



MAINSTREAMING[®]

The Intelligent Media Delivery Company

HDFI 2022

Bordocampo: segreti e futuro dello streaming live massivo

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Piattaforme Ott pay, in Italia 17,8 milioni di utenti

di Ester Corvi

In Italia prosegue l'avanzata dello streaming video. Il numero di abbonati alle piattaforme Ott a pagamento (*note come Svod, Subscription video on demand, ndr*), secondo l'Osservatorio di Ey, sono 14,5 milioni (in base alle rilevazioni fatte a gennaio 2022), in crescita di 3,2 milioni rispetto allo stesso mese dello scorso anno.

Gli operatori considerati nelle stime di Ey sono Netflix, TIMvision, Mediaset Infinity, Now, Prime Video, Eurosport Player, Dazn, Disney+, Apple Tv+ e Discovery+. Gli utenti delle piattaforme Svod sono invece 17,8 milioni, in aumento di 1,4 milioni dal gennaio 2021. A molti non basta avere un solo abbonamento, vista la grande abbondanza dell'offerta, tanto che i sottoscrittori a due o più servizi

Ott pay sono il 45% del totale. Dal lato della domanda i tempi di fruizione medi sono aumentati: in particolare per le piattaforme pay sono saliti da 1 ora e 26 minuti a luglio 2021 a 1 ora e 36 minuti a gennaio 2022. Gli utenti di piattaforme free, pari secondo Ey a 28,2 milioni, spendono invece circa un'ora per la visione di contenuti gratuiti e la quasi totalità dichiara di guardare YouTube.

Per quanto riguarda i dispositivi, il loro utilizzo è legato al tipo di piattaforma. L'80% degli utenti di piattaforme a pagamento prediligono l'uso della tv, mentre meno utilizzati sono il pc (25%) e lo smartphone (23%). Diversa invece la modalità di fruizione delle piattaforme gratuite: i contenuti sono generalmente di breve durata e la visione avviene spesso in mobilità, con lo smartphone che risulta il device più utilizzato (44%). (riproduzione riservata)

Problem: streaming at scale is tricky



Best effort service not good enough, particularly for live events

	Lack of capacity in the right locations
	No end-to-end control over the networks
	No end-to-end control over the streaming process

Consumer QoE pains

- Start time
- Re-Buffering
- Low video quality
- High Latency



*"... complaints from subscribers experiencing reception problems and during the second half the system suffered from **repeated buffering and a lack of video** – with only audio available for some subscribers"*

