0 Introduction to OpenPPM

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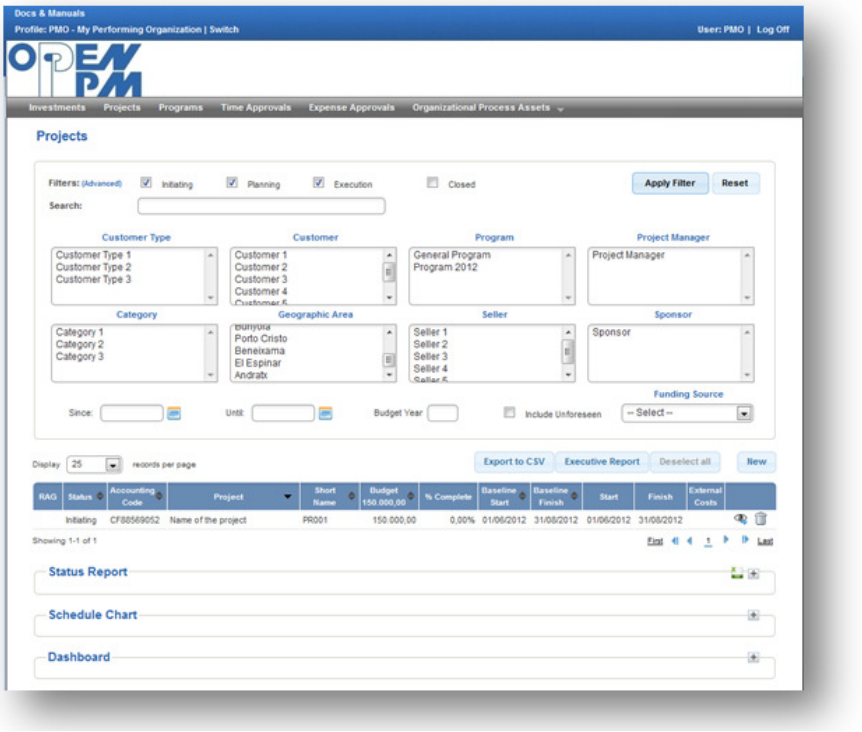


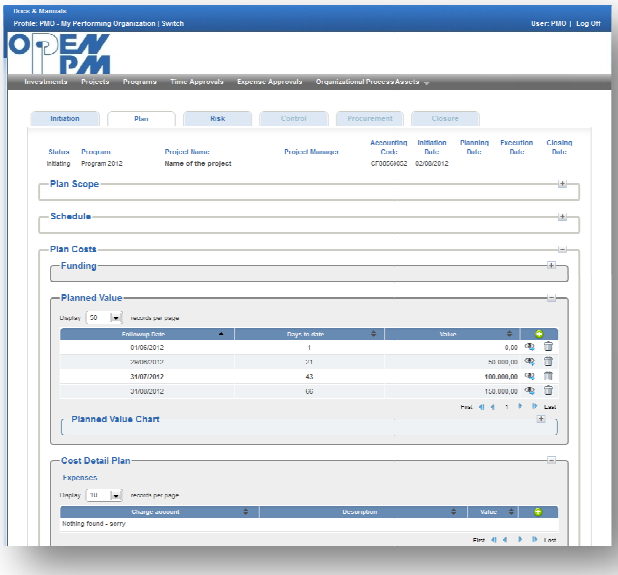
0.1. OpenPPM: A tool thought by and for Project Managers

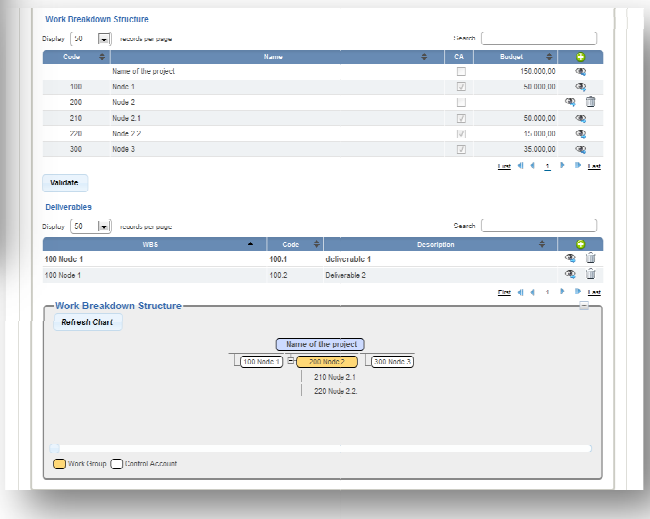
OpenPPM is a product playing in the PPM market. PPM stands for Project Portfolio Management.

OpenPPM is an open source product available at http://openppm.sourceforge.net. The first version of OpenPPM was developed by SM2 Baleares S.A. within the scope of a R&D project funded by Spanish Government (Plan Avanza2 2009. Nº exp. TSI-020513-2009-72). OpenPPM is the first open source tool to manage individual projects and project programs, compliant, by design, with PMI® standards.

OpenPPM does not need any other license software. It can be deployed on the majority of operating systems, servers and data bases.

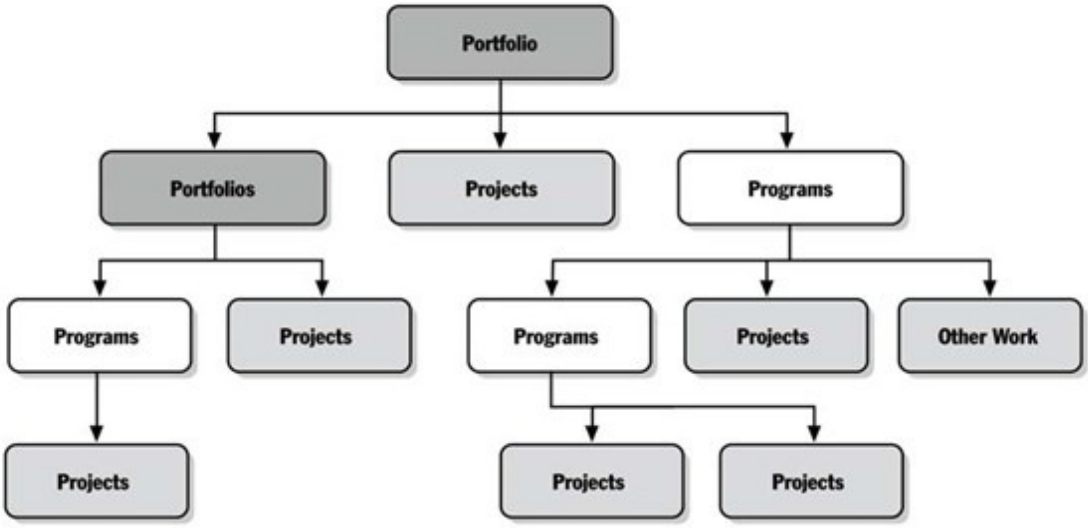
OpenPPM allows managing single projects, covering the whole project lifecycle, since inception (before approval, when there are only ideas, or potential investments) until they are closed projects. It is a tool aimed to facilitating the labor of Project Managers (PM) in the first place, but since it stores every relevant data fact of every project, it also improves dramatically the productivity of other project related roles, such as Team Members (TM), Investment Manager (IM), Resource Managers (RM), Project Management Office (PMO), Program Managers (PgM), Portfolio Managers (PfM), Functional Managers (FM), Sponsors, etc.





