Shelly Kramer: Hello and welcome back to the Six Five Summit. I'm Shelly Kramer, one of the founding partners and a principal analyst here at Futurum Research. And on behalf of my team at Futurum and the team at Moor Insights and Strategy, welcome. We're so glad to have you. In this spotlight session, Ric Lewis, who's the senior vice president of IBM Systems will dive into six IT infrastructure observations that he's seeing in our new era of accelerated digital transformation. We're seeing a lot of change now. That's no surprise to anyone. So it would be interesting to hear what Ric has to say. Let's get to it.

Ric Lewis: Hi, I'm Ric Lewis and I lead IBM Systems Group. I've had a long career in the IT industry, and I've been really lucky to participate in and even lead some key innovations around Scalable X86 architectures, composable infrastructure, some as a service infrastructure delivery, a lot of those things. And in fact, I've been here so long that I even briefly left for a while to focus on other things. But while I was gone, something happened. And that was I saw the industry that I grew up in shift gears into what I would call the era of accelerated digital transformation. And really that is being fueled by IT. And I decided I can't miss this. I spend enough time here. I really want to participate in that. So in this industry, throughout the history, there've been lots of pundits that have been predicting, where are things going and what's happening and all those summaries.

And there've been some good predictions like Software is Eating the World by Mark Andreesen. It's been about 10 years ago or so. That was fairly accurate, but there've also been some things way off track. For example, when I went back to school in 30 years ago to get my master's degree, I was told hardware is dead. Make sure you focus on software. And I can tell you, hardware is not dead. I lead a $20 billion systems business that's rooted in hardware, high value hardware. Now there's a lot of software associated with that, but hardware is alive and well. I even heard mainframe is going to die because client server will kill it. We have a large and growing mainframe business and it's growing program to program every single time. And it really is the backbone of all of the key financial and insurance and healthcare, all the key transactions that go on in our economy.

So that one didn't pan out. Another one I heard, X86 is the only processor needed. In fact, it's just good enough. There won't need to be anything else. And now today you see ARM core processors, you see graphics processors, you see even the cloud and phone and tablet and laptop vendors. They're all developing chips. So clearly that one didn't pan out. And then the more recent one is really public cloud is the only infrastructure needed. Due to the economies of scale, in fact, it'll be the least expensive. And I think we're seeing that not pan out, like we thought. Public cloud has done a lot of great things, including helping change the operating model and accelerate the industry. But it definitely is not the only infrastructure needed. And most clients now have hybrid architectures and even multi-cloud architectures. And it's very common and everybody kind of aligns on that.

So I love this quote that I've known for a lot of years from Neils Bore who's a famous physicist that goes something like, "Predicting is difficult, especially if it's about the future." And I really feel that way. And so when asked to speak about the future here a little bit and where things are at, rather than make a bunch of predictions, what I thought is I'll make some observations about where things are at, a little bit about where they're going, and why I think it's happening. But

before I do that, I'll explain how I came to some of these observations. So in my role, and for the past 20 years in all of those roles, I've been spending a lot of time with clients. In fact, in this week earlier, the first two days of this week, I was at one of our customer advisory boards with CIOs and line of business leaders from financial services, retail, transportation, healthcare, automotive.

And when I speak to these folks, it's really this day and age, there are some common themes. And the biggest of all of those is really that we all believe this is the era of accelerated digital transformation. And I believe it was sparked by COVID. It made everybody try to figure out, okay, how do we do things online? How do I shop online? How do I communicate online? How do I work online, all those things. So that was the spark, but doesn't seem to be going away. COVID doesn't seem to be going away very, very rapidly, but neither does accelerated rated digital transformation. And I believe it's here to stay. And it's really at its core about disrupt or be disrupted across every type of business in the industry.

And so when I speak to these clients, they're in that environment, they have to deal with that and their objectives all kind of fall into the same place. First, it's speed. They need to be able to develop and deploy applications super quickly, and they need to have an agile, modern environment that enables that speed so that they can adjust to things on the fly. It allows them to keep up with the pace of this digital transformation. And it also allows them to have an operating model that supports it, thing that they would call DevOps. That's all really in that speed category and it's super important. The second objective that they have is efficiency. They want to be able to effectively use their dollars and headcount to get things done, not to just support infrastructure and do maintenance or to be able to run workloads at kind of a base level in a given platform. They want optimal cloud and infrastructure usage, and they want that to be deployed in the most effective way.

And then the third, and this is a relatively new requirement. I mean, it was always in there, but it wasn't part of every conversation. Today, it's part of every conversation is around security, cyber security, cyber resiliency, recovering from ransomware attacks. All of that has changed the industry. And that's a top of mind topic right now. And in fact, instead of just DevOps, most clients are talking about dev sec ops to include security. And some are talking about devs sec reg ops to include regulatory requirements in that chain, just to make sure that they can deliver what they need to deliver.

So if they're trying to achieve speed, efficiency, and security, what gets in the way? Well, they're really facing three major challenges. First complexity, complexity of that environment that they have to support, especially with multi-cloud and that multi-cloud can be multi geographical, issues of sovereignty and all of that. They have to have maintained skills. They have to maintain the infrastructure. They have to make sure that it's vibrant and adaptable, and that complexity is really challenging for them. The second major challenge is really around data. It's growing. They're trying to gain insights. They need to secure it back it up. They need to move things as appropriate when necessary. It's just a giant challenge. And then the third, which relates to the security objective is really around trust.

