

15<sup>th</sup>  
ANNIVERSARY

# HDFI • 2021 ANNUAL CONFERENCE

## 15<sup>o</sup> Years Anniversary

Rome, 4 November 2021



# The role of public service: from technology to content and consumption

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From 'technology to content and consumption' or....

## 'FROM CONTENT AND CONSUMPTION TO TECHNOLOGY'?

Addressing and predicting the users' needs before designing the technical strategy is a key factor for success

What happens when the users' needs are not adequately addressed?



## 3D

Wearing the glasses was uncomfortable  
to most of the users

## DVB-H

- unfit technology
- lack of interest from users

## DVD Audio

Investing in the evolution of physical supports was  
nonsense when the mp3s were taking over

# HDFI • THE 'ATAWAD' APPROACH

**Great News! We don't need any POC to predict the future of the audiovisual consumption, In fact it is Anytime, AnyWhere, Any Device. In one single word: ATAWAD!**

### AnyTime

- The user regains possession of the consumption time
- Search for immediate satisfaction

### AnyWhere

- Overcoming the constraints of localization for consumption
- Private space and public space get overlapped

### AnyDevice

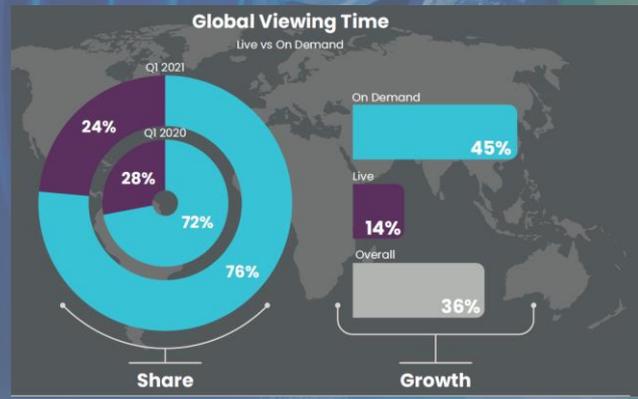
- User's opportunism with respect to technologies and devices
- *user experience as a navigation continuum*

The post-Covid-19 will mark the definitive prevalence of the digital consumer: the triumph of the pleasure principle (refusal of the deferral of enjoyment) as a denial of the limits of space and time in consumption.

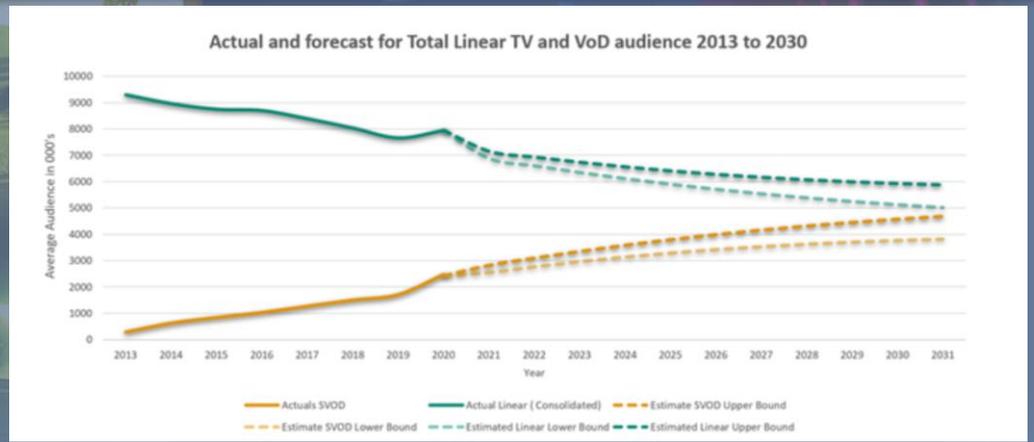
# HDFI • ANYTIME – THE SHIFT TO VOD

In spite of the pandemic crisis, **the share of linear TV has been shrinking**, with an increase in VOD consumption for movies, tv series, documentaries, as Conviva report on IP traffic refers. Linear tv is still central for the uncertain outcome events (e.g. sport)

In UK, the market that anticipates the trends in the audiovisual consumption has been experiencing an increasingly narrow gap between VOD and linear, that may close by the end of the decade. For example Disney has been completing the switch off of 130 linear channels worldwide, by moving the contents to Disney+ in 'VOD mode'.



Source: Conviva\_state\_of\_streaming\_Q1\_2021



Source: digital-I, aggregated data UK

# HDFI • ANYWHERE- 'REGARDLESS WHERE'

What is really challenging for content providers is to make the user experience uniform regardless the consumption environment.

Content design is strongly influenced by the consumption environment: users tend to watch 'long forms' on large screens and short forms on the move (e.g. the 'Vertical Dramas').



