Season 3 Episode 4 of the InfraTalk Podcast:
Trimble: Setting the Standard in Digital Project Delivery

Greg Nadeau:

Hi, I'm Greg Nadeau, publisher of InfraTalk America.

This episode of the Infra Talk podcast was recorded from our studio at the 2023 AASHTO Annual Meeting in Indianapolis, Indiana. It features a conversation with Trimble's Director of Strategy for State and Federal Government, Doug Reichard and Senior Manager for Proposals and Grants, Patrick Holtz. We discuss the Federal Highway Administration's Advanced Digital Construction Management System Technology Grants, the role of open data standards in advancing digital project delivery, and how utilizing asset lifecycle management brings informed decisions and better, more sustainable outcomes. This is the Infra Talk America podcast.

Our thanks to Trimble for sponsoring this episode.

Welcome to InfraTalk America. We are for our audience. Trimble is what we call an alliance partner of our company. And for over five years now, I've worked with Trimble in an advisory capacity, mainly federal policy, which led to other incredible pursuits of the last five years, is better education for me and understanding what we have sort of the industry term of digital project delivery, which encompasses a wide range of solutions in terms of how we more efficiently and effectively deliver projects.

And in our particular focus area, the federal aid highway program space. So, 52 state dots in the country all evolving to to find solutions to more efficiently and effectively deliver projects. So that's kind of the business we're in. But Trimble, I, when I first became affiliated back in 2000, 17, 18, we began the conversation because what Trimble was interested in is how do we help advance the state of practice of the technology?

It wasn't about how do we advance, you know, certainly not in the relationship we had because we don't have the skill sets in terms of marketing specific products. So I've always admired the the philosophy of the Trimble CEO Rob Painter. You know, the rising tide will lift all boats. So how do we as an industry help state dots advance their utilization of technology?

So that became the mission and that became our mission. So fast forward today and we've launched InfraTalk America, and our focus is to essentially tell that story. And Trimble has been such an important part of helping of helping us tell that story, because not only do those Trimble provide important sponsorship to enable us to produce the content that we produce, but the expertise of people like yourselves who can help us understand the complexities of what's going on.

So that's the broad set up about the conversation we want to have today and sought to kind of specific categories. One is the Advanced Digital Construction Management System Grants.

ADCMS is what we're referred to them as and ADCMS was a program that Congress enacted first in the appropriations process in 2020, and that was an effort that Trimble was very much behind in supporting, and I was pleased to be involved in helping to craft an idea that could be advanced with the very talented team at Trimble and very receptive audience in the congressional committees of jurisdiction, very interested in seeing what they could do to help in the discretionary program.

Federal grants produced for states, generally speaking, is a practice that's been going on for a long time. In a practice I've been particularly supportive of over the years, because it's one of the few ways that the federal government, because the relationship between federal highway and the states is governed by federal law. And what it says in the law is federally assisted and state administered is how the law explains the Federal Aid Highway program, which means 52 state DOTs have a lot of discretion as to how they go about doing their business with certain policy parameters that the federal law provides. But for the most part, they make those decisions.

Federal highway can influence through resources to some degree, but cannot mandate certain practices. So that's the sort of that sets the table. And as we're recording this interview at the AASHTO American Association of State and Highway Transportation Officials and that is meeting this year in Indianapolis, Indiana. And we're recording this conversation a couple of days before the Federal Highway Administrator is expected to announce the first round of grants from the ADCMS program.

Now, Patrick Holtz has been involved with your team to provide whatever support you could to state DOTs who are interested in organizing and preparing an application to compete for the funding. So having your, you know, insights, having spent the last several months living with this stuff and doing what you could to support state DOTs, I think we can have a good conversation about ADCMS and the potential of it and what we hope it will accomplish and some sense of kind of the applications that are out there which will see at least the successor, the successful ones on Thursday but.

Patrick Holtz:

This was a fascinating experience. I've worked in public policy and federal programs for over 20 years, and I can't think of a more satisfying experience than this first round of ADCMS.

