THE POWER OF INNOVATION & CLOUD COMPUTING | WIRED BRAND LAB & ACCENTURE
VIDEO TRANSCRIPT

Teresa Tung (00:00):

My name is Teresa Tung, and I'm Accenture Cloud First's Chief Technologist, focused on driving innovation powered by cloud.

Teresa Tung (00:08):

Often our clients come to us with complex and unique problems that require innovative solutions made possible only by cloud and the technologies it enables.

Teresa Tung (00:19):

Today I'll be speaking with a child, a college student, and an expert about how cloud computing generates innovative sources of competitive advantages for businesses to drive the next wave of growth.

Teresa Tung (00:42):

Hi there, Cameron. So happy to meet you.

Cameron Keitt (00:45):

It's happy to meet you too.

Teresa Tung (00:47):

So how old are you and where are you from?

Cameron Keitt (00:51):

I'm eight years old and I'm from New York City.

Teresa Tung (00:54):

So today we're going to talk about a really fun idea, so let's start with what you already know. Can you tell me what you think innovation is?

Cameron Keitt (01:01):

Hmm.

Teresa Tung (01:03):

Let me give you a different one, innovation is like creativity. Do you know what creativity is?

Cameron Keitt (01:10):

Creativity is when you use your imagination to think of stuff, and you create stuff.

Teresa Tung (01:17):

Yes, it sounds like you're an expert. So when we talk about innovation, we're talking about using your imagination to come up with a new way to do something.

Teresa Tung (01:27):

So sometimes you use tools to be creative or to be innovative. So for example, if I'm feeling hot right now I might take a piece of paper and fold it up into a fan, and that's using that paper in a different way for what I need. Sometimes we're innovative or creative when we're playing. What are some of your favorite toys to play with?

Cameron Keitt (01:48):

I like to play with my building blocks and my action figures.

Teresa Tung (01:53):

Do you get packs of building blocks to build from, to build something specific, or do you use your imagination to build something for your action figures?

Cameron Keitt (02:00):

What I do is first I get the set, then I build the set and see if that's what I want to use with my action figures, and if it's not, then I'll take a couple of different sets and mix them together.

Teresa Tung (02:15):

And how do you know where that should be? Is there a design that you're building from, or a lot of this is from your imagination?

Cameron Keitt (02:23):

A lot of it's from my imagination, like if I have a little house, for example, I'll build something underneath it. I'll take a plate and then I'll put it underneath it. And then I'll make like an elevator going down, and then I'll make a big base for superheros.

Teresa Tung (02:51):

Oh, that's wonderful. So, as I said before, innovation is the use of a tool to do something different. In this case, you're using creativity and imagination to build something that no one told you to do, no one has seen it before, it's something new.

Teresa Tung (03:07):

So the fact that you started with the building blocks, you added the action figure, you brought in this plate, nobody told you to do that, but you were using your creativity.

Teresa Tung (03:16):

Actually, my job is to use creativity and technology to help businesses do new things that they hadn't thought of before, that they've never done before so that they can grow their company.

Cameron Keitt (03:28):

That's pretty cool.

Teresa Tung (03:30):

What happens when you're working with building blocks and you don't like what you've built?

Cameron Keitt (03:35):

Well, sometimes I delete it. Sometimes I build back to it, so I don't have to add to make it stronger and cooler, I can always just add to make it bigger.

Teresa Tung (03:52):

That's really what innovation is about. It's not just building it once and then you're stuck with it forever. Part of the creativity is about trying it, seeing what it looks like, and then just even evolving what you wanted to build in the first place. Can you tell me what you think the cloud is?

Cameron Keitt (04:11):

Basically what I think the cloud is, is like a little cloud in the internet that hold stuff together. So if you delete something and you save it to the cloud, it will pause where it is, and then it'll save it to the cloud. So it will basically just generate all the data and put it into the cloud.

Teresa Tung (04:36):

That's impressive that you know that. So you know that the cloud is everywhere. You could store something one place and then access it somewhere else. The cloud is like a big shared computer that everyone can use.

Teresa Tung (04:49):

So just like you could build what you want with your building blocks, I use cloud computers to do what we want for our businesses.

Cameron Keitt (04:57):

What have you learned when you were building things?

Teresa Tung (05:00):

I've learned that you have to also know your building blocks, so to be able to know the blocks that you have. In my case, it's cloud and it's technology. In your case it's knowing which size blocks that you have, and you might have some special pieces that you might use in certain places.

Teresa Tung (05:16):

And so at any time I'm going to use my building blocks, the cloud capabilities, and in the same way that you built your first version I'm going to build a version, and then I'm going to see how it works. And through that process I'm going to learn what works, what doesn't, and then take that into the next design.

Cameron Keitt (05:32):

That's pretty cool.

Teresa Tung (05:34):

What did you learn about our discussion?

Cameron Keitt (05:37):

I learned that creativity, it doesn't just have to be in one specific place, it could be everywhere.