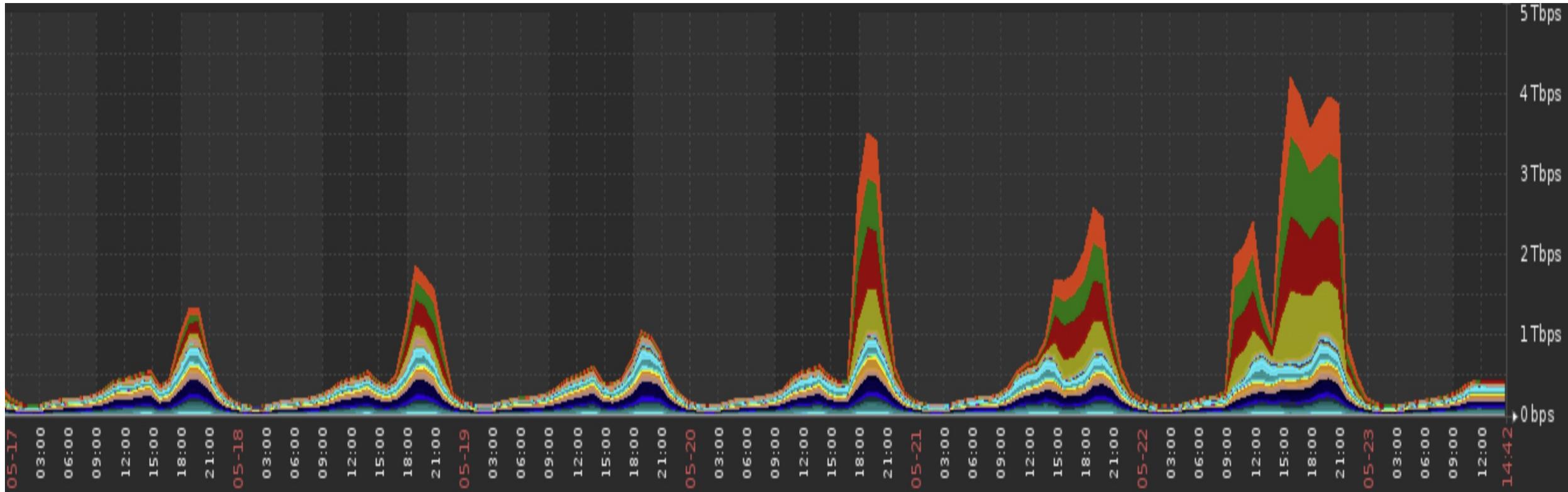


*"... we had **performance degradation** in one of our data centers. This degradation was linked directly to a single CDN and generated re-buffering (spinning wheel)..."*

