

Sample Entry

Content Distribution

Entry title: MediaMesh

Entry details

Company Name Sky Group

Project Summary

Facing the complexity of integrating hundreds of legacy systems and workflows of multiple broadcasters across Europe, in order to migrate to the cloud, Sky collaborated with a network of best-in-class technology partners to deliver a modular, API-driven, cloud-native architecture to form: MediaMesh.

Sky's MediaMesh represents a step-change in broadcast operations at scale, transforming how content workflows are managed across Europe's largest media company.

This strategic transformation has delivered significant operational gains—streamlining the processing of nearly 3 million titles annually, and driving automation and data driven optimisation through AI-enriched workflows.

MediaMesh is a blueprint for large-scale, software-defined broadcast transformation.

Project Description

As one of the world's largest media companies, Sky delivers content across the UK, Ireland, Germany, Austria, Switzerland, and Italy—supporting over 100 formats, 2.7 million assets annually, and trusted with around \$2 billion worth of content at any given time.

To meet rising business demands and prepare for future scalability, Sky created MediaMesh—a cloud-native, fully elasticated, modular platform designed to replace fragmented legacy systems with a single, service-oriented architecture. Each service delivers a distinct capability, allowing Sky to dynamically reconfigure components based on evolving business needs. This flexibility empowers Sky to enhance functionality, integrate new services seamlessly, and adapt rapidly to emerging use cases across the content delivery ecosystem. The primary goal: transform how content is ingested, processed, QCd, localised, enriched with Access Services, and distributed—at scale, with agility, and without compromising quality.

In addition to integrating with a wealth of end points, including Sky applications, NBCU's Peacock, Now, and other third-parties, MediaMesh underpinned the content preparation and metadata enrichment for 'Sky OS', powering the launch of Sky Glass.

The strategic emphasis on metadata - both its meticulous management and intelligent augmentation - has been core to MediaMesh's success. Sky's data-driven architecture is not only powered by content, but by the rich, structured intelligence that metadata provides. Sky built a model where metadata is not just an internal asset, but a shared language—seamlessly exchanged across partners, platforms, and downstream products. This metadata ecosystem ensures discoverability, interoperability, and scalability, setting a new standard for content processing excellence.

But this transformation could not happen in isolation. It demanded deep collaboration with multiple technology partners—each playing a critical role in solving real, complex, cross-territory challenges.

Collaboration Highlights

Seamless Legacy Integration – SDVI

Each Sky territory had its own systems, workflows, and storage—creating a patchwork of complexity. To address this, Sky partnered with SDVI.

Together, they created the Group Content Aggregator Service. This service integrates with legacy cloud and on-premises systems across multiple regions where there is no common ID structure or consistent storage schema, however, this unified API-driven layer locates, retrieves, and prepares media from distributed storage.

Reinventing Auto QC – Telestream

Quality Control had long been a bottleneck in content workflows. To try and reduce this, Sky teamed up with Telestream who had developed Qualify—a new Auto-QC tool that consisted of the best checks from Telestream's library of Auto-QC products.

Sky analysed years of operational QC data, and with Telestream's on-going support, they tested and fine-tuned bespoke Qualify profiles. Additionally, Telestream developed new Auto-QC checks, specifically for Sky.

The new, Sky-specific configurations, optimised operational processes, where QC time was halved, while false positives dropped significantly, operational efficiency increased by more than double.

Augmented QC – AWS

Identifying localisation requirements presents a different set of challenges. Traditional Auto-QC tools can check technical issues, but they can't perform multifaceted editorial checks, which, until recently, had to be done by manually watching the entire content. To achieve this using AI, Sky partnered with Amazon Web Services (AWS).

Through a series of collaborative workshops and meetings, Sky and AWS explored the "art of the possible," leveraging AWS's Rekognition and Transcribe applications to push the boundaries of what is achievable using AI on content.

The most valuable opportunity was in identifying localisation requirements, but it was also the trickiest. Many content samples were shared, with different spoken languages by various native speakers, which allowed AWS to train and improve its algorithm.

By training models on diverse, multilingual content, the partnership enabled Sky to automatically detect non-native speech without subtitles, untranslated on-screen text, and even spelling errors—unlocking smarter localisation workflows.

This innovation also empowered Sky Italia to move beyond generic soundtrack labels of "Original" and "Italian," to offering viewers precise language filtering for a more personalised experience – for instance, a native English speaker visiting Italy can filter the content catalogue for titles with English audio, something that wasn't possible before.

The solution was expanded to address other use cases, such as the automatically identifying contentious video elements (e.g. death, drugs, violence, nudity, etc) and optimal ad break points.

Computational costs can be challenging when looking at a business case where AI is applied to content. However, fine-tuning the proxy creation that would be used by the AI tool and caching raw AI-generated data avoided redundant processing of previously analysed content which significantly lowered costs.

Recognising that no single AI model fits all, Sky developed the Content Enrichment Service—a flexible framework integrating multiple AI engines, each optimised for specific use cases.

Lastly, to avoid overwhelming QC operators, Sky introduced Augmented QC: a unified, intuitive interface that blends traditional and AI-driven insights into a streamlined, actionable timeline.

Unified Operations UI – TMT

One of the guiding principles with this transformation project was to reduce the number of systems that the operational teams interfaced with. For this, Sky chose TMT's Polaris as the true "single pane of glass" from which operations can interface with.

From this UI, operations can monitor ingest flows from 300+ content partners, pick up human dependent tasks from prioritised worklist, and enrich content with access services (including over 10,000 AD and subtitle files last year). However, the UI needed to be expanded to encapsulate the monitoring of many distribution workflows in Sky's ecosystem and beyond.

The requirement had two sides to it. Firstly, Sky wanted to produce a unified view that leveraged the intuitive "tube map" graphical representation of workflows already established in Polaris. Secondly, there was an operational requirement to replicate the fine-grained monitoring that was present a legacy application.

Implementing the fine-grained monitoring, within another product like Polaris, would not have been possible without TMT's support. They introduced a custom page feature where Sky's many detailed notifications, that are generated in the distribution space, are aggregated. It accommodates challenges around the ordering of notifications and skipping key steps when notifications weren't received.

This meant that operations have a "zoomed out" view of workflows presented in a tube map view, and a "zoomed in" view to ascertain details whenever that is required. This achieved one of the primary goals to provide operations real-time, end-to-end, oversight and control across MediaMesh's entire ecosystem.

MediaMesh isn't just a technology upgrade—it's a new operating model for content delivery. By rethinking workflows and building strong, outcome-focused partnerships, the collaborations have set a benchmark for what large-scale, cloud-first transformation looks like in modern broadcasting.

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