IonQ at Mizuho Global Technology Conference 2026
June 9, 2026, 10:30 a.m. EST

Vijay Rakesh: Mizuho – Research Analyst
Inder Singh: IonQ, Inc. – COO & CFO

Vijay Rakesh:

Thank you for joining us again for the Mizuho Global Tech Conference. I'm Vijay Rakesh, Senior [inaudible 00:00:06] Analyst for Mizuho. And joining me is Inder Singh, CFO for IonQ. Thank you for coming to the Mizuho 2026 Global Tech Conference. We really appreciate it.

Inder Singh:

Thank you.

Vijay Rakesh:

IonQ obviously is one of the leaders in quantum computing. They are the biggest quantum computing company in the US by revenues, pure-play. IonQ has a front-row seat to one of the biggest transformations, I guess, in the computing industry, from AI to quantum.

And you guys have grown massively. I think 2024 you are doing what, $40 million in revenues? And I think this year you're probably in... The guide is $265 million or so? So, that's a 4X growth in two years. Impressive. Massive market cap of $20 billion. But again, thank you for coming to the tech conference, and please join me in welcoming CFO, Inder Singh. Thanks.

Inder Singh:

Thank you. Thanks very much.

Vijay Rakesh:

So, maybe I'll start off with the big picture. Obviously quantum computing all-in this year might be a billion in revenues for all the players combined. We think as you look out to 2030, $15 billion. Not big, but it's a 15X growth. Look out maybe 10 years, by 2035 we think it's a $300 billion market, which might be 10%, 15% of the total compute TAM of $3 trillion if you take Jensen's numbers. Which, what do I know? He's been very good and very correct, so we'll take that.

So, I think the opportunity set is massive. Maybe you can walk us through what you are seeing, how the space evolves. What are the opportunities there? And then we can maybe dig through the roadmap for you.

Inder Singh:

Sure, sure. And thank you for your comments. I think when I joined the board of this company originally back in 2021, it had zero revenue. It had a pretty impressive CEO-

Vijay Rakesh:

We won't go back that far, but...

Inder Singh:

Had a pretty impressive CEO, 30 people, and a dream. And I was at Arm, had sold Arm to Nvidia. I was CFO of Arm, and looked at this as kind of the future potentially, right? No one knew. And to your point, five years later here we are. And this company has grown not from one product, which we had until 2024, to a platform company now with 10 or more products. So, many, many TAMs, not just one TAM anymore. The TAM you mentioned, plus the TAM for security, plus the TAM for networking, plus, plus, plus.

And so, I think the opportunity set is bigger. It also does mean that you have to now, just as when I was at Cisco Systems, become the Cisco of this space, and we have that opportunity. We have to keep obviously innovating. Yes, a really good metric of success is revenues, because usually that means a customer's willing to buy your machine or whatever you're building. And in our case, we have not only a machine, but our fifth-generation machine that we are deploying today. Last week I was in Switzerland meeting with one of our largest customers and they have embraced three generations of our machines. So, I'm starting to see that stickiness, flywheel effect that I've seen at other large companies happen.

And to your point, our roadmap going forward, and we of course have to execute, but that roadmap is unmatched. And so, I think the right team, the right opportunity we have to execute for sure. We have to be able to have manufacturing capacity and all the things that you need to actually maintain that leadership. And then not only in computing, but also connecting computers together, ours and somebody else's.

And then securing in a quantum security way the networks that ultimately quantum computing will actually break, right? And that's getting much closer. And yes, I respect Jensen, and having been on the other side of the table with him when I was at SoftBank/Arm, he has a vision and he executes for sure. But I think even he's acknowledging that next to every GPU cluster there might be a CQP one day, which is a big change.

Vijay Rakesh:

Got it. You mentioned execution and obviously the roadmap. I think one of the things that you guys have noted is you have a 256 physical qubit system coming out. And just to set the table, the whole quantum computing performance is measured by the number of qubits that you bring to the table, whether it's physical qubits or finding- the-error corrected logical qubits, I guess.

And you have mentioned a 256 physical qubit system that can drive 12 logical qubits. Is that on track? What is the interest level that you're seeing from customers? How does that raise the bar versus... Or how does that raise the performance versus what you delivered on the prior generation?

