AI'S HORIZON: GROWTH AND GUARDRAILS—A CONVERSATION WITH WHITE HOUSE OFFICE OF SCIENCE AND TECHNOLOGY POLICY DIRECTOR MICHAEL KRATSIOS

Announcer 00:00

Please welcome to the stage Michael Kratsios, assistant to the president of the Office of Science and Technology Policy at the White House, in conversation with David Trulio, president and CEO at the Ronald Reagan Presidential Foundation and Institute.

David Trulio 00:17

Well, welcome everybody. What a beautiful time to talk about consequential things under the lights and the palm trees. So, Michael, welcome. We have very short time, so we're going to dive right in. But to just to set the table, Michael serves as the assistant to the president for science and technology and as the 13th director of the White House Office of Science and Technology Policy, and earlier in President Donald Trump's first term, he served as the fourth chief technology officer of the United States at the White House, and he was also the acting under Secretary of Defense for Research and Engineering, which is two hugely consequential roles. And, also of note, Michael is also a former business executive. His previous position was managing director of Scale AI, and before his public service, he invested and advised technology companies at Teal Capital. So, really, a tremendous run, you bring private sector as well as public sector leadership experience. So, Michael, let's start off with the basics. What is OSTP's mission and what is your mandate?

Michael Kratsios 01:22

Great. So, OSTP is one of the four policy offices in the White House. There's an economic policy office, a domestic policy office, and national security, and science and tech. So, what's very interesting about science and technology policy is that it's spread out across so many agencies. You have the National Institutes of Health doing health work. You have a National Science Foundation doing science work. You have the Department of Defense building and investing in high end technologies for the war fighters and so many other agencies. And what we do at the White House is coordinate policy across all of those agencies. So, when the President says we must win in artificial intelligence, how do we drive that strategy to make sure that all of our agencies are doing what's necessary for each of them in their domains to make sure we achieve the President's mission.

David Trulio 02:05

So, in that context, what's your role in ushering in what President Trump called, "The Golden Age of American innovation?"

Michael Kratsios 02:14

Well, first and foremost, the President wants us to win on these key, critical, and emerging technologies. We as the White House have spoken about four in particular: artificial intelligence, quantum information science, nuclear energy and biotech. And, for each of those, we have to drive a whole of government approach that's able to essentially ensure that we lead in these domains, that Americans are adopting and utilizing these technologies, and most importantly, that we are outpacing our adversaries that are very much on a mission to try to catch up with us.

David Trulio 02:44

So, let's go a little bit deeper, and I'd like to invite your reaction to the policy direction you've received from President Trump. Back in January, Executive Order 14-177 said it is a national security imperative for the United States to achieve and maintain unquestioned and unchallenged global technological dominance. So, how do you and your team get up every morning to advance that?

Michael Kratsios 03:07

So, in order to do that—essentially, what we have to do as a country is pursue a two-part strategy, one of promote and one of protect. And what do I mean by that? So, if you want to lead the world—or the US as we do as a country want to lead in AI—we have to do both those things. We have to make sure that we are building the greatest technologies here at home and adopting them, and also protecting those technologies from nefarious adversaries that want to leverage them to their advantage. So, we can begin on the promote side. So, you can think

