

# Projects

Project Management Institute (2004) defines a project as a temporary endeavor undertaken to create a unique product or service.

## five important characteristics of a project

1- The first characteristic is that a project is temporary, that is, it has a beginning and an end.

The fact that a project is temporary has a natural consequence. Every project will, in fact, have

1. An **initiating phase**, during which the project infrastructure and the project's goals are drafted.

2. A **planning phase**, during which project goals are refined, activities identified and scheduled, and many other support activities are properly planned.

3. An **executing phase**, during which the actual work takes place. Running in parallel, a monitoring phase measures the progress and raises flags when plans and reality disagree.

4. A final **closing phase**, where the project outputs are handed out and the project is closed.

2- The second characteristic is that a project delivers an output in the form of a product, a service, or a capability.

3- The third characteristic is that projects are resource constrained. A limited time is available to build the project outputs. Also limited will be other project resources, such as the budget and the team.

4- The fourth characteristic is that a project requires a progressive elaboration to build the project outputs. At the beginning, different ways are possible to achieve the project goals, till we get to the end of the project with the only possible implementation of the project goals.

5- The fifth and final characteristic is that a project delivers a unique output. Thus, what a project delivers has some novelty, one way or the other.

## **Programs**

A program is a set of related projects managed in a coordinated way. The underlying motivation is that coordination allows one to achieve additional benefits. The most famous program is probably the U.S. manned space program, which culminated with men landing on the moon.

## **Subprojects**

A subproject is thus the way in which one can organize the implementation of some specific objectives of a larger project.

## **MAIN TYPES OF SOFTWARE-RELATED PROJECTS.**

### **1 - Application Development**

The goal in this kind of project is building an application and providing the additional services and outputs to support it.

**One-offs or bespoke systems** that are software systems specifically created for a customer.

A bespoke system often implements a specific need of a customer, although in some cases the customer base of the final product could be large. Some examples of bespoke systems include a luggage tracking software, a compiler for a specific hardware platform, and a system to monitor a fleet of trucks.

**Off-the-shelf applications** are software systems implementing a function which is useful to many different users. It is the software we buy from marketplaces or stores

### **customized off-the-shelf application**

sits somewhere between the two other types of applications. They are systems that are developed similar to off-the-shelf applications. However, they need to (or can) be customized to fit the customer needs.

## 2- Process and Systems Reengineering Services

Process and Systems Reengineering Services are projects related to improving the efficiency of an organization, by changing the way in which they conduct their operational work.

## 3- System Integration Services

System integration services are projects and services related to automating the information flow among the different and independent systems used by an organization. The goals are to improve the efficiency of work and to reduce data duplication and errors. The approach is chosen when migrating to a new system is impractical

or too costly.

Two types of integration are possible, vertical or horizontal. The first refers to the integration of different systems performing similar functions (e.g., putting together data about customers kept by different departments of a multinational company).

The latter refers to automating or improving business functions (e.g., automating the flow of orders from marketing to production).

# stakeholders

Stakeholders are those with an interest in your project's outcome. They are typically the members of a project team, project managers, executives, project sponsors, customers, and users. Stakeholders are people who will be affected by your project at any point in its life cycle.

## Internal stakeholders in project management

Internal stakeholders are those within your organization. They can include top management, project team members, your own manager, your peers or co-workers, a resource manager, and internal customers.

# External stakeholders in project management

External stakeholders are not part of your organization but might include external customers, government entities, contractors, and subcontractors, as well as suppliers.

## Typical key stakeholders in a project

Some of the typical key project stakeholders you'll find in a project include:

- **Customers:** The direct user of a product or service, often both internal and external to the company executing the project
- **Project manager:** The project's leader
- **Project team members:** The group executing the project under the project manager's leadership
- **Project sponsor:** The project's financier
- **Steering committee:** An advisory group providing guidance on key decisions, which includes the sponsor, executives, and key stakeholders from the organization
- **Executives:** The top management in the company executing the project; those who direct the organization's strategy
- **Resource managers:** Other managers who control resources needed for executing the project

There are many more examples of project stakeholders, including: sellers/suppliers, contractors, owners, government agencies, media outlets, and even society at large.