

# MOVR

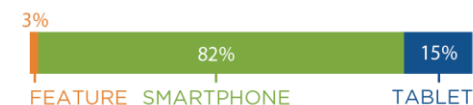
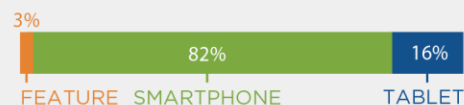
## Mobile Overview Report April – June 2018

## ASIA

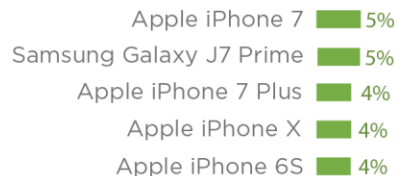
## NORTH AMERICA

## EUROPE

### Form Factor



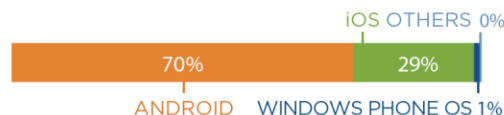
### Top 5 Smartphones



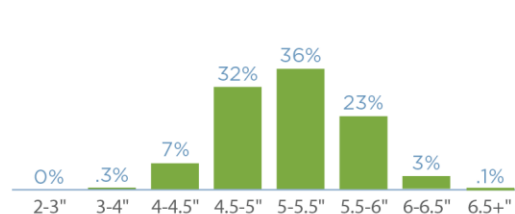
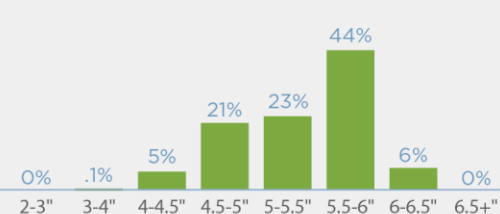
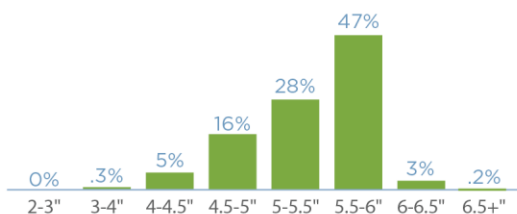
### Top 5 Tablets



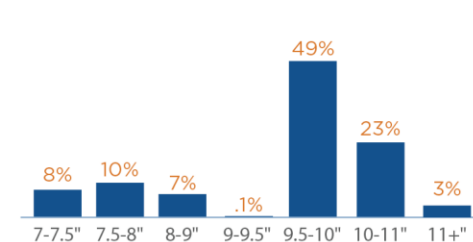
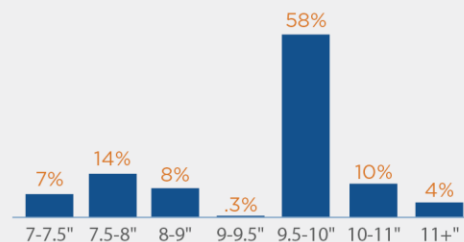
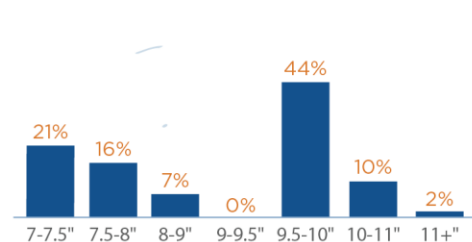
### Smartphone OS



### Smartphone Diagonal Size



### Tablet Diagonal Size



## SOUTH AMERICA

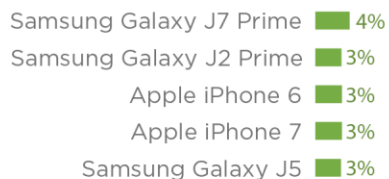
## AFRICA

## OCEANIA

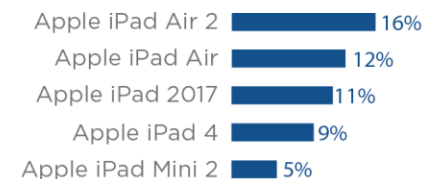
### Form Factor



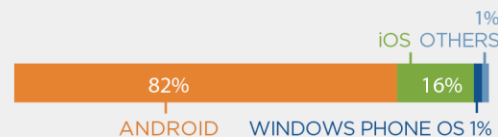
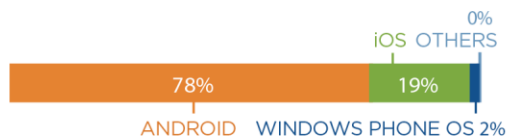
### Top 5 Smartphones



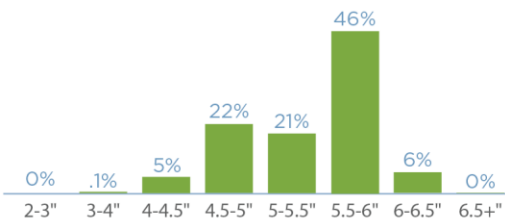
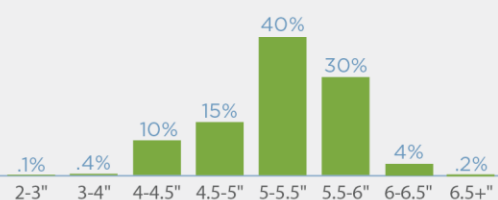
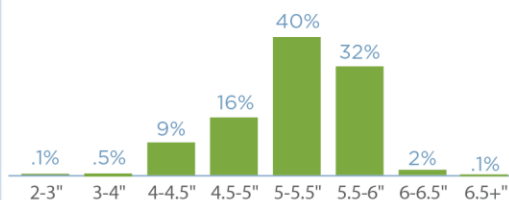
### Top 5 Tablets



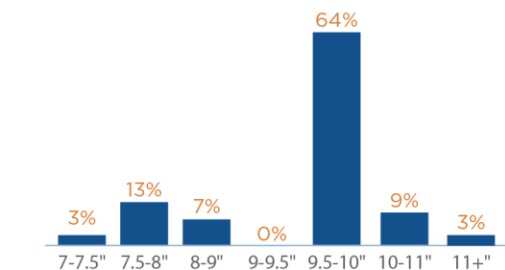
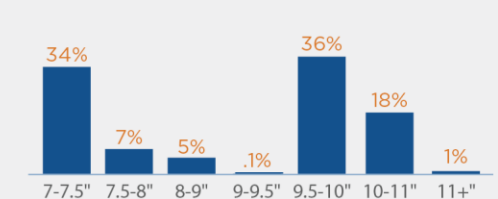
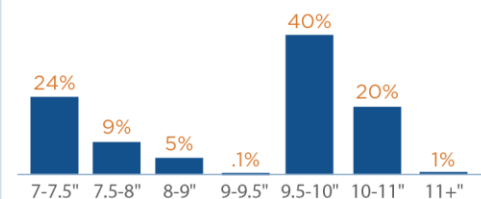
### Smartphone OS



### Smartphone Diagonal Size



### Tablet Diagonal Size



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## Q1 2018 to Q2 2018 Comparisons



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## Top Smartphones

- There are no new smartphones on this list from last quarter.
- Dropping off the list are the Samsung Galaxy J3 Duos, Samsung Galaxy J5 (2016), and the Samsung Galaxy J2 (2015).
- North America and Oceania continue to be concentrated markets for brands, with the top smartphones accounting for 59.50% and 66.02% respectively. With a decrease in top brand loyalty of 2.79% in North America and 8.73% in Oceania since Q1 2018.

### Top Smartphones

	Africa	Asia	Europe	N. America	Oceania	S. America
Apple iPhone 7	3.77%	4.95%	6.59%	8.87%	9.32%	3.04%
Samsung J7 Prime	1.24%	4.76%	0.07%	0.47%	0.28%	3.57%
Apple iPhone 7 Plus	2.04%	4.42%	2.19%	7.65%	8.27%	1.94%
Apple iPhone X	1.28%	4.21%	1.90%	4.79%	6.92%	1.15%
Apple iPhone 6S	1.97%	3.75%	5.75%	6.88%	7.57%	2.74%
Apple iPhone 6	1.67%	3.03%	3.66%	4.80%	4.75%	3.13%
Samsung Galaxy J7 2015	1.17%	2.20%	0.09%	0.74%	0.09%	2.32%
Apple iPhone 8 Plus	0.94%	2.08%	1.55%	5.10%	6.63%	0.95%
Apple iPhone 6S Plus	0.80%	1.71%	0.93%	3.20%	3.21%	0.80%
Apple iPhone 8	1.74%	1.53%	2.11%	3.46%	4.14%	0.82%
Samsung Galaxy S7	1.06%	0.53%	2.99%	2.79%	4.03%	0.81%
Samsung Galaxy S8	1.41%	0.76%	3.13%	2.78%	4.17%	1.11%
Apple iPhone SE	0.57%	0.51%	3.07%	2.69%	1.67%	1.39%
Samsung Galaxy S7 Edge	1.56%	1.26%	2.53%	1.63%	2.22%	1.15%
Apple iPhone 5S	0.76%	1.25%	2.37%	1.44%	1.26%	1.79%
Samsung Galaxy J2 Prime	0.01%	0.00%	0.03%	0.59%	0.13%	3.40%
Samsung Galaxy J5	1.78%	1.34%	1.00%	0.31%	0.33%	3.00%
Samsung J5 Prime	1.09%	0.50%	0.05%	0.25%	0.36%	2.67%
Motorola Moto G (5) Plus	0.03%	0.05%	0.19%	0.59%	0.14%	2.64%
Samsung Galaxy J7 (2016)	0.44%	1.46%	0.76%	0.31%	0.13%	2.41%
Samsung Galaxy Grand Prime+	3.48%	1.01%	0.08%	0.15%	0.43%	0.05%
<b>Others</b>	<b>71.20%</b>	<b>58.72%</b>	<b>58.96%</b>	<b>40.50%</b>	<b>33.98%</b>	<b>59.12%</b>



## Top Smartphone Trends (2018 Q2 vs. 2018 Q1)

- Oceania saw the largest adoption trend in a 2.95% increase in usage of the Apple iPhone X.
- Asia had the second largest increase in smartphone usage with 2.24% adoption increase for the Apple iPhone X.
- Oceania had the third largest adoption of a smartphone this quarter with a 2.17% increase in Apple iPhone 8 Plus usage.
- Apple iPhone X, Apple iPhone 8 Plus, and Apple iPhone 8 had the most growth this quarter. The iPhone X had 7.99% growth globally, the Apple iPhone 8 Plus had a 5.38% increase, and the Apple iPhone 8 had 4.24% growth.
- Largest global drop in usage is from the Apple iPhone 6, 6S, and 5S. Dropping by 5.39%, 5.25%, and 3.17% respectively.

Smartphone Trends	Africa	Asia	Europe	N. America	Oceania	S. America
Apple iPhone 7	-0.02%	0.80%	-0.08%	-0.62%	-2.62%	0.14%
Samsung J7 Prime	-0.10%	0.45%	0.02%	0.02%	-0.01%	0.66%
Apple iPhone 7 Plus	-0.09%	-0.12%	-0.13%	-0.23%	0.08%	0.20%
Apple iPhone X	0.49%	2.24%	0.38%	1.23%	2.95%	0.70%
Apple iPhone 6S	-1.13%	-0.33%	-0.45%	-0.99%	-2.34%	-0.01%
Apple iPhone 6	-0.89%	-1.15%	-0.47%	-0.81%	-1.16%	-0.91%
Samsung Galaxy J7 2015	-0.23%	-0.16%	0.01%	-0.15%	0.01%	-0.31%
Apple iPhone 8 Plus	0.21%	0.87%	0.27%	1.46%	2.17%	0.40%
Apple iPhone 6S Plus	-0.13%	-0.67%	-0.09%	-0.23%	-0.23%	0.06%
Apple iPhone 8	1.06%	0.84%	0.48%	0.98%	0.54%	0.34%
Samsung Galaxy S7	-0.23%	0.00%	-0.13%	-0.35%	-1.04%	-0.01%
Samsung Galaxy S8	0.13%	0.03%	0.41%	0.33%	-0.44%	0.33%
Apple iPhone SE	-0.18%	-0.21%	0.09%	-0.16%	-0.52%	-0.10%
Samsung Galaxy S7 Edge	-0.33%	-0.07%	-0.26%	-0.27%	-0.37%	0.02%
Apple iPhone 5S	-0.15%	-1.09%	-0.26%	-0.38%	-0.42%	-0.87%
Samsung Galaxy J2 Prime	0.00%	0.00%	0.02%	-0.02%	0.02%	0.39%
Samsung Galaxy J5	-0.11%	-0.01%	-0.18%	-0.06%	0.05%	-0.23%
Samsung J5 Prime	-0.01%	-0.04%	0.00%	0.02%	0.01%	0.37%
Motorola Moto G (5) Plus	0.00%	-0.01%	0.02%	0.02%	-0.02%	0.21%
Samsung Galaxy J7 (2016)	-0.21%	-0.06%	0.01%	-0.01%	0.03%	-0.08%
Samsung Galaxy Grand Prime+	0.33%	-0.16%	0.01%	0.12%	0.13%	0.01%
<b>Others</b>	<b>1.57%</b>	<b>-1.16%</b>	<b>0.30%</b>	<b>0.11%</b>	<b>3.19%</b>	<b>-1.33%</b>



## Top Tablets

- The most significant market share for tablets remains with Apple's iPad Airs, with the iPad Air 2 leading for the fifth quarter in a row.
- The iPad Air 2 is the most popular tablet across almost all continents with South America finding the Apple iPad Air more popular this quarter.
- This quarter, the Oceania and North American markets were the most concentrated with top tablets making up 78.66% and 73.32% of the market respectively.
- Joining the list this quarter is the Samsung Galaxy Tab 4 10.1, the Samsung Galaxy Tab 4 7.0, and the Apple iPad 2017. Dropping off is the Apple iPad Pro.