Inder Singh:

Sure. So, I think like every other quantum computing company two years ago that was trying to scale the number of qubits and so on, thinking that that's the measure of success, and it's one measure, we were as well. We were using lasers to control the ions in our case, right? Lasers. So, the more ions you have, the more lasers you need. The more lasers you need, the more complicated the machine becomes, the bigger it becomes, the more expensive it becomes. And we realized that that's not a path to scaling rapidly. So, we acquired Oxford Ionics, which was already incubating the ability to take ion traps and scale them using CMOS, which is semiconductor technology. Foundries that have existed for three decades and know how to scale things by taking ion traps and scaling them. So, 256 to me is an important milestone. Really what's most important in my mind is getting to what's called fault-tolerant computing. So, that's what classical computing had to do to become useful.

It's nice to say I have so many qubits. Great. But how do I actually use it? How does the machine actually find the errors itself, correct the errors itself, keep going? And I think that's the ultimate test. So, people ask me about qubits and superconducting and all of that, that's great. We're happy to have that talk. But until you have a company that gets to fault-tolerant in quantum, it's not useful for many of the things that you need to have. And we've published now our roadmap for getting not just the qubits, but exactly how to get the fault-tolerant.

Vijay Rakesh:

Got it. And I think to that, one of the things that you have released is that "walking cat" architecture, I guess. Pretty catchy name. But just wondering what that is, if you can explain in kind of layman terms how that helps you get to a fault-tolerant architecture.

Inder Singh:

Yeah. Look, I think walking cat refers to Schrodinger's Cat, which exists in two states. So, until you open the box, for those of you who've read about Schrodinger, decades ago he mentioned that you don't know if the cat in the box is alive or dead until you open the lid and then you disturb the state. So, without opening the lid, it's actually potentially both, right? Mind-blowing thing that not even Einstein could quite gather.

So, that's what the walking cat refers to. Walking is because we can actually take that "cat-state" ion and move it across our entire grid and look for errors and heal those errors. So, that's what that is. Now, there are two companies that I know of that have published a fault-tolerant computing roadmap, us and IBM, and I haven't seen many others do it yet, but I think those are the two that I've seen.

Vijay Rakesh:

Got it. Since you brought up IBM, as you look at your roadmap, and obviously both of you are in superconducting quantum, you're on the trapped ion side, they're most in the gate side... How have you differentiated or how do you think your roadmap competitively seems to be better as you move towards fault-tolerance systems?

Inder Singh:

Yeah. And I think I just want to clarify one point. They are superconducting, right? They're using the ability to take things down to zero degrees Kelvin. Those of you who've studied about zero degrees Kelvin, it's when all matter stops moving, and so you have to be just above that, right? We're not that. We use ions that exist in nature at room temperature.

So, two different things, and I'm not saying one is better and the other is not. However, to get superconducting ions, you have to actually get the temperature down, create the matter, create the atoms from scratch. So, you introduce levels of error that don't normally exist, because creating matter involves errors and then controlling it involves errors.

So, I'm not knocking the technology. However, it's expensive, very hard to replicate. It's IBM, so they'll pull it off in the timelines that they describe, I hope. We're focused on machines that can operate near room temperature that have a fraction of the cost, require a fraction of the energy. And for a customer, and I speak with many of them, they care about total cost of ownership. Do I have to pay a big bill upfront?

Inder Singh:

... up front and then do I have to keep paying to keep running this thing? And so I think there are some advantages that Ion traps offer.

Vijay Rakesh:

Got it.

Inder Singh:

Which are less errors, they exist in nature. So you have a natural advantage with fewer errors and then you can get to logical qubits faster.

Vijay Rakesh:

Got it. Before I go down that roadmap, rabbit hole, when you look at, you mentioned cost of ownership. Maybe if you can help us bracket that, how does the cost of ownership compare for you versus some of the other quantum computing modalities? I mean super-conducting you mentioned, but maybe we can start-

Inder Singh:

Yeah. I mean look, as I talk to customers, they care about both. Energy is becoming a big thing, right? So they care about energy, they care about cost of operating the thing, cost of ownership, cost of acquisition. So the first hurdle is always like, how much do I have to spend? Does it have a M behind it or a B behind it? If I want something that's going to be useful. So the machines today, okay, they're fine, but the machines that are going to offer really quantum advantage are going to be much more sophisticated and complicated, bigger, more expensive.

