# Newsletter

The Essentials of Project Management

With such an emphasis on getting the most value out of any business activity in the current economic climate, we're seeing a lot of work being carried out on a project by project basis. Each set of work is thus defined by a scope, a set of objectives, the management philosophy to be used during its lifecycle, and a set of boundaries for its start and finish.

One of the key principles that needs to be considered in any project is its typology, which considers the uncertainty of achieving the project's objectives, and its complexity in terms of size, cost and number of people involved.

The following matrix (from Slack et al*) illustrates where various types of projects fit in the project typology matrix.
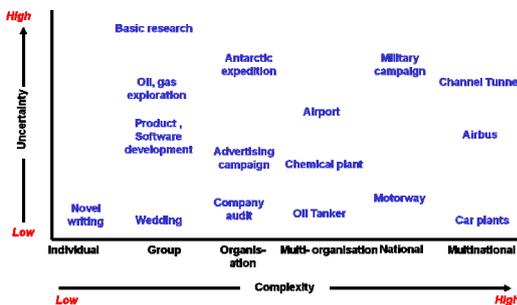
Most projects undertaken by organisations are on the lower left hand side of this matrix, typically involving a handful of people. Once the project is underway however, the usual project scope creep occurs. Many organisations react by bringing more people on board, changing the mix of people involved and / or making wholesale changes to the project. This makes the project more complex and changes its original typology, usually making it more complex and its success uncertain. This in turn changes the essential management style required of the project, which at the very least makes it much harder to achieve its original objectives.

In terms of a project's objectives, these are typically expressed in three areas—cost (or budget), time, and quality (also referred to as deliverables). These three sets of objectives are commonly known as the three pillars of a project or the project objective triangle (see the illustration below). For a project to succeed, it's essential to manage the project with these three sets of objectives in mind.
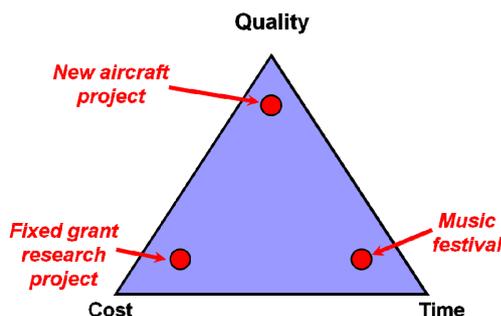
Every project will typically have an objective centred around one of the three pillars which must be achieved, be it cost, time or deliverables. For example, a music festival will typically have to be held on a given date—it cannot be moved. A new aircraft project (e.g. the Airbus A380) will have quality / deliverables as its immutable set of objectives, while a government-sponsored research project will have a cost / budget objective which cannot be exceeded.

In each of these three cases, as the unknown factors creep in, the other two sets of objectives which are not fixed will need to shift to accommodate the primary objective. For example, the delivery date of the Airbus A380 changed several times during its initial project timeframe, so that the quality / deliverables objectives could be met. As well, the cost objective of the A380 project changed with the change in delivery date.

Some projects require that two of the three objectives are fixed, e.g. cost and timeframe. In this case, compromises need to be made in terms of the deliverables to ensure the other two objectives are met. Similarly, if cost and timeframe are fixed, then the set of deliverables will need to be changed, usually by reducing them.

If, however, a project manager tries to control the project by rigidly controlling all three objectives, then he / she will almost certainly fail. It's a given in every project that unknown factors will creep in during its lifetime. These will require modification of some aspects of the project which in turn will mean that one or more objectives will need to be modified in some way, while ensuring that at least one is fixed as the primary objective.

As you may gather from this, projects with different focuses on one or more of the three objective pillars require very different project management skills and styles. This is covered in detail in the next article.

* Slack N, Chambers S & Johnson, R. 2004, "Operations Man-

In This Issue . . .

- **The Essentials of Project Management** — This article looks at two essentials of Project Management—the Project Typology and the Project Objectives Triangle (also called the Three Pillars of a Project). Both need to be well understood for good project management.

- **What makes a good Project Manager** — A good Project Manager is not necessarily one who can produce colourful Gantt charts, but one who has the requisite skills to manage the project according to which of the three pillars are the primary objective.

