Project Management

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Week: 6

Lecture 32 - Control of change scope and scope creep

Phase III
Project Execution

- Planning-monitoring-controlling cycle
- Earned value analysis
- Agile tools for tracking project
- Three types of project-controlling ✓
- Control of change scope and scope creep
- Project audit
- Essentials of an audit/evaluation
- When to close a project
- Benefits realisation

Agenda

- Causes for Project Change

- Scope Creep reason

- Purpose of the formal change control system

- Guidelines for effective change control

- Controlling Creative Activities

    - Process Review

    - Personnel Reassignment

    - Control of Input Resources

Dear students, today we are going to discuss about control of change scope and scope creep. The previous class I have discussed about three types of project controlling, but in this lecture I am going to discuss about control of change scope and scope creep. The agenda for this lecture is first I will discuss what are the causes for project change, then why the project scope is changing that is the reason for scope creep and what is the purpose of formal change control system, then I will discuss about guidelines for effective change control, then finally I will discuss about controlling creative activities. What are the causes for project change? The initial project plan will likely change before they are finished, because whatever the plan which you do, but always there is a more chance for changing the project scope. So project changes result from three basic causes. The first cause is uncertainty about the technology on which the work of the project or its output is based, because when there is uncertainty about the technology, once you started to implement the project the technology may change, then the scope of the project also will change that is the one reason.

Causes for Project Change

- The initial project plans will likely change before they are finished.

- 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. Modification of the rules applying to the process of carrying out the project or to its output

Second reason is an increase in the knowledge base or sophistication of the client or user leading to the scope creep. The second reason is the client knowledge base may increase, they will get more inputs, more knowledge about the projects, then they want there is a change in the project. The third reason is modification of the rules applying to the process of carrying out the project or its output. So when the rule changes, then the project scope, project expectation also changes.

Causes for Project Change

- All three causes are especially common in software projects, where scope creep is legendary.

- When a project's process or output is changed, there is almost always an associated change in the budget and/or schedule.

Cowboys Stadium

So these are the three reasons that there is a change occurs in your project. All three causes what I have discussed are especially common in software projects where scope creep is legendary, because we are permitting, we are welcoming scope creep in a software project. When a project's process or output is changed, there is almost always an associated change in budget or schedule. So when we output an expectation changes, we should remember that the budget also will change, schedule also change. I brought the picture on

the right hand side that the cowboy stadium, there is a more than 1500 changes has happened before completing this project.

Causes for Project Change

- Coping with changes and changing priorities is perceived as the most important single problem facing the PM—or if not the most important, certainly the most irritating.

- Changing project requirements was the most frequent risk class and impacted project performance.

Just I wanted to say that always there will be a lot of changes will happen in your project. So when there is a change that will affect your budget also, that will affect the schedule also. So you should be very careful when you accommodate changes from our client. So coping with the changes and changing priorities is pursued as the most important single problem facing the project manager or if not the most important, certainly the most irritating problem. A survey was conducted for the among the project managers.

So what kind of changes is generally taking place in your project? Everybody is agreed that the changes in the scope is the most important, more prominent changes. So changing project requirement was the most frequent risk class and that will impact the project performance. So whenever there is a change in the project scope, that is a kind of a risk, so that will affect your project performance. The most common change are those due to the natural tendency of the client and the project team members to try to improve the product or service. Because always the product features, the product performance, the customers expecting, the clients are expecting that should be increased.

Control of Change and Scope Creep

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

- New demands and scope requirements become apparent to the client, which were not realized at the time of project initiation.
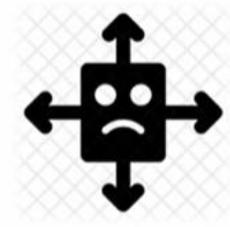
So that they realize at the later part of the project, then they are asking that clients are asking the project manager to incorporate the changes. New demands and scope requirements become apparent to the client which were not realized at the time of project initiation. The another reason is when there is a new demand, then the people ask for changes in our project. Hunsberger agree and that attribute scope creep to just two reason. Then why, now we will discuss about why there is a scope creep occurs.