Top Tablets	Africa	Asia	Europe	N. America	Oceania	S. America
Apple iPad Air 2	5.39%	11.36%	12.10%	14.88%	16.43%	7.31%
Apple iPad Air	3.87%	8.14%	10.00%	12.13%	12.25%	7.72%
Apple iPad mini 2	2.35%	5.50%	4.28%	6.33%	5.24%	3.99%
Apple iPad 4	3.42%	5.27%	6.15%	7.37%	8.74%	6.80%
Apple iPad 2017	3.50%	5.22%	5.81%	9.39%	10.80%	3.08%
Apple iPad mini	1.94%	4.05%	2.58%	3.08%	3.34%	1.51%
Apple iPad mini 4	1.22%	3.96%	2.17%	2.96%	3.34%	2.44%
Samsung Galaxy Tab 3 Lite	1.41%	3.15%	0.82%	0.66%	0.48%	4.22%
Apple iPad Pro 9.7	1.15%	2.87%	1.98%	3.57%	2.89%	1.40%
Apple iPad 3	1.91%	2.65%	2.46%	2.77%	3.46%	2.13%
Apple iPad 2	2.51%	2.19%	2.50%	3.06%	3.87%	1.24%
Samsung Galaxy Tab A 10.1	1.60%	0.65%	5.08%	1.14%	0.18%	0.63%
Samsung Galaxy Tab A 9.7	2.34%	0.62%	2.85%	1.02%	1.39%	1.06%
Samsung Galaxy Tab E	5.10%	1.40%	2.38%	1.56%	0.40%	4.97%
Intel ECS TR10CS1	0.00%	0.00%	0.00%	0.03%	0.00%	4.59%
Canaima TR10RS1	0.00%	0.00%	0.00%	0.01%	0.00%	3.92%
Samsung Galaxy Tab 3V 3G	3.50%	1.76%	0.06%	0.03%	0.16%	1.32%
Vodafone Tab Mini 7	3.14%	0.01%	0.10%	0.00%	0.01%	0.00%
Samsung Galaxy Tab 4 7.0	2.85%	1.84%	0.66%	0.59%	0.09%	1.87%
Samsung Galaxy Tab 4 10.1	2.55%	0.49%	2.16%	1.28%	0.92%	0.82%
Samsung Galaxy Tab A	0.29%	1.10%	0.08%	1.46%	4.68%	0.83%
<b>Other</b>	<b>49.95%</b>	<b>37.79%</b>	<b>35.78%</b>	<b>26.68%</b>	<b>21.34%</b>	<b>38.15%</b>





## Top Tablet Trends (2018 Q2 vs. 2018 Q1)

- The largest growth (2.14%) comes from Oceania's increase in usage of the Apple iPad 2017, the 2nd largest growth (1.95%) comes from South America's usage in Apple iPad Air.
- Globally, the Apple iPad 2017 had the most growth in 2018 Q2 of all other tablets (4.46%).
- North America had the most top brand tablet usage with others accounting for less than 1% (0.80%).
- South America saw the largest usage decrease trends with a 1.77% drop in the Apple iPad mini, a 1.61% drop in Apple iPad Air 2 usage, and a 1.57% drop in Apple iPad 2 usage.

### Tablet Trends

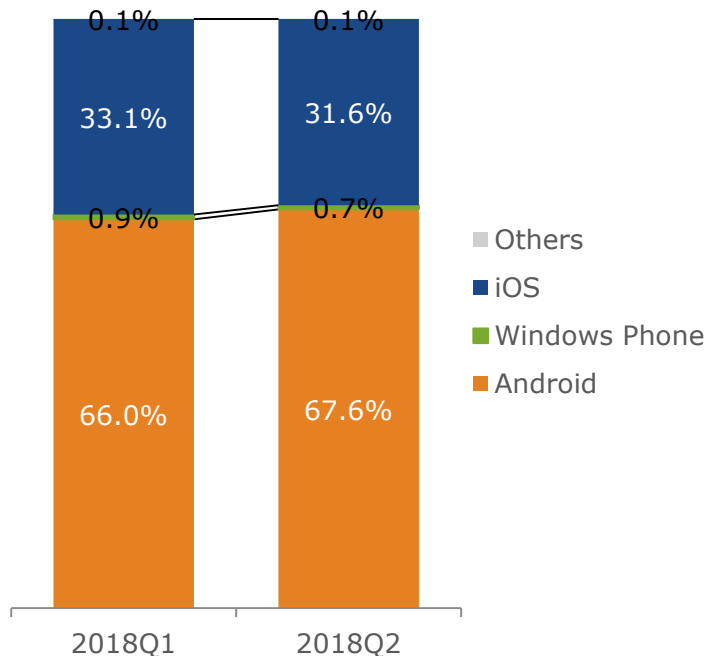
	Africa	Asia	Europe	N. America	Oceania	S. America
Apple iPad Air 2	-0.54%	-0.31%	-0.15%	0.03%	-1.28%	-1.61%
Apple iPad Air	-1.15%	-0.16%	-0.90%	-0.44%	-1.04%	1.95%
Apple iPad mini 2	0.15%	-0.61%	-0.38%	-0.28%	-0.88%	-0.52%
Apple iPad 4	-0.70%	-0.11%	-0.59%	0.00%	-0.85%	-0.15%
Apple iPad 2017	1.84%	0.96%	0.76%	-0.43%	2.14%	-0.81%
Apple iPad mini	-0.53%	-0.59%	-0.48%	-0.18%	-0.50%	-1.77%
Apple iPad mini 4	-0.05%	-0.32%	0.05%	0.17%	-0.11%	-0.58%
Samsung Galaxy Tab 3 Lite	-0.34%	0.47%	-0.06%	-0.04%	-0.13%	0.57%
Apple iPad Pro 9.7	0.10%	0.20%	0.13%	-0.10%	-0.40%	-0.67%
Apple iPad 3	-0.94%	-0.36%	-0.28%	0.19%	-0.63%	-0.58%
Apple iPad 2	0.20%	0.07%	-0.40%	-0.09%	-0.10%	-1.57%
Samsung Galaxy Tab A 10.1	-0.16%	0.05%	0.52%	0.18%	-1.24%	0.04%
Samsung Galaxy Tab A 9.7	-0.12%	-0.07%	-0.13%	0.04%	-0.13%	0.02%
Samsung Galaxy Tab E	-0.03%	-0.06%	0.09%	0.05%	0.11%	1.11%
Intel ECS TR10CS1	0.00%	0.00%	0.00%	0.00%	0.00%	0.27%
Canaima TR10RS1	0.00%	0.00%	0.00%	0.00%	0.00%	0.08%
Samsung Galaxy Tab 3V 3G	0.45%	-0.01%	-0.01%	0.00%	0.01%	0.43%
Vodafone Tab Mini 7	0.69%	0.00%	0.01%	0.00%	0.00%	0.00%
Samsung Galaxy Tab 4 7.0	0.01%	-0.27%	0.03%	-0.06%	-0.03%	-0.13%
Samsung Galaxy Tab 4 10.1	-0.08%	-0.09%	-0.06%	0.25%	-0.10%	0.01%
Samsung Galaxy Tab A	0.04%	-0.13%	0.01%	-0.06%	1.12%	0.09%
<b>Other</b>	<b>1.16%</b>	<b>1.36%</b>	<b>1.82%</b>	<b>0.80%</b>	<b>4.04%</b>	<b>3.83%</b>



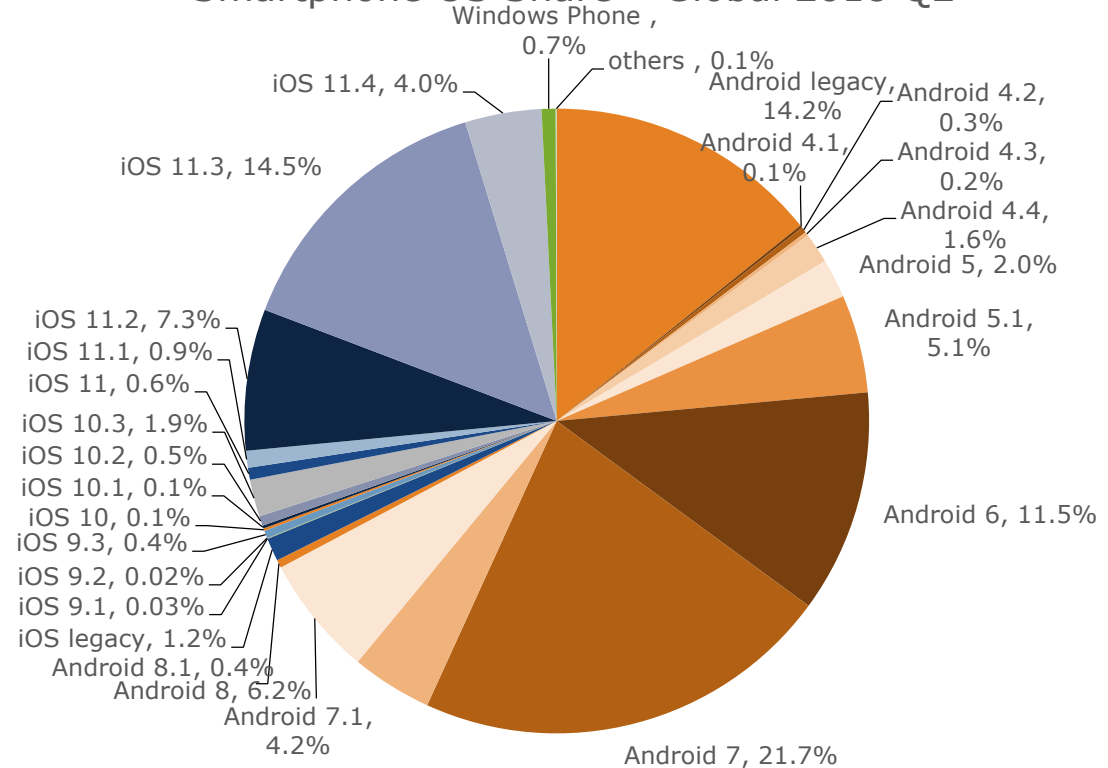
## Global Smartphone OS Versions

- Among Android, version 7.0 continues to be the top OS since last quarter, losing 0.82% since. Android 6 dropped in usage by 1.98%. Like last quarter, the Android 6 remains below the usage of Android Legacy OS. Android 7 is the most popular OS in the world, beating out iOS.
- Apple's OS upgrade process is much more effective than Android, with most of their users on iOS version 11.3. In fact, iOS version 11.3 with 14.5% is the most popular OS version globally for iOS. Unlike last quarter, the most popular iOS is no longer the most popular OS across Android and iOS.
- Android remains the largest OS with 67.5% in 2018 Q2, up by 1.55% from 2018 Q1.

