

THE BROOKINGS INSTITUTION
NACO/NLC LEADERSHIP CENTER

BUILDING INCLUSIVE INFRASTRUCTURE: HOW THE BUILT ENVIRONMENT LIMITS
PATHWAYS TO OPPORTUNITY, AND WHAT WE CAN DO ABOUT IT

Washington, D.C.
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Welcome:

ADIE TOMER
Fellow, Metropolitan Policy Program
The Brookings Institution

Remarks (Pre-taped):

THE HONORABLE AMY KLOBUCHAR (D-MN)
United States Senate

Panel: The Inclusion Challenge:

TANVI MISRA, Moderator
Staff Writer, CityLab

JIM McDONOUGH
Commissioner, Ramsey County, Minnesota

ELLORY MONKS
Co-Founder, The Atlas Marketplace

BROOKS RAINWATER
Senior Executive and Director, Center for City Solutions
National League of Cities

Panel: Building Inclusive Place:

MITCH HERCKIS, Moderator
Senior Director of Programs, Route Fifty

MARK FISHER
Chief Policy Officer, Indy Chamber

STEPHANIE GIDIGBI
Director of Policy and Partnerships, Healthy
People & Thriving Communities Program
Natural Resources Defense Council (NRDC)

SHAUEN V.T. PEARCE
Director of Economic Development and Inclusion
Policy, City of Minneapolis
Office of Mayor Jacob Frey

Panel: Technology for Public Good:

ADIE TOMER
Fellow, Metropolitan Policy Program
The Brookings Institution

SHOSHANA LEW
Chief Operating Officer
Rhode Island Department of Transportation

TOM SCHENK, JR.
Chief Data Officer
City of Chicago

ANGELA SIEFER
Executive Director
National Digital Inclusion Alliance

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P R O C E E D I N G S

MR. TOMER: Good morning. First of all, welcome to Day 2 of Infrastructure Week. My name is Adie Tomer. I direct the Infrastructure and Build Environment Portfolio at the Brookings Institution's Metropolitan Policy Program. I really want to thank all of you for coming here today. This is always an exciting week for many of us. The Brookings team sits on the steering committee for Infrastructure Week. I believe there are at least three other events in town at this exact moment, so we know your time is really valuable and we appreciate you joining us for this conversation.

Before I go any further, I want to make sure to give a huge shout out, in particular, to the NACO Team, Kevin Stone, he's standing in the back. You guys will see him a little bit today. And later this week too, this week has been an awesome partnership between our teams. And, of course, to our friends at National League of Cities too, who are both participating in the first panel and you'll meet Brooks in a little bit. But also their team has been really helpful thinking through and allow us to use their space while Brookings is fully booked this week, but also great thought partners with us all the time.

We have a really engaging set of speakers today and I am excited for you all to hear the topics that are going to come up. While we know your time is valuable and we really appreciate you being here, I can promise you that for whatever events you do this week, this is going to be a different conversation.

Infrastructure is something that is not foreign, certainly to any of in our day to day lives. But in particular, if you think about the news, just in the past three to six months, we have seen a rash of infrastructure stories that I think typify how most Americans receive news about infrastructure. Think about the highway fire in metropolitan Atlanta. The hysterics involved around what happened there. Yet how quickly the solution appeared and honestly how few people in Atlanta were impacted.

What just happened, of course, there was another situation last week but

a few weeks back on Southwest Airlines flight. Obviously, a tragic situation. At the same time, flying by plane is by far the safest mode of transportation in the country and we've actually had almost no fatalities for multiples years in a row.

So what I think we need to change that conversation about is I want you all to take a minute and think about, how do you think about infrastructure every morning when you wake up. I think actually most of us are pretty similar here. I wake up, I want to make sure that there's clean running water in the bathroom. You want to make sure when you flip the light switch that there's power on. That the gadgets you have plugged in are fully juiced up because when they're not it causes real problems for the whole day. You want to make sure that you also have gas and electricity in your kitchen so you can prepare breakfast. And you definitely want to make sure, especially those of us who live here in Washington, that there is the broadband into our homes and therefore the Wi-Fi into our routers is running very smoothly so we can consume as much news as possible, even though we know we're all a little to addicted to our devices.

But then here's the real capper on that whole morning. When we step outside of our homes, whether it is walking back to a garage, going to the nearest bus stop, or just walking on the sidewalk, we also want to make sure there's transportation infrastructure that helps us get to where we want to go. That is an infrastructure system that works for us.

I think we can take it one step further. Not only do I think all of you probably have very similar demands just like that, I think we actually share them for each other. It's an idea that we want every person to wake up in a home that is heated or cooled, that has electricity, that has clean water. These feel like reasonable expectations for our system. Here is when the real sense of gross violation happens. Not when you have an amorphous conversation about funding flows in federal Washington or a tragic occurrence that actually feels a world away.

It's when you hear about an entire proud Michigan City that every single

person who lives there cannot shower or drink water. It's when you hear about the housing crisis on the north and southern portion of the coast of California and a single mother has to buy a house two hours away to have housing security but leaves that two hour commute to her job. It's when you like about entire rural towns and urban neighborhoods where kids are assigned homework they need to do online but when they get home, it's not even possible for them to have a broadband connection. That's the stuff that actually rips our hearts out and it makes it feel like we have not built a built environment that works for everyone.

So what I want to pause it today that I think you're going to hear throughout these conversations is that we want an inclusive infrastructure system. When I say we want, I really meant that in a lower case, qualitative, universal way. We all expect it. We want to have physical access to networks. We want electricity and water and broadband and transportation to come directly to where our homes are and the neighborhoods we live in.