Greg Nadeau:

Can you just give us a couple of examples of your prior experience because it's very relevant for this conversation I think

Patrick Holtz:

I cut my teeth on Capitol Hill. I was I worked for Congressman Steve LaTourette, who's a longtime member of the House Transportation Infrastructure Committee. And then having never wrote a motorcycle in my life, I was the Washington representative for the American Motorcyclists Association. I did that through as many folks in transportation, we measure ourselves in authorization bills. That was through T21 reauthorization. And then what became AB 21.

And then I was fortunate enough to represent some of the largest owners in the country with in every mode from aviation to transit to rail to subway, the Port Authority, New Jersey, L.A. subway system, Dallas subway system. I also then went into service and went back home to Cleveland, Ohio, to help run the MPO for Cleveland, Ohio, as their principal planner, and then came back to then came to Trimble to help us serve our state DOT practice about five years ago.

But you know, when I look at ADCMS, it really was educating folks of a vision of a single source of truth through the lifecycle of a project, and then the dream, which is to do that within a program and to get to the point where we call like the race to the starting line as we got it before the no vote/NOFO? came out.

00:07:45:04 - 00:08:06:06
And it was just to educate the DOTs about this underlying program, this underlying vision. But also then the can do know how just to do it. I mean, the idea of a DOT to do a discretionary grant, irregardless of ADCMS was now and then to make sure that those folks are talking to the relevant people within their duties to submit.

00:08:06:11 - 00:08:37:01
And that itself was a satisfying experience was just of people that we interact with over the last five years. To educate them on ADCMS is one thing. And the other thing is this that they can do, it is other. And that's one thing I loved.

DOUG:

Was it 18 that we worked with?

Patrick Holtz:

We worked with several. And I think even then in saying that though, Doug, it's important just how oversubscribed this program was that we had, I think over 30, we think that may have participated in. And we I'm always looking to the next reauthorization bill.

Greg Nadeau:

00:08:41:03 - 00:09:10:03

Right. And another important point to underscore, the total amount of money that was made available for this round was 34 million of the total of 100 million that was program over five years. This represented the first and second year of funding because delays in getting the program out the door, which is not uncommon with given the volume of discretionary programs that came out of a bipartisan infrastructure bill.

So, it really provides some real insight. And 34 million was made available in this first round and it was oversubscribed four times over subscribed. So over 100 million and request, right? I think 31 or 35. I've heard both numbers, number of applications, which represents a number of states. So, what it demonstrated was a real interest, a real demand for resources to help advance these technologies.

So, so oversubscribed means underfunded to me. So I think we have to start looking for it because the resources available in the second round next year is going to be 17 million, right? So we're going in the wrong direction. This is and we have to do it now. And I'll tell you why in a minute. Well,

Patrick Holtz:

00:10:05:22 - 00:10:38:15
You know, all these programs are interesting and I love kind of that. Each round has a narrative and the program itself has a narrative. And I think ADCMS has a potential to go hyperspace as a relevant program within an FHWA when it of the underlying funding levels, when a DOT is able to connect ADCMS with some of the larger programs within FHWA you're infa grant ? or Bill Grant and that they are then two ships heading in the same direction that you can submit within both. I think would be curious

Greg Nadeau:

if you can leverage the leverage on them.

Patrick Holtz:

Absolutely. And then also just after it's the human part of the grant is and I've said this to the DOTs over the summertime, is that there's just an argument for hanging in there. And generally when you hang in there with FHWA, you will be rewarded. And irregardless of what happens here in round one is to talk to those DOTs immediately.

They'll get an opportunity to be debriefed on what might have been the gap is in project description or the budget table, but it's really there's something there. There's a human quality to discretionary grants of just hanging in there. And the great news is that I in talking to the agencies, I know that they well, these are very industrious, hardworking folks.

Greg Nadeau:

And and a lot of support. Again, I spoke of the history and you know, the sort of genesis of of this of the development of this program.

And over time, of course, other industry members have supported we've had contractors. I think the first evidence a real contractor support ARTBA had produced a policy statement almost three years ago now. And you know, a program that involves, you know, potential of requiring contractors to do certain things certain ways is always challenging because they've been doing business a certain way for a long time with the federal aid highway program.

