

## Cisco Cloud Unfiltered Podcast Series Episode 2: Tim Crawford, CIO Strategic Advisor at AVOA



Tim explains the difference between traditional and transformational CIOs, how to use culture to differentiate, and the value of peeling away the layers and focusing on the “gooey center” if you want to stand out.

**Niki Acosta:** All right this Cloud Unfiltered I am your host Niki Acosta. My cohost Val is on vacation. Hope you're having fun somewhere Val. I am really excited about today's guest Tim Crawford. Tim, why don't you go ahead and introduce yourself.

**Tim Crawford:** Yeah, thanks Niki, and thanks for having me on the podcast today. Tim Crawford CIO Strategic Advisor at AVOA. Former CIO, 25 years in IT, and looking to maybe tap into some of that expertise as part of our conversation today.

**Niki Acosta:** Yes. I'm super excited about that. Just before the show I have a new puppy for those of you watching the video. This is Marlin. He is a Cockapoo. His dad is a five pound toy poodle, and his mom is a 15 pound Cocker Spaniel. It's been raining so he's been going a little nuts. Apologies in advance if he barks today, but say hi Marlin. He's like a little teddy bear.

**Tim Crawford:** Hi Marlin.

**Niki Acosta:** I'm going to try to put him down and throw him lots of treats and try to keep him quiet for this thing. All right, so let's get into it. Tell us how you got into tech. It's always a good way to start the show.

**Tim Crawford:** Well, I was standing on the side of the street and someone walked up to me. No. I actually started and technology back in the 80's working on PCs. It was kind of ironic. I was helping a friend get their computer fixed. The person at the shop said, "Gee, you're asking a lot of interesting questions about this. Would you like a job?" This was back in the 80's when you do crazy things like that. I said, "Sure. It sounds interesting. It would be kind of fun playing with these computer things." I was already going to school to learn about computers, and so one thing led to another. Within a pretty short period of time I was designing networks of all things back then. It was a lot of fun.

**Niki Acosta:** You're a networking guy at heart. I didn't know that.

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Tim Crawford: I started as a networking guy back in the days when we talked about some technologies that are no longer in use today. Twisted Pair wasn't even a figment of our imagination. We were talking about–

Niki Acosta: Bon Jovi was the new hotness.

Tim Crawford: Well, maybe for you.

Niki Acosta: What were you listening to back then Tim?

Tim Crawford: Actually kind of ironically in high school I was a disc jockey. I was listening to a lot of different things. Wow, we're getting into some areas that–

Niki Acosta: You were a disc jockey? When I was in high school I interned with a radio station in El Paso, Texas. It was a rock station and my job was to go through these faxes and pick out good jokes and highlight them, and give them to the hosts. That was my job.

Tim Crawford: That's awesome. That's awesome.

Niki Acosta: It was super exciting. I didn't know you were a DJ. You are very interesting.

Tim Crawford: Yeah, so DJ, and had a company that I had formed in high school. That carried on for a couple of years after. Then I got into this tech thing and that was the end. Started the process.

Niki Acosta: Where did you grow up?

Tim Crawford: I grew up in the Bay Area. I grew up in the East Bay out in Walnut Creek area and spent my formative years out there. Then eventually moved to the peninsula, and was living down between Menlo Park and Mountain View for a lot of years. I still call the Bay Area home even though today I live in Los Angeles.

Niki Acosta: Oh, you're in LA now. I was going to say that looks like a very large home for San Francisco.

Tim Crawford: Yeah, unfortunately where I live in Los Angeles it's about as expensive as the Bay Area.

Niki Acosta: That's all right it just means you really good at your job. You must be doing okay.

Tim Crawford: Well, I like to think that I'm helping people along the process. I wouldn't say I'm the best at what I do, but because there are a lot of really great, and talented, and smart folks in technology today, many folks that you and I both know and work with, so I'm very humbled to be included with some of those groups.

Niki Acosta: Such a nice guy too. Where did I meet you? It was one of the Cloud events. Maybe Cloud Expo, or Cloud Connect, or something back in the day? Such a long time ago it feels like doesn't it?

Tim Crawford: It does. We've been talking about this cloud thing for so long. It does seem like an eternity.

Niki Acosta: We're going to delve into that a little bit, but before the show you and I were talking about this role of the CIO. You are the strategic advisor to CIOs. What does that role look like these days?

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Tim Crawford: It's changing pretty demonstrably. The CIO of the past is not the CIO of the future. I've written a bit about this. I equate it between the difference of the traditional CIO and the transformational CIO. Probably the best way to distinguish between them, and there are a number of traits that I use to differentiate between them, but one of the easiest ways to determine generally which side of the fence the CIO sits on is, are they tech centric or are they business centric? What I mean by that is are they really focused on the technology and looking at ways to engage in the technology, or are they really focused on business objectives and focused on the business problems and business outcomes? That becomes a very huge differentiator. There's a very different set of characteristics that differentiate between the traditional CIO and the transformational CIO.

Niki Acosta: What's better?

Tim Crawford: The traditional CIO I would say has served us really well for the last several decades. Unfortunately that traditional CIO is really going the way of the Dodo. It's a role that's in decline. When you hear statements made that the CIO is becoming irrelevant, or "the end of the CIO," what they're really talking about is the traditional CIO. On the other hand the transformational CIO, which candidly there are very few of today but the ranks are growing, is in demand. The reason for that is if you think about it you want a leader that understands the company, understands the business objectives, and can really bring technology up to solve some of those business problems.

