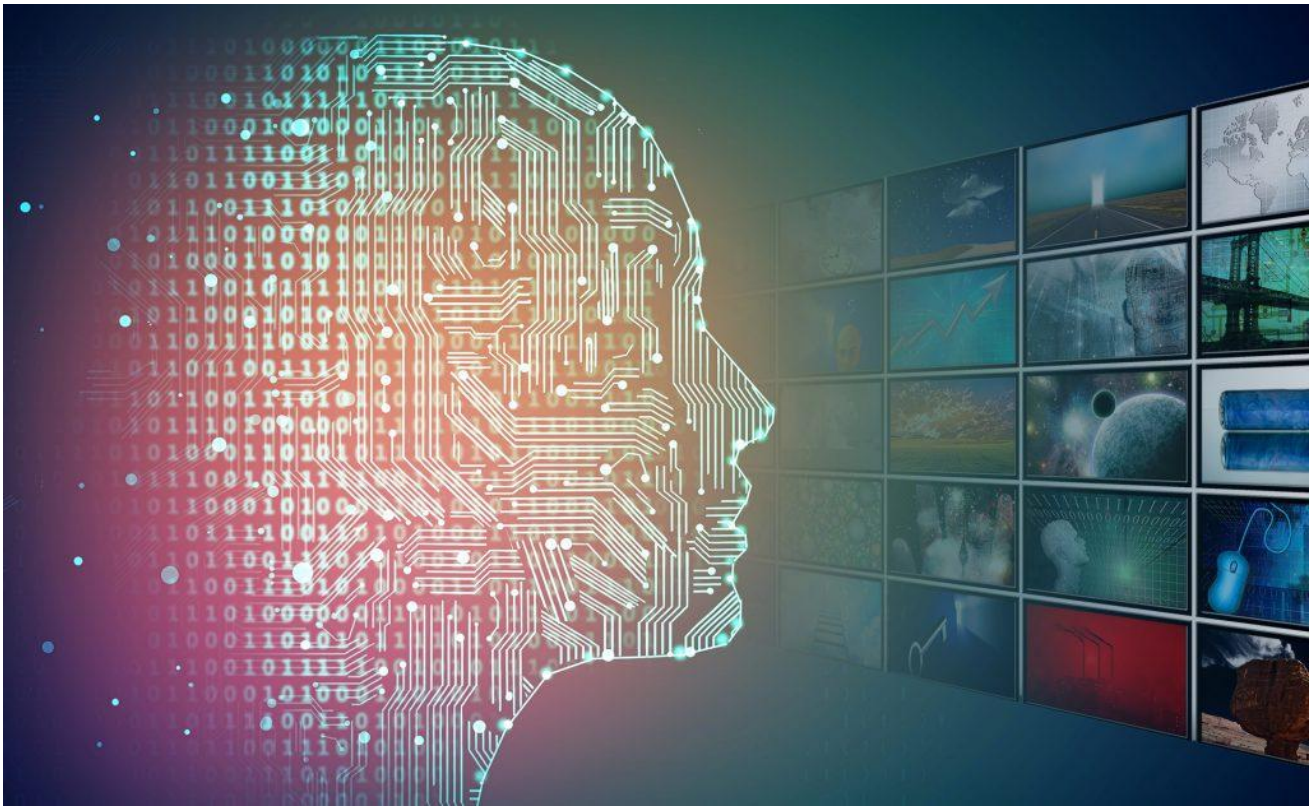


Board Strategy Paper: Turning the TV into European Telcos' Next Growth Platform

How TV Technology Could Shape the Future Telco Industry

1. Context and Overview

1.1 Executive summary

What this paper proposes. This Board strategy paper sets out how telcos can pivot from subsidising set-top boxes to financing operator-branded, edge-based Agentic AI TVs; from channel ARPU to household lifetime value; and from spot ads to intent-driven, on-device monetisation. It argues for a pan-European consortium with PSBs, OEMs and AdTech players, built on an open Agentic TV standard, to ensure Europe defines its own cognitive screen — and turns fibre into a durable, multi-billion-euro growth engine.

Why sovereignty matters. As tech sovereignty rises to the top of the agenda across Europe, the continent's cultural voice and prime communication medium (TV) should be top of the list to bring back under European control. Today, virtually all smart TVs sold in Europe are controlled by foreign platform owners. This paper outlines a route to bring control of this vitally important medium back into local hands.

Who RedSquid are. The RedSquid TV team are a group of visionaries and engineers from across Europe, well proven in the TV technology industry. They were the people who led the 2000s smart TV revolution, dominating the industry with technology that is still having an impact today.

Why this decade is different. RedSquid defines 2026-2036 as the age of cognitive television – a decade when fibre broadband and in-device AI turn the TV into an intelligent, adaptive entertainment hub. While many see AI mainly as a way to do old things faster and cheaper, its real impact will come from experiences never imagined before. This paper outlines how to capitalise on that.

Why telcos are pivotal. This next TV technology era will open opportunities for national broadband providers to become the TV control point, creating the opportunity to bring control of Europe's TV platforms back under local control. While cloud-based generative AI draws most attention, the equally profound shift will come from edge AI embedded directly in the TV. These compact models will personalise storylines, power mixed-reality watch parties and volumetric sports, and enable cloud gaming and dynamic advertising — all natively on the big screen. The television will become the household's primary edge-AI node, moving strategic value to whoever controls the intelligence layer between viewer and screen.

Why monetisation must change. This evolution makes it vital to decouple TV monetisation from the underlying communication platform. While TV sets remain monetised by foreign platforms, how can we trust the motives behind the content that gets shown in the future?

TV's iPhone moment. The next decade is TV's iPhone moment. Just as smartphones redefined telephony through software and intelligence, "cognitive television" will fuse content, commerce, communication and the connected home into one adaptive experience. For incumbents, it is both a threat and an opportunity: the lesson from Nokia's fall is stark. Knowing disruption was coming was not enough; failing to act was fatal. The industry now faces the same crossroads – lead the transformation or become its casualty.

What's at stake for Europe. For Europe's telcos and media groups, the "cognitive television" era will separate those who adapt from those left behind. Acting decisively — and owning the intelligence, connectivity and experience layers — will define the next generation of leaders and bring TV platforms back under European control.

1.2 Foreword – A European Cultural & Creative Perspective

Anette Schaefer, CEO of EIT Culture & Creativity

This strategy paper arrives at a decisive moment for our creative and cultural industries. Today, as cognitive television — powered by edge AI, broadband delivery, and interactive storytelling — redefines that medium, Europe faces both significant risk and remarkable opportunity.

