

Ep. 73 How to Build Federal Systems for Scale and Resilience

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This is John Gilroy from the Federal tech podcast. This is Terry Miller, president of Karson Solutions. Today we're going to talk about how to build for scale and resilience hit the music Manny.

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Welcome to the federal tech podcast. My name is John Gilroy and I will be your moderator. Our guest today is Terry Miller. He's the president of a company called Carson solutions. That's what the KKR su N dash I I.com. For more information, a lot of stuff there in the company. We're gonna talk in general about modernization and some of the challenges of modernizing large systems and hybrid environments. But before we begin, I would be remiss if I did not tell the audience that we are recording this at Caboose brewery in lovely downtown Vienna, Virginia. Why here? Well, of course, we're surrounded by tech companies, what better place to talk about large scale modernization efforts. So Terry, give us a thumbnail sketch of Carson solutions. And we'll jump right in.

01:27

Sure. First of all, thank you, John, for having me here today. So Carson solutions, you know, from day one, we were founded on the premise that we were going to be it monetization experts primarily working with the federal government. And our focus has remained true to that and ever since. So the types of work that we do currently, for our clients, we're very focused on doing modern software development, data and analytics, and also cloud platform solutions for our clients. And I've been very mission focused on the type of work that we do as well a lot of expertise within the transportation area, especially around aviation expertise around acquisitions, and also around grants management.

02:08

You've worked with many large organizations. And I would be intimidated to go into large organization and assume that I get them to change anything. Nevermind how they do systems, because humans being humans, they tend to be comfortable in the systems they have, and many fear change. In fact, some people think change is a four letter word. However, this is a brave new world since COVID, everything's changed whether you like it or not, I've always done it this way. So what and so a company like yours, can go into a large



organization, and maybe work with them and encourage them to make this transition. Because they really don't have any chance at all for not doing it, do they?

02:48

Why that's correct. And one of the things that I think he just said is, the whole thing of what we've always done it this way is the exact opposite of how we approach things, right, where we've always been a company to challenge things. And we'll have new ideas and new approaches of how we go in and tackle problems. And I think what we've really found is that there is much more of an openness now from the federal government to take a look at things differently. And I think that even goes all the way back to not just when you get in the door to work with the clients, but even now in the procurement processes of how they're actually bringing in solution providers to work with them.

03:22

I was doing an interview with a company years ago, they were kind of stuck in their ways, this rather large company, and I kept maybe I insulted them. I said, You know what you guys put the know and innovation don't show was a good interview. It was rather large company with three letters to their name. Oh, no, we're all about innovation. I go, come on. Now. You know, IBM, went downhill from there. When it comes to innovation. You guys, I guess you misspell it, you put the yes and innovation. So what's your innovation center?

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Right, right. So another thing really, and I give our founders a huge amount of credit. But day one of starting the company, we put in a Carson Innovation Center. And it was interesting, I was talking last night to the person about Rishi Rahman, who runs our Carson innovation center a little bit more about you know, really, how would you describe it, I have a way I would describe it. And I think we both really kind of came down on that. A good way to describe our innovation center is it's really the offensive coordinator, if you kind of take the football analogy for us, where we design and implement strategies that can really lead to scoring and that scoring means, you know, going out and doing great things for our clients. You know, when you new business, we really analyze the strengths and weaknesses of traditional approaches. Take a look at the trade offs, the game plans, and take the what we can also see from best from the commercial standpoint of what's going on in the market, and then be able to bring that to our clients and bring really new approaches to how to tackle big problems.

04:50

I don't know much about football occasionally listen to the radio, maybe sports peak teams. And so I'm listening to the local football team. And there's a new coach there. His name is I thought it was Eric the The enemy read them out of the Washington Post. No, it's not the enemy. It's me. Oh, God, I would have been reinstated. So there's that's all I know about offensive coordinators. And a little bit, by the way, Eric, the enemy, you can have to do some innovation themselves. So usually something motivates change, you know, when he first got married, you had a baby motivating change. So we bought a house, that motivated change. And so all kinds of things motivate change. And if you look at the federal marketplace right now, the current administration seems to be changing the Eye of Sauron, the changes on improving customer experience and service delivery. So no matter what agency you work for, there are being tasked with improving customer



experience. And so that may be modernizing their website, whether they like it or not. And when it comes to this, the White House is not just you know, on their way to the helicopter saying, Yeah, let's improve. No, they're very specific about it. They have executive orders that deal with that executive order 14058. In fact, there's fact sheets that go along with it. If you dive into this as a fact sheet that has 36, customer experience improvement equipments across 17, federal agencies, all of which aim to improve people's lives and delivery of Garban services, there's a motivator for change, isn't it?

