

Iconic construction projects: issues and controversies



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Introduction

Construction of large, expensive, and prestigious projects is an historical obsession of the human race.

Every age of human history, as well as every human civilisation, features huge architectural showpieces (Silverberg, 1965). Religions have used enormous and ornate structures, churches, mosques, and temples, to shock and awe their followers into submission. Many of the ancient and modern seven wonders, e. g., the Coliseum of Rome, the Great Wall of China, or the Taj Mahal, were architectural wonders that were built with massive doses of money, effort, time, and genius (Silverberg, 1965). It took two emperors, ten years, and extensive public taxation to build the Coliseum. The Great Wall was built, over hundreds of years, to protect the Mings against invaders, by generations of architects; who did not foresee that the opening of one of its doors would neutralise centuries of sweat and toil (Silverberg, 1965). The Taj Mahal was built over 16 years with an unlimited budget by an idiosyncratic emperor who failed to connect the irony of amputating the arms of his sculptors (after the erection of the Taj) with the building of a monument to the cause of immortal love (Ahmed, 1993). In modern times each of these iconic projects would have been considered to be failures in some aspects, even though they have delivered and continue to deliver numerous benefits.

Such awesome projects link humanity over time and distance with common threads of ambition, grandeur, status, and prestige. The construction of the Empire State Building in New York in 1931 set off a race, albeit some four decades later, among other cities, to build something grander and taller,

(Cowan, 2007), the title for the tallest building going from skyscraper to tower in different locations until it was grasped in late 2007 by the under construction Burj Dubai, an architectural and construction wonder that will be ready only in 2009. Accepting numerous design modifications and a construction delay of many months, mainly to ensure that their project does not get upstaged in its target of becoming the world's tallest building, the creators of Burj Dubai are motivated by ambitions that are largely iconic. "Chairman Mohammed Ali Alabbar said Dubai has resisted the usual and has inspired to build a global icon, 'it's a human achievement without equal.'" (Dubai skyscraper world's tallest, 2008)

The urge to undertake iconic construction projects, projects that are commonly associated with size, status, prestige, architectural complexity, and grandeur, is not restricted to the oil rich sheikhdoms of the Middle East, the capitalist bastion of the United States, aggressive young economies like Australia, or the ambitious Asian Tigers. The United Kingdom, long associated with restraint and the virtues of understatement, has its fair share of projects that can be termed iconic; the Millennium Dome, the London Eye, Portsmouth's Spinnaker Tower, and London's Wembley Stadium; to name but a few.

Iconic projects are usually undertaken with diverse objectives in mind, e. g., raising the profile of a city, creating a tourist attraction, or even increasing the status of a premier football club; they are normally complex in nature and require substantial outlays of money, long construction periods, large tracts of land, sophisticated construction and construction management skills, involvement of political and non-political organisations, agencies and <https://assignbuster.com/iconic-construction-projects-issues-and-controversies/>

individuals, and numerous administrative, financial, and legal issues (Prasser, 2006). Always in the arc of media attention, their progress receives inordinate publicity; their failures and successes are widely discussed, debated and often roundly criticised.

The amount of controversy and censure that invariably attaches itself to most such projects, as well as their patchy records, can well lead people to believe that “ *iconic projects are virtually certain to fail*” .

With such sweeping statements possibly appearing to be somewhat naïve to serious students of management and construction, (more so in light of the rapid strides made by the construction management industry in recent years, both in terms of technological advances and in terms of utilisation of management processes), this study attempts to investigate the issue, with the aid of relevant current examples and current construction management theory.

Commentary and Analysis

A meaningful discussion on the italicised topic calls for logical and relevant structuring. This analytical commentary is structured into sequential sections that take up the determination of failure, as applicable to iconic projects, the various environmental, political, economic and managerial factors that can contribute to such failures, and the measures that can be adopted and implemented to lessen the chances of their happening. The concluding section summarises the discussion and contains appropriate recommendations.

