



Different Approach "Product & Project Matrix" in Requirement Definition and Management

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Terminology

- **Project**

A project is a temporary endeavor with a defined beginning and end (usually time-constrained, and often constrained by funding or deliverables), undertaken to meet unique goals and objectives, typically to bring about beneficial **change** or **added** value.

- **Product**

Product (business), an item that ideally satisfies a market's want or need. Product (project management), a deliverable or set of deliverables that contribute to a business solution (wikipedia)

- **Application**

Application software is all the computer software that causes a computer to perform useful tasks (compare with Computer viruses) beyond the running of the computer itself. A specific instance of such software is called a **software application, application** or **app**.

- **RRC Project Area**

A project area defines the project (or product) deliverables, team structure, process, and schedule. You access all project (or product) artifacts, such as iteration plans, work items, requirements, test cases, and files under source control within the context of a project area



Challenges of Project Development in non-Software Factories

- Not always they have big project, lots of changes request, small demands, enhancements
- %65 of the needs are less than 50 man / day. Generally change request..
- Can not easily follow the existing product features
- Manage the change in products is hard.
- New hiring adaptation to the existing products and high dependency to the product owners.



Defining Requirement in Projects

- Create **RRC Project Area** for Each **Project** or **Group of Requests**
- Define Requirements according to your process (Agile, Traditional) by Use case, Features, Requirements etc. in RRC Project Area
- Define Requirements in documents like Use Case Specification, SRS, FAD etc.
- When project is done, RRC Project Area can be archived.
- If everything is new, that's fine, but what if the requirements changes and you need to know about the existing features?

Projects	Requirement Definitions			
PRJ 00001	Req1, Req2, Req3, Req4	UC1, UC2	SRS	FAD etc..
PRJ 00002	Req12, Req33, Req221	UC3, UC4, UC2		
PRJ 00003	US1, US2, US34, US32, US2			
...				



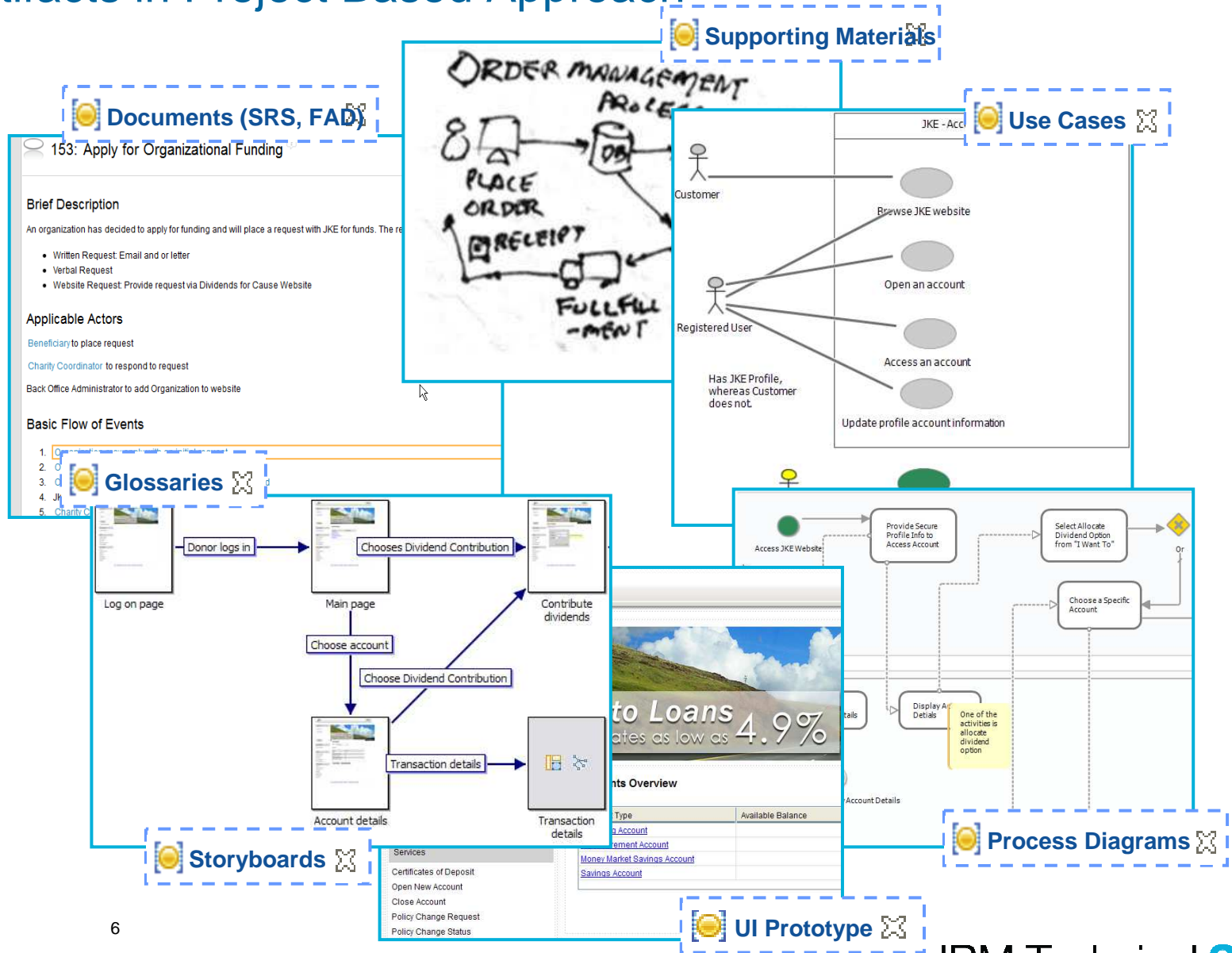
Project Based Sample Structures (Client Samples)

