



For Cloud Professionals, part of the On Cloud Podcast

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Title: Bringing higher-ed to cloud: a success story at the University of Rochester

Description: As cloud adoption has gained steam over the past half-decade, the education sector has often lagged behind. However, that's changing—in part due to the shift to remote learning brought on by COVID-19, but also due to a desire to enhance the student experience. In this podcast, David Linthicum and guests, Deloitte's Kathy Karich and University of Rochester Deputy CIO Julie Myers, discuss the university's cloud journey and how they've made it a successful one. Kathy and Julie cite three critical keys to success: focus on getting your data clean, redesign processes for cloud, and manage change—and people's reaction to it—effectively. Julie also stresses the importance of good executive leadership to ensuring enterprise-wide buy-in for what can initially be a bumpy ride to cloud.

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Operator:

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David Linthicum:

Welcome back to the On Cloud Podcast, your one place to find out how to make cloud computing work for your enterprise. This is an objective discussion with industry thought leaders who provide their own unique perspective around the pragmatic use of cloud-based technology

So, today on the show we have Kathy Karich and Julie Myers. Kathy leads Deloitte's Workday higher education practice and she brings more than 25 years of experience helping large universities and government organizations enhance performance through technology and operational improvements. She has

worked with a variety of different technology solutions including Peoplesoft, Oracle eBusiness Suite, SAP, and Workday. She has successfully served more than 35 government and educational clients providing hands-on, partner-level leadership for diverse portfolios of successful projects across the finance, human capital, student.

Julie, as the deputy chief information officer, CIO, the University of Rochester – and I know that's a great school – her team is responsible for the strategy of enterprise governance, major system implementations, university reporting, analytics, and project management. In addition, she co-chairs the newly-formed data governance program for the university.

Man, you guys bring a lot of experience. Julie, I'm going to start with you first. What's kind of your day like? What does the day like in the CIO at a university?

Julie Myers:

Well, it's currently sitting in a lot of conference calls and meetings. It's amazing how people think in higher ed maybe with the pandemic that we have slowed down, and in essence I've never seen more happening at an institution of higher ed and a medical center in my entire career. We're pretty fast-paced. We're implementing a lot of solutions. We have to pivot on a daily basis to support our students in the pandemic, components such as vaccinations and making sure the students are quarantined if they get sick. And it's been a really interesting, very dynamic year.

David Linthicum:

Yeah, I do a lot of research in the cloud space and you would think that healthcare would be booming and university would be fairly steady, perhaps even dropping a bit, but the opposite's true. I mean, the university settings are having to innovate to really kind of pivot to figure out where they need to be going forward and how to provide a good education. And, so, therefore, and to their credit, I mean, they're just going crazy with innovation, leveraging cloud as a force multiplier to kind of take the university systems to the next level.

So, Kathy, what do you do with your day?

Kathy Karich:

[Laughter] So, yeah, I've had the good fortune to work with organizations like the University of Rochester over – I've been doing ERP work for over 25 years, so started with more client server type products, and then evolved into web-based things. And then probably the past almost nine years now working exclusively with cloud systems in the higher ed space and in fact started with the University of Rochester first when they were modernizing their financial system which was on a 40-year old mainframe. And then they went on to do their student system, so again had the good fortune to work with the UR over that whole period of time. And, Julie, I'm just thinking if you had said, oh, you're going to be a leader in doing a student cloud system, and guess what? You're going to do your first 100 percent virtual student registration one month into April of 2020, I think [laughter] – I don't know that you would've ever thought that would've happened, but –

Julie Myers:

No, that is true, but we had an excellent team. And actually, it was amazing how close the team got during that implementation. And when everybody had to go remote, they had such a strong dynamic and we had such great partnerships that we were able to kind of work seamlessly to continue on the road and deliver it. And it was so intuitive for students. So, even though they were all over the world the first registration was amazing and a huge success.

David Linthicum:

Congratulations. So, the university just went through a cloud migration and tech transformation project, and, so, tell us a little bit about that. Kind of set the stage as to what you did, what you accomplished, and maybe some inside baseball around what you learned.

Julie Myers:

Well, yeah. So, during the initiative, which started really back in 2014 as Kathy was saying, when we decided to replace our 40- or 35-year old financial system, at that point in time it was really a risk mitigation project –

David Linthicum:

Was that a person or a computer?

Julie Myers:

It was a computer but a mainframe. I'm not even sure – we finally actually – I just have to tell you. Two months ago, we finally retired our mainframe system. It had served us well, but it – we were wishing we could have a big party, but we couldn't even do that in this pandemic. [Laughter]

David Linthicum:

You can turn it into somebody's heater.

