Cost: After a protracted [development process](https://en.wikipedia.org/wiki/Software_development_process) lasting five years with a spend of £98 million between 2010 and 2012, the project was finally abandoned in May 2013. BBC losses were estimated to be £38.2m,[[7]](https://en.wikipedia.org/wiki/Digital_Media_Initiative#cite_note-ITProPortal-dmi-7) partially offset by a £27.5m settlement paid by Siemens, leaving a loss of £10.7m to the BBC.<https://en.wikipedia.org/wiki/Digital_Media_Initiative>

<https://medium.com/north-code/tech-fails-bbcs-100m-digital-media-blunder-ca397bb99ecd>

Overview

The Digital Media Initiative, established in 2006, was a business transformation programme to allow BBC staff and partners to develop, create, share and manage video and audio content and programming on their desktops (National Audit Office, 2014). To achieve that, BBC decided to build a custom-made digital system that consisted of:

The BBC contracted Siemens to build the system in February 2008 (PwC, 2013). The fixed price contract established a plan that the project would be completed in 18 months at a cost of £79 million (British Broadcasting Corporation). The contract was mutually terminated in July 2009 after numerous delivery delays (PwC, 2013).

The BBC took the system’s implementation in-house from September 2009 (National Audit Office, 2014). The BBC considered that it could make up the capability by recruiting experienced staff or using third-parties suppliers to build system components that the BBC would later integrate (National Audit Office, 2014).

After numerous delays, inability to deliver a working system, internal and external reports, the BBC decided to close the rest of the DMI project in May 2013 but keep maintaining the archive database (National Audit Office, 2014).

The figures below are the original timeline presented in 2010 for each release and the timeline of what happened with the project. DMI recognised that a high degree of confidence as to what would be delivered in the initial phases would reduce over time because business requirements could change (PwC, 2013).

Today, we’re investigating the demise of British Broadcasting Corporation’s **Digital Media Initiative (DMI)** project of 2008. Envisioned as an ultramodern digital media catalog, the DMI would allow staff to quickly produce high-quality audio and video content directly from their computers. Five years later, the BBC finally terminates this taxpayer-funded project with almost nothing to show for it, after spending nearly **£100m**.

A person with the mouth open

Description automatically generated with medium confidence

# The Project

The DMI was a complex project, aimed at transforming how BBC leveraged digital media to produce content for its audiences. The vision was to pave the way for “a new creative environment in which **production would take place in a digital file format** from the moment of filming to the moment of consumption by the audience. ([2](http://downloads.bbc.co.uk/aboutthebbc/insidethebbc/howwework/reports/pdf/bbcreport_dmi_technicalreview_hypotheses_and_findings.pdf))”

In February **2008**, the [BBC Trust](https://en.wikipedia.org/wiki/BBC_Trust) approved the DMI scheme, as well as **£81m in funding**. Technology company Siemens was contracted to develop the project, and completion was expected within the following year. Multiple components of the new media pipeline were under development:

* An Online Archive of BBC’s programs, in both digital and physical media format, allowing search and metadata.
* A Core Database scoped and architected like an enterprise-wide system for data management across the BBC and a technical platform not just for DMI but for other programs.
* A new set of Production Tools, allowing BBC staff and partners to develop, edit, share, and manage content from their desktops.
* A Media Infrastructure component, designed and built with a focus on Production Tools, enabling users to ingest, organize, edit and send content to craft or archive using through a single interface.

Text

Description automatically generated

The original concept for how the DMI system would work (3)

*Fabric will benefit everyone involved in the development, creation, sharing, and management of BBC’s content by bringing together the production and enterprise processes and tools through a web-based user interface and universal media storage for archive and production needs. (*[*2*](http://downloads.bbc.co.uk/aboutthebbc/insidethebbc/howwework/reports/pdf/bbcreport_dmi_technicalreview_hypotheses_and_findings.pdf)*)*

# The Demise

By February **2009**, Siemens still had nothing to deliver. In September 2009, after months of criticizing and finger-pointing between Siemens and the BBC, the DMI contract to Siemens was canceled by mutual agreement, in a £27.5m settlement — with **BBC losses already amounting to £10.7m and 21 months of project delay**.

