Project Management

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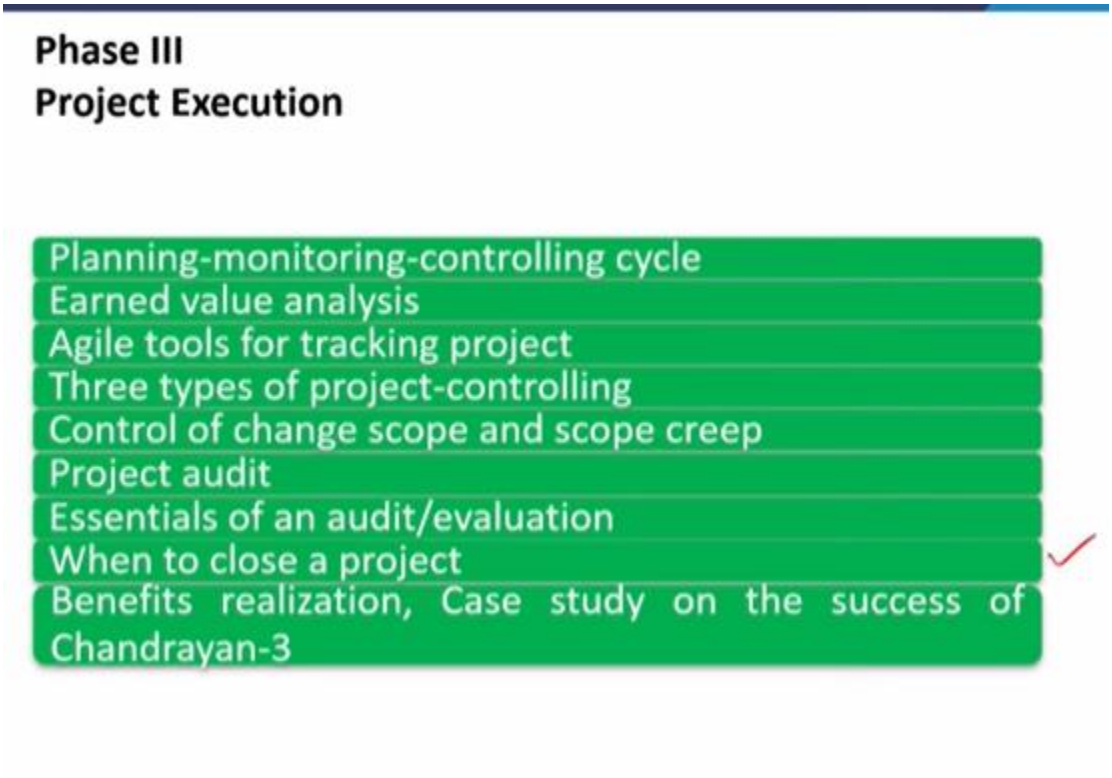
Week: 8

Lecture 36 - Benefits realization, Case study on the success of Chandrayan 3

Dear students, in this lecture we will discuss about project building. The benefit realization and one case study of the successful launching of Chandrayaan 3. So in Chandrayaan 3 there are many project management concept was used. We will discuss about what is the importance of project management for the launching of Chandrayaan 3 project. The previous class I was discussing about closing the project, when to close the project. Now we will discuss about the benefit realization.



Agenda

- Benefits Realization
- Phases in Benefits Realization
- Issues in Benefits Realization
- Tools used in Benefits Realization
- Importance of Benefits realization
- Afterword
- Project Management lessons from ISRO's Chandrayaan-3

urce: Meredith, J. R., Shafer, S. M., & Mantel Jr, S. J. (2017). *Project management: a strategic managerial approach*. John Wiley & Sons.

The agenda for this lecture is benefit realization of the project, then different phases in benefit realization, then what are the behavioral and implementation issues in benefit realization and tools used in benefit realization. Then we will discuss about importance of the benefit realization. So after the benefits has been realized then what to do next that is afterward. Then finally we will do a small case on project management lessons from ISRO's Chandrayaan 3 successful project.

Benefits Realization

- When the project execution effort has been completed, the project owner (PO), sponsor, and PM must close it out by seeing that the project personnel, equipment, and remaining resources are correctly transferred to their correct locations and uses.

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Benefits Realization

- If this was a project closure by addition, these resources may, in fact, stay with the project output, including possibly the personnel, for utilization within the organization.

First we will see benefit realization. When the project execution effort has been completed, the project owner, sponsor and the project manager must close it out by seeing that the project personal equipment and remaining resources are correctly transferred to their correct locations and uses. So before closing the project, because we have to see whether the resources including manpower which has borrowed from the parent organization has been transferred to other places or not. If this was a project closure by addition, just nothing but adding the project into the parent organization that is the meaning of closure by addition. These resources may in fact stay with the project output including possibility the personal for utilization within the organization.

Benefits Realization

- Nevertheless, there may still be
  - contractual and legal documents and payments that need to be completed
  - administrative affairs to attend to
  - final reports to be written

Benefits Realization

- Next, the official benefits realization stage begins for the PO.
- Benefit Realization is the tasks facing the project owner in order to achieve the benefits desired from the project.

Source: Meredith, J. R., Shafer, S. M., & Mantel Jr, S. J. (2017). *Project management: a strategic managerial approach*. John Wiley & Sons.

Nevertheless, there may be still be the contractual and legal documents and payments that need to be completed. Then administrative affairs has to be followed, then the final reports has to be written about project closure and project benefit realization. Next the official benefits realization stage begins for the project owner. So benefit realization is the task facing the project owner in order to achieve the benefit decide from the project. In other words, benefit realization refers to a method for identifying, defining, planning and monitoring benefits as associated with plans and processes.

