Andy Packham:
Good day and welcome to another podcast in the Elevate series where we talk about the intersection between innovation and business value and today we're expanding on the subject that we, in fact, we've previously talked about. So, I'm really excited that Neetha from Microsoft has agreed to come back. And we're joined by Raj from HCLTech. Neetha, do you want to quickly introduce your role and the things at the top of your mind tonight?

Neetha Ravikumar:
Sure. Thanks for having me, Andy. I'm Neetha Ravikumar, global director at Microsoft, and my role is focused on developing technology solutions with a global consulting partner such as HCL, and that, that will help our customers advance their sustainability transformation. And, you know, the IPCC AR6 synthesis report came out just yesterday. So, the urgency of action is probably the topic top of my mind.

Andy Packham:
Absolutely. Thanks. And Raj, you are going to introduce yourself and the kind of things that are top of your mind.

Raj Jayaraman:
 Hi everyone, Raj Jayaraman part of HCL IOT Works business unit. So, I am our global head of product management and good market across all the solutions that IOT works does. In terms of what's keeping us busy, what's on top of my mind is, of course, just every conversation we have with customers today, sustainability is the key topic.
And customers are asking us, where can we start? How do I go about doing it? How do I accelerate my sustainability initiatives? So, we are kind of helping customers with what they need to do and how they do, right, to accelerate their journey. So that's been the foremost question in their minds.

Andy Packham:
Yeah, Thanks, Raj. And I think that's the, that's the important point where last time we spoke, we spoke about how companies need to move from a reactive stance and to be much more proactive, but also getting much more real time. So, they're able to make decisions as they happen in terms of controlling outputs, controlling that important sustainability agenda. So today I kind of like to expand on some of that a little bit more about how, how technology drives innovation, how technology is really pivotal to moving towards that sustainable goal.
So next, in tune, should we kick off just how are investments the priority today, especially for, you know, the CIO?

Neetha Ravikumar:
Absolutely, so, I mean, talking about, you know, why technology now, the scale and speed of efforts, I think we've talked about this briefly as well, previously. The scale and speed of efforts required to achieve the net zero goals is simply impossible without leveraging technology. I mean, here's a simple illustration. A lot of companies net zero targets focus on zeroing out Scope one and two emissions, and a company, say for example, that has in-house manufacturing and wants to decrease its Scope one emissions will look at options ranging from product substitution to process substitution or a combination of both. And for this they need to run, you know, several what if scenarios for these substitutions. Analyzing the Scope one emissions also the Scope three emissions associated with the substituted products. And this might sound straightforward, Andy, but in the real world it gets more and more complex with multiple variables, right, we have to evaluate the supply and demand for this product. Therefore, cost implications, any potential risk, including climate risk, the carbon footprint of these substitutive products and logistics to just procure them. Now think of going through this exercise for multiple product lines and in different geographical locations, and analyzing how this impacts their carbon footprint to the cost of production and therefore their bottom line.

Now, these are complex decisions that need to be evaluated, and most companies looking to achieve net zero have, you know, targets set, but have set targets to achieve net zero goals by either 2030 or 2050. And that does not leave enough time for them. So, they simply don't have the luxury of time nor the cost to hire and allocate people to solve this complex problem.

And especially when you know there is technology that, that is trusted, secure and can offer traceability and can be leveraged at a fraction of the long-term cost. And this technology also enables customers to obtain insights in near real time, near real time. So the benefits of investment in technology, I would say, simply outweigh the alternative, take example of, you know, ingredient is a great example of a customer who leveraged Microsoft sustainability manager to look at the hotspots of, in terms of carbon emissions and then take the necessary actions to decarbonize.

So from, you know, we simply need to harness the power of technology from base lighting emissions to identifying hotspots, to directing capital to the most effective decarbonization strategies. And there is also the question of, you know, now, the regulatory landscape is quickly evolving. Even the IPCC AR6 synthesis report that came out yesterday, it emphasized the need for policies and regulations and the urgency to act.

