

Country case: Allocation of risks during the construction of Heathrow Airport Terminal 5 (UK)

Description

The construction of Heathrow Airport Terminal 5 (T5) was the largest construction project in Europe in the early 2000s. The T5 project was an innovative and extremely complex multimodal transport interchange designed to handle up to 30 million passengers a year. The scope of the T5 programme encompassed more than 60 contractors; 16 major integrated projects, e.g. buildings, air traffic control tower, earthworks, airfield, baggage handling system; 147 subprojects; and 2 train extensions on a 260 ha site. By 2008, 50,000 people, employees, and key stakeholders had been involved in the construction.

Public Procurement
Principle: **Risk Management**

Procurement Stage:
Post-award

Audience: **Procuring Entity,
Private Sector**

The British Airports Authority (BAA), a major airport operator privatised in 1986, realised rapidly that if the projects were to be built on time and within budget a unique approach would be required. During the planning phase, just prior to the project construction phase in 2002, BAA carried out a two-year in-depth study of every major UK construction project of over GBP 1 billion conducted over the previous 10 years and every international airport that opened over the previous 15 years. This benchmarking study found that no such major UK construction project had successfully delivered on time, within budget, and to the quality standards originally determined in the contract, and that few projects had good safety records. It also found that no recently built airport had opened on time. Based on its study of 12 major airport programmes, BAA concluded that without a radically different approach the T5 project would cost over GBP 1 billion more than was affordable, would be two years late, and result in six fatalities.

BAA specifically identified two areas that contributed to the poor performance of megaprojects: the lack of collaboration among project partners and the client's reluctance to assume responsibility for project risk. BAA recognised that the only way it could achieve the desired outcome on a major project was to change the "rules of the game" by establishing a new type of partnership with its first tier suppliers.

The bedrock of BAA's project management approach was the T5 agreement, a relational contract between BAA and all the T5 first tier suppliers, including architects and engineering design consultants, general and specialised contractors and manufacturers, which junked the traditional concepts of construction contract. The BAA legal and commercial teams designed the contract aiming to minimise the conflicts that usually plagued major projects. Instead of spelling out a set of clauses accepting that things could go wrong, and seeking to pass the blame and recover money from suppliers, the T5 agreement aimed at creating incentives for positive problem-solving behaviours that would not allow things to go wrong in the first place. BAA deemed this stance fundamental for creating totally integrated project teams with the suppliers and enabling the latter to achieve exceptional performance.

The ethos of the T5 agreement was to move away from the traditional practice of infrastructure clients choosing suppliers who bid lowest. In this practice, clients often perceived suppliers as attempting to opportunistically exploit design errors and omissions for claiming payments for additional work, which offset the tight profit margins built in the bid. Due to disagreements between suppliers and clients about the legitimacy of these claims, costly litigation often followed causing work stoppages and delays. In contrast, the T5 agreement aimed to encourage suppliers to move into best practice and exceptional performance, and to actively seek and offer affordable and excellent solutions.

BAA took a different and unique approach to risk in T5 – it held all the risk - deciding it would be the best way to achieve price certainty. Subsequently, the contractors risk contingency was removed, lowering the overall tenders. Obviously with no risk placed on the contractor, incentives were required to encourage all to work to minimise the risk – the approach of “it doesn't matter, it is not my bill” had to be avoided for this scheme to be successful. The risk was managed through financial incentives for suppliers, rewarding successful performances. During the design stage the risk contingency was held within each project, however in 2004 it was decided that cost targets could be more challenging. This resulted in GBP 100 million taken from individual projects to a central pot that allowed the risk contingency to be allocated depending on where it was needed. This contingency allowed greater control of the financial implications of risk at a more global level and thus tighter overall budget control.

Arguably it was the formation of trust from contract mechanisms that enabled the success of T5; the formation of integrated teams and the application of a novel form of contract enabled trust between all parties. Experts suggest that the risk associated with large, complex projects can provide the motivation for clients to pursue and reward innovation by contractors and suppliers. By taking on and actively managing project risk, BAA was able to pursue a strategy of rewarding performance enhanced by innovations from all participants.

Source: OECD (2015), [Effective Delivery of Large Infrastructure Projects: The Case of the New International Airport of Mexico City](#), OECD Publishing, Paris.