



# MOBILE VIDEO REPORT

Business Models Innovation Drives  
Mobile Video Monetization



European Mobile Video  
Forum Edition  
September 2016

Partner with  
**STRATEGYANALYTICS**  
Research, Experts, and Analytics



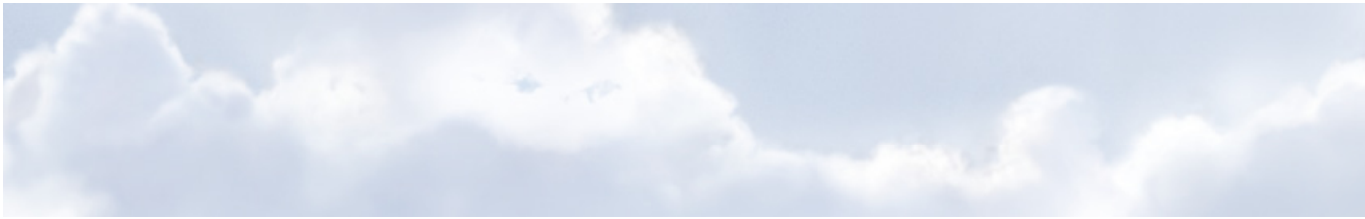


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## EXECUTIVE SUMMARY

Europe's mobile networks are as ready for mobile video as any other region according to Video Maturity scorecard (Exhibit 1).

- Western Europe scores well across key technology dimensions including high smartphone penetration, LTE coverage, and Wi-Fi penetration, which are essential enablers for mobile video growth.
- Western Europe is also leading in the economic dimension by offering affordable mobile data packages.

**However when it comes to facilitating the fast growth of mobile video consumption and innovative monetisation models, European mobile operators lag those in North America and advanced Asia Pacific countries.**

- This may be partly due to different market characteristics, e.g. aging population less inclined to fully embrace mobile video to compare with the enthusiasm of the younger generations in Asia Pacific.

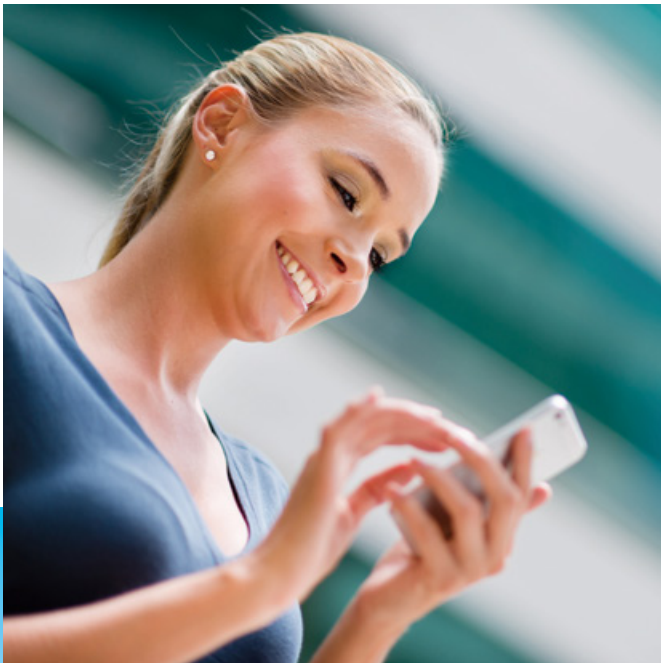
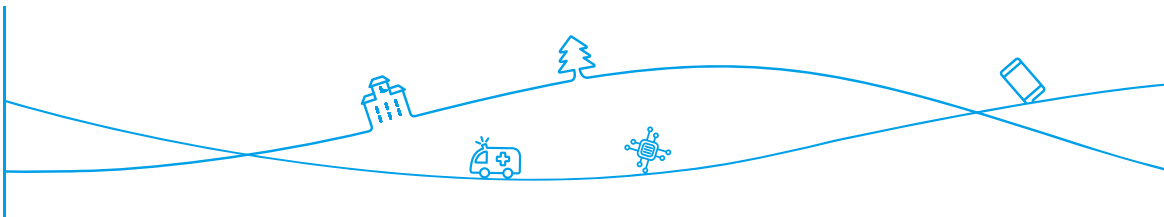
- It may also be a result of overly restrictive regulatory considerations, e.g. net neutrality policies.

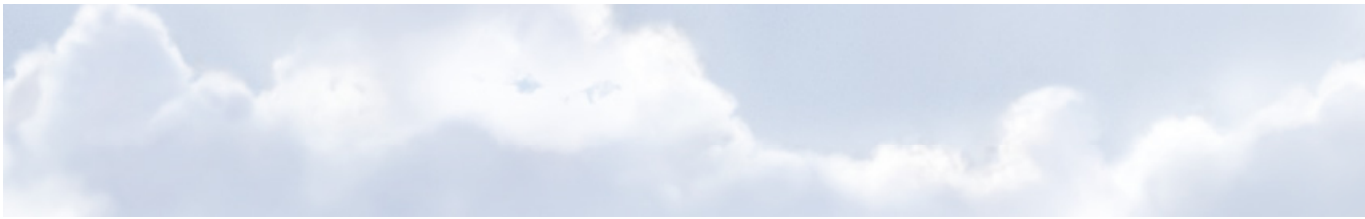
This report provides European operators with examples of successful promotion of mobile video from selected operators in different parts of the world. These case studies cover different modes of engagement by operators, ranging from sponsored data to launching their own OTT services, from partnerships with media companies to operating video portals.

This report concludes with a set of recommendations for European operators. We believe European operators should move beyond selling vanilla data plans as this race will hurt the bottom line and offers no differentiation. Instead, we recommend European operators consider other more sophisticated models, e.g. video centric tariffs, sponsored data, and exclusive content through in house development or partnerships.

- It is time for European operators to update their strategies and business models to unleash the potential of the mobile video market.







# 2

## EUROPE'S MOBILE VIDEO MARKET: THE UNTAPPED OPPORTUNITIES

A decade ago, European mobile network operators (MNOs) were among the most aggressive in promoting their own video offerings including video portals that offered video downloads and DVB-H based mobile TV services. However, these efforts did not take off as fast as expected, hampered both by technology limitations and business strategies, while the industry dynamics evolved.

Since 4G networks started rolling out, and the

market moved on to embracing on-demand video, MNOs in Western Europe have become less active in driving mobile video adoption as compared with their counterparts in other advanced markets, e.g. North America, Japan, and Korea.

Let us start by revisiting the mobile video maturity scorecard introduced in the Mobile Video Report, Video a Key Driver of Mobile Market Value , published in June 2016.

Exhibit 1: Regional Mobile Video Maturity Scorecard

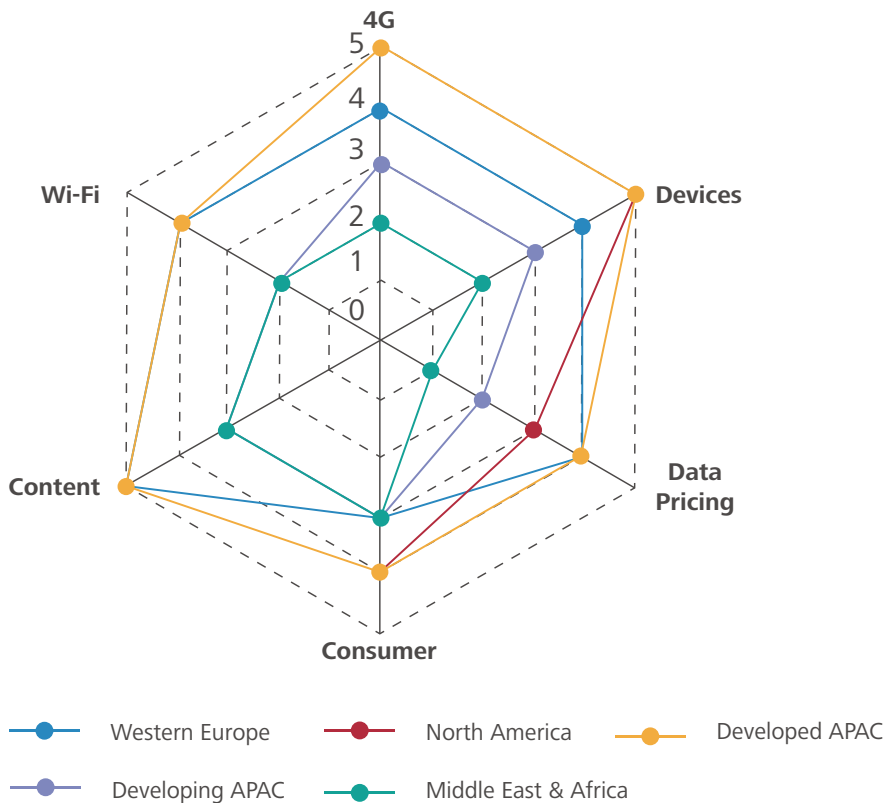


Exhibit 1: The Mobile Video Maturity Scorecard shows that Western Europe is in a mature state for mobile video, scoring highly across most important dimensions required to support active mobile video use. Western Europe is one of the leaders on economic, technical and content dimensions.

The chart shows that Western Europe is among the leaders on economic, technical and content dimensions.

