



The Deloitte On Cloud Podcast

David Linthicum, Managing Director, Chief Cloud Strategy Officer, Deloitte Consulting LLP

Title: Realize the potential of cloud by building a better governance structure around it

Description: Cloud has strong potential to improve business outcomes and foster innovation. However, to realize that potential, organizations must build an effective governance structure around their cloud ecosystem. In this episode, David Linthicum talks with Meredith Stein, co-author of *Cloud Governance Basics and Practice*, about how enterprises can establish effective governance for cloud, the benefits of good governance, and how cloud governance can affect sustainability efforts.

Duration: 00:23:38

David Linthicum:

Welcome back to the On Cloud podcast. Today on the show I'm joined by Meredith Stein. Meredith is a Certified Public Accountant and a results-driven executive with over 20 years of experience, and she has a career focused on governance, risk, and compliance. Good morning, Meredith. How're you doing?

Meredith Stein:

Good morning, David. Thank you for hosting. I'm so excited to be on the show today. I'm a longtime listener.

David Linthicum:

Yeah, it's funny, I look forward to a lot of recordings, and this one I really look forward to, because I get a chance to learn, because I know a lot about cloud governance, but the thing is aspects of it, there's many dimensions to it. There's many reasons that we do governance, and I think really kind of looking at this as kind of a core discipline to take cloud computing to the next generation is really an important discussion. We seem to be missing that in terms of architectural things and solutions. We focus too much on technology and not on the basis such as governance, security, operations things, things like that. So, what got you into governance in general and cloud governance specifically?

Meredith Stein:

So, I've always had my career kind of focused on governance, risk, and compliance, so naturally, I landed on this because cloud is such an important part of the business that we run today, and we'll talk about what this could mean for the future. I've been busy researching and writing a book on the topic of cloud governance with my two co-authors, Vince Campitelli and Dr. Steve Mezzio. The book is the first in a title of a series called, *Professors of Practice*, and the book's titled *Cloud Governance Basics and Practice*. It's launched by de Gruyter Publishing, which is an international academic publisher, and the idea is that the series advocates for the importance of balancing theory with real-world perspectives.

I got teamed up with my co-authors, because it was really interesting the way we got together. We all have a different mix of knowledge, skills, and experience in the domains of corporate governance, cloud governance, change management, learning and development, organizational strategy. Our co-author Vince Campitelli brings deep technical skills and experience. Steve Mezzio and I bring deep corporate governance insights as well as experience in organizational change, human capital, learning. And the three of us, we bring some vertical skills and perspectives including industry specializations. The goal of our book is to increase cloud literacy.

David Linthicum:

Yeah, ultimately this—like I said, this is a topic that needed to be addressed, and it's great to have a book out on this topic. I've been wrestling with this since the beginning of my career. I'm an architect by trade, and so we always had the notion—certainly, it was enterprise architecture before we did cloud architecture—where we had governance which was really someone walking around and hitting people on the heads if they're using their own technology. And it was more than that. The ability to kind of set up policies at different levels and deal with compliance and deal with access to resources and have it linked with security was always something it's missing. Still missing today. So, do you cover that in the book, or what does the book specifically focus on in terms of what governance is?

Meredith Stein:

A hundred percent, David. The ideas that we have—the ideas appeal to many different cohorts of people. It started with the idea of boards of directors but certainly it'll appeal to other audiences like management, consultants like yourself. I'm an auditor by background, and Steve Mezzio is a professor, so from the student and faculty lens and learning and development professionals, like you said, David, you're a lifelong learner, so the idea that the book could also appeal to you is really important. It's user-friendly. That was one of our main goals. It has definitions and explanations, and you're very well aware that there's some complex jargon around cloud computing. It's a compilation of best practices, frameworks, and influencer perspectives like yourself. We really wanted to shine a bright light on the opportunities and risks about corporate governance because corporate boards, management, regulators have questions about how to effectively govern the cloud.

David Linthicum:

So, when you and your co-authors wrote the book, was there really kind of a way that you took as consistently how you're going to define the concept of governance and break it apart, or was it researched and really kind of had a—looked at how everybody's defining governance and really kind of wrote the book around that? So, I'm interested in knowing the process there because it's something I have to go through myself. So, is there a net new way of looking at governance in the book, or is this basically looking how people are typically consuming governance as a concept and implementing it correctly and then putting your own opinions around how it should be implemented?

