

## **The Operator Smart TV: taking a new category of CPE to market**

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How a Pay TV service provider runs its operator application on a television without the need for a set-top box, while ensuring the Pay TV service is the default and 'Sovereign' experience for consumers.

## // In this White Paper you will learn:

- The two main implementation models that support a true virtual STB experience, whether on custom-build Operator Smart TVs or Operator Smart TVs that are 'adopted' from an OEM.
- How an Operator Smart TV ensures that the Pay TV service is the primary UX and aggregation point, and how this 'Sovereign App' implementation differs from an 'app-among-apps' paradigm.
- The multiple OEM partnership and go-to-market strategies that can be used to get Operator Smart TVs into consumer homes, and the business considerations for each approach.
- How an Operator Smart TV is engineered, including the OS choices, operator application integration, and back-office management – with advice on how to reduce complexity.
- What you can do with an Operator Smart TV that you cannot achieve with a set-top box, and how Operator Smart TVs fit into the wider Pay TV operator customer premise equipment portfolio.
- Why the Operator Smart TV represents a new chapter in the Pay TV story and goes hand-in-hand with the future of aggregation and super-aggregation.

## // Introduction

Pay TV operators have spent decades as the entry point to the best television content, providing linear broadcast TV channels, VOD, DVR, catch-up TV and start-over TV within a tightly integrated and unified user interface where content discovery journeys begin and end. During the last decade, popular streaming services have been added to this mix, transforming aggregators into super-aggregators.

This position as the primary aggregator of premium entertainment services has been built upon the set-top box, albeit with complementary multiscreen provision. If a Pay TV provider does a good job (delivering compelling content and a high-quality user experience) consumers default to the operator STB on HDMI1 and the operator effectively becomes their 'home service' – the place where they spend the vast majority of their television time.

The set-top box runs the operator application, which provides the entire Pay TV user experience, linking to the operator back-office and video delivery systems. For most of the history of Pay TV, the operator application has been synonymous with the STB, and operators accepted that to display their service via televisions, they had to supply these devices.

Today, there is growing interest in how a Pay TV service can be displayed on televisions without a set-top box, or any other kind of peripheral device (including conditional access modules). There is no broad-brush explanation for why a Pay TV operator may want an STB-less option in their CPE portfolio – or perhaps a long-term transition away from set-top boxes. This market opportunity is nuanced.

Reduced CapEx or OpEx is unlikely to be the dominant motivator. One of the most important implementation options is where operators private label their own Smart TV, which means taking on the hardware engineering costs themselves. Even where an OEM bears some or perhaps all the costs of hardware development, as with the second notable implementation model (where operators 'adopt' an existing Smart TV model 'inside the factory gate', there are still software development costs.

An important difference to most STB implementations is that for all Operator Smart TV approaches, there is an opportunity to later reclaim at least some of the upfront development costs through the retail sale of the Operator Smart TV.

A second and perhaps more important motive is to seek to own HDMI-0. In a world where retail Smart TV brands offer increasingly attractive content offers and user experiences, there is a danger that the television 'home screen' becomes the primary aggregation point, displacing the operator application that is running via the set-top box. Users simply do not reach HDMI-1.

If the operator application runs directly on the television, the operator elevates itself to a glass-level interface and service. Nobody can come between them and their subscribers.

Operator Smart TVs also create an opportunity for Pay TV providers to engage their existing subscribers and non-subscribers during their periodic television refreshes, especially if offering discount incentives. The Operator Smart TV becomes a marketing tool – helping to lock in established customers with a new offer or acquire new customers.

## // The function of aggregation has been elevated in status

The emergence of direct-to-consumer (D2C) subscription streaming services, especially from international studios and new sports rights holders, has stripped away much of the content exclusivity that Pay TV operators enjoyed. Pay TV operators have ceased to be the gatekeepers to content that was once locked behind their paywall.