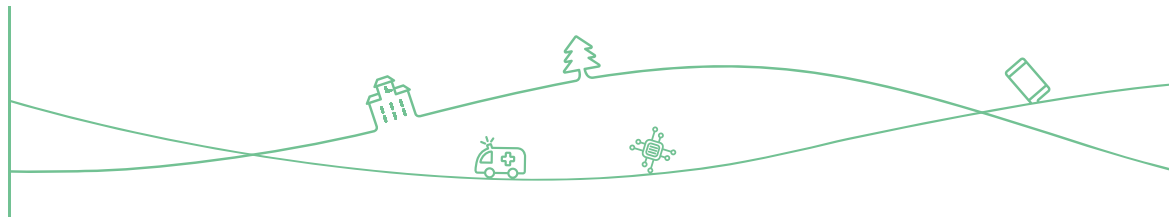


Exhibit 2 is a more detailed analysis of the technical readiness by comparing smartphone penetration, 4G network coverage and home Wi-Fi penetration between the leading regions: Western Europe, North America, and Developed APAC, vs. the global average.

### Exhibit 2: Mobile Video Readiness – Regional Comparison

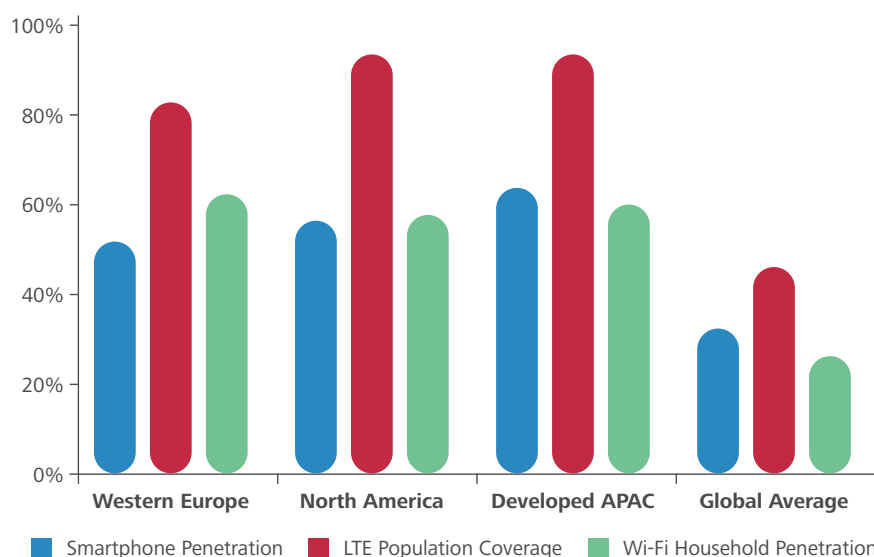


Exhibit 2: Western Europe scores well across key technology dimensions including high smartphone penetration, LTE coverage, and Wi-Fi penetration, which are essential enablers for mobile video growth.

	Western Europe	North America	Developed APAC	Global Average
Smartphone Penetration	54%	59%	65%	35%
LTE Population Coverage	87%	98%	98%	48%
Wi-Fi Household Penetration	66%	61%	63%	28%

Source: Strategy Analytics

It is clear that the only technology dimension that Western Europe falls short of the levels of North America and Developed APAC is LTE coverage .

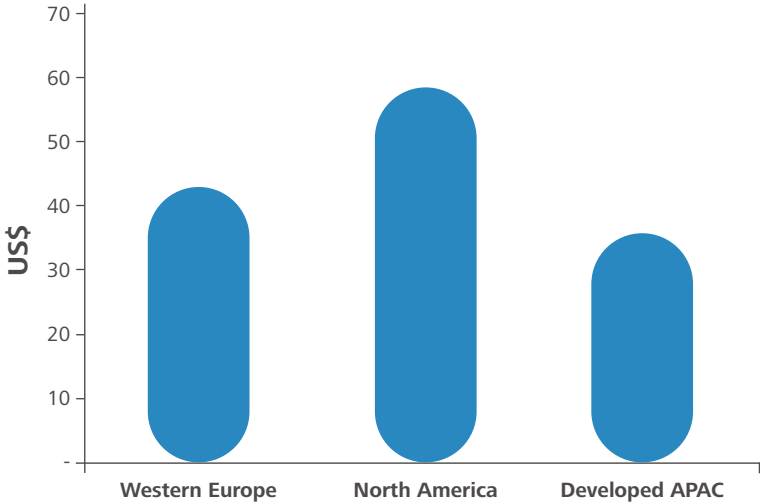


Western Europe is also leading in the economic dimension by offering affordable mobile data packages. Exhibit 3 shows the normalized prices of 5GB cellular data. Developed APAC offers the most competitive price of \$36, followed by Western Europe at \$42, with the price offered by a typical North American operator the least competitive at \$57.

However, operators in Western Europe have been less innovative in their approaches to monetizing demand for video than operators in Asia Pacific and North

America. Western European operators moved away from marketing “unlimited” data plans, while also failing to embrace the business-to-business opportunity associated with sponsored data beyond a few small trials and deployments. Furthermore, operators in Europe have not offered video-centric data add-ons as much as operators in APAC. Instead, tier one carriers in Europe, like Vodafone, have preferred to partner with video streaming services like HBO, Netflix, and Sky to bundle limited time access to these services into higher-value tariffs.

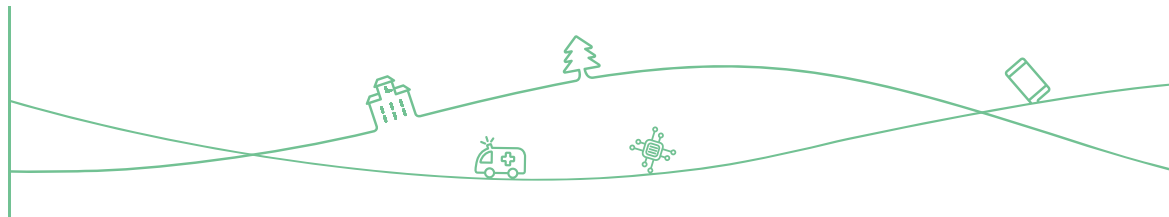
**Exhibit 3: Average Price for 5GB Data**



**Exhibit 3: From the standpoint of mobile data affordability Western Europe compares well against other developed markets, including North America and developed countries.**

Source: Strategy Analytics, Teligen, OECD Mobile Broadband Price Benchmarking

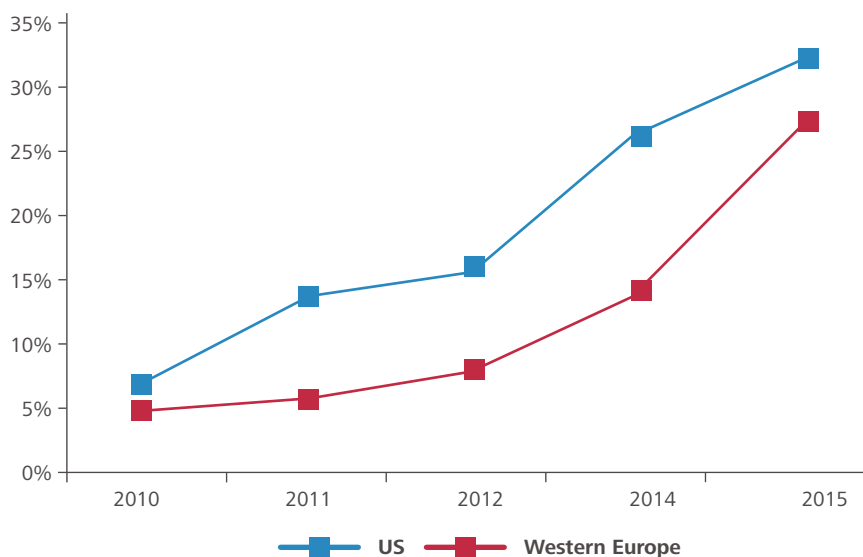




Western Europe is also leading in the content dimension. According to the data tracked by Strategy Analytics, as of the end of 2015, more than 200 OTT video services are available on smartphones in the world. Western Europe has more than 120 OTT services available for smartphone users, the highest number among all regions. It is then followed by North America with about 110 services available on smartphone, leaving APAC as a whole (both Developed and Developing) at a distant third place with less than 70.

The only dimension Western Europe is not leading in is socio-demographic and behavioral dimension. This is largely to do with the ageing demographic, but is also hampered by consumers' concern over data consumption and overage cost. But there are also encouraging signs. According to Strategy Analytics' consumer survey data, the percent of European users who stream video to their smartphones at least once a week doubled from 2014 to 2015, reaching 28%, and closing on the percent of American consumers who do so. See Exhibit 4.