In the case of super-conducting, again, it's kind of where we were two years ago. The bigger it gets, the more expensive it gets. And so there's a 20, 30 times cost advantage that we have to start.

Vijay Rakesh:

Got it.

Inder Singh:

And then now that we have semiconductor, actually the cost goes down with time as the machine gets more powerful and not the other way.

Vijay Rakesh:

Got it. So that would put you at a pretty significant advantage if you're looking at 20, 30 times better cost of ownership versus a super-conducting, I guess.

Inder Singh:

With due humility, yes.

Vijay Rakesh:

Yeah.

Inder Singh:

I think that if you talk to a customer and say, "Here's what it's going to cost you day one. And by the way, we are on our fifth generation. If you stay with us, we'll get you the sixth and the seventh."

Vijay Rakesh:

Got it.

Inder Singh:

And today's machines, ours, anybody else's, our forklift upgrades.

Vijay Rakesh:

Got it.

Inder Singh:

So you replace an old machine entirely with a new machine. When we get to 10,000 qubits, which is right after 256, it becomes modular upgrades.

Vijay Rakesh:

Got it.

Inder Singh:

So you could put the machine in and now it's some modules you have to swap out. You get stickiness, lower cost. And so I think there's a natural advantage, which is why right now we've been super-focused on grabbing market footprint. Just grab market share because then you have sticky customer relationships you can build on.

Vijay Rakesh:

Got it. I want to go to the [inaudible 00:12:43] roadmap. You are at 12 logical qubits now on a 256 physical qubit system. You have noted about 800 logical qubits next year, which is a order or more jump in terms of logical qubit. Part of it might be the four [inaudible 00:13:01] architecture that you have been talking about, but it might be, you can help us bridge how you get there, how you feel, how comfortable you feel with that, because it sets you apart from the rest of the industry. Nobody's in the hundreds of logical qubits by next year. So maybe-

Inder Singh:

Yeah, absolutely. So we've said this publicly and goes back to your very first question, which is like getting to 256 is our first chip-based system. We said on the earnings call two quarters ago that we were making good progress on it already, using a US foundry to do that. That chip prototype was achieved in a couple months versus nine months, which we had thought. So accelerated much earlier and we have now have the same team that developed the 256 chip working on the 10,000 or, still early days, mind you. So I'm not saying that's anywhere near done, but otherwise we might have been doing that a year from now instead of this year. And so building the 256 give you confidence that you can put ion traps onto CMOS and allow SkyWater, who we were using and they know CMOS like inside, out scale that for us. And 10K is using the same 256 chip replicated and scaled.

Vijay Rakesh:

Got it. So from your standpoint, it's basically scaling the 256 physical qubit chip to a 10,000 physical qubit chip to deliver the 800 logical qubits, I guess.

Inder Singh:

Yes.

Vijay Rakesh:

Is it that easy?

Inder Singh:

Well, so far what we've seen with the 256 at least, getting from 100 this year to 256 we've been able to do.

Vijay Rakesh:

Got it.

Inder Singh:

And so like the early, I'm not yet ready to report progress on 10K just yet we will on earnings calls coming up.

Vijay Rakesh:

Got it.

Inder Singh:

But we feel pretty confident that we know how to do that. And I've spoken with the CEO of SkyWater and his team who demonstrate the confidence that they've done it before and it's about using semiconductor scaling basically.

Vijay Rakesh:

Got it. And what's the response been from customers? Because it's like we were saying before, it's the 800 logical qubit is a massive step up.

Inder Singh:

Yes.

Vijay Rakesh:

It starts to, now you start to be able to resolve real world problems, real world quantum computing problems, not the quasi traditional compute, quantum compute somewhere in the middle. What's been the response from customers as you show them this roadmap that, hey, this is feasible, this is what the manufacturing partners are saying, what's the-

Inder Singh:

Yeah, I mean, it's an unmatched roadmap. No other company that I've seen has published a roadmap that even comes close. Forget the 800, then you get to 80,000 when we have two million. And so that roadmap, no one has been able to publish.