Yet at the same time, one of Pay TV's superpowers – the function of aggregation – has been elevated in status. D2C streaming (both paid and free) has created a fragmented television universe where content is harder to find and subscriptions harder to manage. There is an opportunity to differentiate for companies who unify disparate services and make complex interactions simple through a combination of UX and advanced back-office capabilities.

Consult Red helps service providers to become outstanding aggregators and has termed the phrase 'Aggregate More' to articulate the opportunity to deliver an even larger collection of services and applications on their platforms.

'Aggregate More: Video' focuses on filling important app gaps in a super-aggregator UX and making new entertainment services, like casual gaming, possible. 'Aggregate More: Broadband' applies the same general principle to the broadband services market, supporting diversification into Smart Home applications ranging from water leak detectors and security cameras to smart energy.

“There is an opportunity to differentiate for companies who unify disparate services and make complex interactions simple.”

## // App-among-apps vs 'Sovereign App'

Multiscreen TV apps (for laptops, tablets and smartphones) running on consumer electronics (CE) devices that customers own have shown how a Pay TV service can be provided without operator hardware. This is the bring-your-own-device (BYOD) approach – with the customer bringing their own hardware to the table.

The arrival of Smart TVs, with their Internet connectivity and ability to display streaming video, prompted the question: can this BYOD model be applied to the television, too? The simple answer was yes – a Pay TV operator can create an app that sits inside a Smart TV app store and provides access to a streaming-only version of its service (in the same way that a tablet app does).

The drawback with this model, where the television is treated like another multiscreen endpoint, is that the operator application is just another 'app-among-apps', surrounded by content owner apps and even rival Pay TV apps fighting for attention. The app-among-apps is like a shop in a shopping mall, and the company that provides the television OS/UX is the mall owner – taking over the 'home screen' function that Pay TV operators enjoy on their set-top boxes.

Over time, competition for attention within the Smart TV UX has increased. Direct-to-consumer studio apps provide a way to access content that was once exclusive to Pay TV operators. Smart TV user interfaces have become more visually appealing. A growing number of retail Smart TVs (as well as peripheral connected TV devices like streaming pucks) carry an OS/UX/content ecosystem that is provided by tech/media giants that also provide ad sales representation.

In such environments, it is fair to characterise the operator app-among-apps as a guest in someone else's home. This is a long way from the set-top box experience where the operator application is sovereign.

Consult Red uses the term 'Sovereign App' to describe the position Pay TV operators have achieved with their operator application on set-top boxes. The Sovereign App is the opposite of the app-among-apps – it is the app-across-apps. The Sovereign App is the first thing a user sees when they turn on the hardware that hosts it. No other application and UX sits between the consumer and the owner of the Sovereign App. If the device is turned off and back on again, the user returns to the Sovereign App.

The Sovereign App is where consumers will start and end a content journey, and it dictates the look and feel of the entire experience across the hardware platform, and which apps sit 'below' it. There is no rival application that performs the role of Sovereign, competing for attention on the hardware platform. When this model is applied to a television, the television behaves as if the consumer were watching through the operator set-top box on HDMI-1, except the television is on HDMI-0. This is the true virtual STB architecture.

Where the operator provides the Sovereign App, a consumer seeking a popular SVOD service, for example, would open the SVOD application and this runs within the Sovereign App environment. If they click on curated content from the SVOD service, the SVOD application launches within the Sovereign App to play that content. When leaving the SVOD application, the user is always returned to the Sovereign App environment.

As with a Sovereign App running on a set-top box, the 'Sovereign App on TV' is more than a UX – it is the gateway to a platform software stack that links to the operator back-office and video delivery systems to deliver the entire Pay TV experience to subscribers. The Sovereign App manages all content discovery on the platform, from editorially curated content 'rails' to content promotions, personalised recommendations and search.

The term 'direct-to-TV' is sometimes used to describe this second implementation model, when the operator application becomes the Sovereign App on a television (rather than an app-among-apps).

