A GrayMeta Case Study

Archives Unlocked:
From Preservation to Profit in the AI Era

Executive Summary

For decades, media archives represented a necessary expense: vaults of aging tapes preserved out of obligation rather than opportunity. That calculus has fundamentally changed. As artificial intelligence transforms content discovery, licensing, and monetization, archives are emerging as strategic assets capable of generating substantial revenue while preserving cultural heritage.

This whitepaper examines how forward-thinking organizations are leveraging scalable digitization technology to convert legacy media into searchable, licensable, AI-ready content libraries. Drawing on Reuters' large-scale digitization initiative and the capabilities of GrayMeta's SAMMA platform, we explore the business case, technical requirements, and strategic considerations for transforming archives from cost centers into revenue engines.

The New Economics of Archives

The traditional view of media archives as preservation obligations (consuming storage space, requiring climate control, and generating no direct return) is rapidly becoming obsolete. Three converging forces are rewriting the economics of archival content.

AI-Driven Content Discovery

Machine learning has solved what was once the archive's greatest limitation: discoverability. Content buried in unlabeled tapes, accessible only to researchers who knew exactly what they were seeking, can now be surfaced through automated scene detection, facial recognition, speech transcription, and semantic search. Archives that were effectively invisible to commercial users are becoming fully searchable inventories.

The Demand for Authentic Content

Documentary filmmakers, news producers, advertisers, and educators increasingly seek authentic historical footage over stock alternatives. Raw, unedited material (the "rushes" that once held little commercial value) now commands premium interest precisely because it offers perspectives and moments that polished broadcast packages never captured.

Digital Distribution at Scale

Cloud-based licensing platforms have eliminated the friction that once made archival licensing cumbersome. Content that required physical tape duplication and manual rights clearance can now be previewed, licensed, and downloaded globally within minutes. The addressable market for archival content has expanded from specialist researchers to anyone with a production need and an internet connection.

The Urgency of Digitization

The opportunity to capitalize on these trends comes with a deadline. Magnetic tape degrades continuously. Playback equipment is aging, with spare parts increasingly difficult to source. Industry experts agree: the window for reliable videotape digitization is closing.

Organizations that delay conversion face a stark risk calculus. Every year, tapes stored in suboptimal conditions (closets, basements, garages) deteriorate beyond recovery. Once playback systems fail or tape oxide sheds to the point of unreadability, the content is lost permanently. No future technology will recover footage from a tape that has physically degraded.

This reality transforms digitization from a discretionary project into an urgent preservation priority, and simultaneously, a time-sensitive business opportunity. Archives that move quickly can monetize newly accessible content; those that wait may find themselves with nothing to preserve.

Case Study: Reuters Screenocean A 175-Year Archive Goes Digital

Reuters maintains one of the world's largest news archives, spanning 175 years of journalism. The collection encompasses 15 million photographs from 1985 to the present, text archives dating to the first Reuters telegram in 1851, and over two million video assets covering more than a century of global events. reutersagency.com

The video archive's origins trace to the British Commonwealth International News Film Agency, founded in 1957 and later renamed Visnews, which Reuters acquired majority ownership of in 1968. Through subsequent acquisitions of historic newsreel collections including Gaumont British, Paramount, and Universal, Reuters accumulated footage dating to 1896.

Yet much of this content remained locked on aging tapes, scattered across 165 bureaus worldwide, often in suboptimal storage conditions, with minimal inventory documentation and little to no associated metadata.

> *"Digitization isn't just about converting analog to digital. It's about making informed decisions on what to preserve, how to preserve it, and how to make it discoverable and usable."*
>
> *— Helen Walker, Archive Manager, Reuters Screenocean*

The Johannesburg Pilot

Reuters' transformation began with a discovery familiar to many organizations: boxes of forgotten tapes surfacing during an office relocation. The Johannesburg bureau held unedited rushes from post-apartheid South Africa, including previously un-broadcast footage of Nelson Mandela's presidency.

Rather than treating digitization as a preservation expense, Reuters approached it as a commercial proof of concept. The results validated the investment thesis: digitization costs were recovered within the first year through licensing revenue. South African content continues generating substantial commercial returns, demonstrating the sustainable economics of archive monetization.

