



# MOVVR

Mobile Overview Report

JULY - SEPT 2022

	ASIA	NORTH AMERICA	EUROPE
Form Factor	<p>2% 3%</p> <p>95%</p> <p>Feature Smartphone Tablet</p>	<p>3% 5%</p> <p>93%</p> <p>Feature Smartphone Tablet</p>	<p>2% 4%</p> <p>94%</p> <p>Feature Smartphone Tablet</p>
Top 10 Smartphones	<p>Apple iPhone 11 4.1%</p> <p>Apple iPhone 13 Pro Max 3.1%</p> <p>Apple iPhone 12 Pro Max 2.9%</p> <p>Apple iPhone 11 Pro Max 2.0%</p> <p>Apple iPhone 13 Pro 1.8%</p> <p>Apple iPhone 13 1.8%</p> <p>Apple iPhone 12 1.8%</p> <p>Apple iPhone 12 Pro 1.7%</p> <p>Apple iPhone XS Max 1.5%</p> <p>Apple iPhone 7 Plus 1.4%</p>	<p>Apple iPhone 11 4.4%</p> <p>Apple iPhone 13 Pro Max 5.3%</p> <p>Apple iPhone 12 Pro Max 5.0%</p> <p>Apple iPhone 12 4.7%</p> <p>Apple iPhone 13 4.4%</p> <p>Apple iPhone XR 4.0%</p> <p>Apple iPhone 13 Pro 2.7%</p> <p>Apple iPhone 12 Pro 2.6%</p> <p>Apple iPhone 11 Pro Max 2.4%</p> <p>Apple iPhone SE (2020) 2.1%</p>	<p>Apple iPhone 11 6.8%</p> <p>Apple iPhone 12 3.9%</p> <p>Apple iPhone 13 3.2%</p> <p>Apple iPhone XR 2.7%</p> <p>Apple iPhone 13 Pro Max 2.4%</p> <p>Apple iPhone 12 Pro Max 2.2%</p> <p>Apple iPhone 13 Pro 2.0%</p> <p>Apple iPhone 12 Pro 1.9%</p> <p>Apple iPhone SE (2020) 1.8%</p> <p>Apple iPhone 8 1.7%</p>
Smartphone Operating System	<p>68% 32%</p> <p>Android iOS</p>	<p>45% 55%</p> <p>Android iOS</p>	<p>60% 40%</p> <p>Android iOS</p>
Smartphone Diagonal Size (inches)	<p>2~3   0%</p> <p>3~4 0%</p> <p>4~4.5   0%</p> <p>4.5~5   1%</p> <p>5~5.5 ■ 5%</p> <p>5.5~6 ■■ 11%</p> <p>6~6.5 ■■■ 42%</p> <p>6.5+ ■■■■ 42%</p>	<p>2~3   1%</p> <p>3~4 0%</p> <p>4~4.5   0%</p> <p>4.5~5   1%</p> <p>5~5.5 ■ 4%</p> <p>5.5~6 ■■■ 15%</p> <p>6~6.5 ■■■■ 39%</p> <p>6.5+ ■■■■ 40%</p>	<p>2~3   1%</p> <p>3~4 0%</p> <p>4~4.5   0%</p> <p>4.5~5   1%</p> <p>5~5.5 ■■ 5%</p> <p>5.5~6 ■■■ 12%</p> <p>6~6.5 ■■■■ 39%</p> <p>6.5+ ■■■■ 43%</p>

	SOUTH AMERICA	AFRICA	OCEANIA
Form Factor	<p>2% 4%</p> <p>94%</p> <p>Feature Smartphone Tablet</p>	<p>10% 2%</p> <p>88%</p> <p>Feature Smartphone Tablet</p>	<p>3% 2%</p> <p>96%</p> <p>Feature Smartphone Tablet</p>
Top 10 Smartphones	<ul style="list-style-type: none"> <li>Apple iPhone 11 6.2%</li> <li>Apple iPhone XR 2.0%</li> <li>Samsung Galaxy A32 1.6%</li> <li>Samsung Galaxy A21s 1.6%</li> <li>Xiaomi Redmi Note 8 1.5%</li> <li>Samsung Galaxy A10s 1.5%</li> <li>Apple iPhone 8 Plus 1.5%</li> <li>Motorola Moto G20 1.4%</li> <li>Apple iPhone 7 1.4%</li> <li>Apple iPhone 12 1.3%</li> </ul>	<ul style="list-style-type: none"> <li>Apple iPhone 11 1.5%</li> <li>Apple iPhone 7 Plus 2.4%</li> <li>Apple iPhone 12 Pro Max 1.9%</li> <li>Apple iPhone 8 Plus 1.8%</li> <li>Apple iPhone 11 Pro Max 1.7%</li> <li>Apple iPhone 13 Pro Max 1.7%</li> <li>Apple iPhone X 1.6%</li> <li>Apple iPhone XR 1.6%</li> <li>Apple iPhone 7 1.5%</li> <li>Apple iPhone XS Max 1.5%</li> </ul>	<ul style="list-style-type: none"> <li>Apple iPhone 11 9.2%</li> <li>Apple iPhone 13 Pro Max 6.3%</li> <li>Apple iPhone 12 Pro Max 6.1%</li> <li>Apple iPhone 12 5.1%</li> <li>Apple iPhone 11 Pro Max 4.6%</li> <li>Apple iPhone 13 4.4%</li> <li>Apple iPhone 13 Pro 3.7%</li> <li>Apple iPhone 12 Pro 3.5%</li> <li>Apple iPhone XR 3.5%</li> <li>Apple iPhone 11 Pro 2.8%</li> </ul>
Smartphone Operating System	<p>76% 24%</p> <p>Android iOS</p>	<p>73% 27%</p> <p>Android iOS</p>	<p>36% 64%</p> <p>Android iOS</p>
Smartphone Diagonal Size (inches)	<ul style="list-style-type: none"> <li>2~3   0%</li> <li>3~4   0%</li> <li>4~4.5   0%</li> <li>4.5~5   1%</li> <li>5~5.5   8%</li> <li>5.5~6   14%</li> <li>6~6.5   44%</li> <li>6.5+   32%</li> </ul>	<ul style="list-style-type: none"> <li>2~3   0%</li> <li>3~4   0%</li> <li>4~4.5   0%</li> <li>4.5~5   1%</li> <li>5~5.5   9%</li> <li>5.5~6   13%</li> <li>6~6.5   36%</li> <li>6.5+   41%</li> </ul>	<ul style="list-style-type: none"> <li>2~3   1%</li> <li>3~4   0%</li> <li>4~4.5   0%</li> <li>4.5~5   2%</li> <li>5~5.5   3%</li> <li>5.5~6   15%</li> <li>6~6.5   43%</li> <li>6.5+   36%</li> </ul>

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**Q2 2022 to Q3 2022  
Comparisons**

## Top Smartphones

- iPhone 11 continues as the most popular smartphone, with 5.53% globally
- iPhones account for the top 17 devices globally
- Budget phones from Samsung, Motorola and Xiaomi are the only exceptions to the iPhone's dominance, and these only break the top 10 in S. America, and Africa.