And EU CSRD regulation, The Corporate Sustainability Reporting Directive takes effect for nearly 49,000 companies listed in operating in the EU, and majority of these companies have to start reporting since, you know, from January 1st of next year. So, in

this quickly evolving regulatory landscape and the need for embedding sustainability into their businesses, enterprises have a critical need to act now.

So, technology is what can really help customers accelerate their efforts.

Andy Packham:

Thanks, Neetha. And I'm seeing that I'm seeing that change happening. And, you know, if I went and booked to fly a while ago, I mean, I know we had a massive carbon impact, but you had to go to another website and you had to try and find what your impact would be and then make a decision about that.

And if you want to try and compare a couple of flights that it's, it's too much hard work. Now I can go on to the portal that I'm looking at. I'm not just looking at the cost of the flight. I can see the emissions live there and that's changing. That's technology changing behavior and can make a conscious decision to take a lower emission flight. So, seeing this change happening, but you're right, not maybe not fast enough, but technology change is always complex. So, Raj what, what are you seeing in terms of the challenges that companies are facing in terms of adopting all of this technology and onboarding that into the corporate environment?

Raj Jayaraman:

Absolutely Andy, so even when I have to upgrade my iPhone from 10 to 11, I find it complex, right?

Now you think of companies who are trying to put technology to transform something, as strategic as sustainability, right. It is going to be challenging. It's not going to be a click of a button, right? So, if we can think of some of the key challenges and how companies can mitigate it, the number one, of course, is it's not a one time you do something and be done with it.

It's not going to be that, right? It is going to be you have to get started. It's going to be an ongoing process. You have to constantly look at how am I going to improve on it, how am I going to optimize on it? And so for that, it is very important that the partner they actually work with is going to be with them for the long journey through the entire process.

It's not somebody who can come in, give a strategy and then just walk away and then let you be on your own, right? So that is definitely a number one problem that companies are facing today. The number two, especially when it comes to technology, is any company you go talk to today, the number one problem they will say is I have data in multiple systems, my systems are all disparate, my sites all don't talk to each other. My, you know, I have so many different data points, I don't know what to do with it, right. So, the data management is the number one challenge that, no of course, in a lot of cases you don't have enough data. In some cases, you have too much data.

But the problem still is how am I going to get the data? How am I going to put all the data into one place? How am I going to normalize this data across systems, across locations, and how do I actually get some action out of the data? How can this data help me solve the sustainability problem, right? I think that's a huge technology challenge that companies are having.

Number three, and you think of any time you go put any new software or any new technology, the number one question is how does it fit in with what I have, right? And how does it fit in with the various technologies I have? How does it fit in with the various processes I have? Because now this is going to give you a new insight.

It's going to give you new actions to be taken. So how does that fit in with the various processes I'm already having today? So that is another, you know, challenge that companies are looking at is how it fits in. So again, it's very important that you look at to have a bigger vision, have a partner who is looking at the full scope of things and not somebody who's focused on a small silo because that's going to be really disruptive, right, for the company organization in terms of scaling as well as fitting into their needs, then I can also think of other challenge which we hear from companies is the lack of expertise.

So, this could be as simple as saying, I have a sustainability goal. I want to reduce my scope one and two, emissions by 30% or 50% by 2030. I set that goal. I just don't know how to go about doing it, right? I know technology is important. Like Neetha said, I know it cannot do it without technology, but I don't know how I go about doing it, right? So, there's a little bit of strategy element to it, there's a little bit of execution element to it. So, the person or the company, the partner who they are working with should lay out the entire strategy, but also help them with the execution, because the actual organizations may not have the right expertise to be able to implement the right technology for sustainability and they're dependent on strategic partners like Microsoft, HCL etc. to come in, provider those advisory services, provide those technology components, and also help with the change management. So those are kind of some of the top challenges that companies are facing today.

Andy Packham:
Yeah, right. I think one thing you mention and I think these are really core to all of this is data is the center of this and yeah, you you can throw sensors out, you can create this incredible amount of data you need but what you do with it.

You do something, you've got data everywhere. How does that get pulled together? The then gives insight, you know, because these insights that all of them, the important thing, not the data.