Having worked in senior leadership roles across Europe's telecommunications and media sectors, I have seen many of the structural challenges this paper addresses. Fragmented value chains, weak coordination between infrastructure and creative ecosystems, and growing reliance on non-European platforms are eroding Europe's ability to scale innovation on its own terms.

Cultural and creative sectors already represent 5.3% of EU GDP and 8.7 million jobs, with forecasts nearing 10% of global GDP by 2030. Yet barriers—limited scale-up capital, scarce cross-border deployment, and loss of interface control—threaten both economic value and cultural sovereignty. For EIT Culture & Creativity, the challenge is clear: how can Europe turn technological capability into sustainable, values-driven growth? Cognitive television is more than a new media format; it is emerging as digital infrastructure that shapes how culture is discovered, monetized, trusted, and governed in the home.

What Europe needs now is coordinated, cross-sector collaboration among telecoms, public broadcasters, creative industries, technology developers, and policymakers. Open standards, interoperability, and European-led platforms will ensure that the next generation of television strengthens, rather than dilutes, our creative diversity. Three priorities stand out:

- **Digital and cultural sovereignty:** Future TV platforms must respect local governance, data protection, and cultural visibility, safeguarding creative IP and public interest objectives.
- **Creative scale and export potential:** Shared technical foundations can enable creators to reach large audiences with interactive, personalized experiences that strengthen both domestic and global presence.
- **Industrial renewal:** Europe's expertise in broadcasting, fibre networks, embedded software, and design can combine into new jobs, regional innovation clusters, and exportable standards aligned with EU industrial strategy.

Europe cannot afford to be a spectator in television's next chapter. Our broadcasters hold trusted content; our telecoms operators have invested billions in next-generation networks; our creative communities lead globally in storytelling.

The opportunity now is to align these strengths through collaborative, open, European-led frameworks that make cognitive television a driver of innovation, inclusion, and long-term competitiveness. This strategy paper is not just a call to imagine that future, but to build it together.

1.3 A Partner Perspective

Andrew Cole, Executive Chairman, Glow Services & CEO of DAD

For more than two decades, I have watched the global telecoms and media industry wrestle with the same structural dilemma: operators and broadcasters carry the capital burden of networks and content, while value and customer intimacy quietly migrate to the software platforms that sit in front of the screen. The next decade will not be decided in ducts and data centres, but on the glass in the living room – and on who owns the intelligence, identity and economics that sit on top of it.

This strategy paper sets out a compelling, and in my view urgent, vision for how Europe can respond. It argues that television is entering its "iPhone moment": the shift from passive, app-based smart TVs to cognitive screens powered by Edge-AI, capable of orchestrating entertainment, commerce and connectivity in deeply personal ways. Left to market drift, that layer will be captured by West Coast hyperscalers whose incentives and governance sit far from European consumers and regulators. The alternative – and the one this paper champions – is a European coalition of telcos, PSBs, OEMs and advertisers rallying around an open, customisable TV platform that embeds privacy, transparency and user control by design.

From Glow's vantage point, working with leading operators and OEMs on device financing, insurance and upgrade programmes across multiple continents, the direction of travel is clear. As devices become more capable and more expensive, the ability to spread cost over time – with sophisticated risk management, securitisation and vertical AI – is no longer a "nice to have;" it is the economic engine that makes large-scale platform transitions feasible. Telcos that pair a differentiated, operator-centric TV OS with creative, capital-efficient ownership models will be in a far stronger position than those who simply subsidise commodity hardware running somebody else's software.

At Digital Audience Data (DAD), we see a complementary shift underway in how audience intelligence itself is gathered and applied. DAD's mission is to give broadcasters and brands privacy-safe, real-time insight into viewing behaviour, built around transparent value attribution and consent-led data exchange. When combined with Glow's financial infrastructure and RedSquid TV's open, Edge-AI-ready smart TV platform, a unique opportunity emerges: to reinvent the economic and data foundations of television from the inside out.

RedSquid TV's edge-based Virtual Product Placement (eVPP) technology exemplifies this future – enabling dynamic, on-screen brand integration that is both hyper-personalised and privacy-first, processed entirely at the edge rather than in the cloud. Together, DAD, Glow and RedSquid are enabling a model in which television can become more relevant, measurable and economically self-sustaining, while protecting user trust and agency at every step. That is the vision this strategy paper articulates – and the one we are proud to help make real.

1.4 A Personal Vision for the Future Home Screen

Trevor Neal, Founder and CEO of RedSquid TV

Television has been a major part of my professional life – from the launch of DVB-T in the late 1990s to the launch of smart TV that we drove worldwide as MStar Semiconductor. I've watched the medium evolve from fixed channel grids and proprietary set-top boxes to app-driven streaming, cloud platforms, and global operating systems. Each wave felt transformational at the time, but in hindsight they were stepping stones toward something more fundamental: the shift from television as a product to television as an intelligent experience layer in people's lives.

Our small team oversaw the seismic transition from CRT to digital flat-panel televisions – and analogue to digital transmission. Those two inflection points happening at the same time created an opportunity for us as a new entrant to come in and take over the market. Today, I see two new inflection points coming quickly. The transition away from TV aerials to TV supplied over broadband, and the move to personalised edge-based Agentic AI TV, from streamed content.

This time, the change is going to be even more fundamental. Once again, there is an opportunity for the new TV industry leaders to emerge. Managed correctly, the control of the TV can move into the hands of broadband providers – and even the PSBs. But to take advantage of these two inflection points, ISPs must respond quickly, with the right partnerships and strategies.

Looking ahead, it may not even make sense to call it "television." By 2036, what sits at the centre of the living room – your home – will be far more than a "TV set" or "flat panel." It will act as the primary home hub for entertainment, communication, ambient information, and control – where the old notion of "channels" gives way to orchestrated sessions that follow people across rooms and devices. These two inflection points create a massive opportunity for the Telco, the controller of the essential broadband pipe, to step in and lead the next era of Television.