Benefits Realization

- In other words, Benefit realization refers to a method for identifying, defining, planning and monitoring benefits as associated with plans and processes.
- The goal of this process is to ensure that the team fulfils all promised benefits after they have followed all due processes.
- It also includes the execution of these benefits.

So the meaning of benefit realization is whether our planned objective, whether our defined objective, whether our expected benefit has been realized or not. So the goal of this benefit realization process is to ensure that the team fulfills all promised benefits after they have followed all due process. It also includes the execution of these benefits. Of course, the project owner has been preparing for this stage throughout the execution of the project by working with the appropriate functional manager and other users of the project output. As noted earlier, the project owner may be the functional manager if the project

was intended for this function.

Benefits Realization

- Of course, the PO has been preparing for this stage throughout the execution of the project by working with the appropriate functional manager and other users of the project outputs.
- As noted earlier, the PO may be the functional manager if the project was intended for this function.

Phases in Benefits Realization

- Still, there probably are other users of the project outputs, either on a regular or on an intermittent basis.
- There are three primary phases to this final stage of the project.
- **The first phase** is the biggest and involves implementing the project's outputs as they were intended.

Still there probably are other users of the project output either on a regular or on a intermittent basis. There are three phases to this final stage of the project. Now we will discuss about these three phases. The first phase is the biggest and involves implementing the project's output as they were intended. The second phase is the handoff to the functional manager to ensure that the benefit obtained will continue to be realized.

Phases in Benefits Realization

- **The second phase** is the handoff to the functional manager to ensure that the benefits obtained will continue to be realized.
- The third phase is the routine use of the outputs, where the PO writes the benefits realization report for the funder and steering committee.

The third phase is the routine use of output where the project owner writes the benefit realization report for the funder and steering committee. Now we will discuss about some of the issues while realizing the benefits of the project. So implementing the proper use of the output is a difficult task. Even though the project has given many benefits, but implementing is a very difficult task. It is often the case that intended customers or users of the output do not want to change the procedure they have been using which are comfortable and routine.

Issues in Benefits Realization

- Implementing the proper use of the outputs is a difficult task.
- It is often the case that the intended customers/users of the outputs don't want to change the procedures they have been using, which are comfortable and routine.
- They don't take on the complex tasks of learning new procedures and risking the chance that they won't understand this new method
- This is commonly known as "**resistance**."

urce: Meredith, J. R., Shafer, S. M., & Mantel Jr, S. J. (2017). *Project management: a strategic managerial approach*. John Wiley & Sons.

So people may be comfortable the way they were working previously because of the project a new change has come, but some people may not be very comfortable to adapt to that change. They do not take on the complex task of learning new procedures and risking the chance that they would not understand this new method. This is commonly known as resistance. So whenever any change has come because of this successful implementation of the project, it is obvious that people will resistance for to accept that change. This is

especially the case if they have not been involved in the designing the new system or even been informed about the change until it was dumped on them.

Issues in Benefits Realization

- That is especially the case if they have not been involved in designing the new system or even been informed about the change until it was dumped on them.
- Another danger is that they will use the new system for a while and slowly revert to their previous system, which may have been less work.

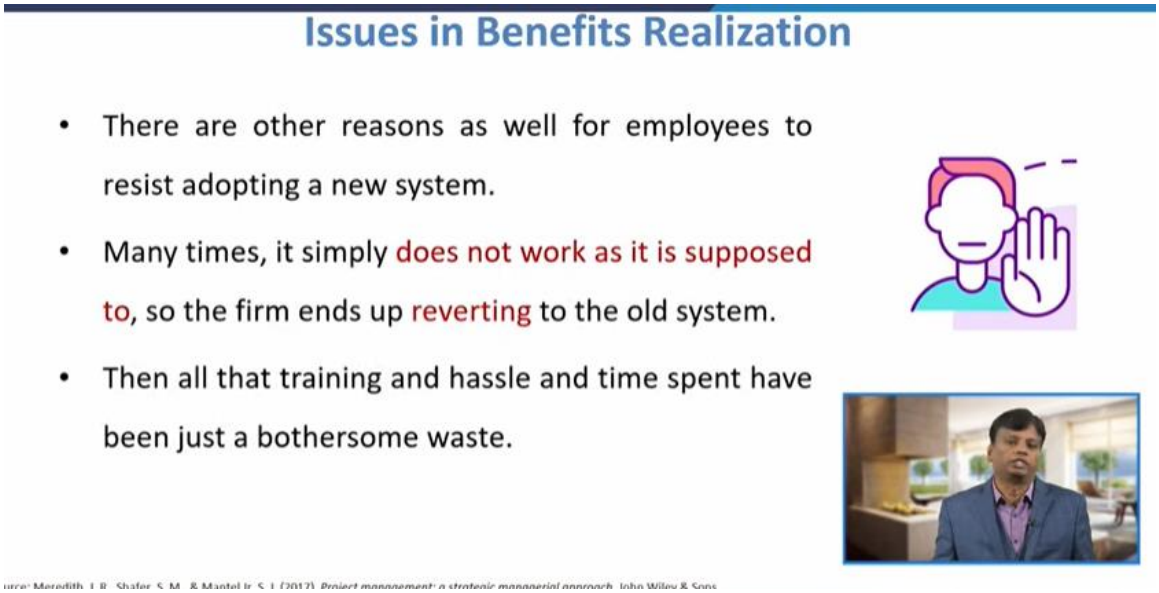
So why that resistance to change has come? Because at the conceptualization of the project, the users are not involved and even they are not informed about this change also. So when they say there is a sudden change, then there is a resistance from the users. Another danger is that they will use the new system for a while and slowly revert to their previous system which may have been less work. For few days, they may work on the new project and after implementing the project, then they will go back to the their original work. That is often the new system may be better overall for the company, but is more work for some employees because new system is providing more works, so they will prefer only the older system.

