



**NAGRA**  
KUDELSKI

CONNECTING PEOPLE TO  
THE CONTENT THEY LOVE



International Telecommunication Union



International Telecommunication Union



## Cable TV transformation: why innovation in user experience matters

Simon Trudelle, Senior Director Product Marketing

A photograph of a man and a young boy sitting together, looking at a smartphone held by the man. The man is wearing a light blue button-down shirt and a watch. The boy is wearing a red and white plaid shirt. They are in a bright, indoor setting, possibly a living room, with a window in the background. The text "More than 500 million users enjoy Kudelski Group solutions every day" is overlaid on the right side of the image.

**More than 500 million users enjoy  
Kudelski Group solutions every day**

**NAGRA**  
KUDELSKI GROUP

# KUDELSKI GROUP

## DIGITAL TELEVISION



SECURE COMPELLING EFFICIENT  
TV SOLUTIONS

\$90B Content Value  
555 Operators  
300 Million Devices

## CYBER SECURITY



END-TO-END  
ECOSYSTEM SECURITY

Finance  
Defence, Government  
practices

## PUBLIC ACCESS



PARKING (#1), MOUNTAINS (#1),  
ARENAS, ATTRACTIONS

>10'000 locations  
>90 countries

## User Experience



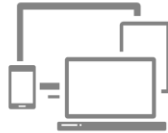
## Content Protection

\$90 Billion



Protected Revenues

300 Million



Devices

500 Million



People

555



Service Providers

\$200 Million annual R&D investment

*Connecting People to the Content They Love*

Do we **still** need to innovate TV?

What **more** could we possibly do?



# Consumers have **NEVER** been so spoiled by TV...



# Consumers have **NEVER** been so spoiled by TV...

TV Anytime, Anyplace, Anywhere to watch What We Want, When We Want, Where We Want. Live TV, Pause and Rewind Live. Start Over, Catch-Up. Store Live TV on a Hard Drive (Personal Video Recorder) or a Removable Storage. Whole Home PVR or Network PVR - Series Recording for Binge Watching. Side Load content Companion Devices to consume later when in the garden, or perhaps travelling on a bus or train. Companion Screen TV Everywhere with Throw and Fetch & Follow Me TV, Over The Top so we can have non-Linear content and not be restricted to a Schedule. Interactive TV & Applications Weather, or Horoscope or Games delivered over the Cloud and Home Network. Search & Recommendations & Social Media. STB or CPE or iDTV or Smart or Connected TV, in 3D or 4K Ultra HD or perhaps Super Ultra HD 8K. Add in High Dynamic Range, so that we get the best quality on a Curved OLED, millimetre thick screen - 24 Hours a Day, 7 Days a Week, 365 Days of the Year completely uninterrupted.



*We have given them a lot of choice ... but BEWARE ...*

# BATTLE for the Consumer's Heart is RAGING ON...



*Everyone along the value chain has to be obsessed with the end consumer  
**SEDUCTION** is the game*



INNOVATION has never been more critical



The logo features the word 'PAY' in a light blue, sans-serif font. To its right, the letters 'TV' are rendered in a large, bold, dark grey font. Further right, the letters 'IF' are in a large, bold, light blue font. Below this entire graphic, the words 'INNOVATION FORUM' are written in a smaller, dark grey, all-caps, sans-serif font with wide letter spacing.

PAY TV IF  
INNOVATION FORUM

- Innovation characteristics of the industry?
- Winning strategies of industry leaders?
- Emerging opportunities – and challenges?

Pay-TV Innovation Forum | March-September 2017

London, Singapore, Las Vegas and Amsterdam.

