

The logo for AST SpaceMobile. 'AST' is in a large, white, bold, sans-serif font. 'SpaceMobile' is in a smaller, orange, bold, sans-serif font. The background is a dark space with a bright, glowing orange arc of light curving across the top right.

# AST SpaceMobile

Transforming how  
the world connects



NASDAQ: ASTS

**Investor Presentation**

October 2024

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The information in this presentation and the oral statements made in connection therewith includes “forward-looking statements” for the purposes of federal securities laws that are not historical facts and involve risks and uncertainties that could cause actual results to differ materially from those expected and projected. All statements, other than statements of historical fact in this presentation and the oral statements made in connection therewith regarding AST SpaceMobile, Inc.’s, collectively with its subsidiaries (“SpaceMobile” or the “Company”), financial position, business strategy and the plans and objectives of management for future operations, are forward-looking statements. Words such as “expect,” “believe,” “anticipate,” “intend,” “estimate,” “seek” and variations and similar words and expressions are intended to identify such forward-looking statements. Such forward-looking statements relate to future events or future performance, but reflect management’s current beliefs, based on information currently available. A number of factors could cause actual events, performance or results to differ materially from the events, performance and results discussed in the forward-looking statements. For information identifying important factors that could cause actual results to differ materially from those anticipated in the forward-looking statements, please refer to the Risk Factors contained in AST SpaceMobile’s Annual Report on Form 10-K, filed with the SEC on April 1, 2024. The Company’s securities filings can be accessed on the EDGAR section of the SEC’s website at [www.sec.gov](http://www.sec.gov). Except as expressly required by applicable securities law, the Company disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise.

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# AST SpaceMobile is building the first & only space-based cellular broadband network



**Raised ~\$1.5 billion to date to fund network build and technology with 3,450+ patent and patent-pending claims**



**Signed agreements and understandings with 45+ mobile network operators with ~2.8 billion existing subscribers**



**LTE & 5G cellular broadband capabilities and achieved 20+ Mbps download speeds to everyday smartphones directly from space**



**Strategic investment from AT&T, Google, Verizon, Vodafone, Rakuten, Bell Canada and American Tower for roll-out of SpaceMobile network**



# Transforming connectivity with direct-to-cell technology (5G + 4G LTE)

*“Eliminating the friction of specialized equipment and spectrum bands from direct-to-cellular satellite coverage, at broadband speeds, is a transformational event for the communications industry”*

*“Not only do we expect to provide essential, affordable broadband connectivity to everyone everywhere, we are working to expand the market to billions of individuals and devices”*



- Abel Avellan  
Chairman and CEO



## Everyday smartphones from all major brands compatible with AST SpaceMobile



Market opportunity  
is deep, untapped  
and expanding

**\$1.1 Trillion**

global mobile wireless services market

**5.6 Billion**

mobile phones and devices moving in and out  
of coverage

**42%**

global population without cellular broadband

**~90%**

of Earth's surface without cellular coverage

**\$67 Billion**

8-yr expected demand for satellite direct-to-  
device communications <sup>1</sup>

Source: GSMA market data as of December 31, 2023.

1. Represents 2023-2030 cumulative estimated demand,  
per Northern Sky Research.



# Top Mobile Network Operators (MNOs) are AST investors, partners and customers

When operational, SpaceMobile service will be available to MNOs on a wholesale basis, with existing relationships spanning nearly all large countries (ex. China/Russia)



Note: Memoranda of understanding and preliminary agreements are not binding and are subject to negotiation of definitive documentation.

- ✓ Leverages existing 5.6 billion mobile phones and devices
- ✓ Easy sign-up for cellular subscribers
- ✓ Super-wholesale revenue share model with MNOs
- ✓ Intended to drive new MNO partner revenue and reduced churn

