

Season 3 Episode 1 of the InfraTalk Podcast: Representative Rick Larsen: Investing in Innovation

Intro

Hi, I'm Greg Nadeau, publisher of InfraTalk America. On this episode, I'm joined by Congressman Rick Larsen of Washington State, the ranking member of the House Transportation and Infrastructure Committee. Listen to our conversation ranging from digital project delivery technology to the electrification of ferry boats, and some thoughts from the ranking member on the next reauthorization of the historic Bipartisan Infrastructure Law, just three years away. This is the InfraTalk America Podcast.

Greg Nadeau

Thank you so much for doing this. I very much appreciate it, and I'm sure your team gave you a little background into what we're going to try to accomplish. At InfraTalk America, our motto is "every innovation begins with a conversation." So, our focus is innovation, and we focus on a couple of what we call our targeted technology sectors. So, we like to have these conversations, and this is the kickoff of a series we're doing talking to national leaders, with a focus on innovation.

First, I'm pleased to be interviewing you from the University of Maine in my home state, and specifically the Advanced Structures and Composites Center, which is the home of one of the nation's UTCs. It is funded through USDOT and your committee. The center is called the Transportation Infrastructure Durability Center.

So, one of the things they do here, one of the many things they do here, is focus on research and have actually developed technology for composite bridge building and other structures. So, what's behind me is a giant wave pool that they use for oceanic research. And they're maybe among the world's leading researchers in offshore wind technology.

So, it's a great example of private-public government funding. In this case, some of the money came from USDOT. US Army Corps has also been very active in developing some technology that is very useful to them. So, just to give you that backdrop of why I'm sitting here with a University of Maine sign behind me.

I wanted to start the series we're conducting with an opening question that we're going to ask each of our participants. The question is, simply, how do we move innovation amongst the state and local agencies responsible for delivering the programs/projects under the Federal-Aid Highway Program? One of the approaches that the federal government has taken and one of my favorite approaches is federal funding to incent the utilization of technology.

We do a lot of work in the digital project delivery sector, a program that was included in IIJA and allotted \$100 million over five years to provide grants to states so they can utilize digital

project delivery technology in a number of ways. Using that as kind of an example of overall utilization of federal dollars to provide grants, is that a tool you think we should do more of? Are there other examples you might have where that's been effective?

Representative Larsen

Well first off, thanks for having me on. I appreciate the opportunity to have a conversation with you and your listeners and watchers, and to contribute to the future of the transportation system in the country. To get to your question, I think there's three ways to look at innovation in transportation.

First is the things we make. The second is how we make them, and the third is how we deliver those things. And so again, start there, the things we make. In Washington State, as an example, our state ferry system is part of our state highway system. We are electrifying the state ferry system to pull those diesel emissions out of our ferry system and to go fully electric over a period of time.

Our state just let out the first contract to convert two of our state ferries, with an option for a third and then eventually a fourth. Then, every ferry we purchase after that will be electric. That's an innovation in the U.S. It's not an innovation in Norway where they do it every day, and it's kind of a routine thing. But it certainly isn't science fiction anymore to be doing things differently and how we make the things that travel on our state highway system. That's unique to us, but it may not be so unique if you include Maine, Virginia, South Carolina, California, Wisconsin, and other states with either county or ferry systems.

Also, we put money into low and no emission transit as part of the Bipartisan Infrastructure Law. These funds help transit agencies completely convert their fleets from diesel emissions to low or no emission, whether that's electric, as you will see in the Whatcom Transit Authority near the Canadian border in my district, or a combination of hydrogen and electric that you're going to see in Island Transit, a rural transit agency in my district. So, how things are made is when innovation is taking place. How we make them is also an innovation. So, you see dollars put into the Bipartisan Infrastructure Law to look at innovative materials. And your folks are probably looking at that in Maine – but innovative materials, different materials, the use of different materials, and what we do with those materials.

Again, I'll bring up the example in Norway. I was just in Norway a few weeks ago to look at a company called Heidelberg Materials, which actually has some operations here in the United States. They're pulling all our carbon out of their cement production and combining with another company to capture that carbon and store it. So, how they are going to green up their cement concrete operations is something that is innovative, and maybe something we look at in future.