2017

PAY TVIF  
INNOVATION FORUM

mtm  
NAGRA  
KUDELSKI GROUP

[dtv.nagra.com/paytvif](http://dtv.nagra.com/paytvif)

# 2017 Programme Overview

- **Scope**
  - **233 service providers**
  - **42 countries** across four regions: EMEA, North America, Latin America and Asia Pacific
  - **93% of the pay-TV market** (outside China)
- **Five key stages**
  - **Original research and analysis** auditing pay-TV operator product portfolios
  - **Seminars** with pay-TV and content executives
  - **In-depth interviews** with senior executives
  - **Online survey** of pay-TV industry participants
  - **Global report** summarizing key learnings and trends



# More than 200 pay-TV executives contributed to the Forum

## Europe, the Middle East and Africa



## Asia Pacific



## North America



## Latin America



The Forum explored the development of pay-TV provider portfolios over the last year – on TV platforms, OTT and in adjacencies

## CORE PAY-TV OFFER: TV PLATFORM AND ONLINE TV SERVICES

### 1. Content pricing and packaging



### 4. Standalone OTT



## ADJACENCIES

### 7. Advertising and data



### 2. Advanced functionality



### 5. Multiscreen TV Everywhere



### 8. Internet of Things / Smart Home



### 3. Content proposition



### 6. App-based pay-TV



### 9. Content and technology services







# The pay-TV landscape today

The global pay-TV industry is experiencing a period of change and disruption

82%

of executives agree that “**competition in the pay-TV industry is set to increase dramatically**, as pay-TV companies, telcos and OTT service providers compete for subscribers.”

71%

of executives agree that “pay-TV service providers in their country will **struggle to grow their businesses** over the next five years”, up from **57%** in 2016.

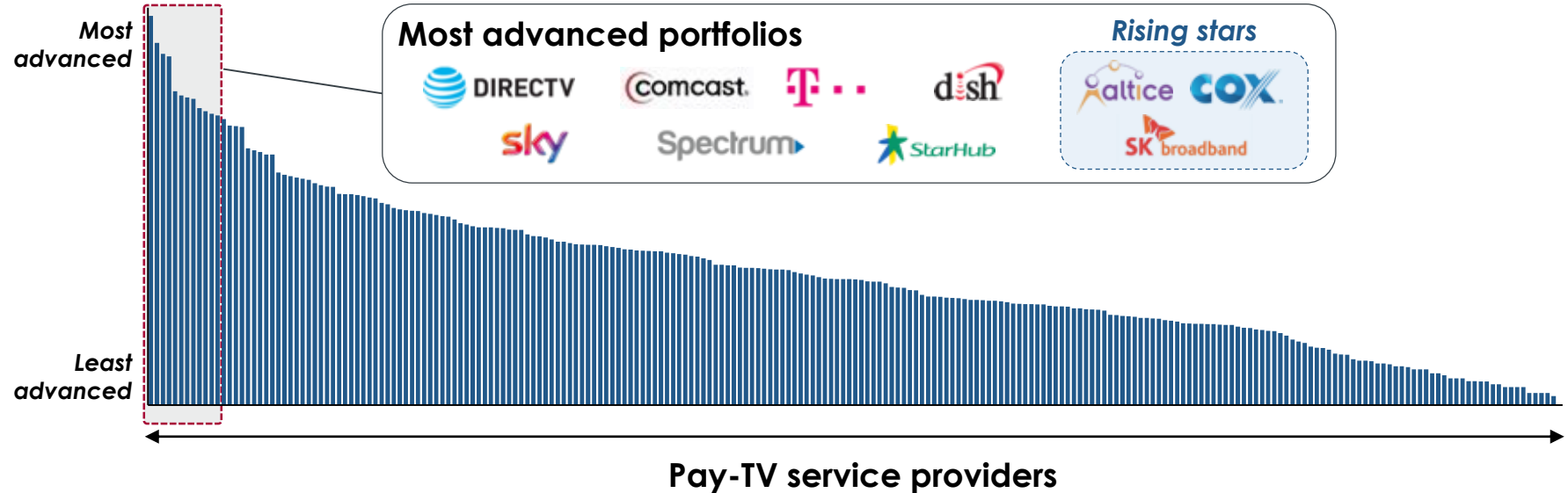
**Question:** Thinking about developments affecting pay-TV industry revenues in your country through to 2022, how much do you agree or disagree with the following statements? (% of respondents indicating “strongly agree” or “agree”; n = 125)

Although there are many trends impacting the pay-TV industry, executives highlight three major challenges

