

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT  
PURSUANT TO SECTION 13 OR 15(d) OF THE  
SECURITIES EXCHANGE ACT OF 1934

Date of Report (Date of earliest event reported): April 14, 2021 (April 14, 2021)

**HOLICITY INC.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction  
of incorporation)

**001-39426**

(Commission  
File Number)

**85-1270303**

(IRS Employer  
Identification No.)

**2300 Carillon Point**

**Kirkland, WA 98033**

(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: **(425) 278-7100**

**Not Applicable**

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- ☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- ☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- ☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- ☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Units, each consisting of one share of Class A common stock and one-third of one redeemable warrant	HOLUU	The Nasdaq Capital Market
Class A common stock, par value \$0.0001 per share	HOL	The Nasdaq Capital Market
Redeemable warrants, each whole warrant exercisable for one share of Class A common stock, each at an exercise price of \$11.50 per share	HOLUW	The Nasdaq Capital Market

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

## Item 7.01. Regulation FD Disclosure.

On April 14, 2021, Astra Space, Inc. (“Astra”) hosted a virtual Analyst Day consisting of presentations from the leadership teams of Astra and Holicity Inc. (the “Company”) in connection with the proposed business combination between Astra and the Company (the “Business Combination”). A copy of the transcript for the call, a transcript of the question and answer session, and a copy of the Analyst Day presentation are attached hereto as Exhibits 99.1, 99.2 and 99.3, respectively, and incorporated by reference herein.

The information in this Item 7.01, including Exhibits 99.1, 99.2 and 99.3, is furnished and shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to liabilities under that section, and shall not be deemed to be incorporated by reference into the filings of the Company under the Securities Act of 1933, as amended (the “Securities Act”), or the Exchange Act, regardless of any general incorporation language in such filings. This Current Report on Form 8-K will not be deemed an admission as to the materiality of any information in this Item 7.01, including Exhibits 99.1, 99.2 and 99.3.

### ***Important Information About the Business Combination and Where to Find It***

In connection with the proposed Business Combination, the Company intends to file with the U.S. Securities and Exchange Commission (the “SEC”) a registration statement on Form S-4 (the “Registration Statement”), which will include a proxy statement/prospectus, and certain other related documents, which will be both the proxy statement to be distributed to holders of shares of the Company’s common stock in connection with the Company’s solicitation of proxies for the vote by the Company’s stockholders with respect to the Business Combination and other matters as may be described in the Registration Statement, as well as the prospectus relating to the offer and sale of the securities of the Company to be issued in the Business Combination. **The Company’s stockholders and other interested persons are advised to read, when available, the preliminary proxy statement/prospectus included in the Registration Statement and the amendments thereto and the definitive proxy statement/prospectus, as these materials will contain important information about the parties to the business combination agreement by and among the Company, Astra and Holicity Merger Sub Inc., a wholly owned subsidiary of the Company (the “Business Combination Agreement”), the Company and the Business Combination.** After the Registration Statement is declared effective, the definitive proxy statement/prospectus will be mailed to stockholders of the Company as of a record date to be established for voting on the Business Combination and other matters as may be described in the Registration Statement. Stockholders will also be able to obtain copies of the proxy statement/prospectus and other documents filed with the SEC that will be incorporated by reference in the proxy statement/prospectus, without charge, once available, at the SEC’s web site at [www.sec.gov](http://www.sec.gov), or by directing a request to: Holicity Inc., 2300 Carillon Point, Kirkland, WA 98033, Attention: Craig McCaw, Chief Executive Officer, (425) 278-7100.

### ***Participants in the Solicitation***

The Company and its directors and executive officers may be deemed participants in the solicitation of proxies from the Company’s stockholders with respect to the Business Combination. A list of the names of those directors and executive officers and a description of their interests in the Company is contained in the Company’s registration statement on Form S-1, which was initially filed with the SEC on July 17, 2020, and is available free of charge at the SEC’s web site at [www.sec.gov](http://www.sec.gov), or by directing a request to Holicity Inc., 2300 Carillon Point, Kirkland, WA 98033, Attention: Secretary, (425) 278-7100. Additional information regarding the interests of such participants will be contained in the Registration Statement when available.

Astra and its directors and executive officers may also be deemed to be participants in the solicitation of proxies from the stockholders of the Company in connection with the Business Combination. A list of the names of such directors and executive officers and information regarding their interests in the Business Combination will be contained in the Registration Statement when available.

## Forward-Looking Statements

This Current Report on Form 8-K includes “forward-looking statements” within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995. The Company’s and Astra’s actual results may differ from their expectations, estimates and projections and consequently, you should not rely on these forward looking statements as predictions of future events. Words such as “expect,” “estimate,” “project,” “budget,” “forecast,” “anticipate,” “intend,” “plan,” “may,” “will,” “could,” “should,” “believes,” “predicts,” “potential,” “continue,” and similar expressions are intended to identify such forward-looking statements. These forward-looking statements include, without limitation, the Company’s and Astra’s expectations with respect to future performance and anticipated financial impacts of the Business Combination, the satisfaction of the closing conditions to the Business Combination and the timing of the completion of the Business Combination. These forward-looking statements involve significant risks and uncertainties that could cause the actual results to differ materially from the expected results. Most of these factors are outside the Company’s and Astra’s control and are difficult to predict. Factors that may cause such differences include, but are not limited to: (1) the outcome of any legal proceedings that may be instituted against the Company and Astra following the announcement of the Business Combination Agreement and the transactions contemplated therein; (2) the inability to complete the Business Combination, including due to failure to obtain approval of the stockholders of the Company, approvals or other determinations from certain regulatory authorities, or other conditions to closing in the Business Combination Agreement; (3) the occurrence of any event, change or other circumstance that could give rise to the termination of the Business Combination Agreement or could otherwise cause the transactions contemplated therein to fail to close; (4) the inability to obtain or maintain the listing of Astra’s Class A common stock on Nasdaq following the Business Combination; (5) the risk that the Business Combination disrupts current plans and operations as a result of the announcement and consummation of the Business Combination; (6) the ability to recognize the anticipated benefits of the Business Combination, which may be affected by, among other things, competition and the ability of the combined company to grow and manage growth profitably and retain its key employees; (7) costs related to the Business Combination; (8) changes in applicable laws or regulations; (9) the possibility that Astra or the combined company may be adversely affected by other economic, business, and/or competitive factors; (10) Astra’s ability to raise financing in the future and to comply with restrictive covenants related to long-term indebtedness; (11) the impact of COVID-19 on Astra’s business and/or the ability of the parties to complete the Business Combination; and (12) other risks and uncertainties indicated from time to time in the proxy statement/prospectus relating to the Business Combination, including those under “Risk Factors” in the Registration Statement, and in the Company’s other filings with the SEC. The Company cautions that the foregoing list of factors is not exclusive. The Company cautions readers not to place undue reliance upon any forward-looking statements, which speak only as of the date made. The Company does not undertake or accept any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements to reflect any change in its expectations or any change in events, conditions or circumstances on which any such statement is based.

## No Offer or Solicitation

This Current Report on Form 8-K shall not constitute a solicitation of a proxy, consent or authorization with respect to any securities or in respect of the Business Combination. This Current Report on Form 8-K shall also not constitute an offer to sell or the solicitation of an offer to buy any securities, nor shall there be any sale of securities in any states or jurisdictions in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No offering of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act.

## Item 9.01. Financial Statements and Exhibits.

(d) Exhibits.

Exhibit Number	Description
99.1	<a href="#">Transcript of Analyst Day Presentation held on April 14, 2021.</a>
99.2	<a href="#">Transcript of Analyst Day Question and Answer session held on April 14, 2021.</a>
99.3	<a href="#">Analyst Day Presentation, dated April 14, 2021.</a>

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

### HOLICITY INC.

By: /s/ Steve Ednie  
Name: Steve Ednie  
Title: Chief Financial Officer

Date: April 14, 2021



**Randy Russell (Holicity, CIO):**

I would like to thank all of you for joining Astra's Analyst Day presentation. I'm Randy Russell, the Chief Investment Officer of Holicity, our \$300 million SPAC sponsored by Pendrell Corporation. Our Analyst Day will consist of presentations from Astra's leadership team, followed by a Q&A session. We encourage you to submit your questions throughout the broadcast, and we will try to address as many of them as possible during our time together.

I would like to begin by reminding everyone that the discussion today may contain forward-looking statements, including, but not limited to, with regards to the company's expectations or predictions of future financial or business performance or conditions. Forward-looking statements are inherently subject to risks, uncertainties, assumptions, and they are not guarantees of performance. You should not put undue reliance on these statements. You should understand that such forward-looking statements involve risks and uncertainties and such factors may be updated from time to time in our filings with the SEC and may cause actual events, results, or performance to differ materially from those indicated by such statements. The company is under no obligation and expressly disclaims any obligation to update, alter, or otherwise revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

We are joined today by key members of the Astra Executive Team, including Founder and CEO, Chris Kemp, Founder and CTO, Dr. Adam London, our newest member, Chief Engineer, and EVP of Manufacturing, Production, and Launch, Benjamin Lyon, Chief Business Officer, Martin Attiq, and Chief Financial Officer Kelyn Brannon. Chris Kemp will go into more detail on his team a little later in the presentation, so I can stop there, though I do want to note that throughout the process, it has been incredible working with the Astra Executive Team, and we have been super impressed with the culture and talent of the whole Astra organization. Today you will get to hear from several of the company's key leaders. I'm excited to share a bit more about the Astra story, and why we decided to pursue the business combination between Holicity and Astra, who we see as a critical enabler of this space economy.

Our Holicity team worked through a comprehensive targeting process that considered over 100 potential transactions, and that ultimately led us to Astra. When Craig, our senior team, and I met with the founders, toured their incredible facility in Alameda, dug into the business model, and saw the standup of their most recently flown rocket, we knew immediately that Astra was a very special company. Early in the process, Craig raised an important insight: "How do we get Astra to go faster, and how much capital do they need to execute and fully scale?" We then worked with the company to carefully outline the plan that Astra will share today, which really underlined our initial business combination as the optimal path forward. We are convinced that the Holicity / Astra merger represents a singular opportunity to invest in a pioneering space services provider that we believe will scale to become a leading global platform. Our objective is that by the end of this Analyst Day, it will be clear that Astra will be a critical enabler of the trillion dollar-plus Space Economy. They have the team and facilities to rapidly scale operations, revenue and free cash flow, and they have proven technology, as evidenced by their successful December 15th launch, when Astra became the third privately funded US company to demonstrate orbital launch capability. And now, I'd like to hand it over to Chris Kemp, Astra's CEO.

**Chris Kemp (Astra, Founder, Chairman and CEO):**

Thanks Randy, and thanks everybody for joining us today. We're really excited to introduce you to Astra, and how we're building the first pure play, public space company to build a platform in space, to power a new generation of services that will improve life here on Earth and help create a healthier and more connected planet.

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So to start, we're going to talk a little bit about our mission, which is to improve life on Earth from space. When Adam London, my co-founder, who you'll meet here in a few minutes, and I first met, we talked a lot about how the opportunity to have the high ground of low Earth orbit could provide a new opportunity for entrepreneurs to build the kinds of sensors, and systems, and communications capabilities that could really have a huge impact here. The challenge is a lot of these companies were really not able to get to space, and in fact, Adam and I were introduced by the founders of Planet; a pioneering small satellite company that built the first large constellation of small satellites in low Earth orbit to take pictures of Earth every day. And they had struggled the summer of 2015 after a failed launch of a large rocket followed by another failed launch of another large rocket, left dozens of their satellites, not in space.

And so, Adam and I started talking about how we could really think differently about how to make increasingly smaller satellites and increasingly larger constellations get where they need to go in space. And we started looking at the economics of space and how, if you were to dramatically increase the number of launches, and decrease the size of the launch vehicle, you could actually get from more places on Earth to more places in space. And the unit economics actually started to cancel out some of the advantages that you'd have with a larger rocket. Much the same way, if you look at the cost of a small aircraft or a small truck, versus a large train, or container ship, or aircraft. The cost goes down as the scale goes up.