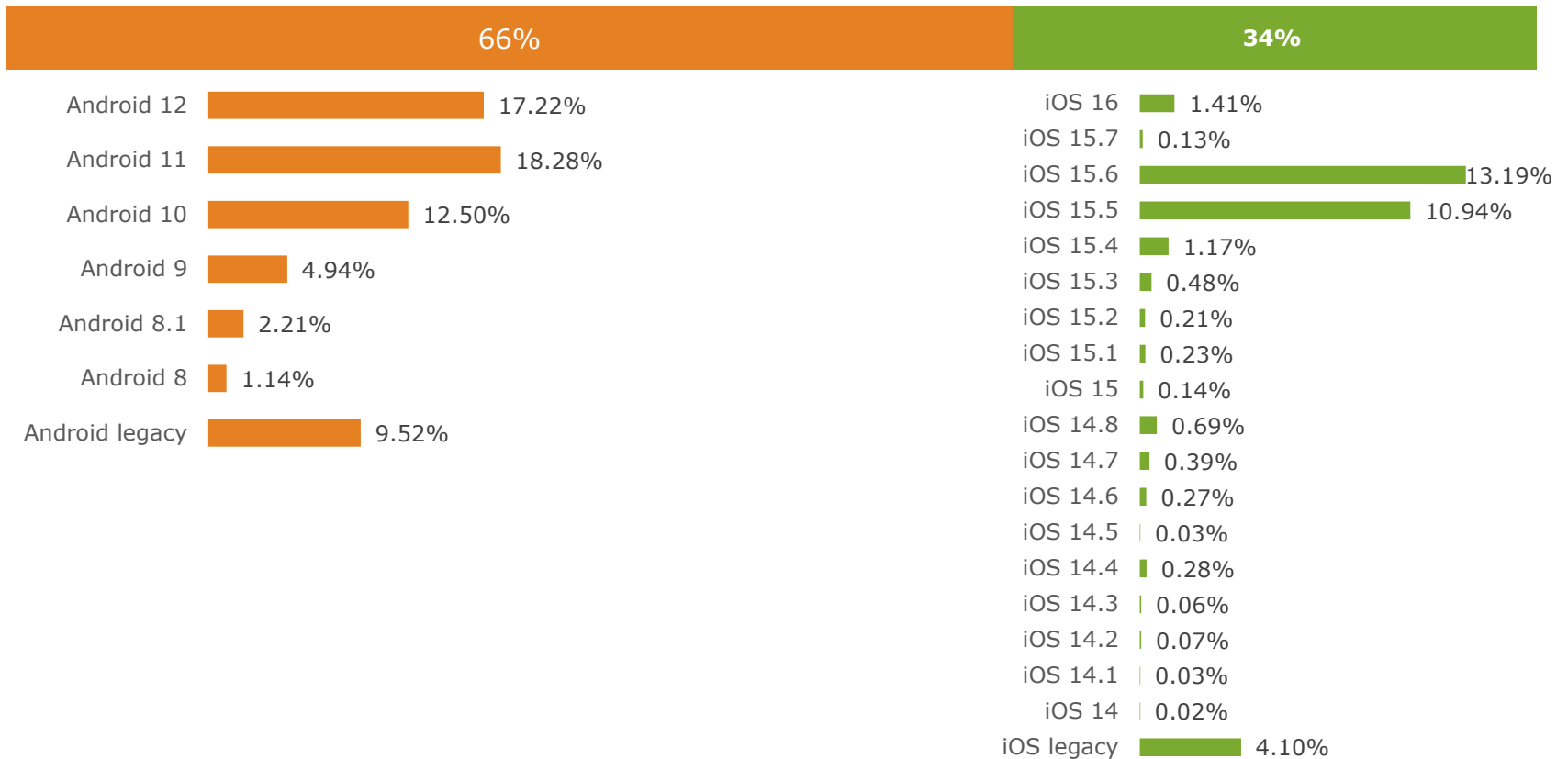
Top Smartphones	Africa	Asia	Europe	N. America	Oceania	S. America	Global
Apple iPhone 11	3.50%	4.14%	6.78%	9.38%	9.20%	6.19%	5.53%
Apple iPhone 12	0.92%	1.76%	3.94%	4.68%	5.06%	1.29%	2.76%
Apple iPhone 13 Pro Max	1.68%	3.09%	2.43%	5.31%	6.34%	0.97%	2.59%
Apple iPhone 13	0.92%	1.77%	3.22%	4.38%	4.39%	1.09%	2.41%
Apple iPhone 12 Pro Max	1.95%	2.91%	2.20%	4.99%	6.14%	0.89%	2.38%
Apple iPhone XR	1.56%	1.36%	2.70%	4.04%	3.52%	1.97%	2.29%
Apple iPhone 13 Pro	0.61%	1.78%	1.96%	2.73%	3.72%	0.55%	1.68%
Apple iPhone 12 Pro	0.77%	1.68%	1.87%	2.65%	3.53%	0.52%	1.57%
Apple iPhone 11 Pro Max	1.68%	2.00%	1.51%	2.37%	4.59%	0.73%	1.46%
Apple iPhone SE (2020)	0.26%	0.42%	1.77%	2.12%	1.26%	0.88%	1.16%
Apple iPhone 8 Plus	1.83%	1.30%	1.01%	1.45%	1.87%	1.47%	1.12%
Apple iPhone 8	0.77%	0.55%	1.71%	1.39%	1.53%	1.14%	1.08%
Apple iPhone 11 Pro	0.69%	1.17%	1.54%	1.27%	2.81%	0.47%	1.07%
Apple iPhone X	1.61%	1.37%	1.33%	1.12%	1.80%	0.72%	1.05%
Apple iPhone 7	1.49%	0.86%	1.32%	1.31%	1.09%	1.37%	1.05%
Apple iPhone 7 Plus	2.38%	1.45%	0.68%	1.01%	0.97%	1.25%	0.94%
Apple iPhone XS Max	1.46%	1.51%	0.80%	1.09%	2.01%	0.53%	0.88%
Samsung Galaxy A21s	1.00%	0.41%	0.77%	0.47%	0.42%	1.59%	0.75%
Samsung Galaxy A32	0.78%	0.54%	0.47%	0.41%	0.26%	1.59%	0.68%
Xiaomi Redmi Note 8	0.38%	0.72%	0.29%	0.42%	0.08%	1.51%	0.58%
Samsung Galaxy A10s	1.20%	0.31%	0.17%	0.42%	0.13%	1.47%	0.43%
Apple iPhone 6S Plus	1.23%	0.61%	0.19%	0.34%	0.27%	0.36%	0.34%
Motorola Moto G20	0.00%	0.01%	0.04%	0.23%	0.00%	1.41%	0.25%
<b>Others</b>	<b>71.32%</b>	<b>68.29%</b>	<b>61.28%</b>	<b>46.41%</b>	<b>39.01%</b>	<b>70.02%</b>	<b>65.94%</b>

