Course Name -Project Management: Planning, Execution, Evaluation and Control

Professor Name - Prof. Sanjib Chowdhary

Department Name - Department of Vinod Gupta School of Management

Institute Name - IIT Kharagpur

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Welcome to the course Project Management Planning, Execution, Evolution and Control. We are continuing module 7 that is Project Risk Management. In this lecture, we will cover the last step of the risk management process that is risk response control and change control management. The concepts that will be covered in these lectures are these we have covered before risk response control and change control management. These two important steps are the sub steps are the part of the risk response control. So, as you are aware of this risk management process, there are four steps and we have already covered the last three steps like risk identification, then risk assessment and risk response development in our previous lectures.

Now the final step is the risk response control. What is risk response control? The risk response control captures all these steps say risk identifications, risk assessment and risk response development. All these steps whatever we have done those things are documented and captured in a register and this register is the backbone of risk response control. It contains the risk identification, the number of risks you have identified, its likelihood, its impact, its risk value, then it also captures the mitigation plan, response plan that is mitigation plan or avoiding risk, transferring risk, contingency plan and all the related things.

So, and the what is the risk response control is basically you are executing the risk response strategy. So, the steps which are available in this are mentioned here. I will repeat this the risk response control the steps are your execution of the risk response strategy, whatever the response strategy has been documented you have to execute that. Then monitoring of triggering events continuously for the risk you have to monitor the triggering event. So, that in the case of any untowards incidents on or any eventualities you have to activate the contingency plan, then initiating contingency plans.

So, when the it will be initiated that is the duty of the risk response control. Then watching for new risk, the risk response control and identifications of risk are not one time job, it is a continuous process that because risk are not static it is a dynamic thing and the new risk may come up at any point of time. So, you have to be very watchful

organizations has to be very watchful to watchful for the new risk that has potential damaging impact. These are the response control one. Then another major activity of risk response control is establishing a change management system because the there are change in the project scope, change in the projects are an inevitable thing you know nothing is constant changes are always happening.

So, the project scope may change the other things may change. So, for that you have to establishment establish a set procedure. So, that there is no ad hocism for the change, it will have a formal procedure that has to be followed that is the good practice. So, what are those establishing change management system, what are its components or the sub points are monitoring, tracking and reporting risk that is one of the functions of this change management system. Another is the next fostering an open organizations environment like you have to you have to inculcate a culture in the organizations the environment a fearless environment.

So, that people come up and mentions or highlights the potential risk or the risk in general or in their work domain. Otherwise, what happen if you punish them for those things, you are shooting the messenger you no one will be will be ready to contribute to your risk management processes or no one will be ready to for the reprisal for telling the potential risk which might occur. So, you have to encourage you have to foster an open environment. So, that people do report the potential risk then repeating risk identification and assessment exercise. As I told you that risk management is not a one-time job it is a continuous job like safety.

So, risk identification exercise generally in an organization is repeated every year because new risk may come up and all and the old risk the you might have treated it that mitigation plan has been done then the treatment has been done. So, the new risk comes up and you treat it. So, unless there is an open environment in the organization people will not be ready to come up with a new risk that is a reality, then and the assessment of those new risk and all and this thing is repeated as a periodic interval. Then assigning and documenting responsibility for managing risk. Documentations is one of the main works for the risk response control.

It is the that this documentation has to be assigned formally assigned to a responsible person. So, that so, that the he will be the nodal point for sharing all those things. So, these are the points for establishing a change management system. Now we will be talking about what are the change when the change happens for a project what are the sources of change, we have to identify. Sources of changes may be customers or the clients it may be from your owner, may be from the project manager or the sponsors of the senior management or the project team itself or any other stakeholders.

So, these are the sources of change. These can be broadly categorized the sources of change can be broadly categorized in three areas. One is the project scope change. What is it? So, project scope changes may arise due to the to customers they wanted to have a different design. So, you have to redesign the product or customers may want it some additional features for the for the product.

So, it may necessitate to change the scope. So, project scope changes are a big thing. So, for that your schedule and cost may change. So, then implementation of contingency plan. Contingency plan is a plan B alternative plan if the event occurs there only it gets activated.