Teresa Tung (05:45):

Innovation is about creativity, and it looks like you're an expert at creativity. Thank you Cameron for joining us, I wish you well on your building adventures, and you've been innovating this whole time.

Cameron Keitt (05:59):

I had a nice talk with you, bye.

Teresa Tung (06:07):

Hi, Kierra. Tell us a little bit about yourself, where do you go to school and what do you study?

Kierra Page (06:13):

Hi, Teresa. I am a computer science major, mathematics minor, at Wichita State University. And I'm also a software engineer intern working in cybersecurity and aerospace.

Teresa Tung (06:26):

Great. I'm Accenture Cloud First's Chief Technologist, where I'm focused on innovation. I was wondering if you could tell us what is innovation?

Kierra Page (06:36):

I think the heart of innovation really lies in how we change and improve how we invent, how we think, and how we progress society through science and technology.

Teresa Tung (06:49):

That's a really great answer. I look at it as doing things differently, as well as doing different things. Can you give us some examples of industries that you think of as innovative?

Kierra Page (07:01):

I think the industries that come to mind for me right off the bat are the electric car industry, e-commerce, and especially now more than ever the medical industry too.

Teresa Tung (07:12):

Those are great examples. And they're all industries that are leaders in how they apply technologies to really helping those industry problems.

Teresa Tung (07:22):

In fact, we've seen example of this happening with digital natives, these were industries that were born in the cloud. So ride sharing, online home rental, streaming video services, and these are using technologies to really change the whole industry, and really change the world.

Teresa Tung (07:40):

How do you think industries like these are using cloud as an engine of innovation?

Kierra Page (07:46):

I think specifically talking about the medical industry, there's been such a shift in data, and the medical industry itself has much more access and control over their data. And also patients have much more access and control over their health data, especially with the popularity and the rise of telemedicine.

Teresa Tung (08:07):

Cloud is a great place to be able to access that data, whether you bring it together centrally, or you're going to keep the data at the edge, maybe on our phones, or on our devices, and really be able to push the compute to that edge. This is all what cloud makes it really easy to do.

Teresa Tung (08:24):

What are the most exciting capabilities that cloud services can provide?

Kierra Page (08:29):

I think there's so many really, really exciting capabilities that we didn't have before, but I think the most exciting is just the fact that companies can now have computing services on a global scale, essentially at the click of a button in a matter of minutes.

Teresa Tung (08:49):

And what's even more exciting, like a lot of times when people think about cloud, they think about the cloud basics, the compute, the storage and network at the click of the button. And they're overlooking that these cloud companies are investing all the time to create the new basics, so artificial intelligence, internet of things, robotics.

Teresa Tung (09:11):

And just like how I didn't have to build a data center to be able to tap into the compute basics, these new basics, any programmer who knows how to use an API can tap into without needing to know the details of the AI or the robotics.

Teresa Tung (09:25):

Can companies that are not cloud-based tap into the same capabilities?

Kierra Page (09:30):

I think it's unrealistic to say that traditional companies who don't use cloud computing can tap into the same capabilities.

Teresa Tung (09:38):

They can't because they're not technology companies, they're not going to be able to compete on the investment and the talent that cloud companies can provide.

Teresa Tung (09:51):

But the great news is that with cloud providers, these other companies that use an adoptive cloud mindset, they can stand on the shoulders of giants by using cloud.

Teresa Tung (10:01):

So how do you see cloud computing influencing how these traditional companies operate in the future?

Kierra Page (10:09):

I think as time goes on the gap is going to get wider and wider with these traditional companies

and the ones who transition to cloud computing and the ones who don't because cloud computing is truly such a catalyst for not only innovation, but also business. You just can't beat the cost and the flexibility and the time of cloud computing. And that's what cloud computing brings to the table

Teresa Tung (10:36):

We're seeing that the technology strategy is very much a business strategy. It's what's really enabling all these industries to create the experiences of the future. And this innovation engine that the cloud is, is always providing new tools and new capabilities.

Teresa Tung (10:56):

So Kierra, thank you so much for spending time with me, looking forward to seeing the impact you're going to make as you bring a fresh set of eyes to re-imagined experiences in aerospace.

Kierra Page (11:07):

I think you're having a really positive impact. So it was really exciting getting to talk to you today, and yeah, thank you.

Teresa Tung (11:19):

Hi Joe, can you share with us where are you from and what do you do?

Joe Hellerstein (11:24):

Sure, I'm here in Berkeley, California. I'm a professor at UC Berkeley in the computer science department. I work on data management, and also a co-founder of a couple of companies in the cloud data management space.

Teresa Tung (11:35):

So we've seen that cloud-based companies are able to secure an advantaged position, a competitive advantage in two ways. First in the particular ways of using cloud and the technologies that they've chosen. And second is a commitment to a operating model of continuous innovation.

