The Value of Communication

Lowe

Depending on which journals and learned institutions you subscribe to, research studies will have highlighted to you that, on average, between 65% and 85% of construction projects are over budget and behind programme. Given the regularity of press coverage related to delays and cost overruns on construction projects, this remarkably poor statistic, which initially one may dismiss as tabloid in nature, carries more credence.

What would be of interest to all of us involved in construction would be what the origin for the delays are but these are as varied as the spectrum of the industry. However, one common thread that binds the vast majority of delay is the monitoring of the project and the communications within it.

Successful delivery of a scheme requires the Project Manager to orchestrate the activities of the team in such a way that the appropriate input of each is available at the right level, and at the right time, to support all the other team members. This will include:

- Setting clear goals and targets for each member of the team. These relate to deliverables and timescales.
- Making sure all the necessary roles are filled and deployed at the right time—not always obvious at the outset.
- Having the ability to deal flexibly with changing circumstances and to redirect the team quickly when needed.
- Having the ability to ‘interpret’ the technical issues between different team members and ensure inter-disciplinary understanding.
- Being able to resolve differences between consortium members diplomatically and in the best technical interests of the project.
- Ensuring that the whole team is using the correct information at any time. Even with extranets and project databases this usually needs close attention.
- Understanding the often complex interactions between the different disciplines and how the work of one will modify the output of others. The PM needs to foresee how these interactions might evolve and aim to drive the team to the end solution with the fewest possible iterations.

The Project Manager deploys a number of tools to achieve this orchestration of the team and to monitor its performance. One of these tools is the programme, but while planning, programming, critical path analysis and resource allocation cover the practical aspects of project management, their additional value is in assisting financial control.

If a programme is to be used as a financial management tool, it must allow value and cost to be inspected and reported upon easily. The key considerations are:

1. The level of detail to which the project is broken down. It will not usually be possible to create an activity for every item in a Bill of Quantities, but sufficient activities should be set up to allow adequate control.
2. The value must be categorised to match the grouping of the programme (and vice versa). The value contained in each bill item should be coded so that it can be summarised to section level. Similarly, the programme should carry activity coding to match the value codes and costs.
3. Costs should be categorised by type—labour, plant, materials, preliminaries and general—then assigned to work categories—direct works, indirect, site overheads, central overheads and then to work packages. There should be enough activities to identify work elements and sufficient value and cost categories to permit a cost—value reconciliation down to specified level of work package.

There are two sets of financial parameters which projects can be managed by:

Value is what is paid for doing that project.
Cost is what it costs to earn that value.

Value may be earned in many ways including by:

- Completing deliverables.
- Completing measurable elements of work in a contract with bills of quantities.
- Completing categories of work covered by milestones.
- Completing an entire project under a lump sum payment.

There will usually be a system of regular, interim payments according to the amount or proportion of work done on, say, a monthly basis.

Costs will be incurred in several ways in order to earn value:

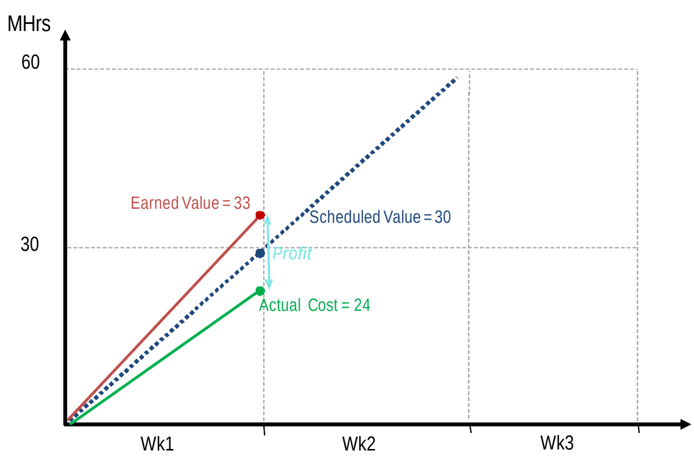
- Direct works—engineers and technicians producing designs etc.
- Labour, plant and materials on construction of permanent works.
- Indirect costs—copying and publishing of reports and drawings etc.
- Temporary works or common-user, general purpose plant on a site.
- Overheads—administration, supervision, management and accounting functions.

When the planned and actual information listed above is available, then *Earned Value* can be utilised. This is a powerful tool in reconciling cost and value and is a measure of useful work done.

The technique essentially identifies the value of the useful work done at any given point in time, in all areas and at levels within the project. By comparison with the original plan, Earned Value can be used to identify other parameters such as time to completion, cost to completion and expected final costs. It also enables project managers to identify those areas of the project that are proceeding well, those that are at risk and enables standard percentage progress and performance indices/ratios to be calculated.

It is obtained by measuring work done and valuing it using a Bill of Quantities or similar schedule. It is then compared with the costs of carrying out the measured work. Thus the earned value cost reconciliation is an extension of measuring physical progress against programmed progress by the Project Manager. It not only introduces the cost element but also takes this a stage further by introducing value.

In the following example, the value of the work completed after week 1 is greater than that planned (i.e. ahead of programme). Measurement of the actual cost of work shows it is less than that earned and also than that planned (i.e. there is a profit).



London: **0203 178 7550** *Perth:* **01738 472055**

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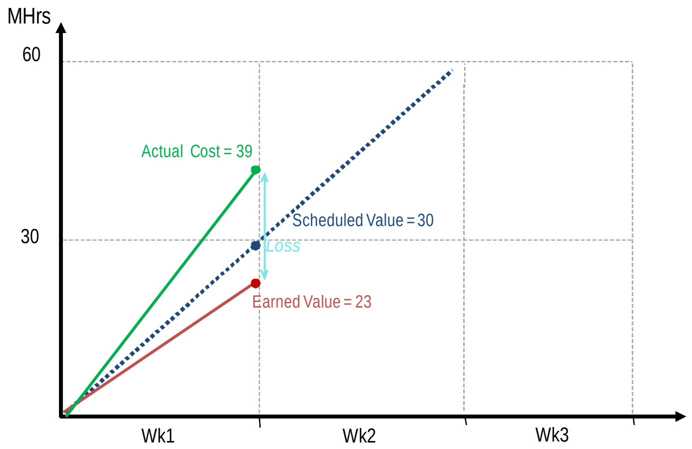
In this example, the value of the work completed after week 1 is less than that planned (i.e. behind programme). Measurement of the actual cost of work shows it is greater than that earned and also than that planned (i.e. there is a loss).



Earned Value provides the Project Manager with an objective way of measuring performance and predicting future outcomes. This can enable them to report progress with greater confidence and highlight any risks earlier. This in turn enables the management team to communicate progress and make cost and time allocation decisions earlier than would otherwise be the case, thus ensuring successful elimination and mitigation.

Without it, it may be possible to say that work is on programme in terms of physical achievement or that spending is on target but, without comparison with the value of the work done, losses and inefficiencies could be concealed. This, together with good communication, is a core requirement of a Project Manager acting on behalf of a Client.

Nigel Lowe Consulting Group utilises the market leading Primavera Enterprise, Pertmaster and Contract Manager software suites to manage projects and drive them towards successful delivery. This tool enables us to manage time, cost, value, change and communications from a single interface which can be shared throughout the project team.

For further information, please contact Manoj Bahl:

tel: 0203 178 7550
email: manoj.bahl@nigellowe.co.uk