- 1 The proliferation of OTT services**
- 2 Changing consumer behaviour and demand**
- 3 Content piracy, fuelled by illicit streaming devices**

The most advanced portfolios tend to be offered by major pay-TV operators and telcos

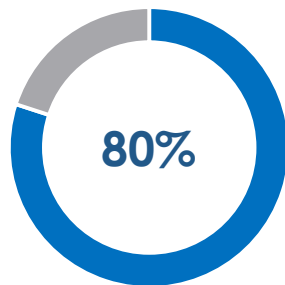
## Portfolio score (2017)



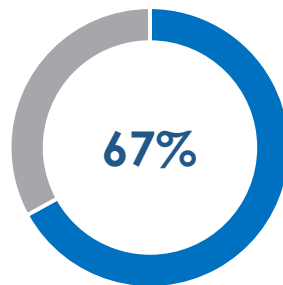
The propensity to innovate varies significantly – top innovators in 2016 were more likely to improve their portfolios over the last year

### % of operators improving their offering in the last year

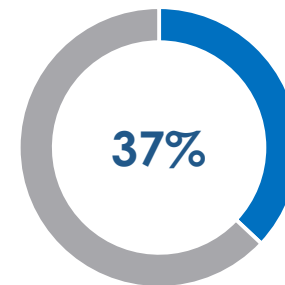
Innovators (top 33%)



Middle ground (middle 33%)



Laggards (bottom 33%)



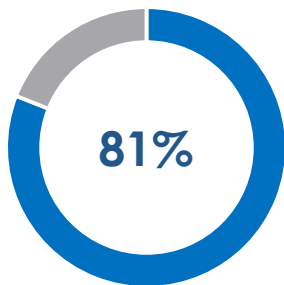
**Notes:**

Proportion of providers improving their offerings – i.e. introducing new products, features or functionalities – during the 2016/17 period (n = 220, change YoY, on a like-for-like basis)

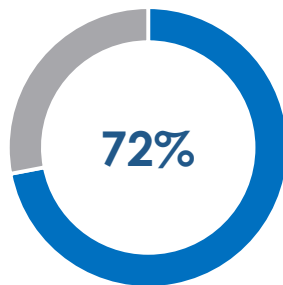
# Operators in North America and EMEA – the leaders in deploying advanced portfolios – are also the fastest to introduce new features

