

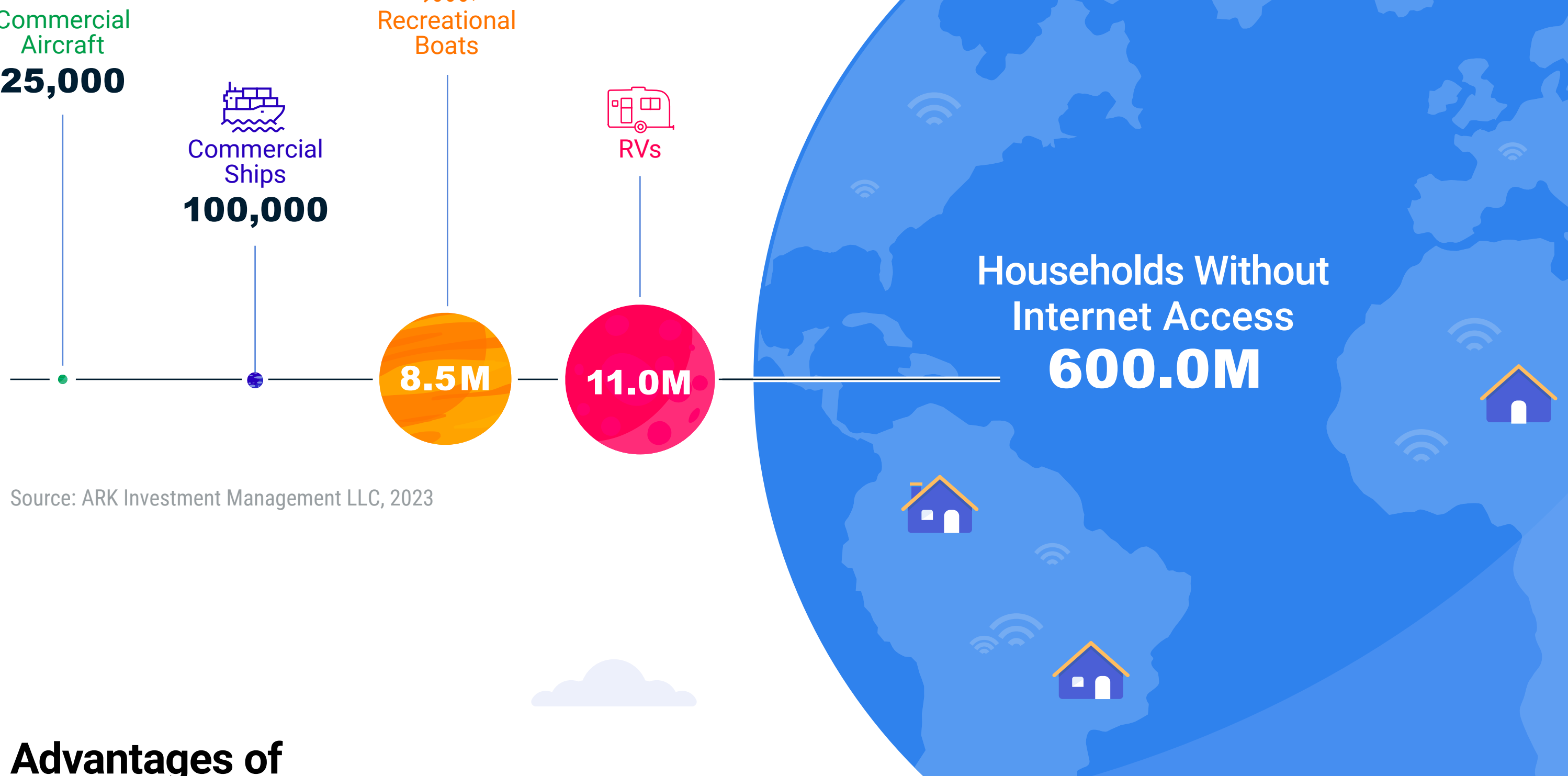
# Could Tomorrow's Internet be Streamed from Space?

In 2021, 2.9 billion people were unable to access the Internet. Companies are increasingly looking at innovation to get people online at the speeds that today's technology requires, and satellite internet could provide a solution.

Source: ITU, 2021

## What is the Potential Customer Base of Satellite Internet?

Satellite internet provides people who don't live or work in a fixed location with a means to get online.



## Advantages of Low Earth Orbit Satellites

Falcon 9\* | Space Shuttle

Average Rocket Turnaround Time

21 Days

252 Days

Average Launch/Refurbishment Cost

< \$1M

\$1.5B

The Space Shuttles were designed to carry cargo and crew to Earth's orbit, whereas the Falcon 9 rocket is designed to launch efficiently into the lower atmosphere, complete its objective, and then return to Earth. This makes the Falcon 9 a more effective tool for deploying satellites.

