

GW: Welcome to the Global Opportunity Initiative podcast series. I'm George Westerman, your host. Today, I'm happy to be able to talk with Katie Hall. Katie is a graduate of MIT and she's the CEO of a new company called Clairra. But she's also been one of the pioneers in the whole conversation around competency-based workforce management. So really happy to be able to have the chance to talk with you today, Katie. Welcome.

KH: Sure. So as you mentioned, I'm a recent MIT graduate. But before that, I spent most of my career in learning in the public sector. So I'm calling in today from Michigan. I live in West Michigan, Grand Rapids and grew up here. So I'm a proud Midwesterner. Sometimes I say Midwesterner with a chip on my shoulder.

Grew up here, worked in public policy, political science. Had a lot of different jobs as a young person. Worked in a factory, fast food, was a waitress, had a hotel job. And you know, obviously I had sort of a front row seat to some of the economic disruption in Detroit. I had a lot of friends who worked in automotive, and the economy took a turn, and a lot of talent left the state. And so having grown up here in the Midwest and worked here and having family here led me to pursue policy and workforce and economic development in particular. So I care a lot about everybody having the opportunity to learn and work and especially be able to compete in the future, where of course, we're going to share work with machines and there's going to be rapid change. And I feel like we're not in that position right now. And so that's what led me to start the business and do my education at MIT, so that I could launch a company that I hope will change behavior with employees and employers and fix some of those systems that frustrated me growing up.

GW: So Katie, we've known each other a long time but you've been working on this competency-based workforce management challenge since long before that. What is this topic and how does it differ from traditional approaches?

KH: Sure, so I think this discussion has been in the mainstream for a long time but the pandemic really changed the amount of engagement around connecting people to work, what does it look like to go to school and then get a job, what about folks all around the world who don't have a degree. So this whole discussion of matching labor market supply and demand and matching those two things to education is top of mind now, which certainly, I'm a big fan of and matters a lot to our business.

But you're right. I sort of got into the competency-based model about 10 years ago. So I had done public policy school at the University of Michigan. And I had done a couple of projects there where I worked with the city of Detroit and different regions in Michigan to align community college education with badges or credentials of some kind.

And as you probably know, there are a lot of models like this in other parts of the world where you get on a technical track and then you get a credential and that means you're going to have these jobs, or you go into Higher Ed and that means you're going to have these jobs.

We're actually fairly new at using competencies and skills in the US. And because we are sort of 50 small countries here when it comes to education and work and policies around that, it's hard to understand what competency-based training means and even harder to implement it here. So the idea of using competencies is rooted in what the goals of education and work are. So companies in my 10 years of workforce would sell us, I just want to know what someone can do. I just want to know what a person can actually do on the job so that I can plug them in and I can train them accurately and promote them.

Individuals want the skills needed to be linked to a job that works for their skill set, works for what their ambitions are. And Higher Ed and learning of all kinds, wants to prepare people to be connected to work and be successful.

So competencies are very simply just what you can do on the job. So maybe it's manages a team of engineers, listens to a colleague with empathy, it can be anything like that. It includes the whole spectrum of experience and attributes that you would need to have at work.

So a competency-based approach at a business would mean instead of a resume or a job description or an assessment, let's just get a list of competencies that we need. What do we need to execute this business function or this role? And then maybe we go out and source based on that. We train internally based on that.

And so it's powerful because when you get that granular, you can cut costs and cut waste. You can promote up through the company without all those barriers that sometimes exist. And job descriptions and resumes are just, they're subjective. I mean, there's a lot of guesswork that goes into those two documents. And they worked in an economy where you were going to have one job maybe or two. They're just not flexible or forward-looking enough for the economy that's coming. And so we try to get businesses to go more toward the granular and competency-based route and away from the subjective, more traditional documents.

GW: So are you saying that these ideas of examinations, certifications, diplomas are less relevant? Or is this added on top of that?

KH: I think we complement a lot of the structure that's already in place. I think there are a lot of scenarios where exams, credentials, assessments are critical because there are all sorts of other things that matter to a job beyond just what you're going to have to do, which is what competencies are.

So medicine is a great example. It's highly regulated, highly credentialed. So there are scenarios where credential and assessment is a necessary complement. But I think over time, this would be a really interesting conversation to have in 2030. It's hard for me to imagine a world where assessments, exams, and credentials as we know them today can keep pace. So that, I think, is a question to be answered. But I think for now, the two things work together.

GW: Yeah, and I love what you said, Katie, this idea about certifications not being able to keep up. And I think you're absolutely right on that one.