I wrote a piece a couple months ago that talked about how the CIO needs to think like the CEO. A couple people said, "That's like running your IT organization as a business." I said, "No, you missed the point. The CIO really needs to think like the CEO of the company today. Many of the challenges the CIO has are the same exact challenges the CEO has." If you start to think like a CEO you start to be able to bring technology to bear in ways that really impact business outcomes. That's a very different conversation than we've seen the CIO have over the last couple decades.

Niki Acosta: It's because every company is becoming a tech company essentially, right?

Tim Crawford: I hesitate to go as far as saying every company is becoming a tech company. I think technology is becoming a huge differentiator between companies that compete with one another. It's becoming a foundational piece to every company; However, I think it's important to understand that ultimately data and how we use data, and how we leverage technology as a tool is what differentiates one company to another. That's different than the company necessarily becoming just a tech company.

Niki Acosta: Who are the CIOs that are doing it right? Who are your favorite CIOs that you are saying, "Yes, they're doing it right."

Tim Crawford: Gosh, I hate to single folks out only because there are a lot of really great folks that do that. Let me talk a little more about some of the attributes of some of those folks rather than singling out, or naming folks. Here's the other problem—

Niki Acosta: Oh, yeah you don't want to name drop all your clients, right?

Tim Crawford: Well, no it's not that as much as these are folks that are already kind of fighting an uphill battle. These are folks that are already on everyone's target list. Especially for vendors. The last thing I'd want to do is put a bigger bull's-eye on their chest. There are some really brilliant folks. I can think of one individual who's been with a number of companies as CIO. And has really built an organization, and in one of the companies built an organization where even the most junior person within their organization understands what they're doing impacts the business, impacts the company, and touches the customer.

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That's a very different way of thinking for most IT professionals. Is, "Okay, I might be building an application, I might be doing some coding, I might be working on some infrastructure pieces." How is that touching the customer other than the customer connects to the server for a website, or I'm building an application the customer's going to use. Do they really truly understand how this is going to benefit the customer from a business standpoint? This individual has actually built organizations that do just that. They understand what they're doing and the importance of what they're doing. Another one that I think of is one that's created a culture in the Bay Area. This is someone in the Bay Area. There's a lot of challenge for CIOs to bring IT professionals into their organization when they're having to compete with the likes of Google, and Facebook, and others, new startups that are sexy, and new, and flashy.

How do you start to attract talent within your organization when you can't pay them significant dollars like some of the startups are waving in front of them? What they've started to do is create cultures where you start to realize this is a culture. This is a team. This is a person that I want to follow, and a team I want to work with. Then the culture was what dominates more so than the dollar. I think that is incredibly telling because it definitely differentiates the individuals too of what's more important? Do you really want to make as much money as you can, or do you want to work toward a purpose that you feel really good about, and you feel really good about the team you're working with, and really want to follow the leader that you're working for?

Niki Acosta: That's a really interesting point. I actually have a blog that's in flight that talks about that very thing. I think the culture piece is the most neglected. I think there's always ways to solve things through technology, and integrations, and software, and these new experiences. If you don't have a culture that will allow people to have a purpose and a mission I think you're going to be left behind.

Tim Crawford: Yeah. No, I completely agree. There's been a fair amount written that people don't quit companies. They quit leaders. If you're working as part of a team or part of an organization that you're just not happy with you'll get up and leave. If you think back to your past history and companies that you've worked for, or teams that you've worked with, or individuals you've worked for when you have left an organization why have you left that organization? I'm not saying that everyone applies to this, but there are a large number of folks that say, "I like the company, but I can't work for this individual" and they're out, and that's unfortunate.

Niki Acosta: Right. We were talking earlier in addition to culture, and the role of CIOs, we were also talking about data. One of the things that I see emerging as far as cloud goes is the need for infrastructure so that you can do more with your data. I think of lots of customers that I talked to. One in particular that stands out is a large bank. They've got so many different systems that they're trying to bring in together and trying to take all this data that they have for customers and feed it into something that would allow, let's say, a chat agent or a banker to recommend products or services. How do you see data impacting what companies do in terms of technology or growth? How are companies making the most of data in IOT and AI and some of these other emerging technologies?

Tim Crawford: Yeah, let me kind of table that AI and IOT piece because that's a whole part of the conversation that I'd love to delve into. Fundamentally I think data is going to be the great equalizer. It's going to come back to if you've got two companies that are competing with one another in the same space, same industry it doesn't even matter whether it's the same size anymore. You've got disruptors that are coming into markets that are disrupting large incumbents. We're seeing that happen right, left, and center. It's important to understand that there are two things that are going to differentiate one company from another. Number one is the data that they pull into their business decisions. The more data you have in the right data that you have is going to give you better granularity and better accuracy in your business decision-making process.

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The second piece to that is algorithms. Algorithms are what going to lead you to increasing the speed in which your decisions are made. Now what you're talking about is two companies have access to similar sets of clients, have access to similar sets of data. The real question is "How are they going to leverage that data?" And that comes back to speed, algorithms, data components. Which then leads directly into business decision-making. If you think about it, a lot of companies today don't make decisions without data. If you delve into that a little further you start to realize that you really need good data in order to bring this together.

