CHARLES UNIVERSITY

FACULTY OF SOCIAL SCIENCES

Institute of economic studies

Bachelor thesis

2019 **Kristina Ratajová**

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Strategic Management of a Project Portfolio in a Consulting Firm

Bachelor thesis

Prague 2019

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Academic Year: 2018/2019

Bibliographic note

RATAJOVÁ, Kristina. *Strategic Management of a Project Portfolio in a Consulting Firm.* Prague 2019. 72 pp. Bachelor thesis (Bc.) Charles University, Faculty of Social Sciences, Institute of Economic Studies. Thesis supervisor Ing. Petr Balcar, M.Sc.

Abstract

The main goal of this thesis is to contribute to the understanding of project management and project portfolio management with focus on the processes, individual tasks within each process, methods and tools. It also serves as an analysis of project-based consulting firm. Project management might seem as an unnecessary cost to the firm. However, the costs resulting from undelivered projects or projects delivered in poor quality would significantly exceed those costs paid for project management.

The firm is analysed in a form of a case study with a combination of semi-structured interviews, analysis and visualization of relevant data and comparison to the best practices. Two specific projects are analysed in depth and project portfolio performance of one team is evaluated.

The detailed analysis provides demonstration of project management methodologies and proves its importance. It shows the correct procedures in the firm as well as inefficiencies and rooms for improvement. Furthermore, it shows practices of managing multiple projects at once in order to reach balanced portfolio and maximize its profitability.

Keywords

Project Management, Project Portfolio Management, Financial Management, Strategic Management, Key Performance Indicators, Portfolio performance

Abstrakt

Hlavním cílem této práce je přispět k porozumění projektového řízení a řízení projektového portfolia se zaměřením na procesy, jednotlivé úkoly napříč každým procesem, metody a nástroje. Také slouží jako analýza poradenské firmy na projektové bázi. Projektové řízení lze považovat za nepotřebný náklad pro firmu. Náklady vzniklé z nedodaných projektů nebo projektů dodaných ve špatné kvalitě by však výrazně převýšily náklady za projektové řízení.

Firma byla analyzovaná formou případové studie s kombinací polostrukturovaných rozhovorů, analýzy a vizualizace relevantních dat a srovnáním s osvědčenými postupy. Dva specifické projekty byly zkoumány podrobně a byla vyhodnocena výkonnost portfolia projektů jednoho týmu.

Detailní analýza poskytla ukázku metod projektového řízení a jejich důležitosti. Ukazuje správné postupy ve firmě i nedokonalosti a prostory pro zlepšení. Navíc ukazuje praktiky řízení mnoha projektů najednou pro dosažení rovnovážného portfolia a maximalizace jeho profitability.

Klíčová slova

Projektové řízení, Řízení projektového portfolia, Finanční řízení, Strategické řízení, Klíčové ukazatele výkonnosti, Výkonnost portfolia

Declaration of Authorship

I hereby proclaim that I wrote my bachelor thesis on my own under the leadership of my supervisor and that the references include all resources and literature I have used.

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Prague, 8 May 2019

Signature

Acknowledgments

I would like to express my gratitude to the thesis supervisor, Ing. Petr Balcar, M.Sc., for his patience, continuous support and feedback on my work.

I would also like to thank my colleagues from the consulting firm for their time, valuable input and advices.

Last but not least, I would like to thank my family for their endless support during my studies.

Bachelor's Thesis Proposal

Author	Kristina Ratajová
Supervisor	Petr Balcar
Proposed topic	Strategic Management of Project Portfolio in a Consulting Firm

Research question and motivation

The main purpose of the thesis is going to be an analysis of portfolio project management in a consulting firm. The firm consists of multiple teams that focus on different industries, such as Energy and Resources, Data Analytics, Public, Risk Advisory etc. Each team is trying to maximize its profit which is measured by NSR (Net Service Revenue). However, there are many challenges in managing multiple projects simultaneously and tools of Portfolio Project Management (PPM) are often used. It focuses not only on doing projects right but mainly on doing the right projects.

The main motivation is to suggest an optimal process map of successful project management that would include effective planning, controlling, defining risks and evaluating. If the strategic management steps are done correctly and properly, we should accomplish balanced portfolio with maximized value that perfectly matches the company goals and strategy.

Contribution

The thesis will develop a framework for successful project management and it will show that portfolio management of projects (if applied correctly) increases profitability, prevents risk and ensures control over the whole process.

Methodology

The theoretical part will be based on findings from project portfolio management literature and performance management literature.

I will try to evaluate different tools of project management and identify their impact on project delivery and overall performance of the teams. To get the information about different processes, I will send a survey to project managers in the consulting company and analyze their responses with respect to the NSR and other performance indicators of their team.

Outline

The expected structure of the thesis is going to be:

1. Portfolio project management background
2. Performance management background
3. Tools and methods of project portfolio management
4. Risks in project management
5. Portfolio project management maximizing profitability - evidence in a consulting firm
6. Suggested framework for effective portfolio management of projects

Core literature

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List of Abbreviations

AC	Actual Cost
AHP	Analytic Hierarchy Process
CoQ	Cost of Quality
CPI	Cost Performance Index
CSF	Critical Success Factors
EV	Earned Value
EVM	Earned Value Management
FTE	Full Time Equivalent
GE	Global Earnings
GSR	Gross Service Revenue
KPI	Key Performance Indicator
MPT	Modern Portfolio Theory
NPV	Net Present Value
NSR	Net Service Revenue
P&L	Profit and Loss Statement
PMBOK	Project Management Body of Knowledge
PMI	Project Management Institute
PMO	Project Management Office
PPM	Project Portfolio Management
PV	Planned Value
QRM	Quality & Risk Management
ROI	Return on investment
RPA	Robotic Process Automation
S&O	Strategy & Operations
SME	Subject Matter Expert
SPI	Schedule Performance Index
WIP	Work in Progress

Introduction

This thesis aims to contribute to the literature on project management and project portfolio management by providing an in-depth analysis of the processes in a project-based organization. Many organizations, in addition to their regular routine, sometimes process based, approach to accomplishing their tasks and goals in the form of projects. These projects can last from days to even years and they are becoming more complex. Due to high competitivness and constant pressure from the leadership to deliver better results, the need for an efficient project management of projects is becoming increasingly important.

Most businesses have to deal with multiple projects at once. Each of the projects must be allocated with sufficient resources, time and finances. Project Management Institute (PMI) defines project portfolio as a collection of projects, programs and other work. If the portfolio is not managed well, organizations can face issues such as overfilled project pipelines, non-profitable projects or unavailability of resources. These issues can result in late accomplishing of the projects, decrease in revenues, additional costs, unsatisfied clients or even damages on reputation of the organization.

The literature in the topic of project management is rather extensive, although most of the resources originate outside of the Czech Republic. There are several sctructured guides for methodologies applied in project management. The most commonly considered are PMBOK (Project Management Body of Knowledge) or PRINCE2 (Projects in a Controlled Environment).

Project managers in many organizations must deal with conflicts over resources (Kendall, G. I., Rollins, S. C., 2003). Due to increasing complexity of projects and portfolios, high proportion of projects is expected to fail to deliver on time, within budget and with the required benefits or quality. Cristóbal et al. (2018) identify the main reasons for increasing complexity as large amount of required resources, unstable environment, advancing technology and diversity of actors interacting with each other. Respondents of the 2018 Project Process Survey carried out by PwC defined the main

reasons for project failure as unclear scope, poor communication, lack of change management, poorly defined goals and change in strategy.

The purpose of the thesis is to provide an insight into project management in real-life context, compare the internal processes in the organization with the literature, identify the consequences of inefficient management and suggest opportunities for improvement in the organization's practices. The organization that was analyzed, serves as an evidence for the utilization of project management methods and their importance. Project managers in the organization are expected to deliver profitable projects of high quality in a limited time period. Their responsibilities are well beyond management of the project team and communication with the client. There are several quantitative and qualitative variables that affect the outcome of the project and the performance of the project portfolio. All the variables should be balanced in order to reach the best possible results.

The thesis consists of two main parts: brief review of literature in the topics of project management and project portfolio management and empirical evidence from a management consulting firm. The first chapter summarizes the key principles of project management and describes the phases in the project management process according to the literature. The second chapter is focused on project portfolio management literature with examples of some tools and techniques. The third chapter is a case study of an existing consulting firm. Detailed description of the project management principles in the firm is included and the project management is demonstrated on two specific projects from the past. Management of a project portfolio is demonstrated on a specific team in the firm.

1 Project Management

Project is one of the ways how organizations perform work. Projects can last for various periods of time ranging from weeks to years and they have the following characteristics:

- Projects are performed by people
- Resources are constrained
- Projects are planned, executed and controlled.

The main difference between projects and operations is that projects are temporary and unique, whereas operations involve ongoing activites (PMI, 2000). A common characteristic of a project is a planned project end and the desired outcome is usually defined in a form of specific deliverables (Patzak, G., Rattay, G., 2012). Projects can be categorized based on different criteria such as duration, project scope, position of the client, degree of repetition etc.

According to PMI, project management is the application of knowledge, skills, tools and techniques to project activities to meet project requirements. There are several phases in the project management process which are described in more detail in the project management process section.

The person responsible for a project management is a project manager. The manager leads of a project team who usually ensures identification of requirements and delivery of the full project scope while maintaining quality.

Project stakeholders are people and organizations that are affected by the project in a certain way and should be involved in the project management process. The stakeholders are for example the customer, sponsor, project team members and others. Some stakeholders are called "key stakeholders" and they have the right to contribute to the decision-making process (Kerzner, H., 2009). The objectives and opinions of the stakeholders are often various and the project manager has to put them in a balance.

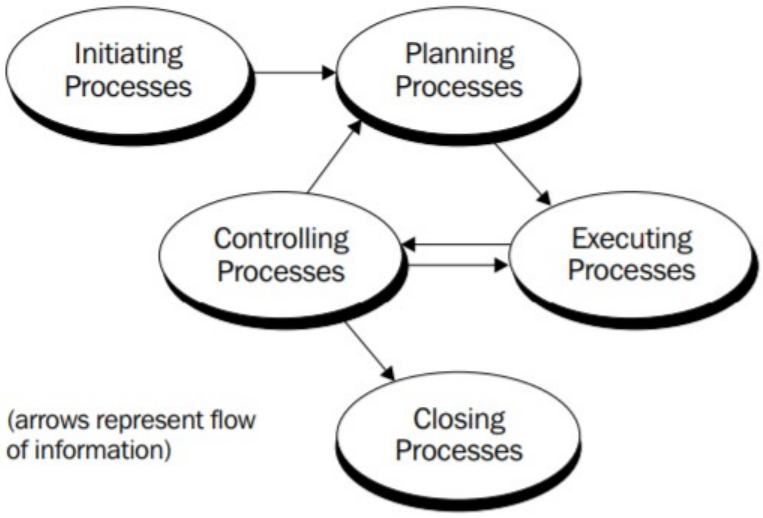
1.1 Project management process

Each project consist of several phases which describe the complete life-cycle of the project. These phases usually overlap and interact throughout the entire project. The main phases in the project management process are defined in the PMBOK Guide as the following:

- Project initiation
- Project planning
- Project execution
- Project controlling
- Project closing

The process phases can be further divided into individual tasks. All the phases require a lot of attention of the project manager to ensure the successful delivery of the project.