06:17

Absolutely. And, and I think we again, and all the work that we're doing today, with our clients, we're seeing that really embedded and the types of work that we do. And I think the other piece is, as I mentioned just a little bit earlier, is that it's not just when I get in the door, to do it, we have to really be able to kind of prove, you know, as we're going out and trying to, you know, when new work, but we've got the ability to bring all those things to the table work with them. And what we've also found is there's a lot more within the government now to say that I'm not just going to write about how I'm going to do this, but a little bit more kind of show. Don't tell right. So what I mean by that is basically a lot more technical challenges, a lot more of those kinds of presentations, a show that how we work, and how we're going to be able to take those kinds of best practices that you get out of an executive order 14058 and be able to go walk in and be able to, you know, on day one, start making some real change for them.

07:09

Let me that's a phrase my wife can use. Because I talk so much she turned say John show don't tell. It's quit talking. User experience, I remember years ago, I was in a classroom, and one of my students walked up to me gave me the business card, and they worked for Deloitte, and it was UX, honestly, X was five years ago, it they started tipping their hat towards user experience. Now the federal government is publishing documents saying, hey, let's modernize and improve our service over many different areas. The difficulty, I think, is that, once you modernize a website, let's say for speed, you may compromise some of the compliance activities for security. And then if you comply with security requirements, all of a sudden, then you have user experience that is challenged. And by the way, there's a lot of user experience in the federal government that commercial organizations don't have to attend to. And so I think years ago, they come up with some kind of a web design standard for some of this. And to tell you the truth, for the websites, I've seen the last five years, maybe 620 16 have been a lot better. And so maybe the user, maybe I'm just seeing it, but it seems like you know, it's not just pallava it's actually work that's being done to improve consumer experience, isn't it?

08:20

Yeah, I would definitely agree. I think what we found is that the US web design standards, as you mentioned, a lot of different aspects to it. I mean, you've got security, you have PII, you have just kind of standardization of how things are taking a look at and, and the user experience, of course, you know, embedded in the whole entire part of it. So we found it to be very helpful. I mean, especially when we think about the user experience now and going into an agency and helping them to modernize into where they're going next. But over time, you look at some of these websites, you'll look at different things that have happened within their applications. And they become very fragmented over time, where we kind of call it as that it's increased a cognitive load on the user of being able to how to use it. And from our perspective, we're truly trying to go in to help them to reduce



that cognitive load, help them to optimize their user time, and really increase the customer satisfaction. And how do you do that? It's really from, you know, coming in at the very beginning, and betting everything right up front, even in the procurement process, and getting the right stakeholders across the agency to work with you, and be able to kind of help to show them what's happening to we really like and one of the things that we do a lot of is having those fast feedback loops with the customers. And it goes back again to that, you know, show don't tell and being able to bring that consistency that exists then with the US web design standards, and also be able to one of the things I think we'll talk a little bit more about as we've established some toolkits to be able to help the government to do that a lot faster.

09:48

We'll go back to toolkits in a couple minutes. But first, I have a quiz for you. Okay, so, you know me shrug your shoulders and go so what no one visits federal websites. Well, you know, maybe a lot of people visit that or websites, you can find it the most popular website, I think it's Iris dot goes, we know that. So this morning, I put on my thinking cap and I went over to analytics.usa.gov. And the question was how many people visit federal websites daily? And the number is what's the what's your guests more than more than one more than 120 1050 to 20 a day. And so lots of people do it. And I'm sure in tax season, it's a whole lot more than 21,000. Typically, it's for tax forms everything else. But I think it's just an indicator of just, you know, if you look at that number, and say, Well, yeah, that's just no, no, what COVID has done is forced people to come and apply for grants. And maybe agricultural people may apply for loans. And people pay for medical situations and, and remote applications for everything from from FEMA trailers to oh my goodness, for benefits from the government. And so consumer interaction is really important. Some people call it about this phrase called product mindset. So when it comes to designing website or modernizing website, you got to worry about product sounds like something from Procter and Gamble. So what that product mindset anyway,

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it's very interesting that we are seeing product mindset embedded a lot more and everything that we do with our clients. And it's a little bit of a different way of thinking about things. So as I mentioned, we do a lot of application development work within the federal government. But the product mindsets a bit different in that, instead of looking at a project and a project ending, the product doesn't, you know, I mean, so, you know, when it comes to that product, that product continues to go on. So we need to have a longer term outlook, we need to have a more unified product vision of what that's going to be and get rid of kind of a legacy mindset. And what we've also found on that product mindset is really kind of getting a brain trust of people within the government or the people who are the users primarily of it, to be able to kind of set a vision as to what it should be, you know, what, instead of saying, hey, go out and build me this functionality, what is it we really want this product to do? How's it really going to impact the public and impact the users within the government?