Meredith Stein:

That's a great question. So, my co-authors and I spent a substantial amount of time researching and discussing how to best define cloud governance. It combines two independent and complex domains: the cloud and corporate governance. We try really hard to help the reader understand the impact of the cloud on the many governance functions, and when I say governance functions, I'm talking about the board of directors, internal audit, cybersecurity, risk assessment, third-party assurance. We present a compilation of cloud governance definitions, and we landed on one definition as the foundation for the book, and the definition that we anchored on has two parts. The first part is IT-related, and the second part is business-focused. The IT part of the definition talks about accountability and decision authority. The key piece is about balancing value, risk, and resources. The business part of the definition is focused on the investment and control for the cloud. The definition informed the creation of our cloud governance business process ecosystem.

David Linthicum:

So, tell me more about the ecosystem concept. Was it—when you came up with it and can you break it down a bit for us in terms of what are some of the components and why this would be interesting to people who are reading the book?

Meredith Stein:

Sure. So, in the context of life sciences and ecosystems, a region bounded by maintenance and chaos were a mix of human and non-human species work together. Every species in the ecosystem depends on each other, either directly or indirectly. The ideas that each species in the ecosystem affects and is affected by others, it creates this evolving relationship in which each species must adapt in order to survive in their ecosystem. If a species doesn't adapt in the ecosystem, it will perish. Using the life science ecosystem as a metaphor, the same concepts are true in a business setting for an organization using the cloud for its digital transformation. Management must recognize that they are embedded within the ecosystem and that they are themselves shaped by as well as shaping the business process ecosystem. Cloud governance plays a crucial role moderating extremes of the business ecosystem, striving to achieve the promises of the cloud at the same time as navigating and governing the chaos of the cloud. The cloud stresses governance in a number of ways. The cloud extends the enterprise with third-party service providers, it brings new opportunities for innovation. At the same time, the cloud causes new risks and exasperates existing risks. We illustrate an example of a cloud risk analysis in the book. To name a few cloud risks, cloud misconfigurations, failure to control cloud expenses, inadequate due diligence to select a cloud service provider, noncompliance with data privacy laws, and importantly a lack of skills and

experience to execute a cloud strategy. But the cloud creates a new need for skills within the organization that management must pay attention to. Management must address cloud risk with strong cloud governance. If the organization doesn't adapt and isn't resilient, then it will perish in the cloud ecosystem. And a business process ecosystem approach we thought is a practical way of looking at cloud governance functions in an organization.

David Linthicum:

So, how are we selling this to the board of directors and the C-suites there? So, who are the key stakeholders that should care and focus on this, and the reality is, I think in many times you mention cloud governance, people's eyes glaze over. They've heard about governance before, not necessarily cloud governance, but how do you sell this as a concept that should be dealt with as a concept and approach that should be adopted as well as underlying technology infrastructure to provide governance?

Meredith Stein:

It's a really interesting take because you're right, David, there are stakeholders who have a role in cloud governance such as the Chief Risk Officer, Chief Financial Officer, internal audit executive, the legal department, procurement. As an example, our book describes how it's important to integrate cloud activities into the organization's enterprise risk management framework to address those cloud risks. The metaverse and virtual reality are changing the way we learn new information. Our book has content about the impact of the cloud on the role of the learning development function. Our book also discusses the role of the CIO and CTO. David, you know that the CIO plays a substantial role in harmonizing the IT function with the cloud strategy. The CIO's no longer the IT developer of the 1980s. Now the CIO needs to be the business-savvy technologist who digitally transforms the organization. Our research led us to explore all avenues of shared responsibilities, and I'm not talking about cloud security shared responsibilities. I'm talking about defining responsibilities for cloud governance.

David Linthicum:

Yeah, you think about it, we're putting the emphasis on governance. It can't be on one individual. It has to be shared within the C-suites and understanding how we're adopting and managing risk, and that kind of comes to the core of the reason we're getting into governance in the first place. So, sorry to interrupt you. You finish your thought, but I would love to understand more about that.

