

Telelogic® Focal Point Product Portfolio Management Configuration Add On™ 1.0

Deployment Guide

Version 1

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Introduction

The Telelogic Focal Point Product Portfolio Management Configuration Add On contains a pre-configured workspace intended for customers who want a starting point for their configuration of their Focal Point application.

This workspace should be imported into Focal Point and can be used right away without changes. However, most likely it's tailored to suit the needs of the customer. One of the strong advantages of Focal Point over other solutions in the product portfolio management space is its configurability. Chances are that there is a need to slightly tweak or extend the workspace to best fit within the way you want approach product portfolio management. This deployment guide will provide guidance to both required and optional activities. It will also provide you with details about how the workspace is built in to make it easier to tailor.

This guide was created in support of the following versions:

- Focal Point 6.3 03 (or later)
- The pre-configured workspace in the Telelogic Focal Point Product Portfolio Management Configuration Add On (version 1.0)

Installation

Prerequisites

In order to install the Product Portfolio Management workspace you first need have an installation of Focal Point 6.3 03. Please refer to the Focal Point installation guide available on the [IBM Rational Support Site](#) for instructions on how to install Focal Point.

You also need to have access to a global and workspace administrator account in order to do the required and optional configuration and data changes of the workspace.

How to Install the Product Portfolio Management Workspace

1. After you have installed Focal Point, login to Focal Point with an administrator account.
2. Go to General > Workspaces.
3. Click the Import Workspace button in the bottom frame.
4. Browse to the Product_Portfolio_Management_v1.0.fpz file.
5. Click the OK button in the bottom frame.
6. Make sure that your administrator account is mapped to the Admin member.



7. Click the Import button in the bottom frame. Wait until the import has finished, it will take a few minutes.
8. Open the Product Portfolio Management workspace by clicking the Open "Product Portfolio Management" link.

General Focal Point Configuration

There are some adjustments that are necessary to do in order to get started, both in the Focal Point application as such as well as within the imported Product Portfolio Management workspace.

Reorganize Homepages

The original order of the homepage windows for the different roles are not kept intact after the workspace import. You therefore need to reorganize them.

1. Click Members > Members.
2. For each role mentioned below, edit the My Home attribute and use the up/down/left/right arrows to reorganize the windows according to the following (and also make sure that the 'Hide Empty Windows' box is checked):

Role	Left Side	Right Side
Administrator	Welcome to Product Portfolio Management in Focal Point	Configuration Tips
	Process	Ideas For Me to Handle
		What's New for Ideas I have created?
Executive Stakeholder	Welcome to Product Portfolio Management in Focal Point	Products (Proposals) With Negative NPV
	Process	Products with Yellow or Red Thresholds for Revenue and/or Cost
	Our Product Portfolio	High Risk Products (Proposals)
		Ideas For Me to Handle
Finance		What's New for Ideas I have created?
	Welcome to Product Portfolio Management in Focal Point	Ideas For Me to Handle
Idea Dispatcher	Process	What's New for Ideas I have created?
	Welcome to Product Portfolio Management in Focal Point	Ideas by Status
	Process	Ideas For Me to Handle
Internal Stakeholder		What's New for Ideas I have created?
	Welcome to Product Portfolio Management in Focal Point	Ideas For Me to Handle

	Process	What's New for Ideas I have created?
Marketing	Welcome to Product Portfolio Management in Focal Point	Ideas For Me to Handle
	Process	What's New for Ideas I have created?
Product Family Manager	Welcome to Product Portfolio Management in Focal Point	Risk Assessment Scorecard for Products in My Product Families
	Process	Financial Threshold for Products in My Product Families
		Ideas For Me to Handle
		What's New for Ideas I have created?
Product Manager	Welcome to Product Portfolio Management in Focal Point	Risk Assessment Scorecard for My Products
	Process	Ongoing Projects for My Products
		Ideas For Me to Handle
		What's New for Ideas I have created?
Product Portfolio Committee	Welcome to Product Portfolio Management in Focal Point	Products (Proposals) With Negative NPV
	Process	Products with Yellow or Red Thresholds for Revenue and/or Cost
		High Risk Products (Proposals)
		Ideas For Me to Handle
		What's New for Ideas I have created?
Project Manager	Welcome to Product Portfolio Management in Focal Point	My Ongoing Projects
	Process	Ideas For Me to Handle
		What's New for Ideas I have created?

Update Business Rules Parameters

There are a number of pre-defined expressions and business rules in the workspace. Some of them needs to be refreshed in order to work as intended, because they contain database ids and those are unique for each Focal Point environment. You will only need to do this once per imported workspace.

The database ids for your environment can be found through the Focal Point user interface. Instructions on how to find them are described in the Focal Point help. Search for “How to find the id number” and follow the instructions.

ListAttributeSum

This business rule calculates the Total NPV in the Product Families module. The class file for this business rule is included in the Product Portfolio Management Configuration Add On package you downloaded from IBM's site.

1. Go to Advanced > Business Rules
2. Click the 'Add Business Rule' button in the bottom frame.
3. Browse to the class file and click OK to save.
4. Open the demo workspace and go to Configure > Attributes > Product Families > Total NPV.
5. The format of the business rule is currently:
=ListAttributeSum("398","333","1151","13",'Products','listen_to=Status','listen_to=NPV')
6. The numbers represent database ids that are unique for each Focal Point environment. Replace the ids (see below) to those of your environment:

Id	Explanation
398	This is the attribute id of the Products attribute in the Product Families module.
333	This is the element id of the view “View for calculating Total NPV” in Configure > Views > Products.
1151	This is the attribute id of the NPV attribute in the Products module
13	This is the element id of the admin member (Members > Members > Administrator > Admin).

7. Once the ids have all been updated, click the 'Copy Default Value To All Elements' button in the bottom frame.

LinkInfo

LinkInfo is a business rule that is used in several modules. It contains a parameter called 'member id' that needs to be refreshed. Use the id of the admin user in the workspace.

LinkInfo is used here:

Module	Attribute
Products	Related Ideas
Products	Related Projects
Product Families	Related Product Details
Product Families	Product Financial Information Threshold
Market Plans	Market Problem Info
Market Plans	Product Info

Update the LinkInfo Business Rule:

1. Click Configure > Attributes > *Select the module* (see table above) > *Select the attribute* (see table above).
2. In the attribute Default Value you will find the business rule, e.g:
=LinkInfo("Market Problems","Description","13','Market Problems','listen_to=Description")
3. Replace the parameter "13" with the id of the admin member in Members > Members.
4. Click the Copy Default Value To All Elements button in the bottom frame.
5. Click OK in the pop-up window. The business rule has been updated.
6. Repeat for all LinkInfo business rules.

SetChoice

1. Click Configure > Attributes > Projects > SetChoice
2. In the attribute Default Value you will find the business rule, e.g:

=SetChoice("647","426","false","426_1","427_2","428_3","Difference")
3. The numbers represent database ids that are unique for each Focal Point environment. Replace the ids (see below) to those of your environment:

Id	Explanation
647	This is the attribute id of the Time Threshold attribute in the Projects module.
426	This is the Choice item id for On Schedule (the first in the list) in the Time Threshold attribute in the Projects module.
427	This is the Choice item id for Take Caution (the second in the list) in the Time Threshold attribute in the Projects module.
428	This is the Choice item id for Delayed (the third in the list) in the Time Threshold attribute in the Projects module.

4. Once the ids have all been updated, click the 'Copy Default Value To All Elements' button in the bottom frame.

Specific Focal Point Configuration

There are also some adjustments that need to be done in the workspace so that it becomes compatible with the new server environment.

Application Settings

In order for Focal Point to be able to deliver account information and e-mails to users, process notifications (if any), forward exceptions to an administrator etc, you need to make sure that the e-mail settings are correct. It may be necessary to engage the IT staff to determine the proper settings.

1. Click Application > Mail. You will now edit some of the settings for the application by double-clicking to edit.
 - a. Set the SMTP Host and SMTP Port attributes per your environment.
 - b. Set the Focal Point Server Mail Name to the name that appears in the From field in e-mails sent from Focal Point.
 - c. Set the Focal Point Server Mail Address to the inbox established for handling system-related e-mails.
 - d. Set the Default Mail Footer, if desired, to provide for example a support number to call.
 - e. Set the desired Mail Format (HTML, Plain Text, or Mixed).
2. Go to Application > Support/Contact and set the Support and Contact Information attributes if desired.
3. Go to Application > Login Page and set the Login or Balancer URL to the appropriate string. It should be the same URL normally used to log in to Focal Point, e.g. `http(s)://focalpoint.example.com/fp/servlet/Login`.

Update Configuration Data

The Product Portfolio Management workspace is configured in a way that it includes references to for example markets and checkpoints that you might want to update according to the new environment.

Update Markets

1. Go to Modules > Criteria > Markets > Geographic Markets. Another type of segmentation than geographic might be used. If so, update the folders for Markets.
2. Update the names of the markets to reflect the wanted markets. You can add and delete markets by clicking the Add Criterion or Delete buttons in the bottom frame.
3. Open the User Requests Criteria folder and then the Market Requirements Specific folder.
4. Update the names of the markets.

Update Strategic Objectives

1. Go to Modules > Criteria > Strategic Objectives.
2. Update the Title of the strategic objectives to reflect the wanted strategic objectives.

Update Qualities

Qualities are used in combination with the Prioritize and Visualize features for User Requests. They are for example used to prioritize the different products.

1. Go to Modules > Criteria.
2. Open the Qualities folder.
3. Update the names of the qualities to reflect the wanted qualities. You can add and delete qualities by clicking the Add Criterion or Delete buttons in the bottom frame.

Update Checkpoints

Checkpoints are used for the Review feature. The product manager reviews new user requests and the development project manager reviews the releases before they are delivered. The checkpoints are what user requests and releases are measured against.

1. Go to Modules > Checkpoints. There are two sub folders; Releases and User Requests.
2. Update the names of the checkpoints to reflect the wanted checkpoints. You can add and delete checkpoints by clicking the Add Checkpoint or Delete buttons in the bottom frame.

Add and Update Images

1. Go to Modules > Images.
2. Click the *Process* element. To change process image, double-click on the row below "Process" and then browse to the new process image file. This image will be displayed on the homepage of all users.
3. Click the *IBM* element. To change the logo image, double-click on the *Title* row and browse to the new logo image file.
4. Go to Configure > Views > Images > Logo.
5. Edit the *View Definition* and update the rule to contain the name of file.

Update Time of Availability

1. Go to Configure > Ideas > Time of Availability > Click here to add and edit choice items
2. Here is a list of quarters per year. Replace their names to relevant time units by opening the links and entering a new name.

Note: This needs to be done on regular basis by an administrator. Make sure that this task is assigned to the right person.

Update Market Sizes

1. Go to Configure > Modules > Market Sizes.
2. Uncheck the Hide Module attribute.
3. Click OK. The Market Sizes module will now be visible under Modules.
4. Go to Modules > Market Sizes.
5. Update the elements:
 - a. Select Geographic Market

- b. Select Product Family
- c. Enter the Total Market Size (\$k) for the particular product family on the particular geographic market.
- d. Make the title reflect both geographic market and product family, e.g. "Microwave Oven in South America" or "Refrigerator in Asia".
6. Go to Configure > Modules > Market Sizes.
7. Check the Hide Module attribute.
8. Click OK. The Market Sizes module will now be invisible under Modules.

Add Data

In order to import user requests, product requirements or any other type of elements to Focal Point, you first need to have them in an Excel file. Required columns are *Id* and *Title*, but you can import information to basically any attribute in the module.

You need to organize your imports in a certain order, so that links between elements can be set. If you for example have a link from your user requests to your projects, you need to import the projects first. When you then import the user requests you can include a link column in your Excel file with links to the projects and these links will then be automatically created during the import.

To Import

1. Click Modules and select the module in which you want to import your elements.
2. Click the Import <Module Name> button in the bottom frame.
3. Browse to the Excel file.
4. Click OK in the bottom frame.
5. Make sure that your columns in the Excel file matches the attributes in Focal Point.
6. Click Import in the bottom frame to start importing. Do not use the browser until the import has finished.

Add Users

To add users you need to do two things. First add the users to the database and then add them to the workspace.

Add users to the database

1. Outside the workspace, click Users > Manage Users.
2. Click Add User in the bottom frame.
3. Enter Full Name, User Name, and E-Mail address for the user.
4. Click OK in the bottom frame.

Add users to the workspace

1. Open the Product Portfolio Management workspace.
2. Click Members > Members.
3. Click the folder you want to add the users to. Each folder represents a role (Refer to [Main Roles](#)).
4. Click Add Member in the bottom frame.

5. Search for the user you want to add to the workspace (or press Enter to list all users).
6. Select the user you want to add by checking the checkbox for the user.
7. Optional: Search for the next user you want to add and check the checkbox for that user. Continue until you've checked all users you want to add.
Recommended number of users to add to a workspace simultaneously is 50-100.
8. Click Next in the bottom frame. Wait until the next page has finished loading. This could take some time depending on how many users you add in one go.
9. Click Finish in the bottom frame. Wait until the users have been added. This could also take some time depending on how many users you add in one go.
10. Verify that the user inherits access to views from the role by marking the user you just added. Edit the attribute Inherit From and select Parent Folder.

