



## **PROJECT PORTFOLIO MANAGEMENT (PPM) IN SMALL CONSULTING COMPANIES - OVERVIEW OF PPM AND AN EXAMPLE OF A SIMPLIFIED PPM SCOREBOARD**

Ritgerð til  
**meistaraprófs (MPM)**

Mái 2012

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## **ABSTRACT**

The subject of this paper is to explore usefulness of score boards for project portfolio management (PPM) in small consulting companies. The paper is written for managers who are not so familiar with portfolio management to introduce the power of PPM as a steering tool. The paper is also a literature review for PPM. The relationship between strategy and projects is explained as well as the reason why portfolio management is so important for all project based companies. Various PPM methods were looked at in order to find the most time effective and most valuable method for small consulting companies. Project portfolio management case studies based on field research were investigated in order to focus on the most important factors for the suggested model. Categories to be measured for each project were selected and a simple model for financial info included. Each project ends up with a key score number and a colored rate in the portfolio which is an indicator of the project performance, business attribute, basic risk and financial outcome. Such a score card for each project with all the most important numbers and key performance indicators could be very useful for the management in order to be able to spot which projects are good for the company and which are not. The bad ones can then be eliminated from the company's portfolio.

## **1. Introduction**

The purpose of this paper is to explain how portfolio management can be used to measure how projects fit within the core competencies and strategy in a consulting company. Is it possible to build a simplified scoreboard to evaluate the performance of each incoming and internal project in order to be able to differentiate between projects which are complying with the strategy of the company and those that are not? How do companies choose which projects they accept and which ones they reject? How should projects be selected? How does one assess their chances of financial success? Numerous books and articles have been written on the subject but most of them focus on larger companies with relatively complex portfolios, big manufacturing companies and big research departments without focusing on a very common business form such as small consulting firms which are project driven. This is understandable as complex businesses need such steering tools but can't they be applied to smaller firms in a simplified form?

The paper starts by introducing portfolio management to those who are not familiar with the subject and those who would raise the following issues or questions: What is portfolio and portfolio management? What is the purpose of portfolio management and how should it be executed? The paper goes on to explain strategy vs. portfolio management and project management. Which experiences are already available in the field of PPM? And finally: Is it feasible and indeed useful to build a project portfolio score board for small consulting firms?

This paper is also a literature review on PPM. Principal references are four books on the subject "project portfolio management". These books are: "Executing Strategy" by Mark Morgan et al /1/, "Project Portfolio management" by Harvey A. Levine /2/, "Advanced project management and the PMO" by Gerald I. Kendall et al /3/ and the PMI standard for Portfolio Management /4/. Articles on the subject were searched within the technical paper search engine "ProQuest" with the following search words: "project portfolio management" AND "engineering", "portfolio management" AND "case study" and "Kleinschmidt" AND "portfolio management". Other search words were tried with poorer results. From these searches which covered close to 3000 papers and articles, 14 were chosen as background research papers and will be referred to in this paper. One paper was a doctoral thesis on the subject.

## **2. Definition of portfolio, portfolio management and project portfolio management**

To start off it is necessary to define portfolio, portfolio management and project portfolio management and explain these concepts to readers who are not familiar with them as the paper is based on these concepts. It is therefore important to understand the similarities and differences?

### **Portfolio**

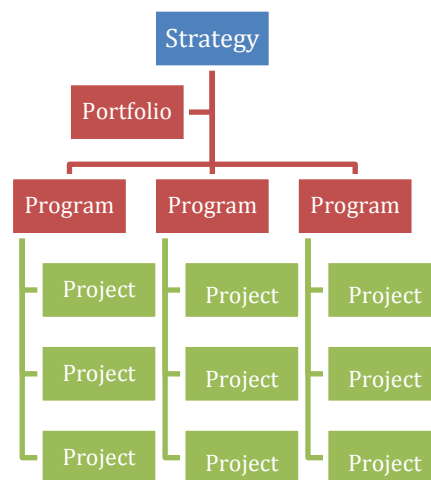
The formal definition of Portfolio by /5/ is as following: "A portfolio is a collection of projects or programs and other work that are grouped together to facilitate effective management of that work to meet strategic business objectives. The project or programs of the portfolio may not necessarily be interdependent or directly related. These components of a portfolio are quantifiable; that is, they can be measured, ranked, and prioritized".

A portfolio exists within an organization and it consists of a set of current components and planned or future initiatives. Portfolios are not temporary like project or programs.