RRC Project Area = Project	RRC Project Area = Project	RRC Project Area = Project
Project- 001	Project- 002	Project- 003
<ul style="list-style-type: none">1- Requirements2- UI Prototypes3- Use Cases4- Storyboard5- Glossary6- SRS7- Supporting Materials	<ul style="list-style-type: none">1- User Story Enrichment2- CCC Cards3- UI Prototypes4- Storyboard	<ul style="list-style-type: none">1- FAD Modules2- Functional Req.3- Non-Functional Req.4- Supporting Materials
(TRADITIONAL)	(AGILE)	(TRADITIONAL) (Document Centric)

- Number of RRC Project increases with the number of Projects
- RRC Project can be achieved after project is Done



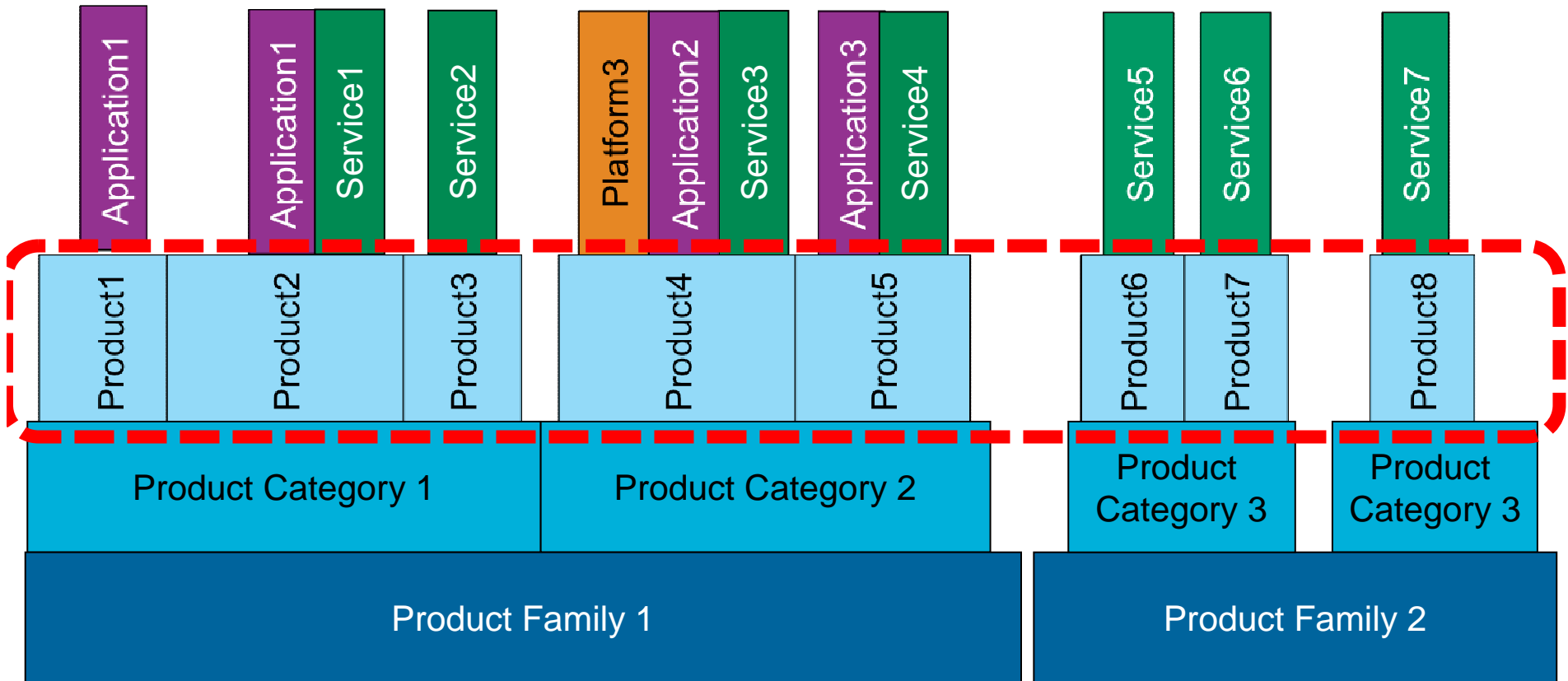
Artifacts in Project Based Approach





How Do You Define a Product?

Cooperating with Enterprise Architecture Team is important, most probably EA teams has an classification domain. Product. Application, Service etc..





What is Product / Project Matrix in Requirements?

- Create **RRC Project Area** for each **Product**,
- Define Requirements according to your process (Agile, Traditional) by Use case, Features, Requirement Enrichment etc. for the **Project**. Requirements related to the **product** created in its own RRC Project Area.
- Define **Project Requirements** in documents like Use Case Specification, SRS, FAD etc. Insert other other Product requirements to the document.
- Newly created or changed requirements are added to a **collection** for each **Product**.
- When project is done, requirements stored as a Product Requirement

Products	Product 1	Product 2	Product 3
Projects				
PRJ 00001	Req1, Req2	Req22, UC2		
PRJ 00002		Req34, UI2	Req34, BP12	
PRJ 00003	Req13, Req34		Req23, UI22,BP2	
...				



Product Based Sample Structures



- Number of RRC Project increases with the number of new Products.
- RRC Project can be achieved after Product dropped.
- Number of Project Collections increase with the number of Projects.



