White Paper 2015-02

Why Portfolio Level Opportunities and Risks Management is So Essential in Project-driven organizations

While most project-driven organizations nowadays implement some level of Opportunity and Risk management process, portfolio-level processes are often inexistent. However they are extremely important when it comes to the overall performance of the organization, in particular because the organization shares resources across projects. Much more structured portfolio-level Opportunities and Risk management processes should be implemented. This White Paper describes what are the issues that need to be covered, and in general how to implement such process.

Introduction

The portfolio level is relevant from the business perspective because it is the level at which organizations do report their financial performance. From the business benefits and protection perspective, a significant segment of Opportunities & Risks also always materialize at the Project Portfolio level, and not just at the single Project level. It is essential that organizations and Projects understand this too often overseen issue. In Project-driven organizations, a significant opportunity for improvement of the organization's business results is actually readily available through the implementation of portfolio level processes related to Opportunity and Risk management

Portfolio-level Opportunity and Risk management is essential for the sustainability of the organization

Principles of Portfolio Management in terms of Opportunities and Risks

At portfolio level, in principle, except in the case of rare catastrophic risks, the Opportunities and Risks of different Projects should tend to average out. This is the way most businesses manage their risks. However there are some instances where it is not the case – in particular, because the averaging out supposes that the Projects in the portfolio are independent. All possible dependencies, which are in effect managed by the organisation, are sources of Opportunities and Risks for the organization.
Typical dependencies between Projects in a portfolio include:

- Key internal resources, in particular when they are shared or they create interfaces between Projects:
  - Key personnel,
  - Key assets,
  - Company infrastructure, standards and systems,
- Insufficient diversification:
  - Clients,
  - Suppliers/ subcontractors,
  - Country,
  - Product line,
  - Etc.

The first section of this White Paper will focus on the key issue of shared resources; the second section on the issue of diversification.

Shared Resources

Common methods for managing shared resources include some kind of scheduling approach. For personnel it is often referred to capacity planning, where the expected usage of resources (by trade or speciality) is forecast adding up the expected usage by all ongoing and upcoming Projects. For discrete assets, more conventional asset utilization schedules are developed, showing projects in-hand and prospects as per the organization's commercial plans.
Most of these methods are deterministic, i.e. consider the baselines of all the ongoing and upcoming Projects. Of course, there is always a major source of uncertainty regarding future Projects that are still at the prospect stage, which timing or materialization can be highly uncertain.
However, the issue is to minimize as much as possible the Cost of Opportunity involved, due to changes to the expected plan. At the end, decisions about resource utilization and allocation, which have tremendous importance for the organization, are often taken by senior management with limited information and under the constraint of time. We believe that there could be a very significant improvement in Project-driven organizations if resource utilization was considered in a more comprehensive manner from an Opportunity and Risk perspective. What are then the approaches that can be used to tackle that particular problem?
The methods described in single project Opportunity and Risk management can be directly used at portfolio level when it comes to resource utilization:

- A resource utilization risk register can be established, with Opportunities and Risks regularly rated, prioritized, and actions assigned to either the commercial department or the Project Managers of ongoing Projects,
- Cost of Opportunity (which translates to sub-optimal utilization of resources) can be managed and an estimate for the upcoming period could be derived using a contingency-like calculation at the resource level, using advanced methods such as Monte Carlo, instead of the deterministic methods that are generally used,

- The resilience of resource utilization schedules can be assessed and further reinforced using Schedule Statistical Analysis on the utilization durations.

In general, the process related to the resource utilization risk should be significantly more developed and formalized and should receive much more management focus and attention than it generally does. The higher the fixed cost of internal resources, the more this process is particularly important.

Diversification

Before we dwell deeper on the issue of diversification, we need to note that in general, diversification increases resilience but can diminish performance. If an organization bets on a certain market segment that happens to much more performing than the overall market, its performance will be significantly better, but at the expense of a much higher risk. This consideration needs to be carefully weighted by the decision-maker, who is always under pressure to maximize the performance of the organization. From another perspective it means that the short term performance needs to be weighed against the sustainability of that performance.

Typical dependencies between projects in a portfolio include: Shared resources and insufficient diversification

In general, full diversification is impossible, and organizations will always have some commonalities in their portfolio of Projects: for example, Oil & Gas companies (Owners) and specialized Oil & Gas Contractors are necessarily highly dependent on a single cause of variation, which is the demand and the market price of oil and/or gas. The same holds for organizations that are specialized in Mining, Nuclear or other industries; other organizations are highly dependent on public expenditure for infrastructure, etc.

Beyond these unavoidable commonalities it is important to maximize as much as possible the diversification of the Project portfolio over a number of dimensions.

The key dimensions that we suggest should be considered by Project-driven organizations, and result in Key Performance Indicators at the organizational level, include:

- Product line/ Industry, for example, cover industries with opposite economic cycles where possible,
- Clients, whereby the organization should not be dependent from a single client or a very limited number of clients,
- Countries, when Projects are dependent on public or semi-public Owners, and laws and regulations can have a dramatic influence on the Project business,
- Suppliers/ subcontractors, whereby the organization's performance would depend on a limited number of suppliers that have significant influence on the Project performance, or would be in a position close to monopolistic price fixing. Examples include welding and coating subcontractors for pipeline construction, or piping contractors for plant Projects,
- Project type, size and duration, whereby the sizes and durations of Projects are varied, and a significant spread from low-risk Projects to high-risk Projects is included in the portfolio; the smaller, less complex low-risk Projects can provide a basis that compensates the materialization of risks in higher risk Projects.

While monitoring of diversification of clients and countries is quite commonly implemented in most organizations, monitoring the diversification of suppliers, Project types, sizes and risk levels is less common while still important. An effective portfolio-level process needs to address these issues in a consistent manner.

Conclusion

Portfolio-level Opportunity and Risk management processes are essential for the sustainability of any project-driven organization. Structured processes are rarely implemented and portfolio-level decision-making such as resource allocation between projects and the decision to take or not a new project as part of the portfolio are often left to the feel of the senior executives.

We believe that a much more structured approach can to be implemented, adding a lot of value to the organization, in particular with regard to common resources and to the monitoring of the diversification of projects. This White Paper gives principles which, if they are followed, will greatly improve the resilience of organizations.