of promote as kind of three things you have to do and get right. The first is on research and development. The US government spends about $150 to $170 billion a year on R&D. We need to direct that and prioritize those dollars into the areas that are most important for national security mission. And our sense is—it says AI and quantum and so on. So, how we spend that money in creative and smart ways so we can keep having the next great breakthroughs, is a lot of what our office does and helps coordinate. The second big part of the promote strategy is around deregulation, or the idea of removing barriers to innovation. And President Trump has made it very clear that no matter what we're doing, we cannot allow bad regulations to stop us from actually achieving what we want to do as a country. So, if we want commercial drones flying for delivery, if we want supersonic jets flying again, if we want autonomous vehicles on the road, if we want AI-powered medical diagnostics approved by the FDA—these are all actions that we need to take as a country to accelerate, sort of the removal of these unnecessary barriers and allow this technology to succeed. And the third part of the promote agenda is all about adoption, both domestically and internationally. So, take AI, for example. We lead the world both for the totality of the stack, from the chips themselves, the NVIDIA chips that all of you probably know very well, to the models, to the actual applications, and we as a country need to be having our great industry at companies, academic institutions, and everyday Americans using this technology. But also, even more importantly, we have the rest of the world running on an AI stack that is ours, that's American. There's no reason why our adversaries should be the ones that are pushing their AI stack around the world. So, that's the promote side. So, essentially, we have to accelerate as much as possible to make sure that we're making the greatest breakthroughs here in the US. But the same time, we can't be giving away that technology to our adversary and essentially giving them tools that allows them to accelerate themselves. So, what does that mean? We have to have simple and strict export controls. So, for key technologies here in the US that if we protect them, will limit the ability or adversary to grow and expand we'd be smart about doing that and make it very clear to industry what the rules are, and to all of our national partners and allies that want to access them. And, as you know, the hottest topic today in this export control regime is around high end semiconductors. The second, is around research security. If we as a country are grading creating these great breakthroughs in labs, at universities and even at some of our great companies, we have to make sure that they're not being stolen by an adversary that's made it very clear that they want to do this repeatedly, over and over again, over the years. And the last is protecting our critical infrastructure. You know, where—there is nefarious Chinese technology throughout critical infrastructure here in the US and around the world, and we need to be much smarter as a country to make sure we root that out and protect this critical infrastructure. So, zooming back out to achieve this technological dominance the President is talking about, we have to both promote and protect equally. We can't do one without the other.

David Trulio 06:36

Can you elaborate on the role of allies and partners? Right? So, they would—to an extent, fall under export controls, but, but also—what's the administration's view on how to engage them on this key topic?

Michael Kratsios 06:48

Yeah I think, you know the—one of the biggest challenges of the previous administration was there was this intense fascination with export controls, and it wasn't just to limit the access of the PRC to these high-end chips; it also became very difficult for our partners and allies to access it themselves, and that's a huge problem. We, as Americans, have this best technology in the world. We need our friends and our allies to be using it, to be running

on the AI standards that we build here in the United States, to be running on our chips, to be using our models. And what the Chinese have made it clear is, when they're able to actually produce as many semiconductors as they want, they will certainly be sharing those Huawei semiconductors with their DeepSeek model to everyone in the world. If not, they'll even giving them away. So, we as a country to be much smarter, and that's what we're going to be doing this administration, making sure that our partners and our allies are using our great technology that everybody already wants to use. So, that's why I think we have a huge opportunity.

David Trulio 07:44

So, for those watching online, we have pretty much a full house here in the room, which speaks to the interest in your role and where you're taking things. This—whether the folks are here in-person or watching online, this is a sophisticated group. What is your call to action to them when it comes to AI and other key technologies? What do you need industry and other smart, thoughtful people to do in support of this mission?

Michael Kratsios 08:10

I think we need to accelerate adoption. You know, I spent a lot of time talking to innovators, to people in labs, to researchers, to scientists, and I'm very confident that as a country, we will continue to make unbelievable breakthroughs in all the technologies we talked about earlier, but those breakthroughs are only really valuable if we actually adopt them and allow the American people to fully realize the benefits of those technologies. So, when it comes to things like AI, we may have the best frontier model that the world has ever seen. It may be released in a couple months, and it may be the top of the leaderboard on all the leaderboards online. But if no one is using it, if the Department of Defense isn't actually adopting and using it in its stack, if all of our great financial institutions aren't attempting to leverage those models to drive better services for their customers, it really doesn't matter. So, we as a government are very, very excited about helping industry and helping everyone else in the country adopt this technology, and that ties back to a lot of the deregulation issues we were talking about. How do we make it easier for Americans and American companies to adopt?

David Trulio 09:11

In that context, what are some of your biggest challenges, but also some of your biggest opportunities that you see as you lead OSTP?

Michael Kratsios 09:19

Yeah, as exciting as the adoption question is, it's also a real challenge. You know, how do we get a lot of these technologies out into the hands in a very safe way, to American customers, to American citizens, to American companies? So, we think a lot about, at the White House, to create an ecosystem of trust where these technologies can be absorbed. I think the other thing I think a lot about is what our adversaries are trying to do is come up a little in this conversation already. There has been a plan for many years for the PRC to try to catch up

with the US on these emerging technologies by the end of the decade, and that's something that we at the US need to think about, but at the same time not be obsessed with. We know that we have the best technologies here in the US. We know that we have the best companies. We know that we have the best technology. What we need to do is actually adopt it and export it and continue to accelerate that effort—so that's what I think a lot about.