How to configure RRC for project product matrix

- Create RRC Project Area for each Product
- Define Artifact Types, Artifact Attributes, Artifact Link Types according to your Method (agile, traditional).
- Define a Collection type artifact for 'Project Requirement Collection'
- Define your folder structure for the product. Sub-Folders can be used for Sub-Products or Services of the product.
- Define a Folder for Storing the "Project Collections" for that Product
- Define Views for filtering Product related or Project related artifacts



How to configure RRC for project product matrix

- Create RRC Project Area for each Product

All Projects
(clm.ibm.com)

My Projects

iCredit Card (Product)

- Explore Dashboard
- Show Artifacts
- Show Modules
- Manage Project Area

iCustomer Account (Product)

- Explore Dashboard
- Show Artifacts
- Show Modules
- Manage Project Area

iPayment (Product)

- Explore Dashboard
- Show Artifacts
- Show Modules
- Manage Project Area

Active Project Areas >

iCustomer Account (Product)

Preview

Team Area Hierarchy

- ▼ iCustomer Account (Product)
 - ▼ Account
 - Corporate
 - Personal
 - Customer

Summary:

Description:

Process



How to configure RRC for project product matrix

- Define Artifact Types, Artifact Attributes, Artifact Link Types according to your Method (agile, traditional).

Artifact Types

AGILE

Artifact Types
Project Change Collection
Requirement (UserStory) Enrichment
Supplementary Material
UI Prototypes
User Story Card

Artifact Types

TRADITIONAL

Artifact Types
Product Features
Project Analysis Specification
Project Changes Collection
Requirement
Supporting Materials
UI Prototypes
Use Case Diagrams
Use Case Spec

Artifact Attributes

An artifact attribute defines a kind of value that is maintained. An artifact attribute definition includes a name (e.g., 'Priority') and a data type.

Artifact Attributes	
Name	Data Type
Business Owner	Boolean
Impacted Systems	Boolean
Launch URL	String
Package Info	String
Priority	String
Project ID	Boolean
QM Creation Time	DateTime
Requirement Type	String
Severity	Severity Type
Source Tag	String
Status	String

Artifact Types	Artifact Attributes	Attribute Data Types
Link		
Affected By		
Elaborates		
Implemented By		
Specifies		
Tracked By		
Validated By		
References		
Synonym		
Project Collection Link		



How to configure RRC for project product matrix

- Define a Collection type artifact for 'Project Requirement Collection'

Artifact Types

An artifact type is a definition for a group of objects that serve a similar function in the requirement management process. For example, there may be a need for a user requirement artifact type, a functional requirement artifact type, and a use case artifact type. Use this page to define the artifact types available in this project.

Artifact Types + New Type... Cancel Save

Name	
Project Change Collection	
Requirement (UserStory) Enrichment	
Supplementary Material	
UI Prototypes	
User Story Card	

Name: * Project Change Collection

Icon: Change...