**Exhibit 4: % of Users Who Stream Video On Smartphones at Least Once a Week**

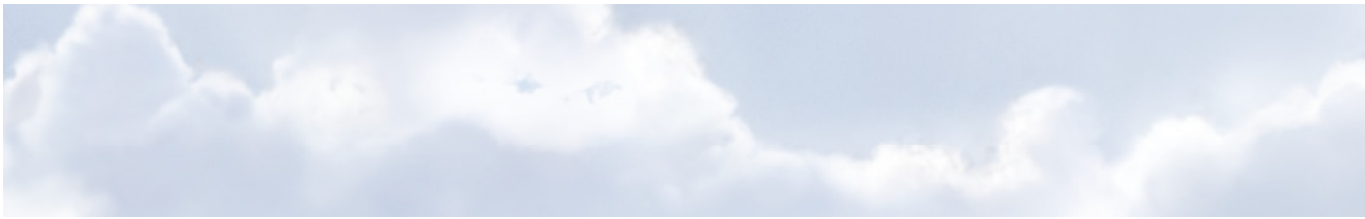


**Exhibit 4: Active use of mobile video in Western Europe lags the US but has started to catch up over the last past two years.**

Source: Strategy Analytics, Modia & Services User Experience



Against the backdrop of the combined effect of all these factors, European operator focus has mainly been selling larger data plans and partnering with premium subscription VOD providers (Netflix, Sky, HBO) at best. While these bundled content offers are to be lauded for bringing popular content into the mobile realm as an integrated part of mobile offers, there are more diversified business models Western European operators can explore to drive faster growth of mobile video adoption. The next chapter will deep dive into 4 selected cases from different regions to provide examples and benchmarks for Western European operators.



# 3

## CASE STUDIES: BUSINESS MODELS TO MONETIZE MOBILE VIDEO

To date, only a handful of mobile operators are addressing growing consumer demand for consuming video on their networks beyond attempting to upsell data and bundle access to video services into high value tariff plans. Examples of more innovative operators include T-Mobile US, which has launched Binge On, LG Uplus, which has developed its own video content portal

that it is monetizing by charging subscription fees for access and bundling into price plans, and Verizon, which has created its own over-the-top (OTT) video application, called Go90, to compete for a share of the \$3 Billion US mobile video advertising revenue opportunity. mobile video advertising revenue opportunity.

### 3.1 USA – T-Mobile’s Binge On

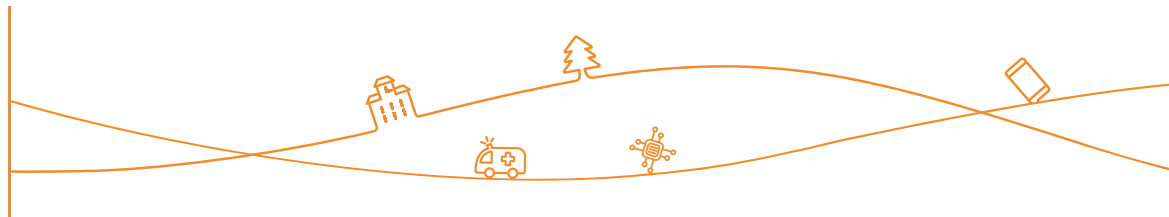
#### What is T-Mobile USA’s Binge On?

T-Mobile US launched Binge On in November 2015 as part of its Uncarrier X (10) initiative. T-Mobile’s Binge On is comprised of three elements which include zero-rated video, partnerships with video content partners, and meeting customers’ expectations for mobile viewing experiences.

- **Zero-rated video tariffs:** Customers subscribing to T-Mobile’s Simple Choice 4G tariffs with a data allowance of more than 6 GB will get zero-rated access to streaming services (via app or mobile web) delivered at standard rate definition only (e.g. 480p).
- **Content partners:** T-Mobile has been able to convince content providers, like Hulu, Netflix and YouTube, among others, to partner with T-Mobile and make their video stream identifiable to the network for the purposes of optimizing the streams to standard rate definition only (e.g. 480p). T-Mobile has successfully argued to content partners that providing a smooth viewing experience, free of jitters, provides a richer mobile viewing experience than a high-definition experience that is more likely to stall and freeze.
- **Consumer experiences:** Binge On is applied to customers on an opt-out basis, which means T-Mobile has automatically opted in users to stream video content at standard definition rates. Should customers decide to opt-out of Binge On then their consumption of video will count against their data bundle.

By zero-rating video traffic T-Mobile’s Binge On addresses a key barrier to mobile video consumption, which is the fear of incurring high data coverage fees (or using up one’s high-speed data allocation) while consuming an ever growing volume of video content being delivered through apps like YouTube, Facebook, Twitch and other video services.

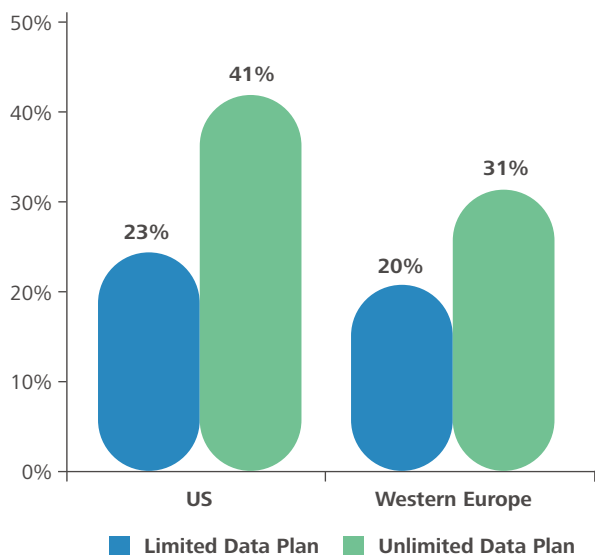




The zero-rating of video content is a key element of T-Mobile's Binge On initiative. One of the major consumer pain points for mobile video usage remains the fear video will drive data usage to exceeding their data allowance, which is also influencing users to delay video consumption to when they have access to a Wi-Fi network. Consequently, users with unlimited data plans are more frequent consumers of video. Strategy Analytics' research indicates 41% of US survey respondents that have unlimited mobile data plans

reported streaming video to their phone at least once per week compared to just 23% of those with limited data . Similarly, in Western Europe 31% of users with unlimited plans stream video on their phone at least once per week, versus 20% of those with limited data plans. The success of Binge On also demonstrates that mobile users are prepared to accept the trade-off of video streamed at lower quality standard definition (SD) in exchange for zero-rated video.

**Exhibit 5: % of Respondents Who Use Mobile Video At Least Once Per Week: By Mobile Data Plan**



**Exhibit 5: Users of unlimited data plans are significantly more likely to watch mobile video than those without unlimited data.**





### Binge On Impact

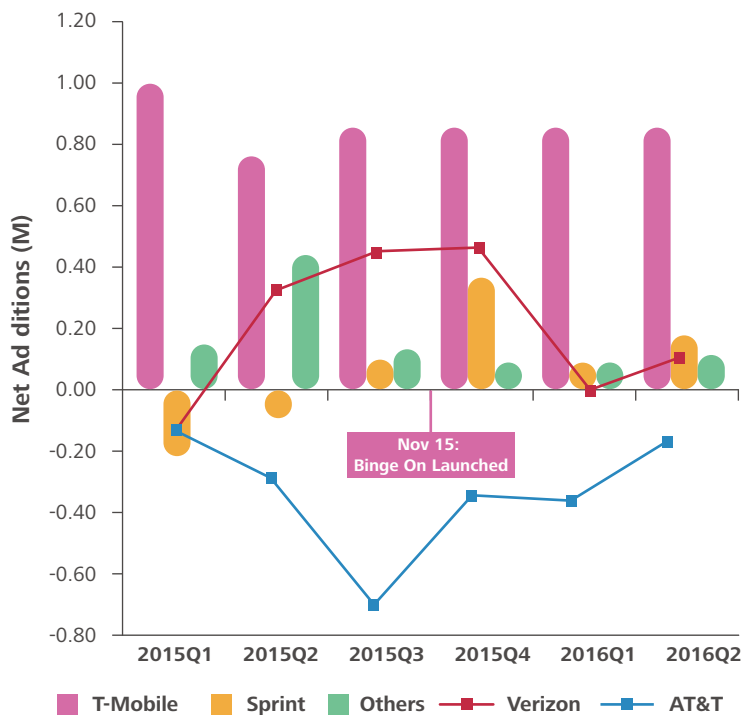
**Binge On has been a key component in the un-carrier portfolio which has allowed T-Mobile to consistently outperform the market in ARPU and churn evolution. Furthermore, T-Mobile claims Binge On has had a positive impact on network traffic, video consumption, and the number of partner video services:**

Customer and ARPU growth: T-Mobile claims partners like Netflix are seeing large increases in daily viewers, while T-Mobile has seen robust performance in both net-additions and ARPU, with the latter due to the tariff price rises introduced to its Simple Choice plans in tandem with Binge On. For example, in order to qualify for Binge On customers had to sign up to 3GB tariffs, with many needing to do so with from lower priced 2GB data plans. The lower limit to qualify for Binge On has been raised to 6 GB, which starts at \$65 per month for a single line. Exhibit 6 compares the net-phone additions for the major US operators on a quarterly basis between 1Q 2015 and 2Q 2016, demonstrating that Binge On is likely to have been a factor in maintaining stronger customer additions than competitors.