1.5 A Burning Platform — and a Telco Growth Opportunity

Traditional pay TV faces an existential crisis. Telcos' set-top box advantages are eroding as smart TVs deliver Netflix, sport, and apps directly; for many viewers, there is no compelling reason to exit the TV's native environment and use an operator interface. Exclusive rights have bought time, but they are increasingly expensive and contested. Samsung reported as early as 2019 that around 85% of streaming on its devices was done through the built-in smart TV platform; that share has only increased as TV OSs mature, and app coverage becomes universal. Yet TV remains telcos' best differentiator against commoditised broadband — and their clearest path to growth. Operators have invested billions digging up roads to lay fibre, only to let hyperscalers and device OEMs monetise the eyeballs on top. It is like building a bridge and then letting other parties own the toll booths. This paper sets out how telcos can use TV as the growth platform that finally unlocks those infrastructure investments.

PSBs face a parallel threat. Smart TV platforms and global streaming ecosystems have diluted linear discovery and weakened traditional scheduling and channel branding. Device OEMs and OS providers now control the home screen — where attention, data, and monetisation concentrate. Advertisers are caught between fragmented inventories, opaque measurement, and the growing dominance of proprietary TV operating systems.

At the same time, the ingredients for a different path already exist: telcos control the pipes, Wi-Fi, and often gateways; PSBs and European studios still create some of the world's most trusted news and entertainment; OEMs and silicon vendors are ready to build edge-AI-capable/Agentic TVs at scale. Together, a pan-European alliance can reshape the stack — starting with a shared, sovereign platform inside the home.

Pal Karlsen, Senior Analyst, Telco Consumer Services, Omdia

"Telcos are under intense pressure to find new growth, and history shows the strongest, most sustainable returns come from markets adjacent to the core network. The TV sits right in that sweet spot: it is deeply integrated with broadband, central to the household relationship, and still commands meaningful spend. By 2030, 65% of telco consumer non-communication revenue is expected to come from TV and video. Ceding this ground would be a strategic own goal at precisely the moment operators need to reinforce, not dilute, their position in the home."

2. The Next Decade: The Age of "Cognitive Television"

TV is entering its most transformative decade since the arrival of colour. By 2036, it will evolve from a single screen into a cognitive environment that unites video, interaction, and commerce across physical and virtual spaces. For telcos and media providers, the challenge is no longer how to distribute channels or apps, but how to orchestrate an adaptive ecosystem that senses, understands, and responds in real time.

2.1 The TV as the Home's Edge AI/Agentic Core

By the early 2030s, the TV will surpass the smartphone as the home's primary edge Agentic hub. With NPUs reaching into the hundreds of TOPS, mid-range TV SoCs will be capable of real-time video understanding, gesture recognition, multimodal interaction, and local language/vision inference. Freed from batteries and mobile thermal envelopes, TVs can host powerful, always-on Agentic engines at minimal incremental cost, because panels still dominate the bill of materials. This positions the TV as the orchestrator for entertainment, gaming, ambient intelligence, and home control — a natural companion to the broadband gateway. Set-top boxes will steadily fade from the living room, their functions absorbed into displays or virtualised in the cloud. The edge AI silicon that will power 2030 TVs is being architected now; hyperscalers' Agentic AI TV models for that timeframe are already in planning and design. Telcos that do not stake their claim at this stage risk finding their role reduced to connectivity alone.

Martin Scott, Research Director, Analysys Mason

"TV remains a central part of the broadband value proposition for many households, even as viewing habits evolve. As broadband markets become more competitive and contract terms shorten, operators need new ways to encourage customer loyalty and reduce churn. Device financing and rental, already proven in a number of markets, offers a practical route to lock in broadband customers, and the TV set is a logical focal point for such strategies. By bundling TV hardware and services, operators can differentiate their offers, strengthen customer relationships, and maintain relevance in a rapidly changing market."

2.2 Display Intelligence and Smart Home Integration

High refresh rates are redefining visual performance. Native 144–165 Hz panels are already mainstream in premium TVs, with 240–360 Hz displays expected by the early 2030s. These frame rates enable smooth cloud gaming, XR sports replays, and responsive AR overlays; variable refresh rate and AI-driven motion handling will bring console-grade fluidity to a broad range of content.

At the same time, the focus is shifting from pixels to contextual intelligence. MicroLED and next-generation OLED will enable modular, wall-scale systems that adapt brightness, tone, and acoustics to the room. Critically, the inclusion of Thread and Matter directly on the TV PCB will turn TVs into true smart home hubs, not just displays: with native interoperability, TVs will coordinate lighting, climate, security, energy, and entertainment into unified experiences, acting as controllers, sensors, and automation triggers for presence-based routines and ambient scenes. This unlocks scalable, secure, low-power connectivity for new services and everyday living.

The TV will become the anchor node in a fabric of connected screens — handing off sessions between TVs, smart displays, mobiles, and XR devices. Financing, trade-in, and upgrade programmes will be central to keeping households within operator-controlled ecosystems over multi-year contracts.

2.3 Software-Defined Screens

Television's intelligence will increasingly reside in software. On-device NPUs and GPUs will power real-time translation, personalisation, accessibility, summarisation, and predictive control. GPUs will turn the screen into a real-time rendering surface for dynamic UIs, multi-window interfaces, volumetric sports, and interactive advertising. Because capabilities can be pushed via OS updates and model downloads, innovation will decouple from hardware refresh cycles.

Competitive power will concentrate around three layers:

- **OS and runtime** (TV OS, agentic AI framework).
- **Data and identity graph** (profiles, viewing, intent, commerce).
- **Orchestration plane** (what runs on-device vs home edge vs telco edge vs public cloud).

For telcos, the strategic choice is whether to become invisible transport for someone else's OS and assistant, or to co-own this stack through TV OS partnerships, sovereign AI / agentic AI models, and integrated identity and billing.

3. Discovery, Content, and Edge AI Advertising

3.1 Conversational and Generative Discovery

Content discovery is shifting from tile browsing to natural conversation. Viewers will express intent ("something relaxing before dinner") and receive dynamically assembled sessions across live, on-demand, UGC, and social sources. AI Agents will combine household profiles, viewing history, environmental signals, and time to construct sessions, not just recommend individual titles. Rapid progress in multimodal AI and generative video is already evident in TV demos at CES 2026, where conversational agents, AI-generated "vibe trailers," and personalised news feeds run directly on mainstream chipsets. This turns the "home screen" into a "front door" for all viewing time and associated ad spend. Whoever owns this assistant layer — and the data behind it — will control viewing choices, advertising allocation, and content economics.

3.2 Adaptive and Generative Content

Content itself will become adaptive. Sports broadcasts may generate custom highlight reels per viewer; children's and educational formats may branch dynamically; advertising will auto-version creative in real time by audience and context. Real-time rendering tools will extend filmed worlds into adaptive environments that change based on profile signals and input.