I think a great example of this, and I just was working with a client in the last couple of weeks and I just had a conversation this morning about this, both in the healthcare space. Data is becoming a way to turn healthcare from an art to a science. That's really, really interesting to me. I've long believed that healthcare is the one industry that is the ripest for disruption. I think there are two attributes that are really key to that. Number one is leveraging data as a means to be able to lower the thresholds for healthcare cost, so you start to get more efficiency. You start to get greater transparency in the process. That's more the back office back backend pieces as you start to think about the payer, provider, as well as the doctors, and clinics, and hospitals and whatnot.

The second piece of that is leveraging data to increase the level of healthcare. Everything from your sitting in your office, I'm sitting in my office being able to get telemetry off of your body and being able to recognize that there's a problem. Let's go ahead and get that information into your physician and be able to respond to it as quickly as possible, or when I do go in to see my physician there's a whole history of data that's available, or you get into research. I've worked with a number of cancer research facilities and it's just amazing the work they're doing with data today. I think there are a number of different ways that data comes into this. Algorithms come into this. Analytics comes into it. Then as you mentioned you start talking about IOT and AI and... mind blown. The opportunities are absolutely endless. We are truly in the Wild Wild West. I mean that in the best of ways, not in terms of craziness.

Niki Acosta: I just had a Westworld flashback all of a sudden.

Tim Crawford: It's a great, great time to be in IT. There's no question. In my years of working in IT I've had the opportunity to see the transitions for distributed computing. I've seen the Internet come of age. I've seen virtualization, and now with the cloud, and what's coming is exciting.

Niki Acosta: Is it scary though too?

Tim Crawford: I think there's probably a healthy amount of hesitation that comes into that. A lot of that can be governed based on past experience. Let's face it anytime we're going into something that we don't know there's a little bit of hesitation. We're kind of programmed as humans that okay there's a risk component here. What should we do? Should we hesitate? Should we go a little more carefully down this path? For those that are willing to take a little more risk the rewards are there. I've seen some pretty amazing things already starting to happen which again it's just exciting. It's absolutely exciting.

Niki Acosta: I was browsing your Twitter feed and you and I, we posted the same article. It was the Ars Technica article about the recent decision to allow ISPs to not have to ask your permission to collect and sell your data. What are the implications of something like that?

Tim Crawford: Well, I think this comes back to a broader issue around privacy. How much do we value that privacy? Do we really have it to begin with? I think there's a belief that what we do and the data that surrounds it is private. I think some of those beliefs are actually fallacies. Meaning we've actually lost a lot of the privacy capability along time ago. We

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just don't realize it. When things like this do come up, and do start to become more visible, I think it starts to kind of raise the eye of the specter. The piece that really got me in it was what data are they actually collecting and how far will they take it? The piece that does not concern me is the web browsing and things like that.

Are we talking about their starting to go into packets and looking at email? Then take it a step further, and you and I have both had conversations about this in the past, what about video feeds? Now are they starting to collect information off video feeds? I'm hoping that some of these companies that are providing consumer based, and consumer grade products are starting to think about how they encrypt that traffic so that it is protected the whole way, and so that companies like your ISP aren't going to start to tap into that. On the other hand I see why the ISPs want to get into that data. You start talking about that along with net neutrality, and you start going this could be bad for the consumer. There isn't a lot you can do about it. That's the part that kind of scares me is where we are in the current climate. Especially the current political climate. I think that it's going to be a very trying time for us over the next coming years.

Niki Acosta: I remember using AOL when I was younger and I think we switched-

Tim Crawford: You've got mail.

Niki Acosta: Yeah, we switched off of AOL or whatever. I was shocked that I got to keep my email address. I'm like how can this company ... why would they just give me free email even though I'm not paying them anymore? Then Gmail came across. There was a much bunch of email providers. Then I was thinking to myself wow these are people who potentially know everything about you. Everything about you. You look at your phone and you can see where you've been over the last whenever on a map.

I bought a new house recently and I was re-upping a new policy, and he sent me these trackers that you stick in your car. I was like, "Dude, I'm not putting that thing in my car. That's giving you guys too much data." He was like, "Hey, man everyone already has your data. We're just gonna pay you for it in the form of a discount from your insurance policy." It felt a little big brothery to want to stick that in my car. I wonder about that. Especially with healthcare, especially. I can foresee a time when someone has access to your health information and they could make a reasonable, either via genetic testing or whatever else, they could make a reasonable assumption about what your health needs will be and charge you accordingly. That's scary.

Tim Crawford: Let me ask you a question about that. This is something that has come up in very recent conversations I've had. I kind of offer this thought around that. Hypothetically if I could tell you that if you provide your entire history, your entire health history, to a central organization that's doing research to find everything from birth defects to cancer research, to God knows what, if I could suggest to you that if we could do that with everyone and that would actually move ... What I was saying earlier healthcare from an art to science, so we start looking for certain markers. We know that these markers show up in certain types of patients. Meaning we've collected such a large sample that now we have greater visibility into what those markers are to be able to say, "You are predisposed for X." If I could tell you that we could do that and we can be able to address it immediately, so essentially going [crosstalk 00:23:38]

Niki Acosta: Oh, I'd be all for it. No doubt.

Tim Crawford: Yeah, right. I think most people would if that was the case. I think where people get a little squeamish about this is where there is the concern of misuse of data.

Niki Acosta: Yes.

Tim Crawford: Right? For example if the insurance company said, "Great give us your data and if you're a great driver no problem. We'll give you a discount." If they misuse the data then your trust goes away and you start going I'm not really comfortable sharing my data with them, or the next person who comes along." It may not be insurance or someone else. Maybe the grocery store is asking data about your purchasing habits. My point to this is I don't think it's as much that were hesitant about sharing data if it's used for good purposes.