So as we looked at this challenge, and as we started working together to figure out how we could maybe make a rocket a day or more, we started to see new companies emerge every day. We started to see a new economic frontier forming around us here in Silicon Valley. Dozens of companies were starting up and we started to see the number of the small satellites that were being launched, increase. We started to see hundreds of billions of dollars of new projects planned, largely in low Earth orbit. The government's spending tens of billions of dollars on new programs, including the Space Force, we started to see hundreds of new companies form around us. And most recently the value of this new economic frontier has been valued at over a trillion dollars by several analysts. And so we really started to work hard, and in the last few years we built generations of rockets that ultimately succeeded at demonstrating orbital capability, faster than any other company, and became the third privately funded U.S. company in history to reach space, and demonstrate our ability to put things in this new low Earth orbit frontier.

Why would we do this? Well, we see opportunities emerging in five areas. We see a whole new generation of global broadband applications emerging in low Earth orbit. Companies like SpaceX or flying constellations like Starlink, beginning to provide services to subscribers all over the world that didn't have any connectivity. And they're able to do this from large constellations of small satellites in low Earth orbit. When you don't need carrier grade connectivity, there's an opportunity to take data off of the billions of devices, whether they're automobiles, or whether they're oil pipelines, or fishing ships, the opportunity to get data off of machines, and into the cloud, this IoT application of space is emerging rapidly as well.

Beyond that, sensing, the opportunity to observe the earth in almost any available spectrum, taking pictures, understanding where water is, where CO2 and methane is, observing the Earth is creating a whole new opportunity to manage our planet better. Couldn't not mention the national security applications. Imagine being able to put a drone, and perform surveillance anywhere on earth in 45 minutes. The applications of being able to go from anywhere on Earth to anywhere on Earth, rapidly, and also putting a whole new generation of national security critical infrastructure, like next generation GPS capabilities that aren't centralized, like mainframe computing, where if you lose few satellites, you lose an entire capability, is really causing a complete revolution in how various civilian and military space capabilities are being thought about, and architected. And then just the kinds of applications that we take for granted every day, like weather services, GPS, location, timing, imagine making these better, higher resolution, and more reliable.

What this looks like in terms of numbers; we've seen the numbers of satellites increase exponentially over time from tens, to hundreds, to thousands, and now to tens of thousands of satellites that are planning on being launched. These are not hypothetical numbers, these are numbers of known satellites that we know because the FCC licenses have been filed to deploy these constellations in the next couple of years. And these aren't just unknown companies, they're companies like Amazon, OneWeb and others that have the resources to really build these kinds of capabilities out in the years ahead.

These satellites are very different than satellites of the recent past. Unlike the large, multi-hundred million dollar satellites, like the one on the left and the NASA Landsat satellite, the satellites like the one on the right in the little green circle are many times smaller, many times cheaper, and they're launched in many times greater numbers than the satellites on the left. And the reason why is because they're much closer to Earth. If you look at the orbit that these satellites are in, the green bar shows how far away a geosynchronous orbit is from Earth, and a low Earth orbit. And that's actually, you can literally stack the Earth to the left, and see how far away some of these large satellites have to be. And when they're that far away, they have to be shielded from radiation, they have much more powerful and larger power hungry transmitters. They require larger solar panels. They require a lot of costs that just, frankly isn't required if you're in a lower earth orbit. Meaning that the satellite in the left costs hundreds of millions of dollars versus many, many fractions less. The satellites that are in the small satellite form factors typically costs between hundreds of thousands, or millions of dollars. So we're really talking about a 25 time decrease in cost, frequency, and the time that it takes to get these on orbit.

So Astra is thinking about this very differently. We're not thinking about the old space industry, and the old launch industry, and the old satellite industry; we're thinking about this like a platform. And that allows us to think very differently about how we build the entire company. So at its core, Astra is a technology company that has data at the very heart of how we make decisions and how we drive the business. So the technology infrastructure that we've built optimizes the business for scale, we built a platform called Astra OS that powers our factory, powers our financial systems, allows engineers to focus on making our products better in the ways that matter, the ways that drive value to our customers. And it allows us to have persistent access to data, whether it's from our launch site or our spacecraft, or from our machines in our factory. This drives a level of automation that is unprecedented in our industry. So imagine being able to automate a rocket factory in much the same way you see automation in a car factory. Imagine automation at the launch site, driving the reduction or even elimination of people involved in the operation.

This allows us to operate a global spaceport footprint. We can set up a spaceport with a license that requires no more infrastructure than a fence and a concrete pad. Our teams have demonstrated that they can take our entire system, the rocket and the spaceport, pack it up into four shipping containers and launch a rocket with five people in five days. And this capability is unprecedented. It means that Astra can start building launch sites around the world and we can build these spaceports out after they're licensed to operate launches literally from anywhere on earth and put satellites to anywhere in space. This is enabled by a mass produced and portable launch system that's unique to Astra. In fact, during the DARPA Launch Challenge, Astra was the only company on earth had showed up with a rocket and a launch system as a finalist in the challenge. The challenge required us to go to a spaceport that we'd never been to before and launch a rocket in a few days.

And you're actually looking at the system in the image on the right. This system packs up into four shipping containers and a team of five people can move these containers via a C-130 Hercules Aircraft, via container ship, train, by truck. We unpack everything and launch the rocket in five days. And this is enabled by a high level of software integration and automation driving the operations of mission control. What this enables now is Astra to build a modular spacecraft platform that is unlike any other. Imagine the kinds of efficiencies that you get when you can put many satellites in one rocket. Imagine those satellites now being perfectly shaped to use all of the area inside the rocket. With a small rocket, it's very important that we don't waste any space on the way to space. So we want to have every bit of area, a solar panel, an antenna, a battery pack, some capability, we don't want to waste any space.

So Astra is building a spacecraft platform that looks a lot like the Dell or the Apple of the 1990s or an iPhone where you can plug in peripherals, load software, and begin offering a capability. And that's really what our customers want. We hear from our customers all the time that what they want is they want to solve problems in space. They don't want to build all of the infrastructure. Just like companies don't build data centers and networks to build applications today, they deploy them on Amazon Web Services or Microsoft Azure, Google Compute Cloud. You can think of Astra as building a platform much like the cloud, but in space, where our customers can maybe give us a camera, give us a sensor, a radio, plug it in, plug and play like you would a device on a PC to your USB port. And then what we worry about is not optimizing the device around the satellite, but the satellites around the entire launch system.

Because what drives cost in this industry is the cost of getting to space and the cost of making sure that you're not flying half empty rockets to space, which is the reality of larger launch vehicles. Finally, this allows Astra to be in a unique position to deliver space services. Space services include constellation management services. So our customers just tell us where they need their assets and we worry about the rest. This allows a new level of resilient, rapid replacement, and replenishment capabilities without having to contract these in advance. Astra is managing the availability of space assets in much the same way that cloud providers manage the availability of compute instances and storage instances in the cloud. This allows us to offer a level of affordability and pace of deployment that, frankly, government and commercial customers begin to take for granted in the rest of computing, but not if that computing and not if that infrastructure needs to be in space. So we're really just taking what everybody has taken for granted here on the ground and we're expanding that into space.

To make this happen, we've pulled together a pretty incredible team of people, and you've met some of those people today and you'll meet some of them soon. Dr. Adam London, our next speaker, my co-founder and our chief technology officer, spent time doing his undergraduate and his PhD at MIT on some of the smallest rocket engines, and spent a lot of his time trying to figure out how to get things into space. One of the smartest, most humble people you'll have ever met. And you'll meet him here in a second. Kelyn Brannon took two companies, Arista and Calix, public through a traditional IPO process, and she was the first Chief Accounting Officer at Amazon. Incredible. You'll hear from her as well. Benjamin Lyon spent 23 years at Apple where he worked on a lot of the core technologies in the iPhone and various automation and robotics initiatives there.

Chris Thompson co-founded SpaceX with Tom Mueller and Elon, and spent time there developing some of the structures for the Falcon-1 and Falcon-9, and is leading our Advanced Projects Team. Martin Attiq from BlackRock, a financial wizard running all of our business and corporate development and operations here. Bryson also spend time at SpaceX, where he led the production of Falcon-9 and went to a car company, NIO, to help run manufacturing and engineering. Kati Dahm, Comms at NIO. Pablo Gonzalez built the Gigafactory, led automation at Tesla for robotics and software at the Fremont and the Buffalo plants at Tesla. Carla came out of both Tesla and Apple. If I had more time, I would just keep going. The talent and the team that we've assembled here brings together the best of space from the best of computing in software and hardware here in Silicon Valley.

And we're really trying to build a completely new kind of space company not focused on rockets and space infrastructure. We're focused on building a platform that creates an opportunity for a whole new generation of entrepreneurs to use space to provide benefits here on earth, to improve life on earth. We've been backed by an incredible group of investors, and we have Craig McCaw joining our board as a result of this transaction here. And then we've built a plan that is really incremental. So as we begin commercial launch operations this summer, we'll start to scale to monthly launch, and we plan to begin monthly launch operations leading to weekly, bi-weekly, and then daily launch operations in 2025. While we're launching, we're going to be adding capabilities. We're going to be building the rocket factory out. We're going to be building the capability to begin constructing and launching satellites and spacecraft.

And then, as we continue to scale, we'll begin offering the spaceport and spacecraft products as services, and that will allow our customers to have lower time to value and higher velocity as they continue to focus their energy on making better sensors, better radios, and frankly, building the services that they're focused on building and not reinventing the wheel. Finally, if you compare Astra to many other companies out there, just looking across the board, we've got by far plans to do more launches at a lower cost than any of our competitors, either in the small, medium, or large launch category. We have a platform which is designed to be mass produced, and I think that's really what allows us to stand out. We, from day one, said, "We're going to be building a mass producible rocket. We're using materials and manufacturing techniques that are always focused on delivering the best value for our customers. Never focused on technology for technology's sake."

So with that, I think it's a perfect segue to introduce Dr. Adam London, my co-founder, our Chief Technology Officer, to tell you a bit more about how Astra is unique and differentiated from a technology standpoint. Thank you.

**Adam London (Astra, Founder and CTO):**

Thank you, Chris. I am Adam London, Astra's co-founder and CTO. And I'm excited to tell you a bit more about our technical approach and our progress. A few words about me before we get started, I was at MIT for undergrad and grad school. For my PhD, I developed a micro-silicon wafer-based rocket engine. It was about that big. It's probably still the smallest liquid cooled rocket engine ever. I spent a few years after that at McKinsey working primarily on automotive and manufacturing projects, but I missed building things, and so in 2015, I co-founded a company in San Francisco that ended up doing about a decade of government sponsored R&D work on how to take the technologies in big rockets and make them smaller. That led to the founding of Astra about four and a half years ago to solve the problems of making space more accessible for all of our customers

A quick overview of what we've accomplished so far. Our focus is always on maximizing our rate of learning, and I'm proud to say that it's worked. After founding the company in late 2016, we had our Rocket 1.0 built and into test by the end of 2017. We conducted its test flight in mid-2018, followed by a test flight of Rocket 2.0 with improvements at the end of 2018. Learning from our customers and their feedback though, we decided we needed to double the size of the rocket to increase its ultimate payload capability. And so we redesigned the entire rocket and the launcher based on what we'd learned from Rocket 1.0 and Rocket 2.0. Then we had Rocket 3.0 ready for the DARPA launch challenge in early 2020. We learned a lot of things from that campaign that led to a few improvements in the rocket and the launcher, and conducted the flights of Rockets 3.1 and 3.2 towards the end of 2020, culminating in 3.2 demonstrating orbital capability. So that was about four years from the start of the company and about two years from when we decided to resize the rocket. And we think this is showing the strategy is working. We've achieved this demonstration of orbital capability faster than any other company, three years faster than SpaceX, almost three times faster than Rocket Lab and Virgin Orbit from the start of the companies. Why is this possible? Fundamentally, it's because we've designed our rockets to be manufactured at scale. We're optimizing for manufacturability and building a lot of rockets and launching a lot of rockets, not precisely for per rocket performance. And so we're taking a lot of lessons learned from the automotive and other manufacturing industries of the past 20 years. Particularly, as cars have shifted from being almost all steel to more and more aluminum, we can leverage a lot of the learnings because our rocket is, frankly, about the same size diameter, etc., so roughly the same size as cars, there's a lot of things that we can leverage there.