Smartphone OS



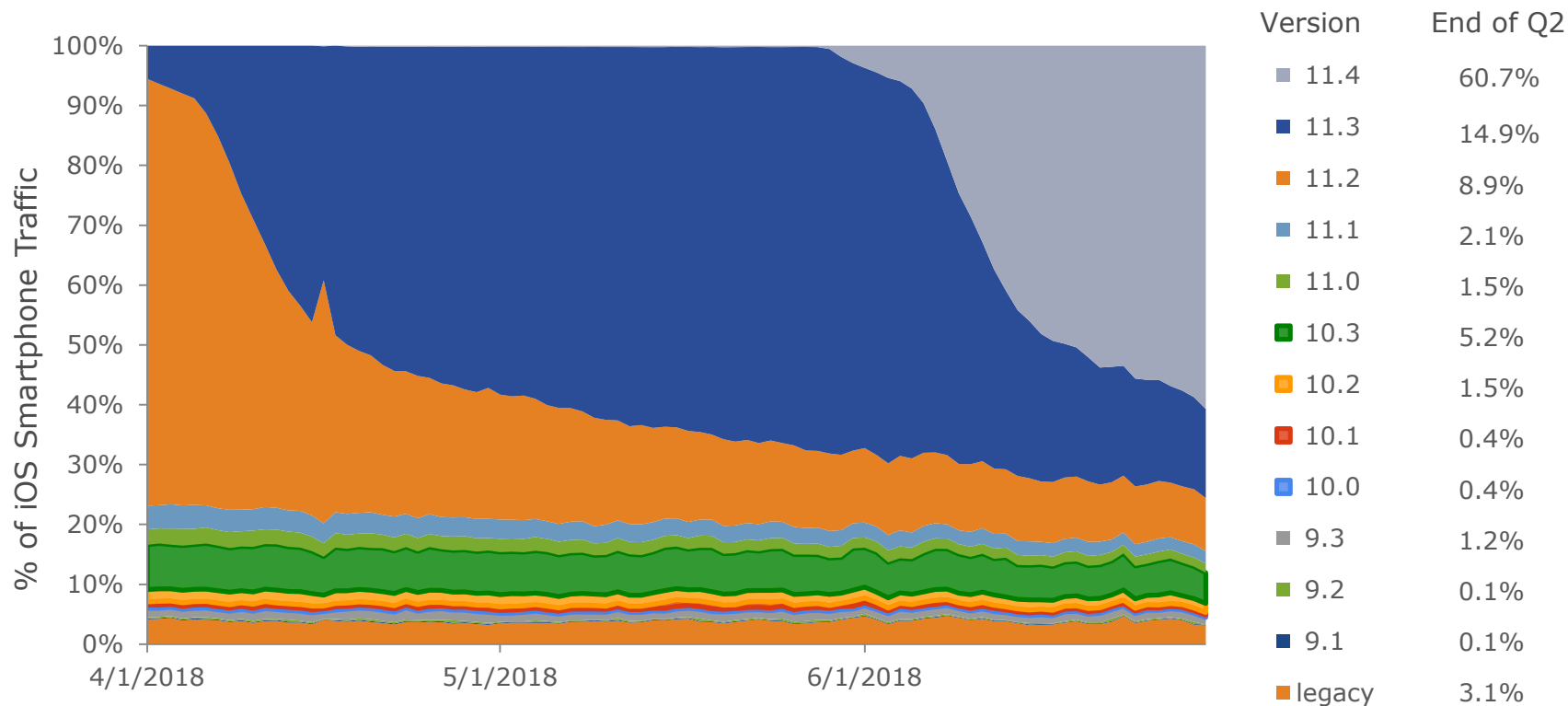
Smartphone OS Share – Global 2018 Q2





## iOS Smartphone Operating System Trends

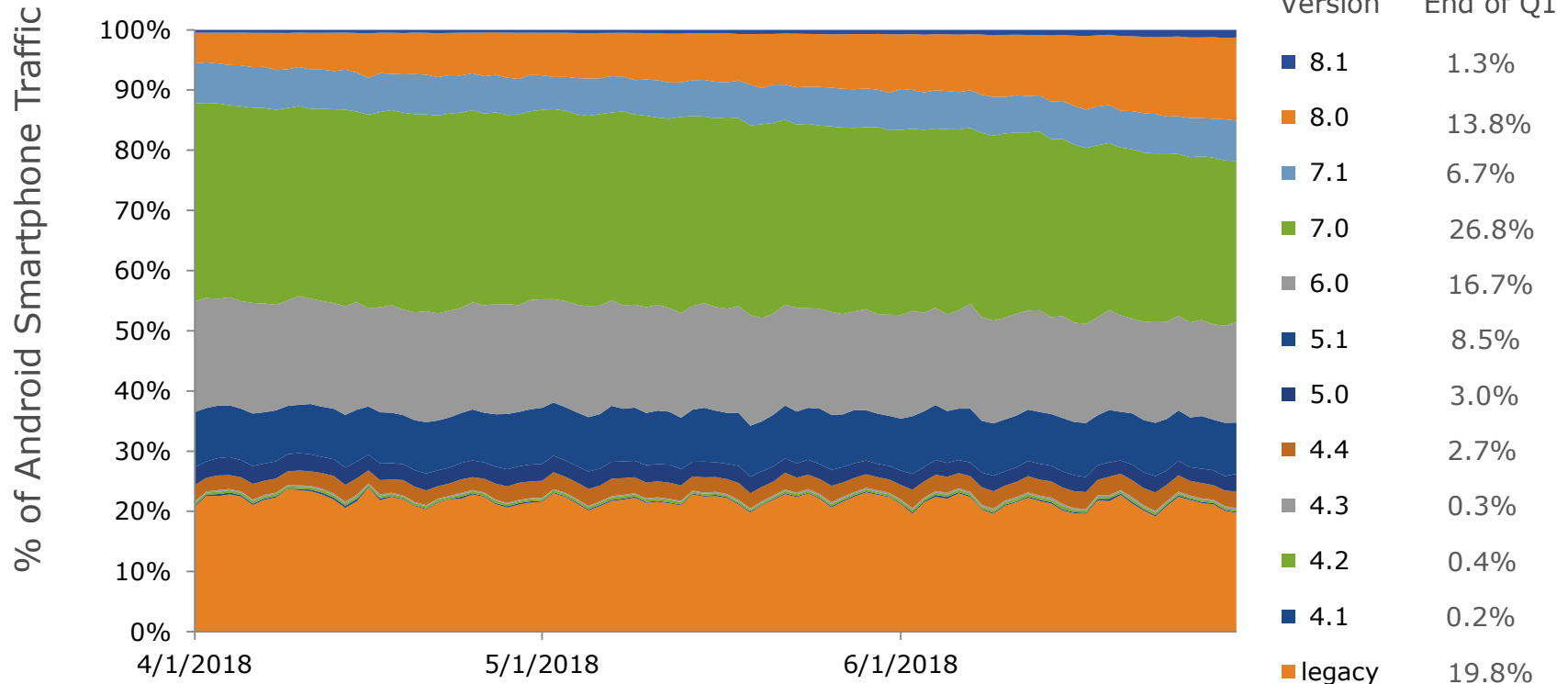
- iOS 11.2 is no longer the most popular iOS. By the end of 2018 Q2, iOS 11.4 leads with 60.7%.
- Over 95% of users are on 10.x or above, indicating the success of Apple iOS upgrade process.
- All of the 9.x releases total only 1.4%.
- The iOS 11.x releases show a general trend toward the most recent version. Unlike last quarter, there is no lag in adoption for iOS 11.x.
- Similarly, the 10.x and 9.x iOS users have also continue this trend, adopting the most recent version more than the later iOS versions.





## Android Smartphone Operating System Trends

- Android 7.0 is still the most popular version at the end of 2018 Q2. However, it is dropping as more users adopt version 8.0 and above.
- Android newest releases, 8.x, accounts for 15.1%, an 8.66% increase from 2018 Q1.
- Releases 7.x accounts for 33.5% of all Android traffic, a 5.53% drop from 2018 Q1.
- Releases 6.x and prior accounts for 31.8% total excluding legacy with 6.0 at 16.7%, 5.x at 11.5%, and 4.x at 3.6% usage.
- Android has always struggled to upgrade users, and this at the particular time in 2018 Q2, the fragmentation of versions continues.



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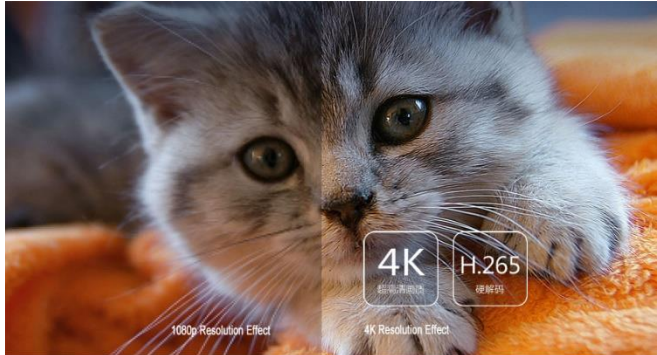
## **Hardware-Accelerated High-Efficiency Video Coding (HEVC) Support**



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Visualization Tool**



# What is High-Efficiency Video Coding (HEVC)



## HEVC Means

- **Higher Resolution and Quality**
- **Lower Video Payload**
- **Leveraging Chipset Acceleration**

## The Challenge of Selecting Video Codecs

- Video streaming is increasingly popular. [Cisco estimates](#) that it will grow to 82% of all consumer internet traffic by 2021. Therefore, increased efficiency in video codecs can yield huge savings.
- However, it is complicated to determine the optimal codec to use based on the device requesting the video. iOS and Android devices support different codecs based on a number of factors, including the OS version and chipset of the device.

## HEVC and the Evolution of Video Codecs

- Video streaming platforms have many options to choose from when it comes to selecting a video codec format. Over the years, video codecs have evolved and significantly improved their efficiency. H.264 provided a 50% improvement in bandwidth consumption vs. H.263 when it was introduced. H.265, also known as [High Efficiency Video Coding \(HEVC\)](#), provides another **50% improvement** over H264.

## Hardware-Based Acceleration on Mobile Devices

- HEVC can make use of specialized hardware-based video decoding and encoding chips on SoCs (System on Chip). Without that hardware-based acceleration, the player will use the CPU to decode the video. This heavy use of the CPU quickly consumes battery life. Users will not appreciate this poor user experience. Therefore, it's best to deliver HEVC only to devices that support HEVC at the hardware level.

## Effective Architecture and Deployment of HEVC

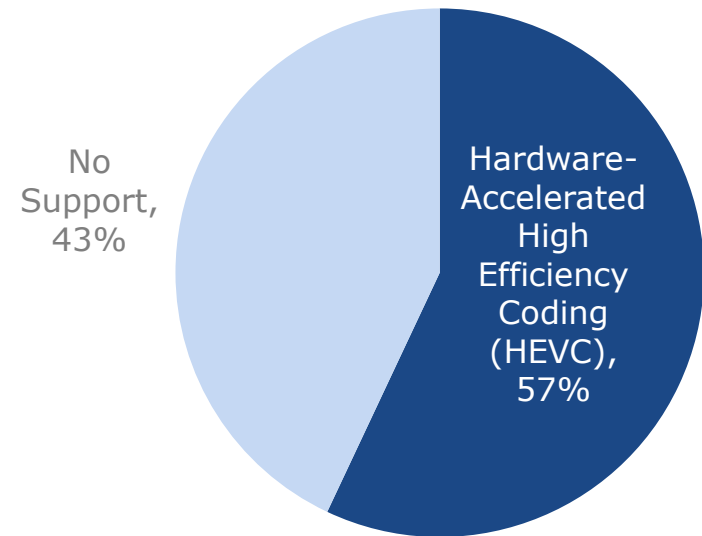
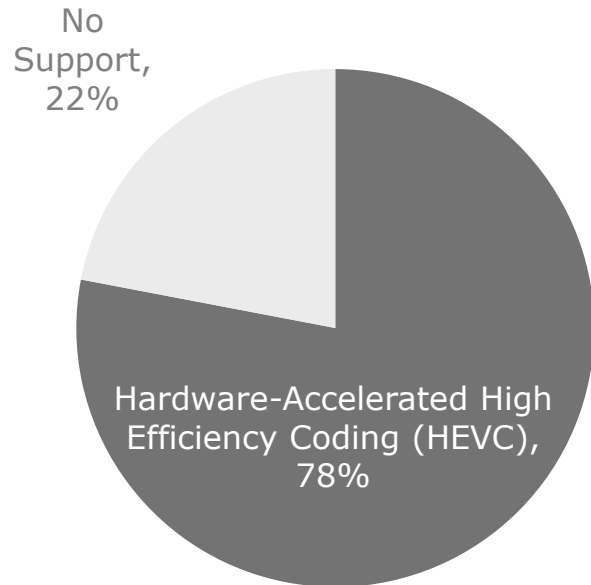
- ScientiaMobile's WURFL device detection can quickly identify the hardware-accelerated HEVC\_decode or HEVC\_encode capabilities of a device and its chipset. Video streaming platforms can dramatically reduce video payload by architecting WURFL's HEVC video intelligence into their load balancing and video serving logic.