And of course, like the customer I was with last week, they bought three generations including the 256 before we've built the machine yet, by the way. And so they bought access to it in the beginning and so over time they'll convert over to the 10K and so on.

Vijay Rakesh:

Interesting.

Inder Singh:

What we're doing is making sure that as we build more powerful machines, we're also building the app store for the iPhone. So the algorithms that will run on each generation of machine. And we won't build all of them, but we'll build some selected ones. And so that's also a differentiation for this company, which is one of the world's largest, if not the world's largest team of algorithm developers.

Vijay Rakesh:

Got it. And as you scale from 256 to 10K physical qubits or 800 logical qubits, is the platform scalable, meaning is the software compatible, do the OEMs have to do a lot of heavy lifting when they go to the 800 logical qubit system? How is that transition, I guess?

Inder Singh:

Yeah, that's a great question. I mean, again, over the four or five years that I've been involved with this company, we build our own machines in our own premises. So we have a factory in College Park, Maryland and one on the West Coast in Seattle and we are now going to have four of those, one Oxford and one in Colorado. So we integrate all of the systems ourselves. And to build the 256, which is a different modality in a way, still ion trap, but semiconductor based, the chip is different. That's the size of your fingernail. The system around it is similar. We have five generations of S-curve learning on what works and doesn't work on the compiler, the optimization, the control mechanisms, the ways that you control what the machine actually and the chip actually does.

Vijay Rakesh:

Got it. One of the things that we have heard is to get to solving real quantum scale problems is you need 100 logical qubits. So the first question is, do you have the fidelity cohorts level for those 800 logical qubits?

Inder Singh:

Yeah.

Vijay Rakesh:

And second, if that statement is true that once you get to 100 logical qubit, you can now open, the floodgates open for real quantum scale problems. Are you seeing that? Are you seeing a significant expanded interest level from customers to start engaging on much bigger projects, whether it is in molecular synthesis or pharma or biotech or cybersecurity, I guess?

Inder Singh:

Yeah. Where we're seeing the proof already with last year's machine, which was only 36 qubits and this year's is 100 was early things that you can do potentially. And each generation more qubits, more power and as you know, like with quantum, it's not how many qubits you have. The power is actually two to the power of the number of qubits, two to the N. With classical computing, it's two times N, right? So this is the exponential power. So each generation, like far eclipses the one before that.

Vijay Rakesh:

Got it.

Inder Singh:

And so yes, you can do many more things with 100. I'm not going to say that gives you quantum advantage, of course not. I think quantum advantage happens when no classical machine can simulate what a quantum computer can do and I think that's closer to the 10,000 machine. So whoever gets there first I think gets to that quantum advantage first.

Vijay Rakesh:

10,000 logical or 10,000 physical?

Inder Singh:

No, total physical. Because I think 800, to your point, you start unlocking incredible things.

Vijay Rakesh:

Yeah, interesting. So you have grown 47%, I guess. Our consensus has you growing 47% for '27. I'd be low balling it, if you're seeing this massive explosion of interest. So we'll let you think-

Inder Singh:

I've been in this business for too many decades to comment on that.

Vijay Rakesh:

To answer that. Back to what you mentioned about cost of ownership. As you scale these systems to 800 to 10,000 logical qubits and 256,

Vijay Rakesh:

How much does the cost of the system go up? I know you mentioned it's a chip so that's scalable, so it doesn't really scale within, right?

Inder Singh:

Yeah.

Vijay Rakesh:

But how about this stuff around it? How does the system cost scale? Is it like a 256 going to 10,000 is what? 20X, but does the system cost go up 20X?

Inder Singh:

No, as I said, I think most of the system is largely the same, right? And as the number of qubits goes higher, it's a similar compiler.

Vijay Rakesh:

Got it.

Inder Singh:

All of the infrastructure around it is about the same. We said publicly at our annual stay last September that the bill of materials for our machine is less than 30 million. And so I think the cost actually goes down as I said. Because the one thing that changes from machine to machine is the chip and the module that goes in there, not the whole system. So 10K and on, it's the same machine, literally.