So, any change is always challenging. But this was widely accepted, ARTBA again. And the AGC of America has also established a committee focusing on this. So, you've got broad contractor support and ADCMS has helped that. So, we've got a lot of support, which is what helped, you know, not only obviously contractors, other software vendors, so

Patrick Holtz:

And don't take our word for it. I mean, look at FHWA and what they said within the nofo of what selection will hinge on your ability to be interoperable and then collaboration. I mean, in a former life, when I was working on discretionary grants and service, you know, you would have liked to have a lot of support from the private sector, helping working on product descriptions were kind of sometimes at an arm's length.

00:12:59:11 - 00:13:16:03

This program is the opposite. The real thinking is collaboration and working together. And in that in that same way, that means not specific point solutions necessarily, but working with other companies in with states because it is about the movement of data through the life cycle.

Greg Nadeau:

Great segway

Doug Reichard:

Rising tides lift all boats

Greg Nadeau:

And okay and let's talk about why it's important, why now this program is going to provide resources for state DOTs to help them pursue this course. Now, Doug, you spent a lot of time working on the sort of big picture stuff associated with this and have some real knowledge that you can share with our audience. There's a lot of work going on in AASHTO in AASHTO

committees in what they call NCHRP studies, 21 states. I think is the number that's involved in that.

00:13:57:22 - 00:14:33:17
They're all looking in one way, shape or form, that it's part of the effort to develop what we call open standards. Can you help us understand? So, we've got the resources that the Federal Government has provided to states to help them move this along. Not enough. Soon we can address that. But the other factor being in terms of the progression of the advancement of digital project delivery, what role does the developing of open standards play?

How is that going to help accelerate? Just give us the tutorial on how this works and why it's important.

Doug Reichard:

00:14:40:06 - 00:15:00:05
My my favorite way to describe this, Greg, is if you are in Europe and you try to take an American plug and stick it in the wall, it doesn't fit right. So open data standards are it's the equivalent of everybody in the world using the same kind of plug, right?

So now all of a sudden data can move, it can move from place to place, it can connect between in like internal systems to Trimble, but more importantly, external systems to Trimble. It's imperative that data is able to flow and be where it needs, when it needs to be there and in the way it needs to be consumed, if we can, as an industry.

So it's already started, right? We've got IFC 4.3 that is now available. It's being utilized by some

Greg Nadeau:

IFC, IFC Can you just explain what IFC is?

Doug Reichard:

Industry Foundtaion Classes. It's a it's just it's a data standard,

Greg Nadeau:

and it's international.

Doug Reichard:

It is, and the governing body that that establishes these standards. Is it let's put it this way it's been accepted by AASHTO as the standard that the DOTs are being advised by Federal Highway And AASHTO, that's the future. That’s where we’re going. Right

Greg Nadeau:

And just in maybe two simple terms, but effectively, that means software developers like Trimble are designing the software to that standard, as are their competitors and other companies. Does that the result of that is a uniformity

Doug Reichard:

it is.

Greg Nadeau:

And does that accelerate the pace of software development? Does it provide what advantage does that what does that provide to the states?

Doug Reichard:

You can't with, you can't do BIM without design standards and something like IFC that draws it all together. And we've talked about I know you've talked about Norway on your podcast many times, but that was one of the first things they did over there was to establish a data standard so that not just the DOT or the Department of Transportation, but the contractors and the consultants that they work with are also all on the same page so that data can go and go and they do everything, almost all of their projects over there, like a design build as opposed to design, bid, build where they're not even done with the design when they start construction.

So, they're able to iterate because that data can move and actually be designing as they're building because things happen on a jobsite. Like you have to be more flexible and you have to be able to meet deadlines and deal with the day to day stuff that just comes up. And if you don't have that flexibility built into your processes, you can't do it.

Patrick Holtz:

I almost feel like sometimes when we talk about this stuff, it's like we're it's almost like a philosophy class is to get out of the project and we would have thought three years ago, how revolutionary is it, that single source of truth within the project.

But what Doug is suggesting, like for example, what's been done in Norway is now you're into the program and that's really interesting. And then if you pull that down to the DOTs, it's the thinking of there's a step look different in the future. Is it just is it a much more dynamic document? It's the intention to have that data inform design.

