

# Portfolio Management in PSNext 3.0

02/15/09 – Revision 1.0

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# A - Introduction

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Economic and strategic constraints that are imposed on projects are crucial because the selection of these projects directly affects the development and the overall activities of a company.

In uncertain and fluctuating economies, respecting the objectives that are set for a project is essential. Essential also is a company's capacity to react quickly when a project is sliding away from its objectives or when the company's strategy is brought to change in order to match its environment better.

Overall, lessons-learned management as well as the ability for a company to measure whether a project is capable of reaching its objectives (i.e. key performance indicators) are keys to success and can be achieved with efficient portfolio management.

First established as virtual project groupings, project portfolios have become full objects in PSNext 3.0. They now have a set of built-in and user defined fields, forms, permissions and other specific tools – as well as a new component specially designed for Portfolio Managers.

Integrated at an early stage, candidates, ideas or objective projects enter the portfolio to be described, evaluated and launched by the Portfolio Manager and the related stakeholders.

This document presents the main principles of Project Portfolio Management in PSNext 3.0.

## B - Project Portfolio Management

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Along with Project Management, Project Portfolio Management ensures that the projects are rolled out at the right time.

For Project Managers, a project is successful when costs, schedule and quality objectives are reached. However, when dealing with portfolio management, the same project can be considered useless or inadequate in sight of strategic criteria, and can then be “frozen” or canceled although it is progressing well.

Portfolio Management brings an essential contribution for whoever is considering investment options, resources allocation and/or projects schedules.

## 1 - Portfolio management concepts

Portfolio management is defined by two main processes: project selection and portfolio follow-up. The selection phase having a strong added value when a company is trying to optimize the management of its projects, it is usually rolled-out as a first step.

The prerequisites of good portfolio management are not only linked to a company's ability to manage its projects (especially workload assessment) but also to manage the risks (being able to evaluate the risk level of each project in terms of resources, skills, IT, finances, sales, law etc...) as well as to analyze a project's alignment with a company strategic stakes. This of course assumes that the company is mature enough in terms of project management both from a methodology viewpoint (processes) as from an organizational viewpoint (roles).

## 2 - What's a stake?

**Strategic stakes:** Portfolio management helps improve and increase the strategic alignment of projects as well as their hierarchical organization. Common rules defined by portfolios facilitate the choice, validation and management of different projects according to financial (income increase, ROI...) and non-financial criteria (strategy, technical evaluation, risks...). In most cases, just being able to evaluate their project potential in terms of revenues and risks allows you to select the right projects to launch.

**Organizational stakes:** portfolio management offers reporting solutions and means of communication that ensure everything will be transparent both for decision-makers and project stakeholders. Portfolio management brings and adds a streamlined visibility on projects and allows to keep a common project information repository up to date– which ensures a fair playing ground for decisions to be made.

**Decisional stakes:** Portfolio management improves decision-making processes thanks to the implementation of key performance indicators (i.e. KPIs) and objectives evaluation criteria. It allows decision-makers to pick the right projects from the candidates pipeline but also to stop as soon as possible the projects that do not respect their objectives or that just do not correspond to current priorities.

**Economical/financial stakes:** Portfolio management ensures that selected projects be viable and profitable. It improves the synergy between projects (by avoiding doing the same projects twice for example) and increases the Return On Investment obtained from projects. Portfolio management also offers a better management of workload forecasts (pipeline management) and, therefore an optimal use of resources.

## 3 - Portfolio managers

PSNext 3.0 provides portfolio managers with a whole set of tools that will help them analyze, simulate, consolidate and make decisions at the portfolio level.

In PSNext, the portfolio manager is responsible for keeping the content of portfolios up to date and making sure the portfolio is healthy. The Portfolio Manager is in charge of:

- defining criteria for objective projects' ranking

- making decisions regarding the launch or cancellation of projects
- following-up the projects during their life cycle – that is to say monitoring the evolution of their success and risks to make global decisions (put a project on hold, push another one through...)
- analyzing workload forecasts to be able to balance resource allocations between projects if necessary
- Communicating clearly on the reasons that motivate certain decisions.

## 4 - The new “Portfolio Control” component

PSNext 3.0 offers a new component that is entirely dedicated to portfolio managers, the “Portfolio Control” component. Access to this component is managed through user roles in the “Users” component.

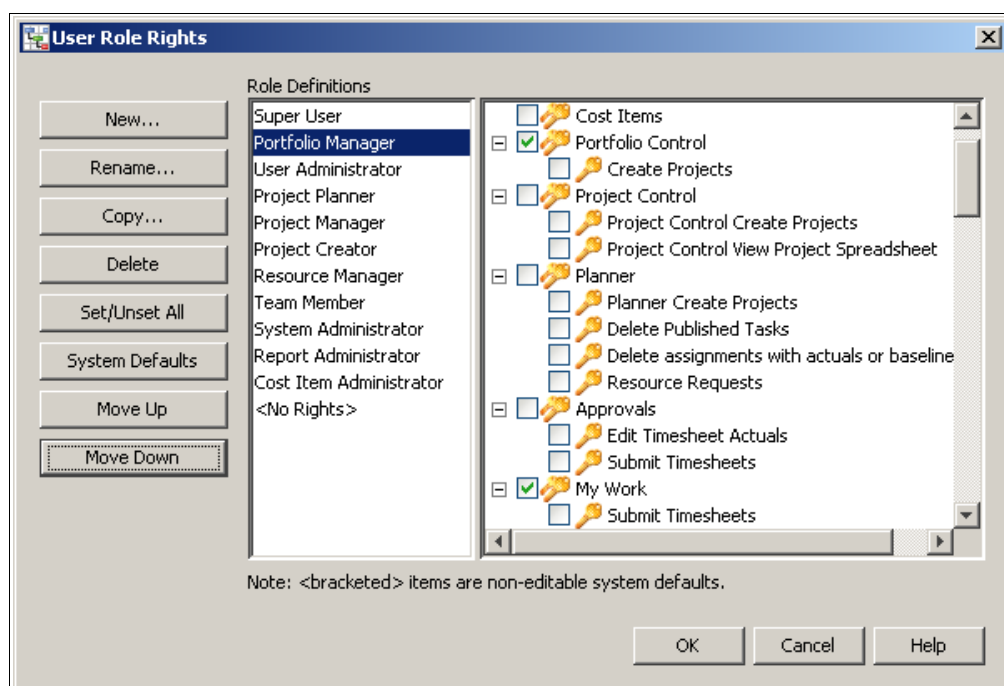


Fig 1. Assigning "Portfolio Control" component access to a user role.

## 5 - PSNext portfolio folders

In earlier PSNext versions, the notion of Portfolios was used to filter and group projects sharing common criteria. These portfolios were used to open or quickly visualize a group of projects (for instance in reports).

PSNext 3.0 offers two major functionalities to respond to portfolio management needs:

1. Portfolio filters,
2. Portfolio folders.

## C - Portfolio filters

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The concept of portfolios in previous versions of PSNext remains unchanged. Nevertheless, this function has been renamed "Portfolio filters" in PSNext 3.0.

The "Portfolio filters" puts together a virtual grouping of projects which correspond to conditions defined by the portfolio filter.

A portfolio filter is only defined by two attributes: its name and the condition (filter) that the projects included within the portfolio filter must abide by.

Being a "virtual" grouping, it is not possible to associate precise objectives to a "portfolio filter" neither a manager. The "portfolio filters" exist for consolidation purposes and to facilitate the access and reading of groups of projects.

For example a "Portfolio filter" can have the name "Current Year Projects" and include all of the projects for which the remaining effort is greater than zero and for which the end date is during the current year.

It is important to remember that any given project can belong to one or more "Portfolio filters". Indeed, it is possible that any one project corresponds to the conditions of more than one "Portfolio filter."

## 1 - Access rights to the “Portfolio filter”

The "Portfolio filter" does not have an associated Access Control List. These are each project permissions which are considered and applied.

A user will only bring up the "Portfolio filters" involving at least one project for which s/he has read access.

Furthermore, the "Portfolio filter" will only list projects that the user can read. It is therefore possible that the data display is only partial.

## 2 - Where can this feature be found?

"Portfolio filters" are available for the final user in several PSNext screens:

- **Opening Projects:** A user can easily find the project to open when looking for it inside a "Portfolio filter."
- **Definition of static reports:** Static reports can refer to a Portfolio filter to define the scope of projects to take into account while calculating a static report on the server side.
- **Selection in reports:** The scope of project data to be used by a report can be defined by an overall choice of "Portfolio filter" or even by individual project selections underneath "Portfolio filters".
- **Project selection in Collaboration component:** Project selection in the Collaboration component is simplified by the ability to re-locate the "Portfolio filters."

## D - Portfolio folders

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A portfolio brings together a group of projects to make their management easier and more efficient in order to reach mostly strategic objectives.

The portfolio must allow a quick and straightforward overview of the strategic overlay of projects. A portfolio is not a program. Projects in a portfolio do not necessarily have links between each other. Nevertheless, a portfolio of projects may include programs.

PSNext 3.0 introduces a new object under the name "Portfolio folder." It is essentially a tree structure (such as the Organization or Job Classification trees). It is possible to create as many "Portfolio folders" as necessary and to group them within a "Portfolio folder" at a superior outline level (a portfolio of "Portfolio folders").

## 1 - Creating portfolio folders

“Portfolio folders” are created by the administrator in the "System" component in the "Portfolio folders" section.

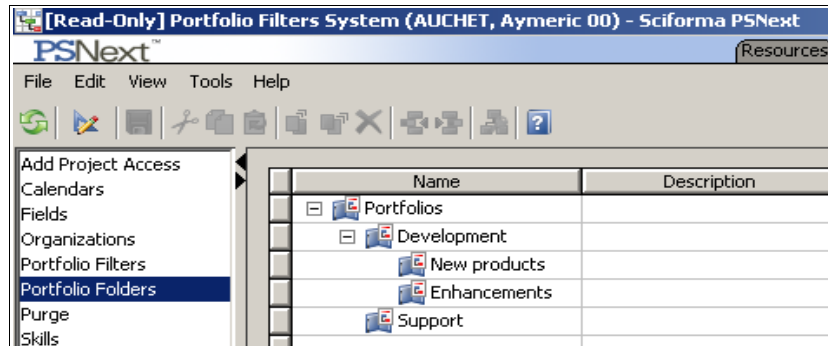


Fig 2. Creating Portfolio folders from "System" component.

“Portfolio folders” are defined at minimum with a name. Each “Portfolio folder” has a group of native attributes (built in fields) to complete their description and identification within the system.

Assigned descriptions, ranking metric definitions or all other additional information is optional for a “Portfolio folder” creation.

“Portfolio folders” can also be deleted in this panel.