## % of operators improving their offering in the last year

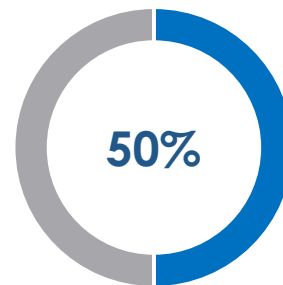
### North America



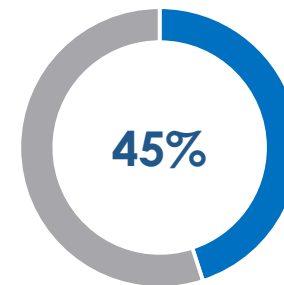
### EMEA



### Asia Pacific



### Latin America



#### Focus

Third-party apps, 4K, voice, advertising and data services

4K, third-party apps, standalone OTT, TV Everywhere

IP connectivity, PVR, standalone OTT, home automation

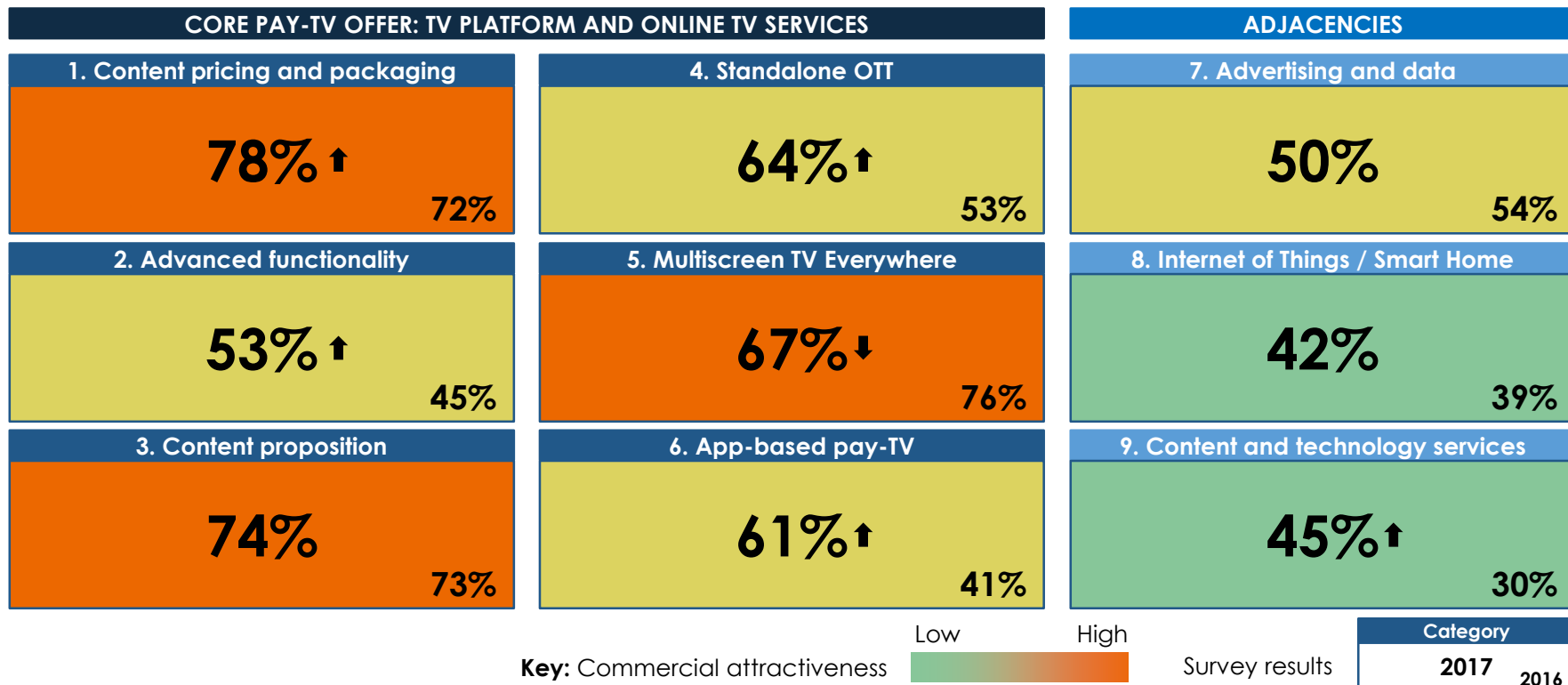
IP connectivity, standalone OTT, home security