Issues in Benefits Realization

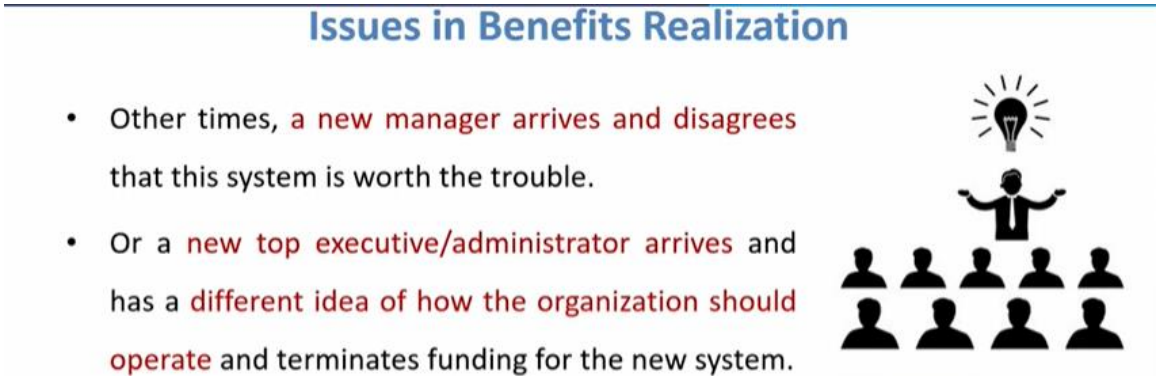
- That is, often a new system may be better overall for the company but is more work for some employees.
- All these behavioural issues are even more complicated if the new system involves complex and confusing technology for the employees, especially computers.

So all these behavioral issues are even more complicated if the new system involves complex and confusion technology for the employees, especially computers. So when we

implement the project, apart from the technical issues, what is more important is the behavioral issues. The behavior of the people who is going to use that project is more important. So not only this for the project when you design a new product also, the behavior of the customer who is going to use that product is more important. There are other reasons as well for employees to resist adopting a new system.



Many times, it simply does not work as it is supposed to. So the firm ends up reverting to the old system. We propose new project, but it was not properly working. So we will go back to the old system. Then all the training and hassle and the time spent have been just bothersome waste.



So whatever amount of time, cost we have spent everything becoming waste once you go back to your old way of working. Other times, a new manager arrives and disagrees that this system is worth the trouble. So when the new person comes that they may not like this project, they will say no, we will go back to the old one. Or the new top executive administrator arrives and has a different idea of how the organization should operate. So and terminate funding for the new system.

Issues in Benefits Realization

- The PO must initiate preparation for this stage well in advance of the project execution due to potential pitfalls.
- But the preparation may need to be adjusted as the project plan changes, which presents other problems for the PO.

So this also problem for working with the while implementing the project. So the project owner must initiate preparation for this stage well in advance of the project execution due to potential pitfall. So the responsibility of project owner is more important here, because he has to prepare if there is a resistance from the users, how it will be overcome. But the preparation may need to be adjusted as the project plan changes, which presents other problems for the project owner. For example, there is a possibility that the customer training may begin too early before the new system is fully operational and debugged.

Issues in Benefits Realization

- For example, there is the possibility that the customer training may begin too early before the new system is fully operational and debugged.
- Then, if the system has to be drastically changed, it is likely that the training will have to be redone as well, which tends to drive the users nuts!
- It is no wonder that their response is: "I'll start the training after you've figured out what the final system is going to be."

Obviously the project is not completed, but the customer training has been started. So what will happen? Then if the system has to be drastically changed, it is likely that the training will have to be redone as well, which tends to drive the users net. So what happened training has started, people have been trained for this project, but there is a major change in the project. So what you have to do the training has to be redone. So that is the very challenging task for the users.

Tools used in Benefits Realization

- As the PO prepares the customers to implement the new system, many tools are available, typically training.
- However, there may also be education classes, motivational events such as tours of other organisations that use a similar system, and other ways of engaging and motivating these intended users.

Source: Meredith, J. R., Shafer, S. M., & Mantel Jr, S. J. (2017). *Project management: a strategic managerial approach*. John Wiley & Sons.

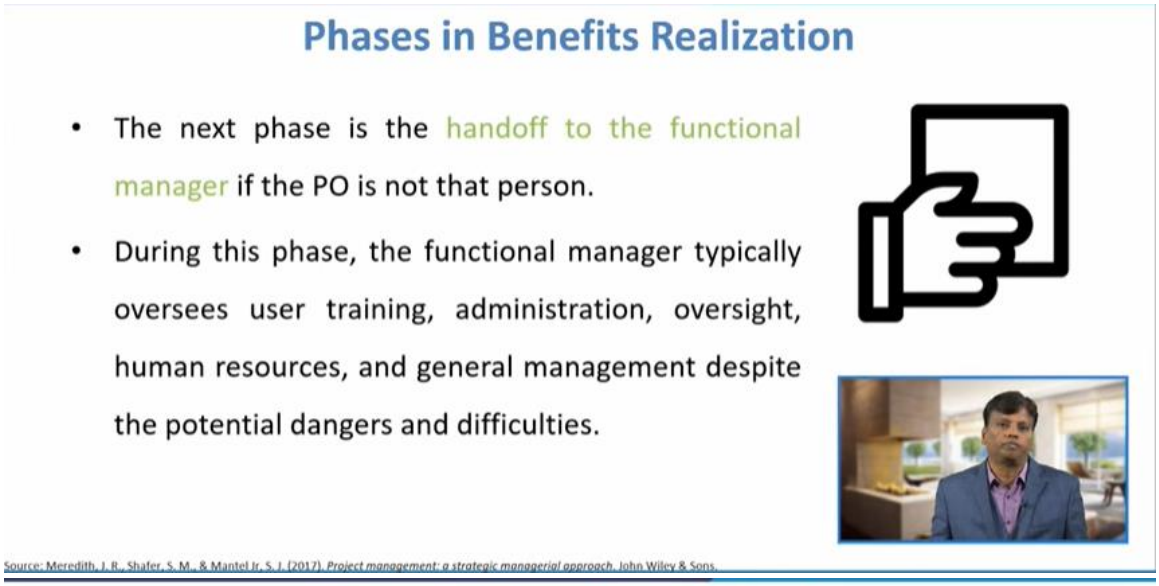
It is no wonder that their response is I will start the training after you have figured out what the final system is going to be. So they may start to say this way, I will take the training once the final product is ready. Now we will discuss about tools used in benefit realization. As the project owner prepares the customers to implement the new system, many tools are available typically training. However, there may be, there may also be education classes, motivated events such as tours of other organization that use the similar system and other ways of engaging and motivating these intended users.