Niki Acosta: How do you know you can trust though?

Tim Crawford: Well [crosstalk 00:24:35]

Niki Acosta: People are doing some really interesting things with data. At what point do you say, "At this point in opening myself up to be charged more, discriminated against, what have you in the future? I think that's the question.

Tim Crawford: Yeah. I don't have a really good answer for that, but I will say in general people they're concerned about the trust factor, but they're wanting to help organizations and ultimately to help themselves. There's a balance to be struck here when it comes to privacy. I personally would be more than happy to share more data than I already share if I have trust in the organization that's going to do the right thing with that data.

Niki Acosta: That's the thing. That data, once it's collected, could be bought and sold by somebody with nefarious purposes.

Tim Crawford: Agreed, agreed. That's one piece of the challenge. The second piece of it is that much of that data that I think I'm protecting already exists in the public, or exists in databases today that I just don't know about it.

Niki Acosta: Right. I saw another article about employers being able to run genetic profile on employees, voluntary. From a healthcare perspective I get why they'd want to do that. For all the things you mentioned. If you're predisposed to something and you can be proactive and offer some kind of preventative care it will cost you a lot less money in the long term.

Tim Crawford: Sure.

Niki Acosta: I can also imagine that there will be employers would look at some kind of score and say, "This is going to be an expensive employee to ensure." Where do those protections kick in?

Tim Crawford: I think that's part of it. We've heard for quite a while if you wear a fit tracker or provide some data or health information to your insurance company about your current state you'll get a discount if you're a healthy individual. What if you're not and you have diabetes or have some pre-existing condition? You are going to be a more expensive person for the health insurance company. My guess is most of those folks probably would hold back that information, because they're fearful of seeing their insurance rates go up. That's just healthcare, but you could say the same thing about car insurance. I'm not sure I want to disclose that I had two fender benders in the last six months and three speeding tickets. I'm hoping they don't find it, because that's just going to skyrocket my rates.

Niki Acosta: By the way for sake of argument here, those were completely fictional things. Don't try to increase Tim's insurance rates in the future based on some tidbit of voice data that he has floating around on YouTube. Thanks.

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Tim Crawford: Yeah, it's all hypothetical.

Niki Acosta: It's all hypothetical. We talk about technology, the privacy thing, man I could talk about that forever. It's such an interesting time for companies and for consumers, I feel like. Especially with the political climate which is a whole other bag of worms. We won't talk about politics, religion, or ex-wives on this show. We were talking earlier, at the core of all this technology, whether you are taking data, collecting data, analyzing data, creating new better experiences for your end customers at the heart of all of that there needs to be some kind of infrastructure or computing underneath it. That's where cloud comes in, right.

Tim Crawford: Yeah, [inaudible 00:28:16].

Niki Acosta: We had an interesting conversation prior to the show where I asked you, "Are you hearing "hybrid cloud?" Is it public, private, or is it just "cloud?" Is it "multi-cloud?" How are people thinking about cloud? I think working for a vendor we definitely see it on the inside out. What are you seeing in terms of cloud? Is it table stakes at this point?"

Tim Crawford: Cloud in general should be table stakes at this point. You should be looking at how you can leverage cloud. Now that is not a statement that says you should be all in with cloud meaning every application, every workload goes to a cloud-based solution. Whether it's public, hosted private, private, some hybrid version of that. You should definitely have hybrid as part of your overall strategy. I'm sorry, have cloud as part of your overall strategy. For most organizations it's going to be some form of hybrid that fits in there [crosstalk 00:29:20]

Niki Acosta: Why? Why should you want cloud at this point?

Tim Crawford: Yeah, the reality is that you can't do everything in technology today. If you go back to what I call the anthropology of IT what you start to realize is go back 20 years. We didn't have the ability to do some of these things through a third-party vendor unless you wanted to outsource your organization. Yes, I said the bad word of outsourcing. Oh, and yes I have a few scars from that to go with it. The reality is there are mature offerings today that allow us to kind of pick apart our portfolio services as an IT organizations and start to say, "There are these pieces they can go to a public cloud infrastructure structure. There these pieces that can go to this type of solution. There are these pieces that can go to a SaaS based offering."

What I'm left with, and I have a this model that I use with clients, what you're left with is this really gooey sticky centerpiece. It's a much smaller problem in relation to the larger portfolio of services that you started with. It's a much smaller problem to have to address. Here's the key; That smaller piece is also the piece that's more differentiating for your company. For example Niki, you and I, we both work for different companies. We both use email. What would be the difference between you running, and I'll just pick a product Microsoft Exchange, within your data center versus having it hosted with 365. It could be Exchange and Google apps. I'm not endorsing any particular product I'm just saying email is a great example. It's a very simple example, but something that everyone can relate to.

Email is a good example of there's nothing really differentiating between your company running email and mine. Why are we trying to become experts in that particular product when we are really just consumers or users of the product? You start to pick off those pieces that are not differentiating for your company and what you're left with is that gooey center. That gooey center is what differentiates my company from your company. That then becomes a focal point for your business to be able to say, "This is what's going to help us differentiate from our competition. It's going to help provide leverage,



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and it's going to bring focus to the conversation" which is something that we have clamored for, for a very long time.