## 2 - Portfolio folder identification and attributes

"Portfolio folders" exist as a built in category of PSNext. For this reason they are available in the "Fields" view of the "System" component. In this view it is possible to customize the native field displays, and to create an infinite number of User Defined fields, formulas and filters to help better identify the “Portfolio folder”.

For example, it is thus possible to assign a manager, a budget, etc to each “Portfolio folder”.

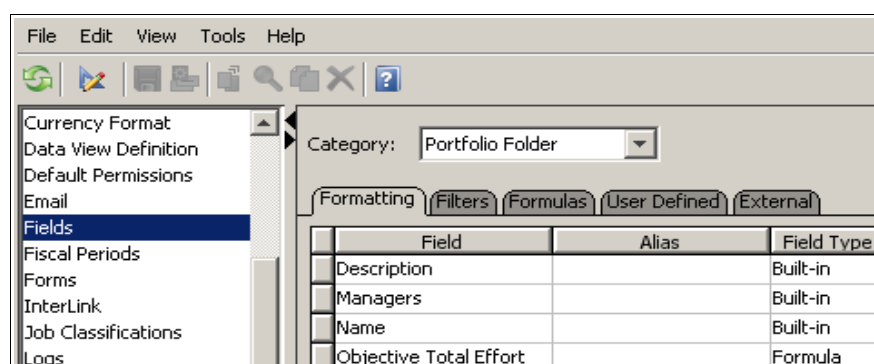


Fig 3. The "Portfolio folder" category allows the native and User Defined fields to be defined for each portfolio folder.

The input of field values identifying each "Portfolio folder" can be done in different places and consequently by users with different roles.

- **"Portfolio folder" view within "System" component.**

This view, generally reserved for administrators, allows the initialization and management of groups of existing "Portfolio folders".

It is possible to choose the fields that you wish to display in this view by double clicking the grid header.

- **"Portfolio folder" view in "Portfolio Control" component**

The "Portfolio folder" view lists all available "Portfolio Folders" in PSNext created first by the administrator. The characteristics within the "Portfolio folder" (name, ranking metrics, etc) can be filled-in or modified in this grid as far as that users have write access rights granted on the "Portfolio folder". It is also possible to choose the current "Portfolio folder" in order to change data available in the "Portfolio folder" forms that would be displayed (see "Portfolio folder" forms below)

The "Portfolio folder" fields entries are saved as they are done. There is no save button for "Portfolio folder" data nor for "open" or "close" actions.

Note that it is not possible to create or delete a "Portfolio folder" from this view.

- **"Portfolio folder" forms in the Portfolio Control component**

PSNext 3.0 extends the customization of forms to several objects, including "Portfolio folders". Administrators can thus create entirely configurable "Portfolio folder" forms and the fields or reports necessary for the full understanding of their users.

All tools for the creation of forms are available: the insertion of report objects, conditional tabs, access rights per form, etc.

Fig 4. Creating "Portfolio folder" forms in the "System" component.

Within the "Portfolio Control" component, users can display the "Portfolio folder" forms that they wish to complete by using the "View Control" dialog box (menu View / View Control...).

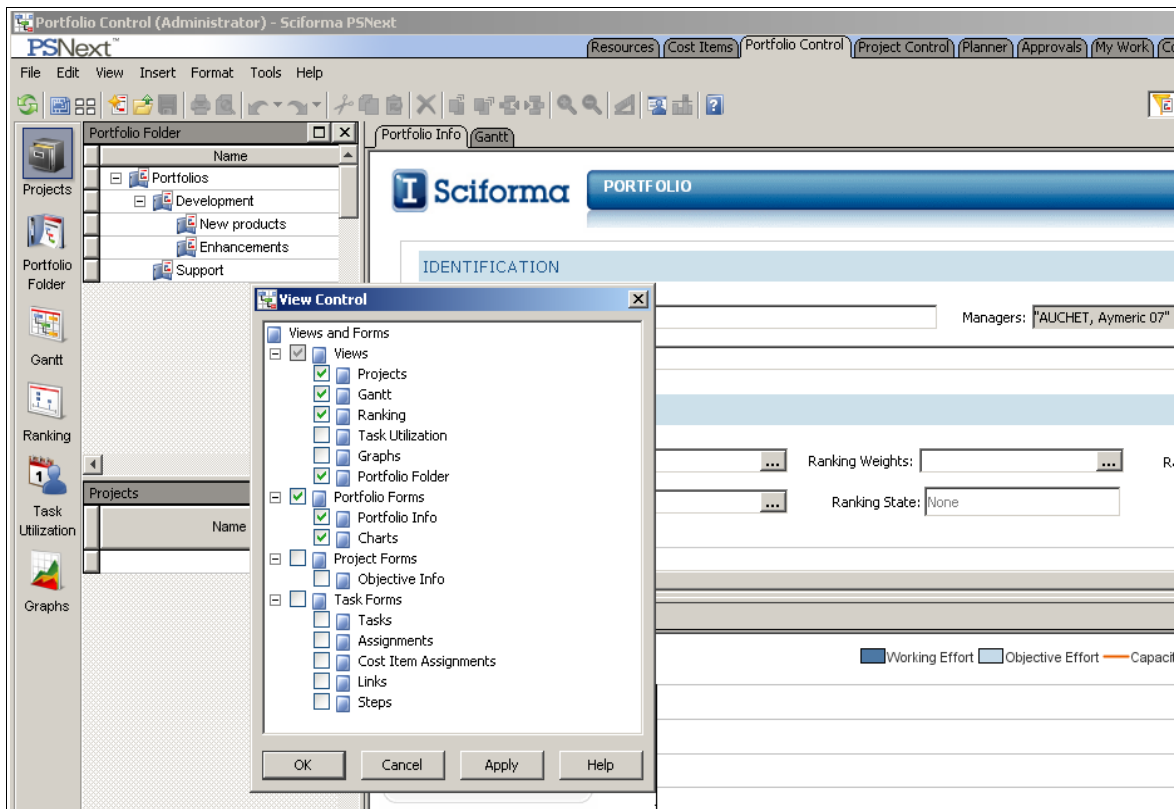



Fig 5. "Portfolio folder" forms can be displayed using the display control.

For more information on creating and managing forms, please refer to the document entitled "User Interface in PSNext 3.0".

### 3 - Access rights definition

Access to each "Portfolio folder" is controlled by an Access Control List. This list is defined by the administrator in the "System" component "Portfolio folders" using the "Access rights" tool  (menu File / Access rights).

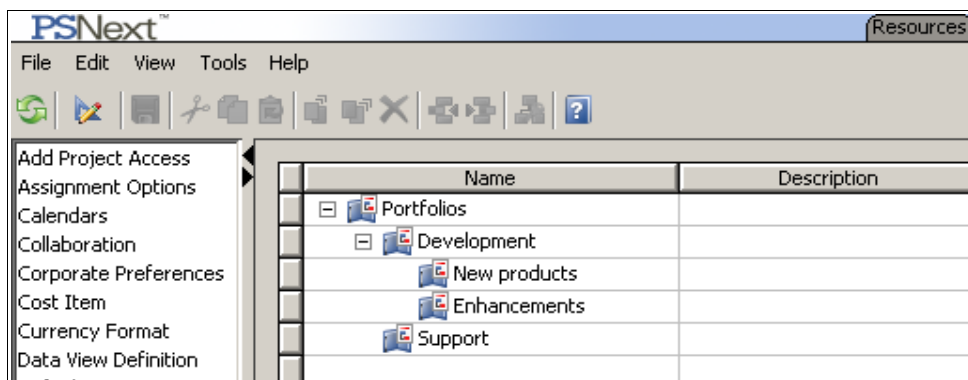


Fig 6. Defining access rights to a "Portfolio folder" from "System" component

The administrator is in a position to delegate the definition of a "Portfolio folder"s access rights to another user (the principle of "the right to grant rights").

It is equally possible to modify access rights of a "Portfolio folder" from the component "Portfolio Control" by using the contextual menu (right click) of a "Portfolio folder" in the "Portfolio folder" view.

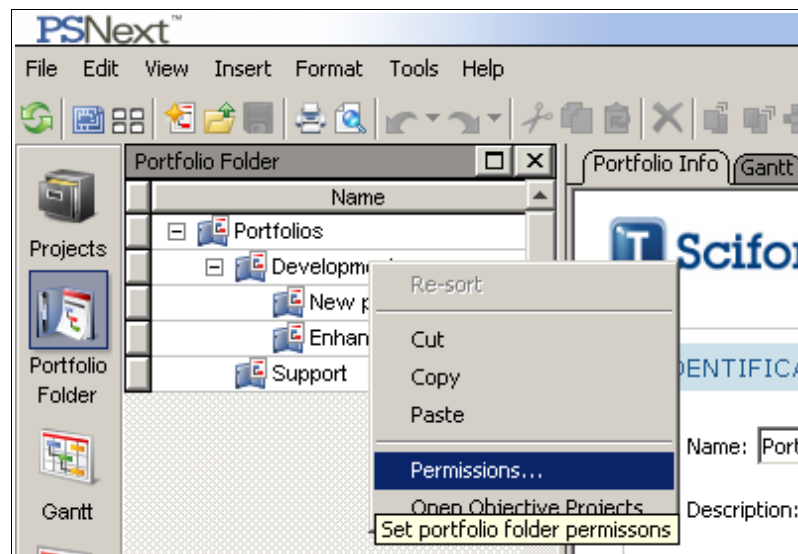


Fig 7. Defining access rights to a portfolio folder from the "Portfolio Control" component.

The list of access rights to each "Portfolio folder" is actually managed from a standard PSNext management rights dialog box. It is possible to grant rights to Organizations, nominative users or generic users as well as defining default access rights (see "System/Default permissions").