## MOVR Data on Hardware-Accelerated HEVC Decode

- The following report provides information on mobile devices with chipsets capable of providing hardware-based acceleration of the HEVC decoding.

## Hardware-Accelerated HEVC Decode Support on Smartphones

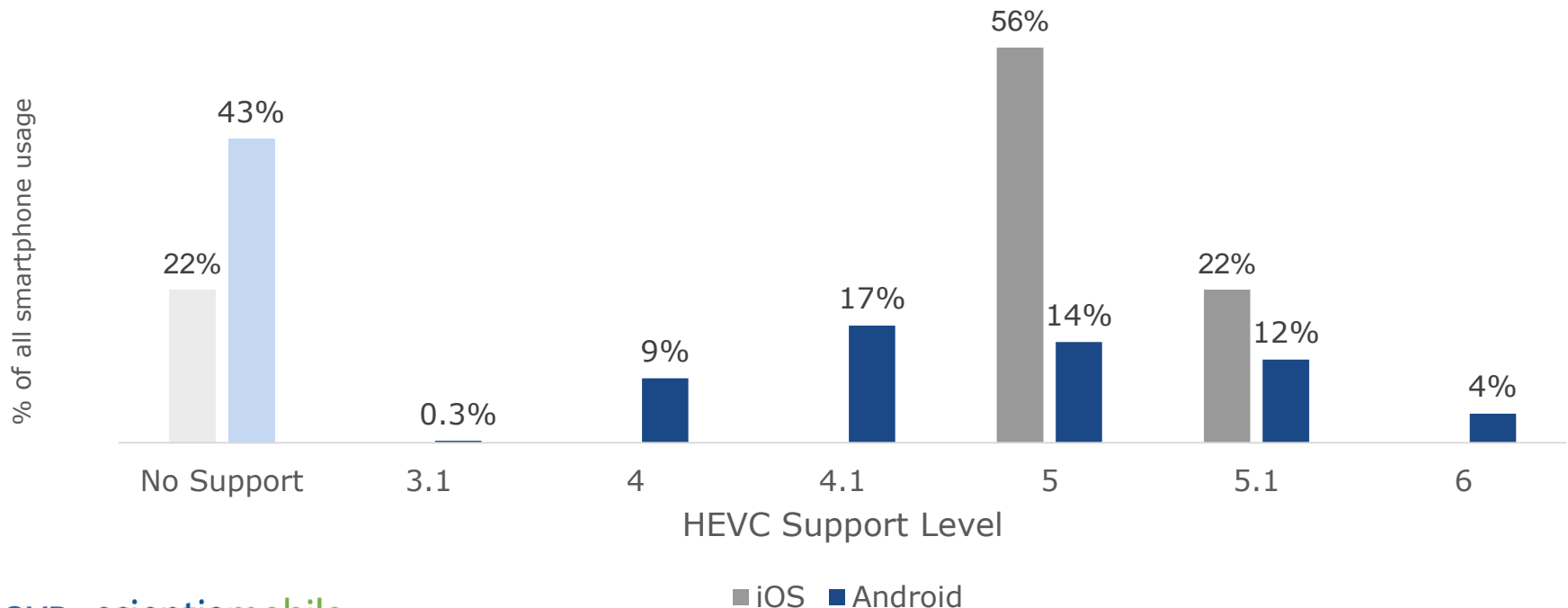
- 78% of iOS smartphone requests come from devices that support hardware-accelerated HEVC decoding.
- 57% of Android smartphone requests come from devices that support hardware-accelerated HEVC decoding.



## Hardware-Accelerated HEVC Decode Level Support on Smartphones

- Apple started to support hardware-acceleration of HEVC decoding on their devices' chipsets. Level 5 is the most common level of support with 56% on iOS.
- 22% of iOS usage came from devices that supported the hardware-acceleration of HEVC level 5.1 decode.
- 43% of Android usage came from smartphones that have no support for hardware-acceleration of HEVC decode.
- Level 6 is starting to have adoption, with 4% of Android devices.

### Hardware-Accelerated HEVC Decode Support on Smartphones by Operating System

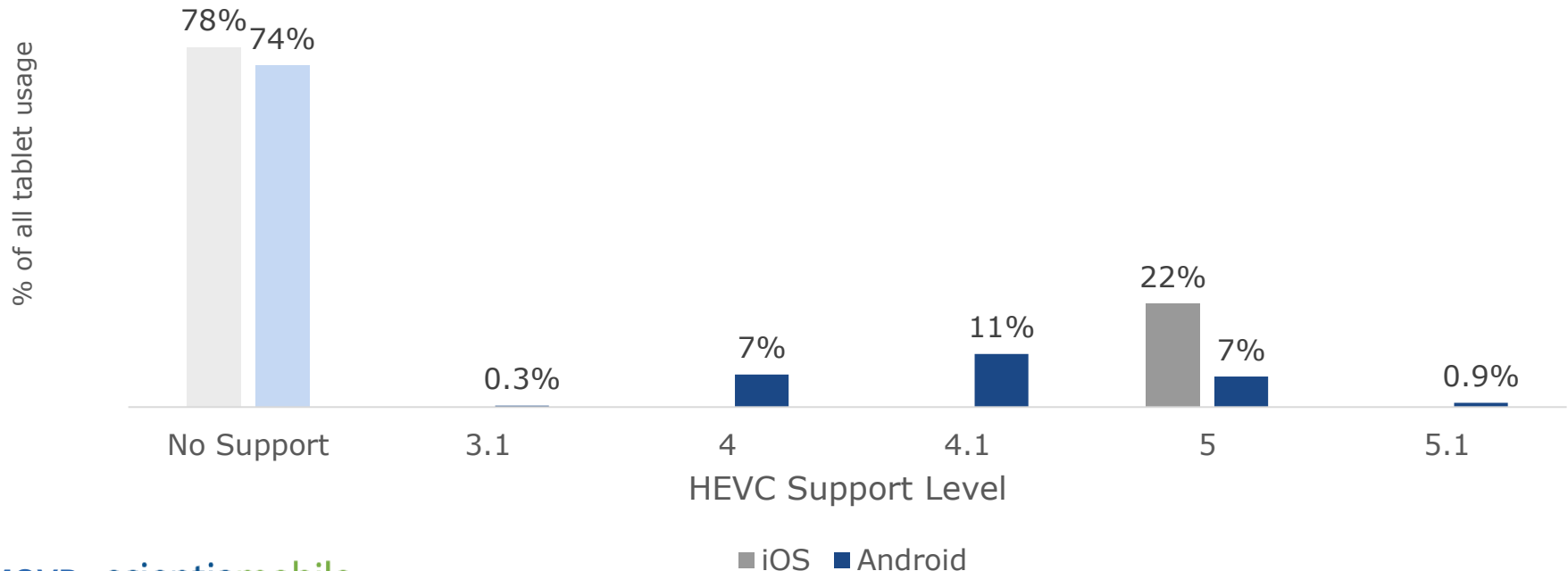




## Hardware-Accelerated HEVC Decode Level Support on Tablets

- Most iPads in use do not support HEVC decode on their chipsets. 78% of all iPad usage does not support HEVC.
- Level 5 support is starting to appear on iPads, with 22% showing support.
- Likewise, most Android tablets do not support hardware-accelerated HEVC decode. 74% of Android tablets do not support HEVC on their chipset.
- Level 4.1 is the most common support with 11%.

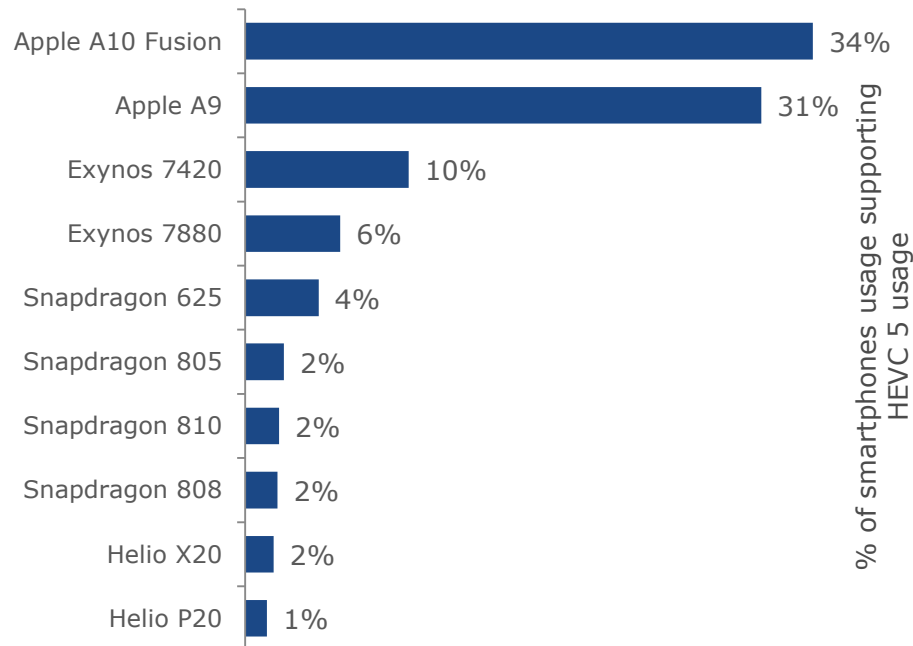
### Hardware-Accelerated HEVC Decode Support on Tablets by Operating System



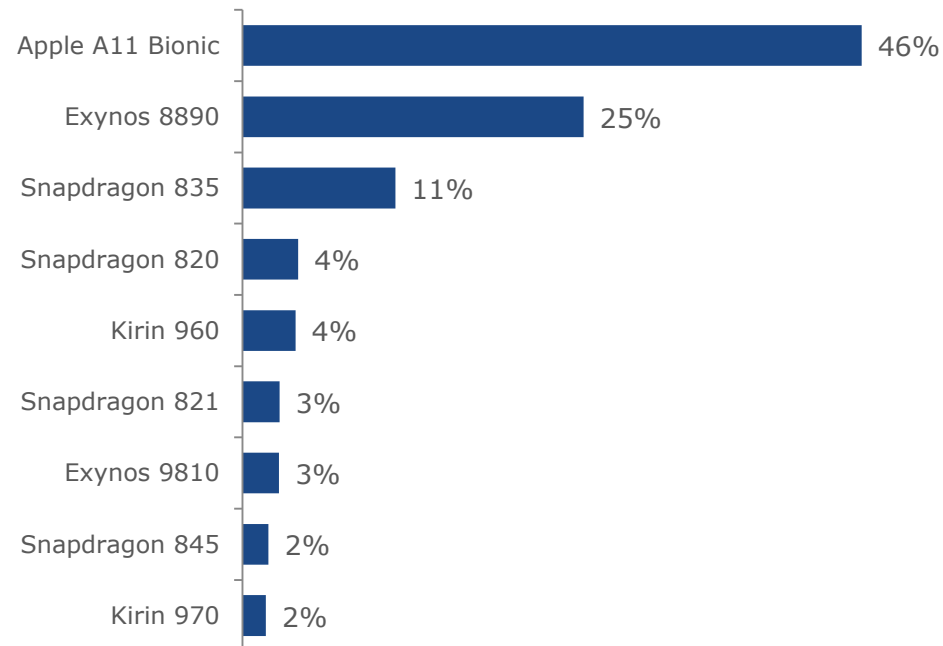
## Top Chipsets on Smartphones Supporting Hardware-Accelerated HEVC Decode Level 5 & 5.1

- The Apple A10 Fusion is the most popular chipset supporting HEVC level 5. The A10 is found in the Apple iPhone 7 and iPhone 7 Plus.
- The Apple A11 Bionic is the most popular chipset supporting HEVC level 5.1. It is used in the Apple iPhone 8, iPhone 8 Plus, and the iPhone X.
- The Samsung Exynos 8890 is the next most popular Level 5.1 chipset, providing 25% usage.

