

Why Are We Not Better at Project Delivery?

The bridge across the River Liffey in Dublin that links Capel Street to Parliament Street is a third-generation bridge on that site. In 1676 the first design was a seven arch stone-bridge constructed from the ruined masonry of a nearby abbey; at completion it was named the Essex bridge¹. A replacement Essex bridge was constructed between 1753 and 1755. This new bridge was a five span semi-circular stone arch designed by George Semple. Between 1873 and 1875 the bridge, redesigned by Bindon Stoney (of Dublin Port fame), was rebuilt and widened and renamed the Grattan Bridge.

George Semple appears to have been a very competent project manager. He took responsibility for the bridge's design and construction. So the use of 'Design and Construction' as a procurement method in Dublin could be said to be at least 250 years old. Another more interesting fact is that Semple undertook the project without any form of written contract. His public declaration of estimates stated that the bridge would cost £20,500 and take two years to complete. He delivered the bridge to the City of Dublin with a 1.1% overrun on the scheduled period (eight days over the two years) and with less than a one per cent overspend (in fact 0.79%) in costs (actual final cost was £20,661).

It is worth noting that later bridges across the Liffey, there are now a total of 15 bridge crossings downstream of Heuston railway station, have not been able to match this excellent result, and it appears we are getting worse at general project delivery. Should this perception be true, people have the right to ask why are we not better at project delivery. It certainly is an important issue that needs some sort of explanation.

Projects by-and-large are complex, multi-discipline endeavours that utilise a broad range of resources. Modern projects are characterised by the collective work involved being unique and with project tasks having degrees of uncertainty. Unlike other forms of productive work, when handling project work you only have one chance at getting it right.

Public bodies continue to be significant procurers of capital projects. Published UK data available for the 1990s show that both time and cost constraints for projects are, with certain exceptions, failing to be achieved. HM Treasury showed that for the period 1994 to 1995 there were 807 projects with an average estimated cost of Stg£10.9m per project. The cost overruns were on average about 12% to 13%. The average time overruns were between six per cent and 19% on project durations of between 35 and 39 months.

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By Albert Hamilton

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Up to 2002 UK government departments using the PFI (or PPP as it is termed in this country) procurement option for projects such as hospitals, prisons, roads and office accommodation buildings had experienced an improvement in project delivery. However, PFI projects make up a very small proportion of public sector procurement but it does indicate that the method of contractor procurement can be a factor impacting on a project's outcome.

There is little documented on the performance of private sector projects in the Republic but the Office of the Comptroller and Auditor General do publish certain data on the public sector. It would be appropriate to presume that the private sector's performance on project delivery would not be dissimilar to that found in public projects. It can also be assumed that the Republic's performance in managing projects is no better or worse than the UK.

So why is it that the processes used in managing projects are failing? Why is it that apparent significant managerial and academic wisdom that has been expended over the past 60 years seems to be stalled at a level that is unable to deliver projects to predetermined requirements?

An obvious general conclusion that can be arrived at from the somewhat limited data over the past 15 years is that both time and cost constraints for projects are, with certain exceptions, failing to be achieved. This missing of targets is generally the case irrespective of whether the project is private or public, of the development sector or of which nation is scrutinised.

As project cost is an outcome of time spent and resources expended, the budgetary process and the associated chain of events should be part of a 'best practice' project management approach. It is accepted that using best practice on planning and controlling a project's budget cost is not in itself a sinecure for reducing project failure. However, in using cost as the starting point for reform, the other variables that contribute to project cost, which is just about everything else, should benefit from whatever changes are introduced.

However, the 'bigger picture' aspects need to be considered. There are three,

non-mutually exclusive, elements that together form the basis of project management. They are: organisation structure; delegation of responsibility and authority; working standards and procedures.