Episodes will increasingly ship as meta-structured templates, carrying embedded "grammars" for recaps, cold opens, and interstitials that platforms can render differently per household. Long-form assets will fragment into machine-addressable scenes for reuse across promos, recaps, and new formats. Rights frameworks will need to evolve from single-asset licences to usage-based or template-based royalties, underpinned by AI verification pipelines that certify modifications and ensure brand safety.

Viewers will also become co-creators, using lean-back creation tools on the TV to spin up highlight edits, mood cuts, or personalised compilations, shared within controlled ecosystems that respect creative rights and commercial rules.

3.3 Edge AI Advertising — eVPP and In-Content AdTech

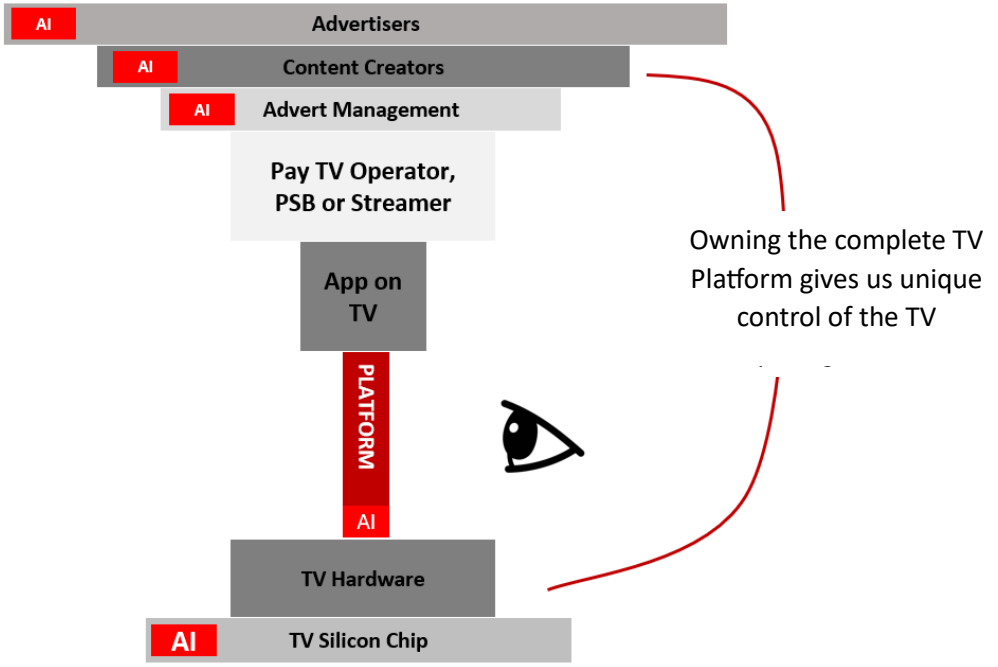
Edge-based virtual product placement (eVPP) proves that live programme modification is feasible; alongside automatic content recognition, it is emerging as a second major edge-based Agentic AI applications in TVs. Research from major agencies such as WPP suggests that around 70% of industry experts expect AI and Agents to produce most creative content by 2030; RedSquid anticipates this will extend beyond execution into the full pipeline — ideation, production, and edge delivery of dynamic overlays rendered directly on the TV.

Imagine watching your favourite show where ads simply belong. Instead of abrupt Ad breaks, the TV's on-device AI blends advertising objects naturally into scenes: a branded coffee cup on the kitchen table, a poster in a stadium, a car in the background of a street. The AI analyses every frame in real time and fuses it with privacy-safe signals — viewing patterns, preferred genres, time of day — to render brand objects unique to that moment and household. Because video is composited at the edge, there is no need to stream separate versions from the cloud; one living room can see a sports drink, another coffee, a third a travel ad on the same billboard, without extra distribution cost.

For viewers, this means fewer interruptions and more context fitting ads that are visually consistent with content. For advertisers, it unlocks premium, "unskippable" in content inventory, targeted by context, audience, and moment, and optimised on the fly using one master video. A typical home session could offer orders of magnitude more advertising instances than traditional breaks. For telcos and platforms, this turns first party data and device control into durable advantage, enabling addressable impact without third party cookies or opaque walled gardens. New revenue layers sit atop traditional pods, sponsorships, and shoppable formats — all anchored on the operator-controlled screen.

3.4 Controlling the Platform & the Edge Upends the Entire Model

The hourglass shape represents the choke point controlled by the TV platform.



Today, all content must pass through the TV platform to be discovered, with broadcaster apps just one of many icons on the home screen where those that pay the most are promoted to the top, giving the platform owner control over access to all content and services.

Controlling the complete platform, and the edge AI gives the Operator the control of the value chain. Leading to greater control over distribution and monetisation. Younger users especially may gravitate to platforms that enable new interactive and personalised features. Platform owners will have to work closely with the content industry to unlock and deploy these new capabilities

4. Immersive, Spatial, and Edge-First Infrastructure

4.1 Immersive and Spatial Experiences

Television will increasingly intersect with spatial computing. Volumetric, multi-angle, and depth-enhanced content will flow across TVs, tablets, and AR glasses, creating layered shared experiences around live events. One screen may show the main broadcast, while companion devices overlay tactics, stats, or social presence. These experiences depend on ultra-low-latency delivery, synchronised timecode streams, and high-performance edge computing — all areas where telcos hold advantages through multi-access edge computing, QoS, and network slicing. Persistent companion worlds linked to franchises will keep audiences engaged between episodes. Operators that host or co-host these worlds at the edge will benefit from higher traffic, lower churn, and partner revenues.

4.2 Edge-First Infrastructure and Economics

By the mid-2030s, broadcasting will be mostly IP-based. Content will assemble dynamically from modular assets and metadata; ad pods and language tracks will localise in real time; interactivity will be standard. Personalisation and cloud gaming will be processed at the edge, turning operator-controlled TVs into smart client endpoints and shifting capex from set-top boxes toward cloud and edge infrastructure.

Cloud gaming is a leading indicator. Trials and research from network vendors show that by using fibre broadband-and edge compute, operators can cut round-trip latency from around 100ms to under 30ms enabling console-class gameplay delivered as a service. The same architecture underpins interactive TV scenes, shoppable XR, and adaptive formats. Operators that master interconnection economics, multi-cloud orchestration, and AI-based QoS optimisation will define the economics of home entertainment and finally monetise their fibre foundations.