### Top Chipsets Supporting HEVC Decode Level 5



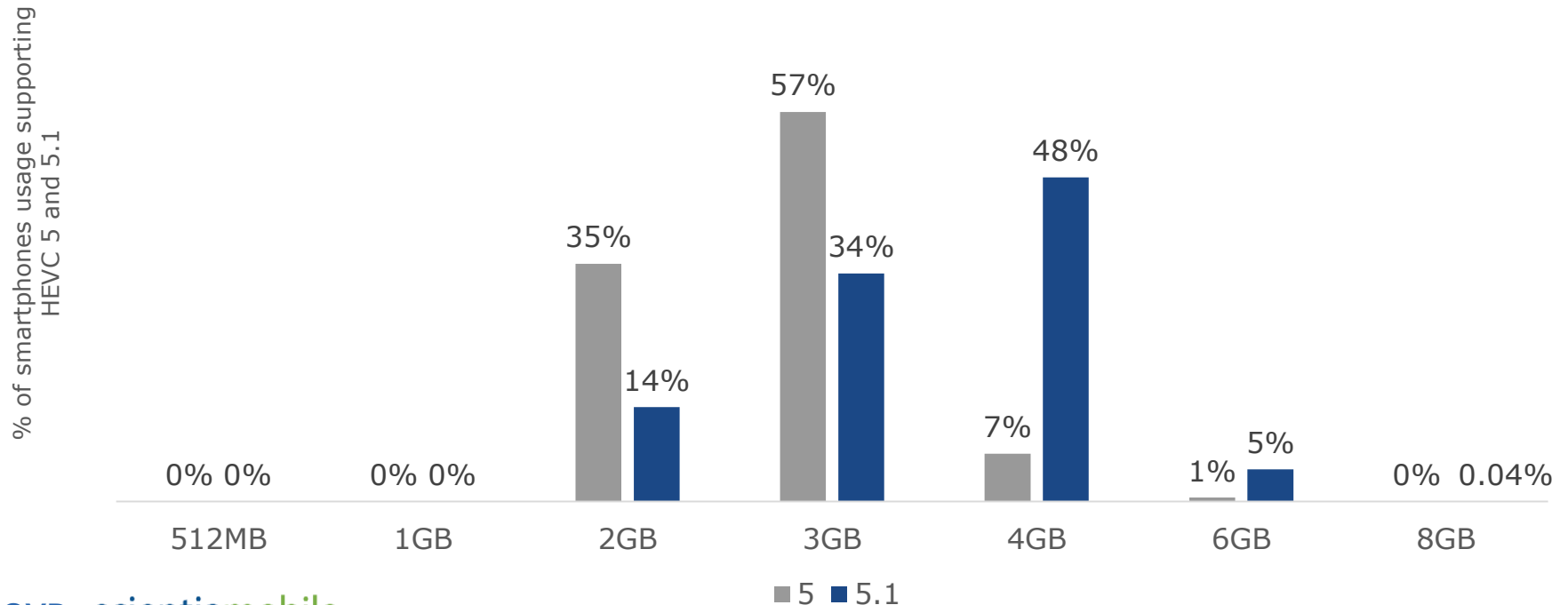
### Top Chipsets Supporting HEVC Decode Level 5.1



## RAM on Smartphones Supporting HEVC Decode Levels 5 or 5.1

- RAM is another indicator of the overall capabilities of a smartphone's processing capabilities. The more advanced the HEVC support, the more likely it is that the smartphone will have more RAM.
- For example, smartphones supporting HEVC level 5.1 have a median RAM of 4GB while smartphones supporting HEVC level 5 have a median of only 3GB of RAM.

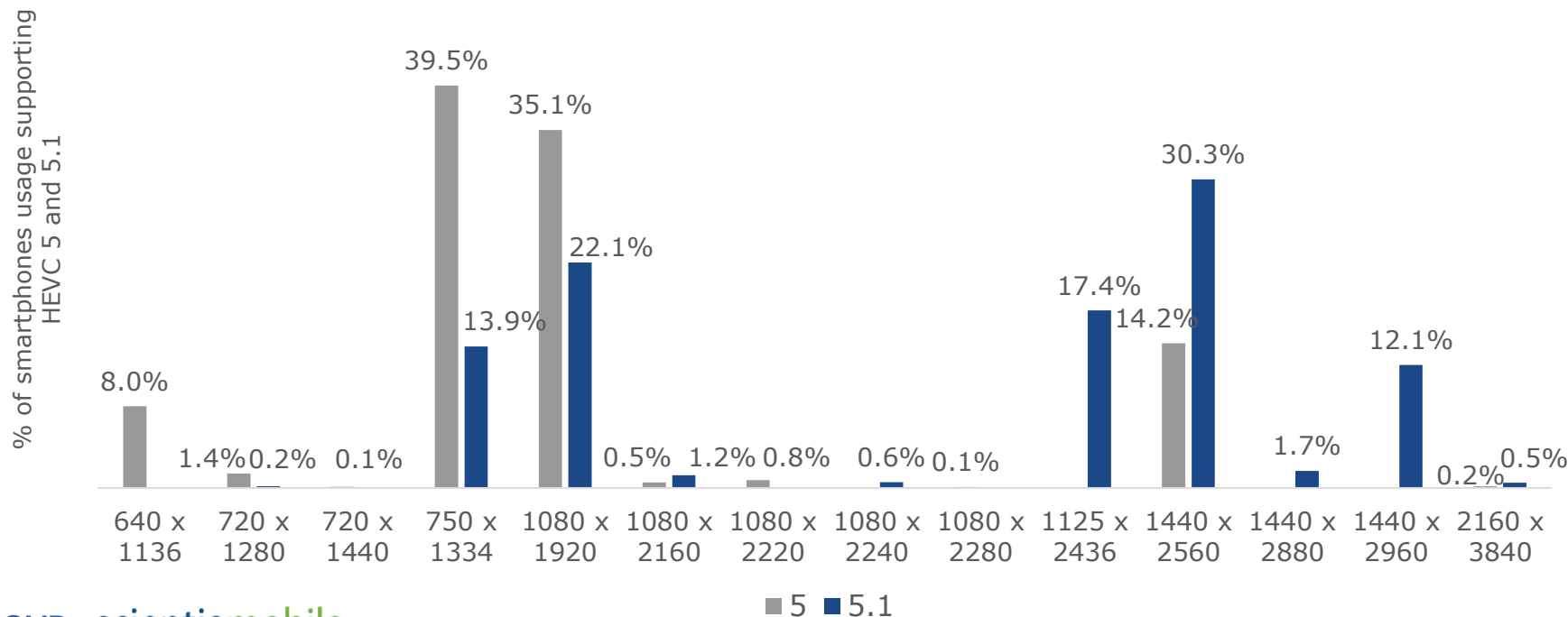
RAM on Smartphones Supporting Hardware-Accelerated HEVC Decode Level 5 & 5.1



## Resolutions on Smartphones Supporting Hardware-Accelerated HEVC Decode Levels 5 or 5.1

- Resolutions on smartphones supporting hardware-accelerated HEVC Decode are increasing as the level supported progresses.
- Level 5 support has its most common resolution at the 750 x 1334 dimension with 39.5%. The second most popular is 1080 x 1920 with 35.1%.
- When evolving to level 5.1, the most common resolution increases to dramatically to 1440 x 2560 with 30.3%.
- These devices can make use HEVC's efficiency in compressing video for their higher resolution screens.

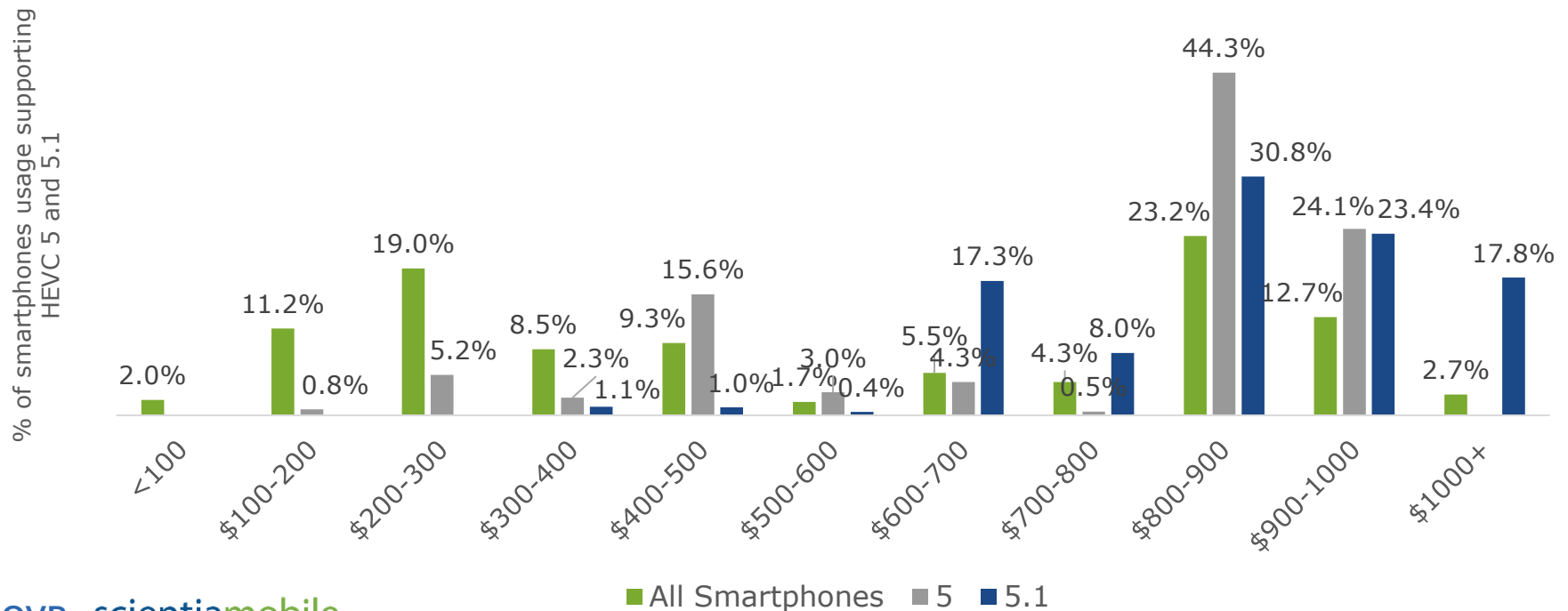
### Resolutions of Top Smartphones Supporting Hardware-Accelerated HEVC Decode Level 5 & 5.1



## MSRP of Smartphones Supporting Hardware-Accelerated HEVC Decode Levels 5 or 5.1

- In general, smartphones supporting hardware-accelerated HEVC carry a premium price.
- The median MSRP for level 5 smartphones is \$849.
- 68% of level 5 smartphones are priced over \$800.
- The median MSRP for level 5.1 smartphones is \$899.
- 72% of level 5.1 smartphones are priced over \$800.
- This is considerably higher than the MSRP for all smartphones at \$499.
- As HEVC and chipsets with HEVC decode/encode become more common, it will be interesting to see if lower-priced devices adopt this technology.

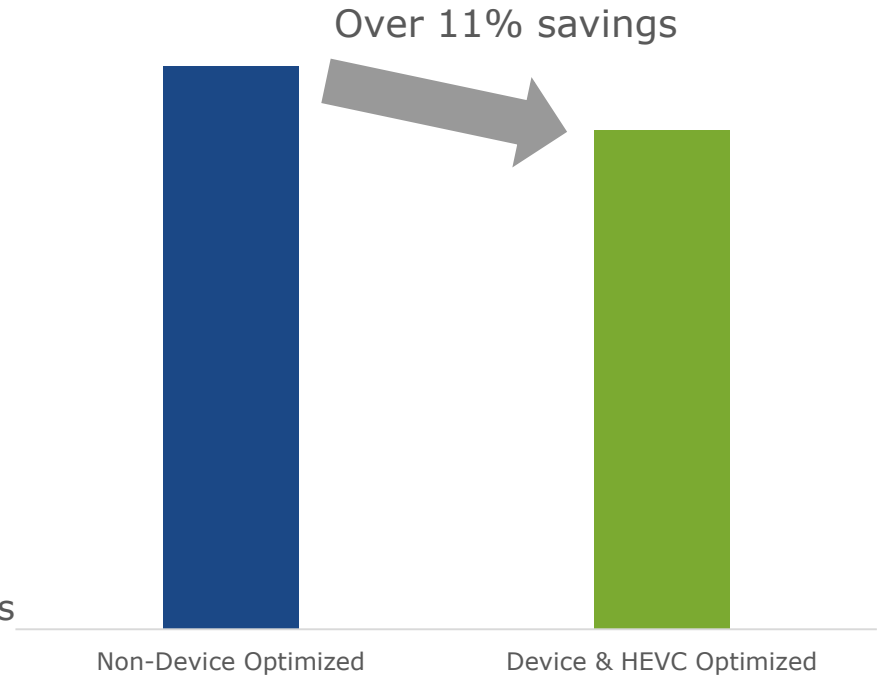
### MSRP of Smartphones Supporting Hardware-Accelerated HEVC Decode Level 5 & 5.1



