GETTING A GRIP:

HOW TO IMPROVE MAJOR PROJECT EXECUTION AND CONTROL IN GOVERNMENT

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Introduction

In my first annual report as Government Lead Non-Executive,[1] I identified major projects as one of the three priority areas that non-executives would focus on during the 2012-13 financial year. Based on my commercial experience, the findings of other government non-executives and best practice in the private sector, this short paper presents my recommendations for improving the execution and control of major projects.

The government owns and runs 185 major projects which in total cost £414 billion.[2] These major projects include the building of roads, railways, defence equipment and information technology systems, and they cost between £20 million and £20 billion each. Despite the level of investment, the management of these projects has been worryingly poor. When the Public Accounts Committee (PAC) reported on major projects in September 2012,[3] it found that only one third were delivered on time and budget; that is in contrast to the highest performing private sector organisations. There have been improvements in government since 2010, including the creation of the Major Projects Authority (MPA)[4] (within the Cabinet Office) and an enhanced remit for Infrastructure UK (within HM Treasury).[5]

However, there is still insufficient attention given prior to the initiation of projects to identifying options and risks; consistent failure to put in place project leaders with the right skills, experience and incentives; and inadequate scrutiny of the most complex and expensive projects at the centre of government.

This paper describes the problems; identifies best practice in the private sector for dealing with them; and makes recommendations for strengthening the remit of the MPA, working alongside Infrastructure UK (IUK) and HM Treasury, to implement the lessons.

There are two basic insights which drive my recommendations. The first is that the lowest standards that are set at the start of a project are the highest standards that can be expected for the rest of the project. Investment of time and resource in a rigorous process at the outset is essential for success, and deficiencies cannot be recovered later. Once a good start has been made, the right skills, experience and review processes are required to maintain that standard. The initiation and management of major projects represents a significantly higher risk to an organisation than business as usual activity. That is why major projects are usually centrally controlled.

The second is that nobody ever stops or intervenes in a poor project soon enough. The temptation is always to ignore or under-report warning signs, and give more time for things to improve to avoid revealing bad news, rather than to intervene decisively at the earliest opportunity. An on-going and rigorous review process with real teeth which monitors the agreed measures of progress is essential to highlight the potential need for intervention.[6]

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[1] https://www.gov.uk/government/publications/government-lead-non-executive-annual-report-2011-12

[2] This figure is the whole life cost of all of the 185 Government major projects. Source: Quarter 3, 2012-13 Government Major Projects Portfolio data.

[3] http://www.publications.parliament.uk/pa/cm201213/cmselect/cmpubacc/384/384.pdf

[4] https://www.gov.uk/government/policy-teams/126

[5] http://www.hm-treasury.gov.uk/infrastructure_about.htm

[6] There are some processes in place that should be doing this, namely the Major Projects Review Group, with guidance from the *HM Treasury Green Book* and business case methodology. In practice, these processes do not have 'teeth' and do not result in a project being stopped on paused when problems arise.

This paper recommends improvements in process, structure, incentives and skills. If followed, these recommendations will produce a new focus on making the best choices for major projects upfront, prior to them getting started, and structuring their development through a modern stage gate process. The MPA, with HM Treasury, will be empowered to enforce parameters for projects that are hard-edged, not flimsy conditions that are contested by interpretation. It will require the appointment of strong project leaders and effective project teams to ensure that ministers' objectives for major projects are met. When things go wrong, it will call 'time out', creating the opportunity either to fix projects or end them.

To make organisations and the outcomes they produce successful needs more than a change to structure and management processes. It requires a deep seated change in culture: the right tone from the top signalling that making projects world class matters; successful leaders being applauded; stories of success and failure being a required part of training; and a culture of compliance with centrally mandated methods of reducing risk.

Without measures like these, unfortunately we may keep watching major projects in government fail and think to ourselves, in the words of Margaret Hodge MP, the Chair of PAC: "My God, this is taxpayers' money."

The execution and control of major projects in government

Based on conversations with other government non-executives, briefings from officials and ministers and my own observations, I have identified three areas in which the government's approach to major projects should be substantially improved.

Making the right start

The process used in government for managing the set-up of new projects, called the 'starting gate process,' while an improvement on earlier attempts, is too simplistic given the costs and risks associated with major projects. It is a short exercise carried out for the purposes of 'assurance' before a project starts. The detailed objectives of the project are not always explicitly stated, and it is not a methodical investigation of issues facing the project designed to expose risks and alternative options for delivering the same objectives. When that fuller inquiry is not completed prior to initiating the project, all this achieves is to store up costs and time delays for later. A project that starts poorly never improves.

The starting gate process is, on occasion, by-passed by departments altogether, without repercussions such as the withholding of funding by HM Treasury until the department sponsoring the project can demonstrate readiness to continue.