But generally, looking in the U.S. at incentives that exist in the Bipartisan Infrastructure Law to look at new materials for construction is important. And then there's project delivery, how we

deliver projects. And you mentioned digital project delivery, which isn't isolated to transportation. Manufacturing companies in this country are moving towards digital engineering, for instance, to cut down the timeframe of product development as well as the waste that comes with it. Moving towards the use of digital engineering eventually evolves into the actual making of the thing. In project delivery, it's the same principle, except the making of the thing is a delivery timeline that is much shorter. They achieve this by using some of the new programs, algorithms, and technologies to deliver those projects faster. So, it's an exciting time to be in transportation for a lot of reasons. There's all the basic foundational infrastructure investment that we're doing, and that will always need to be there; and we're using the BIL as well to provide the incentives to change how we're making things, what those things we are making, as well as how those things get delivered into the transportation system.

Greg

Some terrific examples. It's funny you mention Norway. We talked about the digital project delivery sector. Norway is one of the global leaders. As a matter of fact, we're probably 3 to 5 years behind where many countries in Europe, Norway in particular, are in the adoption and development of standards necessary so that all the software developers, for example, are talking a common language. There is a Herculean effort going on. There are multiple committees at AASHTO. There's a pooled fund study, I think, involving 21 states. So, there's a lot of work going on across the spectrum to get there. Federal Highway has produced a roadmap. They call it a BIM for Infrastructure Roadmap. So, there's remarkable work going on.

There was a study done in Norway. That's why I raised this, and a conclusion looking at a particular project where they measured a 90 to 95% reduction in change orders. The efficiencies of what's characterized as digital project delivery on a broad scale are huge. If a 95% reduction in change orders was a common occurrence, the savings in time and resources would be staggering in a program the size of ours.

So, again, a lot of good work in IIJA. Some money to incentivize. You're right, there's a number of provisions that talk about alternative materials and longer-term sustainable results. So, there seems to be a real sea change going on in how we hit those exact three topics that you raised: what we use, how we do it, and how we execute the projects.

So, I think there's a growing number of State DOTs who are making a serious commitment to all of that. So, thank you for bringing that up. It brings me to a couple of other institutional questions if you will. Obviously, as ranking member, you're in a position to evaluate where you go from here.

IIJA, historic, significant funding across the board, biggest bridge program since the interstate. What do you think? Well, two things. One, you and Chairman Graves are sort of known for your efforts to be bipartisan and work together. You've accomplished working together a couple of major milestones, the FAA reauthorization among them. As you look ahead with IIJA being implemented, any thoughts on what we should expect or prepare for between now and '26. Is

working toward the next reauthorization something the committee is going to be addressing any time soon?

Is there a process internally that you're working on utilizing to prepare for that inevitability?

Representative Larsen

Well, I sure hope it's inevitable. The surprise of the action in passing the Bipartisan Infrastructure Law and having the president sign it is something the president called a once in a generation opportunity. And I think on the committee we'd like to see that be once every five years like it used to be.

Greg

Industry is with you.

Representative Larsen

And not make this too exciting, but actually make it pretty routine. When you look at the unemployment rate in the country and you look at the unemployment rate among women and men who are working in construction on these projects throughout the country, you can understand the consistency of employment that a consistency of passage of you know BIL 2.0, which is not its name, there's no official name folks, but a passage of BIL 2.0 would look like. And so, I think that it is important that we begin preparing for that sooner rather than later. But there's still work we have to get done now on the committee. We're working through the Federal Aviation bill. We've got a Water Resources Development Act bill, which is basically a big project bill. Then, there's a pipeline safety reauthorization that we're working through. So, we still have a little bit of work to do left in this Congress before we move full throttle into what 2025 and 2026 looks like. That said, it is certainly my intent that we will be engaging quickly on what the next version of the transportation reauthorization will look like; and that we try to make it bipartisan in that we don't let another ten years go by without doing something.

And there are examples in these issues we're talking about. There are examples that perhaps we can build on when it comes to the use of materials, the project delivery type, as well as the new technology of delivering transportation options to people. And I think we need to look at these transportation modes as a way that we are delivering a transportation service to people. And think of it in terms of that as opposed to just thinking of it in terms of, you know, a bus or a car or a truck or what have you. These are transportation modes that we have a role in delivering to consumers.

Greg

In going back to my digital example, I go back to my history at Federal Highway when I served as deputy administrator in the early part of the Obama administration. We rolled out Every Day Counts, which is a program that ultimately got sort of codified in the FAST Act.

So, I'm happy to say a program we rolled out in 2010 is going strong today, stronger than ever. I always referred to it as Every Day Counts, the partnership with the states, because that's how it's turned out. And every two years, a number of initiatives are put out there and state DOTs select the ones that make sense for them.

