

## Managing the corporate Project Portfolios

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### Abstract

This paper describes the five Project Portfolio Management (PPM) maturity levels and the general prerequisites to achieve each of these levels. One of the main points is to describe the different PM roles and their significance when it comes to achieve each of these maturity levels. The paper also describes some real life applications of PPM. Paper gives some basic ideas how to develop PPM and how to manage the change towards to Project Oriented Organisation.

### Keywords

Project Portfolio Management (PPM), PPM Board, Project Owner, Project Management Office (PMO), Project Management Model, Project Management Culture

## 1. Introduction

The percentages of tasks in organizations that are carried out project wise have increased dramatically in the last decade. Projects are implemented throughout the whole organization. Project offices have been developed to bring structure in this environment, to provide progress reports, to engage competence development of project managers and suchlike. How can the top management of an organization manage these groups of sometimes tens to hundreds of projects in such a way that the strategy of the organization is implemented? The fairly new area of project portfolio management (PPM) answers this question.

Projects are seen as a way to implement strategic changes more and more. In many companies linked projects are clustered in programmes in order to gain specific strategic objectives.

The ultimate version is the ‘project oriented company’ (Gareis,1995). This is an organisation that uses programmes and projects in a structured way to implement the strategy as effective and efficient as possible. In this case we can speak of ‘management by projects’.

There are two ways to develop PPM in organisations: top down and bottom up. This paper will show that both approaches should be considered. The need for PPM should be recognized by all organisational levels. Top management should know what they need and set realistic objectives for PPM. Prerequisite for any functioning PPM process is that the quality of single PM is adequate as well. Setting the objectives for PPM can be made easier with a PPM maturity model, when realistic objectives can be connected to each maturity level.

As a result this paper will show practical actions on how to develop PPM through the steps of PPM maturity model. Project portfolio management development means developing the PPM process and in addition to that developing single PM and PM Culture of the whole organisation.

Authors will present practical solutions developed in companies in Finland and in the Netherlands and show how these companies have improved their PPM processes step by step. The examples of companies in the Netherlands are presented by Gerard Geurtjens, who has been developing PPM in ABN Amro Bank, transavia.com and nowadays as a Director of Projects at Amsterdam Airport Schiphol. Matti Haukka will present the frame work PPM Maturity model and experiences and examples how several Finnish organisations have been developing their PPM.

## 2. Recognize the value of your Project Portfolio and set the objectives of PPM development accordingly

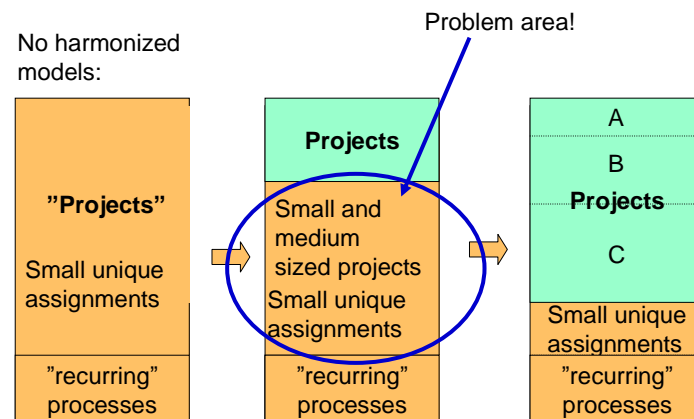
The value of projects to the company should be estimated and management should really be aware of it. This is important to get management awake and start to develop any new models. In a company that is delivering projects to its external customers (delivery projects) the value is well considered. But in the case of internal project portfolio, it usually isn't.

First the value can be measured by estimating the significance of strategic change, need of developing new products and processes etc. Practically the value of projects can be measured by dividing all working processes to project

work and non-project work and estimating the amount of resource allocation to both processes. Figure 1 shows what a typical situation is. In most companies the amount of resources allocated on project work but not managed in proper way is surprisingly big and this should be better noticed by management.

Depending on the value of projects, the management should set the development objectives and estimate the amount of development effort.