Niki Acosta: Where do you see the sticky center gaining traction amongst some of the vendors who've been around for awhile? You wrote an interesting piece recently. You were talking about the Oracles, IBMs, the Ciscos of the world. Where are people getting the sticky center right and where are they not getting it right? You don't have to name names. You can speak in [crosstalk 00:32:31]

Tim Crawford: I think the big challenge is people are so concentrated around what's happening around the sticky center that they don't get to the sticky center, or takes them a long time to get there.

Niki Acosta: That's like eating the outside of a Twinkie without eating the cream center. That's shameful. I'm hungry. It's lunch time.

Tim Crawford: It's kind of like a sticky bun or cinnamon roll. You've got the crunchy outside and you get to that nice gooey center. It's kind of funny that you mention food as an aside. The example I use, and folks that have worked with me or heard me talk about this, I use monkey bread as my example of the portfolio and picking up the pieces. What you're left with is that gooey center. Look it up it's an interesting analogy. Back to your question I think one of the challenges ... and I just came from a couple of the big vendor shows in the last couple of weeks. I think one of the challenges that many of these companies have is they're really struggling to understand how the enterprise is evolving. To a large degree the start up and web scale market has already been tapped. We've seen that. We've seen how it's evolved. Great, go forth and conquer.

There's this massive, massive potential in the enterprise. It is really yet to be tapped. By some metrics some are saying that it's probably less than 5% tapped. That just gives you a perspective of how much more we have in terms of opportunity. What I mean by that is the enterprise is an incredibly complicated beast. For anyone who's ever had responsibility in leading an IT organization or delivering IT services to an enterprise you know firsthand how complicated it really is. Part of that is political, part of it is organizational. There are process challenges. Oh, and by the way there's some technology that gets spattered in there to. The problem is these vendors they're really struggling to understand a couple things.

Number one: how the enterprise is evolving. We talked earlier about the transition from traditional to transformational CIOs. The same thing has to happen within the organization itself. I talk about this, and I'm sure you've seen it in some of my past writings, where I talk about the three legged race, where you've got the IT organization, the CIO, and the rest of the company that all three have to evolve. They all have to work together in unison just like when you're doing a three legged race at a picnic. You can't have the CIO and IT running ahead of the rest of the company or vice versa. You will trip and fall.

They're trying to figure it out within the enterprise. The vendors are trying to figure it out and perceive how far in advance each of these companies are going. Then they themselves are trying to figure out what's the right message to use? Who's the right target? Historically in the traditional organization is been the CIO. If you can get to the CIO you're golden. The reality is the CIO is not your target for most companies today.

Niki Acosta: Can you say that again?

Tim Crawford: The CIO is not the target for most companies today. Let that sink in for just a minute. If you think about it most companies are really focused on going after the CIO. When in reality most of those products are not on the CIO's agenda. Here's a great litmus test for that. If you're a vendor and you want to talk about a particular product. Even if you're a

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small vendor or a large enterprise incumbent vendor if you want to talk about a particular technology and you think that the CIO is your target ask yourself this question; Would the CEO and the rest of the C suite be talking about the same product?

If the answer is no the CIO is not your target. If the answer is yes then probably the CIO is your target. There are more nuances to this statement, but the point is getting you to think differently about who you target and therefore what your message should be and how that evolves. Many of these large companies are really kind of dealing with a lot of confusion around who do I go after? What's the right message that I use so that I start to get traction. I'm not getting the same traction as I've gotten in the past with the CIO.

Niki Acosta: I see this a lot. Especially working at Cisco it's really interesting. We've got a really great relationship with a lot of the data center folks within our customer base. Then you want to talk about apps or assistive technologies or cloud enabling technologies. It's not always the data center people that are tied into that so much. The interesting part is that I think there's this cultural transformation that happening. Not every enterprise looks the same.

Tim Crawford: That's right.

Niki Acosta: We see this with customers big and small where you've got a really small little pocket of a group that is trying to do something really interesting. They are like, "Go forth and conquer. We've got the right skills on our team to make a go of this cloud thing." Then you've got other people that are kind of almost resistant to that change.

Tim Crawford: Yeah, and many of those folks that are resistant to the change... what you'll find fundamentally is they're fearful of job loss.

Niki Acosta: Of course.

Tim Crawford: When I have those conversations it's because they don't understand what's next for them. This is where the leader really has to pull up a chair and have a heart-to-heart conversation with these folks. In some cases sure it may mean that that function is no longer needed. It doesn't mean that that *individual* is no longer needed. They could be retrained, they could be moved to other parts of the organization. Then that comes back to the individual to say what are you willing to do? If you just want to be an order taker, if you just want to manage a data center, and that's all you want to do, okay.

Maybe you don't work in the corporate organization anymore, but maybe your best served to move to a provider, or move to a colo facility, or moved to someone who is still providing data center services. That's part of the conversation that today's leaders need to have. Not just the CIOs but those within the rank-and-file need to have with their teams to really understand what's motivating them. What is that fear that's driving them in their decisions, and how do you start to address it head-on? I found from experience when you really dig into it and you put the proverbial 800 pound elephant on the table and say, "Look I know you're fearful of job loss. Let's talk about that. Let's figure out what we can do to work together so that your concerns are addressed." It's like a huge weight comes off their shoulders. They feel like, "I don't have to carry that myself anymore. I have to address it, but I don't have to carry it." That's part of it is you have to understand some the changes that are happening in dynamics within the organization.