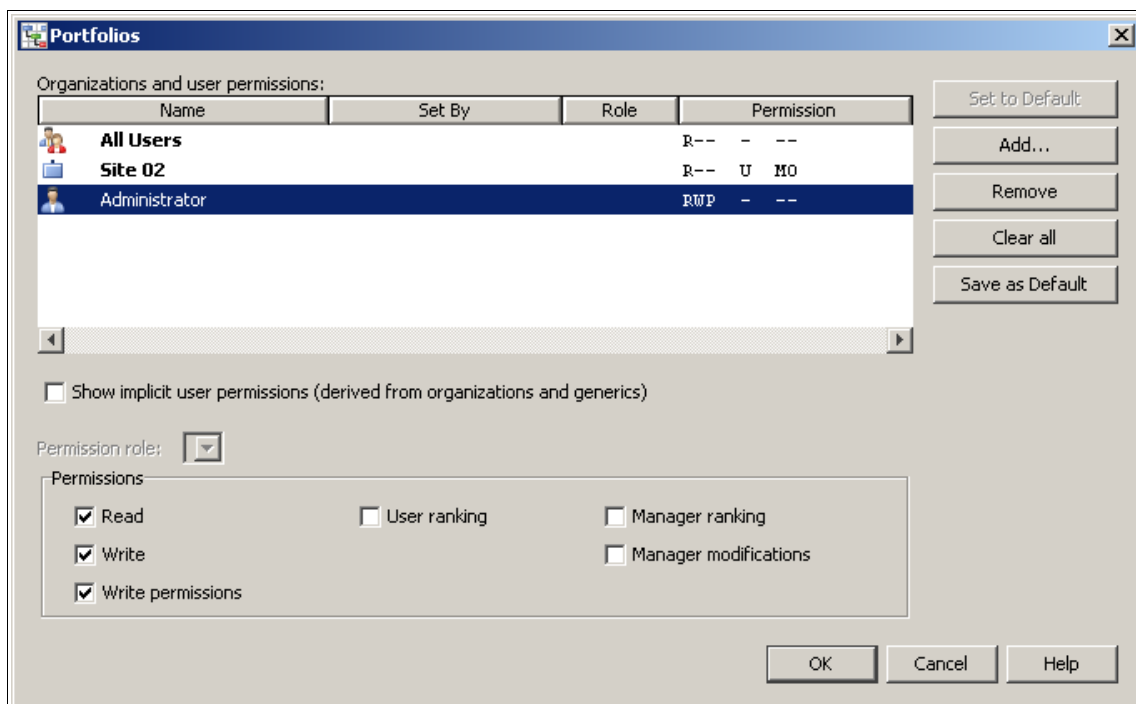


Fig 8. Access rights for a "Portfolio folder".

ACCESS RIGHTS	DESCRIPTION
READ	Allows user to read the fields identifying the "Portfolio folder".
WRITE PERMISSIONS	Allows user to modify the field values identifying the "Portfolio folder".
WRITE PERMISSIONS	Allows user to modify "Portfolio folder" rights.
USER RANKING*	Gives access to "User mode" of a "Portfolio folder" in the "Ranking" view allowing the ranking of projects belonging to the "Portfolio folder".
MANAGER RANKING*	Gives access to "Manager mode" of the "Portfolio folder" in the "Ranking" view allowing user to open, close and combine user rankings over the "Portfolio folder" projects.
MANAGER MODIFICATIONS	Allows user to modify the combined results at the "Portfolio folder" level. The votes of each user are not modified as such.

\*see "Ranking an Objective project" below.

The "Portfolio folder" permissions define the access to the "Portfolio folder" itself. These rights are independent of the rights defined for each project belonging to a "Portfolio folder". It is therefore possible that a user may be able to define "Portfolio folder" properties (Write access on the "Portfolio folder") without having the possibility to directly modify the projects within the "Portfolio folder" (restricted access on projects).

## 4 - "Portfolio folder" projects

Unlike for "Portfolio filters," a project doesn't belong to a "portfolio folder" simply by meeting a condition or a filter. The link is created manually by setting the built in "Portfolio folder" field value of each project. There is no permission required on the "Portfolio Folder" to link projects to it. Administrators are encouraged to enforce permissions or workflow controls to manage this field.

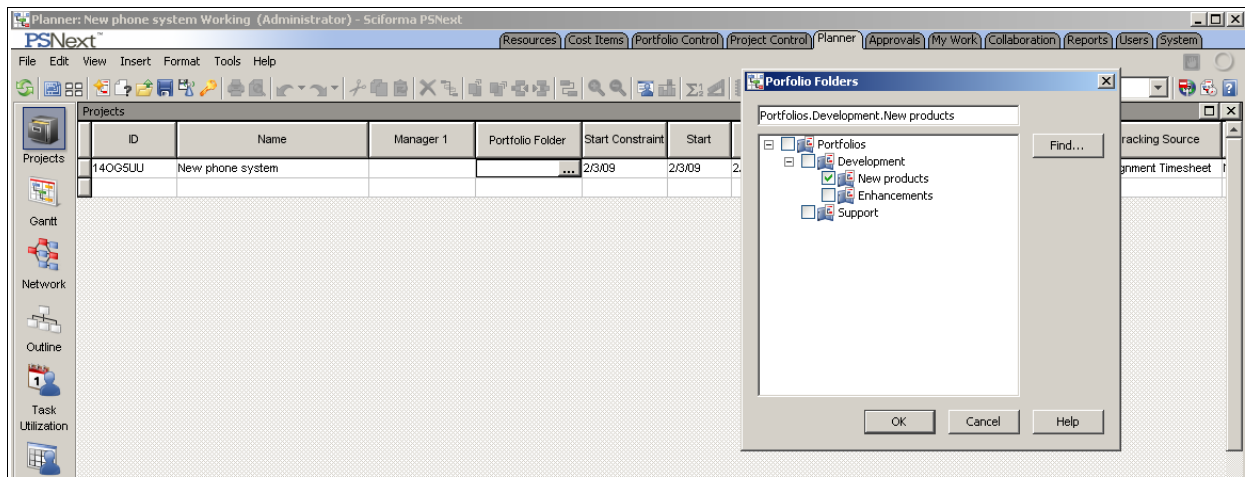


Fig 9. The project link to a portfolio folder made by the "Portfolio folder" native field project.

## 5 - Where can this feature be found?

In addition to their display in the "System" component and the "Portfolio folder" view in the "Portfolio Control" component, the "Portfolio folder" tree structure is available in several PSNext screens in order to facilitate the management of affiliated projects:

- **Opening Projects:** A user can easily search for a project to open by looking into a "Portfolio folder."
- **Selection in reports:** The "Portfolio folders" tree structure is available in the reports component in order to allow the selection of:
  - The scope of project data to use through a project oriented report by making an overall selection of a "Portfolio folder" or even an individual selection of projects underneath a "Portfolio folder".
  - The scope of "Portfolio folders" data to be used by a report "Portfolio folder" oriented report since it is possible to create reports based on the "Portfolio folder" itself.
- **Selecting projects in the Collaboration component:** Project selection in the Collaboration component is simplified by the possibility to re-locate the "Portfolio folder" tree.
- **Values list:** The Text User Defined Fields can use "Portfolio folder" tree structure as a source for the picklist. For more information on the management of value lists, refer to the document "Field management in PSNext 3.0".

## E - Choice of projects

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According to the needs of a company and the implementation scope of PSNext, portfolio management can be limited to just creating tree structures and to linking projects managed in the "Project Control" and "Planner" components.

PSNext 3.0 nevertheless offers additional tools for companies which need to manage the choice of projects to start. It is a matter of ideas, candidate projects or requirements that will be analyzed according to the "Portfolio folder" strategy and then elected or not.

The PSNext 3.0 "Objective" project concept meets this need.

## 1 - Definition of an “Objective” project

An "Objective" project represents an idea, a requirement or an estimate that will be ranked and assessed before finally becoming an "official" project.

The ranking of the "Objective" project relevance and its ability to become a concrete project lies in three main tools:

- **Identification of the project:** This refers to the values of the intrinsic attributes which describe the “Objective” project.
- **Ranking of the project :** This refers to the ranking of a project based on a group of non intrinsic metrics by several users that have been selected to vote by the Portfolio Manager.
- **Workload, costs and deadlines of the project:** The macro plan which allows the execution of simulations and various what if scenarios by comparing the candidate projects against the already committed projects workload as well as the “Portfolio folder” budget.

Relying on these three axes of analysis, “Portfolio folder” owners will be in a better position to decide whether or not to start a new project.

## 2 - Identifying a “Objective” project

An "Objective" project is represented in PSNext as being a project with a distinctive version: the Objective version.

For this reason, an "Objective" project shares the data model of the "Project" category since it matters to the project, albeit at the pre-project stage.

There is therefore no specific category to describe an "Objective" project. All fields in the "Project" category are available to describe an "Objective" project.

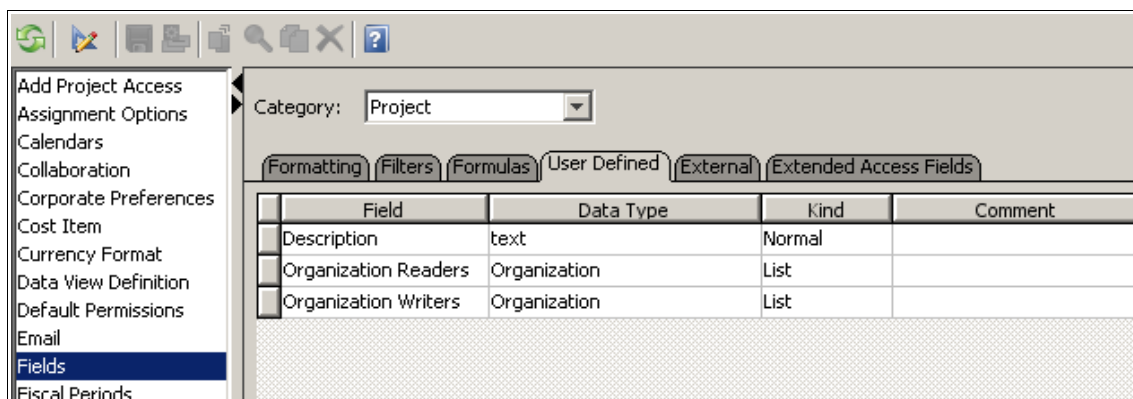



Fig 10. "Objective" projects and "Working" projects share the same data models.

Project fields allow the representation of intrinsic attributes identifying the objective: the potential turnover, the target market, the desired completion date etc.

### 3 - Creating a project objective

"Objective" projects are created exclusively in the "Portfolio Control" component in two different ways:

- By entering a new line in the "Projects" view grid.
- Using the menu File/New .

To create new "Objective" projects, the user must have the Portfolio Control "project creation" sub-permission.