Secondly, we have an incredible facility. So the Navy had a Navy base that was given over to the city of Alameda in the late nineties, and we've taken over a jet engine test facility, which has two jet engine test cells. We've converted them into rocket engine test cells. There's a big maintenance and overhaul facility for jet engines that is now our factory, almost 250,000 square feet. We've co-located our design, manufacturing, test. We can even conduct a practice launch at the facility – no fire or lifting off, of course – and that allows everyone to be co-located and really increases the rate at which we can learn. That is the kind of thing that allows us to move quickly, learn from our developments, make improvements, and move forward. There's a video that you can see on our website that can give you a better sense of the facility. I encourage you to take a look at it.

Lastly, our launch system is portable, and it's global. We like to say that we can launch from anywhere on earth to anywhere in space. Because the launch system is containerized and totally transportable, we can first build up the system at our facility in Alameda. We can conduct practice launches to make sure that we understand the interactions between the rocket and the launcher, and then we can load everything into shipping containers and ship it to the launch site, whether that's via truck, via ship, or even via airplane, as we've done a number of times. We've also really focused on making our launch system as automated as possible. So we can conduct a launch with as few as six employees at the launch site, and we're looking to even reduce that in the future.

We think this has positioned us very well in the market. Through our global spaceport footprint, we can offer access to all orbits, something that many of our competitors cannot do. We also offer the lowest cost of a dedicated launch to orbit, which is important for so many applications. Through our scale, we believe that we can also compete even on a per mass basis with many of the larger-scale launchers. Thus, we think we are very well positioned to meet the needs of our customers who are building a huge variety of low earth orbit constellations. Our services will be suitable for helping them with test launches, with system deployment, with gap filling, and with replenishment as individual satellites fail or need to be replaced. Our system is really designed for all of these applications and I think is a compelling offering to so many of our customers. I hope that I've given you a better picture of Astra and its technology. With that, I'd like to hand it off to Benjamin Lyon, who leads our engineering, production, and launch groups. Thank you very much.

**Benjamin Lyon (Astra, Chief Engineer and EVP of Manufacturing, Production and Launch Operations):**

Thank you, Adam. I'm Benjamin Lyon, Astra's Chief Engineer and Executive Vice President of Manufacturing Production and Launch Operations. I've got to tell you, I am super, super excited to be part of Astra's mission of rapid and low-cost access to space. So one of the things that I thought I might find worthwhile to share with all of you is one of the things that I learned about Astra while I was becoming part of the company, and the big thing that I really picked up was that Astra is not your generic aerospace company. Astra is actually a tech company that is doing space services.

So what do I mean by that? Well, let's think about tech companies and what makes them great. The first is tech companies see around corners. They don't aim at what the customer's asking for right now. What they aim at is what the customer's going to want, what the customer is going to need. The second is that in order to do that, they don't just focus on one piece. They actually look at how to provide the customer a seamless set of experiences. So you utilize your hardware, your software, your services, and you put this all together in a system that really delights customers.

The other piece that's really great about really, really awesome tech companies is they master the hard technologies, and they do that at scale. What I mean by that is that if you have a great idea, but you can't actually have the impact in volume, then your impact is actually very, very small. But if you can solve the problems, these technology problems, in a way that enables scale, then you can enable entire new ecosystems of products. Then lastly is development velocity. The ability to rapidly learn, test, deploy, understand the feedback from the market, and then go through that process again enables tech companies to run at a pace that creates huge competitive moats versus their competitors.

So thinking about Astra and its mission of delivering payloads from anywhere to anywhere for our customers, those fundamentals all really still apply. So, for example, one thing that I found really neat about Astra's mission and the execution plan against that mission is that Astra has recognized that satellites and spacecraft in general are getting much, much smaller. Well, what's the proof for that? Well, let me give you an example. One of the things that's really, really important if you're going to put a spacecraft up into space and have it be up there for years is that it be able to deliver the energy to provide the application.

Well, batteries have been driven much, much smaller and much, much lighter over the last number of years due to tech, due to mobile phones, due to electric vehicles and the like. So what that does is it drives the entire power plant for a spacecraft down in size, which means the mass comes down, which means the size of the rocket you need in order to deliver it to the right place in space comes down as well. So you can see that optimization from looking at where things are going to be comes from.

The second is really globally optimizing. This is something that I'm really excited about doing at Astra, which is instead of taking a piece of the problem, looking at spaceports and the rocket and the satellite and figuring out how to solve these problems as a single problem together, that yields a really optimized solution. Astra has invested deeply in a number of really core technologies to delivering really great orbital space services. One key element of that is propulsion. Another is avionics. Another is understanding the material technologies that lend themselves to scale. So these are all key areas that I see Astra having, and Astra will continue to invest. You will all see that versus time.

Lastly, Astra's strategy of not just delivering an orbital vehicle, even though that is the key to space, delivering a complete customer solution where the customer can come to Astra and say, "Here is my payload. Please put it in space and provide me data." That is a powerful platform that, if you can scale it and drive the cost out of it, will really just completely enable a whole new generation of entrepreneurs and creatives. So while I'm excited about Astra, I'm also incredibly excited to see what this new ecosystem does with the platform that Astra enables.

Then lastly, being operationally efficient is incredibly important. One of the things that I've noticed about Astra is that it is already thinking about, "How do we utilize cloud services? How do we utilize the Internet? How do we have a small group of folks at a spaceport and centrally run mission control from here in the Bay Area?" The days of 30 people in mission control, like the old sixties, those are behind us. And utilizing technology, utilizing automation, utilizing the Internet, we are able to operate at a very, very efficient rate. In addition, having design, fabrication, and test all here in a single facility right in the middle of the Bay Area allows us to iterate at a rate that is really phenomenal. I think all these things, when you put them together, create an incredible value for our customers. So I'm going to hand the discussion over to Martin Attiq, our Chief Business Officer, who can tell you a little bit more about that.

**Martin Attiq (Astra, Chief Business Officer):**

Thank you, Benjamin, and good morning, everyone. I'm Martin Attiq, Astra's Chief Business Officer. Today I'll walk you through the overall market opportunity, including our existing customer base and our pipeline. We built this company to enable the space economy, and since the beginning, we've been talking to customers. We've deeply understood their businesses and their pain points. Our customers are attempting to solve some of the world's hardest problems, including climate change, by monitoring methane emissions or ocean movements. We're trying to connect every human on earth with high-speed Internet, and we're trying to connect every device on the planet from your phone to an autonomous vehicle. Their pain points are actually quite simple, being able to get to space quickly, as affordably and reliably as possible. And that's the foundation by which we have built our products and services for our customers. Our customers have not just been alongside us in this journey. They've also awarded us with contracts. We have more than 10 customers that represent more than 50 launches in our backlog. That represents over \$150 million of contracted revenue. We have a mix of both government and commercial customers. Our commercial customers are all highly reputable, they're well-funded, and they're currently in orbital operations. So we're confident they'll be ready when we're ready. The government has taken notice as well. We've recently been awarded two NASA contracts, one in December, which is the NASA VCLS contract mission, and one in February, where NASA awarded us a constellation mission of three different launches. What's been great about that is that the government has validated our approach, and NASA has said in their source selection document that Astra represents the best value to taxpayers by delivering satellites into the right place in space as affordably as possible, the exact reason why we built the system we had built.

It's not just our existing customers. The broader market has taken notice. Today we have more than a \$1.2 billion active pipeline. I'll say three things about this pipeline. One, it's rapidly expanding. Since our December launch, we've been having more conversations than ever before with customers. Two, it's diverse, both in terms of the number of customers as well as the number of verticals, from broadband, maritime, IoT, earth observation, point to point, and government. Three, the conversations that we're having are deeper and more strategic than ever before. Fundamentally, our customers want to get to space as affordably and reliably as possible. To do that, they want to focus on their application and the problems they're trying to solve from space and not to focus on everything else, including the satellite development, the launch, the monitoring of the constellation. And what that means is that it represents an opportunity for Astra to capture more of that value chain and to become the infrastructure of space. And as such, we're having those deeper, more strategic conversations with customers. And in the future months, we'll tell you more about our customers, and we'll tell you more about our products and services, where Astra is going to capture more of the value chain of space. And with that, I'll turn it over to Kelyn Brannon to talk about our operating plan and our financials. Kelyn?

**Kelyn Brannon (Astra, Chief Financial Officer):**

Thank you, Martin. I'd like to take everyone through Astra's business plan and elaborate on what makes us such a unique launch and services company. Our five-year plan that I'm sharing today is the same plan we shared during our merger announcement with Holicity and is based on a detailed, bottoms up analysis.



We plan to reach what we call “hyperscale” space operations in the next few years. Astra will commence our first commercial launch this summer, and we’ll begin to scale rapidly and expect to achieve the key milestone of daily launches by 2025.

To accomplish these goals, we will complete the build-out of our current manufacturing facility by the end of 2021. Along with this build-out of our facilities, we intend to ramp up spending on automation, robotics, and equipment from 2022 to early 2024. These investments will incorporate history-to-date experience at Astra, as well as lessons learned by our senior management, including Bryson Gentile and Pablo Gonzalez who come from leadership roles at SpaceX and Tesla, as Chris highlighted earlier.

This calendar year, we plan to build out our facility for satellite manufacturing. And by 2022, Astra will begin offering satellite services to our constellation customers. This is part of our platform strategy that transfers much of the burden of constellation design and launch from our customers to Astra. Similarly, the efficiency of Astra’s spaceport services requires minimal incremental capital expenditures, but at the same time enables Astra to launch customer payloads in a rapid cadence at low cost.

As our launch cadence ramp to daily by 2025 and the capacity of our launch vehicles increases to handle larger payloads, we expect strong revenue growth as demand currently exceeds our growing launch capacity by a wide margin. Beyond our forecast period, we believe increases in launch cadence and additional manufacturing facilities, combined with the ramp of our space platform offerings, will continue to drive incremental revenue growth for many years to come.

Our early investments in automation and equipment will enable mass production of launch vehicles at attractive margins. And as a result, we expect strong margin expansion over the next few years. And we currently project that we’ll be profitable by 2024 and operating near projected adjusted EBITDA margins by calendar 2025.

We believe that Astra’s plan to offer end-to-end constellation services, including satellite design and assembly and launch, and offer spaceport services will, at scale, deliver a compelling mix of margins that aggregate to 70% gross margin and 50% EBITDA margin on an adjusted basis. We also expect strong free cash flow conversion.

Our capital investments in facility upgrades, automation, and other equipment should be complete by 2024 and translate to material free cashflow in 2025 and thereafter. Assuming no Holicity shareholder redemptions, a \$200 million PIPE, \$30 million of new primary Series C proceeds results in approximately \$488 million of cash to Astra’s balance sheet. We plan to efficiently deploy the proceeds from the Series C, the PIPE and the merger with Holicity to achieve our growth targets and meet the demands of our customers, which as Martin reviewed, currently is an excess of \$150 million in contracted revenue with over 50 launches.

My CFO experience in taking Arista and Calix public, as well as senior finance roles at Amazon and Sun Microsystems has prepared me well for the challenges of forecasting for high growth, product cycle-driven companies. My approach at Astra will be the same as before, which is to be prudent about managing expectations and thoughtful about modeling cash and operating targets.