According to the PMI standard /4/ all components of a portfolio exhibit certain common features:

- They represent investment made or planned by the organization.
- They are aligned with the organization's strategic goals and objectives.
- They typically have some distinguishing features that permit the organization to group them for effective management.
- They are quantifiable and therefore can be measured, ranked, and prioritized.

Figure 1 shows the hierarchy of projects and the basic relationship between strategy, portfolio, program and projects.



**Figure 1. Hierarchy of projects /5/.**

### Portfolio management

Portfolio management is the coordinated management of portfolio components in order to achieve specific organizational objectives /4/.

Portfolio management is also an opportunity for a governing body to make decisions that control or influence the direction of a group of components as they work to achieve specific outcomes. An organization uses tools and techniques described in the standard to identify, select, prioritize, govern, monitor and report the contributions of the components to, and their relative alignment with organization objectives /4/.

In the simplest and most practical terms, portfolio management is about the following five items /2, p239/:

- Defining goals and objectives
- Understanding, accepting and making trade offs
- Identifying, eliminating, minimizing and diversifying risk
- Monitoring portfolio performance
- Achieving a desired objective

## Project portfolio management (PPM)

Project portfolio management (PPM) is the management of the project portfolio so as to maximize the contribution of the projects to the overall welfare and success of the enterprise /2, p23/. A critical mistake is to think that PPM is fundamentally the management of multiple projects. This is not so.

PPM includes the following /2, p23/:

- Projects must be aligned with the firm's strategy and goals
- Projects must be consistent with the firm's value and culture
- Projects must contribute to a positive cash flow for the company
- Projects must effectively use the firm's resources – both people and other resources
- Projects must not only provide for current contributions to the firm's health but must help to position the firm for future success

Project portfolio management should address to the following /2, p35/:

- A ranking of value and benefits
- An appraisal of risk (in achieving these benefits)
- An inventory of resource availability and allocation
- An idea of an optimum or acceptable size of the project pipeline

According to Max Wideman, project portfolio life span consists of the following /6/:

- Identification of needs and opportunities
- Selection of best combinations of projects (the portfolios)
- Planning and execution of the projects (project management)
- Product launch (acceptance and use of deliverables)
- Realization of benefits

### 3. Strategy vs. portfolio management and project portfolio management

What is strategy? Defined by Michael Porter it is as following "The essence of strategy is in the activities - choosing to perform activities differently or to perform different activities than rivals. Otherwise, a strategy is nothing more than a marketing slogan that will not withstand competition" /7/.

The language of the project portfolio covers the specifics of getting things done – who, how, when, and with which resources. It links the strategic projects with on-going operations /1, p9/.

Strategy is a plan that describes how the company's strengths and core competencies will be used to /4/:

- Capitalize on opportunities
- Minimize the impact of threats
- Respond to changes in the market, and
- Reinforce focus on critical operational activities.

Studies have found that less than 10% of effective formulated strategies carry through to successful implementation /8/. What a company is doing can be summed up by identifying the group of projects in which it invest. For the strategy to become in reality, it must be converted into the packages of work we call projects. Every project investment either contributes to successful strategic execution or sucks

resources away from successful strategic execution. By reviewing the project portfolio, allocating available resources and realigning the organization a company can bring its strategy to life. "There is simply no path to executing strategy other than the one that runs through project portfolio management" /1, p3-5/.

"Lack of strategic clarity coupled with a "do it all" mentality chokes the organization, reduces output, decimate scarce resources, and leads to employee burnout" /1, p5/.

There is no way for senior management to accomplish a strategic transformation without getting deeply into project management. Unfortunately, most executives and strategic thinkers have not yet learned the language of project management /1, p7/.

"What differentiates one organization from another in terms of strategic execution is the discipline of engaging the strategy with the tailored portfolio of projects and programs that will bring it to life. In a world of limited resources, it is as much about choosing what not to do as about deciding which strategic projects and programs to invest in" /1, p141/.

Organization that do not already have strong portfolio and project management capabilities may need help in learning how to approach the task.

The challenge is fivefold /1, p143/:

- 1) Deciding how to decide
- 2) Identifying the projects and programs that will convert strategy into action
- 3) Developing criteria for prioritizing project investment decisions
- 4) Dealing with an overload of qualified projects
- 5) Reshaping the project portfolio as circumstances change

#### **4. The purpose and execution of portfolio management and project portfolio management**

##### **Doing the right work**

As mentioned earlier the goal of portfolio management is to ensure that the organization is **"doing the right work" rather than "doing work right"** /1/.

Portfolio management is the bridge between traditional operations management and project management. Executives have come to realize that projects are the bases for the future profitability of the firm. Hence, they have a growing interest in how projects are selected and managed /2/.

