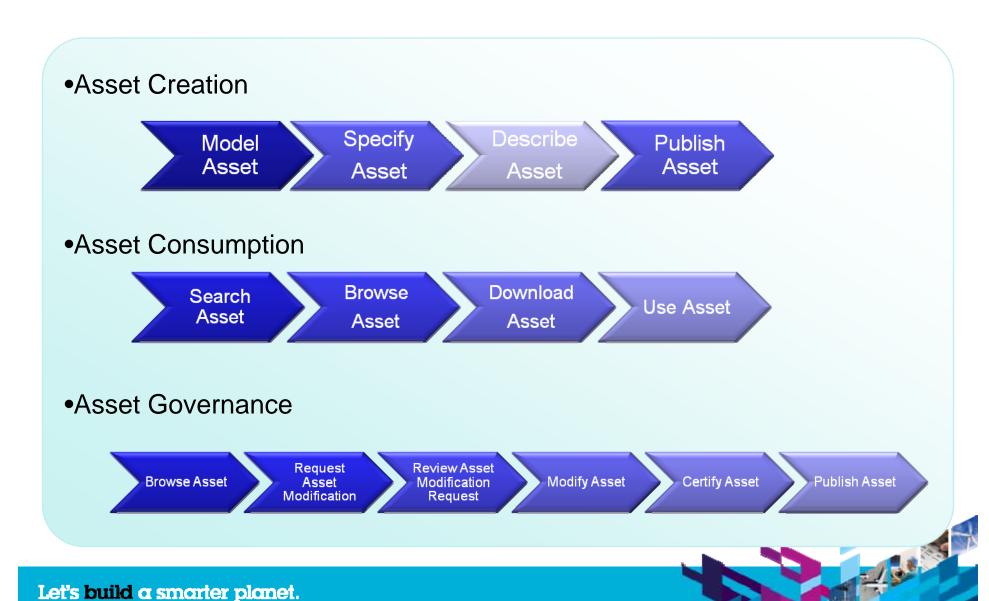
Challenges

- The ability to easily describe and discover assets (service model, business process model, use case model, service spec) using the metadata is severely restricted.
- In order for consumers to use assets or make modification requests, there is a sequence of email interactions between asset consumers and asset producers; because email is used in this way, the audit trail and later discovery and closure of these requests is very difficult;
- In addition, understanding the impact of change to dependent assets is almost impossible. That is determining the impact to changing Account Manager service is not feasible as there is no metadata describing the dependency relationships is captured in Word.
- This kind of asset discovery is time-consuming and elongates development-turn-around time for building applications from these assets.
- The **Owners of these Assets have no visibility into the usage of these assets** so that they can be retired or enhanced as well as for making investment decisions





What do we want to do:





Challenge: Unknown location, usage and duplication of software components, frameworks and collaborative assets

Scenario: Financial Institution

- A financial institution with multiple lines of businesses, is challenged with managing distributed software components across their distributed environments
- Though each line of businesses (LOBs) are managed in silos, many software components that implement common business processes are related
- Assets are not only inaccessible across the LOBs but are so within LOBs themselves

Governed



"How do I prevent duplicate efforts?"



"How do my multiple lines of businesses know of the standards existence?"



"How do I ensure compliance with industry and engineering standards across all LOBs?"



"How can asset collaboration be achieved to break through the LOB barriers?"



Challenge: Govern software assets

Scenario: Financial Institution

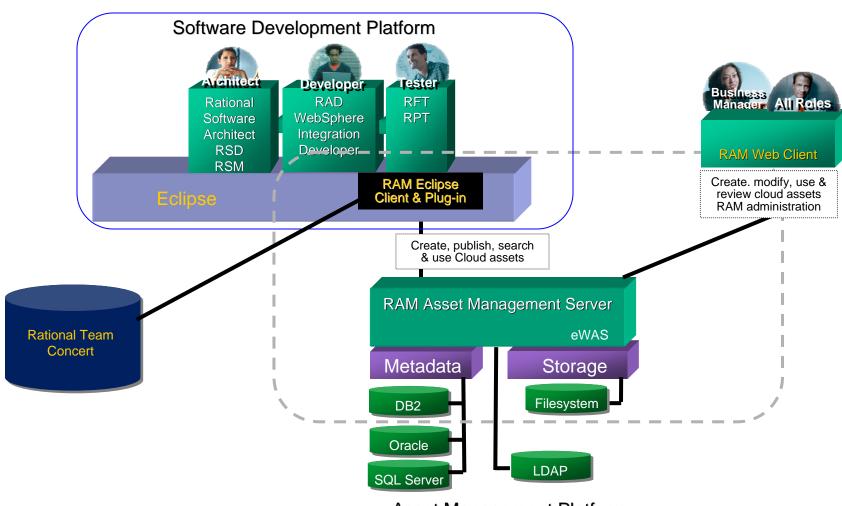
- For a multinational bank managing hundreds of branches worldwide. and managing a global ATM network, a security audit determined that select Web applications posed a "backdoor" risk
 - Old versions of code and pieces of applications made it to production and applications exposed because of changes in common components put live applications at risk
- In addition, the audit took over 500 person hours, found no centralized audit records, making it difficult to do forensic analysis – what, who, when, where, and also found inconsistent approvals/checkpoints

Governed





What do we recommend?



Asset Management Platform



Rational Asset Manager

Scalable, Flexible, Enterprise-Level Solution

Store and



Repository to store and quickly find assets & services

- Reduce
- Improve consistency

Asset Lifecycles



Automate reviews and business and technical policy enforcement

 Eliminate costs from difficult to enforce policies

Impact Assessment



Capture asset relationships, plan change and understand impact Prevent changes that result in

Audit and Report



Identify value add or non-performing

- Allocate resources to
- Reduce compliance & duplication costs

Communicate

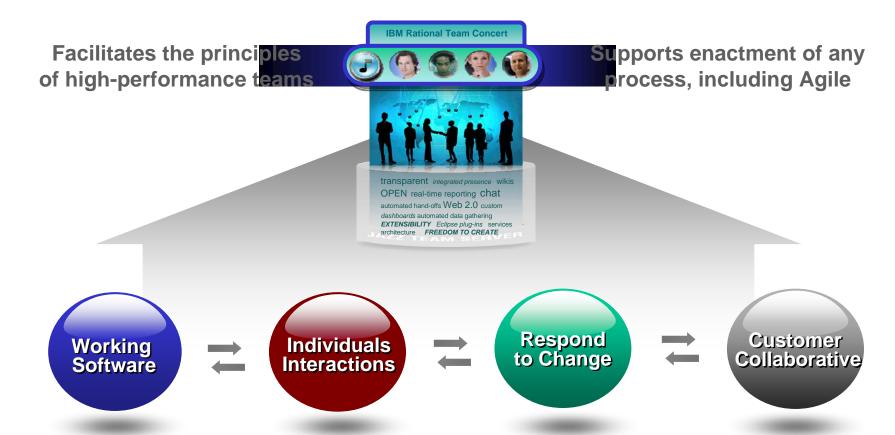


Communicate asset information

- Subscription, Notification, Feeds, Forums
- Reduce cost with efficient

Integrate with your design and operational environment including other existing repositories