Add multiple users

An alternative way of adding users is to add multiple users in the database. For this you must first have all your users in an Excel file. Required columns are Full Name and User Name, but we also recommend E-mail and Access.

1. Outside the workspace, click Users > Manage Users.
2. Click Import Users in the bottom frame.
3. Browse to the Excel file in which you keep your users.
4. Click OK in the bottom frame.
5. Make sure that your columns in the Excel file matches the attributes.
6. Click Import in the bottom frame to start importing. Do not use the browser until the import has finished.

Send User Name and Password to Users

1. Click Members > Members
2. Mark the users to whom you want to send user name and password. Please note that the users must have a valid e-mail address.
3. Click Send Account Information in the bottom frame.
4. Write a message to the users. The user name, password and the login URL will be included automatically.
5. Click OK in the bottom frame to send the information by e-mail.

Archiving Data

The need for archiving in one way or another will come sooner or later, so make sure that you have a plan for archiving the data. Depending on the amount of data that is planned to be stored in Focal Point, you might also need to rethink the configuration with regards to modules, views and attributes. A first plan could be to have a status to archive elements. Elements in this state are not included in views. When the module becomes too heavy, you can introduce a separate module or workspace to which old data is moved.

Modules

There are 20 modules in the Product Portfolio Management workspace that are used. You find them in Configure > Modules. A general description for each module is given below in order to provide you with an introduction to how they are intended to be used.

Ideas

This module functions as a repository for ideas. This is where new ideas are added, investigated and analyzed. If an idea gets approved it is then handled as either a product proposal or user request.

Products

The 'Products' module contains the whole product portfolio with all new product proposals to all retired products. A product can be described as anything that can be offered to a market to satisfy some need or request. This can either be a service or a physical thing. The 'Products' module supports the use of both high level and detailed level business cases as well as retirement plans. It also contains all competitor products (in a separate folder) in order to make it easy to compare the own products with those of competitors.

Product Families

A product family is a group of products. This module is supporting the 'Products' module in order to organize the products and is therefore linked to the 'Products' module. Every product family has a product family manager.

Market Problems

The 'Market Problems' module is used to store actual problems that have been identified with specific markets. Market-driven products should always address a problem that exists in the market, and relating market problems to user requests is a good compass for verifying that your products stayed aligned to addressing real problems.

Market Plans

The 'Market Plans' module is a repository for the documents that are written to detail the actions necessary to achieve a specified marketing objective. Market plans may cover a product, a market or a project and may be created for a single year or several years (e.g. a five year plan).

A market plan may be part of an overall business plan. Solid marketing strategy is the foundation of a well-written market plan. A market plan without a sound strategic foundation is of little use.

Personas

Personas describe the fictitious characters that are created to represent the different user types within a targeted demographic that might use a product. Personas are given characteristics and are assumed to be in particular environments based on real known users' requests so that these elements can be taken into consideration when creating user stories, scenarios or use cases for the conception of a product.

Personas are said to be cognitively compelling because they put a personal human face on otherwise abstract data about customers. By thinking about the needs of a fictional character, one will be able to understand what a real user/consumer might need.

Customers

A customer is someone who makes use of or receives our products. In the case of the Product Portfolio Management workspace, the customer can be either an individual or an organization/retailer, depending on the types of products you develop. The Product Portfolio Management workspace also allows for the differentiation of customers as active or prospective so you can include those customers that eventually become customers, or those that do not, but offered significant requests that you want to consider for the future. Prospective customers are also linked to 'Win/Loss Reports' when they are either won or lost.

The 'Customers' module is to be used for capturing your customers, i.e. the people who buy your product. You can also create login accounts for your customers. They could then be referred to as external stakeholders (a separate role needs to be created for this purpose).

Competitors

The 'Competitors' module is for use to capture and help analyze those companies and organizations that are considered as competition for the product or products being implemented. Competitor products can be added to the 'Products' module so that you can capture competitive intelligence at the product level, as well as at the company level. Through this association, you can build comparisons of your products against the competition's products and understand strengths, fits, and value provided to particular markets.

Win/Loss Reports

Win-loss analysis is the uncovering and analysis of the specific reasons why a prospective customer was or wasn't persuaded to buy a certain product. This information allows mainly product managers to have the information that helps them improve marketing, development, and sales efforts and to better satisfy the needs of potential customers.

Projects

A project is created to support for example an implementation or retirement process for a product where you need to create a schedule for different tasks to

be performed and keep track of cost (e.g. man hours). Each project is planned to use a certain amount of resources based on its content and when it needs to be completed. The content is typically specified in one or several user requests.

User Requests

The 'User Requests' module is used to store all requests for enhancements on existing products in the portfolio. User requests can be categorized as enhancement requests or market requirements. Typically, the user requests are prioritized by a product manager and then planned to be implemented in a certain project related to the product in question.

Meeting Minutes

The 'Meeting Minutes' module has the providing the approval process for ideas and products with support for storing details about decisions taken, e.g. who was attending the approval decision meeting, when did it occur, what decisions were taken etc.

Criteria

Apart from storing the typical criteria used during prioritization and visualization of elements, the 'Criteria' module also contains geographical markets one targets and the list of strategic objectives one is striving to fulfill.

Checkpoints

An administrative module containing the checkpoints against which you review elements (only used in the Review feature in Focal Point). Can be used to for example review a project in order to ensure that all deliverables are ready before one approves the project as complete.

Images

An administrative module containing images used in the workspace.

How to...

A module containing tips and recommendations for workspace administrators. Elements in this module are displayed on the homepage for the Administrator role.

Use Cases

A module containing typical user scenarios for product portfolio management and how they can be carried out in the Product Portfolio Management workspace. The same user scenarios can also be found in this user guide (see below). The *Use Cases* module is intended to be used by administrators as a means to understand how different use cases are related to different parts of the configuration (e.g. process workflow, attributes, roles and views).

Supporting Module

A hidden module that only contains one element, Internal Rate, by default. The value of the attribute Float is used to calculate NPV in the 'Products' module.

Market Shares

A hidden module that has a supporting role for the market share information in the 'Products' module.

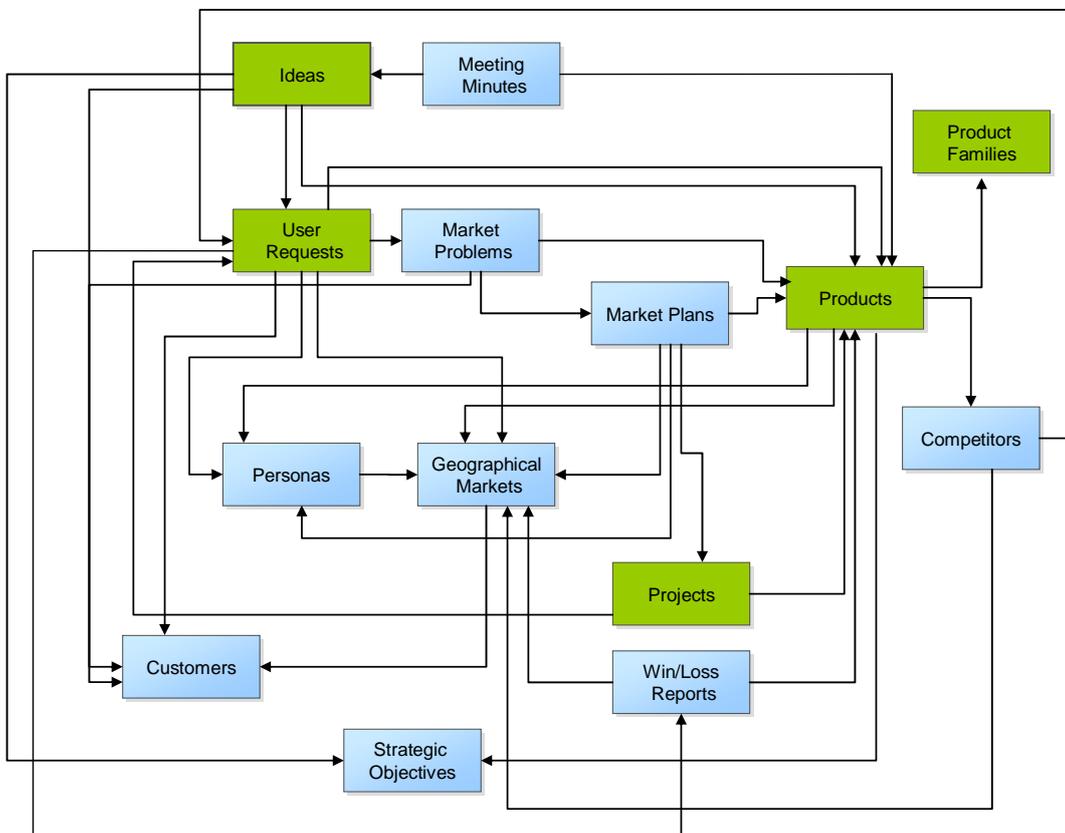
Market Sizes

A hidden module that has a supporting role for the market share information in the 'Products' module.

Information Model

Below is a detailed representation of the information model for data in the Product Portfolio Management workspace with arrows indicating how the modules are linked to each other. Note that Geographical Markets and Strategic Objectives both reside in the Criteria module (for technical reasons) and that administrative and hidden modules have been excluded from the chart.

The green colored boxes represent modules that are closely integrated with the process whereas the blue colored boxes represent modules that supports the process in that they build up the structure around it. An outgoing link in chart below is equivalent to one or several outgoing links in the workspace and similarly an incoming link in the chart is equivalent to an incoming link in the workspace.



Roles

Main Roles

Any member of the Product Portfolio Management workspace should belong to a certain role. The user should be placed in the folder of their *main* role in Members > Members.

Executive Stakeholder

Any person who has any type of executive role can be given the main role of Executive Stakeholder. Having this role gives you access to views of for example ideas, products, product families, competitors, customers, projects and strategic objectives. However, a person with this role only does not play an active part in the process of turning an idea to a real product. The role is more about monitoring progress and being able to give input on strategy and direction.

Finance

This role can be assigned to people who work in finance in the company. Having this roles gives you access to views of ideas, products and customers. Only the financial attributes of the product can be edited. The Finance role can also edit the internal rate used.

Idea Dispatcher

The main responsibility of an idea dispatcher is to look at all submitted ideas and make the first screening. If the idea has potential it's allocated to be investigated. The idea dispatcher edit access for ideas but mainly read access to products, projects, markets, customers etc.

Internal Stakeholder

An internal stakeholder can be any person who should have access to the workspace, but who does not necessarily have one of the already defined roles. It can be used for people who need to use the information about the portfolio. Typically, they could be sales persons, development managers, internal investigators or analysts, business developers, designers etc. Having this role gives you access to ideas mainly, but also read access to for example products, projects, markets, customers etc.

Marketing

This role can be assigned to people who work in marketing in the company. Having this role gives you access to ideas, products (including edit access for the marketing-related attributes), the product roadmap, competitor products and competitors, market problems, market plans, win/loss reports, projects etc.

Product Family Manager

A product family manager is responsible for one or several product families and allocates new product proposals to be investigated by a product proposal investigator. Having this role gives you access to ideas, products, the product roadmap, product families, customers, competitors etc. The product family manager can monitor the progress of products in his or her product families.

Product Portfolio Committee

The product portfolio committee plays a central role in this workspace. It is the responsibility of this group to make investment or replacement/retirement decisions about product proposals and products. Having this role gives you access to ideas, products, product roadmap, customers, competitors, meeting minutes etc. You can also edit the internal rate and update the strategic objectives. On the homepage there are windows for monitoring products with high risk score, negative NPV, red or yellow traffic lights for revenue and cost.

Product Manager

A product manager is responsible for the content of one or several products and plays an active role during the implementation of a product. He or she works closely with members of the product portfolio committee as well as project managers. Having this role gives you access to update information about products you are the manager of, create and monitor roadmaps and projects, fill in win/loss reports, update market information, analyze and plan user requests etc.

Project Manager

The project manager is responsible for one or several projects. He or she makes sure that the projects are carried out by the right resources on time and within budget. Having this role gives you access to add new projects and monitor their progress, view the product roadmap and plan and update user requests.

Secondary Roles

Sometimes one needs to select a certain person for a task, e.g. being responsible for investigating an idea. Any person can be assigned a secondary role in order to perform that task. Therefore, there are three secondary roles who serve that purpose. They are all necessary to support the process.

Secondary roles are added in Members > Members > [Select member] > Secondary Roles.

Idea Approver

A person who apart from their main role scans ideas and approves or rejects them. Alternative states are Clarify and Duplicate.

Idea Investigator

A person who apart from their main role investigates ideas. The investigation involves business value, cost, possible implementation, feasibility etc.

