Project Planning & Control

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Lecture - 02

Objectives of a project, scientific way of Managing of Objectives

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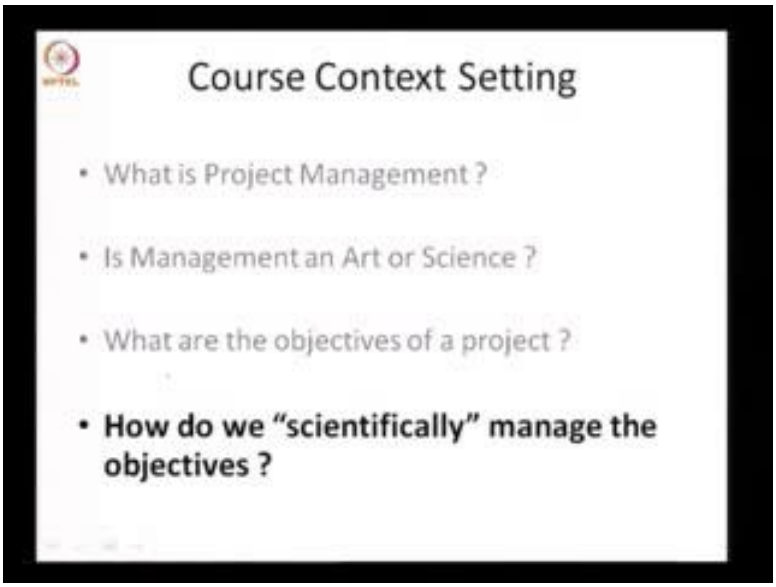

Now, we have taken these two questions. Now, we come to the third question. So, when we are looking at the science of something, we need to be able to understand our goal. So, we take a project, and we say; okay we decide, we defined what a project as we said; project needs more science. Project management needs more science. One of the scientific approaches is to know your goal and work your way towards your goal. So, what are the goals of project management? What are the objectives of the project? What is a project do?

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So, let us take, put up an image here to help you. Let us say so; this is an apartment complex. Let us say you are getting a customer or as let us say either as an engineer or as a customer you want this; you are going to invest in this; you are going to be part of this. What are the objectives?

Student: completion (refer time: 01:07)

Completion, yes.

Student: Within what time? Stipulated (refer time: 01:10)

So, time, cost, quality.

Student: completion, safety.

What do you mean by safety?

Student: So, the structure should be able to (refer time: 01:27)

Right

So, there is safety; you do not want to collapse it. There is one thing about the safety of the structure itself and the safety of it being constructed. So, when it was constructed, You want to make sure that you are not living in a place which took many people; you got many people injured or some there are. So, from a construction point of view, safety is important. Anything else?

Student: Completion is also important.

Completion, but all these we are assuming; at completion, you should have met the time deadline; you should have met cost expectation and quality, safety.

Student: Environmental

Yes, environmental consideration. Today that has become very important. So, typically, these are the objectives of a project. There might be other objectives; for example, they say good team building. You know project's specific objectives are also there. You know if it is a social cause, you might say if the project is from a social perspective; you have social upliftment; that there are other things which can come. The next issue which we want to discuss is what you think as the priority today?. So, these are objectives.

Student: Constant time, cost and cost management (refer time: 02:50).

Is it cost? You know, is this the priority or is this the priority?

Student: some like roads and this is time (refer time: 03:14).

Right. So, there are certainly many projects now. You are saying cost and time; can we compromise on quality?

Student: No.

So, we are assuming this is cost and time, given acceptable quality. We will not accept a very shoddy place immaterial of cost and time. Accept, we are saying quality should be acceptable. So, what we are saying is basically right; there is, it certainly used to be cost plus time earlier on, especially, in the Indian context if you go back 20-30 years, people did not put so much importance to time; cost was all encompassed. Now today, you know that I mean time has become, almost in the most project, has become a high priority. You take Chennai metro. Yes, I mean time; people are looking at the deadline. The whole public is looking when it is going to be opened. There are other projects, which were started and gone on for nearly 25 years before it was opened, and it did not matter those days, but today, you cannot have Chennai Metro go on for ten years; it has to open, start open and so, time is a priority. Now, with such a priority that the owners, the contractors, especially, the owners are willing to pay more to finish on time; why?

Student: Depend on the importance of constructed facility.

Yes, anything else?

Student: They finishes early; the cost, the money were getting might result in a better profit

(refer time: 04:53).

Exactly. So, when you look at the project's life cycle; when you finish early and you get, you start generating income from the project, you actually make up whatever money you spent in the construction phase. So, if you look ultimately, from a corporate standpoint, all businesses are in the business of making money, if you are looking specially, from a private perspective. It becomes, all these get related to cost or profit. So, I would put cost or profit; all of them, even putting environment safety; everything gets related to this. This is from a business sense point of view. So, for example, today, time is important, because take the real estate; land value is so high. If I finish a project earlier and start getting rent out of it, I mean, I offset any kind of acceleration cost of my construction very quickly, and that construction phase is only two odd years or three years max; my income phase is so many more years. So, this is the reason today, the time has become very important. Let us say the quality is something we are taking care. Why is a safety not so important today in our context?

Student: (refer time: 06:16).

One is this, people perceive this additional cost. Two is yes; there are very good standards in the country, but you know, there is little enforcement, and also, people do not pay for poor safety. So, in a lot of the developed countries, people started implementing safety only because if there was a safety violation, it really affected your modern work. Similarly, the environment is very new. We are not even sure what are the policies where the environment things are getting only clear now, but again, if you make, say today for example; the green building is a very popular concept; why?

