Project Planning & Control

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Lecture - 47

Project Control Process, Daily Progress Report, Macro Level Update-Data Need, Standard Progress Reports

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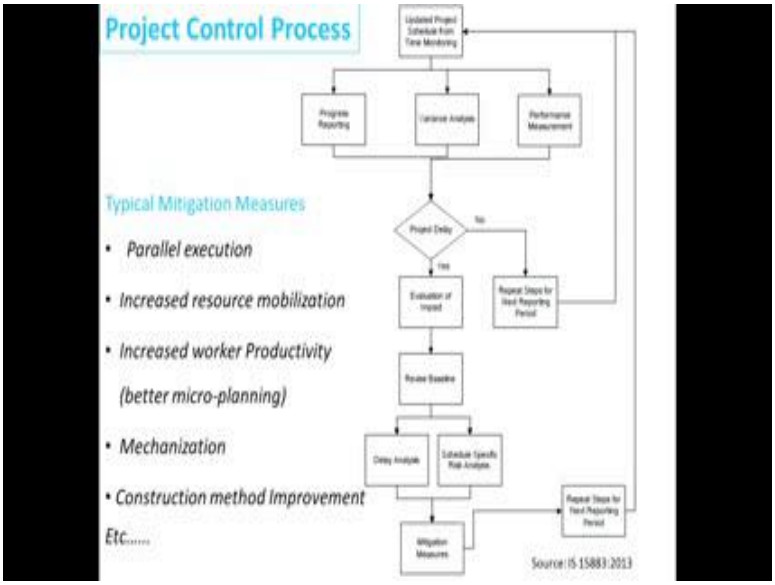

Now we go to.. what we are taking from the BIS code, and this is the project control process. So, here you can see that we can.. we have the..we have the updated project schedule from time monitoring. So, we have done the monitoring we have the updated project schedule, and we have the progress reports, we have variance analysis and we have performance measurements. So, all this is there and then we have to decide, is the project delayed or not? The project is not delayed, then this no problem; we repeat next steps to the next reporting period, so we go back to the next reporting period. If the project is delayed, we have to evaluate the impact of the delay, we might have the revise the baseline, like I discussed if there is delay due to several reasons and client not giving materials or drawings or some other kind of reasons, you might have a revise a baseline and get a new agreement as to where the project is going.

And this gets then based on the analysis of the delays or a risk analysis, and based on this we need to mitigation measures, and again try to get the project back on track as much as

possible through the mitigation measures. And typical mitigation measures we discuss some of this in the crashing modules in a weekend executive activities parallelly, we can in increase resources. So, that things, the production level increases which is very common to use, ideally we should increase worker productivity through better planning or better micro planning this would be the ideal ways, you are getting, more value out of the work done, in the given time or we can do mechanization, methods improvement, there are several mitigation measures which we will use to try to catch up with any lost time, or some kind of catch up planning.

And a lot of this, so while we would like to discuss control from a classroom perspective, a lot of this will be project dependent, case dependent, a site condition dependent. So, I think we should appreciate the need for control and in concept what control does, but further than this, we will not be discussing the control measures as far as this section is concerned.

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So, now coming back to monitoring in another earliest lessons, you should see something which we call the daily progress report. So, the DPR is the daily progress report provides a key input for updating the project. So, here we can see that the daily progress report is actually something that is coming out of the micro-schedule. If you go to the earlier slide you will see the DPR is coming out of the micro-schedule, and it provides updated data from the work phase, updated data from the work phase. So, this is what is filled by the team at the work phase and this micro-schedule you can see in the background I have some forms, it typically should be done on a paper form, by in the form and supervisor,

they would fill out; it's kind of a diary of the project. What happened? How much of the work was done? How many people was deployed? What is the equipment deployed? All this is entered by the field team.

And like we said, the detailed diary of progress and several other attributes are entered in this DPR. If you go on to the web, you will find there are several formats available for the daily progress report, but we have found usually company specific and typically based on spreadsheets, but that is a good place for.. good way to do the DPR, as far as if the company is basically with the kind of data, and they can use at to update and monitor at the schedule. And today what we find this while more and more from papers moving into digital form. So, the DPR collection itself is getting at a digital form which has become very beneficial, because only if you are able to update these things is accurately and quickly will we be able to do the monitoring properly.

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So, here are in typically you can see know tablets are being used on site to be able to capture data.

