



National Audit Office



Interactive

For full iPad interactivity, please view this PDF in iBooks or GoodReader

The National Audit Office (NAO) scrutinises public spending for Parliament and is independent of government. The Comptroller and Auditor General (C&AG), Sir Amyas Morse KCB, is an Officer of the House of Commons and leads the NAO. The C&AG certifies the accounts of all government departments and many other public sector bodies. He has statutory authority to examine and report to Parliament on whether departments and the bodies they fund, nationally and locally, have used their resources efficiently, effectively, and with economy. The C&AG does this through a range of outputs including value-for-money reports on matters of public interest; investigations to establish the underlying facts in circumstances where concerns have been raised by others or observed through our wider work; landscape reviews to aid transparency; and good-practice guides. Our work ensures that those responsible for the use of public money are held to account and helps government to improve public services, leading to audited savings of £741 million in 2017.

# Framework to review programmes

UPDATE 2018-19

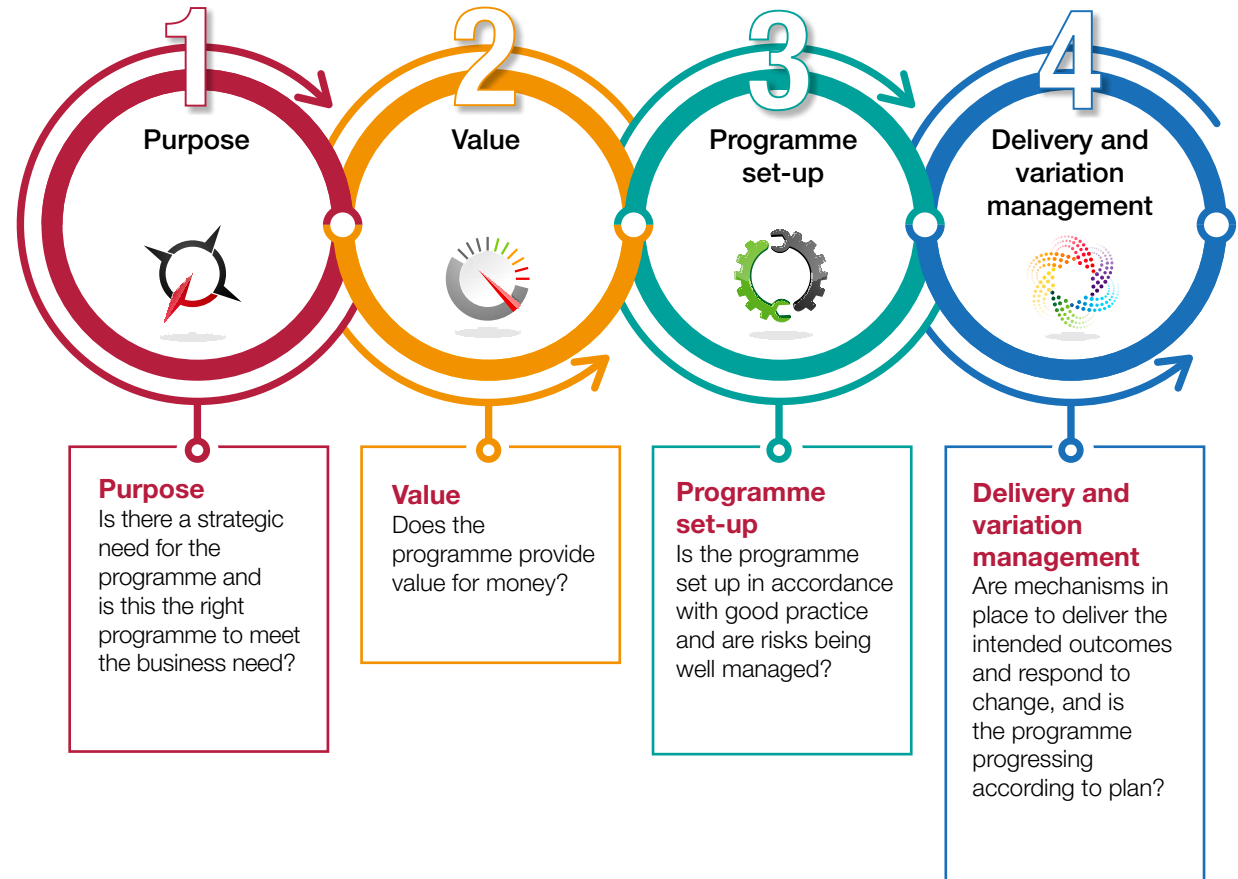


Major programmes are expensive, high profile and carry great uncertainties and risks. It is not surprising that many fall short of their objectives, in terms of cost and/or outcomes.

This framework draws together the key questions we ask when we review major programmes, based on our experience and taking into account the findings of our reports. It was developed for our value-for-money auditors to use when reviewing programmes, but may be useful for those seeking an overview of our work on projects and programmes.

### About this framework

The framework is structured into four elements that should be considered at each stage of a project or programme:



### Evidence base

This framework is based on our experience of around 140 studies reviewing public sector programmes since 2010. The main NAO reports are available on our [Managing major projects](#) web-page, including good practice guides such as [Initiating successful projects](#). Key aspects are detailed in the Appendix to this document.

We have revised the guide to reflect our work up to February 2019. The previous edition, including evidence from reports up to 2017, is available [here](#). This is an evolving framework and we expect to add to and amend it as further evidence becomes available.

## Using this framework

This framework is not intended to be a checklist. It is a flexible approach that can be tailored, based on issues such as the stage and type of programme. We designed it for auditing major government projects and programmes, but the elements are also relevant when examining any project or suite of projects.

Our audit approach depends on the context of each examination, and we make our assessments on a case-by-case basis. We may apply the framework within a wider set of audit questions. Auditors use other NAO resources, detailed under [in-depth tools](#), and deploy their own experience and judgement to probe deeper into areas of particular interest on each programme.

Our audit approach evolves over time and responds to the challenges government faces. Accordingly, we expect the framework to develop further, and the questions we ask may change in the future.

This framework can be applied to programmes or individual projects. When we examine portfolios of programmes, we ask some of these questions and consider other issues, such as prioritisation and resource allocation.

The framework comprises [18 top-level audit questions](#), each with suggested sub-questions. We generally ask the main questions first, then use the sub-questions to get more information, if needed. Many of the questions are interrelated. The 'essential evidence' section contains suggested documentation that may provide the answers, but it is not exhaustive.

The examples from our studies illustrate how we have reported our answers to such questions for a wide range of programmes.

More specific tools to help with examining some issues, types of programme or delivery methods are detailed under [in-depth tools](#).

# 1

## Purpose

### Need for programme

Is it clear what objective the programme is intended to achieve?

### Portfolio management and dependencies

Does the programme make sense in relation to the organisation's strategic priorities?

### Stakeholder engagement

Have the right people bought into the programme, such as users, suppliers, those who have to implement it?

# 2

## Value

### Option appraisal

Does the option chosen meet the programme's objective and provide long-term value?

### Business case

Does the business case demonstrate value for money over the lifetime of the programme?

### Cost and schedule

Has the programme built up robust estimates of cost and schedule, including all programme components?

### Benefits

Does the programme: have a baseline; know what measurable change it is going to make; and actually measure it? Are benefits being achieved?

# 3

## Programme set-up

### Governance and assurance

Are there structures (internal and external) which provide strong and effective oversight, challenge and direction?

