



National Audit Office

Memorandum

prepared by the Comptroller and Auditor General
presented to the BBC Trust

British Broadcasting Corporation

Digital Media Initiative

JANUARY 2014

Key facts

£125.9m

BBC's estimate of spend on the DMI

£98.4m

BBC's estimate of the net cost to licence fee payers

6 years

the time the BBC took to plan, design and attempt to build the DMI

£133.6 million budgeted cost of the DMI (April 2007 to March 2017)

184 BBC staff and contractors working in the DMI programme team at its peak

Summary

Our scope and purpose

1 In May 2013, the BBC cancelled its 'Digital Media Initiative' (DMI) after concluding that most of the £125.9 million it had spent on the DMI had been wasted. In this memorandum we summarise:

- the BBC's aims for the DMI;
- what went wrong;
- where the money the BBC spent on the DMI went; and
- what the BBC got in return.

2 Our findings are based on our high-level review that we carried out over four weeks during November and December 2013. We relied largely on the findings of existing reviews that the BBC and the BBC Trust prepared or commissioned, supplemented by our own review of key documents. These included technical reviews that the BBC commissioned from Accenture and a review of governance and project management that PwC carried out for the BBC Trust. We did not undertake extensive audit work to verify the accuracy of the information received.

Overview of the DMI

3 The DMI was a major technology-enabled transformation programme that was designed to allow BBC staff and partners to develop, create, share and manage video and audio content and programming on their desktops. It required the development of a fully-integrated digital production and archiving system. It also needed a significant cultural change to standardise practices across television production in some of the BBC's main divisions that produce factual and current affairs programmes.

4 The BBC decided at the outset to build a custom-made digital system as commercially available products at the time did not support its aims for transferring digital files between production and archiving processes. The main elements of the proposed system were as follows:

- **Production tools.** This new software would enable production teams in some of the BBC's main television production divisions to share content for factual and current affairs television programmes, carry out basic video editing at their desktops and save partially completed work. Production tools would also allow users to transfer rough edits between their desktops and the BBC's professional editing facilities, while retaining any detailed information (known as 'metadata') associated with the files.
- **Digital archive.** The digital archive would provide a new online digital store for finished television programmes and other selected programme-making materials and information. The BBC's intention was to provide a more efficient alternative to storing archive material on magnetic tapes or other physical media. Production teams would be able to add detailed information (or 'metadata') about the content of digital files to make it easier to find archived material. The digital archive would be integrated with production tools to enable the automatic transfer of files and associated information between them.
- **Archive database.** The archive database would replace an existing system for cataloguing and managing physical archived content. The new system would be integrated with the digital archive to enable all BBC staff and third-party producers to search and order completed television programmes and related material held in the BBC's digital and physical archives.

5 We reported previously to the BBC Trust, in January 2011, on the DMI's progress at December 2010. The BBC contracted Siemens in February 2008 to build the system but the contract was terminated by mutual agreement with effect from July 2009. The BBC took responsibility for implementing the system in-house from September 2009 but did not assess the value for money and risks of this approach against alternative options. We recorded in our report that the BBC had started to implement the system and that users had been positive about the elements they had seen. We noted, however, that there was a considerable way to go to develop a technically complex system, which required integrating several independent elements without any time contingency. In addition, we noted that success would depend on take-up by users across the BBC. The BBC estimated that the DMI would cost £133.6 million and create financial benefits totalling £97.9 million from April 2007 to March 2017.

Key findings

6 When the BBC took over responsibility for developing the DMI system in July 2009 it had little time left to meet critical internal deadlines. When the BBC contracted Siemens to complete the system by May 2009, it had envisaged that the technology would be ready in good time to support its move to Salford in summer 2011. The BBC took system development in-house, in summer 2009, after its contract with Siemens was terminated. At that point the BBC had used 18 months of development time without securing a working system. It estimated that the system would not be ready until February 2011, a delay of 21 months. By August 2010, it became clear to the BBC that its schedule would be delayed by a further five months to July 2011, which left no contingency in its timetable. From March 2011, emerging problems with the system and also unclear user requirements resulted in the BBC moving the completion date beyond autumn 2011, and beyond required dates, for example to support production teams relocating to Salford.