Meredith Stein:

Absolutely you're right. We talk about many different people within the organization, and there are a lot of stakeholders. Democratized employees, we talk about them a lot. These are employees outside of the IT function authorized to engage with the cloud. Our cloud shared responsibility model advances that management create policies and define roles for employees interacting directly with cloud service providers as it relates to governance. There's also a cohort of employees who are engaging in shadow IT, those outside of the purview of the centralized IT function and outside organizational governance function. Management's often surprised that shadow cloud exists at their organization, and I would say that if a podcast listener has one key takeaway from this episode, it would be to create a cloud inventory. A cloud inventory is the key element of cloud strategy and also operational oversight.

David Linthicum:

So, ultimately as we're morphing into more of a hybrid work environment, becoming more dependent on cloud computing, this becomes critical to what the business is, and so we're struggling with the ability to kind of get an ROI back from cloud. I've been reading a lot of articles about that, I'm writing a lot of articles about that, so this becomes kind of a board-level play at the end of the day, even investors within the organization. There's always this corporate governance thing that they're talking about governing the board of directors and managing to the rules and making sure the accounting's done and things like that, but governance within the company way more important, and guess what, if we're moving into a distributed kind of a hybrid workforce, we may not even meet people we work with. I've worked with people for a couple of years, never met them. This becomes even more important because the ability to virtualize a company is only going to be as strong as the governance capabilities that we're wrapping around to keep us out of trouble. So, what are your thoughts on the role of the board of directors and how they play into cloud governance and how should they think about cloud governance?

Meredith Stein:

David, I have many thoughts on this. The boards of directors are challenged with making sure they ask management the right questions about cloud governance. Members of the board have a duty of care to be literate and fluent about the cloud. Management has to include the cloud on board agendas, and the board has to be prepared to discuss the cloud at meetings. If cloud governance is not on board agendas, it must be added soon. Actually, I think that actually bears repeating. Listeners, add cloud governance to your board of director meeting agendas. Cloud jargon is, we found in our research, an obstacle for a board member to discuss the organization's use of the cloud.

It's management's responsibility to help their board members become fluent about the cloud through training and other interventions. Our book advances questions the board can and should ask management about cloud governance. David, when I signed on to this project to write this book, I vividly pictured board members on an airplane preparing for their upcoming board meeting holding our book and reading the questions about cloud governance that they should ask management. So, listeners, feel free to reach out to me, Meredith Stein, on LinkedIn to chat more. I'm very passionate about the topic the role the board of directors plays in cloud governance.

David Linthicum:

Yeah, as someone who's sat on a lot of boards in my career, I would probably be one of the ones who's doing that, trying to become an expert in the plane flight, so to speak. And there's multiple dimensions to this, and if you're looking into understanding the businesses, this really kind of has to be a core aspect of doing that. So, let's talk about environmental social governance, ESG. It's been a hot topic in the press. I've been talking to a lot of reporters about it, things as it relates to cloud computing, but tell us how governance is related to ESG. I know that your book talks about that, so let's talk about that real quick.

Meredith Stein:

Thank you. People are going to want to read the chapter about the relationship between the cloud and ESG. It's crucial for management to examine environmental stewardship, social responsibility, governance issues in the context of the cloud. There are two important ways that the cloud impacts an organization's sustainability strategies. First, how the deployment and use of the cloud impacts sustainability. I'm talking about carbon emissions, water consumption, and data affects. Second, the cloud can serve as a powerful tool for organizations to improve ESG reporting. Organizations have a responsibility to act on the world's social and environmental challenges. It's crucial for management to consider ESG factors in the cloud.

David Linthicum:

So, one of the things that we always talk about in terms of ESG and the reason that people are leveraging cloud is the shareability aspect of it and the ability to get a sustainability benefit from leveraging cloud because we're able to utilize more hardware in more productive ways, and therefore it's going to take less power, have less of a carbon impact. But I think to your point, there has to be some discipline within the organization or else you're never going to get there. The ability to kind of write efficient code, the ability to leverage platforms that are more optimized than other platforms, the ability to leverage some cloud providers over others that are providing a better ESG score because they're able to provide renewable energies to power their cloud data centers, lots of things. And it's this moveable thing, this very complex array of all these interlocking parts that becomes the complexity where companies fall out of their ESG score in some way. So, this will help them do that? This will help them maintain discipline within the organization, so they're constantly focused on ESGs and putting governance around that?