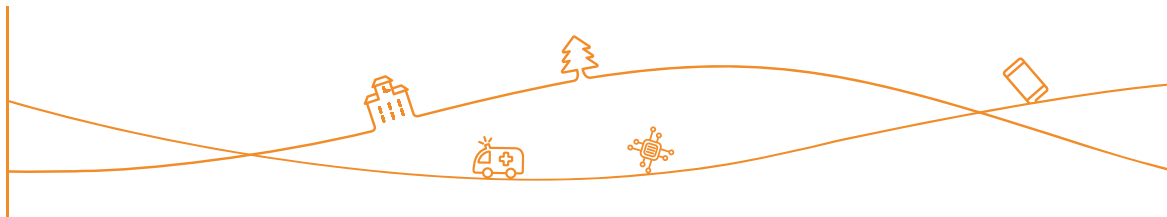
Overall drop in data traffic: T-Mobile claims Binge On has been a success, stating in its Q4 2015 financial reporting that data traffic on its network had declined by between 10%-12% since launch. At Q1 2016 T-Mobile stated network efficiencies above 10%, more users congesting the network at 480p compared to 720p or HD. Unlimited data users are keeping Binge On activated (i.e. not opting out) enabling T-Mobile to reduce the potential impact of video data traffic on T-Mobile's network from this heavy data user segment.

- **Video traffic usage:** 70% of video traffic on T-Mobile's network is covered by Binge On, and users have doubled their video consumption. 34 Petabytes of video data streamed by end January 2016, the equivalent of over 5.3 million standard DVDs of video content. Growth in video consumption proves latent demand for mobile video enabled by unlimited or zero-rated data.
- **More video content providers:** Binge On has grown the number of video content provider partners since launch from 24, including Netflix, Hulu and HBO, to just over 100 currently, including YouTube. A growing list of partners indicates Binge On has proven to be a compelling platform for leading video content providers.

**Exhibit 6: Quarterly Postpaid Phone Net Additions - USA**



**Exhibit 6: Initiatives like Binge On have enabled T-Mobile US to maintain its growth momentum with its quarterly postpaid phone net additions remaining superior to its competitors.**



T-Mobile's newly announced tariff, T-Mobile One, which will be launched on 1st September for new customers, provides unlimited data, which effectively zero-rates all classes of data traffic. Importantly, subscribers to T-Mobile One will have unlimited video streaming, but will be restricted to video streamed at 480p quality. Customers that want higher quality video (720p or 1080p) will need to pay an additional \$25 per month in addition. Furthermore, T-Mobile will shape all video traffic to 480p, unlike Binge On where T-Mobile partnered with video content providers to include them in zero-rating. On 29th August, T-Mobile updated the offering with T-Mobile One Plus, whereby the \$25 addition will not only enable subscribers to stream HD video but also include unlimited tethering and higher data speed while roaming. In addition T-Mobile One Plus would also add a \$3 HD day pass offer from October for those subscribers not prepared to commit the upgrade for the full month.

**T-Mobile One and One Plus have been designed to monetize users that prefer to stream video in higher quality than 480p, creating two separate**

**video streaming tiers, zero-rated and premium. Thus, Binge On has provided a stepping stone for T-Mobile to charge users for high-quality video use.**

T-Mobile One, which offers unlimited data starting at \$70 per month for a single line, demonstrates the success of T-Mobile Binge On. Significantly, while Binge On only zero-rates videos from its partners, but does not cover videos played inside popular social networks, e.g. Facebook and Snapchat. With T-Mobile One the switch to unlimited data extends zero-rating to all video content.

Currently, T-Mobile customers that qualify for Binge On through their Simple Choice tariff can opt-out of Binge On and have higher definition video counted against their data allowance. With T-Mobile One, subscribers that opt-out of limited quality streaming will need to increase their spending to \$95 per month (for a single line) or purchase \$3 day passes when needed. However, T-Mobile claims that just 1% of those on tariffs that qualify for Binge On have so far opted out in order to get higher quality video streams, which suggests limited monetization potential.

### Binge On End User Behavior or Perceptions

T-Mobile US' Binge On campaign has proven to be a success, with survey results from Strategy Analytics' AppOptix USA telemetry panel indicating high levels of awareness among T-Mobile and non-T-Mobile users, a significant portion of T-Mobile users upgrading to a larger tariff to get Binge On, and increased mobile video consumption, among other positives.

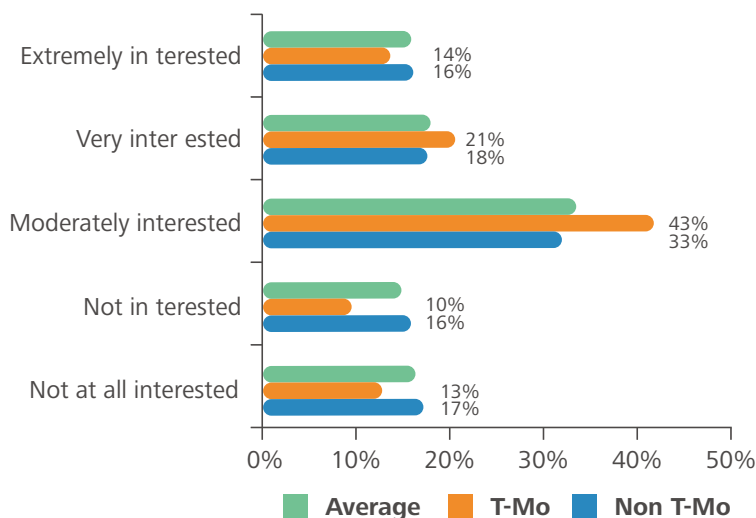
- Just below 40% of T-Mobile users on our panel claimed to have Binge On activated with their T-Mobile account.
- **Significantly, 20% of T-Mobile Binge On users indicated they had upgraded to a larger price plan in order to get access to Binge On, underlining strong demand for video and the positive impact Binge On plans have on boosting ARPU.**
- 34% of T-Mobile customers that don't use Binge On and non-T-Mobile users claimed to be very interested in a service like Binge On, 34% stated moderate interest, while 32% demonstrated no interest (Exhibit 7).
- 36% of respondents across all carriers indicated they

were either extremely or very aware of Binge On, with only 22% unaware. Not surprisingly T-Mobile customers reported the highest levels of awareness followed by AT&T and Sprint.

- Despite being restricted to streaming at 480p quality, 92% of T-Mobile Binge On users claimed to be satisfied with the quality of mobile video streaming, indicating that the vast majority of users are prepared to trade high-quality video to have acceptable-quality video zero-rated against their tariff.
- 87% of males versus 66% of females claimed to have increased the amount of time they spend watching mobile video since using Binge On. 40% of males have raised their mobile video use either extremely or very, versus 30% of females, (Exhibit 8).
- From a customer retention perspective, 61% of non-T-Mobile customers indicated they would be highly likely to stay with their wireless provider if they offered to zero-rate mobile video traffic, with a further 28% indicating they would be moderately influenced to stay with their provider.

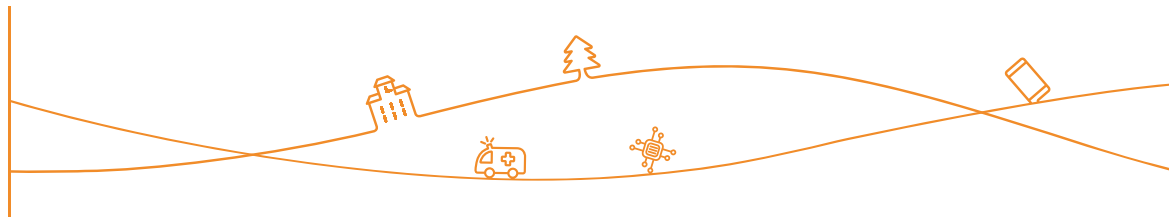
### Exhibit 7: Interest Levels In Services Similar To Binge On

How interested are you in gaining access to a free service like T-Mobile's Binge On that allows you to stream popular video services at DVD quality, like YouTube, to your smartphone without it counting against your data allowance?



**Exhibit 7: High levels of interest in Binge On both within and outside the T-Mobile customer base indicate a strong interest in zero-rated video tariffs among US smartphone users.**

Source: Strategy Analytics, AppOptix USA, August 2016, n = 812



**Exhibit 8: Binge On Raising Mobile Video Consumption – males versus females**

Has Binge On increased how much video you watch on your smartphone? & What is your gender?

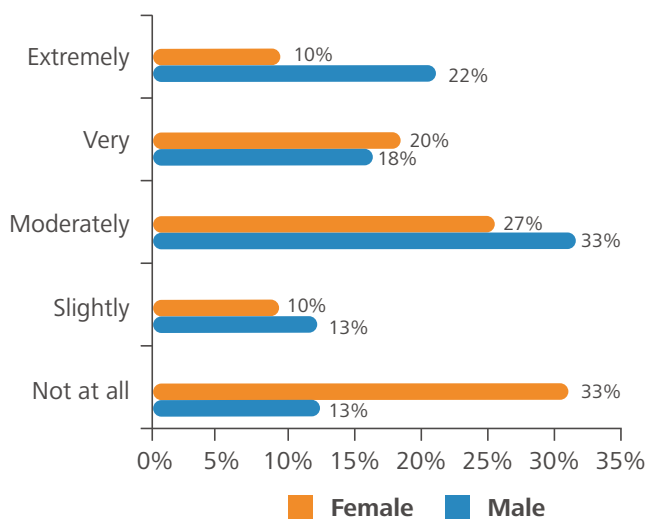


Exhibit 8: Binge On has influenced increased mobile video consumption, with more males stating an increase in mobile video use compared to females.