Scaling Globally

The Johannesburg success funded expansion. Reuters identified tape archives across 14 bureau locations, ultimately digitizing 7,000 hours of content, effectively increasing the accessible video archive by 20%. Prioritization required balancing three factors:

Preservation Risk. Climate change and geopolitical instability introduced urgency calculations beyond tape condition. Los Angeles holdings faced wildfire risk. Jerusalem materials were vulnerable to regional conflict. A Belgrade archive stored in a basement near a river with flooding history demanded expedited attention.

Logistical Feasibility. International customs and export restrictions complicated or prevented shipping tapes from certain locations, requiring alternative approaches including portable digitization equipment that could be deployed on-site.

Client Demand. Commercial viability guided sequencing. Jerusalem footage offered historical context for ongoing regional coverage. New York bureau tapes, rich with September 11 rushes, aligned with approaching anniversary demand. Content with clear market interest received priority.

> *"As our video journalists have borne eyewitness to history, and in some cases risked their lives to capture that history, I strongly believe as part of the duty of care to all those journalists that we look after both them and the content they have produced."*
>
> *— Helen Walker, Archive Manager, Reuters Screenocean*

Building an In-House Digitization Hub

Initial digitization was outsourced, but scale demanded a different approach. Reuters built an in-house digitization facility in London using GrayMeta's SAMMA system, establishing an end-to-end workflow from cataloging through cloud migration.

The current configuration digitizes 80 tapes simultaneously, producing approximately 1,000 newly digitized tapes monthly. This throughput has enabled migration of the Sarajevo, Madrid, and Athens bureau archives, with Belgrade, Bogotá, and Santiago in the queue.

For locations where tape export proves impossible, Reuters plans to deploy mobile SAMMA hardware (a "flypack" configuration) directly to bureau locations. Cairo is scheduled as the proof of concept, with Baghdad identified as a priority destination.

The Screenocean Platform

Digitized content flows to Reuters Screenocean, a video licensing platform now offering access to over 1.5 million clips spanning Reuters' news archive alongside content from Channel 4, Channel 5, Warner Bros Television Productions UK, and other partners. The platform provides self-service search, preview, and licensing, transforming what was once a manual research process into an on-demand commercial service. reuters.screenocean.com

Screenocean demonstrates the complete arc from preservation to profit: content rescued from degrading tapes in scattered bureau storage now generates licensing revenue from filmmakers, broadcasters, educators, and researchers worldwide.

SAMMA: Scalable Videotape Migration Technology System Overview

GrayMeta's SAMMA (System for Automated Migration of Media Assets) is an Emmy Award-winning platform designed specifically for high-volume videotape digitization. Unlike manual approaches requiring constant operator attention, SAMMA automates the migration workflow while maintaining broadcast-quality output and comprehensive quality control.

The system architecture combines hardware and software components:

SAMMA Prep handles tape preparation and metadata association, capturing information from tape cases (including handwritten notes) and linking it to digital assets.

SAMMA Server manages operations and controls, orchestrating the digitization workflow across multiple simultaneous channels.

SAMMA Eye leverages the InSync AE2020 Analysis Engine for real-time technical quality monitoring and technical metadata extraction.

SAMMA Stats provides metrics, reporting, and dashboard visualization from the SAMMA database.

Format Support

SAMMA accommodates the full range of professional videotape formats that archives typically hold:

Cassette formats: 3/4" U-matic, DVCPro, D2, Betacam SP, Betacam SX, IMX, DigiBeta, HDCAM, and HDCAM SR

Open reel formats: 1-inch Type C and 2-inch Quad

Output formats are highly configurable, supporting archival standards including JPEG2000, MXF, and MOV, as well as proxy generation for preview and browsing applications.

The AE2020 Analysis Engine

What distinguishes SAMMA from simpler digitization approaches is its integration with InSync Technology's AE2020 HD Analysis Engine. This hardware serves as the bridge between analog and digital domains, processing incoming composite, component, or SDI video signals with precision conditioning, synchronization, and enhancement before encoding.

The AE2020 preserves frame-accurate integrity, embedding original timecode (typically LTC) and maintaining the technical provenance essential for archival authenticity. Combined with SAMMA's workflow automation, the system creates a complete migration pipeline: capturing, analyzing, converting, and synchronizing footage to meet the highest preservation and production standards.