Description: Requirements Collection for Projects

Default Artifact Format: * Collection

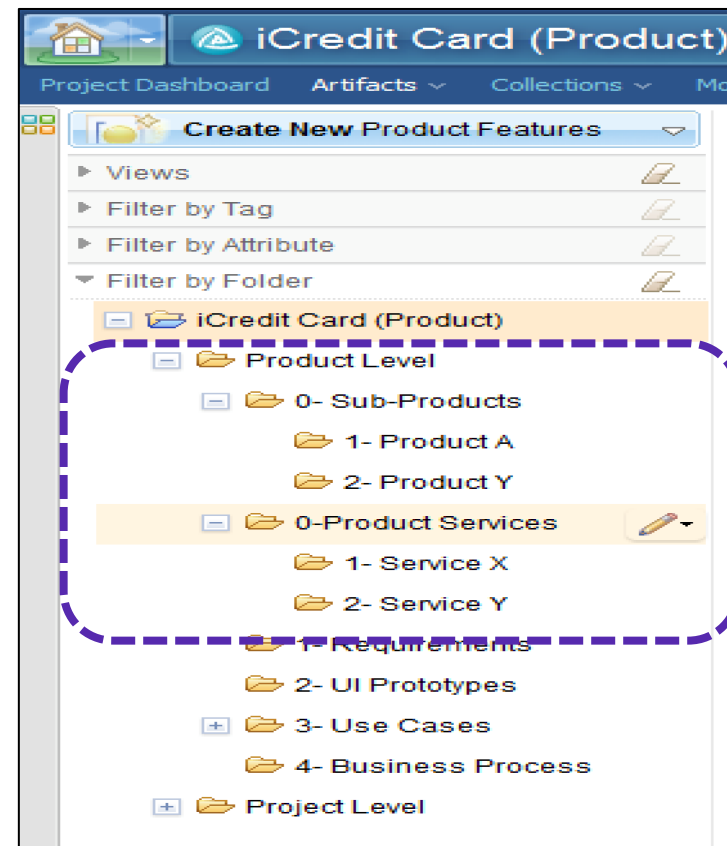
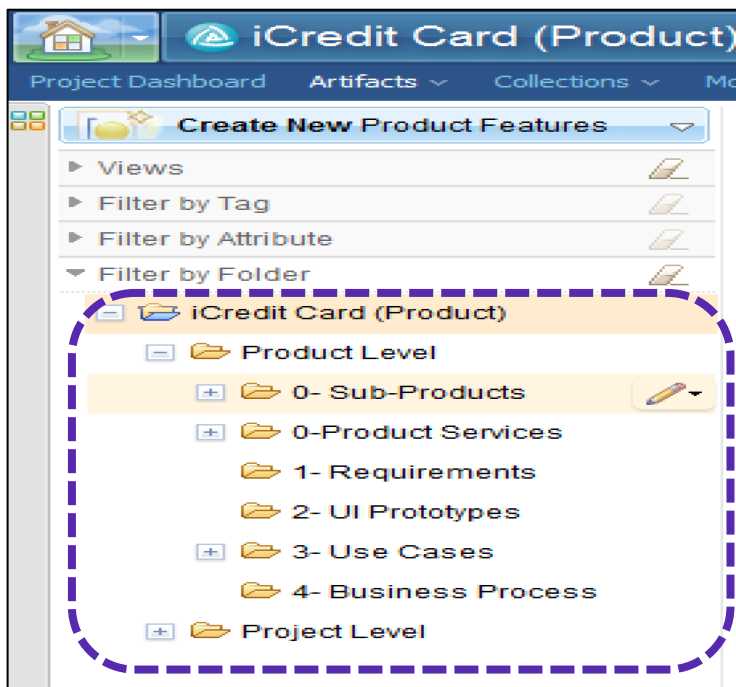
Preferred Link Types: Choose... Copy from...

Artifact Roles: Use artifacts of this type as glossary terms.



How to configure RRC for project product matrix

- Define your folder structure for the product. Sub-Folders can be used for Sub-Products or Services of the product.





How to configure RRC for project product matrix

- Define a Folder for Storing the “Project Collections” for that Product

The screenshot shows the IBM Rational Requirements Composer (RRC) interface for the 'iCredit Card (Product)'. The interface is divided into a left-hand navigation pane and a main content area. The navigation pane shows a tree view of folders, with the 'Project Changes Collection' folder under 'Project Level' highlighted with a dashed blue box. The main content area displays a table of artifacts, also highlighted with a dashed blue box. The table has columns for ID, Name, Artifact Type, Modified By, and Modified On. The artifacts listed are:

ID	Name	Artifact Type	Modified By	Modified On
644	PRJ 10124 - Paying Credit Card From Mobile Client	Project Changes Collection	halil - Dev	May 26, 2013 3:44:59 AM
649	PRJ 998 - Request Credit Card Limit Increase	Project Changes Collection	halil - Dev	May 26, 2013 3:53:29 AM
650	DM 92212 - Changing the interest rate of card	Project Analysis Specification	halil - Dev	May 26, 2013 4:03:24 AM
652	PRJ 9999 - Paying Telecommunication Payment with Credit Card	Project Changes Collection	halil - Dev	May 26, 2013 4:09:48 AM