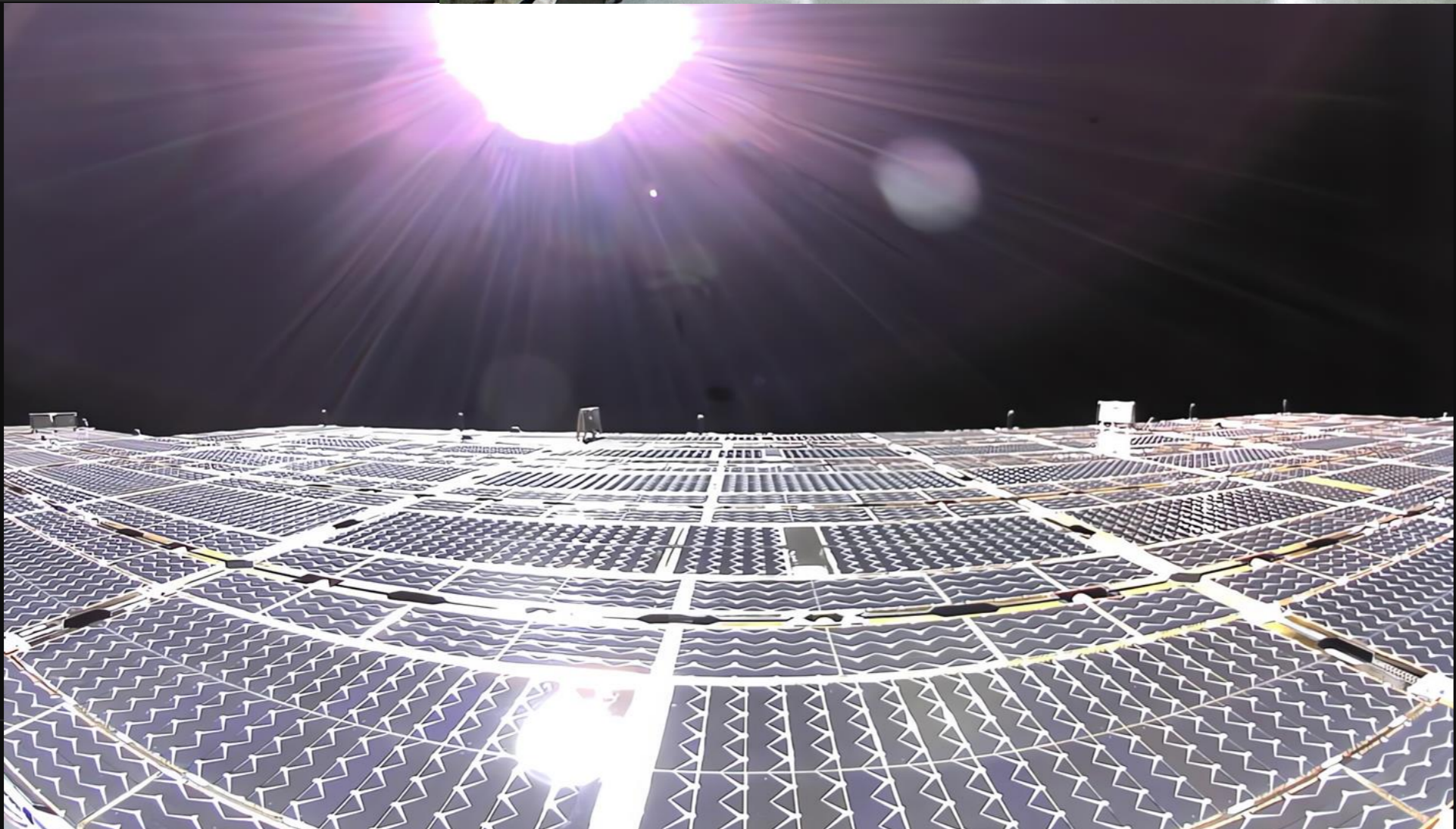
### Strategic Investors



### Select MNO Partners



First five commercial satellites reach low Earth orbit successfully in September 2024



**850 MHz**

**Premium  
Spectrum**

**5,600+**

**Cells**

**Target ~100%**

**Geographical  
Coverage**

**~70%**

**US Mobile  
Users**



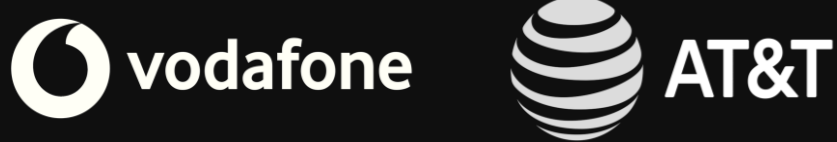
**AT&T**

**verizon**

**AST**SpaceMobile



History made:  
connecting  
everyday  
smartphones  
directly from space  
using BlueWalker 3



September 2023

**5G Voice Calls**  
**14 Mbps Data Rate**  
*(Per 5MHz Channels)*

*In a 5G first-ever, we demonstrated space-based 5G connectivity by placing a call from Maui, Hawaii, USA, to a Vodafone engineer in Madrid, Spain, using AT&T spectrum*



June 2023

**4G LTE Voice Calls**  
**10 Mbps Data Rate**

*In a LTE first-ever, using AT&T spectrum, we again connected everyday smartphones to BlueWalker 3*



April 2023

**2G Voice Calls**

*The first voice call was made from the Midland, Texas area to Rakuten in Japan over AT&T spectrum using a Samsung Galaxy S22 smartphone*



