Course 2

PROJECT GOAL, PARTIAL GOALS (OBJECTIVES), SCOPE STATEMENT, PROJECT CHARTER AND PROJECT REQUIREMENTS (Strategy Phase)

Objective

The primary objective of the current course is to provide accurate delineation of core project management concepts, such as the goal, the project objectives, the project scope and a charter and finally indicate the importance of a thorough and complete specification of all the types of project requirements, including technical, user, process requirements. A reference of requirement documentation tools is also included.

KEY WORDS

Project goal, objectives, scope statement, project charter, requirements

Definition 1

<u>Project Goal:</u>

Project goal has the following synonyms: *Project Aim* and *Project Objective*.

The **project goal** can be defined as the number of objectives that should be accomplished in order to complete the project. Project goals are used as input for measuring the project success.

Project objectives are stated in order to respond to questions such as: *what, where, when, how much.* By answering these questions, the possibility to achieve the defined goal is significantly increased. According to [4] project objectives must be (Fig.1) (SMART method):

- ***S**pecific – which can be translated to clear, precise and consistent*
- ***M**easurable – verified through measurement*
- ***A**cceptable – approved by all project team members and gives a general positive impression*
- ***R**ealistic – achievable given the time and resources available*
- ***T**ime – limited - reached within a specific time period*

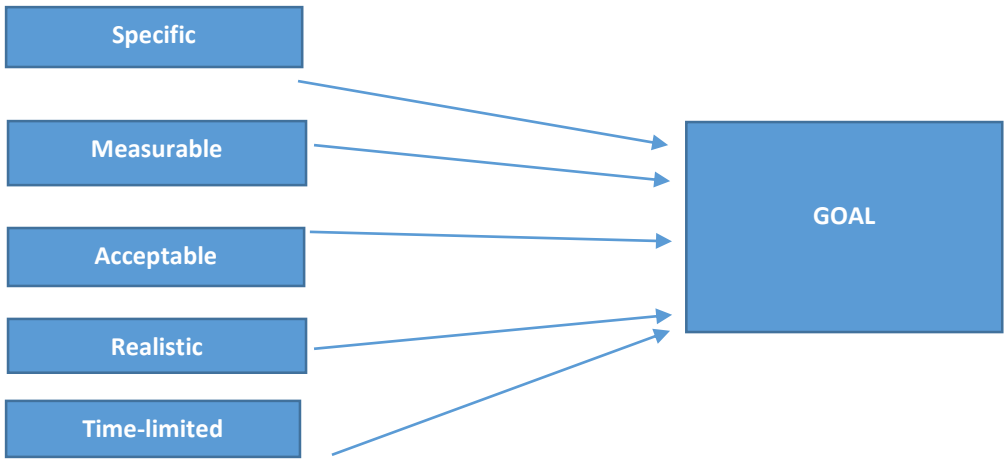

Fig.1 The SMART approach to defining objectives

Project Scope Definition

With the term ***project scope*** one refers to the end result (or mission) of a conducted project. Even if the project scope definition is a fundamental task of the project management integration process, it is often ignored by project managers in large corporations. The project scope includes only the necessary elements that can help to complete a project. Any work that does not contribute to the successful completion of the project is out of scope.

Project scope check list:

In order to successfully complete any type of project, the following tasks must be taken into account when formulating the project scope list [2]:

Project objective. The first step of project scope definition is to define the over-all objective to meet your customer's need(s).

Example: Reconstruction of a university computer lab, under cost X, to be completed within a given time T.

Deliverables. The next step is to define major deliverables—the expected out-puts over the life of the project.

Example: in the early design phase of a database system, a conceptual data model is expected (ER Diagram). Or, before the construction of the building starts, a detailed design is requested at the early stages (initiating process group). Regular reports regarding the progress of a project are also types of deliverables.

Milestones. A milestone is a highly important event in a project that occurs at a point in time. Milestones (else referred to as milestone vents or milestone dates) are highlighted and included in a detailed project plan.

Example: user acceptance tests will occur on the 4th of September 2021. Or, final building inspection will take place a specific on a specific scheduled date. Or, in

research projects, the first planned publication of the primary results will be announced at a conference venue on the 3rd of February 2021.

Technical requirements. Project outcomes products or services will have technical requirements to ensure proper performance.

Examples from information systems projects include speed and capacity of database systems and connectivity with alternative systems

Limits and exclusions. The defined scope includes limitations and exclusions. Otherwise false expectations may be assumed by the customer or the project team members. In this case, projects may be negatively affected in terms of time and resources

Example: in a marketing research project, the request for feedback from customer via online questionnaires exclude the product advertisement task. Or during software testing, the bugs recorded should be those reported by the customer not the developers.

Reviews with customer. The scope checklist is completed with a review with customers—internal or external, for ensuring understanding and agreement of expectations. Is the customer getting what he or she wishes? Has the project definition spotted the key achievements, budgets, timing, and performance requirements? Are questions regarding limitations and exclusions covered? All these issues should be addressed in this final step.

DEVELOPING PROJECT CHARTER (ORDER) (STRATEGY PHASE)

Developing a Project Charter is the process of developing a document that formally authorizes the start of a project. With this document, the project manager is authorized to initiate and lead the project. This document is “issued by upper management and provides the project manager with written authority to use organizational resources for project activities”. [2]

Often the charter will include a brief **scope description** as well as such items as risk limits, customer requirements, spending limits, and even the composition the team.