Your design programs your construction programs, not just the project, but asset management programs altogether.

Doug Reichard:

Right. Well, imagine it like just being able to deliver in a predictable fashion a step like you can more accurately,

Greg Nadeau:

Which is what the what state DOTs have to produce every two years.

Doug Reichard:

Exactly

Greg Nadeau:

The state translation improvement program, which governs what projects they're going to build.

Doug Reichard:

Right. And it would be greatly affected if they're able to have they can predict like when this one's not going over budget, we're going to we know what's going to happen because we're all operating in synchronization. Right.

Greg Nadeau:

Can you give an example of, we keep talking about digital project delivery and how to advance and creates more efficiencies?

How about an example of, and obviously feel free to use a terminal example, but an example of technology that our particularly our audience, we hope and includes a range of policy folks and especially we focus on the state level, help them understand why this is important with a real with a real example

Doug Reichard:

So a real example. I mean, I'll name a piece of technology used by Trimble called Quadri. All right. So this is a it's a data hub for a project. So when and it and it operates at a very, very high level of detail.

I won't go into the feature sets and things like that because that's just going to bore the audience here. But it operates at a very high level of detail and enables data to move throughout the asset lifecycle, starting in planning like in the earliest phases of a project. As

soon as a model is created, a 3D model is created, that data gets attached to objects in that model, a curb, a gutter, a road surface, and that data making that journey throughout the process enables wonderful and amazing things to happen when they go to operate those assets,

Greg Nadeau:

Certainly versus using a bunch of blueprints and paper plans.

Doug Reichard:

Exactly.

Greg Nadeau:

Which is what this replaces.

Doug Reichard:

It's flat files, right? You're you're replacing you have the ability to to associate data with a 3D iteration of a project. And it makes the whole journey all the way in asset management as designed, as built and as maintained. That's what they do in Norway that nobody else does.

And they literally maintain their entire road and rail network in over 1800 models inside of the solution. We've told this story to the DOTs and the DOTs hear it and they're scared. They are they get they're intimidated they'd like that's not achievable but through pilot programs and and many DOTs that we're working with, they're starting to realize actually this is going to help us get there faster because accelerating that pace of digital adoption is really the crux of what we're trying to do.

We're trying to just enable the DOTs and we're not all things to all people. We don't have like global domination is not Trimble's thing. The other thing is to integrate with our contemporaries wherever necessary to allow that data to move where it needs to be in the way. It needs to be there to be considered

Greg Nadeau:

Interoperability, integration are common phrases that are explaining where we have to go because of the the number of moving parts and the number of players involved in a project's delivery is important to consider.

And the technology you're describing enables everyone to have access to information instantly and immediately. So, for example, imagine a change to a set of plants, paper plants, and that change has got to be shared and distributed among a number of players involved in the project

delivery process, as opposed to everybody having exact, you know, immediate access to digital files that have whatever changes we're talking about right there.

So, there's it minimizes and reduces the the possibility of mistakes dramatically. And in your business, mistakes cost money in the project delivery business. So I've often referred to an analysis that Trimble folks did in Norway on a project that resulted in an estimate of 90 to 95% reduction as a result of really, if I call full digital, that a 95% reduction in change orders is staggering.

Well, in terms of cost savings, it could mean billions to our program over a decade.

Patrick Holtz:

I think just just putting the gantlet down Doug and I were both on I think is is it an moment when this presentation was given to Caltrans and Caltrans rightly said, well you know, why did that happen? And they just simply said, well, we just made the decision not to change orders anymore, like it just weren't right. We're not going to do that.

Doug Reichard:

They’re not necessary.

Greg Nadeau:

And and for those of you who aren't in those business, that's huge. I mean, from the standpoint of of of it saves time. It saves money. And in a in many ways it contributes to the sustainability of building the project.

Patrick Holtz:

And it's almost like it's a value. It's committing to a value and accepting a value.

Doug Reichard:

And agencies have a pay. They need to be good stewards of public funding. And if they're going to do that, you want to be as efficient as you can and make the best use of that funding. And that's the mission. Like if you look at the the the goals in the in the business plans for all the different DOTs, that's being good stewards of public funding is usually in the top two right up right right next to safety. Hugely important.