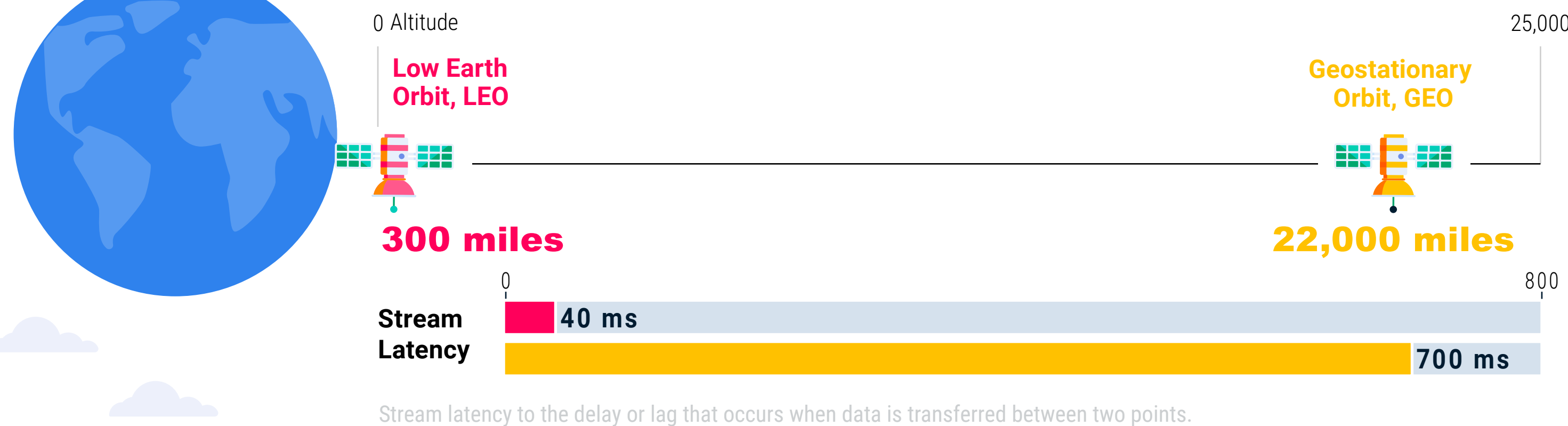
Source: SpaceX

\* Assuming Falcon 9 is using SpaceX Reuse 2022 rockets. \$1.5Ba approximately.

Source: ARK Investment Management LLC, 2023

Once deployed, satellites in low orbit have the potential to transfer data faster than those in GEO.

Average Stream Latency, by Orbit



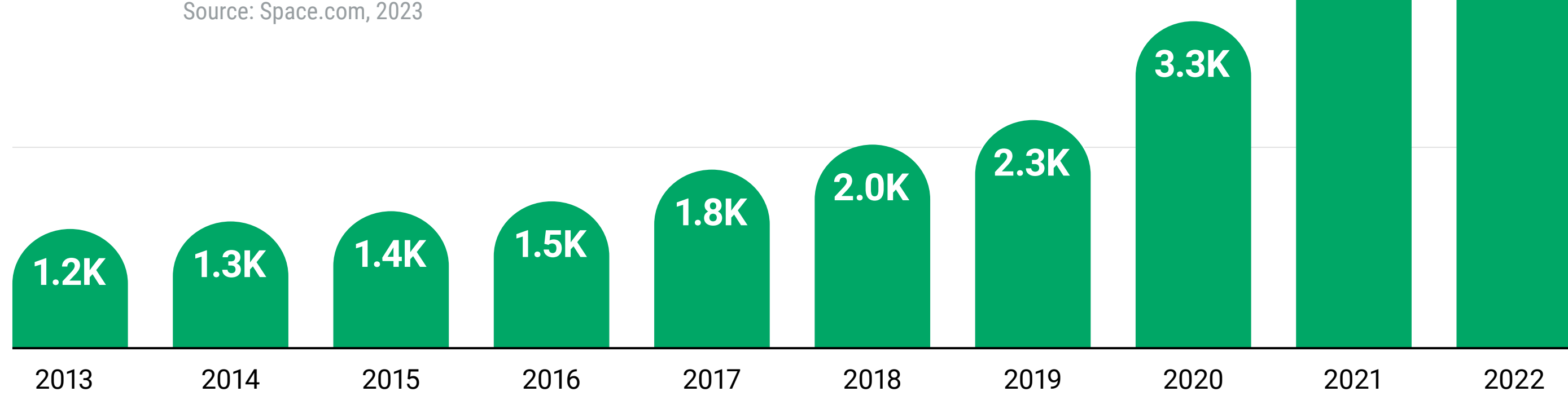
Satellite launches are routine, but more will be required to support satellite internet.

