

# MediaKind

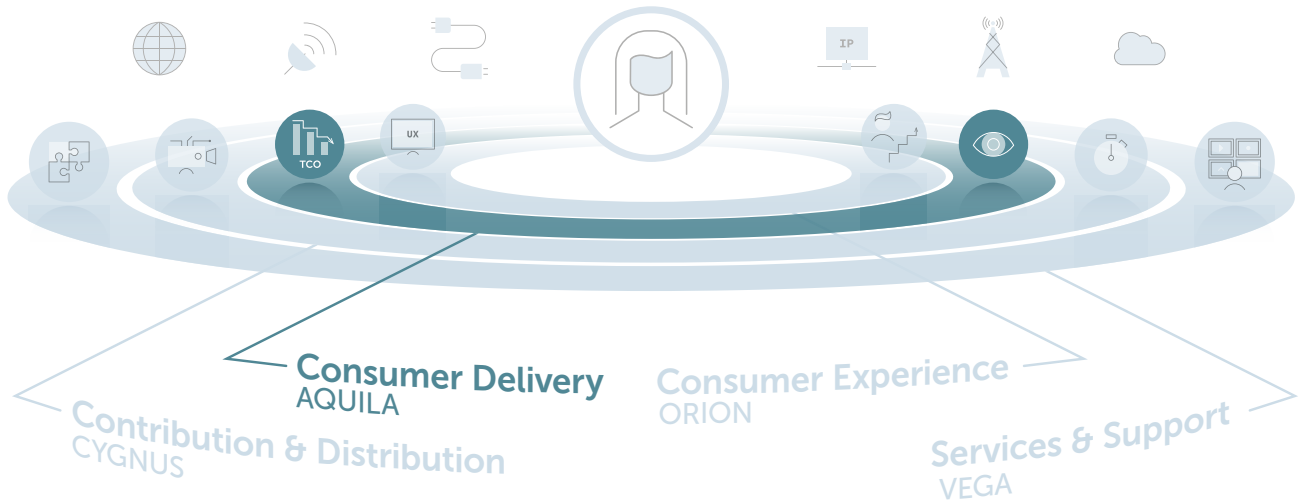
## Aquila On-Demand



**AQUILA**  
Consumer Delivery

Aquila On-Demand is a video on demand solution for the processing & delivery of video files over any network (Cable, IPTV & OTT) to any device, ensuring a premium experience.

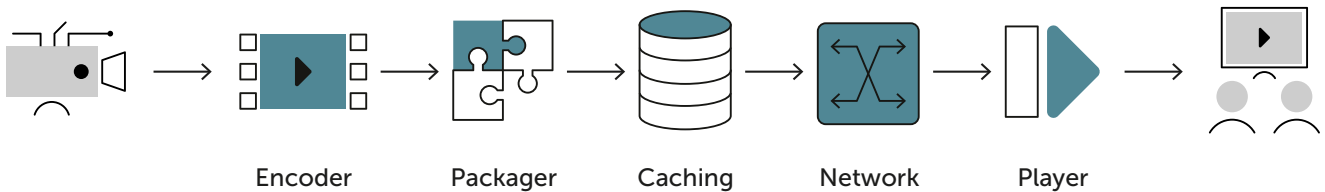
## MediaKind Universe – Consumer Delivery



MediaKind's cutting-edge Consumer Delivery solutions embody creative thinking for today's challenging world of media delivery. Video is no longer stagnant nor immobile and no longer comes in limited flavors. Today's world of video requires bold solutions capable of ingesting any type of video feed and format, dynamically storing video when and where appropriate, doing so on a heterogeneous mix of physical storage hardware, and streaming live and stored video on demand to a wide variety of device types, each with their own technical requirements.

Aquila On-Demand is the MediaKind solution addressing video on demand use cases within the area of Consumer Delivery. It enables the ingest, transformation, processing, storage and delivery for file-based video content. In addition, these premium streaming services enable innovative consumer experiences with flexible deployment and operating choices.

## Aquila On-Demand solution workflow



## Aquila On-Demand solution values

## Single solution, multiple use cases

- **Push your video quality higher** leveraging MediKind's On-Demand Encoding technology to provide the highest video quality and guaranteed performance across multiple codec choices - MPEG-2, H.264 & HEVC
- **Enabling a better consumer experience** delivering content to a wide variety of devices by leveraging MediKind's packager support for all major segment and manifest formats (HLS, Smooth Streaming, DASH, CMAF)
- **Faster time to market** by deploying a unified solution across any network and infrastructure type (COTS servers, IT datacenters & private and public clouds)
- **Reduce operational complexity** using a single interface for all services and servers' operations
- **Optimize server footprint** with an underlying micro-services design, that provides deployment flexibility, allows scalability according to demand and delivers a highly available service

## Premium on demand streaming market challenges

With drivers such as innovation, convergence and cost rationalization, OTT streaming is increasingly becoming an evermore popular technical solution to deliver content to end users.