Source: Strategy Analytics, AppOptix USA, August 2016, n = 75

**3.2 Korea – LG Uplus**

With evidence that users of mobile video services are generating greater data use than average mobile users, LG Uplus has launched a mobile video portal to increase both users’ watch time, mobile data usage, and ultimately average revenue per user.

- Data reported by LG shows how users of its video services are on average consuming double the volume of data than the average LTE user base. Demand for video is also encouraging users to migrate to higher value unlimited data tariffs. In Q2 2015 users of U+HDTV service used an average of 8 GB per month versus 4.2 GB for the average U+ LTE user versus the industry average of 3.6 GB, Exhibit 9.

**Exhibit 9: Video Service Users Consume A Higher Than Average Volume Of Data Per Month**

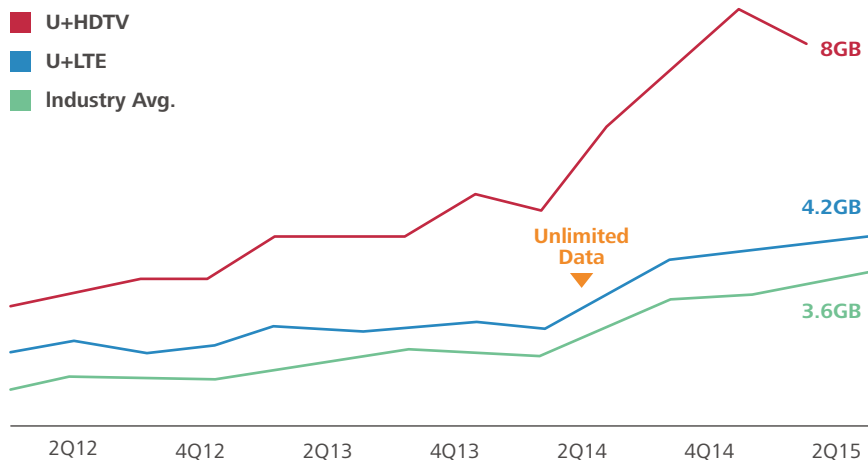


Exhibit 9: LG Uplus users of video services (U+ HDTV) consume almost double the average volume of data compared to average LG Uplus LTE subscribers, highlighting the positive impact of bundled video services on mobile video use.

Source: Company Information, Ministry of Science, ICT and Future Planning (MSIP)

LG Uplus in South Korea has been one of the most active operators at developing a digital video offering to meet rising consumer appetite for mobile video services.

**“We learned our customers use the faster LTE network for video content. So we decided to provide more video-related services based on our world-class broadband LTE-A network,” - Park Joon-dong, head of LG Uplus' contents business division, June 2014.**

LG Uplus has focused on premium video services, including its subscription LTE Video Portal, subscription movies and TV service, Uflix, and other premium content bundles optimized for delivery over its LTE-A network, as shown in Exhibit 10. To attract subscribers LG Uplus claims to have licensed popular video content from US broadcasters including NBC Universal, ABC, HBO and MGM among others. For example, in February 2015 LG Uplus signed a 6 month exclusive license with HBO to distribute 600 HBO shows.

**Exhibit 10: LG Uplus' Mobile Video Service Portfolio**

LG's Video Services	Launched	Type	Business Model	Description
LTE Video Portal	June 2015	•TV & VOD	•Bundled into tariffs •Subscription (5,500 WON per month)	•IPTV service with over 120 channels •KBS, MBC, and SBS •KBO baseball and MLB LIVE •Partnerships with US broadcasters NBC Universal and ABC among others •Knowledge Pack (included for LG Uplus subscribers)
Uflix	June 2014	•VOD	•Subscription (7,000 WON per month)	•22,000 movies and shows •Partnership with MGM to show US content in Korea •Feb 2015: 6 month exclusive license to offer up to 600 HBO shows
Knowledge Pack			•Bundled into tariffs •Subscription (5,500 WON)	•3,000 knowledge and lifestyle content (e.g. language, education courses, cooking courses, DIY tips and others)

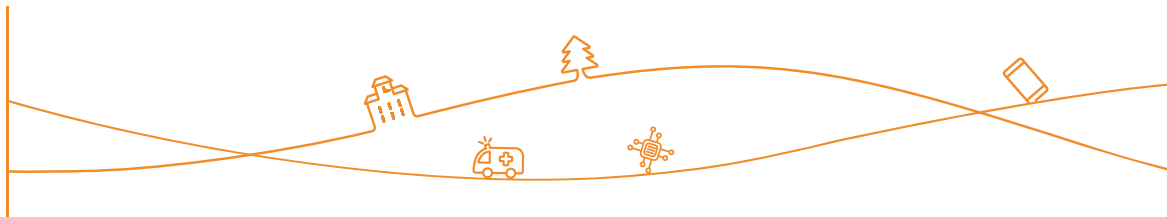
**Exhibit 10: LG Uplus has developed a subscription based video portal, LTE Video Portal, offering live TV, catch-up and on-demand services. Access to the LTE video portal is also bundled into higher-value tariffs.**

LG Uplus is monetizing its video assets by charging a monthly subscription to access content in its LTE Video Portal. On higher value plans Uplus is bundling both access to its LTE Video Portal in addition to generous data allowances specifically for using its video portal, to encourage users onto upgrade.

- **Rising demand for subscription video services:** services will generate over \$1 Billion in South Korea by 2021. Subscriptions to digital video services, such as Uflix, Netflix, and others in South Korea will rise at almost a 7% CAGR between 2016 and 2021, approaching 14 million subscriptions at the end of the period. LG Uplus is seeking a share of subscription revenue after covering costs for acquiring distribution rights for live TV and VOD content.







Enticing users to higher value price plans: As highlighted in Exhibit 11, LG Uplus is bundling access to its LTE Video Portal along with its premium knowledge pack bundle onto higher-value price plans. To further encourage users to upgrade tariffs LG Uplus has bundled additional LTE data allowance of 1 GB per day into those tariffs, specifically to be used for content available through its video portal. Users of video content have a higher than average demand for data, (Exhibit 9).

LG anticipates that over time growing engagement and usage of mobile video will drive increased mobile data usage, which will enable LG to migrate users towards higher value price plans with unlimited data, or video-specific data tariffs. Indeed, LG Uplus attributes the 6% growth in service ARPU from WON 35,309 (US\$ 31.50) per month in 1Q 2014 to WON 37,449 (US\$ 33.42) at the end of 4Q 2014 on the launch of unlimited LTE data in April 2014, and expects video-centric tariffs launched in June 2015 to replicate this trend.



**Exhibit 11: LG Uplus Video Data Plan**

VOICE Data Plan			
Plans	Voice & Text	Data	VAS
29.9	Unlimited	300MB	300MB
35.9		1.3GB	600MB
41.9		2.3GB	1.1GB
46.9		3.6GB	2.2GB
50.9		6.6GB	3.3GB
59.9		11GB	Unlimited

Launched 2Q 2015

\*Unlimited Data: Speed reduced to 3Mbps after exceeding 2GB/day

VIDEO Data Plan			
Plans	Voice & Text	Data	VAS
38	Unlimited	300MB	1GB Video Data / Day
44		1.3GB	
50		2.3GB	
55		3.6GB	
59		6.6GB	
68		11GB	
80	20GB	LGHH Gift Points 5,000/mth.	Asiana Mileage 10,000/yr
100	35GB		Asiana Mileage 20,000/yr

Launched 1Q 2015

\*Unlimited Data: Speed reduced to 3Mbps after exceeding 2GB/day

**Exhibit 11: A comparison of LG Uplus' LTE VIDEO Data Plan against its VOICE Data Plan. VIDEO Data Plans provide access to an extra 1 GB per day for video portal use to stimulate use of content offered on LTE Video Portal.**

### 3.3 USA - Verizon's go90 application

**go90 is a bold move by Verizon to assert its position in content play, a significant part of Verizon's \$10 Billion investments in digital media. Verizon is positioning go90 to capture a youth-centric viewing audience that are increasingly turning to their smartphones to meet their entertainment needs.**

#### What is Verizon go90?

go90 is an over-the-top (OTT) video service for consumers who watch video on their smartphones and tablets, the "mobile first generation" as Verizon calls



them. The service was launched by Verizon in October 2015 and is available for free to consumers on any networks in the US, though Verizon Wireless subscribers enjoy certain privileges, including zero-rated data for FreeBee Data 360 users when using go90 on its cellular network, and certain Verizon Wireless exclusive content, for example, live streaming of NFL to mobile devices will not be extended to non-Verizon users of go90.

In addition to the offerings of a typical OTT video service, another significant feature of go90 is its social functions, including sharing favourite entertainment inside go90 as well as on Facebook, Twitter and through email, and following favourite shows, channels and people.

#### Content and content creation

Content on go90 is a mix of on-demand content from cable networks Verizon has sourced (including ESPN, Viacom, Discovery Communications, and Scripps Network Interactive) and online video from popular YouTube networks. The genres range from live events including live sports to TV comedy, music, news, entertainment, etc.