As we will see in the next section, best practice in the private sector is to hold projects to a very high standard of scrutiny before the decision to start is taken. Any announcements made prior to the completion of this scrutiny, including those by ministers, should be regarded only as aspirations rather than as commitments.

Skills, experience and incentives

Major projects in government are announced and money is committed to them without the assurance that a project leader and team with the right capability have been put in place.

This lack of attention to identifying the right skills and experience is alarming to anyone who has seen, by contrast, the premium that is placed on specialist skills and experience for the leadership of major projects in the private sector.

The creation of the Major Projects Leadership Academy with Saïd Business School at Oxford University has started to improve skills, with 90 senior leaders from the civil service currently going through training. However, this programme will take years to build sufficient capability and for the moment most major project leaders in government still lack the right skills to be running those projects.

Even when departments grip these issues and recognise that a project leader and team needs to be recruited from outside government, they are reluctant to request HM Treasury approval of salaries above the Prime Minister's; or that Cabinet Office provides an exception to rules on employment of consultants and other external experts. (In fact, Ministers can authorise consultancy spend up to a certain level within their own departments, and Cabinet Office stands by to authorise consultants on appropriate projects above this level).

Over the lifetime of a project, project leaders and team members also need to be better incentivised to stay on a project for a reasonable length of time so that they deliver key milestones. The pay controls will need to be adjusted to make this easier. In addition, the dominant approach of the civil service to recognising performance is to promote talented individuals to a different role; hence the continuity of leadership needed on a major project between milestones is lost.

Finally, one way to strengthen the capability for executing major projects is to have stronger functional leadership, that is, to have full time heads of profession for many of the roles associated with the execution of major projects, such as finance, project management, engineering and information technology. In the private sector these heads of profession are responsible for identifying where more capability is needed and taking steps to build it. Government has some heads of profession, but the roles are not full time; they are not vested with the authority of the centre of government; and their roles do not include advising on the capability for executing major projects.

Central scrutiny and portfolio management

Central oversight of major projects is conducted between the MPA, IUK and HM Treasury's general expenditure section. The MPA was set up to develop the government's major project portfolio; provide assurance on existing projects; enforce processes for setting up new projects; and build capability. It has a mandate from the Prime Minister and reports to both Cabinet Office and HM Treasury ministers. IUK supports the delivery of the top 40 priority infrastructure investments and assists the MPA in providing assurance on the value for money of investment in major infrastructure projects. HM Treasury holds the purse strings, and decides when public money should be spent on major projects.

The MPA and HM Treasury have been working together on an 'integrated assurance and approval process' which brings together project assurance and financial assurance for ministerial decisions on the allocation of investment funds. However, it remains the case that if these assurance reviews find that a project is not ready to proceed or is failing during execution, funding is not withheld by HM Treasury. This was a key finding of recent PAC and National Audit Office (NAO)[7] reports on government major projects.

To inform these decisions on funding, there needs to be high quality assurance on project readiness and value for money; the MPA has insufficient resources to undertake this. They lack input from the heads of profession or other parts of the centre, for example, on the quality of contract management, or the digital capability of project teams. They should also be seeking an independent view on the design of major projects as part of the stage gate process, drawing on the expertise of the Chief Scientists in government and the senior members of professional associations such as the Royal Academy of Engineering.

As we will see, a critical innovation in the private sector has been the emergence of a portfolio management approach to major projects, that is, a central project authority takes the role of prioritising across a company's projects on the basis of benefit to cost ratio, risk and deliverability. This exercise is repeated frequently, allowing a company to take a view on which projects require on-going high investment; the allocation of the most capable project leaders; and, within a context of limited resources, identifying by contrast those projects that should be re-scoped or stopped.

In government, a Major Project Portfolio (GMPP) was created in 2011. Before then the government did not know the overall number and value of its major projects. However, there is no senior decision-making authority which routinely scrutinises the GMPP in the way of the private sector. This is a serious gap which means that government is failing to use information to create action.

Outside of the realm of major projects, there are also a vast number of other projects in government which could benefit from a portfolio approach being taken at the level of each department. Again some departments have taken steps in this direction, but there is no systematic portfolio management, leading to some projects having additional resource devoted to them to ensure a successful outcome and others being re-scoped or stopped.

Best practice in the private sector

In preparing this part of the report, I have relied on updates provided by major projects experts from a range of capital-intensive industries[8] and my own experience as an executive in the private sector.

Making the right start

Private sector organisations recognise the critical importance of identifying the options for delivering a major project at the outset, prior to committing any spend, and creating strategies for managing risk. If this is not done, then costs and risks are 'baked in' to the project, rather than managed out, and that decreases the benefit to cost ratio of even a highly viable project.