- **No Business Analyst is better than a bad one!** - In addition to good project management, the success of a software development project also depends heavily on the quality of the business analysts involved.
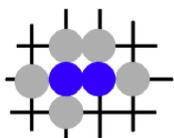
What makes a good Project Manager?

In our last newsletter we stated "the success of a project depends on good project management". As we also stated this is a somewhat obvious statement and one which very few people would take exception to. The problem arises when we start to ask what is "good project management" and more importantly, what makes a person or group of people a good project manager?

Every book and article on project management will give you chapter and verse about the qualities required for a "good project manager". However, what they are describing are the tools that may need to be utilised by a project manager. We assume that every person with the temerity to call themselves a project manager has an understanding of those tools which, in most instances, are little different to the tools needed to be utilised by good managers anywhere (not just project managers). However, we have always maintained that the ability to feed software to produce a Gantt chart is not a particularly unique or even, with certain types of project, a useful talent. In some instances we have seen the development and maintenance of the Gantt chart become a substitute for progressing the achievement of the project deliverables, i.e. the Gant charts become the project deliverables.

Most good, experienced business managers can manage projects in their sphere of business influence – and without formal project management training! However, if the man-

agers are any good then they are too valuable to their organisations to be taken away from their day to day work. Furthermore, projects tend to be (normally) based around finite time frames which are not appealing to career executives. Hence the need to hire someone (or some company) to manage the project to completion. So organisations go looking for an "experienced, qualified project manager" and typically ask for the person to have all the so called required project management skills – regardless of the type of project that they are to manage.

Now when we talk about a "type of project" we are not talking about the type of project deliverable (i.e. a building, a road, application software, function catering etc). We are talking about the specific priorities allocated to each of the three key pillars of any project: time, money and deliverables. Typically one or more of the three key pillars will take priority and that priority should dictate the type of person that you need to manage the project. Now if you only "peg down" one of the key pillars then you can usually get away with one person managing the project – the following table sets out a very brief overview of the key skills required of project managers for each of the different types of projects (based on which of the key pillars you "peg down". The problems start to arise of you want to "peg down" two of the key pillars – you can see from the characteristics in the table below that your talent pool from which to select your project manager is going to shrink considerably.

Key priority	Project impact	Project Manager skills MUST include
Time	Project MUST be completed by a stated time. Budget and deliverables can (and usually will) change to accommodate the focus on time i.e. deliverables may be limited and costs may increase to pay for more resources to complete the project within the timeframe.	A very detailed approach to identifying and managing the time required for project tasks and a creative approach to reducing time requirements wherever possible – using more / different resources and/or using resources in more time-effective ways. Ability to identify which of the project deliverables can be postponed for later delivery without impacting the business and, most importantly, the ability to convince management of that need. Will work closely with the business management.
Cost (budget)	Project MUST be completed within a stated budget. Time and deliverables will change to accommodate the focus on budget control i.e. deliverables may be limited and time may extend as fewer resources work over a longer period of time to achieve the project deliverables.	More of an accounting focus – a good understanding of the costing of services required to complete a project and some experience in using project resources in a cost effective manner. Will work closely with financial management as well as business management. Also requires the same ability regarding deliverables that can be postponed as for "Time" above.
Deliverables	The stated project deliverables MUST be delivered in full (e.g. you cannot have half a building or half a road). Time and budget often "slide" to accommodate the delivery of required project product.	Much more of an emphasis on understanding the project deliverables. Will often have work experience with organisations focussing on the specific project deliverables e.g. engineering, architecture, catering, finance etc. If such work experience is lacking then MUST have at least Masters level business qualifications (the hope is that having gone through 5 years of business study they will at least have sufficient understanding of business processes and strategy to quickly pick up a good understanding of what must be delivered and why). In some instances specific qualifications and experience are a MUST – for example, its no good getting someone to manage a software development project if they have no idea about the technical capabilities and limitations of databases and development technologies. Project Management manuals will tell you that this is not necessary if there are people with those skills on the project team – well, after 40 years of experience with development projects we are telling you that this is nonsense. We will talk about our experiences in this area in later newsletters but would also encourage others to let us know of their experiences in this area – if there is sufficient interest we will develop a research paper and disseminate the findings via this newsletter.

What makes a good Project Manager (cont.)?

