ADAM SELIPSKY: We have to work really hard to act as insurgents, not take anything for granted that we've achieved. The cloud is going to push out everywhere.

We're maybe 10 yards into the 100 yard race. And I'm talking about enterprises, and start-ups, and nonprofits, and government agencies. Our success and our scale do bring broad responsibility.

Amazon has been very public about a pledge, a goal to be net zero carbon across the entire company by 2040. And at the end of last year, had actually gotten to over 85% of our energy consumption, being renewable.

We are a big company, but we don't want to act like a big company, and we don't want to have big company-itis. It's really important that we keep being really restless, and dissatisfied, and understanding that we're just scratching the surface of what customers need us to do.

BOB SAFIAN: That's Adam Selipsky, CEO of Amazon Web Services, the fastest growing and most profitable part of Amazon.

When Andy Jassey became CEO of Amazon last year, he tapped Adam, an old colleague who'd left five years earlier, to come back and take the helm at AWS.

I'm Bob Safian, former editor of Fast Company, founder of the Flux Group, and host of Masters of Scale: Rapid Response. I wanted to talk to Adam because AWS isn't just a crown jewel for Amazon. It's become central to the entrepreneurial transformation of business, as cloud computing reaches more deeply into more and more industries.

What's more, Adam is leading Amazon's climate change efforts, pushing to make not just the cloud greener but retail and commerce globally.

Adam shares lessons about changing jobs, limiting bureaucracy, and the responsibility that scaled organizations should take on.

He also shares stories about Bill Nye the Science Guy, what the cloud is doing for the NFL, and how AWS helped the Ukrainian government stave off cyberattacks from Russia.

[AD BREAK]
SAFIAN: I'm Bob Safian, and I'm here with Adam Selipsky, the CEO of Amazon Web Services. Adam, thanks for joining us.

SELIPSKY: It's delightful to be with you. Thank you for having me.

SAFIAN: So you came on as CEO at AWS a little over a year ago, returning to Amazon after several years away. You've been CEO at Tableau, which you successfully sold to Salesforce and then stayed running the business. What prompted you to come back to Amazon?

SELIPSKY: I would say the last of several really unexpected things in a five-year period. If you back up, I came to Amazon to help start up AWS in 2005. It was about one year pre-revenue. 11 years later, it was about a $13 billion a year run-rate business in 2016. And I got this phone call, which I wasn't expecting nor seeking. And it was about being the CEO of Tableau, and I, after a lot of thought, decided to go for it. We turned a lot of things around.

And the public markets recognized that very nicely. And all of a sudden, I got a phone call from Salesforce and, "Would you ever...?" And we certainly weren't looking to sell Tableau. Turned out to be the third largest software sale in history at the time. So that was my second big surprise. And when I got the same Apple News alert that everybody else got, which was that the deck chairs were shuffling at Amazon and that Andy was becoming CEO.

Conversations ensued, as they say. Three big changes in five years that were completely unanticipated and really showed me that you can't plan everything, you shouldn't try and plan everything. Sometimes you have to take life as it presents itself to you. I came back because for me personally, it's just such a huge opportunity to take what is still, I think, a young business, an early business, in AWS, despite its size. And I just went for it.

SAFIAN: It sounds like as you tell this story, remember to pick up the phone when it rings and keep track of the news. That sounds like that's driven so much.

SELIPSKY: There's a large amount of serendipity to all of that. There is a lesson there about being open to opportunity. At the same time, being passionate and heads down and focused on what you're doing is also really important. You have to be in the moment, and you have to focus on what you're focusing on.

SAFIAN: So, you have your head down, you're focused on Tableau and Salesforce, and then you come back to Amazon. How is AWS different from when you left? Has the culture changed? What was different about it?
SELIPSKY: The most obvious difference is size. Four and a half years later, it had precisely quadrupled to a $52 billion a year run rate, the quarter I came back. And there's a lot more surface area to our services and our technology, the number of customers. And it just means that there are a lot more moving pieces to be watching.

We are a big company, but we don't want to act like a big company, and we don't want to have big company-itis or slip into unnecessary bureaucracy.

SAFIAN: How do you do that? How do you make sure that you don't have big company-itis? Especially because it is much bigger, and at the same time, at the outset, you say you still think it's early; it's still young. So as big as it's gotten, you're expecting it to get that much bigger going forward. How do you protect the kind of environment you want it to be?