According to /10, 11, 12/ portfolio management is used to select a portfolio of project to achieve the following four main objectives:

- 1) Maximize the profitability of the portfolio. Here, financially based methods and scoring models are most effective
- 2) Provide balance within the portfolio. The most popular models are risk versus reward, ease versus attractiveness, and breakdown by project type, market and product line. Visual models, like bubble diagrams are most appropriate
- 3) Support and align with the strategy of the enterprise. Scoring models, strategic buckets and strategic checks are appropriate
- 4) Limit the number of projects within a portfolio to easily allocate constrained resources to them

Another and practical but similar view of the goal of PPM is from Harvey A. Levine /2, p321/. According to him the key reasons that portfolio management is vital management task are:

- Financial – to maximize return, maximize R&D productivity, and achieve financial goals
- To maintain the competitive position of the business – to increase sales and market share
- To properly and efficiently allocate scarce resources.
- To forge the link between project selection and business strategy
- To achieve focus – not doing too many projects.
- To achieve balance – the right balance between long and short term projects and high-risk and low-risk ones.
- To better communicate priorities within the organization.
- To provide better objectivity in project selection and weed out bad projects

### Executing PPM

The process of PPM extends well beyond the scope of traditional project management. The following functions are usually beyond typical view of project management /2, p53/:

- Identifying opportunities and needs
- Selecting which projects are to be undertaken
- Selecting which projects are to be terminated or deferred
- Establishing project priorities
- Projecting revenue and effect on cash flow
- Aligning projects with strategic objectives
- Evaluating the value and benefits of the project to the firm
- Making a determination as to whether there are adequate benefits from the opportunity to overcome predicted risks
- Ensuring balance among various types of projects so as to protect and enhance the firm's future

Figure 2 shows how PPM can be presented as a hub between many aspects of project related issues and their connection to business issues and project management.



**Figure 2.PPM as a hub /2, fig 3.1.1/**

To some people, PPM might appear to add a level of complexity to managing projects. This is partially correct as project will no longer be conducted as floating islands in the enterprise. In many cases the barriers to establishing a PPM system are involved in changing the organizational environment, the training involved and investment in developing the procedures and tools. The benefits of PPM are on the other hand better competitive positioning, an improvement in effectiveness of project teams, and lower overall cost of projects /13/.

### Portfolio planning

Portfolio planning involves four basic tasks according to /14/:

- 1) Identifying current as well as future gaps in the portfolio relative to the firm's overall business strategy
- 2) Striking a balance between strengthening the firm's current strategic position and the exploration of new markets or technologies
- 3) Creating a portfolio with the highest potential financial value, and
- 4) Exploring the extent to which the competition can be redefined

### Decision support methods for PPM

To realize full PPM's potential it is important to have decision support methods and tools to support various portfolio level decisions and analysis tasks, including portfolio balancing, project prioritization, and strategic alignment. Typical management methods are not enough. Information from a survey suggest that portfolio management has gained prominence for a number of reasons /15, 16/.

- Financial – to maximize return on R&D and technology spending
- To maintain the business's competitive position

- To properly allocate scarce resources
- To forge the link between project selection and business strategy
- To achieve a stronger focus
- To yield the right balance of projects and investments
- To communicate project priorities both vertically and horizontally within the organization

### How to prioritize projects

The criteria to select projects for working “in” the business generally may be the following /1, p160-161/:

- Dollar value of the project (revenue)
- Resources required
- Project risk
- Profit margin
- Growth in the market share
- Lead time to revenue
- Development of brand

In contrast, criteria for selecting projects to work “on” the business might be:

- Contribution to improvement in key business metrics
- Level of reduction in cycle times
- Level of reduction in process costs
- Amount of improvement to customer service levels
- Improvement in service of delivery quality
- Resources required.

Another representation of ranking projects is by Levine /2, p63/. Of course one of the primary ranking factors is ROI (Return on investment). But other factors could be:

- Alignment with strategic and tactical plans
- Balance between maintenance projects and investment projects
- Allocation of R&D expenditures and resources
- Effective use of resources
- Probability of delivering the project on time within budget, and with the designed work scope
- Ancillary benefits (nonfinancial)
- Impact of potential risk
- Cost of performing the project

### Risk management methodologies for portfolio of projects

In project portfolio management, risk management process focus on analyzing the probability of the success or failure of projects and analyzing risks generated by the selection of a project ensemble during the balancing of a portfolio. The standard for portfolio management deals with this issue as it is difficult to find risk management guide for portfolio management in the literature /4/.