### Leadership and culture

Does the programme have strong leadership with the necessary authority and influence?

### Resources

Has the organisation the resources (staffing, skills, equipment, and so on) required to deliver the programme?

### Putting the programme into practice

Are scope and business requirements realistic, understood, clearly articulated and capable of being put into practice?

### Risk management

Are key risks identified, understood and addressed?

# 4

## Delivery and variation management

### Delivery strategy

Are there appropriate incentives for all parties to deliver (contractual, performance management, or other)?

### Change control

Is there an effective mechanism to control programme alterations?

### Responding to external change

Is the programme sufficiently flexible to deal with setbacks and changes in the operating context?

### Performance management

Is progress being measured and assessed, including consideration that the programme is still the right thing to do?

### Lessons learned

Is the programme learning from experience on the current programme and previous relevant programmes?

### Transition to business as usual

Does the programme have a clear plan for transfer to operations/business as usual?

The framework comprises 18 key questions grouped into the four main elements we consider when we audit programmes.



## Key audit question

### 1 Need for programme

Is it clear what objective the programme is intended to achieve?

#### Sub-questions

Has the need for a programme been established?

Is there a clear understanding of the current position, the shortcomings that the programme is intended to address and the desired outcome?  
And is it clear that the programme, if delivered, would address the need?

Are there clear, realistic objectives and an understanding of what success looks like?

#### Essential evidence

Statement of what the programme is intended to achieve – likely to be in the strategic business case.



## Need for programme – examples from our studies

Our 2018 report [Improving children and young people's mental health services](#) found that even if current initiatives are delivered as intended, there would remain significant unmet need for mental health services among young people. Moreover, unmet need is likely to be higher than previously thought, given that a prevalence survey, published just after our report, showed the proportion of children and young people with a mental health condition had increased. Significant weaknesses in the data undermined the government's understanding of its progress and whether additional funding had been spent as intended. In particular, the NHS could not reliably track progress against one of its key targets to treat an additional 70,000 children and young people.

We reported on the Bank of England's (the Bank's) [Progress delivering the 'One Mission, One Bank' strategy](#), a strategy launched in March 2014 following an expansion of its responsibilities and number of staff. The three-year strategy aimed to bring together various parts of the expanded Bank into a more unified, single institution. Our 2017 progress report found that the Bank had developed a well-thought-through strategy based on a clear diagnosis of the issues to be addressed. In most cases, there was a link between the Bank's action plan and the initial identification of the issues to be tackled. Clear responsibilities for delivering the strategy were established before it was launched, along with effective arrangements for tracking progress. By March 2017, the Bank had reorganised its operations and delivered many of the component parts of the strategy. The report noted that some of the more challenging aspects, such as embedding cultural change and delivering significant data projects, would require a long-term effort.

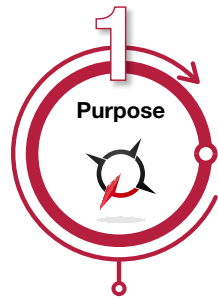
## Other relevant reports

[Sustainability and transformation in the NHS](#) (paragraph 14)

[Developing new care models through NHS vanguards](#) (paragraph 8)

[Rolling out Universal Credit](#) (paragraph 8)

[E20: renewing the Eastenders set](#) (paragraph 6)



## Key audit question

### 2 Portfolio management and dependencies

Does the programme make sense in relation to the organisation's strategic priorities?

#### Sub-questions

How does the programme address the highest priority strategic needs of the organisation?

What other programmes are active at the same time to address these strategic needs?

Is there good understanding of other organisations' programmes that may impact on the operating environment of the programme?

Is there an approach in place to manage the interdependencies between different policies, teams and organisations?

Is there evidence of timely and consistent communication between those with an interest in the outcome being sought?

Does the programme make sense in relation to the resources available to the organisation? (see also [Question 10](#))

#### Essential evidence

Statement that programme fits with organisational strategy – likely to be in Single Departmental Plan.





## Portfolio management and dependencies – examples from our studies

Our November 2018 report found that the Ministry of Defence's (MoD's) [Equipment Plan 2018 to 2028](#) remained unaffordable and there are risks to longer-term value for money. The MoD's forecast costs for the Plan exceeded its budget by £7.0 billion over the 10 years. It forecast £193.3 billion equipment and support costs, against a £186.4 billion budget, including a £6.2 billion contingency. Should all the identified risks occur, this gap could grow to £14.8 billion. However, the MoD's approach to forecasting costs was more realistic than in previous years. It had a fuller assessment of nuclear project costs, had used more accurate US dollar exchange rates, and included costs for the Type 31e frigates, which were omitted from the previous year's Plan. The MoD had also improved its understanding of affordability risks. However, we still lacked full confidence in the robustness of some the MoD's underlying assumptions, particularly around efficiencies.

In [Developing new care models through NHS vanguards](#) we reviewed NHS England's programme to create 50 sites as 'vanguards' to design new care models that could be quickly replicated across England. This might entail, for example, joining up GP, hospital and community and mental health services in an integrated network or single organisation in one area to improve healthcare for patients. Our 2018 report found that the programme had not delivered the originally-intended depth and scale of transformed services. Instead, money originally intended for this programme was spent on helping to relieve short-term financial pressures in the NHS, weakening the programme's chances of success. NHS England planned for £2.2 billion of funding for new care models between 2016-17 and 2020-21, but it used much of the funding to reduce deficits faced by hospitals. Actual direct funding of vanguards was £329 million over three years from 2015-16, with another £60 million spent by NHS England on central support for vanguards. Consequently, with less funding for transformation, the original intention to expand the programme was not realised.

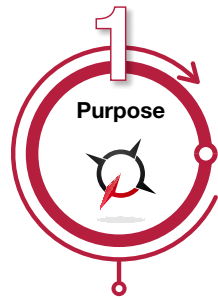
## Other relevant reports

[Low carbon heating of homes and businesses and the Renewable Heat Incentive](#) (paragraph 10)

[Early progress in transforming courts and tribunals](#) (paragraphs 8 and 17)

[The Defence Nuclear Enterprise: a landscape review](#) (paragraphs 9 and 14)

[The Nuclear Decommissioning Authority: progress with reducing risk at Sellafield](#) (paragraph 19)



### Key audit question

#### 3 Stakeholder engagement

Have the right people bought into the programme, such as users, suppliers, those who have to implement it?

#### Sub-questions

- Have all stakeholders been identified and their influences understood?
- Have they been engaged and roles and responsibilities established?
- Are key stakeholders supportive of the programme?
- Is there a stakeholder management plan?
- Is there a complementary communications plan?

#### Essential evidence

Stakeholder engagement strategy.



## Stakeholder engagement – examples from our studies

Our 2019 report [Administration of Welsh Income Tax 2017-18](#) found that, following the approval of its strategy, HM Revenue & Customs began developing its stakeholder mapping and external communications plans to engage with a wide range of audiences through a number of channels. We found that key external stakeholders were being informed about the changes through GOV.UK, social media and factsheets, employers or agent-specific bulletins and forums, and bilingual notification letters to individual taxpayers.