SELIPSKY: Keep focused on what the potential is for customers and then on what the potential for our business, if we focus on customers. Sometimes as companies grow, they start looking inwards and just start focusing on process for its own sake. One thing Amazon has always been really good at, I would argue, unique, and I don't use that word frequently, is truly being customer obsessed.

And I think if you really keep that at the center of your decision making, then you don't have tolerance for bureaucracy.

SAFIAN: Is there a decision that you've made in the last year that you look back on and say, "That was the most important decision I made?"

SELIPSKY: I wish I could give a simple yes to that. You could look at a lot of services that we've chosen to launch, investments that we've made. You're building a wall, and it takes time. You have to have a very long-term perspective, and we've built some great bricks in the wall, but we still have many left to build.

SAFIAN: Are there things happening on the cloud today that surprise you? Things you didn't see coming or new creative impacts that weren't there when you left four and a half years earlier?

SELIPSKY: What continues to surprise me is just the sheer innovation and the breadth of that innovation in our customer base. Today, you just see customers using the cloud to transform, not only their organizations, but entire industries.

If you look at NASDAQ, for example, one of the workloads that folks said would never move to the cloud was the actual matching engine of a financial exchange, the thing which actually matches a buy and a sell request. By the end of this year, NASDAQ will have moved the first of their exchanges to AWS, with the rest to follow over the next few years. The NFL, a very different example. We're working with them not only on really cool, next gen stats, around catch probability and speed of the ball in the air and that
type of thing, but also on really important things like player health and safety. So for example, we’re working with the NFL to build a digital athlete, which can understand and anticipate the effect of different pieces of the player’s equipment on their health and safety. Dish is building the first cloud native, truly virtualized 5G network, all in the cloud. It’s just incredible in every industry.

SAFIAN: Along with shepherding AWS, you were tapped to lead the sustainability and climate efforts across all of Amazon. And I’ve heard that you feel like climate change is the most important issue for this generation. Where does that interest come from, for you?

SELIPSKY: I do believe that climate change is the issue of our generation. We have a window, I think, where we can still act to impact climate change. And that window won’t be here forever.

I did hear, believe it or not, Bill Nye The Science Guy, talk. It was actually at the Tableau conference a few years ago. And, one thing that he said, which really resonated with me was, "If you don't like education policy, you can change it every four years or every eight years, worst case. But any carbon you put in the atmosphere stays there for many, many decades, and you cannot change the impact quickly. So you have to be very purposeful about when and how you act." That really just got me thinking about this being something which is so critical, across so many different dimensions. And so I do have a lot of personal passion for it.

SAFIAN: Was that one of the reasons you came back to AWS, because of climate issues, to make the cloud greener? AWS uses a lot of machines and energy.

SELIPSKY: We certainly have a lot of servers. But, I'm actually really excited about the progress that we're making in having all of that be more sustainable. So if you look at renewable energy across all of Amazon, of which AWS though is a very big part, we've made incredible progress. And at the end of last year, I'd actually gotten to over 85% of our energy consumption, being renewable, as a company. And we've set a goal to be 100% renewable energy by 2025. So it's really exciting. We have good line of sight. We think we're on track. Amazon has been very public about creating in 2019 a pledge, a goal to be net zero carbon across the entire company by 2040, which is 10 years ahead of the Paris Accords. We have well over 300 other organizations who have now joined us in that climate pledge.

Part of our goal is to inspire others, and I hope, despite how much Amazon's going to innovate, that other companies hopefully will out innovate us and will have even better and smarter ideas. Whether it's in fuel, whether it's in batteries, whether it's in concrete, whether it's in packaging, many organizations, public and private, all need to come together to make progress.
SAFIAN: I mean, this is a super tricky area. The goals and the progress are great, and at the same time, it can be more complicated than it looks. There was a recent article on the Verge that called out that your own sustainability report says Amazon's carbon emissions grew 18% from '20 to '21 and 40% from '19. Is that because as the percentage of net zero activity improves, if the volume of your business is growing even faster, you're kind of chasing your own growth? Can you just put that in perspective for us?

SELIPSKY: Yeah, I think that's exactly it, Bob. I mean, Amazon is growing, so we’re delivering more packages. We are serving more AWS customers, et cetera, et cetera. As we as a business grow, everything we do naturally grows. So not to get too obtuse, but there's a really important concept, which is carbon intensity, which is the amount of carbon you use per unit of X. We'll say per unit of revenue, but you could pick other measures as well. Our carbon intensity actually improved last year, which is a really important metric.