This paper will though not deal with this issue even though it is of great importance for the project portfolio management. This issue is outside the scope of this paper. To express the importance of risk one of the key numbers in our suggested model is indeed a risk factor.

## 5. PPM techniques and tools

There is a wide range of portfolio management tools developed to maximize different metrics. Cooper et al /10, 11/ addressed this issue and concluded that by using a mixture of qualitative (e.g. alignment with company strategy) and quantitative (e.g. return on investment) tools it is difficult to define an optimum portfolio and can lead to surplus of information. Consequently, portfolio managers often select their portfolio using a mixture of professional judgment or a scoring/weighting methods /12/.

According to /16/ PPM tools can be organized into three main categories:

- Mathematical models and financial indicators,
- Non-mathematical based methods
- Visualization tools

Only four portfolio models in the mentioned categories are dominant in enough businesses that conclusions about their key strengths and weaknesses can be made /17/.

They are:

- Strategic approaches (non-mathematical models)
- Financial methods (mathematical models)
- Scoring models (non-mathematical models)
- Bubble diagrams (visualization tool)

### Mathematical models and financial indicators

Mathematical models with financial indicators can e.g. be as following /16/:

- Cost-Benefit Analyses which directly compares the expected costs and benefits of project. Return on investment (ROI) is often used as indicator.
- Net Present Value (NPV) and Internal Return Rate (IRR). NPV is used to calculate the value of project at the current time. IRR is best used to compare overall return rate of a project compared to alternative investments.

Financial methods are rated as having many more weaknesses than strength. These weaknesses are according to /17/:

- Fail to match the right number of projects
- Fail to yield a balanced portfolio (balance between high risk and low risk)
- Not totally understood by management
- Not really used to make Go/Kill decisions
- Not particularly realistic methods, failing to capture key elements of the situation and decision
- Not effective decision tools
- Not particularly time-efficient

### Non-mathematical model based techniques

Non-mathematical model based techniques are easier to understand and use in practice. The most common ones are the scoring model tools. Managers need to consider important information other than cost and return to have a more complete view of the organizational status. Besides financial issues, information can include risk, budget, personnel and business goal /16/.

*One dimensional* rating lists use a single indicator to represent projects. It is the simplest way to categorize projects /16/.

*Two-dimensional* rating systems use two indicators to represent projects. It is popular to form 2 by 2 matrix (or 3 by 3 grid) based on these two indicators. The advantage of using two indicators instead of one is that the additional indicator adds one more dimension of information and enriches the meaning of projects. In addition, in these models, projects are commonly and easily presented by using pivot tables, or by using 2D diagrams /16/.

*Multidimensional* tools use more than two indicators. Projects usually have complex and huge volumes of data. There is no consistent classification of projects. There are times when more than two attributes are of equal importance and need to be considered. Fewer indicators can reduce the amount of information and over simplify the decision making process /16/.

*Strategic approaches* (non-mathematical) could be explained as following:

- Strategic approaches yield a portfolio of projects that is aligned with the business's strategic direction
- The resulting portfolio of projects contain excellent value projects
- Spending breakdown of projects in the portfolio reflects the business's strategic priorities /17/

*Scoring models (non-mathematical)*. Decision makers rate the project on a number of questions that distinguish superior projects, typically on 1-5 or 0-10 scales. These ratings are added to yield a quantified Project Attractiveness Score (PAS), which must clear a minimum hurdle. This Score is a proxy for the "value of the project to the company" but incorporates strategic, leverage and other considerations beyond just the financial measures. These models have the following advantages/disadvantages according to /15, 17/:

- Yield portfolios that are aligned with the business's strategic direction – a strong rating
- Fit management's decision making style
- Yield portfolio who's spending breakdown reflects the business's strategic priorities.
- Time-efficient
- Effective, yielding the right decisions
- Result in well-balanced portfolios
- Most used for truly making Go/Kill decisions.

Scoring models tend to be weaker in terms of user-friendliness, and also when it comes to having the right number of projects in the portfolio for the resources available.

