Dear shareholders:

Over the past 25 years at Amazon, I've had the opportunity to write many narratives, emails, letters, and keynotes for employees, customers, and partners. But, this is the first time I've had the honor of writing our annual shareholder letter as CEO of Amazon. Jeff set the bar high on these letters, and I will try to keep them worth reading.

When the pandemic started in early 2020, few people thought it would be as expansive or long-running as it's been. Whatever role Amazon played in the world up to that point became further magnified as most physical venues shut down for long periods of time and people spent their days at home. This meant that hundreds of millions of people relied on Amazon for PPE, food, clothing, and various other items that helped them navigate this unprecedented time. Businesses and governments also had to shift, practically overnight, from working with colleagues and technology on-premises to working remotely. AWS played a major role in enabling this business continuity. Whether companies saw extraordinary demand spikes, or demand diminish quickly with reduced external consumption, the cloud's elasticity to scale capacity up and down quickly, as well as AWS's unusually broad functionality helped millions of companies adjust to these difficult circumstances.

Our AWS and Consumer businesses have had different demand trajectories during the pandemic. In the first year of the pandemic, AWS revenue continued to grow at a rapid clip—30% year over year ("YoY") in 2020 on a $35 billion annual revenue base in 2019—but slower than the 37% YoY growth in 2019. This was due in part to the uncertainty and slowing demand that so many businesses encountered, but also in part to our helping companies optimize their AWS footprint to save money. Concurrently, companies were stepping back and determining what they wanted to change coming out of the pandemic. Many concluded that they didn't want to continue managing their technology infrastructure themselves, and made the decision to accelerate their move to the cloud. This shift by so many companies (along with the economy recovering) helped re-accelerate AWS's revenue growth to 37% YoY in 2021.

Conversely, our Consumer revenue grew dramatically in 2020. In 2020, Amazon's North America and International Consumer revenue grew 39% YoY on the very large 2019 revenue base of $245 billion; and, this extraordinary growth extended into 2021 with revenue increasing 43% YoY in Q1 2021. These are astounding numbers. We realized the equivalent of three years' forecasted growth in about 15 months.

As the world opened up again starting in late Q2 2021, and more people ventured out to eat, shop, and travel, consumer spending returned to being spread over many more entities. We weren't sure what to expect in 2021, but the fact that we continued to grow at double digit rates (with a two-year Consumer compounded annual growth rate of 29%) was encouraging as customers appreciated the role Amazon played for them during the pandemic, and started using Amazon for a larger amount of their household purchases.

This growth also created short-term logistics and cost challenges. We spent Amazon's first 25 years building a very large fulfillment network, and then had to double it in the last 24 months to meet customer demand. As we were bringing this new capacity online, the labor market tightened considerably, making it challenging both to receive all of the inventory our vendors and sellers wanted to send us and to place that inventory as close to customers as we typically do. Combined with ocean, air, and trucking capacity becoming scarcer and more expensive, this created extra transportation and productivity costs. Supply chains were disrupted in ways none of us had seen previously. We hoped that the major impact from COVID-19 would recede as 2021 drew to a close, but then omicron reared its head in December, which had worldwide ramifications, including impacting people's ability to work. And then in late February, with Russia's invasion of Ukraine, fuel costs and inflation became bigger issues with which to contend.

So, 2021 was a crazy and unpredictable year, continuing a trend from 2020. But, I'm proud of the incredible commitment and effort from our employees all over the world. I'm not sure any of us would have gotten

through the pandemic the same way without the dedication and extraordinary efforts shown by our teams during this period, and I'm eternally grateful.

It's not normal for a company of any size to be able to respond to something as discontinuous and unpredictable as this pandemic turned out to be. What is it about Amazon that made it possible for us to do so? It's because we weren't starting from a standing start. We had been iterating on and remaking our fulfillment capabilities for nearly two decades. In every business we pursue, we're constantly experimenting and inventing. We're divinely discontented with customer experiences, whether they're our own or not. We believe these customer experiences can always be better, and we strive to make customers' lives better and easier every day. The beauty of this mission is that you never run out of runway; customers always want better, and our job is both to listen to their feedback and to imagine what else is possible and invent on their behalf.