## Global Smartphone OS Versions

- Android has 66% of operating system share among smartphones globally.
- Android 11 is the most popular version, with 18.28% of global market share. Android 12 is gaining in adoption, with 17.22%.
- iOS has 34% of OS share.
- iOS 15.6 is the most popular version with 13.19% globally.

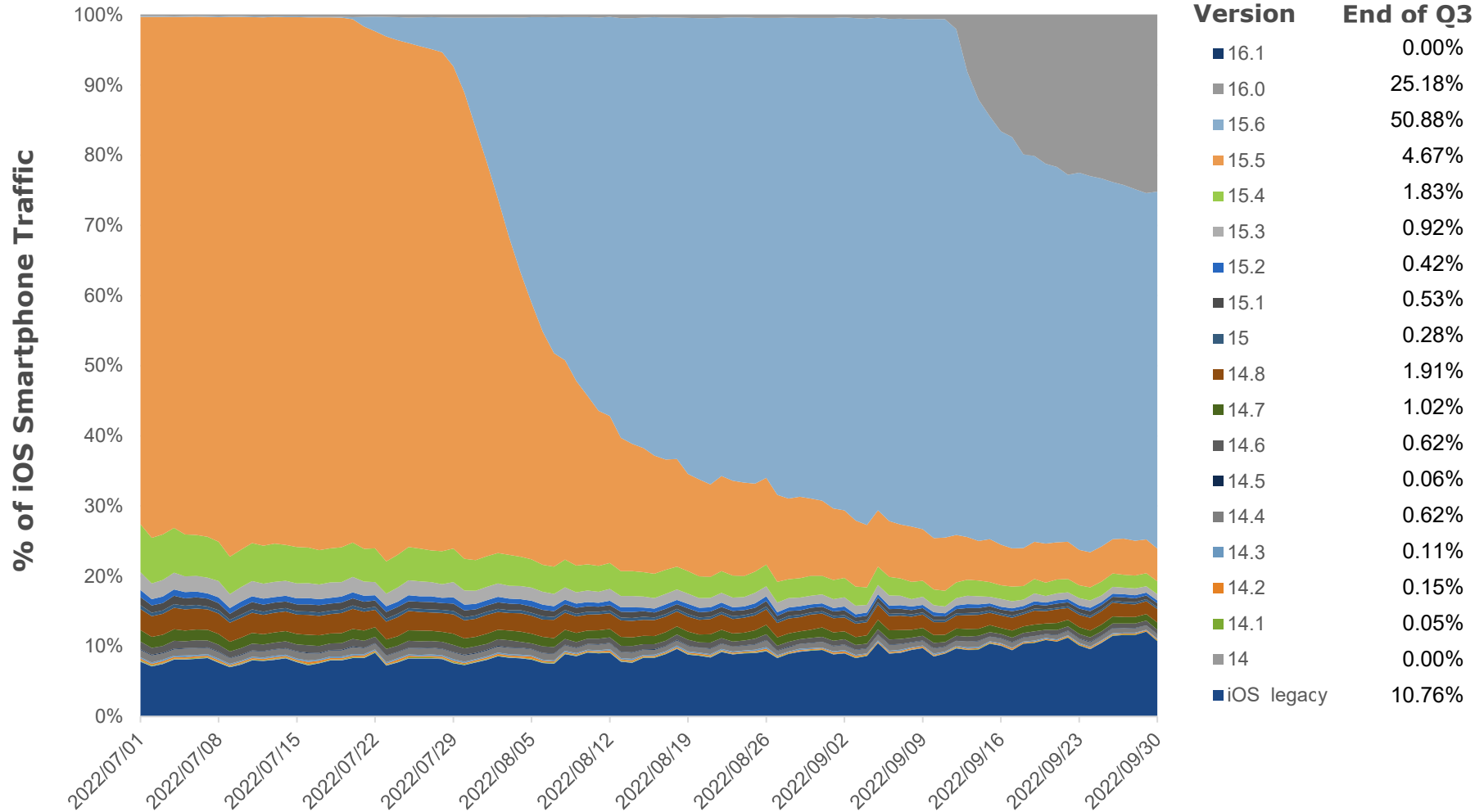
### Android

### iOS



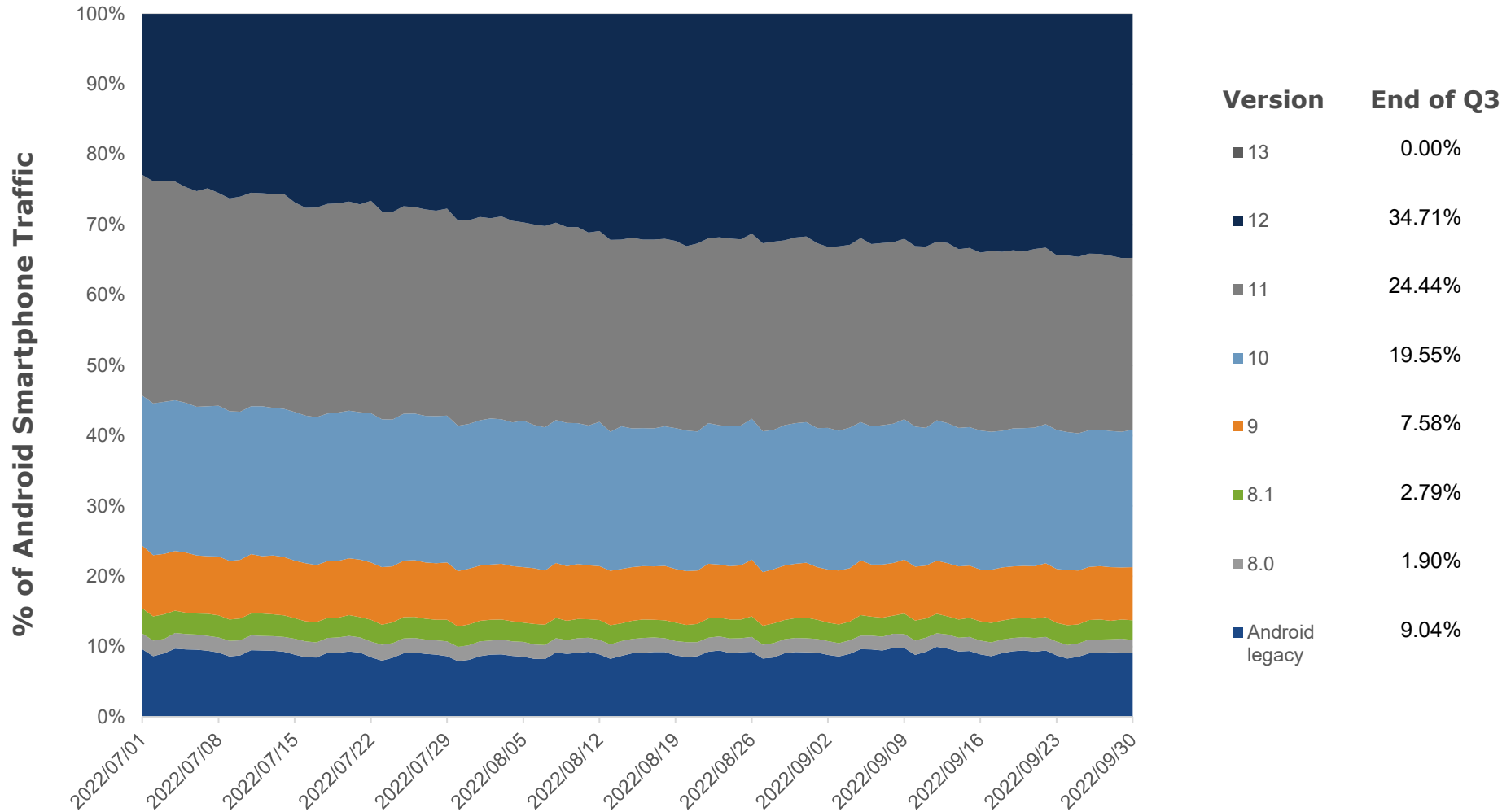
## iOS Smartphone Operating System Trends

- iOS 15.6 ended 2022 Q3 as the most popular iOS operating system with 50.88%.
- New iOS 16 released in September and had 25.18% by end of 2022 Q3.



## Android Smartphone Operating System Trends

- By the end of 2022 Q3, Android 12 had surpassed prior versions with 34.71% of Android OS smartphones.





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**Chrome Updates,  
Frozen User Agents,  
and Client Hints**