Determination of Project Failure

A project can be defined as a discrete and predetermined endeavour that has specific commencement and conclusion nodes and is undertaken to construct a quantifiable deliverable (Lewis, 2007). Projects can be initiated in many areas of social, economic and business life and can be classified as iconic in terms of their status, importance, glamour, media friendliness and size. With the topic of this discussion being related to construction, the commentary is focussed on iconic projects that involve substantial construction activity, e. g. stadia, buildings, roads, dams, museums, monuments and the like. Large and prestigious projects in areas like IT or brand building, which can also be truly termed to be iconic, do not find place in this study.

A project can be termed to be a failure if it does not meet its objectives (Lewis, 2007). With most modern day projects, especially those that are large and complex, having aims and targets, in terms of physical, cost, and time deliverables, and expected to conform to norms of accountability, transparency, and ethics during their execution, such projects can be deemed to be unsatisfactory if they fail to meet such signposts and requirements (Lewis, 2007). Properly set project objectives, in the language of project management, are expected to meet specific SMARTA criteria, i. e., they should be Specific, Measurable, Achievable, Relevant, Time-Framed, and Agreed (Lewis, 2007).

Apart from such objectives, iconic projects have broad aims in terms of what they are expected to achieve and the services they are to provide (Prasser, 2006). The Millennium Dome at Greenwich in the outskirts of London, for <https://assignbuster.com/iconic-construction-projects-issues-and-controversies/>

example, was conceived as a mega project that was planned to be either a football stadium or a huge convention and exhibition centre (and an attractive tourist destination), after the completion of the Millennium Experience in December, 2000 (Maddox, 2000). The structure, which is the largest of its type in the world, whilst proving to be a huge tourist attraction in 2000, proved to be of little use thereafter. Horrendously expensive to maintain, it remained practically unused during the next five years. Most of its adjacent structures were demolished. Renamed O2 in 2005 it has since been transformed into an entertainment district at a cost of 600 million dollars (Millennium Dome, 2008).

The Spinnaker Tower at Portsmouth is another example of an iconic project that has come in for widespread criticism. Reflecting Portsmouth's maritime history and designed to resemble a sail, the tower was completed five years after schedule, incurred expenditures far beyond what was originally forecasted, was executed poorly, developed construction defects and was found to be unfriendly towards disabled visitors (Oates, 2006).

The London Wheel, on the other hand, which received lesser visitors than the Millennium Dome in 2000, belied pessimistic forecasts and went on to become a hugely successful tourist attraction, redefining London's skyline and being featured in every Bollywood movie that was shot in London.

Projects to be successful should specifically deliver on the wider planned benefits and services.

“ The concept of project benefits is central to project success. A project will be deemed successful if it delivers its promised benefits. What about on time <https://assignbuster.com/iconic-construction-projects-issues-and-controversies/>

and on budget? These are different questions, relating to how well the project is managed. Important as they are, these are not the focus of a quest to clarify objectives. Besides, in the end we would rather have a successful project a little late and over budget than a beautifully managed disaster which fails to deliver on promises” (Writing Project Objectives, 2008, <http://www.numerix.com.au/docs/newsletter-articles/writing-project-objectives.htm>).

Causes for Project Failure

Commercial project management, as a discipline, has enlarged significantly in recent years. Imbibing theories and concepts from various sectors of management theory like strategic, human resource (HR), financial, general and environmental management, its evolution has been helped by the progressive sophistication of project management, decision making, monitoring and control techniques (like PERT (Project Evaluation and Review Techniques), CPM (Critical Path Method), Gantt Charts, and Fishbone diagrams) (Richman, 2002).

