



### PP02 Progress Records and Reporting.

In the previous article in this series, I reviewed the submittal and acceptance phase of a programme. In this article, I review progress records and reporting.

If one looks at the health of the project and compares it to health of a vehicle, the comparisons are striking. People who ignore routine maintenance of a vehicle typically experience premature breakdowns and exorbitant repair costs that could be traced directly back to the lack of maintenance. If a contractor ignores routine maintenance of a project by taking the easy approach of updating schedules, the outcome is very likely to be an expensive "repair" in the form of a claims battle and often a claims loss, or even missed opportunities.

Most construction professionals do not enjoy reporting progress. This task rivals the other bane of keeping minutes of meetings. The fact that the progress reporting duty is taken on not with relish, but usually because no-one else will touch it with a barge pole, is evident in the tosh that often passes for the monthly Client Progress Report.

These reports contain more than just progress, of course. There are the usual sections in there – safety, risk, commercial, etc – but this chapter concerns the programme/progress section. Quite often the programme and or progress sections fall into one of two approaches;

- The 'I'm going to prove to everyone, especially my boss, how clever I am, with lots of technical jargon and long words' approach,
- The 'lets take last month's report and just change the figures' approach.

The first approach will be almost impenetrable and unfathomable to anyone reading it, including the boss. The second approach is plain boring and is effectively saying to the client that you can't be bothered and the monthly report is unimportant.

On most projects, the client is looking for simplicity in the monthly report, and he is primarily interested in one key thing; when will the project be complete. The information in the programme/progress section of the report to the client should be easy to understand and well annotated/explained.

The format of progress reporting should be agreed with the client at the onset of the project. The programme, which will normally be maintained as a critical path network in proprietary planning software, should be capable of being summarised to level 1 bar chart format.

The most readily understood graphic is that of the 'staggered-line'. Graphics of the original baseline programme and the current revised or working programme should have a vertical line showing the progress cut-off date. Progress may be indicated either by colouring along the bar or by the vertical line diverting to the actual progress position for each bar. This is a very simplistic 'Progress Indicator' chart.

Unfortunately, we tend to leave the client to interpret the chart for himself, and often he will not have the information to do this meaningfully and may easily jump to the wrong conclusion. Therefore, both the chart and the accompanying narrative should contain an explanation of why activities are shown in delay, what the implications are for completion of the project, and how you intend to redress the situation and by when.

The simple 'Progress Indicator' chart and an accompanying narrative may be enough for many projects, but each project is unique and there will be many where auxiliary methods are necessary, or even required under the contract. Details of three such methods are given below.

The first of these is the 'Planned Progress' chart. This addresses the volume of work, and simply measures the volume of progress in terms of activity weeks, giving no allowance for weighting of activities. Planned progress can be shown in terms of a cumulative S-curve of activity weeks achieved if the early dates are met. Another curve can be generated



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from the late dates. When plotted on the same chart, the area between the curves represents the zone within which the actual achievement line should lie.

Figures are calculated after each progress update and the actual line plotted. The closer this line is to the early (left hand) line, then the more comfortable all parties should feel. A drift towards the late (right hand) line means that float is being used up and more activities are becoming critical.

Even though there is no weighting factor, the fact that every programme activity is taken into account means that the law of averages comes into play, and the outcome is virtually identical to one where complex weightings based on earned value or work content have been laboriously applied.

A second method is the 'Progress Tracking' chart. This is a simple but effective way of showing progress in terms of quantity or value or work done at any point. It is basically two charts in one. The x-axis is a common time scale. The left hand y-axis shows unit per time unit (week or month) shown in histogram form; whereas the right hand side relates to the cumulative figure and is shown as a simple line. The actual performance is input on a regular basis and compared to the plan.

Because this method relies on the work being measured in the same units throughout, this approach is well suited for package works or individual operations or trades. It would usually be introduced to show close control of a particular critical or near-critical activity. As the planned figures are likely to be based on early dates, it is important to stress that the plan is target-based and that moderate slippage does not necessarily mean that the programme has been compromised.

The third method is a 'Line of Balance' chart. This approach comprises a series of cumulative line graphs set against a common time scale. This approach is somewhat specialist in nature and is ideal for situations of repetition, such as housing and high-rise.

The angle of each line represents the rate of output, and the gap between the lines shows the working float between operations or trades. In a situation where the lines represent recorded progress on site, it is easy to see who is delaying whom. This method also allows simple 'what-if' scenarios to be explored.

A further method of recording progress which should be encouraged is colouring in drawings as work proceeds. However, the colouring in of drawings is not particularly useful in comparing progress to a plan. But it is an accessible way of showing how the site is proceeding and should not be dismissed on the grounds of crudity. Often it is exactly what is needed to convey a sense of momentum; and this method of recording progress is particularly useful in a claim situation.

However, for progress reports, this method should only cover one or two activities at a time, and one should avoid confusing the message through overkill. Types of activities that are particularly suited to this method include piling, pipe caps, slabs, roof coverings and ceilings.

To summarise, simplicity is the watchword. Firstly, the contractor should state when the project is forecast to be complete. Secondly, give the client a programme with a staggered line and explain the main features; including what is to be done to recoup lost time. Finally use any of the auxiliary methods, as appropriate, to focus on critical areas or to get key points over.

Progress reporting should not be a complicated process. Clients do not scrutinise boring or complicated documents to find the hidden message. It is in everyone's interest to present information in as simple a format as possible. The client will never complain of condescension if the message is clear, and if he wants something a little more sophisticated, he will ask for it.