Figure 1: The phases in project management life-cycle



Source: PMBOK (2000)

1.1.1 Project initiation

Most projects start with an initial idea from a potential client or from the inside of the company (Young, T.L., 2016). The first phase in a project management consists of gathering information about the project, setting an approach, defining potential risks and proposing the roles and responsibilities. A project charter should be created to capture all these aspects. Project charter is an official documentation that involves problem statement, scope definition, completion criteria and can include assumptions (Knutson, J., 1991).

An inevitable task in the initiation phase of a project is to define key stakeholders. This involves assigning of a project manager and defining potential project team. From the other point of view, the client (customer) can be either one person, several people or an entire department. The question that should be asked is whether the client has a sufficient funding to pay for the project (Knutson, J., 1991). Potential financial constrainst that might arise from any of the stakeholders should be identified as soon as possible.

1.1.2 Project planning

The planning phase of a project is the most extensive one in terms of tasks performed. Questions that should be asked during this phase are "What", "How", "Who", "When" and "How much" (Knutson, J., 1991). The answer to these questions is captured in clear definition of the scope and work requirements and scheduling of work acitivities. The project manager has to plan the management of resources and create the project budget accordingly. Some projects require involvement of multiple project teams or external vendors. The contract plan or revenue sharing agreements should be also defined during this phase.

Other tasks in the planning phase are setting up change plan for major changes in the project scope, risk plan to identify and approach potential risks, financial plan for more detailed budgeting strategy and also logistics and communication plan. According to the PwC Global project management

report conducted in 2012, poor estimation during the planning phase is the largest contributor to project failures.

1.1.3 Project execution

The project team performes the activities agreed in the project scope. Sometimes also external vendors are involved in the execution phase. Communication between the stakeholders is essential during this phase. The project manager should direct and manage the work and lead the project team effectively. Another important part of project execution is quality assurance to mitigate potential risks, taking responsibility for each item and giving recommendations on ongoing steps.

1.1.4 Project controlling

Project performance must be controlled throughout the entire life of the project to supervise the project delivery and identify potential issues. The budget should be regularly reviewed and updated. If there are any changes in the project scope, the project manager should analyze the impacts and make necessary adjustments.

1.1.5 Project closing

The final phase of project life-cycle should verify that all the work has been accomplished. It also involves gathering feedback from the client, conducting lessons learned, administrative closing, contractual and financial settlements.

1.2 Role of a PMO

Project Management Office (PMO) plays very important role in project management. In a multi-project environment, organizations often seek a solution to effectively manage those projects and to have a specialized person or an organizational unit who is in charge of those projects. The definition of PMO according to Project Management Institute is "an organizational structure, with different functions and responsibilities, whose main task is to centralize and coordinate the management of projects in the parent organization." PMOs used to be considered to carry rather supportive tasks such as administration and archiving, however, their recognized value has been increasing and their responsibilities have been extended to more complex tasks and coordinating roles (Artto et al., 2011).

A report conducted in 2013 by PMI has gathered a team of Subject Matter Experts (SMEs) to define the different types of PMO frameworks based on their responsibilities. We can distinguish enterprise-wide PMOs (EPMOs) who are in charge of portfolio reporting, project alignment and ensuring that the projects are linked to the strategy of the business unit. Departmental PMOs are one step below in the hierarchy and they provide project-related support to a specific organizational unit in an organization. Project-specific PMOs are responsible for supporting individual projects by coordination, reporting and administrative tasks. Some organizations employ also Centers of Excellence (CoE) to represent the best practices for the business and enable managers to deliver high quality projects. The categorization of PMIs can be simplified to two groups: project-oriented PMOs and organization oriented functions (Rad P., Levin G., 2002).

The above mentioned report has shown that the best-performing PMOs are not only contributing to linking the projects with the strategic initiatives but also to creation and implementation of the strategy itself. These PMOs are being recognized as having a real added value to the organizations.

According to the KPMG Project Management Survey 2017 results, the top three reasons for introducing a PMO in an organization are to improve

governance, prioritize investment, align and adjust to business strategy and to enable consistency of delivery.

Successful PMOs must consist of skilled and knowledgeable workforce and have an appropriate access to top management of the organization. Another report conducted by PMI in 2013 examining the impact of PMOs on strategy implementation has shown that the PMOs who were directly engaged with C-level executives were the ones bringing the best results. PMOs should also be continuously evaluated and their importance in the organizations should not be underestimated.

1.3 Successful project management

Project management is a complex process and the success of project management is evaluated by several criteria. In the past, the only objectives that were accounted for were time, costs and quality (Olsen, R. P., 1971). Nowadays the project managers are required to manage their projects within a given timeframe and budgeted costs, in a sufficient quality accepted by the client, minimum scope changes and in alignment with the corporate strategy and other projects (Kerzner, H., 2009). Hence it is not enough to efficiently manage individual projects but also the entire project portfolio. Cristóbal et al. (2019) stressed out the ability of managers to make decisions in the unstable environment and willingness to change leadership style as a necessity for managing complex projects.

When measuring project management success, the expression of Critical Success Factors (CSF) is commonly used. E. Westerveld suggested in his Project Excellence Model (2002), that the project is successful if the five groups of stakeholders were statisfied - client, project team, users, contractors and other stakeholders that are not directly involved but have a significant influence.

F. Hartman (2000) defined three questions that should be asked at the beggining of a project to identify the expected deliverables, success criteria and stakeholders for the project.

Q1: On the last day of the project, what will the project team hand over to operations?

Q2: How will the success of the project be judged?

Q3: Who has an opinion on questions 1 and 2?

These questions help to achieve common understanding and alignment of the project team.

2 Project Portfolio Management

Project portfolio management (PPM) is an approach to solving several project tasks simultaneously in a multiple project environment. It has origins in the Markowitz's Modern Portfolio Theory (MPT) which was an approach to managing many financial investments (Bonham, S. S., 2008). Based on the MPT four criteria for managing a portfolio of projects can be defined:

- Maximization of returns
- Risk balancing
- Strategic alignment
- Resource balancing

Organizations must select the projects for their portfolios carefully since the resources such as labor, finance and time are limited. The main goals of PPM are selecting and initiating those projects that are necessary for business success, visualizing project dependencies, identifying potential conflicts, using experience from other projects and regularly controlling ongoing projects (Patzak, G., 2012). According to the KPMG's Project Management Survey conducted in 2017, 60 % of organizations manage their projects within a portfolio structure.

Project based organizations often struggle with efficient management of project portfolios. The project teams often change during the project lifecycle, especially on long-term projects. The team members are also often assigned to multiple projects at once. The project managers must have control over multiple budgets and project timelines, regularly check staff assignments and also guarantee that the client's requirements and expectations are met.

According to Kendall and Rollins, the main reasons for and unbalanced portfolio is that some projects have unclearly defined ROI or the portfolios are clogged with too many projects which consequently leads to scarcity of resources.

2.1 Measuring portfolio performance

Many organizations measure the performance of a project portfolio by Key Performance Indicators (KPIs). We can distinguish qualitative and quantitative KPIs. The compliance with quantitative KPIs is easier to measure and organizations can easily identify the performance of any KPI against its target. Some examples of quantitative KPIs that organizations track include time, cost, forecasted revenue, safety, variations or productivity (Turner, J. R., 2009).

However, the traditional project-level KPIs are often insufficient for measuring the true value the portfolio delivers to the organization. The metrics needs to be defined for the aspects related to work, cost and risk as well as the business value. Some of the factors that might affect the business value negatively are for example unreliable planning, disconnected data and systems, poor resource utilisation or disconnected portfolios (KPMG Survey, 2017).

According to Cooper et. Al. (1999), a successful portfolio performance can be measured by having the right number of projects in the portfolio for the resources available, undertaking projects in a time-efficient way and having a balanced portfolio of high-value projects that are aligned with the business strategy.

2.2 PPM process

The selection of projects for the portfolio is a process composed of multiple tasks. The definition of the tasks can aid in defining the difference between project management and PPM. The life cycle with PPM is extended on both sides (Levine, H. A., 2005). According to Max Wideman, the PPM process consists of the five tasks. The process is initiated by the identification of needs and opportunities. Then the optimal combination of projects for the portfolio is selected. In the next phase, those projects are planned and executed, which is the project management process described in the first chapter. After the official project closure, the deliverables are accepted and

used. The benefits are realized in the final phase.

According to J. Miller (2002), the process of project portfolio management should consist of four steps.

In the first phase, called Inventory, the responsible person or unit should review the current project portfolio and categorize those projects. This involves projects in all phases from leads through active projects to completed and archived projects. Next step is to identify strategic objectives and link these projects to the strategic objectives. Also all the information regarding budgets, reporting, finances and gating process should be gathered and defined.

The next stage is called the Analysis stage which works as more in-depth breakdown of the project portfolio. There are many ways how organizations handle this stage and it should uncover potential risks and conflicts, identifying the resource capacity, evaluate the alignment of specific projects and establish relevant KPIs such as expected values and financial metrics.

In the third, Alignment phase, the projects that are in the portfolio are reclassified in order to maintain balanced portfolio. This often means that some of the projects may be delayed or canceled. Achieving balance might be very challenging as the estimates of the costs and benefits might be quite inaccurate and different models and what-if analysis are commonly used to determine the possible effects.

The final phase aims to manage the portfolio and implement the changes decided in the previous steps. This involves cancelation and rescheduling of projects, initiation of new projects, reallocation of resources and the overall launch of the portfolio and its changes.

Figure 2: The PPM process phases according to J. Miller

Source: Author's illustration based on the process description (2019)

2.3 PPM tools and techniques

PPM is a complex process and usually requires supplementary tools, usually a specific software, in addition to those used for project management. The goal is to integrate traditional project management with business functions (Levine, H. A., 2005).