Rational Team Concert



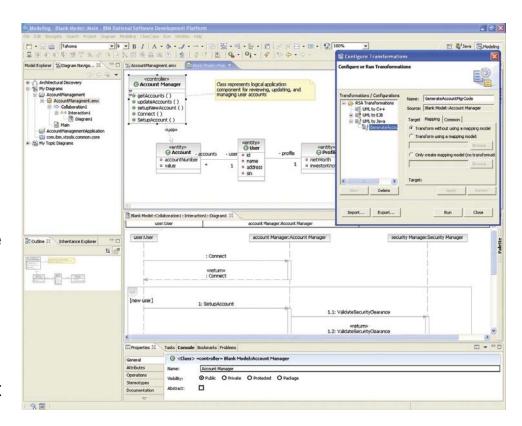
- Continuous integration
- Manage team assets
- Change driven
- Integrated / traceable
- Starting ad-hoc teams
- Team awareness
- Process awareness
- Ad-hoc sharing

- Process flexibility
- Iterative plan-execution
- Multiple releases
- JIT code reviews

- Transparency
- Objective commonality
- Project health checks
- Context driven

IBM Rational Software Architect

- IBM Rational Software Architect is an integrated design and development tool.
- Leverages model-driven development with the UML for creating wellarchitected applications and services.
- Develop applications and Web services more productively than ever
- Exploit the latest in modeling language technology and leverage an open and extensible modeling platform
- Review and control the structure of Java and service-oriented applications
- Simplifies the design and development tool solution by integrating with other facets of the lifecycle





Roles of RAM, RTC and RSA

Use IBM® Rational® Asset Manager with RSA and RTC to:

- Browse and search for assets stored in from RSA / RTC
- Rank, comment, or discuss on assets
- Govern asset management and define submission and approval lifecycles
- Create and submit assets from RSA / RTC into RAM



- Define business objectives
- Assess the organization
- Select improvement Strategy and practices
- The project team conducted their retrospective(s)
 - 1 Adapt
 - 1.1 Configure project ensemble
 - 1.2 Tailor & Test
 Practices/Process
 specifications
 - 1.3 Update Production project ensemble

ational Software Conference



- 2.1 Prepare & Prioritize Backlog
- 2.2 Plan Project (Time, resources, plan-items)
- 2.3 Plan & Align Test Effort
- 2.4 Agree to / approve plan
 - 2.5 Repeat above for sprint.

3 Sprint

- 3.1 Steer & Measure progress against plan & practices
- 3.2a Detail sprint plans
- 3.2b Detail test sprint plan /
- 3.3 Source/fix is developed, tested, delivered
- 3.3b Construct tests
- 3.4 Monitor Integration builds
- 3.5 Inspect automated BVT status.
 - 3.6 Executes Test. Submits Defect.
- 3.7 Triage defects / change requests
- 3.8 Confirms the defect is fixed
- 3.9 team leads Approve the milestone (dev, test)

4 Deliver

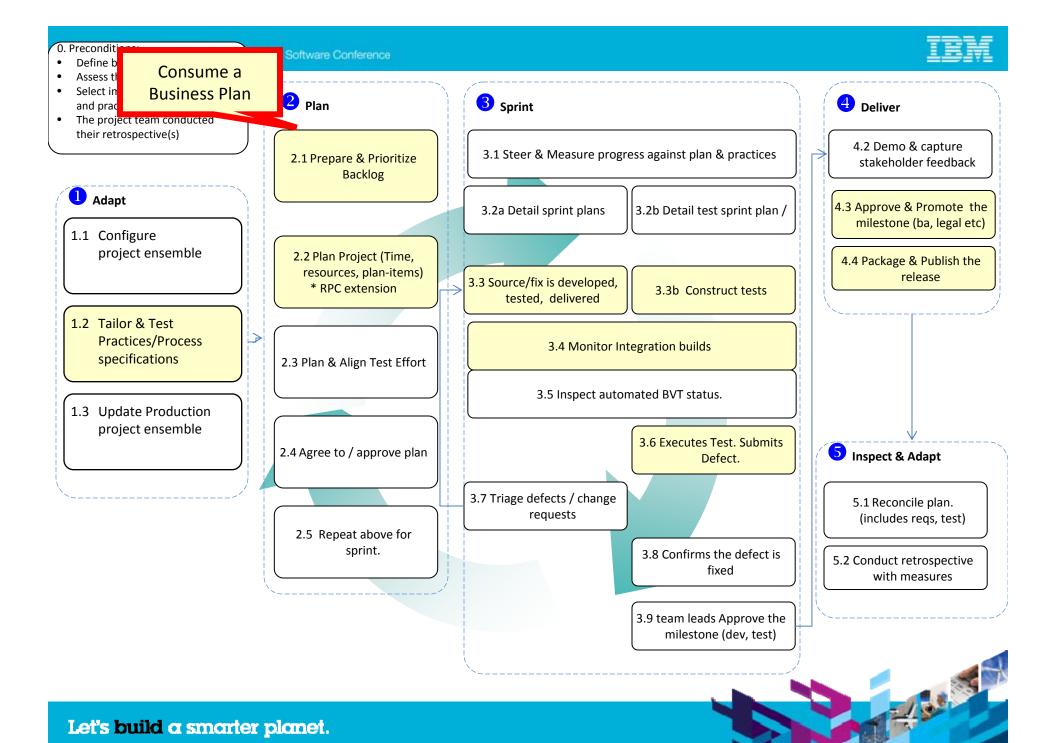
- 4.2 Demo & capture stakeholder feedback
- 4.3 Approve & Promote the milestone (ba, legal etc)
- 4.4 Package & Publish the release

5 Inspect & Adapt

- 5.1 Reconcile plan. (includes reqs, test)
- 5.2 Conduct retrospective with measures