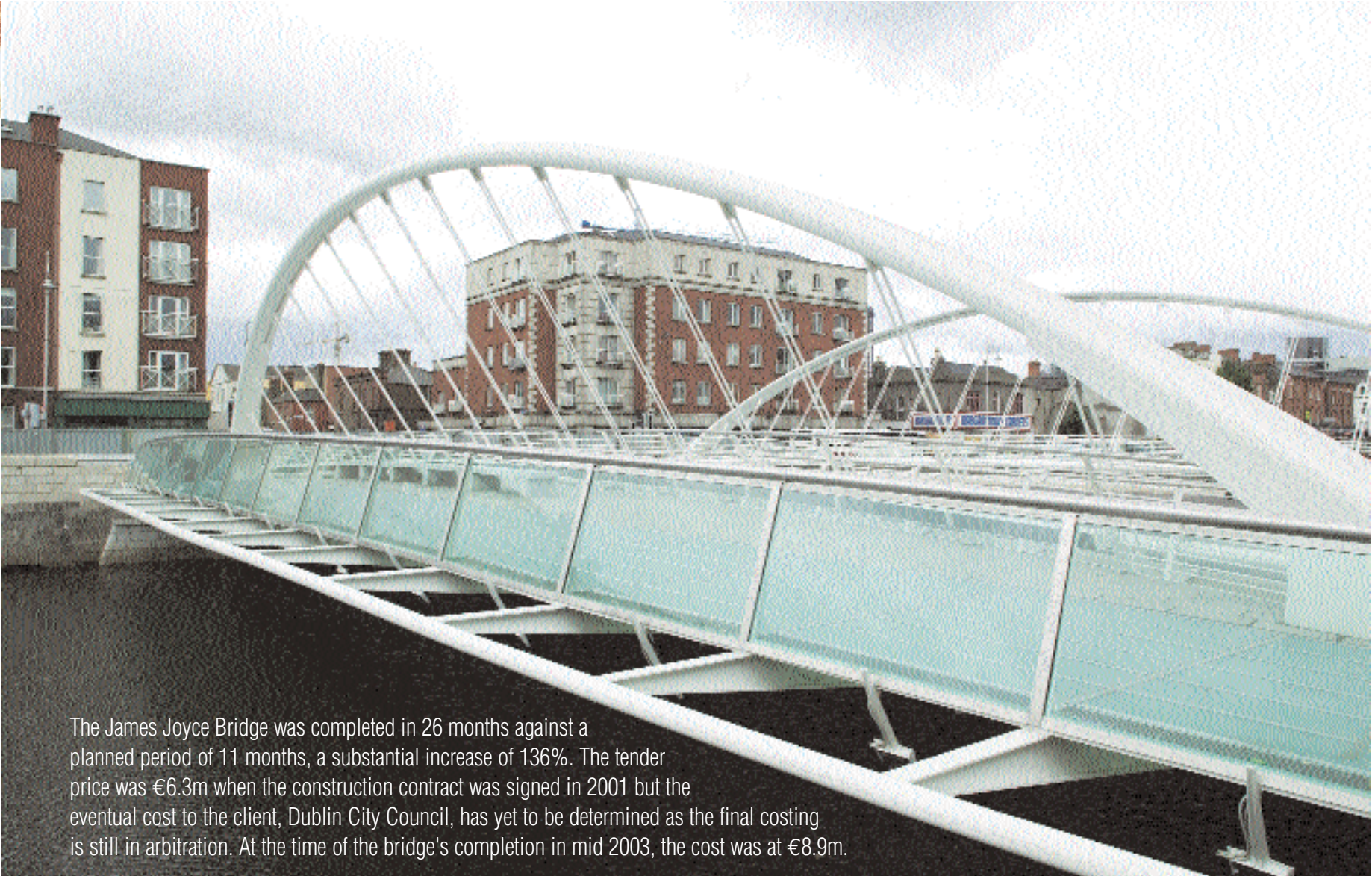
The Organisation

The structure of a project-driven organisation has a big influence in the overall performance of projects. The alignment of the organisational structure to the level of importance of project management within the organisation is decisive in overall project performance. Quite often this aspect is undervalued or completely ignored by top management. Often organisations have not adapted themselves to the rapidly changing business environment and, because of how the organisation evolved, there is an amazing reluctance to match external change with internal reform or transformation. In recent years many organisations have realised the significance of project management as opposed to operations management. More and more organisations are increasingly using project management as a strategic process to drive change and achieve their business objectives and as a tactical process for achieving successful project outcomes.