0.2. Project, Program and Portfolio Management

According to PMI® standards:



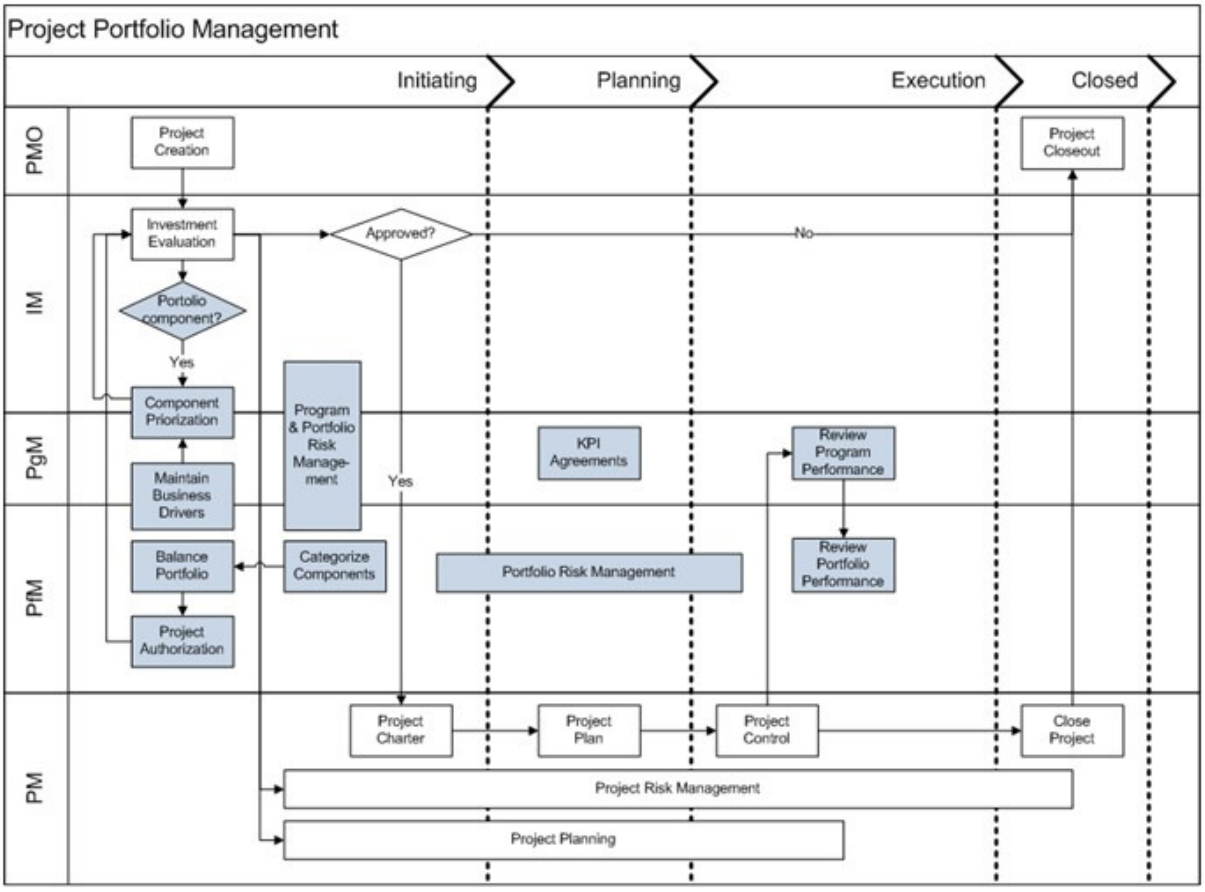
- A **project** is a temporary endeavor undertaken to create a unique product, service, or result.
- A **program** is defined as a group of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually. They may include work outside projects' scope (e.g. operations).
- A **portfolio** refers to a collection of projects or programs and other work that are grouped together to facilitate effective management of that work to meet strategic business objectives. The projects or programs of the portfolio may not necessarily be interdependent or directly related.

In each case, management objectives are quite different: In projects you aim to do the thing right (with no variance on schedule, costs, or scope). In program and portfolio management, you aim to do the right thing (in terms of strategy, profitability, added value and new capabilities).

Regarding portfolio and program manager roles, PMI distinguishes **Portfolio Manager**, more related to executive management and **governance**, from **Program Manager**, more close to tactic management.

OpenPPM is the first open source tool to manage individual projects and project programs, which is compliant, by design, to PMI® standards.

Next diagram shows how different roles can collaborate in the common tasks of managing a Project (program and portfolio processes in darker color):



Program and portfolio features have a bottom-up design approach. Project Managers (PM) are responsible of publishing truthful information about projects. Investment Managers (IM) are responsible of publishing information about investments. The information coming from PM and IM could be sufficient to Program and Portfolio Managers to take their own decisions, being them capable of drilling down from programs to components (projects or investments).

For instance, in practice, IM may propose that a given investment is part of a portfolio. On their side, the Program Manager (PgM) and the Portfolio Manager (PfM) can review business alignment by means of business drivers priorization for this component. PgM can compare this new component with the others in the program. PfM can approve or reject this component, taking into consideration the budget informed by IM and the priority informed by PgM.

On the PM's side, Project Charter elaboration, risk analysis and other planning tasks can start in initiation phase, while IM performs the go/no-go analysis. PM's planning activities can be accessed top-down from the portfolio and program levels.

0.3. What is not OpenPPM?

OpenPPM is not a tool aimed to control the job of a Project Manager. Quite the opposite, the spirit of the design is based on the assumption that Project Manager acts in a professional way, upholding PMI® code of ethics and professional conduct values of responsibility, respect, fairness and honesty. Being honest and responsible, it is assumed that Project Manager will always register truthful and timely information. OpenPPM allows rolling wave planning (progressive planning elaboration on an ongoing basis, as new information is discovered). For instance, changes like modifying budget or schedule are allowed[1].