Two components of the model that we feel comfortable about are one, our ability to deploy capital in a productive and efficient manner to meet our production goals. And secondly, the depth of demand from the many customers in our backlog and pipeline. We’ve built a great finance team here that I’m confident will increase the speed and efficiency in measuring and optimizing Astra’s internal financial operations, as well as completing public company filings and quarterly close processes on a required cadence.

This concludes our prepared remarks. And before we turn it over to Q&A, I’d like to remind everyone that you can email us your questions at [investors@astra.com](mailto:investors@astra.com). And for those of you in our virtual audience, we will be posting the slides at the conclusion of this call. A replay of today’s event will also be made available on the Investor Relations section of our website. And with that, let me turn the call over for Q&A with our executive team.

**Dane Lewis (Market Street Partners):**

Hi everyone. My name's Dane Lewis and I manage investor relations for Astra. Thank you all for joining us and submitting questions this morning. With that, let's begin Q&A.

Our first question comes from Mike Ciarmoli from Truist. Mike asks, "How is Astra differentiating itself in the fast-evolving market from other players like Rocket Lab, Relativity, SpaceX, Blue Origin, Virgin Orbit, etc.?" Chris, can you take that one?

**Chris Kemp (Astra, Founder, Chairman and CEO):**

Sure, thanks Dane. And thanks for joining us today, everyone. I think the first thing that we're doing is we're focusing predominantly on scale. We believe that by accessing more places in space from more places on earth at a lower cost, we're serving our customers better. And what that means to us is manufacturing more rockets, and having more spaceports and more launches than any company in history. And that means keeping the rockets small so that they're easy to transport. And that means that we can make more of them and serve more customers more quickly.

Secondly, we're just moving very quickly. We, as a company have been iterating, making 1.0, 2.0, 3.0. Our 3.3 rocket, which will carry our first commercial payloads this summer, is being improved from the feedback we're getting from our customers, from operations, from manufacturing. And what we're able to do there is we're able to focus on, I think probably the third factor here is really global optimization. So we listen to our customers and we're able to rapidly respond to what they need. And in some cases that might be more launches. In some cases that might mean a lower cost. In some cases it might mean more capacity or more performance.

So, as a company we're really focused on the growth and the scale and the margins of the business, and we're able to do that because we're able to iterate faster, and we're able to do that because we're able to learn faster by focusing on scale.

**Dane Lewis (Market Street Partners):**

Great. Our next question comes from Kristine Liwag at Morgan Stanley. Kristine asks, "How mature is the current technology and what do you still need to accomplish before commercialization?" How about Benjamin, you take that one.

**Benjamin Lyon (Astra, Chief Engineer and EVP of Manufacturing, Production and Launch Operations):**

Sure Dane, no problem. So in December, Astra demonstrated orbital launch capability. And we really are on track right now for our summer first commercial launch, and then proceeding forward into monthly launches towards the end of this year. I think for Astra, the big next step is scale. And so it's about taking our ability to make these technologies robust and taking that to the next step of doing it at scale so we can hit these greater cadences.

**Dane Lewis (Market Street Partners):**

The next question comes from Ken Herbert at Canaccord Genuity. Ken asks, "What are the benefits of a complete offering, a one-stop shop so to speak, for constellations and other customers?" Martin, can you handle that?

**Martin Attiq (Astra, Chief Business Officer):**

Sure thing, Dane, and thanks for the question, Ken. I think there are two key components to that. One is total cost of ownership. And two is speed. So if you're able to combine and integrate the rocket with the spacecraft, along with the constellation design, that combination allows you to optimize the design, which allows you to lower the total cost of ownership significantly.

And secondly, it's speed. When you have to do less integration with multiple third parties, that allows you to move faster and more efficiently, which also helps in speed. So our customers are services businesses, and they really care about speed, which is getting their applications to orbit as quickly as possible. And they care about total cost of ownership.

**Dane Lewis (Market Street Partners):**

Good, thanks. Pete Skibitski from Alembic Global asks, "What gives you confidence that satellite launch demand will grow meaningfully in the years ahead?" Martin, can you take that one too?

**Martin Attiq (Astra, Chief Business Officer):**

Absolutely. Thanks Dane. And thanks for the question, Pete. I would think of that in three ways. One is that there's already been significant demand in the recent past, and there are known constellations from companies like Amazon, OneWeb and others, and we've shown slides on that significant growth for those planned constellations. And that's coming from mega constellations, from small satellites and from government.

The second way to think about it is that what's nice about lower earth orbit is that the shelf life of the satellites is between three and five years. So it's a little bit like getting an iPhone refresh where satellites need to be replenished up in space, which means that even though there's this planned demand, we know it's also going to need to be refreshed, which means that we think it's sustainable.

And then the third way to think about it is the just amount of growth that's happening and the amount of problems that are being solved in space. So just broadly speaking, climate change, if you believe that's going to be a big thing, the best way to monitor methane emissions or ocean movements is from space. If you believe that connecting every device on earth is going to be important, whether that's your phone or whether that's an autonomous vehicle where you believe availability is really key, that's also best done through space. And if you also believe that every human on earth is going to have high speed internet, we believe that global coverage can only really happen through space. And there are many, many applications like that. And so we see continued significant growth in addition to what's already planned and out there.

**Dane Lewis (Market Street Partners):**

Chris, following up on your talk about kind of the modular platform, Suji Desilva at Roth Capital asks, "Can you explain Astra's satellite platform or modular plan? And what options can customers plug into in modular satellite?"

**Chris Kemp (Astra, Founder, Chairman and CEO):**

Yeah. Thanks Suji, and great question. As we spend more time with customers, what we're finding is that many of them are really just trying to provide services to their end users. And what that means to them is how quickly can they begin providing those services, because there's value in doing that faster.

Many of these customers, they're buying satellite buses from third-party integrators and they want to fly launches just to kind of get the satellite working. And so the common theme is the faster we're able to provide value to our customers, the faster we're able to get them providing services that are improving their end users' lives, whether it's connectivity, whether it's earth observation, the better for our customers.

And so I think what we want to do here is we want to allow them to focus on the software and on the sensors or the radios that allow them to provide their unique end user services, and we'll take care of the rest. And as we move from being a launch provider to being a true space platform provider, the spacecraft that's actually hosting their software and hosting whatever sensor that makes their service unique, and getting that pulled together for them faster, allows them to go from a concept to a constellation, in perhaps months instead of many years, as we've seen traditionally in the aerospace industry.

So we're building that kind of like a plug and play, kind of like a USB device plugs into your PC. And that's really how we think about Astra, is we're building this platform like the PC or like an Apple iPhone, where our customers are going to be able to much more rapidly begin providing services to their end-users, and value.

**Dane Lewis (Market Street Partners):**

Good. Well, there's a lot of questions coming in. Several of them are about just the book of business and backlog and pipeline. So I've got a question from Edison Yu at Deutsche Bank and he asks, "What exactly does your \$1.2 billion pipeline represent? How does it account for the services revenue that you guys have talked about, and how has that number evolved over the last year or two?" Martin, I think this is a question for you.

**Martin Attiq (Astra, Chief Business Officer):**

Yeah, sure. And thanks for the question, Edison. I would say three things about that, and just characterizing the backlog. One, is that it's rapidly growing. And so you asked the question of, how has it changed in the last year? It's grown by more than 10 times in the past year. And that has continued to accelerate since our December launch. Two, is just the depth and diversity of the customers and the verticals. So we are growing and expanding the customer base significantly. And the number of verticals that we're working with, whether that's broadband, earth observation, maritime, IoT, government point-to-point, etc., we're touching all of those verticals. And so that's also nice to see, because it gives us a nice diversity in our backlog. And thirdly, the conversations that we're having are deeper and more strategic than ever before, and they're extending well beyond launch. And really, people do see the value of this integrated platform approach that we're taking. And so we think that there's exciting things ahead for the company in terms of our backlog.

**Dane Lewis (Market Street Partners):**

We also have a few questions about the launch failure rate and what we expect. Myles Walton from UBS, asks, "NASA's study of small satellite launches between 2000 and 2016 suggest a 6% launch failure rate. Does Astra expect a higher rate than that in the first few years? And are there stipulations with customers in backlog that Astra demonstrate a certain success rate prior to their launch?" Chris, can you take that?

**Chris Kemp (Astra, Founder, Chairman and CEO):**

Yeah. And, and thanks, Myles. It's a great question. One of the things that we recognize is that reliability drives cost. And as a company, if you're focused on delivering, say, human passengers, or say, you're building a really big rocket, that's taking a large number of satellites, or a really exquisite payload for the Department of Defense, well, then you need reliability, right? If you're going to be flying people, or trying to reuse your rockets, and that drives costs. And so to some degree, Astra's thesis is, let's focus on customer value. And if you think about how Amazon thought about data centers, if a server, or a rack of servers, or even a whole data center fails, you don't even notice. And likewise, if you think about the constellations where you have a large number of small satellites, no one satellite will take out your constellation or your service.

And so, as we think about the launch services business, for example, we think about value to customers, and our customers would rather pay a lot less for a launch, because, frankly, they're flying a more or less disposable satellite on a more or less disposable rocket, to build a constellation where no one satellite will affect the overall service that's being provided to customers. And so what we're focused on, as we always are, is building a business that focuses on customer value, and on the global economic optimization of all of these factors. And it'll mean that Astra will probably target a lower reliability level, and we'll probably have more launch failures along the way, because it's frankly how we continue to push the best value to our customers. And we're going to try to do launches out in the middle of nowhere, with as few people as possible and always focused on safety. So our mantra is put safety first, put customers first, and deliver the best value.

**Dane Lewis (Market Street Partners):**

Next, we have a question from Chuck Minervino, in Susquehanna. He asked, "How come Astra's price per launch is so much lower than Rocket Lab and other competitors?" Martin, can you take that?

**Martin Attiq (Astra, Chief Business Officer):**

Yeah, sure, and thanks for the question, Chuck. What we've developed is the lowest-cost dedicated access to space. And the way we've done that is, from the beginning we have this mantra that, simple scales. So we've designed the entire launch system to be scalable and mass producible, which allows us to significantly reduce our internal cost of development. What that allows us to do is, as we've built the system that is the lowest-cost dedicated access to space today, it allows us to capture significant market share, and also allows us to win really key and strategic long-term customers. And that's what we've been doing, and that's what's represented in our backlog. So we think of it as a key strategic advantage of Astra. I would also add that we see a lot of price elasticity when it comes to responsiveness. So as the time from the order to the launch gets shorter, we see a lot of elasticity in terms of demand. And what's unique about our system is that it's fully containerized, it's fully mobile, and it's very responsive. And that also gives us pricing power for customers that need a responsive launch.

**Dane Lewis (Market Street Partners):**

Thanks for that. Brian Hsu from Light Street Capital asks, "Can you discuss the licensing process for launch sites? How quickly can you get proposed launch site locations through the FAA process?" Chris, do you want to take that?

**Chris Kemp (Astra, Founder, Chairman and CEO):**

Yeah. And I think that I'll also, potentially, allow one or two of my colleagues to comment on this, because the question touches a few areas, but the way we've really thought about this is, it's a system, and the actual spaceport, and the launch system, and the rocket, are all designed as a system. And they're design as a system to lower overall cost. And none of that system is at the spaceport, right? So we can go to an area that will license us for launch operations, put up a fence, pour a concrete pad, we don't even really need that, but it's nice, and our containers arrive with five people, and we can launch there in about five days. And we've demonstrated this a couple of times already. And what this allows us to do is have many spaceports. So really it is all about finding places where it's safe, and environmentally and logistically ideal to launch. And that allows Astra to set up really many spaceports in the United States and abroad, and it's primarily a business issue. So with that, Martin handles that. So I'll hand it over to him.