## // App-among-apps vs Sovereign App

Here is a summary of the pros and cons associated with the two models a Pay TV operator can use to run its service on a television without set-top boxes or any other hardware peripherals.

### App-among-apps

- + No hardware provision required, or any hardware-related relationships with television OEMs.
- Lots of development and maintenance needed to support the app-among-apps.
- Requires the same aggregation effort (as an STB or Operator Smart TV) to offer operator-owned or third-party content within the app.
- Reduced prominence for the Pay TV service, as users must find and enter the application.
- No automatic return to the Pay TV service when the television is turned off and back on.

### Sovereign App

- + The operator remains the primary aggregator and cannot be disintermediated.
- + The operator can offer third-party streaming services inside the Sovereign App, devaluing 'rival' connected TV platforms that offer access to the same or fewer third-party services.
- + The operator brand is front-and-centre as a provider of entertainment services to the end consumer.
- The operator requires a hardware partnership with a television OEM.
- The operator may have to contribute towards hardware costs, or pay all hardware costs,
- Business, engineering and go-to-market implementation will take time.

The rest of this paper focuses on the virtual STB, direct-to-TV model, where a Pay TV operator application is the Sovereign App on a television where there is no set-top box attached. Consult Red calls this type of television an Operator Smart TV.

## // Implementation options for Operator Smart TV

There are two main categories of Operator Smart TV implementation. The first is where a Pay TV operator custom-builds their own private-label television in partnership with an OEM. The second is where an OEM has already engineered a Smart TV model and allows a Pay TV provider to 'adopt' the model 'in the factory' as an Operator Smart TV.

Once the deployment model is established, Pay TV providers can decide which OS and Sovereign Application roadmaps they want to pursue. Some of the many options include RDK (as an OS example) and HbbTV OpApp (as an operator application example). The considerations, in each case, are outlined below.

## // The custom-build, private label Operator Smart TV

The custom-build, private-label approach effectively treats the television as if it were a set-top box, in terms of its engineering development. The operator selects a hardware (OEM) partner and, if required, an independent software vendor (ISV) that helps build the software/OS stack. The operator has full control over hardware specifications and hardware branding.

Non-recurring engineering costs (NRE) sit with the OEM or the operator, and the operator orders and pays for a minimum quantity of devices and so takes the capital risk on any unsold stock. The operator sells and distributes the Operator Smart TV, which could be direct to subscribers via the usual operator ordering and shipment channels, or via retail. An OEM that does not have brand aspirations of its own would be a prime candidate as a hardware partner, and the Smart TV is likely to carry the operator brand on the hardware.

The custom Operator Smart TV approach is well suited to Pay TV operators who can bear upfront CapEx investments. Operator Smart TVs could be purchased outright by consumers or paid for in monthly instalments, replicating the mobile phone model (especially if the Operator Smart TV is subsidised in return for a Pay TV subscription).

The custom Operator Smart TV implementation model lends itself to syndication (where a lead operator develops the platform and licenses others to share the software stack, even if they source their own OEM partners). This approach could also be used by smaller Pay TV operators working as a consortium.

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## // The factory-adopted Operator Smart TV

With this approach, a Smart TV OEM engineers and builds its own television model that is suitable for the retail market, but is not yet sold in retail. This television model is built to serve the Operator Smart TV market. A Pay TV operator signs an agreement to 'adopt' this model 'inside the factory gates' as an Operator Smart TV. The operator application is integrated and becomes the Sovereign App, replacing any OEM-owned home screen application/UX.

Most engineering choices belong with the OEM, who can offer their television model to multiple operators in different territories. In most cases, the Pay TV operator will have a target OS in mind when selecting its OEM partner. An adopted television can have the same hardware specifications (e.g. memory, processing, graphics) as a custom-built, private-label television, or it can have less. It would be wrong to assume that custom-built means better hardware and adopted televisions mean worse.