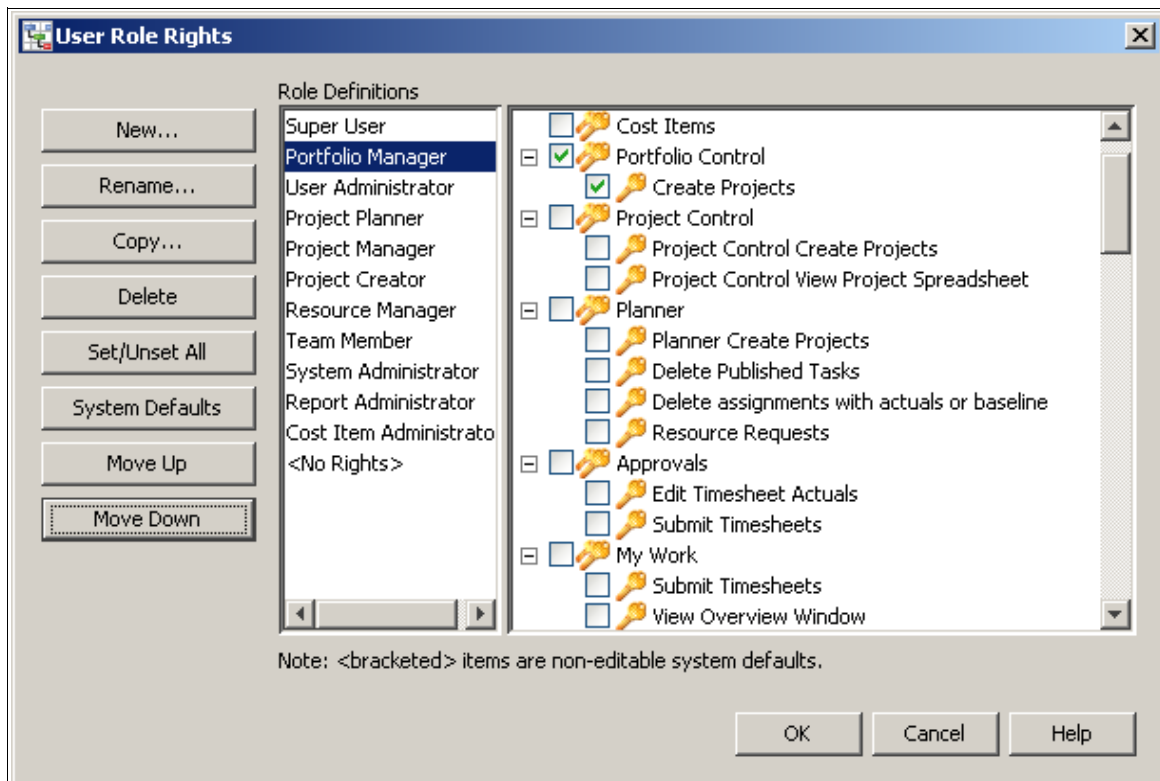



Fig 11. In addition to having access to the "Portfolio Control" component, the user must be allowed to create projects.

#### 3.1 - IDENTIFICATION AND ATTRIBUTES OF AN "OBJECTIVE" PROJECT

The input of field values identifying each "Objective" project can be made in different places:

##### The "Projects" view in the "Portfolio Control" component

The "Projects" view lists all open projects in the component. The attributes of each project can be entered or modified in this grid as far as the user has the Write permission on the given project and field. It is also possible to choose the current project what will automatically update data available in the project forms which would be displayed (see Project forms).

The input or modified values of a project field are saved using the Save button  (menu File/Save).

## Project forms from Portfolio Control component

Forms allowing the update of Project fields are available in the "Portfolio Control" component. Administrators can therefore create as many Project forms as necessary.

All tools for form creation are available for project forms: inserting object reports, conditional tabs, access rights per form etc.

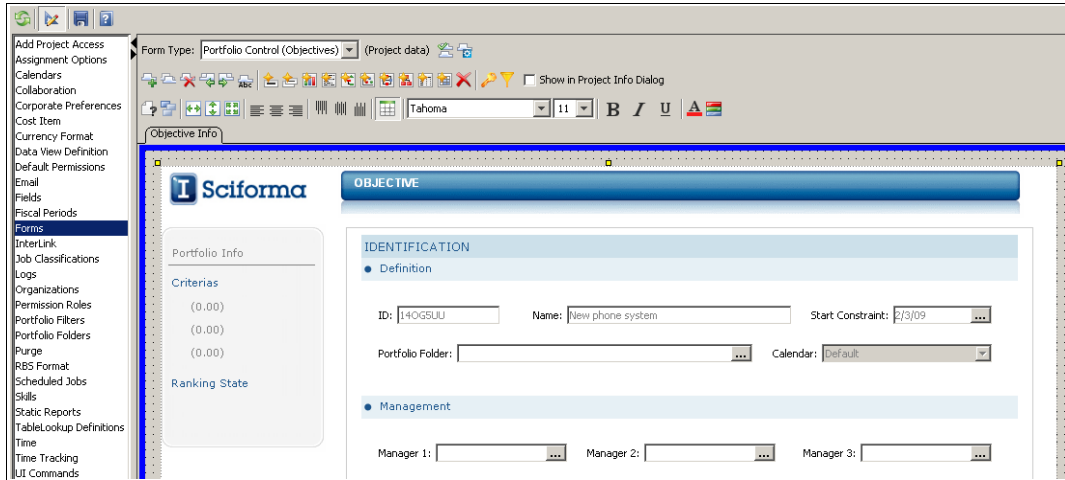



Fig 12. Creating Project forms for the "Portfolio Control" component from "System" component.

From the "Portfolio Control" component, users can choose the Project Forms that they wish to display by using the "View Control" dialog box  (menu View/View Control...)

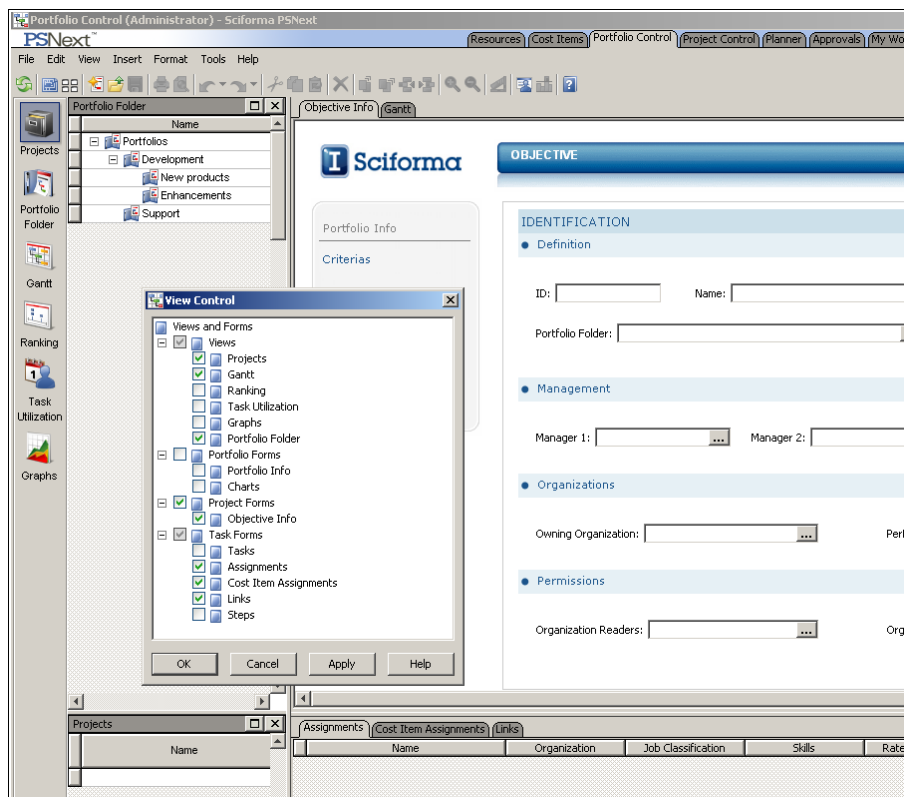



Fig 13. Project Forms can be displayed using the display control.

For more information on the creation and management of forms, refer to the document entitled "User Interface in PSNext 3.0".

Note that linking "Objective" project to a "Portfolio folder" is a manual operation as well. It is therefore possible to make this link asynchronously, that is to say after the creation of the "Objective" project.

### 3.2 - PERMISSIONS DEFINITION

Access to each "Objective" project is controlled by an Access Control List defined from the "Portfolio Control" component.

The permissions button  or the File/Permissions menu shows the definition of permissions for the current "Objective" project.

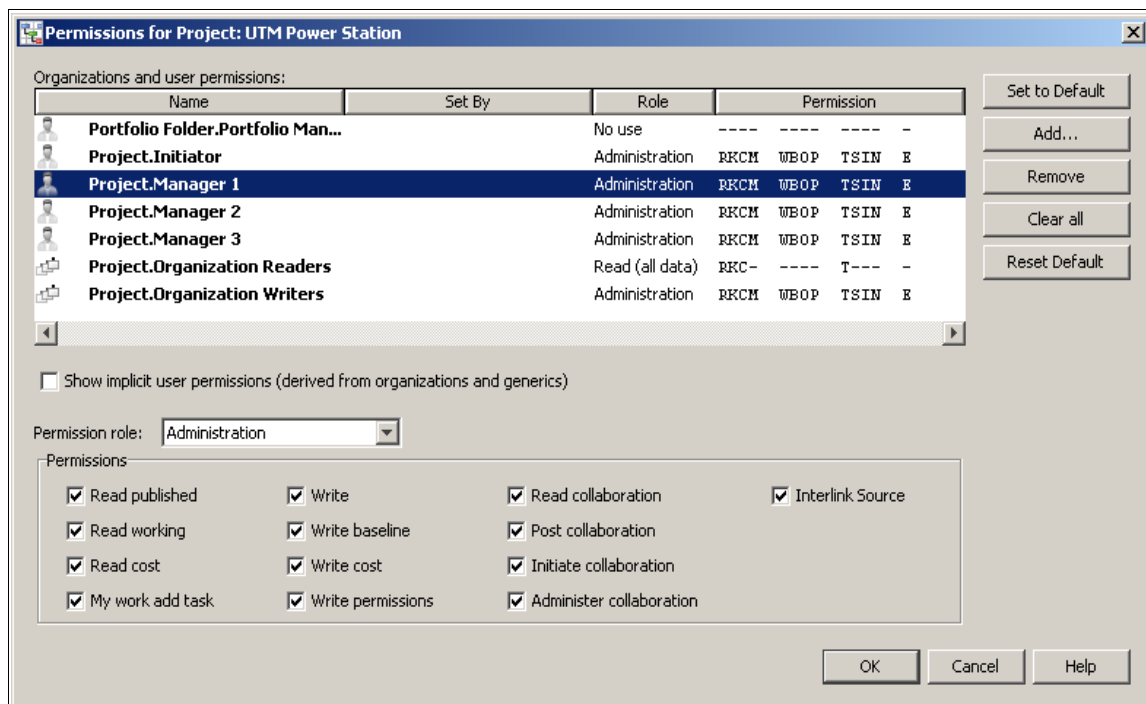


Fig 14. Definition of permissions for a "Objective" project.

Permissions for "Objective" projects are identical to those defined for a project in another version. It is nevertheless possible to independently define default permissions applied to any new "Objective" project.

It is important to note that access to projects is managed project by project. It is therefore necessary to elaborate a permissions strategy for all the actors in the same "Portfolio folder". The implementation of this strategy is facilitated through the use of generic users.

For more information on generic users and their access, refer to the document entitled "Field management in PSNext 3.0"

## F - Ranking an "Objective" project

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Entering the values of intrinsic attributes for a candidate project might be considered an easy step, but Portfolio Manager quite often needs to complete that by consulting certain stakeholders, generally executive managers or operational managers in order to rank a group of metrics of a more subjective nature.