**Martin Attiq (Astra, Chief Business Officer):**

Yeah. And thanks for the question, Brian. Our requirements, as Chris mentioned, the actual launch requirements are very limited that we have on site. So as such, getting through all that paperwork is actually quite limited. So even with a government spaceport, which takes longer, that's about 12 months. And so for a commercial spaceport, it could be as fast as the commercial spaceport can move.

**Dane Lewis (Market Street Partners):**

Great. Next question is from Ron Epstein at BofA Securities. Ron asked, "By 2025, what do we expect the cost per kilogram for orbital launch?"

**Chris Kemp (Astra, Founder, Chairman and CEO):**

Sure. We've got the numbers that we've shared, and I think our 2025 target as we start to produce a rocket a day is just over a half a million dollars for the materials, the labor to produce the rocket and the variable costs that goes into launching a rocket. At that point, we'll be putting about 500 kilograms to a mid-inclination orbit. So that works out to just over a thousand dollars a kilogram of costs to Astra. As Martin said, the price is really based on the value to customers. If we think about being able to launch something on the launch tomorrow, there might be a very high value to that. Of course, if we're talking about a contract to launch something two or three years from now as part of a larger mega constellation deployment, there might be a lower cost of launch there because it's a larger overall contract value that we can plan for.

So there's a lot of elasticity that we see. We've again reflected in the numbers we've shared in ASP of launch around just over three and a half million dollars, and that kind of is the blended average of the launch services piece. We also start to see that get embedded in the spacecraft services. So we have a satellite services and a spaceport services, which are higher margin services that build on the overall capability that we've been deploying.

**Dane Lewis (Market Street Partners):**

Great. This next question looks like it's for you, Dr. London. It's a follow-up from Mike Ciarmoli at Truist. He asked, why are your rockets all metal versus the use of lighter weight, potentially more reliable composite materials?

**Chris Kemp (Astra, Founder, Chairman and CEO):**

Yeah, Dr. London. That's yours.

**Adam London (Astra, Founder and CTO):**

Thank you. Finally, a rocket science question. Michael, thanks for the question. A couple of thoughts. One, I actually don't believe that metal is less reliable than another material. It tends to be actually a more robust material, but you're correct. It is lower performing from a sort of pure rocket science perspective. But again, as Chris and others have said, our objective is a global optimization, and so a customer doesn't care when their satellite is in orbit, whether it got there with a carbon fiber rocket or a metal rocket, just like you don't really care whether your UPS package arrived on a carbon fiber UPS truck, or a metal steel inexpensive UPS truck. So we choose to think that it's more scalable and more economical and provides the best value to our customers, and we believe that to be a metal system.

**Dane Lewis (Market Street Partners):**

Great. Thanks. We have a follow up question from Myles Walton at UBS. Can you comment on how you expect the pipeline to move into firm orders? Are customers waiting for success before signing up, and how contingent is your \$150 million contract backlog to demonstrate success? He also asks about Kuiper moving to lock up supply this year. Martin, can you comment on those things?

**Martin Attiq (Astra, Chief Business Officer):**

Yeah, sure. Very happy to. So when we think about backlog, what we mean by that is that these are committed contracts for committed launches. So things that are letters of intent or memorandum of understanding, that we include in our pipeline. As I mentioned in my talk, all of our customers, whether there's a good mix of both government and commercial customers, all of our commercial customers are customers that you would know they have satellites that are on orbit. So we're very confident and-

**Chris Kemp (Astra, Founder, Chairman and CEO):**

It looks like we might have lost Martin.

**Dane Lewis (Market Street Partners):**

Okay. We'll skip that and we'll go onto something else. We have a follow-up question from Kristine Liwag at Morgan Stanley. She wants to know how much does it cost to build each launch site if everything fits into four shipping containers? Who'd like that?

**Chris Kemp (Astra, Founder, Chairman and CEO):**

Yeah. I think there's two pieces to that question. There's the spaceport itself, which is the cost of putting up a fence and pouring some concrete and doing the license and development work to operate. That can range from hundreds of thousands to a few million dollars. It's a fairly inexpensive investment to set up a new spaceport. Then the launchers themselves, the thing that accompanies the rocket that allows us to launch the rocket from that concrete pad is something that we can kind of manufacture like one of our products. We have several of them in production right now and we've produced several of those in the past. We haven't shared the numbers on the cost of those things, but it's kind of in family with that as well.

So it's something that we can see deploying many spaceports, many launchers, and we upgrade the launcher with the rocket. So as we have new enhancements to make the rocket less expensive to operate as we add features to the rocket or remove features from the rocket, we design the launchers to be upgraded along with the rest of the system as well.

**Dane Lewis (Market Street Partners):**

Great. Here's another competitive positioning question. It's from Edison Yu, a follow-up. He's at Deutsche Bank and he's curious about the differentiation in terms of technology, such as the rocket design, the platform software, and anything else that is proprietary compared to SpaceX, Rocket Lab, Virgin Orbit, and others. Chris, can you, can you address that?

**Chris Kemp (Astra, Founder, Chairman and CEO):**

Sure. I think that the way we think about technology development is how quickly can we introduce new technology and actually put it into a system, use that system, collect data from that system, see what's working, and then if you think about the trajectory of the company, we were incorporated at the end of '16, and 2017 we were able to design, manufacture Rocket 1.0 and in 2018 launch it. 2.0 again. We actually got feedback from customers at that point where we said that we learned of Kuiper's requirements where we needed to build a slightly larger rocket so we could deliver their satellites that they were planning on building for that constellation. So we doubled the size of everything. We doubled the size of the rocket, literally every pump, every valve, every tank, everything. Doubled the thrust of the engines and we launched again in 2020.

Again, we demonstrated that we could put things in orbit at the end of 2020. So it shows you how this velocity is in of itself an advantage. One of my mantras is that the only truly sustainable competitive advantage is learning faster than your competitors. You might replace learning with launching, right? So the more we launch, the more we learn and the more data we collect. If you look at our investor presentation, you'll see our platform strategy speaks of a technology company at the foundation that has data at the spine of the company. So everything we do, whether it's the data that comes from manufacturing rockets, the data that comes from launching rockets, it's all being fed back into design, and the designs are continually pushing for value to customers.

So what we have here, it's not some sort of rocket laboratory, it's really a space platform business that's focused on how do we get our customers the most valuable services that they need to begin solving the problems and improving the value that they're delivering to end users?

**Dane Lewis (Market Street Partners):**

Cai von Rumohr from Cowen asks, "Who bears the cost of launch failures and what sort of insurance rates does Astra expect?" Martin, can you take that, or Chris?

**Martin Attiq (Astra, Chief Business Officer):**

Yeah, thanks for the question. So, today, as Chris mentioned earlier, these are disposable satellites with disposable rockets. So there's really low cost to both us and to the end customer. So that basically means very low insurance requirements as a result of that. And so if there's a failure, we'll send a satellite back up.

**Dane Lewis (Market Street Partners):**

Great. A follow up question from Chuck Minervino at Susquehanna, he asked how comfortable Astra is with the timeline of launches beginning this summer? He just comments that some other space companies have had misses on timelines and just wants to get a check on our level of confidence. Chris, can you answer that?

**Chris Kemp (Astra, Founder, Chairman and CEO):**

I can, but I think Benjamin is leading the engineering effort and the operational effort around these upcoming launches so maybe I'll pass it to him.

**Benjamin Lyon (Astra, Chief Engineer and EVP of Manufacturing, Production and Launch Operations):**

Thanks, Chris. And thanks for the question. You know, one of the things that I think is great about Astra is that we prove by doing, and we have a very robust test program so that between our launches we learn from the launch and we improve our odds of success going into the next one. So I think that the forecast that Astra is providing right now is a good one.

**Dane Lewis (Market Street Partners):**

Great, thank you. We'll take a couple more. And then we'll cut it off. Pete Skibitski, a follow-up question, he's at Alembic Global and he wants some more color on the satellite portion of the business. You know, heard a lot about rocket development, but less so on the satellite side. Can we give a little more detail on what the plan is for the development of that business?

**Chris Kemp (Astra, Founder, Chairman and CEO):**

Well, I think what we've shared so far is that we're building the capability to start making spacecraft and we'll start to begin flying those next year. And initially we're just getting a lot of feedback from customers. What helps them get into service and operations faster? And we've heard a lot of customers that would rather have Astra take that on, versus just continue to buy our launches, to figure out, effectively reinventing the wheel. You know, how do you do propulsion? How do you do radios? How do you do all this stuff that frankly, if you look at our rocket in the upper stage, the electronics on our upper stage are effectively satellite. So it's about taking the expertise that we already have and just adding things to it so that it's more capable and it can do more for our customers.

**Dane Lewis (Market Street Partners):**

Okay. And our last question, it's a follow-up from Ken Herbert at Canaccord Genuity. When does launch supply outstrip small satellite communications launch demand? Martin or Chris, can you take that?

**Martin Attiq (Astra, Chief Business Officer):**

Yeah. We see us being in a supply constrained market for many years to come. And that goes to what I said earlier around what we know in terms of the planned demand and where those customers are coming from. And what we also believe is also coming from both mature companies as well as startups and in the years to come. So we believe that we'll be in a supply constrained market for many years to come.

**Chris Kemp (Astra, Founder, Chairman and CEO):**

Yeah. I want to also just add to that. I want to put a big idea in people's heads. If there was one giant rocket that could take millions of metric tons to space once a year, everybody could just wait for that one giant freight rocket and put everything on it. And I bet you wouldn't even fill it up. On the extreme other end of the spectrum, if Astra were launching a few hundred kilograms every single day, we would have a total supply constrained situation still because that wouldn't add up to millions of metric tons the day before Christmas on the giant freight rocket. The reality is that's not the way the industry works. You know, FedEx is not a substitute for Maersk. If you're one of the hundreds of companies that's trying to innovate and develop, you don't want to go to one place in space. You want to go to the place in space that differentiates your business. It might be a different altitude and in different inclination, and you want to go on your schedule. You don't want to wait for a year or two.

When we looked at the last SpaceX ride share, those customers waited for over a year and then the flight was delayed a year. And if you're a startup, being delayed two years before you can test something will have a real impact on your business. And so think of Astra much more like a FedEx. We are creating, as Martin has said a couple of times, we want to be able to provide the best value service, getting our customers where they need to go in space from where they want to launch on Earth. And I think that's really what will allow us to stand out. We're not going to go build a bigger rocket, and we're not going to focus on putting expensive exquisite assets and people in space. We're going to focus on our customers and what they need, which is the lowest cost access to space and the most frequent access to space.

**Dane Lewis (Market Street Partners):**

Great. Thank you, Chris. Okay. So we're going to stop Q&A there. Thank you everyone for joining us. I hope you guys got to enjoy and get to know our leadership team. I hope that was helpful for everyone in the audience. We will be sharing the slides later this afternoon, and we'll have a replay of the event also on our website, the Investor Relations section. Thanks again. If you have any follow-up questions, you're certainly welcome to email us at [investors@astra.com](mailto:investors@astra.com). Thanks everyone, and have a good day.

**Chris Kemp (Astra, Founder, Chairman and CEO):**

Thanks everyone.

**Martin Attiq (Astra, Chief Business Officer):**

Thanks everybody.

**Adam London (Astra, Founder and CTO):**

Thank you very much.





Investor Day  
April 14, 2021

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RANDY RUSSELL

CO-FOUNDER & CHIEF INVESTMENT OFFICER, HOLICITY

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**Additional Information:** In connection with the Transaction, HOL intends to file a Registration Statement on Form S-4, which will include a preliminary prospectus and preliminary proxy statement. HOL will mail a definitive proxy statement/prospectus and other relevant documents to its stockholders. Investors and security holders of HOL are advised to read, when available, the proxy statement/prospectus in connection with HOL's solicitation of proxies for its special meeting of stockholders to be held to approve the Transaction because the proxy statement/prospectus will contain important information about the Transaction and the parties thereto. The definitive proxy statement/prospectus will be mailed to stockholders of HOL as of a record date to be established for voting on the Transaction. Stockholders will also be able to obtain copies of the proxy statement/prospectus, without charge, once available, at the SEC's website at [www.sec.gov](http://www.sec.gov) or by directing a request to: Holicity Inc., 2300 Carillon Point, Kirkland, Washington 98033.