## Tasks and endeavors that should be managed using PM and PPM processes:



The blocks describe the distribution of worktime of personnel in a company that has many projects

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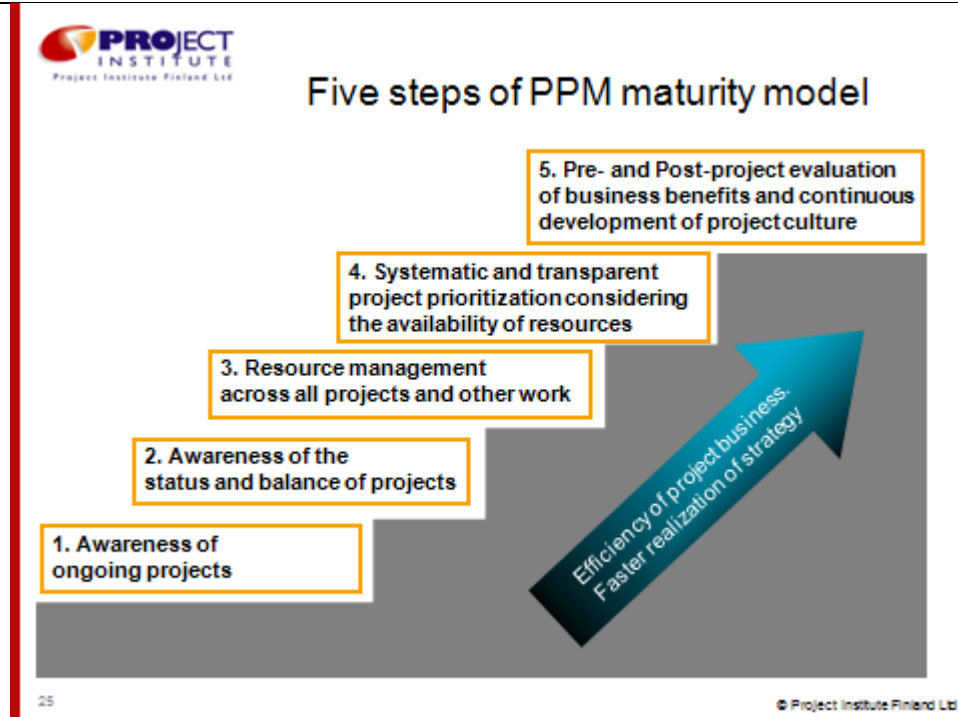
**Figure 1: Typical situation is in the middle. Management effort is used into the big projects only and huge amount of medium and small size project are leaving without. Solution on the right is based on the use of project complexity classification, which is setting a right level of management effort when it comes on a single project. However PPM system should consider all projects.**

### 3. Developing the PPM model and methodologies

Several Maturity Models regarding PM and PPM have been published. The one which is the base for this presentation is developed by Project Institute Finland Ltd. Its approach is little bit different compared with the others. It is mainly focusing "what are you getting out as a result of your PPM" instead of just describing "how well we are performing it". This Maturity Model helps to set the objectives for PPM and describes concrete steps to develop it.

A method of keeping a database of all on-going projects creates the foundation for PPM. This alone brings a challenge. Many line managers would have to start a two-week investigation when being asked which projects are going on in their organisation. The first level of portfolio management maturity is reached when this aspect is in order.

Many would possibly have to start a new investigation when being asked: "What is the status of these projects?" or "Is our portfolio in balance what it comes to strategic objectives and risks?" The second level of maturity is reached when the reporting is working on regular basis. There is still a long way to go to the stage where projects are systematically evaluated, visible decisions are taken in gates, attention is paid to resources and the strategically most important projects are carried out without delay. When the reporting also covers forecasts of projects' real benefits and their evaluation continues till the projects are finished, only then can we start talking about advanced PPM (See Figure 2).