So there's a there's a there's a reduction of risk for that money. There's all these things that play into it. But but reality is there's still operating at a level that is 20 years behind some of

these advanced countries and whatnot. But they're trying. And our goal is to help them step on the gas. Right. Look, what can we do?

Patrick Holtz:

I think I think, Doug, I think you're totally right. And not only is it just, you know, in dealing with the change management, which is the idea of new technology, I my hope is that when you go from the project and into the program, duties can really tackle, I think which is a the elephant room it's just growth and that if you are a state that is growing, if you're growing, you're adding capacity.

If you're adding capacity, there's more construction. If you are. We're from Cleveland, Ohio, is where Doug and I are from I'm we're Cleveland Guardians fans. It's a place it's struggling on these questions and and in that same way that's that's its own challenge and you still have some in the case of where we're from there's capacity for a population twice its size half its size.

And so it becomes that much more important to be able to do predictive analysis. Because irregardless of whether your region is growing or not, you have fixed funding and so you can then do that in a meaningful way, you can what I would say is you're now truly practicing asset management, right?

Greg Nadeau:

Asset lifecycle management. Can you explain that? It's a it's almost a theme of trembles.

Doug Reichard:

Yeah, it's, it's, it's how we have built our business for construction owners and what it means to us. Everybody kind of has their own version of that. But like, what it means to us is the ability for that data to flow throughout the asset lifecycle so that better informed decisions happen and ultimately better outcomes happen. But the real benefit of asset lifecycle management is to help the states reduce the total cost of ownership of the assets that they create because they spend, you know, 10% of the budget building it and then they spend the rest of the 90% of that total cost of ownership maintaining it.

And by making better decisions early on, making the data available in in 3D, not flat files for when they're managing and maintaining these assets, the opportunity to reduce total cost of ownership by up to 40%. Think about that for a minute. 40%.

Greg Nadeau:

Can you explain that?

Doug Reichard:

Yes. Yeah. Yeah. So I'm basically it will just think of it. If I could save a state 2% on the cost of their pavement that justifies any technology investment they would ever want to make. Right. And if I can save 40% on something like a bridge, that's significant and that's the that's the that is what results. When you utilize data and you use asset lifecycle management, you know, to its fullest. And it's everybody is intimidated by this but it's not that hard and can be done

Patrick Holtz:

And the easier thing to do and it's it tends to be which would stuns that then we're just going to focus on paving condition ratings and then do kind of a worse the first approach on project selection and think I said that that's just not going to optimize the program or the system, right?

Greg Nadeau:

One of the things I like it, but one reason I'm focusing on, you know, we focus on policy, folks, is what I think it's important for the policymakers at the state level, whether you're a legislator or a legislative staff or governor's office, they need to understand that supporting resources for their state duty to do the kinds of things you're talking about in this conversation is critical.

They've got to understand. I mean, you know, I spent I helped run a DOT for seven years, and I understand the demands of legislators. They want they want more paving. They want more bridges than you're ever able to afford. But, you know, so expending resources on anything else is a problem. Well, this is going to result in more resources available for more, you know, more paving and more bridges because you're going because of the kinds of savings you just described.

Doug Reichard:

the and this is a result of If you look at a if you go from hand, like hand over through design, you know, design, construct, build, operate and maintain, if you look at that continuum at every handover rate between planning to pre design predesigned to design design at every one of those steps, you're lucky if you maintain, if you are able like in under current practices, you're lucky if 10% of the data that's created during that time actually makes it to the next phase.

So think about that for a minute and that's if you're able to make that linear and capture all of it. That's what results in the total cost of ownership, reducing as much as it does because that

data makes the journey and you have complete data sets to be able to do what you need to do and maintain those assets.

And it changes prioritization and enables DOTs to go from a preventative or preventive methodology for asset management to a predictive. And that's where I mean, we haven't even talked about AI and machine learning yet but we could that's just another.

Greg Nadeau:

Most people, most people hadn't heard of AI a year ago.

