INTRODUCTION TO PROJECT MANAGEMENT

LECTURE 1

AN OVERVIEW OF PROJECT MANAGEMENT

Since your perceptions surrounding project management will vary depending on work experiences, education, industry, and roles, it's important to establish some "common ground' before we venture down the road of learning what a project manager must do to be successful in his first opportunity.

This lecture provides the common ground by clarifying what constitutes project management and why project management is important to both your future and the future of your organization.

What is Project Management….Exactly?

- Project management is not "brain surgery". "Yes it covers a vast array of subjects, processes, skills, and tools, but the key fundamentals of project management are straightforward and are consistent across industries.
- To better understand project management, we need to understand what a project is. The nature of a project provides insights into the scope and challenges of project management.
- To better understand project management, we need to understand what is implied by the term *managing* and how this compares against traditional business management.

What is a Project Exactly?

Note *The Project Management Institute (PMI)* definition of a project is a temporary endeavour to produce a unique product or service.

A *project* is the work performed by an organization one time to produce a unique outcome. By one time, we mean the work has a definite beginning and a definite end, and by unique, we mean the work result is different in one or more ways from anything the organization has produced before. Examples of projects include the following:

- Building a new house;
- Developing a new software application;
- Performing an assessment of current manufacturing processes;
- Creating a new radio commercial.

This is in contrast to the operations of an organization. The operational work is ongoing, repetitive set of activities that sustain the organization. Examples of ongoing operations include the following:

- Processing customer orders;
- Performing accounts receivable and accounts payable activities;
- Executing daily manufacturing orders.

To further explain the nature of projects (and project management) and how they compare to the ongoing operations of an organization, please review the summarized table 1.1 below.

Feature	Projects	Operations
Key Similarities	Planned, executed, and controlled Performed by people Resource constrained	Planned, executed, and controlled Performed by people Resource constrained
Purpose	Attain objectives and terminate	Sustain the organization
Time	Temporary Definite beginning and end points	Ongoing
Outcome	Unique product, service, or result	Non-unique product, services, or result
People	Dynamic, temporary teams formed to meet project needs Generally not aligned with organizational structure	Functional teams generally aligned with organizational structure
Authority of Manager	Varies by organizational structure Generally minimal, if any, direct line authority	Generally formal, direct line authority

Table 1.1 Comparing Projects and Operations

Managing Projects

What do we mean when we say "managing projects"?

- We mean applying both the science and art to planning, organizing, implementing, leading, and controlling the work of a project to meet the goals and objectives of the organization;
- We mean the process of defining a project, developing a plan, executing the plan, monitoring progress against the plan, overcoming obstacles, managing risks, and taking corrective actions;
- We mean the process of managing the competing demands and trade-offs between the desired results of the project (scope, performance, quality) and the natural constraints of the project (time and cost);
- We mean the process of leading a team that has never worked together before to accomplish something that has never been done before in a given amount of time with a limited amount of money.

Note The PMI definition of project management is the application of knowledge, skills, tools, and techniques to project activities to meet project requirements.

An Academic Look

To further assist this alignment process, let's look at project management from a more academic level. PMI, the globally recognized standards organization for project management (www.pmi.org), defines project management as a set of five process groups (see table 1.2) and ten knowledge areas (see table 1.3). These references are taken from the PMI's *A Guide to the Project Management Body of Knowledge, Fifth Edition.*

#	Process Group	PMBOK Description (Fifth Ed.)	Common Terms
1	Initiating	Authorizing the project or phase	"preliminary planning" "kicking off"
2	Planning	Defining and refining objectives of the project and selecting the best course of action to attain those objectives	"defining" "developing the plan" "setting the stage"
3	Executing	Coordinating the people and resources to implement the plan	"making it happen" "getting it done" "coordinating"
4	Controlling	Ensuring project objectives are met by monitoring and measuring progress regularly to identify variances from the plan so that corrective action can be taken	"tracking progress" "keeping on course"
5	Closing	Formalizing acceptance of project or phase and bringing to an orderly end	"client acceptance" "transition" "closeout"

Table 1.2 Description of PMBOK Project Management Process Groups

Figure 1.1 summaries the relationships among the project management process groups, which is based on the PMBOK Guide – Fifth Edition.
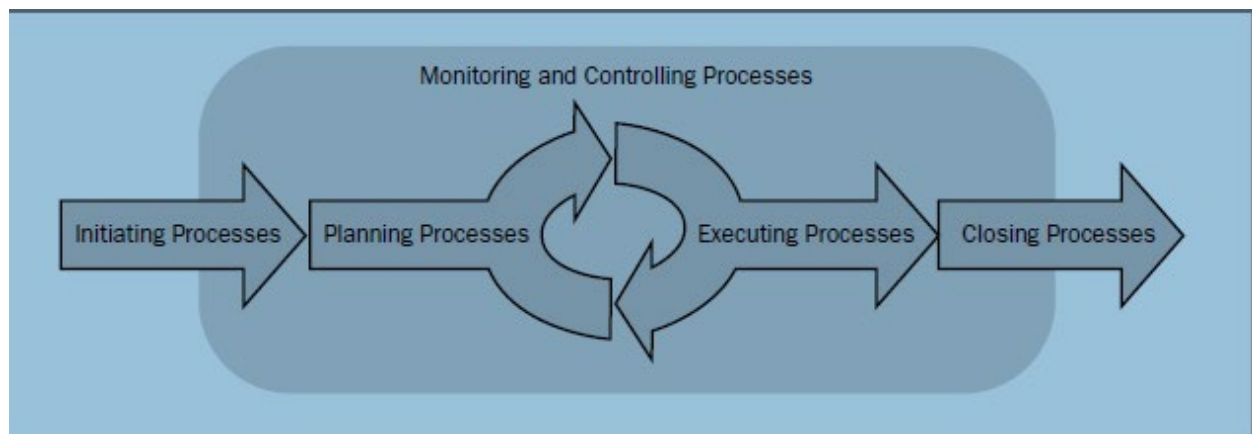