**Participants in the Solicitation.** HOL, Astra and their respective directors, executive officers, other members of management, and employees, under SEC rules, may be deemed to be participants in the solicitation of proxies of HOL's stockholders in connection with the Transaction. Investors and security holders may obtain more detailed information regarding the names and interests in the Transaction of HOL's directors and officers in HOL's filings with the SEC, including HOL's Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2020, which was filed with the SEC on November 4, 2020, and such information and names of Astra's directors and executive officers will also be in the Registration Statement on Form S-4 to be filed with the SEC by HOL, which will include the proxy statement of HOL for the Transaction.



## SPEAKERS



**Randy Russell**



**Chris Kemp**



**Adam London**



**Benjamin Lyon**



**Martin Attiq**



**Kelyn Brannon**

## SUMMARY INVESTMENT HIGHLIGHTS

1. | First pure-play public space company
2. | Compelling platform strategy that enables scale and efficiency
3. | Competitive advantage that increases with velocity and scale
4. | Large and growing sales backlog and pipeline
5. | World-class executive team with leading investors



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# CHRIS KEMP

FOUNDER, CHAIRMAN & CEO

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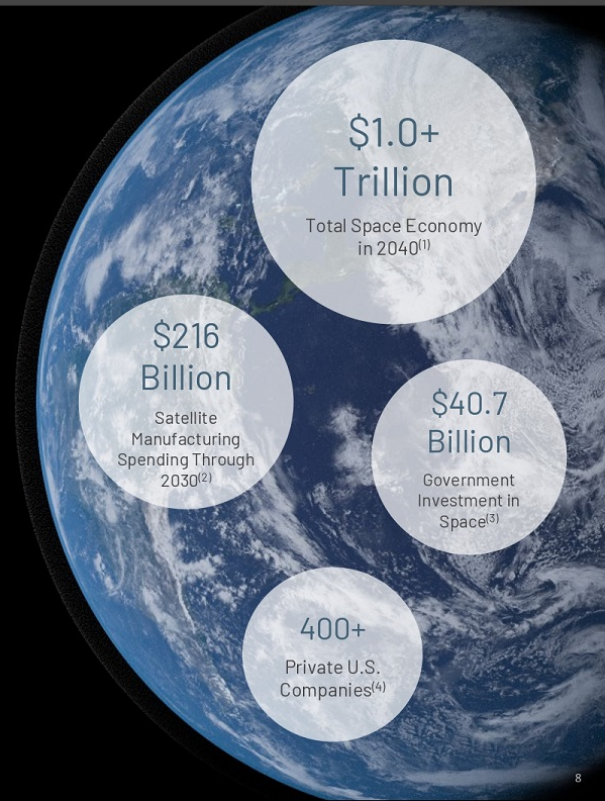


## MISSION

IMPROVE LIFE ON  
EARTH FROM SPACE

# Space is the Next Economic Frontier

Astra is the third privately-funded U.S. company in history to reach space and demonstrate orbital capability



Source: Wall Street Research, Space Capital.

(1) Per Morgan Stanley Research.

(2) Based on projected FY'21 DoD and NASA budgets from Jefferies, What's Up in Space: New Launchers, Same Incumbents (Aug. 2020).

(3) Companies currently operating space assets or with plans to launch them in the next 3 years.

(4) Companies currently operating space assets or with plans to launch them in the near term.

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## GLOBAL BROADBAND CONNECTIVITY

Reliable, low latency connectivity that could leapfrog wireless



## IOT / M2M

Monitoring billions of objects



## EARTH OBSERVATION

Monitoring activity on earth



## NATIONAL SECURITY

Early warning systems



## NEXT-GENERATION WEATHER, GPS, AND OTHER SERVICES

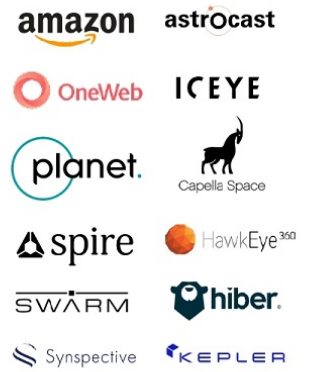
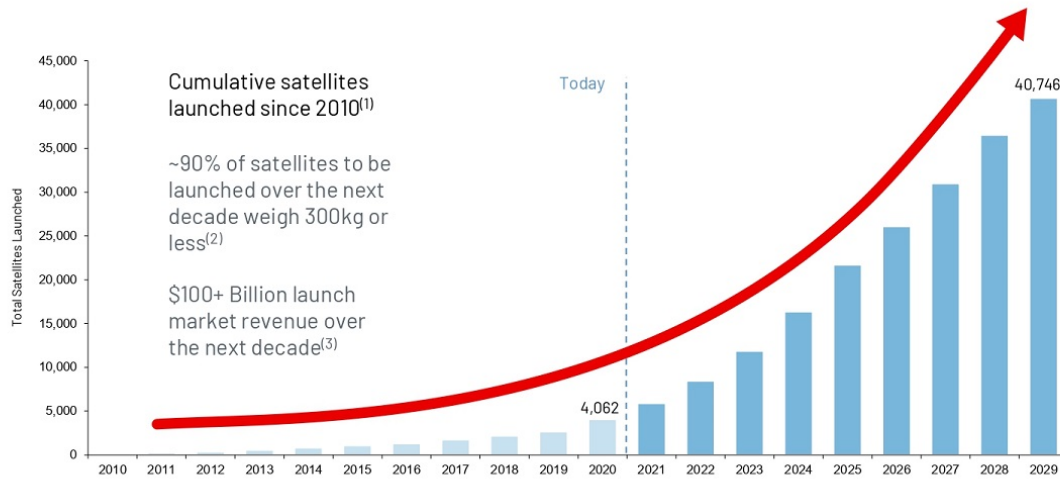
Leapfrogging wireless

## THE "NEW SPACE AGE" IS AT AN INFLECTION POINT...

38+ thousand satellites to be built and launched over 2020 - 2029<sup>(1)</sup>



14x increase from 2010 - 2019<sup>(1)</sup>



Source: Wall Street Research, Space Capital.  
 (1) Based on Euroconsult and Astra Management estimates.  
 (2) Based on Euroconsult estimates derived based on 7,016 satellites with known mass.  
 (3) Factors in Euroconsult and Management estimates for satellite launches.

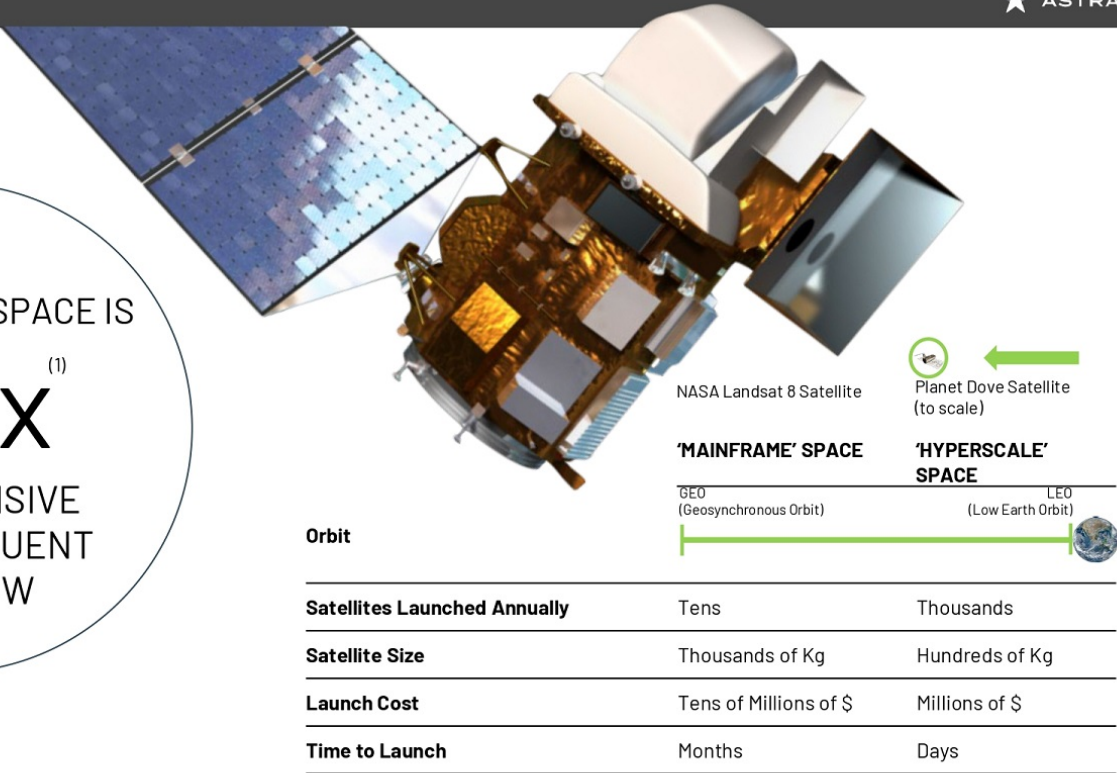
ACCESS TO SPACE IS

~25x<sup>(1)</sup>

TOO EXPENSIVE

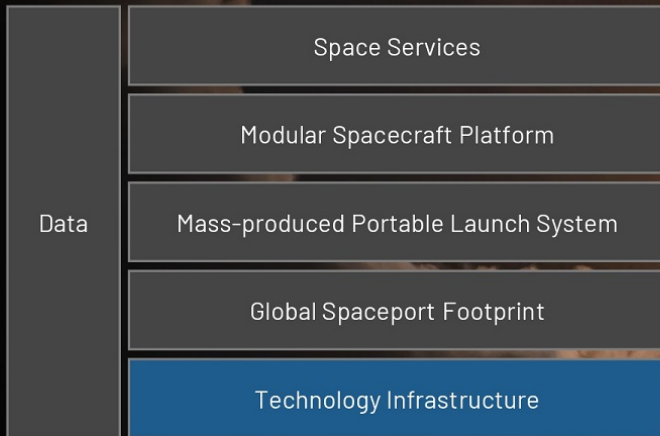
TOO INFREQUENT

TOO SLOW



(1) Based on average of the mid-point of variances shown on bottom of page rounded to the nearest 10.