Neetha Ravikumar:
Exactly. Yes. It is very important to have the right partner, As Raj said, somebody who not just knows your enterprise data architecture, but who also knows your business up and close, who knows where all these, you know, different sources of data are located. And, you know, going back to the topic of limited in-house expertise, sustainability skills gap is serious. I mean, last year we put out a report with BCG, which revealed how big of a gap that is.

And really when you're thinking about enterprises looking to achieve their sustainability goals, this becomes a real barrier. So even having folks who know which data to pull from which data sources, how to validate and authenticate the quality of data, and also to trace the data, you know, for reasonable assurance, limited assurance, full assurance is something that's becoming a norm with all the regulatory bodies focusing on it more and more.

And CFO is what I've heard, is that actually they're actually creating the role of an ESG controller who can also, you know, sign off and verify and authenticate that data. So, it becomes even more critical to work with the right partner who understands your business and, you know, take the help of that partner to identify the right technology that will help, help you bring in data from all the disparate sources through APIs in a traceable and auditable fashion.

And then be able to and then a partner who knows your business well enough to generate the right insights. It's not just beautiful Power BI dashboards, but knowing, you know, what the data can do to your business and generating those right insights that will help you propel your business even further.

Andy Packham:
Raj, based on that, then what, you know, if the CIO had to do a' to do list', what's the, what should be the top three things on that to do list?

Raj Jayaraman:
So, you know, like we spoke about how technology is critical, how we need to do something now, we spoke about the challenges, right? And if you look at who's the anchor person across all of these things, right? The CIO is the main person.

So, when, when we look at organizations today, number one, we find that when a corporation is laying out its sustainability goals, there is a CSO who's actually laying out the strategy, who's laying out that goal, but you don't have a CIO sitting next to the CSO saying, I'm signing off on this because I know how to do it.

I know how to get us there, right? That's not happening today. So, the number one, I think the area for a CIO to focus on is how do I get attached in the hip to a CSO? So, when the CSO is laying out the sustainability strategy, I'm laying out my corporation's

digital transformation strategy to help make corporation meet the sustainability goals, right?

Otherwise, you have these aggressive goals or, you know, conservative goals the CSO is laying out without knowing the practicality of whether the CIO will be able to catch up with it. So, I think that's a number one area of focus is how do I get in attached to the CSO in laying out the sustainability strategy for a company? That's definitely number one, right?

Now, once you kind of, now lay out a strategy, now you have a plan. Okay, I have a practical plan of how to get there. Okay, that's great. Now, when it comes to execution, I think we touched upon this and I cannot emphasize this enough. Data management and analytics is extremely critical on this, right? So, we spoke about how they're disparate systems and all this.

But when you look at how a CIO can help today each of a, each of a plant, as an example, in one of the companies we're working with, they're looking at the plant operations and saying how much is the energy that is getting consumed yet how can it reduce the amount of energy conservation, energy emissions on that plant, right? Now, the way a CIO can help is by having the right data management and data analytics tool. They can now look across all these locations and actually compare the performance of these multiple plants. So, they can actually now go to the CSO and tell a CSO," Plant, one which is in Chicago, they are having so much emissions, but a similar, a compatible plant sitting in Seattle who has actually done some fantastic optimization measures they are able to reduce better, right? So now you are, actually, kind of gamifying this to say how can I make all my locations do great compared to everybody else? How do I make the first person behave as good as the best person? Right? And that tool is in the hands of the CSO because all of this can be done with data management and data analytics. So that is extremely critical from a CIO that's the tool the CIO has. So that's definitely the second area of focus, or of Action that CIO can do. The third one, if you look at all of the companies, everything, you know, I mean, you think of what is in the control of the CIO. This is how do I consolidate my data centers, how do I consolidate my servers, how do I virtualize my applications, how do I transition to hardware, which is actually much more energy efficient?

So there are a lot of policies the CIO can implement internal to the organization which can actually help them reduce their amount of carbon emissions and energy consumption as well. And of course, the data center is something that is huge, where the CIO can actually implement certain policies which can actually reduce the carbon footprint. So I think it'll start from the strategy side, working with the CSO, helping them optimize across all their locations on the execution side.