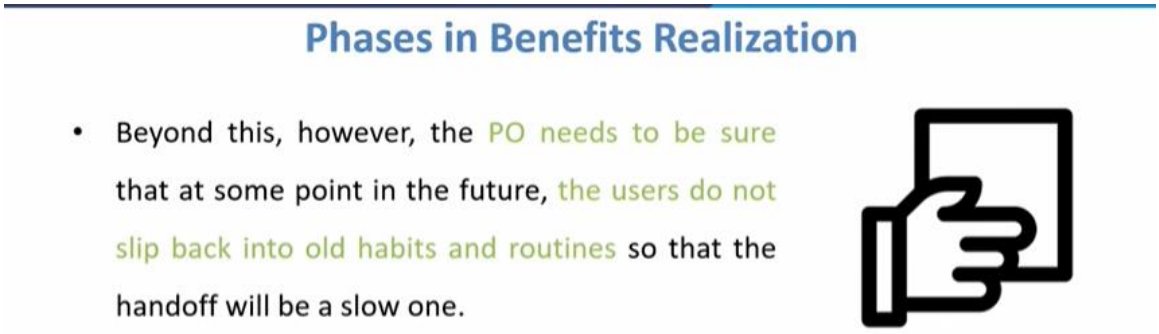
Tools used in Benefits Realization

- Beyond training in new procedures, though, there may also be new responsibilities for the customers or reorganizations of the workgroups or departments.
- All this adds to the headaches for the PO, so it is no wonder that it is so difficult to obtain the intended benefits from a "successfully completed" project.

So one way, one important tool for benefit realization is training to the new users. We can take that our employees to the other organization where there this kind of advanced methodology is used. We can keep on advertising, we can motivate them to use the new system. So beyond training in new procedures, though there may also be new responsibilities for the customers or reorganization of the work group or the department. All this adds to the headaches for the project owner.

So it is no wonder that it is also so difficult to obtain an intended benefits from a successfully completed project. So like this there are many problems for implementing the benefits of the projects. So it is a very challenging task for the project owner. The next phase is the handoff to the functional manager if the project owner is not the person. So during this phase, the functional manager typically oversees user training, administration, oversight, human resource and other general management despite the potential dangers and difficulties because now what happened to that the idea was given to the other person, to the functional manager because it is not to the project owner.





So there will be more challenges. Beyond this, however the project owner needs to be sure that some point in the future the user do not slip back into the old habit and routines so that the handoff will be a slow one. For example, it is familiar with the new technology implementation in manufacturing for the project owner to stay around until production reaches 80 percentage of utilization with the new system. It is also well recognized that when a new system is installed, the productivity is immediately dropped because it is not accepted by the employees. But the productivity slowly starts to rise back eventually returning to its previous level and then improving even further and gaining the benefit desired by the funder.

Phases in Benefits Realization

- For example, it is familiar with new technology implementations in manufacturing for the PO to stay around until production reaches 80 per cent utilisation with the new system.

Phases in Benefits Realization

- It is also well recognized that when a new system is installed, productivity is immediately dropped.
- But then productivity slowly starts to rise back up, eventually returning to its previous level, and then improving even further and gaining the benefits desired by the funder.

Phases in Benefits Realization

- And at some point in this last routine-use phase, the PO's job is complete.
- It may be when the system reaches 80 percent of the benefits expected, or more, or less, depending on the organization and situation.

So whenever the new system is introduced, obviously initially the productivity will be very low, then it will go back to the original level, then it goes beyond the previous level of our productivity. And at some point in this last routine use phase, the project owner's job is complete. It may be when the system reaches 80 percentage of the benefits expected or more or less depending on the organization and situation. However, at some point the project owner must be satisfied that the desired benefit will continue. Similarly, to the Sydney Australia Opera House, the worldwide familiarity and the administration of the structure took years after the completion to develop.

Phases in Benefits Realization

- However, at some point, the PO must be satisfied that the desired benefits will continue.
- Similarly to the Sydney, Australia Opera House, the worldwide familiarity and admiration of the structure took years after completion to develop.

Importance of Benefits realization

- It is highly important to a project's success as it provides organizations with the needed tools for success and progress.
- This success can be reflected in different forms, including:

Prevention of delays
Implementation of each promised benefit
Avoidance of simple and major errors
Fair consumption of resources
Efficient change management

ource: Meredith, J. R., Shafer, S. M., & Mantel Jr, S. J. (2017). *Project management: a strategic managerial approach*. John Wiley & Sons.

https://uk.indeed.com/career-advice/career-development/benefit-realisation

So initially there was no much response for that, but it took many years to become popular. Now we will discuss about the importance of benefit realization. It is highly important to a project's success as it provides organizations with needed tools for success and progress. This success can be reflected in different forms including the prevention of delays, implementation of each promised benefit, avoidance of simple and major error, fair conception of resources and efficient change management. So the output of the project will be reflected under these points like delay will be reduced, so implementation of each benefits, each promised benefits will be achieved, the error will be minimized, the resources will be properly utilized and the change management has took place in a proper and smooth way.