How to configure RRC for project product matrix

- Define Views for filtering Product related or Project related artifacts

The screenshot displays the IBM Rational Requirements Composer (RRC) interface for the 'iCredit Card (Product)'. The 'Artifacts' view is active, showing a list of 22 artifacts. A dashed blue box highlights a custom view configuration in the left sidebar. The view configuration includes the following filters:

- All PROJECT for the PRODUCT
- All Requirements of PRODUCT
- All UI Sketches of PRODUCT
- Artifacts DO NOT have a linked TESTCASE
- PROJECT requirements linked to TEST PLAN
- PROJECTS linked with CROSS PRODUCT
- Requirement Enrichment linked to SPRINT

The artifact list includes the following items:

ID	Name	Artifact Type	Modified By	Modified On
632	Credit Card UseCases	Use Case Diagrams	halil - Dev	May 30, 2013 5:14:39 AM
633	New Credit Card Appointment	Use Case Spec	halil - Dev	May 26, 2013 12:36:46 AM
634	Listing Credit Card Details	Use Case Spec	halil - Dev	May 26, 2013 12:37:49 AM
635	Paying Credit Card	Use Case Spec	halil - Dev	May 26, 2013 12:38:22 AM
636	Customer	Use Case Spec	halil - Dev	May 26, 2013 12:38:54 AM
637	PRJ 10124 - Paying Credit Card From Mobile Client	Project Analysis Specification	halil - Dev	May 26, 2013 3:21:20 AM
638	Mobile Banking users can list the existing credit	Requirement	halil - Dev	May 26, 2013 12:53:49 AM
639	Mobile Banking users chooses the credit card to pa...	Requirement	halil - Dev	May 26, 2013 3:20:52 AM
640	Mobile Banking users chooses their account which h...	Requirement	halil - Dev	May 26, 2013 3:21:01 AM
641	Mobile Banking users submit the payment and money	Requirement	halil - Dev	May 26, 2013 3:21:12 AM
642	Credit Card List	UI Prototypes	halil - Dev	May 26, 2013 3:43:08 AM
643	iphoneScreen.png	UI Prototypes	halil - Dev	May 26, 2013 3:24:16 AM



Best Practices

- If project is related to more than one product, most of the time one product is the flag ship of the project.
- To view all the requirements in a single document or module Create the document in that product and use INSERT ARTIFACT to add artifacts from the other products into the document.
- If project is related to more than one product, link each collection created in each Product. Because you can only add artifacts to the collection if both are in the same project area.
- If cross product reporting needed, you can use Publishing engine for customized reporting needs



Best Practices

- Use 'tag' for easily finding the artifact in Product.
- Use 'attributes' for easily categorizing the artifacts.
- Create Snapshot after each project is finished. Name the snapshot as Project Name or Code
- Export Project Collection content as a report (custom reports by Publishing Engine)
- Use Link Explorer to trace the product artifacts level or Project collection level
- Needs more maturity to define and manage requirements compared to the Project based.



Benefits of Product & Project Matrix

- **Centralized repository** for all **product features** (requirements artifact) classified for the projects.
- Having **up-to-date Product Document** (Product Spec, Product Guide, etc.)
- Increased **Reusability** both in requirement level or Lifecycle level
- Possibility to follow **Product based Requirement Change Management**
- **Less dependency** to the Product Owner.
- Increased **reporting** capabilities (Product or Project based)
- **Tracing** the requirement & Test Cases both in project or product level



Constraints of Solution

- Other RRC Projects' artifacts can not be added to a **Module** in different RRC project.
- Other RRC Projects' artifacts (Product Artifacts) can not be added to a **Collection** in different RRC project.
- Because of QM can not have test asset reusability in QM project areas, having a single QM Project Area supporting product with categorization
- Collections can not be linked to work items.