Scalability and Automation

SAMMA scales to match project requirements. Configurations range from one or two-channel systems suitable for smaller archives to four and eight-channel installations for high-throughput operations. Multi-channel systems can be further combined for larger facilities.

For maximum speed, SAMMA supports robotic automation, enabling 24/7 operation. Organizations facing tens of thousands of tapes and aggressive timelines can achieve processing volumes that would be impossible with manual approaches.

Operational Simplicity

Despite its technical sophistication, SAMMA requires minimal specialized expertise to operate. GrayMeta configures systems to client specifications (defining tape types, output formats, metadata workflows, and storage integration) and provides training for all operational tasks. Day-to-day operation can be managed by existing staff, interns, or temporary hires, reducing the personnel investment required for large-scale digitization.

AI-Powered Metadata and Discovery: The Metadata Challenge

Digitization solves only half the problem. Converting tapes to digital files preserves content but doesn't make it discoverable. Many archival collections suffer from minimal documentation: tape cases bearing only a date and location, if that. When journalists created these recordings, posterity wasn't the concern; the next broadcast deadline was.

This metadata poverty historically limited archive utility to researchers who knew precisely what they sought. Commercial exploitation required browsing or educated guessing. AI changes this equation entirely.

Automated Indexing

Modern machine learning enables extraction of rich metadata from video content itself:

Speech-to-text transcription makes spoken content searchable, allowing users to locate footage by what was said rather than relying on accurate manual logging.

Scene detection identifies shot boundaries and characterizes content (panning shots, close-ups, crowd scenes, press conferences) using the visual grammar that editors and researchers understand.

Facial recognition surfaces appearances by known individuals, enabling queries like "all footage containing Nelson Mandela" without requiring manual annotation of every frame.

Object and location recognition identifies settings, landmarks, vehicles, and other visual elements that contextual searches might target.

Reuters' AI Implementation

Reuters' digitization workflow integrates AI indexing to transform minimally documented rushes into fully searchable assets. Initial work utilized Moments Lab, a specialized AI metadata company, for speech transcription, scene detection, and shot listing.

The approach acknowledges AI limitations. Automated systems hallucinate, misidentify subjects, and produce confident but incorrect assertions. Reuters maintains human oversight throughout the pipeline, with quality control processes verifying AI-generated metadata before publication. Every AI-indexed asset on the Screenocean platform carries a disclosure statement, consistent with Reuters' trust principles as a news organization.

Building on this foundation, Reuters is developing proprietary AI indexing capabilities in partnership with internal technology teams, leveraging the organization's existing three million assets (most with associated shot lists) as training data. According to Helen Walker, speaking at the FIAT/IFTA World Conference in 2025, Reuters is "working with Vista in-house to develop our own AI metadata indexing system." The archive's scale becomes a competitive advantage: extensive annotated content enables training of increasingly accurate domain-specific models.

From Discovery to Revenue

AI metadata transforms archives from passive repositories into active commercial assets. Content that licensing teams couldn't locate can now surface automatically in response to client queries. Footage that required specialist researchers to identify becomes accessible to self-service customers. The combination of discoverability and digital distribution creates a scalable licensing model impossible with analog archives.

Strategic Implementation Framework

Organizations considering large-scale digitization should approach the initiative as a business transformation, not merely a preservation project. The following framework synthesizes lessons from successful implementations.

Phase 1: Audit and Prioritize

Begin with comprehensive inventory. Catalog all tape formats across all storage locations, assessing:

Physical condition: Visible degradation, mold, contamination (one Reuters bureau discovered sand in its tape collection)

Storage risk: Environmental threats including flooding, fire, seismic activity, and conflict
Export feasibility: Customs and regulatory barriers to consolidating materials at a central digitization facility
Commercial potential: Anticipated demand based on subject matter, historical significance, and temporal relevance (anniversaries, ongoing stories)

Phase 2: Define Standards and Workflows

Establish technical and metadata specifications before digitization begins:

- **Output formats:** Archive masters, production proxies, and web-optimized versions
- **Metadata schema:** Technical metadata, descriptive cataloging, and AI-extracted indexing
- **Quality control:** Human review requirements, AI confidence thresholds, and disclosure policies
- **Rights documentation:** Provenance tracking and clearance status

Phase 3: Technology Selection and Configuration

Match technology to project scale and constraints. Consider:

- **Throughput requirements:** Volume of tapes and timeline constraints determine channel count
- **Format mix:** Ensure selected system supports all tape formats in the collection
- **Location constraints:** Assess whether portable or mobile solutions are required for materials that cannot be shipped
- **Integration needs:** Define connections to existing asset management platforms and cloud storage

GrayMeta works directly with clients to configure SAMMA systems for specific tape types, volume requirements, output formats, and metadata workflows.