David Trulio 10:07

Your mandate covers many technological areas. Just because something gets a lot of attention doesn't mean it's important. What are one or two things that are important, but that, in your judgment, aren't getting the kind of attention they perhaps deserve? Is there a call to action to industry on biotech specifically, or something that is needed there, that isn't happening yet to the degree that's needed?

Michael Kratsios 10:23

Yeah, I think, to me, what's challenging about or what often comes up in the policy debates around biotech, is that it is so broad and so diverse, so even like sort of narrowing down and necking down to a definition that is that's really valuable, it's kind of step one. But I think for everyone in the bio domain, you know, the call to action is really see how we can best utilize these breakthroughs in AI to drive further growth and innovation in the biotechnology realm. And I know a lot of our great technology companies are excited for that pairing, and there's a lot of great American companies that already been working on it. And I think there's more to come there. I think the one area that the—that the President brought up an executive order in January, which probably doesn't get as much attention as it should, is the rapid development and transformations that we're seeing in the world of biotechnology. And I think a lot of it is built on and will be built on the years ahead, on the breakthroughs that we've seen in artificial intelligence. Very recently, you guys may have seen there was a bipartisan commission that was set up in Congress that did a bunch of work over the last few years on the national security implications of biotech leadership in the US, and their final report was put out a couple—a couple of weeks ago. And for those interesting domain I really recommend you guys take a look at that. Biotechnology is something that's going to have dramatic impacts, again, across so many different domains, from runways for the military that can grow themselves, to new diagnostics and therapeutics for—for the health care domain, it really is cross-industry, and we as a country need to be sort of prepared for the transformations that can happen in biotech, and also understand that there are a lot of people around the world that it could—they could really impact.

David Trulio 12:07

You mentioned quantum information sciences earlier, as well as nuclear technology falls under your mandate. What would you like to share with the audience about your work in those areas? Well, this is a very savvy audience. At the same time—tell us a little bit more about—the your team and your office, how you play in the interagency community? You told me offstage that you're running policy coordination committees. But tell us a little bit more about the work of OSTP.

Michael Kratsios 12:17

Yeah, I think the nuclear one is really interesting, because a lot of the technologies we've been talking about to date—take quantum or even take AI. I think there's still a lot of fundamental breakthroughs that need to happen. What's fascinating about the nuclear example is these breakthroughs, you know, had been done many decades ago. Are there new things we could be doing on small module reactors or fusion or other things? Absolutely. But what's so interesting to me about the nuclear problem is that, you know, we have already had the breakthrough. We know how to build these things, yet we as a country have made the decision to just stop building them. And that's a real problem in an area where we need more electricity. We need more power to drive this AI revolution. We should be encouraging the development of these nuclear reactors and taking advantage ofa proven technology, which we, as a country led—we have led the world on for—for many, many decades. So, as an administration, we're focused on an all the above energy approach. And part of that energy dominance agenda is leading nuclear. I'm confident Secretary Wright and Secretary Burgum and the entire energy team, along with us, is driving and making sure that that we can actually deploy these at a much faster speed than we have in in decades. So, I think hopefully we'll see a lot more on that from the White House. Yeah, it's—you know, the sausage-making of policy is probably not particularly glamorous, but the way that it works for good or bad, at least in the science and tech domain in the US is there is no Department of Technology or Department of Science. The work is kind of split out across so many different agencies, and if you're trying to drive a presidential priority, you have to make sure that all of these agencies are working together and have deconflicted on an area that the President has prioritized. So, we have policy advisors and all the domains we've talked about. We have a team that runs our AI projects. We have a quantum team, we have a nuclear team, we have a biotech team, we have an oceans team, and kind of the list goes on. And, for each of those, you essentially run a policy coordination committee, so you essentially bring together all the relevant agencies to a meeting at the White House. Usually when the White House says, come for a meeting, everyone shows up, so you can bring everybody there and you kind of set the agenda for what the President's trying to accomplish. You figure out what the right policy solution is to that, you deconflict issues across the agencies, and then you kind of roll out. So, we do that on everything. So, take, for example, drone work. If you wanted to make sure that it was easier to drive commercial—the commercial drone delivery, obviously the FAA would be involved because they're overseeing kind of the airspace at the same time, there's very serious security equities that need to be weighed. So, you have department Homeland Securities there and so on, and everyone kind of has to deconflict and make sure the policy makes sense for the agenda.