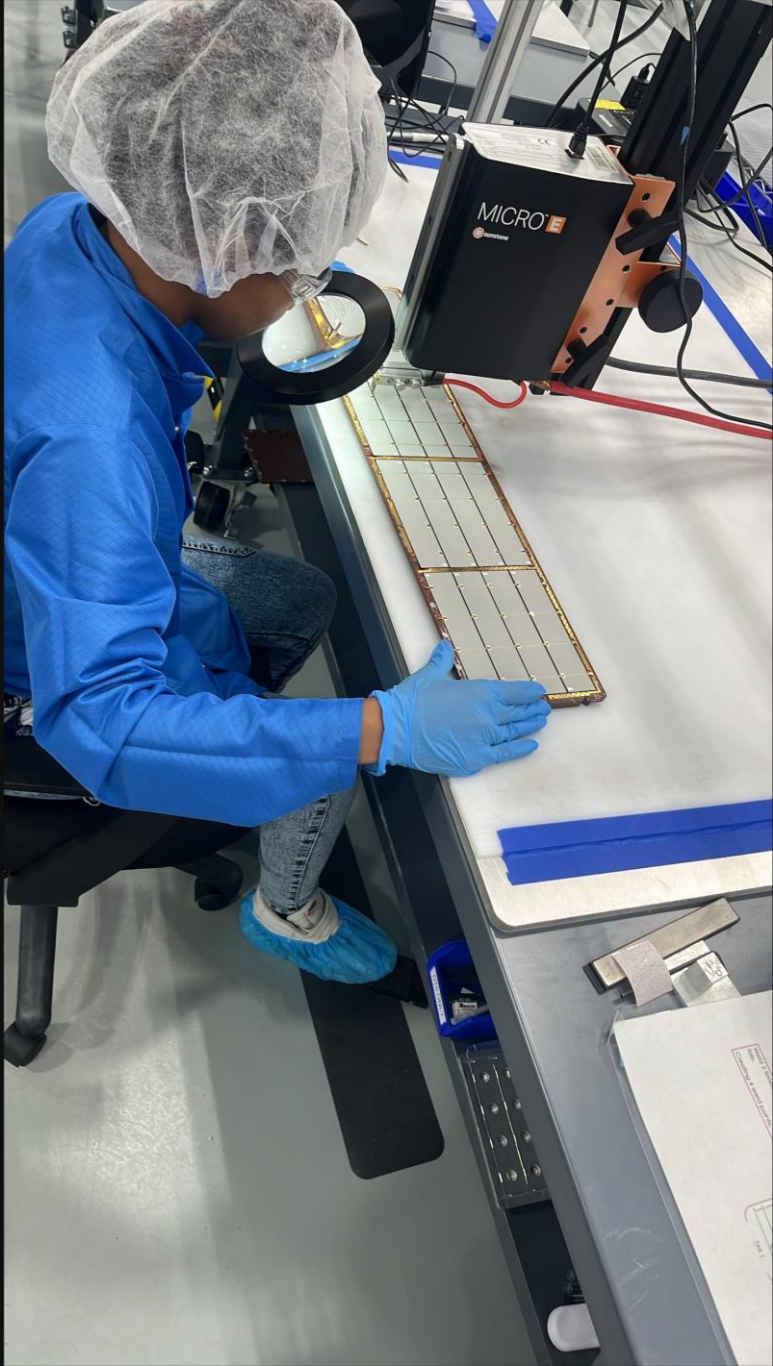
Vertically  
integrated  
manufacturing to  
support rapid  
constellation build

Two locations in Texas with combined 185,000 sq ft and existing capacity to produce up to two satellites / month, and potential capacity of six / month, using automated processes

Manufacture ~95% of  
satellite subsystems in-  
house or through third-  
parties using our own  
Intellectual Property



# Initial Block 2 BlueBird planning and production of 17 satellites underway



# Completed tape-out phase of custom ASIC with TSMC

Custom ASIC, which is planned to support up to 120 Mbps peak data rates, is one key enabler of space-based cellular broadband



- Represents a competitive advantage developed over five years, equivalent to 150 man-years, with approximately \$45 million of development costs
- Novel, custom and low-power architecture developed to enable up to a 10x improvement in processing bandwidth, totaling 10,000 MHz, on each satellite

# AST SpaceMobile differentiation



Only pure play, low Earth orbit (LEO) broadband communications company that is publicly-traded



Novel technology solution applicable to a market of 5.6 billion mobile phones and devices and the related \$1.1+ trillion TAM <sup>1</sup>



Jointly going to market, not competing, with mobile network operators with hundreds of millions of subscribers



Revenue share business model designed to allow users to sign up with a simple text message



Over \$440 million in pro forma cash, cash equivalents, and restricted cash to fund business operations and commercial satellites <sup>2</sup>

1. AST SpaceMobile market size based on GSMA Intelligence estimate of total cellular wireless market spend. As of December 31, 2023.  
2. Cash Position as of June 30, 2024 including \$153.6 million in aggregate warrant exchange proceeds.

