The Waves of Video Digital Transformation

Introduction

As a video service provider, it is highly likely you have been working through multiple generations of video platform. In addition, the need to transition to a new platform is most likely driven by the perception that the existing platform is unable to meet an evolving set of requirements. If that describes your organisation, rest assured, you are not alone

There is a perception in our industry that video is already digitally transformed. However, based on our work with video service providers across the globe, every organisation is in fact transforming in a series of waves. As each wave completes, the organisation consolidates, and then confronts the next wave.

Each wave brings a new set of requirements and challenges, and typically the existing video platform lacks the development runway to adapt.

The challenge with this approach is that with every wave, organisations are consolidating on what they needed for the previous wave, and not leaving themselves runway to tackle subsequent waves.

The result is a costly sequence of rebuild after rebuild, not just of technology but of business processes, and many organisations are growing tired of the expense of launching, redesigning and launching.

In this paper we'll break down digital transformation into the series of waves organisations are typically encountering and describe the waves still to come. We'll then describe how the **Cloud TV Suite** from Comcast Technology Solutions is enabling customers globally to break free of the disruptive and costly cycle of continuous rebuilding, and hence tackle digital transformation in a less disruptive way – deploy once, then adapt, because Cloud TV Suite is programmable, not just configurable. Digital transformation may be the journey not the destination, but with CTS we can accelerate your journey to that destination.

The waves of digital transformation

Wave 1 – Perfecting Streaming

The first wave of digital transformation was simply getting online video to work. Although a crazy amount has changed in the industry, it wasn't that long ago that adaptive bitrate streaming was a new challenge, but even today this is still an area for optimisation as organisations use cloud computing, multi-CDNs and low latency streaming to meet the challenge[1] of highly concurrent events delivered with an equivalence to broadcast networks.

Wave 2 – Converging Siloes

In the second wave, organisations realised carrying two teams doing largely the same work of content preparation, scheduling and promotion was a costly overhead. As a result, organisations pivoted to thinking "digital first", meaning rather than seeing online video as a bolt-on, it became an integrated part of the core.

This helped solve many problems, such as content metadata being different on each platform or having data split in siloes, resulting in a fragmented picture of how the service was performing. However, it was also a difficult transformation, since it was the first time many organisations had to bring together their broadcast and "digital" teams, which had previously worked independently, to get them to work as a cohesive whole.
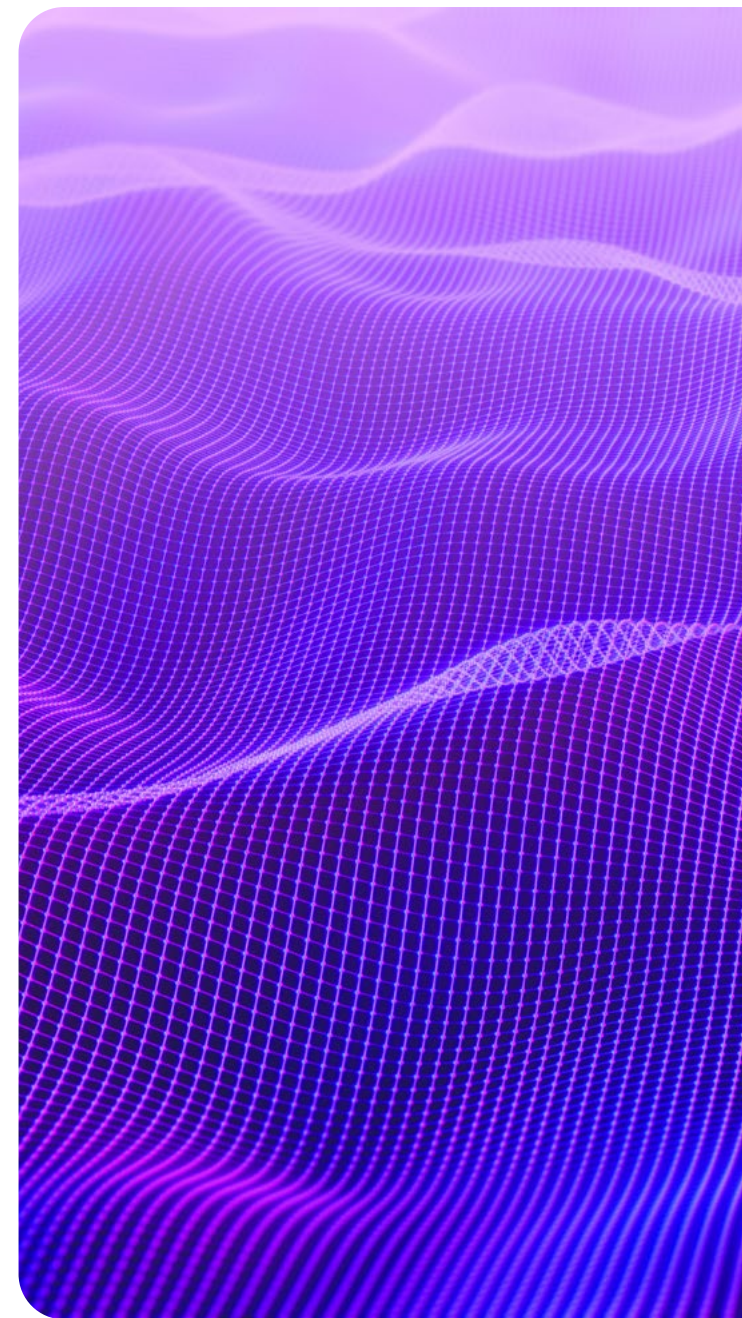
Wave 3 – Innovating Business Models

Once the business had converged, the next challenge was increasing ARPU (average revenue per user). As a distribution route, online video was now considered as important as traditional broadcaster distribution routes, so the question shifted to how this could help organisations to grow.