Vijay Rakesh:

So the performance per dollar actually improves significantly.

Inder Singh:

For sure. If you measure it like cost per qubit effectively.

Vijay Rakesh:

Yeah, for the power and performance.

Inder Singh:

Yeah, exactly. There's no comparison that way.

Vijay Rakesh:

Got it. And to that same TCO argument, I guess, how do you see whether you're seeing customers start to now ask for more on prem rather than using it on the cloud because you would assume now that you're starting to get to some very attractive but very significant logical qubit numbers, you start to crack some of the quantum computing problems and you probably want to have some of these platforms in house. Are you seeing that mix start to shift more to on prem versus quantum as a service, I guess?

Inder Singh:

Yeah. I think that what I'm seeing is, to your point, there are data center operators who are putting a quantum computer next to their data center because they're envisioning this world of hybrid computing already. And to get hybrid computing, you have to have both machines, like the AI factory and the QPU. So there I think it's a natural fit and I'm seeing like three data points now in a row that lead me to believe that's a trend. There are others who may not need an entire quantum computer all the time and may want to just access it in a cloud environment and our has been behind all three major clouds since inception. We'll offer it both ways. As I said on the earnings call, we want to meet the customer where they are. If they can buy the machine and pay for it, fine. If they just want access to it, that's okay too.

Vijay Rakesh:

Got it.

Inder Singh:

And we can enable both and over time there might be hybrid deployments where someone says, "I want a machine on prem, but if I need more compute power, I want you to be able to reach that through the cloud."

Vijay Rakesh:

Got it.

Inder Singh:

We can enable that too.

Vijay Rakesh:

And to that point, you had Nvidia on the AI side talk about where they see AI quantum computing as an adjacency where you can run Kuda and then Kuda Q on the software side, have a NVQ link to connect the AI platforms to a quantum computing platform. Are you seeing a real demand at the CSPs of the cloud for the ability to move workloads back and forth or is it more of a defensive mechanism to, "Okay, I need that technology. I better look at it now."

Inder Singh:

Yeah. I think that as I saw with classical computing in my career, CPUs and GPUs still coexist. So CPUs haven't gone away and I think QPUs will come next to these two. So it's going to be some things that only can be done on the quantum computer and you can't send it back to the AI factory and maybe vice versa. Like LLM training, probably GPUs are perfect for that, but when you're trying to simulate 100 million scenarios in a nanosecond and get one answer, which is the best, then only QPUs can be able to do that. So I think that workloads will naturally start to be sent to the right machine. Now, are there workloads that can be split? Yes. Then you need a hypervisor layer to decide which one goes here, which one goes there. And I think the industry has to evolve to that.

Vijay Rakesh:

Got it. And so to that point, as you look at your customer pipeline, whether it's academic or government or enterprise, where are you seeing a real thirst for, okay, I need this 800 logical qubit system, 100 logical qubits is great. Where are you seeing the highest, biggest interest, I guess? I mean, we step back and we think, yeah, molecular synthesis, all those sound great, but from your viewpoint, because you have a front row seat to that, but where are you seeing customers really saying, "Okay, I need this system right away."

Inder Singh:

It's where you would expect where the number of inputs is too large for our classical computing to try to even handle. So the number of possibilities, just impossible. So life sciences, financial services, material science, battery chemistry. So those are the things where you have way more things to model that classical will never model. So early adopters will be industry like those. And so we've done enough proof points with customers that we've announced AstraZeneca in terms of accelerating drug discovery, for example, protein folding is around the corner. We've done the first instance of it, the second, third is down the road. Those are things that small molecule modeling of drugs which has been impossible historically. Those are things where absolutely there's a relevance to the machine that we build that does quantum computing equally as these machines get more powerful, ours will and we're building the algorithms that optimize to run on them.

They will do things like break encryption in the not too distant future. So as responsible citizens, if we're creating the ability to crack encryption, we need to have the ability to deliver a solution like the antidote to that poison as I call it. So we have a security business that we acquired that as a world leader in post quantum security so that customers who want it now can get it now. Knowing that at some point, whether you believe Jensen or Google and others were saying it's like we're almost on the cusp of that, that we need to have that as well. So some begin with just saying, "I want the security now." Financial services firms increasingly are saying, "We want the security now and we don't want to wait till it's too late." And this is a national security matter, countries are racing to this and whoever gets their first... Countries want to make sure they're there first.