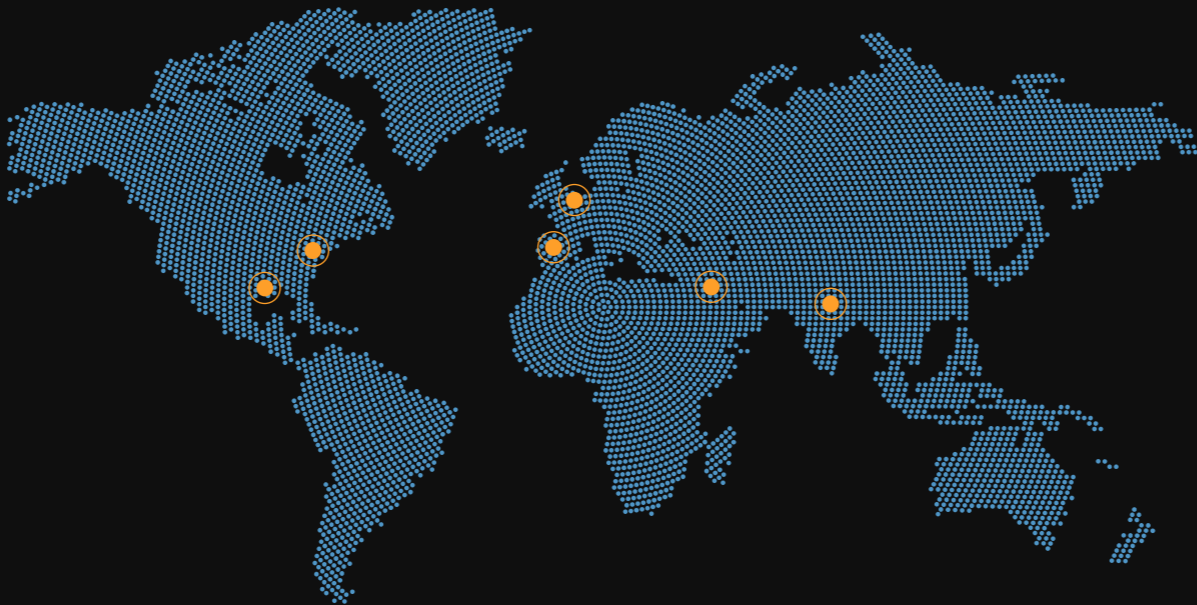
# Appendix



# Company snapshot

Founder-led leadership and deep team with decades of successful execution

## Global Infrastructure



Midland HQ /  
Manufacturing Facilities

Maryland Satellite Operations and  
Network Operations Center /  
Space Assembly Lab

Israel  
RF/Hardware  
Design

Spain  
Mechanical  
Design

United Kingdom  
Manufacturing/  
Support

India  
Research &  
Development



**Abel Avellan**  
Chairman and CEO

- 25+ years space industry experience
- Co-inventor of 21 U.S. Patents
- Former Founder and CEO of EMC (Emerging Markets Comms.) until \$550mm sale in 2016
- Provided initial seed capital for AST SpaceMobile



**Scott Wisniewski**  
President & Chief Strategy Officer

- 15+ years of M&A / financing experience
- Previously Managing Director, TMT Investment Banking at Barclays
- Advised or managed all AST SpaceMobile funding since \$110mm Series B in 2019



**Shanti Gupta**  
Chief Operating Officer

- 25+ years developing and implementing growth strategies, business operations, and building high performing teams
- Joined AST SpaceMobile in 2021 as Chief Accounting Officer
- Over two decades experience working in Big 4 audit and consulting firms



**Andrew Johnson**  
Chief Financial Officer and Chief Legal Officer

- 25+ years of legal / capital markets experience
- Nearly two decades at 3D Systems Corporation as EVP, Chief Legal Officer and Secretary and Chief Corporate Development Officer
- Previously held positions of Interim President and CEO and Interim CFO while at 3D Systems Corporation



**Chris Ivory**  
Chief Commercial Officer

- 25+ years in satcom, business development and government / regulatory affairs
- Led Commercial Business Unit as EVP Globecomm
- Former SVP of Satellite Land Services at EMC



**Dr. Huiwen Yao**  
Chief Technology Officer

- 30+ years RF engineering + satcom
- Prior: Northrop Grumman Innovation Systems (Orbital ATK)
- 40+ GEO satellites built

# SpaceMobile will connect directly to everyday mobile phones

Source: GSMA Intelligence (data as of 12/31/2023).