By September **2010**, one year after bringing the project in-house, the National Audit Office estimated that the expected **project costs now exceeded benefits by over £38 million.** The new completion date was now delayed to around Q4 2017. Still, their official 2011 report was not all negative towards BBC’s stewardship, with the head of the NAO stating that “since taking the program back in-house, delivery of the system has progressed well, and users have responded positively. ([5](https://www.nao.org.uk/report/the-bbcs-management-of-its-digital-media-initiative/))”

In **2011**, delivering the infrastructure for DMI is **outsourced to a consortium** of three third-party companies. Interviews with the BBC team revealed that before this transition, “the original implementation using open source [Drools](https://www.drools.org/) rules engine faced memory leak instability and was eventually deemed too difficult to resolve. ([2](http://downloads.bbc.co.uk/aboutthebbc/insidethebbc/howwework/reports/pdf/bbcreport_dmi_technicalreview_hypotheses_and_findings.pdf))” A BBC spokesperson said: “The consortium is primarily responsible for delivering the infrastructure for DMI as this was the most cost-effective way to deliver this part of the project. They are on schedule for delivery by the end of the summer. ([8](https://www.broadcastnow.co.uk/bbc-outsources-design-of-infrastructure-for-dmi/5028576.article))” They were not.

Chart, line chart

Description automatically generated

People working on DMI, January 2010 to September 2013 (3)

In May **2013**, the BBC decided to keep the archive database component but shut down the rest of the DMI program. The new BBC Director General at that time, Lord Tony Hall, admitted that “the DMI project has wasted a huge amount of license fee payers’ money and I saw no reason to allow that to continue which is why **I have closed it**.” BBC’s technology chief, John Linwood, was fired in July 2013 over the project’s demise. Linwood had been appointed in 2009 from Yahoo and had formerly worked at Microsoft.

A Public Accounts Committee report underlines the scale of the failure: **only a single show was ever actually produced** using the DMI platform:

*The BBC also told us that it was using the DMI to make many programs and was on track to complete the system in 2011 with no further delays. This turned out not to be the case. In reality, the BBC only ever used the DMI to make one program, called Bang Goes the Theory. (*[*6*](https://publications.parliament.uk/pa/cm201314/cmselect/cmpubacc/985/98502.htm)*)*

Being unable to benefit from the platform developed by their own parent company, some units took things into their own hands. BBC Sport decided, at the time, to contract outside suppliers to design its own digital video archive system at the cost of just £500,000 — a fraction of the millions spent on the DMI ([7](https://www.theguardian.com/media/2013/may/03/bbc-digital-video-archiv)).

**Where did all those millions go?** Here’s the official breakdown: ([4](https://www.bbc.com/news/entertainment-arts-26963723))

* Contractors — £46.7m
* IT — £37.2m
* Siemens costs — £24.9m
* Consultancy — £8.4m
* BBC staff — £6.4m
* Other — £2.3m

# What Happened

Multiple expert reports have been published to cast some light on the motives behind the DMI project downfall, including one from the National Audit Office in 2014 ([3](http://downloads.bbc.co.uk/bbctrust/assets/files/pdf/review_report_research/vfm/dmi/dmi_nao.pdf)), and two by PricewaterhouseCoopers and Accenture in 2013 ([9](http://downloads.bbc.co.uk/bbctrust/assets/files/pdf/review_report_research/vfm/dmi/pwc_dmi.pdf))([2](http://downloads.bbc.co.uk/aboutthebbc/insidethebbc/howwework/reports/pdf/bbcreport_dmi_technicalreview_hypotheses_and_findings.pdf)). Here are the main determinants that were identified:

**Bad Requirements**

* Requirements for the DMI project did not live in a single, central repository, but were instead fragmented across a multitude of services, including Confluence and JIRA projects.
* Even worse, many of the specs lived within transient Excel or Word documents.
* Less than a third of the identified defects were directly linked to business requirements. This problem made it hard to know which issues had been fixed, within which area, and how the overall solution would be affected.
* Also, 80% of end-to-end tests for new functionality did not link directly to a business requirement.