OpenPPM is not a workflow product. The philosophy of the design is to make more efficient the work of Project Managers and other stakeholders. OpenPPM shows management information in an intuitive, accessible way. Workflows have been minimized to project approvals, resources assignation/releasing, time and expenses tracking and KPI agreements.

OpenPPM is not a content management system. However, the project documentation directory path or URL can be stored. Most of the tables and charts are exportable to CSV or PDF.

OpenPPM is not aimed to substitute detailed planning tools like Microsoft Project®[2]. OpenPPM can import a Microsoft Project® file in order to load the initial information on schedule, cost and scope, or to update actual costs and dates if project tracking is performed with Microsoft Project®.

OpenPPM is a muti-user tool. There are 8 basic roles operating at the Performing Organization level and a superior role capable of viewing the different Performing Organizations projects at once.

0.4. What does a Project Manager need?

A project is something that has never been done before, is done with a team of people working together for the first time, and has some strong constraints of scope, schedule and cost. Furthermore, in a project there is much at stake. There are many stakeholders, affected people that win or lose with the project. There are many chances that a project is a success, but there are many chances of it being a big failure, impacting the company's image, or even come to affect the value of the share. Surely there is no discipline so result oriented like project management. It may sound unfair, but if a project ends fine, no one question how well was it managed, or who made up the team. Conversely, if the project ends up badly, the Project Manager usually bears all the blame and everyone talks about the obvious risks not managed, the mandatory processes not applied, the corporate tools not used, his lack of "soft skills ", etc. If your organization has put you in charge of a project, they expect a lot from you. They may assume that you have good project fundamentals and many experiences

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1 OpenPPM also allows People responsible may find the proper explanation on the documentation of the approved change request.

2 Two way synchronization is also available for Redmine©.

learned throughout your career. What do you need to make the project a success? First of all, you need a good team. A project manager does not do the work, the assigned project team do. Project Managers performance depends entirely on their team. A team whose members do not understand each other, or do not work well together, will never deliver a successful project. By contrast, a cohesive team has a synergy that makes the whole greater than the sum of its parts.

Unfortunately, there are many good Project Managers with good experience and project management fundamentals, and with good professionals on their teams, but they suffer the problem that there are not many good tools to use their knowledge effectively. It is like getting a driver's license and then realizing that you can only go by walk. Sometimes, even worse, the performing organization forces you to go by bus, by imposing certain tools contrary to good management and extremely overloading. A Project Manager needs to manage the project, not the tool. Specifically, you need to manage expectations of all stakeholders, with effective and efficient communication, providing the information on the right format, at the right time, with the proper impact and only the necessary information.

0.5. Why OpenPPM?

OpenPPM already provides early important benefits, including:

- Short learning curve for PM® certified people, or for them familiar with the PMBOK® guide. For those who do not know this standard, they can learn on the job, just by using the tool.
- Quantitative monitoring of projects sellers. You can use KPIs and measure progress and seller performance on pre-agreed criteria and objectives.
- Separate management levels for Project Managers and Program Managers. Each performing organization can group certain sets of projects (programs), accountable people assigned to perform executive management (Program Managers). Project and Program Managers devote their efforts exclusively to their management level, with no overlapping. Program Manager can control Project Managers under them. Functional Managers can control Program Managers and Project Managers.

Some additional benefits when OpenPPM is institutionalized in organizations:

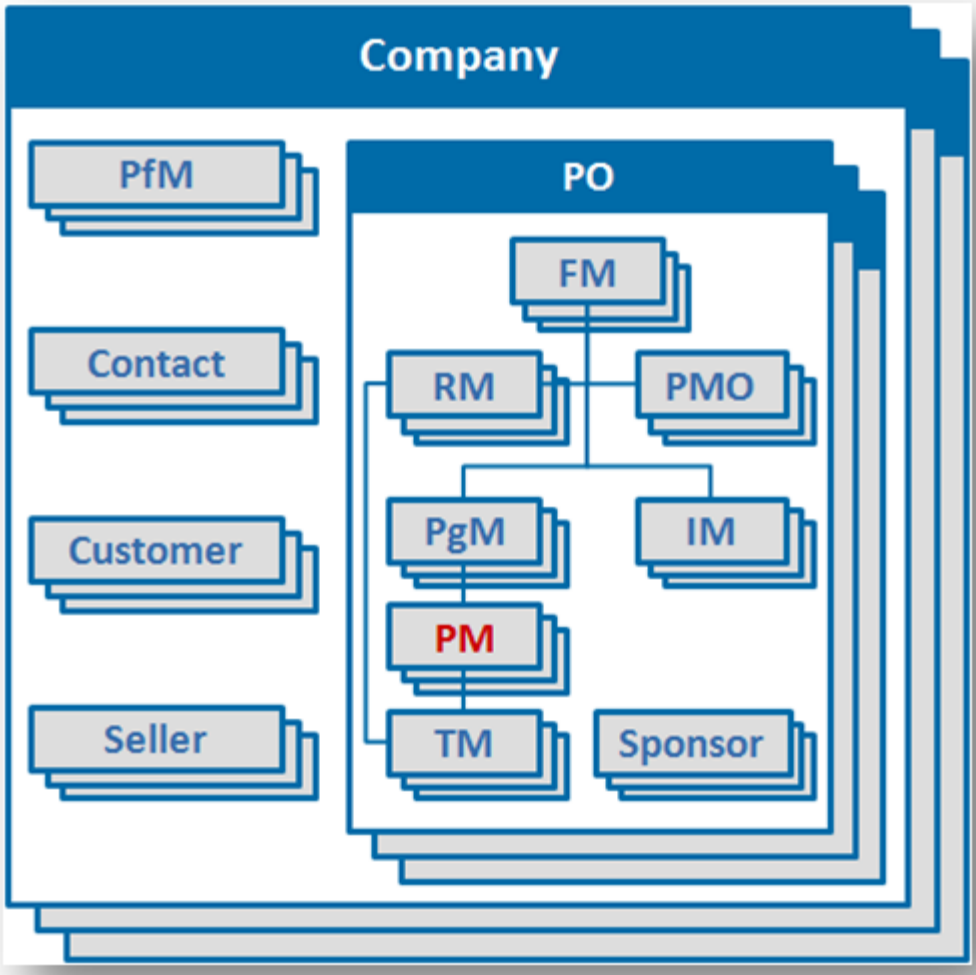
- PMBOK® guide, de facto standard in Project Management, is effectively used and become “common language”.
- Tracking on multilateral projects: When several parties of an organization are collaborating or when a relationship between customer and seller is present, each part can control their own project taking into account the dependencies among projects.
- Bottom-up tracking: Project Manager publishes his or her information, the same information that is aggregated at the program level.
- Quantitative control: OpenPPM uses the standard EVM (ANSI 748) to measure actual variances and forecasting.
- Historical information: Risk database, with information of previous projects, can be reused (yesterday’s problems are today’s risks).
- Templates: WBS and schedule templates may be reused to plan new similar projects.