Scope Creep reason

- Hunsberger (2011) agrees and attributes scope creep to just two reasons:
- Stakeholders only being consulted at the beginning of the project
- Requirements were changing due to new information about the project's needs.

The first reason is stakeholders only being consulted at the beginning of the project because the stakeholder has to be consulted throughout the project. But many time we consult only at the beginning of the project. So later point of time that stakeholders want some changes. The second reason is requirement were changing due to new information about the project's needs. Whenever people get, the clients get new information, then they are asking to change the project scope.

Scope Creep reason

- New technologies become available or better ideas occur to the team as work progresses.
- As noted earlier, the later these changes are made in the project, the more difficult and costly they are to complete.
- Burba (2013) recommends that PMs frame the project in such a way that sponsors and clients can see for themselves what the trade-offs of a desired scope change are.

New technologies become available or better ideas occur to the team as the work progress. As noted earlier, the later these changes are made in the project, the more difficult and costly they are to complete. So when somebody says that changes in the project once the project is progress, if it is late for giving the changes into the project, so that is very costly. See Burba recommends that the project manager is frame the project in such a way that the sponsors and the clients can see for themselves what the trade-off of a desired scope change are. So the point I wanted to say here is whenever there is a changes in the project, along that there is a cost also changes and the schedule also changes.

Control of Change and Scope Creep

- Instead of telling the client "No," say, "Sure, we can change the design. I'll reply with this change's schedule and budget impact."
- Without control, a continuing accumulation of little changes can significantly impact the project's schedule and cost.

So the project budget is increasing. So now we have to see whether that the change has to be accommodated or not accommodated. So we need to go for trade-off. Instead of telling the client no, simply say sure, we can change the design. I will reply with the change schedule and the budget impact.

So instead of saying directly no to the changes, what we can say, yes I can accommodate the changes, but along with the change there will be a new budget will be there, there will be a new schedule that I will come with after some time. This way you can answer. So without control, a continuing accumulation of little changes can significantly impact the project schedule and cost. So if there are so many changes are occurring, directly will affect the project schedule and the project cost. So control of scope creep is accomplished with a formal change control system, which in some industries is a part of their configuration management system responsible for integrating and coordinating changes throughout the system development cycle.

Control of Change and Scope Creep

- Control of scope creep is accomplished with a formal change control system, which, in some industries, is a part of their configuration management system responsible for integrating and coordinating changes throughout the systems development cycle.

- The purpose of the formal change control system is to
  - review all requested changes to the project
    (both content and procedures)
  - identify all task impacts

The purpose of the formal change control system is to review all requested changes to the project and identify all task impact. If there is a new task is coming, how that will impact the project performance? Now we will see the purpose of formal change control system. So we need to have a proper change control system. What is the purpose of that? Review all requested changes to the project, both content and procedures. That is the first purpose.

Purpose of the formal change control system

Review all requested changes to the project (both content and procedures)

Identify all task impacts

Translate these impacts into project scope, cost, and schedule

Evaluate the benefits and costs of the requested changes

Second identify all task impact, then translate these impact into the project scope, cost and schedule. Evaluate the benefits and cost of the requested changes. These are the purpose of a formal change control system. Then identify alternative changes that might accomplish the same end, accept or reject the requested changes, communicate the changes to all concerned parties, ensure that the changes are implemented properly, then prepare monthly report that summarize all changes to date and their project impact. So these are the purpose of having formal change control system.

Purpose of the formal change control system

Identify alternative changes that might accomplish the same ends

Accept or reject the requested changes

Communicate the changes to all concerned parties

Ensure that the changes are implemented properly

Prepare monthly reports that summarize all changes to date and their project impacts

Guidelines for effective change control

- 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.

GUIDELINE

Now we will see certain guidelines for effective change control. All project contracts or agreement must include a description of how request for change in the project's plan, budget, schedule and deliverable will be introduced and processed. Once your project is approved, any change in the project will be in the form of change order that will include a description of agreed upon change together with any changes in the plan, budget, schedule and deliverables that result from the change. For any but minor changes, a risk identification and analysis study should be performed. To study the potential impact of change, it is often possible to conduct a simulation study.