And then the number three is within the house of the CIO or within the umbrella of the CIO, potential measures which the CIO can help it.

Andy Packham:
So, I think, I think what's important is the CIO becomes the change agent, and that's a significant, almost a shift in the way that you would think about a technology role. It's become a change role.

But Neetha, how the rest of the organizations is going to think about this as well. How does the organization think through that change?

Neetha, you're on mute.

Neetha Ravikumar:
I'm sorry. Ya, I mean, it's very important for everybody to be focused on this topic. In fact, I was at Green Bays earlier this year and speaking with customers, I, I want the one message I heard loud and clear was companies' CSOs trying to figure out how to embed sustainability into every part of the business, making sustainability everyone's job because that's how it should be.

It is not the sole responsibility of a CSO. So, I think providing these data insights to every single person helps them understand what is what impact their, their own role in the company can have to advance those sustainability goals. And the second is the knowledge gap. That is still a massive knowledge gap out there. You know, I can recollect from the days I used to do a sustainability auditing and people used to ask me, you know, why do I have to care about this, right?

And so there, there is a safety element that there is a general sustainability is good for business. You're actually buying, you know, when we talk about the energy consumption, how do we optimize our energy consumption? It's not just good for the planet, but your plain being, you know, you were, you know, the cost of energy is lower for you.

So, it, it affects your bottom line at the end of the day. So, it's not just about, you know, hitting your beautiful net zero goals, but sustainability is good for business. So and I also heard a lot of CSOs saying," the success for sustainability is when the CSO role does not exist anymore, because it, sustainability then would have become part of everybody's job".

A CIO is equally responsible. A CFO is equally responsible, COO or operations officer is equally responsible. And therefore, everybody down that down the, you know, down the ladder there. So, it's, it's important for leaders to bring along all of the employees along this journey. And at Microsoft, we believe this like everybody's responsible. It's not about, you know, just receiving a mandate from the top, but there has to be that bottom-up adoption and commitment to drive sustainability.

Andy Packham:
Thanks, I'm going to ask you a question that we didn't script because I think it's just come to mind. The last big I.T. project was Y2K, and, you know, the whole world was

going to collapse if we didn't get that sorted. Maybe it wasn't quite as bad and the world didn't collapse. We are now facing what is a fundamental and much more accident, you know, a much higher risk, really. Both of you in your perspective on this, I'd really value. Are you seeing the same focus, the same commitment from organizations as we did back then, or is it something that we know is really important but we are still struggling? Y2K was easy, it was a date bug. I knew from a technology perspective how to fix it wasn't easy, but I knew what to do. Do we have that same level of focus and understanding yet about the scale of the problem we need to fix?
 Neetha, do you want to do you want to kick that off?

Neetha Ravikumar:
Why don't we have Raj go first? Y2k I was……

Raj Jayaraman:
I started my career, Andy, the first job I had while actually going into a system and making two zeroes into four zeroes, right. That was the first project that I did. Anyway, that dates me back. But no, I mean, I think of two main things, right? One is and a summary of it is, probably we haven't hit that level of criticality as in Y2K not yet, right. And the reason I'm best my perspective is that one is because Y2K companies were actually going to be losing money if they did not do something, right? Right now. Yes, there's a combination of I'm doing something for the greater good, right? But I'm not going to go out of business yet, right, if I did not do this. So that is number one.

Number two in the Y2K is companies knew how to solve that problem. Here, while companies may still set up a sustainability strategy and say this is important for me, like we were discussing about not everybody has a good handle or grasp on how am I going to go solve this problem. I know technology is important. I know how to solve this, but I still haven't, I don't have a full grasp of exactly what are the things I need to go to be able to solve the problem. Right? So we are still probably a few years away, but I think like Neetha was, I think, telling in the beginning of this conversation, we just let it go for a few more years then Ya, we are going to hit the Y 2040 or so, right, it's going to happen.