**Figure 2: Maturity levels and steps to develop PPM based on ABC Project Model™. Knowing the development steps and key elements of a PPM system helps management to set objectives and time schedule for development work**

Achieving even the level 2 can be realistic short term objective for many organizations. Companies which are delivering projects to their external companies have usually achieved level 2 but achieving level 3 is quite challenging for them as well. Achieving level 4 needs functioning link between tendering&sales and project implementation processes.

#### **4. The prerequisites and examples of methods for each PPM Maturity level**

There are certain prerequisites that should be applied before achieving any of the maturity levels. The basic prerequisites to achieve any of these levels and some real life PPM applications and experiences are described in the following paragraphs.

##### **4.1 Awareness of ongoing projects (level 1)**

Project owner is the most critical PM role when an organization starts to develop its PM culture. Our experiences with our customers has shown, that if nothing else is happening but the project owners has been clearly recognized and these owners understand their roles and responsibilities, it is already causing a clear improvement what it comes to effectiveness of project work and business results.

If the owners exist, the basic information of all projects is available and there is always somebody who is responsible and aware about the “go/no go” decisions of any project. This only can make stage-gate model to function. Certain stage-gate model (decision point model) is of course crucial and all projects of the portfolio must follow this model.

If the necessary prerequisites mainly concerning single PM processes exist it is quite easy achieve the maturity level one. The simple application example is shown in picture 3.

Project Portfolio - basic listing

Project number / ID	Project name	Project owner	Project manager	Strategic connection, Goals	Priority	External costs	Man-days (in €)	Main project type	Project class	Project G1 date	Project G4 date
	Project 3								A	5.5.2008	7.3.2009
	Project 9							Process development	C	26.6.2008	15.6.2009
	Project 5								A	13.9.2008	5.5.2009
	Project 1								A	24.10.2008	5.4.2009
	Project 8								B	28.11.2008	3.6.2009
	Project 4							Vendor management	C	11.2.2008	11.2010
	Project 2								A	5.3.2009	7.6.2009
	Project 10								C	3.4.2009	22.2.2010
	Project 7								C	5.5.2009	12.1.2010
	Project 6								B	24.7.2009	11.12.2009
	Project 11								A		
	Project 12										
	Project 13										
	Project 14								C		
	Project 15										
	Project 16										

Figure 3: If the basic prerequisites has filled up it is possible to maintain and update project list consisting the needed information

4.2 Awareness of the status and balance of projects

In order to get reliable information about the project portfolio a harmonized PM Model is needed. Developing and updating this model is one of the most important responsibilities of a PMO. Another important responsibility is of course to administrate the portfolio. If nobody is doing this it is impossible to give current and reliable information to management. Of course quality of status reporting of single projects should be good enough and reliable.

The job starts with clearly defining the strategy and from this deduce the aimed head objectives, also referred to as the focus areas. Secondly, it is important for the top management of the company to make an assessment of the spending budget of the various focus areas. Herein lies the assumption that the investment of money in these areas realises the strategy. In figure 4 an example of focus areas at transavia.com. is given.