Figure 1.1 Project Management Process Relationships

#	Knowledge Area	PMBOK Description (Fifth Ed.)	Common Deliverables
1	Project Integration Management	Processes required to ensure the elements of the project are properly coordinated.	Project Charter Project Plan Change Requests Work Results
2	Project Scope Management	Processes required to ensure that the project includes all the work that is required and only the work that is required to complete the project successfully.	Scope Statement Work Breakdown Structure Formal Acceptance
3	Project Time Management	Processes required to ensure timely completion of the project.	Network Diagram Task Estimates Project Schedule
4	Project Cost Management	Processes required to ensure the project is completed within the budget approved.	Resource Requirements Cost Estimates Project Budget
5	Project Quality Management	Processes required to ensure the project will satisfy the needs for which it was undertaken.	Quality Management Plan Checklists Quality Reviews
6	Project Human Resources Management	Processes required to make the most effective use of the people involved with the project.	Role and Responsibility Matrix Organization Chart Performance Evaluations
7	Project Communications Management	Processes required to ensure the timely and appropriate generation, collection, dissemination, storage, and ultimate disposition of project information.	Communication Plan Status Reports Presentations Lessons Learned
8	Project Risk Management	Processes concerned with identifying, analysing, and responding to project risk.	Risk Management Plan Risk Response Plan Risk Log
9	Project Procurement Management	Processes required to acquire goods and services outside the performing organization.	Procurement Plan Statement of Work Proposals Contract
10	Project Stakeholder Management	Processes required to identify the people, groups, or organizations that impact the project positive or negative and analyse stakeholder expectations.	Stakeholder Management Plan

Table 1.3 Description of PMBOK Knowledge Areas

What is the Value of Project Management?

The strategic value points that effective project management can offer an organization include, but not limited to the following:

- Provide a controlled way to rapidly respond to changing market conditions and new strategic opportunities;
- Maximize the innovative and creative capabilities of the organization by creating environments of focus and open communication;
- Enable organizations to accomplish more with less costs;
- Enable better leverage of both internal and external expertise;
- Provide key information and visibility on project metrics to enable better decision-making management;
- Increase the pace and level of stakeholder acceptance for any strategic change;
- Reduce the financial losses by "killing off" poor project investments early in their life cycles.

Note: *Stakeholder* is the term used to describe individuals and organizations who are actively involved in the project or whose interests might be impacted by the execution or completion of the project.

Why are Projects Challenging?

Key reasons why projects are challenging to manage:

- **Unchartered territory** – Each project is unique. The work to be done has likely never been done before by this group of people in this particular environment.
- **Multiple expectations** – Each project has multiple stakeholders that each have their own needs and expectations for the project.
- **Communication obstacles** – Due to natural organizational boundaries, communication channels, and team development stages, communication of project information must be proactively managed to ensure proper flow.
- **Balancing the competing demands** – every project is defined to produce one or more deliverables (scope) within a defined time period (time), under an approved budget (cost) with a specified set of resources. In addition, the deliverables must achieve a certain performance level (quality) and meet the approval of the key stakeholders (expectations). Each of these factors can affect the others, as figure 1.2 illustrates.

For example, if additional functionality (scope, quality) is desired, the time and cost (resources needed) of the project will increase.

Note: The competing project demands are often referred to as the *triple constraint of project management.*

Figure 1.2 Traditional Model of Competing Project Demands

- **Cutting edge** – Often, projects have a strategic, innovative focus. As a result, they often deal with new, leading-edge technologies. In these cases, the project has more risks, more unknowns, and is much more difficult to estimate accurately.
- **Organizational impacts** – in addition to overcoming natural communication obstacles created by the project structure, the project manager must also manage overlaps in organizational approval and authority domains, contend with competing priorities for shared resources, deal with annual budget cycles that might not be aligned with the project's funding needs, and ensure that the project is aligned with the focus of the organization.
- **Collaboration** – depending on the strategic level and scope of your project, your project team will consist of stakeholders across the organization from different functional areas that are likely not accustomed to working together. For project success, these different stakeholders must learn to work together and to understand the others' perspective to make the best decisions for the project. Often, the project manager plays a key facilitating role in this collaboration process.