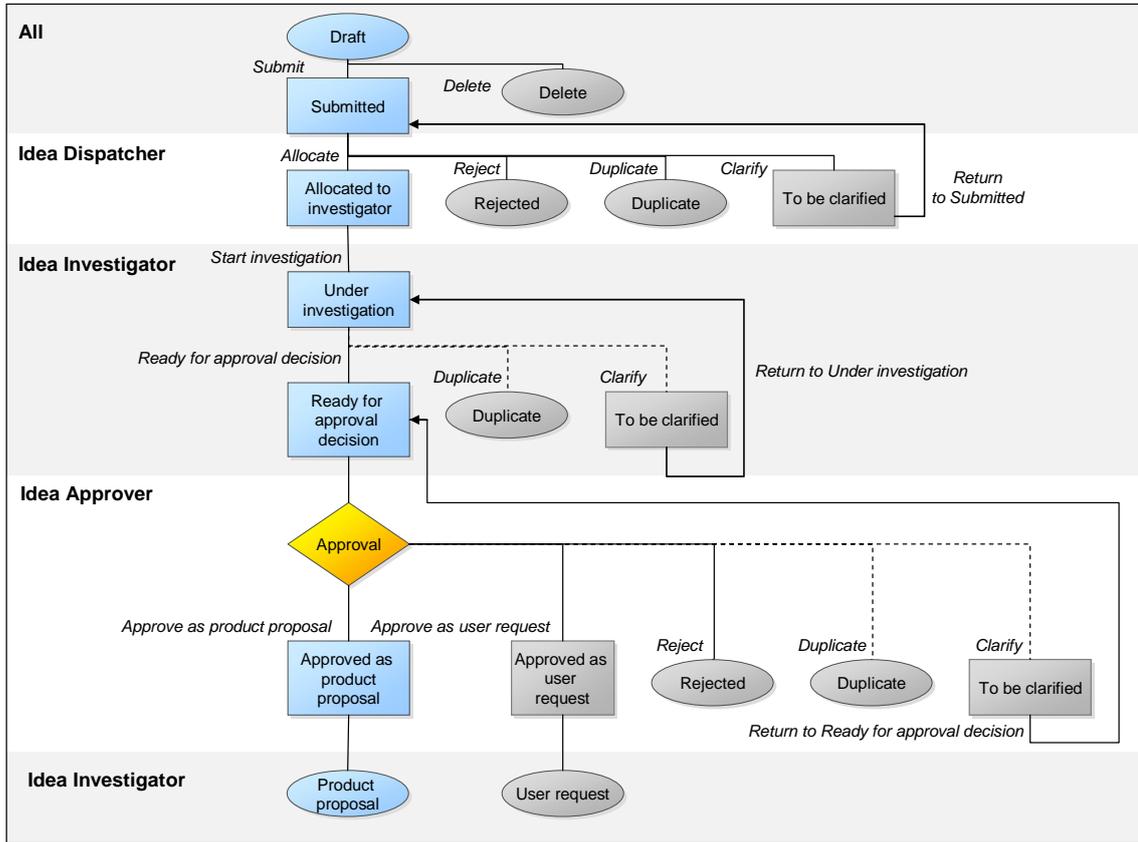
Product Proposal Investigator

A person who apart from their main role investigates product proposals. The investigation involves creating first a high-level business case (e.g. strategic fit, SWOT analysis, identification of markets and competitors, revenue and cost estimations). If the product proposals scores high in the prioritization done by the product portfolio committee, the product proposal investigator also creates a full business case (e.g. product vision, full market and competitor analysis, risk assessment).

Process

Views that support the process included below.

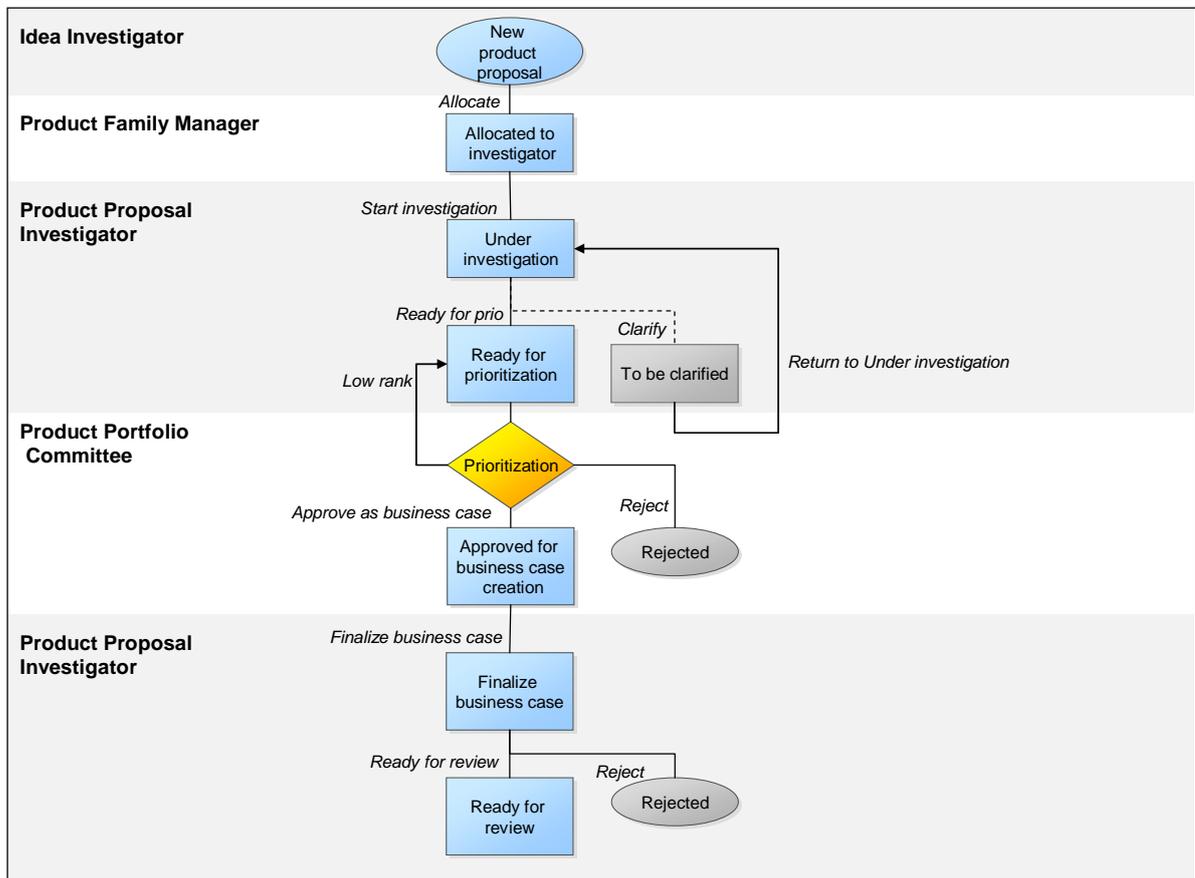
Idea Management



Status	Views	Members who have view
Draft	Add > Idea	All members
	Display > My Draft Ideas	All members
Submitted	Display > Submitted Ideas	Idea Dispatcher
	Display > My Submitted Ideas	All members
Allocated to investigator	Display > Ideas For Me to Handle	Idea Investigator
Under investigation	Display > Ideas For Me to Handle	Idea Investigator
Ready for approval decision	Display > Ideas Ready for Approval Decision	Idea Approver
Approved as product proposal	Display > Ideas For Me to Handle	Idea Investigator
Approved as user request	Display > Ideas For Me to Handle	Idea Investigator
Delete	Display > Delete – Ideas	Administrator
Rejected	Display > Ideas	Executive Stakeholder, Finance,

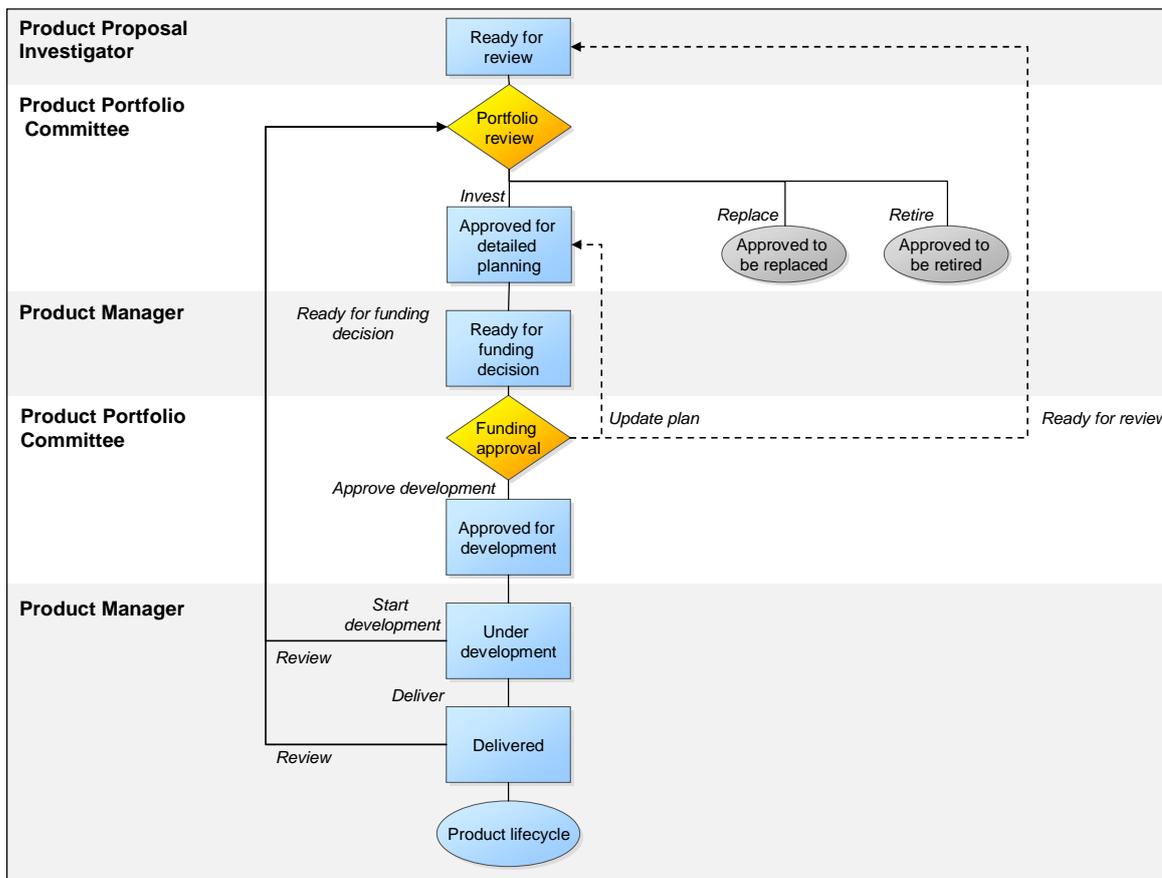
		Idea Dispatcher, Internal Stakeholder, Marketing, Product Family Manager, Product Manager, Product Portfolio Committee, Project Manager
Duplicate	Display > Ideas	Executive Stakeholder, Finance, Idea Dispatcher, Internal Stakeholder, Marketing, Product Family Manager, Product Manager, Product Portfolio Committee, Project Manager
To be clarified	Display > Ideas For Me to Clarify	All members