So, that when the contingency plan is implemented. So, it changes in the baseline cost and schedule because contingency plan that cost and time were not part of the baseline initial baseline. So, after the contingency plan is activated it, you have to change the baseline cost and time schedule. Another is the scope of sources of change is the improvement changes. This is generally coming from the project team.

Project team in a better position while they are executing the project, they may come up that the new technology and new gadgets have come in. So, introduce that instead of the old plan. So, that improvement changes may inculcate in the improvement of the product in terms of its efficiency, in terms of its robustness, in terms of cost also, and performance. So, these are the sources of change. Now this is the change control process because as I told you changes should not be ad hoc basis there must be a formal process for change because you are when a project is being done the scope of the project and all is already been fixed because these are given in the contract and contract is a legal document.

So, whatever is there that is binding for both the parties. So, any changes on the scope they have to be has to be reflected on the scope and in the contract. So, for that you have a you have to develop a change control process. Here if you see the change control process, change originates these may originate from any of these sources and that may be any of these types of categories of changes. Then when the change origin then the change request is submitted it must come the request of the change must come from the appropriate level or appropriate positions or the stakeholders.

Then review change request then the it goes to the approving authority either it is approved or it is disapproved. If it is approved then you go for update plan of record and distribution for an action if it is not approved it again goes back to the initiator. So, this is a simplification simple illustrative change control processes these are generally followed.

Then what are the benefits of change control system? If you have a change control system you this is then you know the inconsequential changes are generally discouraged because of small ad hocism and all those changes you have to discourage it those things are being discouraged in a formal change control process. Then it also all the changes and the cost associated with it must be entered in a log book.

So, you maintain the log book and maintain the cost of changes it is very it will be very handy and very useful in real life actual work. Then maintain integrity of the WBS work breakdown structure and performance measures these are generally maintained if you have a change control system. It also helps you to allocate and use of budget and management reserves fund helps you to tracking, tracking how the use of budget is going on and how the management reserve fund has been used. It helps you to allocation also and tracking also. Then also implementation responsibility is clarified.

So, you have who will implement and whose responsibility is it? It is clarified in the change control management control process. Then also it ensures a visibility of effect of change to all the parties or the stakeholders everyone is at a can see it that the effect of changes. These are then monitoring implementations of change. it also helps to monitor the implementing the change and also that scope changes are reflected in baseline and performance measures.

These are also captured. So, these are some of the benefits of change control system. This is a sample change request you can see that what it is say a request. So, the it says the who is the originator date and the change request the companies and all they have changed. Then you give a description of the requested change a short description is given. Then reasons for changes are also cited.

Then areas of impact of the proposed change. So, whether it is a scope change or schedule change, cost change, risk change these you are the you mentioned. Then disposition either you approve, approve as amended, disapprove all these. Then priority what this change will have what priority emergency, urgent or the low priority and the funding source it is also important whether this changes funding will come from will it come from management reserve, budget reserve or customers or others. So, and thus approvals the approvals of say project manager, project sponsor and project customer the client they also have to approve it these are very important.

This is a sample change request generally followed in real life. So, this is just a glimpse to you. Next is some common project risk the as you know the three are innumerable number of risks in a project. So, some common project risks are as follows accuracy of resource base, technology risk, construction challenges, partner and contractor risk this is

a very important. For the next slides and all we will give some examples, then estimation risk these are the pre completion risk.

Then there are some post completion risks these are the price risk, production and transportation risk, environment risk, geopolitical risk, stakeholder risk. Depending on the type of project these are these I am talking about is the big projects, big construction project for the plant and all the cases in the oil and gas industries. So, these are some micro economic risks like inflation, economic disruption, currency risk that is the exchange risk. So, these are some of the common risks the project managers generally are aware of it. Then as I told you in the last slide this is a very important risk that this, we generally partner this contractor risk.