## Business Case for HEVC Detection in Video Streaming Architecture

- HEVC will reduce dramatically lower video payload. This drives lower Content Delivery Network (CDN) costs for the video platform and lower data consumption costs for end users.
- For a medium-size social media video platform serving 10 million views per month, the video platform can save over 11% on CDN costs alone.
- Other benefits include video server scaling and an improved user experience from higher-quality, faster video.
- For more information, please [contact ScientiaMobile](#) and request the white paper, "How to Optimize HEVC Streaming Video Across Mobile Devices"

### CDN Cost Benefits from HEVC-Optimized Architecture



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## JPEG2000 and Image Payload Size



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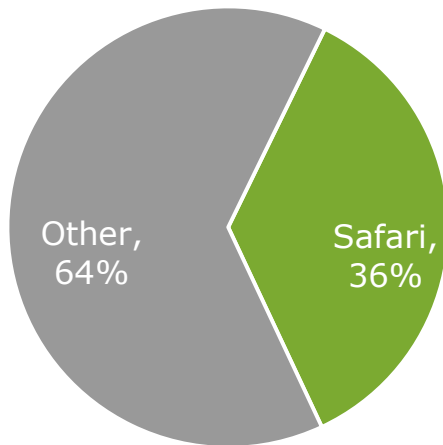




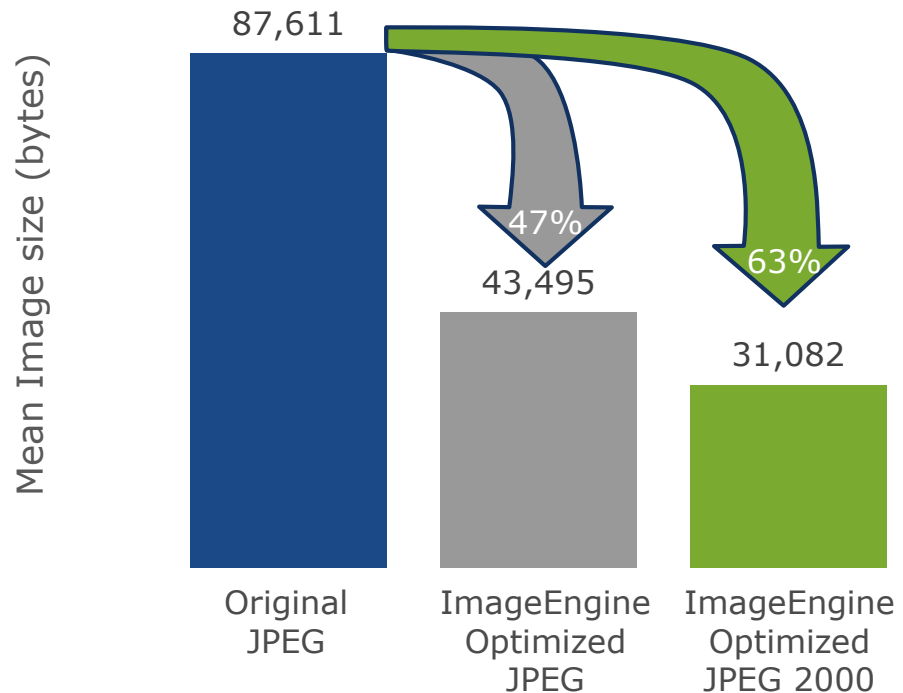
## Image Optimization by Converting to JPEG2000

- 36% of image requests from smartphones come from Safari. Safari supports JPEG2000, a more efficient image format.
- We analyzed a real-world traffic from 2018 Q2 to determine the potential for image payload savings. ImageEngine, device-aware image CDN, can automatically convert and deliver optimized images in real time.
- The mean size of original JPEG is 87,611 bytes.
- Staying within the JPEG format, device-aware optimization produces a file that is 47% smaller.
- Converting to JPEG2000 generates a file that is 63% smaller, with a median size of 31,082 bytes.

### Safari Browser Share of Usage



### JPEG2000 Image Payload Optimization



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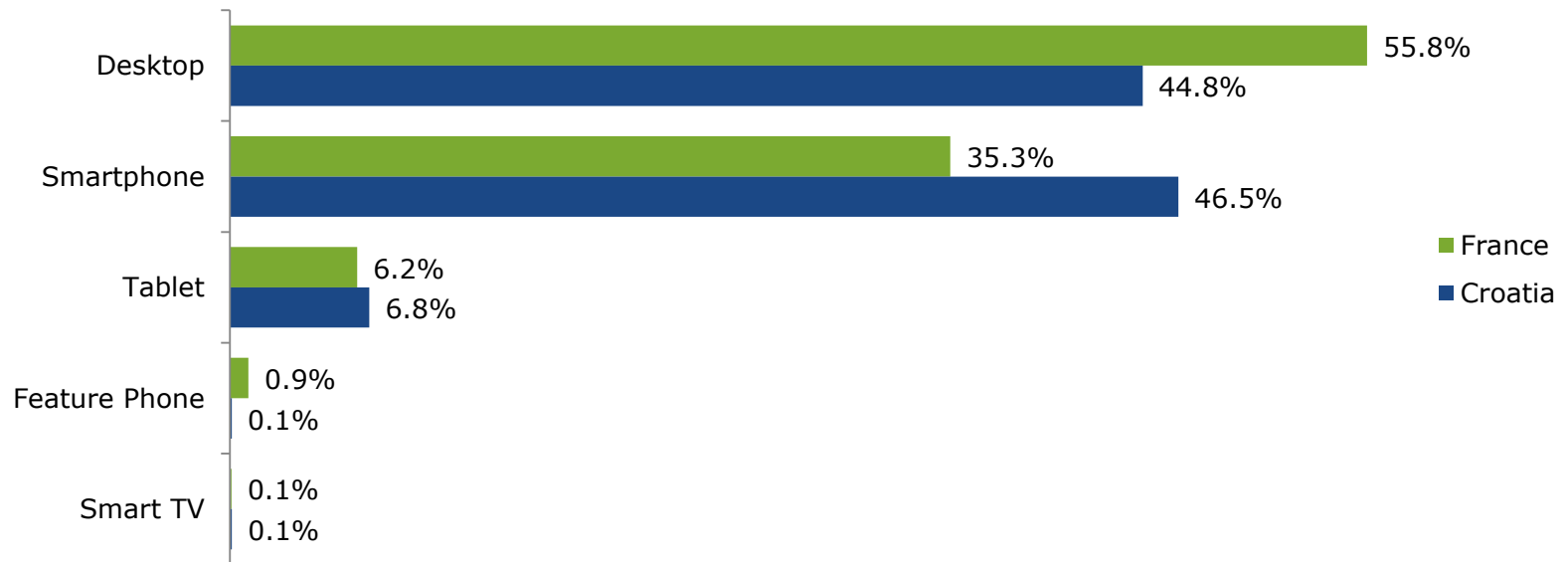
**Spotlight:  
France vs. Croatia  
World Cup Rematch**



## Form Factor

- Looking across all device usage, Croatia has a much higher use of smartphones at 46.5% vs. France at 35.3%.
- Croatia's tablet usage is higher, with 6.8% vs. France's 6.2%.
- Feature phone use has dropped away, with France showing only 0.9% of browsing usage on feature phones, and Croatia at 0.1%.
- Smart TV browsing is a small portion of usage, with both Croatia and France's at 0.1%.

### Usage By Form Factor



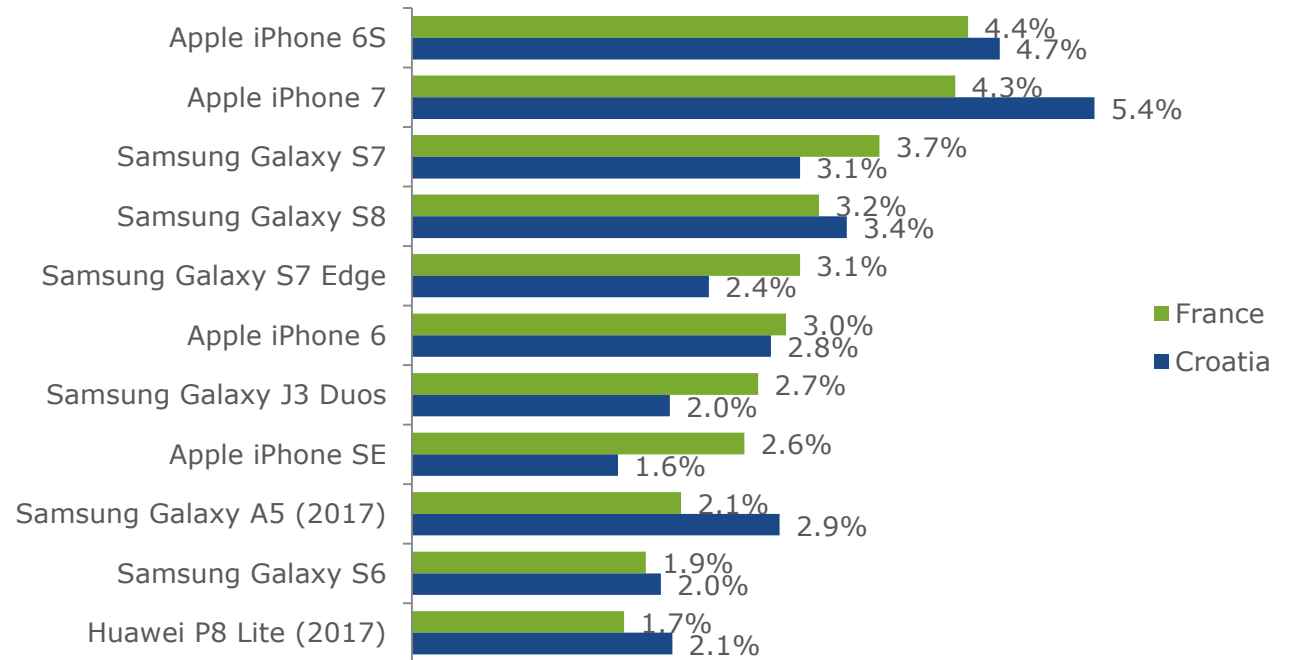
% of all device usage



## Top Smartphones

- The most popular smartphone in France during 2018 Q2 was the Apple iPhone 6S at 4.4%. It was also the second most popular smartphone in Croatia at 4.7%.
- The most popular smartphone in Croatia was the Apple iPhone 7 at 5.4%. It was also the second most popular smartphone in France at 4.3%.

### Top 10 Smartphones - France & Croatia

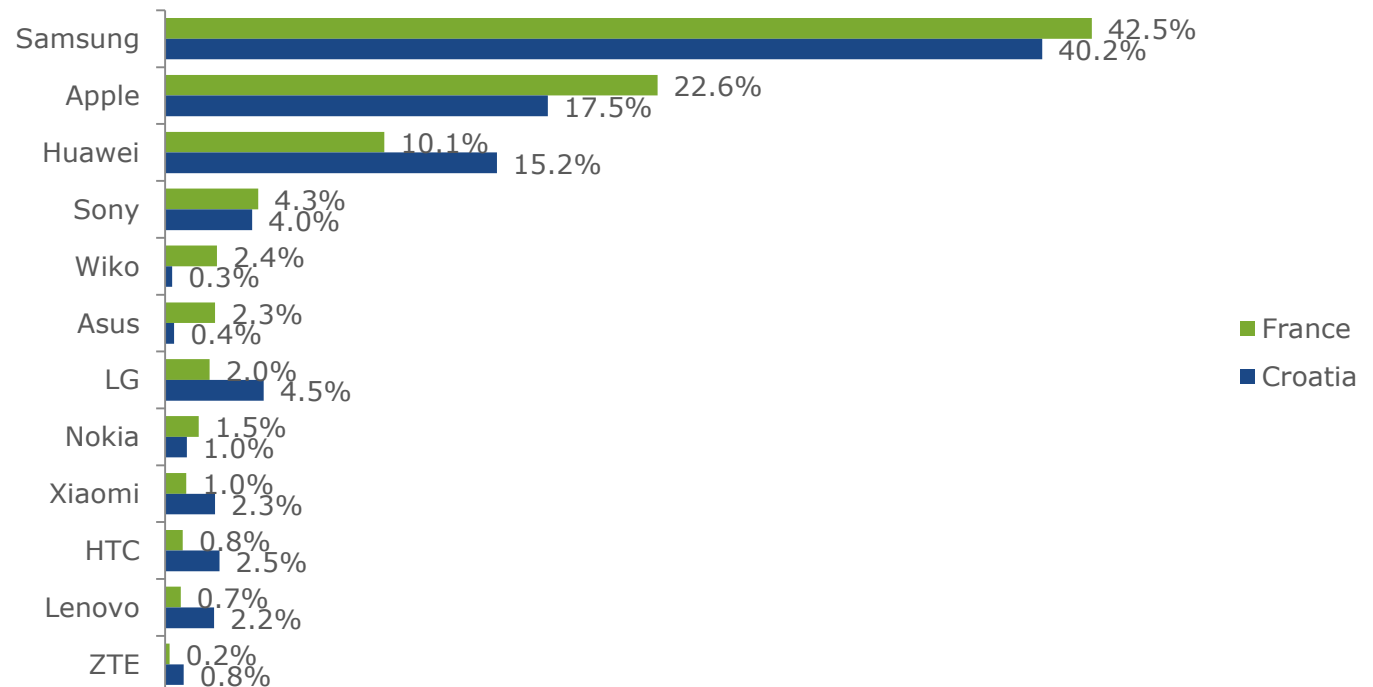




## Top Smartphone Manufacturers

- Samsung is the leading smartphone manufacturer in both France (42.5%) and Croatia (40.2%).
- Croatia has a lower adoption of Apple's iPhones (17.5%) vs. France (22.6%).
- Croatia's third most popular manufacturer, close behind Apple, is Huawei (15.2%).
- In France, Huawei holds third place with (10.1%).
- The top three manufacturers hold 75.1% in France and 73.0% in Croatia.