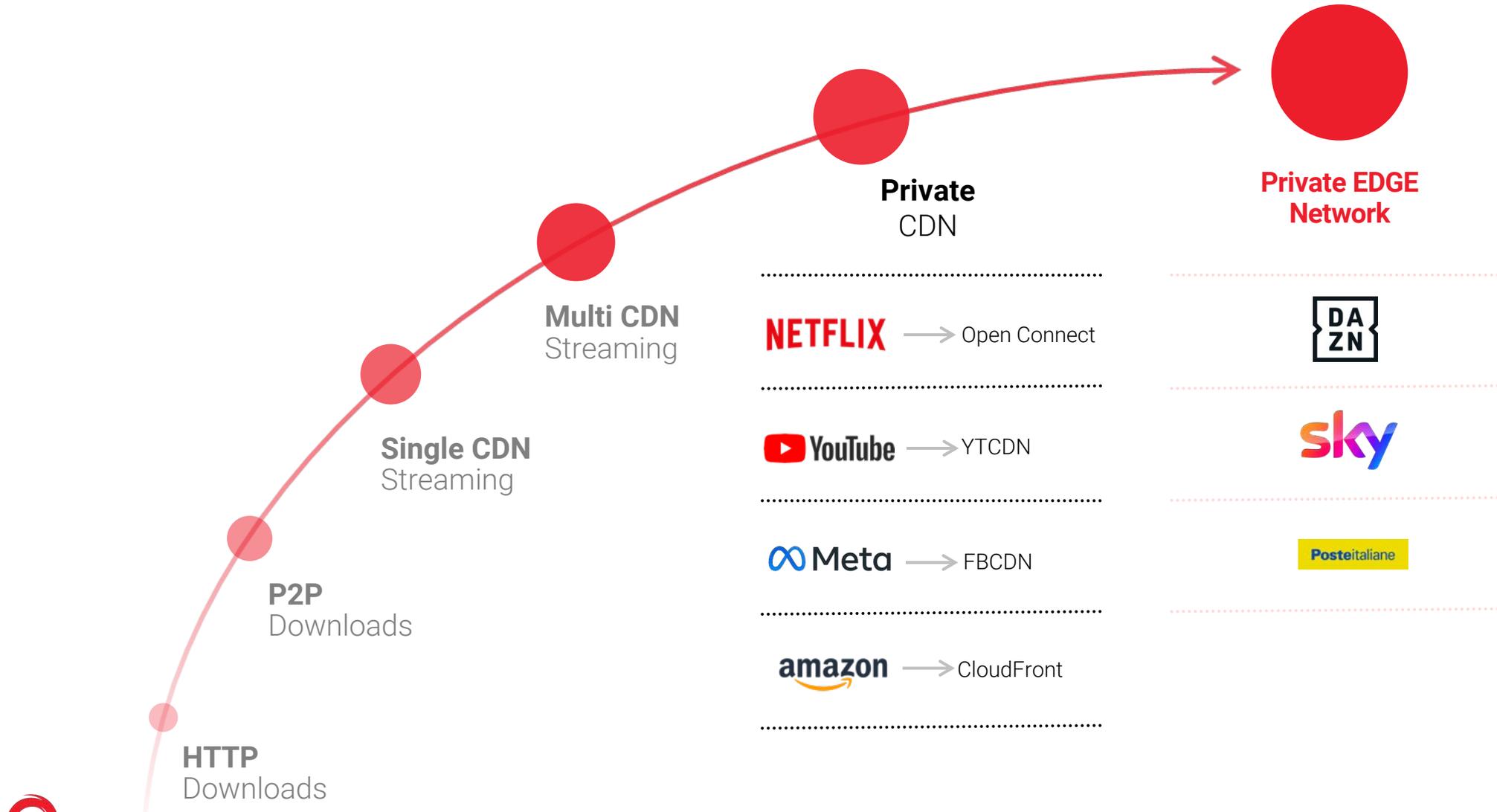


Sources: sportspromedia.com

Example of Traffic Distribution on a subset of MainStreaming's servers



Video Streaming evolution: a path toward Private EDGE Network

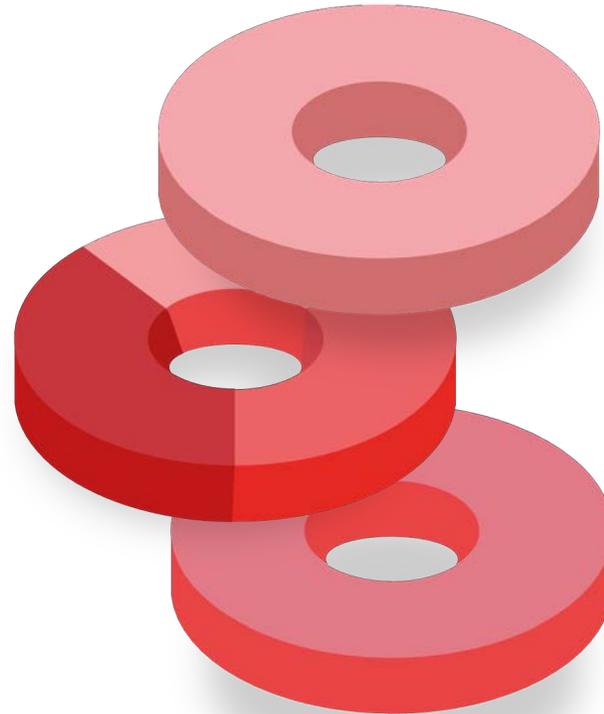


| Our EDGE solution is born for live streaming at scale

To overcome the issues of traditional *best-effort* architectures and networks, we have studied and created a new solution from scratch, combining a Smart Architecture with Intelligent Software and an EDGE distribution network.

2. Intelligent Software

to ensure quality of delivery through Smart algorithms, Big Data Analysis and a continuous monitoring of QoE and Network conditions.



1. Smart Architecture

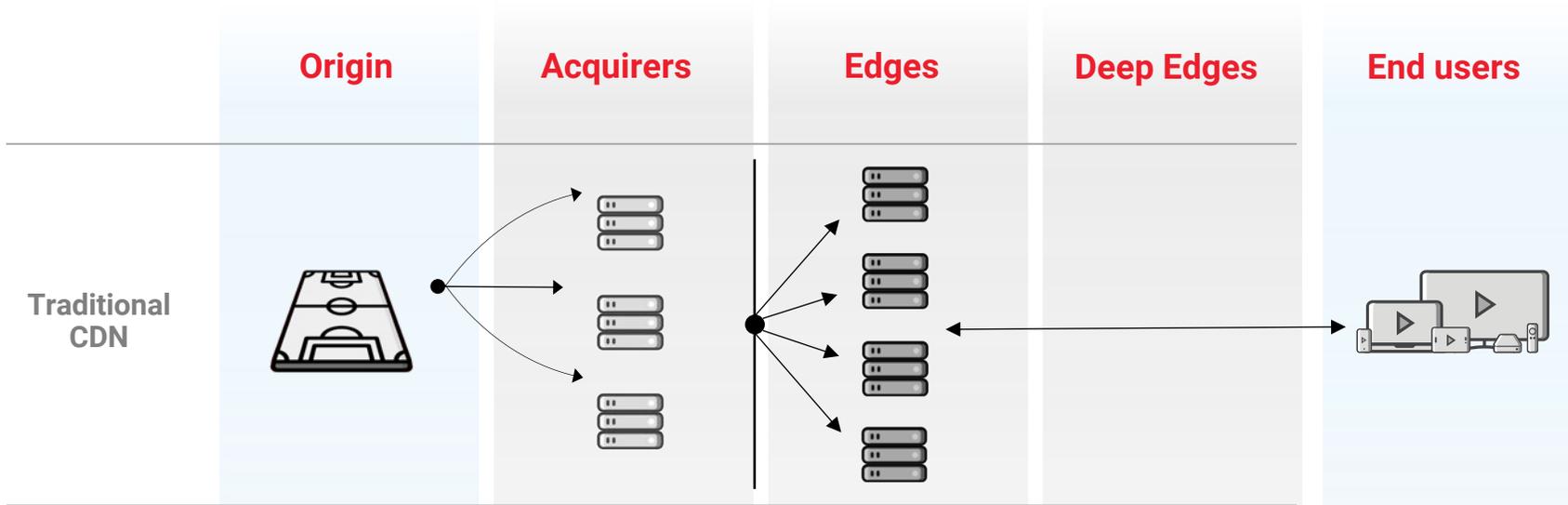
Streamlined to optimize all resources while ensuring a **high quality of service** and a **reduced power consumption**.