# PLATFORM STRATEGY





# TECHNOLOGY INFRASTRUCTURE



## OPTIMIZED FOR SCALE

AstraOS links critical processes across development, manufacturing, test, launch, and finance



## INSTANT AND PERSISTENT ACCESS TO DATA

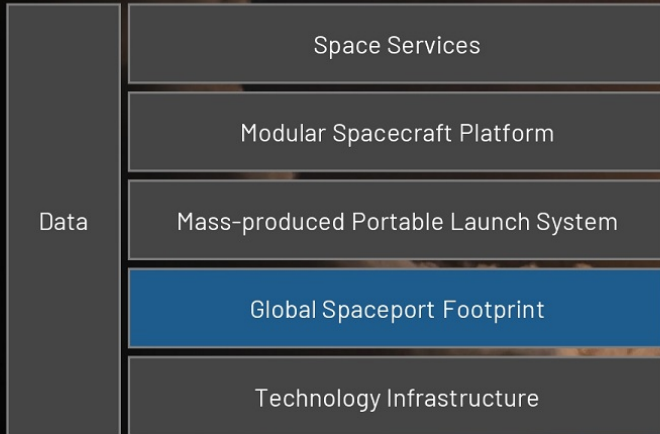
Decisions driven by real-time data acquired across all platforms via proprietary operational platform



## AUTOMATION

Test and launch operate under automation framework that will scale into manufacturing

# PLATFORM STRATEGY



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# GLOBAL SPACEPORT FOOTPRINT



## RAPID

Time to build new Kodiak spaceport: ~6 months



## GLOBAL

10+ Launch Sites identified around the world

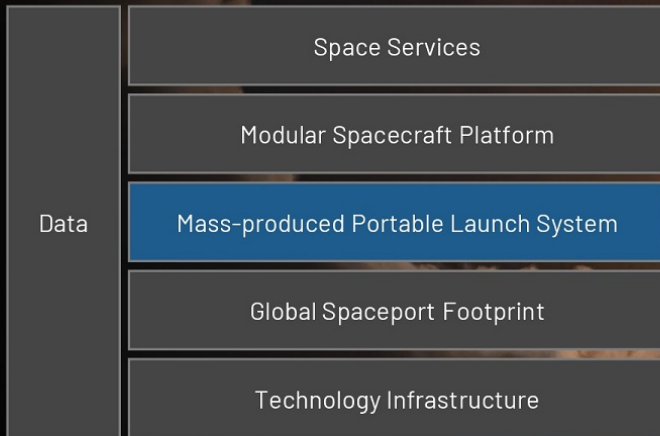


## AFFORDABLE

Commercial FAA spaceports only require concrete pad



# PLATFORM STRATEGY



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# MASS-PRODUCED PORTABLE LAUNCH SYSTEM



## RAPID

From payload delivery to launch within days



## PORTABLE AND GLOBAL

Launch from anywhere in the world in 24 hours

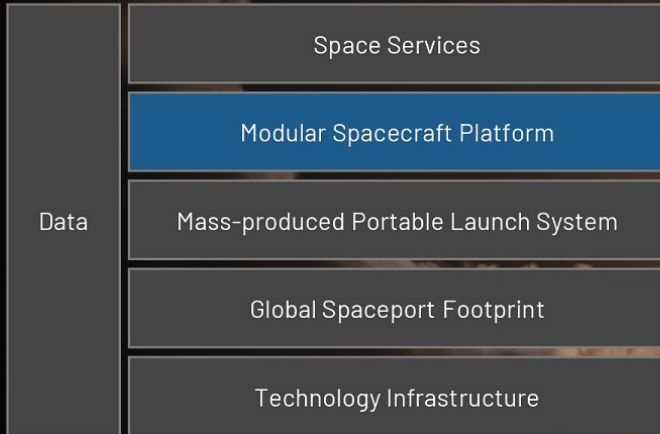


## AFFORDABLE

Most affordable launch system for small payloads

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# PLATFORM STRATEGY



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# MODULAR SPACECRAFT PLATFORM



## INTEGRATED

Factory integration with rocket eliminates unused mass and volume



## RAPID

From concept to constellation in months not years



## MAINFRAME TO MOBILE

Eliminates investment in bespoke satellite bus development



# PLATFORM STRATEGY

Data	Space Services
	Modular Spacecraft Platform
	Mass-produced Portable Launch System
	Global Spaceport Footprint
	Technology Infrastructure



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# SPACE SERVICES



## COMPLETE

Complete Constellation Management Services



## RESILIENT

Rapid replacement and replenishment



## AFFORDABLE

Most affordable path to space for governments and commercial customers



## VISIONARY LEADERSHIP



**Adam London**  
Founder & CTO



**Chris Kemp**  
Founder, Chairman & CEO



**Kelyn Brannon**  
CFO



**Benjamin Lyon**  
Chief Engineer, Engineering,  
Manufacturing & Launch



**Chris Thompson**  
Chief Engineer, Advanced  
Projects



**Martin Attiq**  
Chief Business Officer



**Bryson Gentile**  
VP Manufacturing



**Kati Dahm**  
VP Communications



**Pablo Gonzalez**  
SVP, Factory  
Engineering



**Carla Supanich**  
VP of People



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## GUIDED BY A SEASONED BOARD BACKED BY LEADING INVESTORS



Chris Kemp – Founder & CEO



- Leads the overall company strategy and direction
- Previously served as CTO of NASA and founded OpenStack
- Developed Cloud Computing Strategy for United States Government at White House
- Studied Computer Engineering at University of Alabama in Huntsville
- Teaches at Stanford



Dr. Adam London – Founder and CTO



- Leads the technology strategy and long-term product roadmap
- 10 years leading DARPA and NASA initiatives to miniaturize high-performance rocket technologies. 4 years at McKinsey & Company, focused on automotive and manufacturing sectors
- BS, MS, and PhD in Aerospace Engineering from MIT where his research culminated in the creation of the world's smallest liquid-cooled chemical rocket engine



Nomi Bergman – Director



- President of Advance / Newhouse Investment Partnership
- Previously served as President of U.S. cable owner and operator Bright House Networks until its 2016 merger with Charter and Time Warner Cable
- Board Member of publicly held Comcast and Visteon as well as 1010data, Black & Veatch, Astra, and Hawkeye360. Trustee for University of Rochester, The Cable Center, Adaptive Spirit, and One Revolution



Scott Stanford – Director



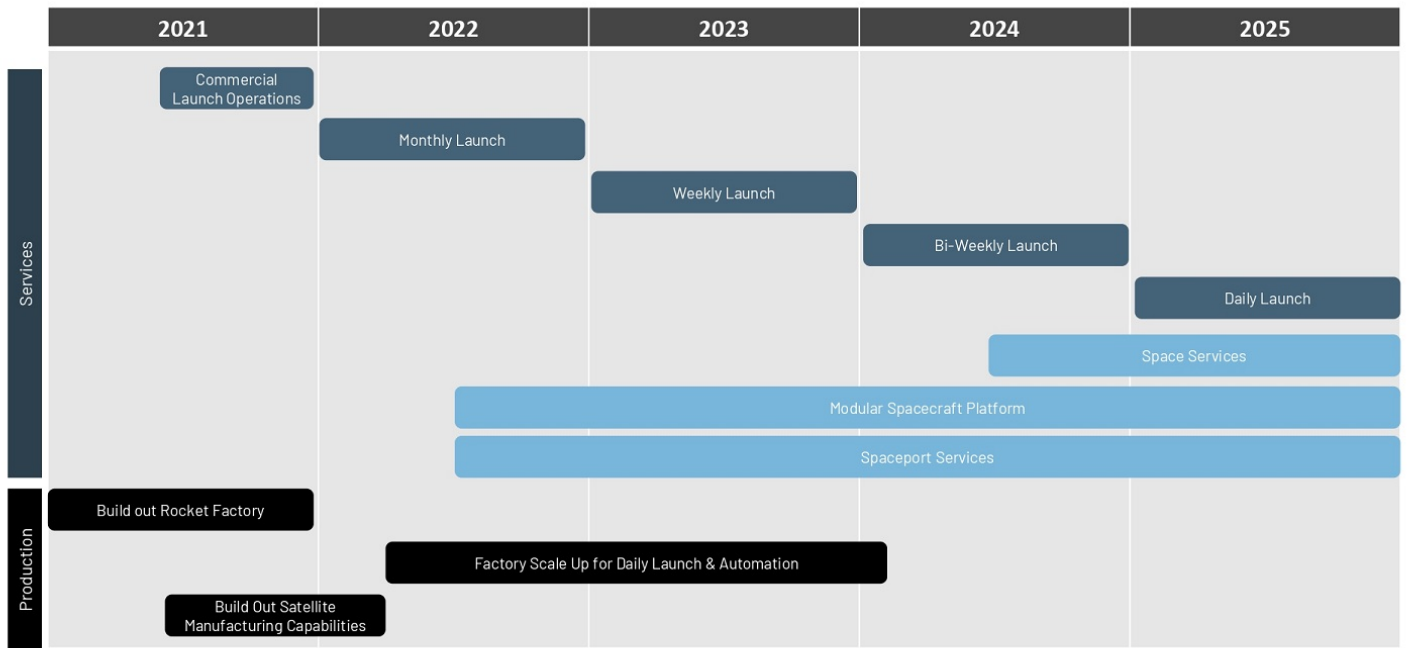
- Co-Founder and Partner at venture capital firm, ACME Capital
- Previously Managing Director of Global Internet Investment Banking at Goldman Sachs
- Co-Founder of Silicon Foundry
- Former Senior Vice President at LookSmart



Note: Upon closing, Craig McCaw is expected to join the Board of Directors.




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## TIMELINE TO HYPERSCALE SPACE OPERATIONS





## ASTRA IS UNIQUELY POSITIONED TO SERVE THE SATELLITE MARKET

		CADENCE	DEDICATED LAUNCH PRICE	RANGE OF ORBITS <sup>(1)</sup>	TECHNOLOGY READINESS
★ ASTRA		300+ LAUNCHES / YEAR	\$		
SMALL LAUNCH COMPETITORS (<500 KG)		< 50 LAUNCHES / YEAR	\$\$		
MEDIUM LAUNCH COMPETITORS (<1,500 KG)		< 25 LAUNCHES / YEAR	\$\$\$		
HEAVY LAUNCH COMPETITORS (>1,500 KG)		< 30 LAUNCHES / YEAR	\$\$\$\$		

Source: Company website, press, and Wall Street Research.  
(1) Range of orbital destinations available to small satellite customers.

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DR. ADAM LONDON  
FOUNDER & CTO

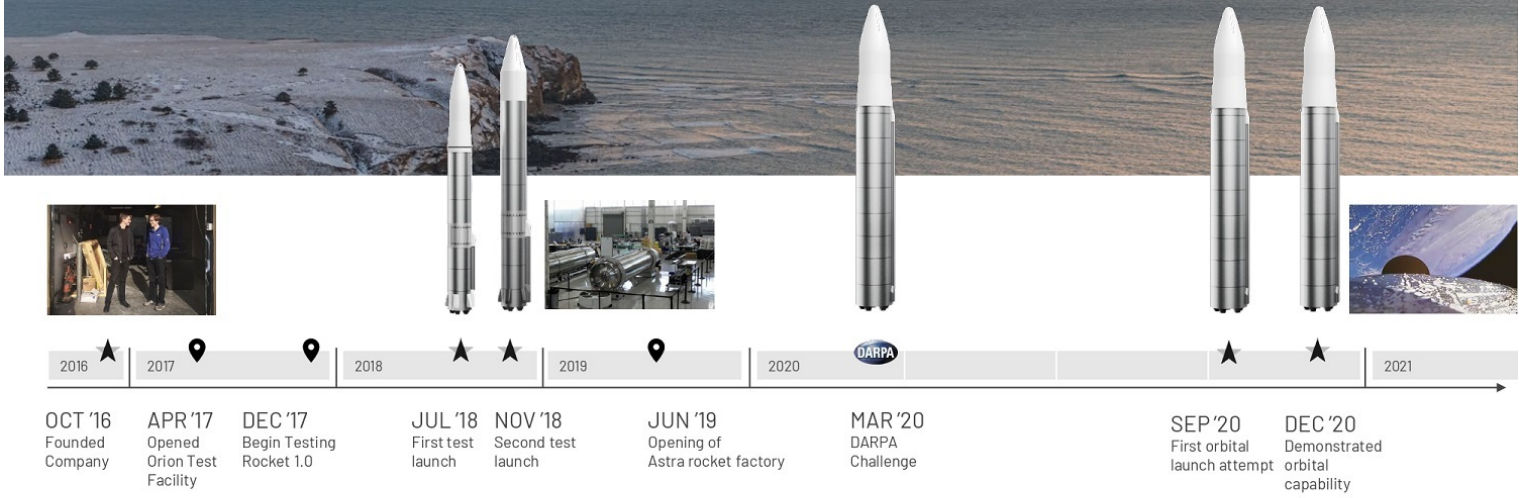
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## RAPID ITERATION DEEPENS COMPETITIVE MOAT

### KEYS TO SUCCESS:

- Technology de-risked by success of launches
- Rapidly enhance and re-launch rockets
- Automation to optimize costs and streamline improvements



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# STRATEGY IS WORKING: ASTRA ACHIEVED COMMERCIAL LAUNCH FASTER THAN OTHER COMPANIES

Unprecedented Velocity. Four Years to Launch.