7 The BBC completed the most straightforward of its new technology releases for the DMI but these proved not to be reliable indicators of progress. The DMI programme team planned to implement the system in phases by issuing a series of technology releases that would successively add new capabilities. However, the BBC changed its technology release plans owing to technical and timetabling issues. In January 2010, BBC-commissioned consultants reported that plans for the DMI were superficial and lacked clarity about the scope of technology releases. We examined progress as at December 2010. We found that the BBC's plans did not map on to release schedules, which could lead to confusion about releases. We also found that planning processes for system development and testing were not strong enough to support the more complex integration of the system elements. Confusion about what each release was supposed to provide and the complexity involved made it difficult to establish what progress the BBC had made and what more it needed to do to complete the DMI.

8 Technical problems and releases not meeting user expectations contributed to repeated extensions to the timetable for completing the system, eroding user confidence and undermining the business case. In June 2010, BBC-commissioned programme management consultants reported that although there were several important issues to address, such as poor planning, there had been a positive reaction to the DMI components that the BBC had provided. However, as the project began to encounter further difficulty and delay, users lost confidence in the DMI to provide a reliable system that met their requirements. Some television production teams that relocated to the BBC's new site at Salford had to install alternative digital storage and adapt their editing technology to operate as stand-alone systems. As soon as this happened, the BBC's forecast of business benefits for a fully functioning DMI system started to erode.

9 The BBC's management of the DMI was focused more on the technological aspects of the programme rather than enabling BBC-wide change. To achieve the forecast benefits after building the system, the BBC would have to change its archiving and production processes. However, PwC found that DMI reporting focused on technology risks and issues rather than whether the programme could achieve operational change to business practices in the BBC. PwC concluded that the BBC executive's view of progress could have been more clearly informed by taking into account reporting by projects that depended on the DMI, such as the move to Salford, on the impact of delays in delivering the system.

10 Governance arrangements for the DMI programme were inadequate for its scale, complexity and risk. The BBC's decision to take the DMI in-house was high-risk. It needed to fill capability gaps to complete the programme by recruiting staff with the right skills or using third parties to deliver DMI components. Its plans also involved high levels of parallel development work to complete and integrate the system and meet important internal deadlines. Despite this:

- **The BBC did not appoint a senior responsible owner to act as a single point of accountability and align all elements of the DMI.** Future media and technology was responsible for developing the investment case, delivering and deploying the system, training users and achieving its share of the projected benefits. The divisions that would use the DMI, once delivered, were responsible for using the system and ensuring that it generated the projected benefits in their areas. The splitting of responsibilities across divisions and the absence of a senior responsible owner meant that differences between the expectations of those developing the DMI system and its intended users were not resolved. The BBC executive board noted when it closed the programme the need to ensure clear accountability for delivery in programmes like the DMI.
- **Reporting arrangements were not fit for purpose.** PwC found that the DMI did not provide clear and transparent reporting on progress against the plan, cost to complete, or achieving benefits to enable effective decision-making within the corporate governance structure. We found that there was also a six-month gap between a serious deterioration in the risk rating at the end of 2011 and when it was reported to the executive board, in June 2012, and the BBC Trust, in July 2012. This change in risk rating had, however, been reported to the finance committee in February 2012. In December 2013, following a review of governance arrangements across the BBC, the BBC announced it would introduce a new approach to speed up project reporting and identify issues earlier.