People often assume that the game-changing inventions they admire just pop out of somebody's head, a light bulb goes off, a team executes to that idea, and presto—you have a new invention that's a breakaway success for a long time. That's rarely, if ever, how it happens. One of the lesser known facts about innovative companies like Amazon is that they are relentlessly debating, re-defining, tinkering, iterating, and experimenting to take the seed of a big idea and make it into something that resonates with customers and meaningfully changes their customer experience over a long period of time.

Let me give you some Amazon examples.

Our Fulfillment Network: Going back to the pandemic, there's no way we could have started working on our fulfillment network in March 2020 and satisfied anything close to what our customers needed. We'd been innovating in our fulfillment network for 20 years, constantly trying to shorten the time to get items to customers. In the early 2000s, it took us an average of 18 hours to get an item through our fulfillment centers and on the right truck for shipment. Now, it takes us two. To deliver as reliably and cost-effectively as we desire, and to serve Amazon Prime members expecting shipments in a couple of days, we spent years building out an expansive set of fulfillment centers, a substantial logistics and transportation capability, and reconfigured how we did virtually everything in our facilities. For perspective, in 2004, we had seven fulfillment centers in the U.S. and four in other parts of the world, and we hadn't yet added delivery stations, which connect our fulfillment and sortation centers to the last-mile delivery vans you see driving around your neighborhood. Fast forward to the end of 2021, we had 253 fulfillment centers, 110 sortation centers, and 467 delivery stations in North America, with an additional 157 fulfillment centers, 58 sortation centers, and 588 delivery stations across the globe. Our delivery network grew to more than 260,000 drivers worldwide, and our Amazon Air cargo fleet has more than 100 aircraft. This has represented a capital investment of over $100 billion and countless iterations and small process improvements by over a million Amazonians in the last decade and a half.

Ironically, just before COVID started, we'd made the decision to invest billions of incremental dollars over several years to deliver an increasing number of Prime shipments in one day. This initiative was slowed by the challenges of the pandemic, but we've since resumed our focus here. Delivering a substantial amount of shipments in one day is hard (especially across the millions of items that we offer) and initially expensive as we build out the infrastructure to scale this efficiently. But, we believe our over 200 million Prime customers, who will tell you very clearly that faster is almost always better, will love this. So, this capability to ship millions of items within a couple days (and increasingly one day) was not from one aha moment and not developed in a year or two. It's been hard-earned by putting ourselves in the shoes of our customers, knowing what they wanted, organizing Amazonians to work together to invent better solutions, and investing a large amount of financial and people resources over 20 years (often well in advance of when it would pay out). This type of iterative innovation is never finished and has periodic peaks in investment years, but leads to better long-term customer experiences, customer loyalty, and returns for our shareholders.

AWS: As we were defining AWS and working backwards on the services we thought customers wanted, we kept triggering one of the biggest tensions in product development—where to draw the line on functionality in V1. One early meeting in particular—for our core compute service called Elastic Compute Cloud ("EC2")—was scheduled for an hour, and took three, as we animatedly debated whether we could launch a compute service without an accompanying persistent block storage companion (a form of network attached storage).

Everybody agreed that having a persistent block store was important to a complete compute service; however, to have one ready would take an extra year. The question became could we offer customers a useful service where they could get meaningful value before we had all the features we thought they wanted? We decided that the initial launch of EC2 could be feature-poor if we also organized ourselves to listen to customers and iterate quickly. This approach works well if you indeed iterate quickly; but, is disastrous if you can't. We launched EC2 in 2006 with one instance size, in one data center, in one region of the world, with Linux operating system instances only (no Windows), without monitoring, load balancing, auto-scaling, or yes, persistent storage. EC2 was an initial success, but nowhere near the multi-billion-dollar service it's become until we added the missing capabilities listed above, and then some.