## Timeline for Freezing User Agents, Migration to User-Agent Client Hints

- In **2022 Q2**, Google started to migrate to user-agent client hints for desktop.
- In **2022 Q3**, mobile devices will start migrating
- [Learn more](#) about keeping device detection accurate with WURFL



Desktop  
Browsers

Trial UA  
Client Hints

Migrate

UA Frozen

Mobile  
Browsers

Trial UA  
Client Hints

Migrate

UA Frozen



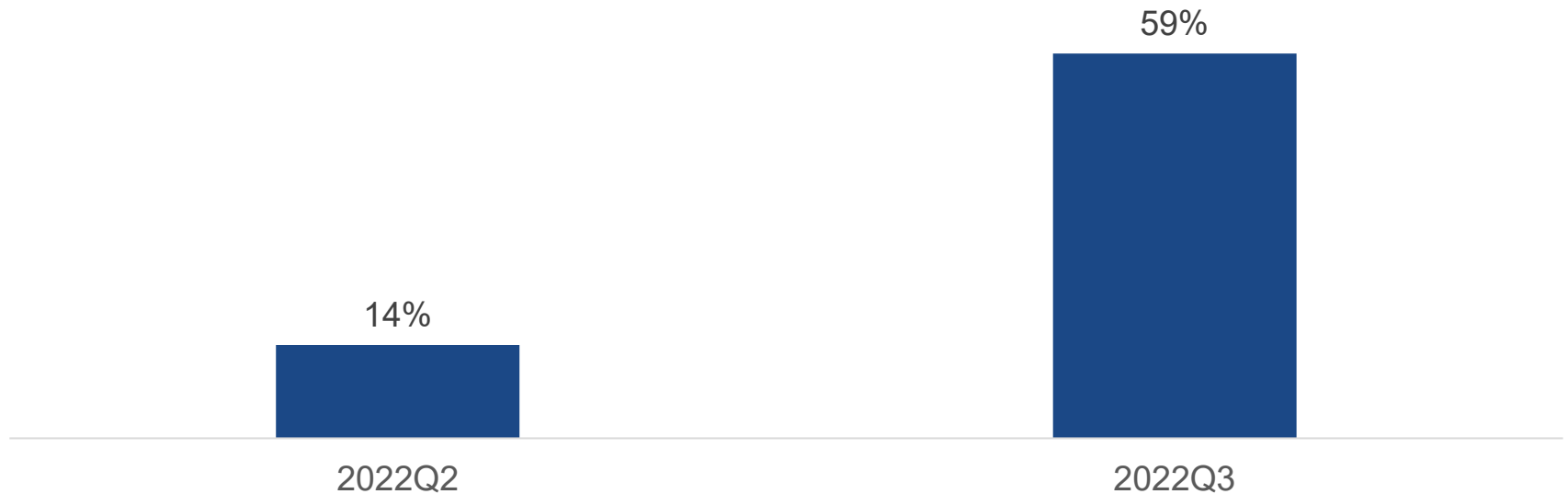
Ready for User-Agent Client Hints

*WURFL API Update (1.12.5.0, released in March 2022) accepts User-Agent Client Hints and reconciles them with User-Agents Strings. WURFL is already prepared for Google's plans that will not arrive until 2023.*

## Chrome Desktop Frozen User Agent String

- Chrome Desktop User Agent (UA) strings were starting to freeze in 2022 Q3.
- 59% of all Desktop UA observed from Chrome were frozen, up from only 14% in 2022 Q2.
- Almost no Mobile UA strings were frozen during 2022 Q3.
- However, as 2022 Q4 progresses, we are starting to see frozen UA strings.