[Progress on the government estate strategy](#) (2017) examined the Government Property Unit's (GPU's) strategy to make savings in the central government estate by creating regional property hubs and centralising the management of the estate. It found that the Cabinet Office (in which the GPU sits) had yet to achieve strong commitments from most departments to making these key programmes work, and that limited progress had been made towards creating a shared, flexible and integrated estate. It recommended that the GPU should take stock and, if necessary, delay, redesign or consider phasing the programmes over a longer timescale.

### Other relevant reports

[Crown Commercial Service](#) (paragraphs 10 and 17)

[Air Quality](#) (paragraph 15)

[Early progress in transforming courts and tribunals](#) (paragraph 16)



### Key audit question

#### 4 Option appraisal

Does the option chosen meet the programme's objective and provide long-term value?

#### Sub-questions

Does the option appraisal explore a sufficiently broad range of options to determine what the programme should look like?

Does it include sufficient evidence from a variety of sources?

What assumptions have been made?

Is the programme brief consistent with the chosen option?

Has a pilot scheme/feasibility study been considered?

Has there been learning from previous/similar programmes?

Has consideration been given to the need to demonstrate good practice?

#### Essential evidence

Option appraisal – should be included in business case (for investment programmes) or impact assessment (for regulatory programmes).



## Option appraisal – examples from our studies

Our [Investigation into the Department for Transport's decision to cancel three rail electrification projects](#) found that at the point of this decision it was too early to determine whether the benefits of rail electrification, such as increased capacity and reduced journey times, could be delivered without these three projects in place. The Department for Transport identified rail electrification as a strategic priority in 2012, with the announcement of a £3 billion investment in England and Wales. In July 2017 the Secretary of State for Transport cancelled three of these projects on the basis that the majority of the intended passenger benefits could be delivered instead through bi-mode trains, which can transfer from diesel to electric power. However, at the time of the decision, bi-mode trains with the speed and acceleration required to meet the timetable for one of the lines that was due to be electrified did not exist. It was also uncertain whether existing bi-modes could be modified to meet the needs, and it was uncertain how much the new trains would cost.

Our 2017 report on [The new generation electronic monitoring programme](#) found that the Ministry of Justice (MoJ) pursued an overly ambitious strategy that was not grounded in evidence. The MoJ failed to establish a case for the programme, with its very ambitious requirements to develop a new 'world-leading' ankle tag that combined radio frequency and GPS technology. It then selected the highest-risk approach to the procurement, the new 'tower' delivery model, as it was promoted at the time by the centre of government. In adopting this risky and unfamiliar approach the MoJ failed to anticipate and resolve the implications of its delivery model, which led to disputes with suppliers and two failed procurements. However, following internal and external reviews of the programme in 2015 and 2016, the MoJ concluded that abandoning the original plan to develop new tags and improving its existing procurement approach was the least bad option, taken to avoid further delay and costs. At the time of the report, it was expected that the total delay to the programme would be five years, with planned completion in summer 2019.

## Other relevant reports

[Hinkley Point C](#) (paragraph 9)

[E20: renewing the Eastenders set](#) (paragraph 8)

[Investigation into the British Army's Recruiting Partnering Project](#) (paragraph 4)



### Key audit question

#### 5 Business case

Does the business case demonstrate value for money (VfM) over the lifetime of the programme?

#### Sub-questions

- Have the achievable benefits and outcomes been defined?
- Is the funding secured?
- Does the business case consider all elements that will contribute to successful delivery of the programme?
- Is there a credible estimation of all costs, appropriate for the stage of the programme?
- Is there a credible estimation of all durations, appropriate for the stage of the programme?
- Are decisions through the lifecycle made with regard to VfM?

#### Essential evidence

**Cost-benefit analysis for the full programme** – likely to be included in economic case. The financial case should highlight funding and affordability issues.

**Accounting Officer's assessment of feasibility or value for money** – departments are expected to publish a summary of all such assessments, for major projects within the Government Major Projects Portfolio that receive Outline Business Case approval, or for existing projects where the need for a further assessment has arisen and been approved after that date.



## Business case – examples from our studies

Our 2017 report [Hinkley Point C](#) found that the Department for Business, Energy & Industrial Strategy (BEIS) had not sufficiently considered the costs and risks for consumers when it agreed key commercial terms on the deal in 2013. It only considered the impact of the deal on consumers' bills up to 2030, while consumers are locked into paying for Hinkley Point C long afterwards. By the time BEIS finalised the deal in 2016 its value-for-money tests showed the economic case for Hinkley Point C was marginal and subject to significant uncertainty. Less favourable, but reasonable, assumptions about future fossil fuel prices, renewables costs and follow-on nuclear projects would have meant the deal was not value for money according to BEIS's tests. Between 2013 and 2016 the government's case for the project had weakened, but BEIS's capacity to take alternative approaches was limited once terms were agreed. Although the government increasingly emphasised Hinkley Point C's unquantified strategic benefits, we found that BEIS had little control over them and had no plan to realise them.

[Early progress in transforming courts and tribunals](#) highlighted the impact of programme change on the business case and the need to consider wider benefits. In 2016, HM Courts & Tribunals Service (HMCTS) set up a portfolio of change programmes to introduce new technology and working practices to reform and upgrade the justice system. We found that since 2015, HMCTS had twice revised its business cases for each of two programmes. The 10-year economic case weakened with each iteration, partly due to longer timescales for rolling out the programmes. Annual planned benefits of the whole portfolio also fell as HMCTS reduced its scope. At the same time, we found that the total benefits were underestimated because the business cases only quantified benefits in terms of savings to HMCTS and the Crown Prosecution Service, not the wider benefits to other organisations and court users.

## Other relevant reports

- [The new generation electronic monitoring programme](#) (paragraph 6)
- [Crown Commercial Service](#) (paragraph 8)
- [Equipment Plan 2017–2027](#) (paragraph 6)
- [Rolling out Universal Credit](#) (paragraph 12)



## Key audit question

### 6 Cost and schedule

Has the programme built up robust estimates of cost and schedule, including all programme components?

#### Sub-questions

Have programme cost and duration estimates been developed through use of systematic and appropriate methods?

Have the estimates been validated?

Do the cost estimates cover all elements of the programme?

Is it clear where costs have been excluded?

Do costings make allowance for risk?

Do the scheduling estimates cover all elements of the programme?

Does the schedule reflect dependencies on activities managed within the programme and those external to it?

Does the programme schedule have the majority of its tasks on the critical path or is there some flexibility in the scheduling of individual tasks?

Does the programme have identified contingency sums aligned with its risks and uncertainties that adequately reflect the level of complexity?

Does the programme record and continually update its critical path?

Are realistic milestone dates consistently reported to leadership and the organisation?

#### Essential evidence

Breakdown of programme cost into main components – (cost categories/ contract packages, programme management overhead) including allowance for risk.

Planned start and end dates of programme phases and changes to these schedules during the programme.





## Cost and schedule – examples from our studies

Our 2018 [Investigation into land and property acquisition for Phase One \(London – West Midlands\) of the High Speed 2 programme](#) found that the estimated cost for HS2 Ltd to buy the required land and property was very immature at the start of the programme in 2009. In 2012, HS2 Ltd estimated that the acquisition programme would cost £1,120 million (2011 prices), by 2013 the estimate was £1,608 million (2011 prices), and by 2017 it was £3,295 million (2015 prices). Costs increased due to inflation, but also through changes to the route and a more detailed understanding about the land required. Additional discretionary compensation schemes were also introduced by government. Despite these changes, HS2 Ltd believed costs would remain within the available funding, although significant uncertainty remained about the final cost.