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And you have for example, as screen here from one of the systems we are familiar with. So, you have different activities, you have different activities is excavation stub setting pit, and update here is giving the percentage complete, this is 0, this is 80 percent of that particular activity. So, you have different percentages complete, if some reasons there is a delay, the person entering data can enter the delay reason here, you can enter other comments here. You can actually see typical delay reasons also are popped up, and you can say the labour shortage, that is the problem, there are weather problems and all these data can be captured from the field and they really become the basis of your monitoring data.

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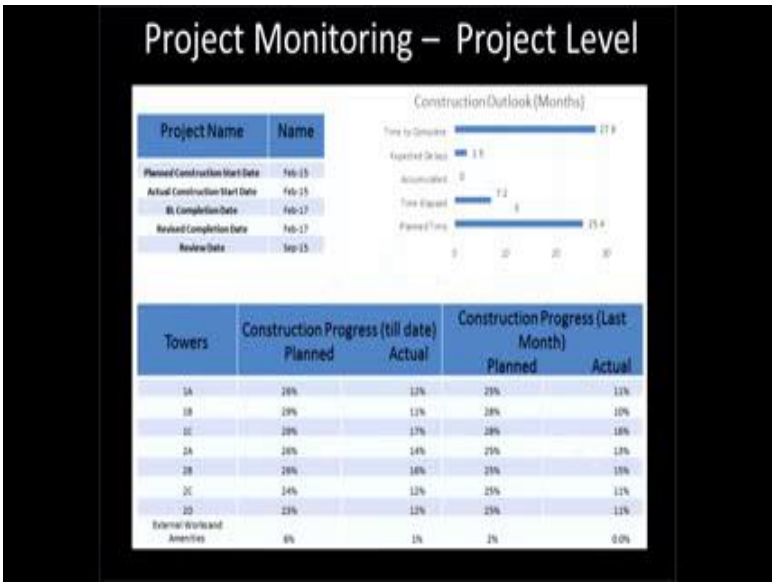

Now, this data then makes its way from the field level to a project level, and you can use it a project monitoring. You can see that you look at, basically the construction outlook here, looking at the various issues: expected delays, how much is the delay accumulated time elapsed, planned time or the this is basically the project details.

So, here we have other information the project levels here. So, it looks like residential projects with several towers, and for each tower, the planned percentage complete is given and the actual percentage complete at this monitoring time. So, you can see most of it looks like it's behind. So, this percentage complete is something which we are going to deal with later, it's a very, very important topic when we going to deal with that, towards the end of the lecture. And you can see this is construction, between last month and this month we can see where the progress is, and all of this kind of information can be done, and this is the part of the monitoring.

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We can, also at the project level get other kinds of information, like how is mechanical doing, how is architectural doing. I mean the architectural, mechanical, electrical; the various trades, what are the issues, how are things going, budget versus purchase order variations for civil structure, plumbing, interiors, so you can see these dashboards will give the project management team. A lot of information as to in a what is going right, what is not going right, and enough information to be able to nowhere to focus around to for control actions.

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So, from the project level, we can then actually go to the regional level. So, this same data now flows up to the regional level, and here you can see probably the regional managers not looking at a particular project, but he is looking at several projects. He is not interested in the micro level detail now or even in the network; he wants to know what is happening to the portfolio of projects, and how are the projects doing in terms of overall percentage complete. So, he is looking at broad milestones and trying to compare with the various milestones is to what is happening. And this particular system you can capture photos on what is happening? So, that if also at very visual.

So, with this, I hope you are got an idea of different levels at which a project can be a monitor and all levels are important, but without a doubt, the most detail level of DPR is where the data comes from. So, if the DPR and subsequent field data are not entered probably; obviously, the remaining levels have no meaning, it will only be guess work or kind opinions. So, the DPR and the field level data really is a very, very important part of monitoring.