KH: Yeah. I mean, we'll still have them in some form. It's just going to have to look different.

GW: So we already talked about how you got into this space. So one of the things you did is, you helped create the Connecting Credential Framework. What is that? How can that help this conversation?

KH: Yeah, that's right. So that was, gosh, 2014, 2015 now, I think. Connecting Credentials Framework, so I was working for corporation for a skilled workforce, a 501(c)(3) based in Ann Arbor. And we were grant-funded, so we did a lot of state and federal business but also a lot of grant-funded projects.

And Lumina Foundation funded a project where we would try to create a framework for the United States that would align work with credentials, so jobs and degrees loosely, in a similar way to what I mentioned earlier, other parts of the world that have qualifications framework. So Europe, for example, has a national qualifications framework for individual countries. And then there's a European qualifications framework for the whole continent or majority, now, of the continent.

So our role was to create that for the United States. And it was called Connecting Credentials because we wanted to make it clear that it's not just a list of competencies that you need to get a specific job. It's also meant to show how you can progress through education and potentially move one way or the other.

So one of the things that we tried to do for the United States is make it a little bit less structured because there's so much variability, as I talked about earlier, in credentials and across different states. So we built it so that the language included a knowledge domain and a skills domain.

And it was written broadly enough that it could apply to multiple industries, but it would at least be a starting point and a linkage between education and work. And if you were a company, you could get a sense of the level of competency based on the level that they were in in the Connecting Credentials framework. So the original one had eight levels. And so you can see that would help a company understand where a role sat, what education they needed for that type of role.

So we had a big event in DC. We had thousands of employers in Higher Ed. And employees and workforce organizations bought in. And it's still used today. It still gets downloaded and used across the country. But it's tough formalize the use of a tool like that.

So I had the microphone turned off because the air conditioning keeps coming on and going off here. But then you missed half of a sentence.

GW: One of the things that was interesting is this idea of just being able to put eight levels on and say what good means in these competencies. I thought that was interesting. You mentioned that the original had eight. Is it changing now?

KH: Yeah, so the original still has eight. Part of what happens sometimes in the adoption of the framework is that an institution or an employer will simplify it and use four levels instead.

GW: I see.

KH: Yeah, some companies don't have as many entry level jobs and so they'll just focus on the middle levels, 4, 5, and 6, which we know get the most use. I mean, most of the competencies

in most roles are sort of mid-level. They don't require expert level functioning or knowledge. And a lot of them aren't the other end, which is really basic entry level, most of them. So I'd say 4, 5, and 6 are the most used. So the Connecting Credentials framework was actually part of a broader, multiyear grant project that Lumina Foundation funded. So the team of us from my nonprofit would routinely sit with Lumina in Indianapolis.

And this was several years ago, and they were really-- they were the first, I think, foundation to start putting real backing behind these workforce challenges linked to education, of course, and hiring. But this was one of the first projects that had this meta view of competencies and how it should connect to work in the United States.

And I believe we were the first credentials framework built for the United States. And so that was a pretty significant feather in our hat.

GW: I've only seen the framework. I haven't seen it implemented. So is the idea that you're-- the idea was to get to a new O*NET, but now it's not. So is this, each employer can use it for their own jobs? Is that what it is?

KH: Pretty much. It's embedded in a lot of consortium and grant-based work now across the United States. So it became part of apprenticeship programs, internship programs. It's used by some one-stop centers workforce organizations to help with intake for folks who are trying to get back to work. It's also embedded in some community colleges. And so I think on the website, there are a couple of case studies of how the framework has been used at various institutions. But we wanted to make it open source and downloadable. And companies still come in and download it and try to integrate it into their talent systems.

And so we thought the best way to drive adoption would be to give the market something helpful and let them handle the implementation in the way that it would be most sticky for their organization.

GW: So Katie, we've been talking about competencies, not just credentials, that in many cases, the credentials can't keep up with the competencies as they're changing. And yet, you and I met because you were a student at MIT.

So what made you want to go back after all this work you've been doing, helping to define the whole conversation, to then go back and get a formal degree at MIT?

KH: That's right. That's a great question. So I came to MIT because I felt strongly enough about this competency work that there had to be a better way to drive adoption. So I'd been thinking, in the several years that I worked with employers and governments, someone should turn this idea, the idea that organizations can use competencies to manage people, someone should turn that into software. Because that's the thing that's going to change behavior, right?

So we all know the stories about the unicorn companies who created something that actually started changing behavior. You have to educate the market about why something's working and the value that it could create for them. But you also have to make it incredibly simple to use. It's hard to use a PDF, especially with the pace of change.