SAFIAN: So the amount of carbon per dollar or something like that?

SELIPSKY: Per dollar of revenue, but at the end of the day, they're important concepts like per unit of volume within the business. But dollars will just serve as a pretty convenient proxy for that. So that basically allows you to normalize for business growth by saying, for a given activity, you're less carbon intense. You're using less carbon to deliver one package to a consumer. You're using less carbon to provide one EC2 instance hour inside of AWS, that type of thing. So I think that is the first really important step is to reduce our carbon intensity because that means we are actually making progress.

The Amazon business, if you look at most years, has grown pretty significantly. So even as we reduce carbon intensity at least in the short term, the absolute amount of carbon has gone up. But nonetheless, at the end of the day, we want to reduce our absolute amount of carbon very, very significantly.

SAFIAN: You mentioned the things you're doing to try to inspire others. I know you also have a carbon footprint calculator for AWS customers, right? You're trying to encourage your partners to keep track of what their own carbon footprint is.

SELIPSKY: We have a lot of AWS customers who want to be able to track the carbon that they consume via AWS. So what does their AWS footprint mean for their carbon footprint? A lot of them have regulatory requirements to do this and others just have internal compliance or desires to do so.

So we've released this tool, which allows them to at a pretty granular level... I mean, if you're using our facilities in Oregon versus Virginia, versus Sydney, versus Tokyo, versus Indonesia, et cetera, et cetera, your carbon footprint is going to be different just based on what those local power grids look like, where the energy comes from.
SAFIAN: You've also announced that you're moving into chip design for servers, in part as a way to reduce energy demands, if I understand that correctly. Is that connected at all to the new U.S. chip manufacturing push, or is that completely different? You guys aren't chip makers, right?

SELIPSKY: We're designing chips. A lot of resources are allocated to that, but you're correct. We don't actually manufacture or fabricate the chips.

It turns out that there are so many things that our customers want to do. Do not make economic sense unless we keep pushing hard to improve price performance on basic computing.

You take these huge data sets and you can do really interesting machine learning on them and get to really interesting insights that can drive businesses, but that is incredibly compute intensive.

So really for almost a decade, we've been investing in this program around custom silicone; we're really under our third generation of custom chips. Our competitors really don't even have workable prototypes for the first generation, and it's proven to be a huge advantage for our customers and a big differentiator for AWS.

You mentioned the energy implications of it. So if you look at this newest generation of chips, the Graviton 3 chips, they use 60% less energy than comparable non AWS design chips. So that's an incredible savings for our customers in energy just by coming to AWS. Just by using our custom silicone, they get to help improve the energy footprint of the planet.

SAFIAN: What do you think people most misunderstand about the cloud right now?

SELIPSKY: I think a lot of people assume that the bulk of the migration of the cloud has actually happened, whereas really it's still incredibly early in that journey. 10% of workloads may have migrated to the cloud. We think most or all workloads will migrate to the cloud because the economics are better. The security's better. The operational performance is better. The agility and the innovation that it unlocks are far, far better.

It's really important that we keep being really restless, and dissatisfied, and understanding that we're just scratching the surface of what customers need us to do if they're truly going to be able to migrate 80, 90, a hundred percent of their IT to the cloud.
SAFIAN: Before the break we heard Amazon Web Services CEO Adam Selipsky talk about the innovation being unleashed by cloud computing and how Amazon is working to fight climate change.

Now he talks about a cultural transformation that his CEO customers are obsessed about, Amazon’s own efforts to be a better employer, and why the company’s 16 leadership principles are like a nervous system for the organization.

He also talks about Amazon’s responsibility, as a scaled business, to leverage its expertise for societal impact in key areas from education to housing equity.

Plus, why the cloud is still in its early days, and how AWS helped the Ukrainian government protect itself from cyber attacks in the war with Russia.

I want to ask you about the broader marketplace. You spend a lot of time sitting down with customers, with CEOs and boards to talk about their technology and their business strategy. Certainly we hear a lot in the media these days about economic uncertainty. What are you hearing these days?

SELIPSKY: It is interesting, obviously there's a lot of economic uncertainty, existing and potential wars and conflicts, supply chain uncertainty.