Julie Myers:

That's what we talked about. What should we do with it? But we started the modernization to really be risk mitigation, as I said. And then when we got through the finance system and really started looking at our aging student system and everything we'd built around it, we realized that we really had to go forward and move on that project. And at that point in time, our focus was really on how to make the student experience better and how to bring our schools closer together from a business process arena. We have six different schools and really kind of operate in a very decentralized way. And during the design process they fundamentally all came together and agreed most of their business processes could be really simplified and aligned, and we could really bring a much better student experience, a much better faculty experience, and a much more efficient process to the entire institution.

David Linthicum:

So, Kathy, what are you seeing in the industry right now relative to this project? Are you seeing lots of universities engage in similar things? Are they weaponizing technology to be more innovative? And I love the fact that Julie kind of talked about raising the student experience up. And as someone who was a college professor for many years I don't think I heard that uttered, so that's something that's good. [Laughter]

Kathy Karich:

Yeah. I mean, I think the students are just so used to having technology at their fingertips 24/7, and with everything being virtual it's just made technology be so much at the forefront. And I think for many years if the universities were having to say, "Well, are we going to build another classroom building or build another dorm?" It was a hard decision to say, "Well, let's go invest in technology." But I think that's sort of flipped on its head now and I think they're realizing that to do virtual and support a virtual operation, it's just so much more difficult without having a cloud infrastructure. And, so, we are seeing unprecedented projects moving forward to – we knew we had kind of something going but we just kept seeing the universities and – you know, public and private across the country continuing to move forward because I just think they feel they don't have a choice. So, – and even, Julie, I don't speak for you, but just thinking about what if trying to do that registration 100 percent virtual if you had not been on the cloud student system and how difficult that would've been.

Julie Myers:

Right. Yeah, I'm not sure we could've been successful at all. And I think even the virtual piece, the cloud piece, but the thing that also I think is really critical is what the university could never have done and never can do really by itself. The fact that cloud providers – I mean, that's their business, right, and they're innovating in real time. They're bringing things like AI and machine learning to the forefront, right? And independently schools can't even – can't invest to do that innovation, and, so, we're really relying on that continuous improvement and really – again, that continuous innovation to keep us in the forefront with our students and our faculty.

David Linthicum:

Yeah, and if you look at the R&D spend of the cloud providers out there, it's well and above that of traditional systems and people are moving forward. So, in other words, it's not necessarily – we're moving to the cloud for good reasons, but also moving to the cloud because I think that's where the action is and that's where the technology improvements are. That's where you can monetize some of the better technology to punch way above your weight, such as leveraging AI systems, data analytics, things like that.

So, Julie, put you in a time machine. Go back to the beginning of this project, maybe the beginning when you started as CIO. What would you tell yourself in terms of how to avoid some of the mistakes that were made and what would you do different?

Julie Myers:

The first thing I would do different is I would really focus on our legacy data. I think that there's so much cost involved in converting data, especially 30-year old data when you didn't have any guardrails. We spent a lot of time and a lot of energy converting both our financial systems, of which we had to delay because we couldn't get our research data convert – our grant data converted, and we had – we converted student data I think for two and a half years. We're the best-positioned prior to clean it up prior to investing in a major project where you have implementation partners and large project teams and you're burning dollars quickly. So, going forward we've invested in making sure that we clean the data, then begin the project.

The other is just making sure that – how do I say this? It used to be that we could customize a system to make it work for the university or make it work for your business processes. And what you really want to do is make sure that you're leveraging the business processes and the simplification that really come with a cloud solution. They're providing you some guardrails on how to behave in their environment, and you want to embrace that and leverage that.

It's really expensive now to do change management, to change people, and I think we would've invested more in change as well. Our first project was difficult to stabilize, I will say, because we didn't bring people along as well as we should have. We just thought, "We're changing a financial system – you know, debits and credits, it will all work the same," and it wasn't farther from the truth. And, so, again, in our second project we really invested a significant amount of energy and investment in bringing people along, understanding their new business processes and embracing them.

David Linthicum:

So, Kathy, kind of the question for you since you have kind of a wider aspect of what's going on in the university systems in general. So, people who are going through a campus modernization, what would you tell them? What things do they need to understand before they create this venture?