Guidelines for effective change control

- 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.

GUIDELINE

Guidelines for effective change control

- For any but minor changes, a risk identification and analysis study should be performed.
- To study the potential impact of change, it is often possible to conduct a simulation study.

GUIDELINE

Guidelines for effective change control

- The PM must be consulted on all desired changes prior to the preparation and approval of the change order.
- The PM's approval, however, is not required.

GUIDELINE

The project manager must be consulted on all desired changes prior to the preparation and approval of the change order. The project manager's approval however is not required, only he has to be informed. Changes must be approved in writing by the client's agent and 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 plan should be amended to reflect the change and the change order become a part of the project plan. Now we will discuss about how to control creative activities.

Guidelines for effective change control

- Changes must be approved, in writing, by the client's agent and 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 plan should be amended to reflect the change, and the change order becomes a part of the project plan.

GUIDELINE

Controlling Creative Activities

- For example, controlling research and development projects, design projects, and similar processes that depend intimately on the creativity of individuals and teams.

- First, the more creativity involved, the greater the uncertainty surrounding outcomes.

- Second, too much control tends to inhibit creativity.

For example, controlling research and development projects, design projects and similar process that depends on intimately on the creativity of individuals and teams. So if there is a change in this project when there is a creative, where the creativeness is included, how to do that? First, the more creativity involved, the greater the uncertainty surrounding the outcomes. So what will happen? If any task is which are highly creative task, there is a more uncertainty will occur. Second, too much control tends to inhibit the creativity because the task is related to creativity, but when you bring so much control, then there is a loss for creativity. Control is not the enemy of creativity.

Controlling Creative Activities

- Control is not the enemy of creativity

- While the exact outcomes of creative activity may be uncertain, the process of getting the outcome is usually not uncertain.

- If the potential payoff for the creative activity is high, the need for careful risk management is also high

While the exact outcome of creativity may be uncertain, the process of getting the outcome is usually not uncertain. If the potential payoff for the creative activity is high, the need for careful risk management is also high. To control creative project, the project manager must adopt one or some combination of three general approaches to the problem. The first approach is process review. The second approach is personal reassignment.

Controlling Creative Activities

- To control creative projects, the PM must adopt one or some combination of three general approaches to the problem:

  (1) Process review
  (2) Personnel Reassignment
  (3) Control of input resources

Process Review

- The process review focuses on the process of reaching outcomes rather than on the outcomes itself.

- Because the outcomes are partially dependent on the process used to achieve them, uncertain though they may be, the process is subjected to control.

The third approach is control of input resources. First, we will discuss about process review. The process review focuses on the process of reaching outcome rather than the outcome itself because the outcomes are partially dependent on the process used to achieve them. Uncertain though they may be, the process is subjected to control. For example, in research projects, the researcher cannot be held responsible for the outcome of the research, but can most certainly be held responsible for adherence to the research proposal, budget and the schedule.

Process Review

- Control should be instituted at each project milestone, an obvious opportunity for phase-gate controls.

- If research results are not as expected or desired, milestones provide a convenient opportunity to assess the state of progress, the value of accomplishment to date, the probability of valuable results in the future, and the desirability of changes in the research design.

So the process is controllable even if the precise result or not. So what should be the output, but we can control the process of getting that output. Control should be instituted at each project's milestone and obvious opportunity for phase gate controls. If research result are not as expected or desired, milestone provide a convenient opportunity to assess the state of progress, the value of accomplishment to date, the probability of valuable result in the future and the desirability of changes in the research design. Again the object of

control is ensuring that the research design is sound and carried out as planned or amended.

Process Review

- Again, the object of control is ensuring that the research design is sound and carried out as planned or amended.
- The review process should be participative.
- Unilateral judgments from the superior are not apt to be accepted or effective.