### Frozen Chrome Desktop UAs



## Turn On User-Agent Client Hints Now!!

- Google Chrome is starting to freeze both desktop and mobile browser user agent strings.
- Be prepared for frozen user agent strings. Configure your application and HTTP servers to request additional Client Hints headers.
- Example:  
`Accept-CH: sec-ch-ua-platform-version, sec-ch-ua-full-version, sec-ch-ua-full-version-list, sec-ch-ua-model, sec-ch-ua-arch, sec-ch-ua-bitness, sec-ch-ua-wow64`



**Add Support for User Agent Client Hints NOW!**

Sri Sridharan, Director of Mobile Data Analysis explains the changes in Chrome and User Agent Strings. And why you need to add support for User-Agent Client Hints Now.

Read Now! >

Learn more here:

<https://www.scientiamobile.com/add-support-for-user-agent-client-hints-now/>

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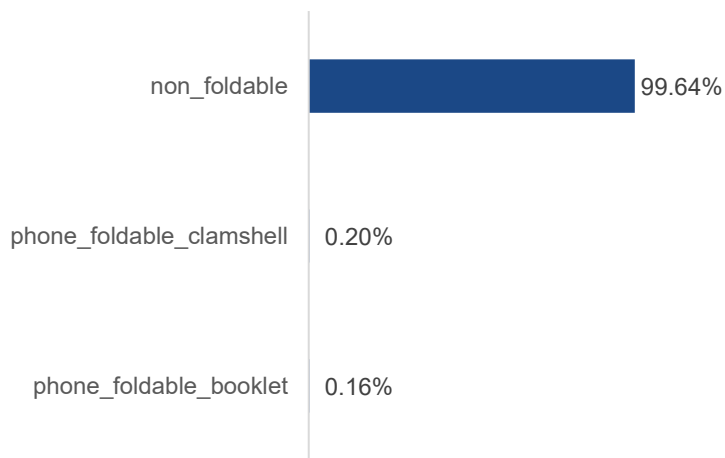
# **Foldable Mobile Phones**



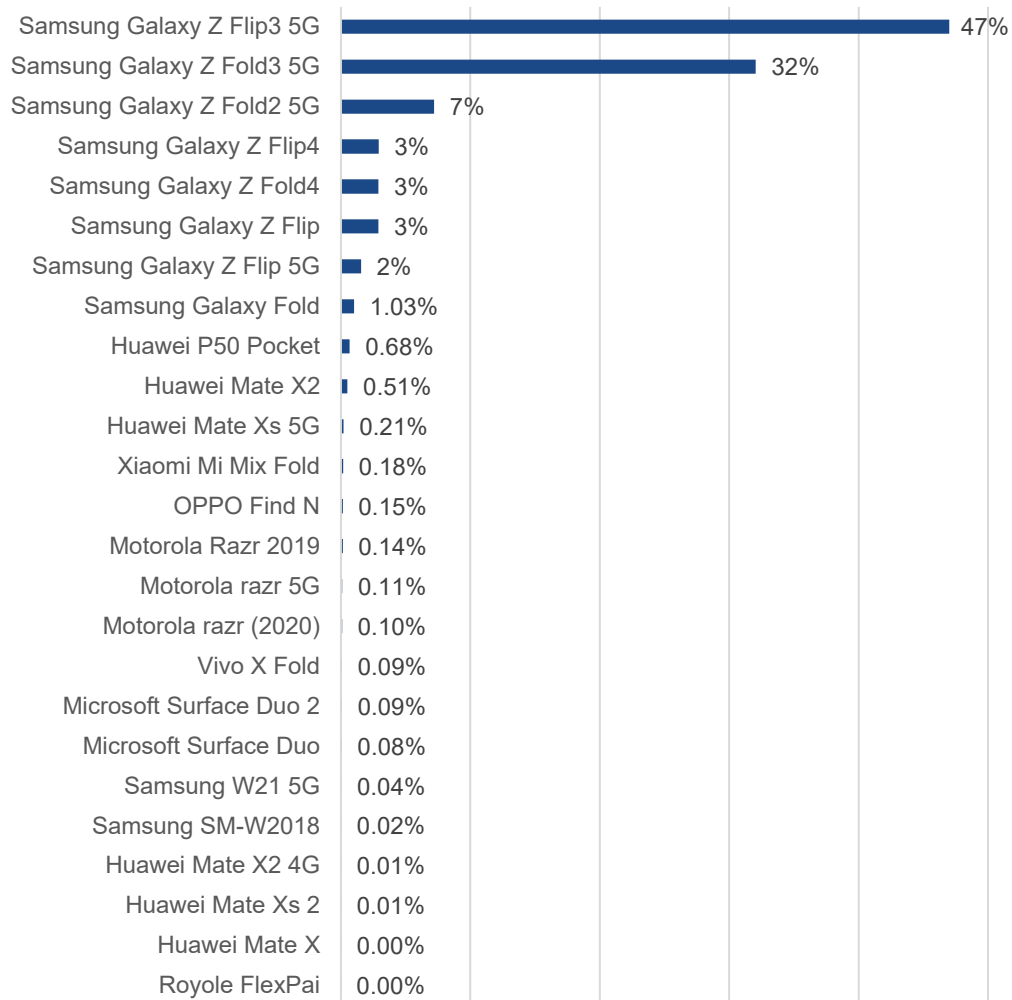
# Global Foldable Phone Usage

- It has been 3+ years since the debut of foldable phones at Mobile World Congress 2019.
- As of 2022 Q3, only 0.36% of phones are foldable, despite many models and much marketing.
- The clamshell design is the most popular, with 0.20%. The booklet form has 0.16%.
- Samsung dominates the foldable market, with 8 of the 10 top foldable phones.
- Samsung accounts for 97% of the foldable phones.