With construction having progressively become one of the biggest business activities in the world, the use of sophisticated management practices, which otherwise originated and were developed in other business sectors like automobile and steel production, is but normal (Richman, 2002). The fact that project construction, especially on the scale of what is being attempted in the modern day, is an extremely complex process that involves political decision making, activist involvement, environmental repercussions, land acquisition, financial organisation, use of sophisticated technology and complex machinery, diverse human skills, and the involvement of numerous

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agencies, contractors, and subcontractors, results in the emergence of numerous variables, which, individually, and in tandem with others, can lead to partial or complete failure in achievement of project objectives (Richman, 2002).

Despite the existence of numerous related and independent factors that can effectively hinder the success of projects, management experts feel it advisable to group and analyse these variables under specific categories. Again, whilst project management experts and project consulting organisations by and large appear to have their own interpretation of reasons behind failures of large and prestigious projects, they are united on some major causal factors.

Problems in Project Initiation

The most important of these causal factors arise during the initiation of the project, a process that in the case of iconic projects is likely to include issues of political governance, harmonisation of expectations of different stakeholders, environmental requirements, cost estimation, organisation of finances, selection of management team, and crystallisation of broad project objectives, benefits, and services, as well as its SMARTA criteria (Lewis, 2007). Ambiguity about any of these factors, especially at the initiation stage can lead to the perpetuation of uncertainties in objectives, as the project progresses, and inadequate or inappropriate managerial inputs at later times (Lewis, 2007). Large projects, more often those that are public in nature, or involve public private participation, need clarity in political approach, inter-departmental involvement, and decision making; the lack of which can lead to continuing snags in project implementation. The Millennium Dome, <https://assignbuster.com/iconic-construction-projects-issues-and-controversies/>

projected as the most celebrated iconic project of the beginning of the Millennium, went over budget by more than 200 million GBP and lay idle for five years after 2000 (Millennium Dome, 2008). It was mired in political and public controversy regarding its cost, design, and content right from project inception; developments that definitely contributed to unsteadiness in its management and leadership and uncertainty in its execution.

Whilst the initiation stage of the project in matters of time is often much shorter than the actual time required for its completion, it is critical for satisfactory project outcomes, because of its key processes, (all of which involve high level decision making skills), namely (a) crystallisation of project benefits (b) agreement on project implementation at governing levels, (c) fleshing out of project dimensions and project design, (d) arrangement of finance, and (e) selection of management team (Lewis, 2007).

Although commercial project management does borrow many managerial and control techniques from regular management theory and practice, its finite and bounded nature poses significantly different and multifaceted challenges, especially those that arise from the need to make route corrections, if and when such need arises (Hannigan & Browne, 2000). Whilst such route corrections are part and parcel of regular management projects, their occurrences in construction projects invariably lead to disruption of time, cost, and completion targets; thus the need for careful project initiation. A project well begun often leads to far easier meeting of project objectives (Hannigan & Browne, 2000).

The costs of the project, its construction and finance requirements, and time frame, ultimately depend upon project design, the excellence of which has a significant effect on its final success. The design for the Millennium stadium at Cardiff had to take account of variables like the proximity of the river Taff, the issue of tidal flooding and the demolition of a number of buildings with consequent compensation and relocation costs (Lowe, 2008). Mishandling of these issues could well have fatally jeopardised the outcome of this project.

Project design is also inextricably linked to the land needed for the project. With land for prestigious projects invariably being substantial, and more often than not in populated areas, land acquisition is a complex exercise with political, environmental, social, and economic aspects that need to be addressed separately and competently. The Tatas, recent acquirers of Corus Steel and Jaguar Landrover, are in the process of constructing their factory for the world's cheapest car, the 2200 USD Nano, in India. In many ways the group's most celebrated and iconic project, the original Nano site near Kolkata in East India had to be abandoned after a year's work and more than 100 million US dollars in expenses, after protests from local landowners, (who did not agree with the land acquisition price negotiated by the concerned state government), led to riots and violence (Misery Is the Price Farmers Must Pay for " People's Car", 2008). The project, which has been resumed in a totally different location, is now substantially behind, both in terms of costs and time, and only the future will tell whether the Tatas will be able to keep their price commitment.