Our 2016 report found that the schedule for the infrastructure programme for [Modernising the Great Western railway](#) was unrealistic, resulting in significant subsequent cost increases. The electrification schedule was not based on a bottom-up understanding of what the works would involve and in 2014 Network Rail still underestimated the numbers of bridges to be modified, the complexity of planning permission and other consents, and was too optimistic about the productivity of new technology. As a result, the estimated cost of electrification between Maidenhead and Cardiff increased by £1.2 billion (70%) between 2014 and 2015 even though Network Rail believed it could reliably estimate the cost in 2014. Since 2015, Network Rail had taken steps to improve its programme management, including cost estimation, monitoring and governance, and strengthened its collaboration with contractors and the wider rail construction industry.

## Other relevant reports

- [Progress delivering the 'One Mission, One Bank' strategy](#) (paragraph 7)
- [The Sheffield to Rotherham tram-train project: investigation into the modification of the national rail network](#) (paragraphs 4 and 8)
- [The new generation electronic monitoring programme](#) (paragraph 8)
- [The Equipment Plan 2018 to 2028](#) (paragraphs 6 and 7)
- [Early progress in transforming courts and tribunals](#) (paragraphs 9,10 and 12)
- [The Nuclear Decommissioning Authority: progress with reducing risk at Sellafield](#) (paragraphs 9,10 and 12)



### Key audit question

#### 7 Benefits

Does the programme: have a baseline; know what measurable change it is going to make, and actually measure it? Are benefits being achieved?

#### Sub-questions

Has the needs analysis for the programme established the current baseline performance?

Does the programme have clear objectives that relate to measurable change?

Are there identified programme benefits and ways of measuring achievement of those objectives?

Are the estimated benefits based on realistic and defensible assumptions?

Is there an appropriate plan to establish what information needs to be captured to measure future changes in performance?

Is there a commitment to monitoring the performance to support evaluation of the programme?

Is there a commitment to review performance against the plan and to determine whether the programme has delivered the intended benefits and outcomes?

Is the programme on track to deliver intended benefits?

#### Essential evidence

Estimates of benefits – how compiled. Likely to be in economic case.

Benefits realisation plan/strategy.

Gateway review 4 – readiness for service and 5 – benefits realisation.



## Benefits – examples from our studies

For many [Projects leaving the Government Major Projects Portfolio](#) (GMPP; which includes the biggest and riskiest government projects) it is not possible to determine if they have achieved their intended outcomes. Our 2018 report found that monitoring of the projects on the GMPP had improved, but the Infrastructure and Projects Authority and government departments needed to do more to increase transparency about what benefits are delivered to ensure taxpayers secure maximum value. We reviewed 48 projects that had left the portfolio and found that 12 had achieved their intended outcomes. However, for 22 projects it was not possible to determine if this was the case. For some projects this was because they were still being rolled out, but in other cases projects did not have a business case with intended outcomes to measure against. For example, while the Household Energy Efficiency programme improved energy efficiency in one million homes, it did not have measurable targets for wider objectives such as saving energy.

**Rolling out smart meters:** The government sees smart meters as a way of reducing energy suppliers' costs and encouraging consumers to reduce energy consumption. However, important gaps in monitoring are impacting on the programme's ability to achieve the intended benefits. The Department for Business, Energy & Industrial Strategy is not systematically monitoring whether the intended energy savings are being achieved; and, even if industry costs are cut, it is not monitoring whether these savings are passed on to consumers. Our 2018 report also found the government's original ambition of installing smart meters in every home by 2020 will not be met; the cost of the rollout is likely to escalate beyond initial expectations; and the 12.5 million first-generation meters that have been installed (7.1 million more than planned) are losing the 'smart' functionality needed to provide the full range of functions for managing electricity networks more efficiently.

## Other relevant reports

[Hinkley Point C](#) (paragraphs 17 and 23)

[Transforming Rehabilitation](#) (paragraph 7)

[The new generation electronic monitoring programme](#) (paragraph 9)

[Crown Commercial Service](#) (paragraph 12)

[Low carbon heating of homes and businesses and the Renewable Heat Incentive](#) (paragraphs 9 to 13)

[Early progress in transforming courts and tribunals](#) (paragraph 18)

[Rolling out Universal Credit](#) (paragraph 15)



### Key audit question

#### 8 Governance and assurance

Are there structures (internal and external) that provide strong and effective oversight, challenge and direction?

See also Q16 – Performance management

#### Sub-questions

Is there a suitable governance structure for the programme?

Are there clearly defined roles and responsibilities?

Is there a distinct programme management team with authority and responsibility for delivering the programme?

Does the organisation's board receive timely and accurate reports on programme progress?

Is the programme integrated into the wider planning and development of the organisation?

Are the programme and oversight teams realistic about their ability to deliver and implement the programme successfully?

Do the programme sponsor and other senior stakeholders receive independent assurance on the programme?

Has the programme board responded proactively to external assurance reviews?

#### Essential evidence

Programme board terms of reference.

If relevant, framework document for/contract with delivery organisation.

Infrastructure and Projects Authority and Major Projects Review Group reviews.

Regular reporting of progress and issues to Senior Responsible Owner (SRO), and from SRO to organisation.



## Governance and assurance – examples from our studies

Our report on the [Nuclear Decommissioning Authority \(NDA\)'s Magnox contract](#) set out the events leading to the NDA's early termination of its £6.2 billion contract to decommission services at 12 nuclear sites. For the procurement, the NDA board relied on internal audit, external assurance reviews and legal advice, but these did not detect the problems later identified in a High Court judgment. After the contract was awarded, the NDA commissioned three assurance reviews that noted the NDA's process of adjusting the contract after it was awarded presented significant risks. The reviews were shared with the programme's senior responsible owner and the NDA's chief financial officer, but the NDA board was only informed of findings from the third review. HM Treasury and UK Government Investments told us that they were concerned about delays in adjusting the contract but relied on assurances provided by the NDA that a resolution would be achieved. From October 2016, a cross-government group of senior officials, including the chief executive of the civil service, met seven times to discuss the issues the NDA faced.

[Improving children and young people's mental health services](#) (2018, see Q1) concluded that the government did not have cross-government accountability arrangements in place to ensure that its vision for children and young people's mental health services, *Future in Mind*, would be delivered as intended. It had formed an inter-ministerial group, and supporting cross-departmental group, to discuss mental health policy and share information. However, as the government was not managing *Future in Mind* as a single programme of work, there was no single governance structure for delivery. We also found that NHS England did not have strong levers to ensure that all the additional funding allocated to improving children and young people's mental health services was spent as intended by clinical commissioning groups, although it has taken steps to strengthen controls in 2018-19.

## Other relevant reports

- [Progress delivering the 'One Mission, One Bank' strategy](#) (paragraph 8)
- [The Sheffield to Rotherham tram-train project: investigation into the modification of the national rail network](#) (paragraph 7)
- [The new generation electronic monitoring programme](#) (paragraph 13)
- [Early progress in transforming courts and tribunals](#) (paragraph 13)
- [Projects leaving the Government Major Projects Portfolio](#) (paragraph 12)
- [Rolling out smart meters](#) (paragraph 25)



### Key audit question

## 9 Leadership and culture

Does the programme have strong leadership with the necessary authority and influence? – that is, a suitable Senior Responsible Owner (SRO) and programme director who can make decisions and have the support needed?