12:08

I mentioned earlier, your company website is K AR es un dash llc.com. And soon, there'll be a blog addressing this issue of design there. So let's name this blog coming out.

12:18



Right. So the blog that we have coming out is going is called Design for every next part of the approach that we take as a company is really helping our clients always prepare for what's around the corner, you know, what is that next thing that's out there. So, again, this one will be designed for every next

12:33

great and so what I will do is I'll put the link to that article in the show notes for this interview. Every husband I think in the world is got a honey do list and the weekend comes around, and you got to fix that from the house. So last weekend, there was a rotting step on our deck, I get up my toolkit, and rip that out and put it in a new step. And I painted it twice, and everyone was happy around the house wasn't rotted anymore. But toolkits are used in federal projects as well. You mentioned earlier that your company has a toolkit, nothing to do with steps on the deck. So what is your toolkit got to do with?

13:06

Thanks. So the toolkit that we have, it's called the Digital Transformation design toolkit. And we've really some of the issues that we talked about before, being able to get quality, move faster on how things happen within UI UX. And what we're doing for them is really embedded in this. So what we've done is we develop a toolkit that has code already written that is matching to those design standards and needs that we talked about within the US web design standards, and be able to kind of marry up, you know, the requirements versus what needs to happen on the UI x side of things, and be able to move things faster. And what it does, it moves it faster, but also makes sure that it's more accurate, and how we approach our clients and what we're doing for them. So one of the examples I give is if you think about writing code now, right, and I'll be upfront, I'm not a guy who writes code, but most of our people do within the company, is that if you think about the millions of lines that are code to implement a project, a huge amount of that is related to UI. And being able to have that toolkit of those standardized ways of how we're approaching that, making sure that it's correct. Making sure that it's accurate, allows us to be able to move a lot faster for those clients. And it also allows us to be able to just kind of make sure that we're more dynamic, and we can grow at a faster rate and scale with our clients as well by having a toolkit available to them.

14:30

So this toolkit for Terry's doughnuts are is a toolkit for discovering only.

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So as of today, this was a toolkit for the government. And we have not done this on a commercial standpoint, but we have done it with our federal government clients.

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So this is a toolkit that your developers and staff would use or that people in the government would be able to use or who's going to be using these tools.

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So currently, this is a toolkit that our people and our developers use as we're working on different government types of projects, but it's something that is really like it's that allowed us to be able to move at a faster and more accurate rate, and bringing significant cost savings to the government as well, by being able to do that. I think, you know, one of the examples that I could point to is that, you know, through being able to do this, and being able to have this kind of setup, we haven't had to have, as many people kind of embedded into different types of projects that we've done for the government, we've been able to really focus more on this. And maybe maybe not always have to have people embedded on every single team to be as worried about, you know, having that UI UX framework related to it.

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130 agencies, I can't count the number of projects. If you look at NIH, there's countless grants, countless, I can't name them all. And some are simple, some are complex, some are too complex. And some involve high security, some no security, some outward, I mean, it's good on holist. Here, someone interfaces outward facing all kinds of and so So what types of projects is this toolkit best served for,

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but it's really I think, well served for anything that is going to be related to having a UI UX component, or a customer facing component to it within the federal government. So I'll give you an example. You know, one of the places that we work with us, I think I mentioned to you before we we do a good amount of work with FAA, as of today. And so one of the applications is called medexpress. And that application is for air traffic controllers and airmen currently has about 1.3 million users. And it's really focused on kind of the safety of crew members. And being able to use this toolkit has been able to allow us to scale for that larger user base that is currently using that today, and really helps to make sure that the people who are you know, the air traffic controllers on the airmen, tracking the health and safety of each of those individuals, this has helped us to be able to ramp that up in a much faster way.

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We mentioned product mindset earlier, which reminds me of Agile software development, whole idea of product manager and everything else. And one of the challenges with I think, with Agile software development is this whole idea of fail early fail, often have rapid iteration, go back and forth. I think that's fine. If you're dealing with 40, or 50 people is maybe even fine if you're dealing with a couple of 100 people, but 1.3 million, all of a sudden, we have multiple stakeholders, you can tell me that that are out of that 1.2 million people, there are people there who have strong opinions about certain aspects of the design of the interface there. So so how do you juggle this? I mean, I couldn't imagine juggling 30 people, but 1.3 million and rapid expansion, I mean, you're going to run into some fighters in there.