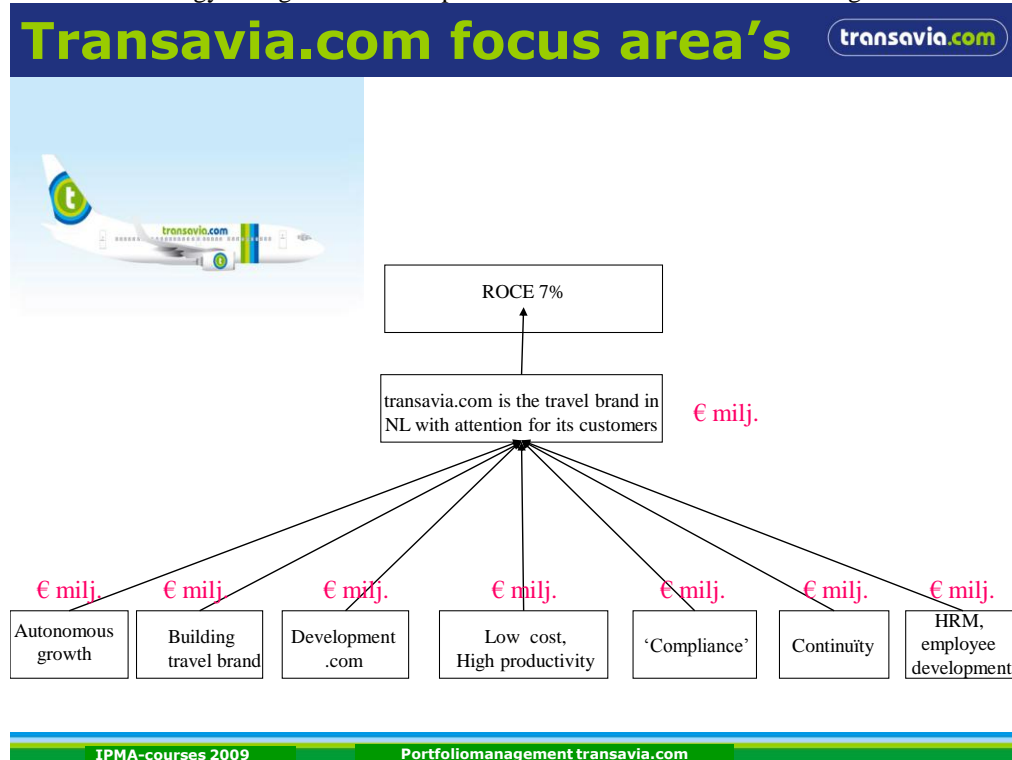


Figure 4: Focus areas of transavia.com

The assigning of projects to the portfolio should be affected in such a way, that the available budget for the focus area would be exhausted. Through strategic reports, the advancement of the investment decisions can be made known to the top management. This report can cause projects of a certain area to be dismissed or intensified. In figure 5 an example of such a strategic report is given. The actual exhaustion per focus area is reflected in a percentage of the total budget. This can be compared with the advisable exhaustion per focus area.