[7] http://www.nao.org.uk/report/assurance-for-major-projects-2/

[8] I have relied on interviews with: Sir David Higgins (Chief Executive, Network Rail); Sam Laidlaw (Chief Executive, Centrica); Dev Sanyal (Executive Vice President, and Group Chief of Staff, BP); and Ric Parker (Director of Research and Technology, Rolls Royce). I am also grateful to Professor Bent Flyvberg (Saïd Business School, University of Oxford) who provided a synopsis of his research on these themes.

The first component of this approach is to have an explicit project gateway for initiation. That gateway is typically controlled by a high-level investment committee or even by the Board itself. At this stage, the detailed objectives of the project are stated and quantified. This focuses attention; and creates high-quality scrutiny.

When a project is presented at this gateway, as well as the lead option, the project proposer is required to present other options, which must have been worked up to a similar level of detail to the lead option. This line of sight from the top of the organisation to the options considered by a business unit is essential to making the best investment decisions for the overall strategy of the organisation.

Crucially, given the long-run nature of major projects, this top-level scrutiny of options is not a one-off. Usually further options will arise during the lifetime of the project, each with different benefits, costs and timescales. Hence, these too will be considered at a senior level before the project continues down any specific route.

To assist scrutiny, approval for major projects will typically require prior review by the heads of function, for example, the heads of engineering and finance.

This set of processes attached to the start of a project is typically known as a stage gate process. In some companies, recognising the complex mix of issues involved, initiation is not treated as a single stage but an accumulation of stages relating to: the conception of the idea; development of options; the choice of the preferred option and its full design; the preparation of a financial case; and the proposition for project leadership, including incentives. Certainly, given the complexity of many government major projects, there would be advantages to adopting this same modern and multi-staged approach to initiation.

When a major project has been signed off for initiation in the leading private sector organisations, that sign off prescribes a set of parameter conditions around interim deliverables, cost and timing. If the conditions are breached, then the project leader is required to return the project for review. Equally, no contingency funds will be released to the project until there has been further review. This means that risks remain exposed throughout the lifetime of the project. The objective is to surface risks and manage them transparently rather than pretend that they do not exist.

Skills, experience and incentives

Getting people with the right skills and experience is central to project approval in the private sector. The project will not be allowed to proceed until the capability to deliver it has been identified.

The project team will be led by someone who has tried and tested project leadership skills. Multi-billion pound projects are never seen as a personal development opportunity and it would show unsound judgment to appoint someone who has not previously delivered a large, complex project to one of the top priority and most expensive projects. Project members are assessed on their suitability before being allocated to a project and projects do not start until a team with the right skills has been identified. This can take the form of a competence evaluation which assesses project managers' skills and those who perform particularly well against the criteria are placed on the most risky and challenging projects.

Project leaders and team members are incentivised with pay, benefits and bonuses. Their performance tends to be assessed against three areas: their behaviours; delivery against in-year targets; and delivery against the organisation's long term legacy. Project management is viewed as a prestigious career path in the private sector. Though projects are delivered by temporary teams, constituted for the specific purpose of achieving the project objectives, project leaders and team members are incentivised to work on the project until appropriate milestones are reached. This can mean that people work on the same project for many years, but that does not stop career progression - for instance people can be promoted while staying in the same role to reflect the experience and achievements they have gained on the project and to incentivise them to remain until the next milestone.

Central scrutiny and portfolio management

It is very striking that all the organisations I consulted as part of this review have created central project authorities to manage the portfolio of major projects to a common set of objectives, standards and processes. I have already described their role in project initiation; and at subsequent project gateways. The size of the project authority varies, depending on whether the authority itself is responsible for the delivery of major projects, or if its role is to hold the teams created to deliver major projects to account on behalf of the Board or Investment Committee.

The role of the MPA, the government's equivalent to central project authorities in the private sector, is at the heart of my recommendations for how government could improve the execution of its major projects. The next section is devoted to this.

Recommendations

There are six areas in which the role of the MPA should be enhanced to reduce risk and hence improve the execution and control of government major projects: (1) control of project initiation; (2) on-going project assurance and intervention; (3) post project audit; (4) appointment of major project leaders and certain critical project management posts; (5) design of pay and incentives to create high performance; and (6) wider development of skills and capability across government.

Some of these recommendations go with the grain of changes that the government has already made. The Chancellor's Autumn Statement 2012 referred to creating an enhanced MPA and the 2013 Budget announced that IUK is currently working with departments to create plans to drive forward the delivery of infrastructure. My recommendations suggest how the MPA should be enhanced and comment on some specific areas where it will need the support of IUK, on infrastructure projects in particular, and the support of HM Treasury to ensure that the scrutiny and control of projects is connected to decisions on project funding.

The performance of the MPA should be reviewed annually by the Cabinet Office Board to determine whether or not it is discharging its new remit and major projects are being delivered more effectively.