In the early days of AWS, people sometimes asked us why compute wouldn't just be an undifferentiated commodity. But, there's a lot more to compute than just a server. Customers want various flavors of compute (e.g. server configurations optimized for storage, memory, high-performance compute, graphics rendering, machine learning), multiple form factors (e.g. fixed instance sizes, portable containers, serverless functions), various sizes and optimizations of persistent storage, and a slew of networking capabilities. Then, there's the CPU chip that runs in your compute. For many years, the industry had used Intel or AMD x86 processors. We have important partnerships with these companies, but realized that if we wanted to push price and performance further (as customers requested), we'd have to develop our own chips, too. Our first generalized chip was Graviton, which we announced in 2018. This helped a subset of customer workloads run more cost-effectively than prior options. But, it wasn't until 2020, after taking the learnings from Graviton and innovating on a new chip, that we had something remarkable with our Graviton2 chip, which provides up to 40% better price-performance than the comparable latest generation x86 processors. Think about how much of an impact 40% improvement on compute is. Compute is used for every bit of technology. That's a huge deal for customers. And, while Graviton2 has been a significant success thus far (48 of the top 50 AWS EC2 customers have already adopted it), the AWS Chips team was already learning from what customers said could be better, and announced Graviton3 this past December (offering a 25% improvement on top of Graviton2's relative gains). The list of what we've invented and delivered for customers in EC2 (and AWS in general) is pretty mind-boggling, and this iterative approach to innovation has not only given customers much more functionality in AWS than they can find anywhere else (which is a significant differentiator), but also allowed us to arrive at the much more game-changing offering that AWS is today.

Devices: Our first foray into devices was the Kindle, released in 2007. It was not the most sophisticated industrial design (it was creamy white in color and the corners were uncomfortable for some people to hold), but revolutionary because it offered customers the ability to download any of over 90,000 books (now millions) in 60 seconds—and we got better and faster at building attractive designs. Shortly thereafter, we launched a tablet, and then a phone (with the distinguishing feature of having front-facing cameras and a gyroscope to give customers a dynamic perspective along with varied 3D experiences). The phone was unsuccessful, and though we determined we were probably too late to this party and directed these resources elsewhere, we hired some fantastic long-term builders and learned valuable lessons from this failure that have served us well in devices like Echo and FireTV.

When I think of the first Echo device—and what Alexa could do for customers at that point—it was noteworthy, yet so much less capable than what's possible today. Today, there are hundreds of millions of Alexa-enabled devices out there (in homes, offices, cars, hotel rooms, Amazon Echo devices, and third-party manufacturer devices); you can listen to music—or watch videos now; you can control your lights and home automation; you can create routines like "Start My Day" where Alexa tells you the weather, your estimated commute time based on current traffic, then plays the news; you can easily order retail items on Amazon; you can get general or customized news, updates on sporting events and related stats—and we're still quite early with respect to what Alexa and Alexa-related devices will do for customers. Our goal is for Alexa to be the world's most helpful and resourceful personal assistant, who makes people's lives meaningfully easier and better. We have a lot more inventing and iterating to go, but customers continue to indicate that we're on the right path. We have several other devices at varying stages of evolution (e.g. Ring and Blink provide the leading digital home security solutions, Astro is a brand new home robot that we just launched in late 2021), but it's safe to say that every one of our devices, whether you're talking about Kindle, FireTV, Alexa/Echo, Ring, Blink, or Astro is an invention-in-process with a lot more coming that will keep improving customers' lives.

Prime Video: We started in 2006 with an offering called Amazon Unbox where customers could download about a thousand movies from major studios. This made sense as bandwidth was slower those days (it would take an hour to download a video). But, as bandwidth got much faster to people's homes and mobile devices, along with the advent of connected TVs, streaming was going to be a much better customer solution, and we focused our efforts on streaming. In 2011, we started offering over 5,000 streaming movies and shows as part of customers' Amazon Prime subscriptions. Initially, all of our content was produced by other studios and entertainment companies. These deals were expensive, country-specific, and only available to us for a limited period; so, to expand our options, we started creating our own original shows. Our early efforts included short-lived shows like *Alpha House* and *Betas*, before we had our first award-winning series in *Transparent*, and eventually created multi-year franchises in *The Marvelous Mrs. Maisel*, *The Boys*, *Bosch*, and *Jack Ryan*. Along the way, we've learned a lot about producing compelling entertainment with memorable moments and using machine learning and other inventive technology to provide a superior-quality streaming experience (with useful, relevant data about actors, TV shows, movies, music, or sports stats a click away in our unique X-Ray feature). You might have seen some of this in action in our recent new hit series, *Reacher*, and you'll hopefully see it in our upcoming Lord of the Rings series launch (coming Labor Day 2022). We also expect that you'll see this iterative invention when we launch *Thursday Night Football*, the NFL's first weekly, prime time, streaming-only broadcast, airing exclusively on Prime Video starting in September 2022. Our agreement with the NFL is for 11 years, and we will work relentlessly over the next several years to reinvent the NFL viewing experience for football fans.