Product Proposal



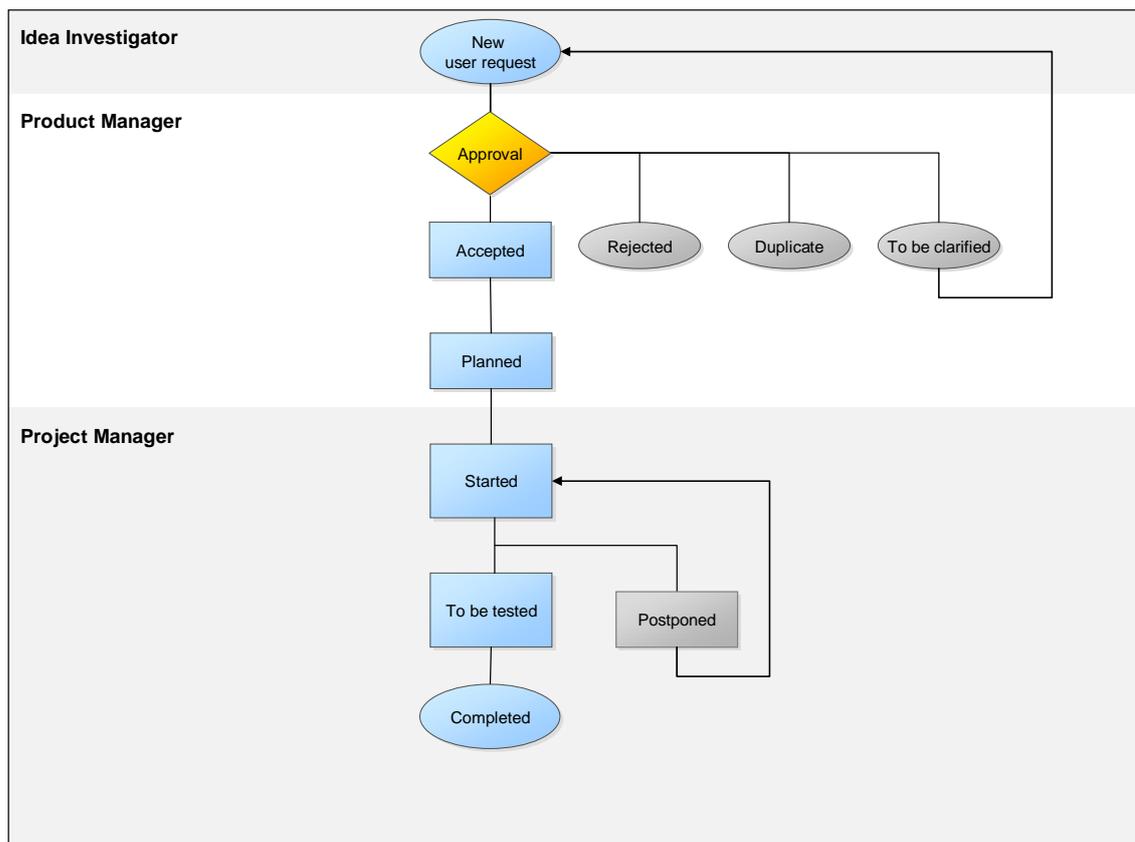
Status	Views	Members who have view
Product proposal	Add > Product Proposal	Idea Investigator
	Display > New Product Proposals	Product Family Manager
Allocated to investigator	Display > Product Proposals For Me to Handle	Product Proposal Investigator
Under investigation	Display > Product Proposals For Me to Handle	Product Proposal Investigator
Ready for prioritization	Prioritize/Visualize > Product Proposals to Prioritize, Strategic Objectives Criteria for Prio	Product Portfolio Committee
Approved for business case creation	Display > Product Proposals For Me to Handle	Product Proposal Investigator
Finalize business case	Display > Product Proposals For Me to Handle	Product Proposal Investigator
Ready for review	Display > Products (Proposals) Ready For Review	Product Portfolio Committee
To be clarified	Display > Product Proposals For Me to Clarify	All members

Portfolio Review & Development



Status	Views	Members who have view
Ready for review	Display > Products (Proposals) Ready For Review	Product Portfolio Committee
Approved for detailed planning	Display > My Products To Manage	Product Manager
Ready for funding decision	Display > Products (Proposals) Ready For Funding Decision	Product Portfolio Committee
Approved for development	Display > My Products To Manage	Product Manager
Under development	Display > My Products To Manage	Product Manager
Delivered	Display > My Products To Manage	Product Manager
Approved to be replaced	Display > My Products To Manage	Product Manager
Approved to be retired	Display > My Products To Manage	Product Manager

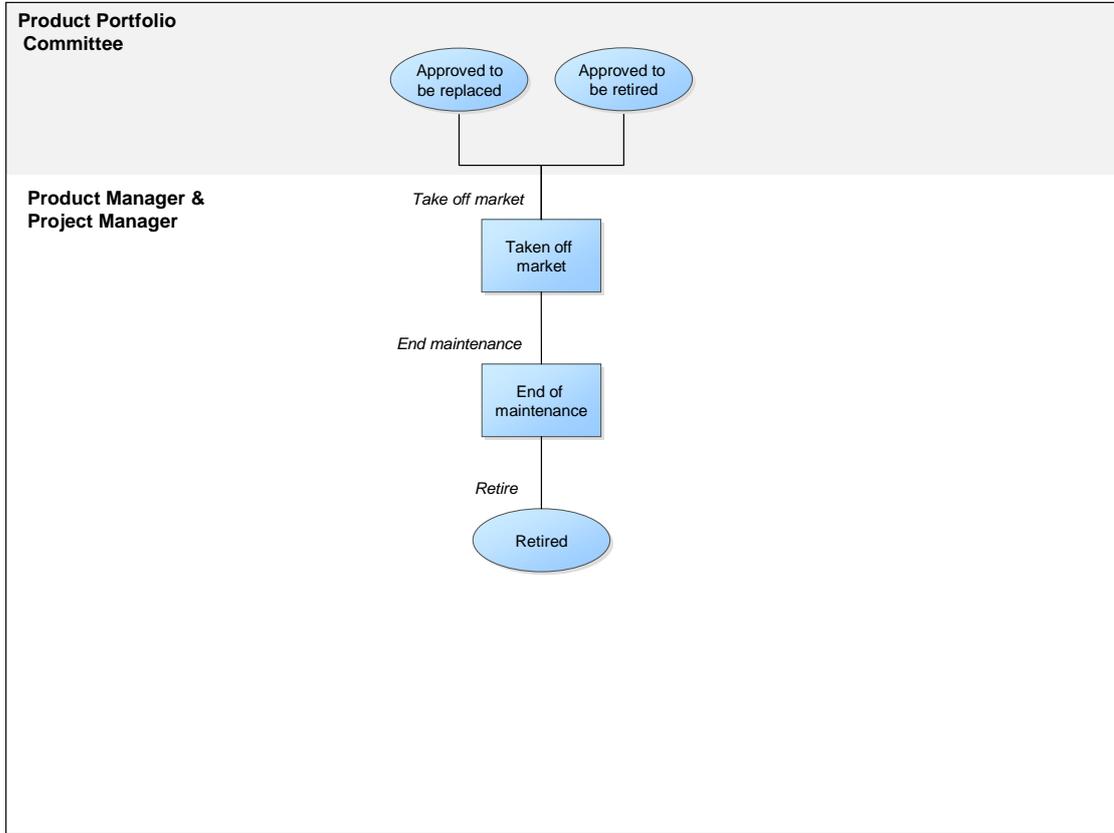
User Requests



Status	Views	Members who have view
New	Add > User Request	Idea Investigator, Product Manager, Project Manager
	Display > User Requests	Idea Investigator, Product Manager, Project Manager
Accepted	Prioritize/Visualize > User Requests (All prio)	Product Manager
Planned	Display > User Requests to Estimate	Product Manager, Project Manager
Started	Display > User Requests	Idea Investigator, Product Manager, Project Manager
To be tested	Display > User Requests	Idea Investigator, Product Manager, Project Manager
Completed	Display > User Requests	Idea Investigator, Product Manager, Project Manager
Postponed	Display > User Requests	Idea Investigator, Product Manager, Project Manager

In this process, user requests are gathered either as ideas or through communication with the product manager who adds them to Focal Point. It is reasonable to assume that there are situations where you might want to include the user requests in their product portfolio reviews. A solution to that could be to transfer accepted user requests to the products module as product changes and then include them in the review.

Retirement & Replacement



Status	Views	Members who have view
Approved to be replaced	Display > Products To Be Retired	Executive Stakeholder, Marketing, Product Family Manager, Product Manager, Product Portfolio Committee, Project Manager
Approved to be retired	Display > Products To Be Retired	Executive Stakeholder, Marketing, Product Family Manager, Product Manager, Product Portfolio Committee, Project Manager
Taken off market	Display > Products To Be Retired	Executive Stakeholder, Marketing, Product Family Manager, Product Manager, Product Portfolio Committee, Project Manager
End of maintenance	Display > Products To Be Retired	Executive Stakeholder, Marketing, Product Family Manager, Product Manager, Product Portfolio Committee, Project Manager
Retired	Display > Retired Products (r/-)	Executive Stakeholder, Marketing, Product Family Manager, Product Manager, Product Portfolio Committee

Workflow

Workflow is set up for two modules; Ideas and Products (The definition of the workflow is found in Configure > Workflow.). The workflow is based on the Status attribute in each module. The purpose of the workflow is twofold. First of all, the workflow definition enforces the process of moving an idea or product from one state to another where only certain defined transitions should be possible to do. The second purpose is to control which attributes should be editable, visible but not editable or hidden for each state and also which attributes should be editable or visible during a transition from one state to another.

Some of the views based on the 'Ideas' and 'Products' modules uses workflow, while some don't. Views that are *not* using workflow will work just as normal, i.e. attributes will be editable, visible or hidden all according to the access level you have defined for that view. However, if a view *is* using workflow, the access level of the workflow will affect what the user can see and do.

In the Product Portfolio Management workspace the following principles have been applied:

- Views that are *not* used for transitions do not use workflow. The Status attribute is visible but not editable in order to prevent transitions.
- Views used for transitions and views showing ideas or products of several states are using workflow. The Status attribute is then visible at the top of each element's attribute list in the view, with all possible transitions available.

Ideas

Below is a list of all views based on the 'Ideas' module that use workflow. There are brief descriptions on how configuration has been done to make it easier to understand and, if needed, also change.

My Draft Ideas

View definition: All elements in the Ideas module whose type is a folder is false AND Submitter is Current user AND Status is Draft.

Workflow has only been applied in order to allow transitions for the person who added the idea (any member). Therefore all attributes are set to "As View" in the workflow.

Submitted Ideas

View definition: All elements in the Ideas module whose type is a folder is false AND Status is Submitted.

Workflow has only been applied in order to allow transitions for the idea dispatcher. Therefore all attributes are set to "As View" in the workflow.

Ideas For Me to Clarify

View definition: All elements in the Ideas module whose type is a folder is false AND Status is To be clarified AND Submitter is Current user.

Workflow has only been applied in order to allow transitions for the person who added the idea (any member) or the idea investigator. Therefore all attributes are set to "As View" in the workflow.

Ideas For Me to Handle

View definition: All elements in the Ideas module whose type is a folder is false AND Status is (Allocated to investigator OR Under investigation OR Approved as product proposal OR Approved as user request OR To be clarified) AND Responsible is Current user And User Requests number of links is 0 AND Products number of links is 0.

Since this view contains ideas in several states workflow has been applied not only to allow transitions, but also because the ideas should have different attributes editable, visible or hidden depending on the state they are in.

For example, when an idea is in state Allocated to investigator it means that investigation has not yet been started. Only a few attributes are therefore editable or just visible. However, when an idea in state Under investigation more attributes are editable (e.g. Business Mechanism, Level of Effort (hrs) and Market Feasibility) because the investigator should enter data in them during his or her investigation.

Ideas Ready for Approval Decision

View definition: All elements in the Ideas module whose type is a folder is false AND Status is Ready for approval decision.

Workflow has only been applied in order to allow transitions for the idea approver. Therefore all attributes are set to "As View" in the workflow.

Products

Below is a list of all views based on the 'Products' module that use workflow. There are brief descriptions on how configuration has been done to make it easier to understand and, if needed, also change.

New Product Proposals

View definition: All elements in the Products module whose type is a folder is false AND Status is Product Proposal AND Parent Folder is Our Product Portfolio, or any subfolder.

Workflow has only been applied in order to allow transitions for the product family manager. Therefore all attributes are set to "As View" in the workflow.

Product Proposals For Me to Handle

View definition: All elements in the Products module whose type is a folder is false AND Status is (Allocated to investigator OR Under investigation OR Approved for business case creation OR Finalize business case) AND Parent Folder is Our Product Portfolio, or any subfolder AND Responsible is Current User.

Since this view contains products in several states workflow has been applied not only to allow transitions, but also because the products should have different attributes editable, visible or hidden depending on the state they are in.

All products in the states filtered out by the view rule are to be handled by the product proposal investigator (link in the Responsible attribute). This person creates the high level and detailed level business cases during the process of bringing forward a complete product proposal to the product portfolio committee. Because different attributes need to be editable during this process, the workflow for the states has been defined accordingly.

For example, a product in state Allocated to investigator has just been assigned to the product proposal investigator. Only very few attributes are visible and editable. When the product proposal investigator transfers the product to state Under investigation, more attributes will become editable. The same thing happens when the product has been transferred to state Approved for business case creation by the product portfolio committee. The product proposal investigator now has access to edit and see all attributes that together form the full business case.

Product (Proposals) Ready For Review

All elements in the Products module whose type is a folder is false AND Parent Folder is Our Product Portfolio, or any subfolder AND Status is (Ready for review OR Under development OR Delivered).

Since this view contains products in several states workflow has been applied not only to allow transitions, but also because the products should have different attributes editable, visible or hidden depending on the state they are in.

For example, a product in state Ready for review is a product proposal with a complete business case, ready to be reviewed by the product portfolio committee. They will decide whether or not to invest in it. If they decide to invest, a development project will be created and the result will be a finished product. A delivered product, on the other hand, is out for sale on the market. One has therefore already started to think about its future retirement, so the retirement plan attributes are visible and editable.

Product (Proposals) Ready For Funding Decision

All elements in the Products module whose type is a folder is false AND Parent Folder is Our Product Portfolio, or any subfolder AND Status is Ready for funding decision.

Workflow has only been applied in order to allow transitions for the product portfolio committee and the product manager. Therefore all attributes are set to "As View" in the workflow.