Can I trust the tools, infrastructure, the encryption, the vendor that delivered all of this? Those are my challenges that I need to face. So in that environment, when I'm with those clients, it's caused me to kind of settle on six observations in this era of accelerated digital transformation that seem to resonate. That seem to be themes that matter that we as IT infrastructure providers have to make sure that we're addressing for clients. So first and by far foremost, really, it is all about the data.

Data's everything. In our innovation history. It kind of started around how fast can I compute how many megahertz? And then it was, how can I connect things together around network? And then from network, it kind of quantum leaped up to the network effect. And a lot of value was created in companies that are taking advantage of the network effect, things like Facebook and Instagram, where the power of the solution has to do with how many people are connected. And then there was an evolution towards simpler storage infrastructures, hyper-converged and even some of our composable infrastructure kind of plays. All of those things kind of were the next phase. But right now in the industry where the disruptive business models are happening is all around data, predicting events like buyer behavior or disasters or whatever kind of thing that you're trying to predict. And modeling everything from supply chain discontinuities, to issues that we have to track to drug manufacturer and vaccines, all of that is really around data.

So data is everything at this point. Data's not only everything, it's everywhere. It's distributed. In fact, I would say it's hybrid. We used to talk about hybrid cloud almost as an argument about where things should live. Really, if the data is everywhere, then the data is hybrid and it has implications on us being able to deal with architectures to bring capabilities to that data. The third thing in this area I would talk about is data is growing. It's growing exponentially. And so dealing with it, providing insights, this is all... It really is all about data. And for IBM, our hybrid cloud strategy is focused on that data. We have a platform centric architecture that with Red Hat OpenShift has containers, and it enables us to be able to focus on bringing workload capabilities to data, no matter where it is.

We have data fabric efforts. We have data and analytics that's focused on data, a plethora of offerings that we have in this space. And we're known for securing people's most sacred data. So it's a critical piece of capability that we have. So at first, it's all about the data. The second thing or observation I would make is really that specialization and integration matter in this era. So you're seeing the emergence of fit for purpose, compute fit for purpose hardware, fit for purpose full stack integration. It's all about fit for purpose, which basically means specialization to do a specific function through the compute all the way up through the clouds. And you're even seeing specialized clouds like our own financial services cloud. I expect that trend to continue, and I think it's going to be really key.

And really in the end, it's really about content and outcomes being delivered as a service is where the industry seems to be going in this area. So when I look at it, IBM's got a long rich history of this specialization and integration from the early platforms that we built to our FSS cloud that I mentioned and headed out into the future with things like quantum and being able to access quantum transactions in a cloud operating model environment and databases, analytics. It's all about delivering this content, the integration and the specialization to do

specific things extremely well. So the third point I would make, or third observation is really around cloud. And I would say cloud is really an experience. And in fact, more specifically, cloud is an operating model. What it's not is it's not a destination. It's not a specific company. It's not a strategy. It really is an operating model and it can be delivered on or off premises. Most customers in fact are going to do both on and off premises.

And they're also going to do multi-cloud, meaning they're going to have multiple clouds on and off premises. And that seems to be a universal theme. So for us at IBM, really modernizing platforms and making sure that we can deliver the cloud operating model to mission critical workloads is key for us, but also our as a service delivery of power BS and Z dev test and storage as a service, those are all critical efforts for us moving forward and areas where we have products already today.

So we've talked about data. We talked about specialization, we've talked about cloud, obviously. Now I want to talk a little bit about the fourth one, which is AI is a necessity. I think we've always thought of it as a future opportunity. Now it's not a future opportunity. It's fundamental. It's the only way we're going to be able to deal with the complexity of environments and derive value from the exponentially growing data that's in the industry.

And for IBM, it's part of our core strategy. We have AI in our CPUs, in our management subsystems, in the way we diagnose things and it continues to be an area of consistent investment for us. In fact, hybrid cloud and AI, it's right at the core of our strategy. Fifth point, security is paramount. In fact, I think it's the issue of the decade. It's on every client's mind. And the assets we have in confidential computing, quantum safe encryption, all of those things, we continue to enhance and develop to make sure that our clients have the most secure environments in a multi-cloud arena that they can possibly have.

And then the sixth point, the observation in this era of accelerated digital transformation is we all need advice and support and how that translates is really consulting on digital transformation, as well as life cycle support and management of all of the infrastructure and software that you have, and is a key area of strength for IBM.

So I hope you agree with me. This really is the era of accelerated digital transformation. It's really intense business disruption fueled by creativity and innovation in the IT space, our space. Hopefully, some of these observations will help you navigate this era. You can think about data. You can think about specialization and integration, the cloud operating model, AI, how that fits into your strategy, security, and services. And if that's too much to think about, we can help. IBM has a long heritage of the innovation, the skills, the advice, and the trust to be able to help clients in these areas. So please don't hesitate to reach out to us and utilize our technology and our expertise around the world to deliver hybrid cloud platforms to help you achieve accelerated digital transformation. And rather than have me try to predict the future, let's go create it together.