Phase 4: Operationalize and Scale

Launch with a defined pilot scope (a single bureau's collection or a specific format) before scaling:

- Train operators on daily workflows
- Validate quality control processes with initial output
- Refine metadata treatment based on discovered edge cases
- Establish throughput baselines and scale configurations accordingly

Phase 5: Monetize and Measure

With digitized content accessible, focus shifts to commercial activation:

- Integrate with licensing platforms for self-service access
- Develop marketing highlighting newly available collections
- Track licensing revenue against digitization investment
- Identify additional collections for future digitization based on demonstrated returns

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The Commercial Imperative

Reuters' experience demonstrates that archive digitization can be self-funding and ultimately profitable. Johannesburg content recovered its digitization costs within a year and continues generating revenue. This commercial success funded expansion to 14 additional bureaus, creating a virtuous cycle of preservation and monetization.

The economics depend on several factors:

Content uniqueness. Raw, unedited footage offers perspectives unavailable elsewhere. Broadcast packages are duplicated across networks; rushes are typically unique to the organization that shot them.

Historical significance. Footage documenting major events (apartheid-era South Africa, September 11, regional conflicts) commands sustained licensing interest.
AI-enabled discovery. Automated indexing surfaces content that would otherwise remain unfindable, dramatically expanding the addressable inventory.
Scalable distribution. Cloud platforms enable global licensing without manual fulfillment, reducing marginal costs to near zero.
Organizations with substantial tape holdings (broadcasters, news agencies, studios, universities, national archives) are sitting on assets whose commercial potential has been unlocked by technology advances. The question is no longer whether digitization is worthwhile, but whether organizations will act before tape degradation forecloses the option.

Future Directions

Mobile Digitization
For collections that cannot be shipped due to export restrictions, fragility, or volume, mobile digitization capabilities are essential. GrayMeta's SAMMA can be deployed in a “flypack” configuration which enables on-site deployment, bringing broadcast-quality digitization to the archive rather than requiring the archive to travel. Reuters plans deployments to Cairo and eventually Baghdad, locations where centralized processing would be impossible.

Continuous AI Enhancement
As digitized archives grow, they provide training data for increasingly sophisticated AI models. Organizations developing proprietary indexing capabilities can achieve accuracy levels generic services cannot match, creating competitive advantages in content discovery.

Archive-as-a-Service
The Screenocean model suggests a broader opportunity: archive management and licensing as a platform service. Organizations lacking the scale to justify dedicated infrastructure may access archival digitization, indexing, and licensing through shared platforms, democratizing capabilities previously available only to major media companies.

Conclusion
The transformation of archives from cost centers to revenue engines is not theoretical. It is happening now, at the world's leading media organizations. Reuters' experience proves the model: systematic digitization using scalable technology, combined with AI-powered discovery and cloud distribution, creates a sustainable business from content that was literally gathering dust.
The window for action is finite. Tapes degrade. Equipment fails. Every year of delay represents lost content and foregone revenue. Organizations that move quickly can capture their archival assets' full value; those that wait may face irrecoverable losses.
GrayMeta's SAMMA platform provides the technology foundation: proven, scalable, broadcast-quality digitization that transforms the traditionally manual migration process into an automated workflow accessible to any organization. Combined with intelligent metadata extraction and cloud integration, SAMMA enables archives to make the transition from preservation obligation to strategic asset.

The past, properly preserved and activated, can fund the future. The technology exists. The business case is proven. The only remaining question is execution.

About GrayMeta

GrayMeta develops technology solutions for quality control and compliance software, video analysis tools, and videotape digitization for archives. The SAMMA platform is deployed at leading broadcasters, archives, and cultural institutions worldwide.