There has been significant growth in usage of on demand content, driven by changing consumer behavior towards more personalized experiences, which, in turn, has led to an increasing number of new players entering the video on demand market. This has created a new potential revenue source, but also provided a tough competitive landscape for these providers.

There are many challenges to provide a premium experience when leveraging this streaming delivery method.

Challenges such as **picture quality** and offering content for consumption on **multiple devices** both inside and outside of the home continue to exist for TV Service Providers either already in the streaming world or new to the market.

Individual streaming of videos results in a huge **demand for bandwidth**, and therefore **distribution costs**, which must be minimized to ensure the viability of service.

## Simplifying integration

On demand service workflows involve various components from content providers to end-user delivery. Aquila On-Demand offers an open REST API as well as a Watch Folders ingest methodology that ease the integration with content providers and Content Management Systems.

The automated workflow can trigger both encoding and packaging processing from a single request, which reduces any integration complexity to a minimum and provides a quick time to market for valuable content. This ensures a rapid return on investment for expensive content assets.

For every ingested asset, resources required for processing are calculated to identify the most optimal server according to the current system load. No external load balancing mechanism is required, and resource usage is optimized due to the load balancing being enabled at application level. This results in cost efficiencies and operational simplicity.

## Multi-device delivery

Traditionally delivered on TV screens via set top box, consumer demand for video on demand content continuously increases on other more mobile devices such as tablets, laptops, smartphones. There is also increasing use of streaming main screen devices such as smart TVs and consumer streaming devices. Aquila On-Demand provides a unique solution to address all of these devices by adapting both encoding and delivery formats.

Network pre-requisites and operational preferences may impact technical requirements and Aquila

On-Demand offers a delivery method that fits each application, by a simple configuration choice which allows for a smoother and faster network integration:

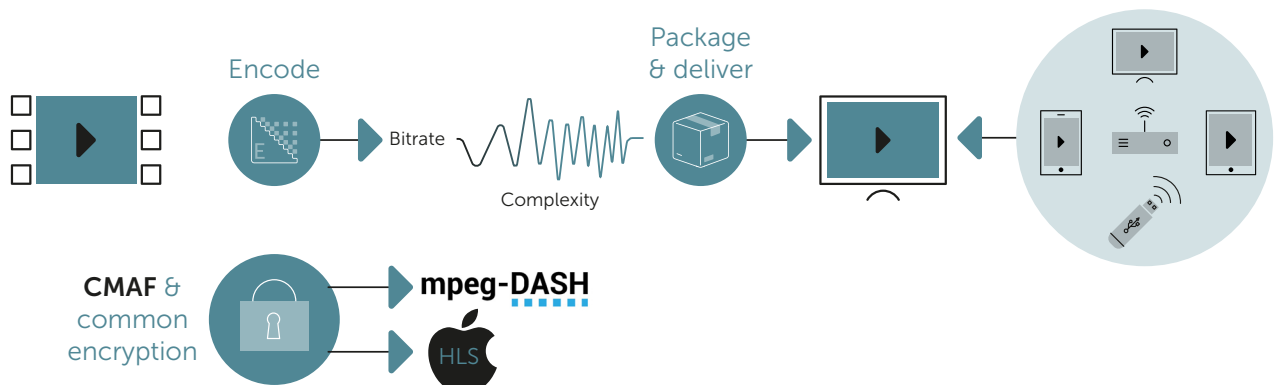
- **Aquila On-Demand Origin** – leveraging embedded just-in-time packaging and encryption with a wide variety of supported formats and Digital Rights Management (DRM) integrations
- **External origin/CDN** – creating pre-packaged content for publication to on-premise origins such as MediaKind's VSPP, or external Content Distribution Networks



## Optimizing the cost of OTT delivery

Since OTT content is typically delivered via unicast, where every viewer receives a unique copy of the stream, Aquila On-Demand optimizes bandwidth usage to minimize distribution costs and network load. Techniques such as MediaKind's Constant Video Quality (CVQ) enable a broadcast quality for content whilst minimizing these costs.

In addition new developments such as converged CMAF chunks and common encryption reduce the variety of content types required to support a wider range of devices, which further improves delivery efficiency.



Constant Video Quality (CVQ) workflow

### Consumer Values

- More content variety with optimized Picture Quality regardless of resolution (SD, HD, UHD)
- Enjoy new content quicker by leveraging the solution performance and internal load-balancing capabilities
- Ensure a rich experience across any device, anywhere by supporting the latest audio & video capabilities and accessibility through subtitling, captioning and alternative audio tracks