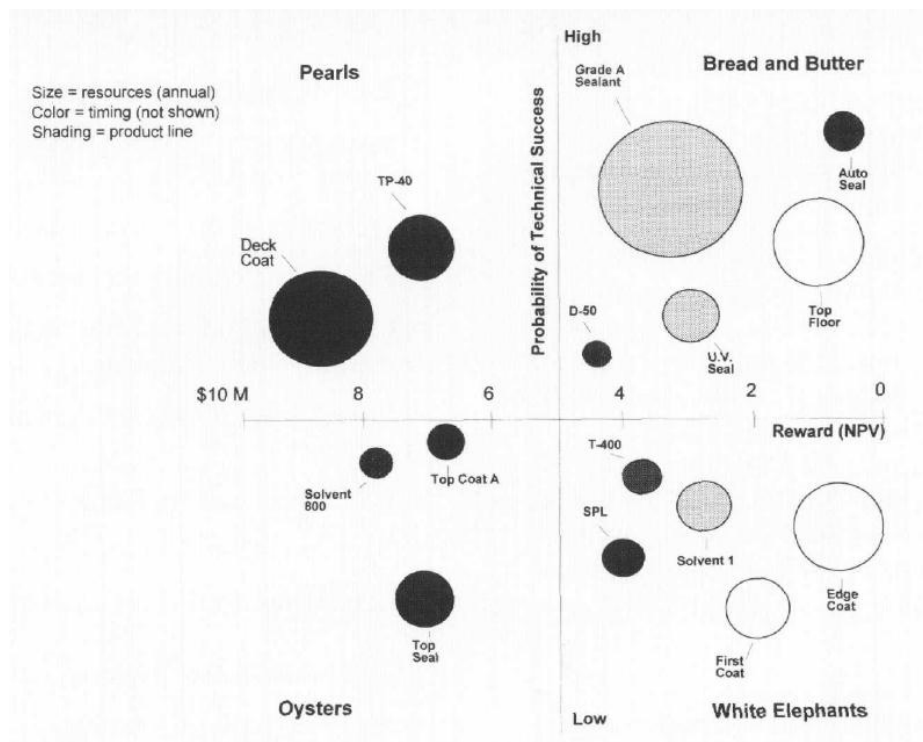
### Visualization tools

The projects are positioned (mapped) in the diagram with their corresponding attribute values measuring against scales. Because the mapping space is often conceptually organized into four (2 by 2) or 9 (3 by 3) regions, the diagram is also known as a quadrant, matrix, or grid diagram. Common pairs of dimensions are risk vs. reward, success vs. value, and risk vs. time to complete /16/.

*Bubble diagrams (less frequent use as the dominant method).* These models have the following advantages/disadvantages according to /17/:

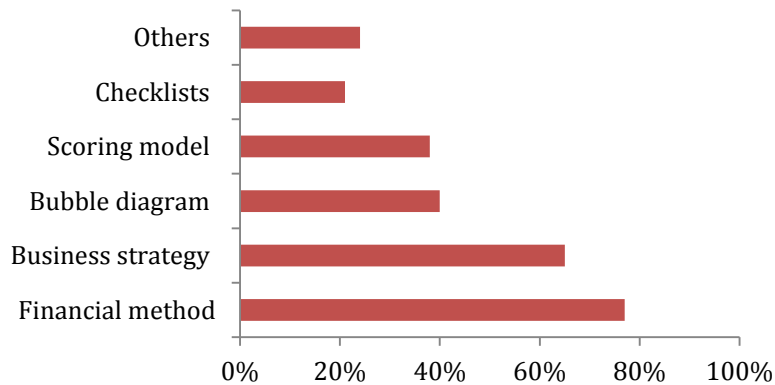
- Best method for yielding a portfolio of projects aligned with the business's strategic direction
- Effective models, yielding the right decisions
- User friendly and easy to use
- Realistic method, capturing many facets of the decision situation
- Yield a high-value portfolio of projects
- Do not deal well with the issue of number of projects in the portfolio for the resources available
- Not particularly time-efficient models
- Weakest when it comes to yielding a portfolio whose spending breakdown reflects the strategic priorities of the business

Figure 3 shows a typical Risk Reward Bubble Diagram for a production company.



**Figure 3.A Risk-Reward Bubble Diagram /10, fig.2/**

Figure 4 shows the popularity of the best known portfolio methods and/or models.



**Figure 4. Popularity of Portfolio Methods Employed /17 fig. 7/**

## 6. Experiences in the field of project portfolio management

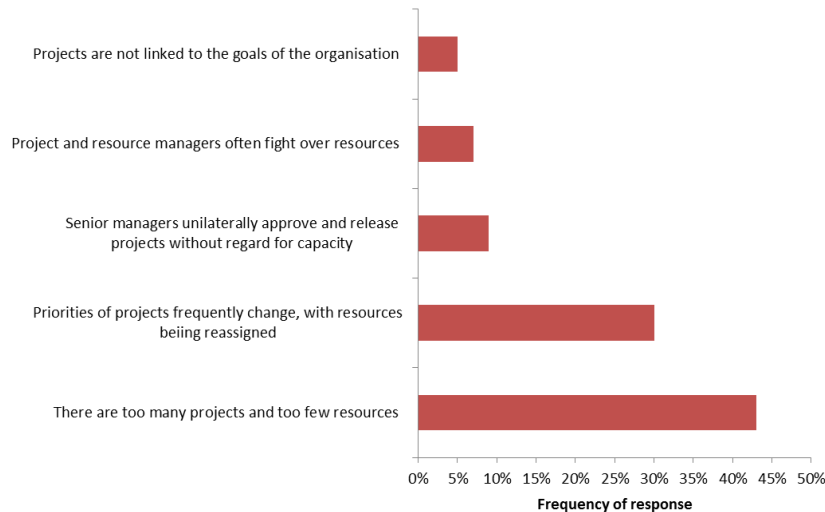
The four biggest universal problems in project portfolios management are according to /3/:

1. Too many projects
2. Wrong projects
3. Projects not linked to strategic goals
4. Unbalanced portfolio
  - a. Too much on the supply side, not enough on the marked side
  - b. Too much development, not enough research
  - c. Too much short term, not enough long term
  - d. Not reflective of the organization's most important assets
  - e. Not reflective of the organization's strategic resource value
  - f. Not reflective of major product revenue opportunities risks, etc.

Projects are often not delivered in time, within budget, or within scope or specifications. Another research has found that some of the most common reasons why projects fail are the following /18/:

- Project and resource managers often fight over resources
- There are too many projects and too few resources
- Priorities of projects frequently change, with resources being reassigned
- Senior managers unilaterally approve and release projects without regard for capacity
- Projects are not linked to the goals of the organisation

Characteristic problems of organisations project portfolios were also evaluated by means of the survey questionnaire. The most common problem (44%) of their project portfolios is that they have too many active projects as can be seen in figure 5.



*Figure 5. Reason for project failure /18, fig. 3/*

### Key problems in portfolio management and project selection

Portfolio management, project selection and resource allocation were deemed critical to new product success by selected firms in a study by /10/. Every firm faced following problems:

- The portfolio of projects does not reflect the business's strategy
- The portfolio quality is poor, too many unfit and weak projects
- The Go/Kill decision points are weak; projects tend to take on a life of their own; poor projects are often not killed
- Resources are scarce, and there is a lack of focus, there are far too many projects for the limited resources available
- Some firms admitted to having too many trivial projects in their product pipeline

A study by /19/ suggests the following three factors as the most hurting factors from good performing of projects:

1. **Stretching the people resource.** The temptation to assign the same individual to many projects may be great because it enables the company to multi-use the expertise of a single person. The study suggests portfolio managers should resist this temptation.
2. **Stretching the money resource.** Portfolio managers should also avoid the temptation to spread new product development (NPD) too thinly across their portfolio of projects.
3. **Switching team leaders and members.** The desire to switch team leaders and members arises frequently over the lifetime of a project.

### Challenges for PPM

Open-ended questions in a survey allowed respondents to highlight any PPM challenges facing their organisations /21/. Many respondents mentioned the need for a "central" well-communicated, formal process" and the need for "the support for the PPM process from all relevant areas and levels of the organisation". Shortage of time

and resources make it difficult for many organisations to implement PPM. The need for the portfolio to reflect strategy is also a common challenge. Methods that link long-term planning and strategy with portfolio decision are felt to be lacking or poorly understood.

## **7. A portfolio score board for a small consulting firm**

Several portfolio models have shown strengths and weaknesses when tested in practice. Based to this information the choice of model for this project is a scoring model. It was considered interesting to try to link simple mathematical information with the model as financial factors are always extremely important. Financial indicators are very important in assessing the projects likelihood of success and therefore an attempt was made to link simple numerical information to the model.

Scoring models have been dealt with in the literature. Levine et al /3/ made some suggestions for a scoring model like *opportunity scoring template* and *risk scoring template*. Based on the literature review on the subject such as /22/ the aim was set at developing a score model suitable for small firms. The questions were selected based on the author's experience in running a small consulting firm (engineering firm) in Iceland for several years.

The obvious goal is to build an easy to use time efficient portfolio score board for a small consulting firm. If the model is too complex most likely the model will not be used at all. If a small consulting company which uses about 40 – 100 hours on each medium size project and 100 - 300 hours on large projects in total, the accountant and/or project manager should not have to spend more than half an hour to an hour maximum for bigger jobs on the score board for larger projects.