3. EDGE Network

Our **EDGE** Services and our interconnected network, **within ISP premises**, are designed to be closer to the end users.



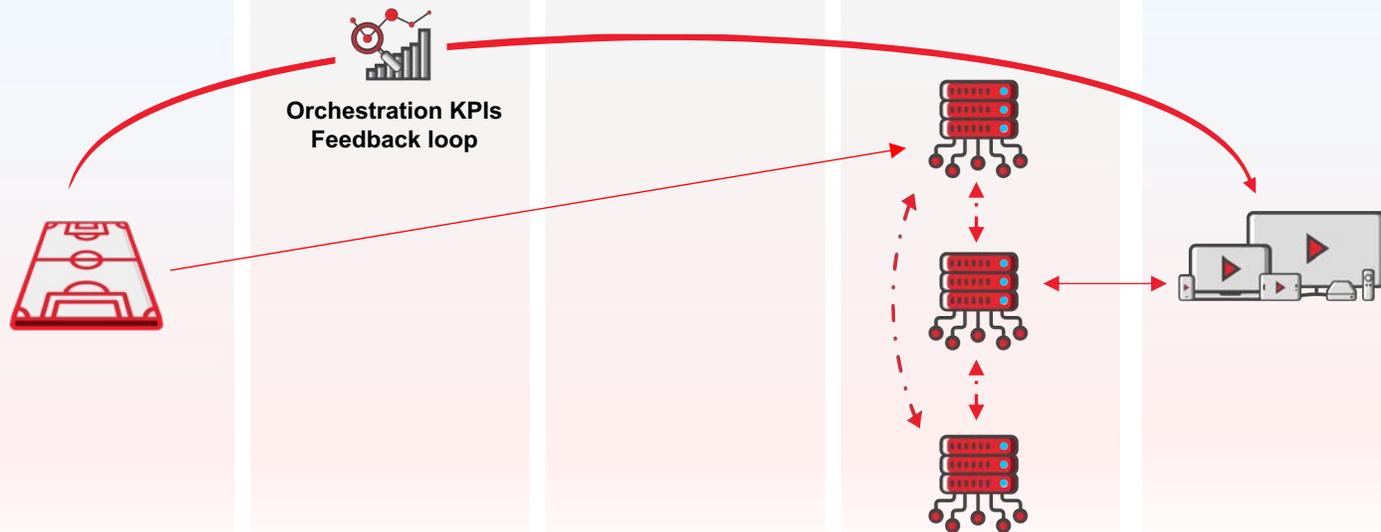
1. Smart Architecture



Traditional
CDN

Not designed for live streaming at scale
Created in the 90s for static content distribution

- Multi-layer caching architecture
- General purpose software algorithms
- No end-to-end control over the streaming process
- Best effort approach



Born for live streaming at scale
Ensures the highest Quality of Experience

- **EDGE architecture**
- **Intelligent Software (Intelligent Media Delivery)**
- **End-to-end control over the streaming process**
- **Highest QoE approach**

- **Deployed at ISPs**

- **Reduced power consumption (Green)**



| 2. Intelligent Software



Smart Origin

Get the best video quality from the Origin server

Contents are requested just once from Origin servers, avoiding rebuffering and streaming errors while protecting the Origin from overload and minimizing network traffic.