Patrick Holtz:

A chance to honor the father seems is such a really is that when we first started this exercise we wrote down on a board 'single source of truth through life cycle project' we realized that we gotta find opportunities where all the parties are in the same room designers, general contractors, DOTs, and owners and we stumbled our way onto what CMGC

Doug Reichard:

contract construction manager, general contractor, something like that, you know, I think so.

Patrick Holtz:

But Greg in your time at FHWA promoted that

Greg Nadeau:

Round one of every counts.

Doug Reichard:

Yeah there you go.

Patrick Holtz:

I got to tell you, that was an aha moment for our team four years ago is and that's what we're able to demonstrate this proposition.

Doug Reichard:

The enemy of digital project delivery is design, bid, build I'll just say it. I mean it is, it's a way of doing things and progressive of states like California and others that are using not just the MGC, but they're starting to progressive design build. And then it's the future. Yeah,

Greg Nadeau:

Design build just for a policy friends is you get you can equate it to a little bit and it's yeah and it's what most states do for most cookie cutter projects and in some cases that's justified to some degree.

But by and large for me, I've always said low bid is a equates to lowest common denominator. It's contractors showing up who want to win the bid. And I don't blame them. They're in the business of trying to win bids. So you're going to sharpen that pencil, you're going to cut back, you're going to do what you can and you're going to make it up. Often end up making it up and change orders. It's where you deserve. That's that's been the pattern for decades

Doug Reichard:

They change order there way out of profitability. And that just is inherently wrong

Greg Nadeau:

And to our friends in the contractor community, we're not suggesting anything nefarious. It's how you have to do business in a design bid, build environment if you want to be success.

Doug Reichard:

Well, cash flow is king for a contractor. Exactly. Keep money going through their business And if they can make out three or 4% on a job, that's design, bid build they've done it, they've achieved. And that's impressive. it'll be wonderful if we had a world that, well in Norway they did 80% I mean they started the journey to go digital, 80% of their contracts were design bid build now 80% of them are design build and their version of design build is a little different then ours here and the way their legal system functions is a little different than ours and liabilities and things like that that are looked at but that's the point right they knew that one of the first things they did was work on their contract language because they're like man doing it this way is not going to work. So we need to go design build and they kinda created their version of it

Patrick Holtz:

And Doug it goes even then to the role of Trimble. And in that process and, and it's something only we kind of discovered on our own is this there's such a human quality as you kind of work with all the partners as they pull that data through the lifecycle and that a Trimble became kind of that and the parties were working on that that that steward to hold your hand as you go.

If there was a design defect that's got to be commuted somehow. We found that we were sometimes in that role. That's just to be that steward as a kind of cross that chasm through the lifecycle. And that was actually something I think we just we discovered and learned

Greg Nadeau:

Well every day counts six which is which for every everyday counts is a two year cycle. So EDC-six was early the 11th and 12th year of the program and there was an initiative that covered both something called e-ticketing and digital as builts and digital as builts is how they captured this. We hear terms like digital as builts. You hit terms like BIM and open BIM BIM being building information. Now I'm acronym challenge, Building information. Madeline

Doug Reichard:

Modeling.

Greg Nadeau:

I almost said management and it which was that which which is a process utilized heavily and extensively for a long time in the vertical building business. But in the horizontal business, the highway and bridge sector, if you will, relatively new.

So is how does the technology, the contracting method, how does all the initiative I was talking about, EDC six really began a two-year process of taking what had been six years of effort before that. I mean, a lot of years went into collaboration between federal highway and state DOTs in various aspects of this over time. But so how would you you're in the field.

You've talked to a lot of state DOTs about this specific. Where are we at? Give me as as we as we as we come in for a landing, as we could talk about this all day. But give me your sense of the state of practice today and where you think we'll be in

Doug Reichard:

Well, here's here's what's happening now, Right. All the DOTs that they have, the data, they have it. It's coming in via survey like their like survey practices alone and inspection practices. They have the data right. And I'm not talked to a DOT that is not using a drone these days for photogrammetry and and they're light the DOTs are light are scanning the road networks there the data's there.

We just need them. We need to help them make use of it. Turn the lights on. It's dark data, right? It lives in it lives in a dark closet until you turn the lights on. And the way you turn the lights on is by giving it the context of a project and a 3D model. And by putting that data into a 3D model of the whole world, it's like turning.