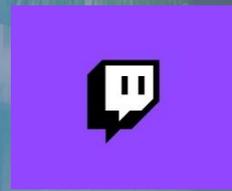
# HDFI • ANY DEVICE- FULL PORTABILITY



**Smart TVs:**  
 'Hbbtv only' approach unfit and  
 the central role of vertical environments:  
'bring the contents where the users are'



**Mobile first**  
 Smartphones  
The rise of connected cars



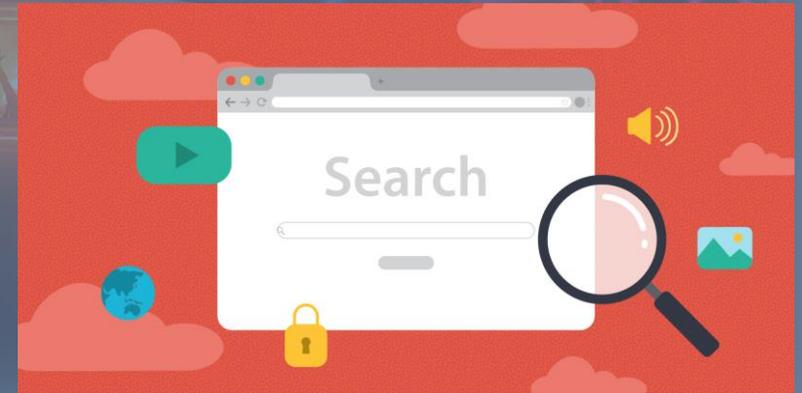
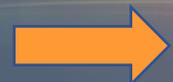
**Hybridization**  
 Game consoles  
 New consumption environments (e.g. Twitch)

# HDFI • FAIR RECOMMENDATION ENGINES

In consideration of the ongoing shift to VOD consumption, the focus moves from EPGs to **'fair' Recommendation Algorithms** that:

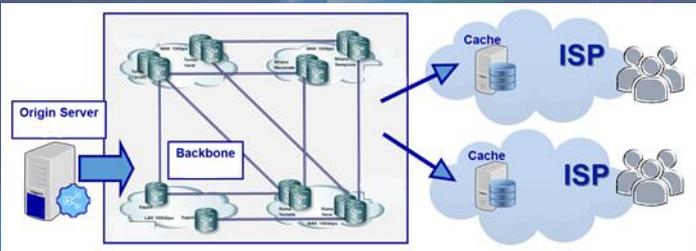
- Prevent 'echo chambering' and 'filter bubble' effects
- Leverage mostly on first-party data, the only ones available when the so called 'Third-party cookie apocalypse' will be completed, by 2023
- Enable advanced man-to-machine interfaces (e.g Voice Assistants)

	11/16	18:00	18:30	19:00	19:30
COMEDY		Saturday Night Live		BattleBots	Comedy Cen...
HISTORY		Hands on Hi...	Hands on HI...	Traitors Within	>
KTMV		3rd Rock Fr...	King of the Hill	Cops	Cops
KMOV		Channel 4 N...	Extra Edition	Touched by an Angel	
KSDK		Newschanne...	Wheel of For...	Law & Order	
TBS		College Football			>
KPLR		Will & Grace	Will & Grace	That '70s Sh...	WB 11 News
KDML		Adventure Inc.		The Sixth Sense	
LIFE		Undue Influence			>

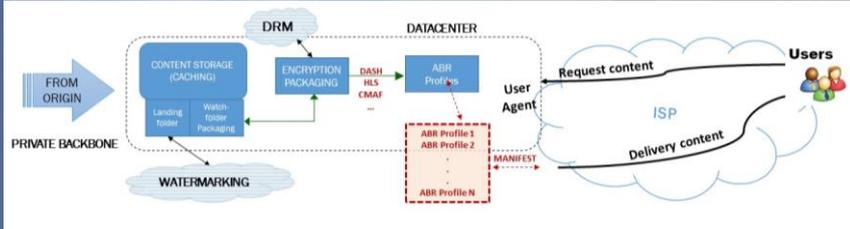


From EPGs to Recommendation Engines

In order to cope with the need to make the user experience uniform regardless the device and the environment, a new approach in designing the distribution networks is required. **ECC is fit to meet this requirement.**

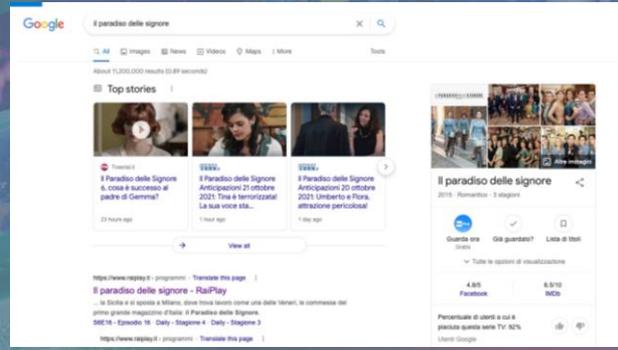


- ✓ Direct connection between data centers and origin server via a private and redundant backbone.
- ✓ Computing functions in the peripheral nodes
- ✓ Distributing data centers as near as possible to the final users
- ✓ As tight as possible integration within Telcos infrastructure



- Higher flexibility and resilience when dealing with the peaks (Busy hour traffic)
- Higher Throughput
- Lower Latency

The ongoing trend for **content providers** is to get adequate prominence of **their services, their brands** and **their contents** within the most popular platforms and ecosystems in the market.



**Giving adequate prominence to national players is win-win for both broadcasters and technology partners, as it fully fit the users request for entertainment.**

- ✓ The **ATAWAD** approach implies the need to make contents available to users anytime, anywhere, any device.
- ✓ **Anytime** means the **shift from linear to VOD**: the focus moves from EPGs to the implementation of advanced, fair recommendation algorithms and advanced man-to-machine interfaces, **whose design requires the cooperation of several player across the value chain, including R&D institutions (e.g. Universities).**
- ✓ **Anywhere** implies the need to guarantee a future proof evolution of the distribution networks, based on an extensive implementation of Edge Cloud Computing. **A tight cooperation with technology providers and network providers is encouraged.**
- ✓ **Any Device** is a win-win approach for both the content providers and the gatekeepers, aimed at fully satisfy the users needs by offering both global and national contents. **Nevertheless, an effort to define a regulatory framework in order to give an adequate prominence to local contents may be appropriate.**