Case Study: Document Control

Thameslink Programme

The challenges, benefits and lessons learned during the implementation of Document Control on the Thameslink Programme

The control of documents is vital throughout the lifecycle of any Project or Programme, and the Thameslink Programme (TLP) was no exception. Document Control refers to the control of documents at all stages in their lifecycle (Create-Review-Approve-Distribute-Use-Revise-Archive/Withdraw/Supersede/Obsolete) using processes, procedures and work instructions, dedicated electronic document management systems (EDMS) and professional document control staff.

1. Background

TLP began using Network Rail’s Corporate Content Management System (CCMS) document control system but there was a desire to work collaboratively with suppliers and contractors. This meant opening access to TLP documentation and giving external companies the rights to upload and download content from Network Rail’s system. CCMS could not provide this functionality so the Programme began, after going out to the market for solutions, a trial of two new systems. Blackfriars Station was chosen to use Build Online and Farringdon Station was chosen to use SharePoint (also known as MOSS). During the trial Network Rail’s corporate strategy was changed to include SharePoint as a corporately supported product. The decision was made to roll out the corporate tool to the rest of TLP. It was also decided that Blackfriars would remain using Build Online.

2. Self-service Document Control

Approximately halfway through the first phase of TLP, and partly due to the perceived efficiencies brought by the additional functionality offered by SharePoint, the concept of self-service document control was introduced. Document controllers working for projects were removed and everyone was made responsible for their own documentation. This led to individuals and projects storing and using SharePoint in different ways or not at all. For example, there were lots of document numbers on the system that didn’t have documents attached to them. Each project adopted its own approach and processes to document control. In this environment the number of document classes flourished, as did the use of shared drives, as project members lacked clear guidance on what and where documents were to be placed.

Due to the volume of documents on a programme of TLP’s scale, self-service document control did not work and resulted in very poor-quality document control. Consequently, the resources used for document control were reorganised, creating a centrally managed team of document controllers, co-located with the delivery projects but reporting directly to a central Document Control Manager.

3. Deficiencies in SharePoint

Problems with the migration and the lack of functionality provided by the corporate system led Thameslink Programme to purchase additional software for their instance of SharePoint. This provided some additional, albeit basic, document control functionality such as document numbering and transmittals.

4. Improvements

Whilst the customisations applied to SharePoint solved some of its deficiencies they were not enough to address everything it was lacking. Therefore, the decision was taken to radically change the way Document Control was managed starting with significant changes to the way SharePoint was organised, the locking down of document numbering and mandatory metadata and working to migrate document control away from SharePoint and into eB. The use of eB has allowed the mandating of a document’s lifecycle and, during the migration process, the correction of problems caused by several years of poor document control.
5. eB

The migration and adoption of eB as the Programme’s one EDMS brought a host of benefits:

- Electronic Transmittals built-in to the EDMS
- Workflow system for the review of documents (the Document Review Notice (DRN) process)
- Improved search function
- Smooth transmittal of, and easy access to, information for both Network Rail staff and external suppliers
- Security easy to apply
- Creation of document numbers and users restricted to Document Control staff
- Ability to relate documents to other documents, specific works locations, people, Health and Safety File sections etc. This was very powerful when used in conjunction with TLP’s Reporting solution (see below)
- Extensive and appropriate metadata that can be changeable according to the class of document that is being created. Again, this was very powerful when used in conjunction with TLP’s Reporting solution
- Electronic approval of IMS (Integrated Management System) documents.

6. TLP Reporting

TLP used the Logi reporting development application to create a bespoke application, TLP Reporting, to provide real-time, fact-based reporting on the information held within eB. For example, TLP Reporting provided:

- Late reports on the status of Document Review Notices (document review comments sheets), Requests for Information and Technical Queries
- The status of Health and Safety Files as they are being compiled (using individual documents)
- Live reporting on the status of the completion of stages in the Project Management lifecycle (Network Rail uses Governance of Rail Infrastructure Projects - GRIP) and the ability to link documents to the various stages
- Personalised tabs where users could see documents when they were the Owner or Author, documents that had been checked-out for editing etc
- Transmittals reports that could be interrogated to see which documents have been issued under which transmittals.

7. Training

A continuous feature of Document Control was the training of new users on the use of the mandated EDMS. This was vital in promoting the correct use of the various systems. With the adoption of eB came the development of additional training courses to train users in its increased functionality. Courses included Reviewer Training, which taught users how to use the DRN workflow process, and eGRIP training, which taught users how to use the project management tool on TLP Reporting.

8. Hard Copy vs Soft Copy Documents

During TLP’s lifespan there was a large decrease in the production and supply of hard copy documents, especially with the adoption of eB, which allowed easy access to documents for both Network Rail and its suppliers. This had several benefits:

- Reduced costs associated with printing (ink, paper, wear and tear on printer parts)
- Reduced Network Rail’s carbon footprint (less paper being consumed)
- Reduced space required for storage of documents (saving money).

9. One programme-wide EDMS minus use of network drives equals: One Version of the Truth!

Having different parts of TLP using different EDMS affected the governance and provenance of the documents. Some documents ended up being stored on more than one EDMS, with the resulting risk of users not knowing which system held the most current revision of a document (‘the truth’).

This also applies to the migration of documents from one EDMS to another. For example, once documents had been migrated from SharePoint to eB, they should have been either deleted or, more appropriately, access to them should have been restricted to administrators and document control staff. This would have maintained access for the latter in case any documents had failed to be migrated.
10. Lessons for future programmes

The main lessons to be learnt from the course of Document Control on TLP are:

- Implement one EDMS from the beginning of the Programme, for the whole of the Programme, and do not change it during the lifetime of the Programme. This will save time, cost and the risk of losing documents.
- Ensure the EDMS open to your suppliers for their use.
- Ensure that a proper EDMS is chosen for the above; one that contains all the required features for such a system, such as the ability to create numbers and send transmittals.
- Arrange with the programme’s IT department to forbid the creation and use of shared network drive areas for team members.
- Eliminate the use of hard copy documents from the formal submission process, and minimise them in other circumstances, and ensure that your EDMS features a method of electronic approval.
- Have a team of document control professionals situated within the project teams. Do not leave people to control their own documents – it doesn’t work.
- Provide plenty of training: the more people know how to use an EDMS, the more they will use it.
- Make use of a reporting tool that can provide reports on information held on the EDMS, this adds great value to the information for the benefit of the Programme.

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Further information
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