Probably the most consistent theme across the CEO and CIO level conversations that I have is a desire to look past the technology and to talk about transformation. It's probably the conversation I end up having most with CEOs. I think so many of them now are realizing that, well, at the end of the day, the technology is incredibly important. It's really not an end unto itself. It's really a means to an end and that end is transformation. Transforming how agile a company can be, transforming how innovative they can be, the amount of experimentation they can do, the way they think about risk as a company. A cultural transformation inside the company. And so, I get asked very often, what are the cultural things that I either can change or that I need to change if I'm going to make this journey.

How do I think about organization? How do I think about the skills that people need to have inside of my company? It's a really fascinating area that I think we're only going to hear about more and more over the next few years.

SAFIAN: This area of cultural transformation, recently all businesses have faced new pressures managing their teams, given the pandemic and other social developments. I know Amazon is known for its high performance work culture, sometimes criticized for some elements of it. Last year, Amazon added two new items to its list of leadership principles, one of which is: strive to be the Earth's best employer. How is Amazon, how are you evolving the workplace culture, dealing with that transformation to meet and live up to that principle?
SELIPSKY: Amazon has 14 leadership principles. This is an incredibly central part of how the company actually operates. I sometimes refer to them as the nervous system or even the operating system of the company. And there are 14 of them, except now there are 16 of them.

I was really happy that last year we added two new leadership principles, one of which is: strive to be the Earth's best employer. Now, every word in there is important, but "strive" is certainly important. I don't know at what point you actually declare victory and say you are Earth's best employer, but it's indicative of the fact that we want to do better and better, and continue to improve. We actually in that leadership principle specifically named employees as a customer group, as a customer segment, and that's very important at Amazon.

I mean, the customer obsession is so deeply ingrained here. So, just as one example, we went and identified 100, what we call, paper cuts in our people processes, things like what happens to your RSU or stock compensation when you go on medical leave or leave of absence processes, or how we do IT support for employees. Things which are in some cases merely annoying, and other places, just unpleasant for employees. And we're methodically fixing those. Last time I checked, I think we'd really made substantial progress in about 28 of those 100, and we're not done.

At the same time, if you want to be Earth's best employer, it's not enough just to eliminate the paper cuts. And so, we think about some really important broad, long term initiatives, such as investing in managers. Those employees who are unhappy when they leave, if you look at why, it's disproportionately because of their manager. And we want to make sure that we're a place where that's not the case.

I personally think a lot about ideas like listening with empathy, making sure that both I, as well as other leaders, are setting a culture where we listen to people, and not only listen, but we understand where they're coming from. And this is something I've tried to do a lot better in the past five years than probably I ever did before, which is to really understand that people are coming from different places, and that their worldviews, or their assumptions, or their goals and aspirations are not necessarily the same as mine.

At the end of the day, I really want us as a company to be inspiring employees. Do something that's greater than themselves. And I think that's a really important component of what's going to be required if we really want to ever actually be Earth's best employer.

SAFIAN: The other new leadership principle, the 16th is: scale and success bring broad responsibility. Now, climate change, which we talked about, is part of that. There's a lot of talk about other kinds of responsibilities, social issues, political issues, and what business leaders should and shouldn't weigh in on. And I'm curious how much you and the leadership team at
SELIPSKY: This is an enormously complex question. We do need to make a positive difference in all of our communities. That's local, geographic communities, that's national communities, that's our global community, on things like climate change. And yet at the same time, I don't think people want to hear from us, want to hear from Amazon on every single issue on which anybody has an opinion.

I also think there are a number of areas where we feel we can disproportionately actually have an impact, that we actually have capabilities which allow us to have an impact. As an example, you think about STEM Education starting at an early age, all the way up through cloud computing skills for professionals. There is going to be a gap of millions and millions of people who will be needed to have cloud skills by organizations all over the world, and that doesn't exist today.

It's a big need for companies, for our customers of today and tomorrow, and a huge opportunity for people. AWS, one of our many skilling or education programs is called re/Start, and it's basically a boot camp, if you will, a multi-week cloud skills training. There was a young woman named Charlotte in England, who was laid off from her job at McDonald's when they were forced to close during the pandemic. And she completed re/Start multi-week free, didn't cost her a penny, full-time program with mentorship. And she is now an associate solutions engineer at a software company in the UK. It's an absolutely amazing story, and there are many more like that.