Meredith Stein:

Yes, absolutely. And I think in context of the cloud, again, organizations have to examine how governance issues impact the cloud. And one example that we delve into in the book relates to how an organization should incorporate the due diligence process when selecting their cloud service providers. Service level agreements have to include commitments and requirements related to the environment, how there's that social responsibility perspective where organizations are being held responsible for working conditions, whether it be fair compensation, safety, human rights, not just at their own organization but also third-party vendors like cloud service providers or even further extending the enterprise, the payroll providers of the organization that uses the cloud to do their business.

I think about organizations' governance policies and how that relates to their data ethics, the concepts of right and wrong as it relates to collecting unstructured and structured data and how that relates to making sure that personal information is secure. There's a lot of emphasis right now in government regulations on data ethics, take the E.U.'s general data protection regulation and HIPAA in the United States. So, yeah, David, you're absolutely right that this is definitely something that's going to continue to be a focus for organizations.

David Linthicum:

Yeah, and experience with this you guys are going to end up facing an audit, so you need to put those internal limits in place and governance is pretty much the only way to do that. Let's talk about the future of cloud governance. Ultimately cloud providers are innovating as quickly as they can to benefit the company and benefit themselves because they're pushing their own technology out into the ionosphere that people are leveraging, and this kind of creates kind of a balance effect between innovation and governance. In other words, we want to move as quickly as we can, move to AI, and tie in transactional systems and supercomputers, things like that, but we have to maintain innovation in the context of governance. And so how can we make maintaining effective governance work for a particular enterprise and how is this going to be something that we need to monitor and watch evolve into the future?

Meredith Stein:

Great question, and I agree that management has to transform how they govern innovations leveraging the cloud. Organizations and cloud service providers are already seizing opportunities to leverage the cloud-enabled metaverse and other technologies such as cloud gaming, IoT, AI. The first thing I think about when I hear the words artificial intelligence is data affects and privacy risks. These risks surrounding AI demand extensive governance. Our research also showed that the market for cloud gaming is massive.

One study we discussed in our book expects 4.5 billion gaming consumers worldwide by Year 2030. That's the equivalent to \$6.5 billion in revenue. The technology companies are betting big on the metaverse, which as you know is dependent on the cloud. There are amazing things that are happening, and these utopian promises of the cloud combined with the chaos of deploying and scaling the cloud certainly has profound governance implications.

David Linthicum:

Right, and you have to kind of maintain the idea and the notion of governance to really get to the level of able to weaponize this innovation as a true force multiplier for the business because if you do without governance, we're unable to use that in kind of a business context, and it brings risk, and risk brings cost. And, so, this is why one thing's married to the other. This is why I tell people it's great if you're going to move out to any kind of a new technological space. AI technology, supercomputers, quantum computers, things like that. But you have to put the rules and regulations around it and internal policies around it to make sure it's going to be leveraged effectively, and also put the financial restraints around it to make sure people aren't going to have runaway cloud bills that they seem to be getting these days. So, where do you—what do you want our listeners to remember about this conversation? What are some of the bullet points?

Meredith Stein:

You do not need to be a technology specialist to understand the corporate governance implications of cloud computing. Our research confirmed that there's a lot of confusion. Many businesses are confused about cloud governance. Second, an ecosystem mindset's a practical way of looking at cloud governance. Cloud governance is a wicked problem. If it's not done properly, it threatens cloud success, it threatens the future for the organization within their business ecosystem. Super important, buy our book entitled *Cloud Governance Basics and Practice* written by me, Meredith Stein, Vince Campitelli, and Steven Mezzio. Give yourself this resource and connect with me on LinkedIn at Meredith Stein.

David Linthicum:

I'm assuming wherever fine books are sold?

Meredith Stein:

Absolutely.

David Linthicum:

This is a great conversation. I think that ultimately as we're peeling the onion of cloud computing, this is an aspect of it that we're overlooking. We talk so much about technology and how these things kind of work and play well together. We don't really look at the fundamentals of architecture. And you think about it, you go back 20, 30 years when there was more of a discipline around how we did architecture, governance was kind of front and center, the ability to have great policies, the ability to put guardrails around various things, and it's becoming more important now that we're getting into the second, third,

fifth generations of cloud computing in many organizations. If you enjoyed this podcast, make sure to like us, rate us, and subscribe. You can also check out our past episodes, including those hosted by my good friend, Mike Kavis. Find out more at deloittecloudpodcast.com. If you'd like to contact me directly, you can email me at dlinthicum@deloitte.com. So, until next time, best of luck on your cloud journey. Everybody stay safe.

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