Project score board										
							Weight	Score	Color Score	
Project name		Consulting to X-Contractor (engineering consultation)								
	Fixed offer	60 hour	6600\$							
Business vision attributes (>3 is green, 2-3 is yellow, < 2 is red)							100%	2,75		
Strategic impact (clear opportunity=5, unlikely=1)							0,2	3		
Within core competancies (well=5, not at all=1)							0,1	5		
Fits well with the culture of the company (high=5, low=1)							0,05	5		
Advantage - first in the market (5) or par with competence (1)							0,05	1		
Improve market share (high=5, low=1)							0,2	1		
Costumer impact (resolves significant problems=5, no impact=1)							0,1	3		
Increases knowledge and strengthen core compitancies (high=5, low=1)							0,05	2		
Increases revenues (high=5, low=1)							0,25	3		
Info on project budget	\$ pr hour	Offer	Use							
Hour			60	70						
Price	110	6600								
Project deliverable attributes (>3 is green, 2-3 is yellow, < 2 is red)							100%	4,75		
Well scoped project (high=5, low=1)							0,1	5		
Likelyhood of staying within timeframe (high=5, low=1)							0,2	5		
Liklelyhood of staying within budget (high=5, low=1)							0,25	4		
Likelyhood of acceptable quality (high=5, low=1)							0,2	5		
Known methodologies (yes=5, no=1)							0,1	5		
Good resources for the project (good=5, poor=1)							0,1	5		
Does not affect other resources heavily for other projects (not at all=5, heavily=1)							0,05	5		
Risk scoring template (>3 is red, 2-3 is yellow, < 2 is green)							100%	1,60		
Small job paid per hour (1), big job paid per hour (2), small job offer (3), medium job offer (4), large job offer (5)							0,3	3		
Reliability of costumer (very good=1) (poor=5)							0,2	1		
Risk of extra cost - extra resources e.g. new tech (high=5, low=1)							0,1	1		
Degree of newness - new technology (high=5, low=1)							0,1	1		
Complexity - needs good project management (high=5, low=1)							0,1	1		
Risk of loosing other jobs because of size of project (high=5, low=1)							0,1	1		
Risk of poorer service to other costumers (high=5, low=1)							0,1	1		
Key Project Portfolio Information (cost/benefit analyses)										
Project	Business score	Project score	Risk score	Total income on project (\$)	Total cost on project (\$)	Net revenue from project (\$)	Total hours	Net rev pr hour	Color score	
X-Contractor	2,75	4,75	1,60	6600	5900	700	70	10		
Good project	green	Net revenue above 20\$ per hour. Low or medium risk. High or medium project and/or business score								
Average project	yellow	Net revenue between 10\$ and 20\$ per hour. Low, medium or high risk. High or medium project score and/or business score								
Bad project	red	Net revenue between 0 and 9\$ per hour. Medium or high risk. Low project score and/or business score								

**Figure 6. Example of a simplified project portfolio scorecard for a small consulting company.**

The idea behind the simple model is demonstrated in figure 6 needs some introduction. Initially management must decide what categories should be measured. Based on the available literature on project portfolio management, the author's experience and the model study carried out for this paper three categories were deemed to be the most important to rate for each project. These categories are:

- Business vision attributes
- Project deliverable attributes
- Risk scoring template

For each of these categories several questions are asked and each question rated with a score between 1 and 5. Each question is given a certain weight in each

category and the score for each question ranges from 1 to 5. A good project should score high on business vision, high on project attributes and low on risk.

As these rates are given at the beginning of the project financial indicators are not yet included at that stage. Financial indicators are very important so a simple way of measuring the financial outcome of each project is included. When the project is finished the project manager should close each project by measuring the total cost of the project. The project manager knows the hours spent on the project so the income for the project is available in the firm's office. The tricky question is perhaps the final cost of each project. Each company produces a report for the financial year. From that report fixed cost per hour spent can be estimated for each year. The cost of each worker can be acquired with the assistance of the accountant.

Even though the outcome of one project may not be very accurate, the result is a collection of portfolio of projects allowing for comparison of different projects performance in comparison with other projects within the company.

Now basic information have been collected for each project with one score for business attribute, for project performance and for risk. Also a rough estimate on the revenue for each project in the portfolio has been made. These four indicators can then be used to rate the project as good, average or bad. To simplify this rating we use the traffic lights; green, yellow and red. Green projects are good projects, the yellow are average and red projects are bad.

How can this info be used for the company and PPM? Once each project is assigned number for all these factors, some pattern may eventually be realized when all the projects in the portfolio are looked at, e.g. which projects are good for the company and which are not so good. With this tool the management can use the pattern to spot what kind of projects the company should seek after and what kind of projects the company should simply exclude. Analysis of such scoring records of projects can be used to assist the portfolio manager in creating a project selection/rejection method in alignment to the corporate strategy.

