The advantages of the Hybrid MAM approach

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An Arvato Systems Brand

Executive Summary:

In recent years, the media supply chain and asset management landscape has largely divided into three distinct camps. First, the "traditional", often large-scale turnkey MAM – tailored to the application and user requirements and with a wide range of integration touch points. Second, the BIY (Build it Yourself) approach, custom built to directly respond to the needs of the organization, but requiring the resource and knowledge to build, deploy and maintain within the organization. Lastly, the smaller, "off the shelf" system with limited flexibility and functionality, but usually at a lower price point.

In this paper, we will first look at the advantages of each approach, before examining how we can take a combination of those approaches to deliver additional benefit while retaining those individual advantages.

What a MAM requires

The term MAM, or Media Asset Management to give it its full title, usually refers to a software-based system that governs key aspects of the media supply chain, namely managing, organizing, acquiring, ingesting and delivering media files.

The base hypothesis for their use and construction is that the more an organization knows about its media, usually via tracing it through the system and the various processes it undergoes via metadata tags attached to it, the more agile and efficient its MAM can be.

At its most simplistic, a MAM can essentially be just a folder structure operating in a computer OS that follows distinct file naming methodologies and folder hierarchies to indicate high-level metadata. The media files can be found via search, and renamed and moved between folders as workflow processes occur upon them.

> " This, of course, is not an approach that scales or supports the collaborative workflows so integral to modern broadcasting that see multiple users work on files simultaneously.

This is why, first as specialist software that tracked the movement of physical media and then as software that included the media files itself as media supply chains became digitized, the MAM has grown in sophistication and features over the past decades.

In the same timeframe, the way a MAM is implemented within a media organization has also evolved.

Three flavors of MAM

Given the initial bespoke nature of the software involved, it is unsurprising that the first MAM systems to be implemented were purpose-built. Indeed, if we widen our net beyond just media and examine business software solutions in general, historically in most markets there have been two main approaches; turnkey or BIY (Build it Yourself).

1 – Turnkey system

For many media organizations, historically the only viable option initially was to purchase a **turnkey system**. Provided by specialist vendors and built with a large degree of customization to the organization's needs, these are typically monolithic projects that are both expensive and resource hungry, often entailing a significant change management process as part of their installation. The advantage they bring is that they are specifically tailored to the organization's needs, and often feature multiple integrations with other systems within the business. They are also long-term projects, with any change in requirements across the lifetime of the system handled together with the vendor through change requests, system upgrades, or additional customization (though this has evolved in recent years to give System Administrators agency to iterate aspects of a turnkey installation, such as metadata schema, without recourse to the initial vendor).

2 – Build it yourself

The alternative **BIY option** was only realistically open to organizations with the appropriate depth of resources necessary to implement large scale digital infrastructure projects. Historically these were found at the national broadcaster level and resulted in a completely custom solution that was exactly tailored to the organization's requirements but was also self-maintained and developed. They were not only expensive to establish, they became a regular ongoing cost on the balance sheet with a high TCO (Total Cost of Ownership). As a result, there are plenty of instances where they have morphed into a vendor-supported system. They often also fail to reflect the modern interconnectedness of the broadcast ecosystem, where facilitating the flows of data and files between organizations has assumed the same degree of importance as that ascribed to internal workflow patterns.

3 – Off the shelf

A third option in the market has been the ***off-the-shelf MAM***. These have more constrained functionality compared to the other two approaches, limited flexibility, and leave the customer entirely beholden on the vendor for ongoing development. Their advantage is, as you would expect, that they are available at a lower price point. However, companies often have to adjust their internal workflows to match the MAM system that is being integrated, rather than the other way round. This can cause significant disruption over a long period of time.

The Hybrid MAM implementation:
the best of all worlds

Developments in standards

The file wrapper MXF, the Material eXchange Format, was introduced in an attempt to facilitate the seamless interchange of media files between systems in 2004. While that interchange might still not be as seamless as hoped, the scope of the MXF standard(s) has grown significantly over the years and MXF has become the dominant file format in media production with a strong degree of interoperability. Augmented by IMF (the Interoperable Master Format) in recent years, MXF is still used as the file format for media components such as audio and video, but other connections between these components and their structure and descriptive metadata are written in XML. As such, you no longer need to be a media expert or wade through pages of documentation to understand the content of a media package.

Meanwhile, BPMN (Business Process Model and Notation) provides a graphical notation for specifying business processes that can also be described using XML. This has made a dramatic impact on the way that the workflow steps that make up a media supply chain are described and monitored.

BPMN is widely used across many industries. And while there is a degree of nuance in applying it to media workflows, BPMN, and other standards like it, enable the media industry to apply automation to the media supply chain in a clear and transparent way.

Both MXF and BPMN are published by standards bodies, but increasingly we have also seen other standardization emerging from the adoption of industry-wide *de facto* standards such as Amazon S3 (Amazon Simple Storage Service). This effectively becomes a "lowest common denominator" for interfacing the storage with other components, and means that new applications and services can be quickly on boarded.

Bringing it all together

Parallel to the developments in the wider industry, with MAM the realization that, to paraphrase Dunne, no media organization is an island completely of itself has changed the landscape. While many systems now offer standardized interfaces that allow for greater tailoring and adaptation over time, even more now offer one or more APIs (Application Programming Interfaces) should significant custom developments or integrations be required, even within enterprise systems. A multitude of options for extending and integrating the system, whether that development is done by you, the vendor, or a third party, is now the new normal.

The result is that BIY in particular no longer requires organizations to start with a blank sheet of paper or commit to a 100% custom-built solution. Services such as our VidiCore API-based Media Asset Management Platform provide the backend in terms of object repository and metadata structures that enable organizations to focus on developing the frontend application layer. In this manner the framework is already in place and the overlying functionality can be built upon it, dramatically shortening development time.

Alongside that, accompanying toolkits can massively accelerate development while templated solutions, called "Themes" for example in our VidiNet platform, enable developers to realize a MVP (Minimum Viable Product) for common use cases, such as a media library, for instance, within only a couple of hours.

By extension, vendors are using their own and other vendors APIs to build their software too. This means that organizations building their own frontend applications can compliment those with other applications from vendors. For example, an organization building their own user interface on our VidiCore service could easily add to that our VidiFlow workflow engine or VidiEditor browser-based video editor, or any number of alternative applications and services from our partner vendors.

Conclusion

MAM systems are one of the key components of a modern digital workflow, and a vital part of the overall movement towards cloud- and IP- based models of production and distribution. They are also one of the most complex, with many integrations that need to be considered in their design, and they need to work flawlessly time after time if the synergistic advantages presented by their company-wide use are to be truly realized.

They were also one of the pioneering components that enabled the industry to move over to digital, and at times the legacy of their heritage weighs heavy upon them. The point is that it doesn't have to. The advent of API-based approaches, as well as the wide scale adoption of standards such as MXF and BPMN, and *de facto* standards such as Amazon S3, means that we can change the way that we build them. We can still provide the same functionality, but we can create that functionality — and improve on it — with more agile and more responsive components that can be adapted to the way that a company works rather than imposing a monolithic, unchangeable workflow.

The new Hybrid MAM allows media organizations to quickly and simply build their own systems, laying individually specified functionalities on top of a robust backend layer; bridging the space between the bespoke and the BIY and truly providing the best of both worlds.

Get in touch to find out how we can set up a Hybrid MAM Solution for you

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