The OEM or the Pay TV operator can employ an Independent Software Vendor (ISV), as required. The OEM may allow deeper customisations (beyond integrating the operator Sovereign App), but this will add cost for the operator. Examples of possible customisations are the addition of an extra onboarded streaming service app (as

part of the super-aggregator function) or adding operator hotkeys to the remote control.

The OEM accepts the television hardware engineering costs, but the Pay TV operator may agree to a minimum sales order for adopted versions. It should be emphasised that this is not a cost-free option for operators.

The factory-adopted televisions are sold via retail, perhaps on a single payment basis. The OEM could make money from additional hardware sales (thanks to operator co-branding on the hardware, or even total operator branding). There may be scope for operator payments to the OEM based on customer acquisitions (for the Pay TV subscription service) once the devices reach retail.

OEM partners who have modest branding ambitions of their own and/or do not see themselves as future super-aggregators, and who are driven by hardware unit sales, are strong candidates to become factory-adopted Operator Smart TV partners. OEMs could approach Pay TV providers to offer Operator Smart TVs – it may not fall upon operators to instigate these partnerships. OEMs who have limited software, Sovereign App and UX capabilities can use the operator partnership to lift themselves into a higher position within the retail market.

## // The field-adopted Operator Smart TV

There is a third, and nascent implementation model, but not all the details are clear yet. It is similar to the factory-adopted Operator Smart TV, but the television will not be built only to provide operators with an Operator Smart TV and will go into retail channels whether it is adopted or not. It can then be adopted by an operator in the field.

- The television development ROI is based on classic retail success, independent of Operator Smart TV sales, which should mean that operator costs are lower (because the television model was being made anyway).

## // Operating Systems for Operator Smart TVs

Pay TV providers can harness many of the operating systems already proven in the set-top box market for Operator Smart TVs. These include Linux, RDK and AOSP. The OS choice can be based on the same criteria that determine set-top box choices. Consult Red is OS-agnostic and can advise on all the options.

## // HbbTV OpApp as one option for creating the Sovereign App

HbbTV OpApp provides an open standards approach to creating a Sovereign App that manages the UX, and is one of the options for creating a virtual STB on a Smart TV. HbbTV OpApp can be used in the Pay TV market.

## // Minimising complexity in Operator Smart TV deployments

Consult Red would expect that most operators will offer one main model of Operator Smart TV during the early years of market development, even if this model comes in multiple screen sizes. There may be potential to 'tier' the Operator Smart TV market with different specification television models in future. Operators are expected to focus on either a custom-built approach or an adopted-television approach, and not deploy both at the same time.

Pay TV operators can make life easier for themselves by working with one preferred OEM, although a desire for vendor competition may eventually dictate more. Even if a Pay TV operator introduces additional Operator Smart TV choices for consumers, works with multiple OEMs, or mixes-and-matches custom-built and adopted Operator Smart TVs, they are advised to harness a common OS/software stack to maximise efficiencies and minimise cost.

For custom-built Operator Smart TVs, it is possible to create modular hardware/software components that are added once televisions are in customer homes. This is a way to

differentiate the Operator Smart TV offer at a consumer level. Cameras that can be added to an Operator Smart TV (to support multi-household social viewing like sports parties and video calling) are a good example of a modular peripheral. Game controllers are another.

Nearly all the work that Pay TV operators have put into their set-top box software stacks and Sovereign Apps can be re-used for the Operator Smart TV environment. However, a decision to add an Operator Smart TV to the CPE portfolio is a good moment to reflect and review the technology strategy – something that Consult Red can help with. The best approach will be to pursue a unified technology strategy that encompasses both the STB and the Operator Smart TV.

Operators embarking on the custom-built approach should familiarise themselves with television functions that do not appear on set-top boxes, ranging from volume control, HDMI input and external audio pass-through to Logical Channel Mapping and device negotiation.



## // Working with a trusted consulting partner and platform tech developer

Pay TV operators are used to working with set-top box vendors and the ISVs in that market. The world of Smart TVs introduces many new 'vendors' (television OEMs) who are potential partners, and some new challenges.