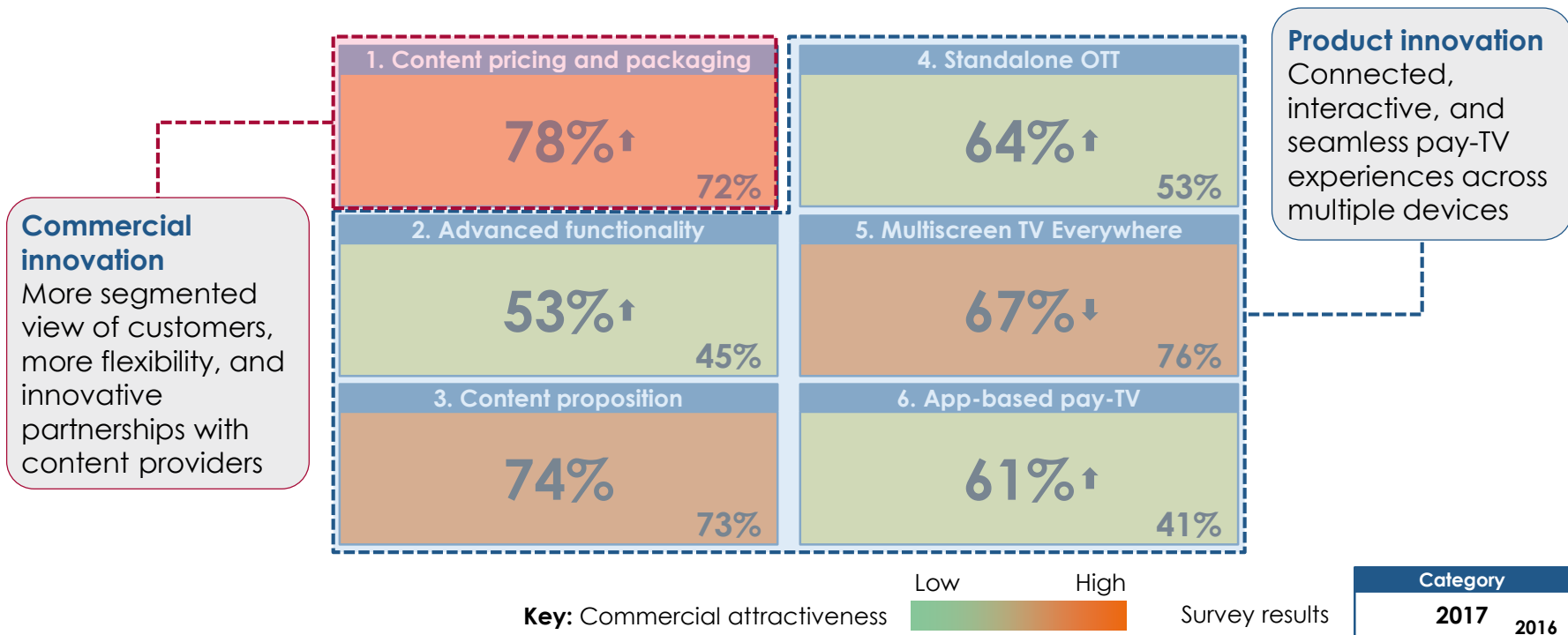
**Looking ahead – future areas  
of opportunity**

The most commercially attractive opportunities relate to strengthening and differentiating core pay-TV and online TV offers



**Question:** Thinking about new products and services, what do you see as the most commercially attractive opportunities for pay-TV service providers in your country? (% of respondents indicating 4 = attractive and 5 = highly attractive, n = 125)

# Pay-TV executives see innovation opportunities in both the product offering and commercial model





**Addressing the innovation  
imperative: NAGRA Solutions**

Do we **still** need to innovate TV?

What **more** could we possibly do?



**Don't bring a knife to a gunfight**



# Appeal of “Large Platforms” and “Digital Insurgents”



*Scale & Presence*



*Young & Fresh Style*



*Service Innovation Velocity*

*Consumer Centricity*



*(frightening) Consumer Intimacy*

# Picking the right **weapons** – and using them **smartly**



*Frictionless  
BYOD*

*Broadly Embrace  
Consumer Devices  
(but not **naively**)*



*Smart  
IP-Fication & Cloud-i-Fication*

*Cloud Economics  
&  
TV-Grade Reliability*



*Rapid  
Data Driven Innovation*

*Beyond Opinion & Guesswork  
**Actionable**  
Data Intelligence*

# Smart IP-fication – unified IP for the “post-OTT era”...



## Single Service Creation & Management

Cloud Economics

Cross-device Service Evolution



## Single Network Paradigm

(Unicast ABR, Multicast IPTV, Multicast ABR, DVB)



## Single Coherent Experience

Same “product”