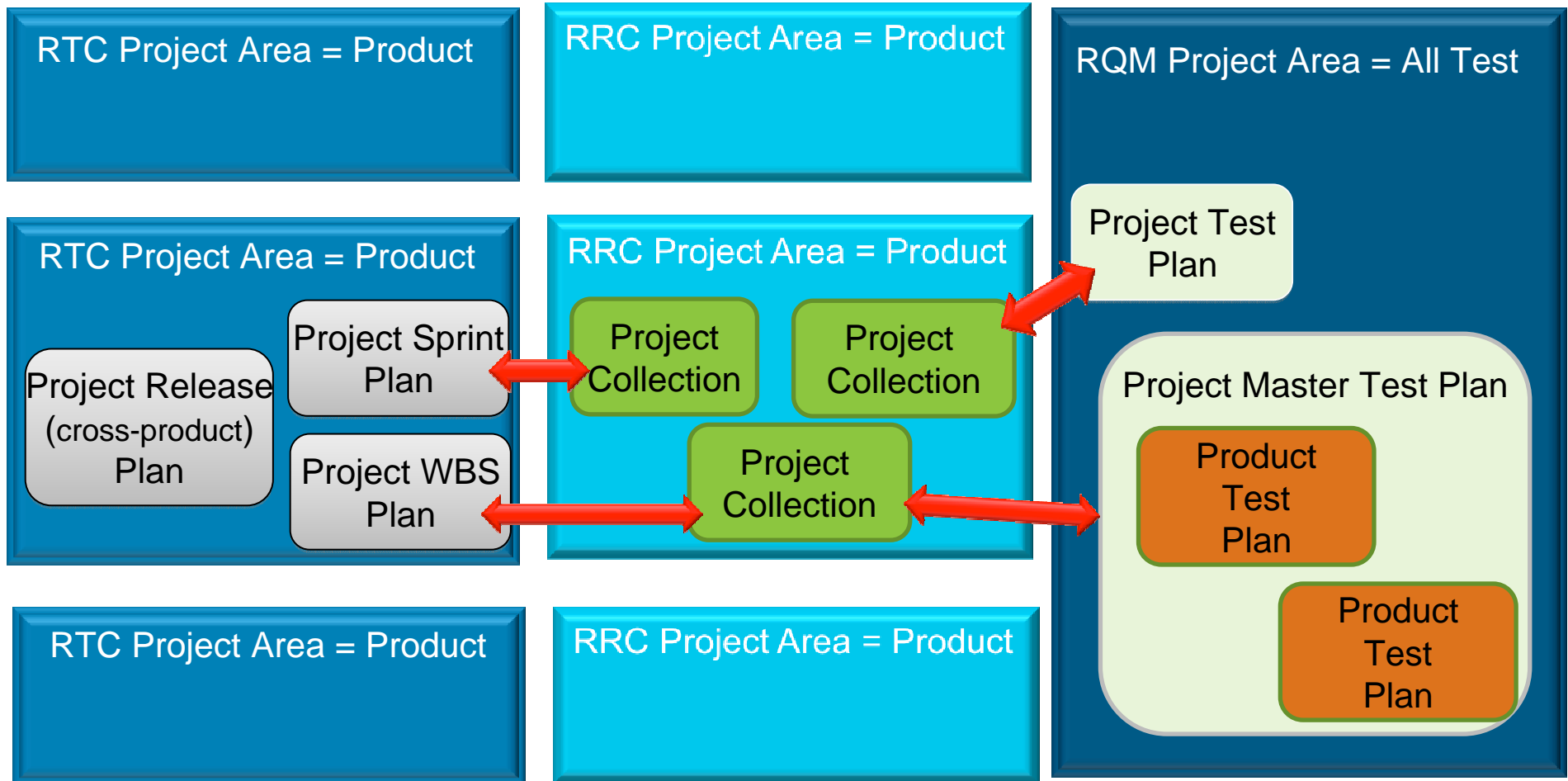


Extending the Solution with Lifecycle Disciplines

Planning – Change Management

Requirement Management

Quality Management



Questions



Thank You