Afterword: Project Management practices and success

- A survey was conducted with responses from 142 active project managers.
- The frequency of use of each PMBOK project management practice was scored on a five-point scale (never, seldom, sometimes, frequently, always).

So after realizing the benefit, now we will discuss about project management best practices and success. So a survey was conducted, what was the, suppose we are talking about implementation of the project, what is most important project management activity that has helped to effectively implement the project. So for that purpose a survey was conducted with responses from 142 active project managers. So the frequency of use of each project management practice was scored on a 5 point scale like never, seldom, sometimes, frequent, always. So what you have done, a survey was conducted to know what management practices is more important for successful implementation of the project.

Afterword: Project Management practices and success

- The use of time management techniques was the highest, with a score of 4.03 for the average of seven time-related practices (project schedule and updates, baseline schedule, PERT/Gantt charts, activity lists, duration estimates, and updates).

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Afterword: Project Management practices and success

- Risk had the lowest average score with an average of 2.79 for the six related practices (risk management plan, contingency plan, risk register, quantitative risk analysis, register updates, and preplanned responses).

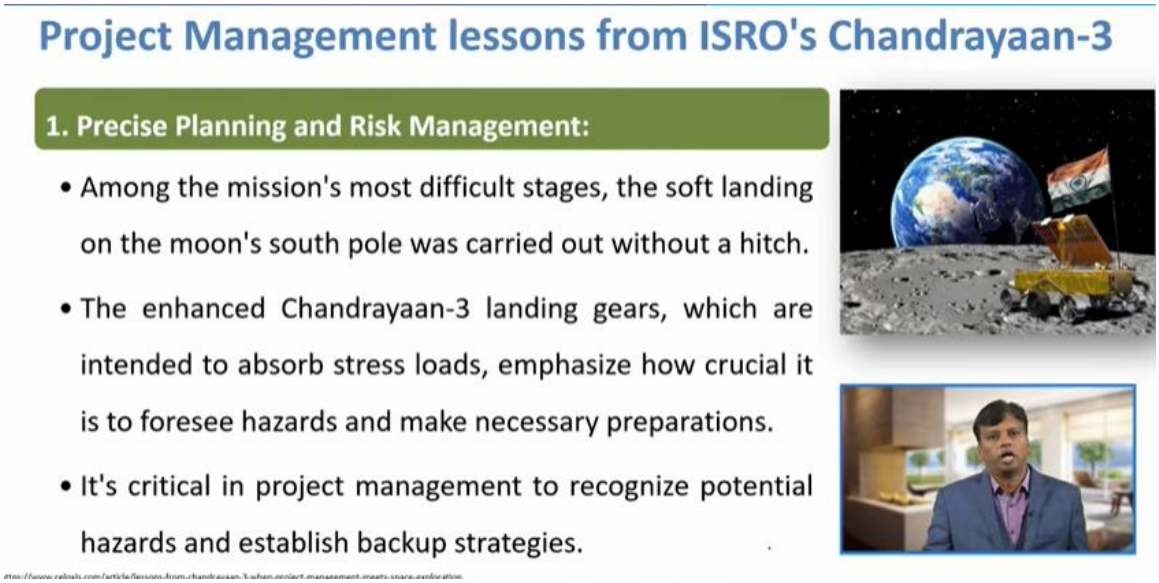
So the use of time management technique was the highest with a score of 4.03 for the average of 7 time related practices like project schedule, updates, baseline schedule, PERT, Gantt charts, activity list, duration estimates and updates. So what we are learning from here, out of many project management activities, so the time management is the most important factor for successful implementation of the project. So timely implementing the project, timely finishing the project is most important factor and the risk had the lowest average scores with the average of only 2.79 for the 6 related practices like risk management plan, contingency plan, risk register, quantitative risk analysis, register updates and pre-planned responses.

Project Management lessons from ISRO's Chandrayaan-3

- India became the fourth nation to accomplish a soft lunar landing when the Indian Space Research Organization (ISRO) succeeded in making history by landing on the moon's dark side.
- India's space technology advancements offer a blueprint for other nations and public and private organizations to explore the ultimate frontier.
- As project managers, what are the lessons that we can learn?