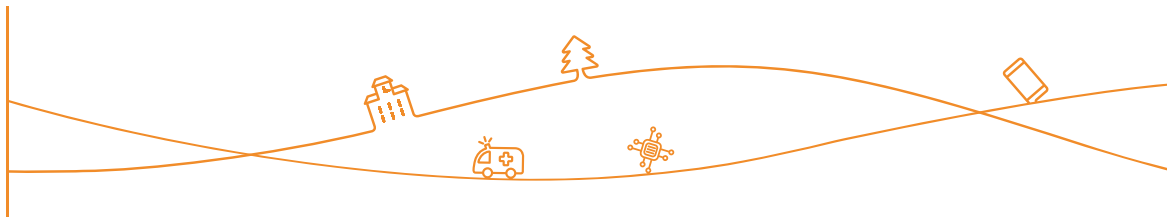
In addition to licensing and distributing content, Verizon has also moved into financing content creation. In quick succession in April 2016, Verizon announced two deals:

- On April 3, Verizon and Hearst announced a 50-50 joint venture, called Verizon Hearst Media Partners, to develop digital video programs targeted at millennials, initially distributed through two channels on go90, AOL and other platforms, as well as licensing to other partners. On April 18, the two joint-venture partners acquired video-focused publisher Complex Media;

- On April 6, Verizon announced its acquisition of a 24.5 % stake in AwesomenessTV, a Multi-Channel Network (MCN) and a partner for go90's web content, jointly owned by DreamWorks Animation and Hearst, for \$160 million.

Verizon is also able to reduce the investment in programing, or subsidize the cost, by allowing brands to sponsor shows. For example, Ford sponsored the reality series "Runner," produced by Ben Affleck and Matt Damon, which includes a pre-roll video advert for Ford, and Ford cars are featured prominently during the shows.





**Although go90 distributes feature length TV programmes, its focus is on short-form, less than 5-minute video clips. this is the right type of content to target mobile users with, as the data on AppOpitx, Strategy Analytics’ consumer telemetry platform, shows the average length per mobile video session is between 4 and 4.5 minutes.**

### **Monetising through advertising**

Both the go90 app and its content are free for end users. Verizon is monetising through advertising on two fronts.

- **Selling ads and sponsorship:** with the exception of a few premium sport events, ads inventory is part of the content right agreements. All go90 ads are sold through its content marketing platform AOL Pictela, and video ads delivered to go90 customers are typically pre-roll optimised to 5-7 seconds for mobile viewing, instead of rehashing existing adverts designed for regular TV spots. The value proposition looks to have been well received by the advertising partners. For example, the Paris-based advertising agency, Publicis Groupe, paid AOL \$50 Million for a three-month period of exclusivity for ten of its customers to advertise within the go90 app.
- **Aggregated user data as value add to advertisers:** go90 can leverage Verizon’s cross-platform assets, including its multi-play FiOS bundling on the fixed side and Verizon Wireless on the mobile side, to gather and produce aggregated user data. Soon it will be able to add Internet user data from Yahoo, which Verizon recently acquired and will be combined with AOL. By offering the aggregated user data Verizon can help advertisers and publishers to

better target and customise the ads delivered, therefore increase the advertising value. However this is also an area that Verizon should tread carefully. Last March, the FCC handed out a nominal fine (\$1.35 Million) to Verizon Wireless for its failure to disclose that it had been inserting Unique Identifier Headers (UIDH) into consumers’ Internet traffic over its wireless network, the so-called “supercookie”.

Significantly, Verizon is using its sponsored data program, Freebee Data 360, to zero-rate access to its go90 application for its own subscribers. Verizon states advertisers are covering the cost of streaming video associated with go90 specifically for Verizon postpaid customers. Advertisers will likely see greater value in reaching Verizon’s customers because Verizon will be able to provide advertisers with better audience profiles for its own subscribers compared to users on other networks. Verizon expects zero-rating data to go90 to encourage more of its subscribers to use and engage with the application, which will in turn translate to an appealing audience size for advertisers to reach.

### **Strengths, Weaknesses, Consumer Reception, and Business Impact**



We see in Verizon go90 these key strengths and weaknesses:

**Strengths:**

- Verizon has over 110 million subscribers to promote its go90 app across various physical and digital customer touch points. Verizon is already leveraging its sponsored data program, FreeBee, to zero-rate go90 use to its postpaid customers, and has already provided a 2 GB bundle of data for the first three months to customers signing up to use go90. Verizon can also leverage its scale to preload the go90 application on Android smartphones sold through its retail channels.
- go90 is a bold move by Verizon to assert its position in content play, a significant part of Verizon's \$10 Billion investments in digital media. It is positioning itself differently from its competitors AT&T and T-Mobile US . It is not directly competing with the prime TV content as offered by services like Netflix or AT&T's DirecTV OTT services, and it goes beyond a tariff-centric zero-rated data approach offered by T-Mobile's Binge On and T-Mobile One.
- Unlike the standalone OTT services like Netflix, go90 does not have the pressure to make profit any time soon. Though longer term it aspires to be profitable, it is an early step in Verizon's strategic ambition

to become a significant player in the digital media industry. It can also help Verizon to defend against churn and win more customers for Verizon. As a matter of fact, Fran Shammo, Verizon CFO, said he would not expect go90 to be profitable in two years given the required investment in content and marketing to attract significant audiences.

- With Verizon's assets across fixed, mobile, cable and Internet access, plus the Yahoo asset to be added, go90 has the potential to upsell its advertising value by combining multiple consumer touch points in a one-stop-shop offering through AOL.

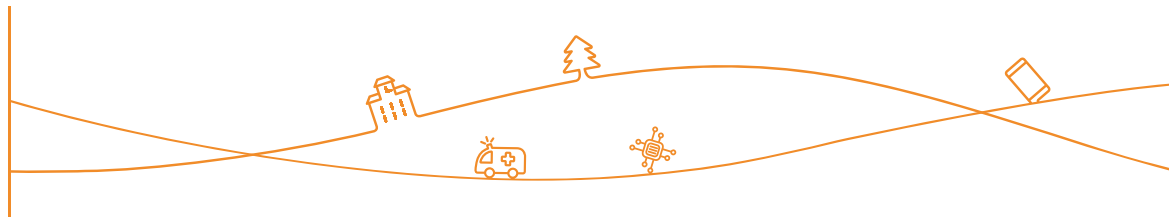
**Weakness:**

- Go90 is an unknown brand and is competing with established video apps like YouTube and a plethora of online Multi Channel Networks (MCNs), some of which Verizon is licensing content from. Gaining viewers and greater engagement levels will remain a challenge in the face of growing competition from social networks like Facebook, which also has ambitions in video, and is a leader in mobile engagement levels.
- Though go90 may not have immediate pressure to be profitable, its advertiser clients would expect to see fast user growth to justify the high spending threshold Verizon is demanding (\$10 Million minimum commitments for individual marketers and \$50 Million for large ad-agencies, according to a recent report by The Wall Street Journal)

**End user reception:**

go90 so far has seen a mixed reception by end users.





App downloads:

According to Strategy Analytics' app tracking database, AppTrax, go90 has been on the Top 200 free download list of Entertainment category every week of 2016 so far for both iPhone and Android, with the performance on Android particularly strong, moving into Top 10 in Q1 and Q2 this year. It also appears on the Top 200 free download list for iPad in most weeks. See Exhibit 12.



Exhibit 12: go90 App Download Ranking for iPhone, iPad and Android

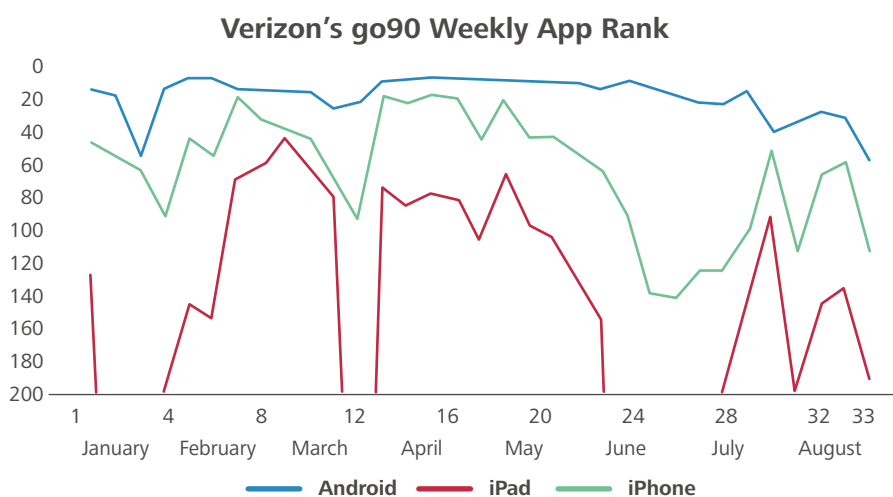


Exhibit 12: Tracking the download performance of go90 during 2016 indicates moderate, rather than stellar, performance on Google Play and Apple's App Store.