Whether this is to assist a final decision or to make a definitive choice, PSNext 3.0 offers a ranking tool for "Objective" projects.

# 1 - Ranking metrics

Each “Portfolio folder” has a group of metrics available which allow all of its projects to be aligned with the same strategy.

The built in field "Ranking metrics", from the “Portfolio folders” category, allows the Portfolio Manager to define metrics which will be open to ranking as well as the weight of each of these metrics.

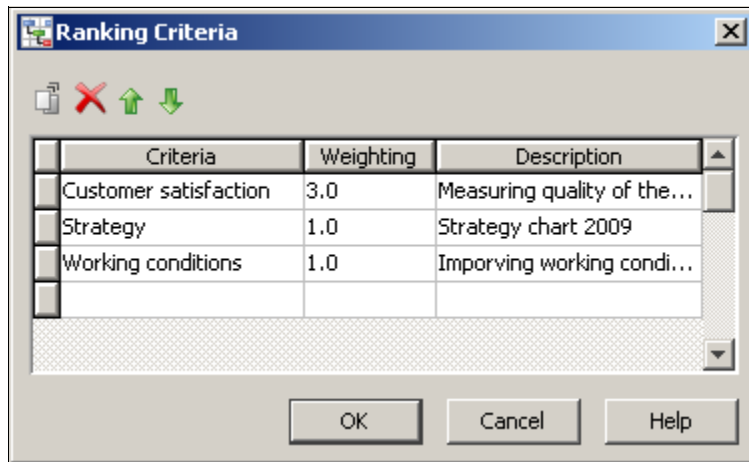


Fig 15. The portfolio folder "Ranking metric" field.

FIELD	DESCRIPTION
CRITERIA	Name of metrics to be ranked
WEIGHT	Weight of metrics at the time of ranking valuations. PSNext will make a percentage conversion for each metric based on total weights. It is nevertheless advised that a division by percentage from the input metrics is made (for example 50,25,25)
DESCRIPTION	Allows you to orient the user at the time of ranking by giving him more details on the metrics to be ranked.

## 2 - Ranking rights

As detailed previously in "Portfolio folder" access rights chapter, three specific rights allow to manage the rankings of "Objective" projects belonging to the "Portfolio folders":

- User ranking,
- Manager ranking,
- Manager modifications.

## 3 - Scope of projects to rank

"Portfolio folders" are perpetual objects in PSNext. New "Objective" projects will be associated to such "Portfolio folders" throughout their existence. The ranking phase is a recurrent phase which is generally linked to decisive periods of the company, notably at the time of annual budget planning, the revision of quarterly objectives etc.

It is therefore important to restrict the scope of "Objective" projects to be ranked so that for example, an objective that has already become a project (or even already been rejected) does not overload the ranking process (since it was ranked already at a previous period of time).

A field called "Ranking Criteria" thus allows the Portfolio Manager to enter the criteria for which the projects will be ranked.

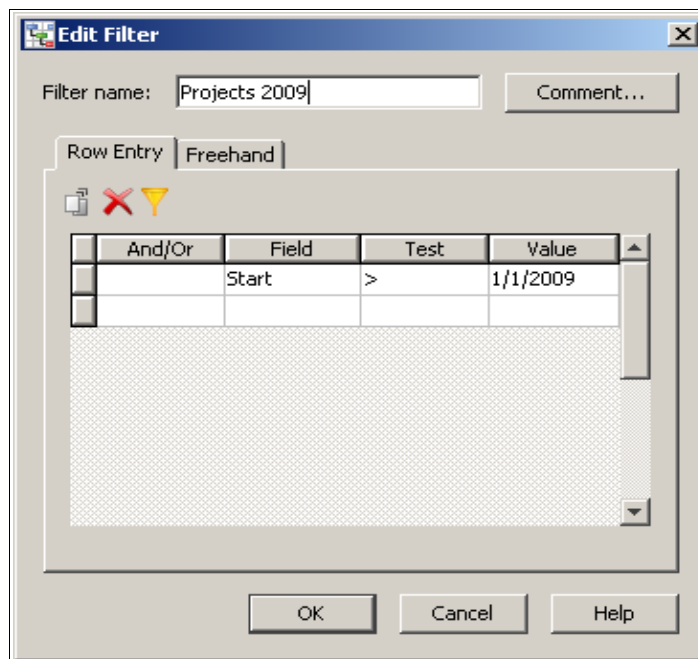


Fig 16. The limit of projects to rank can be restricted by a filter at the portfolio folder level.


## 4 - The Ranking view

The ranking of projects and its management can be carried out from the "Ranking" view. In this view, all the existing "Portfolio folders" in PSNext are listed. By choosing a "Portfolio folder", the user has two user modes available : User mode and / or Manager mode.

The available modes depend upon the user permissions of the selected "Portfolio folder". It is therefore possible that any given user only has User mode available on a "Portfolio folder" (on which he is a participant), although he may be able to access another portfolio in Manager mode.

## 5 - Opening rankings

The Portfolio Manager must manually open the ranking process of the candidate projects.

By using "Manager mode" on a "Portfolio folder", the Manager can toggle the Edit mode and open ranking by using the Open button  .

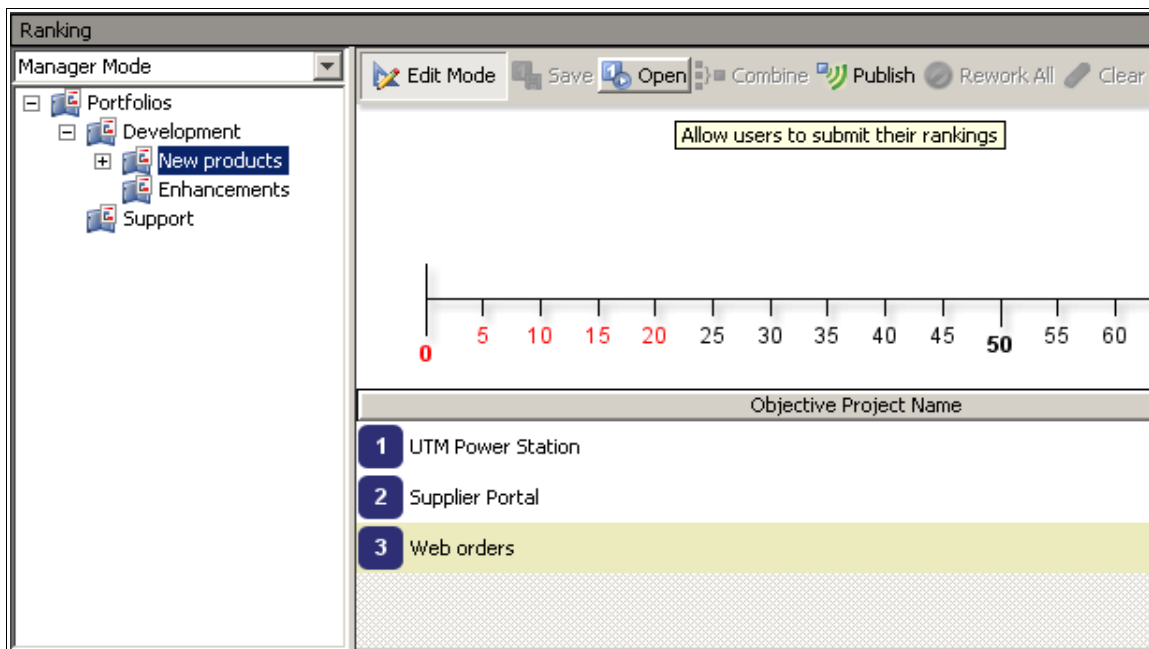


Fig. 17 Opening ranking as a Portfolio Manager.

A set of email alerts can be associated to events surrounding portfolio ranking. The rankers can for example start evaluate the project prior to the opening of the ranking. They would then automatically informed when the ranking is open. The Manager can be forewarned when all rankings have been made etc.

For more information on Email management, please refer to the document entitled "Emails in PSNext 3.0"

## 6 - Carrying out rankings

Users with "User ranking" rights can access the User mode on the "Portfolio folder" chosen in the "Ranking" view. Note that the Portfolio Manager can also be a ranker, the two modes being available at the time when the user chooses the "Portfolio folder".

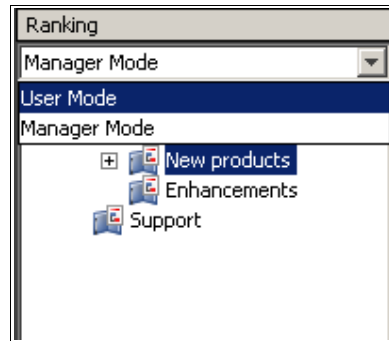


Fig. 18 The two modes are active when a Manager has ranking rights.

On the right hand side of the view, each ranker can re-locate the list of "Objective » projects to rank. Only the projects corresponding to the ranking scope (matching the defined filter on the Portfolio folder) and on which the user has read access (read work) are listed.

This prerequisite is important and allows the Portfolio Manager to partition rankings by granting "Objective" project read permissions to different people.

The group of ranking metrics for each project is available in the "Metric" scroll down list. The button on the right hand side of the list allows the display of chosen metrics

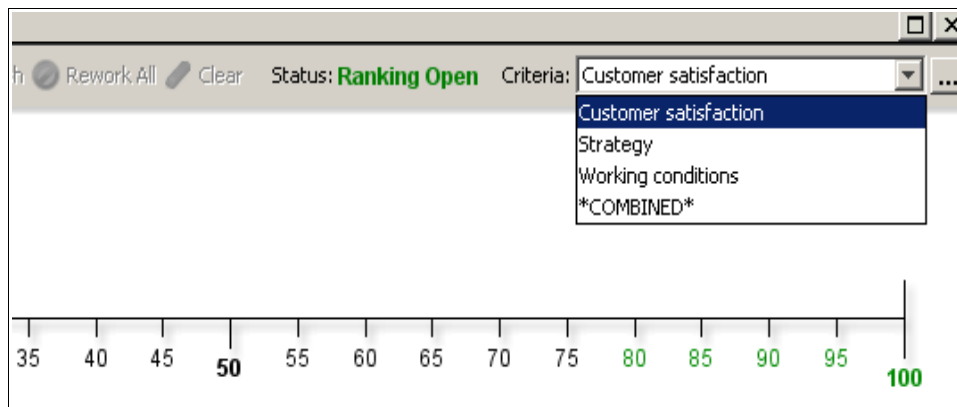


Fig. 19 Projects are ranked metric by metric

For each metric, the ranker can rank each listed project on a scale of 0 to 100. This action is carried out by showing the value directly in the "Ranking" field in the lower table, or by dragging the project name into the grid where the scale is.

