



# CASE STUDY

## Imperial War Museums digitally preserve the history of modern war indefinitely with Spectra Digital Archive

“ When we set out on our search to find a storage solution capable of preserving Imperial War Museums’ substantial digital archive, there were specific criteria on which we were not willing to compromise. Spectra met all of our requirements and then some, and now continues to deliver with its Spectra Digital Archive solution. ”

Ian Crawford, Chief Information Officer, Imperial War Museums



Spectra Digital Archive includes: Spectra StorCycle, BlackPearl Platform and Spectra T950 Tape Libraries



### About the UK Imperial War Museums

IWM (Imperial War Museums) tells the story of people who have lived, fought and died in conflicts involving Britain and the Commonwealth since the First World War. IWM’s five branches attract over 2.5 million visitors each year and house a collection of over 10 million objects. The branches are IWM London, which will open extensive new Second World War and The Holocaust Galleries in October 2021; IWM North, housed in an iconic award-winning building designed by Daniel Libeskind; IWM Duxford, a world-renowned aviation museum and Britain’s best preserved wartime airfield; Churchill War Rooms, housed in Churchill’s secret headquarters below Whitehall; and the Second World War cruiser HMS Belfast.

### The Challenge

IWM is home to hundreds of thousands of films, videotapes, audio recordings and photographs that must be preserved forever but won’t last on their original media. They currently store an archive of around 750,000 digital assets, which amass a total of 1.5PB as uncompressed files. Their digital asset collection includes 5,000 film and video scan masters – a continually growing collection which is scanned and digitized from donated VHS and Umatic tapes (nitrate and celluloid film) before it becomes unliabile and disintegrates. They also have a collection of 100,000 audio masters dating back to the 1930s, nearly 500,000 image masters and thousands of lower resolution versions (access versions for commercial and web use) of the above assets. New scans in their film collection generate an additional 10TB of data per month, and the videotape scanning project is expected to create another 900TB over four years.

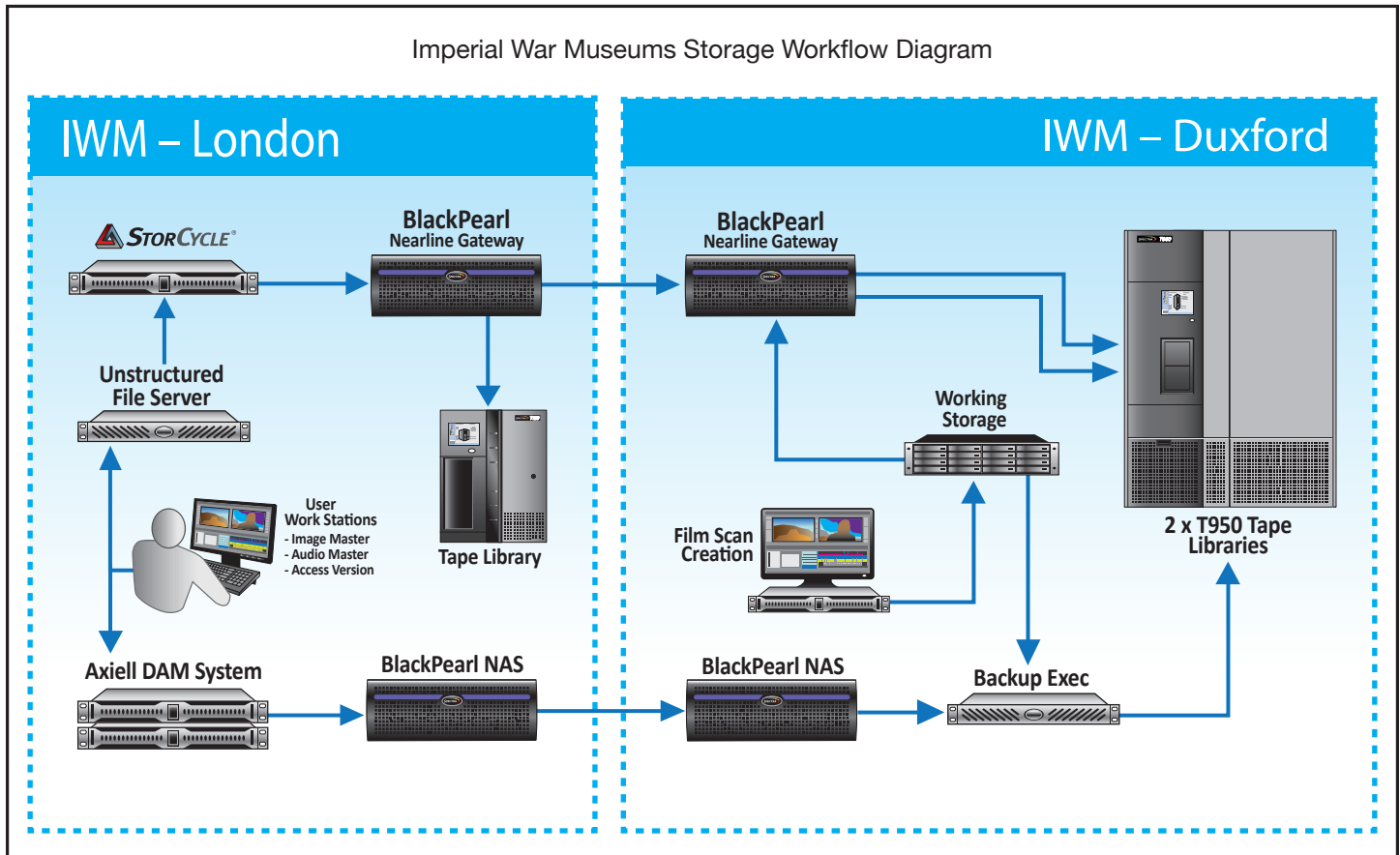
When it came to preserving their content, Imperial War Museums (IWM) had been facing issues regarding reliability, insufficient capacity and longevity of support with their previous storage solution. It was important that they find a solution that would not only satisfy their organization’s needs, but offer an investment that could be leveraged into the future as their archive and data storage needs grew.