My Products To Manage

All elements in the Products module whose type is a folder is false AND Parent Folder is Our Product Portfolio, or any subfolder AND Status is (Approved for detailed planning OR Approved for development OR Under development OR Delivered OR Approved to be replaced OR Approved to be retired OR Taken off market OR End of maintenance) AND Product Manager is Current user.

Since this view contains products in several states workflow has been applied not only to allow transitions, but also because the products should have different attributes editable, visible or hidden depending on the state they are in.

For example, products that have passed the state Delivered, i.e. they are available on the market, have the retirement plan attributes visible and editable, in order to make it possible for the product manager to think about how and when a product shall eventually be retired and taken off the market.

Product Proposals For Me to Clarify

All elements in the Products module whose type is a folder is false AND Status is To be clarified AND Creator is Current user.

Workflow has only been applied in order to allow transitions for the product portfolio committee and the product proposal investigator. Therefore all attributes are set to "As View" in the workflow.

Microsoft® Project™ Integration

Preparations have been made in the workspace configuration to set up integration with MS Project. The *Projects* and *User Requests* modules contains attributes to be used for this purpose.

Besides having MS Project installed, it is necessary for the user to also have the MS Project Add-in installed on the client computer in order to set up and use the integration between Focal Point and MS Project.

1. Open Microsoft Project.
2. Click the *Set up Focal Point integration* button.
3. Enter *Web Services URL*, e.g. <https://example.com/fp/services> where "example.com" is replaced with the customer's Focal Point domain.
4. Enter your login name and password.
5. Click the *Login >* button.
6. Select *Workspace*: Product Portfolio Management.
7. Select *Projects View*: For example My Projects.
8. Select *Project Element*: the project in question.
9. Map properties in MS Project with attributes in Focal Point, for example:

MS Project Property	SyncDirection	Focal Point Attribute
Name/Title	<->	Title
Start Date	->	Planned Start Date
Finish Date	->	Planned End Date
Responsible	<-	Project Manager
Tasks	<->	User Requests
Estimated Cost	->	Total Estimated Time
Actual Cost	->	Total Actual Time

10. Click the *Next >* button.
11. Select *View*: For example User Requests.
12. Map fields in MS Project with attributes in Focal Point, for example:

MS Project Field	SyncDirection	Focal Point Attributes
Name	<->	Title
Responsible	<-	Responsible
Start Date	->	Start Date
Finish Date	->	Finish Date
Actual Cost	->	Actual Cost (hrs)
Estimated Cost	->	Cost Estimate (hrs)
Milestone	<->	Milestone

13. Click the *Finish* button.
14. Click *Yes* to synchronize the project file with Focal Point for the first time.
15. Update the project file with the plan.
16. When finished, click the *Synchronize with Focal Point* button in MS Project.
17. Go to *Display > My Projects*. The project is now updated with the information from the project file.

Configuration Groups

In order to make it easier to scale the workspace down by removing configuration areas that you don't care for or to change it to something that is more applicable to your situation, various configuration entities have been grouped below.

Scorecard for an Idea

Modules	Attributes	Related Views	Related Criteria
Ideas	Scorecard		
	Market Feasibility		
	Business Feasibility		
	Technical Feasibility		
	Commercial Risk		

Strategic Objectives

Modules	Attributes	Related Views	Related Criteria
Ideas	Strategic Objectives	-	Criteria in the Strategic Objectives folder
Products	Strategic Objectives	Strategic Objectives Criteria for Prio	Criteria in the Strategic Objectives folder
	Related Ideas	-	-
Criteria	Status	-	-

Idea Information for a Product

Modules	Attributes	Related Views	Related Criteria
Products	Idea Information	-	-
	Ideas	-	-
	Related Ideas	-	-
Ideas	Business Mechanism	-	-
	Implementation	-	-
	Strategic Objectives	-	-

Project Information for a Product

Modules	Attributes	Related Views	Related Criteria
Products	Project Information	-	-
	Projects	Project, Non Product Retirement Projects	-
	Related Projects	-	-
Projects	Status	-	-
	Project Manager	All Project Managers	-
	Budgeted Time	-	-
	Total Estimated Time	-	-
	Total Actual Time	-	-
	Time Threshold	-	-
	User Requests	-	-

	Project Type	-	-
User Requests	Cost Estimate (hrs)	-	-
	Actual Cost (hrs)	-	-
	Difference	-	-
	SetChoice	-	-

Market Shares for a Product

Modules	Attributes	Related Views	Related Criteria
Products	Geographic Markets	-	Criteria in the Markets folder
	Markets	-	-
	Market Share	Market Share	-
	MatrixWriter for Markets	-	-
Product Families	Market Sizes	-	-
Market Shares	Market Revenue (\$k)	-	-
	Market Size (\$k)	-	-
	Market Share (%)	-	-
	Market Size Link	Market Size	-
	Product	-	-
	Trend	-	-
Market Sizes	Geographic Market	-	-
	Total Market Size (\$k)	-	-
	Product Family	-	-
	Geographic Market	Geographic Markets(h)	-

Strategic Position Analysis (SPAN)

Modules	Attributes	Related Views	Related Criteria
Products	Strategic Position Analysis (SPAN)	-	-
	Market Segment Attractiveness	Strategic Position Analysis (SPAN)	-
	Competitive Position of Solution	Strategic Position Analysis (SPAN)	-
	Attractiveness	-	Attractiveness
	Competitive Position	-	Competitive Position
	LinkListAttributeSum Market Size	-	Market Size
	Market Share	-	-
Market Shares	Market Revenue (\$k)	-	-

Financial Analysis (FAN)

Modules	Attributes	Related Views	Related Criteria
Products	Net Present Value of Acc Revenue/Cost	Financial Analysis (FAN)	NPV Acc Cost
	Net Present Value of Acc Revenue/Cost	Financial Analysis (FAN)	NPV Acc Revenue

Risk Assessment for a Product

Modules	Attributes	Related Views	Related Criteria
Products	Risk Assessment	-	-
	Risk of Commercial Failure	-	-
	Risk of Technical Failure	-	-
	Risk of Schedule Delay	-	-
	Organizational Risk	-	-
	Complexity	-	-
	Total Risk Score	High Risk Products (Proposals)	-

Competitive Analysis for a Product

Modules	Attributes	Related Views	Related Criteria
Products	Competitive Analysis	-	-
	Competing Companies	-	-
	Competing Products	-	-
	Number of Competitors Covering the Market	-	-
	Product Advantages	-	-
	Price	-	-
	Design	-	-
	Quality	-	-
	Durability	-	-
	Safety	-	-
	Total Score Product Advantage	-	-
	Competitor Product Advantages	-	-
	List Size	-	-

NPV for a Product

Modules	Attributes	Related Views	Related Criteria
Products	NPV	Products (Proposals) with Negative NPV	-
	Net Present Value of Acc Revenue/Cost	-	-
	Yearly Total Estimated Result	-	-
	Product Family	-	-
	NPV for Product Family	-	-
Product Families	Total NPV	View for calculating Total NPV	-
	Products	Our Product Portfolio (r/-)	-
Supporting Module	Float	Edit Internal Rate	-

Revenue and Cost Thresholds for a Product

Modules	Attributes	Related Views	Related Criteria
Products	Threshold Actual vs Target Revenue	Products with Red or Yellow Thresholds	-
	Threshold Actual vs Estimated Cost	Products with Red or Yellow Thresholds	-
	Target Revenue	-	-
	Actual Revenue	-	-
	Estimated Costs	-	-
	Actual Costs	-	-
	Difference % Actual vs Target Revenue	-	-
	Min Difference Revenue	-	-
	Difference % Actual vs Estimated Cost	-	-
	Max Difference Cost	-	-
Product Families	Product Financial Information Threshold	-	-
	Active Products (Proposals)	-	-

Return on Investment (ROI) for a Product

Modules	Attributes	Related Views	Related Criteria
Products	ROI		-
	Net Present Value of Acc Revenue/Cost	-	-
	Yearly Total Estimated Result	-	-
	Target Revenue	-	-
	Estimated Costs	-	-
Supporting Module	Float	Edit Internal Rate	-

Retirement Project for a Product

Modules	Attributes	Related Views	Related Criteria
Products	Retirement Project	Product Retirement Project	-
Projects	Project Type	-	-

Market Problem Information for a Market Plan

Modules	Attributes	Related Views	Related Criteria
Market Plans	Market Problems	-	-
	Market Problem Info	-	-
Market Problems	Description	-	-

Product Offering Information for a Market Plan

Modules	Attributes	Related Views	Related Criteria
Market Plans	Products	Our Product Portfolio(r/-)	-
	Product Info	-	-
Products	Lifecycle Phase	-	-
	Market Share	-	-

Revenue Information for a Customer

Modules	Attributes	Related Views	Related Criteria
Customers	Revenue	-	-
	Product Revenue	-	-
	Total Revenue	-	-

Microsoft® Project™ Integration

Modules	Attributes	Related Views	Related Criteria
Projects	Title	Projects	-
	Description	Projects	-
	Status	Projects	-
	Project Manager	Projects	-
	Actual Start Date	Projects	-
	Actual End Date	Projects	-
	User Requests	Projects	-
	MSP_File	Projects	-
	MSP_File_Status	Projects	-
User Requests	Title	User Requests	-
	Description	User Requests	-
	Project	User Requests	-
	Responsible	User Requests	-
	Start Date	User Requests	-
	Finish Date	User Requests	-
	Milestone	User Requests	-
	Cost Estimate (hrs)	User Requests	-
	Actual Cost (hrs)	User Requests	-

Cost Monitoring for a Project

Modules	Attributes	Related Views	Related Criteria
Projects	Budgeted Time	-	-
	Total Estimated Time	Ongoing Projects > Gantt > Values	-
	Total Actual Time	Ongoing Projects > Gantt > Values	-
	Time Threshold	-	-
	Difference	-	-
	SetChoice	-	-
	User Requests	-	-
User Requests	Cost Estimate (hrs)	-	-
	Actual Cost (hrs)	-	-

Resource Utilization for a Project

Modules	Attributes	Related Views	Related Criteria
Projects	Resource Utilization	-	-
	Project Management	Ongoing Projects > Gantt > Values	-
	Implementation	Ongoing Projects > Gantt > Values	-
	Marketing	Ongoing Projects > Gantt > Values	-
	Services	Ongoing Projects > Gantt > Values	-

Risk Analysis for a User Request

Modules	Attributes	Related Views	Related Criteria
User Requests	Risk Analysis	-	-
	Technology Risk	-	-
	Quality Risk	-	-
	Cost Risk	-	-
	Schedule Risk	-	-
	Risk Index	-	-

Product Portfolio Management and Product Management Together

There are situations where you want to use Focal Point for both Product Portfolio Management and Product Management. IBM provides you with a Focal Point Configuration Add-On for product management as well. There are many ways of combining the workspaces for Product Portfolio Management and Product Management, so no detailed instructions will be given here. Instead you will find recommendations and things to consider during the deployment.

Medium or Small Sized Companies - One Common Workspace

It is recommended to deploy one workspace for both product portfolio and product management if the solution is for a medium or small sized companies. The reason for this is to keep it as simple as possible.

Start with the Product Portfolio Management workspace and add the Product Management areas to that workspace.

Product Requirements

One area of product management that you can add is that of breaking down user requests into smaller manageable pieces, requirements, in order to do the manage the implementation. A Product Requirements module is recommended for storing these detailed requirements. There is one hidden module prepared for you to use; Configure > Modules > Product Requirements > Hide Module > Yes/No.

There are also a few prepared views based on this module in Configure > Views > Product Lifecycle Views > Product Requirements. These views need to be revisited in order to make them work with the roles and process used. You might also need to add more views.

Roles that are recommended to handle product requirements are for example development/implementation manager, development/implementation project manager, developer/implementer. Add these roles in Members > Members > Add Folder. Each new role will need some homepage windows (dashboards for each role), so those need to be added.

Attributes that need to be updated or added are especially the Status attribute, different types of link attributes in the workspace and attributes containing expressions. The Status attribute supports the process of working with product requirements. You might want to use the workflow feature in Focal Point (Configure > Workflows) to enforce a process which will require some configuration effort. Make sure that you can set links between user requests and product requirements. It is likely that you want to monitor progress of the implementation of a product requirement. You can for example use the Estimated Time and Actual Time attributes for this purpose. The values for all product requirements can be aggregated up to the related user request with LinkListAttributeSum business rules.

If needed, you can also create modules for testing with corresponding views, rules, workflow, links and expressions.

Enterprise Companies - Several Workspaces

It is recommended to deploy one workspace for managing the product portfolio (Product Portfolio Management) and several workspaces for product management (Product Management), e.g. one for each product family, if the solution is for an enterprise company. The reason for this is that the data that is to be stored in Focal Point can be plenty and that calls for a more organized structure.

Modules

There are several modules that are overlapping because they are available in both workspaces. The customer should decide which modules to use in which workspace and which to use in both. Use the export/import module feature in Focal Point to move modules between the workspaces.