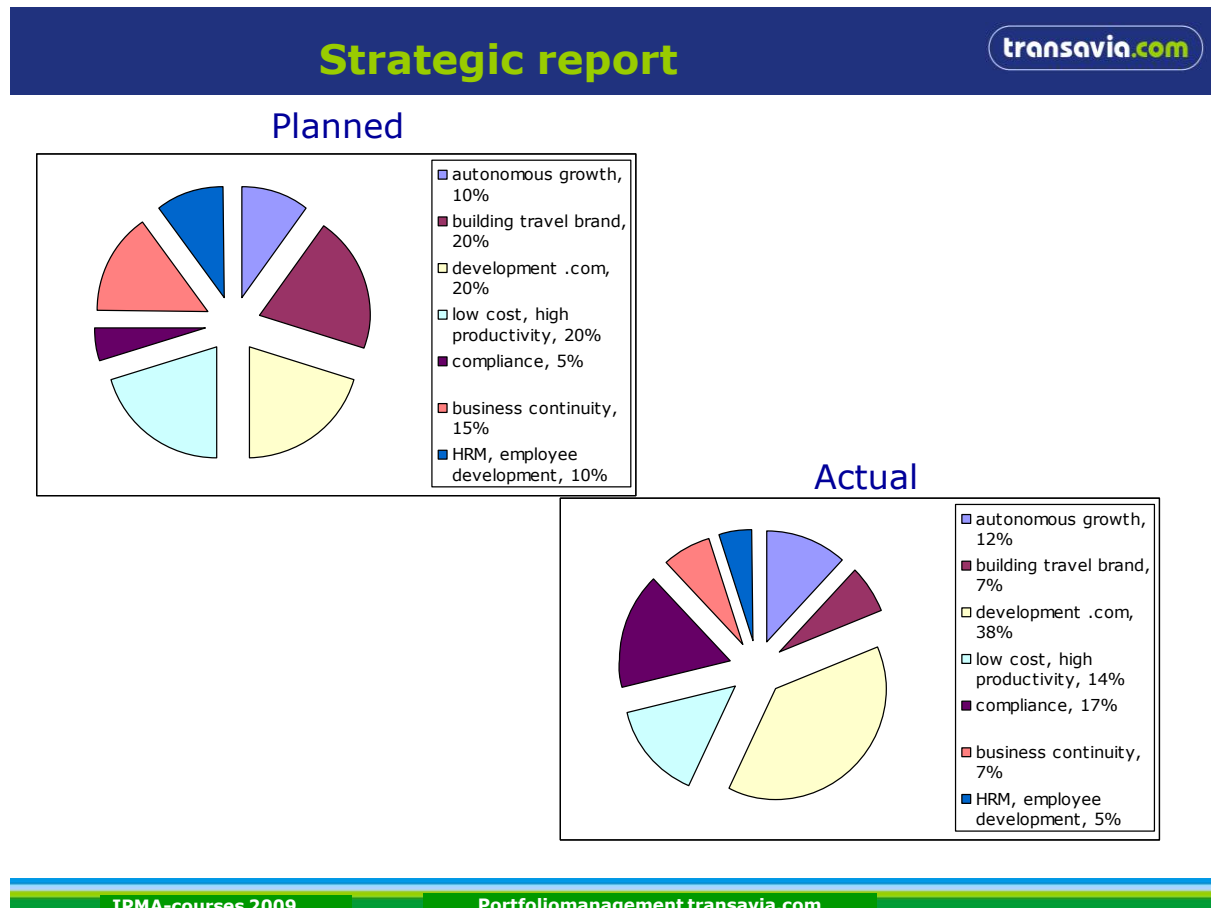


Figure 5: Strategic report

#### 4.3. Resource management across all projects and other work

Achieving the level 3 means, that the allocation of resources is continuously known. This cannot happen if the organization has not enough competent project managers with good skills of making WBS, time scheduling, work amount estimations, rolling wave planning or using PM software etc. However the use of project complexity classification helps here. Small non complex projects are not requiring the same level of planning as the complex one. But still the predefined procedures are needed and all Project Managers should work according to these procedures.

Achieving this level has proven to be the most challenging. Several software tools support these procedures but organizations have not achieved corresponding maturity level and competencies.

#### 4.4 Systematic and transparent project prioritization considering the availability of resources

To achieve the 4<sup>th</sup> level PPM Board and strategic level PMO should be established. It is however very important that project owners take enough responsibility what it comes to business cases of single projects. This helps PMO in its administrative role and makes it possible for PPM Board to concentrate to its main task – selecting the right projects.

You need the role of PPM Board already on the lower 5<sup>th</sup> level and it is of course performing project prioritization

at least to the certain extent. However achieving the level 4 requires much more work systematic and transparent effort by management. In case that PPM board is the same as Management Group, PPM issues should be clearly separated in the agenda or these should be handled in separate meetings.