So as I mentioned, I had done policy school after I worked for the federal government. And then I was doing this workforce-focused competency work. And I had thought for several years about the idea of going back.

And the reason why I chose to go back and do the formal degree, specifically at MIT, is because I'd had some business school training, and business training. But I felt like if I'm going to be successful in launching this thing and doing all the things required to launch a technology startup, a machine learning startup, I'm going to need the learning from one of the best institutions in the world. I'm going to need a crash course, basically. I need a full-time load to learn from the best in the world, meet colleagues who might eventually end up being team members or co-founders, and I need the brand and the venture capital connections that come with a startup ecosystem like MIT.

Those are the things that are going to help me maximize the success of the project. And so could I have done it without MIT? Maybe, but in 18 months, I went from nonprofit researcher and future work director to the CEO of a now twice venture-backed tech startup. And MIT was the linchpin that made it happen.

GW: So thank you. Can you tell us a little bit more then? What is your company doing? What is Clairra?

KH: Yeah, so Clairra is a competency analytics workforce solution. So we are just a SAS tool for businesses that has a database of competencies in the back end, about 20,000 of just those things people can do that we talked about earlier. And that allows businesses to create a big digital map of their whole workforce.

So sounds complicated, but it's actually quite simple. We ingest company data. We onboard employees. They come in and they answer a few questions and we pull out competencies that they have from previous jobs, volunteer experience, all that invisible stuff that sometimes isn't captured on a resume or written in a job description.

And once that data comes in, we're able to show companies all the invisible skills that they have. We're able to show trending competencies. Do you have gaps in a department where you need different competencies? Because the challenge is, job descriptions, resumes, ATS systems are point in time and they're backward-looking. And so there are so many things employees can do to add value and so many opportunities to cross-train or customize education that are hard to uncover without a system like ours.

So at its core, that's how it works. And we get companies who come to us and say, I know the things that I don't know are expensive. There's so much I don't know about my workforce and that's costing me a lot of money.

We also get companies who come to us because they care about diversity and they know that competencies are a fairer way to assess and promote and train than using the name of a school or a zip code or who knows who. And we know a lot of the stuff just lives in people's heads still. So that's the solution and how it works. And we're in the early days, but we're getting really good feedback from the early customers. So it's exciting to see it alive in that way.

We have an advanced manufacturing company, 2,000 employees, came to us after I believe seeing us present at a conference about our solution and said, we are trying to understand what

the competencies that our high performers have. So we have line leaders that are incredibly important and plant operators. So if you work in manufacturing, you know that plant operators, L3 operators, critically important to a manufacturing business. They make sure the lines run, product goes out on time.

So we want to know what their competencies are so that we can make sure to train all the new folks to be like them and we can also have them run trainings. And if they want to become part of leadership, which is what we want, they can jump over to the front office if that's what they desire, so sort of an upskilling need. So visibility, upskilling, and also promotion from within.

So they came to us with that ask. They had mostly process sheets. That was their workforce documentation. So they had an Excel file of the skills that they thought these folks have. Then they had process sheets, what do you need to run this machine, work on this line.

So we ingested that data, created a competency library. Then the operators went through the mobile flow in the break room. This whole process took four weeks, about, get the data in, onward the employees.

And they actually learned that three of their four top performing operators had a military background. So of course, everybody loves to hire vets. But that was a great example of some of those incredibly valuable but hard-to-uncover competencies.

So three out of four had a military background. And almost all of the L3 operators had a service background, so they worked in a restaurant or in a hotel. And that mix made them really disciplined, but also, they had great communication skills.

So that was a big epiphany. The company took a second step, which was to remove a couple of job descriptions that they had posted. So after they had that competency profile, they were able to find people internally that were similarly-profiled to the L3s and they learned that they didn't need to hire for it externally. So that was another efficiency.

So we're a few months in with that client, but that was sort of a specific use case.

GW: Such a neat story, right? Helping to unload-- such a neat story, helping to uncover the talent you already have in your company that you can promote instead of hiring externally. Just kind of off on that, I didn't hear the AI there, Katie. Where's the AI in that story? Because I heard workforce consulting. Where'd the AI come in?

KH: Yeah, it's definitely software and definitely not service. It's definitely not consulting.

So Clair is sort of your smart HR assistant. So she becomes part of the HR function at these companies. And she does what it would take humans a really long time to do, which is where AI is best suited to make a huge impact right now.

