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THOUGHT

Do you know which activities have free float?

The question posed in the title of this article is one we often ask Project Managers when we are invited to review their project or when we are making a general enquiry about how a project is progressing. It is the third in a series of related questions:

1. *Can you tell me the activities that fall on the critical path for your project?*
2. *In what areas of your project's schedule do you have (total) float?*
3. *Do you know which activities have free float?*

Those of you who have studied for a project management qualification such as APMP or PMP® and are currently managing projects (or managing a bit of a project) should not only know what we mean by the questions but should be able to answer all of them. Be honest how many can you answer? Some of you might not have a clue about what we are asking; and if this is the case does it matter that you don't? We think it is critical for effective management of time and resources but unfortunately from considerable personal experience we know that this is not always the case. We wonder why?

Before we go any further let's first consider some **'text book'** definitions (taken from the APM's Body of Knowledge 5th Edition).

Critical Path - Sequence of activities through a project network (schedule) from start to finish, the sum of whose durations determines the overall project duration.

Total Float - Time by which an activity may be delayed or extended without affecting the total project duration.

Free Float - Time by which an activity may be delayed or extended without affecting the start of any succeeding activity.

The terms described in these definitions have been around since the critical path method was invented 50 years ago by the DuPont and Remington Rand Corporations. When first conceived they provided data that allowed a Project Manager to understand which project activities were most important and those that where perhaps less attention might be needed. Believe it or not it was considered a major breakthrough in the history of management and in particular operational research. Things have moved on considerably since the 1950s; not least that the calculations to determine these vital data are no longer carried out by hand. Scheduling can now be carried out in real time using easy-to-use computer tools and as such this fundamental data is instantly available for anyone who wants to use it.

But used for what? Knowing a project's critical path allows a Project Manager to focus their attention on what work matters most to holding the planned end date. Understanding float allows the Project Manager to understand what's not critical i.e. what can be delayed or extended (using their float) so that activities on the critical path can be completed on time. Having said this, activities with float cannot be ignored as if they are delayed or extended too far then of course they will end up critical.

What else can this data be used for? We believe that activity owners (those who are responsible for doing the work) should be aware of how much total and free float they have so they can make informed decisions as to whether they need to do something immediately, or, negotiate with the Project Manager to delay the start or completion (where there is total and no free float).

Creating Value by **Shedding Light** on Managed Change
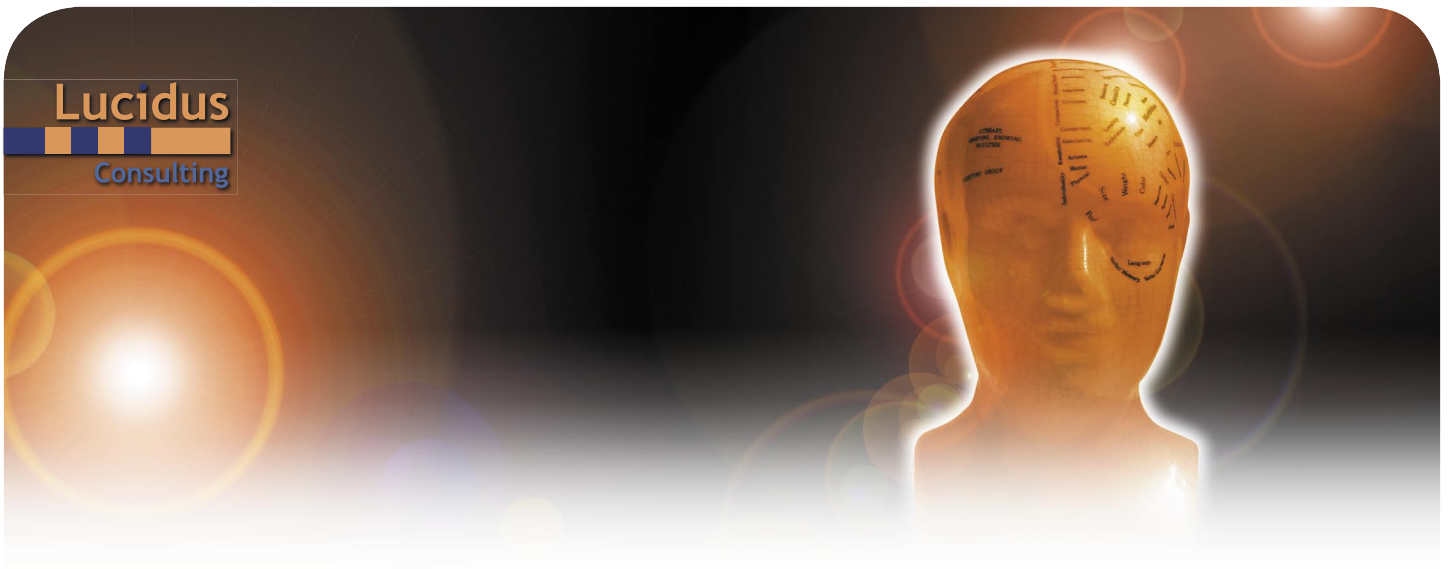
So why isn't it used? Why are many Project Managers unable to answer all the questions we pose? Is it because they choose to ignore the information or is it more fundamental?

Our perception is that the data isn't being ignored; it is just not available. The schedules that are put together from which the data should be generated are in most cases nothing more than pictures; a visualisation of what the Project Manager thinks will happen based on the scope of work they are aware of at the time. **For the data to be generated and therefore used appropriately a project schedule must:**

- Reflect the entire scope of the project being undertaken.
- Contain activities that are defined well enough that their ideal duration can be determined.
- Have logical dependencies between all activities that reflect the sequence in which they should be carried out.
- Reflect the resources required to carry out the work.

And in addition a schedule must not:

- Contain only stand-alone activities driven or positioned by imposed start dates.
- Be put together in isolation and take no account of other projects or real organisational constraints.

So the answer is easy all that is needed is for Project Managers to get a lot better at project scheduling and as a result they will discover the missing treasure trove of information that could help them manage their project more effectively. As we said in Lucid Thought 11, proper scheduling seems to have become an 'ancient art' but something we believe, if practised properly, can bring substantial rewards.

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