AI Orchestrator

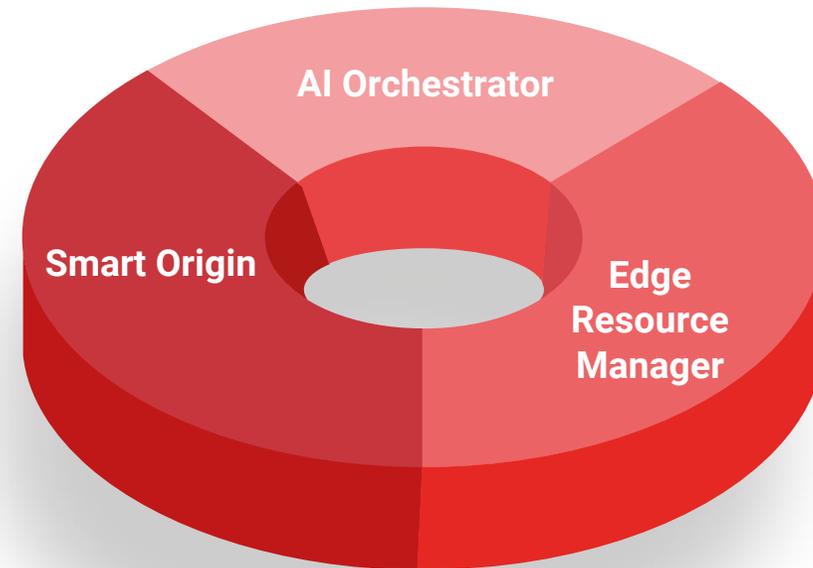
Connect the viewer to the best and closest EDGE server

Advanced viewers, location detections, and the ability to coordinate all streaming resources on the fly lead to a proper connection of the viewers to the best and closest EDGE server, thus granting broadcast-grade QoE

Edge Resource Manager

Cut slices of your private EDGE Network

Each virtual set of flows can be customized according to user traffic distribution, content/cache allocation, computational power, priorities and power consumption rules



Several **patented solutions** to ensure all the streams are delivered flawlessly.