5. Premium Displays, Gaming, and Agentic AI

5.1 Premium Displays and Sustainable Design

MicroLED and advanced OLED will anchor the premium segment with 4K resolution, extreme HDR, and AI-driven upscaling and tone mapping. However, sustainability will become a key differentiator: modular panel replacement, recyclable materials, and low-power standby operation will be mandated by regulation and demanded by consumers.

Telcos can offload industrial design and upgrade logistics to manufacturing partners while keeping control over software, services, and offers. Typically, operator-supplied TVs avoid high-street retail margins, leaving more budget room for better silicon, connectivity, and audio while still presenting competitive prices. TV upgrades become natural triggers for contract renewals and upsell.

5.2 Gaming and Interactive Entertainment

Cloud gaming will normalise console-grade experiences without consoles, enabled by sub-20ms latency networks, GPU virtualisation at the edge, and efficient codecs. Interactive storytelling and shoppable XR experiences will emerge alongside, extending entertainment into new service-based models.

In parallel, in-home edge optimisation — using TV and gateway CPUs and NPUs for prediction and rendering — will complement the cloud, reducing required over-provisioning. The boundary between gaming and lean-back TV will blur: games become shows, shows become games, and viewers become participants. Telcos can monetise this shift via performance tiers, premium latency classes, and integrated discovery and billing on the operator TV.

5.3 Voice / Visual UI and Agentic AI

Voice AI is now beyond novelty. CES 2026 showcased TVs with always-on, conversational assistants embedded in mainstream SoCs, making remotes secondary as users speak naturally to their screens. As accuracy improves and privacy moves on-device, reaching for a remote will feel as antiquated as rotary dialling.

Agentic AI pushes this further. TVs will become deeply personal storytellers and concierges, not just catalogue browsers. They will curate, reshape, and in some cases generate shows, summaries, and interactive narratives tailored to each household's preferences and context. Entertainment becomes co-creative: an ongoing, adaptive dialogue between viewer and machine. Strategically, this is the ultimate customer-relationship surface for telcos — always on, in the most valuable room, and spanning video, gaming, commerce, and communication.

6. What It Means for Telcos: Silicon, Economics and Platforms

6.1 TV Chipset Timelines and CPE Economics

New TV generations lock in economics 3–4 years before launch. SoC architecture, design, validation, and tape-out take around 18 months, followed by OEM integration (6–12 months) and high-level software stabilisation (up to a year). Manufacturing ramps add further delay. That means Agentic AI TV hardware shipping around 2030 is being decided now. Hyperscalers are already planning their 2030 TV OS and silicon strategies; telcos must act quickly if they want to.

Silicon economics strongly favour TVs over set-top boxes. In TVs, electronics (CPU, GPU, NPU, memory) often account for under 20% of BOM; panels dominate, so stepping up SoC or RAM has modest ASP impact. In set-top boxes, electronics can exceed 80% of BOM, making every increase in silicon or memory a direct subsidy burden — especially in a world where DRAM prices have risen due to AI demand.

As AI and interactive features demand more compute, trying to keep up via ever-smarter STBs is a bet on the wrong side of the cost curve. TV-centric strategies, by contrast, gain headroom to add NPUs, richer graphics, and more memory for caching and AI inference without blowing up unit economics.

Furthermore, there are a number of other opportunities for telcos when they control the TV panel. There is a clear opportunity to integrate Wi-Fi mesh into the TV, given its size and position around the home. If a customer has two or three TV panels hung on the walls around their home, with integrated Wi-Fi mesh, it will deliver a significant improvement in coverage than a traditional mesh hub, often located at floor level; in addition to reducing the Capex and Opex hit of providing standalone CPE (customer premise equipment).

6.2 TV Silicon Roadmaps: Overtaking Smartphones

Flagship TV SoCs on roadmaps from 2028 onwards target edge AI performance comparable to today's high-end smartphones, with far fewer power and thermal constraints. CES showcases already demonstrate advanced edge AI for video manipulation, visual search, and personalised news feeds on mainstream TV silicon.

Within a few years, TVs are on track to surpass smartphones as the primary edge AI surface in the living room — driving AI-first discovery, sensor-driven experiences, and in-TV video manipulation. Smartphone reliance on battery power will curb AI integration progress. TV clearly does not have the same power supply limitations and therefore is a more natural place for in home AI processing.

Operator-supplied TVs, which are not burdened by retail margins, can adopt more powerful chipsets and become the default choice for premium home entertainment tech.

6.3 Cognitive Screen Economics

Cognitive TVs follow the trajectory of smartphones: premium computing justified by ecosystem value. As TVs evolve into edge AI hubs, their BOMs will include NPUs, upgraded GPUs, more memory, higher-quality microphones and cameras, and higher-refresh panels. The incremental electronics cost remains small relative to the panel, but the system-level value they unlock — in churn reduction, advertising yield, and service uptake — is significant.

At a high-level two business-model shifts underpin the opportunity:

- **From one-off STB subsidies to device-as-a-service.** Instead of subsidising boxes that generate little direct revenue and become obsolete quickly, operators can finance AI-TVs over multi-year contracts tied to broadband, mobile, and content bundles. This spreads capex, raises perceived value, and creates natural upgrade cycles.
- **From channel ARPU to household lifetime value.** Intelligent displays make it easier to attach additional services — FAST, cloud gaming, fitness, security, education, smart home — all discoverable via the same assistant. Operators can manage total household value across verticals, not just TV ARPU.

Agentic AI TV enables context-aware product placement, shoppable overlays, and scene-based optimisation that do not resemble traditional Ad breaks. Brands pay for verified engagement and conversion events, with on-device measurement providing privacy-preserving signals. Operator-supplied TVs become aspirational, QoS-optimised devices — cheaper than retail equivalents yet superior in experience — and the foundation for multi-product growth.