So before Clair, maybe this company had job descriptions, resumes, maybe a skills test, and an Excel document of skills. So that takes a lot of labor hours to maintain. It's also a lot of interviews with employees and there's a lot of trouble with that data. It's all different types of data. There's bias in the data. So it's really hard to maintain, it's hard to ensure data quality.

So the AI component is on the intake and cleaning of information from companies. And then it starts to learn about competencies that types of roles have so that it can make suggestions about, you could also train this person because they already have half the competencies that the L3 does. So it's part of the intake process. It's part of the cleaning in translation into competencies process, which is a very heavy machine learning lift.

And then it's part of the learning for companies. Clairra will make suggestions to you. She'll show you things that you didn't know before. But that's because she's constantly doing calculations and analyzing patterns in the background, which means that the humans don't have to do that part anymore. They can focus on the human part of HR.

GW: What are some of the other big problems that still need to be solved in this competency-based space? And how might we at the GOI or some of the companies we work with help to solve some of those?

KH: Yeah, I mean, probably the top thing that comes to mind that I think GOI could have a really big role in is sort of the education and value proposition and behavior change.

So there's a ton going on in this space, right? There's tons of skills tech, workforce analytics, upskilling and e-learning. The space is exploding.

We are one slice. We're a data solution. And we want to be the system of record as opposed to the old model.

But we're not doing everything, right? We're not doing interviewing. We're not doing benefits. There's a lot of HR that we don't touch.

So the big challenge where I think GOI and organizations like it could weigh in is the education, for businesses who maybe are thinking about this approach but they're not sure where to start or they're interested in the approach but they're not sure what the value would be. Case studies, what would it look like, painting the picture of what it would look like if your company adopted a system like this end-to-end.

Part of what I try to do when I speak to companies or speak at events is tell the story about what the world could look like. You don't have to waste a ton of money on-- human capital doesn't have to be a cost center. It's an asset center, which businesses know. But businesses are handicapped by the old system, so helping draw that line between what's it currently like and what's possible and really, what the ROI would be for at least experimenting with an approach like this.

There's so much wrap around education and behavior change that we try to support. But we can't do everything. We need larger, networked groups that are sharing learning and sharing experiences and case studies, maybe running little experiments together. That would be a huge complement to the sort of very specific product and experiment that we're running.

GW: Oh, that's wonderful. That's something that we're trying to do in pulling together this community of organizations so we can all learn from each other. And thanks. We'll take up some of those challenges and hopefully make a difference here.

KH: And so I think what's cool about it and what is interesting in the model that translates, as you're saying here, is I was unusual in my class, I think, in that I was there for one reason. I mean, of course multiple reasons and I got a ton of value. But I was there to start this business. That was my top priority.

And of course, I took a lot of risk to do the program when I did it. But I was able to tailor the experience around my top priority. So I wanted to get a venture-backed machine learning

startup off the ground. And it was in-- I mean, the product is based on this competency science and competency methodology and approach that I had seen working.

But I was able to vet that idea with a bunch of colleagues who are in the business world and work for some of the world's largest companies. And so is this idea just a non-profit and policy notion, or can it survive as a private sector business, selling to business people?

So I was able to-- I took courses that supported getting the company off the ground. I did venture mentoring service, Mass Challenge. I took advantage of the parts of the ecosystem that would specifically help me for the phase that I was in. So what do I need to incorporate? Who's going to need to be my first hire?

I spent time at the Media Lab working on the machine learning. What natural language models do we need to be using? What's the stack that I should use for the company? Who do I need to hire? Do we like-- which cloud service do we like? All that.

So the fact that I was able to tailor it, I think, is a huge predictor of value for how learning is going to happen in the future. Where are you, and let's tailor the experience to where you want to go.

It was also hybrid at the end. So the pandemic happened, as you said. We went online. And then we got back in person eventually. But We moved online pretty seamlessly. And part of why that was successful, I think, is because it was self-directed. Of course, we had course outcomes. But you could pick-- we had more flexibility. You can finish with this class or that class. What are the things you think that you need? We want to make sure you get what you need out of the training.

So I think learning in the future is going to have a lot of those components. It's going to be hybrid. It's going to be modular and customizable. And I think, as you and I have talked about, it's going to be more based on competencies acquired than just seat time. So I think there were a lot of forecasters in the program that should be similar.

GW: Very interesting. So Katie, it's been great to talk with you again. And thank you for sharing what you've learned and what you're doing on competencies with the rest of our listeners. And thank you all for being with us for another episode of Beyond the Resume podcast series for the Global Opportunity Initiative.

As always, if you have any questions or any comments, contact us at goi-info@mit.edu. Thanks and have a good day.