Consult Red is a trusted consulting partner that provides technology development services across the delivery platform, spanning strategy, design, and embedded systems to cloud solutions and platform security. The company is an independent software vendor and systems integrator with vast experience across set-top boxes and back-office solutions for leading Pay TV and free-to-air platforms.

Consult Red is a global-level pioneer in the development of Operator Smart TVs. The company can help operators manage the OEM technical partnership and work with OEMs on the Operator Smart TV model. It can support a wide range of projects related to set-top boxes or Operator Smart TVs, such as:

- Consulting, including TCO (total cost of ownership) analysis.
- Hardware design, development, certification and in-life.
- Software architecture and development, including OS.
- Accelerated adoption of RDK, Android TV and other software stacks.
- Technology syndication activities (supporting franchiser and franchisee).
- Migration from Android TV to RDK (using the Operator Smart TV as the first step).
- Rapid prototyping and proof-of-concepts.
- Containerised applications.
- Intelligent edge.
- OTT app integration and certification.
- Apps management and deployment (DAC Warehouse).
- Pain-free enablement and delivery of Android apps for use on RDK/Linux devices with AndApps.

## // Using Operator Smart TVs with set-top boxes

There is currently no indication that the fledgling Operator Smart TV market will replace set-top boxes. Consult Red anticipates that Pay TV operators who provide Operator Smart TVs will continue to offer at least an IP-only streaming set-top box, if not a hybrid broadcast/broadband gateway.

Streaming-only STBs (commonly referred to as pucks or sticks because of their shapes) can provide the same hardware performance (in terms of processing and memory) as a television, but operators may decide that the Operator Smart TV becomes their premium product and choose hardware specs that outperform a streaming STB.

Consult Red advises that the same OS/software stack should be used across the CPE portfolio, so it is easier to manage. This means that operators using RDK or Linux for their set-top boxes would use RDK or Linux for their Operator Smart TVs. However, the emergence of the Operator Smart TV does represent an important CPE inflection point and is an opportunity for operators to begin an OS migration if they were already thinking about this for their STB fleet. You can read how an RDK or Linux-based Operator Smart TV can harness Android apps used on an Android-based set-top box elsewhere in this paper.

Software flexibility is key if you want to use the same common stack across a range of customer premise equipment. Strong ongoing support for the Operator Smart TV software stack (OS, Sovereign App, applications launched from within the Sovereign App, and associated back-office functions) is essential, given the potential longevity of televisions.

Operator Smart TVs could come with broadcast tuners, depending on the approach used (custom or adopted) and the agreement with an OEM. Streaming-only Operator Smart TVs are the default option. Operator Smart TVs can come with custom or customised remote controls, depending on the OEM approach and agreement (so 'Home' and 'Guide' buttons, and even voice control, can be included on the remote control, as examples).

Multiroom features can be supported on Operator Smart TVs, with synchronisation between devices (whether Operator Smart TV to Operator Smart TV, or more likely Operator Smart TV to Operator IP-only STB) using the operator cloud. This replicates the way a multiscreen app works, allowing someone to pause video playback on one device and resume it on another, for example.