It's not just turning the lights on. It's illuminating a universe of possibility. And I know this sounds a little wonky, but like it really is the ability to now look at projects differently and asset management differently than we ever have before. And when we use the term digital twin, it's an aspiration for every DOT. I don't like the term.

Everybody has their version of it. The only real digital twin that I know of is what Norway does for with their entire road and rail network in 3D. And yes, it's in Trimble technology, but it truly is. The data flows in that data flows out and they and by it has to be a bi-directional relationship in order to be able to achieve this.

So where are we at? We're we're at the beginning of helping the DOTS leverage that data. We're at the beginning of that journey and they are mostly receptive. The challenges are contemporaries that have proprietary technology that don't like to play with others. Well, we're the anti of that like we everything we do is open. Everything we do is based on API level connections that enables that data to flow from our systems.

Other systems. We don't really care. We sincerely want the DOTs to be successful. And the way that we do that is by saying we're not proprietary, we're not, we're open to everything and we will work with. and we walk the walk.

Patrick Holtz:

I think you're going to see that. that's a go go hyperspace. I mean, there's just some practical things in the C-suite that this gets at.

For one, when you have a every state has their projects of national regional significance that are competing in these large programs, losing round after round after round. And when you realize that this is the hinge on you being successful and funding that projects national regional significance, that will be interesting when if that that connection is made and then and then the other practical way I mean I only say this from experience is that as everyone has their favorite projects, when chief engineers no longer are talking to DOT secretaries and saying, Hey, I need you to fund this project, and not to suggest that, you know, an entire adoption of a moneyball approach to project selection, but at least what I found in my my background was when we had the analytics discern what was the biggest bang for the buck.

It gave us something to say to that chief engineer, like, hey, listen, we can't fund you this year, but these are these other projects we're going to get to because we have to do predictive analysis. But just that you'd have an answer for that other than just it's my favorite project and he's going to find out.

Doug Reichard:

Yeah. The best answers are always backwards.

Patrick Holtz:

You go back to the worst, the first, and it's just the idea to go into predictive analysis. And and these are the things these are the questions that DOT secretaries, secretaries have. They have

to they are answerable to their governors on these big grants. And then also in that same way, in the blocking and tackling of the stimulus projects that those chief engineers love so much. And and we have to be that source of information in that conversation that they invariably have.

Greg Nadeau:

Well, this has been a great conversation of anyone wondering about this. I think we'll be a little more enlightened for this conversation. And it's our hope is and you know, we're right, we have a real advantage right now.

We have a robust industry, software developer industry, very competitive world. Open standards will lead to everyone sharpening their tools and coming up with better solutions. It's exactly how the market should work. And but the key to that market developing and prospering is for state DOTs to get to a commitment to go full digital and begin the process of getting there. And a whole bunch of states have done that, I think we're at a real turning point.

Doug Reichard:

Don't be don't be scared. Got to jump in. It starts with one project and then it goes from there. There are states doing it and they're being successful. They're being successful with it. Caltrans is a great example of alternative delivery using delivery methodology to facilitate alternative delivery projects they went from like 25 CMGC projects in 2022 to like 125. I might be off on that so Donna Barry don't hold me accountable. But it is that significant.

Greg Nadeau:

Donna Barry, who's their chief engineer is, has a lot to be proud of because I think no organization can make this kind of progress without leadership at the top, giving them that license and that ability. So I like to talk about I always talked about everyday counts at the federal highway is top down, bottom up. Yes, top down wasn't enough. Right. Bottom up. You have to have that buy in from the front line troops who deliver the program and deliver the projects. And of course, with that, with the with the top endorsing, giving them cover, giving them it's a it's a function of risk aversion.

If it's the folks on the front lines, the career people who are there year after year and director after director, if they feel they've got the support and backing of the top level management, they're going to be much more inclined to take those risks and advance those innovations and solutions. And I see that's happened certainly happened at Caltrans in the last several years.

So it's a good example of a state that's really taken it to another level. And there are a number of states we could we could talk about other examples as well, but we can't because we are out of time right now. But having you here today and having this conversation at AASHTO is just it's special. So thanks again. We'll be talking more.