## Building the first and only space-based cellular broadband network



**Giant total addressable market**  
Global wireless services market generates over \$1.1 trillion in annual revenue via 5.6 billion mobile phones and devices



**Revolutionary tech, over 3,450 patent & patent-pending claims and first-mover advantage**  
Technology designed to deliver broadband from space to unmodified mobile devices, providing a service to fill cellular coverage gaps



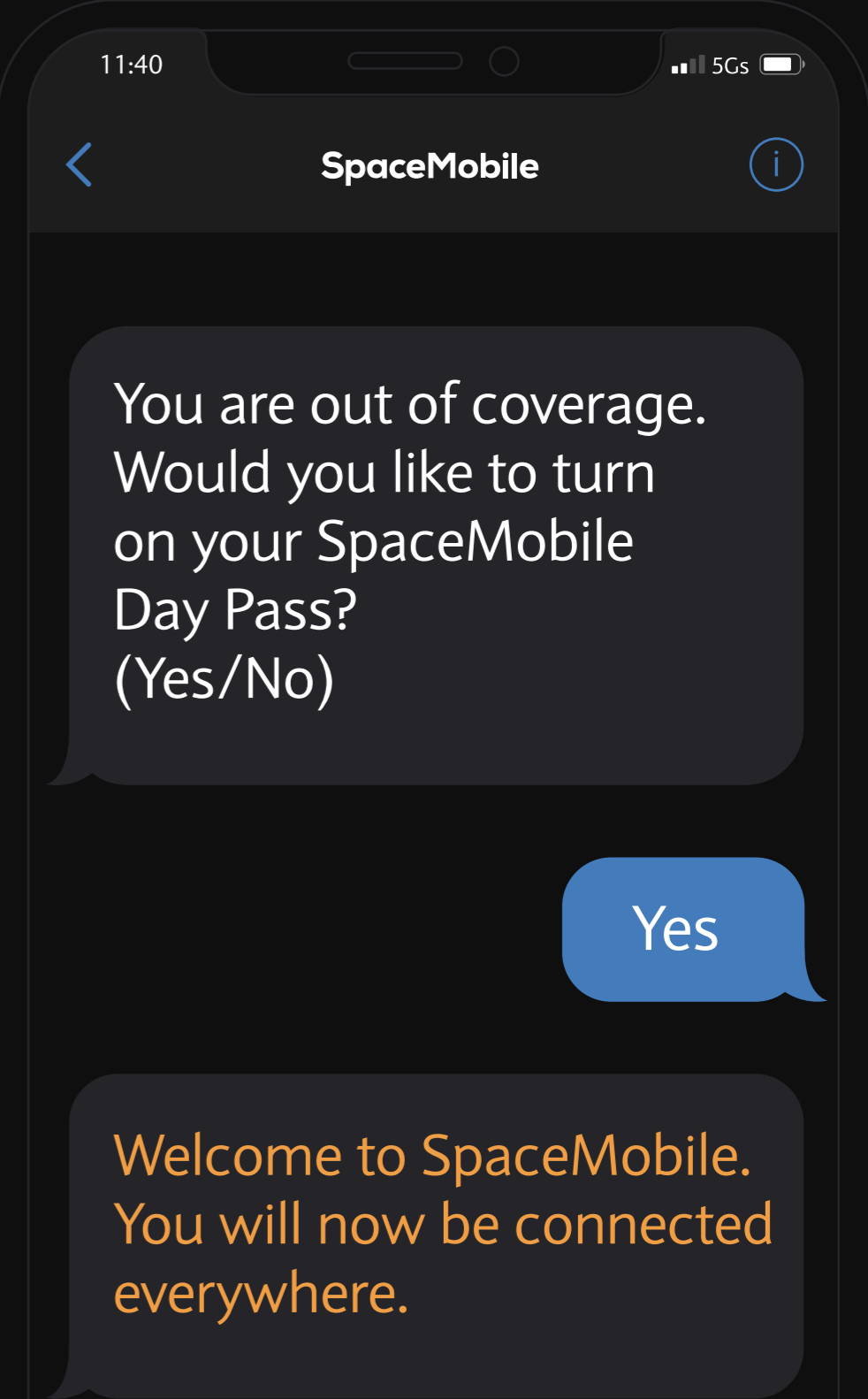
**Industry-leading strategic partners**  
Investment, development and commercial relationships with AT&T, Verizon, Vodafone, Google, American Tower, Rakuten and others



**Built-in customer base ready to be turned on**  
When operational, SpaceMobile service will be available to our MNO customers, a growing list of leading companies that have over 2.8 billion existing subscribers