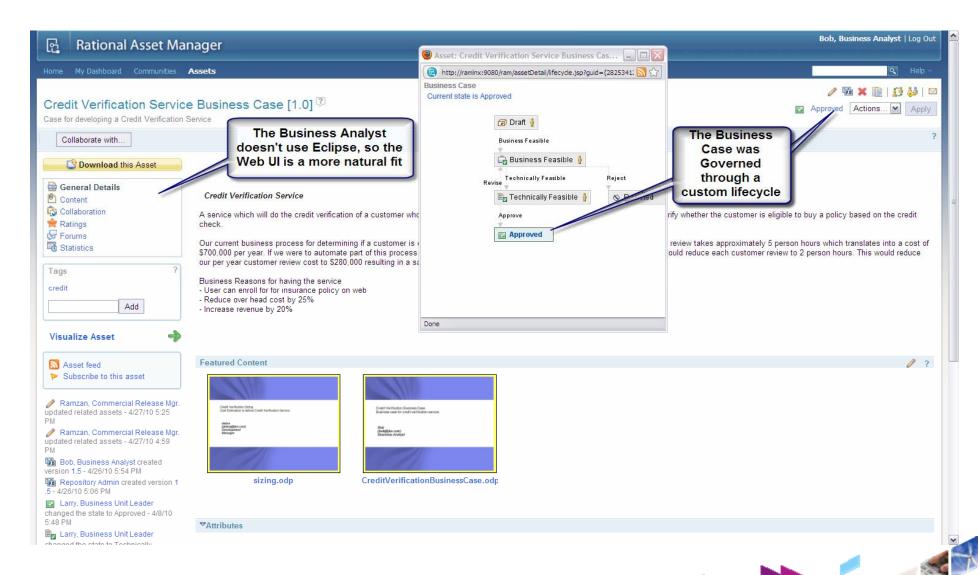






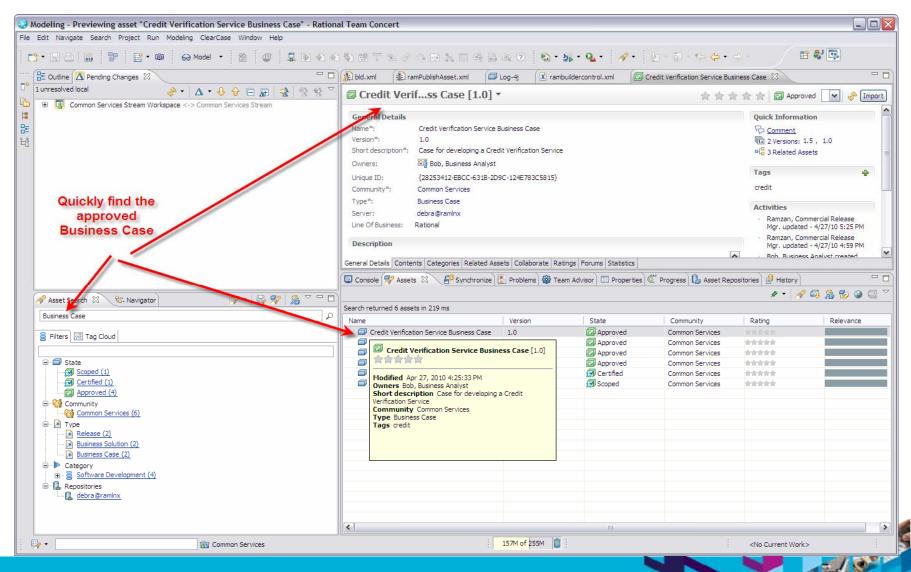


Business User publishes the Business Case

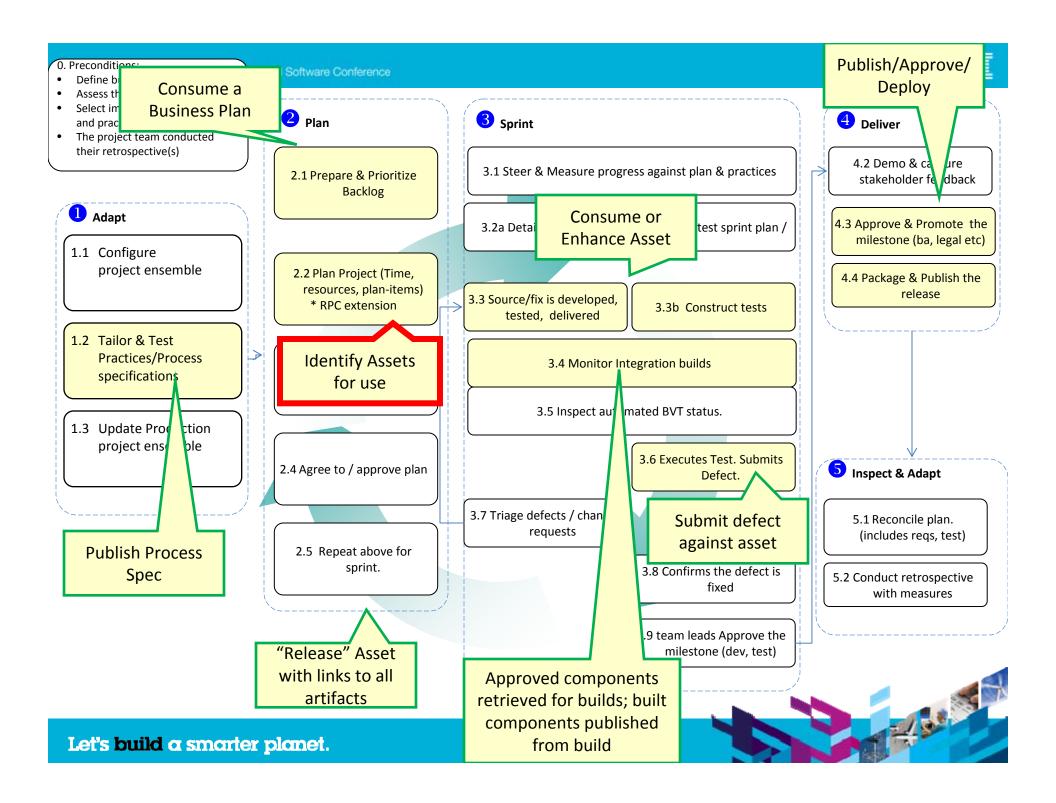




Scrum Master prepares backlog, using the approved Business Case

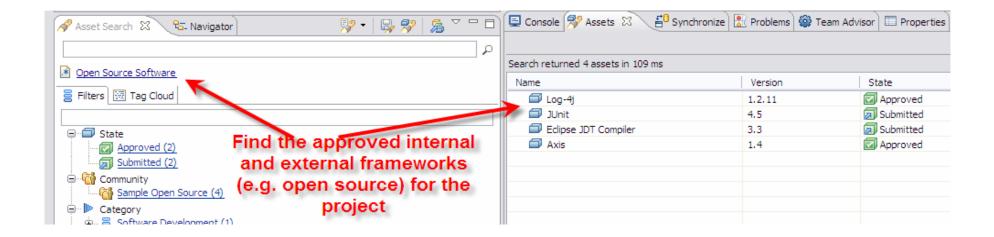


Let's build a smarter planet.