To your earlier point of if you're traditionally going after the data center team and you want to talk about something higher-level in the stack. I know Cisco's been really wanting to have the conversation. Does a developer today really see Cisco as an example as a application source of knowledge? I would argue that the answer is no. They see Cisco as that's that infrastructure company. That's not to say that Cisco is doing bad things. I'm just saying that it creates a challenge. It creates a challenge for

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Cisco and I know for a fact that there are changes happening in Cisco that are really great and providing great value to application developers. Let that be known that there is a perception change. There is a change happening, but you just have to jump into these issues and address them head-on, and be honest about where things are.

Niki Acosta: Yeah, I think every large company goes through this to some degree. I was pretty much agreeing with everything you wrote about Oracle, HP, IBM. The bigger the company the harder it is to turn that ship. I wonder as we go and talk to customers how much of it is it a technology problem so much as the culture problem, as a communication problem, as a problem managing expectations of millennials entering the workforce? I think those are the parts that often get neglected when you're trying to help a company transform. How do you go into companies and have these discussions? Do use a framework to take companies through this?

Tim Crawford: Yeah. I do. It's something that I've used within my organizations, but then something that I've crafted a little further since then. The thing is you have to really understand where they are and where they're going. That's not a technology problem. I think it was recently that I had said this in a couple of different forums. We'd almost be better, from an industry perspective, if we stopped innovating for a little while and let people catch up. We've gotten to a point where we've brought a lot of technology to the table, but the adoption rates of said innovative technology is actually anemically low. Especially when you look at the enterprise.

Part of that is because I don't think we have really done a good job, as an industry this is not specific to any one company or even big companies versus small, but I don't think we've done a good job of really helping companies progress through that adoption cycle. I have a thing that I say when I start working with companies that within the first 30 minutes I'm going to talk about the good, the bad, the ugly, and the embarrassing. If we can get that on the table then it's like putting that 800 pound elephant on the table. We can talk about it, we can figure out how to work through it, we can figure out what the challenges are. I will tell you that for most organizations the problem is not technology. Most of the issues and challenges that companies have to contend with right now directly center back to culture and organization. Then eventually you get to process and technology.

Niki Acosta: That's hard to fix. How do you fix that? It's a process right? It's not just something where you throw a solution on the table like, "Oh, we're gonna buy this new app or form this new partnership to retrain our entire workforce," right?

Tim Crawford: Well, go back to an earlier part of our conversation. Technology organizations have been around for decades. It's taken us decades to get to this point. We're not just going to unwind that ball of yarn overnight. It's going to take a while to do it. I don't think it will take decades, but we need a concerted effort to focus on unwinding that ball of yarn and thinking about how we evolve cultures. Like I mentioned earlier some leaders have actually been able to do this. The number of leaders that are heading down that path is growing which is great. That's a huge opportunity for the companies that they work in. We need more of that.

We need more conversation around the people issue, around the cultural issues, and we need to stop having these really stupid silly religious arguments about technology. Business leaders don't care. They really don't care. Let's stop it. Let's get focused on what the business outcomes are. Let's figure out how we change the way our organizations operate. Let's make some meaningful things happen and get on with it. I think once we do that as a profession not just a leader, but those within the rank-and-file we'll start to see some real change taking place.

Niki Acosta: This brings up an interesting point. I've been doing the women in tech stuff for a while. I do notice a pretty significant difference in the way that women share and communicate

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versus the way men communicate. I'm trying to think about your role. I imagine you going in somewhere and almost being somewhat of a career coach in a way. It sounds like a lot of the issues that are happening are around communication. It's something that I studied in college. It's a little bit near and dear to my heart. I think there's been a very sort of patriarchal authoritative kind of way in which a lot of older companies operate. Now you've got these small startups where there's no walls and everyone sits on the same level playing field. It's interesting to see these small companies that have way fewer resources and a way lower budget just eating the lunch of these large incumbent providers that have been around forever. How do you reconcile that?

Tim Crawford:

I know. It's funny. You're right I do go in sometimes, and sometimes it's just the CIO and I having a heart-to-heart conversation. I've had several CIOs that have said, "You are actually the CIO whisper." I kind of chuckle because I don't necessarily think of myself that way, but okay if it works go for it. I do think there is something to be said about women and technology. I was raised in a very diverse environment.

I don't see distinguishing factors amongst men, women, different races, different backgrounds. The more the merrier. I was always raised that diversity is a strength not a weakness. That kind of built who I am as a person. I find it really weird when we have to have these conversations about forcing diversity within an organization, or within an industry. I understand it. I respect it, but it's kind of a sad state when we do have to have that forcing function to actually make it happen.

Niki Acosta:

I agree. I think ultimately when you start trying to force diversity it's almost as though you're picking winners and losers. If you don't do anything then you're not seen as somewhere good talent wants to work. There's kind of this weird gray area.

Tim Crawford:

That's right. Going to your other point about differences between men and women go back to a book that I read a long time ago. "Men are From Mars Women are From Venus." It talks about relationships between men and women, but also talks about John Gray's first series, I think he was a psychologist, and it talks about his perspective of how people think. How men think, and process, how women think and process. You're absolutely right that even though we may see everyone as the same, someone like me might see everyone as the same, you still have to have an appreciation that people are coming from different backgrounds, and people are programmed differently. You have to have an appreciation for that to as you go through this process.