0.6. Information inside OpenPPM

OpenPPM is a multi-company product. That means that a single instance of the product may host the information for different companies, keeping the information privately. Being the **Company** the higher administration unit, each company has several units capable of managing projects, named **Performing Organizations** (**PO**). Any **PO** is a business unit inside a company, with resources and capacity to perform projects. Every user accesses to OpenPPM with a given profile, which is a determined role inside a **PO**.

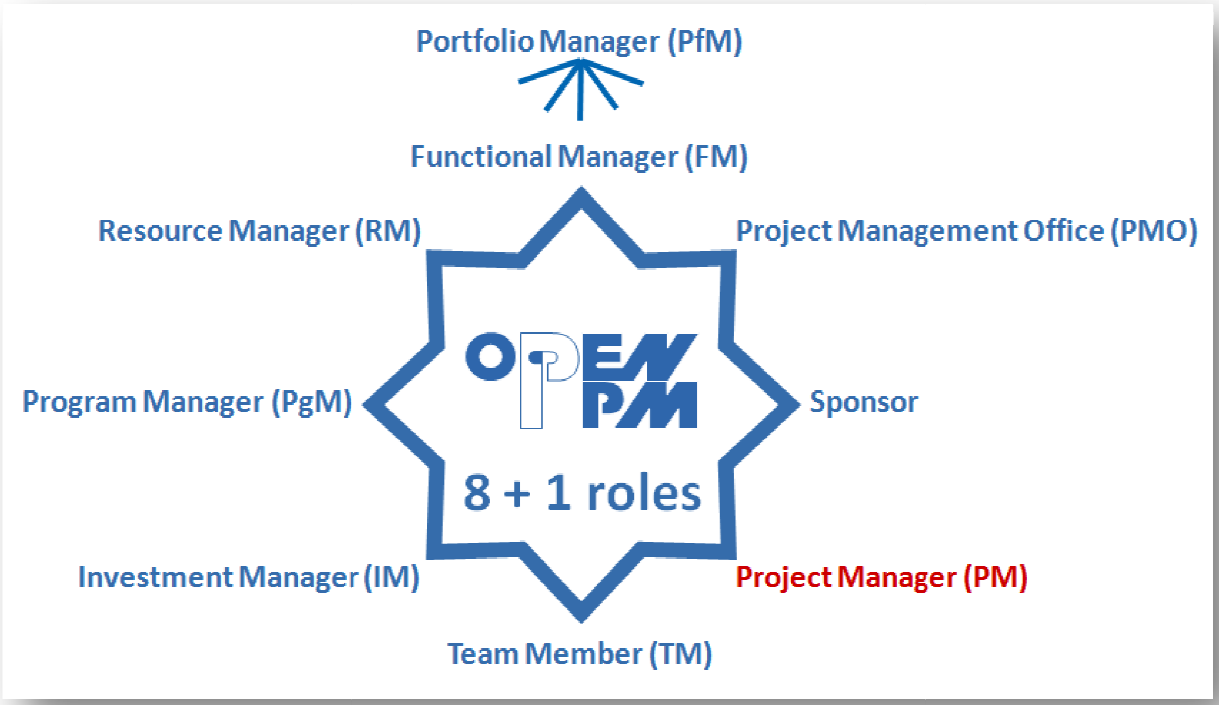
For instance, a user can connect to a **PO** with the role Project Manager (since he manages several projects of that **PO**) or with the role Team Member (to inform actual expenses or worked hours).

Another user may connect to the same **PO** with the role Program Manager or Resource Manager, or Investment Manager, etc. In each case, OpenPPM presents different views of the same root information, in a consistent, efficient and effective way.



0.7. OpenPPM Roles

OpenPPM is a multi-user tool. There are 8 basic roles operating at the **PO** level, and a superior role capable of viewing the whole set of projects of every **PO** of the **Company** at once.



OpenPPM roles are defined as follows:

1. **Project Manager (PM)**: Main role in OpenPPM, responsible of managing authorized projects (planning, execution, controlling, closing), leading the project team and providing project reporting (status and forecast). Direct reports: TMs. Project lifecycle of 4 states: initiation, planning, execution and closed.
2. **Investment Manager (IM)**: Responsible of managing projects pending approval, (bidding, initiation, postponement, rejection, authorization), providing aggregated reporting (status and forecast). Investment lifecycle of 3 states: In progress, approved and closed (exceptions: rejected, inactivated).
3. **Program Manager (PgM)**: Responsible of managing programs (groups of related projects managed in a coordinated way to obtain benefits and control not available from managing them individually). Direct reports: PMs. Program lifecycle of 4 states: initiation, setup, execution and closed.
4. **Resource Manager (RM)**: Responsible of ensuring human resource availability according to plan, capacity management and training programs.