Many organisations are today still working through this phase. We are entering the era of "Peak SVOD", in which organisations recognise that there is a limit to how many services consumers will loyally subscribe. This has led many organisations to experiment with hybrid advertising/subscription tiers, different content bundles and premium features (such as UHD and offline viewing).

It has also resulted in new relationships emerging between industry players. For example, the role of pay TV operators is evolving[2] to provide services for cross-platform content discovery and aggregation of first-party viewing data, both of which are the basis of a symbiotic relationship that benefits both the operator and the content owner.

The future waves

The era of Peak SVOD is creating more waves of innovation as the industry realigns. In many ways, the old adage "everything changes; everything stays the same" applies, since as content providers evolve away from pure SVOD to ad-funded models, the new world begins to look a lot like the old world – as in ad-funded content providers working in tandem with pay TV operators to maximise viewing time and ARPU.

[1] https://corporate.comcast.com/press/releases/peacock-wildcard

[2] https://www.comcasttechnologysolutions.com/resources/how-ott-changing-role-operators

Wave 4 – Driving retention through personalisation

The first of the new waves is the shift in focus towards user retention as well as user growth. By now in most regions, most organisations that have content have launched some form of online service, meaning the ecosystem of services is largely complete. However, Peak SVOD has driven organisations towards ad-funded business models, which have even less lock-in than monthly "cancel anytime" plans. Services therefore can't rely on loyalty even month to month and must therefore fight harder to retain viewing.

There are five main drivers of voluntary churn. There is little that can be done about the first four – cost, end of an offer period, quality of experience and running out of content to watch – in the short term, since improving these tends to require changes to annual budgets. But the fifth area – user experience – can be impacted relatively quickly, with the results measured through A/B testing.

A major way in which user experience can drive retention is through more and more personalisation of the service. In other words, from an end user's perspective, a service that intuitively knows what a user wants to watch is going to be a more natural destination than rival services.

Clearly a key part of driving retention through personalisation is algorithmic recommendations, but there are many other tools. Curated, or editorial, recommendations (such as "hero" images on the UI's homepage) are one such tool. Other tools include CRM (customer relationship management), such as push notifications, "what to watch" emails and even birthday wishes all form part of an integration package of measures. There are a lot of potential options with this wave!

Wave 5 – AI and ML

The next wave is even further out on the horizon and is just coming into view. This wave uses artificial intelligence and machine learning (AI/ML) to supercharge the previous waves. It is important to remember that AI/ML is just a set of tools – it is a means to an end, not the end itself. Instead, it's the way in which those tools are applied that unlock the benefits of AI/ML.

And unlock it certainly will. AI/ML will power the "more" of everything discussed so far in this article – more recommendations, more A/B testing, more workflows, and more business model options. The more of everything creates an unmanageable number of data points, but AI/ML can help control that.

For example, at CTS, our **VideoAI™** framework can, amongst many other use cases, drive the more of metadata. It can surface scene and contextual level metadata that can describe content to a much greater depth than is possible with human curated metadata. This metadata can be used to help provide better recommendations and better ad targeting, providing a more personalised service than can be achieved with human curation alone.

Wave 6 – Watch this Space

AI/ML will supercharge our waves of innovation, but we shouldn't expect the fifth wave to be the final one. Our industry is both hyper-competitive but also endlessly creative, and so even as previous waves are being absorbed, something new will appear.

This article isn't an attempt to forecast the future, although even from today's vantage point there are many emerging technologies, such as volumetric video, generative AI and interactive content, of which as an industry we have so far only just started to explore.

This article is instead trying to highlight a significant point: with multiple waves of transformation, it is vital to design and plan your infrastructure with flexibility in mind to target tomorrow's waves as well as today's. How to approach this is the subject of the final section of the article.

Simplifying the waves with Cloud TV Suite

As we set out at the beginning, digital transformation is more a journey than a destination. The waves aren't prescriptive and so aren't felt by all organisations in the same way. It's okay if your organisation is at a different point compared to your peers.

However, what is clear is that it is important to design and plan your infrastructure to achieve not just today's immediate objectives, but to retain the flexibility to achieve tomorrow's objectives as well.

With many video platforms, this is difficult, as they are often optimised for today. In contrast, the Cloud TV Suite from CTS is built to be programmable, not just configurable. Each microservice offers its own API surface, and data is represented with adaptable, flexible models. This empowers customers to adapt to new waves of transformation.

Find out more about the CTS Cloud TV Suite →

For more insights into digital transformation, you can read the following papers on the Digital Transformation of Video:

Navigating your journey to broadcast Cloud TV

Going for growth by thinking "digital first"

Key success factors for broadcaster digital transformation

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