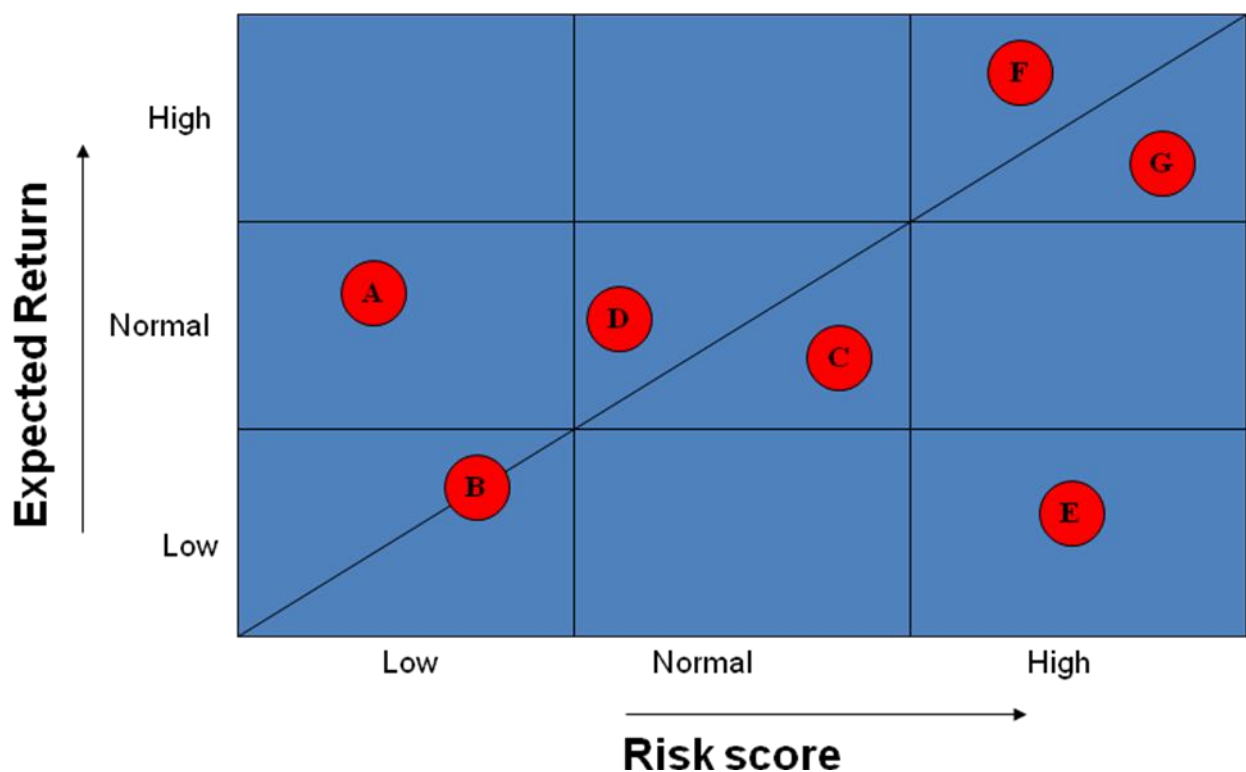
The most important task of PPM board is to select right projects and make prioritization. To do this, they must be aware of available resources (level 3 needed!). The critical competence of PPM Board members is just a normal business competence. Of course they should know well the PM and PPM model of the company and definitions and terminology of PM. Actually the training should again emphasize changing attitudes. We recommend that during the deployment of new PM and PPM model in the organization the PPM Board Members should participate the same trainings as the other personnel.

Project prioritization models can be divided into mathematical and estimation models. With mathematical models the one thing exclusively taken into account, is the expected financial return in relation to the risk of the project. This model comes closest to the original shares-theory.

The estimation models assume that for linking projects and strategy, more is needed than a financial evaluation of the project. In these models the criteria as well as the expected contribution of the project to customer satisfaction, process optimisation, innovation, learning ability and the like are involved.

#### Mathematical approach

In the mathematical approach, a business case is set up for each project, resulting in a financial standard per project, like the net cash value (NCW) of the return on investment (ROI). Furthermore a risk analysis is made per project giving a risk criterion in the form of a number, for instance on a scale from 0 to 10 (0=low risk, 10=extremely high risk). These scores are often based on surveys (sometimes electronic), in which some tens of questions are asked about the chance of risks arising in the project and the effects of impact. By rating the answer to every question on a scale from 0 to 10, the calculated average risk score for the project can be determined. In this way, a financial and a risk score can represent each potential project in the portfolio (of focus area). In view of the diagram shown below, decisions can be made on the to/not assigning of projects to the portfolio.



**Figure 6: mathematical model for project prioritization**

In most cases the projects above the diagonal line will be assigned to the portfolio (of focus area), since they have the best return/risk relation.

Assessment models

For many companies the mathematical approach is too one-dimensional as a basis for strategic decision-making. After all it can be opportune to implement a project with high risk and low initial profit, since an innovative breakthrough is then accomplished. In that case, other assessment criteria will have to be added to the investment-model. Often the balanced business scorecard is used (see figure 7).