There are several different techniques used for selection of projects. The portfolio managers try to evaluate potential projects in terms of expected value benefits as well as the related risks while considering the capacity to accept new projects, which is dependent on availability of resources (Levine, H. A., 2005).

In order to efficiently maintain the pipeline, project portfolio should be regularly controlled and evaluated against the established criteria.

Although the concepts and goals of PPM have not changed significantly since the origins in 1960s, the tools and methods are much more advanced nowadays with the arrival of new technologies. Due to the quick advancement of technology and shifts in consumers demand in the recent years, organizations must re-evaluate their strategies. This can have an impact on the PPM as well.

One of the requirements for PPM that has been given a higher importance is data visualization. The interpretation of the findings is the baseline of decision-making and new software and applications enable organizations to create customized dashboards with charts, diagrams and models instead of simple Excel spreadsheets.

Another trend that also affects PPM is the effort for higher cooperation between departments and many organizations are implementing ERP systems (Enterprise resource planning) which enable centralization of data from multiple business functions such as Procurement, Supply Chain, Sales, Finance or Marketing (Khan, B., 2018).

2.3.1 Analytic hierarchy process

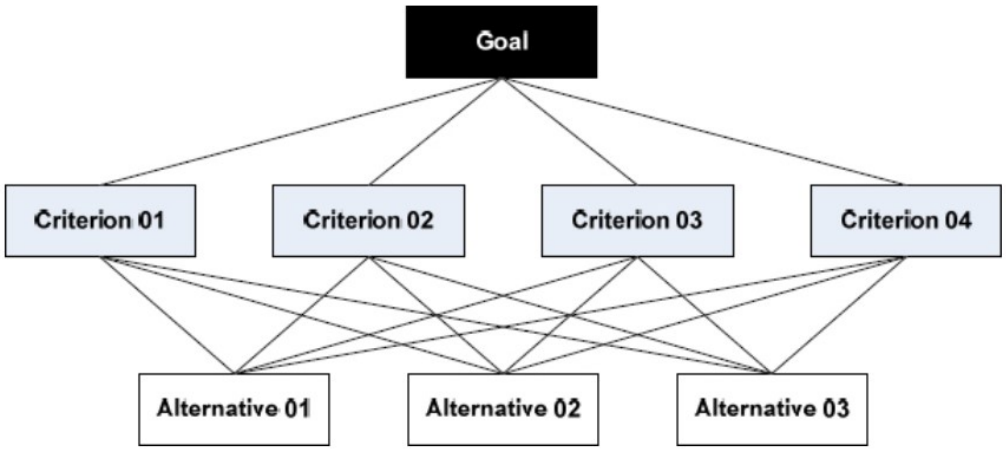
Analytic hierarchy process (AHP) can be used during the phase of project prioritization and selection. It is a mathematical model utilized for selection and prioritization of projects. It is based on a group of criteria based on which the projects are evaluated. This criteria can be different for every organization, depending on preferences of the decision makers. However, there are several groups of criteria that the management usually focuses on:

- Financial criteria - this involves metrics related to financial aspect of the projects. Some examples are ROI (return on investment), NPV (Net Present Value) or Payback period (time necessary for recovering initial investment to the project).
- Strategic criteria - metrics associated with strategic objectives of the organization. A common method of determining the criteria is by using a balanced scorecard approach.
- Risk criteria
- Urgency
- Stakeholder comitment
- Technical knowledge - a criteria that evaluates the technical knowledge necessary to deliver the project.

The AHP was developed by Thomas L. Saaty in the 1970s. It is widely used as a decision making tool for complex scenarios. According to Saaty, there are four steps in the decision making process (Saaty, T., 2008). At first, the problem must be defined. Then the hierarchy is created by placing the

goal of the decision at the top, adding the criteria on which the goal depends below and set of alternatives on the lowest level. This decomposition is followed by making pairwise comparison matrices for each of the criteria. The priorities obtained from the comparisons are then used to add weights to all the elements. The comparison can be made by many ways. The commonly used way suggested by Saaty is by adding values on scale from 1 to 9 as a relative importance of one alternative with respect to another alternative.

Figure 3: The AHP technique



Source: PMI (2010)

2.3.2 Earned Value Management

Earned Value Management (EVM) is a method allowing managers to track the amount of work actually performed on a project. It integrates the project scope, schedule and resources in order to measure project performance from its initiation to closeout (PMBOK, 2013). It allows the project manager to forecast the total costs and date of completion.

The EVM requires the input of three data sources (Reichel, C. V., 2006). Planned (or budgeted) value (PV) reflects what should be the level of completion of project work at any point in the schedule and cost estimate. Actual

cost (AC) expresses what has actually been spent for executing work on a project. Earned value (EV) gives information, in physical terms, what the project accomplished.

For the analysis of the project performance, project managers are interested in Schedule and Cost Variance. The Schedule Variance is obtained by subtracting PV from EV. Cost Variance equals EV less AC. Another analysis that can be done by the managers is to calculate Schedule Performance Index (SPI) and Cost Performance Index (CPI). The SPI is defined by PMBOK as "a measure of schedule efficiency on a project". The CPI is defined by PMBOK as "measure of cost efficiency on a project". The calculations for the indexes are following:

$$SPI = EV/PV \tag{1}$$

$$CPI = EV/AC \tag{2}$$

3 Strategic Management of a Project Portfolio - Evidence in a Consulting Firm

A consulting department in one of the big four companies has been analyzed in order to demonstrate the project management and project portfolio management practices. The main reason for choosing this company is its character and the access to the data. The author of the thesis has been employed in the company for over a year and has gained a good insight into the project management process practices during that time. In the first part, the company is introduced from the organizational structure point of view. There is an overview of the project management process standards in the firm. The project management process is demonstrated on two specific projects labeled as "small" and "large" project in terms of duration, project price and stakeholders involved. Personal interviews were conducted with managers, who were asked questions aimed at project management practices. The author has compiled a "project management checklist" which consists of recommended tasks in each phase of project management based on the literature. The checklists were also filled in by the managers. Project portfolio management is demonstrated on one specific team. The team leader has shared his practices for managing the project portfolio and the financial results of the team were used to analyze the performance of the team.

The author of the thesis was working in close cooperation with project managers from the firm. The financial data related to the profitability of the projects and the team have been multiplied by a constant and the names of the clients have been anonymized to avoid breach of confidential information.

3.1 Methodology

For the purpose of this thesis the most suitable methodology selected was a case study. It is a research strategy which is commonly used in organizational and management studies (Yin, R. K., 2014). An important step

in identifying which research strategy should be used is clear definition and understanding of the research question. According to Yin, case study is the most appropriate strategy when a “how” or “why” question is being asked about a contemporary set of events over which the investigator has little or no control.

Very commonly used technique in case study research is triangulation. It refers to a combination of several research methods being employed, such as interviews, surveys and observations, often at different levels of analysis (Rothbauer, P., 2008).

Several one-to-one interviews with project managers from the firm were conducted. The interviews were semi-standardized to allow for a more flexible approach through the use of open-ended questions (Ryan, Coughlan & Cronin, 2009). The author has prepared some questions in advance and the rest of the interviews were determined based on the managers' responses.

There are several risks and downfalls of case study strategies. If the researcher is rather unsystematic, the findings and conclusions might be biased. Another concern about case study research is that it does not provide generally applicable results (Yin, R. K., 2014). However, the main purpose of this thesis is to demonstrate theoretical principles of project management in a real-life context.

3.2 General information about the firm

The firm is a process and project based organization and the efficient way of managing projects within a portfolio structure is crucial.

The consulting department is one of four functional units of the company. The entire company is part of the superior corporation connecting the companies from 18 countries in Europe. This corporation is part of the global brand providing professional services in over 100 countries all over the world. There are over 1 000 professionals working for the Czech entity who are providing services in the area of audit, tax, legal advisory, financial advisory, management consulting and risk management.

3.2.1 Organizational structure

The organizational structure of the firm can be compared to the typical functional structure. There are four main functions that offer professional services and each of the functions have its own organizational structure.

- Audit
- Management Consulting
- Financial Advisory
- Tax and Legal

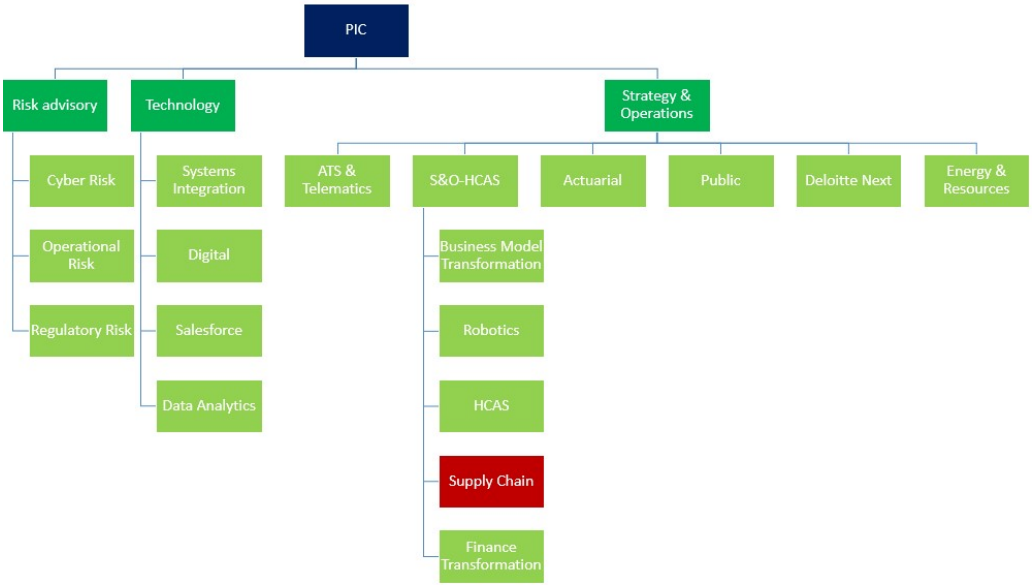
However, the firm does not share all the characters of the typical functional structure as some of its roles are common only for the Czech Republic and some are common for the superior organization. Each of the 18 member countries is represented by a country leader. Most of the C-level management positions are common for all the member countries.

The consulting department in the firm is structured based on the services provided to the client. Some of the teams are focused on a specific industry (such as Energy & Resources) but most of the teams are rather service-oriented which has become a common practice in the firm globally. The head of consulting is a Partner in Charge (PIC) who is also the business leader for consulting in the entire region. Each of the teams reports to one of the 8 consulting partners.