## // Harnessing Android applications on an RDK or Linux Operator Smart TV

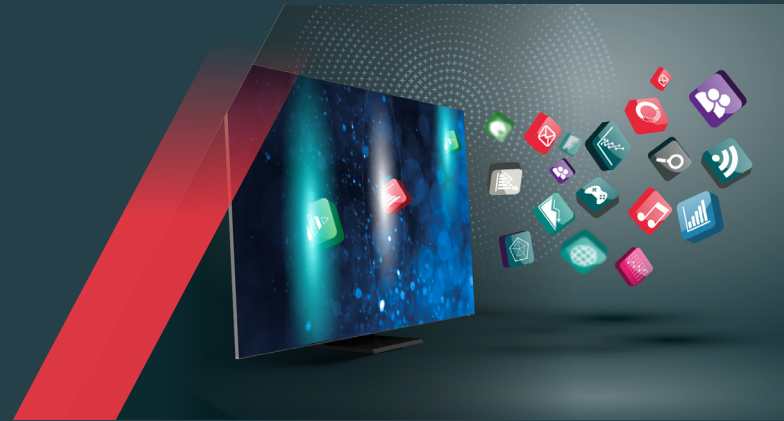
Some Pay TV operators may wish to use RDK or Linux for their Operator Smart TVs, even though their set-top boxes harness Android TV or Android TV Operator Tier. One immediate challenge presented by an Android-to-RDK or Android-to-Linux migration is a potentially dramatic loss of apps – because the Google Play store is sacrificed.

Options for app replacement include an RDK-centric app store, if the desired apps exist there. You could make an agreement with an app author to develop for the RDK environment, if you are willing to accept the development and maintenance costs. A third option is AndApps.

AndApps, from Consult Red, is an advanced application delivery platform that opens access to the vast library of Android applications for use on RDK and Linux middleware-based devices. It provides an affordable and scalable solution for mirroring apps provided on an operator Android-based set-top box within an RDK or Linux-based Operator Smart TV or STB environment.

AndApps is a live solution, available today. It supports operators who:

- Want to harness Android applications to fill gaps in app provision on an existing Linux/RDK device.
- Expand their aggregation offer by harnessing Android apps in gaming and social media.
- Want to migrate their set-top boxes from an Android environment to Linux/RDK.
- Want to maintain their Android-based set-top boxes but start their Operator Smart TV life using Linux or RDK middleware.



In all these cases, AndApps makes it possible to deliver a consistent app experience across the whole CPE portfolio.

The foundation for AndApps is an AOSP (Android Open Source Project) runtime which can run Android applications (APKs). Android applications are not inherently tied to Android-certified devices or GMS (Google Managed Services). The same APK as found in Android TV devices can be run via AndApps elsewhere.

Where an application author has written an app for the Android environment, AndApps takes this same application and makes it work in an operator environment running in AOSP. The app author does not have to write new code or introduce any customisations if they already have an AOSP-compatible APK.

**[Click here to learn more about AndApps and get a deep dive into the technology.](#)**

## // What an Operator Smart TV gives you that a set-top box cannot

The Operator Smart TV has some advantages over a set-top box. These are:

- Removing the threat of disintermediation. No high-level UX (acting as the app-across-apps/ Sovereign App) can come between the Pay TV operator and their customers.
- Amplify the Pay TV operator brand in the home, thanks to more prominent hardware branding. Technology fans know the look and feel of different operator STBs, but everyone can recognise branding that sits around the edge of a large-display television.
- The ability to transfer CPE cost to consumers, whether with one-off payments or monthly instalments. This applies across all implementation models (custom-build, factory-adopted or field-adopted).
- Simplicity for consumers, with only one remote control, single volume control, no cables, no need to tune to HDMI1 to access the operator Sovereign App (and the services within), etc.
- The potential to use a higher-visibility device as a focal point for Smart TV service developments in future.

## // The back-office, and ongoing Operator Smart TV support

As with set-top boxes, an Operator Smart TV deployment requires a comprehensive back-office to support platform functions like applications management and deployment, and device security. Like set-top boxes, the Operator Smart TV must be maintained in the field using regular apps and security updates. With the exception of provisioning, back-office functions are no more complex for Operator Smart TVs than they are for STBs. In the adopted Operator Smart TV model, operators and their ISV partners must work with the television OEM in an ongoing relationship that could last many years.

## // What happens when someone stops subscribing to the Pay TV service

Televisions are big-ticket items, and the average consumer expects many years of life from them. If a Pay TV operator subsidises an Operator Smart TV, using a content subscription to recoup some of its investment, they must decide what to do if a consumer stops taking the content package.