Student: (refer time: 06:59).

Is that why it so popular? Is that the only reason why it is popular?

Student: Sir, it actually energy efficient, basically.

One is it is energy efficient.

Student: Materiel efficient.

Material-efficient, all of that is there, but it is also that people build a green building, because more people will want to buy a green, will invest in a green building. So, it really comes out to business requirement. So, we now move on to the fourth question. So, we understood what the objectives of our project are, and we now on to combine Actually, the second question and the third question and say, how do we scientifically, manage these objectives.

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So, we went to cost; you know, how do we scientifically manage cost? How do we scientifically manage time? How do we scientifically manage quality, safety, and environment? If you go back, you know, even these two decades, the answers to this would be each company would have a different practice. It would not be what; there is no standardized method. If you ask me today, how do design a reinforced concrete building, what would, how would you answer me? What would you refer me to?

Student: Code (refer time: 08:20).

Prof: You will say IS 456; has the reasonable way of, we follow the practice there. I can get you know, most kind of standard buildings I can do, and this is also being the approach to scientifically, approach these project objectives, which is the establishment of standards for scientific management.

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You have seen; I have actually put so, one of the pioneering standards was the project management body of knowledge, PMBOK, released by PMI. Now, the ISO standards which are very popular; the ISO also now got a standard for project management; it is ISO 21500 guide to project management, very similar to the PMI standard. The Indian standard has also got a guide for project management, 15883, very and so, these standards are fair quite closely related. If you actually go into these standards, you will find; I have kind of given a broad outline. We will find there are sections on integration, scope, time, cost, quality, human resources, communication, risk, procurement, stakeholders, health, safety and environment, other management issues; all of these you can see some of the objectives, which we explicitly define. Time, cost, quality, and then, when you look at health and safety, and environment; all of these are there.

These other parts; for example, without human resource development, you cannot achieve these objectives. So, the other parts of it are supporting processes, which help us achieve these objectives. So, this is actually what you call a process standard, which is that if you do things right, the results will be correct. It is not a product standard saying that or this is what I expect out of the product. It is a process standard. Now, this is also supported by; we are familiar with this standard. You heard of it; right, what does it do? 9001 for quality; it is a quality management system standard; 14001, environmental standard; 18001, occupational health and safety. So, what you find today is there are scientific ways to approach this. There are standards; there are if you get into the standards today, and this is a start; these are only of you know, about a few years old, but this is put things into a standardized form.

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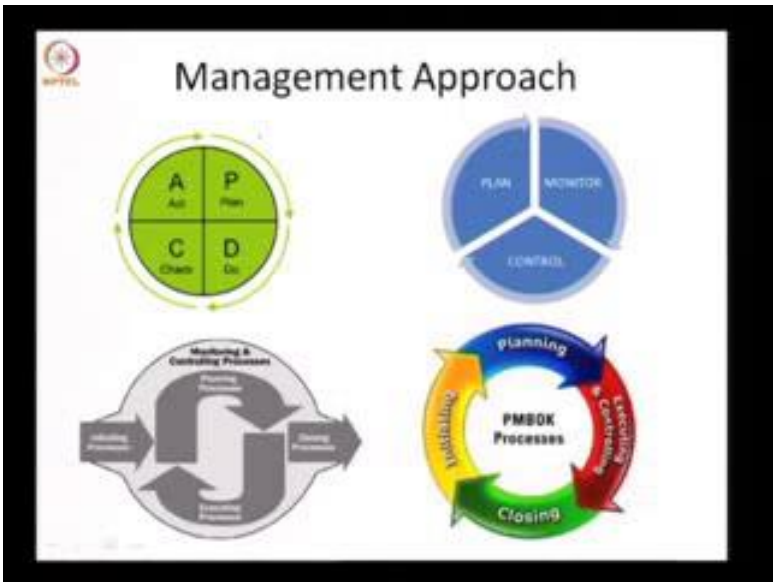

This is a really strong step. Now, when we talk about the process approach and management approach is this process. So, when you get into a process, this is the way you look at it. So, almost all of this is similar in its philosophical concept. Basically, this is a very very popular cycle called Deming cycle or the Shewhart cycle; call plan, do check, act. You will find that most of this course or almost all of the concepts we cover in this course, has to follow this cycle. So, you plan something; you do what you are planning. Will what you do exactly, as per your plan? Almost always no. Then you check; you kind of take action as to what corrections you need to make, replan and do again. So, this is called the plan, do check, act, and you will find a simpler version of this is plan, monitor, and control.

So, you plan what you want to do; let us say plan what you know, for the next month; monitor how you are progressing on the work. If you do not, if you are not able to keep the plan, apply control to be able to try to change so that, you were adhering to the plan as much as possible. Another same thing again; plan, execute and control; closing and then say initiate. Actually, I should start with initiating, planning, executing and controlling, closing. So, this is a PMI cycle. So, if you look at that from another perspective, the initiating processes; you have planning, executing and then, the monitoring and control is the larger cycle in this whole process and then, you have closing. So, what I want you to take away from this is that the whole so, what is the title of this close?

Student: (refer time: 13:16) control.

Prof: Control. So, this is the philosophy; we are not putting monitoring in that because it

makes a title tool lock; that you basically need to plan, monitor, and control. This is the cycling; only if this cycle is well placed, then the whole project will proceed with; this is the philosophy, with which we take the project forward.