The structure was formed based on logical interdependencies in the scope of service offerings as well as previous experience. However, the teams are very integrated and there is a strong cooperation between them. In respond to the latest technological advances, requirements for innovation and automation all the teams are shifting their service offerings towards technology and the need for cooperation is even higher.

The members of the teams are further structured based on their career position. As was already mentioned there is always a partner responsible for the team. The partners are often responsible for more than just one team. The responsible team leaders are usually on the position of senior managers

Figure 4: Organizational structure of the consulting department



Source: Author's illustration (2019)

or directors and they report directly to the partners. Each of the positions in the career hierarchy has certain responsibilities and expectations which must be fulfilled in order to progress in the hierarchy.

Figure 5: Career hierarchy

Source: Author's illustration (2019)

3.3 KPIs in the firm and the P&L structure

The ultimate goal in the firm is GE (Global Earnings), which represents the net profit for the firm. All the teams as well as consulting as a whole get a GE target for a fiscal year which they are supposed to meet. This target is set up regionally based on earnings from previous years and other aspects. There are multiple KPIs which affect the GE and they are all being taken into consideration when managing the project portfolio of the team.

The main indicator of profitability in each team is Net Service Revenue (NSR). It represents the actual net income for the firm. It is calculated as follows:

$$NSR = Project\ price - Services - Materials/Subcontractors \quad (3)$$

The Project price is the amount paid by the client for the services. It should include any costs charged to the firm in relation to the relevant project. Based on the character of the project it can either be set at the beginning of the project as a fixed price or it can be charged to the client on a Time and Material basis.

The Services and Materials/Subcontractors items are additional costs incurred during the project. These usually include subcontractors' fees, hotels, travelling expenses, per diem, entertainment and other expenses.

The Gross Service Revenue (GSR) is the amount of time charged to each engagement, multiplied by standard rates per hour per staff level. The standard rates are determined by leadership for the entire region.

$$GSR = hours\ charged\ per\ position \times Standard\ rate\ per\ position \quad (4)$$

The Recovery rate, or Realization, is the percentage rate that is determined by planned GSR and NSR of the project. This rate is used for NSR recognition during the entire life of the project. This rate should be regularly updated to reflect any tangible changes.

$$Recovery = \frac{NSR}{GSR} \quad (5)$$

Provisions is the amount of adjustments that reduces GSR to NSR each month.

Figure 6: The P&L statement structure of any team

Source: Author's illustration based on the information provided by controlling (2019)

The value Work in Progress (WIP) expresses the work that has already been done on the project (charged hours and costs) but has not been billed to the client yet. It has to be managed by the responsible project manager to avoid significant amounts. The Finance department checks the WIP amount regularly. Negative WIP means that the client has been billed work that has not been performed yet.

$$WIP = NSR\ Recognized + Services + Materials - Bills \tag{6}$$

Cost of Quality (CoQ) is a new measure implemented by Quality & Risk and it occurs when actual Recovery is lower than originally planned recovery.

$$CoQ = GSR \times (Planned\ Recovery - Actual\ Recovery) \tag{7}$$

Another KPI that is more related to resources allocation rather than financial performance is utilization. It is expressed in percentages and it represents the ratio of hours an employee is working on engagements billable to the client. Currently the target utilization is set at 65 %.

$$Utilization = \frac{Charged\ billable\ hours}{Total\ charged\ hours} \tag{8}$$

Although utilization is related to employees rather than finance, it affects the financial performance. The number of hours that employees charge together with recovery determine the NSR of the teams. It is the responsibility of the project manager to look after the project price, project costs, NSR, Recovery and WIP.

Another important term in financial management of projects is revenue sharing. Many engagements involve cooperation across teams and even functions. Revenue sharing is a system which distributes NSR from engagements among P&L of the multiple teams working on the engagement. There are three ways to set up revenue sharing:

- Default Inter-office rated
- Negotiated Percentage rates
- Slave codes

The default Inter-office rates are different across functions and they can lead to discrepancies in the revenue sharing. The project managers are usually advised to establish the negotiated percentage rate for revenue recognition of employees from other teams. The negotiated rate should not exceed the recovery rate on the entire project to avoid undesirable outflow of NSR to other teams and loosing profit of the leading team.

3.4 Project management process in the firm & the QRM system

The firm is project oriented and efficient project management is essential. The person responsible for project management is usually an employee at position of manager or senior manager. Some other important roles can be involved in the project management and their roles depend on different characteristics of the project. There is a prescribed workflow for a project management which should be followed from the initial phases to closing of the project.

The firm follows strict Quality & Risk management (QRM) policies that are in compliance with ISO certificates of quality. The main purpose of the

QRM system is to meet both the specified requirements of the clients and the business objectives in a consistent, economical and reliable manner.

Projects at the firm are called engagements. The process is managed in SAP based system called O2E (Opportunity To Engagement). Each of the engagements is associated with a unique code that serve as an identification.

At the opportunity stage of the project, the project manager or another team member identifies a potential opportunity and starts negotiating with the client. The project team starts working on a proposal. In some cases there are QRM processes that must be fulfilled already before submitting the proposal. If the project is won, the manager in cooperation with legal department prepares the contract.

When the contract is signed from the client as well as representative from the firm, the unique engagement code is created and the project shifts to the engagement delivery phase. This phase involves the project execution by the project team and it can last from few days to years. The delivery phase should involve sufficient communication with the stakeholders. The project manager is responsible for preparing project deliverables.

After the official finalization with the client, the project shifts to the engagement closure phase. It is required to obtain a client feedback or a reference letter and to gather all the tangible deliverables in the system.

3.5 Financial management of projects in the firm

A very important part of project management is managing the finances. It is a responsibility of the project manager to look after the project finances over the entire duration of the project. Financial management consists of many tasks that are part of the project management process.

During the opportunity stage, the project manager must prepare initial budget. The budget is created in a single template and it requires input of the total price billed to the client, expected duration of the project, hours charged on the engagement for each employee involved and expected costs on the project (i.e. travelling expenses, subcontractors' fees). The budget

creation should be consulted with finance departments especially in case of complex engagements. Sufficient amount of hours must be allocated to the project team members and also for quality assurance roles on the project. If the budget is not set up well, it can have negative impact on the P&L of the team.

The engagement delivery stage is accompanied by regular financial checks. Every time any tangible change occurs, the project budget should be updated. Another responsibility of project managers is to create NSR forecast for future months. This requirement comes primarily for the purpose of tracking the set targets by leadership and it is also useful for efficient management of the project portfolio.

When the deliverables are submitted to the client, project manager issues the invoice and together with finance department checks the payments. There might be some financial adjustments necessary before the project closure. If the project involves cooperation of multiple teams, the financial results can be adjusted by manual NSR transfers to ensure fair distribution of profit between the teams.

There are some risks in the financial management that the project managers should be aware of. They can be mitigated by setting the budget correctly and cooperating with the finance department. One of the risks comes with the previously mentioned revenue sharing between teams. If the budget is not set up well, a team can lose significant part of its profit to another. An additional risk is associated with the billing to the client. The amount billed should be equal to the WIP amount. If the invoices are issued after long time period, it becomes more difficult to control the costs and charged hours. Unexpected changes and deviations can result in undesirable write offs.

3.6 Management of a small project

The first project that was analyzed for the demonstration of project management aspects was a project executed by the Supply Chain team. The

project can be defined as a small scale project in comparison to other projects that the firm does. It was small in terms of fees, project team capacity as well as duration.

The client was a Czech manufacturer from a food processing industry who has requested a review of current processes in the firm. The main scope of the project was an evaluation of all key business functions (procurement, production, maintenance, logistics, planning etc.), identification of potential cost savings and opportunities for process improvements with qualitative rating of required effort and impact. The secondary objective of the project was to assess the necessity to build a new warehouse based on current capacities. The duration of the project was three weeks and the fee was set fixed at the amount of 9 146 EUR.

According to the project manager, the project management process was reduced from five phases to three due to the short duration of the project. The main tasks were from the process groups of planning, execution and closing. The key to a successful project delivery was thorough planning. The scope of the project was rather extensive and the duration of three weeks was challenging, so there was no room for mistakes or delays. The initiation phase was omitted and the project charter was not created. The project documentation was also reduced.

The project team from the organization consisted of the project manager, SME (Subject Matter Expert) and a junior team member to support the project in ad hoc matters. There was no dedicated person for quality assurance, only the team leader was guaranteeing the high quality of delivery. The project manager was in close cooperation with the SME throughout the project and the current status and potential deviations from the plan were discussed on a daily basis. The risk assessment was executed on a very high level basis, which is required by the Consulting firm's policies in order to protect the brand reputation and avoid potential conflicts of interest. There is a support team in the Consulting firm dedicated to conducting all the necessary risk procedures before the contract is signed.

The project budget was set up during the planning phase. The price negotiated for the project was a compromise between the client's willingness to invest and the revenue expectations of the consulting firm. The input for the budget was an estimation of working hours needed for the defined scope of the project and the agreed price. The goal was to create a budget with realistic estimations for scheduled hours and costs that would be resistent to small deviations from the planned working hours. A common practice is to target a recovery rate around 21 %.

Due to the short duration of the project and the strict schedule, the communication with the client was quite frequent. The key stakeholder from the client's side was the head of the division but the project team was in cooperation with head of each department. There was a status meeting every week in order to align on what has been acomplished so far and what should be the next steps. The frequent contact with the client allowed for slight scope adjustments according to the client's feedback and prioritization.

The deliverable of the project was an assessment of the current state. It was very high-level evaluation of the processes, some opportunities for improvements were identified such as automation or removal of duplicities. The evaluation of risks related to the implementation of improvements was not part of the scope. Based on the warehouse analysis the project team concluded that the construction of new warehouse was not necessary. One of the expectations of the project team was a follow-up project with implementation of the suggested solutions. However, the client has decided to proceed only with help of internal resources.

3.7 Management of a large project

The second project that was selected for a detailed analysis was led by the team focused on Robotic Process Automation (RPA). The client was a large bank with intention to automate 15 back office processes. It was the first RPA experience for the bank and it meant an introduction of the technology to the organization. Beside the automation of the processes, part of the

scope was also training the client, creating a competency center and setting up governance over the robots.

The project was originally scheduled from June until December, however, it was extended until March of the following year. Key stakeholders from the consulting company were the project manager as the responsible person and partner as the accountable person (according to the RACI matrix). Other stakeholders, such as the project team members, carried either consulted or informed roles. The project team was divided into two main streams, one devoted to the development, the other devoted to the analysis and documentation. Each of the streams was led by one person who was reporting to the project manager.