Kathy Karich:

Yeah. Well, I think some of the things – and Julie touched on – even with these cloud implementations, the areas of risk are actually not so different in some ways. So, data – that was always something even 25 years ago data conversion was a risk area. There are systems that stay, so you're going to have to write interfaces or integrations if it's a financial system, it's to banking systems, or HR it's benefit systems, or – those things are areas of risk. And obviously the people part of it probably even more so because you're not customizing systems to adhere to the processes of that particular organization. But I think something that is different is that things move a lot more quickly in the cloud world because you're not customizing – the systems do work coming in.

You have these tenets up and they're working, and, so, decision making becomes very critical and having the governance in place that the universities can make decisions quickly, or any organization implementing cloud can move quickly is pretty important. So, just having those set up in advance, as Julie said, so that you're not slowing things down in a way that while these large teams are – or any team is on the ground, you're not using resources of the organization in a way that you don't need do. But being ready for when that project is starting and doing some preplanning in advance is really a good idea.

David Linthicum:

Yeah, and kind of a common theme of what's going on out there, that universities as we mentioned in the beginning of the podcast are pivoting and they're becoming sources of innovation very businesslike in terms of their ability to kind of compete in a global economy, whereas something where it was competing regionally. So, Julie, am I on to something or way off?

Julie Myers:

I definitely think you're on to something. I think the pandemic has become probably the fastest, most transformative change we will ever see. And I think we're all going to have to kind of really think about how do we transform ourselves quickly. What do we want to be out in that global economy and what do we want to offer? You can teach anyone from anywhere with a single professor kind of coming in with cloud technology. I can work from anywhere and support any institution. And, so, it's important for us to have a lot of flexibility and really be able to – as you said, be able to pivot and to be able to use kind of the cloud technology to offer new things in a really seamless way.

And I also think the cloud offers the ability for IT professionals to become much more business partners, right? We understand the technology, so in many cases we understand the end-to-end solutions much more than the business does. A lot of times they see one aspect of what happens, and we can really help them transform and pivot in a way and think about things in a way they've never really thought about before, because we're freed ourselves up from the normal coding and designing and we're just consuming cloud solutions.

David Linthicum:

So, Kathy, kind of the same question. I mean, you're seeing lots of universities, working with lots of universities out there. Are you seeing this movement into more of an innovative, businesslike kind of posture than it was in the past?

Kathy Karich:

Yeah, absolutely. I think even the nature of the work, as Julie mentioned – it's not about running datacenters and things like doing infrastructure anymore, so they can really think about how to support the mission of the university in a strategic way and even partnering with some of the cloud – I've seen that very much – even in designing for – in the case of the University of Rochester, even being an early design partner for this cloud student product and really providing the blueprint of the vision of the student product and making it a better product because of the vision that the university had, helping shape that product. And that code is not just for the product and, some of the reporting, some of the analytics, and I think that's just an example of how you can sort of – the university can make the software work better for them and for the industry itself.

David Linthicum:

Yeah, I see this is a very exciting proposition. I think universities are moving into a new dimension. It was probably a long time coming but I think it's going to have a huge positive effect on our ability to deliver education. So, Julie, question to you. Moving forward, ultimately what do you think are the challenges you're going to be facing and how are you going to overcome those challenges?

Julie Myers:

Well, I think the challenges are being able to kind of keep up with the pace of change that is happening, not just in the products that we have currently but in the products that are continuing to kind of evolve on a daily basis, and trying to understand how much change can the institution take, how much can people consume in a normal year, and trying to pace it in a way that strategically answers the mission of the institution but also allows people to do it in a way that they can be successful at their day to day business as well.

So, I think it – you know, we're ready to rise to the challenge, but I think – in general I think universities have been I would say a little bit slower paced, and now we've got to kind of pick up the pace in information technology because the university is basically living on all the technology that we have to offer. And they couldn't have survived this pandemic without it.

David Linthicum:

So, Kathy, kind of same question to you but much wider look at the market. So, what do you think the challenges out there that the universities, other educational institutions around the world are going to be facing? And how do you think they're going to overcome the challenges?

Kathy Karich:

Yeah, I think there is still some resistance to change. I mean, that's just inherent, and there is still entities out there – there's places in the university that are used to doing things the way they've been doing it, and these are – it's pretty dramatically changing. In some cases, they're leaping two and three generations of process and technology at one time. To go from a 35-year old mainframe system to the cloud is a big leap and, some do that more easily than others. So, I think having the support and leadership and particularly of the academic – the president, the provost, some of the deans within the university and having them be very visible and very supportive of that change is just critical to being successful.

David Linthicum:

So, given that this is an education thing, we're improving how we educate ourselves or educate our students, so, Julie, where did you go for information and how to learn about cloud, learn about how to be successful, learn about some of the tricks and to make this project successful?