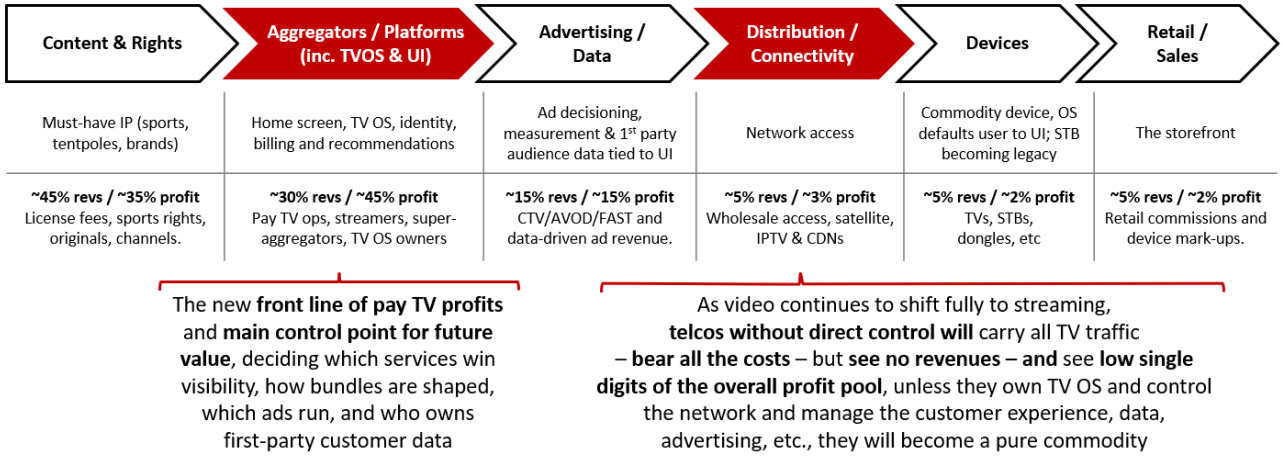
7. Hyperscalers, Risks, and a Collaborative Path Forward

7.1 Hyperscaler Strategies — and How Telcos Can Counter

Hyperscalers already dominate much of the connected-TV OS market and are fusing AI, voice, and commerce into aggregation hubs on the main screen. They embed generative tools for discovery, promos, ambient modes, and personalised advertising directly into their OS stacks, turning TVs into data engines that reinforce their wider ecosystems. Vertical integration through branded TVs and OEM alliances further hard-wires their assistants as defaults. If left unchecked, this reduces operator propositions to connectivity and app aggregation. Broadband risks becoming "more speed for less money" into someone else's platform. Telcos can counter only by combining managed networks with control of the screen: low-latency gaming, edge-optimised streaming, and QoS-aware features perform best on operator TVs, not on generic retail devices.

PSBs also face serious risks. Hyperscalers can use exclusive access to viewing data and home-screen real estate to prioritise their own services, eroding universal reach and relegating PSB offerings to algorithmic obscurity — similar to how some smart speaker defaults have marginalised linear radio. As new cognitive formats emerge, PSBs could be forced onto hyperscaler tools and platforms for interactive content, adding cost while enriching their competitors. Advertisers risk lock-in to proprietary targeting and measurement systems, fragmenting revenue and limiting transparency.

Telcos need to decide how far they want to move up the value chain – instead of just owning connectivity and content licensing – they need to decide whether they want to take direct control of the living room; and ultimately become the default supplier for the home's entertainment platform.



7.2 A Collaborative, Pan-European Path

The answer is collaboration at scale. Telcos, PSBs, OEMs, and advertisers can form alliances around neutral platforms such as RedSquid to deploy eVPP and edge AI standards, pooling content and data to create interoperable overlays and shared revenue models while retaining European control. Regulators can support this through prominence rules, open standards, and data portability, building on existing industry groups like the DTG in the UK and similar bodies in other markets.

Crucially, this collaboration should be pan-European. Any major national operator can start to move the market on its own, but no single player will, by itself, match the scale and leverage of global TV OS providers in AI, CTV ad demand, and device footprint. The real advantage goes to the first movers who use their national strength to catalyse a wider consortium spanning multiple EU and UK operators, PSBs, OEMs, and AdTech specialists — shaping the rules and becoming the reference platform others join in order to:

- Reach tens of millions of screens and hundreds of millions of viewers
- Influence silicon roadmaps and OEM priorities
- Define and certify a neutral Agentic AI TV standard for metadata, edge runtimes, and governance

Federated edge initiatives (e.g. European Edge Continuum) demonstrate that such cross-border platforms are feasible. Applying the same logic to Agentic AI TV would allow Europe to define how intelligence runs at the edge instead of importing black-box platforms.

Tony Gunnarsson, Principal Analyst, Media and Entertainment, Omdia

"In response to a shrinking Pay TV market, operators have made a great job of staking out a unique role as principal aggregators of major streaming services. Instead of Pay TV services, telcos now sell popular streaming services like Netflix, Disney, and HBO Max in bundles together with broadband and mobile services. However, it's not enough for operators to align their future TV & Video strategy to the bundling major third-party SVOD streaming services. Come 2030, Omdia forecasts just ¼ of streaming will come from telco bundling. To ensure a key role in the future of TV and video, the telco industry must look beyond simply bundling major streaming services."

8. The RedSquid TV Approach

8.1 From DVB to AI: TV's Next Great Revolution

Television has defined the careers of the founding team — from launching DVB-T in the late 1990s to driving smart TV adoption worldwide at MStar Semiconductor. They have seen it evolve from fixed channels and proprietary set-top boxes to app-driven streaming and global OS platforms. Each shift felt revolutionary at the time, but they were stepping stones to today's inflection: television as an intelligent, participatory layer in daily life — and a platform for telco growth.

The MStar team seized the CRT-to-flat-panel and analogue-to-digital transitions as new entrants and captured market leadership. Now, two forces converge again: broadband-delivered TV overtaking aerials, and edge-based Agentic AI transforming streamed content into personalised, interactive experiences. This time, the opportunity is even greater — for new leaders to emerge, with broadband providers and PSBs taking back control of the living room. But ISPs must act fast, forging the right partnerships to make TV their growth engine rather than a cost of sale.

By 2036, the "TV" will transcend screens altogether: a cognitive home hub orchestrating entertainment, communication, ambient intelligence, and control — where channels yield to orchestrated sessions that follow people across rooms, devices, and contexts. The question is not whether television has a future, but who will own it.

8.2 An Operator-Centric TV OS

The preceding sections describe what Europe's Agentic AI TV platform should look like. RedSquid.tv is one concrete implementation path: an open, customisable smart TV OS platform designed for telco control. It leverages proven IP from pay TV set-top boxes and smart TV chipsets, combined with new in-device AI capabilities, to give operators full screen control with minimal integration effort.

The founding team has deep backgrounds in STB and smart TV silicon, low-level software, and AI-driven features. Operators can reuse their existing STB UIs or TV apps as the primary UI on the TV, while RedSquid provides the OS, middleware, and AI engine beneath. Founded in 2025 and headquartered in Bristol, England, RedSquid's platform has been developed in stealth, and is already in mass production in the MENA region; and has been demonstrated with partners at IBC 2025.