	Objective Project Name	Ranking
1	UTM Power Station	55
2	Supplier Portal	
3	Web orders	35

Fig. 20 Input rank in the table

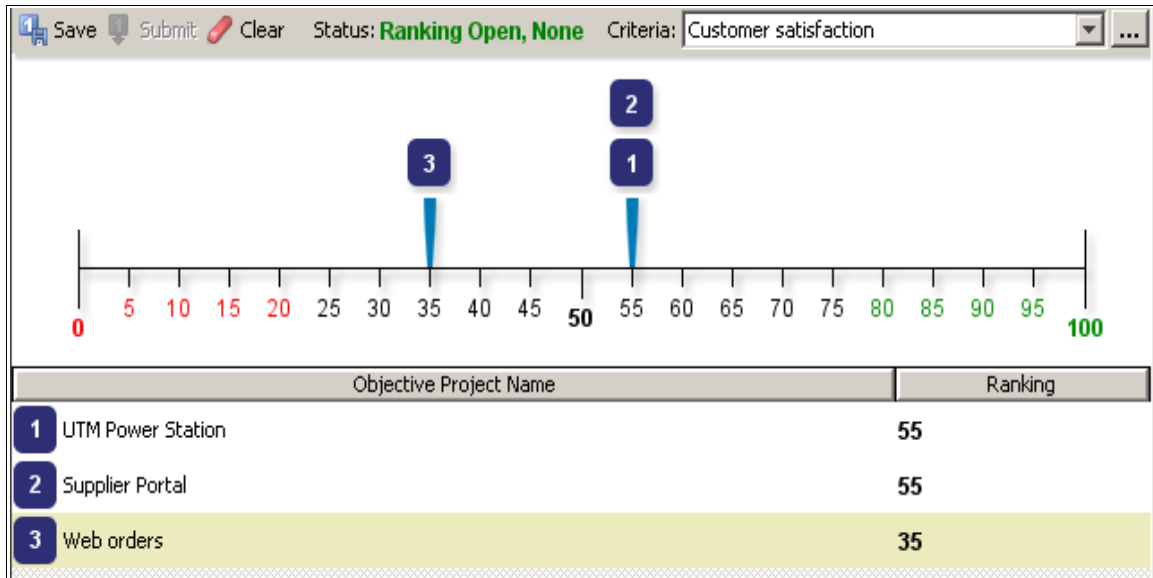


Fig. 21 Drag and drop projects in order to rank them.

A voter can abstain from ranking all the projects and all the metrics. Ranking abstentions are not considered as a rank of zero but as an abstention. At the time of weighting and combining rankings, abstentions will not be taken into account.

## 6.1 - COMBINING RANKINGS

For information purposes, the voter can bring up the combined rankings result by choosing \*COMBINE\* from the list of metrics.

Projects are presented according to the grading of the weightings and rankings of all metrics. This view is disabled since it is used for consultation purposes only.

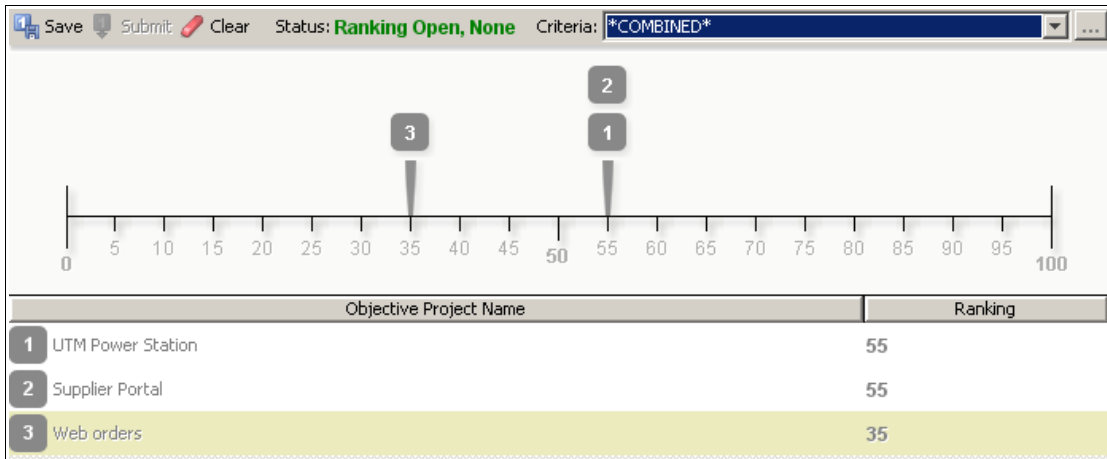


Fig. 22 Displaying combined rankings

The calculation of combined rankings is carried out in the following manner:

- 1. Calculate the proportion of each metric.** Each metric has an associated weight, PSNext calculates the corresponding percentage of each metric based on the total weights.

$$\text{Metric percentage} = (\text{Metric weight} / \text{sum of all metric weights})$$

CRITERIA	WEIGHT	PERCENTAGE EQUIVALENT
CRITERIA 1	3	$3 / (3+1+1) = 60 \%$
CRITERIA 2	1	$1 / (3+1+1) = 20 \%$
CRITERIA 3	1	$1 / (3+1+1) = 20 \%$

Fig. 23 Example: percentage calculation by metric for "Portfolio folder" P

- 2. Calculation of weighted score by metric.** The weighted score by metric is established by using the ranking 0 to 100 made on a metric and the percentage of each metric on the total.



CRITERIA	RANKER 1	WEIGHTED RANKING
CRITERIA 1	55	$55 \times 60 \% = 33$
CRITERIA 2	20	$20 \times 20 \% = 4$
CRITERIA 3	45	$45 \times 20 \% = 9$

Fig. 24 Example: Scaled Rank calculation by criteria for a given ranker on project P1



- 3. Calculation of combined score.** The overall project notation for a given ranker, including all metrics, is then obtained by adding the project's weighted rankings on each metric.

Ranker's weighted ranking on P1 =  $33 + 4 + 9 = 46$

## 6.2 - SAVING AND SUBMITTING RANKINGS

Once the rankings are finished, it is possible to save  them and submit them to the Portfolio Manager  (this button is only active if the rankings are "open"). Once the rankings are submitted they can no longer be modified by the ranker, unless the Portfolio Manager modifies their status to "Rework".

## 7 - Consulting user rankings

In Manager Mode, the list of users having the ability to rank "Portfolio folder" projects is displayed. Managers can consult users having already submitted their ranks, they will appear with a colored icon  while those not yet submitted are displayed with a grey icon .

When choosing the user name, the right hand side shows rankings which have been submitted by the user. It is possible to view them, metric by metric, or even in combined mode.

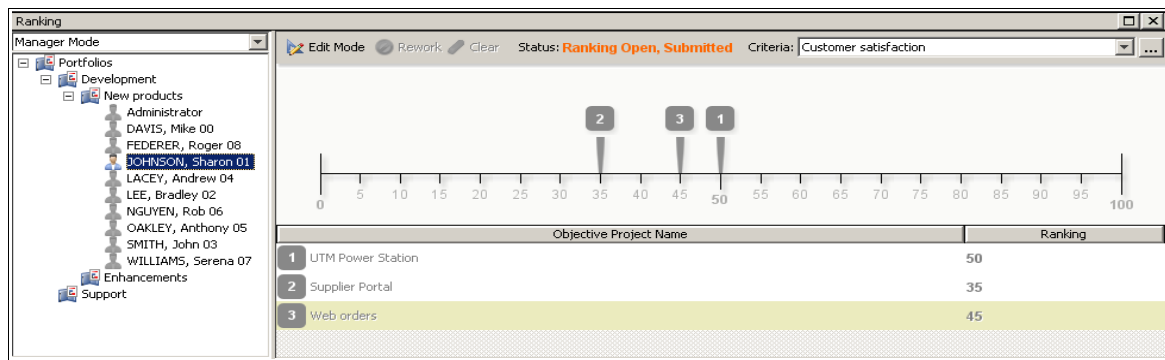




Fig 25. The manager can view the rankings of each user.

## 8 - Closing rankings and combining

It's been shown that the Portfolio Manager can bring up rankings at any time. However, it is necessary to be able to close the ranking process after a short while to enable final analysis of the "Portfolio folder".

At the end of the ranking period (manually determined by the "Portfolio folder" Manager), the Portfolio Manager then proceeds to shut down before combining (Close button  in Manager mode).

The rankers can then no longer submit rankings.

Combining is performed by choosing the "Portfolio folder" in Management mode and activating the Edit mode. By clicking the Combine button , the group of submitted rankings is taken into account to calculate total project marks metric by metric.

## 8.1 - COMBINED CALCULATION BY METRIC

The combined ranking for a project for each metric corresponds to the average individual rankings which have been submitted.

CRITERIA	RANKER 1	RANKER 2	RANKER 3	COMBINED RANKING ON THE PROJECT
CRITERIA 1	55	30	20	Average(55, 30, 20) = 35
CRITERIA 2	20	35	70	Average(20, 35, 70) = 42
CRITERIA 3	45	90	53	Average(45, 90, 53) = 62
WEIGHTED PER RANKER	$33 + 4 + 9 = 46$	$18 + 7 + 18 = 43$	$12 + 14 + 11 = 37$	

Fig. 26 Example: calculation of the combined ranking for project P1 for each metric

## 8.2 - COMBINED CALCULATION ALL METRICS


Finally the combined rankings for an “Objective” project comprising all metrics corresponds to the average combined results of each ranker.

PROJECT	COMBINED RANKER 1	COMBINED RANKER 2	COMBINED RANKER 3	COMBINED RESULT
P1	46	43	37	Average(46, 43, 37) = 42
P2	50	15	20	Average(50, 15, 20) = 28
P3	30	20	80	Average(30, 20, 80) = 43

Fig. 27 Example: Calculation of the combined overall mark comprising all metrics

## 9 - Changing combined results

After the combination of rankings, it may be that the Portfolio Manager needs to change the combined results. The "Manager modifications" right is necessary to carry out this operation.

By choosing the "Portfolio folder", the right hand side of the screen shows the combined results (metric by metric or the overall COMBINATION). These values can be initiated by making the Combine action  or even input directly by the manager when the editing mode is active.

The user then just has to choose a metric from the list in order to change the combined project mark for this metric.

## 10 - Publishing project results

Project rankings evolve as one goes along from the different rankers input, they are not considered as validated until they have not been published.

Publishing the results is made by the Portfolio Manager activating the Edit mode in the "Ranking" view with the help of the Publish button.

The publish action sends information of the rankings results to ranked projects. Consequently, the following project fields are updated.