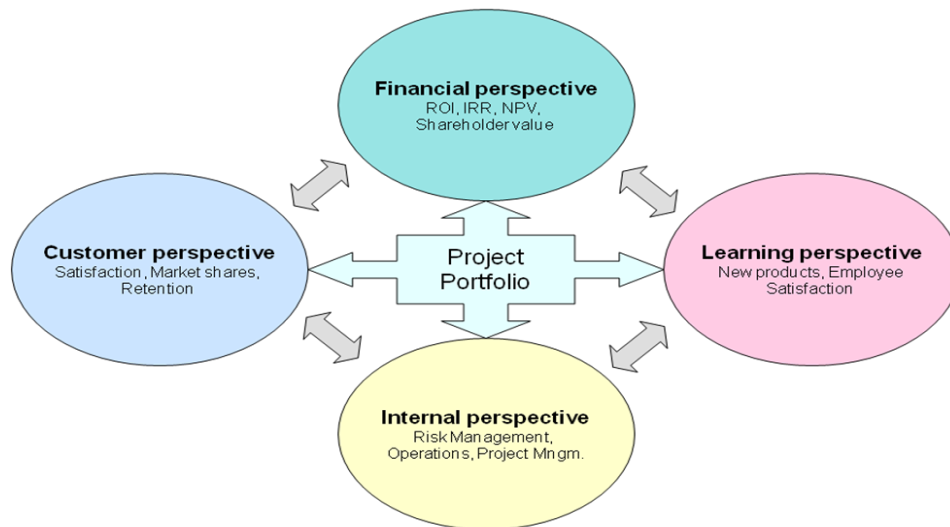


Figure 7: Balanced Business Scorecard

Projects are then “scored” on the perspectives of the balanced scorecard: customer perspective, internal perspective, learning perspective and financial perspective. Scoring is done by for instance making an estimate between the expected contribution of the project and customer satisfaction on a scale from 0 to 10. A good assessment method goes out of a focus group, as used in the marketing discipline: let a group of experts from different disciplines of the organisation make project proposal scores on the different perspectives on a scale from 0 to 10. The average score per discipline will be the score taken into account for the investment decision. For the evaluation of the financial perspective a business case and risk analysis is available in the focus group.

When all projects within the focus area are scored there can be prioritised in different ways. So can the projects with the highest total score for the four disciplines simply be selected (see figure 8 for an example). It is also possible to select the projects with the highest score on customer perspective etc. The manner of prioritising and the eventual investment decision depend on the situation within the company, method of strategic control, the interest of the different perspectives of the balanced score cards and so.