- Products
- Market Problems
- Market Plans
- Personas
- Customers
- Competitors
- Win/Loss Reports
- Projects or Releases
- User Requests

Depending on how these modules are deployed, you need to consider the following:

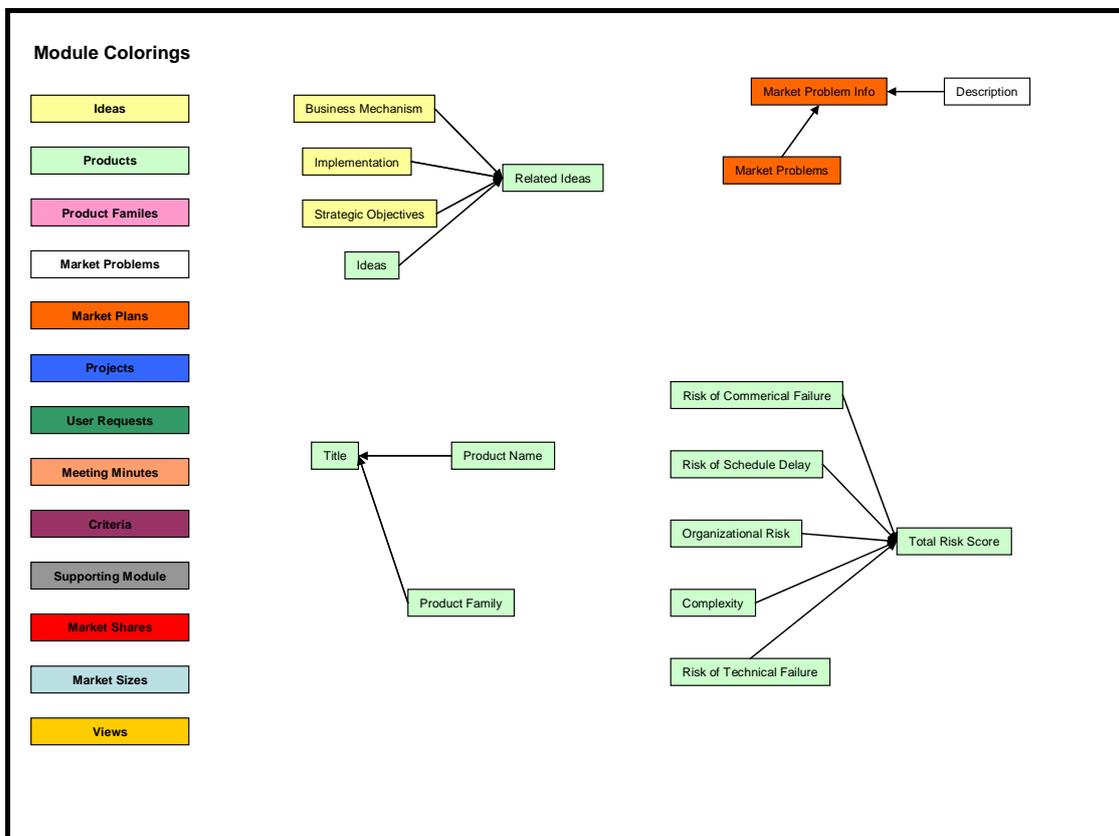
- Attributes e.g. Status (holds the process items) and links (where you need to consider links within the workspace as well as those to elements in other workspaces).
- Views
- Roles and homepage windows (dashboards for each role)
- Workflow to support the process
- Expressions in attributes, e.g. aggregating values in a chain

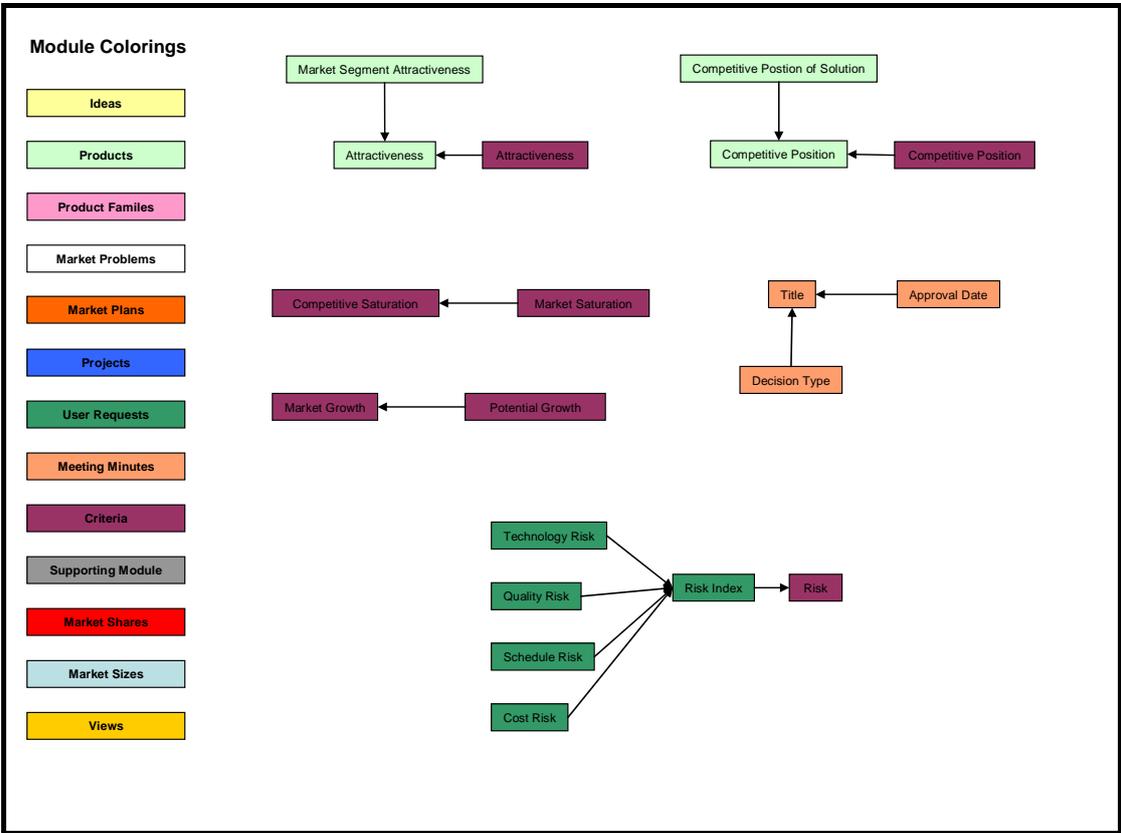
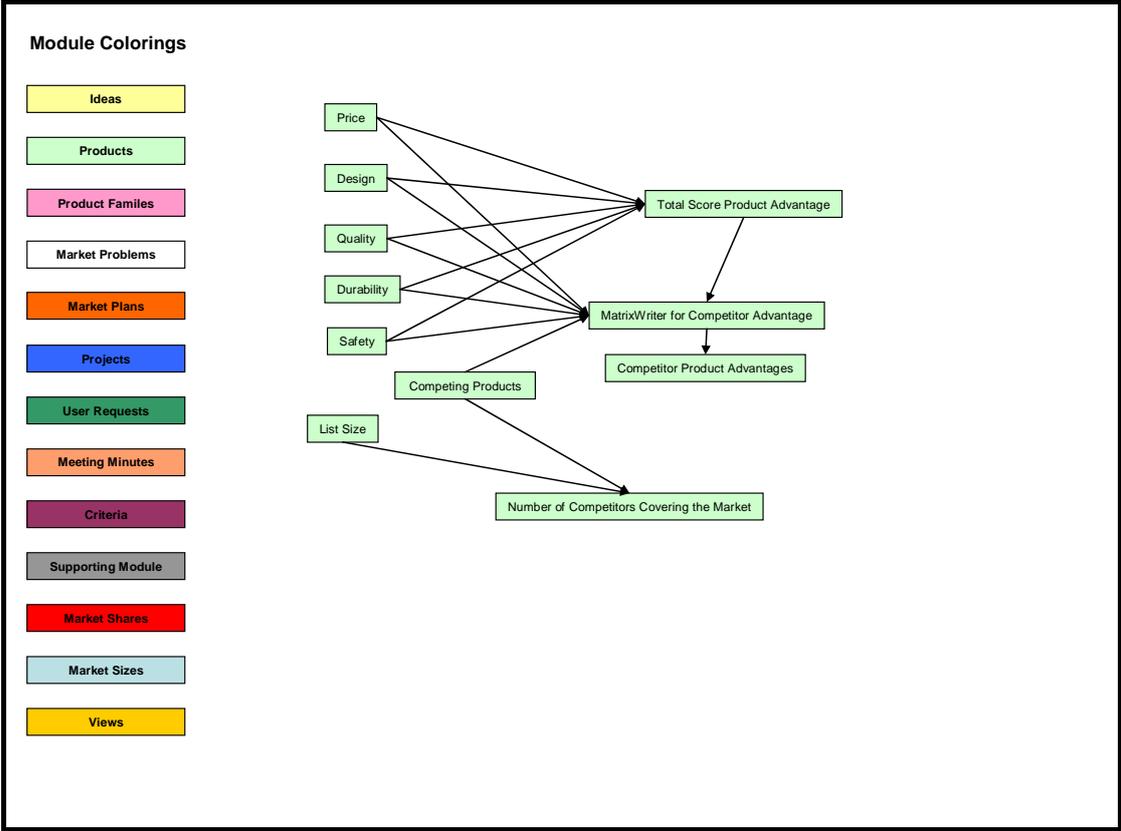
Dependencies

There are dependencies between areas in the workspace that can become relevant to consider when you tailor the workspace.

Below is a visualization of the dependencies. On the left side are the colored bars representing the modules in the workspace. The graphs on the right side show the names of the attributes (and sometimes elements, mostly from the 'Criteria' module) and their relationships with other attributes (or elements).

After the visualizations, the same attributes are also listed in detail, grouped by module and in the same order as they appear in the workspace.





Ideas

Business Mechanism

- Used by the 'Related Ideas' attribute in the 'Products' module.

Implementation

- Used by the 'Related Ideas' attribute in the 'Products' module.

Strategic Objectives

- Used by the 'Related Ideas' attribute in the 'Products' module.

Products

Title

- Expression: ='Product Family' + ":" + 'Product Name'¹
- Puts together the values of 2 attributes in the 'Products' module to form the title.
- Depends on the 'Product Family' and 'Product Name' attributes in the 'Products' module.

Product Name

- Used by the 'Title' attribute in the 'Products' module.

Product Family

- Used by the 'Title' attribute in the 'Products' module.

Status

- Used by the 'Related Product Details', 'Product Financial Information Threshold' and 'Total NPV' attributes in the 'Product Families' module.

Product Manager

- Used by the 'Related Product Details' attribute in the 'Product Families' module.

Lifecycle Phase

- Used by:

¹ The expression is not placed in the default value in this attribute, but can instead be found in the Add view for Products (Configure > Views > Product Proposal). The reason for this is to avoid triggering the expression when adding competitor products, but only when adding product proposals.

- The 'Related Product Details' attribute in the 'Product Families' module.
- The 'Product Info' attribute in the 'Market Plans' module.

Related Ideas

- Expression: =LinkInfo("Ideas",",Business Mechanism,Implementation,Strategic Objectives","13",'Ideas')
- Shows 3 attributes in the 'Ideas' module that are related to the product.
- Depends on the following attributes:
 - 'Ideas' in the 'Products' module
 - 'Business Mechanism' in the 'Ideas' module
 - 'Implementation' in the 'Ideas' module
 - 'Strategic Objectives' in the Ideas module

Related Projects

- Expression: =LinkInfo("Projects",",Status,Project Manager,Budgeted Time>Total Estimated Time, Total Actual Time,Time Threshold","13','Projects')
- Shows 6 attributes in the 'Projects' module that are related to the product.
- Depends on the following attributes:
 - 'Projects' in the 'Products' module
 - 'Status' in the 'Projects' module
 - 'Project Manager' in the 'Projects' module
 - 'Budgeted Time' in the 'Projects' module
 - 'Total Estimated time' in the 'Projects' module
 - 'Total Actual Time' in the 'Projects' module
 - 'Time Threshold' in the 'Projects' module

Markets

- Used by the 'MatrixWriter for Markets' attribute in the 'Products' module.

Market Share

- Used by:
 - The 'LinkListAttributeSum Market Size' attribute in the 'Products' module.
 - The 'Product Info' attribute in the 'Market Plans' module.

Market Segment Attractiveness

- Used by the 'Attractiveness' attribute in the 'Products' module.

Competitive Position of Solution

- Used by the 'Competitive Position' attribute in the 'Products' module.

Risk of Commercial Failure

- Used by the 'Total Risk Score' attribute in the 'Products' module.

Risk of Technical Failure

- Used by the 'Total Risk Score' attribute in the 'Products' module.

Risk of Schedule Delay

- Used by the 'Total Risk Score' attribute in the 'Products' module.