Julie Myers:

I think the great thing about higher ed, first of all, is that peer benchmarking is invaluable. So, we were able to work closely with many of our peers that were even in this design partner program. Our vendor was great at educating us, and our consulting partners are fabulous at helping us along this journey and kind of understanding what's actually possible. And I think if we give them a problem at times, they come back with multiple options and, some creative solutions.

I also think it's just about trial and error, right? We've tried a few things; they've worked. We've tried a few other things; they didn't work. So, it's a challenge. I don't think there's any total playbook, so I think it's kind of learning as you go as well.

David Linthicum:

So, Kathy, you have a lot of on-the-job training, that's for sure. But where do you go to learn more about cloud and to gather more information and pontificate about the next generation of technologies?

Kathy Karich:

There's a lot out there as you know, David. You read everything you can find. You talk to – as Julie said, what's fantastic about the higher education industry is that it's an open book. You know, they're willing to share everything from lessons learned to get down to even tactical level. So, if you're doing integration to the same system, we'll share the codes with you. [Laughter] It gets that tactical. So, I think they're willing to share at every level and that's incredible.

And then there's industry conferences, there's podcasts like this – you know, you're listening to everything you can find out there. And I mean, it's really an exciting time because it is new, and, so, if you do it for a few years it's quite a tightknit community, even among – you know, the "competitors" and the consultants in the market tend to have camaraderie and share, because even the vendors, the cloud vendors encourage – kind of typical competitors

actually do share information because I think we're just excited about the possibilities of what this technology can do to help the mission-driven organizations that are served, their constituents, and I think we're all pretty excited about that.

David Linthicum:

So, last question – I'm going to go to both of you. Julie, starting with you, what are the words of advice that you would give others taking on this kind of modernization project within universities?

Julie Myers:

Well, I think you need – first of all, I think you need strong leaders. I think Kathy kind of referenced it. I mean, you need really strong university top-level sponsors. You need strong leadership within your IT community. These projects don't just need a project manager; they need somebody to kind of take them through this journey, which is uncomfortable for many, right? It's new technology. Some of it's a little elusive for people and, sometimes these large projects get difficult, and, so, leadership is key in that journey. And again, I think change management – I think back in the day when we could modify – as I said earlier, modify our systems to accommodate the business processes that they wanted us to run, we can't do that anymore. And people are difficult to change. It costs a lot of money. It takes a lot of time. It takes a lot of energy. And a good change management program can really take your investment to a whole new level.

David Linthicum:

So, Kathy, same question. Words of advice?

Kathy Karich:

Yeah, I think it's really changing the mindset, too, same thing as Julie but it's now a continuous improvement mentality. It's not we finished the project – it's a very – you know, it's a difficult project and we're going to finish, though, and then we'll be better off, because really there's different periodicity of these changes that get these improvements or enhancements that get rolled out on a periodic basis, but they are rolled out on a periodic basis. And there is some flexibility as to how much of the enhancements each organization can opt to adopt or not adopt, but they're being pushed out regularly; that's the whole point.

So, this idea that, well, we want everything to be certain and then every five or ten years we'll have a major change, that's really not the approach anymore. It's a continuous – you have to sort of get comfortable with continuous change and continuous improvement, and that's sort of a state of being, and, so, that's very different than sort of the traditional what it has been in the past. And I think it's better. I think it'll – once people get used to it, but that's going to be pretty challenging. People should have their eyes open and try to get the organizations to embrace that sort of philosophy.

David Linthicum:

Yeah, I think one of the common patterns that we're seeing on this podcast as we're inviting in users, people that are making cloud work for their enterprises, for their institutions, for their government agencies, things like that, is that one of the silver linings of the pandemic is they're basically looking at resetting and becoming more innovative in this space. And, so, there's a positive reaction to something that's fairly negative in that we're going to take our business, take our universities, take our government agencies to the next level, leveraging all technology but specifically cloud technology as a force multiplier to make that happen. And I think that's a positive thing.

So, if you enjoyed this podcast make sure to like and subscribe on iTunes or wherever you get your podcasts. And don't forget to rate us. Also check out our past episodes including the On Cloud Podcast hosted by my good friend Mike Kavis and his show Architecting the Cloud. If you'd like to learn more about Deloitte's cloud capabilities, check out DeloitteCloudPodcast.com, all one word. And if you'd like to contact me directly you can reach me at DLinthicum@Deloitte.com, L-I-N-T-H-I-C-U-M. So, until next time, best of luck with your cloud projects. We'll talk again real soon and you guys stay safe. Take care.

Operator:

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