That's incredibly important as you build relationships. Whether it's in the corporate environment, whether it's in a business form, whether it's in a personal setting the reality is relationships mean everything. You have to figure out how to foster, and grow, and cultivate those relationships. I think that's another piece that IT professionals as a whole really struggle with. A great example of this, and I know this is squarely in your background, but think of the value of community. Think of the value of community and how many IT organizations where the individual they get up in the morning, they go to work, they do their work, they have their silo that they work within, within their company, and then they get up and they leave and they go home. There isn't that sense of growth and community amongst technology organizations.

What's interesting about this is within the Bay Area there are meetups and opportunities to meet other like-minded professionals every night of the week. You could go out and have pizza and beer every night of the week in the Bay Area. You start to go beyond the boundaries in the Bay Area and that tapers off pretty quickly. I do think that there is another dynamic there that has to be considered in looking for ways to infuse diversity. Not just in terms of people and backgrounds, but also in terms of other ways of thinking. Take you and I; You came up through technology in one way. I came through a different way. You're going to have great ideas that I haven't thought of, and I can have great ideas that you haven't thought of. I think that's where the value comes in is how do we start to expose ourselves to other ways of thinking so that we get beyond that glass

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house, we get beyond that siloed thinking of this is what I've always known and that's what we'll do again.

Niki Acosta: Yes. I definitely see a lot of that. What feels comfortable. Let's default to that. That's the way we've always done it.

Tim Crawford: The one thing that I've heard earlier in my career when I worked for a couple of CIOs the one thing that always just really grate on me is when I'd bring up this innovative idea. This is a question that should be stricken from the record for every single IT professional. "Tell me who else has done this at our size in our industry?" My argument was always "Tell me what CEO would say that." If you're bringing something interesting and differentiating to the table is the CEO going to say, "Tell me who else is doing this at our size and in our industry?" Heck no.

They're going to be saying, "Great. How do we get that in place right away" assuming it's a good idea. "How do we get in place right away so we can differentiate our organization and catapult it forward?" I think this talks about some of the dynamics too between the CIO and the CEO in terms of that stretchy rubber band. You've got a CEO that might be more innovative and really trying to drive the organization forward. Then you've got a CIO that might be more conservative. This plays in those dynamics, those complicated dynamics, that I was talking about earlier.

Niki Acosta: Where's the big opportunity? We've talked about data. We talked about the abysmally low number of companies that have adopted cloud. We talked about the hybrid cloud and having cloud as part of your strategy and trying to get to that sticky center. As a CIO I'd probably be exhausted. As soon as you think you get a grasp on something the industry is off talking about something else. I'm not at cloud yet completely, but you guys are talking about that it was containers. Now it's machine learning, and AI, and data. Where's the big opportunity? I do agree that it would be really nice to have a moment and let people catch up, but the world doesn't exactly move that way.

Tim Crawford: Unfortunately.

Niki Acosta: [crosstalk 00:53:21]

Tim Crawford: You don't have the magic wand? I thought you had it?

Niki Acosta: I do have many magic wands. I usually have one sitting around here believe it or not.

Tim Crawford: If you could just wave it and everything would be great, right?

Niki Acosta: I did overpay for a magic wand at the Harry Potter World for both of my children. I feel you on that.

Tim Crawford: There we go. The single biggest opportunity for enterprises today, the single biggest opportunity, is cloud. Single biggest opportunity. What I mean by that is a holistic view of how to truly leverage cloud and a roadmap that really gets them there as quickly as possible in a meaningful way. That's not to say that all things go cloud. I've written a bit about how it sits in many different buckets along the journey. Having a holistic strategy that ties into a very direct executable roadmap that helps you enable cloud and leverage cloud as quickly as possible is the number one thing that every single enterprise should be thinking about today. Hands down. Single biggest opportunity.

The very next one behind that is looking at data. Before you start thinking about data as I need to store bits, and let me get into Hadoop, and talk about data warehousing, and master data management, and the rest before you go down that technical path you have to understand how your company makes money and how it spends money. What I

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mean by that is if you're in retail, for example, how long does it take from the time that something is designed to the time it's in the customer's hands? Do you know the answer to that? Do you know the process that it goes through? Is there contract manufacturing involved? What does your supply chain look like? What are the different modes in which your customers interact with the company? What is it that they're looking for? How do they interact? Where do they interact? How does pricing come into it? What does the market look like for your particular industry? Whether you're talking about retail, fashion, or the like.

How do you start to get your arms around that? Understand how your company is making money and spending money in detail. That becomes your context to start to understand how the company is functioning, how it's operating, and ultimately how you can bring data to the table to be able to say, "This group is working with this group." I just had a conversation I just went through a exercise with one of my clients doing just this. Where we had the executives of each of the different groups together. There were some aha moments where they're like, "Wow I didn't know you did this. I didn't know you did this." What was great about this was they started to recognize opportunities where they could share data to help them both out.

You start to really become, as a CIO or as an IT leader, you start to become an enabler to help the company as itself start to evolve and mature. That's why I say thinking like the CEO of the company is really, really important. Understanding how they make money, and how they spend money is incredibly important. That ultimately becomes the context that you use for all the data pieces, where you can bring analytics to bear. Oh, and by the way when you start to look at newer things like Internet of Things and artificial intelligence, which are going to impact just about everyone, you have to have some of these fundamentals in place first. It all starts with cloud. Cloud would be my number one thing and then you start in parallel understanding the business and then getting onto IoT and AI.