Source: Strategy Analytics, AppTrax, August 2016

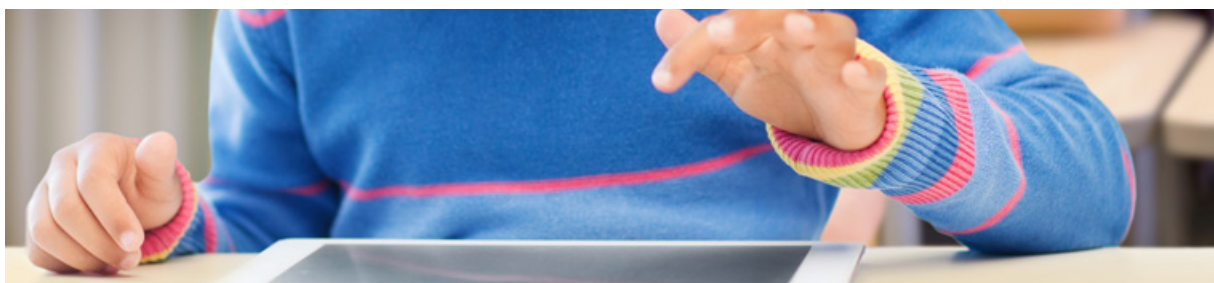
**Post-download engagement:**

Strategy Analytics' AppOptix data shows that the number of minutes consumers spent on go90 peaked in Q1 2016 and subsequently has dropped.

**Impact on Verizon Business**

There can hardly be a linear relationship between the launch of one service and the change of overall business metrics, but it is safe to assume that go90 must have contributed to the 44% year-on-year increase

in LTE data consumption Verizon witnessed in Q2 2016. However, against an increasingly competitive landscape the increased data consumption has not yet translated into higher income, with Verizon Wireless' total service revenues down by 5% in the same quarter, and average service revenue per postpaid account (ARPA) down by nearly 6%. The success of go90 needs to be judged after a longer period of time. Growing eyeballs to its application will require consumer education of the proposition along with its benefits.



### 3.4 Europe - Vodafone and Sky

In Europe partnerships between operators and popular OTT VOD services, like Vodafone and Sky/ Netflix, have been more commonplace, with operators differentiating tariffs from competitors while benefiting from the halo-effect provided by associating with cool over-the-top digital content brands.

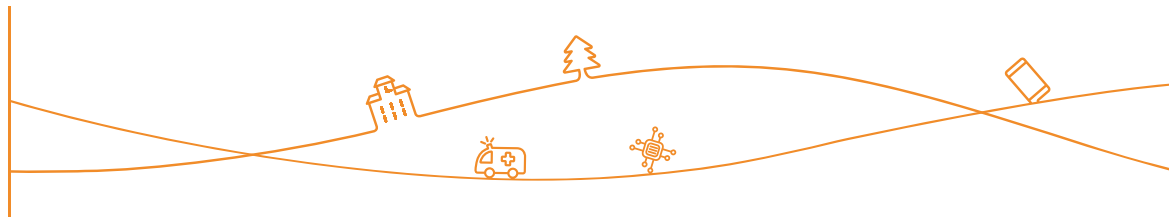
In the UK, Vodafone has partnered with broadcaster Sky to offer new and existing Vodafone Red customers access to either its Sky Sports Mobile streaming TV application, or an Entertainment Pass for Sky's OTT streaming video service, NOW TV. Exhibit 13 demonstrates how Vodafone is bundling premium content subscriptions to NOW TV or Sky Sports Mobile or Spotify into its 4G Red tariffs, starting from its 8 GB and 12 GB tariffs both offering 12 month to one of the these services.



Exhibit 13: Vodafone Partners Sky For Tariffs Bundled With Video Content

4GB Red Bundle <span style="float: right;">SAVE 15%</span>		8GB Red Value Bundle <span style="float: right;">SAVE 15%</span>		12GB Red Value Bundle	
Monthly cost	£18.70 <del>£22</del>	Monthly cost	£22.95 <del>£27</del>	Monthly cost	£32
4G UK data	4GB	4G UK data	8GB	4G UK data	12GB
UK minutes	Unlimited	UK minutes	Unlimited	UK minutes	Unlimited
UK texts	Unlimited	UK texts	Unlimited	UK texts	Unlimited
Inclusive roaming data*	2GB	Inclusive roaming data*	2GB	Inclusive roaming data*	4GB
Inclusive roaming minutes and texts**	Unlimited	Inclusive roaming minutes and texts**	Unlimited	Inclusive roaming minutes and texts**	Unlimited
<a href="#">Choose bundle</a> <a href="#">More information</a>		Plus choose 12 months of: <div style="display: flex; justify-content: space-around; align-items: center;"> </div>		Plus choose 12 months of: <div style="display: flex; justify-content: space-around; align-items: center;"> </div>	
<a href="#">Choose bundle</a> <a href="#">More information</a>		<a href="#">Choose bundle</a> <a href="#">More information</a>		<a href="#">Choose bundle</a> <a href="#">More information</a>	

Exhibit 13: Customers paying for Vodafone's 8GB Red Value Plan and above have the option of 12 months access to NOW TV, or Sky Sports Mobile TV or Spotify.



Data from Vodafone demonstrates the positive impact of content bundling on driving additional data usage as its customers migrated from 3G to 4G data tariffs. Subscribers adding Sky Sports Mobile TV and Spotify customers raised their data use some 20% and 30% respectively compared to those users yet to add either

content service to their 4G tariff. Furthermore, users opting for premium bundled video content services, like Netflix, are typically using more data across most major applications than those without video bundles, indicating that content bundling into tariff appeals to or drives heavier users of mobile data.

#### Exhibit 14: The Impact of Video Service Bundling on Customer Data Usage

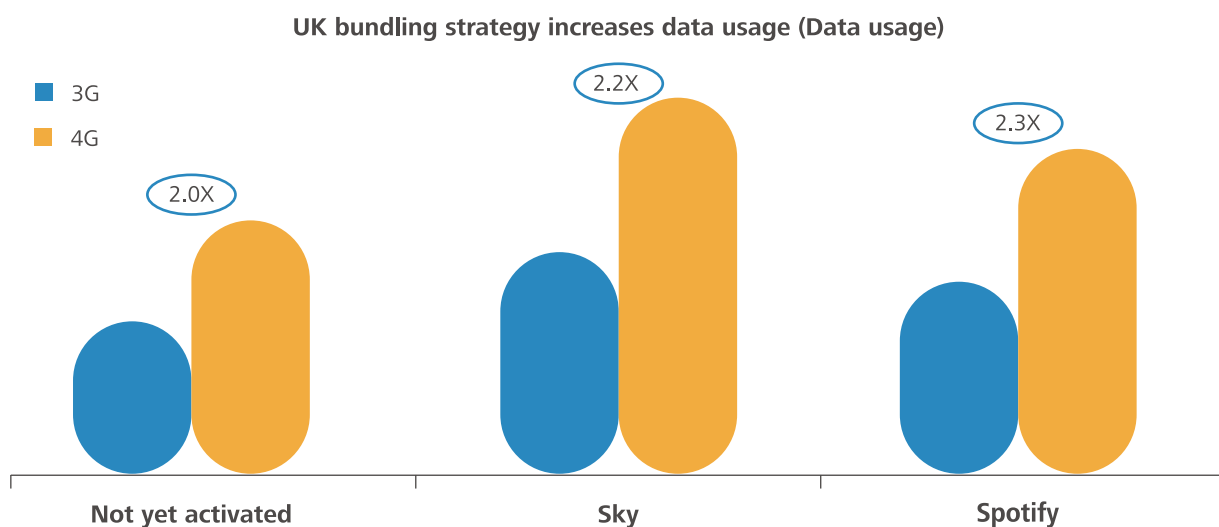
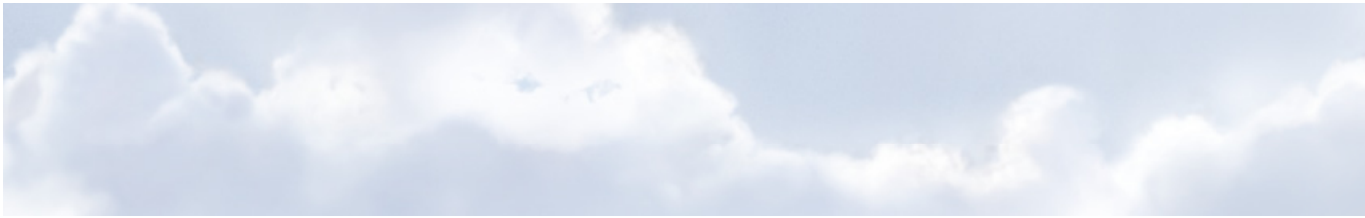


Exhibit 14: Offering access to compelling content can raise data usage. Vodafone UK customers activating content bundles use more data than those not activating their bundles.

In March 2015 Vodafone reported 4.1 million content bundles across the 12 markets in which it bundles content, and video has reached 48% of total network traffic.





# 4

## RECOMMENDATIONS: GOING BEYOND VANILLA DATA PLANS

Many mobile operators in Europe have yet to seize the initiative in monetizing rising demand for mobile video, and have mainly focused on promoting larger data plans to cover all classes of mobile data use. Tier one operators, such as Vodafone, have partnered with providers of subscription-based digital video services, like Sky, to bundle access to those services into higher-end tariffs. As highlighted in the previous section, operators in markets like Korea and the US have demonstrated

a stronger ambition to monetize video content, by introducing innovative pricing approaches, such as zero-rating video traffic, and by launching their own branded mobile video apps and services to tap new sources of revenue. The advantages and disadvantages of five video monetization strategies are outlined in Exhibit 15. None of these approaches is mutually exclusive.