**Flexible, scalable, super-wholesale business model**  
The SpaceMobile network is designed to provide easy sign-up for existing MNO subscribers under revenue share agreements

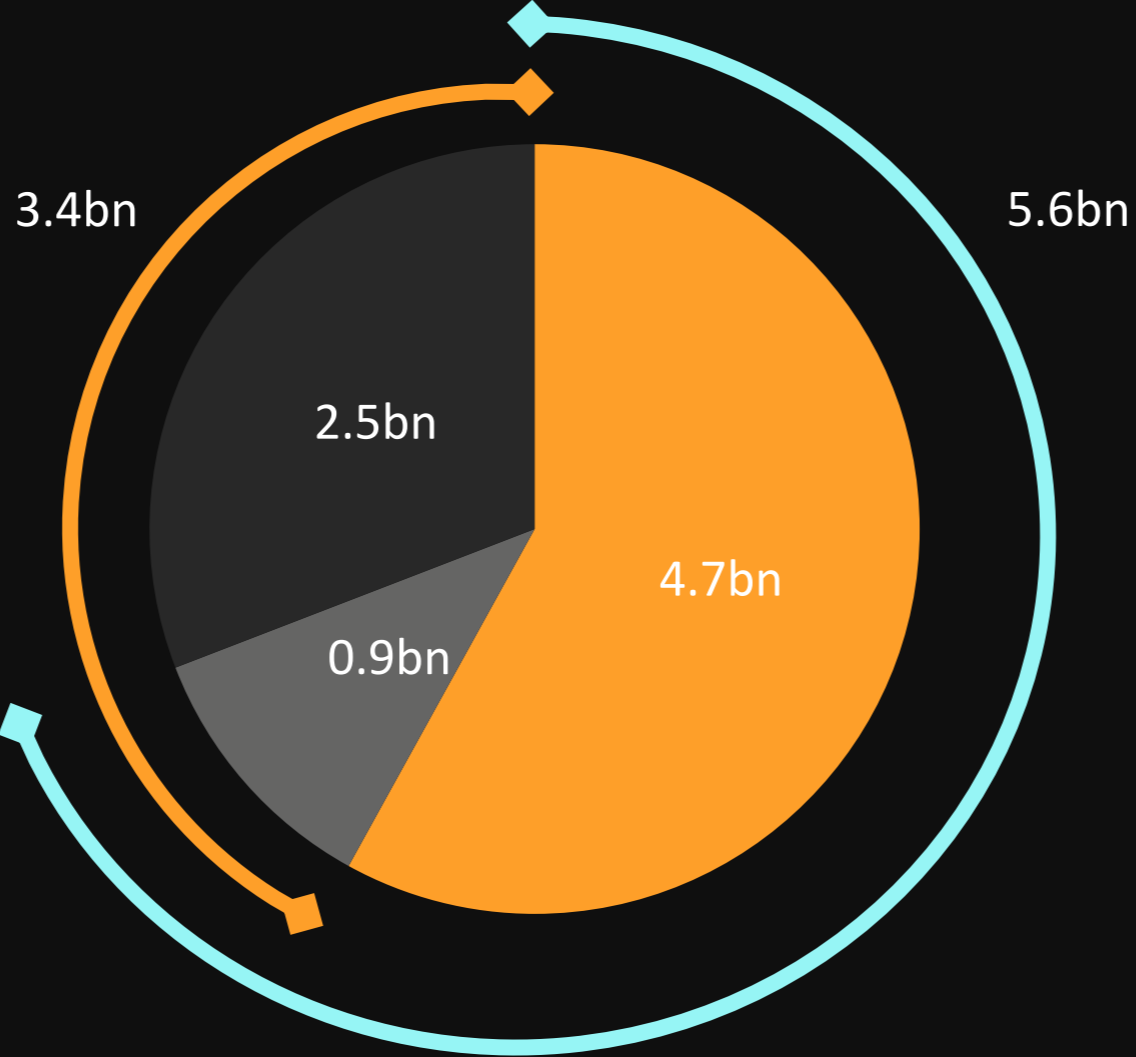




# 5.6 billion mobile phones and devices globally

Global wireless services market generates over \$1.1 trillion in annual revenue, with a backdrop of evolving and imperfect networks

Global Population – 8.1 billion



5.6 billion unique cellular subscribers

*move in and out of coverage as they live, work and travel*

3.4 billion not subscribed to cellular broadband

*0.4 billion have no coverage*

*3.0 billion usage gap*




- Cellular subscribers - broadband
- Cellular subscribers - no broadband
- Not a cellular subscriber

Source: GSMA Intelligence (data as of December 31, 2023).