The project was initiated by a kick-off meeting with the client. Detailed project scope was introduced as well as the expected timeline and the suggested project team. The project charter was created and it consisted of five parts:

- Introduction of the robotics team
- Organizational issues including the definition of project management, regular meetings, steering comittee meetings
- Project plan and timeline
- Necessary contacts
- Definition of roles and responsibilities including the project manager role, SME role, infrastructure

The project manager participated in regular meetings with the client once per week. Steering comittee meetings, where the partner also participated, were held approximately every two to three weeks. The rest of the project team was meeting according to their needs based on the processes they were currently working on.

Risk mitigation plan was created prior to the official project start. There were several necessary risk procedures arising from the internal policies of the consulting firm. The project team also required meeting with the IT security

team and compliance team from the client's side, however, the client decided to leave this part out of the scope claiming that it was unnecessary. Later on, when the first process was being deployed, it turned out that other roles and internal processes were involved. As a result, comprehensive risk analysis including action plan had to be worked out additionally in a shortened time period in order to avoid conflict.

The consulting firm's policies require an independent person of sufficient seniority to provide quality assurance on certain projects.The person assigned to the project as a quality assurance reviewer was a senior manager from another team. His main responsibilities were to control the timing of the project, participate on the steering comittee meetings, supervise the compliance with best practices, control reports etc. The senior manager has a wide experience with change management projects and his knowledge was very useful for negotiations with the compliance team when problems occured.

The financial management of the project required much more dedication compared to the smaller project. There were many changes and deviations from the initial plan and only about 20 % of the original plan was fulfilled. The duration of the project had to be extended by four months due to big change in scope of one of the processes. The analysis had to be multiple times more extensive than was first anticipated and thus the number of man days needed for its accomplishment increased by approximately 300. The person responsible for the process analysis part of the project was not supervising carefully enough and the team members were charging more hours on the project than the initial budget involved. This has led to the project extension by additional 4 months and the project price had to be renegotiated and increased by 30 % in order to reach the desired profitability. The overall project profitability has decreased anyway almost by 10 percent due to this significant change in scope.

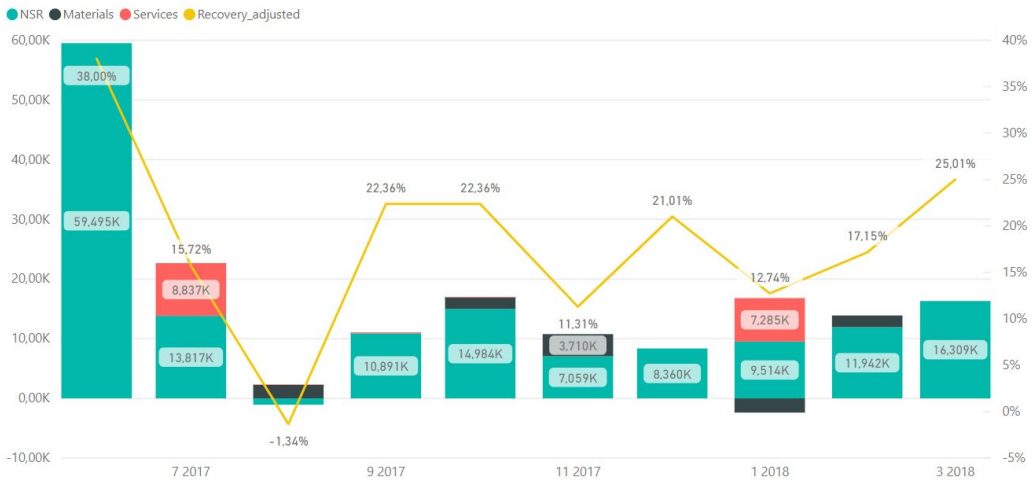
The project team consisted of members from three different teams within the Consulting department. Each of the teams has a separate P&L and the

revenue sharing between the teams was set at 30 % of the standard rate in order to maintain fair split of revenue between the teams.

Another complication in the financial management arised from the participation of a subcontractor on the project in the period between October 2017 and February 2018. As opposed to regular employees of the firm who charge hours on the project and generate NSR, the subcontractor submits an invoice which occurs as an expense on the project budget. The only way how to efficiently control the work of the subcontractor is to track the performance in a separate Excel sheet.

Some issues can arise from the client and his project team. The work was scheduled precisely for each of the processes. At some points, the client was not able to provide the necessary documentation on time and the project team had to postpone the planned work. In order to prevent unoccupied team members and delays in delivery, change requests had to be negotiated.

Figure 7: Project financials with responsive recovery rate

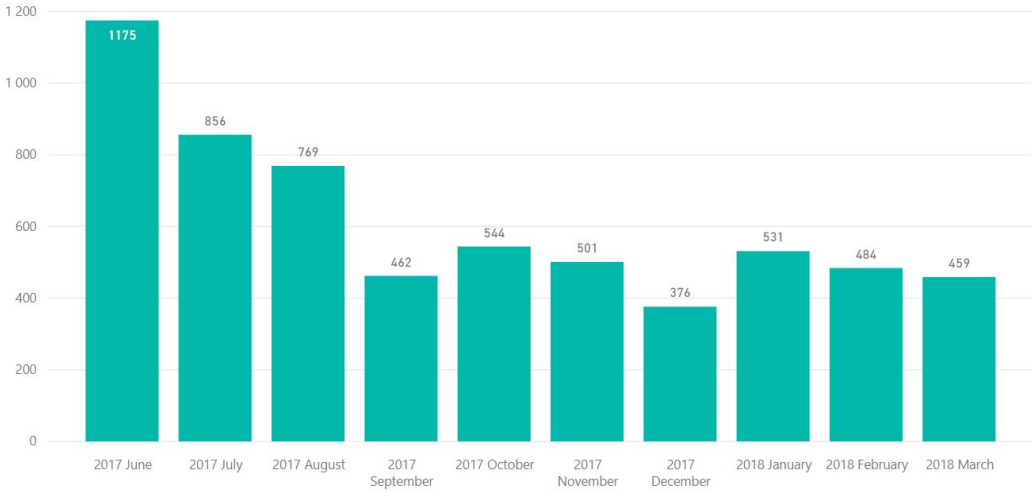


Source: Author's visualization of financial data (2019)

Different aspects of financial management can be analysed by comparing monthly NSR inflow and project costs with the recovery rate, which basically expresses the profitability. NSR is a result of hours charged on the project, Materials reflect the subcontractor invoices and Services are any additional

costs on the project, such as travelling or representational expenses. Figure 7 displays the development of the total recovery on the project. It has started at the level of 38 % and ended up at 25 %. The month of August has generated negative NSR which is reflected by the significant drop of recovery rate below zero. The subcontractor's invoices were issued in August, October, November, December and February.

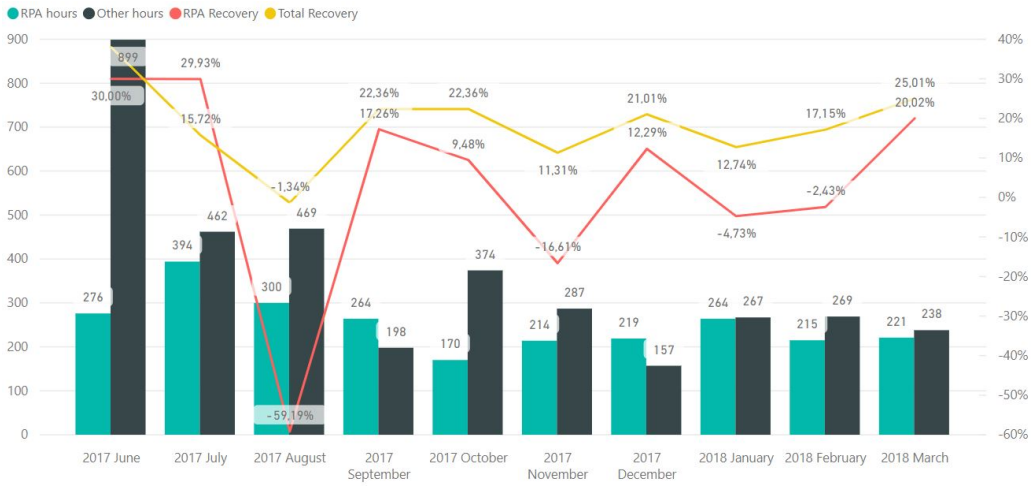
Figure 8: Hours charged on the project



Source: Author's visualization of financial data (2019)

Figure 8 displays the distribution of the charged hours by all team members on the project over its entire duration. Majority of work was performed in the first three months.

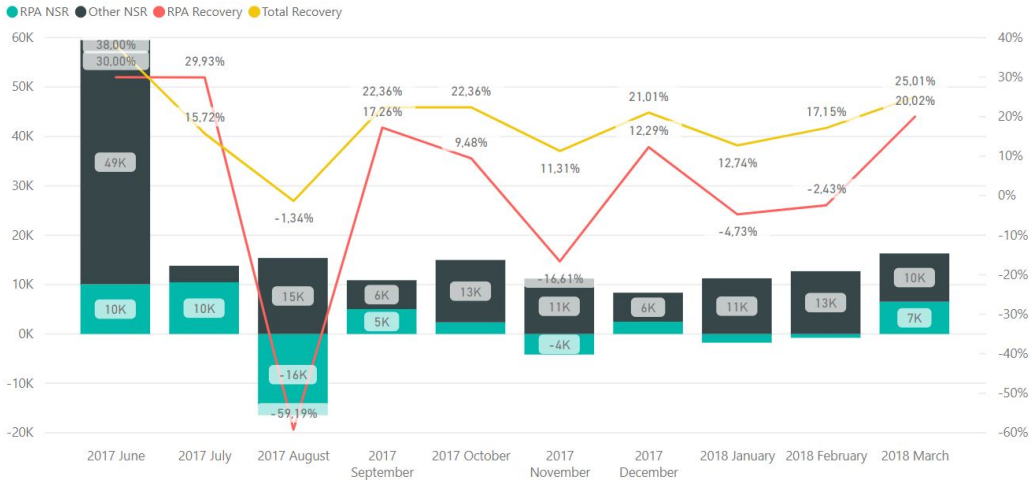
Figure 9: Hours charged on the project with responsive recovery rate



Source: Author's visualization of financial data (2019)r

Figure 9 displays the hours charged on the project split into two groups: one of them being the hours charged by members of the leading RPA team and the second as charged hours by the members from other team. The red and yellow line represent the recovery rate for the RPA team and for the entire project, respectively.