So our platform strategy is around having all of that including connecting computers to other computers on the ground, in space perhaps in a computing way, putting sensors in space that can't be jammed, things like that.

Vijay Rakesh:

Got it. I mean, obviously quantum computing, I think this opens up a huge opportunity, opens a huge window, I guess. And unless you open the window, you don't know what the opportunity size is.

Inder Singh:

Exactly.

Vijay Rakesh:

But that also begs the question, if you look at the AI side, you are spending going to 800 billion this year, a trillion next year and people look at, okay, what's the cloud spend? How many gigawatts is it? So how much do I need to spend on AI? How do you size the quantum computing opportunity? How do you look at what is a problem set and what is the quantum computing dollar that can be assigned to that? And to that point, how do you look at your different markets, I guess? Because that's the challenge I guess investors face is how do you size-

Inder Singh:

This is a fundamental change that frankly, I'm not sure anyone could really model. Your $15 billion number earlier, I've seen 30 in other numbers as well. So I don't accept-

Vijay Rakesh:

Pick a number, I guess.

Inder Singh:

I don't obsess on that. What I obsess on is if our revenues exceed the entire rest of the industry that rewards revenues, okay, we are a pacesetter. And so that's something that... Not that I rest on that.

Vijay Rakesh:

I'm saying the 15 billion when you look at 20, 30, let's say. The AI CapEx number, the AI spend or AI market time is two trillion, three trillion, some two to three trillion, let's say. 15 billion is a rounding error.

Inder Singh:

It is. And I think that's where when you think about rounding error, you think about a machine that can do way more than what the trillions might be able to do. When you think about ours plugs into the wall, doesn't require an electrical grid, doesn't require zero degrees temperature, et cetera, et cetera. At some point that wins the argument.

Vijay Rakesh:

Right. And so the flip question to that is once you get to these 800 logical qubits and a thousand logical qubits, why can't that 15 billion be significantly higher given exactly what you just mentioned, that it's scalable, it's lower cost, it opens up a whole new window, which-

Inder Singh:

I think the 15... Humble opinion, I think the 15 billion is way underestimated.

Vijay Rakesh:

Got it.

Inder Singh:

Who knew ChatGPT before OpenAI announced it? Who knew that we'd be spending trillions on that three years ago, four years ago. And I'm saying we may be four years behind AI or three years behind AI, but at some point I think there will be realization. The good news is with our form factor, you don't

Inder Singh:

Don't need to spend a trillion. I'm on the board of a data center company and they're talking not in gigahertz of compute power, but in how much energy, actually, is being consumed as a measure of the power of the data center.

Vijay Rakesh:

Right.

Inder Singh:

That's not a conversation you have to have with our computing.

Vijay Rakesh:

Got it. And you guys have put out a 2030 target of 80,000 logical qubits, I guess. Is that primarily based on just scaling your SkyWater engagement?

Inder Singh:

Yeah.

Vijay Rakesh:

Okay.

Inder Singh:

Yeah. And look, I don't want to make it sound easier than it is. It's always hard. But we are now leveraging mature nodes in semiconductors that are basically fully depreciated, so low cost to begin with. And in our partner in SkyWater, a technology company that knows how to scale.

Vijay Rakesh:

Got it.

Inder Singh:

And we're unique in the semiconductor roadmap in that way. Because again, I think we learned two years ago, what I think others will learn two years from now, which is there's a limit to which you can scale without using something like a semiconductor approach.

Vijay Rakesh:

I want to quickly go to the manufacturing side. We've got three minutes left here before we take some questions on the audience. Your manufacturing partner is SkyWater. Can you talk to how do you have multiple foundries? Obviously you are in the process of an acquisition there. Do you see IBM start to compete in that space in manufacturing because they just got a billion dollars for the US government, I guess. Maybe you can address how you see that.

Inder Singh:

Yeah, there's more than one Foundry you can use. But that foundry needs to focus on quantum, not just classical semiconductor. So Infineon is another foundry, for example.