## **8. Conclusion**

In this paper a simplified portfolio score card has been proposed for project assessment in small consulting companies. A simplified financial aspect was added to the scoring model. The model could be used in different ways for a variety of project oriented companies. The aim was to come up with a simplified model containing the most important factors from each project in the company's portfolio. The categories which are evaluated for each project should eventually show some pattern regarding project performance, alignment of strategy and amount of risk as well as some basic financial information indicating which projects are good for the company and which are not good. The questions selected for each category can vary and should perhaps evolve with time as experience in using the model builds up. Not much has been written on portfolio management for small companies. PPM should, however, be of equal importance for small firms as it is for larger more complex ones. At the same time the management structure and management tools of these smaller firms do not need to be as complex as for larger firms. In order to improve the performance of each project based company PPM should always be used as a management tool to some extent in order to improve the company's performance and thus raise its revenue.

## References

- /1/ Mark Morgan: Raymond E. Levitt (2007). William Malek. Executing your strategy. How to break it down & get in done. Harvard business school press.
- /2/ Harvey A. Levine (2005). Portfolio Management. A practical guide to selecting projects, managing portfolios, and maximizing benefits. Jossey-Bass. A Wiley Imprint.
- /3/ Gerald I. Kendall, Steven C. Rollins (2003). Advanced project management and the PMO. Multiplying ROI at Warp Speed. J.Ross Publishing.
- /4/ The Standard for Portfolio Management - Second Edition (2008). Project Management Institute, Inc.
- /5/ A Guide to the project management body of knowledge (PMBok Guide, 2008). Fourth Edition. Project Management Institute, Inc.
- /6/ R.M. Wideman (2004). A Management Framework for Project, Program and Portfolio Integration (New Bern, N.C: Trafford Publishing, p. 181).
- /7/ Michael E. Porter (1996). "What is Strategy?" Harvard Business Review , p. 61-78.
- /8/ Robert S. Kaplan and David P. Norton (2001). The Strategy-Focused Organization: How Balanced Scorecard Companies Thrive in the New Business Environment. Harvard Business School Press.
- /9/ Cleland, D. & King, W. (eds) (1988). The project management handbook, 2<sup>nd</sup> edition. New York: Van Nostrand Reinhold.
- /10/ Cooper, R. G., Edgett, S. J., & Kleinschmidt, E.,J. (1997). Portfolio management in new product development: Lessons from the leaders-I. Research Technology Management, 40(5), p. 16-28.
- /11/ Cooper, R. G., Edgett, S. J., & Kleinschmidt, E.,J. (1997). Portfolio management in new product development: Lessons from the leaders-II. Research Technology Management.
- /12/ Morcos, M. S. (2008). Modelling resource allocation of R&D project portfolios using a multi-criteria decision-making methodology. The International Journal of Quality & Reliability Management, 25(1), p. 72-86.
- /13/ Rad, P. F.,P.E.C.C.E., & Levin, G. (2008). What is project portfolio management? AACE International Transactions, (15287106), TC31-TC34.
- /14/ Terwiesch, C., & Ulrich, K. (2008). Managing the opportunity portfolio. Research Technology Management, 51(5), p. 27-38.
- /15/ Cooper, R. G., Edgett, S. J., & Kleinschmidt, E. J. (2000). New problems, new solutions: Making portfolio management more effective. Research Technology Management, 43(2), p. 18-33.
- /16/ Zheng, G. (2009). A multidimensional and visual exploration approach to project portfolio management. Georgia State University). ProQuest Dissertations and Theses.
- /17/ Cooper, R. G., Edgett, S. J., & Kleinschmidt, E.,J. (1998). Best practices for managing R&D portfolios. Research Technology Management, 41(4), p. 20-33.
- /18/ Buys, A. J., & Stander, M. J. (2010). Linking projects to business strategy through project portfolio management. South African Journal of Industrial Engineering, 21(1), p. 59-68.
- /19/ McDonough,Edwards F., I.,II, & Spital, F. C. (2003). Managing project portfolios. Research Technology Management, 46(3), p. 40-46.
- /20/ Cooper, R. G., Edgett, S. J., & Kleinschmidt, E.,J. (2004). Benchmarking best npd practices-ii. Research Technology Management, 47(3), p. 50-59.
- /21/ Killen, C. P., Hunt, R. A., & Kleinschmidt, E.,J. (2008). Project portfolio management for product innovation. The International Journal of Quality & Reliability Management, 25(1), p. 24-38.
- /22/ Rad, P. F., & Levin, G. (2005). A formalized model for managing a portfolio of internal projects. AACE International Transactions, (15287106), PM41-PM45.