The scope of a project results from the **project order** (synonym of project charter). The project order includes the following information [1]:

Principal

A project or a project manager needs always a single contact point, even if someone like the steering committee is behind this person, who is expected to influence the project with corresponding decisions. It should be clear who finally approves the project outcome.

Purpose of the project

Are the visions and wishes of the principal known? Description of the problem and of the task: What is it all about? Sharing duties: What we are not discussing about?

Project objective

What will be the main achievement when the project is finished? What are the quality prerequisites for this project result? Are there specific critical success factors and which?

Short project delineation. A brief project delineation should be provided in this point.

Project structure and project organization. Description of the committees, the project manager, and the project team.

Time schedule and resource plan. Resources, costs, budget, time, and milestones are to be listed.

Risks. Project risks should be identified and mitigation strategies should be addressed.

Requirements in projects

The term ***requirements*** is used by project management experts, stakeholders, end users, customers and project team members when referring to the desired or expected project results. Throughout a project, During the course of a project, requirements once registered could change or may be omitted; other requirements may be added. So there is a need, to regularly revise the requirements, to reduce or to extend them on request. They have to be consistent all the time.

The field which deals with the definition, identification, documentation, modification, alignment and generally the management of the project requirements is entitled ***requirements engineering*****.** The specific field also provides guidelines, methods and tools regarding the way that the requirements are managed.

During the completion stages of the project requirements can be validated. Primary objective of the requirements engineering methods, tools and activities is also to detect and fix possible project negative issues as early as possible.

According to [3], the top four factors associated with project failure are:

- Poor end user/customer involvement (stakeholders)
- Poor executive management support
- Improper planning
- ***Unclear statement of requirements***

Requirements' identification.

The Identification of requirements is usually based on an initial query to the Principal Project Manager (Senior Project Manager) regarding the project objectives which are listed in the project charter (else project order).

Except for the requirements specified by the Principal Project Manager and the project charter, additional resources for identifying requirements can be considered the following:

• Company-specific provisions: the specific requirements resource type is related to documented process instructions within departments, work instructions provided by managers, as well as the business strategy of a specific organization

• Comparison with similar work/project: the specific requirements resource type is related to the comparison of a currently conducted project with similar projects that have been successfully conducted in the past, comparison of projects that have been undertaken by competitors, or comparison of the functionality of a legacy system (obsolete software application, platform or tool) with that of the expected integrated solution

• Customer opinion: the customer's standpoint is a valuable source regarding the identification of requirements in project. The customer may express opinion via emails, online surveys, interviews. In modern agile projects the customers' participation is mandatory for the completion of the project. Moreover, contracts between customers and companies can contribute to the requirements identification process.

• User's aspect: the user's view is an additional valuable source. As in the occasion of customer's opinion (note that in many prospects the terms "user" and "customer" is identical) the identification of requirements can stem by emails, interviews, workshops and many more.

• Project elements: some core project elements as the project objective, secondary objectives can also be a valuable source for identifying requirements.

Management of project requirements

The specific project topic is characterized as a continuously implemented process throughout the entire project implementation process. The most important activities included in the specific process are the following:

• Settlement of project priorities: the identified requirements should be prioritized in order to be processed in a sequence which can guarantee the timely, efficient and effective project implementation. The requirements are usually prioritized by the Principal Project Manager (else Senior Project Manager). Additionally, priorities can be settled by the Project Manager or a “Change Control Board (CCB)” [1].

• Documentation of requirements and transparency: the project requirements after being identified and prioritized, their official documentation is a mandatory. Multiple tools exist for the documentation of project requirements. The most common is the **requirements list** (Fig. 2)

Requirements list

Project name		Project No.	
Responsible			
Version / Date			

No.	Requirement	Stakeholder	Com-plexity	Priority	Status	Comments

Fig.1 A typical requirements list template [1]

However, in order to achieve a detailed and transparent for the stakeholders delineation regarding specific types of requirements such as ***process requirements***,

user requirements, and ***data requirements***, multiple tools are available, such as data flow diagrams (DFD), object relation diagrams (ORD), Business Process Modelling Notation (BPMN diagrams), Use Cases, Database models (Entity Relationship Diagram or Object Oriented Class Diagrams) or Prototypes.

The term “transparency” refers to the fact that requirements should be easily accessible by the involved stakeholders and clarity regarding the status and the description of the requirement is indispensable.

Literature

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SUMMARY

Successful projects rely on a clear statement of the primary project goal and the definition of quantifiable and precise objectives which must be fulfilled in order to achieve the project goal. Moreover, the preparation of a project charter is also crucial input for the formulation of a project scope statement, where, a summarized reference to project expected output, goal, objectives, team, limitations and potential risks is included. Finally, the documentation of requirements and involved stakeholders is also of paramount importance.

Comprehension Questions

1. Which are the main characteristics of the project objectives
2. Which is the input and the content of the project scope?
3. What is the main content of a project charter?
4. Which are the tools used for stakeholder definition and documentation of potential project risks?
5. Name some known techniques for analyzing and documenting requirements.