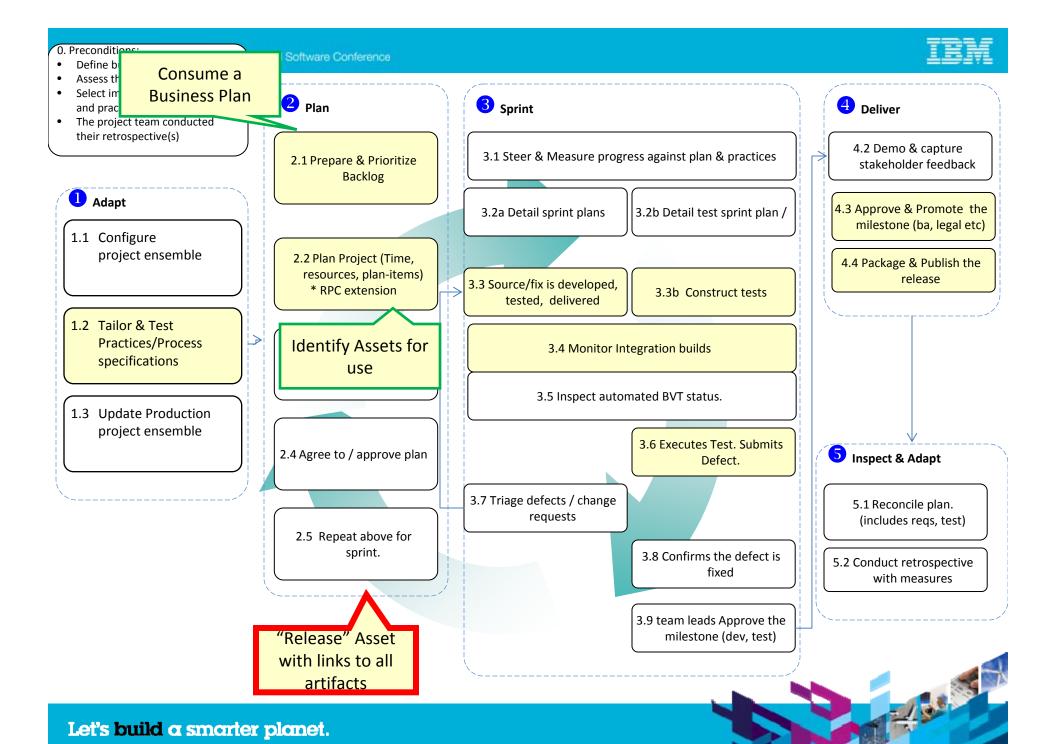




Identify Assets for use





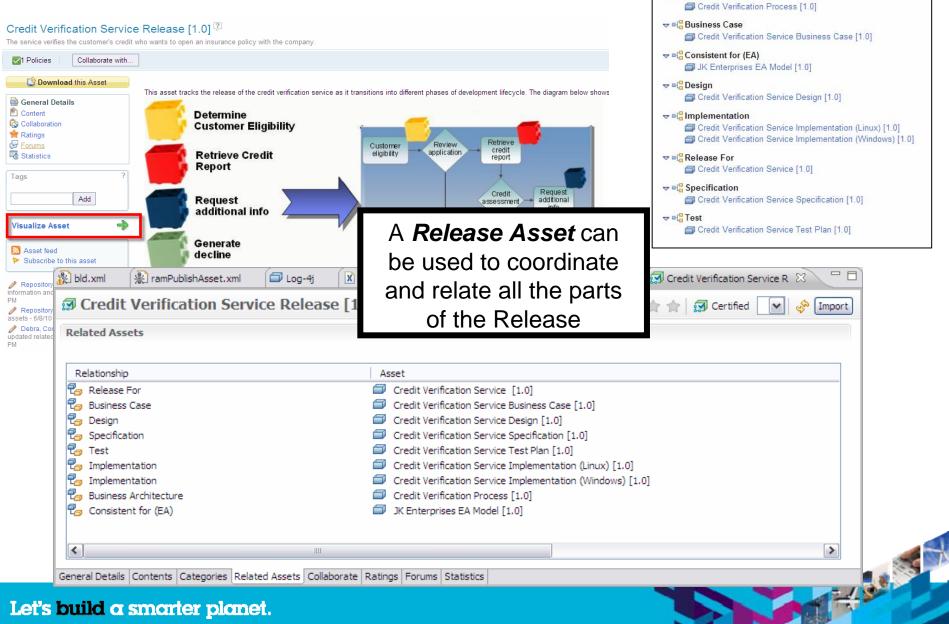




♥Related Assets

→ ■ Business Architecture

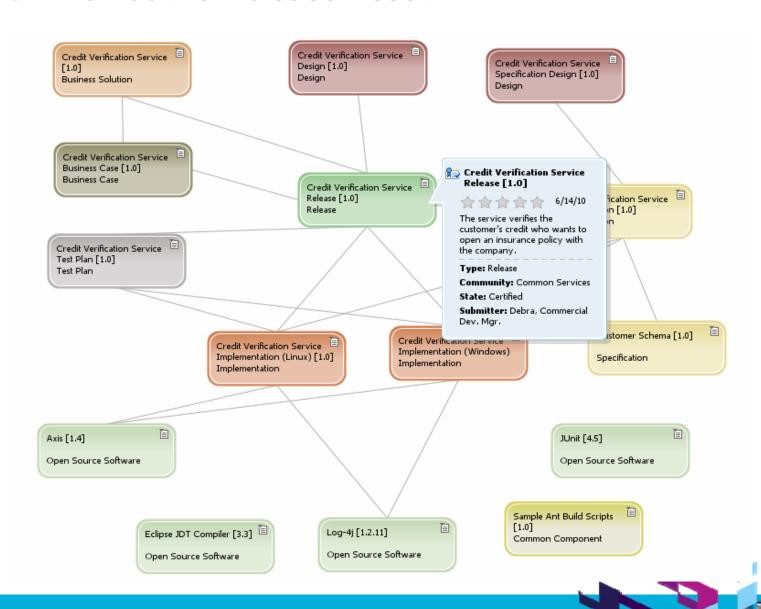
The Release Asset in RAM

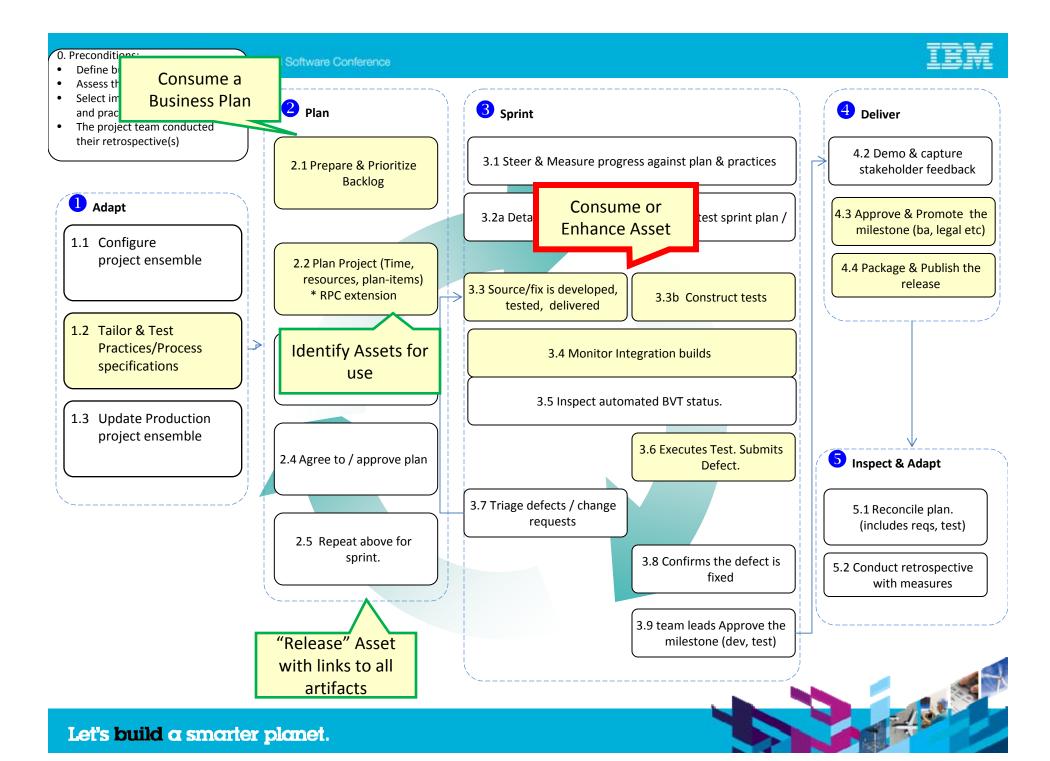


Let's build a smarter planet.