Any one person with the required experience and qualifications to manage these sorts of projects is not common, usually expensive and booked up well in advance and (this is a somewhat politically insensitive comment but it needs to be said) more mature. Unless you have ready access to one of these rare talents, we suggest that these sorts of projects are better managed by a project management team of two or more people working on different aspects of the project but reporting back to the business as one unit.

If you are in the unfortunate position of having to "peg down" all three of the project key pillars then you really have little choice but to install a project office with a project management team. Otherwise you will spend fruitless time searching for a magician that may prove to be very elusive. You may

elect to hire a company to manage the project for you and that way you can pass the responsibility of the skills across to the company but still can expect a single approach to project management, monitoring and reporting.

Think very carefully before insisting that all three key pillars be "pegged". To do this means that the organisation is facing a specific strategic imperative that threatens either the commercial viability of the organisation or its competitive advantage in the marketplace (which is likely to affect its commercial viability anyway). We have seen organisations do this but these sorts of projects are rarer than most people think, and there's a much higher risk of failure. If there is sufficient interest we will discuss some of these projects that we have been involved with over the years in later newsletters.

No Business Analyst is better than a bad one!

Business analysis is a much maligned term which gets translated into a little-understood job title. Taken literally a business analyst (BA) should be able to do just that – analyse the business. That means the entire business – its value chain, future needs, market positioning, strategic options, funding capabilities, strengths and weaknesses (more about this later), threats and opportunities and much more. A BA should be able to look at current and future required information and process flows and map the two together in such a way that the resultant models assist management to make choices and trade-offs relating to current and future strategies. The people that can do this well are usually highly qualified (an MBA or MBT doesn't go amiss in helping to give an analyst the scope of business skills needed) and they usually have had many years of business experience.

A good BA is a valuable resource at project definition stage – especially if the project involves any sort of new or modified application software to assist the business achieve its goals. Back in the mid to late 1980's those of us with a systems design bent started to experiment with concepts like Information Engineering which resulted in things like entity relationship models and data models. These concepts were an absolute boon for a good BA because finally information dependencies and relationships could be modeled in a way that could be translated into system design. It was really quite easy – work out the entities then analyse the Add, Browse (query), Change & Delete business rules and operational requirements. We even got some quite smart Computer Assisted Software Engineering (CASE) tools to help us with the modeling job.

Then the salesmen got on to the CASE (literally) and oversold the concept. There was an erroneous belief that anybody who could learn to use a modeling tool could become an analyst and produce information models which would determine the development of software. This was about as smart as the belief that anyone who can produce a Microsoft Project Gantt chart can become a good project man-

ager. Unfortunately history is littered with the remains of failed software development projects that got off to a very shaky start because the initial analysis was less than good. Just take a look at the amount of change and scope creep of a software project and that should give you an idea as to how good the initial business analysis was.
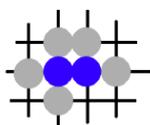
We are constantly surprised at how little today's IT people understand of the concepts of information analysis. The discipline isn't new but it does take time and when you've got developers who lack analysis skills their preference is to "design iteratively" (a more apt description would be: work it out as we go along) as software is developed. Some of the resultant data models we have reviewed have left us wondering how they ever got the software together in one piece. (And if we're reviewing the project its often because its gone bad.) We have seen some very mediocre analysis resulting in poorly drafted requirements. Software developed from such requirements is worse than mediocre as it often constrains a company's future strategies. And that's presuming it ever sees the light of day – many software projects don't make it.

However, a good BA can look at a business in terms of its information requirements (current and future) and come up with ideas that the business itself hasn't even thought of. That's the job of a good BA – not just to model what the business is currently doing but to look at how information could be used in a completely different way – now and for the future. And that sort of analysis is worth more than its weight in gold – it can even get your software development project into the 40% that succeed.

Comments / Feedback

This newsletter is being sent to you as part of our commitment to keep you informed of the on-going trends in the marketplace, particularly with respect to IT Outsourcing, Services Management, Project Management and Strategic Planning. We would appreciate your comments and / or feedback as to whether this newsletter is of interest, and whether you would like to be kept informed about future developments and trends in IT. Send your email to: information@farrell-associates.com.au

We also want to make sure you don't receive unwanted email from us. If you don't want to receive any future newsletters, please send us an email with "*unsubscribe*" in the subject header and we will remove you from our email list.