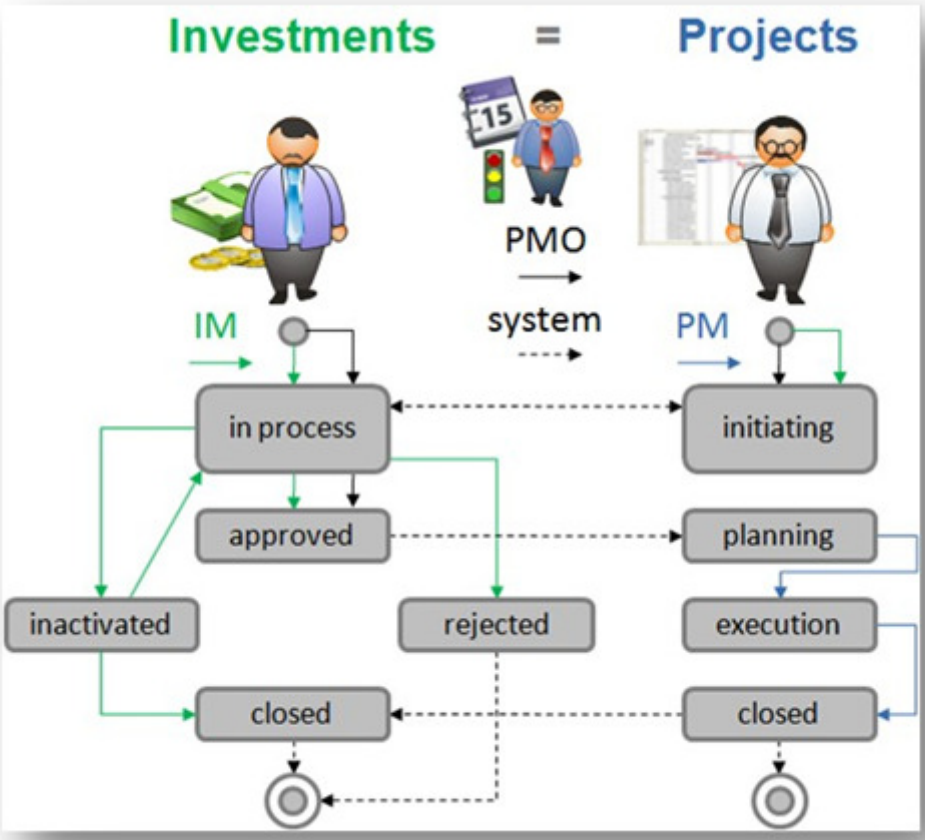
5. **Team Member (TM)**: Person assigned to a project team, source of direct costs, responsible of registering actual work and expenses.
6. **Sponsor**: Responsible of project funding, helps ensure that project meets its planned strategic goals.
7. **Project Management Office (PMO)**: Defines processes and quality standards, supervises performance of programs and components, centralizes administrative support and provides the information needed to make decisions.
8. **Functional Manager (FM)**: Manager in charge of the Performing Organization, accountable of alignment with the organization's strategy, part of the steering committee, assists portfolio governance oversight, supervises performance of programs and components. Direct reports: PMs, IMs, PgMs.
9. **Portfolio Manager (PfM)**: Company manager, with visibility on every performing organization. Direct reports: PMs, IMs, PgMs, FMs.

0.8. OpenPPM Workflows

By design, OpenPPM avoids, as much as it is possible, mandatory workflows. Mandatory workflows imply bureaucracy and makes agile management impossible to PMs. PMs are to manage projects, not tools.

Nevertheless, OpenPPM includes 3 unavoidable workflows, in order to model project lifecycle, resource assignation and cost approval.

Project lifecycle workflow



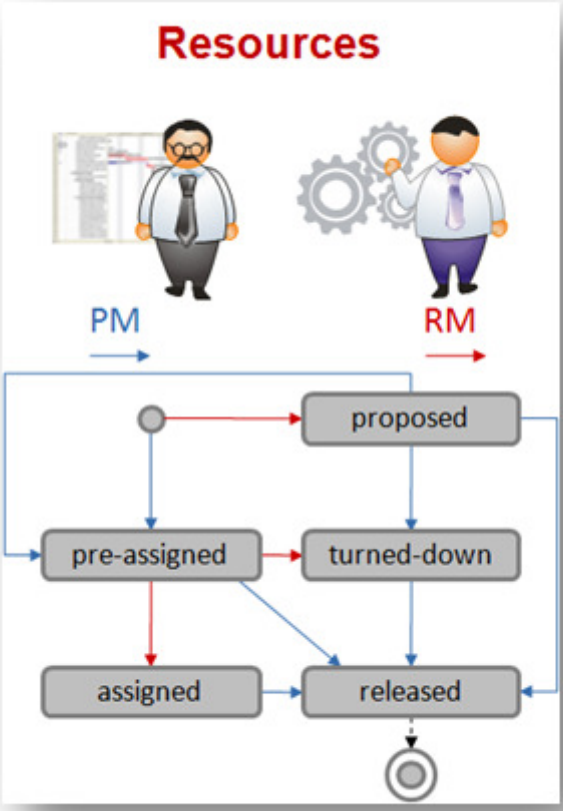
According to PMI®, Project management starts before approbation, when it is not yet decided if it is going to be performed. In this initial stage, projects could be named also investments.

PMO and IM are the unique roles capable to create a new project. In OpenPPM, “investment” and “project” are two views of the same object. When creating an investment, IM will see it in state **in process**. If a PM is then nominated (it is good practice introducing PM as early as possible), then when PM access OpenPPM, he or she will see this new project in the project list, in state **initiating**, so that many project management activities can be started (planning, risk, procurement). Role IM is in charge of registering and updating the information on the investment (budget, probability of being undertaken, duration, start and finish dates, etc.). Any investment in state **in process** may evolve in 3 different ways:

- **Approved**: Investment is approved, approbation probability is set 100%, and project state is set **planning**.
- **Rejected**: Investment is rejected, that is, **PO** decides not to undertake this project. Investment and Project state is set **closed**.
- **Inactivated**: Investment is decided to be deferred to a later, more opportunistic time. Any time, any granted role (IM, PMO, PgM, FM, PfM) could recover this investment and set it **in process** again, or decides to set it **closed** otherwise.

Once a project is approved, project progress is maintained by PM. When PM finishes **planning**, the project state is set **execution**; meaning that from that moment on, TMs may register actual working hours and expenses. When project is finished, PM change state to **closed** (so does investment, automatically by system).

Resource assignation workflow



When planning resources, PM can pre-assign a given resource to one or more activities. Solicited resources may or belong to the PO performing the project, since PM can look for resources in every pool of the company.

When connecting OpenPPM, RM in charge of the solicited resource pool, will see that pre-assigned resource, along with the other pending solicitations. RM has 3 alternatives:

- RM can accept the conditions as solicited by PM, then PM will check that resource as **assigned** in his or her list (assignation is firm).
- RM can reject the solicitation, and then PM will check that resource as **turned-down** in his or her list. PM has to **release** that resource.
- RM can propose another resource. PM will check the new assignation as **proposed** in his or her list , with the new conditions proposed by RM: Other candidate, or the same candidate but with oder workload, start and finish dates, etc. PM accepts the proposition setting the resource to **pre-assigned** in order to get the resource firm assigned by RM. PM rejects RM proposition setting the resource as **released**.