As TV pivots from aerial to broadband delivery, operators can reclaim control by supplying managed TVs — eliminating retail competitors from the living room and avoiding uneconomic STB upgrades for AI services. RedSquid integrates partners across eVPP AdTech, wireless sensing, gesture control, cameras, automatic content recognition, UIs, recommendation engines, manufacturing, logistics, financing, advertising, and monetisation, enabling operators to launch market-leading products quickly.

8.3 Partners and Supply Chain

- **Sharp Consumer Europe (Foxconn)**: A major supplier of RedSquid TV hardware platforms, backed by Foxconn's global manufacturing scale.
- Logistics providers and finance partners such as **Glow Financial Services**, handle delivery, warranties, and consumer credit.

In practice, telcos never need to handle physical TVs; RedSquid and its ecosystem manage hardware, logistics, and financing so operators can focus on brand, bundles, and services.

9. Toward an Open Agentic AI TV Standard

Fragmentation across proprietary TV OS stacks makes it impossible for broadcasters and operators to maintain 10–15 separate AI enablement workflows. The industry needs a "Dolby-like" neutral standard for Agentic AI TV — a device-level intelligence layer that sits beneath apps and above silicon, accessible to multiple stakeholders.

9.1 Three Pillars of an Agentic AI TV Standard

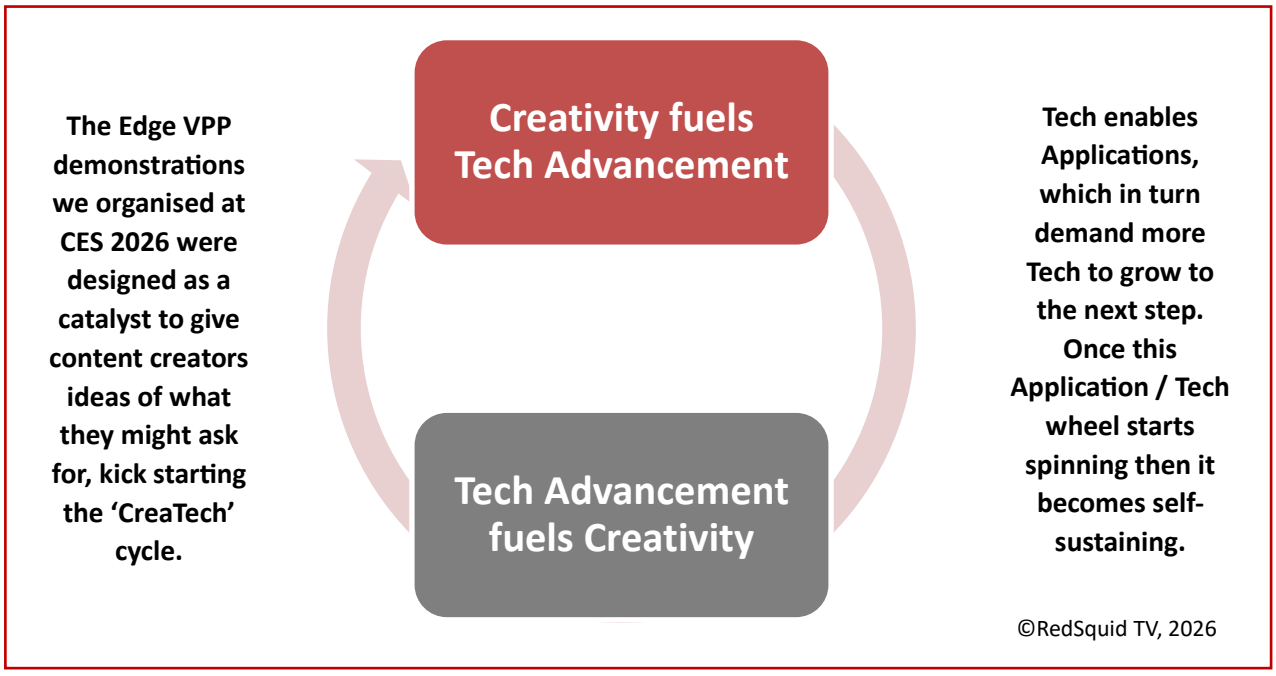
- **Metadata and Instruction Layer**: Content and ads carry compact data blocks describing which elements in a scene (objects, signage, overlays) can be adapted and under what constraints. These are authored once during production or versioning and travel with the asset across platforms.
- **Local AI Engine**: A lightweight edge AI runtime on TVs (and in future routers) interprets metadata in real time, using on-device profiles and contextual signals to apply safe adaptations, swapping pack-shots, localising references, or inserting avatars without sending raw video off-device.
- **Governance and Ecosystem Layer**: A standards body or consortium sets certification criteria, privacy and safety rules, and commercial models, ensuring adaptations are authorised, reversible, and correctly accounted for. Value-sharing is defined so no single OS owner can capture all upside.

RedSquid TV's ambition is to help define and implement this layer as an embedded, licensable capability that sits in the TV stack much like Dolby Vision or Dolby Atmos sit in the AV chain. TV makers and operators can switch it on across many devices, while content owners and advertisers see a consistent target environment.

9.2 Rapid evolution of Agentic AI TV applications

Today we are at the start of the Agentic TV revolution. RedSquid (together with the Operator) brings the enabling Tech, the app industry then responds with new features to use that Tech. The 'CreaTech' wheel then start spinning, creating demand for increased Tech, which leads to new applications.

'CreaTech' Flywheel



10. End-to-End Network Control and In-Device AI

10.1 End-to-End Network Control

Owning the TV platform is not just about UI control; it is about managing traffic economics for next-generation workloads such as cloud gaming and interactive video. Sustained, high-bitrate, low-latency patterns make simple over-provisioning unsustainable. With operator-controlled TVs, decoding and rendering can happen locally, while multicast, "low-latency by design" network engineering, and Wi-Fi 7/8 orchestration maintain responsiveness and contain edge compute costs.

RedSquid's platform enables TVs to coordinate with operator routers, adjusting video pipelines based on network conditions, managing contention proactively, and applying AI-driven optimisation in-home — capabilities impossible when the TV OS belongs to a third-party hyperscaler. This combination of network ownership and device intelligence creates a differentiated position versus global retail brands.