Control of project initiation

The MPA, working with IUK on infrastructure projects, should design and mandate the use of a strengthened stage gate approval process taking into account lessons learned internally and best practice externally.

It must control the gateway for the set-up of any new major or complex project to ensure that: major projects deliver the option that enacts the objectives of ministers with the highest benefits to cost ratio that is possible; risks have been identified upfront and strategies are in place to manage them; clearly defined accountabilities of project leaders, project managers, departmental leaders and ministers have been established; processes for authorising and reporting transparently any material changes have been established; and the capability, including the right project leader, is in place to deliver the project efficiently and effectively. Projects not meeting these criteria should not be started or funded. This last requirement on funding will have to be enforced by HM Treasury, based on advice from the MPA.

Having the MPA assume these additional roles will not be easy. It will require additional resource and time from the departments responsible for delivering major projects compared to what is committed to the more perfunctory 'starting gate' reviews that are done at the moment. As shown by the best performing private sector organisations, achieving real clarity about the decisions to be made at initiation requires dividing this into a set of stage gates, rather than pretending that there is only one decision to be made. This is a deliberate choice designed to identify options and risks at the outset, when the prospects for making the best choices are the broadest. If these options and risks are not understood prior to initiation, then the likelihood is that higher costs and longer timescales will be 'baked in' to the project. These processes may well slow down implementation of a project, but this is better than wasting billions of pounds because there has not been full assessment of deliverability from the outset. These processes are not to be seen as needlessly bureaucratic and civil servants should not turn this into a box ticking exercise.

When projects are approved and funded for initiation, that approval will be subject to parameter conditions on cost and timing. Those conditions will have to be set by HM Treasury, based on advice from the MPA.

Evidently the decisions to be made at this stage are complex, looking across the entire portfolio of government activity, and they are also central to the government's political strategy. As such they will require the sustained involvement of senior ministers who should report to a dedicated Cabinet committee.

But the MPA must also retain a degree of independence, challenging ministers with information on the options and risks that their enhanced scrutiny has revealed. Drawing on the expertise of Chief Scientists and the senior members of professional associations such as the Royal Academy of Engineering will be an important part of building the credibility to provide that challenge.

On-going project assurance and intervention

Over the lifetime of a major project, new options for delivering it will emerge, either changes in the scope or cost, or improvements or efficiencies made possible by new technology. Equally, major projects will run into problems (by their very nature they are laden with risk) and even when project initiation is strictly controlled, on-going assurance and intervention is necessary.

The MPA, working with IUK on infrastructure projects, should be required to examine all the major projects in the portfolio regularly to provide this on-going scrutiny, based on the parameters agreed for each project at the previous stage gate; and every project milestone should be accompanied by a stage gate review, requiring similar scrutiny to the project initiation stage before further funding is released.

Critically, the MPA will require the power to recommend directly to ministers that they temporarily halt projects that have breached the parameter conditions agreed with the authority. This ‘project time out’ will enable additional strategies for mitigating risk to be identified; or for the tough decision to re-scope or stop a project entirely to be made before further resources are consumed.

Post project audit

The MPA should carry out or mandate a post project audit for most major projects, especially when they are novel in nature or could bear lessons for other current projects. The findings from the audits should inform the future work of the authority and be incorporated into training for project leaders. Only the MPA can consistently ensure that post project audits take place, and it is a telling weakness of the current approach that they do not happen as a matter of course.

Appointment of project leaders

The MPA should be able to nominate candidates for the project leader posts and to veto the appointment of those who are deemed unsuitable. It should also be able to examine the makeup of the project management team to determine whether or not it is suitable for the task at hand at each stage gate. It may withhold its endorsement to proceed to the next stage if the team is inappropriate.

Project leaders and critical project management personnel should only move at predefined stages of the project. This schedule should be agreed with the MPA at the start.

Design of pay and incentives

The MPA, working with IUK on infrastructure projects, is best placed to create a common framework for how pay and incentives will be used to create high performance; manage any pay control process; and provide consistency.

The pay and incentives for leadership of a major project should be settled upfront at the project initiation stage alongside identifying the capability to lead the project.

Development of skills and capability across government

As with post project audit, the MPA, working with IUK on infrastructure projects, should have the role of ensuring that the gains in skills and capability made in any individual major project are recycled for the wider portfolio. This means being the head of professional function for project leaders and senior project managers; providing on-going professional development for major project leaders, as the Major Projects Leadership Academy has started to do; having a set of standards to identify the very best project leaders in the civil service and outside it; and then being in a dialogue with departments so that they can be assigned to the most complex and challenging projects in the portfolio. To do this effectively, the Cabinet Office and HM Treasury should create pools of project leaders and experts that are deployed to projects when capability gaps are identified. Experts from outside the civil service will need to be recruited and steps must be taken to encourage their acceptance by the civil service.