Organizational Risk

- Used by the 'Total Risk Score' attribute in the 'Products' module.

Complexity

- Used by the 'Total Risk Score' attribute in the 'Products' module.

Total Risk Score

- Expression: ='Risk of Commercial Failure' + 'Risk of Technical Failure' + 'Risk of Schedule Delay' + 'Organizational Risk' + 'Complexity'
- Sums the value of 5 choice attributes in the 'Products' module.
- Depends on the following attributes:
 - 'Risk of Commercial Failure' in the 'Products' module
 - 'Risk of Technical Failure' in the 'Products' module
 - 'Risk of Schedule Delay' in the 'Products' module
 - 'Organizational Risk' in the 'Products' module
 - 'Complexity' in the 'Products' module

Competing Products

- Used by:
 - The MatrixWriter business rule in attribute 'MatrixWriter for Competitor Advantage' in the 'Products' module to create the 'Competitor Product Advantages' matrix.
 - The 'Number of Competing Products' attribute in the 'Products' module.

Number of Competitors Covering the Market

- Expression: =LinkListAttributeSum("Competing Products", "List Size", "listen_to=List Size", "Competing Products")
- Calculates the number of links in the 'Competing Products' attribute.
- Depends on the following attributes in the 'Products' module:
 - 'List Size'
 - 'Competing Products'

Price

- Used by the MatrixWriter business rule in attribute 'MatrixWriter for Competitor Advantage' in the 'Products' module to create the 'Competitor Product Advantages' matrix.

Design

- Used by the MatrixWriter business rule in attribute 'MatrixWriter for Competitor Advantage' in the 'Products' module to create the 'Competitor Product Advantages' matrix.

Quality

- Used by the MatrixWriter business rule in attribute 'MatrixWriter for Competitor Advantage' in the 'Products' module to create the 'Competitor Product Advantages' matrix.

Durability

- Used by the MatrixWriter business rule in attribute 'MatrixWriter for Competitor Advantage' in the 'Products' module to create the 'Competitor Product Advantages' matrix.

Safety

- Used by the MatrixWriter business rule in attribute 'MatrixWriter for Competitor Advantage' in the 'Products' module to create the 'Competitor Product Advantages' matrix.

Total Score Product Advantage

- Expression: ='Price' + 'Design' + 'Quality' + 'Durability' + 'Safety'
- Sums the value of 5 choice attributes in the 'Products' module.
- Used by the MatrixWriter business rule in attribute 'MatrixWriter for Competitor Advantage' in the 'Products' module to create the 'Competitor Product Advantages' matrix.

Competitor Product Advantages

- Is populated by the 'MatrixWriter for Competitor Advantages' attribute in the 'Products' module.

NPV

- Expression: =round(('Net Present Value of Acc Revenue/Cost(F1)' - 'Net Present Value of Acc Revenue/Cost(F2)') /1000) *1000
- Calculates the difference between cell F1 and F2 in the 'Net Present Value of Acc Revenue/Cost' attribute and rounds it in thousands.
- Depends on the 'Net Present Value of Acc Revenue/Cost' attribute in the 'Products' module.

- Used by the 'Total NPV' attribute in the 'Product Families' module.

NPV for Product Family

- Mirrors the value in the 'Total NPV' attribute in the 'Product Families' module.

Threshold Actual vs Target Revenue

- Expression: =TrafficLight('Min Difference Revenue',"0.1","0.2","Red","Yellow","Green")
- Displays a red traffic light when there is a negative difference between actual and target revenue, i.e. actual revenue is lower than target. Red light for more than 20% difference, yellow for 10-20% difference and green for less than 10% difference.
- Depends on calculation made in the 'Min Difference Revenue' attribute in the 'Products' module.
- Used by the 'Product Financial Information Threshold' attribute in the 'Product Families' module.

Threshold Actual vs Estimated Cost

- Expression: =TrafficLight('Max Difference Cost',"1.1","1.2","Red","Yellow","Green")
- Displays a red traffic light when there is a negative difference between actual and target cost, i.e. actual cost is higher than estimated. Red light for more than 20% difference, yellow for 10-20% difference and green for less than 10% difference.
- Depends on calculation made in the 'Max Difference Cost' attribute in the 'Products' module.
- Used by the 'Product Financial Information Threshold' attribute in the 'Product Families' module.

ROI

- Expression: ='Net Present Value of Acc Revenue/Cost(F1)' / 'Net Present Value of Acc Revenue/Cost(F2)' *100
- Calculates the quotient of F1 divided by F2 in Products > Net Present Value of Acc Revenue/Cost, then multiplied with 100 to show the value in percent.
- Depends on calculations in 'Net Present Value of Acc Revenue/Cost' attribute in the 'Products' module.

Actual vs Target Revenue

- Expressions from cell A1 to E5:
 - Cell A1: ='Actual Revenue(A1)' =0 ? 0: 'Actual Revenue(A1)' - 'Target Revenue(A1)'
 - Cell A2: ='Actual Revenue(A2)' =0 ? 0: 'Actual Revenue(A2)' - 'Target Revenue(A2)'
 - Etc
- Expressions from cell F1 to F5:
 - =Sum('Actual vs Target Revenue(A1:E1)')
 - =Sum('Actual vs Target Revenue(A2:E2)')

- Etc
- Calculates the difference between actual and target revenue in the 'Target Revenue' and 'Actual Revenue' attributes. The last row and last column contain sums of the rows and columns. Displays 0 if actuals have not yet been entered.
- Depends on the following attributes in the 'Products' module:
 - 'Target Revenue'
 - 'Actual Revenue'

Actual vs Estimated Costs

- Expressions from cell A1 to E5:
 - ='Actual Costs(A1)' =0 ? 0: 'Actual Costs(A1)' - 'Estimated Costs(A1)'
 - ='Actual Costs(A2)' =0 ? 0: 'Actual Costs(A2)' - 'Estimated Costs(A2)'
 - Etc
- Expressions from cell F1 to F5:
 - =Sum('Actual vs Estimated Costs(A1:E1)')
 - =Sum('Actual vs Estimated Costs(A2:E2)')
 - Etc
- Calculates the difference between actual and estimated cost in the 'Estimated Costs' and 'Actual Costs' attributes. The last row and last column contain sums of the rows and columns. Displays 0 if actuals have not yet been entered.
- Depends on the following attributes in the 'Products' module:
 - 'Actual Costs'
 - 'Estimated Costs'

Yearly Total Estimated Result

- Expressions from cell A1 to E1:
 - ='Target Revenue(A5)'
 - ='Target Revenue(B5)'
 - Etc
- Expressions from cell A2 to E2:
 - ='Estimated Costs(A5)'
 - ='Estimated Costs(B5)'
 - Etc
- Expressions from cell A3 to E3:
 - ='Yearly Total Estimated Result(A1)' - 'Yearly Total Estimated Result(A2)'
 - ='Yearly Total Estimated Result(B1)' - 'Yearly Total Estimated Result(B2)'
- Expressions in column F:
 - Cell F1: =Sum('Yearly Total Estimated Result(A1:E1)')
 - Cell F2: =Sum('Yearly Total Estimated Result(A2:E2)')
 - Cell F3: =Sum('Yearly Total Estimated Result(A3:E3)')
- Copies cell values in the 'Target Revenue' and 'Estimated Costs' attributes. Calculates the estimated results per year and sums the rows in the final column.
- Depends on the following attributes in the 'Products' module:
 - 'Target Revenue'
 - 'Estimated Costs'

Yearly Total Actual Result

- Expressions from cell A1 to E1:
 - ='Actual Revenue(A5)'
 - ='Actual Revenue(B5)'
 - Etc
- Expressions from cell A2 to E2:
 - ='Actual Costs(A5)'
 - ='Actual Costs(B5)'
 - Etc
- Expressions from cell A3 to E3:
 - ='Yearly Total Actual Result(A1)' - 'Yearly Total Actual Result(A2)'
 - ='Yearly Total Actual Result(B1)' - 'Yearly Total Actual Result(B2)'
 - Etc
- Expressions in column F:
 - Cell F1: ='Yearly Total Actual Result(A1)' + 'Yearly Total Actual Result(B1)' + 'Yearly Total Actual Result(C1)' + 'Yearly Total Actual Result(D1)' + 'Yearly Total Actual Result(E1)'
 - Cell F2: ='Yearly Total Actual Result(A2)' + 'Yearly Total Actual Result(B2)' + 'Yearly Total Actual Result(C2)' + 'Yearly Total Actual Result(D2)' + 'Yearly Total Actual Result(E2)'
 - Cell F3: ='Yearly Total Actual Result(F1)' - 'Yearly Total Actual Result(F2)'
- Copies cell values in the 'Actual Revenue' and 'Actual Costs' attributes. Calculates the actual results per year and sums the rows in the final column.
- Depends on the following attributes in the 'Products' module:
 - 'Actual Revenue'
 - 'Actual Costs'

Net Present Value of Acc Revenue/Cost

- Expressions in row 1:
 - Cell B1: ='Yearly Total Estimated Result(A1)' * 'Supporting Module!Internal Rate!Float'
 - Cell C1: ='Net Present Value of Acc Revenue/Cost(B1)' + 'Yearly Total Estimated Result(B1)' * ('Supporting Module!Internal Rate!Float' **2)
 - Cell D1: ='Net Present Value of Acc Revenue/Cost(C1)' + 'Yearly Total Estimated Result(C1)' * ('Supporting Module!Internal Rate!Float' **3)
 - Cell E1: ='Net Present Value of Acc Revenue/Cost(D1)' + 'Yearly Total Estimated Result(D1)' * ('Supporting Module!Internal Rate!Float' **4)
 - Cell F1: ='Net Present Value of Acc Revenue/Cost(E1)' + 'Yearly Total Estimated Result(E1)' * ('Supporting Module!Internal Rate!Float' **5)
- Expressions in row 2:
 - Cell B2: ='Yearly Total Estimated Result(A2)' * 'Supporting Module!Internal Rate!Float'
 - Cell C2: ='Net Present Value of Acc Revenue/Cost(B2)' + 'Yearly Total Estimated Result(B2)' * ('Supporting Module!Internal Rate!Float' **2)
 - Cell D2: ='Net Present Value of Acc Revenue/Cost(C2)' + 'Yearly Total Estimated Result(C2)' * ('Supporting Module!Internal Rate!Float' **3)
 - Cell E2: ='Net Present Value of Acc Revenue/Cost(D2)' + 'Yearly Total Estimated Result(D2)' * ('Supporting Module!Internal Rate!Float' **4)
 - Cell F2: ='Net Present Value of Acc Revenue/Cost(E2)' + 'Yearly Total Estimated Result(E2)' * ('Supporting Module!Internal Rate!Float' **5)
- Calculates the Net Present Value per year.

- Depends on the following:
 - Values in the 'Yearly Total Estimated Result' attribute in the 'Products' module
 - The value in the 'Float' attribute in element 'Internal Rate' in the 'Supporting Module' module.²
- Used by:
 - The 'NPV Acc Revenue' criterion in the 'Criteria' module.
 - The 'NPV Acc Cost' criterion in the 'Criteria' module.

List Size

- A helper attribute to support the calculation in the 'Number of Competitors Covering the Market' attribute in the 'Products' module.

MatrixWriter for Competitor Advantages

- Expression: =MatrixWriter("Competing Products","Competitor Product Advantages","6","false","listen_to=Price","listen_to=Design","listen_to=Quality","listen_to=Durability","listen_to=Safety","listen_to=Total Score Product Advantage",'Competing Products')³
- Writes 6 values (5 choice values and 1 expression sum value in a text attribute) from each related competitor product in a matrix in the 'Competitor Product Advantages' attribute.
- Depends on the following attributes in the 'Products' module:
 - 'Competing Products'
 - 'Competitor Product Advantages'
 - 'Price'
 - 'Design'
 - 'Quality'
 - 'Durability'
 - 'Safety'
 - 'Total Score Product Advantage'

MatrixWriter for Markets

- Expression: =MatrixWriter("Market Share","Markets","1","false","listen_to=Market Revenue (\$k)","listen_to=Market Size (\$k)","Market Share')
- Writes 2 values (1 integer containing an expression and 1 mirror) from each related market share in a matrix in the 'Markets' attribute.
- Depends on the following attributes:
 - 'Market Share' in the 'Products' module.
 - 'Markets' in the 'Products' module.
 - 'Market Revenue (\$k)' in the 'Market Shares' module.⁴

² 'Supporting Module' is a hidden module.

³ The expression is not placed in the default value in this attribute, but can instead be found in the Add view for Products (Configure > Views > Product Proposal). The reason for this is to avoid triggering the expression when adding competitor products, but only when adding product proposals.

⁴ 'Market Shares' is a hidden module.