## Global



## Global

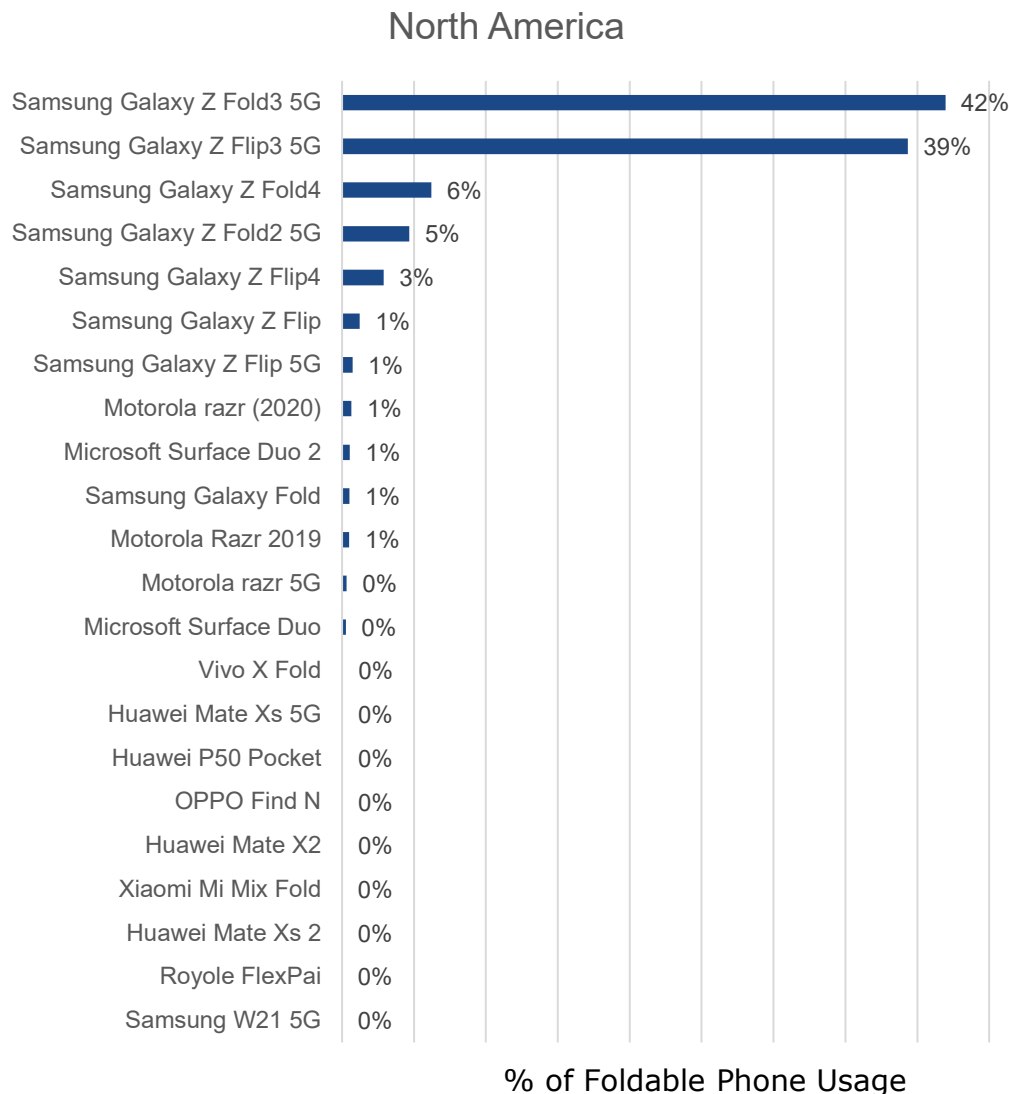
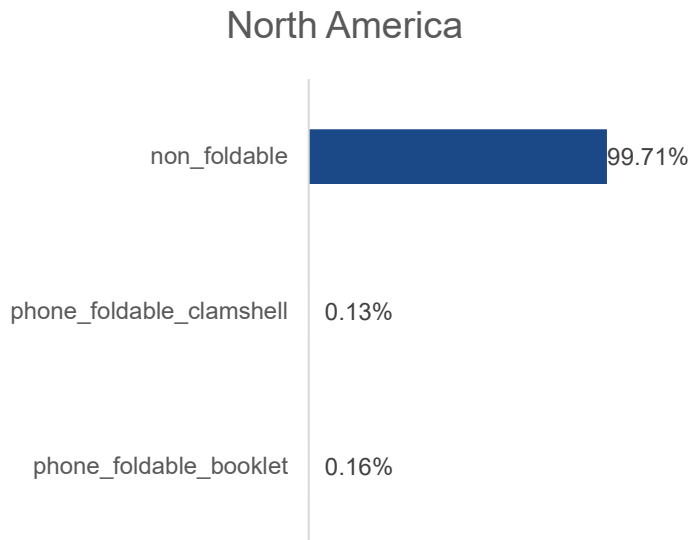


% of Foldable Phone Usage



## N. American Foldable

- The Samsung Galaxy Z Fold3 5G is the most popular foldable phone in N. America with 42% of the foldable usage.
- The second most popular is the Samsung Galaxy Z Flip3 5G with 39%.
- Looking at the physical form factor, the booklet form factor is slightly more popular in terms of usage in N. America.