Process Review

- Care must be taken not to overstress the method as opposed to the result.
- Method is controllable and should be controlled, but results are still what counts.

The review process should be participative. Special judgment from the superior are not apt to be acceptable or effective. Care must be taken to oversee the method as opposed to the result. Here because it is the creative activity, so we should not bother about the result, but we should bother about the method of achieving that result. We should control about only the method of achieving the result.

So method is controlled and should be controlled, but the result are still what counts. The next process is personal reassignment. This type of control is straightforward. Individuals who are productive are kept, those who are not are moved to other jobs or other organizations. Problem with this technique can arise because it is easy to create an elite group.

Personnel Reassignment

- This type of control is straightforward—individuals who are productive are kept
- Those who are not are moved to other jobs or other organisations.

Personnel Reassignment

- It is also important not to apply control with too fine an edge.
- While it is not difficult to identify those who fall in the top and bottom quartiles of productivity, it is usually quite challenging to make clear distinctions between people in the middle quartiles.

While the forward few are highly motivated to further achievement, everyone else tend to be the demotivated. It is also important not to apply control with too fine an edge. While it is not difficult to identify those who fall in the top and bottom quartiles of productivity, it is usually quite challenging to make clear distinctions between people in the middle quartile. Now we will discuss about another way of controlling creative projects that is a control of input resources. In this case, the focus is on efficiency.

Control of Input Resources

- In this case, the focus is on efficiency.

- The ability to manipulate input resources carries with it considerable control over output.

- Obviously, efficiency is not synonymous with creativity, but the converse is equally untrue—creativity is not synonymous with the extravagant use of resources.

EFFICIENCY

The ability to manipulate input resources carries with it a considerable control over output. Obviously, efficiency is not synonymous with creativity, but the converse is equally untrue. Creativity is not synonymous with the extravagant use of resources. The result of flowing from creative activity tend to arrive in batches. Visible resource expenditure may occur with no visible result, but then seemingly all of a sudden many outcomes may be delivered.
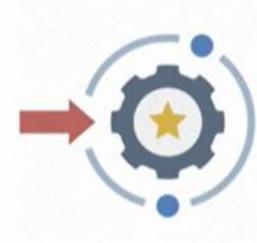
Control of Input Resources

- The results flowing from creative activity tend to arrive in batches.

- Considerable resource expenditure may occur with no visible results, but then, seemingly all of a sudden, many outcomes may be delivered.

Control of Input Resources

- The milestones for application of resource control must therefore be chosen with great care.
- The controller who decides to withhold resources just before the completion of a research project is apt to become an ex-controller

Control of Input Resources

- Sound judgment argues for some blend of these three approaches when controlling creative projects.
- The first and third approaches concentrate on the process because the process is observable and can be affected.
- But the process is not a matter of moment; results are.
- The second approach requires us to measure (or at least to recognize) output when it occurs.

The milestone for application of resource control must therefore be chosen with great care. The controller who decides to withhold resources just before the completion of a research project is apt to become an ex-controller. Sound judgment argues for some blend of these three approaches when controlling creating projects. The first and third approaches concentrate on the process because the process is observable and can be affected, but the process is not a matter of moment results are. So the second approach requires us to measure output when it occurs.

Control of Input Resources

- This is often quite difficult.

- Thus, the wise PM will use all three approaches:

  - checking processes and methods

  - manipulating resources

  - culling those who can not produce.
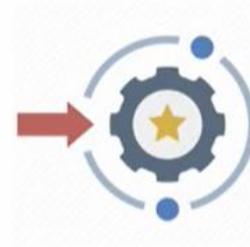
This is often quite difficult, thus the wise project manager will use all three approaches, that is checking processes and methods, manipulating resources, culling those who cannot produce. Dear students, in this lecture, I have discussed about causes for project change, then what are the reasons for scope creep, then I have discussed about purpose of formal change control Then I have explained about guidelines for effective change control system. Finally I have discussed about how to control creative activities. In that I have explained three approaches, one is process review, personal reassignment, control of input resources. Thank you. Thank you.