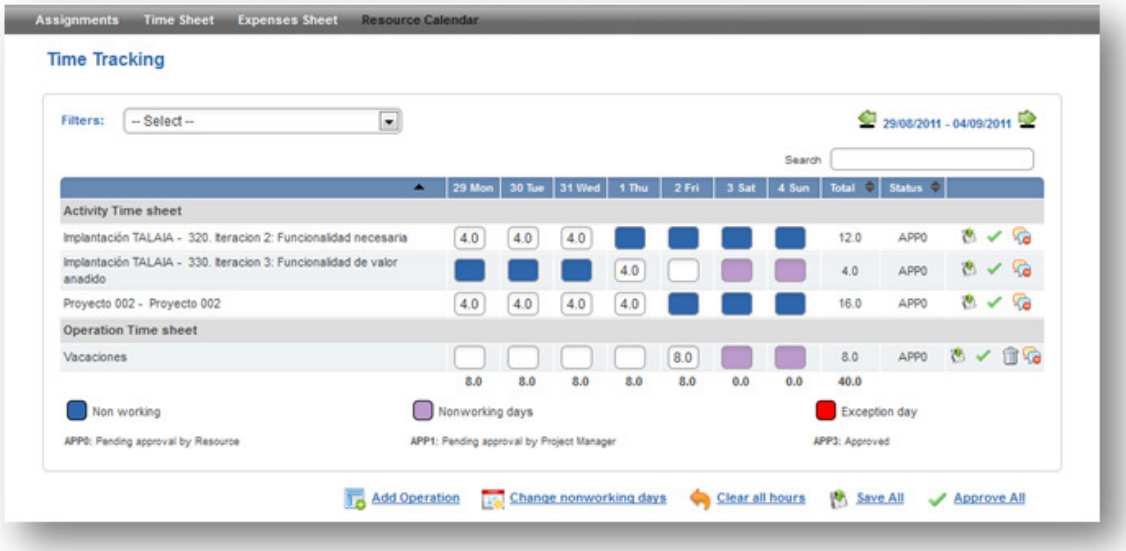
When a resource is assigned to a project, accessing as TM, this person would see to which project he or she has been assigned, under what conditions. Once assignation is firm, any contingency about conditions must be treated with PM.

A resource can be released in 4 cases. In any case, RM will see that resource in the resource pool as **released**, so RM is aware that the resource is available:

- When **assigned**, if PM decides to release him or her, on the grounds PM may consider.
- When **pre-assigned**, if PM decides to release him or her, generally because a better candidate is found.
- When **proposed** by RM, if PM is not satisfied with the proposition, PM must release the resource.
- When **pre-assigned** and then rejected by RM, PM must release the resource.

Actual cost approbation workflow

TMs may register time sheets and expense sheets for control accounts they have been assigned.



Once the week sheet has been completed, each affected PM has to approve his or her part (setting approbation level APP2) and then affected FM or PMO has to do the same (approbation level APP3). PMO or FM's approbation is necessary to close accounting ledgers.

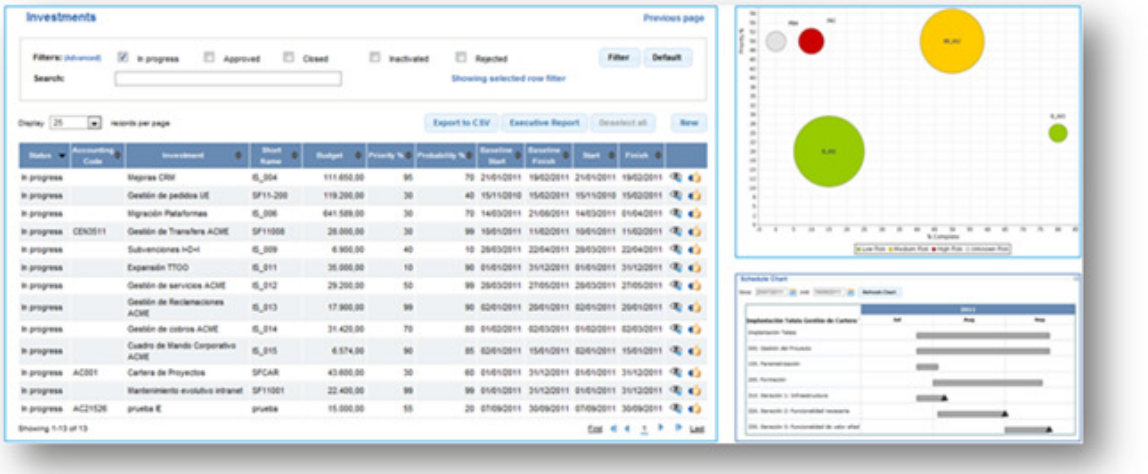
Note that a given TM may work to different projects at a time, and these projects may belong to different PO (each appointed FM must approve his or her costs).

0.9. Some features

In the following sections, some features in OpenPPM are shortly introduced.

Project lists and Dashboards

When a user (not TM, RM) accesses, a list of the granted projects or investments is presented (nice filtering, sorting and grouping features implemented). In OpenPPM, PMO is the unique role capable of creating/deleting projects or investments. IM can create investments.

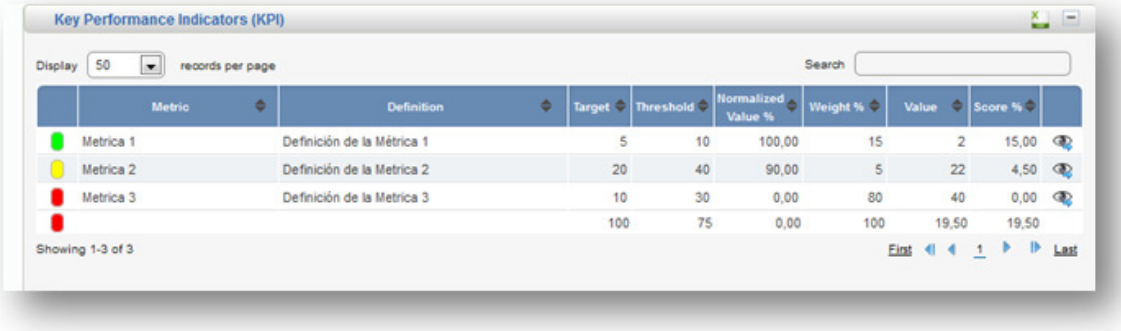


Below the lists, aggregated information is presented on:

- Time information (Schedule chart: one schedule bar for each project or investment).
- Dashboard information (bubble chart showing one circle for each project or investment, indicators on performance, business value and risk).
- Summarized **status report** (one row for each project, with executive status information).