# AST SpaceMobile technology solution

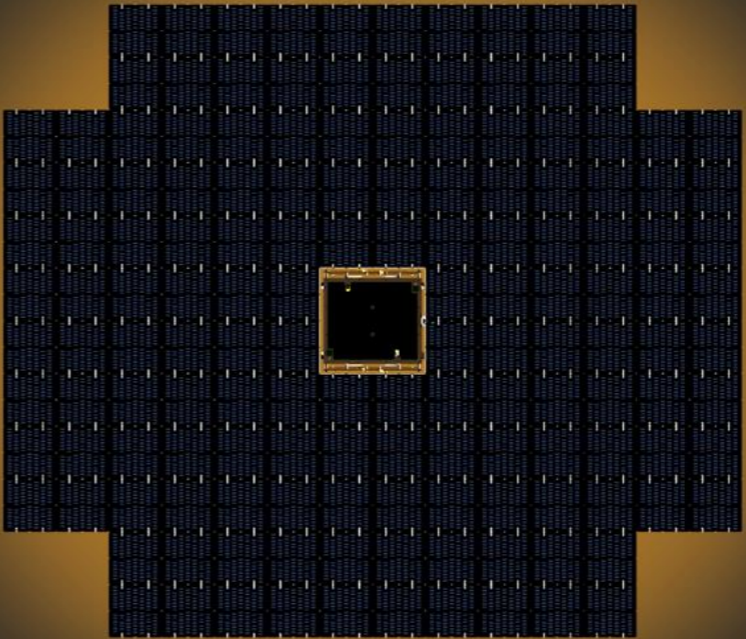
## Differentiated approach compared to existing space-based communications

1. Market size based on the sum of 2020A revenues of included providers, AST SpaceMobile market size based on GSMA estimate of total cellular wireless market spend.

	<b>First &amp; Only Broadband Direct To Mobile Phones</b>	<b>Direct via Proprietary Mobile Phones</b>	<b>Indirect via Complex, Expensive Hardware</b>
			
	Any standard mobile phone	Provider-specific satphones (~\$1K)	Provider-specific antennas mounted on planes, ships, vehicles, buildings (~\$1K-\$200K+)
<b>End Users</b>	Mass market mobility and the unconnected	Narrowband service on satphones	Enterprise, Maritime, Aviation, Government, Residential
<b>Market Size <sup>1</sup></b>	<b>&gt; \$1 trillion</b>	<b>&lt; \$2 billion</b>	<b>&lt; \$20 billion</b>

Satellite-to-cellular architecture is transparent to end-user

# SpaceMobile network designed to closely mirror terrestrial cellular architecture



Satellites in low Earth orbit to offer low-latency and attractive look angles

Large satellites designed to create over 1 million fixed terrestrial cells globally with broadband capacity

Low- and mid-band frequencies shared with wireless operators on non-interference basis

High-throughput Q/V-band feeder links for backhaul

Direct link to unmodified mobile phones and other cellular devices



Gateways / Partner Network




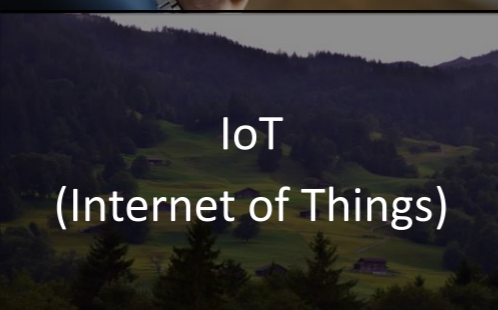
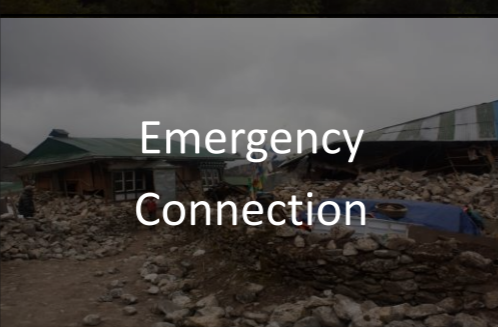