So back in 2012, we rolled out the 3D modeling initiative. It was the first sort of overt Every Day Counts activity in the context of beginning to collaborate with states, and that was, you know, 2010. So, there were four other initiatives and eight years of total collaboration between states and Federal Highway on advancing various elements, whether it was e-Ticketing, which digitizes the construction materials supply chain, which is huge and catching on like wildfire around the country. 43 states, a record for EDC, adopted the initiative, so the notion of federal resources, of an agency like Federal Highway, I think it's a very unique approach in the federal government, certainly in the infrastructure agency segment. The administration actually put out a plan that included expanding Every Day Counts to other agencies within USDOT, including FTA, or I should say FTA is one of the agencies that has expressed an interest in running with it.

So, in the context of project delivery, whether it's Federal Aid Highway Program. FTA is a different animal. It's a grant program. It's a little different than the kind of relationship DOTs have with Federal Highway. But a lot of the lessons learned from Federal Highway and the relationship with State DOTs, from the standpoint of assisting in accelerating and making more efficient and reducing cost to project delivery, certainly can be applied to transit projects and transit agencies that administer those.

So, you've got this broad philosophy on how these approaches can benefit a broad array of infrastructure technology that the federal government funds. Two things you said that really encourage me: that overall philosophy on innovation, but also, as much as I admire the President's leadership on infrastructure, I agree, it needs to be more than once in a generation. Given the state of the infrastructure and the ten years I served as a deputy commissioner of Maine DOT and then I went to Washington. 10 years of continuing resolutions. It's an experience I never want to have another generation go through.

So, it's encouraging that you're looking at the future as necessary to building upon this historic effort.

Representative Larsen

Yeah, the mention of a continuing resolution is certainly timely right now, given when we're recording this we are looking at the end of September coming up without a budget deal in sight.

But, I do think that there's really an important role that advocates in transportation need to play, and that is to ensure that members of Congress, in the House and the Senate, understand what a lack of continued funding for transportation will do. Although there are some automatic dollars in the Bipartisan Infrastructure Law, not all of them are. It's important that we continue to meet the promise of the Bipartisan Infrastructure Law because of the jobs it has already created and the jobs it can create, as well as continuing forward on some of these pilot programs that allow us to look safely at how to apply some of these innovative approaches to both developing the process to deliver projects as well as the construction materials.

I would also note there's some things that the Administration can do and has done when they developed the Freight Logistics Optimization Works or the FLOW initiative as part of COVID to look at our ability to break down hurdles and barriers within the supply chain, to get products to move from A to Z faster. And that is something that, you know, I would hope the Administration can continue to press upon, as well as that we on the committee can learn some things about supply chain bottlenecks and maybe use those lessons more acutely in the next version of a Bipartisan Infrastructure Law.

Greg

Well said. A lot of innovation going on in states. And part of our mission is to tell the story, report on successes, and target specifically policymakers in the states, because we need them supporting what their state DOTs or their local infrastructure agencies are doing. So, very much appreciate your outlook on this because it's very consistent with that overall policy objective.

Representative Larsen

There are opportunities moving forward as we look at the next version of the Infrastructure Bill to both expand on things we've already done, but also look for new innovative technologies to apply in the next iteration and the next generation of infrastructure investment. So, I look forward to hearing what you all in Maine and your center have to offer us.

Greg

Well, Mr. Ranking Member, I have one final comment, and that's to pass on a message from the director of the center, Dr. Habib Dagher. He invites you to visit any time you want. Congressman Golden and Congressman Pingree are both very familiar with this institution and both have been involved and very supportive. So, they'd very much love to have you visit and share with you the wider range of innovation that they're working on at this center. And of course, to some degree, thanks to the federal support that Congress provides. So, I promised them we'd follow up with your staff and provide that information and invitation.

Representative Larsen

Alright, thank you. Thanks so much.

Greg

Thank you very much, Mr. Ranking Member. Very much appreciated.

Representative Larsen

Alright, talk to you later.

Greg

Have a great day. Bye-bye.

Outro

Thank you for listening to this episode of the InfraTalk Podcast. We hope this discussion inspires you to ask your own questions and encourages you to have discussions with policymakers and your peers. If you want to know more about InfraTalk America, visit us at infratalkamerica.com, follow us on social media at InfraTalkUSA, or subscribe to the InfraTalk Podcast on your favorite listening platforms to be notified of all new episodes and features. And remember, every innovation starts with a conversation. So, let's start talking.