Vijay Rakesh:

For sure.

Inder Singh:

And we were looking at Infineon in the very beginning when we acquired Oxford Ionics, and Infineon is on a learning curve. They're huge. Their quantum thing was a teeny, tiny part of that equation. So when we looked at how fast can they scale for us, and when they realized how quickly we were getting to some of these milestones and the volumes we were talking about, it wasn't going to come together. And what we got with SkyWater was a company that knew about Quantum to begin with a little bit, enough where their learning curve was not as steep and their willingness to invest in it higher. And they've demonstrated they can do in two months what would've taken 9 or 12, maybe, elsewhere.

So there will always be more than one foundry. I'm glad you need that because without that, you don't get an industry. And for sure, the SkyWater does work with other quantum companies. They will keep doing that. And to your point, there will be others that want to get into quantum.

Vijay Rakesh:

Right.

Inder Singh:

That's a great validation of the space. I actually love that.

Vijay Rakesh:

Yeah. And with SkyWater, is that part of how you are getting to that 10,000, 80,000 or a million physical qubits, I guess, that roadmap is something that you're already working with them two, three years out, I guess. Is that fair?

Inder Singh:

One step at a time. 256, we needed to really get comfortable that they could do and they have done. 10K we're working on with them now. And so everything is a step.

Vijay Rakesh:

Right.

Inder Singh:

We can get them to move our tech roadmap to the left and get to these milestones even faster is part of the thesis, I think, then absolutely they remain the one, I think, that we will be leaning on and depending on. Never say never. If you need a second source, you can always get a second source. We have a balance sheet that's among the strongest, if not the strongest in the industry, and the ability to invest for multiple years and deliver in the shorter term, as well.

Vijay Rakesh:

Yeah. Fantastic. You guys have executed well. I think your logical and physical qubit roadmap looks significantly well above where the peers are.

Inder Singh:

I like it when I don't have to say that, somebody else does.

Vijay Rakesh:

Yeah, there you go. No. Maybe we'll take some quick questions from the audience. Got a minute here.

Speaker 1:

Hi, quick question.

Speaker 2:

[inaudible 00:34:14].

Speaker 1:

Thanks. Most of the industry today talks about general purpose computing. Over the next few years, curious how you think about vertical specific applications within financial services. Do you guys think of buying, building, partnering, and what's the mindset behind that?

Inder Singh:

Well, what we look for are algorithms that can solve multiple industries' problems. So there's a thing called Hamiltonians, which is a common denominator among algorithms. And if you can optimize Hamiltonian-based algorithms, you can serve multiple different industries, including financial services, life sciences, and others. And so we don't want to spend on everything. We want others to innovate on top of our platforms and develop their own. But for the ones that we can address, we'll address ourselves.

And so we have drawn together algorithm developers from really AI companies, like the trillion-dollar companies that Vijay was talking about. And they've come together at INQ basically to deliver on something that is beyond AI at this point. So I think that we will end up partnering with others like Nvidia, which we do because our machines are being deployed next to their machines and all the things that Vijay was saying earlier are true. Our things have to be interoperable with theirs. But at the same time, the ability to deliver what AstraZeneca wanted from us required both Nvidia and us to go in together to do that. So absolutely, partnerships where it makes sense.

And as I said earlier, in our networking strategy, we want our network to be able to connect anyone's computer to anyone else's quantum computer. And that's how you become a defacto leader over time, which I learned from Cisco and others, which is connect anything to anything. And there's room for a superconducting future, there's room for an ion trap future, there's room for maybe others, as well. Don't try to pick those, just make sure that you connect everything together, build the best one you can, which we're doing. So our competitor is us. So 256 now, 10,000 next year, 20,000 a year after that, 200,000 a year after that. That's what we're focused on uniquely.

And then don't obsess over where everyone else is. Help everyone, in fact, succeed, and it keeps you honest and it keeps you innovating and keeps you a little paranoid.

Speaker 1:

Thank you.

Vijay Rakesh:

Great. I think that brings us to top of the hour. So has been absolute pleasure, in there.

Inder Singh:

Thank you.

Vijay Rakesh:

And thank you for joining us.