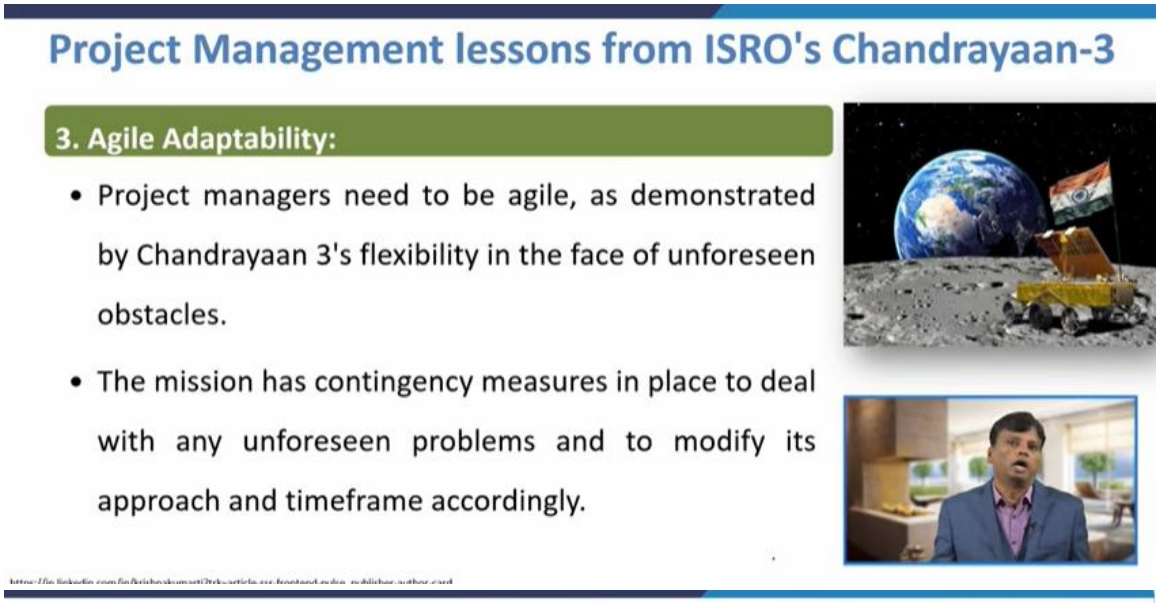
So the first important factor is time management, the least important is the risk. Now we will discuss about the project management lessons from ISRO's Chandrayaan 3 successful project. So India become the fourth nation to accomplish a soft lunar landing when the Indian Space Research Organization ISRO succeeded in making history by landing on the

moon's dark side. India's space technology advancement offer a blueprint for other nations and public and private organization to explore the ultimate frontier. As a project manager, what are the lessons we can learn from the successful project? The first lesson is practice planning and risk management.

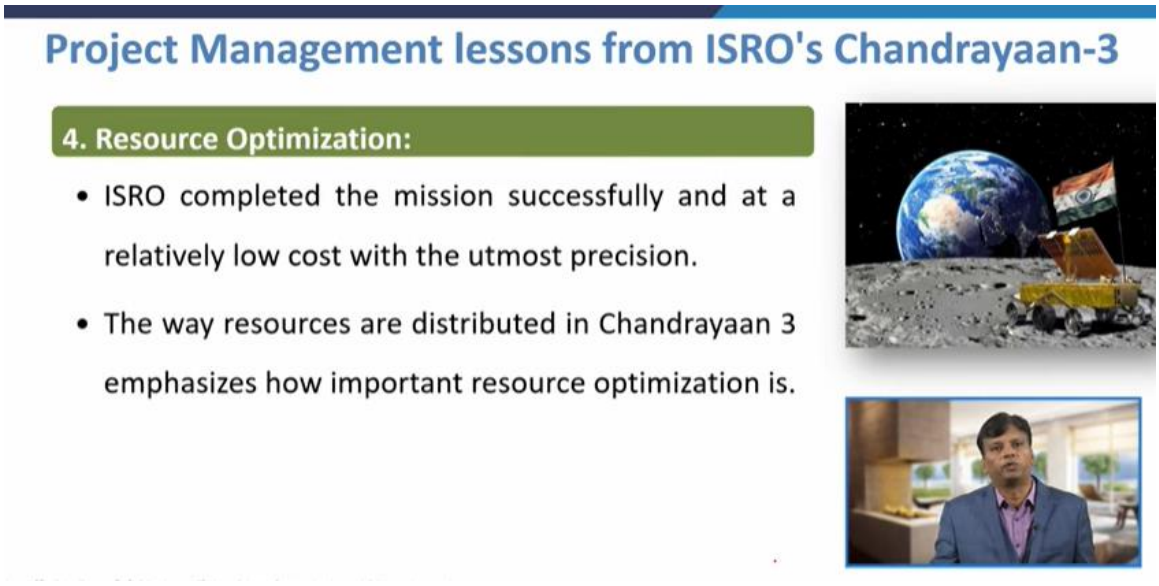


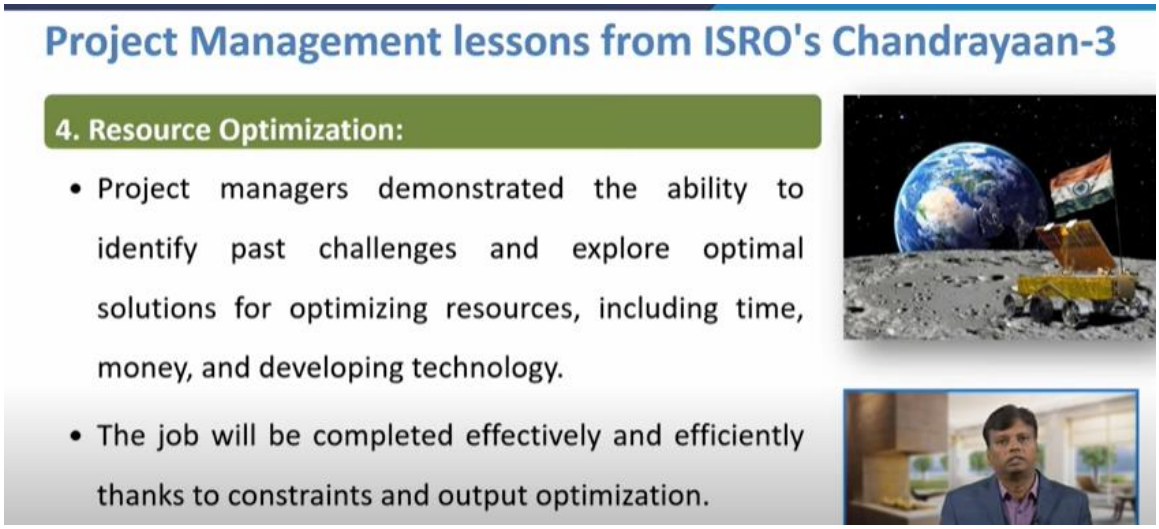
Among the missions most difficult stage, the soft landing on the moon's south pole was carried out without a hitch. So the enhanced Chandrayaan 3's landing gears which are intended to absorb stress loads emphasize how crucial it is to foresee hazards and make necessary preparation. It is critical in project management to recognize potential hazards and establish backup strategies because at the time of landing so many backup strategies, redundant backup strategies was adopted whether the landing place is the plane or it is a slope or it is a very sandy or whether it is hot, whether it is cold, all the conditions were taken care. The second learning is cross functional collaboration of teams. So in space exploration, people from various professions work together to achieve a common goal.