This track record of frequent invention is not only why more sports entities are choosing to work with Prime Video, but also why so many large entertainment companies have become Prime Video Channels partners. Channels is a program that enables entertainment companies to leverage Prime Video's unique technology and viewing experience, as well as its very large member base to offer monthly subscriptions to their content. Companies like Warner Bros. Discovery, Paramount, Starz, Corus Entertainment, and Globo have found that they're driving substantial incremental membership and better customer experience through Channels. While there is so much progress in Prime Video from where we started, we have more invention in front of us in the next 15 years than the last 15—and our team is passionately committed to providing customers with the most expansive collection of compelling content anywhere in the world.

This same sort of iterative invention can be applied to efforts supporting people and communities. Last summer, we added two new Leadership Principles: **Strive to be Earth's Best Employer** and **Success and Scale Bring Broad Responsibility**. These concepts were always implicit at Amazon, but explicit Leadership Principles help us ask ourselves—and empower more Amazonians at all levels to ask—whether we're living up to these principles.

For example, more than a million Amazonians work in our fulfillment network. In 2018, we championed the $15 minimum wage (which is more than double the federal minimum wage), but haven't stopped there. We continued to increase compensation such that our average starting hourly salary is currently over $18. Along with this compensation, we offer very robust benefits, including full health insurance, a 401K plan, up to 20 weeks of parental leave, and full tuition coverage for associates who want to get a college education (whether they remain with us or not). We're not close to being done in how we improve the lives of our employees. We've researched and created a list of what we believe are the top 100 employee experience pain points and are systematically solving them. We're also passionate about further improving safety in our fulfillment network, with a focus on reducing strains, sprains, falls, and repetitive stress injuries. Our injury rates are sometimes misunderstood. We have operations jobs that fit both the "warehousing" and "courier and delivery" categories. In the last U.S. public numbers, our recordable incident rates were a little higher than the average of our warehousing peers (6.4 vs. 5.5), and a little lower than the average of our courier and delivery peers (7.6 vs. 9.1). This makes us about average relative to peers, but we don't seek to be average. We want to be best in class. When I first started in my new role, I spent significant time in our fulfillment centers and with our safety team, and hoped there might be a silver bullet that could change the numbers quickly. I didn't find that. At our scale (we hired over 300,000 people in 2021 alone, many of whom were new to this sort of work and needed training), it takes rigorous analysis, thoughtful problem-solving, and a willingness to invent to get to where you want. We've been dissecting every process path to discern how we can further improve. We have a variety of programs in flight (e.g. rotational programs that help employees avoid spending too much time doing the same repetitive motions, wearables that prompt employees when

they're moving in a dangerous way, improved shoes to provide better toe protection, training programs on body mechanics, wellness, and safety practices). But, we still have a ways to go, and we'll approach it like we do other customer experiences—we'll keep learning, inventing, and iterating until we have more transformational results. We won't be satisfied until we do.

Similarly, at our scale, we have a significant carbon footprint. It's a big part of why we created The Climate Pledge a few years ago (a pledge to be net-zero carbon by 2040, ten years ahead of the Paris Agreement). We're making significant progress on this effort (we're committed to powering our operations with 100% renewable energy by 2025—five years ahead of our original target of 2030, we have ordered over 100,000 electric vans to deliver packages, and have over 300 companies who've joined us in The Climate Pledge). But, we have a different challenge than most companies given the diversity and intensity of our operations (including shipping billions of packages per year). We're committed to the challenge, but it will take relentless invention.

We also are trying to increase the amount of affordable housing in the communities in which we have a large presence. Our more than $2 billion Housing Equity Fund that we started a year ago has already allocated $1.2 billion toward affordable housing initiatives in the areas around Washington state's Puget Sound region, Arlington (Virginia), and Nashville (Tennessee).

A final quick example is Kuiper, our low Earth orbit satellite network that we're spending over $10 billion to build in the next several years. Kuiper will serve customers with minimal to no fixed broadband connectivity, changing access to information and resources for many communities (analysts estimate approximately 300-400 million customers globally are in this category). We're optimistic that there is a pretty good business model for us too, but we'll see—and it's a real game changer for underserved families and businesses that will unfold over many years as we keep evolving its capabilities.