This contractor risk I will explain in next slide say these are some of the contractors these disasters happened for due to the contractors did not do the job as per the book or as per the safety rules and all. So, these are the role of contractors in project execution. One of the things you must have heard that is the that is the blow out at British Petroleum some deep-water horizon drilling in the Gulf of Mexico which is called Malakand that blow out. This is that oil spill covering a surface area of 2500 square miles, the oil spill originated from a deep water well 1500 meter below sea level discharge an estimated 5 to 40000 barrels per day and BP that is British Petroleum had to had to give a huge penalty for the for this blow out. They have to pay to the though all those regulators' agencies US and all this was in Gulf of Mexico USA.

Can you guess how much BP has to pay? They had to pay for these 42 billion dollars and what was the reason for this blow out? It was the contractor was Halliburton, the contractor did not do and also contractor Halliburton gave it to subcontract to Transoceania which is the which is the largest offshore drilling company in the world. So, all these companies you know Halliburton, BP, British Petroleum, this Transoceanic and many other they are the leading companies in the world and they are the you know follows the best practices, but they did not do the cementing job the very following the rule. So, following the standard operating procedures and it happened so. So, here are some more contractor risk this blow out and these disasters happen due to the contractor risk. One is that fire at BHN platform complex that is our India's Bombay high north platform it happened in 2005 and whole platform was gutted 1200 crores of the cost of that platform which collects oil and gas from the sea and pumps it to the onshore and this sea these are around 160 kilometers away from the shore.

So, the and it happened due to the contractor's contract there are very flimsy reasons for the why this blows out this fire happened. So, it is very important that you also educate as a principal owner you educate the contractor and so that they are abide by the safety

rules and the risk contractor risk and all they should follow that is then this such operational risk may be averted. As I informed you at the beginning of this lecture that risk register is the backbone of the risk response control. Now, I will show you a real-life risk register that has been used by a large reputed organization. See this is the risk registers as you are seeing it.

So, title this is the dashboard this is a risk of one group. So, you can see it this is the is the risk register of that group say. So, risk what does it have? It has a risk mitigation plan responsibility these are the risk mitigation plan of that risk. Risk was the delay in implementation of strategic plan ok. These are the risk mitigation plan responsibilities that groups are responsible for and then the status target start date, target end date and so forth this is the summation.

So, risk treatment options this is important. what risk treatment options are there? So, here risk name say delay in implementation of 2030 strategic plan, risk description, risk appetite whether it risk minimizer, risk economizer or not. Then the root causes root causes of this risk you have to do then you give your likelihood 1 to 5 scale, impact 1 to 5 scale and consequences you these are the treatment options. Then what are the treatment options? Total timeline then risk mitigation plan this is the treatment. What is your risk mitigation plan for this risk? Then expected to complete by you have give a this has to be a time bound it will not be open ended.

So, this mitigation plan then what are by which date, which time period you will complete it. Then contingency plan then the current risk management. you these are the treatment options. So, then you can have many other things these are the registers. So, these are each worksheet size having different information.

This is this risk treatment option analysis very high risk causes of risk, consequence of the risk, current risk treatment practices, risk treatment of options, benefits of these qualitative as well as quantitative, cost of qualitative and quantitative recommendations and rational decision maker, who are the decision makers of this risk and the date that time has to be given. So, this is a called risk treatment option analysis. Similarly, these are the we have seen scales you have to risk registers also contain the impact scales. So, these we have discussed in the previous lectures. Then the guidelines the risk treatment guidelines are also given risk to your examples, mitigations these are the mitigations, impact scales are given, information's, risk categories these are the risk categories you give, definitions of the risk you also put it.

Then risk map you also put the risk map. this way you can you this is a real-life risk register is maintained by the company. So next, we will be going to the conclusion, what

we have done in this lecture. This session deals with the final step of risk management process that is risk response control that includes maintaining risk register, monitoring, triggering events for risk, watching for new risk, establishing change management control system, sources of change, benefits of change, control system and so on. The module also highlights some common project risk and contractor risk which may lead to catastrophic effect if not attended to or proper risk management system is not in place in an organization. These are some of the reference books that you must go through and enhance your knowledge further. Thank you very much for attending today's lecture.