With a set-top box, consumers understand that the STB could cease functioning or must be given back. When a consumer has purchased the television, it is not so easy to separate the hardware and the operator Sovereign App from the content package. In the case of a custom-build Operator Smart TV, the most likely outcome is that the Pay TV provider degrades the UX to reflect the new relationship status. Subscription content is removed, but so too are recommendations, watch lists, playlists and advanced features like voice search.

The degree to which ongoing UX support is required, and what that UX support looks like, could depend on the implementation model. With a custom-build Operator Smart TV, the consumer purchased the television in the expectation of operator services and the operator application, and the operator brand sits on the hardware. It is anticipated that operators will maintain UX functionality that is at least equivalent to a standard Smart TV with free TV services.

On the custom-build Operator Smart TV, there is no fallback UX for consumers to turn to. Local broadcaster streaming apps could be kept up-to-date, and security updates are provided for the full life of the device.

With the factory-adopted Operator Smart TV, consumers bought the television with the expectation of an operator application, so the Pay TV operator may feel similar responsibilities. However, in this scenario, the OEM may have their own UX/Sovereign App for the device model in question and may be willing to 're-adopt' the television.

In the case of the nascent field-adopted Operator Smart TV approach, the consumer may have bought the television because of the OEM brand, and it is harder to argue that the availability of the operator application was the driving force in the purchase. In this scenario, operators may feel more inclined to end support and allow the TV to revert to the original OEM's application (a kind of 're-adoption').

In all cases, there are potential ongoing revenue-generating streams that can make it worthwhile for a Pay TV operator or television OEM to provide ongoing support. These include automatic content recognition (ACR), which tracks viewing at the 'glass' level and can provide valuable (and monetisable) data to the advertising industry on audience exposure to ads and programmes. ACR data is already used by audience measurement organisations, including to complement panel measurement. The provision of FAST channels opens up opportunities for advertising representation.

For a Pay TV operator, an ongoing presence in the post-subscription consumer's life provides an opportunity for 'win-back' marketing, with content promotions or other forms of advertising used to tempt the household back to a content subscription. This may be a reason to maintain base-level UX support on an adopted television. The decision on how to handle Operator Smart TV owners who unsubscribe to Pay TV content services is one of the non-engineering challenges associated with Operator Smart TV, along with the financing and retailing required.

A new kind of marketing is needed, too, to educate consumers about this new category of CE equipment. Consumer marketing might focus on television hardware capabilities, the advanced UX functionality (including content discovery made easy for the streaming age), the content services and, potentially, bundling and discounting of selected streaming apps

## // Conclusion

The Operator Smart TV represents a new chapter in the Pay TV story and goes hand-in-hand with the future of aggregation and super-aggregation of both content and value-added services. These devices will complement set-top boxes today in a typical operator CPE portfolio, but they also provide a roadmap to STB-less service provision if this is desired.

The single most important benefit of the Operator Smart TV is that it prevents the operator from being disintermediated by rival UXs (which the operator-as-an-app does not achieve). Because they are no longer reliant on consumers tuning to HDMI1 (where their set-top box would reside), operators effectively elevate themselves to being the glass-level UI.

This alone could be the incentive some operators need to introduce an Operator Smart TV. The Operator Smart TV also amplifies the operator brand in the home. It could also help operators engage with existing subscribers and non-subscribers when these consumers are refreshing their television.