FIELD	DESCRIPTION
ORDINAL RANK	Project grading among the group of ranked projects. A value of 1 indicates a project in first place.
ORDINAL METRICS	Positioning of project metric by metric
SCALED RANK	Weighted value of combined ranking of a project comprising all metrics Values go from 0 to 100
SCALED METRICS	Obtained rankings by project for each metric.

## G - Costs, time and workload estimation

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Although detailed planning of a project at this phase may have no interest for the Portfolio Manager, it is possible to use the objective planning tools to carry out a macro plan.

The « Portfolio Control” component has Gantt, Task Utilization, Graphs as well as a Task Form in order to allow macro-level plan to see if the “Objective” project should be made live.

Generally, the “Objective” project will only be described in high-level phases and with its key milestones. The resources and costs estimations will also be done at this level.

It is also possible to use project templates or even delegate the estimation of a certain part of the project to another user using work packages.

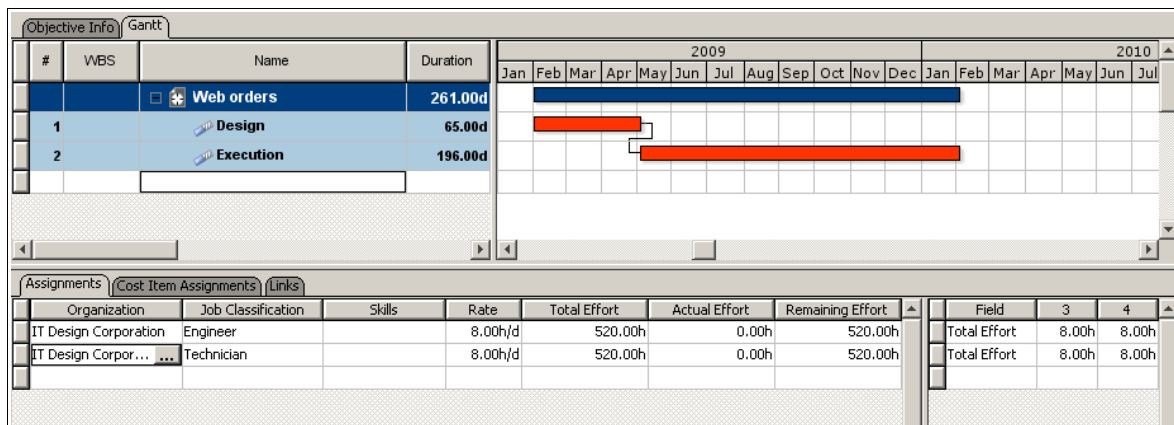


Fig. 28 The main phases of a project are described with the assignments resources and cost items.

## 1 - Assessing resources needs

Resource assessments can be done in the Assignments tab. Although it is possible to assign nominative resources, the costs assessment will be often supported by generic assignments (soft assignments) of an organization and / or job classification.

According to the availability of the performing organizations, the resources leveling tools are available in the "Portfolio Control" component to take into account the remaining availability in the different departments.

## 2 - Assessing cost items needs

Assessments of non human resources, sub-contracting costs or material costs are managed with the help of cost items assignments. The "Cost items assignments" tab allows the creation of those assignments.

## H - Choosing between candidate projects

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Project selection (or electing) is an important process in the portfolio management. It is a formal process where each candidate project (idea or "Objective" project) is studied from different angles.

This phase makes it possible to improve the quality of selected projects and to control the demands by enforcing a workflow and an objective ranking. Decisions are based on the overall ranking of a project, but also on its position in relation to the group of existing projects in the "Portfolio folder" and on the needs at the time of ranking.

Obviously, an important criteria is the "capability to do" that requires a project macro plan (or "capacity planning") to simulate the use of generic resources.

The Portfolio Manager now has a comprehensive vision of the candidate projects in their portfolio. The Portfolio Manager is capable of using the intrinsic characteristics defining each project, the rankings and opinions of participants as well as the cost, deadline and workload assessments.

## 1 - Analyzing the project properties

The intrinsic attributes of projects are generally read in bubble graphs through the different dimensions of analysis that they contain.

To support decision making, these graphs can be displayed directly in the “Portfolio Control” component as reports inserted into a “Portfolio folder” form.

The content of a bubble graph depends upon the open projects in the component. This filter offers large simulation capabilities since the graphic is automatically updated when a property change occurs.

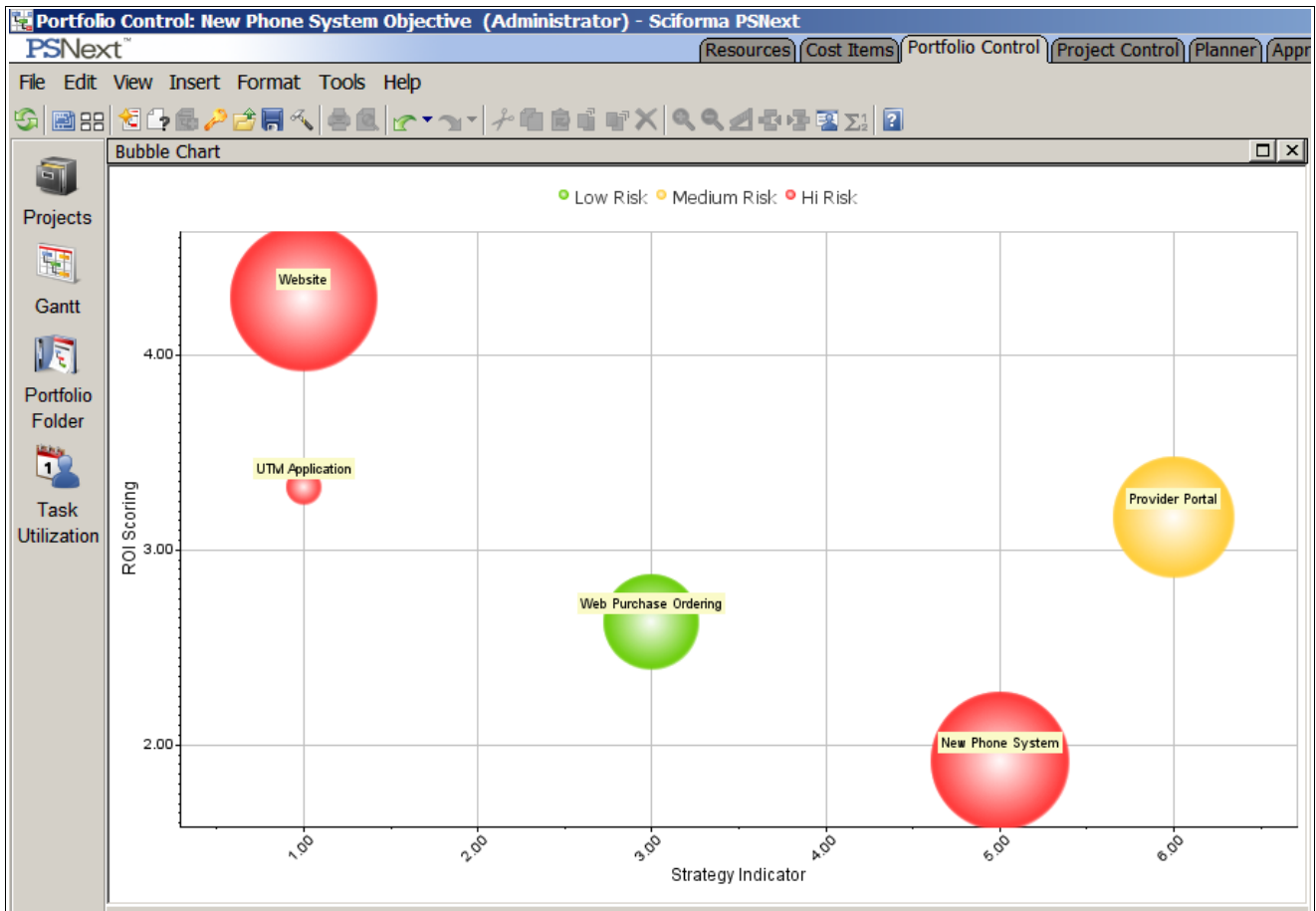


Fig. 29 Bubble graphs can be directly consulted from the “Portfolio Control” component with definitive data or simulated data.

## 2 - Analyzing ranking results

As shown in the "Ranking an Objective project" section, the ranking results are published in some fields of each ranked project. It is then possible to use the results as if they mattered to intrinsic values (in the same bubble graph) or even in an independent manner.

## 3 - Analyzing "ability to perform": Capacity planning

"High level" planning of a project is very useful for the "capacity planning" stage. What matters here is to display the ability to produce of the company both in terms of resource availability and budget.

The interest of this analysis lies in the integration of "Objective" projects with the on-going projects workload which the Portfolio Manager has already committed on ("Working" projects). In case of conflict, arbitration must not only enable a candidate to be modified, but also act on an already started project (by delaying or stopping it) in a case where the "Objective" project has a higher priority.

The development of a new product can for example place major constraints on its market entry. Its chance of success and the return on investment that it can bring are strongly linked to this date. If this "Objective" project had to be delayed, its value for the portfolio strategy would be compromised. In such a case, it could happen necessary to stop or postpone a project in progress with a low priority.

In order to perform all actions, whether it is a simulation or a definitive change, the manager of a "Portfolio folder" has the possibility to open "Working" or "Published" projects directly in the "Portfolio Control" component

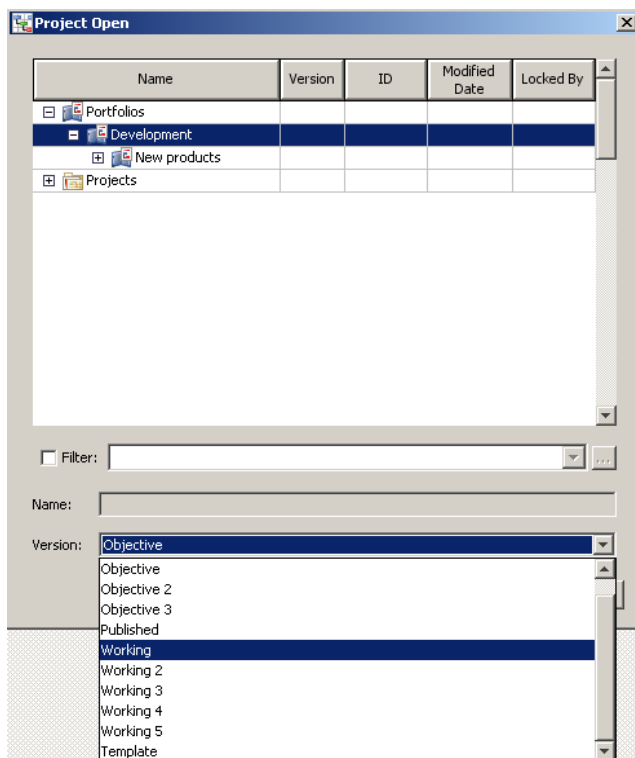


Fig 30. From the "Portfolio Control" component it is possible to open any version of a project.