### Sub-questions

Does the programme leadership have the appropriate knowledge, personal attitudes and skills required to deliver the programme?

Is the leadership suitable for the role?

Are the leadership's decisions accepted by stakeholders?

Can the programme leaders give their roles the personal time and priority needed to fulfil their duties and responsibilities?

Does the programme leadership exhibit personal ownership of the programme and provide clarity of direction?

Is there an identified programme sponsor ensuring executive commitment and oversight at the organisation's highest level? (This may be the Senior Responsible Owner if they are part of the senior management team.)

### Essential evidence

SRO appointment letter (Osmotherly Rules).



## Leadership and culture – examples from our studies

[Air Quality](#) (2017) highlighted the importance of strong leadership and coordination if substantial and sustained improvements are to be achieved in an issue as over-arching as air quality. The Department for Environment, Food & Rural Affairs and the Department for Transport established a joint air quality unit in 2016 to oversee delivery of the government's plan for tackling NO<sub>2</sub> compliance. This included an oversight board with representation from across central government and provided a valuable forum to improve collaboration and coordination. However, the board was not fully representative as it did not include local authorities or the Local Government Association, despite local government's key role in improving air quality. We also found that the unit did not systematically oversee spend and progress on schemes run by other parts of government that included intended air quality benefits, which meant there was no clear single responsibility within government for knowing whether the initiatives formed a coherent portfolio that delivered good value for money.

Our 2017 report on [Cross-government funding of research and development](#) highlighted the importance of a strategic vision and clear information about how funding is used when the investment comes from across government. In more mature areas of research, effective leadership and well-established arrangements to support coordination and collaboration between public sector funders has resulted in funders working together to prioritise research investment. However, we found that where such leadership was less well developed there was a risk that funders lacked the coherent data on capability, funding gaps and/or outcomes to inform decisions on national priorities and strategic direction. Collective action was needed in the areas we examined to prioritise investment to focus efforts on addressing the principal challenges.

### Other relevant reports

[Sustainability and transformation in the NHS](#) (paragraph 16)

[Improving government's planning and spending framework](#) (paragraph 18)



## Key audit question

### 10 Resources

Has the organisation the resources (staffing, capability, equipment, and so on) required to deliver the programme?

#### Sub-questions

To what extent does achievement of the programme depend on external consultants?

Does the organisation have the required skills, experience and commitment appropriate to the stage of the programme?

Has the organisation assessed whether skills are available in government to deliver the programme and other concurrent and upcoming priority programmes?

Has the organisation considered the potential costs of securing skills that are in short supply?

Is there an appropriate level of programme management expertise in place?

Are there communication links between the programme team and those responsible at a senior level for current and future operational models?

Are the resources deployed in the right places?

Is there sufficient capacity to deliver the programme?

Does the programme team have access to support services outside the core team, for example legal, commercial, evaluation analysis?

Has the (core) programme delivery team been involved in the design of the programme and/or are they confident of their understanding of the programme and its deliverability?

#### Essential evidence

Organisation chart with numbers and roles.

Recruitment plan for key posts within the programme.





## Resources – examples from our studies

Our report on [E20: renewing the EastEnders set](#) (see also Q13) found that the BBC's planning in 2015 for its renewal of the EastEnders set did not consider the specific skills required in the programme team. Subsequently, in 2017 a BBC internal audit report identified that the team had inadequate expertise in construction project management. This meant there was limited construction knowledge to manage the programme's design, procurement and construction activities, which contributed to, for example, coordination problems with the Front Lot design, resulting in the need to commission internal and external reviews to resolve design issues and inconsistencies. It also meant that there was ineffective technical review and challenge of programme documents and decisions. In 2017, the BBC recruited a new programme director and a Front Lot project manager – both with construction experience – and in early 2018, the programme director carried out a capability assessment that identified the resources required for the remainder of E20.

[Capability in the civil service](#) (2017) examined the government's approach to identifying and closing specialist capability gaps in the civil service. Capability means the civil service's ability to implement policy effectively, requiring the right number of people, with the right skills, in the right place, supported by effective accountability, governance and information. Our report included a particular focus on plans to address specialist capability gaps, including in the management of major projects. Although the civil service had skilled people, many major projects have drawn on the same pool of skills. For example, in rail projects such as Crossrail and Thameslink, skilled civil servants had performed a number of project roles or have been moved to fill skills gaps for new priorities or projects. Our report noted that government had recently accepted that project leaders and accounting officers need to assess whether projects were feasible at the outset, including whether departments had the right skills to deliver them.

## Other relevant reports

- [The new generation electronic monitoring programme](#) (paragraph 14)
- [The Defence Nuclear Enterprise: a landscape review](#) (paragraph 13)
- [Investigation into land and property acquisition for Phase One \(London – West Midlands\) of the High Speed 2 programme](#) (paragraph 7)



## Key audit question

### 11 Putting the programme into practice

Are scope and business requirements realistic, understood, clearly articulated and capable of being put into practice?

See also [Q18 – Transition](#)

## Sub-questions

- Has the programme been defined clearly?
- Does the programme definition take into account likely business and external changes?
- Have stakeholders endorsed the arrangements for delivering the programme and its ongoing operation?
- Is there appropriate staff training and support in place to deliver the programme and effect business change?
- Has the programme identified enablers to achieve its objectives (for example people, policies, funding, processes, partners, technology)? Are they in place?
- Does the organisational risk management plan include risks associated with the operation of the service or capability?
- Is there an appropriate disaster recovery plan?

## Essential evidence

- Programme brief, programme definition or programme initiation document.
- Plan for implementing programme.
- Operational risk management plan.



## Putting the programme into practice – examples from our studies

Our 2017 report on [The new generation electronic monitoring programme](#) (see Q4) found that the Ministry of Justice (MoJ)'s planned timescale for this programme was unachievable. The Ministry initially allowed 15 months after signing the contract for the tags in August 2012 to develop, test, manufacture and deploy the new tags. Contracts, however, were not signed until July 2014 due to the discovery of overbilling by G4S and Serco, followed by two failed procurements for the tags. Five years after initiation, the programme had not delivered the intended benefits. We found that the MoJ had adopted a new high-risk and unfamiliar approach to the procurement, and failed to manage the implications. However, following internal and external reviews of the programme in 2015 and 2016, the MoJ took action to address many of the issues, including abandoning the original plan to develop new tags.

Our 2018 report [Rolling out Universal Credit](#) concluded that there was no practical alternative to continuing with this new benefit system. However, we also found that it was unlikely that the Department for Work & Pensions (DWP) would ever be able to measure whether it had achieved its goal of increasing employment. Given this, combined with extended timescales and the cost of running Universal Credit compared to the benefits it replaces, we concluded that the project was unlikely ever to be value for money. We found several reasons that rollout had been considerably slower than planned. There were early problems, including issues with governance, contractors and developing a full working system. DWP used an agile approach, which allowed lessons to be applied and changes to be incorporated, including slowing the rollout. DWP did not measure additional costs for local organisations that help to administer Universal Credit and support claimants, and DWP had only partially compensated these organisations. We recommended that progress towards achieving the intended benefits was tracked better, including taking account of the impact on third parties; that the programme did not expand before operations could cope with higher claimant volumes; and that DWP worked more closely with delivery partners, including to make it easier for the latter to support claimants.