Provisioning of finance, its estimation, its sources, and its arrangement form another crucial component of project initiation activities. Project financing, <https://assignbuster.com/iconic-construction-projects-issues-and-controversies/>

especially in public private partnerships is a complex process, with different sources of finance carrying different cost and repayment commitments. Whilst the Millennium Commission projects were by and large funded by the national lottery, most projects are not so lucky and need to be funded adequately to ensure against work delays on account of financial inadequacy. The Spinnaker Tower, the showpiece of Portsmouth Harbour, suffered from underestimation of cost as well as under-arrangement of finances, leading to an overrun of 36 million GBP and the need to use taxpayers' money, an avenue that was specifically not considered at the time of the project decision (Oates, 2006). With financial inadequacy likely to arise both from poor financial management and from wrong cost estimation, it is important to get the financials right before the start of a complex and expensive project.

Activities like the estimation of finance and the coordination of design activity are the responsibility of the commercial management team of the project, the selection of which, along with that of the commercial manager, is critical to project success. Subject to the necessary provisioning of required inputs from the project owners, the functioning of the commercial management team assumes enormous responsibility for successful project execution.

Commercial Management

Commercial management of projects is a complex and multifaceted discipline requiring numerous managerial skills and inputs. The execution of large projects is possibly among the most challenging of modern day management tasks, an area of work that is distinguished by two main

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features, first the sheer number of variables that need to be controlled and issues that need to be attended, and second the minimal scope for wrong decisions or operational blunders (Frame, 2002).

The commercial management function is underpinned on theory that is drawn from diverse disciplines like social sciences, management, economics, law, accountancy and finance, in addition of course to project management and supply chain management (Lowe, 2008a). Commercial managers of construction projects have extensive responsibilities that commence from the time of initiation and need to be appointed as soon as a final decision on project implementation is taken (Frame, 2002). Whilst commercial managers are not involved in much of the initial decision making that concern areas of political governance, environmental and ecological issues and sourcing of avenues of finance, their involvement at this stage can be rewarding because of their managerial expertise and their previous experience (Frame, 2002).

Commercial managers are more often than not senior practicing managers with significant project experience and are expected to be competent in areas of technical and financial knowledge, budgeting, forecasting and monitoring, law, human resource management, supplier chain management and above all leadership and general management. They need to be selected with the utmost of care as much of the proper execution of projects depends upon their knowledge and competence. Whilst they are generally provided with adequate support in both line and staff functions, their own knowledge of finance management, HR management, supplier chain management and project management is under constant challenge and test; successful project <https://assignbuster.com/iconic-construction-projects-issues-and-controversies/>

progression depends significantly upon their own interpretation of cash flows and assessment of contractors and subcontractors for project jobs.

With the overwhelming majority of project work being carried out by contractors who are chosen for and assigned specific jobs, the most important constraint and critical variable in successful project execution arises from the need to appoint, instruct, monitor and control them (Lowe, 2008a). Unlike regular business organisations, where the bulk of the work is handled by company employees, the majority of project work is undertaken by external contractors who are supervised by project managers with the help of support staff and project accountants, a phenomenon that leads to the emergence of numerous uncertainties and project risks. Much of the delay in the construction of the Wembley stadium, which was finally opened in 2007, more than a year after schedule, can be related to unsatisfactory working of Multiplex, the main contractor (Lowe, 2008a).

Contractors are used for every conceivable function and service, from providing designing and architectural services to erection, masonry, electrical work, provisioning of machinery and vehicles, and secretarial and canteen services. A comparison of the nature of project work with that of the currently growing trend of outsourcing in routine business operations is apt. Outsourcing, a process by which internal operations of the company, is handed over to outsiders in return of cost and efficiency advantages, can make a company vulnerable to external factors and is handled by most organisations with utmost circumspection and care. It is used only for repetitive and low skills work and the credentials of service providers are literally tested with fire before they are engaged. The complexities

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associated with running a company where practically every activity is outsourced can be realistically compared with the challenges faced by commercial managers of large, iconic, projects.