- 'Market Size (\$k)' in the 'Market Shares' module.⁵

Difference % Actual vs Target Revenue

- Expressions:
 - A1: $=('Actual\ Revenue(A5)' / 'Target\ Revenue(A5)') > 0$? ('Actual Revenue(A5)' / 'Target Revenue(A5)') :1
 - B1: $=('Actual\ Revenue(B5)' / 'Target\ Revenue(B5)') > 0$? ('Actual Revenue(B5)' / 'Target Revenue(B5)') :1
 - Etc
- Calculates the difference in % of actual vs target revenue. Actual revenue is divided by target revenue per year. A helper attribute used to provide a threshold for revenue.
- Depends on the following attributes in the 'Products' module:
 - 'Actual Revenue'
 - 'Target Revenue'
- Used by the 'Min Difference Revenue' attribute in the 'Products' module.

Min Difference Revenue

- Expression: $=1 - \text{Min}('Difference\ \% \text{ Actual vs Target Revenue}(A1)', 'Difference\ \% \text{ Actual vs Target Revenue}(B1)', 'Difference\ \% \text{ Actual vs Target Revenue}(C1)', 'Difference\ \% \text{ Actual vs Target Revenue}(D1)', 'Difference\ \% \text{ Actual vs Target Revenue}(E1)')$
- A helper attribute that looks at the 'Difference % Actual vs Target Revenue' attribute and returns its minimum value.
- Depends on the 'Difference % Actual vs Target Revenue' attribute in the 'Products' module.
- Used by the 'Threshold Actual vs Target Revenue' attribute in the 'Products' module.

Difference % Actual vs Estimated Cost

- Expressions:
 - A1: $=('Actual\ Costs(A5)' / 'Estimated\ Costs(A5)') > 0$? ('Actual Costs(A5)' / 'Estimated Costs(A5)') :1
 - B1: $=('Actual\ Costs(B5)' / 'Estimated\ Costs(B5)') > 0$? ('Actual Costs(B5)' / 'Estimated Costs(B5)') :1
 - Etc
- Calculates the difference in % of actual vs estimated cost. Actual cost is divided by estimated cost per year. A helper attribute used to provide a threshold for cost.
- Depends on the following attributes in the 'Products' module.
 - 'Actual Costs'
 - 'Estimated Costs'
- Used by the 'Max Difference Cost' attribute in the 'Products' module.

⁵ 'Market Shares' is a hidden module.

Max Difference Cost

- Expression: =Max('Difference % Actual vs Estimated Cost(A1)', 'Difference % Actual vs Estimated Cost(B1)', 'Difference % Actual vs Estimated Cost(C1)', 'Difference % Actual vs Estimated Cost(D1)', 'Difference % Actual vs Estimated Cost(E1)')
- A helper attribute that looks at the 'Difference % Actual vs Estimated Cost' attribute in the 'Products' module and returns its minimum value.
- Depends on the 'Difference % Actual vs Estimated Cost' attribute in the 'Products' module.
- Used by the 'Threshold Actual vs Estimated Cost' attribute in the 'Products' module.

Attractiveness

- Expression: ='Market Segment Attractiveness'
- Copies the value in the 'Market Segment Attractiveness' attribute in the 'Products' attribute. A helper attribute to view SPAN in Visualize by using this value as an estimate for the 'Attractiveness' criterion, because an estimate needs to be retrieved from an integer attribute.
- Depends on the following:
 - The 'Market Segment Attractiveness' attribute in the 'Products' module.
 - The 'Attractiveness' criterion in the 'Criteria' module.

Competitive Position

- Expression: ='Competitive Position of Solution'
- Copies the value in the 'Competitive Position of Solution' attribute in the 'Products' module. A helper attribute to view SPAN in Visualize by using this value as an estimate for the 'Competitive Position' criterion, because an estimate needs to be retrieved from an integer attribute.
- Depends on the following:
 - The 'Competitive Position of Solution' attribute in the 'Products' module.
 - The 'Competitive Position' criterion in the 'Criteria' module.

LinkListAttributeSum Market Size

- Expression: =LinkListAttributeSum("Market Share", " Market Revenue (\$k) ", "listen_to= Market Revenue (\$k) ", 'Market Share')
- Calculates the number of market share links in 'Market Share' attribute in the 'Products' module. A helper attribute used to aggregate the total market size for a product. Used in the SPAN visualize view to illustrate market size (criterion with estimate) as a bubble.
- Depends on the following:
 - The 'Market Share' attribute in the 'Products' module.
 - The 'Market Revenue (\$k)' attribute in the 'Market Shares' module.⁶
 - The 'Market Size' criterion in the 'Criteria' module.

⁶ 'Market Shares' is a hidden module.

Product Families

Products

- Used by the 'Related Product Details' and 'Total NPV' attributes in the 'Product Families' module.

Related Product Details

- Expression: =LinkInfo("Products",",Status,Lifecycle Phase,Product Manager","13','Products')
- Copies 3 values (2 choice and 1 link) from related products in the 'Products' module.
- Depends on the following attributes:
 - 'Products' in the 'Product Families' module
 - 'Status' in the 'Products' module
 - 'Lifecycle Phase' in the 'Products' module
 - 'Product Manager' in the 'Products' module

Product Financial Information Threshold

- Expression: =LinkInfo("Active Products (Proposals)",",Status,Threshold Actual vs Target Revenue,Threshold Actual vs Estimated Cost","13','Active Products (Proposals)')
- Copies 3 values (1 choice and 2 text that contains business rules) from related products in the 'Products' module.
- Depends on the following attributes:
 - 'Active Products (Proposals)' in the 'Product Families' module.
 - 'Status' in the 'Products' module
 - 'Threshold Actual vs Target Revenue' in the 'Products' module
 - 'Threshold Actual vs Estimated Cost' in the 'Products' module

Total NPV

- Expression: =ListAttributeSum("398","333","1151","13','Products','listen_to=Status','listen_to=NPV')
- Calculates the sum of the NPV values for all active products related to the product family.
- Depends on the following:
 - The 'Products' attribute in the 'Product Families' module
 - The 'Status' attribute in the 'Products' module
 - The 'NPV' attribute in the 'Products' module
 - The 'View for calculating Total NPV' view in Configure > Views > Products.
- Used by the 'NPV for Product Family' attribute in the 'Products' module.

Active Products (Proposals)

- Used by the 'Product Financial Information Threshold' attribute in the 'Product Families' module.

Market Problems

Description

- Used in the 'Market Problem Info' attribute in the 'Market Plans' module.

Market Plans

Market Problem Info

- Expression: =LinkInfo("Market Problems","Description","13",'Market Problems',"listen_to=Description")
- Shows the Description of all related market problems.
- Depends on the following attributes:
 - 'Market Problems' in the 'Market Plans' module.
 - 'Description' in the 'Market Problems' module.

Product Info

- Expression: =LinkInfo("Products","Lifecycle Phase, Market Share","13",'Products',"listen_to=Lifecycle Phase","listen_to=Market Share")
- Shows 2 values (1 choice and 1 link list) from all related products.
- Depends on the following attributes:
 - 'Products' in the 'Market Plans' module
 - 'Lifecycle Phase' in the 'Products' module
 - 'Market Share' in the 'Products' module.

Projects

Status

- Used by the 'Related Projects' attribute in the 'Products' module.

Project Manager

- Used by the 'Related Projects' attribute in the 'Products' module.

User Requests

- Used by:
 - The 'Total Estimated Time' attribute in the 'Projects' module.
 - The 'Total Actual Time' attribute in the 'Projects' module.

Budgeted Time

- Used by:

- The LinkInfo business rule in the 'Related Projects' attribute in the 'Products' module.
- The 'Related Projects' attribute in the Products module

Total Estimated Time

- Expression: =LinkListAttributeSum("User Requests","Cost Estimate (hrs)","listen_to=Cost Estimate (hrs)","User Requests')
- Sums the estimated time for all related user requests (in hours).
- Depends on the following attributes:
 - The 'User Requests' attribute in the 'Projects' module.
 - The 'Cost Estimate (hrs)' attribute in the 'User Requests' module.
- Used by:
 - The 'Related Projects' attribute in the 'Products' module.
 - The 'Difference' attribute in the 'Projects' module.

Total Actual Time

- Expression: =LinkListAttributeSum("User Requests","Actual Cost (hrs)","listen_to=Actual Cost (hrs)","User Requests').
- Sums the actual time for all related user requests (in hours).
- Depends on the following attributes:
 - The 'User Requests' attribute in the 'Projects' module
 - The 'Actual Cost (hrs)' attribute in the 'User Requests' module.
- Used by:
 - The 'Related Projects' attribute in the 'Products' module.
 - The 'Difference' attribute in the 'Projects' module.

Time Threshold

- Used by:
 - The 'Related Projects' attribute in the 'Products' module.
 - The 'SetChoice' attribute in the 'Projects' module.

Difference

- Expression: ='Total Actual Time' - 'Total Estimated Time' <60?1: ('Total Actual Time' - 'Total Estimated Time' >120?3:2)
- Calculates the difference between total actual time and total estimated time of the project. Returns 1 if the difference is lower than 60, 2 if the difference is between 60 and 120 and 3 if the difference is higher than 120.
- Depends on the following attributes in the 'Projects' module:
 - 'Total Actual Time'
 - 'Total Estimated Time'
- Used by the 'SetChoice' attribute in the 'Projects' module.

SetChoice

- Expression: =SetChoice("647","426","false","426_1","427_2","428_3",'Difference')

- Sets the 'Time Threshold' attribute to green, yellow or red based on values in the 'Difference' attribute. If value is 1, set green. If value is 2, set yellow. If value is 3, set red.
- Depends on the following attributes in the 'Projects' module:
 - 'Difference'
 - 'Time Threshold'

User Requests

Cost Estimate (hrs)

- Used by the 'Total Estimated Time' attribute in the 'Projects' module.

Actual Cost (hrs)

- Used by the 'Total Actual Time' attribute in the 'Projects' module.

Technology Risk

- Used by the 'Risk Index' attribute in the 'User Requests' module.

Quality Risk

- Used by the 'Risk Index' attribute in the 'User Requests' module.

Schedule Risk

- Used by the 'Risk Index' attribute in the 'User Requests' module.

Cost Risk

- Used by the 'Risk Index' attribute in the 'User Requests' module.

Risk Index

- Expression: ='Technology Risk' + 'Quality Risk' + 'Schedule Risk' + 'Cost Risk'
- Sums the values of 4 choice attributes in the 'Projects' module.
- Depends on the following attributes in the 'User Requests' module:
 - 'Technology Risk'
 - 'Quality Risk'
 - 'Schedule Risk'
 - 'Cost Risk'
- Used as estimate by the 'Risk' element in the 'Criteria' module.

Meeting Minutes

Title

- Expression: ='Decision Type' + ": " + 'Approval Date'
- Puts together the values of 2 attributes to form the title of the meeting minute element.

- Depends on the 'Decision Type' and 'Approval Date' attributes in the 'Meeting Minutes' module

Decision Type

- Used by the 'Title' attribute in the 'Meeting Minutes' module.

Approval Date

- Used by the 'Title' attribute in the 'Meeting Minutes' module.

Criteria

Estimate

- The 'Competitive Saturation' element depends on the 'Market Saturation' element in the 'Criteria' module
- The 'Market Growth' element depends on the 'Potential Growth' element in the 'Criteria' module.
- The 'NPV Acc Cost' element depends on the 'Net Present Value of Acc Revenue/Cost' attribute in the 'Products' module.
- The 'Net the 'NPV Acc Revenue' element depends on the 'Net Present Value of Acc Revenue/Cost' attribute in the 'Products' module
- The 'Attractiveness' element depends on the 'Attractiveness' attribute in the 'Products' module.
- The 'Competitive Position' element depends on the 'Competitive Position' attribute in the 'Products' module.
- The 'Market Size' element depends on the 'LinkListAttributeSum Market Size' attribute in the 'Products' module.
- The 'Risk' element depends on the 'Risk Index' attribute in the 'User Requests' module.

Supporting Module

Float

- The 'Internal Rate' element is used by the 'Net Present Value of Acc Revenue/Cost' attribute in the 'Products' module.

Market Shares

Market Size (\$k)

- Mirror attribute that copies the value in the 'Total Market Size (\$k)' attribute in the 'Market Sizes' module by following the 'Market Size Link' link.
- Used by:
 - The 'MatrixWriter for Markets' attribute in the 'Products' module.
 - The 'Market Revenue (\$k)' attribute in the 'Market Shares' module.

Market Revenue (\$k)

- Expression: ='Market Size (\$k)' * 'Market Share (%)' /100

- Calculates the estimated market revenue (market size * market share). Divides by 100 to show percentages.
- Depends on the following attributes in the 'Market Shares' module:
 - 'Market Size (\$k)'
 - 'Market Share (%)'
- Used by the 'LinkListAttributeSum Market Size' and 'MatrixWriter for Markets' attributes in the 'Products' module.

Market Share (%)

- Used by the 'Market Revenue (\$k)' attribute in the 'Market Shares' module.

Market Sizes

Total Market Size (\$k)

- Used by the 'Market Size (\$k)' attribute in the 'Market Shares' module.