Neetha Ravikumar:
So, I mean, speaking to, you know, is this realization really hitting the companies? What is the barrier for folks to act soon enough? I think, one, it is it is quite complex because, I mean, think of all the beautiful supply chains we've established today. The global supply chains, right? With Globalization came a lot of complexity. And to change that, it's not one person's responsibility. At Microsoft also we say, I mean, from Carbon Call

to every initiative that we've had, we've been very vocal about saying, you know, hey, this is not one company's or one nation's responsibility.

All of us have to act. I feel like it's and the other, the other biggest challenge is in the absence of regulation. I mean, they take this with a grain of salt because, you know, I come from an auditing background and I know the, the impact and the effect a regulation can have. When you speak to, you know, leaders versus operators on the field, in the absence, in the presence of regulation, there is a certain behavior.

In the absence of regulation, there is lack of certain behavior. So, for better or worse, regulation definitely impacts behavior. And because there wasn't, you know, it took, even now there is the whole alphabet soup in ESG that people are trying to figure out everywhere from CSRD to NFRD to, you know, TCFD like it's enough, right? I think I can teach alphabets to my toddler just by, you know, letting her sit through this alphabet soup.

So, one there is, there is not a harmonization of all of those standards, on one end. Second, there is lack of regulatory policies. And third, you know, we have seen in the pandemic as well, a bit of a reverse, reversal of globalization. So as companies and countries tend to think about how do we protect, you know, our economy, it's, you know, it's a bit of a challenge for them to quickly act and disrupt the supply chains they have in place.

And then there is, you know, energy security. We see, we see what's happening in Europe with, you know, the Ukraine - Russia war, energy security is top of mind and trying to balance that with the decarbonization goals. I wouldn't say it's lack, for lack of trying, but just the, just the age we're like, just the time we are in, facing all of these challenges.

I think we still need more commitment. We need corporations diving in and for all, you know, for decarbonization to happen, to really limit the global warming. I was reading, I think it was a synthesis report. I was reading where they said governments, private sector and public sector, all of them, you know, and the people, all of the three entities have to work in concert to make this happen.

So, there are several barriers. But I think enterprises at the end of the day should also realize that sustainability is good for business. This affects your bottom line. If there is a flood in some place, it's, it disrupts your supply chain, it affects your bottom line. If that if you know, if there is a, if there's lack of a material available or it hugely impacts your carbon footprint, you've got to rethink about those products and how you make those things.

So, end of the day, all of this affects the bottom line. And the good thing is it also has a positive effect on the people and the planet. So, I think it's important to just stay on that message and know that, you know, today it might seem like a huge effort and a huge

challenge to just get out of the comfort zones companies are in. But the companies that are thinking long term, you know, and think about all the regulatory how the regulatory landscape is evolving, the companies who have that long term business goal in mind are already starting to see the positive impacts of some of their sustainability measures. So, I would say we should continue to drive that message hard and Ya, and really help companies leverage technology because, you know, the companies that know that this is important have to act now. They have to act now. They are really looking to technology saying you need to help us solve this and, you know, get better at doing this. So, we just have to bring everybody else. And, you know, peer pressure is going to drive everyone to do this and regulatory pressure. So, I'm, I'm confident that we are headed in the right direction, although I couldn't wait for more acceleration.

Andy Packham:
Neetha, I think, is spot on. We, you know, I hope we don't have to wait for those, those impacts with the floods and the stuff that actually causes coming out, how the companies rushed to the point yeah, we did Y2K because we kind of, it was easy. It was a couple of zeros and we knew, you know, it was going to it was going to cost money. I think getting that same level of clarity about how to solve it. And in a world that is like just so, so much more complicated than it was, right?

Neetha Ravikumar: Exactly!

Andy Packham:
It's going to be a challenge. But I think bringing together the technology and the thought leadership, the partners that can help companies through this is, is key to success. So, Neetha and Raj. Thank you very much. It's been a fantastic conversation. I loved it. I really appreciate both of your times. Thank you very much.

Raj Jayaraman: Thanks Andy. Thanks Neetha.

Neetha Ravikumar: Thank you, Andy. Thanks, Raj.