Figure 10: NSR generated by teams with responsive recovery rate



Source: Author's visualization of financial data (2019)

Figure 10 displays NSR inflow for the RPA team and for other teams for each month. The red and yellow line represent recovery rate for the RPA team and for the entire project, respectively. There is a clear correlation between these variables. The months that generated negative NSR inflow resulted in negative recovery. The RPA team as the leading team on the project has suffered from the fixed negotiated recovery rate being set at 30 %. When the other teams charged more hours on the project than was anticipated, the profitability of the leading team has gone down. During the month of August 2017, the recovery rate for RPA decreased to nearly -60 %. The team members were charging hours on the project according to their performed work and the amount of hours was higher compared to the plan. Employees from outside the RPA team were generating NSR for their teams in a rate of 30 % of their standard rates and the amount paid to subcontractor for his work has further decreased the revenue durign that month. These two aspects have resulted in negative NSR for the RPA team. The recovery rate has risen back above zero in the following months. However, it has never returned to its initial level of nearly 40 %.

The charts above clearly identify the relationship between charged hours, project costs, NSR and recovery rate. There are many risks in managing a large project, especially if more teams with separate P&L statements are involved. It also stresses out the importance of thorough planning and continuous controlling over the project life-cycle.

3.8 Supply Chain Team Project Portfolio

The Supply Chain team is part of the Strategy & Operations team and cooperates with other teams across the entire consulting department. There are four key service offerings that the team is focused on:

- Supplier risk mitigation - Projects focused on crisis management for client supplier management to minimize the risks associated with late delivery of products or the delivery of poor quality products.
- Supply Chain & technology projects - The team deals with supply chain

challenges complemented with data analytics and hardware technologies. Primary topics are optimization in the area of purchase processes, production, maintenance, warehousing or logistics.

- Deals - Projects offering support in every phase from pre-deal to po post-deals and sales. The main topics are operational due diligence, post-merger integration and carve outs.
- Technological solutions implementation - The team members provide support for implementation of technological systems from the perspective of functional or business roles.

The typical clients are manufacturing firms, retailers, engineering companies, pharmaceutical companies or oil & gas companies.

The team consists of 12 members of different seniority. The team leader is also in charge of the project portfolio and overall team finances. The governance of the team has changed significantly in the recent years due to the multiple increase in the number of members.

3.8.1 Portfolio structure

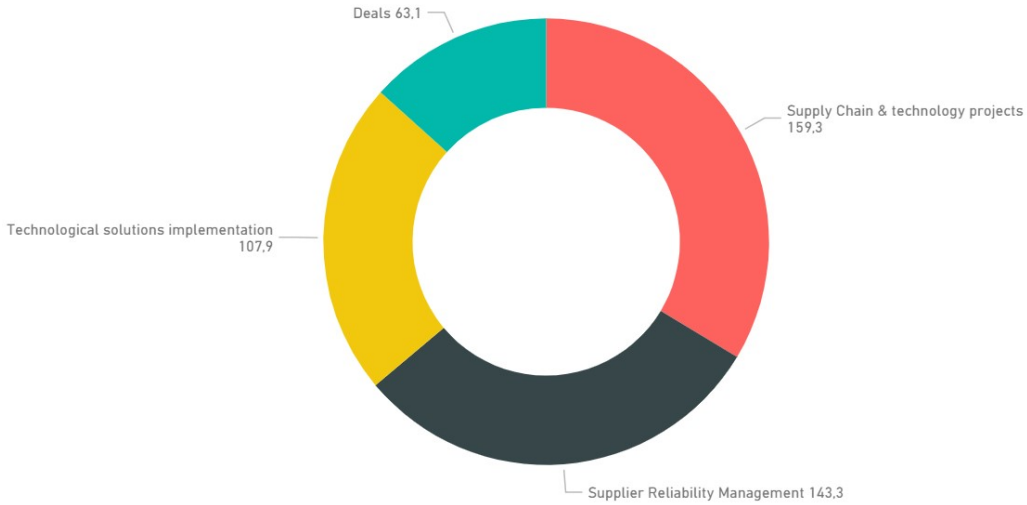
Each of the teams in the firm has a slightly different strategy for selecting projects, allocating and controlling resources over the projects and maximizing profitability. However, the main goals of the teams are more or less the same.

Previously there was not any systematic approach for managing the project portfolio. The team leader was controlling the project portfolio in Excel and new project opportunities and leads were held in a web based application. The team has recently adopted a new tool for the visualization and dashboarding of portfolio performance. The software used for managing the portfolio is called Power BI from Microsoft. It is a business analytics service that transforms data into organized and attractive charts, diagrams and other visuals. It creates user friendly environment for exploring and analyzing data within the team.

The author of the thesis has cooperated with another team member on gathering the source data for the software and creating the dashboards. The baseline data about the financial results was taken from monthly reports that are created and distributed by financial department in the firm. It involves the P&L of the team on monthly basis, hours charged by team members on individual projects in given months and the overview of the utilization of the team members. The data related to the forecasted projects were gathered directly from the team leader.

The project portfolio of the team consists of projects owned and managed directly by the team members and projects managed by other teams on which some of the team members participate. When the team "borrows" some of its members to other teams, it loses some of the profit due to the margin, i.e. if the recovery rate on the project is at the level of 30 % and the revenue sharing is fixed at 21 %, the margin creates 9 % of the standard rate. It is therefore the goal of the team to get as many own projects as possible to maximize the profitability.

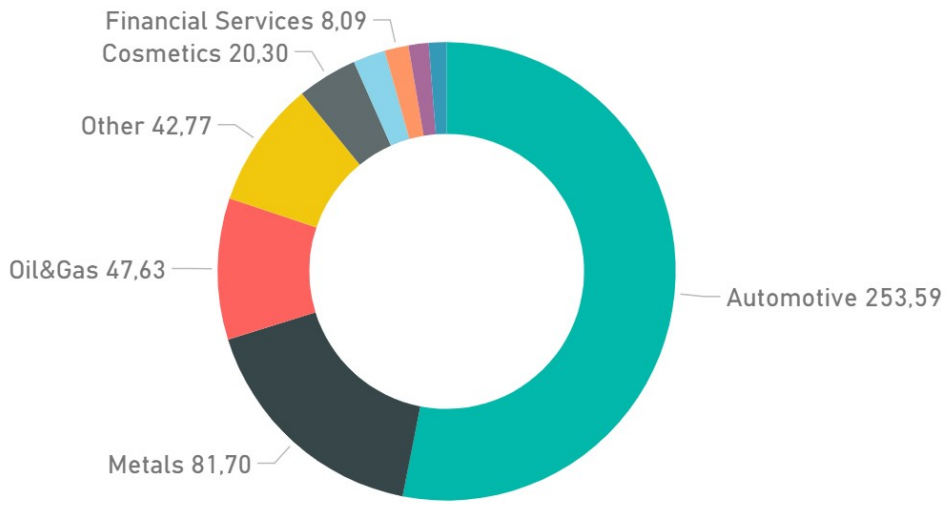
Figure 11: Volume of NSR by Category



Source: Author's visualization of the portfolio related data (2019)

Figure 11 displays the distribution of NSR based on the service category as defined in the previous chapter. by The highest proportion of projects are in the category of Supply Chain & Technology projects (33,63 %). However, this proportion is expected to change in favor the category Technological solutions implementation in the near future. Most of the team members are undergoing learnings for different softwares and technological solutions, such as SAP S/4 Hana, Anaplan or LLamasoft.

Figure 12: Volume of NSR by Industry



Source: Author's visualization of the portfolio related data (2019)

Figure 12 displays the proportion of NSR by the industries the client operates in. The main industry Supply chain team provides services to is automotive. The projects for automobile manufacturers and vehicle parts manufacturers generated almost 250 thousands EUR of profit, which is more than a half of the total cumulated NSR. The client that has generated the highest NSR in the fiscal year is a large manufacturer of sports cars.

3.8.2 Financial management of the project portfolio

At the beginning of a new fiscal year, which lasts from the beginning of June to the end of May of the following year, GE and NSR targets for

the teams are determined and set up. These targets are set based on the financial results from previous years and expected changes. The Strategy & Operations team is superior to the Supply Chain team and the target is determined for the entire S&O group. The partner responsible for all S&O sub teams decides on the distribution between individual teams. The targets for Supply Chain team in fiscal year 2019 (FY19) were set as following:

$$NSR = 731,25k\ EUR \tag{9}$$

$$GE = 112,56k\ EUR \tag{10}$$

When the team leaders track the status of target fulfillment, he looks at the results from previous months. This data from the P&L statement of the team is an exact and unchangeable result.

The costs that appear on the P&L statement of the team can be divided into three groups:

- Staff Costs including regular employee wages, employer contribution to the health and social insurance, benefits and bonuses
- Allocated Costs including expenses for computers, rent of the building and fees dedicated to the global company
- Other Costs including the contribution to the marketing expenses of the firm, business development, trainings and other.

Figure 13: Team costs by month

Source: Author's visualization of the financial data (2019)

Figure 13 displays the proportion of the costs for the months from May 2018 onwards. The monthly data until January 2019 are actual costs charged to the team, the data from February onwards are forecasted costs estimated by the team leader.

Table 1: NSR to GE ratio

	NSR	**GE**	**Ratio**
Supply Chain	473 545	73 832	15,59%
CNS	16 089 389	2 936 702	18,25%

Direct and allocated costs decrease the NSR and have an impact on GE. One of the profitability indicators is a ration of GE to NSR. It expresses the fraction of revenues recognized after reduction of all the team costs. Table 1 shows that the Supply Chain team has slightly lower profitability compared to the results of the entire company. The costs of the team are higher in proportion to its revenues.

An important part of the portfolio management is to forecast upcoming months. The most efficient way of forecasting is by estimating the number

of hours needed for each project, multiplying it by the standard rate per position and the recovery rate of the projects. The project opportunities should be added to the forecasts as well. Project managers are obliged to submit NSR forecast for all the projects they are in charge of each month. The main aim is to track the performance and deviations from the set target. There is a certain seasonality in the consulting business and some months are characteristic with less workload and lower amount of projects in the pipeline. The weakest months in terms of new project work are usually July, August and December due to summer holidays and Christmas. The team leader's goal is to smooth down the peaks and lows over the fiscal year.

The expected NSR inflow for the upcoming months can never be estimated with complete accuracy. Some of the projects that will generate positive NSR are already won and the billed price is distributed between the months of the planned project delivery. Other projects are at the opportunity stage and the profit is uncertain. These projects are added to the forecast for upcoming months and the expected revenue is multiplied by percentage chance of a success.