# A Compelling User Experience on All Screens

## The OpenTV Experience



OpenTV UI

## OpenTV Suite



OpenTV OS



OpenTV Player



OpenTV Platform

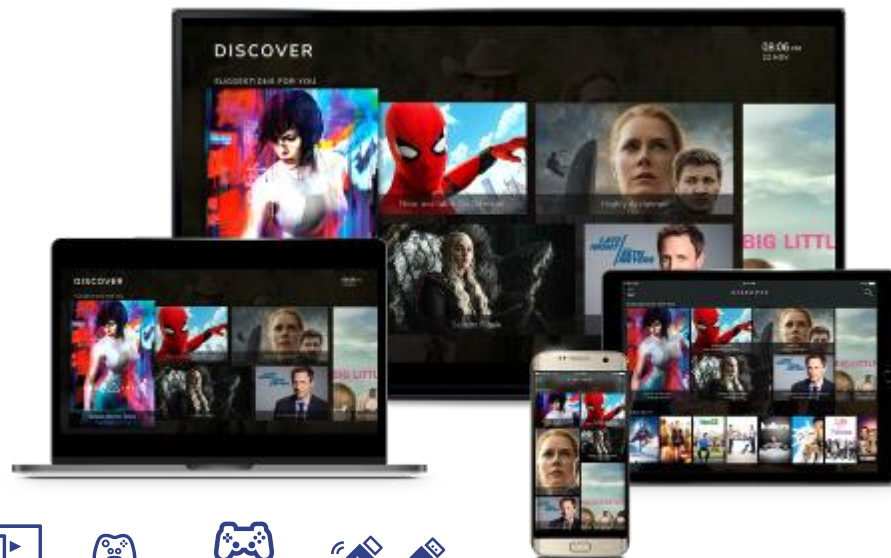
*OpenTV Signature Edition*

- Simple and intuitive discovery & consumption of content
- Consistent experience across *all* viewing use cases & devices



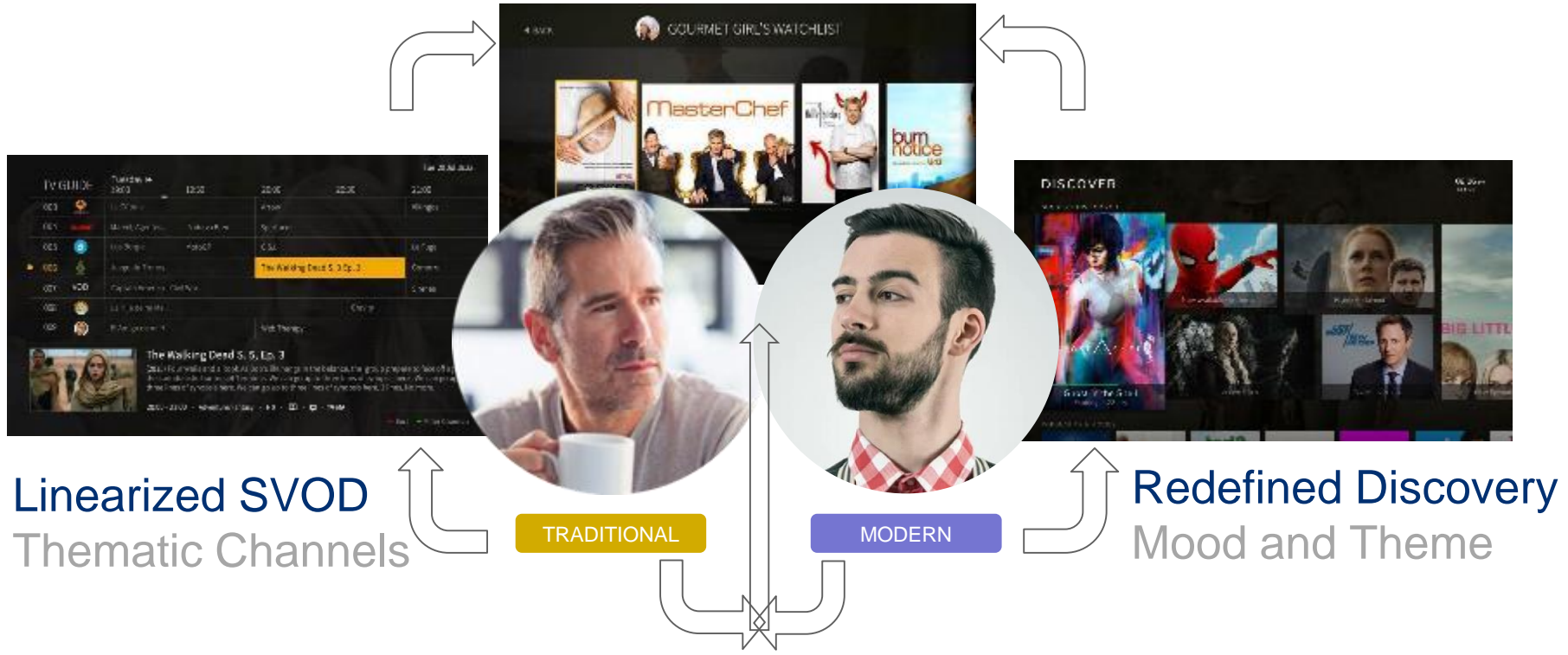
- Smart & efficient operations
- Rapid & insightful service innovation