Diagram

Description automatically generated

Sample Links between Sources of Requirements (2)

**Missing Design Oversight**

* In the final DMI architecture, multiple vendor products exist that perform similar purposes (e.g., Tomcat and WebSphere).
* The inconsistency is a result of misalignment of technology guidelines among teams, resulting in some groups using open source software while others using proprietary software for similar purposes.
* The affected products were already live in production at the time, going through a full development cycle without any member identifying and addressing design issues.
* The Technical Quality Group could have implemented stronger design governance principles and been responsible for the mitigation of technical risks.

**Bad Testing**

* Some components had not been included in a software release process to be formally tested. Therefore, they were not officially progressed through the project lifecycle to production systems.
* Most components had no set of comprehensive, repeatable tests, including data and media file validation, stress, or stability.
* Many components were not integration tested.

**Bad Outsourcing Management**

* The BBC did not have an up-to-date assessment of its contractor’s capacity and capability to deliver the program. The project was initially outsourced to Siemens based on a strategic partnership agreement signed in 2004.
* When taking technology development in-house, the BBC did not test whether that was the best option.
* No independent technical assurance reports on system design were commissioned.
* No minimum technical and management requirements for effective oversight of contracts were established.
* No procedure was set in place to intervene and secure the delivery of outsourced contracts rather than waiting for either contract non-delivery or termination.

**Faulty Governance**

* By having sponsors and business stakeholders on the DMI Steering Group, there was insufficient separation from the day-to-day management to enable them to provide adequate oversight and challenge of the project.
* The financial benefits of the program were initially overstated and unchallenged.
* DMI did not provide clear and transparent reporting on progress against plan, the cost to complete, or delivery of benefits to enable effective decision-making within the governance structure.
* There was a considerable change in the personnel fulfilling several critical roles in the governance structure over the life of the program:

<https://medium.com/north-code/tech-fails-bbcs-100m-digital-media-blunder-ca397bb99ecd>

 The BBC was far too complacent about the high risks involved in taking it in-house. No single individual had overall responsibility or accountability for delivering the DMI and achieving the benefits, or took ownership of problems when they arose.

Lack of clearly defined responsibility and accountability meant the Corporation failed to respond to warning signals that the programme was in trouble.

The BBC Trust demonstrated similar complacency in its poor oversight of the Executive’s implementation of the DMI.

Both the BBC Executive and the Trust need to overhaul their approach to managing and implementing major projects so that they properly safeguard licence fee payers’ money.

It is not clear why the BBC failed to share important evidence, a 2010 report from Accenture about the DMI, with my Committee or the National Audit Office when it reported on the DMI’s progress in January 2011, which contributed to our false impression of the progress by DMI. My Committee expects the BBC to be completely transparent in its dealings with us and the NAO and tell us of any potentially significant evidence or facts in a timely way."

### Recommendations

**Recommendation:**& nbsp;The BBC should ensure that governance and assurance arrangements match the scale, strategic importance and risk profile of its major programmes and projects.

**Recommendation:**& nbsp;Projects like the DMI need to be led by an experienced senior responsible owner who has the skills, authority and determination to achieve transformational change, and who sees the project through to successful implementation.

**Recommendation:**& nbsp;In its reporting on major projects, the BBC needs to use clear milestones that give the Executive and the Trust an unambiguous and accurate account of progress and any problems.

**Recommendation:**& nbsp;The BBC Executive should apply more rigorous and timely scrutiny to its major projects to limit potential losses that will ultimately fall on licence fee payers.

**Recommendation:**& nbsp;The BBC Trust should set out in response to this report what changes it will make to be more proactive in chasing and challenging the BBC Executive’s performance in delivering major projects, so that it can properly protect the licence fee payers’ interest.

**Recommendation:**& nbsp;The BBC Executive should report back to us on which of its original requirements for the DMI are still essential, how and when it will meet them, and at what cost.

**Recommendation:**& nbsp;We expect the BBC to be completely transparent in its dealings with us and the NAO and inform us of any potentially significant evidence or facts in a timely way.

<https://www.wired-gov.net/wg/news.nsf/articles/BBCs+Digital+Media+Initiative+a+complete+failure+10042014150500?open>