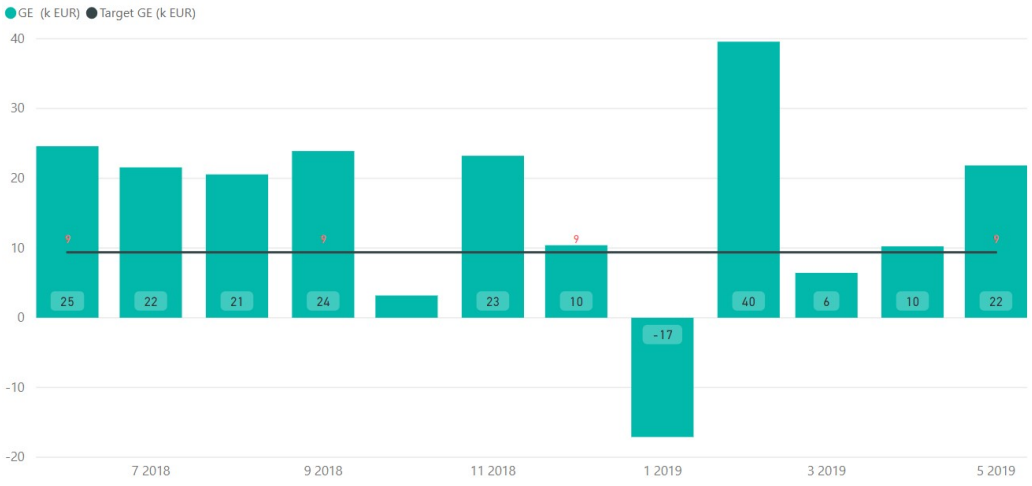
Figure 14: NSR vs. NSR target by month

Source: Author's visualization of the financial data (2019)

Figure 14 displays the NSR results from the past months and the fore-

casted values until the end of FY19. The dark green columns display NSR forecast for projects that are already won and therefore the revenue for the team can be guaranteed. The pink columns display the estimated revenue from projects that are currently at opportunity stage and the forecasted amounts are the expected monthly revenue multiplied by the percentage chance of a success. The yellow line shows the monthly NSR target, which is a constant value of approximately 61k EUR. As we can see, October 2018 and January 2019 were the least successful months over the fiscal year and the monthly NSR result was way below the target.

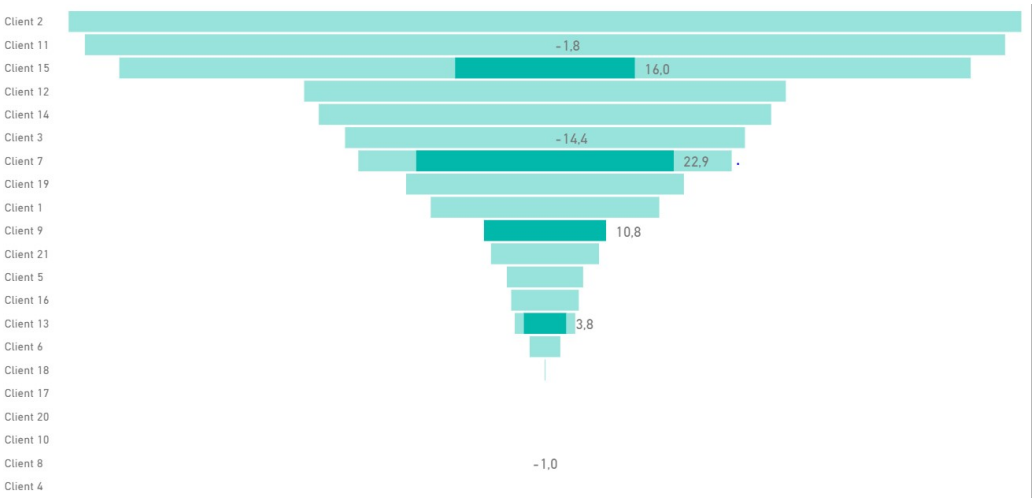
Figure 15: GE vs. GE target by month



Source: Author's visualization of the financial data (2019)

Figure 15 displays the GE results with respect to the target, which is a constant value of approximately 9,4k EUR. Most of the past months generated GE above the target, October 2018 resulted in approximately one third of the target and January 2019 generated negative GE, which means that the costs of the team were higher than its profits.

Figure 16: January 2019 NSR by client



Source: Author's visualization of the financial data (2019)

After further investigation, it turns out that Client 15 and Client 3 generated negative NSR in January 2019 as Figure 16 shows. Negative values in NSR occur when the invoice is not paid by the client within certain time. The billed amount becomes an accrual and it generates negative NSR. However, the invoice was paid in the month of February and the positive value will appear on the P&L statement for the following month. Therefore lower NSR and GE values do not imply unsuccessful month.

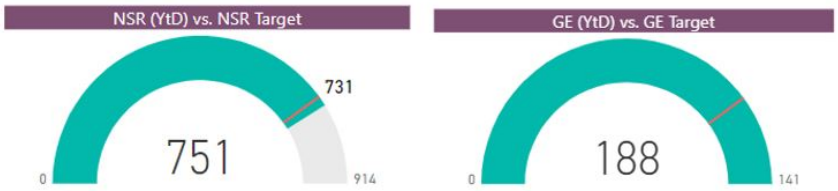
The estimation of projects that are at opportunity stage can be very challenging. Sometimes even projects that are thought to have 90 % chance of success can end up with rejection from the client's side. Client also often postpones the project start due to internal processes. This causes deviations from the forecasts and complications for planning and allocation of resources.

Although the above shown charts provide useful information about the financial results in individual months, it is not obvious how the team is performing with respect to the yearly target.

One of the big challenges for the team leader is fair revenue sharing with other teams. Almost a half of the team members works on projects led by other teams with separate P&L. This implies lower revenue for the Supply

Chain team as the NSR inflow is in a fixed proportion of the standard revenue and the leading team usually gains a margin equal to the difference between project recovery and the negotiated rate.

Figure 17: NSR and GE (YtD) vs. NSR and GE target



Source: Author's visualization of the financial data (2019)

Figure 17 proves that despite the two weaker months, the team is already above the yearly target.

3.8.3 Selecting new projects for the pipeline

New project opportunities can arise from various sources. One of them is a direct approach from the client. Sometimes the client has previous experience with the team or another team within the company, in another cases the client simply issues an RFP (request for proposal) and addresses several companies. The team is also making an effort to reach out to the clients by so called "cold calls" and targetted promotion. The company being an international corporation provides a significant advantage for the project opportunities. The team cooperates on some projects with member firms from other countries all over the world.

The team meets every second week to discuss the current projects and opportunities. This is an efficient way of keeping all the team members in the loop of the current happening. The team leader reports directly to the partner of the S&O group about monthly results and fulfillment of targets.

The goal of the team leader for the upcoming fiscal year is to target overall stabilization. Part of the portfolio should be made of long term,

stable projects to ensure coverage of fixed costs. These long term projects are usually characteristic with lower profitability but serve as a security and create solid base of the project portfolio. The rest of the portfolio can be devoted to projects that are less certain but generate higher profit, create reference for future opportunities or projects that offer potential for further engagement with the client.

3.8.4 Suggested matrix for project selection

There are several criteria that are being considered during project selection for the portfolio. The team is currently in a situation when most of the project opportunities is being utilized and the amount of won projects does not overfill the project portfolio. However, a simple tool or metrics for selecting and evaluating project opportunities might be useful in the future when the team is more established. Based on the interviews with the team leader and observations, the author has created a matrix for evaluation of the project portfolio and potential projects. The following criteria were set as the major ones for project selection:

- What is the profitability?
- How many resources are available?
- What is the duration of the project?
- Is the project aligned with the strategy?
- Is there a potential for further business with the client?
- Is the project a good reference for future projects?

The total number of available resources at the moment is 14. Each of the projects requires a certain amount of resources. This amount is expressed as the number of full time equivalents (FTEs). However, the team can "borrow" resources from other teams within the consulting department. During the project selection process, availability of resources is a very important variable. All the other criteria is assigned with rating from 1 to 5. Even

if the opportunity has low ranking in the rest of the criteria, it should be considered for the portfolio as it can provide coverage for the fixed costs for the team.

C1: Profitability criteria assings rating 5 for the highest profitability

C2: Duration criteria assings rating 5 for long duration projects

C3: Strategic alignment criteria assings rating 5 for projects that are fully aligned with the strategy

C4: Potential for further business criteria assigns rating 5 if the project is very likely to open opportunities for future projects yielding high revenues in the future

C5: Good reference criteria assigns rating 5 if the project is a proof of concept or if it is very beneficial as a reference for future projects

The projects and opportunities can be categorized based on the type of offering. The column Category assigns S1 to projects in the topics of Supplier risk mitigation, S2 to Supply Chain & technology projects, S3 to Deals related projects and S4 to Technological solutions implementation projects.

Table 2: Evaluation of projects in the portfolio

Project	**FTEs**	**Category**	**C1**	**C2**	**C3**	**C4**	**C5**	**Evaluation**
Project 1	2	S2	4	4	4	4	4	**4**
Project 2	1	S3	5	3	3	5	3	**3,8**
Project 3	1	S3	2	4	3	4	3	**3,2**
Project 4	2	S2	4	4	3	4	3	**3,6**
Project 5	0,5	S2	3	5	2	4	3	**3,4**
Project 6	1	S2	3	2	2	4	3	**2,8**
Total	7,5		3,5	3,7	2,8	4,2	3,2	**3,5**

Table 2 displays suggested matrix for evaulation of current projects in the portfolio and project opportunities in the pipeline. The total evaluation of the project or project opportunity is an average of the five criteria.

Table 3: Evaluation of opportunities in the pipeline

Opportunity	**FTEs**	**Category**	**C1**	**C2**	**C3**	**C4**	**C5**	**Evaluation**
Opp 1	1	S2	2	2	4	2	4	**2,8**
Opp 2	1,5	S2	3	3	4	3	3	**3,2**
Opp 3	2	S4	2	5	5	5	5	**4,4**
Opp 4	1	S2	3	2	4	2	2	**2,6**
Total	5,5		2,5	3	4,25	3	3,5	**3,25**

The same approach has been used for opportunities in Table 3. Clearly opportunity 3 has the highest ranking and it should be given the highest priority. The opportunity with the lowest ranking is the fourth one. In case of overfilled portfolio and unavailability of resources, this opportunity should be given the lowest priority.

Conclusion

The thesis aims to describe standard practices of project management and portfolio project management. These practices are demonstrated in a form of a case study. Since the company that has been analyzed is project-oriented, efficient management of projects is crucial for its operations. The internal processes and project management practices in the company were compared to the literature and different approaches.

