The Client

BBC Wales were moving their headquarters from an aging (but much loved) facility in the suburbs of Cardiff to a state-of-the art new facility in Central Cardiff. Being a national broadcast headquarters, the new facility needed to have space for radio and TV production, including live news and sport, high end post production, playout and extensive media library facilities

ABCI's engagement

We were appointed to lead technical requirements capture and design, preparation of procurement specification documents and assisting in technical assessment of responses. The scope was for all production and post-production facilities, including media asset management and associated storage systems, video and sound edit suites, news and live production systems. Interaction with other systems such as planning, scheduling and radio systems was also to be defined. The engagement began way before ground was broken for the new building, and ended as systems were handed over to users for use in live and non-live productions

What we did

Extensive stakeholder interviews and 'user group' meetings were conducted, capturing a wide range of functional and non-functional requirements. Often requirements were opposing across different departments or became unrealistic to implement within strict budgets, timescales or currently available technologies.

We produced three main types of documents: workflow overviews, system interaction diagrams and room facility 'layouts'. These shaped further discussion until consensus was reached for a realistic implementation within budgets.

For processing scaling and storage definitions, complex 'volumetric' spreadsheets were created which led to overall throughput and storage tier specifications.

The above documents were wrapped into specification documents which formed the backbone of RfP (request for proposal) documents. These were sent to various system component and system integrator providers through the clients' formalised tender process. ABCI assisted the client in assessing technical aspects of responses.

On appointment of key suppliers, we then assisted in detailed design, ensuring deliverables matched the requirements at all stages of the project.

As the key parts of the project were delivered, we provided further expertise for initial functional and technical testing, along with snagging of systems and interfaces outside of suppliers' scope.

Project Highlights

Being able to work with some very talented production and post-production experts from both the client and supplier organisations. This was the first facility where we have worked with Dolby Atmos: panning the first 'Atmos object' in 3D space in a Munro designed sound theatre was certainly a high point. Due to the scale of the facility, this seemingly simple act required some incredibly complex technology.

Due to the wide range of operational requirements, a truly 'enterprise' MAM was required. Having one of the clients lead engineers tell us that "all workflows you defined are now fully implemented" was an incredibly satisfying moment.

Biggest Challenge

With the client having worked in their old facility for many decades with a 'make do and mend' attitude (which, has to be said, they did extremely well), getting stakeholders to think of new or better ways of doing things was certainly the biggest challenge. It really was very hard to get the team to accept that there really would be several Petabytes of storage space, and there was budget to procure all new equipment.

At the start of the project, the clients' facility still had plenty of standard definition workflows. Stakeholders initially dismissed UHD as an unnecessary extra cost that they did not feel they would use. We stuck to a 'UHD first' strategy throughout, which ultimately proved a critically important decision (in many ways, I feel we should have pushed for some 8k workflows for very high-end production, but that's a whole other discussion!), with the first productions in the new facility being created in UHD.

What we learnt most

Before this project, we always saw a sound suite (AKA dubbing theatre) as a DAW (Digital Audio Workstation), a control surface and set of speakers. The only real question we would ask was "how big a console do you need?". During this project we were lucky enough to spend many hours sitting in real world audio post-production sessions, seeing the huge complexity as well as the incredible talent involved in sound production. The workflow for audio is in many ways far more complex than video and combine with that the need to screen productions for the first time in a larger theatre space, makes these facilities critical to high end production.

Project Outcomes

All facilities and workflows that we defined have been implemented and the client has taken their new facility into service pretty much on time. End user feedback is positive, with their new facility providing the tools they require to continue to produce new, high-end content in UHD and Atmos audio. The first productions were completed during summer 2020.