A British munitions factory during World War I... from the IWM website.

# CASE STUDY: Imperial War Museums, UK

Imperial War Museums Storage Workflow Diagram



## Environment Snapshot

- Spectra® StorCycle® Enterprise Software for Digital Preservation
- Spectra® BlackPearl® Nearline Gateway with Object Storage Disk
- BlackPearl® NASi
- BlackPearl® Eon Browser
- Spectra T950 with LTO-7 tape drives
- Spectra T950 with IBM® TS1150 tape drives
- Java CLI
- Veritas BackupExec

## The Solution

A long-time Spectra Logic customer, IWM had previously installed a Spectra solution at their Duxford data center, where it reliably preserves their historical content, a total of around 5PB. IWM decided to leverage their investment in existing Spectra hardware and deployed a com-

plete Spectra Digital Archive, as well as extending the solution to their London data center. Their Spectra Digital Archive solution includes Spectra StorCycle enterprise software for digital preservation, two Spectra BlackPearl Nearline Gateway systems, BlackPearl Object Storage Disk, two BlackPearl NAS systems, and Spectra Tape Libraries with LTO-7 and IBM® TS1150 tape media and drives.

They run five workflows in this environment. The first are the master film scans, which comprise the bulk of their data (1.2PB). Master film scans are rarely accessed and stored on tape via BlackPearl Nearline Gateway. Per IWM's policies, two copies of the scan data are stored, one to each tape library on different tape media. End users are able to search and retrieve this data using Spectra's Eon Browser software.

IWM's second workflow stores everything else on enterprise disk, their Spectra NAS.

Audio masters, image masters and access versions are simply shared with users on standard shared folders on the Spectra NAS. The NAS solution offers a very dense capability of drives so there's plenty of opportunity for expansion.

All of their files are backed up to tape. IWM's primary backup uses an automated Java CLI script to send data to BlackPearl Nearline Gateway, which writes data to both tape libraries at the same time. This data can later be accessed via BlackPearl Eon Browser. IWM also runs a secondary backup workflow with BackupExec, which sends master film data to a partition in the LTO-7 library.

Finally, StorCycle helps the IWM's audiovisual and exhibitions departments offload primary storage by scanning and identifying inactive data outside of the digital asset management applications. StorCycle will scan these departments' primary

# CASE STUDY: Imperial War Museums, UK

storage for specific attributes, in this case identifying media file types older than two years and with more than 1GB in size. StorCycle then moves these files automatically to tape via BlackPearl Nearline Gateway, offloading primary storage and saving space and money.

The scalable solution enables IWM to set policies that automatically store their digital assets on multiple storage mediums with one copy of their assets on disk, and two copies on differing tape drive technologies. This genetically diverse approach to digital preservation ensures some of Great Britain's most historically important archives are preserved for many years to come. Spectra Digital Archive offers IWM the capacity, reliability and product longevity they sought for an extremely affordable price, and is backed by Spectra's efficient, award-winning support services.

## Why Spectra?

- Reliability
- Ease of Use
- Exceptional Support
- Tape's Capacity and Scalability
- Product Longevity
- Effortless data migration, access and preservation with StorCycle
- Cost-effectiveness



“ We have around 1.5PB of unique data, but with multiple copies to keep data safe, we actually store nearly five petabytes. SDA empowered us to move our data into reliable long-term storage, offloading our primary storage and preserving media files and unstructured data all with the push of a button. ”

*Ian Crawford, Chief Information Officer, Imperial War Museums*

## Solution Recap

**Spectra Digital Archive (SDA)** is a complete hardware and software solution powered by Spectra's StorCycle software to provide digital preservation for data at scale. SDA is designed for cost-effective bulk archive, project archive and automated long-term archive. Components include:

- **Spectra StorCycle** – StorCycle automatically identifies and moves data from primary storage to a lower cost tier that includes cloud, object storage disk, network-attached storage and object storage tape.

- **Spectra BlackPearl** – BlackPearl provides an object-based, hybrid storage platform that easily and cost effectively scales up as object and file volumes grow; adapts as operational requirements change; and enables easy synchronization of data between on-prem and cloud storage.

- **Spectra T950 Tape Library** – The T950 library affordably scales in capacity and throughput, and supports multiple generations of current and future tape formats. From the greatest storage density to proactive media management, the T950 is always protecting your data.