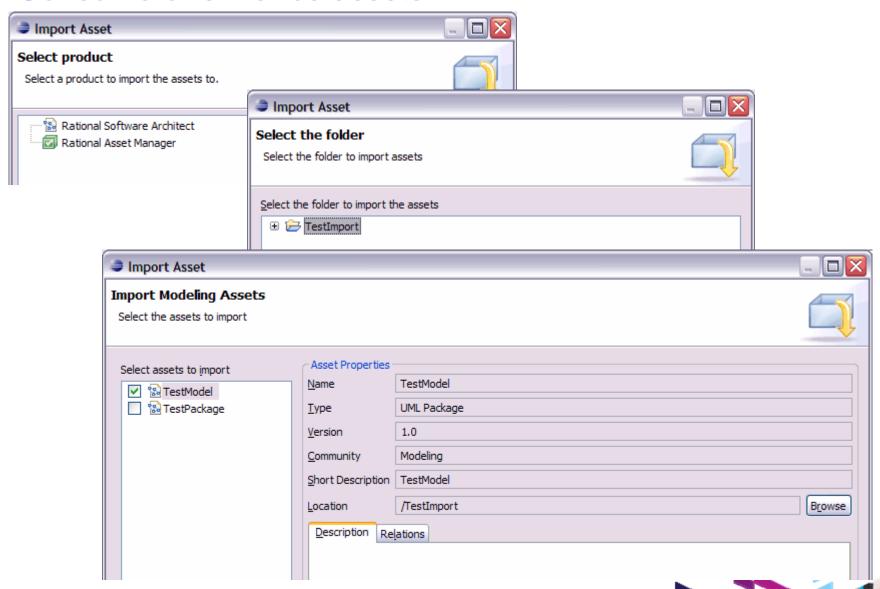
Visual Browse the Release Asset





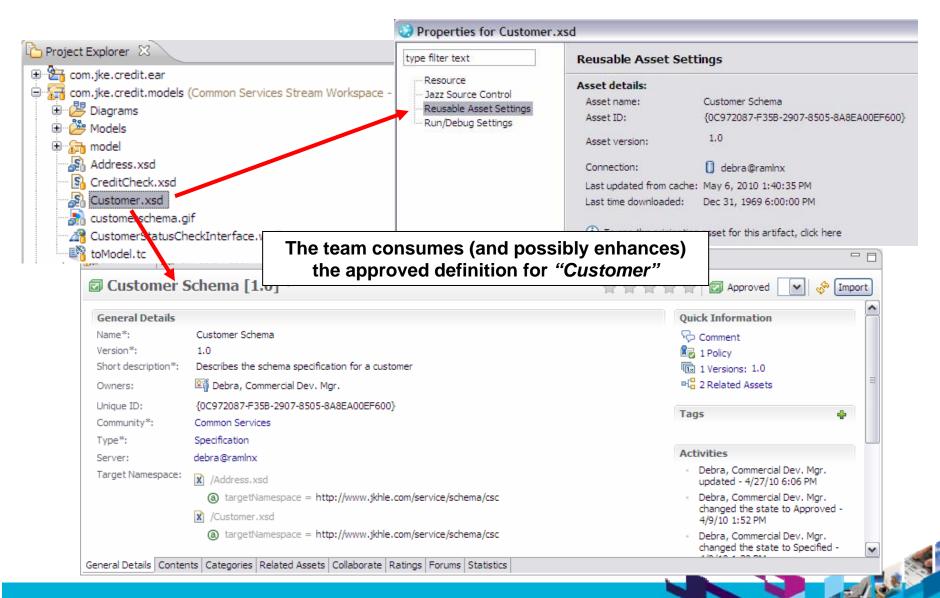


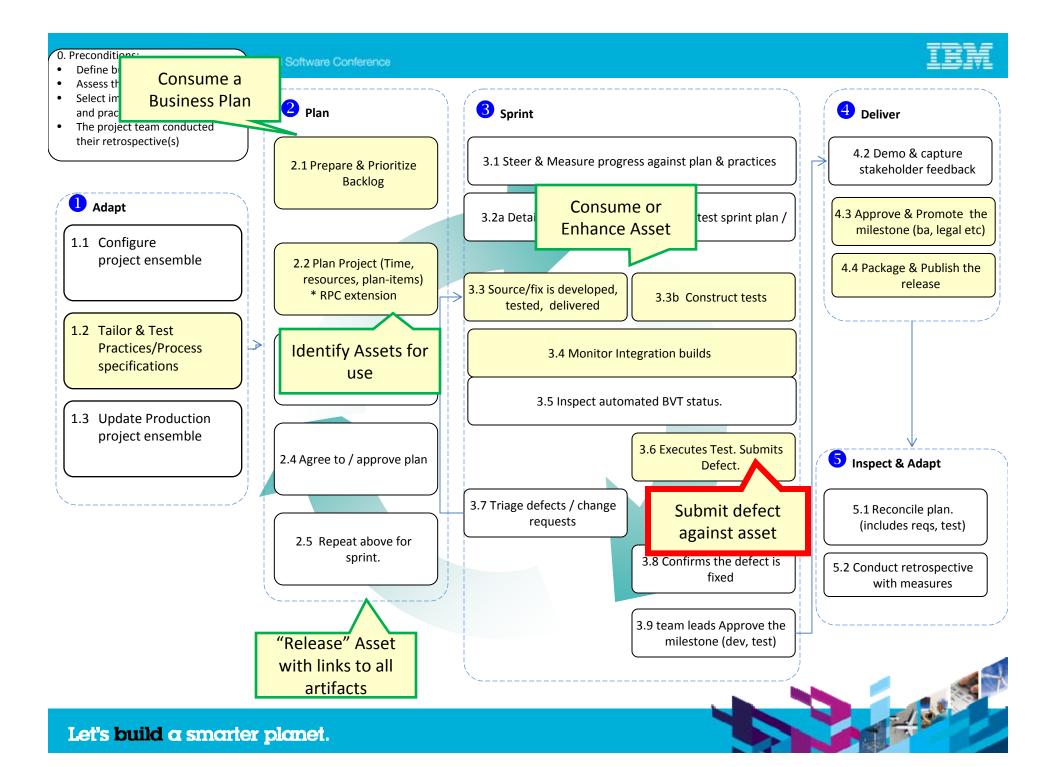
Consume or enhance assets





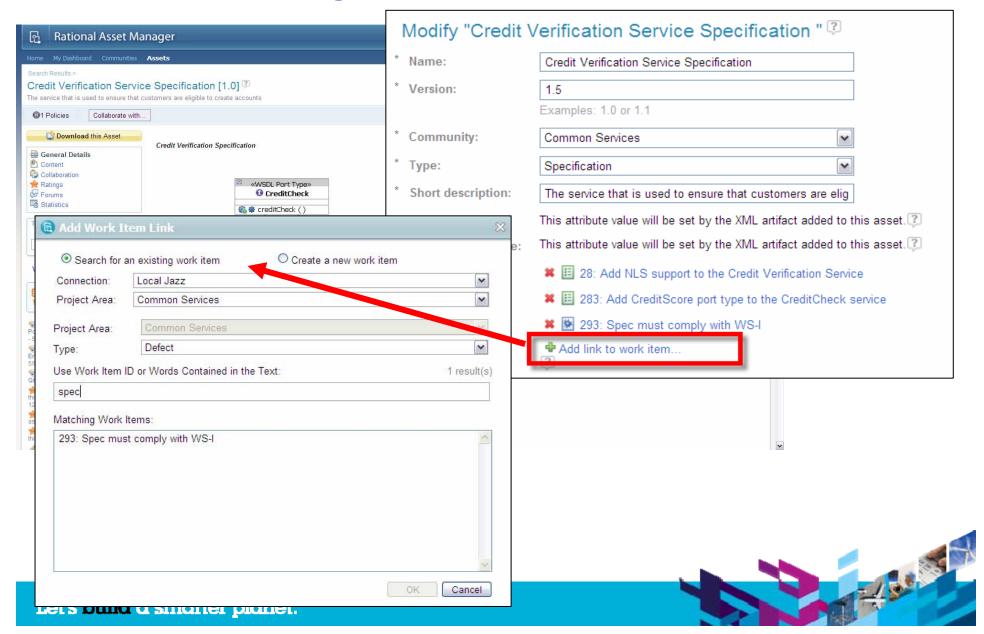
Consume or enhance assets





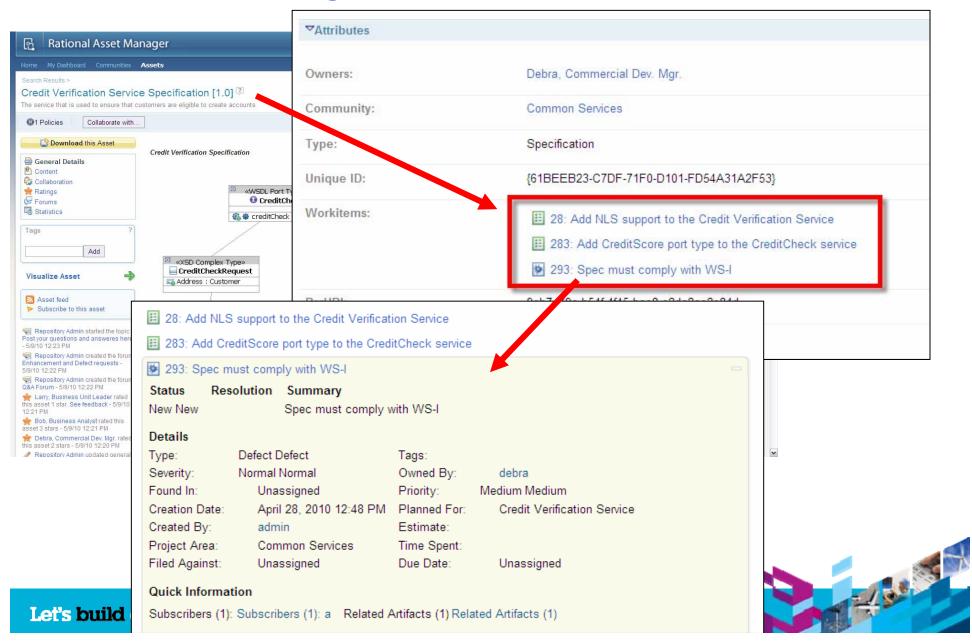


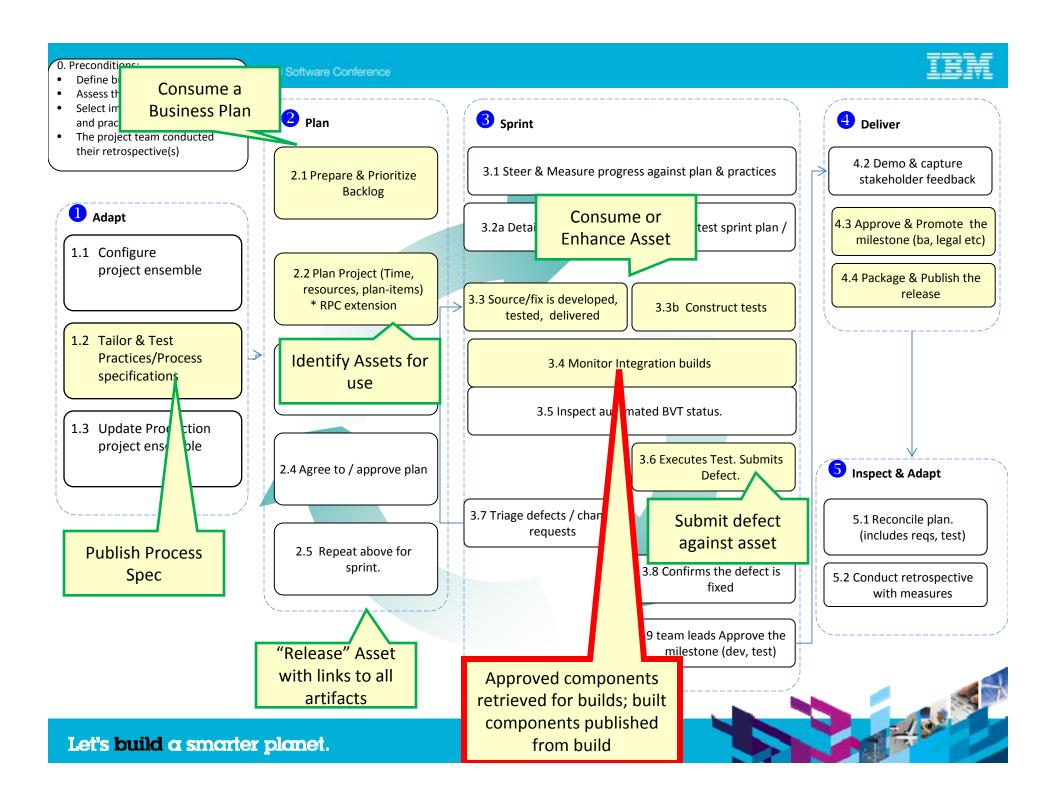
Submit work items against an Asset





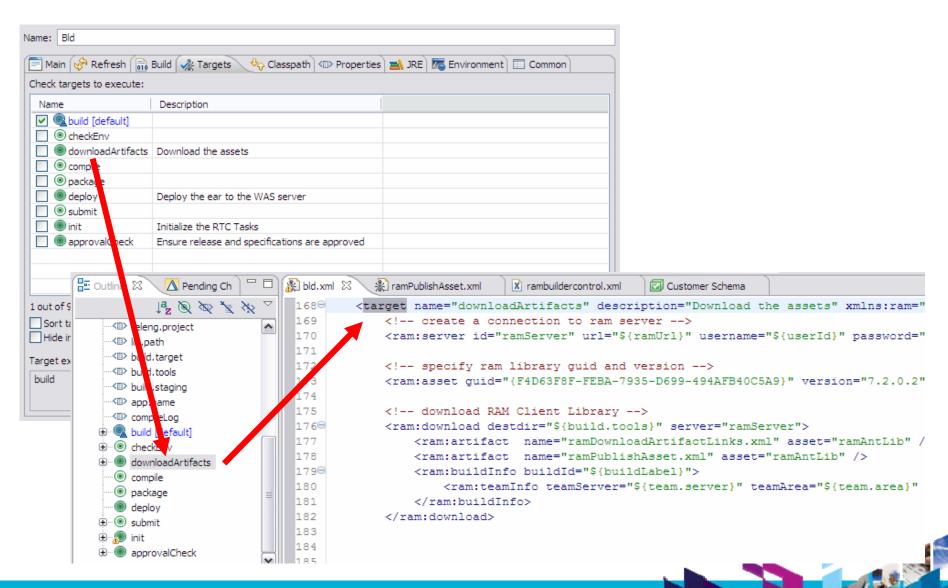
Submit work items against an Asset





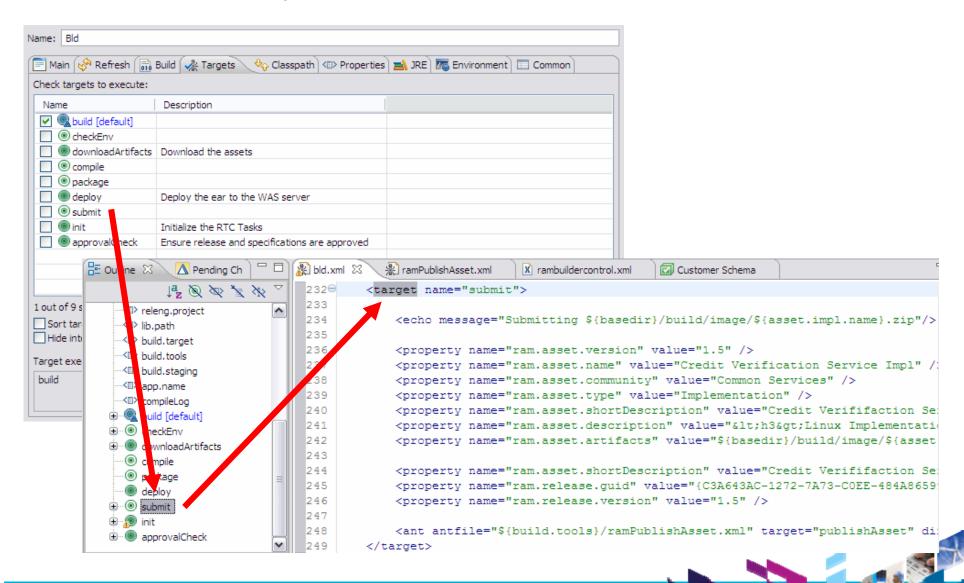


Approved components consumed for build



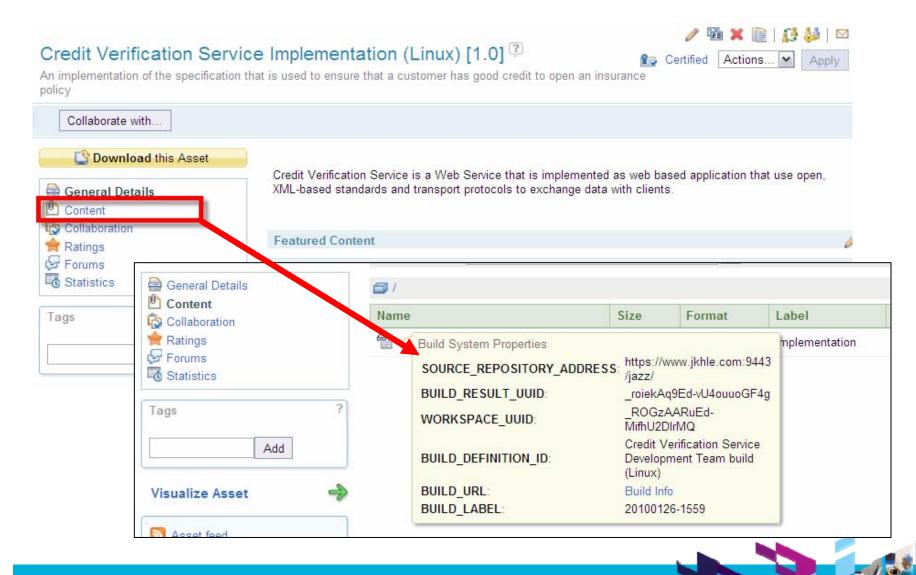


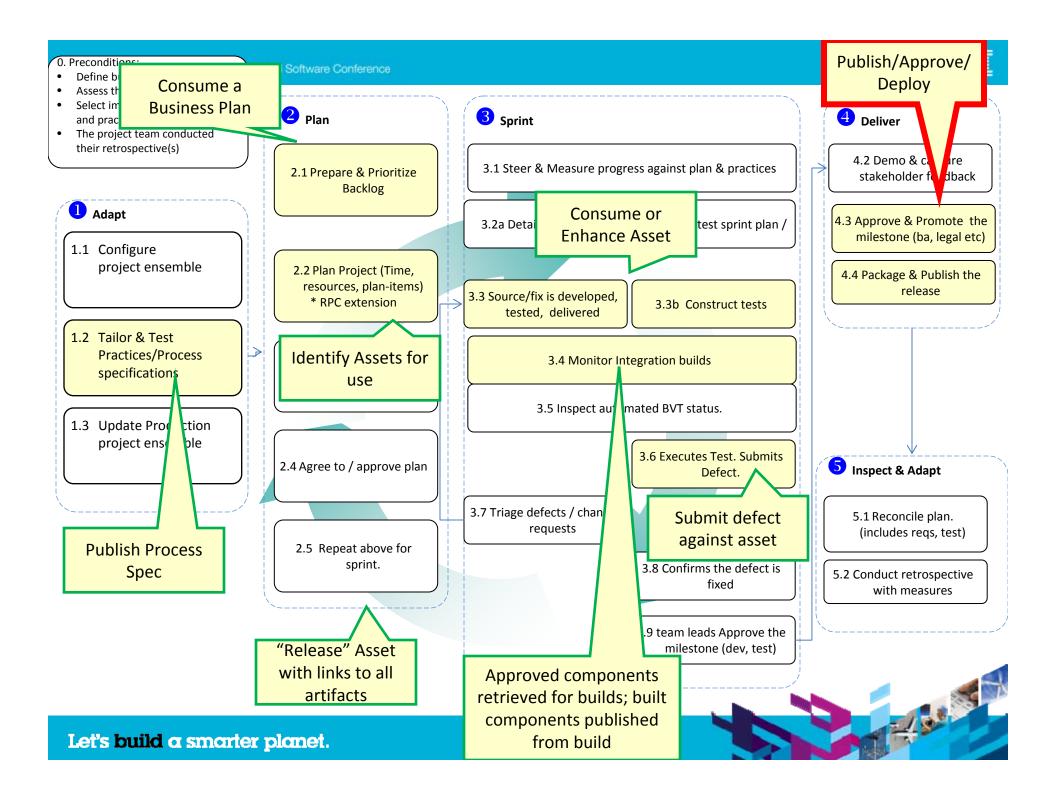
Publish built components



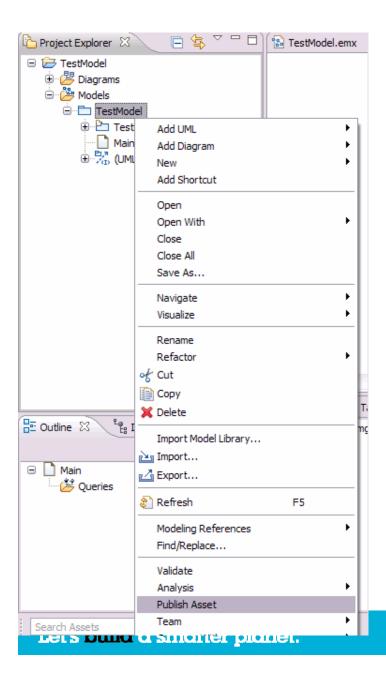


Approved build is traced back to the build automation





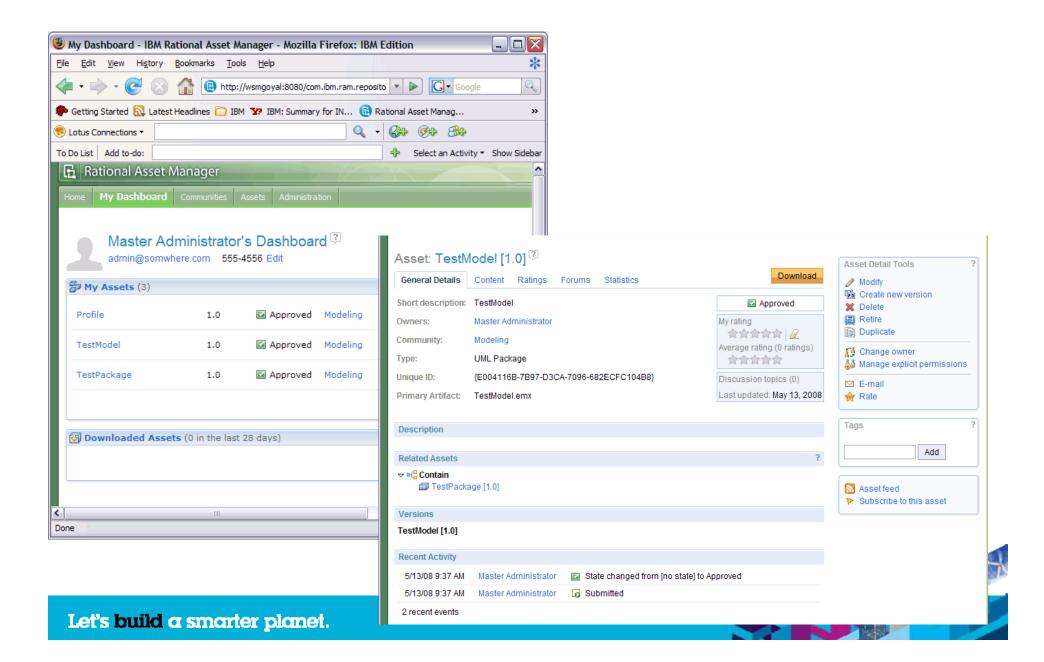




Publish Assets		
Publish Assets		
Select the artifacts to publish as assets		
Select to publish as assets Asset Properties		
