CONTROL OF CHANGE AND SCOPE CREEP

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OVERVIEW

- Control of Change
  - Caste Study
- Scope Creep
  - Case Study

CONTROL OF CHANGE

- Generally, the original plans for projects are almost certain to be changed before the projects are completed.

- Project changes, result from three basic causes:

1. Uncertainty about the technology on which the work of the project or its output is based
2. An increase in the knowledge base or sophistication of the client/user leading to scope creep
3. A modification of the rules applying to the process of carrying out the project or to its output.

- The most common changes, however, are due to the natural tendency of the client and project team members to try to improve the product or service.

- New technologies become available or better ideas occur to the team as work progresses.

- The later these changes are made in the project, the more difficult and costly they are to complete.

- Without control, a continuing accumulation of little changes can have a major negative impact on the project's schedule and cost.

- Control of change is, therefore, one of the primary concerns of risk management. This is accomplished with a **formal change control system**.
- The purpose of the formal change control system is to:

1. Review all requested changes to the project (both content and procedures)
2. Identify all task impacts
3. Translate these impacts into project performance, cost, and schedule
4. Evaluate the benefits and costs of the requested changes
5. Identify alternative changes that might accomplish the same ends
6. Accept or reject the requested changes
7. Communicate the changes to all concerned parties
8. Ensure that the changes are implemented properly
9. Prepare monthly reports that summarize all changes to date and their project impacts

- The following simple guidelines, applied with reasonable rigor, can be used to establish an effective change control procedure.
- All project contracts or agreements must include a description of how requests for a change in the project's plan, budget, schedule, and/or deliverables will be introduced and processed.
- Once a project is approved, any change in the project will be in the form of a change order that will include a description of the agreed-upon change together with any changes in the plan, budget, schedule, and/or deliverables that result from the change.

- The project manager must be consulted on all desired changes prior to the preparation and approval of the change order.
- Changes must be approved, in writing, by the client's agent as well as by an appropriate representative of senior management of the firm responsible for carrying out the project.
- Once the change order has been completed and approved, the project master plan should be amended to reflect the change, and the change order becomes a part of the master plan.

CASE STUDY:

BETTER CONTROL OF DEVELOPMENT PROJECTS AT JOHNSON CONTROLS

- The Automotive Systems Group of Johnson Controls was having trouble controlling their product development programs with each project being managed differently, disagreements about who was responsible for what, projects failing because of rapid company growth, and new employees having trouble fitting into the culture.

- For a solution, they went to their most experienced and successful project managers and condensed their knowledge into **four detailed procedures** for managing projects.

- The **first procedure** is project approval for authorizing the expenditure of funds and use of resources.

- The sales department must first provide a set of product/ market information, including financial data, project scope, critical dates, and engineering resource requirements before management will approve the project.

- Thus, projects are now scrutinized much more closely before work is started and money spent—when more questions are asked and more people are involved, better decisions tend to be made.

- The **second procedure** is the statement-of-work, identifying agreements and assumptions for the project.

- Here, both the customer and top management must sign off before product design work begins, thereby reducing misunderstandings regarding not only product specifications, prices, and milestones but also intangible product requirements, explicit exclusions, and generic performance targets.

- Maintaining this documentation over the life of the project has helped avoid problems caused by late product changes from the customer, particularly for 3–5 year projects where the personnel rotate off the project.

- The **third procedure** is the work breakdown structure, consisting of nine critical life-cycle phases running from definition through production.

- Included in each of these nine phases are four key elements:
  - the tasks,
  - the timing of each task,
  - the responsible individuals, and
  - the meeting dates for simultaneous engineering (a formalized procedure at Johnson Controls).

- The **fourth procedure** is a set of management reviews, crucial to successful project completion.

- Both the content and timing of these reviews are specified in advance and progression to the next phase of a project cannot occur until senior management has approved the prespecified requirements, objectives, and quality criteria for that phase.

- The procedure also specifies questions that must be answered and work that must be reviewed by senior management.

Scope Creep

Scope & Scope Creep

- The extent of what a project will produce, and the work needed to produce it is known as a scope of the project

- **Scope Creep**, is nothing but adding new features, altering existing requirements or changing the pre-agreed project goals.
- Scope Creep can come in picture at any time and disrupt entire project strategy because they require additional resource, time and cost which were not accounted for at the beginning.

What Causes Scope Creep ?

1. Lack of enough clarity or information on requirements
2. Not Saying No
3. Poor Communication with client
4. Conflicting ideas and opinions
5. Lack of proper and time bound feedback mechanism
6. Lack of clarity and depth to the original specification document.
7. Allowing direct and unmanaged contact between client and team participants.
8. Beginning design and development of something before a thorough requirements analysis and cost-benefit analysis has been done.

Case Study :

In 1999, the XY Department of the Federal Government reviewed its Year 2000 Date Turnover Computer Risks and found that its outdated computer systems for managing public clients needed replacing. A business case was prepared for funding the replacement while at the same time implementing some improvements. The total budget requested was $2.3 million.

In view of a shortage of funds around at the time, government did not approve this amount. Only $1.5 million was authorized. However, the XY Department accepted this amount after they decided that they could maybe do the work for around the $1.5 m.

A final completion date of 30th June 2001 was projected. The original business case had loosely identified some risks to the project that were also included in the project plan.

The project commenced in July 1999.

In view of the shortfall on its original budget request, the committee decided not to employ a project manager. Instead it assigned this responsibility to its Finance Manager, who would undertake the work along with his normal duties.

A Company, called "Good Programs" was contracted to supply the software and assist in the implementation. This company recognized the marketing opportunities of this project, as the XY Department was its biggest client in the region.

As a result, they offered, free of charge, many more features that were not in the original scope.

Initially, the steering committee met regularly, but as new versions of the resulting software were being implemented regularly, meetings became less frequent and Good Programs were left to do more and more of the day to day management of the new version implementations.

All the XY Department and steering committee had to do was to identify problems with the software and to make the system testers available for new versions. However, the effect was an unanticipated overhead for the department.

Sometime after the original project was scoped and commenced, both the original CEO and finance manager had been moved out of the department and new officers have been appointed.

At this time, the new CEO has been advised that about $185,000 more is needed for the project, which is not in his current budget. The original project has not been signed off. Indeed, it is evident that it has not been completed. The new CEO of the department is not sure of the original scope of the project, what aspects have been implemented, nor what has been spent for which parts. There do not seem to be any reliable reports available as to original scope, scope changes, schedule or budget.

This ultimately generates the Scope Creep.

How to avoid Scope Creep

1. Communication and Feedback

   Define a clear communication criteria in terms of frequency of updates, means of updates (reports, meetings) and timing of these updates.

2. Assess & Estimate

   Assess and estimate the time and cost implications of the requested change and then only decide whether to do updates or not.

3. Build a strong Change Control Culture

   When the change is requested, there is a series of approvals that are triggered. This leads to enhanced attention on the requested changes and the required focus to decide if it is needed at all.

REFERENCES

- Project Management: A Managerial Approach by Jack R. Meredith and Samuel Mantel

- Project management for Business and Engineering by John M. Nicholas

THANK YOU!