## Other relevant reports

[Transforming Rehabilitation: Progress review](#) (paragraph 11)

[Early progress in transforming courts and tribunals](#) (paragraph 14)

[Rolling out smart meters](#) (paragraphs 12 and 21)

[E20: renewing the Eastenders set](#) (paragraph 14)



### Key audit question

#### 12 Risk management

Are key risks identified, understood and addressed?

#### Sub-questions

Has the programme adopted a systematic approach (for example, horizon scanning) to identifying and considering risks?

Have foreseeable risks been identified and assessed?

Have risks been appropriately analysed to assess both the likely occurrence and the potential impact and produce a prioritised management strategy?

Have key risks been allocated an owner and a management plan in place?

Are there systematic criteria for escalation?

Have risks associated with using innovative approaches/solutions been taken into account?

What contingency plans are in place and how would they be activated?

#### Essential evidence

Risk register with regular updates.



## Risk management – examples from our studies

In [The London 2012 Olympic Games and Paralympic Games: post-Games review](#) we reported that to manage and forecast costs, assessed risks were turned into quantified assessments with financial values attributed to them. A £2.7 billion contingency provision gave a high level of financial cover for the Delivery Authority, with clear procedures for applying for and releasing contingency funds. In this way, cost forecasting, management of risk and management of contingency funds were all aligned. As the programme progressed, the requirement for contingency cover reduced and the funding could be redirected to operational requirements.

As the programme moved from its planning to the operational phase, the government's oversight arrangements changed to reflect the need for quick resolution of any issues that might arise. In the year or so before the Games, there was intensive testing of a range of potential scenarios across the programme, enabling delivery bodies to refine their plans, and identify risks and mitigating actions. For example, when it became clear that G4S could not provide the full number of venue security guards required, effective contingency plans were implemented.

Our 2018 report [Investigation into the British Army's Recruiting Partnering Project](#) found that the Ministry of Defence underestimated the complexity of what it was trying to achieve, resulting in significant problems that meant the Army did not recruit the number of soldiers needed. The Army and its contractor, Capita Business Services Ltd, did not test fundamental changes before introducing them. Capita also failed to recognise that it could not use an 'off-the shelf' commercial solution as it did not understand the level of customisation needed. As a result, it could not introduce the automated approach to recruitment as originally envisaged. The Army and Capita failed to implement measures to simplify the recruitment process in advance and had to develop manual work-arounds to process applications. We found that, as a result of such problems, Capita had missed the Army's target for recruiting soldiers every year since 2013.

## Other relevant reports

[Update on the Thameslink Programme](#) (paragraph 13)

[Equipment Plan 2017 to 2027](#) (paragraph 9)

[Early progress in transforming courts and tribunals](#) (paragraph 15)

[Rolling out smart meters](#) (paragraph 24)



## Key audit question

### 13 Delivery strategy

Are there appropriate incentives for all parties to deliver (contractual, performance management, or other)?

#### Sub-questions

Is there evidence that different ways of delivering the programme have been evaluated?

Has the programme been appropriately tendered and contractors/partners selected using a defensible process?

Is there appropriate sharing of risk and reward between parties?

Are risks owned by the parties best placed to manage them?

See the in-depth tools on [Delivery](#) for tools containing more detailed questions on specific delivery strategies. For instance, [Commercial and contract management: insights and emerging best practice](#) covers issues with risk transfer.

#### Essential evidence

The delivery strategy, including a procurement strategy if appropriate.



## Delivery strategy – examples from our studies

Our 2018 landscape review of [the Defence Nuclear Enterprise](#) reported that the Ministry of Defence (MoD) used four main contractors for 97%, by value, of its Enterprise-related contracts. These contractors in turn used around 1,500 sub-contractors, many of which were small and specialist. The MoD recognised that the commercial arrangements did not provide incentives for contractors to perform as needed, so it introduced new ways of working with them to try to address historic poor performance. The most significant change affected the production of the Dreadnought-class submarine. From 1 April 2018, two of the main contractors and a new organisation within the MoD, the Submarine Delivery Agency, reached an overarching commercial agreement with coordinated incentives that involved joint costs and schedules and a profit-based incentive scheme. The MoD hoped this would improve performance in delivering the Enterprise through a combination of better project controls, stronger collaboration and information sharing, and more rigorous oversight.

In [E20: renewing the EastEnders set](#) (see Q10) we found that by the time of our 2018 report, the BBC expected the E20 programme to be completed in May 2023 – 31 months later than envisaged in its 2015 plans. E20 was delayed by around 12 months as a result of commercial challenges. In 2017, the BBC revised its procurement approach for the Front Lot construction contract owing to a lack of market interest. This delayed the programme by around six months and increased costs by an estimated £2.3 million. The BBC avoided further delays by separating the enabling works from this contract and carrying them out within its existing Boiler House contract. The BBC, acknowledging that its original single-stage approach had not worked, moved to a two-stage procurement with contractors on its construction framework in early 2017. An initial stage appointment was made in April 2017. The second stage involved seeking more clarity about the BBC's requirements and design before proposing costs for various elements of the work. There were around 11 months of negotiations – six months more than planned – as contract price offers were higher than anticipated, and the BBC and its contractors needed to agree the type and supply of bricks, allocate risks and confirm provisional sums.

## Other relevant reports

- [Hinkley Point C](#) (paragraph 8)
- [Transforming Rehabilitation](#) (paragraphs 12 to 14)
- [The new generation electronic monitoring programme](#) (paragraph 12)
- [Update on the Thameslink Programme](#) (paragraph 12)
- [The Nuclear Decommissioning Authority's Magnox contract](#) (paragraphs 2 to 4 and 10 to 13)
- [Rolling out smart meters](#) (paragraph 11)



### Key audit question

#### 14 Change control

Is there an effective mechanism to control programme alterations?

#### Sub-questions

- Are changes considered in the context of the programme as a whole?
- Who has what authority to agree changes (cost, time and quality)?
- Are changes in the overall scope of the programme responding to new influences or opportunities, or resulting from performance concerns?

#### Essential evidence

Record of changes to definition of the programme (for example, changes in scheme design, changing requirements or objectives), and accumulated cost and value-for-money implications.





## Change control – examples from our studies

Our 2018 report [The Nuclear Decommissioning Authority \(NDA\): progress with reducing risk at Sellafield](#) included our concerns about the baseline used for performance measurement. The Nuclear Decommissioning Authority and Sellafield Limited track how their major projects are performing against cost and schedule compared with a baseline set in 2014. Each year, Sellafield Limited introduces a series of change controls that update part of the 2014 baseline, and every year it produces a detailed plan of work for the next three years. We were concerned about the viability of measuring performance against this baseline because:

- the baseline was set under a previous management model, where it was in an involved party's interest to negotiate larger budgets and longer schedules;
- the appetite for risk had since changed and meant that project managers had incentives to find savings that they would have not otherwise been able to; and
- the NDA changed its approach to assuring cost estimates halfway through the process of setting the baseline.

Our 2017 [Update on the Thameslink Programme](#) covered the Department for Transport's actions to deal with changes in the latter stages of this programme. Earlier in the programme, when developing detailed designs, Network Rail had found that conditions were not as expected, requiring design changes, additional work and acceleration of other works to keep to schedule. Inefficiencies resulted because its processes were not set up to deal with the volume of design change needed. Network Rail subsequently improved its financial and cost control of the programme, introduced measures to improve the way it managed design changes and used more sophisticated cost forecasting techniques.