### Top 10 Smartphone Manufacturers – France & Croatia



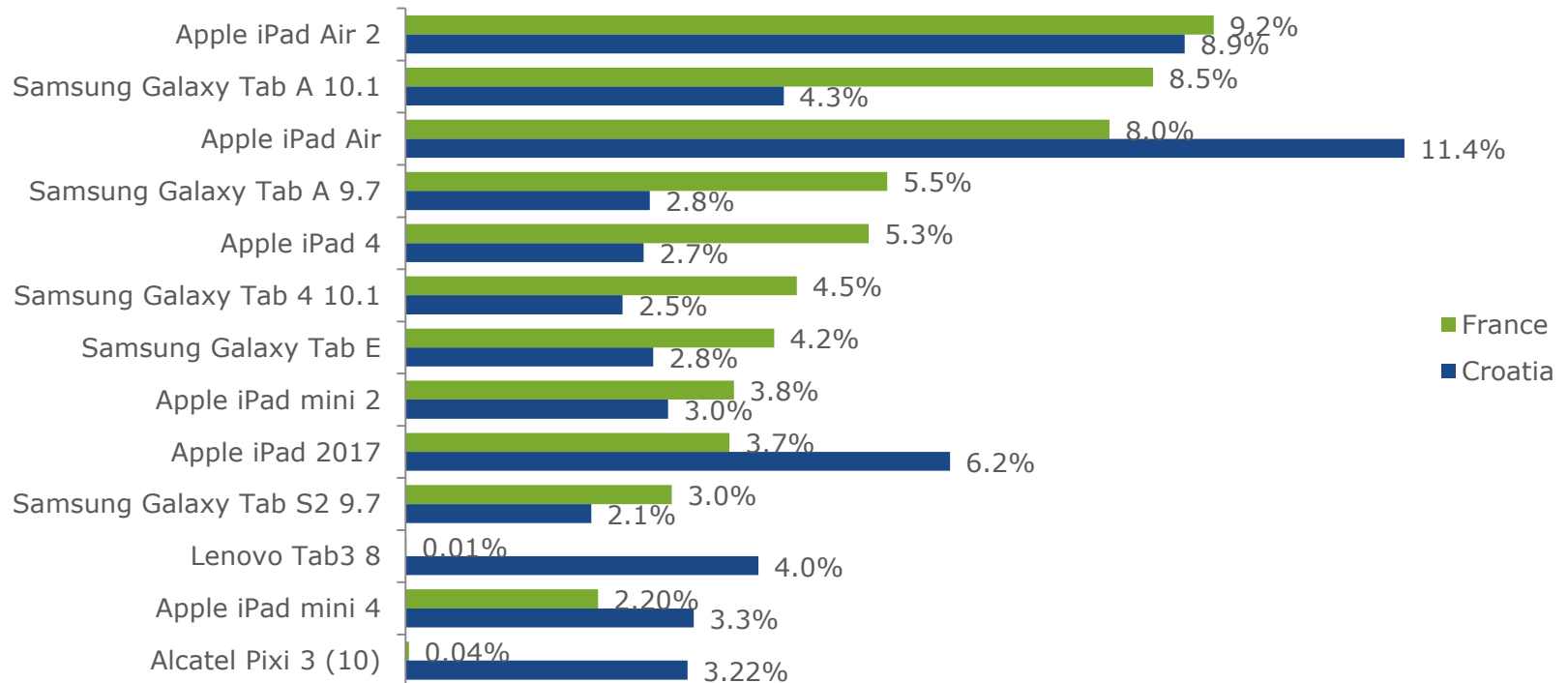
% of all smartphone usage



## Top Tablets

- The Apple iPad Air 2 is the most popular tablet in France with 9.2%.
- France uses the Samsung Galaxy Tab A 10.1 slightly less as it is in second place with 8.5% usage.
- The Apple iPad Air is the most popular tablet in Croatia with 11.4%.
- The Apple iPad Air 2 is in second place in Croatia with 8.9%.

### Top 10 Tablets – France & Croatia

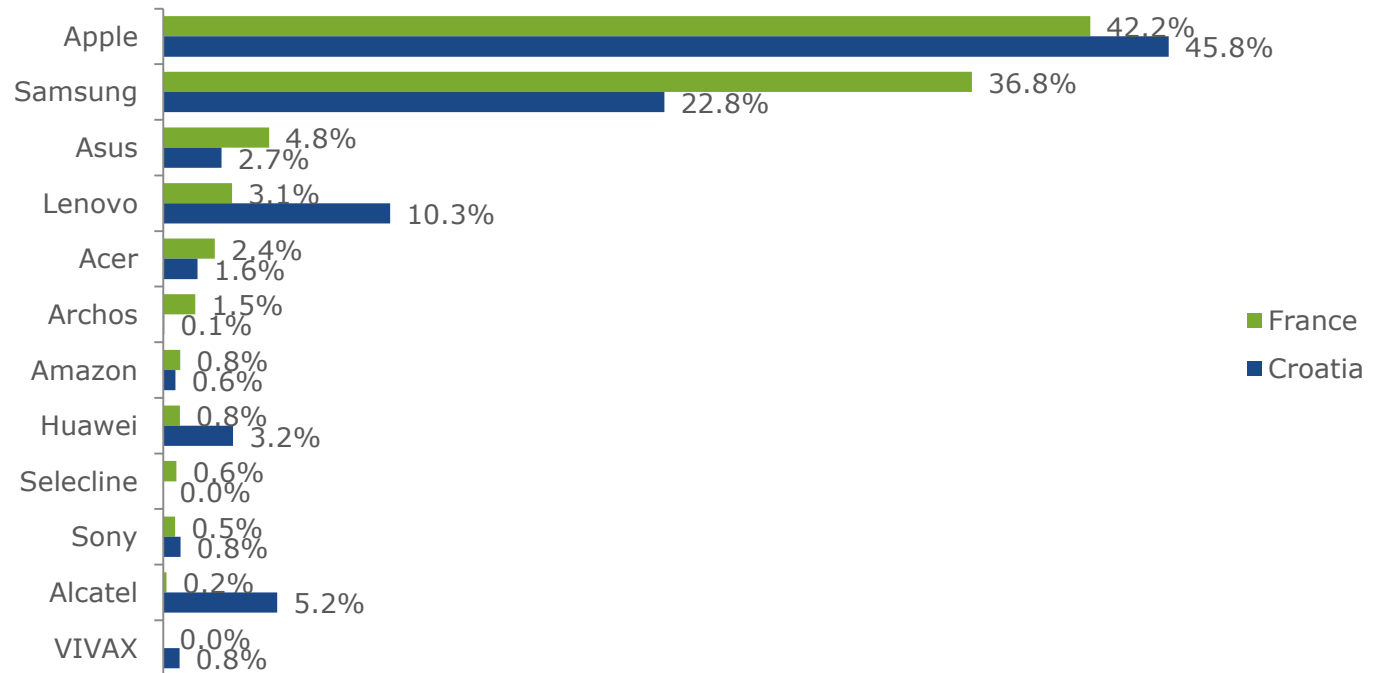




## Tablet Operating System

- In France, Apple is the most popular tablet manufacturer with 42.2%.
- Apple is the most popular manufacturer in Croatia with 45.8%.
- Samsung is the second most popular with 36.8% in France and 22.8% in Croatia.
- In Croatia, Lenovo (10.3%), Alcatel (5.2%), and Huawei (3.2%) also have significant share.

### Top 10 Tablet Manufacturers – France & Croatia



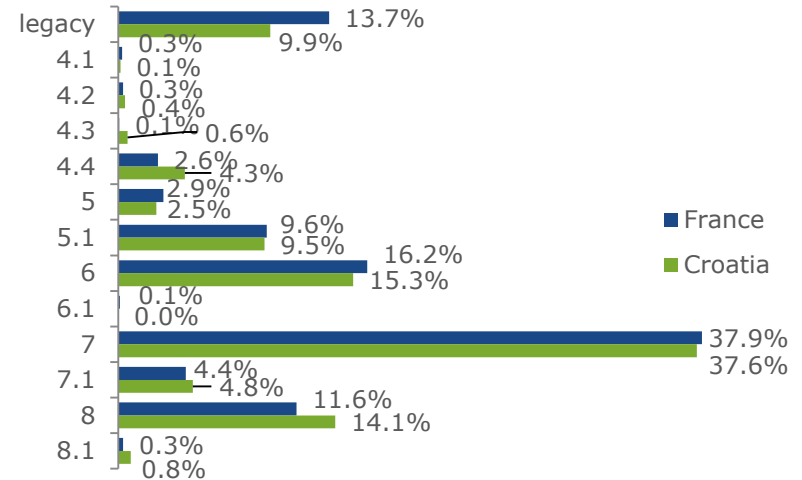




## Smartphone OS Version

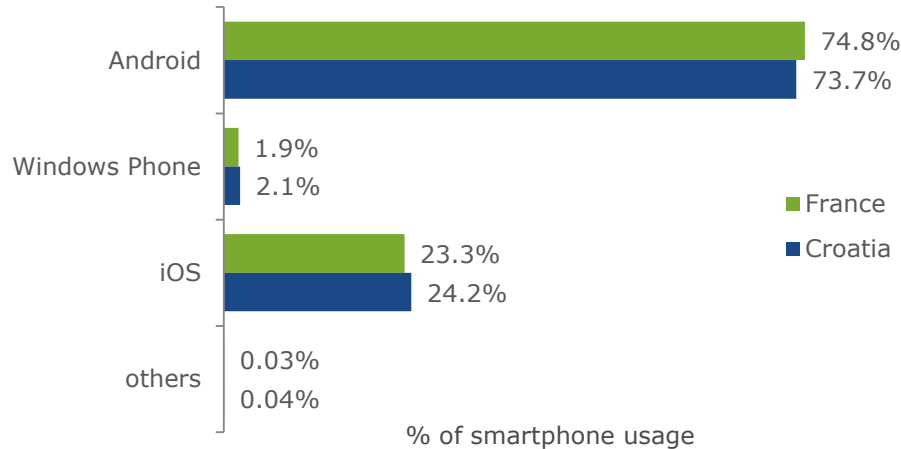
- Android dominates the smartphone OS with France at 74.8% and Croatia at 73.7%.
- iOS has 23.3% of smartphone OS in France versus 24.2% in Croatia.
- The most popular version of Android in both countries is version 7 with France at 37.9% and Croatia at 37.6%.
- For iOS, the most popular version during 2018 Q2 was 11.3. France had 45.7% of iOS users on version 11.3. Croatia had 43.7% on 11.3.