In the construction industry the project-driven organisation should be structured within the range between matrix structure and project structure. The matrix is a less intrusive intervention for traditionally structured organisations to contemplate, as it creates a horizontal 'project layering' on top of the existing functional departments. On the other hand, a 'projectised' structure normally means a complete restructuring, that is, replacing departments with dedicated project task forces. There is clear evidence showing that the correlation between achieving successful business and project outcomes with the organisation structure increases significantly when adopting a structure that focuses on project dedication.

The People

Project management is all about working in teams and, therefore, the people management skills of a project manager are essential. In this regard, particular empha-



The James Joyce Bridge was completed in 26 months against a planned period of 11 months, a substantial increase of 136%. The tender price was €6.3m when the construction contract was signed in 2001 but the eventual cost to the client, Dublin City Council, has yet to be determined as the final costing is still in arbitration. At the time of the bridge's completion in mid 2003, the cost was at €8.9m.

sis is placed on the project manager but project success is also a function of the other stakeholders (project sponsors, project teams, sub-contractors, and so on) and the working relationships.

Research shows that success is also directly related to the delegation of responsibility and authority to a single individual - the project manager. On average a high proportion of project failures can be blamed on assigning too low levels of responsibility to project managers, in other words, they have less than the required influence. Project managers do not generally have any control over the assignment of their role and any constraints that may be imposed. So if lack of influence is a reason for project failure then the cause is likely to be organisational.

Staff development programmes can have a positive effect on overall performance of the organisation and in project delivery. As less than 10% of organisations have no project management development for their staff, it is not surprising that project teams feel their ability could be improved through on-the-job training. Although there is no clear link between the certification of project managers and teams as project management professionals and the raising of project outcome success, certification does create an atmosphere for motivation and esprit de corps within the organisation.

Tools and Techniques

Project management is essentially a systematic and organised set of processes that bring order and efficiency to the logistical details and team management of any size

of project that has a deliverable product. Therefore, the existence of a well-defined project management process, ie, a project management methodology, differentiates those organisations that consistently deliver high project results from the rest.

The core project management process during any project's life cycle is the interconnected iteration of planning, executing and controlling the permanent and temporary work needed to design, construct and complete the project. The process implies that we cannot control something unless it was planned and by extension we cannot plan anything unless we know what's wanted, in other words knowing 'the requirements'. This implies that if the requirements cannot be adequately defined and detailed there is little chance that what will be delivered will be what's required. It is essential that time and effort is devoted to the up-front stages of any project to ensure that the requirements have been fully documented and understood.

With the requirements defined, the project can be planned. Here again sufficient time and effort needs to be devoted to creating plans that are realistic, achieve the various milestones and provide the best use of resources. Because work tasks are often not executed the way they were planned, the control step is essential in comparing the differences, or the variances, between what was planned and what was executed. Re-planning the remaining work, including any other approved changes or extra work to satisfy whatever constraints have been imposed, is a significant part of the iteration.

In any organisation seeking to increase

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its maturity, best practice project management must manifest itself through the organisation establishing project management procedures and applying continuous improvement in the use of the associated tools and techniques. These tools need to encompass the work scope, time duration, budget cost, risk events, value for money, etc. that, when combined, offer a comprehensive joined-up methodology for managing projects.

In conclusion, top management need to understand that project management is a key strategic tool for driving organisational change and achieving business benefits. Those organisations understanding the vital importance of excelling in project management, and acting upon it, will undoubtedly outperform the competition. Project success can really only be achieved when organisations adopt a systemic approach to the management of projects. This involves making changes to the organisation structure, delegating function to project teams and formalising a project management methodology for everyone to use.

For readers wishing to know more, an interesting paper titled 'Project history of Dublin's River Liffey bridges' can be downloaded as a PDF file from the author's web site www.berthamilton.com

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