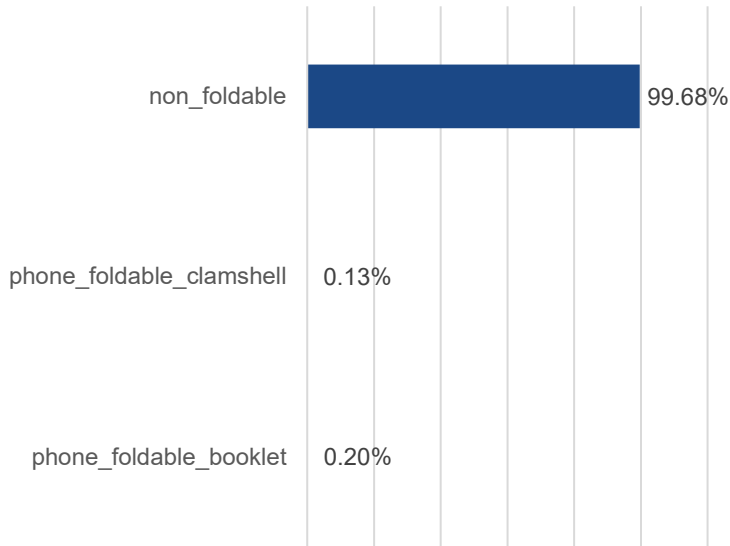




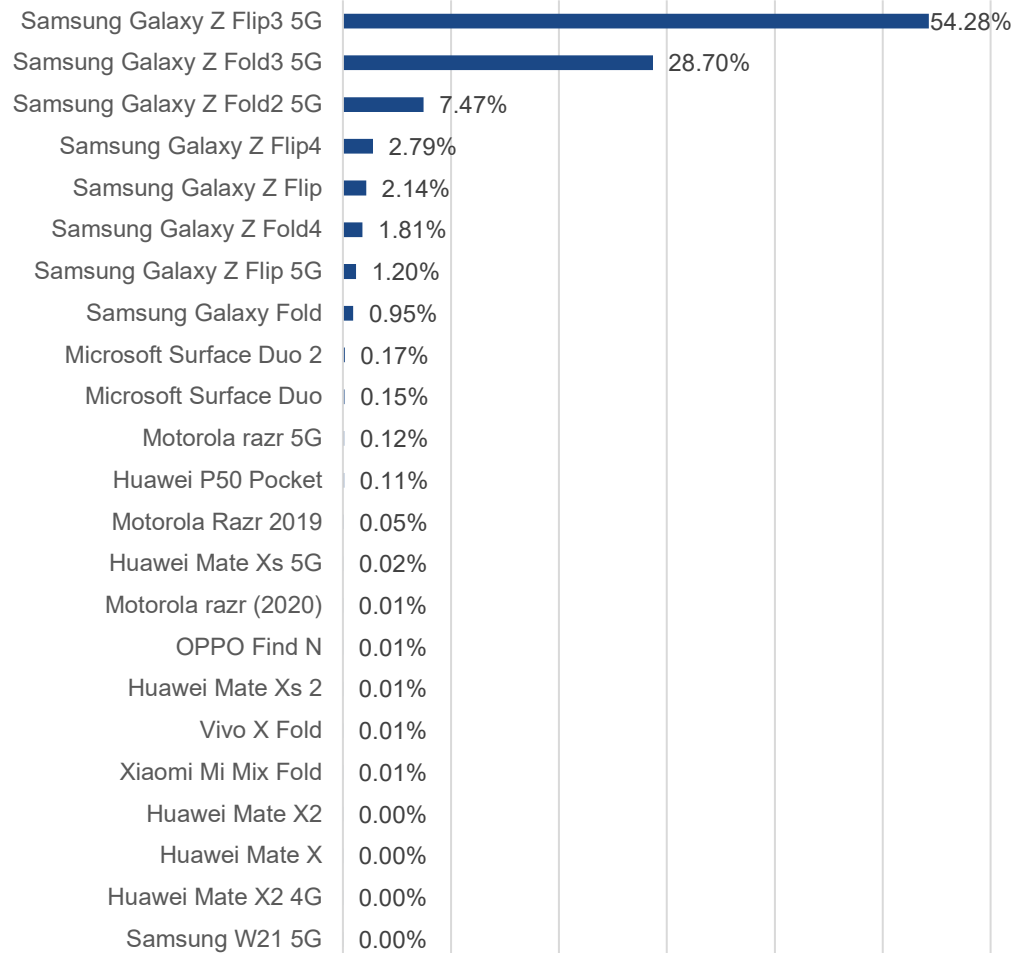
# Europe Foldable

- The Samsung Galaxy Z Flip3 5G is the most popular foldable phone in Europe with 54% of the foldable usage.
- The second most popular is the Samsung Galaxy Z Fold3 5G with 28%.
- Looking at the physical form factor, the booklet form factor is slightly more popular in terms of usage in N. America.

Europe



Europe



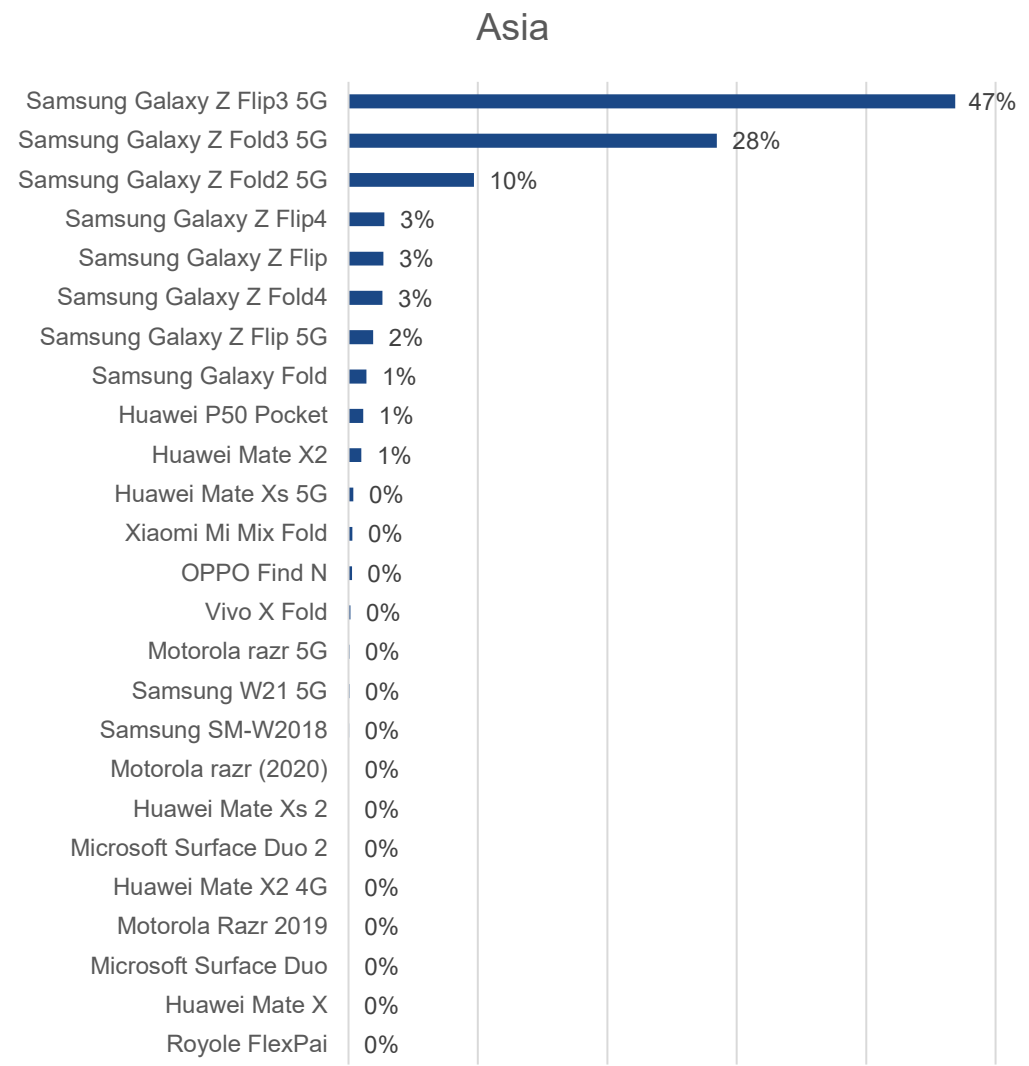
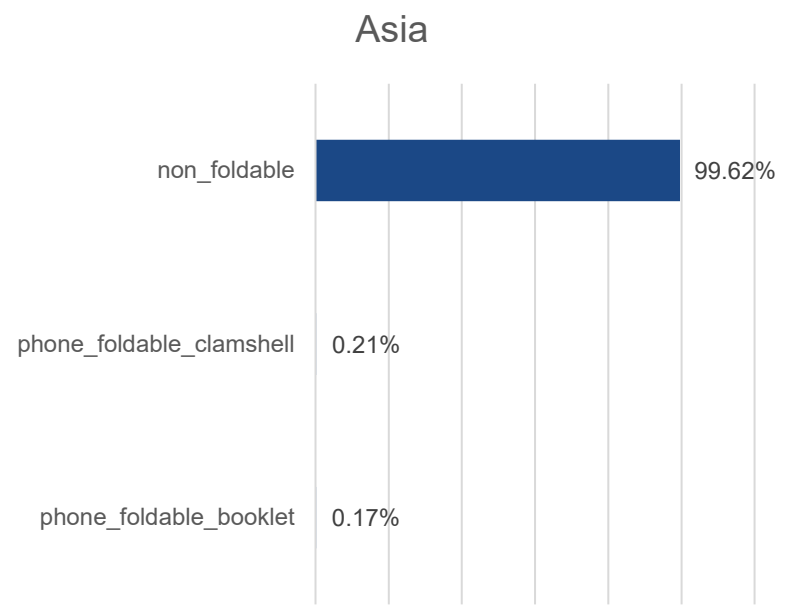
% of Foldable Phone Usage