Whilst appointing contractors it is essential to gauge their competence and ability for fulfilling proposed responsibilities by assessing their size, competence, availability, financial position, and readiness to work (Frame, 2002). Although such contractors are routinely appointed in Asian countries on the basis of their closeness to and intimacy with the commercial management team (leading to informal and trust based client-contractor relationships), such relationships in Anglo American environments are governed by detailed contracts, and most commercial managers use sophisticated legal help to draw out elaborate agreements with their contractors (Frame, 2002). It needs to be mentioned here that few of the contractors who are engaged in large projects represent small one man organisations. Most of them are medium sized or even large, (where the requirement is substantial, involves the use of expensive machinery or large numbers of people), organisations employing thousands of people. Some are joint stock or privately held companies, and many operate a number of projects simultaneously. In many cases main contractors engage sub-contractors to carry out different jobs that fall under their area of responsibility.

Apart from contractual obligations, contractors are controlled by regular monitoring, quality checks, and financial incentives and penalties. Despite the use of legal and managerial methods for progressing work, advancement of project activity in line with forecasts and schedules are often affected

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adversely due to a number of operational reasons. Commercial mismanagement of projects occurs, in the opinion of experts mainly because of (a) lack of commercial and project management skills with the implementing management (b) inability to assess and control risks (c) lack of attention to breaking development and implementation into manageable and discrete steps, (d) lack of understanding and contact with the supply industry at senior levels and (e) lack of effective project team integration between the commercial management team, the subcontractors, and other participants of the supply chain (Frame, 2003). Experts are also quite clear in arguing that many of the problems that arise in project management occur because of overworked commercial managers. Project owners rarely understand the extent of detailed and complex work that is natural to commercial management of projects, a phenomenon that leads to unsustainable loads on executives and to consequential errors and delays (Frame, 2003).

Failure of Iconic Projects

Project execution is essentially a complex exercise and is affected by the inter-play of a host of variables, many of which arise from issues and developments that are not under the direct control of the project execution team. Project delays and cost overruns, are common to both the private and public sector, and continue to happen despite the increasing sophistication of project and commercial management techniques and methods. Project failure in the IT industry, for example, is an unhealthy 85 %! “ Research highlights that only one in eight information technology projects can be considered truly successful (failure being described as those projects that do

not meet the original time, cost and (quality) requirements criteria”

(McManus and Wood Harper, 2008)

The situation becomes even more complex in case of iconic projects. Such projects in the public or public-private domain arise because of a continuing historical obsession of decision makers with size and grandeur and often occur at the expense of more essential infrastructural projects like roads, hospitals, power and public transport. With the origins of such projects often mired in controversy and public disapproval, their approval leads to difficulties in balancing of public budgets and slashing of other required expenditure; the stated benefits of such projects often have to be related to the reduction of benefits from other areas that need to be cannibalised.

Iconic projects, all over the world, irrespective of their location in the UK, Australia or the United States involve enormous costs and stress on size as a feature rather than as a requirement. They extol form over function and their benefits are more symbolic than measurable. Often large scale in nature they are taken up for boosting economic or tourism activity, (Millennium Dome), hosting huge sporting events, (Beijing and London Olympics), lifting regional prestige (The Millennium Stadium at Cardiff and Spinnaker Tower at Portsmouth), and symbolising governmental achievement (the magnificent Parliament House at Canberra). The Beijing Olympics led to an enormous demand for global steel and the intensification of a commodity super cycle, a phenomenon that now lies buried under the debris of the sub prime crisis. The London Olympics are similarly expected to generate 60, 000 person years of employment during construction.