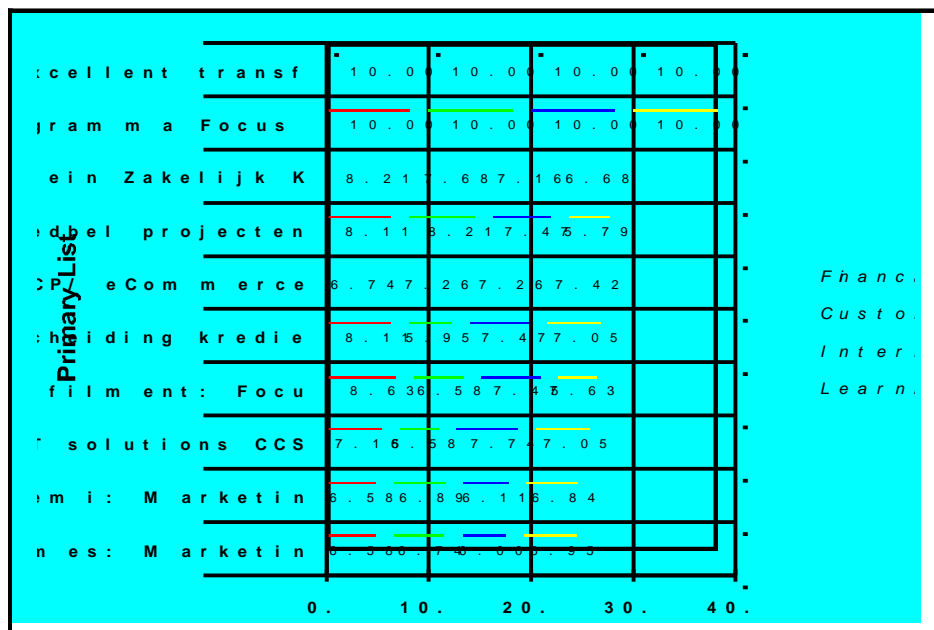
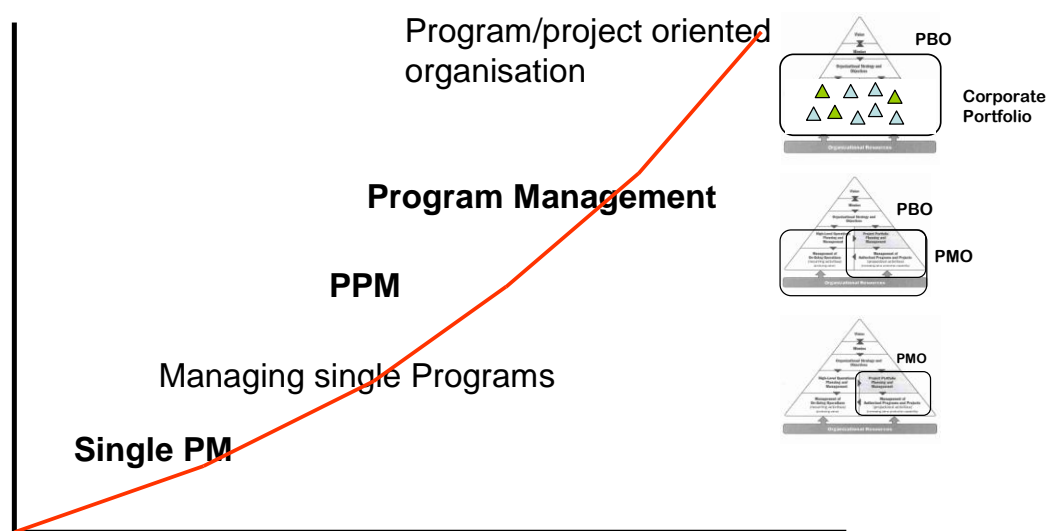


Figure 8: Balanced Business Scorecard mathematical model for project prioritization

#### 4.5 Pre- and Post-project evaluation of business benefits and continuous development of project culture

In the future the best effectiveness will be achieved if all these processes and roles have been merged as a part of the whole organizational structure and governance model. In this case we can talk about real Project Oriented Company. Figure 9 shows how the PM Culture is developing towards the Project Oriented Company.

## Developing PM Culture



Source: "The Portfolio Management Standard" , PMI, 2006  
 and Valense Ltd. & Michel Thiery, 2007 (Adjusted)

Figure 9 : Development of PM Culture

### 5. Conclusions

When implementing a PPM system, the question is actually of the need for changes in an organisation’s management culture. The time allocated to management should be reconsidered, in middle management in particular. This will not happen unless the evaluation and reward systems in organisations are changed in order to pay attention to the successes in project work as well. The more important strategic change and development are to organisations, the more crucial these issues will become.

This requires that a strong project culture is developed at all levels of the organisation.

Using “instinctive” assessment methods for the taking of strategic decisions will horrify the mathematicians among us. Many experienced directors and managers will feel uneasy by solely depending on mathematical models for the making, of the same decisions. In the years after all, they have learned to depend on their “gut feeling”. As in so many cases the best results will be achieved in an optimal synthesis between both approaches. Mathematical as well as assessment methods lay the foundation of good project portfolio management.

When developing the PM culture, the PPM maturity levels may help the organisation to progress step by step. But before developing PPM, the organisational competence and processes of individual projects should be on a certain level. A generic project model for individual projects should be implemented and clear classification criteria for project types and complexity levels should be defined.

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