Niki Acosta: It's interesting I was just thinking about the meetup conversation and how you go and learn about, especially in the area or large cities in general Austin has a ton of them, but you can go and learn about technology. You can go to a hack-a-thon and hack on a specific thing. How many people are actually working on the process of it? How many people are going to process-a-thons where you're hacking on a process or you're hacking on a cultural idea? I feel like there's a really big opportunity there just by getting people in a room who don't normally talk to each other to break down those silos.

Tim Crawford: Yeah, we don't do that. We really don't do that. I would argue that it's really hard to do that in mass because every organization is unique.

Niki Acosta: [crosstalk 00:58:05]

Tim Crawford: I've worked with a number of companies since my last leadership role. I will say that each one is a snowflake today. The path in which they've taken to get there is interesting. That also starts to provide context for where they go too. You can talk about this at a very superficial top line method, but the reality is you kind of have to dig into a little bit deeper in each organization. I think over time or if you pick off particular pieces like if you wanted to talk about business resiliency, or business continuity, or talk about disaster recovery I think those are great example where understanding how the company operates, what the core pieces are of the company, how are you doing it today?

BC and DR is probably one of the most screwed up areas in every single enterprise. It's been that way for decades. It's like an insurance policy. You really want the Cadillac insurance or are you willing to get away with some lesser rate insurance? I do think there's some challenges here, but the thing is we need to learn more about people. We need to stop for a minute. I need to stop and say, "Who is Niki? Let me learn about Niki."

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What makes her tick? What motivates her? Who is she as a person? What interests her?" Then as you start to understand and you start to marry that with how your company operates what you start to realize is who do I have in the right spot? Who do maybe I have in the wrong spot, but they would be better served if they were in this spot.

You start to realize where those places are within your staff, within your people. We do need to spend some more time doing this. I think the best thing we can do is number one talk more about it openly. Then number two is to share ideas. Here's what I found that works. Once we start sharing some of those ideas and start almost crowdsourcing from a process and people standpoint I think we'll actually make some pretty significant progress. I'm starting to see some of that happen at the CIO level with some of the CIO summits that I take part in. I think there's a bigger opportunity here. Take the big organizations, right. The Cisco's of the world. You know IBM, Google, and whatnot. I actually think they have a great opportunity to bring together people and have some of these conversations. Even though IT leaders won't necessarily openly talk about it there is demand, there is an interest in addressing these people and process issues.

Niki Acosta: You know it's funny is those people and process issues are probably going to be assisted by technology. It's like a chicken and egg thing. How do you get feedback? How do you find out what motivates people? Well there's probably a tool you could build for that, right?

Tim Crawford: Well, there's probably some of that. I just want to hesitate a little bit with that statement Niki, because I think too often we look for an app. Especially today we're looking for our mobile device and we're like is there an app for that?

Niki Acosta: You lose the human element though. You lose the emotion, right.?

Tim Crawford: Exactly. That's why I hesitate. I think there is something that as IT professionals we don't do a good job of and I mean all the way to the CIO. We don't do a good job of building relationships and understanding people.

Niki Acosta: If you do you don't do a good job scaling it. It's kind of hard to scale, right?

Tim Crawford: It is.

Niki Acosta: Interactions are hard to scale.

Tim Crawford: They are. They are.

Niki Acosta: Well, Tim you have given us a ton of food for thought today. Thank you so much for coming on the show and spending time and being unfiltered. I hope that there's at least one or two good nuggets that every listener of this podcast will pick up. I know I had several aha moments and a couple of startup ideas along the way. It's always a pleasure to talk to you. Where are you going to be next? You're going to be at the OpenStack Summit?

Tim Crawford: No, actually I am at Microsoft Builds that same week.

Niki Acosta: Oh, boo you'll be at Build. I saw it somewhere your schedule. It was just crazy. It was like do, do, do, do.

Tim Crawford: Yeah, I've pretty much been on the road for, I think it's been eight or nine weeks solid, and this was my last week of travel for probably two weeks.

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Niki Acosta: Oh man.

Tim Crawford: I actually get to get caught up on a few things. That's why am not in a jacket today. I actually get to dress down a little bit which is kind of nice for a change. I've got some conferences coming up. Got some client travel on the docket. I'll be glad to be closer to home for at least a couple of weeks until things come back around for the next round of travel.

Niki Acosta: Where can people find you online? Give us your contact deets.

Tim Crawford: Yeah, you're more than welcome you can see my blog [AVOA.COM](http://AVOA.COM) [A-V-O-A.com](http://A-V-O-A.com). You can reach out to me there. There's a contact page. You can also follow me on Twitter at [@TCrawford](https://twitter.com/TCrawford).

Niki Acosta: Thank you so much for joining us today, Tim. I hope we get to do this again. I'd love to catch up with you in six months or twelve months and see what's happening. It's hard to put into perspective how quickly things are changing. I think you're always at the bleeding edge of what's going on and I appreciate that.

Tim Crawford: Thanks Niki, I appreciate the opportunity to join you on the podcast today.

Niki Acosta: All right, say bye.

Tim Crawford: Bye.

Niki Acosta: Tune in next week. Not next week the week after we've got Dan Hersey as our next guest from Cisco working on some really interesting service provider oriented stuff. Join us for that one. We will post details on the [@Cisco cloud](https://twitter.com/CiscoCloud) Twitter handle. Thank you Tim. Thank you everyone. Have a good day everyone thanks to my support staff behind-the-scenes Jamie and Allie who always do an excellent job, and everyone have a great weekend. Bye-bye.

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