17:45

Sure. And I think that, you know, one of the things that we've really seen in the monetization projects that we do for our clients, I mean, obviously, it is a big, big chunk of what we do. But a bigger piece of that is really, I think the change management aspect of it being able to work with clients early on, I would say that, when it comes to work with multiple stakeholders, a few things, number one, we really need to have those discussions upfront about what are the benefits? Why is it that we're trying to do this, and how's it going to benefit them,



how's it going to benefit their stakeholders, and then get them involved very early on in the process, being able to have those real discussions with them about their involvement early and often. Their involvement also to, like I said, kind of test things out, and have that ability to really kind of see things before we go and put them in place. And another big, huge part of this, I think more than anything else is establishing that trust, having the trust with the government that we're really partners together at the table to be able to make this get done, I think is really important. So are we going to make 1.3 million users happy all the time. I mean, that's a very hard thing to do. But obviously being able to work early on and establish what we how we have a vision for what we're going to do together, I think is probably one of the most important things.

19:01

It sounds like you should be hiring people with degrees in communication, and not necessarily with math or physics or science. Communications is so important in this endeavor.

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I mean, it's part of all of our jobs and the company. And one of the things that we've really done actually as a company over the last few years is kind of build in some of that training for people to really understand the clients a lot better people on all levels of the company to be able to kind of work across the board and really, truly be partners with our clients.

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There's a movie a few years back about baseball, and the theme for the movie is building they will come Okay, so we know that and I tell you the truth because I'm old fashioned stuck in my ways. So I hire someone to do the John Gilroy website and they're done. Then they go home pack their bags, like a plumber or a carpenter or pipe fitter or something like that. And I think this is the mistake federal agencies make is that okay, old Terry came and he finished up and he's gonna go home and take his lunch and go home and No, no, this just because it's done doesn't mean it's done. Done means it's done for today. because there could be a new security requirement, there could be new initiative coming up, there could be a, an artificial intelligence induced attack vector that no one thought of. And so, so So when do you put the dawn on it? I mean, when is it done? And when is continuous? make that transition? Because it's going to have to be continuous?

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Sure, I think kind of going back to your earlier question, and it goes back a little bit to that whole product mindset, discussion, and that the product, and we have to think about things from a long term perspective. So while I, again, a project man, a product does not, so we need to be able to think about how we're able to be dynamic, how we're able to scale. I mean, there are a lot of things that we find, especially in the work that we do today, where, you know, maybe there's a congressional mandate that came down, that something needs to be changed. So it's very hard to kind of really kind of put that on that date in sight. Okay, this is when this is done. And that's probably goes a little bit more back to what you were talking about around agile development. You know, we're in there, we're kind of doing those things, we have the Sprint's we're working on that, on those, that's next step, but there always seems to be some sort of backlog or something new, that may arise. Like you said, it may be because of AI, it may be because of congressional mandates that may just be cut, be something we haven't even thought of. But we do need to be ready for those. And we need to really kind of do



our best to build applications that are going to be future proofed to be able to handle those things around future modernization.

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Now, what's interesting is that, in this conversation, we've never brought their faves DevOps or dev SEC ops, or, or even Agile software development, it almost seems like it's assumed. It's like, well, yeah, it's a maybe it's a breakthrough, where we're in the 1940s, it would be, hey, this car has air conditioning. And now of course, has air conditioning all cars ever. And so you assume it's so it seems like the way you accomplish the modernization is assuming that coordination between different aspects of it and, and focusing in on the communication. And but so dev SEC ops part of this game, or is that just assumed?

22:02

It's part of it? I think, what one of the things I would kind of think back to well, about a year ago, we sat down as a company, and we were talking about successes that we have, and also areas where maybe we could always make some continuous improvements. And one of the things that came up when we were thinking about our current clients was, where is it there, we're actually succeeding with them. And we thought we were going to be sitting down and having a technology discussion. And instead, what we really had was a discussion about how we communicate with our clients, how we establish a vision with them, and how we really kind of work together in a partnership to take things forward. And we found that this is not an IT discussion and how we're really kind of accomplishing things. It's much more of a partnership discussion, and it's much more about how we work and how we approach things than just bringing it to the table. Well, this

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is an interesting conversation we've had about managing larger systems and modernizing them a whole lot more topics than I thought we'd even cover. You have been listening to the federal tech podcast with John Gilroy, like think my guest Terry Miller, President Carson solutions.

23:07

This is Tom Scurlock from Tallinn listen to episode 72 of the federal tech podcast to expand your knowledge on data quality and governance.

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