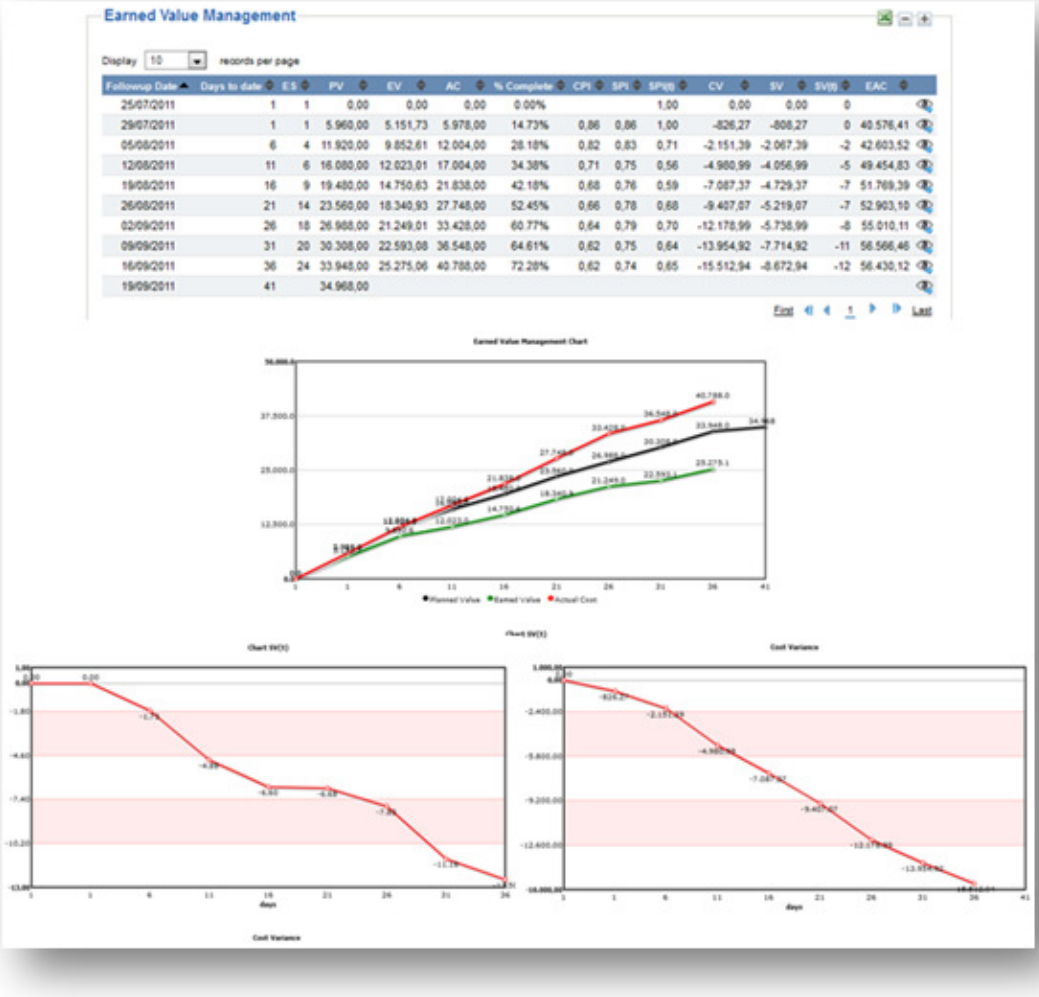
Key Performance Indicators (KPIs)

OpenPPM allows PM and PgM perform project quantitative monitoring and control by means of agreed KPIs.



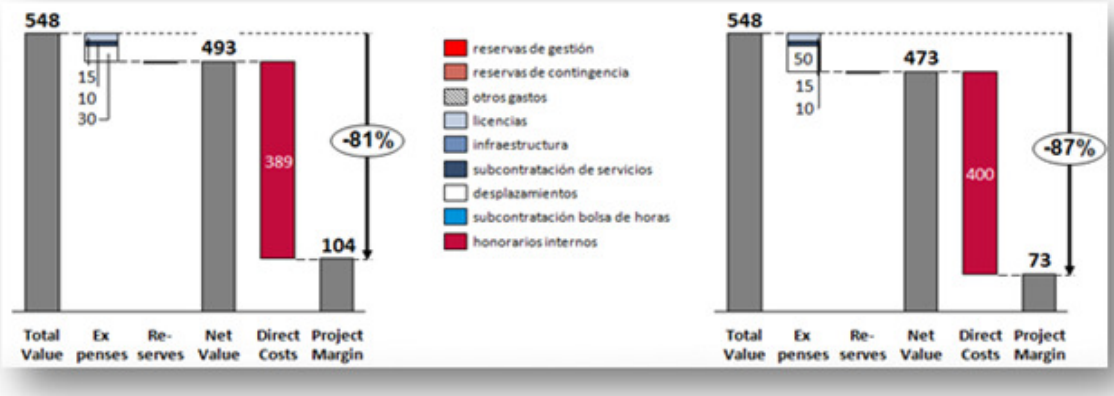
Controlling costs with Earned Value Management (EVM)

PM can control project costs following EVM standard. PgM, FM, PfM, PMO, IM and Sponsor can Access this information in read mode.



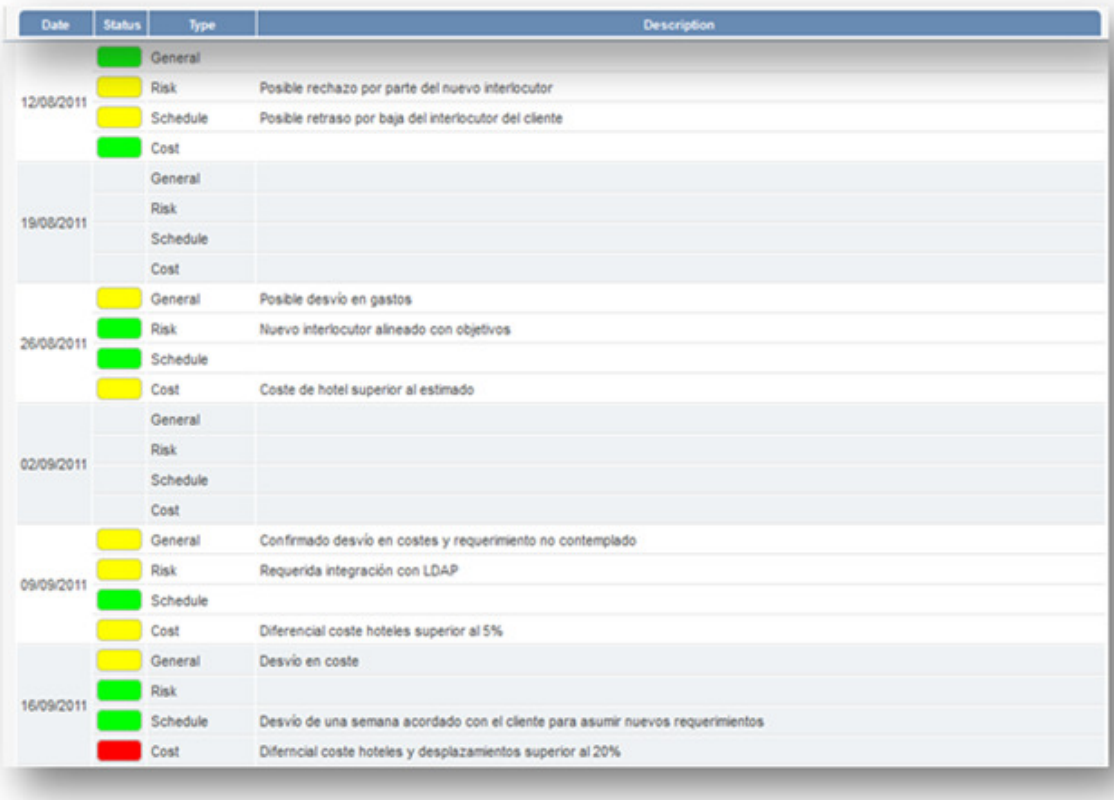
Project Profit Control

PM can represent and control graphically incomes and expenses, planned vs. actual.