David Trulio 15:13

So, you're coming to events such as this, but how else are you engaging and what's your engagement plan for the coming months? I mean—just what does the next—what do the next few months look like for you?

Michael Kratsios 15:24

Yeah, so I think the big piece we've been working on that's going to be due to the President this July is our AI action plan, and that's something that he called for on January 23 and asked me and David Sachs and National Security Advisor to bring to him, kind of the next US national strategy on AI. We put out a request for information on that and got for like, an RFI about an archaic or like, a small tech issue, we got a pretty, pretty crazy response back, about 10,000 responses from all sorts of folks. We're ingesting a lot of that right now and having a lot of

listening sessions with industry and academia and philanthropy, about AI, and ultimately, we're going to be delivering that to the President in the middle of the summer. What's great about our office is we're very much the open door to the science and technology community around the world, to come into the White House and share with them, kind of what is most important, the issues that they think we should be working on and we love to host folks and bring together people on these important issues.

David Trulio 16:25

So many people listening may wish to be in touch with you or your office. Who do you seek outreach from? And what's the best way for folks to engage with you and your team?

Michael Kratsios 16:34

Yeah what I—you know, we talk about a lot is the unique innovation ecosystem we have in the United States, it's one part private sector, one part academia and one part government, and all those work together and in tandem to drive everything that we do in science and technology. The government funds early stage, basic pre competitive research that is often done by sort of our premier academic institutions the United States, breakthroughs and sort of fundamental science are made there. Those are handed off to industry to ultimately commercialize, and then the government comes back to figuring out how you can create and foster a regulatory environment that can allow those technologies to ultimately commercialize. So, there's this very virtuous circle of these, these sort of—this three-legged stool kind of working together. So, for us, it's everyone in that community. We want to hear from researchers that are in government and academia. We want to hear from industry that has actually commercialized these technologies, and understand what regulatory barriers or burdens are sort of holding you back from being able to bring these technologies to bear for American people, and let us know we can do better as a government to make sure that our—these great technologies actually implemented by the US government.

David Trulio 16:34

So, Michael, in the two minutes that remain, I want to point out that unlike many other direct reports to the President, you actually got a letter from the President and an assignment. So, in the tradition of FDR writing your predecessor, President Trump wrote you a letter on March 26 and he asked three questions of you, and I'll invite you to comment on the answer you're working on to question one, and that question was, how can the United States secure its position as the unrivaled world leader in critical emerging technologies, maintaining our advantage over potential adversaries? So, what's your early response to that answer, as you're formulating it?

Michael Kratsios 18:19

Yeah, it was—I think it was a very important and sort of special letter that kind of laid out, essentially the mandate for science and technology for the next four years. In that letter is essentially three questions. The first was about, kind of maintaining this technological leadership in critical and emerging technologies. And in that one, it goes back

to we talked about a little bit earlier this "promote and protect" agenda, which we laid out in a speech a couple weeks ago in Austin, where, as a country, what do we do to drive that? And we have to do both sides of the coin. We have to be able to actually promote this technology, allow it to accelerate from discovery all the way through adoption. And that is far beyond just our boards in the United States. We want to be, as Vice President Vance said in a speech in Paris in the first week of the administration, we want us to have gold standard AI that's used by the entire world. And the second piece of that letter was a question around scientific leadership, and that's something that we as a country need to go back to, what we say is sort of restoring the scientific ethic. This idea that we as a country need to be doing real science, not politicized science. We have to remove politics from it, allow our entrepreneurs and our scientists to pursue real hypotheses and not be sort of drawn left and right by the political whims of Washington and we as an office are going to be promoting that sound science agenda, or that gold standard science in the months ahead. And last piece the letter, and the big question was, how can we as Americans leverage these technologies for the benefit of the American—of the country and the American people? And that's an agenda about, again, adoption, but also the training and the reskilling and the work that needs to be done in order to allow Americans to sort of wield these technologies, whether it's students in K-12 that need to be better equipped to leverage AI in their future, or if it means people who are mid-career that are trying to transition to something that's important for the 21st century agenda, but that's what we're looking to do. And I think there's a there's a ton of the next four years to work on.

David Trulio 19:04

Well, it's a hugely consequential time, Michael, so congratulations on attaining this role, and good luck for this tremendously important work you're doing.

Michael Kratsios 20:21

Thank you so much. [Applause.]

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