## Other relevant reports

[Investigation into the Department for Transport's decision to cancel three rail electrification projects](#) (paragraphs 4 and 5)

[Rolling out smart meters](#) (paragraph 15)

[E20: renewing the Eastenders set](#) (paragraph 14)



## Key audit question

### 15 Responding to external change

Is the programme sufficiently flexible to deal with setbacks and changes in the operating context?

#### Sub-questions

Is the programme team aware of any changes in other policies and programmes that impact on the programme?

Has the programme responded to those changes?

Has scenario planning been used to check the programme's assumptions?

Which identified risks have materialised and with what effect?

#### Essential evidence

Strategies for managing risks and issues, plans and risk register.



## Responding to external change – examples from our studies

Our 2018 [Investigation into the British Army's Recruiting Partnering Project](#) (see Q12) highlighted that Capita had missed the Army's recruitment targets each year since 2013, with the shortfall ranging from 21% to 45% of the Army's requirement. The environment for the Recruiting Partnering Project was, however, challenging. The Army and its contractor, Capita Business Services Ltd, believed that a range of external factors had impacted on their ability to meet recruitment targets. These included: a fall in applications due to the improving UK economy and low levels of unemployment; a shrinking recruitment target population that was less likely to commit to a long-term career in the Armed Forces; and reduced public understanding of the Army's role, with the perception that the Army was reducing in size and was non-operational, making it less attractive to join. However, the changes to the recruitment approach at the start of the contract also reduced face-to-face contact with applicants, meaning there was less chance to provide support. The Army and Capita have subsequently introduced significant changes to the recruitment approach although, at the time we reported, Capita had yet to meet the Army's requirements for recruiting new soldiers.

Our 2018 report on [Rolling out smart meters](#) (see Q7) looked at what steps the Department for Business, Energy & Industrial Strategy (BEIS) had taken to manage the risk that the chosen technology would become obsolete. BEIS recognised that, over that period, there was likely to be innovation in the range of smart household devices on offer to consumers. It therefore took steps to future-proof the smart metering system, for example by ensuring that smart meters would be able to send their data to other (newly invented) devices via a consumer access device. However, it assumed that smart meters would not be replaced for at least 15 years, over which time it was difficult to predict what innovation will happen. There was therefore a residual risk that the Department's smart metering system could be a factor that limited the range of 'smart home' benefits consumers could enjoy in future.

## Other relevant reports

[Investigation into the Department for Transport's decision to cancel three rail electrification projects](#) (paragraph 3)

[Investigation into land and property acquisition for Phase One \(London – West Midlands\) of the High Speed 2 programme](#) (paragraph 2)



## Key audit question

### 16 Performance management

Is progress being measured and assessed, including consideration that the programme is still the right thing to do?

#### Sub-questions

Does the programme leadership receive regular and timely reports including information on:

- progress and milestone achievements against plan?
- reports on individual work packages/streams?
- resources and funding used to date (and compared with expectation and progress)?
- confidence in forward plan/updated plan from team and suppliers?

What parameters have been set around the planned performance/delivery of the programme as acceptable?

Is there evidence that action has been taken to address problems?

Does the evidence indicate that the programme is delivering/on track to deliver its objectives and intended benefits?

Is there systematic reporting against clear criteria that reduces reliance on individual judgements?

Are cost and delivery indicators integrated, or at least aligned, to provide an overall value measure?

#### Essential evidence

Programme dashboard or other reporting on progress of work packages.

Key metrics used to measure progress.



## Performance management – examples from our studies

Our 2018 report [The Nuclear Decommissioning Authority \(NDA\): progress with reducing risk at Sellafield](#) (see Q14) found improved performance in delivering major projects to reduce risk and high hazard. However, evaluating overall performance at Sellafield was difficult due to a range of factors, including projects cancelled after significant spending had occurred, new strategies to perform the work and rescheduling of work planned. The complexity, uncertainty and scale of the task, and the bespoke nature of many of the required solutions, meant it was inherently difficult to measure and benchmark the NDA's progress, but the NDA could have done more to clarify progress, for instance, reviewing its baseline plan, presenting sunk costs more clearly and reconciling annual performance metrics with long-term milestones.

Our 2018 report [Low carbon heating of homes and businesses and the Renewable Heat Incentive](#) (RHI) concluded that there was not the evidence to determine whether the programme was on track to achieve its aim of encouraging a switch from fossil fuel to renewable and low-carbon heating systems in homes and businesses. The RHI was a novel approach to making progress against the UK's international energy obligations and identify longer-term options for reducing carbon emissions. The Department for Business, Energy & Industrial Strategy (BEIS) showed flexibility in rolling out the scheme, adjusting scheme objectives to respond to a changing strategy and over-optimistic initial planning assumptions, and it learnt lessons for the future. However, BEIS had not set specific goals, established a monitoring plan or defined clear criteria for making adjustments to the programme in support of the objective of developing the supply chain for the future. It did not have a reliable estimate of the amount it had overpaid to participants that had not complied with the regulations, nor the impact of participants gaming them, which could accumulate to reduce the scheme's value significantly. We therefore concluded that the scheme had not achieved value for money.

## Other relevant reports

[Progress delivering the 'One Mission, One Bank' strategy](#) (paragraphs 10 and 11)

[Rolling out smart meters](#) (paragraph 23)

[E20: renewing the Eastenders set](#) (paragraph 9)



## Key audit question

### 17 Lessons learned

Is the programme learning from experience on the current programme and previous relevant programmes?

### Sub-questions

If the organisation has attempted similar programmes, has it avoided repeating any mistakes made in those programmes?

Is there evidence of learning from programme performance information?

What caused deviations from plan (over/under-runs)? Are these likely to re-occur/knock-on in subsequent stages?

### Essential evidence

Evaluation strategy/plans.

Evaluation reports.

Gateway 5.



## Lessons learned – examples from our studies

Our 2018 report on [Developing new care models through NHS vanguards](#) (see Q2) recommended that NHS England should strengthen its approach to transformation, by setting out what it had learned from the vanguard programme and that the Department of Health & Social Care and NHS England should consider setting out clear plans for transforming NHS services over the long term. We found that although NHS England coordinated the development of local vanguards, it did not set clear national objectives or state how new care models would be spread. Before the vanguard programme, the NHS had introduced several other short-lived initiatives to build integrated health and social care services. The timeframe for the vanguard programme funding was three years, although many stakeholders consider that such a transformation often takes 10 years or longer to be delivered successfully. The NAO has seen a pattern of initiatives being continually folded into a successor initiative, sometimes before their objectives are fully achieved.

Our 2015 report [Reform of the rail franchising programme](#) examined whether the Department for Transport (DfT) had improved its management of its rail franchising programme since it had had to cancel its competition for the InterCity West Coast franchise in 2012. We looked at whether DfT had applied the recommendations from reports by the NAO and others after 2012. We concluded that DfT had improved its management of its rail franchising programme, and that the results of the more recent franchise competitions indicated that, if managed effectively, returns to the taxpayer could be higher than in the past. DfT had established a team to focus on franchise letting and management; improved the transparency, consistency and clarity of information provided to bidders and the public; and strengthened the assurance and governance of franchising. To continue to improve the programme, DfT had started to apply lessons learned from completed competitions and feedback from bidders.