This type of iterative innovation is pervasive across every team at Amazon. I could have given comparable examples in Advertising, Grocery, Gaming, Amazon Music, Amazon Care (our telemedicine offering), or Pharmacy, to name a few. All of these stories are still being written as we rapidly experiment, learn, and continue to try to make our customer experience better every day.

If this approach sounds appealing, a natural question is what's required to get good at it? It's easier said than done, but here are some components that have helped us:

1/ **Hire the Right Builders**: We disproportionately index in hiring builders. We think of builders as people who like to invent, who look at customer experiences, dissect what doesn't work well about them, and seek to reinvent them. We want people who keep asking why can't it be done? We want people who like to experiment and tinker, and who realize launch is the starting line, not the finish line.

2/ **Organize Builders into Teams That Are as Separable and Autonomous as Possible**: It's hard for teams to be deep in what customers care about in multiple areas. It's also hard to spend enough time on the new initiatives when there's resource contention with the more mature businesses; the surer bets usually win out. Single-threaded teams will know their customers' needs better, spend all their waking work hours inventing for them, and develop context and tempo to keep iterating quickly.

3/ **Give Teams the Right Tools and Permission to Move Fast**: Speed is not pre-ordained. It's a leadership choice. It has trade-offs, but you can't wake up one day and start moving fast. It requires having the right tools to experiment and build fast (a major part of why we started AWS), allowing teams to make two-way door decisions themselves, and setting an expectation that speed matters. And, it does. Speed is disproportionally important to every business at every stage of its evolution. Those that move slower than their competitive peers fall away over time.

4/ **You Need Blind Faith, But No False Hope**: This is a lyric from one of my favorite Foo Fighters songs ("Congregation"). When you invent, you come up with new ideas that people will reject because they haven't been done before (that's where the blind faith comes in), but it's also important to step back and make sure you have a viable plan that'll resonate with customers (avoid false hope). We're lucky that we have builders who challenge each other, feedback loops that give us access to customer feedback, and a product

development process of working backwards from the customer where having to write a Press Release (to flesh out the customer benefits) and a Frequently Asked Questions document (to detail how we'd build it) helps us have blind faith without false hope (at least usually).

5/ **Define a Minimum Loveable Product (MLP), and Be Willing to Iterate Fast**: Figuring out where to draw the line for launch is one of the most difficult decisions teams must make. Often, teams wait too long, and insist on too many bells and whistles, before launching. And, they miss the first mover advantage or opportunity to build mindshare in fast-moving market segments before well-executing peers get too far ahead. The launch product must be good enough that you believe it'll be loved from the get-go (why we call it a "Minimum Loveable Product" vs. a "Minimum Viable Product"), but in newer market segments, teams are often better off getting this MLP to customers and iterating quickly thereafter.

6/ **Adopt a Long-term Orientation**: We're sometimes criticized at Amazon for not shutting much down. It's true that we have a longer tolerance for our investments than most companies. But, we know that transformational invention takes multiple years, and if you're making big bets that you believe could substantially change customer experience (and your company), you have to be in it for the long-haul or you'll give up too quickly.

7/ **Brace Yourself for Failure**: If you invent a lot, you will fail more often than you wish. Nobody likes this part, but it comes with the territory. When it's clear that we've launched something that won't work, we make sure we've learned from what didn't go well, and secure great landing places for team members who delivered well—or your best people will hesitate to work on new initiatives.

Albert Einstein is sometimes credited with describing compound interest as the eighth wonder of the world ("He who understands it, earns it. He who doesn't, pays it"). We think of iterative innovation in much the same way. Iterative innovation creates magic for customers. Constantly inventing and improving products for customers has a compounding effect on the customer experience, and in turn on a business's prospects.

Time is your friend when you are compounding gains. Amazon is a big company with some large businesses, but it's still early days for us. We will continue to be insurgent—inventing in businesses that we're in, in new businesses that we've yet to launch, and in new ideas that we haven't even imagined yet. It remains Day 1.

Sincerely,

Andy Jassy
President and Chief Executive Officer
Amazon.com, Inc.

P.S. As we have always done, our original 1997 Shareholder Letter follows. What's written there is as true today as it was in 1997.