

MAXIMISING PROJECT PERFORMANCE - THE ROLE OF PROJECT CONTROLS IN ASSURING DELIVERY



Highlights from the Major Projects Association event held on **9th February 2017**

From aircraft carriers and airports, to nuclear decommissioning and new railways, this Major Projects Association seminar *Maximising project performance* examined project controls within a wide range of sectors and industries. Like these applications, the experiences and viewpoints of delegates varied, but some clear lessons and best practice emerged from the day, which was hosted by National Grid Group Director Ian Galloway OBE.

The need to invest adequately in the planning and development stages to create an effective project controls framework was a clear theme, as was the need to ensure that the right data is being produced at the right time. Having project controls, assurance and governance systems that are integrated, flexible and able to evolve with the project and its environment were also highlighted as key to successful delivery – as was the need to ensure that control measures are appropriate for the complexity of the scope. Concerns were also raised that clients did not always value project control systems and it was agreed that better articulation of their benefits was needed.

Arcadis UK Head of Programme and Project Controls, Iain Minns, warned delegates about what he termed ‘rear-view mirror syndrome’, where data is used to look back at the past; it becomes a waste of resources, creating huge volumes of historic information instead of being used as it should be – as a useful tool for performance forecasting.

From an external perspective the National Audit Office (NAO), which scrutinises public spending for Parliament, outlined some of the common themes that emerge repeatedly in their investigations. Key issues centre around problems with the role of programme boards, the size of committees, turnover of members, and once again the quality of information that they receive.

‘The big thing that crops up time and time again is quality of information – the need for a single source of truth, the need to triangulate different sources and keep it simple. Unfortunately we find quite variable performance.’

Geraldine Barker, Director, NAO

Recent NAO investigations into the Common Agricultural Policy (CAP) Delivery Programme and London’s Crossrail were held up as examples of extremes. The **December 2015 CAP review** found management information to be

patchy and inconsistent and not given a high priority in the programme. Conversely the **January 2014 Crossrail report** impressed auditors with the quality of their monthly and semi-annual reports to the board.

As is expected on long and complex schemes Crossrail’s project and programme control systems have evolved during its life cycle. The key milestone in this was the upgrade to the PRISM G2 cost management system implemented in 2012. The next principal evolution occurred in 2015 when Earned Schedule was implemented over and above the existing Earned Value Performance Management System. The Earned Value (EV) tool shows how much of the budget and time should have been spent considering the amount of work done so far and is measured as a cost, whereas the Earned Schedule (ES) performance indicators are time-based and considered easier to understand and manage.

Another improvement undertaken in late 2015 was the decision to exploit the data warehouse by providing project managers with a data-rich dashboard from central programme controls, rather than each project team having to export and reformat their own data, i.e. removal of double handling of data.

‘For the first time on a major project that I know of, we now simply ask project managers to add their commentary to a data-rich dashboard, provided from the centre, in the spaces provided. A bi-product of this methodology was that it allowed us to put every performance metric on one programme dashboard to allow us to see the whole programme at a glance, and compare project to project. By exploiting this single source of the truth and using the data warehouse we have been able to put some real efficiency into programme controls across Crossrail.’

Richard Palczynski, Programme Controls Director, Crossrail

Another organisation which continues to improve its project control systems is Transport for London (TfL), which must deliver its capital improvement and maintenance programmes against a backdrop of reducing financial support from government. Examination of the control systems showed a diversity of practice across the organisation and highlighted the need for better risk control, assurance and clearer accountabilities. To facilitate solutions to its project delivery challenges TfL has set out several improvement aims, including the roll-out of assurance mapping within the business.

Site licence company Magnox Ltd is also improving its project control systems as it undergoes a change in focus from being an electricity generating company to becoming a decommissioning entity. With more than 3,000 staff in 13 locations the key challenge for the organisation is about transforming its deeply embedded operational mindset culture into one that delivers an integrated portfolio of programmes and projects. Achieving this means challenging behaviours and striking a new balance between adequate controlled assurance, delivering those quality products and holding people accountable for what they are delivering. Six main improvement work streams have been created to enable this transition, including a new programme framework and project delivery model which is applied consistently and clearly communicated across the entire business.

Looking to the future, Crossrail's Richard Palczynski challenged the audience with the view that project controls as we know them today will be obsolete by 2020 with new technologies disrupting traditional roles. In the four years since the Major Projects Association held an event on **project controls** new terms such as 'gamification', 'hackathons' and 'drones' were becoming increasingly commonplace and were leading to new solutions and increased automation. Cost verification, for example, could be carried out by drones, and radio frequency identification (RFID) tagging could be used to track people and commodities. However this view was countered by views from the audience, which identified a reluctance among some organisations to make these types of investments and argued that contracts are not keeping pace with new technologies.

One of the most successful aspects of the project control system, explained David Shepherd, QEC (Queen Elizabeth Class) Project Director at ACA, has been the implementation of a new project control tool, the completion management system. First used in the oil and gas industry this tool maps completion events,

which are underpinned by the requirement for physical sign-off based on inspection and testing. This clarity of end point when used with other project control tools removes some of the areas of uncertainty that come about when moving from fit-out to commissioning.

PROJECT CONTROLS WITHIN THE AIRCRAFT CARRIER ALLIANCE

The **Aircraft Carrier Alliance** (ACA) is building two of the Royal Navy's largest ever ships, HMS Queen Elizabeth and HMS Prince of Wales. At 65,000 tonnes each these floating cities can house 40 aircraft and 1600 people and are being constructed at six sites throughout the UK. The project control system maps all scopes of work across both ships and reports on a monthly basis to the Alliance Management Board. This board consists of people at managing director or chief executive level for the companies involved, ensuring that strategic decisions can be made quickly. Deep-dive quarterly reviews are conducted to see what risks lie ahead, and an independent chairman, Sir Peter Gershon, was brought in to hold all partners to account.

POINTS FOR FURTHER DISCUSSION

- How can we encourage clients and contractors to 'switch on' to the value of project controls?
- What steps must be taken to ensure that project controls and assurance are integrated into projects early enough?
- Should project controls sit with a central management office or be embedded within delivery teams?
- How good is your data? Is it enabling you to focus on the future or does it dwell on the past?

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Chair:

Ian Galloway OBE, Group Director, National Grid

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Participating Organisations:

AECOM	Freshfields Bruckhaus Deringer LLP	Nuclear Decommissioning Authority
Advance Consultancy Ltd	Gatwick Airport Ltd	PA Consulting
Arcadis LLP	Grosvenor Britain & Ireland	Pinsent Masons LLP
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Department for Transport	National Audit Office	WMG: University of Warwick
EDF Energy	National Grid	WSP Parsons Brinckerhoff
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