- **The executive board applied insufficient scrutiny during 2011 and the first half of 2012.** The DMI was not subject to any audit or assurance reporting, beyond reports prepared by the project management office, between early 2011 and July 2012. The BBC emphasised to us that during this period it was overseeing several other major projects, including the move to Salford and preparing for the 2012 Olympics. After the BBC executive board became aware of the problems, it initiated a review of the DMI timetable, costs and benefits in May 2012. At that point, the programme was 15 months behind the timetable in the business case approved by the BBC Trust. The BBC Trust finance committee raised concerns about progress when it was informed in July 2012 that the DMI's risk rating was red. When the executive board cancelled the DMI in May 2013, it identified a failure to recognise the severity of the issues in the reports they had received.
 - **The BBC Trust questioned the executive in September 2011 whether delays might lead to the possibility of reduced benefits, but then applied limited challenge until July 2012.** The BBC informed the BBC Trust finance committee in September 2011 that the DMI's risk status had increased to amber-red. The Trust finance committee questioned the executive about slippages in achieving milestones but took assurance that there was potential for unforeseen benefits. The DMI's risk status increased to red for the period October to December 2011. A gap in reporting in the first part of 2012, which neither the BBC nor the BBC Trust addressed, meant that the Trust did not know this until July 2012.
- 11 The BBC did not adequately address many important issues identified by external reviewers during the course of the programme.**
- **The BBC lacked sufficient independent assurance that its design for the DMI was technically sound.** It is standard practice in technical design to commission thorough independent technical assessments. We noted in our previous report that the BBC had not obtained an independent technical assessment of its design. The BBC did not take sufficient steps to implement our recommendation to complete an independent technical assessment. The assessment it received from its technical consultants in December 2010 examined only part of the system and was therefore incomplete. Additionally, the BBC took insufficient steps to address the significant remedial work that the consultants concluded was needed on the parts they examined.

- **The BBC was aware that business requirements for the DMI were not adequately defined.** The BBC's initial focus was on rolling out early technology releases to demonstrate progress, even though it had not established detailed user requirements for archiving and production. Unclear requirements subsequently resulted in delays, procurement problems and a lack of alignment between system development and the requirements of the archiving and production teams who would use it. BBC internal audit reported in July 2012 that the BBC had still not established a blueprint stating the required end-state for the system. A high-level internal review carried out by the BBC in August 2012 reported that although the purpose of the archive was understood, DMI requirements remained vague and production teams were indifferent about using production tools. Accenture, in a technical assessment for the BBC of part of the DMI, reported in March 2013, that the BBC was confused about what parts of the system were for.
- **The BBC did not revisit the business case.** In our January 2011 report on the DMI, we noted that the BBC's projections of the financial benefits had weakened. We therefore recommended that the BBC should resubmit programmes for approval where the delivery model, risk profile or cost-benefit projection changes. However, BBC internal audit reported 18 months later, in July 2012, that despite significant changes to the timetable and projected benefits, the BBC had not revisited the business case that the BBC Trust approved in April 2010.

12 The BBC Trust approved the executive board's proposal to close the DMI in May 2013.

- **The executive board halted work on most parts of the DMI in October 2012, other than the archive database which was already in use.** At that stage, the DMI steering group considered that the production tools software developed by the DMI programme team was potentially viable for use in programme-making and supporting some efficiency benefits. However, they had not yet been proven and the intended users of production tools had reported that they had no desire for further development owing to unclear business direction. The archive was still not complete. The executive board initiated a review of the BBC's future technology requirements for archiving and production and DMI outputs. This included commissioning an independent technical review of the parts of the DMI it had not already halted.
- **The executive board concluded that its original vision for integrated production tools was no longer valid, taking account of the delays and wider developments within the industry, and that it needed to revise its approach to developing a BBC-wide digital archive.** It therefore decided in May 2013 to retain the archive database but close the rest of the DMI programme. The BBC did not examine the technical feasibility or cost of completing the DMI. However, the BBC and the Trust concluded that owing to technological difficulties and changes to business needs, continuing the programme would be throwing good money after bad.

13 The BBC estimates that it spent £125.9 million on the DMI. The BBC offset £27.5 million of spend on the DMI against transfers of assets, cash and service credits that formed part of its financial settlement with Siemens. This left a net cost of £98.4 million. The BBC wrote off the value of assets created by the programme but is exploring how it can develop or redeploy parts of the system to support its future archiving and production needs.

Conclusion

14 The DMI was a major technology-enabled transformation programme for the BBC. The BBC was too optimistic about its ability to implement it and achieve the benefits. It did not establish clear requirements for the system or obtain a thorough independent assessment of its technical design as a whole to see whether it was technically sound. Confusion about the content of technology releases and protracted problems with getting the system to work contributed to a growing gap between technology development and what system users expected.

15 The level of assurance and scrutiny that the BBC executive applied to the DMI was insufficient for a high-value and strategically important programme that involved significant risks. The BBC executive did not have a sufficient grip of the programme and did not appear to appreciate the extent of the problems until a late stage. If the BBC had established better governance and reporting for the DMI, it would likely have recognised the difficulties much earlier.