And so, in AWS, we're trying to provide cloud skills. In fact, we've actually committed to training 29 million people by the year 2025 in cloud skills. It's a big audacious goal. Amazon has a program called the Amazon Future Engineer program. We actually reached, I think, about 1.8 million students last year. And in addition to providing access to learning and skills at an early level, we actually go so far as to provide $40,000 college scholarships and paid internships at Amazon to a smaller number of students. I think about 250 per year.

We actually formed a $2 billion housing equity fund and are making very, very large grants for loans in places like Seattle, like Northern Virginia, like Nashville, Tennessee, to ensure that affordable housing exists. And then very future-looking projects, such as Project Kuiper, which is a low earth orbit satellite network. We're spending $10 billion on Kuiper. And its point is to serve households with minimal or no broadband connectivity around the world, of which there are still hundreds of millions. It's that kind of long-term view in terms of our responsibility and where we can be a good citizen on the planet that we're really trying hard to lean into.
SAFIAN: There's a question that I've asked other executives on this show, because it's been a stressful couple of years with pandemic, and war, and a lot of uncertainty. Do you get stressed? How do you handle your own stress?

SELIPSKY: Yes, I absolutely get stressed. I get stressed most when I don't feel like I have a plan; I don't feel like a plan exists. And so, the way I handle stress is to basically vocalize what I'm feeling stressed about, and nine times out of 10, I'm going to emerge with, okay, we have a lot of work to do, but we have a plan in this area, and that immediately de-stresses me. So, that's a big thing for me. And if that doesn't work, then if it's summer, getting out early at 6 a.m. and water skiing on the lake here, is a big stress reliever as well.

SAFIAN: That doesn't hurt either. But uncertainty is what slows us down. And sometimes having a plan, I don't want to say almost no matter what plan it is, but having a direction can help anchor you.

SELIPSKY: Yeah. I think particularly if you believe that you're with an organization, and a team, and a set of people who have a great track record of execution, if you have a plan you like then, I mean, nothing's perfect. But chances are pretty good that if you have a good plan, that you'll execute well, then you get a lot of stress relief from having the plan.

SAFIAN: So, what's at stake for AWS right now?

SELIPSKY: I think that the vast majority of workloads have yet to move to the cloud. And so, most of the customer benefit, ironically, is yet to come, and therefore most of the business growth for the people that can make customers happy is yet to come.

We're certainly out ahead of anybody else in the race, but the problem is we're maybe 10 yards into the 100 yard race. And so I really think what's at stake is: who's going to figure out what customers really need in order to fully be in the cloud with most or all of their workloads? And I'm talking about enterprises, and start-ups, and nonprofits, and government agencies, across every type of workload. The cloud is going to push out everywhere.

We have to work really hard to act as insurgents, and not take anything for granted that we've achieved, even though we're the clear leaders today. And that we never try to "protect" the assets that we've built. We always only think about tomorrow, and what is the fastest, best way of getting there?

SAFIAN: Yeah. A lot of people do worry about their cybersecurity these days. How central is that to the work that you're doing?
SELIPSKY: Cybersecurity has been in the news more and more for very good reasons. Now, the good news is that the vast majority of our customers actually do experience better security in the cloud. Just given the scale of our business and what we do for a living, it makes a lot of sense for us to hire world-class security experts. And it wouldn't necessarily make sense for every chemical company, every internet company, to make those kinds of hires.

We now offer a whole series of external security services, explicit security services, where we allow customers to scan code or code libraries, for example, that they're running on AWS, or to understand and remediate security vulnerabilities that exist in their AWS environment.

SAFIAN: For some businesses, there was a time where they sort of assumed that the government was protecting them from the worst cases. And it's become pretty apparent now that you're on your own on certain things. You got to protect yourself.

SELIPSKY: In fact, there are some governments who are helping to create the problems, not safeguard against it. Ukraine is a good example. We actually worked very early, and very intently, with a number of governments, including the Ukrainian government, to make sure they could understand security threats that were emerging and could protect themselves before any harm could be done. And that is one of the reasons why their online security posture was actually as good as it has been through the whole war with Russia.

That's one element of “success and scale brings broad responsibility.” We have the capabilities and so we feel like we have the responsibility to help our customers, governments, whoever we can, secure themselves.

SAFIAN: Well, this has been great, Adam. Thanks for spending so much time with us.

SELIPSKY: It was a pleasure. Thanks Bob.