10.2 In-Device Agentic AI Engine

On this foundation, RedSquid is developing a task-specific in-device Agentic AI engine that runs on TV (and future router) processors rather than in the cloud. It focuses on two core jobs:

- **Video Modification**: Applying face replacement, product replacement, interactive overlays, and similar effects based on embedded content instructions (eVPP and beyond).
- **Local Profile Building**: Maintaining household and viewer profiles inside the TV, based on everything watched across all apps, to support personalisation and commerce without relying on any single streaming service's data or sending profiles off-device.

If users consent, operators and partners can access aggregated analytics and advanced targeting; if not, local-only profiles still enable relevant product placement and recommendations with strong privacy guarantees. For pay TV operators, these capabilities integrate natively into the operator TV platform, allowing them to surpass retail TV feature sets and open new AI-driven monetisation streams. For retail TV, the same AI layer can be delivered as a plug-in, to existing software platforms, especially where manufacturers lack low-level silicon control or neutrality to build open ecosystems.

11. Operating Models, Partnerships and Regulation

11.1 New Operating Model

Claiming Agentic AI TV will require telcos to evolve from set-top box-driven organisations to TV platform stewards. Instead of periodic STB launches, operators can concentrate on customer growth, and ARPU. The TV hardware being managed by the TV manufacturer.

Data and AI governance become first-order disciplines. Edge engines will generate high-fidelity behavioural data, but trust hinges on consent, anonymisation, transparency, and fairness. Legal, security, data science, and UX teams can work together to design privacy-by-default experiences that differentiate European Agentic AI TV from surveillance-driven alternatives.

Hardware, paradoxically, becomes easier. TV manufacturers will build these products regardless; telcos simply choose hardware partners and make them their own, focusing on services and experience rather than designing and specifying the hardware, as they would have done with a set-top box.

11.2 Partnerships and Regulation

All the ingredients for Agentic AI TV already exist across specialist players. RedSquid's role is to connect them into a single, operator-centric platform and offer a clear migration path from today's fragmented solutions to tomorrow's unified Agentic AI TV experience. Telcos should participate not just as customers but as co-sponsors of a common platform that scales across markets. Key partnerships include:

- **UI/UX specialists** to co-define feature roadmaps and amortise development across multiple operators.
- **Broadcasters, studios, and rights-holders** to design metadata, templates, and licensing that support generative and adaptive content while preserving editorial integrity.
- **Agentic AI providers**. From content recognition to edge VPP and recommendation engines, speech and agentic assistants.

Regulation can act as a differentiator rather than a brake. European emphasis on privacy, data minimisation, and explainability aligns naturally with edge AI architectures that keep profiles local. Operators who lean into this — positioning Agentic AI TV as both smarter and safer than cloud-only platforms — can build trust with regulators and consumers alike.

12. Conclusion

12.1 Summary Opportunity

A new commercial model is emerging in which Pay TV providers can take direct ownership of the connected TV customer relationship. By integrating OEMs and finance partners, this model redefines how TVs are sold, financed, and monetised, creating fresh revenue streams while strengthening long-term customer lock-in. In summary:

The operator never need to handle the TV. The subscriber orders directly via the operator's website, and the purchase order flows straight to the manufacturer, who ships the TV to the customer. If the TV is bought on credit, the finance partner integrates seamlessly into the transaction, ensuring a smooth end-to-end purchase experience.

By eliminating the retailer margin, the operator can offer "interest-free credit" at a price that undercuts traditional retail channels, or alternative BNPL providers – making operator-controlled TVs significantly more appealing.

The operator earns a profit share from the TV manufacturer and a share of revenues from the finance partner, while the TV's cost never appears on the operator's balance sheet.

The strategic imperative is clear: act now. Fibre network providers hold a position of strength to shape the future of the TV business. Delay, and hyperscalers, or others, will claim the first-mover advantage.

12.2 A European Platform, Not Just Better Boxes

Jon Carter, CCO, RedSquid TV

Telcos stand at a fork in the road. Either remain fragmented, fighting country-by-country for margin on commodity broadband while hyperscalers own the living room, or move together to build a shared European Agentic AI TV layer that turns the TV into a growth engine. The next decade of television will be defined not by who has the best set-top box, but by who controls the cognitive screen — its OS, assistant, data, and edge AI runtime.

A single national operator can benefit immensely by controlling the TV platform. However, the real big gains of using common hardware across multiple operators will create scale to counter global TV OS platforms in AI, advertising demand, or OEM leverage. A pan-European consortium of telcos, PSBs, OEMs, and AdTech players could together create Europe's own hyperscaler, with a neutral Agentic AI TV standard that serves European interests. Fragmented strategies will grow slowly; federated models can compete at platform level.

Europe starts from a position of strength: dense fibre coverage, strong PSBs and creative industries, emerging federated edge initiatives, and privacy-first regulation that already rewards on-device intelligence. If these are combined into a shared cognitive TV platform — with open standards for metadata, runtimes, and governance — Europe can define how intelligence operates at the edge instead of importing black boxes.

For telcos, the TV becomes the primary surface where this strategy translates into revenue. It is the place where network performance is visible, where Agentic AI-driven discovery steers viewing and commerce, where gaming and smart home services run, and where edge-based advertising can be executed without third-party cookies. Connected TV ad spending is forecast to grow rapidly and take an increasing share of global TV budgets by 2030; operators can only participate meaningfully if they control a material share of Agentic AI TV screens.

The growth vectors extend beyond advertising: device-as-a-service tied to broadband contracts, performance tiers for gaming and sport, fitness and wellbeing subscriptions, smart home, security and insurances bundles, health and education services, and financing margins on operator-supplied TVs. At the same time, edge optimisation reduces transit and cloud costs, lifting margins rather than compressing them.

Three strategic commitments define success from 2026 to 2036:

- **Own the edge** — prioritise in-device AI and operator-controlled OSs over cloud-only dependence.
- **Federate ecosystems at European scale** — build a cross-border consortium with PSBs, OEMs, and advertisers around a neutral Agentic AI TV standard, instead of duplicating efforts in national silos
- **Build viewer trust** — make transparent consent and privacy-by-design core features, not footnotes.

The opportunity is clear: a European Agentic AI TV platform that captures a meaningful share of a rapidly growing CTV and services market, anchored on operator-supplied cognitive screens. The risk is equally clear: if operators delay and act alone, they will be left providing "more broadband for less money" into someone else's platform. The decisive move now is collective — to build, own, and standardise the cognitive screen before it is defined for Europe by others.