The in-depth analysis has uncovered several flaws in the project management processes and deviations from the literature. These flaws can be caused by lack of time, pressure from the leadership to deliver better results, low level of experience with project management or overall laxity. As a result, projects suffer from poor quality, late delivery, unsatisfied stakeholders and loss of revenue.

The project management processes in the firm are generally set up well. Communication with stakeholders is usually efficiently managed. Frequent meetings and status updates with the client allow for management of client's expectations and timely negotiations of changes in the project scope. There is a big difference in project management processes for small and large projects. Large projects require more thorough planning and controlling.

The interviews with project managers in the firm have uncovered the fact that projects are often initiated and planned in a very short time period and thus these two phases lack sufficient dedication. Project budgets are often set too optimistically and projects then need to be extended or delivered under time pressure. There is also low awareness of potential risks. Risk mitigation plans are often done vaguely or completely omitted and if a problem occurs, project teams might face unexpected constraints. Managers are obliged to comply with internal risk policies. However, the prescribed risk processes are very high-level. There are other potential risks which should be assessed before the project start.

Financial management of projects in the firm is very complex. Although all project managers must undergo a mandatory training, some of them still

struggle with the preparation of budgets, financial controlling and overall understanding of the financial processes. Project cooperation of different teams with separate P&Ls carries the risk of unfair revenue distribution. Correctly set up budget can be a preventive measure. Project managers should realistically estimate the amount of hours needed for the accomplishment of the project during the initiation and planning. The charged hours should be regularly checked and if necessary, the budget should be modified. The frequency of necessary controls varies for every project. General recommendation is at least once per week.

Furthermore, overall unbalance and inaccuracy of the KPIs was discovered. The main factors of project and portfolio success are values related to the profitability. Project managers are mostly focused on maximizing the recovery rate and NSR inflow. However, these two indicators are affected by several other variables and their value does not always precisely reflect the project and project portfolio performance. The inaccuracy was confirmed by the detailed analysis of project finances and portfolio performance. Some KPIs in the firm are often neglected, such as utilization or cost of quality. Some important quantitative and qualitative variables are not reflected by any KPI in the firm. The finding of inefficient KPI set up has been consulted with the leadership and controlling department. The author will cooperate with a senior coordinator from the firm on re-evaluation of the current KPIs and new KPI set up allowing for benchmarking.

Management of a project portfolio requires dedication and consciousness of all the variables with impact on portfolio performance. Project portfolio in such large organization must be well balanced and managed. Portfolio managers should evaluate and prioritize during the process of a project selection. One of the findings during the analysis of the company was the fact that most of the managers give the highest priority to the profitability of the project. They calculate the revenue inflow for the team and the recovery rate. However, managers often neglect the other important criteria, such as strategic alignment, potential conflicts and risks or availability of resources.

There are several consequences of an unbalanced portfolio that the firm experiences. One of them is the fact that some team members are burdened with excessive workload during busy time periods and other team members are unutilized during quiet periods.

There are several criteria that should be evaluated when selecting new project. One of them is certainly the recovery rate, which can be expressed as the ratio of the recognized revenue to the gross revenue. Another criteria is alignment with the business strategy. Project managers should also be aware of the amount of team members available at the point. If most of the team members are already assigned on running projects, only opportunities with higher profitability should be accepted. In the times of resource abundance, the team can consider projects with lower profitability. Despite the lower revenue, these projects can provide occupancy to the team members and cover a fraction of the costs. The author has suggested an evaluation matrix comprising five qualitative and quantitative criteria that should be considered by the portfolio managers.

The literature review and case study of the organization proves the importance of a structured approach for project management. Project managers are facing challenges in many areas and their responsibilities require competency, ability to work under pressure, empathy, attention to detail and many other qualities.

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Appendix A: RACI matrix

RACI matrix

Source: Saurabh Tandon, LinkedIn (2015)

Appendix B: Project management checklist

Project management checklist was conducted by the author based on the available literature. The checklist was filled in by project managers both on small and large projects. The project managers were asked to indicate which of the tasks they completed during the project.

Legend:

P = Performed

PP = Partially performed

NP = Not performed

NA = Not applicable

Project management checklist for a small project

Process group	**Task**	**Status**
Initiation	Develop project charter	P
Initiation	Identify key stakeholders	P
Planning	Define scope & Plan scope management	P
Planning	Identify & Plan resource management	P
Planning	Create project schedule	PP
Planning	Estimate costs & Create budget	P
Planning	Plan Quality Management	PP
Planning	Plan Communications Management	NA
Planning	Create Risk Management Plan	NP
Planning	Plan Procurement Management	NA
Planning	Create Stakeholder Management plan	PP
Executing	Direct and Manage Project Work - follow project schedule	PP
Executing	Manage Quality	P
Executing	Acquire Resources	NA
Executing	Manage Team	NA
Executing	Manage Communications	P
Executing	Implement Risk Responses	NA
Executing	Conduct Procurements	NA
Executing	Manage Stakeholder Engagement	P
Controlling	Report project status	P
Controlling	Perform needed change control activities	NA
Controlling	Control scope	P
Controlling	Control Schedule	PP
Controlling	Control Costs & project expenses	NP
Controlling	Control Quality	P
Controlling	Control Resources	P
Controlling	Monitor Communications	P
Controlling	Monitor Risks	PP
Controlling	Control Procurements	NA
Controlling	Monitor Stakeholder Engagement	P
Closing	Gather deliverables	P
Closing	Collect final invoices	P
Closing	Finalize budgeted & Actual costs	P
Closing	Evaluate team	P
Closing	Conduct lessons learned	P
Closing	Gather client feedback	P
Closing	Administrative closing process	P

Project management checklist for large project

Process group	**Task**	**Status**
Initiation	Develop project charter	P
Initiation	Identify key stakeholders	P
Planning	Define scope & Plan scope management	P
Planning	Identify & Plan resource management	P
Planning	Create project schedule	P
Planning	Estimate costs & Create budget	P
Planning	Plan Quality Management	PP
Planning	Plan Communications Management	NP
Planning	Create Risk Management Plan	NP
Planning	Plan Procurement Management	NP
Planning	Create Stakeholder Management plan	NP
Executing	Direct and Manage Project Work - follow project schedule	P
Executing	Manage Quality	PP
Executing	Acquire Resources	PP
Executing	Manage Team	P
Executing	Manage Communications	P
Executing	Implement Risk Responses	NP
Executing	Conduct Procurements	PP
Executing	Manage Stakeholder Engagement	P
Controlling	Report project status	P
Controlling	Perform needed change control activities	P
Controlling	Control scope	P
Controlling	Control Schedule	P
Controlling	Control Costs & project expenses	P
Controlling	Control Quality	PP
Controlling	Control Resources	P
Controlling	Monitor Communications	P
Controlling	Monitor Risks	P
Controlling	Control Procurements	PP
Controlling	Monitor Stakeholder Engagement	PP
Closing	Gather deliverables	P
Closing	Collect final invoices	P
Closing	Finalize budgeted & Actual costs	NP
Closing	Evaluate team	PP
Closing	Conduct lessons learned	PP
Closing	Gather client feedback	P
Closing	Administrative closing process	P

Appendix C: Questions for the interviews with project managers

Project management interview

1. What was the scope of the project?
2. How did you execute each of the phases in project management?
3. How did you manage the finances of the project?
4. Did you create risk mitigation plan?
5. Did you do quality assurance?
6. How did you lead the team?
7. Who was involved from the client's side?
8. Who was involved from the consulting company's side?
9. How was the communication with the client performed?
10. What was the approach to change management?
11. What was the result of the project (expectations vs. reality)?
12. How did you manage client's expectations?

Project portfolio management interview

1. What is the process of project selection?
2. What tools do you use for project portfolio management?
3. How do you forecast NSR for upcoming months?
4. How do you forecast costs for upcoming months?
5. What is the strategy of the team?
6. How do you align projects to the strategy?
7. What is the target profitability for projects?
8. What is the bottom line profitability to accept a project?
9. What is the goal for project portfolio management for the future?

Appendix D: P&L Statement of the Supply Chain team

Consolidated P&L Statement of the team

OPS	June 2018	July 2018	August 2018	Sept 2018	Oct 2018	Nov 2018	DEC 2018	Jan 2019
GSR	246 300	308 720	282 920	308 075	265 760	280 225	200 194	254 357
NSR	70 212	62 628	62 486	65 255	45 751	68 576	62 317	36 319
Client Service Compensation	26 460	30 525	35 074	31 298	30 975	31 195	40 551	41 742
Compensation	18 327	19 857	19 536	20 309	20 151	19 996	20 699	28 273
Compensation at Risk	0	3 200	8 584	3 928	3 928	3 928	3 928	3 928
Employer Contribution	7 098	6 299	6 275	6 217	6 379	6 327	8 016	8 734
Outisde Consultants	0	0	0	0	0	0	0	0
Fringe Benefits	1 035	1 169	679	844	517	944	941	808
Bonus Pool	0	0	0	0	0	0	6 966	0
GROSS MARGIN	43 752	32 103	27 412	33 957	14 776	37 381	21 767	-5 423
	0	0	0	0	0	0	0	0
Admin Salary Costs	0	0	0	0	0	0	0	5 051
	0	0	0	0	0	0	0	0
Business Development	6 051	2 006	1 556	92	687	4 493	1 275	1 261
Computer	1 816	1 763	1 856	1 670	1 670	1 763	1 763	2 042
Training	212	21	21	21	191	23	21	21
	0	0	0	0	0	0	0	0
Other direct costs	-792	-1 989	231	571	1 831	293	445	227
	0	0	0	0	0	0	0	0
Marketing	486	0	93	1 849	777	800	19	28
Postage	0	0	0	0	0	0	0	0
Personnel Expenses	-2 243	-1 039	95	-1 319	250	-480	16	44
Taxes	0	0	0	0	0	0	343	0
Office Supplies	0	0	0	0	0	0	0	0
Telecommunication Expenses	12	3	43	41	31	-26	67	156
Travel Expenses	954	-954	0	0	774	0	0	0
Subcontractors charge	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0
Total Direct Costs	7 287	1 800	3 665	2 354	4 380	6 573	3 504	8 601
	0	0	0	0	0	0	0	0
Allocated costs	10 080	10 348	10 185	9 968	9 968	10 304	10 207	11 132
Subscription Fees	1 790	1 597	1 593	1 664	1 167	1 209	1 589	926
	0	0	0	0	0	0	0	0
GLOBAL EARNINGS	24 595	18 358	11 969	19 970	-739	19 294	6 467	-26 082

Source: Financial data provided by the consulting firm (2019)