## Number of Active Satellites by Year



SpaceX currently has 4,500 satellites in operation but believes they would need nearly 10x this amount to support satellite internet properly.

Source: SpaceX, 2023



## Understanding the Next-Generation Internet Innovation Indexes

The MSCI Next Generation Internet Innovation Indexes aim to represent the performance of a set of companies associated with the Internet and take advantage of potential future disruptive technologies.

Here are the four indexes within this theme:

1 MSCI ACWI IMI Next Generation Internet Innovation Index

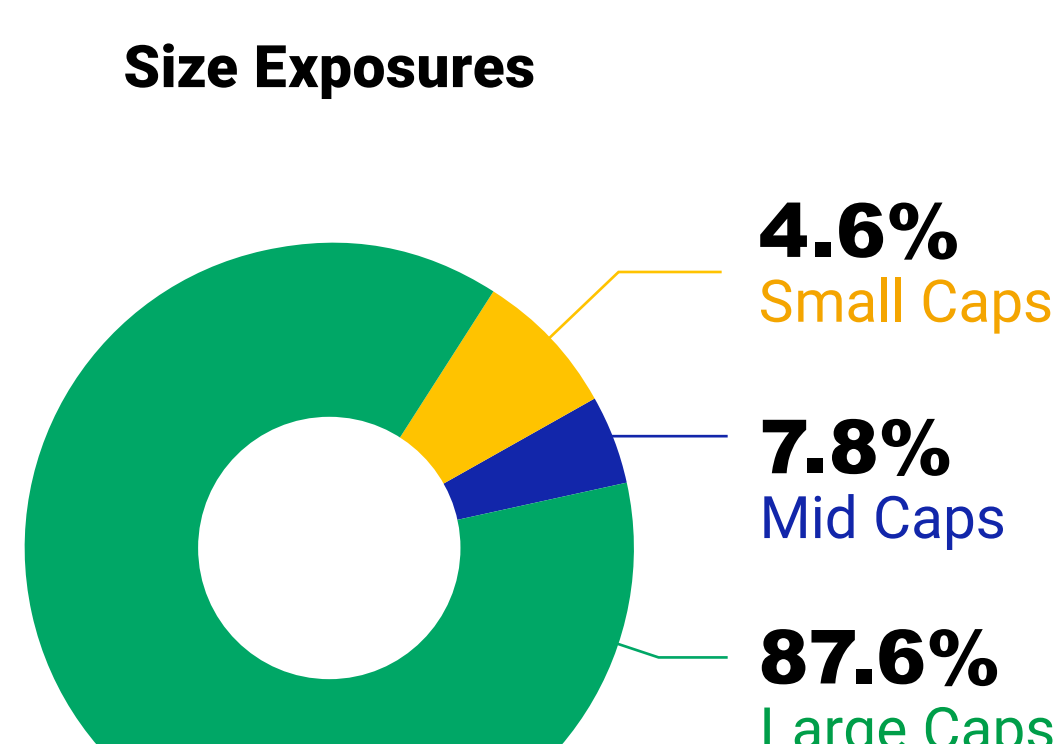
2 MSCI World IMI Next Generation Internet Innovation 30 Index

3 MSCI China All Shares IMI Next Generation Internet Innovation Index

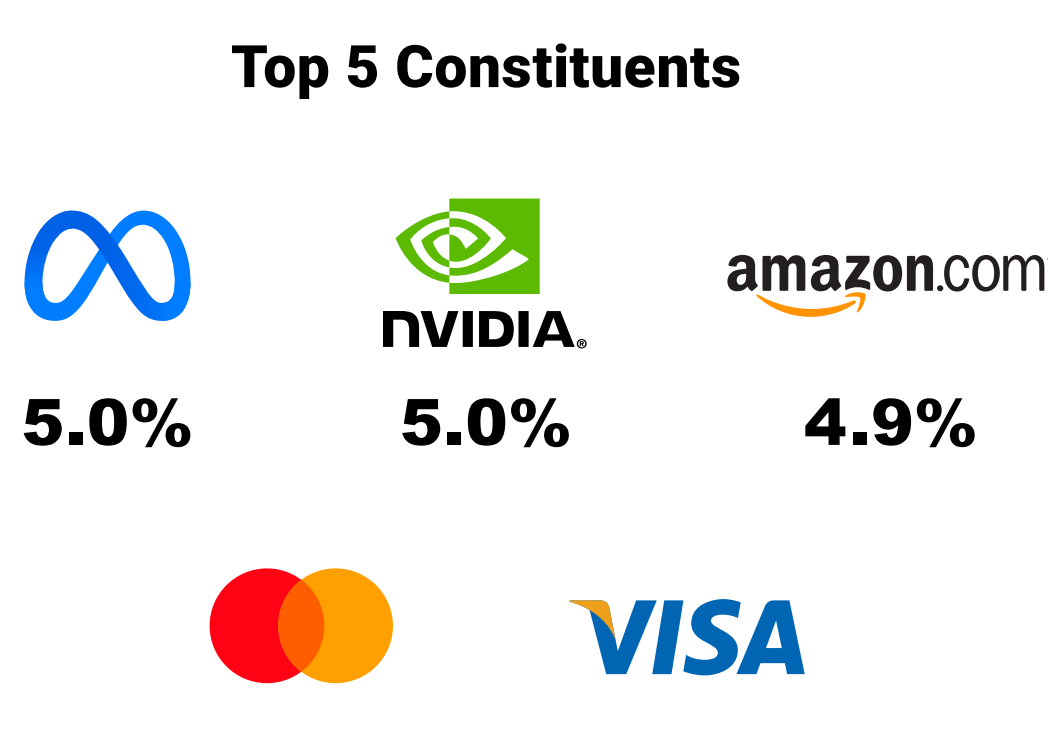
4 MSCI China A Onshore IMI Next Generation Internet Innovation Index