☐ ✓ TestModel.emx ☐ TestPackage.efx	<u>N</u> ame	TestModel
	<u>T</u> ype	UML Package
	<u>V</u> ersion	1.0
	Community	Modeling
	Short Description	TestModel









Asset Governance Process Roles and Their Activities For Establishing Asset Governance

Asset-based Development Manager

Create Asset Governance Board **Define Asset Gov and Dev Org** etermine Metrics to Track

letrics and **reporting**

Review and approval

Define Asset Review Workflows Define Asset Type Specify Asset Version Strategy

Information **J**odel

> set Versioning

Board

Asset Governance

Apply the asset governance process to define the policies and artifacts for implementing governance in the repository. Practice

Asset-based Development Administrator

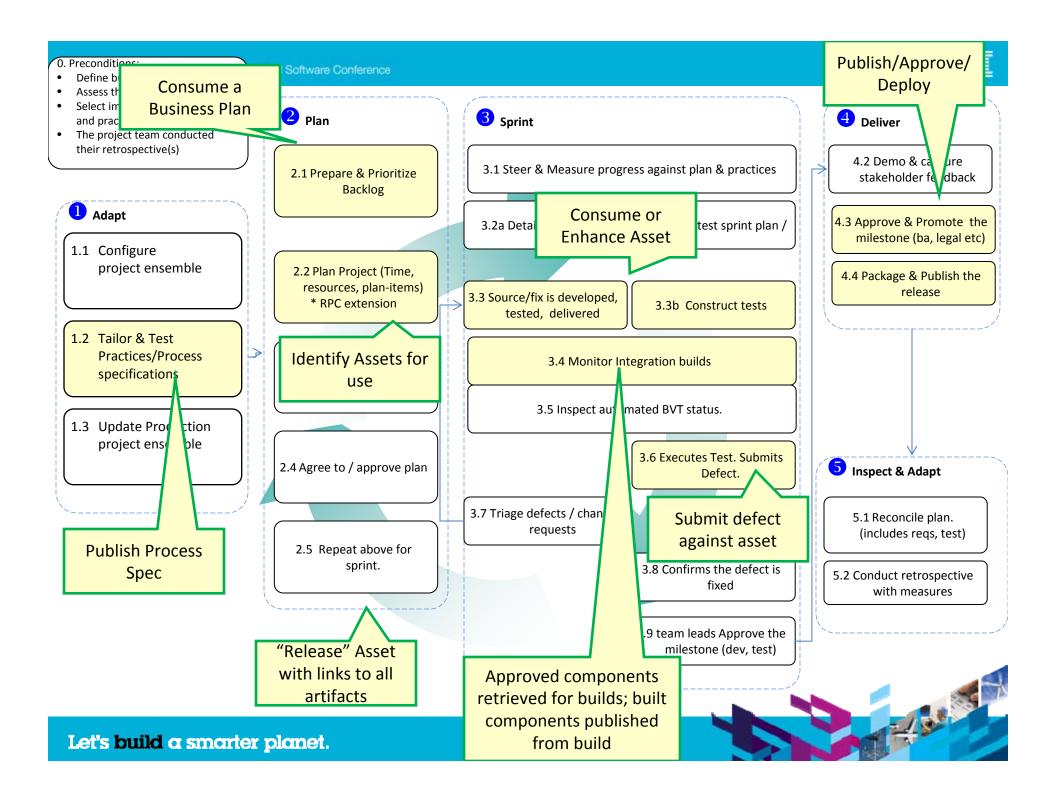


Notification, *Determine Tools to Support ABD* **Subscriptions** *Specify Repository Community*

Communities, Access control