## Other relevant reports

- [Rolling out Universal Credit](#) (paragraph 6)
- [The Equipment Plan 2018 to 2028](#) (paragraph 9)
- [E20: renewing the Eastenders set](#) (paragraph 17)



## Key audit question

### 18 Transition to business as usual

Does the programme have a clear plan for transfer to operations/ business as usual?

#### Sub-questions

Have stakeholders endorsed the requirements for absorbing the programme's aims into ongoing operations?

Is the organisational structure appropriate for the new operational context?

Are revised operational procedures appropriate and in place?

Has responsibility for benefit realisation been allocated to operational business units?

Does the completed programme satisfy the organisation and key stakeholder requirements?

Has sufficient and relevant learning, guidance and experience been migrated from the programme team to the operations team?

#### Essential evidence

Plan for implementing programme.





## Transition to business as usual – examples from our studies

Our 2019 [Progress review of Transforming Rehabilitation](#) reported that the reforms to probation services had failed to meet the Ministry of Justice (MoJ)'s targets to reduce reoffending, or its wider objectives. It cancelled its contracts with probation providers early at an additional cost to the taxpayer. We found that the MoJ had designed and implemented reforms to rehabilitation services too quickly, without sufficient testing. It split probation services into 21 new Community Rehabilitation Companies (CRCs) and a National Probation Service, which then created interfaces it had to manage. The MoJ had acted on many of the shortcomings in the reforms, but would still need to manage the risks posed by the split between the CRCs and National Probation Service and with the wider system. It would also need to manage the risks of transitioning to the new contracts, and of existing providers withdrawing services or failing outright.

In our 2017 [Update on the Thameslink Programme](#) (see Q14) we concluded that the upgrade to the Thameslink routes through London had a realistic prospect of delivering value for money, but there remained risks which the Department for Transport (DfT) and Network Rail needed to manage carefully, having not begun this work early enough. DfT deferred the full introduction of the new services by up to a year in order to improve its ability to manage the risks of each service change. The wider rail network could not yet reliably support the Thameslink programme's new services. DfT and Network Rail did not initially make adequate arrangements to manage the introduction of the new services, which required a high degree of collaboration across the rail industry, and clarity over who had the authority to make decisions on how the rail network operated. However, making the decision to defer full service introduction at a late stage compressed the schedule to prepare for the May 2018 train timetable, contributing to significant disruption to services in the south east of England.

## Other relevant reports

[Crown Commercial Service](#) (paragraph 9)

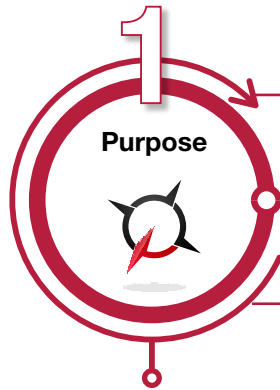
[Developing new care models through NHS vanguards](#) (paragraphs 10 and 20)

[Rolling out Universal Credit](#) (paragraph 14)

[Projects leaving the Government Major Projects Portfolio](#) (paragraph 11)

[Investigation into the British Army's Recruiting Partnering Project](#) (paragraphs 8 and 9)

The questions detailed in this framework are the high-level questions to ask about major projects and programmes. The following NAO tools provide further support for examining issues in more depth.

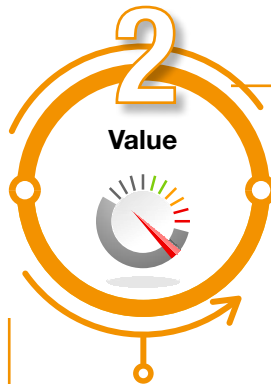


[Delivery Environment Complexity Analytic: Understanding challenges in delivering project objectives](#)

Provides a framework for assessing the context in which outcomes are being delivered. It includes key principles of stakeholder engagement.

[Initiating successful projects](#)

This 2011 NAO guide sets out key elements of project initiation.



[Framework to review models](#)

Models generate the information on which a wide range of decisions are formed, from forecasting policy outcomes to estimating the financial feasibility of major infrastructure programmes. This framework is intended to aid those commissioning or undertaking analysis of a model with the aim of determining whether the model is robust and reasonable. It can be used for models of all levels of complexity and business risk.

[Over-optimism in government projects](#)

Sets out factors which may lead to over-optimistic assessment of costs and benefits.

[Survival guide to challenging costs in major projects](#)

Outlines some of the challenges in estimating and managing costs that we have observed in our work on major projects, and offers senior decision-makers some ground rules and thoughts on factors to consider when challenging costs.



[Delivery Environment Complexity Analytic: Understanding challenges in delivering project objectives](#)

Provides a framework for assessing the context in which outcomes are being delivered.

[Lessons from cancelling the InterCity West Coast franchise competition](#)

Paragraph 6 of this report sets out a simple 5-stage model of assurance safeguards.

[Assurance for high risk projects](#)

This 2010 report set out the good practice principles that would be present in a mature and effective assurance system.

[Lessons from major rail infrastructure programmes](#)

Contains lessons from a variety of programme delivery arrangements.

[Managing risks in government](#)

This 2011 good practice guide focuses on organisation-wide risk management, but the principles also apply to managing risks in programmes.

[Transformation guidance for audit committees](#)

Sets out questions committees should ask during the set-up, delivery and live-running phases of transformation programmes.

[Over-optimism in government projects](#)

Describes the principles of independent scrutiny and covers risks that lead to optimism bias in programmes.



[A Framework for evaluating the implementation of Private Finance Initiative projects](#)

Sets out the issues that need to be considered in evaluating whether PFI projects have been implemented effectively, covering the life cycle of projects from initial strategic analysis to the mature operational phase. Many of the issues considered are applicable to non-PFI programmes.

[Performance measurement: Good practice criteria and maturity model](#)

Pulls together good practice criteria and maturity models from a number of our earlier performance measurement frameworks and [Choosing the right FABRIC](#) – guidance published jointly with the Audit Commission, Cabinet Office, Office for National Statistics and HM Treasury. Its appendix provides links to a large number of related sources of information on performance measurement.

[Commercial and contracting management: insights and emerging best practice](#)

This web-page also includes:  
NAO contractual relationships audit framework  
Good practice contract management framework

Based on 100 studies on commercial and contractual issues that we have undertaken since 2000, this interactive document draws out common themes and identifies 20 areas of insight we feel government needs to think about going forward.

The insights continue to be identified through our ongoing work and are summarised in this series of [blog-posts on contract management](#).

[Evaluation in government](#)

Cross-government report setting out what the government's evaluation requirements are, the sources of guidance, the extent to which they are followed and the quality of evidence, including a model for assessing the robustness of evaluation evidence.

[Helping Government Learn](#)

This 2009 report included 11 case examples of organisational learning in the public sector.

[Lessons for major service transformation](#)

This 2015 briefing outlines 11 lessons for managing service transformation, drawing on our report [Welfare reform – lessons learned](#) but also setting out broader principles from our work auditing government programmes and reporting on value for money.

[Outcome-based payment schemes: government's use of payment by results](#)

Alongside this report is an analytical framework for decision-makers, a toolkit covering the structure, risks and challenges of payment by results schemes and a framework of questions for commissioners to consider.

[Transformation guidance for audit committees](#)

Sets out questions committees should ask during the set-up, delivery and live-running phases of transformation programmes.