In our project management also we studied importance of cross functional teams. So this cross functional collaboration strengthens the team's unity and focus on a single objective. So team communication, teamwork and a common understanding of the goals are necessary for team members and stakeholders to coordinate with the ease. So this is the second learning from the Chandrayaan 3 project.



The third learning is agile adaptability. Project managers need to be agile as demonstrated by Chandrayaan3's flexibility in the face of unforeseen obstacles. The mission has contingency measures in place to deal with any unforeseen problems and so modify its approach and timeframe accordingly. The project's leaders demonstrated adaptability, quick change of course and skill in transforming challenges into opportunities despite volatile conditions. The fourth learning is resource optimization. ISRO completed the mission successfully and at a relatively low cost with utmost precision.





The way resources are distributed in Chandrayaan 3 emphasize how important resource optimization is. Project managers demonstrated the ability to identify past challenges and explore optimal solutions for optimizing resources including time, money and developing technology. The job will be completed effectively and efficiently thanks to constraints and output optimization. The fourth lesson, project management lesson from Chandrayaan 3 is leadership amidst uncertainty. The problematic parts of Chandrayaan 3 highlight the value of maintaining the course in the face of uncertainty.

Project Management lessons from ISRO's Chandrayaan-3

5. Leadership Amidst Uncertainty:

- The problematic parts of Chandrayaan 3 highlight the value of maintaining the course in the face of uncertainty.
- Project managers must be adept at giving their team members guidance, clarity, and comfort while instilling confidence and a sense of purpose—even in trying circumstances.

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Project managers must be adapt giving their team members guidance, clarity and comfort while instilling confidence and a sense of purpose even in trying circumstances. The next learning is power of persistence. While the second mission faced its challenges, ISRO's determination to forge ahead is a testament to the importance of persistence in project management. Every setback is an opportunity to learn, adapt and come back stronger. The next learning is learning and adaptation from past experiences.

Project Management lessons from ISRO's Chandrayaan-3

6. The Power of Persistence

- While the second mission faced its challenges, ISRO's determination to forge ahead is a testament to the importance of persistence in project management.
- Every setback is an opportunity to learn, adapt, and come back stronger.

https://www.celoxis.com/article/lessons-from-chandrayaan-3-when-project-management-meets-space-exploration

Project Management lessons from ISRO's Chandrayaan-3

7. Learning and Adapting from Past Experiences

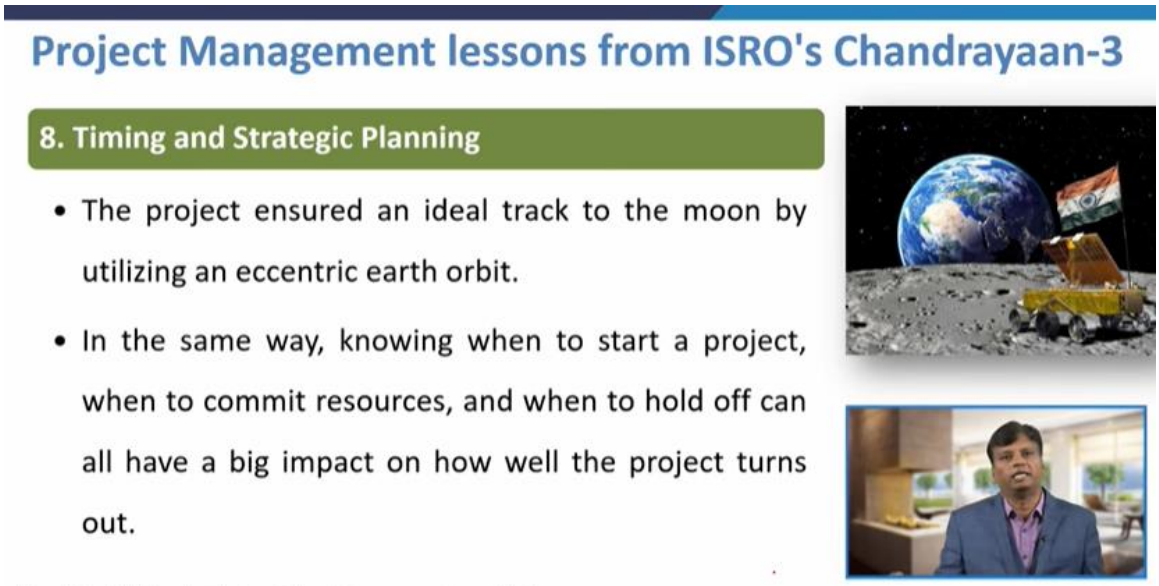
- Effective project management is characterized by its capacity to draw lessons from past mistakes.
- The success of Chandrayaan-3 was based on the knowledge gained from Chandrayaan-2.

Effective project management is characterized by its capacity to draw lessons from the past mistakes. This also we discussed about at a time of project closing and project controlling. The success of Chandrayaan 3 was based on the knowledge gained from Chandrayaan 2. The Chandrayaan 2 orbits data was essential in rising the mission success rate. Continuous improvement depends on their iterative process in which each project build on the lessons learned from that came before it.