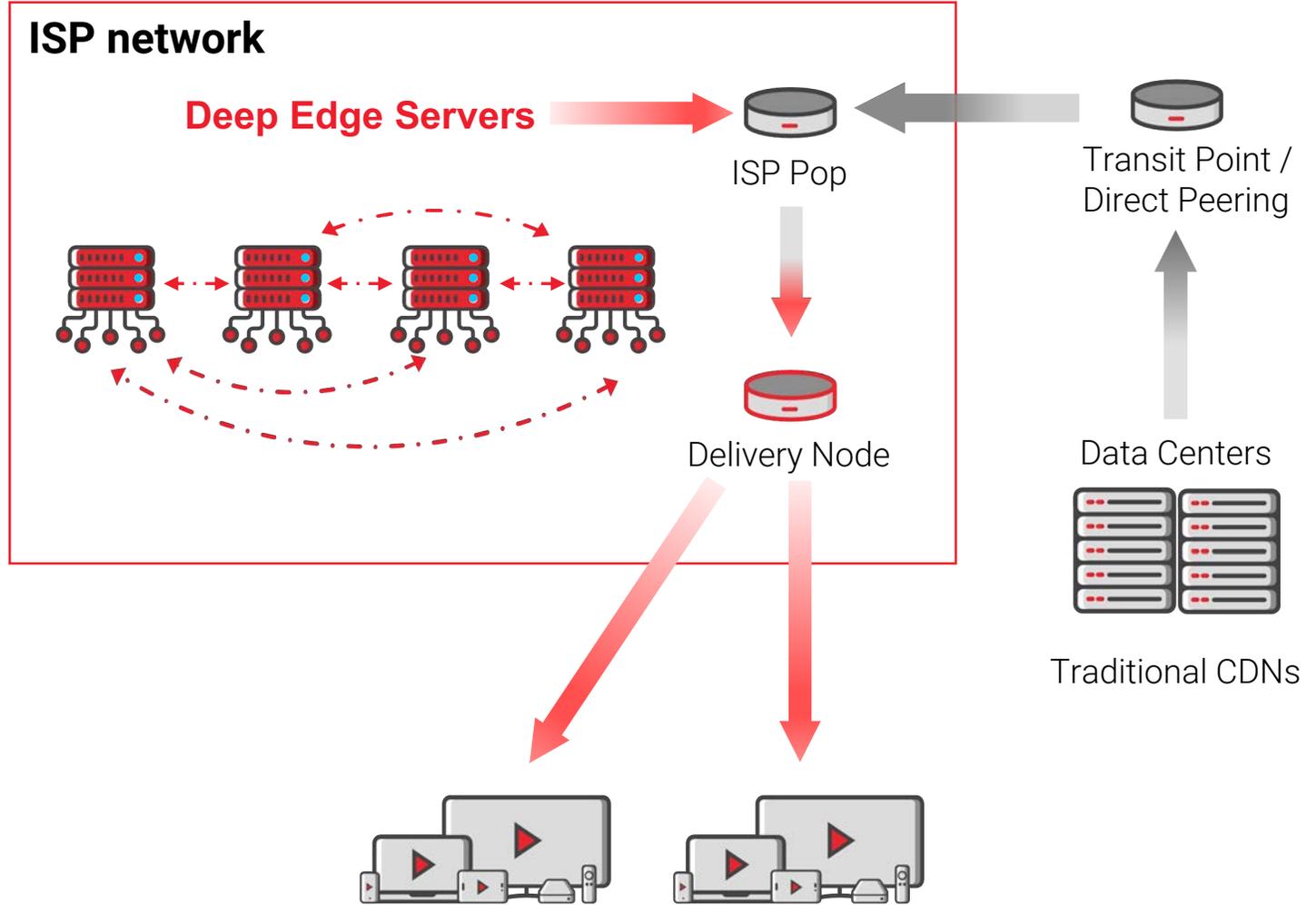
3. EDGE Network

MainStreaming Deep Edge Servers are located inside ISPs networks:

- Becoming a “super-network” available for broadcasters, deployed at various ISPs
- **Reducing latency** and offering an effective **video streaming at scale**
- **Easily deploying in each ISP** a solution designed to mitigate backhauling bottlenecks

EDGE opens a full range of possibilities in delivering **applications**

- | | |
|---------------------------|-------------------|
| ▪ Advanced media delivery | ▪ Encoding |
| ▪ Tokenization | ▪ Packaging |
| ▪ Watermarking | ▪ AD optimization |
| ▪ Manifest manipulation | ▪ Gaming |
| ▪ Transcoding | ▪ Betting |



Winning some of the biggest players in EU

Broadcasters



Our primary target, building their D2C infrastructure, broadcast grade and at scale

Telcos



Serving their customer with our managed EDGE video delivery service

Digital disruptors



Looking for a network partner to scale up

Big corporations



Solving their video streaming needs with a category killer



Our threefold approach to a Green Solution

Greener
tech
by design



Our solution is born with **less server layers**, and with software solution to **reduce power consumption**.

Greener
industry



www.GreeningofStreaming.org

We are one of the **founding members of Greening of Streaming** with the aim of raise industry awareness on power consumption.

Carbon
neutral
company



We have started a path to **become** within few months **a certified carbon neutral EDGE distribution network**.



| Greener industry

www.GreeningofStreaming.org



“Greening of Streaming will bring together some of the biggest players in the industry, along with creative, lesser known companies - to share best practice and make ourselves as efficient as we can be”

“Greening of Streaming plans to commission papers on the state of the sector, and measure the gains in improvements made by our members

Greening of Streaming will act as the mouthpiece for our industry and promote the changes we are making to ensure that Streaming becomes as sustainable as we can make it”

Founder Members and Year One Steering Committee





MAINSTREAMING®

Grazie per l'attenzione!

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#WeStreamTheFuture

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