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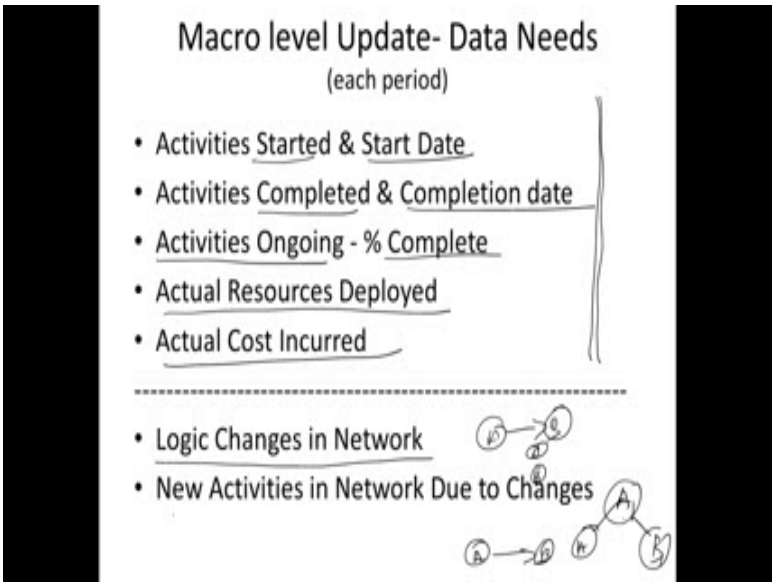

And that has really been sometimes a problem at in projects because the field level data is not very ((Refer Time: 08:43)) accurately captured, and we will see some issues in being able to capture field data accurately. Again to what we talked about the macro schedule, we are not talking about the DPR here, we talking at the macro level, at the network level, remember we want we have things like early start, early finish, late start, late finish; all other things are what came out a network planning. So, we would we want to do an update we really want to know, the activities which started, the start date the activities completed the completion date of the activities, activities which are ongoing, the percentage complete of the activities which are ongoing, the resources deployed versus resources planned, actual cost incurred. So, all of this data would be what we would want from to monitor the progress of the project from the macro perspective, we need to be able to a capturing and entered this data.

Now most of these data assume that my network is a same, and I am only making progress based on the existing the topological of the network, but in many projects in a network itself is going to a change. So, we can have logic changes in the network; that means, might be I did finish-start relationship between two activities, but because of some reason they decided the construction method is going to a change, and it is not going to be a finish start this way, but they want to do accelerate and they decided that both are going to start at the same time through some method or means.

So, now a network logic can changed or I had activity A and B, but due to the client wanting to me to include something, now I have to do activity A1 and B. So, the new

activity might have be introduced in the network. So, these kinds of changes actually cause change, cause a network itself to change. This really makes the schedule updating and monitoring quite a challenge, especially if the network is also going to change and how much you plan in detail during the planning phase, there are always going to be changes that will come up during the construction phase, during the execution phase. So, you have to be prepared for these changes also. And the management of this change is critical to the successful planning and monitoring function. So, as we go forward, we will not be dealing too much with the network change, because of this beyond the scope of this course, but please remember this is an important issue and as a professional planner you will have to deal with how the network changes are also going to be handled. We will mostly deal with assuming the network what we planned is still valid, but the progress on the network can have variations.

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So, once we actually enter the data what typically a planning group will do is, they will have project review meeting. So, you can see for example here is a typically example of the project review meeting, where all the subcontractors, the general contractors, might be the consultant will sit across the table and start discussing, what is going right, what is going wrong, how to coordinate, what are the resource issues, what are the procurement issues, are things on site when they needed or are they still in the process of being delivered, are they design issues, are the drawings available, do the drawings have errors, are drawings clear, all of these kind of issues will be discussed; coordination between subcontractors extremely important; you might you might recall we discussed how the

float and early start, early finish, late start, late finish information can be used to schedule subcontractors.

Items such as these are discussed review to make sure that the whole project team works in a coordinate at a manner. And finally, based on this the client will also get the updated, and the update the client will then say whether the client will then have his review as to what is happening and the project and if any interventions are required to bring about any changes as based on the progress.

Now I also put in some screenshots here of typical report. So, this is from the report section of Microsoft Project. So, you can see there are reports on critical tasks, late, milestone reports, or in a burn down on activities, cost overview, project overview, upcoming tasks, cash flow reports, overruns, earned value, resource cost all of these kinds of reports, over allocated resources, resource overview; all these kinds of reports are available in professional planning software, and more and more the teams rely on these reports or even custom reports. So, you can even have things like a develop a new report or a custom report, which will give what your particular team is familiar with or want to track.

So, this also is a really important part, being able to generate a review, and discuss these reports really form an important part of how a project progresses, especially from a monitoring and controlling perspective.