



Managing Changes in Projects

Report of seminar 124, a debate held on 22nd March 2006
at the Royal Aeronautical Society, London

Motion for debate: 'This house believes that the only way to stop changes causing cost and time overruns is not to have any'

Summary

Introduction

The seminar took the form of a debate along Parliamentary lines on the motion: 'This house believes that the only way to stop changes causing cost and time overruns is not to have any.'

Projects in all sectors are frequently subject to delays and cost overruns, and the cause is often due to changes in requirements and design. Supporters of the motion looked at how changes frustrate cost and time targets, whilst opposers argued that good project management can deal with change without detriment to the process.

The House was divided into 'for' and 'against' and delegates were invited to cross the floor as they felt swayed by the argument.

For the motion

On the face of it the motion, proposed by Sir Alan Cockshaw, appeared fairly straightforward. Sir Alan felt strongly that the most important consideration in ensuring the delivery of major projects, on time and within budget, was to spend more time on concept development and risk analysis in the early design stages, and to focus on the certainty of the end date and the cost.

Many fundamental mistakes in projects occur that are almost entirely preventable, and certainly manageable, if identified and acted upon promptly. If people genuinely believed that no changes would be permitted they would work harder to identify and eliminate any problems at the beginning of a project. What was needed was a change in attitude of mind and culture towards the core issue of good design management.

Sir Alan had no doubt that the proposition was a fundamental step in improving the efficiency and effectiveness of the delivery of major projects.

The Speaker, Mr Norman Haste, noted that the private sector was better prepared than the public sector in investing in design at the concept stage.

Against the motion

The Speaker advised the House not to lose clarity in debating the motion – advice that Dr Martin Barnes, opposing the motion, welcomed. Sir Alan, he said, had concluded that a cultural change was needed so that additions and changes did not take place.

The core of the proposal was that in order to finish a project on time and within budget there had to be no changes. Dr Barnes doubted whether anyone in the chamber had ever worked on a project which met such a condition. To support the motion was to admit that the major projects industry could only deliver what clients wanted if the project did not change in concept or detail before being completed. It was, he said, ‘preposterous’.

Clients were entitled to change their requirements and it was the industry’s job to deal with the changes. He admitted there were still instances, particularly in the building industry, where changes had to be implemented because of sloppy initial work by designers – this was a disgrace, and should not be tolerated. But the major projects community had no more justification in asking for what amounted to a ‘design freeze’ than to expect the client to assume that the commercial or political environment was frozen. His proposition was that the industry must show it can provide major projects and be confident in its ability to manage those changes which are in the client’s interests to make. The major projects sector should be masters of change and not the victims of it.

Case studies

Two case studies were outlined, one in support of the motion, the other against it:

For:

Mr Stuart Baker’s support for the motion rested on the case of the West Coast Main Line. Under Railtrack the project had been a disaster, with insufficient analysis at the beginning of the project to see whether the input would deliver the required output. Trains were ordered and built which did not fit the track, sub-projects were only at the ‘blue-sky’ stage and a contractor was virtually in charge of the client’s credit card. It all led to ‘poor output clarity, cost escalation and a loss of timescales.’

All that changed in 2002 when the Strategic Rail Authority (SRA) stepped in and made Network Rail accountable for the delivery of the scope needed to meet the Department for Transport’s (DfT) required project outputs. The project was henceforth executed in a highly competent way, with a clearly defined fixed scope, without changes. Earthworks, track, signalling and two new platforms were delivered on schedule and under budget, whilst the separation of the West Coast route from the Birmingham to Leicester line proved crucial in the delivery of a high earning and well performing West Coast route.

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Critical success factors were highlighted through a description of a particular stage of the project, at Nuneaton, which involved building a new section of railway, interlocking signalling and a new platform.

Nuneaton Stage 1 Critical Success Factors

- Sponsor/funder (SRA) set key requirements and completion date and stood back
- Construction client (Network Rail) defined and fixed engineering scope
- Careful planning of interfaces
- No time to debate and dither
- Clarity of leadership by project manager
- Challenge of cost and timescales was huge

Against:

Supporting the opposition, Mr Keith Farley's case study looked at the 20 year programme for the development of the Ebbsfleet Valley in Kent, where a new town is being built in disused chalk quarries as part of the Thames Gateway scheme. 11,000 homes will be built creating 22,000 permanent job opportunities in 9.5 million square feet of office, retail and leisure space.