Teresa Tung (11:54):

So with that landscape in mind, how do you think companies that are transitioning to cloud-based models are becoming more innovative due to this technology?

Joe Hellerstein (12:03):

Well, I think you put your finger on a bunch of it. I mean, one thing to keep in mind is that the cloud saves you the trouble of standing up your own data center. And that reduces your costs and your barrier to get going substantially.

Joe Hellerstein (12:16):

And then as you say, once you're in the cloud, you're getting the latest innovations from your suppliers of software deployed for you. So the cloud brings together the ability to get started very quickly, and also the continuous ability to stay current with technology.

Teresa Tung (12:30):

Many of our clients are just getting into cloud, or having started on cloud. What should enterprises do to adopt cloud more?

Joe Hellerstein (12:40):

One way to do it is to allow teams in discrete parts of the business to behave like cloud natives. So you empower a team to go off and build a solution to a particular business problem, fully in the cloud. And then you build expertise in the organization, and you build design patterns that the organization can follow, both software design patterns and management design patterns, which requires some modification as you transition to cloud.

Teresa Tung (13:05):

It gives a enterprise an ability to begin with these proofs of concepts, or its particular wins to build the capability, and build the business case. And then as it works, this builds excitement and the business case to do even more.

Teresa Tung (13:22):

So I have a question about innovation in

particular. So oftentimes if we think innovation, we think AI, artificial intelligence, and that's driven by data. And enterprise data is really hard. How does cloud help with this problem?

Joe Hellerstein (13:37):

Data's hard for a bunch of reasons. One is that it's actually a physical asset, which means it's stored in a place, like physically. And in enterprises that place would often be some central managed facility that IT had to take care of. And then little bits of that data would get copied out, like under people's desks, into PCs and so on.

Joe Hellerstein (13:57):

And you had this management problem that the data was replicating like [inaudible 00:14:00], and you would get different versions of the truth, and it would be a big mess.

Joe Hellerstein (14:04):

In the cloud everybody can sort of log in and access the same pool of data. It still should probably be governed in certain ways, but we don't have this problem that we don't know where the data is in the same way that we did on premises.

Joe Hellerstein (14:17):

So the physics of data in the cloud being centralized is actually quite valuable, but then you need to build processes around that data all being in the same place to make it rationalized, and to make sure that the streams of data coming in all begin to integrate into useful business functions.

Teresa Tung (14:32):

So now that we have the data in one place, data is a really important part for driving something we call continuous innovation. Can you talk a little bit more about how cloud enables that?

Joe Hellerstein (14:45):

Yeah. Obviously getting the data sort of into one logical space so that everyone can access it is good for sort of management, but it's only the first step. And the next step is exactly what you described, it's continuous innovation.

Joe Hellerstein (14:59):

Because the data's in one place, you have lots of eyeballs on that data, you have lots of hands working that data for various business purposes. And so you begin to see that the pipelines for the data, the way that it goes from source to use case, gets shared across people and across the organization, and be maintained over time because you have live production use of the data for multiple purposes.

Joe Hellerstein (15:23):

But that's really not enough. The next thing you need to do is have some engineering discipline about it. You need to think about how does the data get there, what processes does it go through once it's there? So that is sort of the next evolution in how we think about data in the cloud; and that's truly continuous innovation.

Teresa Tung (15:39):

Great. So one last question; what are some ways you think the cloud could be utilized by businesses that they're currently not doing today?

Joe Hellerstein (15:49):

I'm super-enthusiastic about where things are going in the cloud. What we've seen over the past sort of 10 to 15 years of the cloud is that it's incredibly lowered the barrier to entry for using new ideas.

Joe Hellerstein (16:02):

What we're going to see over the next 10 years,

I think, is the ability to harness the biggest assemblage of compute that humankind has ever put together. The cloud is just phenomenal as a resource. So if you think about millions of computers and exabytes of data, goodness knows what we're going to be able to invent.

Teresa Tung (16:20):

I'm also super excited about seeing how innovations of cloud are going to really change the world where it's further adopted within traditional industries that haven't yet used cloud to do different things. They might be doing the same things that they've done differently, but really about changing their process because you're embedding more AI, you're embedding more robotics.

Teresa Tung (16:43):

When we think about a self-driving car, that's really the change that we're making, but how do you apply that now within a factory to make it safer and more sustainable? How do you make a supply chain more real time and responsible? So I'm really excited as well.

Teresa Tung (17:00):

Thank you Joe, again, for joining us, I really enjoyed the discussion.

Joe Hellerstein (17:04):

It was a pleasure to be here. This was a lot of fun.

Teresa Tung (17:09):

When organizations take advantage of the cloud's capabilities they can reimagine how they interact with their customers, partners, and employees, how they make and market their products and services, how they build and operate their IT systems, and the role of data and compute within their organization.

This expansive move to cloud-based models is paving the way for businesses of all sizes to adapt and succeed in their respective industries.