### Android OS – France & Croatia



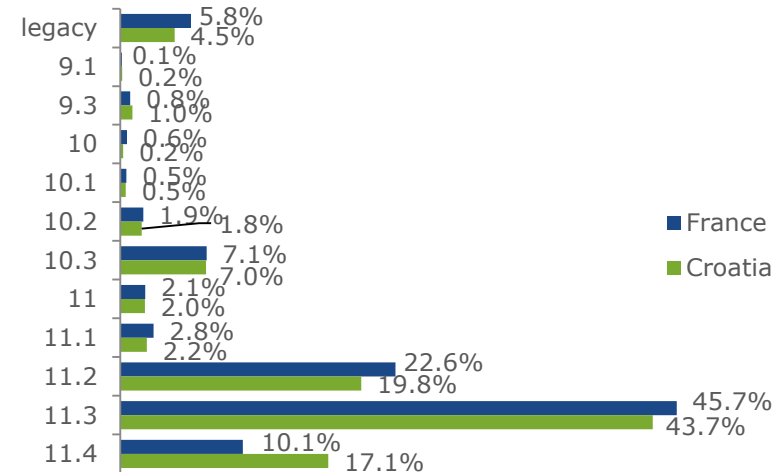
% of Android smartphone usage

### Operating Systems – France & Croatia



% of smartphone usage

### iOS – France & Croatia



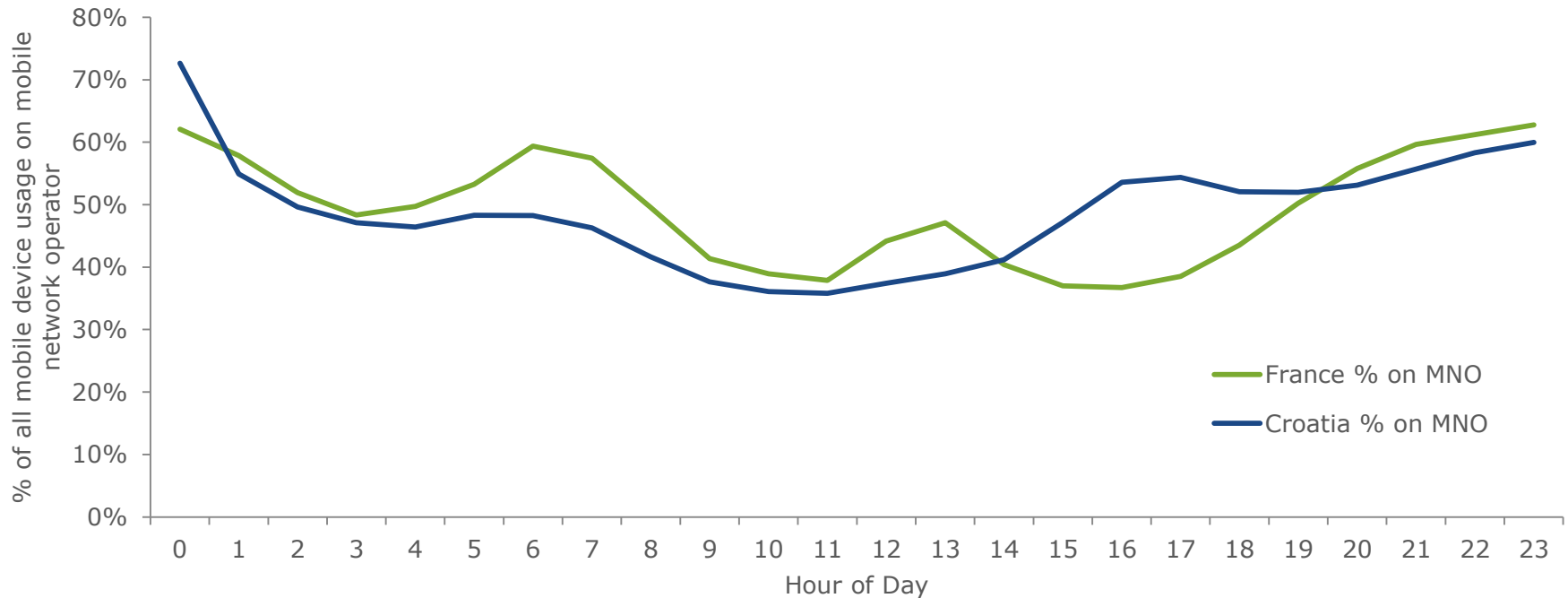
% of iOS smartphone usage



## Mobile Network Operator Usage by Time of Day

- Both France and Croatia have an average of 49% of traffic on mobile network operators (MNO), but during the day, the usage fluctuates.
- The peak hour for France is around midnight with 63% of traffic on MNOs.
- Croatia's peak hour is right after midnight with 73%.

% of Traffic on Mobile Network Operators by Hour of Day



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## About this Report & Resources



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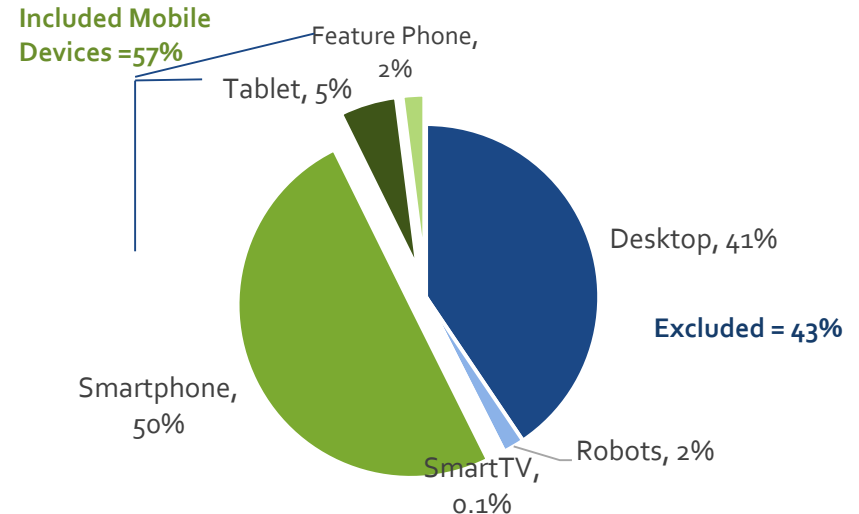
# Report Specifications

- Purpose of Report

- ScientiaMobile publishes MOVR to provide the mobile Web community with timely information on mobile Web device usage.
- Our goal is to stimulate interest in mobile device trends, device capabilities, and tools for analyzing and managing device fragmentation.

- Sources of Data and Filtering

- The information in this report is based on a representative sample of a larger data set. The sample size is over 83.9 billion requests from April 2014 to end of June 2018.
- MOVR focuses on mobile devices, consisting of smartphones, tablets, and feature phones.
- While the data set includes desktops, laptops, smart TVs, game consoles, apps, and robots, we have excluded them, unless otherwise noted.
- We have used an Equivalent Weighted Sites (EWS) methodology that indexes the traffic at each site and assigns an equal weight to each site.
- Samples sizes for Africa and Oceania are small enough that we have a low level of confidence that these figures are representative. However, the source data from these continents continues to grow. Over time, we will improve the quality of these figures. In the meantime, we feel that more information is better than less for people looking for insights in these continents.
- To download the data files supporting MOVR, or subscribe to future publications of MOVR, please visit us at [www.scientiamobile.com/movr](http://www.scientiamobile.com/movr)



## Definitions

- **What is a "hit"?** Each time a user visits a Web page and a user agent (UA) is generated and tested by WURFL (through a number of mechanisms), a "hit" is recorded in the ScientiaMobile dataset. All data reported in MOVR reflects hits, not the count of physical devices generating the hit.
- **What is a smartphone?** A smartphone must meet several criteria: it must be a wireless device, have a touch screen with horizontal resolution greater than or equal to 480px, and not be considered a tablet.
- **What is a tablet?** Criteria for a tablet include: a wireless device, be marketed as a tablet, and running a mobile or tablet OS. One exception is that a full version of Windows running on a tablet is considered to be a laptop.

## Definitions (continued)

- *What is a feature phone?* It is a wireless device that falls into one of the three categories: classic feature phones, modern feature phones, and old smartphones.
  - **Classic feature phone:** Typically a bar, slide, or clamshell form factor with limited possibilities to install apps and a proprietary OS. Other criteria include a physical keyboard and a low price range. Examples are Nokia Series 30 and 40 or Motorola Razr devices.
  - **Modern feature phone:** These phones also have a low price range. They are “smartphone-like”, but targeted at the classic feature phone market. They may have a smartphone OS. They borrow features from classic feature phones, such as size or screen size. Examples are Nokia Asha series or Samsung Galaxy Pocket.
  - **Old smartphones:** These smartphones are older. Classic Blackberry devices and Symbian-based devices fall into this category. More recent devices with a touch screen, but with older hardware or older versions of Android, iOS or Windows Phone also fall into this category.
- *What is MNO Traffic?* Traffic originating from Mobile Network Operators (MNO). It is defined, in our research method, as the connection type provided by the browser navigator.connection API.

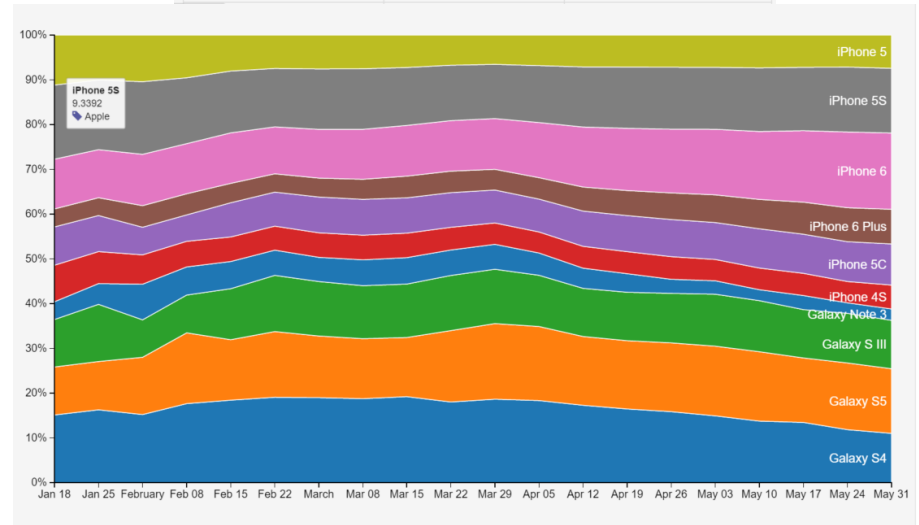
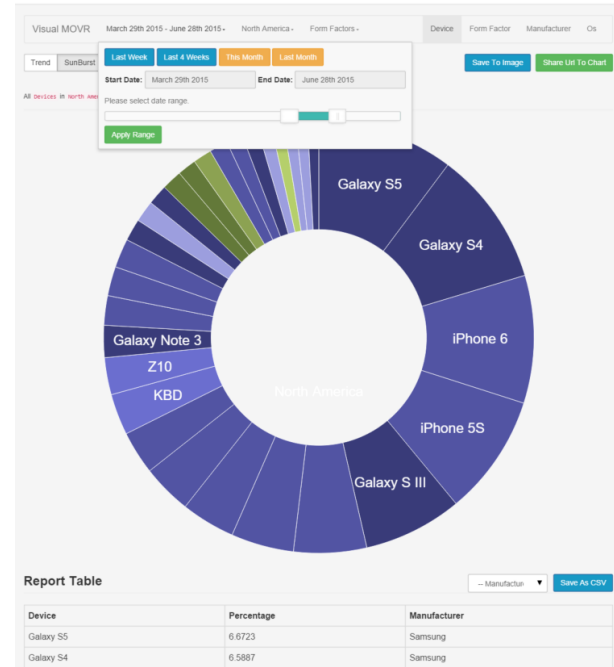
## About WURFL

- ScientiaMobile uses its WURFL products to collect and analyze the device intelligence contained in the MOVR report. WURFL is a Device Description Repository (DDR) that integrates an API and XML to provide an always-updated source for detecting devices and their capabilities. For more than 10 years, WURFL has been the industry standard for device detection. Today, ScientiaMobile offers a number of WURFL products to match a range of needs, from small developers to large enterprises.
- WURFL OnSite and WURFL InFuze provide businesses with high performance server-side device detection solutions.
- WURFL.js provides front-end developers with access to device detection through JavaScript snippets.
- WURFL InSight provides business intelligence analysts with a table-based device detection tool that will integrate easily with data analysis tools.
- ImageEngine combines mobile device detection with image resizing, image file optimization, and Content Delivery Network (CDN)-type delivery. It provides significantly faster downloads, especially on mobile devices.



## Visit the MOVR Visualization Tool

- We have **shortened** this quarterly report because you can now get **up-to-date reports** directly from our MOVR Visualization Tool at <https://www.scientiamobile.com/movr-visualization-tool/>
- With the MOVR Visualization Tool you can:
  - Run interactive reports on up-to-date MOVR information.
  - Export high-quality PNG images. Export data as CSV.
  - Share URL of reports you have generated.



## About ScientiaMobile

- ScientiaMobile provides the industry's most accurate and flexible device detection solution, helping customers deliver great web experiences and manage the increasingly fragmented mobile device ecosystem. ScientiaMobile sells WURFL, a constantly-updated repository that catalogues thousands of devices and their capabilities and provides access to them via range of API languages. The WURFL framework enables many organizations, including Fortune 500 companies, to effectively design and analyze web experiences for an ever-growing range of smartphones, tablets, smart TVs, and game consoles.
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