But over a 20 year period life styles change, along with building regulations, technology, and energy and environmental requirements. Because of the timescale, dealing with change has to be an integral part of the contracts, and construction of the infrastructure has to take into account many possible changes over the period. The project did not have a defined scope and cost, but it did have a defined outcome, which was to build a whole new town.

Mr Baker objected to this argument on the grounds that what Mr Farley was describing was a strategy not a project. The building of a home only became a project when authorised. Mr Farley, he suggested, would surely not change the specification of a house when it was half constructed. The Strategic Rail Authority was responsible for train development over the next 40 years and was building flexibility for change within the scope, but this was a strategy not a project.

Mr Farley pointed out that it would be simpler to conceive of the Ebbsfleet development as a traditional project and build it that way, spending the infrastructure money up front developing the roads and utilities. It is much harder to treat it as a flexible project which must be delivered against key business drivers.

Whether a project was a strategy and vice versa gave rise to a mini-debate, following which Mr Speaker suggested that everybody could spend time over lunch deciding how much money they would be willing to invest at the design or development stage of a project or strategy before going ahead, and what level of certainty would be required.

Afternoon session

The afternoon debate was lively, with relevant and cogent contributions from participants on both sides of the house. The question posed by Mr Speaker was debated, as was more general discussion about the effects of change on budgets and timescales. The house was reminded by those opposing the motion that all elements of change on a project, such as changes in legislation and management personnel have to be managed for the benefit of all stakeholders. Necessary changes should be managed quickly and efficiently, and opportunities for innovation seized.

Those delegates proposing the motion reminded the house that many major projects were delivered late and over budget, and in general it was felt that civil engineering was underperforming. However, the use of proven products and systems greatly improved the chances of project success. A final suggestion was that a further debate might be arranged in which people might define 'change' and discuss the different viewpoints from which it might be considered.

Summing up

Sir Alan Cockshaw (proposer) and Dr Martin Barnes (opposer), summed up their respective cases before Mr Speaker put the motion to the vote.

For:

Sir Alan Cockshaw reminded delegates that what the motion was really about was whether the major projects industry was efficient in delivering value for money in a timely way and producing quality. People could give all sorts of examples where projects had gone well and he could give examples of ones that had not. If you were producing aeroplane engines you did not change the design half way through. You decided at the beginning what you wanted and then went ahead and made it.

Dr Barnes had skewed the perception of the motion and was an apologist for people who got things wrong and was not willing to accept that something had to be done to put things right. Sir Alan knew there were great people who could manage change, but what his side of the house was saying was that the industry was not as it should be and what was needed was a culture which asked people to get things right at the beginning.

Against:

Dr Barnes summed up his case by saying he had been worried, as Executive Director of the Major Projects Association (MPA), that the message sent out might have been that the MPA could only deliver projects as long as the client did not change their mind. People could quote as many examples as they liked of projects which had no changes and finished within budget and on time. None of them were relevant to the motion.

Supporters of the motion needed to prove that changes inevitably led to cost and time overruns. They had not done so. For instance, the no-innovation policy on the Channel Tunnel Rail Link (CTRL) effectively meant that it had been decided in advance that change could not be handled effectively. Professionalism required that members of the major projects community should be masters of change and Dr Barnes thanked those that had supported him by saying that they could be.

The motion was defeated by 27 votes to 11.

Participating organisations

Arup
Atkins
BAA plc
Balfour Beatty plc
Bechtel Ltd
Bovis Lend Lease
British Energy
CMS Cameron McKenna LLP
Denton Wilde Sapte
Department for Transport
Emcor Rail Ltd
Ernst & Young LLP
Henley Management College
High-Point Rendel
KBR
Laing Rail
Major Projects Association
May Gurney Integrated Services
Mouchel Parkman
Network Rail Infrastructure Ltd
Pell Frischmann
PricewaterhouseCoopers
Rolls-Royce plc
Simmons & Simmons
Sir Robert McAlpine
Taylor Woodrow Construction
Transport for London
Union Railways Ltd