Note: Years to achieve orbital launch capability, rounded to the nearest full year.  
 (1) Represents time between company founding and first achieving orbital launch capability.  
 (2) Virgin Galactic founded the LauncherOne program in 2007; Virgin Orbit (including the LauncherOne program) was spun off from Virgin Galactic in 2017.



## VALIDATION FROM GOVERNMENT AND HIGH-QUALITY CUSTOMERS



10+ customers and 50+ launches in backlog<sup>(1)</sup>



Over \$150+ million in contracted revenue



Over 100 spacecraft in backlog



All customers are highly reputable, well-funded and currently in orbital operation



Feb 2021: Awarded NASA's TROPICS mission (Time-Resolved Observations of Precipitation Structure & Storm Intensity) in a competitive bid process versus major launch services companies



Dec 2020: Awarded NASA's VCLS mission (Venture Class Launch Services) for launch of NASA CubeSats

(1) Represents existing customer contracts. Certain existing customer contracts permit the customer to terminate them for convenience, subject to a termination penalty, or to terminate for cause (e.g., if Astra does not achieve certain milestones).

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### BACKLOG CUSTOMERS



5+ GOVERNMENT CUSTOMERS



ESTABLISHED SMALL SAT COMPANIES

"First and foremost, I find that Astra clearly provided the strongest overall proposal and technical solution demonstrating they are capable of meeting the Mission One requirements with a significant strength assigned for maturity of the launch vehicle proposed."

Scott Syring  
SOURCE SELECTION AUTHORITY



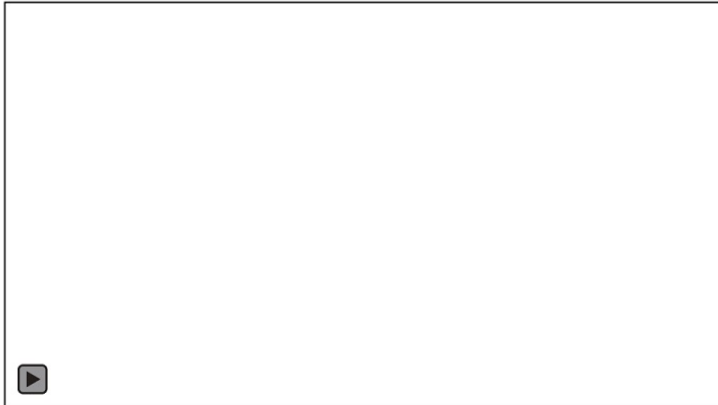
## ASTRA ROCKET DESIGNED TO BE MASS MANUFACTURED AT SCALE

Focus on all-metal manufacturing to leverage learnings and automation of past 20 years in Automotive assembly



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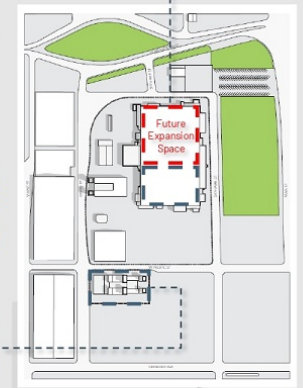
## A "MODEL T" FOR THE SPACE INDUSTRY



Former Alameda Naval Air Station Headquarters

Designed with affordable manufacturing processes and automation  
in a world class facility, using readily available materials

### Integrated Development and Production Facility



285,000 sq.ft 20 acre campus

## ASTRA LAUNCH SYSTEM IS PORTABLE AND GLOBAL




Launch system fits in four standard shipping containers and only requires six Astra employees at launch site



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## ASTRA IS UNIQUELY POSITIONED TO SERVE THE SATELLITE MARKET

		CADENCE	DEDICATED LAUNCH PRICE	RANGE OF ORBITS <sup>(1)</sup>	TECHNOLOGY READINESS
★ ASTRA		300+ LAUNCHES / YEAR	\$		
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HEAVY LAUNCH COMPETITORS (>1,500 KG)		< 30 LAUNCHES / YEAR	\$\$\$\$		

Source: Company website, press, and Wall Street Research.  
(1) Range of orbital destinations available to small satellite customers.

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## ASTRA MEETS THE NEEDS OF TODAY'S CONSTELLATIONS

Astra's dedicated direct orbital delivery eliminates the need for an orbit raise or in-space shuttling saving customers time and reducing risk of delay



### RAPID

Real-Time, Point-to-Point  
Satellite Delivery

### GLOBAL

From Anywhere on Earth

### AFFORDABLE

Launch Vehicle  
Optimized for Cost

IDEAL  
FOR KEY  
USE CASES

TEST SATELLITE LAUNCHES

SYSTEM DEPLOYMENT

GAP FILLING<sup>(1)</sup>

REPLENISHMENT

(1) Gap filling represents launching satellites to fill out an orbital plane that already has a number of operational satellites.



# BENJAMIN LYON

CHIEF ENGINEER, EVP PRODUCTION,  
MANUFACTURING AND LAUNCH OPERATIONS

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## OBSERVATIONS

Tech companies are great at:



Seeing around corners



Utilizing hardware, software, and services to delight customers



Mastering critical technologies at scale



Operational Efficiency



## FROM ANYWHERE TO ANYWHERE

The fundamentals still apply:



Satellites and spacecraft are getting smaller



Globally optimized



Ownership of enabling technologies



Platform that unlocks and enables a whole new ecosystem



Operationally efficient

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MARTIN ATTIQ  
CHIEF BUSINESS OFFICER







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## SUPPLY CONSTRAINED MARKET LEADING TO A RAPIDLY GROWING PIPELINE

### \$1.2B Pipeline

with great diversity in number of customers and verticals

	BROADBAND		EARTH OBSERVATION
	MARITIME		POINT-TO-POINT
	IOT/M2M CONNECTIVITY		GOVERNMENT

Ongoing demand to be driven by deployment and maintenance of mega-constellations

Source: Company estimates.

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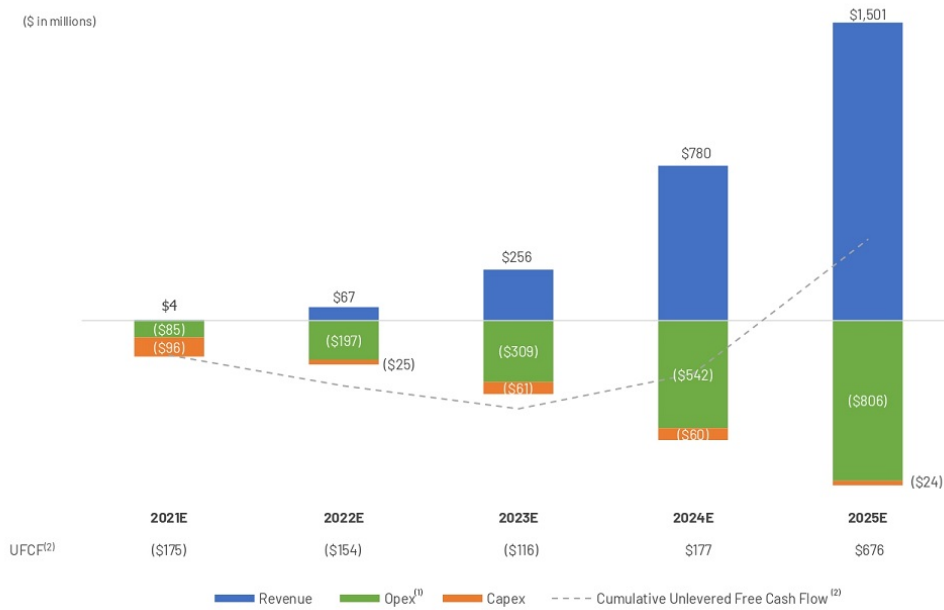
**KELYN BRANNON**  
CHIEF FINANCIAL OFFICER

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## ASTRA FUNDING PROFILE

(\$ in millions)



- Total Funding Requirement: ~\$450M
- Net Proceeds from Transactions: ~\$488M<sup>(3)</sup>
- Significant investments will be made in major facilities, machinery, automation, and headcount to be complete in 2024
- Limited long-term CapEx requirements after 2025
- Cash Flow Thereafter: Substantial

Source: Management estimates.

(1) Defined as Revenue minus Adj. EBITDA.

(2) Defined as Adj. EBITDA less Capex less Changes in Net Working Capital.

(3) Pro Forma for \$30M primary Series C offering, initial business combination (assuming no Hologic shareholder redemptions), and \$200M PIPE.

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## FINANCIAL SUMMARY WITH KEY DRIVERS

(\$ in Millions)	2021E	2022E	2023E	2024E	2025E
# of Launches	3	15	55	165	300
Total Launch Revenue	\$4	\$47	\$206	\$619	\$1,125
# of Satellites Launched	--	10	60	250	660
Modular Spacecraft Platform Revenue	--	\$6	\$31	\$123	\$314
# of Spaceports Deployed	--	1	1	2	3
Spaceport Services Revenue	--	\$15	\$18	\$38	\$62
Total Revenue	\$4	\$67	\$256	\$780	\$1,501
% Revenue Growth		1,697%	280%	205%	92%
Gross Profit <sup>(1)</sup>	(\$6)	\$14	\$119	\$477	\$1,045
% Gross Margin <sup>(1)</sup>	NM	20%	46%	61%	70%
Adj. EBITDA <sup>(1)</sup>	(\$81)	(\$130)	(\$53)	\$238	\$694
% Adj. EBITDA Margin	NM	NM	NM	31%	46%
(-)Δ Working Capital	\$3	\$1	(\$1)	(\$2)	\$5
(-)CapEx	(\$96)	(\$25)	(\$61)	(\$60)	(\$24)
Unlevered Free Cash Flow	(\$175)	(\$154)	(\$116)	\$177	\$576

- Launch Revenue grows as launch cadence ramps to daily in 2025
- Revenue ramps as Astra's Modular Spacecraft Platform grows
- Gross margins increase as factory utilization ramps and efficiencies from mass production are realized
- Further increases in launch cadence and space platform offerings expected to drive material revenue growth after 2025

Source: Management estimates.  
(1) Before stock-based compensation.

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# ASTRA IS AN ATTRACTIVE OPPORTUNITY FOR PUBLIC INVESTORS TO PARTICIPATE IN THE COMMERCIAL SPACE ECONOMY



Creates the first and only Public Hyperscale Space Platform



Only potential provider of daily, low-cost and global access to Space



Uniquely positioned offering with unmatched value proposition to mega-constellations



Proven technology that is far along the development curve; the third privately funded U.S. company to achieve orbital launch capabilities



Strong commercial traction with over \$1.2B in pipeline opportunities



ESG friendly given climate-focused end-use applications and environment-conscious manufacturing choices



World-class management team with unparalleled industry experience at NASA and SpaceX

As the only publicly-traded satellite launch company, Astra represents a pure-play opportunity to partake in the momentum of tomorrow's Space Economy

**\$1.0+ TRILLION**

Space Economy in 2040<sup>(1)</sup>

**> 38K**

Satellites to be launched 2020-2029<sup>(2)</sup>

**\$40.7 BILLION**

Government investment in Space<sup>(3)</sup>

**\$1.2+ BILLION**

Pipeline

**\$46 BILLION**

Valuation for SpaceX today, representing ~48% CAGR since reaching Orbit in 2008<sup>(4)</sup>

Source: Wall Street Research.

(1) Per Morgan Stanley Research.

(2) Factors in Euroconsult and Management estimates for satellite launches.

(3) Based on projected FY21 DoD and NASA budgets from Jefferies, What's Up In Space: Now Launchers, Same Incumbents (Aug 2020).

(4) Based on \$410M 2008 valuation per PitchBook.

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# Q & A

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