With decisions for undertaking such projects often being founded on peripheral considerations, they are subject to excessive political interference, have unclear and ill defined objectives, over optimistic considerations, and inflated viability. More often than not they are driven by considerations of supply rather than demand and suffer from the “ Build it and they will come” syndrome (Fenn, 2002). It is difficult to assess today whether the huge infrastructure that has been created at Beijing or is being created at London will be utilised in future after the dust of the three week Olympic spectacle subsides. With England in the middle of a severe economic crisis, the pound losing against all world currencies, and unemployment expected to rise, the justification of continuing with such massive expenditure at the cost of economic measures that could help overcome the recession appears to be difficult.

Critics also associate iconic projects with poor governance, symbolised by secrecy, lack of transparency, minimisation of risk assessment, fudging of budgets, and political expediency.

The Federation Square project at Melbourne had major icon implications. It had high profile and high visibility during construction and a complex architectural design. The haste shown in its construction led to construction activity moving ahead of detailed design work and its lack of transparency was revealed in the cost overrun of more than 350 million when it was inaugurated in 2002, two years behind the opening deadline and in a still incomplete state (Prasser, 2006). The project was affected by cost variations, trade disruption and contractor delay claims, increases in contracting costs,

extra project costs, hidden design changes, and post completion changes (Prasser, 2006).

Whilst examples of poorly executed iconic projects are not difficult to find, tarring all top drawer projects with the same critical brush appears to be cynical; there also being projects that have been handled and executed with utmost transparency and brilliance. Arsenal's Emirates Stadium at Islington, completed in 2006, is an example of brilliant project visualisation and construction. Awarded the Building Project of the Year at the Annual Building Awards, the judges described it thus:

“ The whole process was an example of how important teamwork should be to a project, with everyone from the client to the contractor and subcontractors coming together and working successfully to ensure the project was completed on time and under budget. The way that this team tackled design changes should be a lesson to the industry” (Lowe, D, 2008, 21).

Conclusion

Much of the perceptions associated with the “ failure” of large “ iconic” projects arise out of their being over budget and behind schedule. The execution of such projects is in common perception also associated with poor risk management, bureaucratic thinking, and poor project execution. Whilst a number of big ticket projects have been rightly criticised for their failure in meeting of project objectives and underdelivery of promised benefits, the basic issue about viability of iconic projects is prone to becoming clouded by media publicity and public debate.

Project conception and management are by themselves extremely complex tasks and it is not difficult to understand the reasons behind their execution problems. The private sector also witnesses numerous incidences of project failure, a fact that possibly does not come to light because of the shroud of confidentiality that covers much of private sector working.

Successful project execution involves two discrete and distinct components, first, the conception and visualisation of and the decision to undertake a project and second, its actual physical execution and completion. The actual progression of a project is largely carried out by experienced professionals with the aid of experienced contractors and it would be nothing short of uncharitable to lay the blame for unsatisfactory project execution to the inferior project management skills of managers of iconic projects. Brilliantly executed iconic projects like the Emirates Stadium at Islington confirm that large and top drawer projects can indeed be successfully completed.

Iconic projects, especially those that occur in the public space, are usually visualised by political leaders, who, whilst capable of feeling the public pulse and conceptualising ambitious and extravagant plans are not fundamentally strong in commercially complex areas of project management. Being impatient doers they tend to rush through the initiation stages of such projects without paying detailed attention to the greater practical ramifications of project execution, thus building in inherent weaknesses that lead to difficulties later. Iconic projects have a far greater chance of being successfully executed if such errors can be minimised by more transparent and participative working in the initial stages without sacrificing the project's grand vision.

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The widely publicised aims and benefits of iconic projects are essentially subjective and their assessment in terms of right or wrong is beyond the scope of this commentary. Being public and long term decisions their benefits are judged more by posterity than by current applause or criticism and on many occasions assume dimensions that make issues like cost and time overruns trivial matters of detail and quibble. The public perception of success of iconic projects could however improve radically if their initiation and execution were tackled with clarity, conservatism and attention to detail. The responsibility for this lies essentially with the project owners, the people who conceptualise and decide upon the project, than on anybody else.

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