The MSCI ACWI IMI Next Generation Internet Innovation Index is designed to represent the performance of a set of companies associated with the development of new internet-based products and services.

Size Exposures

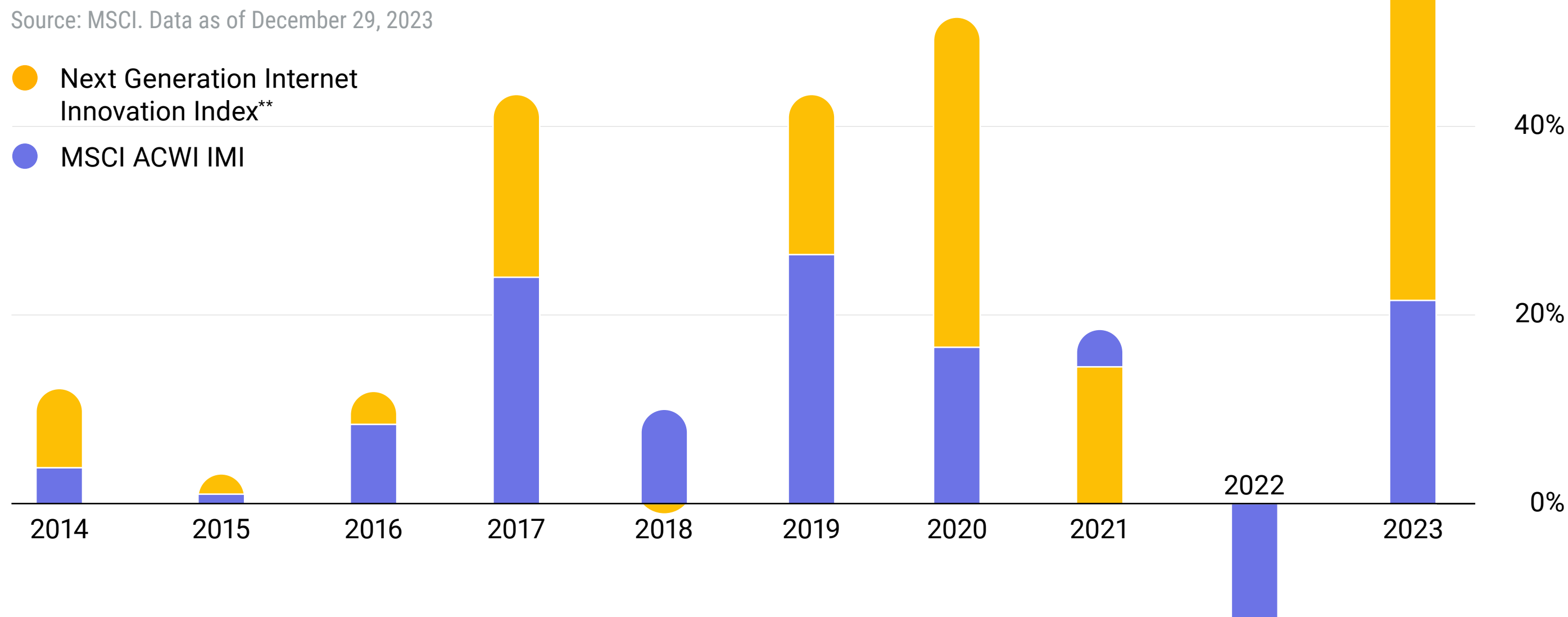


Top 5 Constituents



## Performance of the MSCI ACWI IMI Next Generation Internet Innovation Index

Source: MSCI. Data as of December 29, 2023



MSCI thematic Indexes are objective, rules-based, and regularly updated to focus on specific emerging trends that could evolve over time.

Explore the indexes

Powering better investment decisions. [msci.com](https://www.msci.com)

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