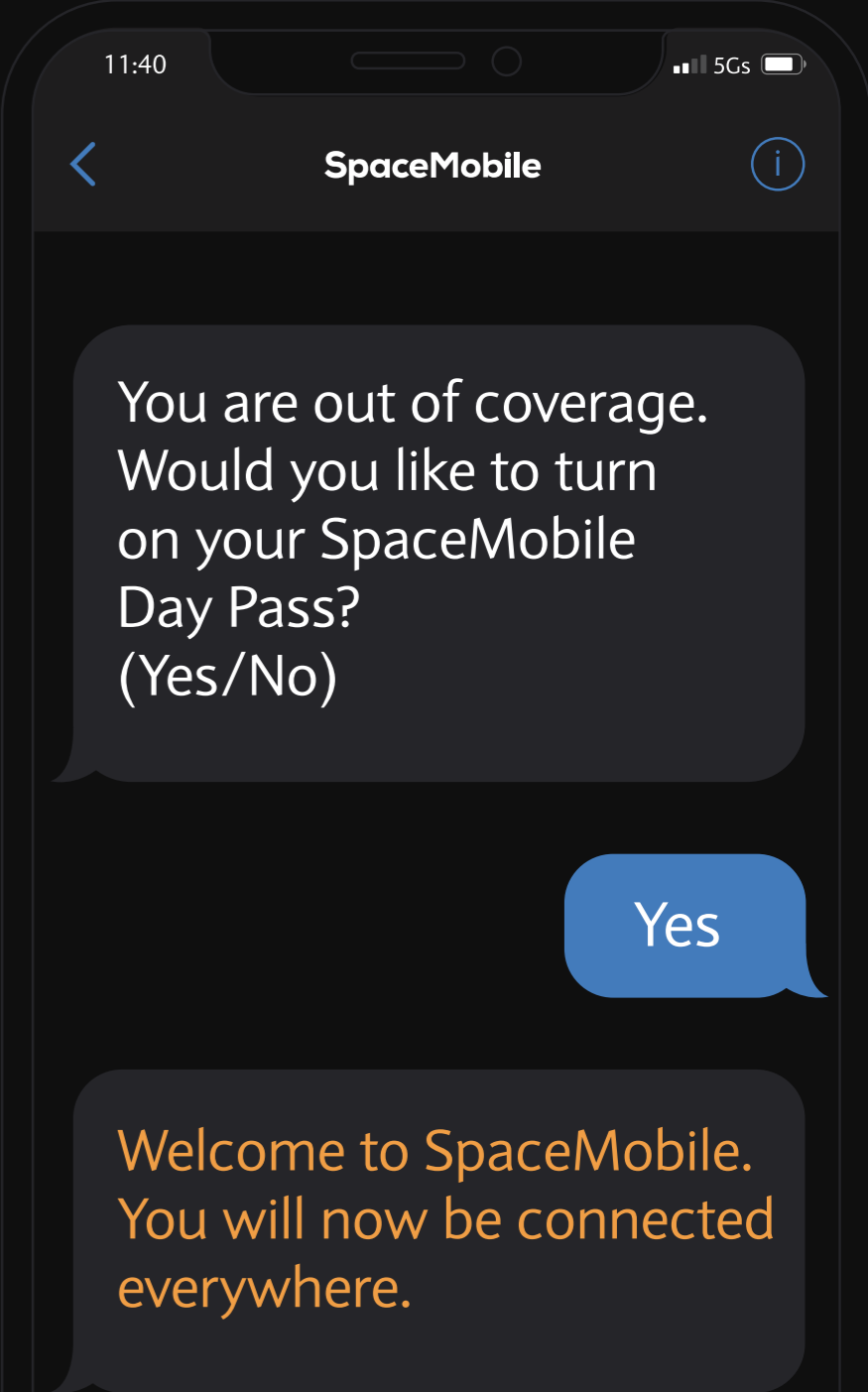
Terrestrial Telecom Network

# How subscribers are expected to use SpaceMobile

Service designed to be compatible with the 5.6 billion existing mobile phones and devices in use globally today

## Significant flexibility in go-to-market strategy, with multiple potential ways for cellular subscribers to access more and better connectivity

 <p>Day Pass (Broadband)</p>	<ul style="list-style-type: none"><li>• Subscribers receive a text on their phone asking if they would like to turn on SpaceMobile service</li></ul>
 <p>Monthly Add-on (Consumer)</p>	<ul style="list-style-type: none"><li>• A fixed monthly rate to add SpaceMobile as a supplemental service to existing cellular plan</li><li>• Automatically connect with SpaceMobile's network upon entering an area without cell tower coverage</li></ul>
 <p>Monthly Add-on (Enterprise)</p>	<ul style="list-style-type: none"><li>• Same as consumer, but with more data targeting power users</li></ul>
 <p>IoT (Internet of Things)</p>	<ul style="list-style-type: none"><li>• Uplink / downlink for cellular compatible IoT devices, for areas with poor terrestrial connectivity</li></ul>
 <p>Emergency Connection</p>	<ul style="list-style-type: none"><li>• Subscribers would use SpaceMobile during emergencies and natural disasters when terrestrial networks are not nearby or have failed</li></ul>







# AST SpaceMobile