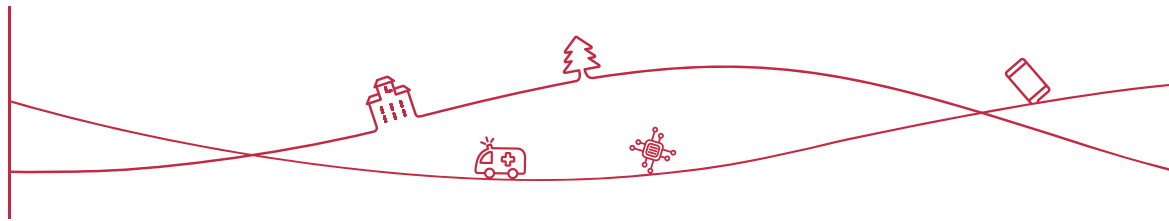
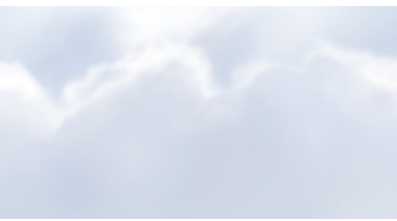
- **Move beyond selling vanilla data plans:** Operators must avoid the race to the bottom for data pricing. Monetizing through selling larger data bundles to meet users growing needs in the face of intense price competition is a limited strategy which is easily replicated by competitors and is becoming less relevant as the industry converges across telephony, internet access, and content services.
- **Implement additional pricing levers:** Sponsored data and to a lesser extent, zero-rating specific services or classes of content like video, should be considered by operators as a means of monetization and attracting new users to the network.
  - **Unlimited data:** removing the barriers for consumers to use video services by offering unlimited data can help stimulate video use (Exhibit 5). As highlighted in section 2.2 the launch of unlimited LTE data in April 2014 helped LG Uplus increase overall ARPU, with a growing base of users migrating to higher priced unlimited LTE to meet demand for mobile video services. The launch of T-Mobile One, which offers unlimited LTE as an evolution of Binge On has similar aims.
  - **Video centric tariffs:** With 20% of T-Mobile US users upgrading to a larger data plan to get access to zero-rated video and 46% of non-T-Mobile customers claiming to be interested in switching to Binge On to get zero-rated video there is clear demand for video-centric pricing approaches. LG

Uplus in Korea has also deployed video-centric tariffs to tap into growing consumer demand for mobile video.

- **Sponsored data:** Significantly, sponsored data opens up new sources of revenue for carriers. As we have seen in the USA, Verizon is using its sponsored data program, which is open to all media companies, to circumvent net-neutrality rules to zero-rate go90. Verizon is using Freebee Data to subsidize the cost of go90 use for its post-paid customers, which in turn it hopes will drive go90 audience and engagement levels. With the volume of video advertising set to rise operators can leverage sponsored data, rather than customer spend, to monetize this traffic.
- **Premium offers for high quality video:** T-Mobile US and LG U+, as well as US operator Sprint, have begun to leverage higher speeds offered by LTE-A and Carrier Aggregation to offer premium HD video for a higher fee or bundled in premium plans.







- **The importance of content:** Integrating exclusive content, either through partnerships or by building their own services enables operators to add-value to their tariffs, differentiate their offers from competitors, and stimulate additional video consumption that can be monetized by up-selling higher value plans. Tier one mobile operators with fixed line and IPTV operations are best positioned to develop innovative video services, leveraging existing relationships with domestic and international broadcasters and (film and TV) studios, and with their customer bases, to offer compelling content.

- **Video service bundling:** Both LG Uplus and Vodafone have demonstrated that content bundling into tariffs both appeals to, or drives heavier users and usage of mobile data, respectively. In the case of LG Uplus users of its LG U+ HDTV service generated almost double the volume of data than average LTE users (Exhibit 9). In the face of fierce competition content partnerships with best-of-breed providers is a less risky approach for stimulating video use and driving users to higher tariffs.

- **Own video application:** Verizon, SingTel, LG Uplus and Bharti represent a handful of operators that have launched their own video applications in order to tap new premium and advertising revenue opportunities, while potentially enriching their core business by bundling access to content services. While the most risky option due to strong competition (e.g. YouTube) and the need to acquire compelling content, operators with quad play assets may find it makes business sense to launch their own video applications as pay TV providers embrace OTT delivery opportunities.

**None of the options above is mutually exclusive, nor are they static. Western European mobile operators should consider taking further steps for video monetization, in view of their customer base and competitive landscape, and adapting as markets evolve. Western European mobile operators should strive to reclaim leadership in innovation and differentiation, and provide consumer centric, video centric approaches to address the growth opportunity of the mobile video market.**



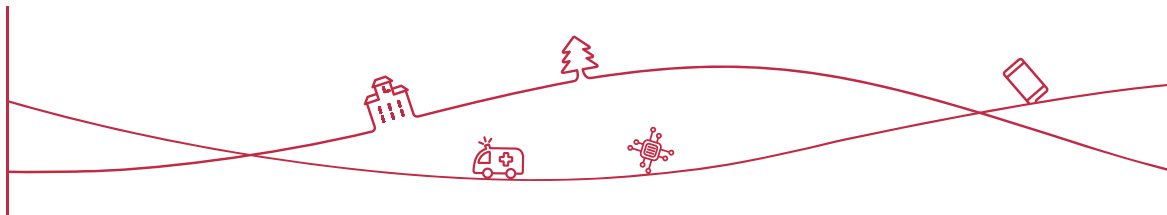
**Exhibit 15: Beyond Selling Vanilla Data: Moving Up The Mobile Video Value-Chain**

	Examples	Advantages	Disadvantages
Own video app	<ul style="list-style-type: none"> <li>• go90</li> <li>• HOOQ</li> <li>• Wynk Movies</li> <li>• LG Uplus</li> </ul>	<ul style="list-style-type: none"> <li>• New revenue opportunities</li> <li>• Enter new business</li> <li>• Tariff bundling- stimulate video traffic</li> <li>• Difficult to replicate</li> <li>• Tap multiscreen and OTT trends</li> <li>• Ownership of usage/ viewing data</li> </ul>	<ul style="list-style-type: none"> <li>• Established and fierce competition</li> <li>• Complex to develop</li> <li>• High investment in content</li> <li>• Digital video content expertise</li> <li>• App bundling on iPhones</li> </ul>
Video service bundling	<ul style="list-style-type: none"> <li>• Vodafone&amp;sky</li> <li>• TELE2 &amp; HBO</li> <li>• Orang &amp; OCS</li> <li>• LG Uplus</li> </ul>	<ul style="list-style-type: none"> <li>• New revenue opportunities</li> <li>• Add value to plans</li> <li>• Tariff differentiation</li> <li>• Halo effect</li> <li>• Stimulate video traffic growth</li> <li>• Additional data upsell opportunities</li> </ul>	<ul style="list-style-type: none"> <li>• Added complexity</li> <li>• Can be replicated</li> <li>• Reliant on content provier</li> <li>• Content provider owns viewing data</li> <li>• App bundling on iPhones</li> </ul>
Sponsored data	<ul style="list-style-type: none"> <li>• Verizon Freebee Data</li> </ul>	<ul style="list-style-type: none"> <li>• Open new revenue source</li> <li>• Stimulate mobile media use</li> <li>• Limit consumer spend</li> </ul>	<ul style="list-style-type: none"> <li>• Uncertain demand</li> <li>• Net-neutrality</li> </ul>
Tariff innovation(zero-rated, video-centric, unlimited)	<ul style="list-style-type: none"> <li>• T-Mobile: Bing On/T-Mobile One</li> <li>• LG Uplus: Video plans</li> <li>• Grameenphone</li> </ul>	<ul style="list-style-type: none"> <li>• Tariff differentiation</li> <li>• Encourage video usage</li> <li>• Monetize heavy video users</li> <li>• Low risk and complexity</li> </ul>	<ul style="list-style-type: none"> <li>• Net-neutrality regulations</li> <li>• Can be replicated</li> </ul>
Vanilla data plans	<ul style="list-style-type: none"> <li>• Most operators</li> </ul>	<ul style="list-style-type: none"> <li>• Low complexity</li> <li>• Low risk</li> </ul>	<ul style="list-style-type: none"> <li>• Low differentiation</li> <li>• Easily replicated</li> <li>• Does not stimulate video use</li> </ul>

Increasing differentiation

**Exhibit 15: A comparison of different strategies for mobile operators to follow to drive mobile video growth.**





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### **Research Methodology:**

Huawei and its related partners conduct regular observations on market maturity and drivers for mobile video contents. These observations aim to support the strategy making and external market communication of the mobile video industry. All data in this report comes from historical records and future projections, and is verified against internal data from Huawei. User data is collected anonymously before transferred to Huawei engineers. Main sources of data include Strategy Analytics (on macroeconomics, traffic trend, and business model), Huawei mLAB (on consumer behavior survey, service and terminal behavior, user experience research, and actual network capability), as well as other public third-party materials. Huawei MBB engineers are qualified with long-term research experiences. They strive to present the current situation of the drivers for mobile videos both comprehensively and impartially. They try to identify the development trend, and point out latent problems facing the industry. Note that data involved in this analytical report is bound to factors including time period, sample quantity, and level of research. All information provided is for reference only.

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