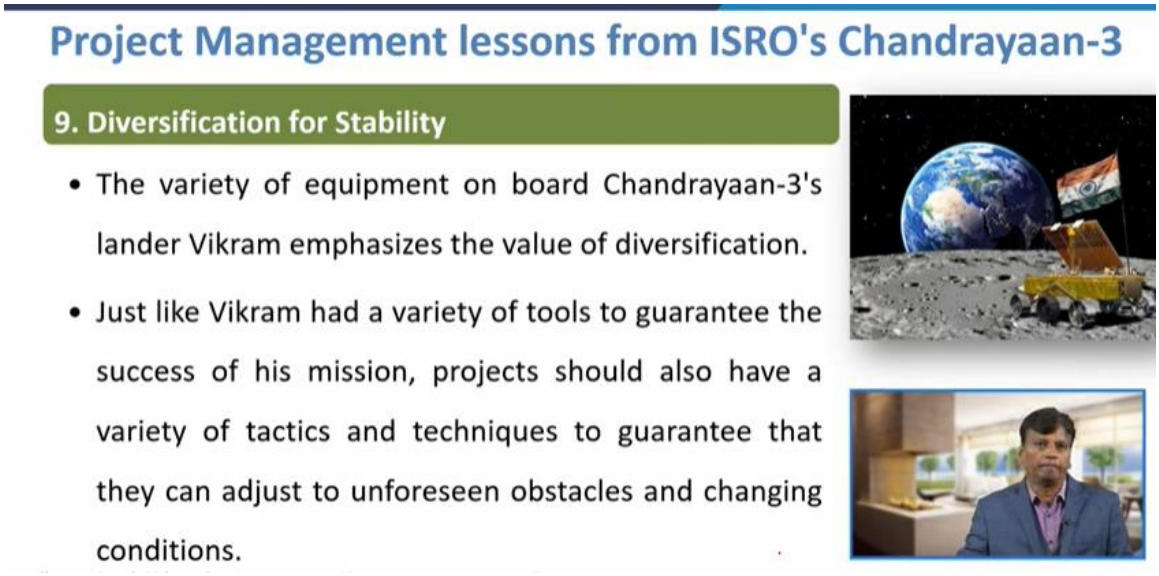
Project Management lessons from ISRO's Chandrayaan-3

7. Learning and Adapting from Past Experiences

- The Chandrayaan-2 orbiter's data was essential in raising the mission's success rate.
- Continuous improvement depends on this iterative process, in which each project builds on the lessons learned from the ones that came before it.



The next learning is timing and strategic planning. The project ensured an ideal track to the moon by utilizing eccentric earth orbit. In the same way, knowing when to start a project, when to commit resources and when to hold off can all have a big impact on how well the project turns out. The next learning is diversification for stability. The variety of equipment on board Chandrayaan 3's Lander Vikram emphasize that the value of diversification. Just like Vikram had a variety of tools to guarantee the success of this mission, the project should also have a variety of tactics and techniques to guarantee that they can adjust to unforeseen obstacles and changing conditions.



Project Management lessons from ISRO's Chandrayaan-3

- The journey of Chandrayaan-3 to the south pole of the moon is not only an amazing tale of space exploration but also a project management masterpiece.
- It illustrates the genius of project management that enables such missions by providing lessons in tenacity, flexibility, risk management, and strategic planning.

https://www.celoxis.com/article/lessons-from-chandrayaan-3-when-project-management-meets-space-exploration

The journey of Chandrayaan 3 to the south pole of the moon is not only an amazing tale of space exploration, but also a project management masterpiece. It illustrates the genius of project management that enables such missions by providing lesson in tenacity, flexibility, risk management and strategic planning. Now, we will discuss about the final takeaway from this Chandrayaan 3 project. The important takeaway is the budget. The budget of Chandrayaan 3 was relatively low when compared to the other countries lunar project.

Takeaways

- Budget
- Matrix organization
- Planning
- Simulation
- Risk analysis
- Time constraints
- Uncertain weather conditions in Moon

ce: Meredith, J. R., Shafer, S. M., & Mantel Jr, S. J. (2017). *Project management: a strategic managerial approach*. John Wiley & Sons.

And the second thing is optimal resource manpower utilization. They followed matrix organization type. In our previous lecture, we discussed about different types of organization structure, functional, projectized and matrix, then composite also. Then the planning, as soon as the Chandrayaan 2 was not successful, the next three months for Chandrayaan 3 is complete planning and identifying what was wrong with the previous project that is Chandrayaan 2. And so many simulation activities have been conducted to see all scenarios in the moon.

So different risk analysis tools was used, because it was learned from our previous failures, that is our Chandrayaan 2. We studied about various risk analysis tools in this topic, in this subject also. We studied about failure mode and effect analysis. We studied about decision tree.

We studied about simulations for doing risk analysis. So all these tools was used for this project also. The next one is unique constraint is a time constraint, because landing on the right time, because it is only 14 days, after 14 days, there will not be any sunlight in the moon. So landing on the right time is more important. So the project was backward scheduled by fixing the landing time. The other important challenge for this project is uncertain weather conditions in the moon, because there is a high, very high temperature, the same time it is a very low temperature also.

So they have considered all these uncertain weather conditions. So at finally, the project management techniques has played very crucial and important role for the success of Chandrayaan 3. Dear students, in this class, I have discussed about the benefit realization, then discussed about various phases in the benefit realization. Later I have discussed about tools used in benefit realization, then discussed about importance of benefit realization. So after benefit realization, what is to be done that also we studied. And finally, I have explained the project management lessons from success of Chandrayaan 3. Thank you. Thank you.