Preparing for ational Asset Manager governance







Summary: End Result when you use Rational Asset Manager in project

- Supports asset based development, warehousing and asset management
- ▶ Allows disparate teams to communicate securely and eliminate rework with asset traceability, categorization and utilization monitoring
- ▶ Implement compliant standards related to your intellectual property, providing the right level of access to countries, and/or teams.
- Mitigation of risks and lower costs of meeting compliance mandates by securing Intellectual property
- ▶ Store information that is useful for collaborating on software development of Assets.
- Provides tools for defining, creating, reviewing and retrieving assets.
- ▶ Uses the Reusable Asset Specification to describe and classify assets
- ▶ Supports any kind of asset source code, DLLs, documentation, presentations, patterns, process flows, etc.
- ▶ Enables you to implement asset based development to and succeed with reuse strategies, cutting development costs. Flexible access to assets via an Eclipse or Web
- ▶ Integration with other products like RTC, RSA ensure asset based development workflows.









www.ibm/software/rational

© Copyright IBM Corporation 2010. 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 logo, and other IBM products and services are trademarks of the International Business Marchael and the statements of the statement of

Let's build a smarter planet.

or service names may be trademarks or service marks of others.



Managing Assets for Optimal Reuse

- What needs to be done
 - The establishment of
 - Chains of responsibility to empower people
 - Policies to guide the organization to meet their goals
 - Control mechanisms to ensure compliance
 - <u>Communication</u> to keep all required parties informed
 - **Measurement** to gauge effectiveness