# Complete and pre-integrated pay-TV entertainment solution



4K + TV Everywhere with multi-device capability

# Free flowing personal route to content



# Feature rich - Modular services - Always evolved



Pause Live, Start-Over – Premium

Secure TV Anywhere



Follow Me



Analytics



NAGRA Security, Watermarking & DRM

Replay TV



Apps, Services



AVOD, SVOD, TVOD - MONETIZATION



Personalisation



We automatically enhance the system – bringing scheduled add-on features and services - so you can concentrate on marketing to consumers and business growth



# Content Management System - Monetization

Open TV  
Signature Edition

Operations  
Console

Personalisation  
and Consumer  
Satisfaction Focus



Onboard  
Update  
Manage  
Analyse  
Promote  
Advertise  
...



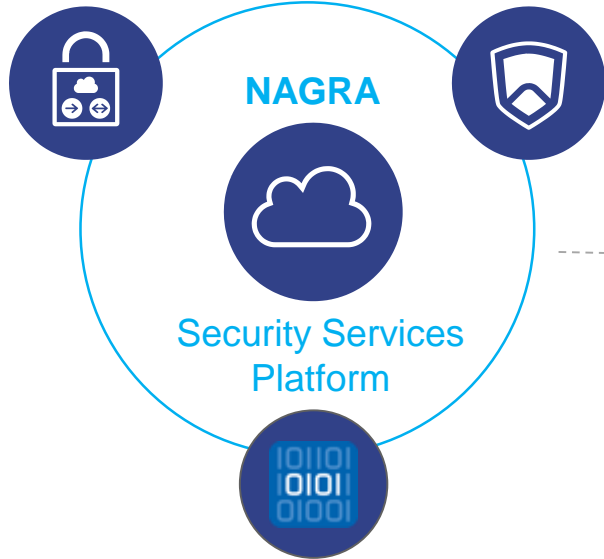
# Content Management System – Analytics



# Smart & Data Driven Innovation

Service, Device & App Security

Anti-Piracy Services

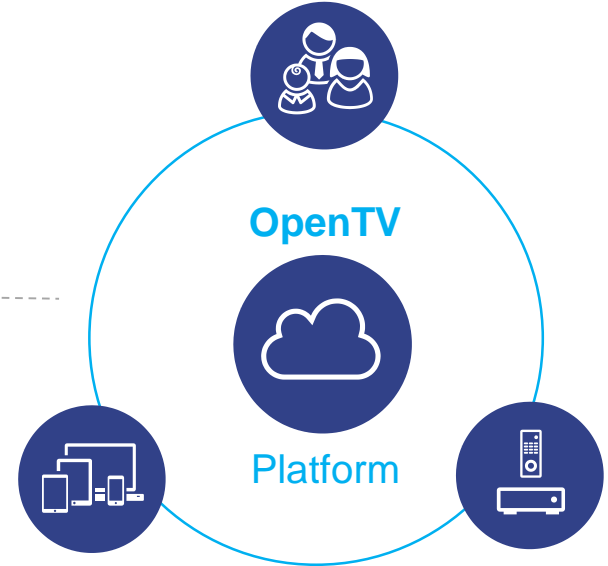


Security Services Platform

Forensic Marking

 insight  
Actionable Intelligence

OpenTV UI



OpenTV

Platform

OpenTV Player

OpenTV OS

**Content Value Protection**

**Compelling User Experience**



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