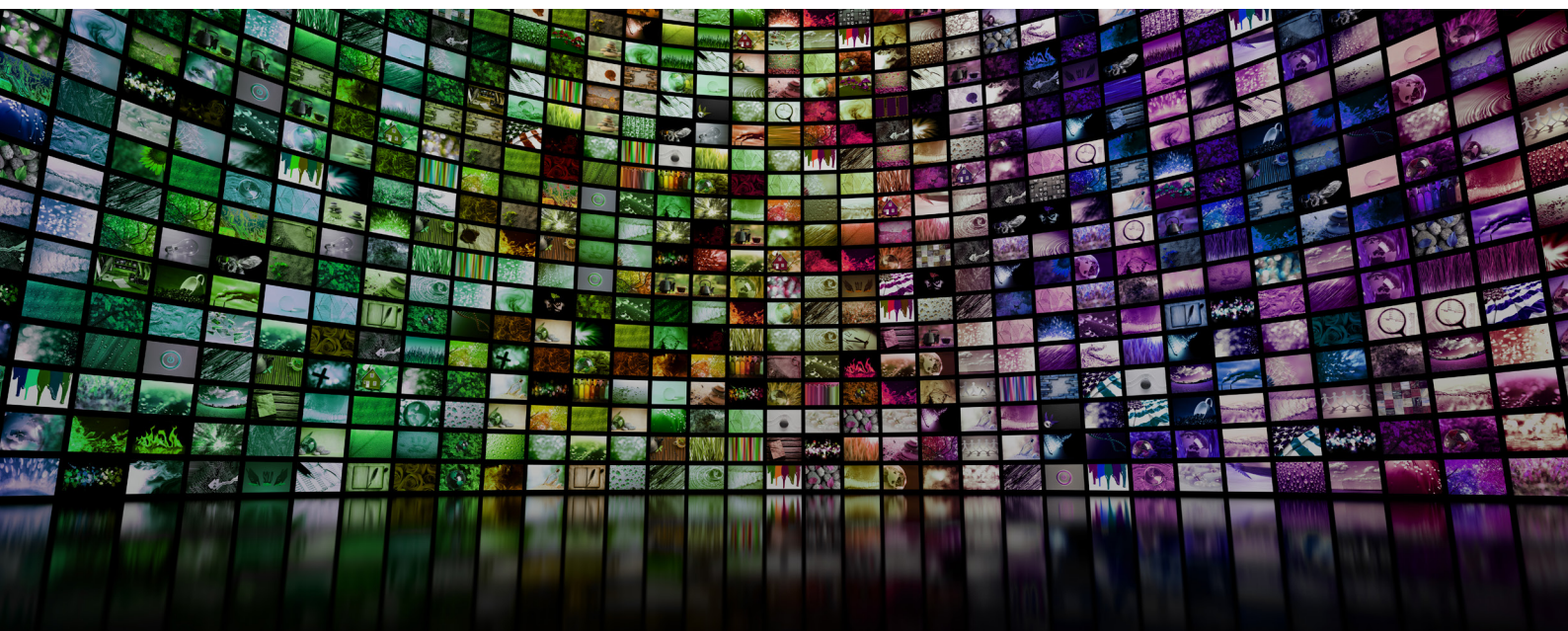
The Operator Smart TV is not a future innovation – this model is here today, already deployed and attracting increasing interest. It gives operators two notable implementation models already: the custom-built private-label Operator Smart TV and the factory-adopted model, ensuring flexibility around cost, business model and go-to-market considerations. In all cases, it becomes possible for operators to transfer the cost of hardware to consumers, albeit with potential subsidies. There are already precedents for how an Operator Smart TV can be marketed to consumers.

There are many technology choices, but it is advisable to seek a unified approach across the STB and Operator Smart TV device portfolio, harnessing the same OS, software stack and back-office capabilities to minimise complexity and maximise efficiencies. The Operator Smart TV represents an inflection point in both the CPE and the Pay TV marketplace, so it also becomes an opportunity to review the entire CPE technology strategy.

Consult Red can support operators every step of the way on their Operator Smart TV journey, from strategic consulting through development and ongoing, lifelong support. The company has extensive experience working in this emerging marketplace.

The Operator Smart TV is a powerful and bold innovation, but its basic principle is familiar – ensuring the Pay TV operator is the Sovereign App so that it can remain the primary aggregator at all times, only now without a set-top box to run that Sovereign App.

**“The Operator Smart TV represents a new chapter in the Pay TV story and goes hand-in-hand with the future of aggregation and super-aggregation of both content and value-added services.”**





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