Once projects are opened, the simulation results can be displayed in reports embedded into the Portfolio forms. Bars charts are a good example of tool for analyzing availability.

The modifications made on open projects will be automatically considered by the form reports without having to save projects what allows to undo them one by one (menu Edit / Undo or Ctrl + z) or in a combined manner (by closing the projects without saving modifications).

The Portfolio Manager can easily postpone phases of a project, the entire project, modify effort assessments etc.

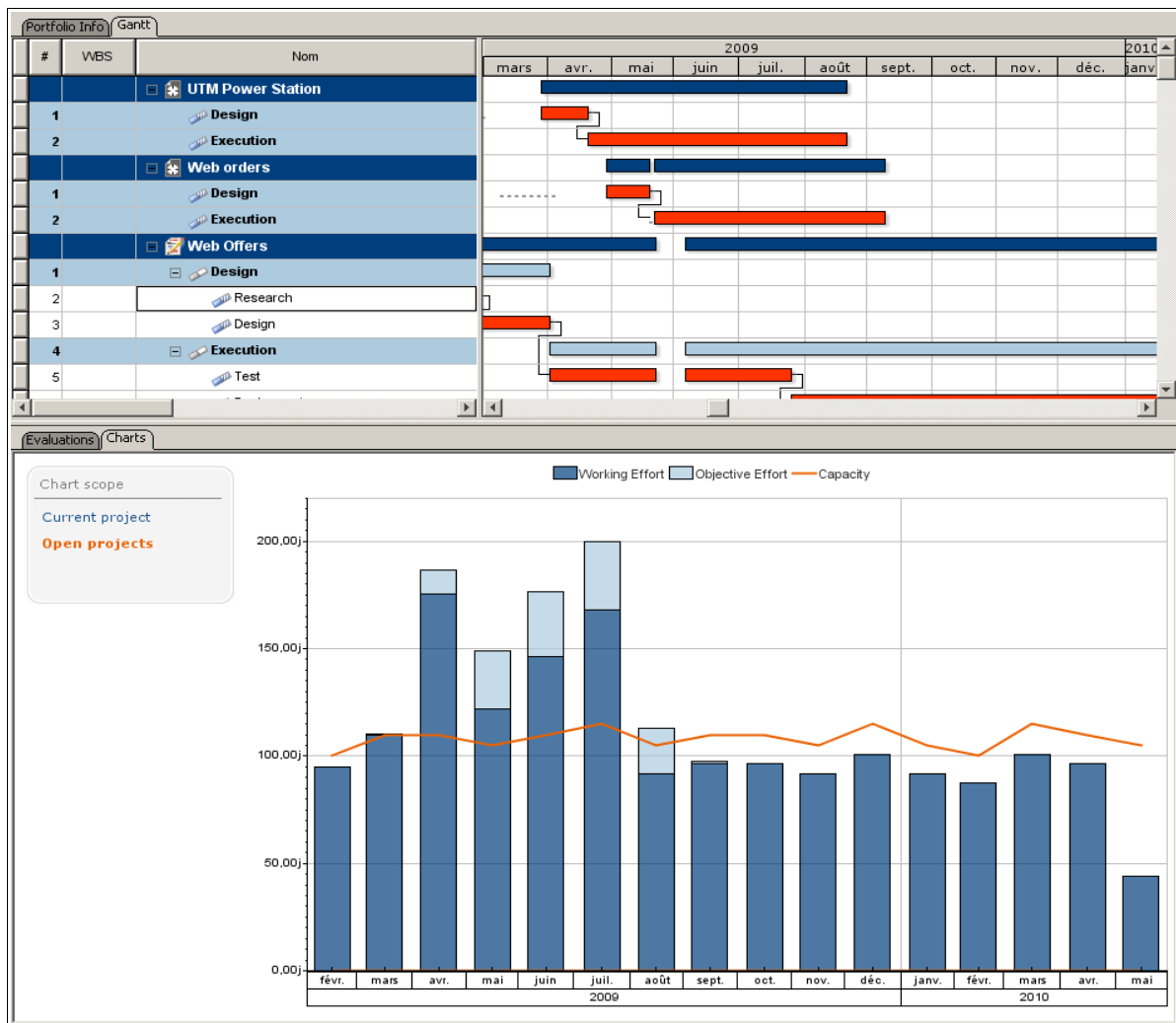


Fig 31. Example: Capacity simulation analysis with the aid of a bar chart.

PSNext leaves you free to choose the metrics and analysis axes to use. Whether it is ability to do, available budget or project priority, the options are limitless and can be adapted to whatever context or need.

## 4 - Saving simulations

When modifications done on a candidate project lead to a suitable solution, the "Objective" project can be saved in version "Objective 2" or "Objective 3" (File / Save as...). Simulations are thus preserved and can be used later.

## 5 - Launching a project

The goal of these analysis phases is to choose the best projects to launch. Once a project is elected, the Portfolio Manager proceeds to the kick-off. The "Working" version of the project must be created and contains the detailed plan and execution of the project.

PSNext gives free choice in the manner of which this initialization is made.

### 5.1 - SAVE AS

As a "standard" way it is possible to use the command "Save as" in order to save the "Objective" project as a "Working" version. If so, the "Working" version of the project will be, while launching it, an exact copy of the "Objective" project.

### 5.2 - UI COMMANDS

The needs associated to a new project kick-off can vary considerably from one company to another and even from one "Portfolio folder" or project type to another. Here are some examples:

- An authorization is required for the project launch (check of the existence of an associated account in an ERP),
- A project in "Working" version must be initiated by using a specific template having a different breakdown that of the objective,
- A project in "Working" version must be initiated without any planning data,
- Several "Working" projects must be created from an unique "Objective" project, objective etc.

The "UI commands" function of PSNext 3.0 offers all the necessary flexibility for launching a project from the "Portfolio Control" component.

By creating a UI command, it is possible to integrate into PSNext all of the rules and processes necessary for launching a new project.

For more information on UI commands, refer to the document entitled "UI commands in PSNext 3.0".

The "Objective" project now represents the objectives to achieve which were fixed at the time of project start up. The "Objective" project remains under the responsibility of the Portfolio Manager. The "Working" version, such as it is, represents the "launched" project and falls under the umbrella of a project manager.

## I - “Objective” project Follow-up

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The portfolio follow-up is an important phase which consists in verifying that projects are delivered in accordance with the choices made in the previous phase and that they meet the objectives defined for a successful conclusion.

## 1 - Tracking a portfolio

The portfolio follow-up process is a must-have tool for making decisions when taking into account new projects, possible failures or budget related modifications.

At any moment, decision makers can take advantage of a synthetic view of their portfolio comprising the key indicators of the good health of projects (established according to measurable objectives).

It is also important to regularly oversee risks evolution and the cost effectiveness of projects in order to arbitrate the allocation of resources and eventually stop a project which would fall outside of the portfolio target zone.

### **Bottom-Up analysis**

The principle of a "Bottom-Up" (ascending analysis) is to represent key information (indicators) of a "real" project, planned and updated, at "Objective" project level as a means for comparison.

The idea is to define some strategic indicators (costs undertaken, planned end date etc.) and to compare the values of the "Working" project against the "Objective" project.

Here it is essentially a matter of providing some alerts in case some predefined objectives are exceeded.

### **Top-Down analysis**

The principle of a "Top-Down" (descending analysis) is to lay down the project objectives into the "Working" project.

The project manager can then read the objectives directly in the "Gantt" view or set up alerts in different dashboards in case of exceeding.

Like the initialization of a "Working" project, the portfolio follow-up is entirely configurable. Users are free to define the metrics for "Bottom-Up" and "Top-Down" analyses according to their own needs.

PSNext 3.0 offers a set of tools which enables the Portfolio Manager to carry out the portfolio follow up. Two major approaches are recommended:

1. Copy source data,
2. Consulting only.

## 2 - Copy source data

Data copying consists of opening and consulting a data source in order to re-locate information and repatriate it to a target object into which the information is copied.

### 2.1 - PROJECT INTERLINKS

Normally used between different projects to create dependencies, interlinks can be a solution for the follow up of objectives. The "Objective" project can be connected to a "Working" project and vice versa. Information at project and / or task level can be studied with this solution.

### 2.2 - UI COMMANDS

For the same reasons as project initiation, the use of UI commands can meet the more sophisticated needs of retrieving information from the "Working" and copying it to "Objective" and vice versa.

This option is useful for example when the "Working" and "Objective" projects breakdown structures are completely different. The UI command could for example aggregate data coming from the "Working" project to make them usable while analyzing the "Objective" project.

The great advantage of exchange solutions is the degree of customization that they offer. On the other hand a major inconvenience is the fact that the information is copied from a source and that it is only brought up to date on request.

## 3 - Consultation only

Another approach for the verification of the objectives follow-up is to directly read data from the source. Contrary to the previous method, information is consulted in real time and updated as soon as it is modified, no copying takes place.

### 3.1 - REPORTS COMPARING VERSIONS

Text reports offer the possibility to compare different project versions (specific data). Used in previous versions of PSNext to compare a "Working" version with its published version or even with different simulated versions (2 to 5), this option presents an excellent solution when the manager of a "Portfolio folder" wishes to compare way in which a "Working" version of a project behaved in relation to its "Objective" one.

## 3.2 - DATA VIEWS

The data views are an ideal tool to exchange data with external applications. It is then possible to have project data made available in a database table to be consulted by another application. Therefore, it is possible to consult from PSNext, information originating from a third application which would have been made available in the database table.

These "exchanges" between applications perfectly represent the necessary kind of exchanges between the portfolio management and the project management worlds, even if both of them are managed within PSNext.

With the possibility of creating user defined categories within PSNext 3.0, it is possible to consult data coming from the objective by using reference fields (for example [Objective]) and vice versa for use in tables, Gantt charts, reports etc.

For more information on how to use the User defined categories, refer to the document entitled "User-defined categories in PSNext 3.0".

## J - Conclusion

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The portfolio management represents a major improvement to PSNext 3.0. A new component and dedicated tree structure have been integrated to meet the needs of Portfolio Managers.

Projects can tie in to portfolio folders from the early stages: a request, an idea etc and are thus named "Objective" projects.

The choice of projects to launch is based on the analysis of a group of properties for each objective: its intrinsic attributes, rankings made by participants and workload assessments, deadlines and production costs.

In case of conflicts, simulation possibilities (what-if scenarios) facilitate the choice of projects and the decisions to make regarding on-going projects.

Projects launch as well as the descending (top-down) and ascending (bottom-up) analyses are entirely configurable in order to meet all the needs of a company.

These new PSNext 3.0 tools are implemented in order to guarantee you an easy portfolio management that is adapted to your needs.