# Asia Foldable

- The Samsung Galaxy Z Flip3 5G is the most popular foldable phone in Asia with 47% of the foldable usage.
- The second most popular is the Samsung Galaxy Z Fold3 5G with 28%.
- Looking at the physical form factor, the clamshell form factor is slightly more popular in terms of usage in Asia.

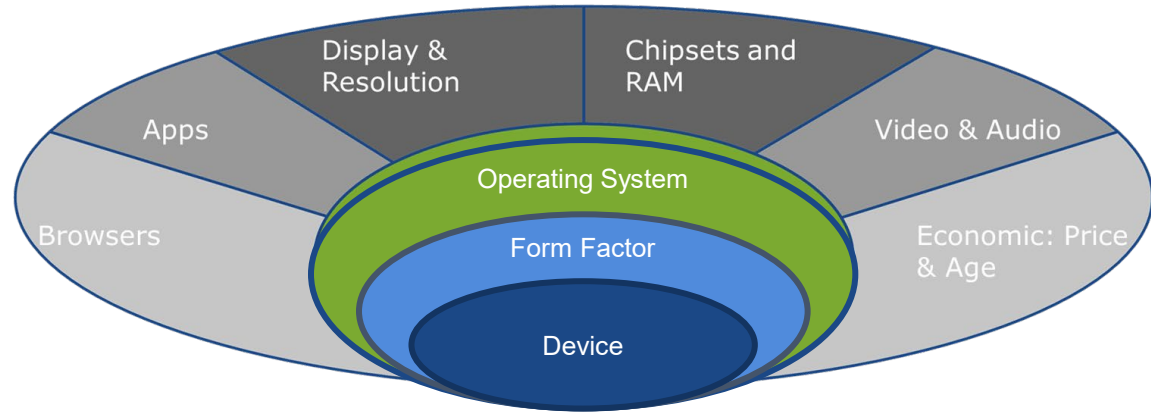


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**Get a Custom MOVR**

## Get Customized Mobile Data Reports

- **Geography:** select global, continents, or over 40 countries from developed or emerging markets
- **Device Capabilities:** select from over 500 device capabilities including form factor, OS, browsers, apps, display & resolution, chipsets, video, and economic information.
- **Time Frame:** analyze trend and make comparisons by selecting the time frame of the report
- **Delivery Frequency:** select how often the MOVR data is delivered, including annual, quarterly, monthly, weekly, or daily
- Contact: [sales@scientiamobile.com](mailto:sales@scientiamobile.com)



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**How the Mobile Overview  
Report is Possible**

## Add Device Detection, Including iPhones, to Your Analytics Today with WURFL.js



### With WURFL.js Basic, Standard or Pro, You Get:

- Accurate identification of iPhone and iPad models
- Integrate with [Google Analytics](#)
- Over 20 of WURFL's most [popular capabilities](#)
- Easy-to-use JavaScript snippet works with ScientiaMobile's cloud-based DDR
- SLA and high reliability
- Helpdesk support

Get WURFL.js: <https://www.scientiamobile.com/products/wurfl-js/>

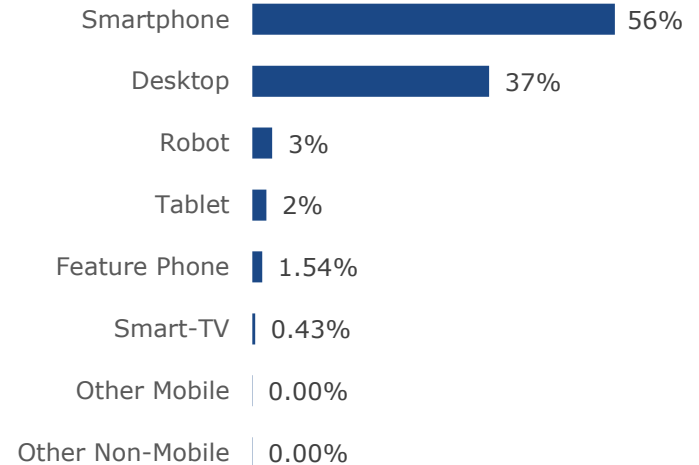
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**About this Report  
& Resources**

# 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 more than 216 billion requests from April 2014 to end of September 2022.
  - 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)

## Hits by Form Factor



## 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 540px, run either Android 6.0 or iOS 9 or later, 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 solution 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.



## 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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- [WURFL.io](http://WURFL.io) offers a number of free tools for device detection and image optimization.
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