Executive Status Reports

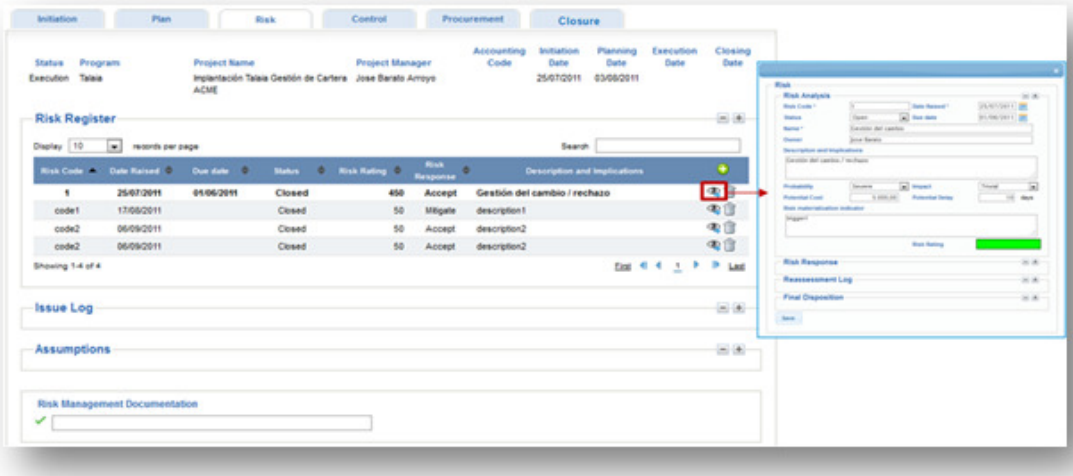
PM can provide summarized information on the status of the project, with red-amber-green indicators, in the way top managers are used to. Top managers may drill down to detail information they need to analyze specific information on risk, cost, schedule, procurement, etc



Date	Status	Type	Description
12/08/2011		General	
		Risk	Posible rechazo por parte del nuevo interlocutor
		Schedule	Posible retraso por baja del interlocutor del cliente
		Cost	
19/08/2011		General	
		Risk	
		Schedule	
		Cost	
26/08/2011		General	Posible desvío en gastos
		Risk	Nuevo interlocutor alineado con objetivos
		Schedule	
		Cost	Coste de hotel superior al estimado
02/09/2011		General	
		Risk	
		Schedule	
		Cost	
09/09/2011		General	Confirmado desvío en costes y requerimiento no contemplado
		Risk	Requerida integración con LDAP
		Schedule	
		Cost	Diferencial coste hoteles superior al 5%
16/09/2011		General	Desvío en coste
		Risk	
		Schedule	Desvío de una semana acordado con el cliente para asumir nuevos requerimientos
		Cost	Diferncial coste hoteles y desplazamientos superior al 20%

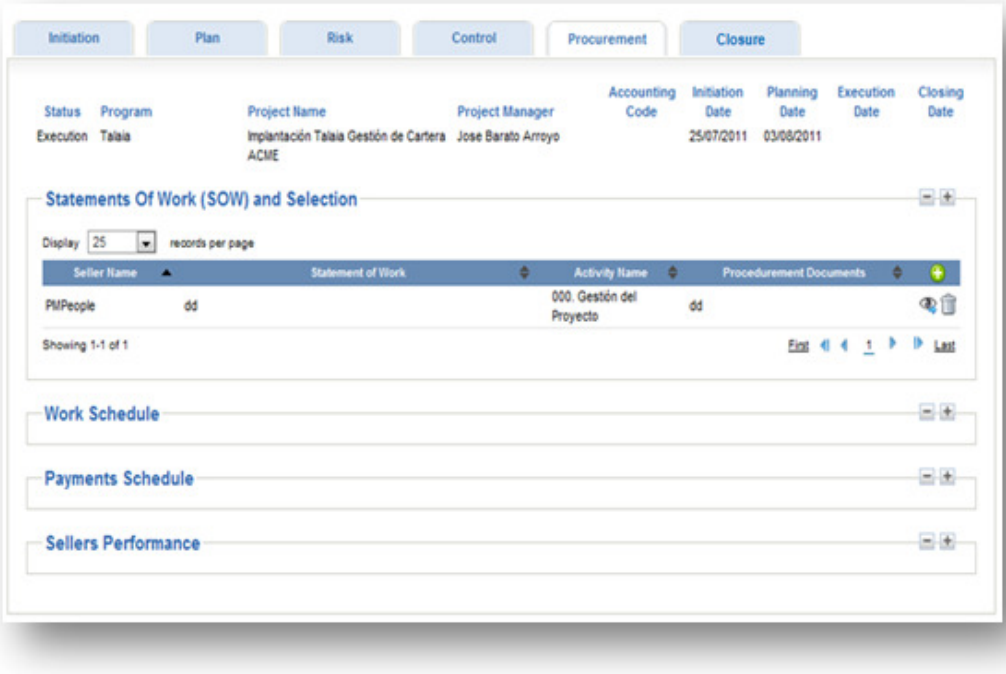
Risk Management

PM can plan and control each risk, issue and assumption.



Procurement Management

PM can perform procurement planning and administration for each seller in his or her project, by registering information on the performance and payment schedule.

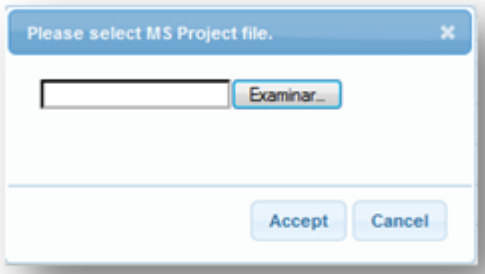


Resource Management

RM and PM can represent the information on capacity planning and actual use of resources.

0.10. Integration with Microsoft Project®

PM can import planning and tracking information from Microsoft Project® files.



On the other hand, PM, PgM, FM, PMO, IM, Sponsor and PfM can export project and investment lists to Microsoft Project®.