Second, we want to make sure those services are affordable. It is beyond the pale to expect that what someone does for a living could preclude them from having that foundation to economic opportunity. Third, we want to make sure our infrastructure systems do not put us at risk. Not just in the most extreme of circumstances but on a day to day basis and also in the face of a changing climate.

Those are the topics we're going to hit on today and by all accounts, many portions of America are failing by this kind of universal grade. So what do we mean by that? Well, last week, our Brookings Metro Team put out three pieces talking about this approach, access, affordability and risk. I really do urge you to go check out those blog pieces. You'll be able to consume them during a train ride to your work after this, they're not that long.

There was one statistic among many that really hit me after our entire team put them together and that is this. The lowest quintile of American households by income, so

this is tens of millions of households. When you add up their housing plus infrastructure costs, it out paces their income for the year. So for all the money they make, once they pay their rent or mortgage, once they pay down their transportation costs to fill up their car or to keep their car maintained or transit passes. Electricity bill, broadband bills, et cetera, they are left with negative dollars. That is not a shared platform for prosperity and goes a long way to explaining how many people are struggling to make it in America today.

Now, all is not dower. There is an incredible amount of innovation happening all across the country. There are many leaders who are thinking about how we can do more and we are really excited to host a whole bunch of experts from all across the country today to talk to you about both the challenges they see but also many of the innovations and opportunities they see in their respective focus areas.

With that, I want to turn over to a special guest who is not here today. Senator Klobuchar from Minnesota unfortunately had a scheduling conflict but wanted to make sure that she could still be here today anyways. Senator Klobuchar doesn't need much of an introduction but she both has worked in government as well, of course, now in national government. The first female Senator from Minnesota and a tireless champion both for inequality issues but also infrastructures role in making the world a better place. So with that, let's role the video from Senator Klobuchar.

(VIDEO SHOWN)

MR. TOMER: A huge thank you to the senator's team for making sure that was possible. I want to go ahead and transition right away into the first panel. I want to invite Tanvi Misra up to the stage as well with the panelists. Tanvi is a staff writer for CityLab at the Atlantic. Does amazing work on housing and inequality and other urban issues. If you're not reading her work, you're doing it wrong. So she's going to lead some great conversation here with local experts from across the country. Thanks.

MS. MISRA: Welcome everyone. My name is Tanvi Misra, as Adie just

said. I'm a staff writer at CityLab which, if you all don't know, is a website of the Atlantic and we write about cities. Every week is infrastructure week for us. I specifically write about equity and inequality so I'm really, really excited to learn from our panelists right here. Without further ado, I'm just going to start introducing them.

Right next to me is Jim McDonough and he served as the Chair of the Ramsey County Board of Commissioners from 2014 to 2016. Before that, he served as the Chair of the Regional Real Authority beginning in 2008. He shepherded a number of really, really interesting transportation projects in his area and he continues to be an advocate and a national leader on that front. Apart from that, he's also dedicated to the prevention of sexual violence in his community. He comes from a variety of perspectives that can be really useful for our conversation.

Next to him is Ellory Monks. Ellory has extensive experience working directly with local governments, leaders and stakeholders to identify and implement strategies that solve complex infrastructure problems. Problems like local flooding, redevelopment, et cetera. She's the cofounder of the Atlas Marketplace.

Next to her is Brooks Rainwater and he is from the National League of Cities. This is his territories. Brooks drives the organization's research agenda, community engagement efforts, leadership education programming and helps leader create strong local communities.

Just before we start and dive into some of the questions I have for you all, I want to lay out the plan of what our conversation is going to be like. We have the liberty, as I've been told, to complain a little bit before we leave some of the heavy lifting to the panels that come after us. The first question I wanted to ask my panelists right here is to talk a little bit about the history of infrastructure planning and some of the approaches or some of the mindsets that have led us to create unequal cities and create a built environment that does not work for everyone. Jim, do you want to start us off?

MR. MCDONOUGH: Sure, thank you. Good morning everybody. I'm

going to use an example in the Minneapolis, St. Paul area, Ramsey County, Hennepin County, two large cities, two large counties that are basically one big metro area. In the fifties when the highway infrastructure was being built out, when I-94 came through St. Paul, like many communities, that went right through a thriving, very active African American community that was really self-sufficient and really supported the African American community in that neighborhood in St. Paul. It came through and it came through in such a way that people got 30 days notices and their houses were gone, I mean, literally gone, no place to go.

So we've got that history there and I-94 is what connects St. Paul to Minneapolis. So we have that history of how we did those infrastructure investments then. We needed that system but there was no thought about equity or inclusion and about how that investment affected the community. It was totally focused in on goals and benefits and left out so many people in the community.

Fast forward here to the early 2000's. We're starting conversations or we've had conversations about building a light rail line. At the time, we called it the Central Corridor, it's now known as the Green Line. We actually felt that connecting downtown St. Paul through the University of Minnesota campus into Minneapolis. It was going through that same community that had moved, for the most part, from that disruption in 1955. Those were open wounds that hadn't even begun to heal over from the impact that that investment of that freeway had in that community. The distrust and fear about what a light rail investment was going to do to a community 30, 40 years later was real. And they truly could not see that the community was making this investment with them in mind and how this included them, how it provided opportunities.

So we had a lot of work to do in that community. One of the things early on that really sent a bad message to that community, we started our full funding grant agreement process with the FTA during President Bush's administration. At that time, the cost effectiveness indicator, which is one of six rankings for a full funding grant

agreement, that administration decided to make that a pass/fail, it wasn't just a part of the ranking. So you had a pass a certain benchmark to be able to qualify for a full funding grant agreement. Which really tied local hands about making decisions about the project budget and how to do that.

So at the time, because of ridership and cost and travel time, parts of that line in more prosperous communities were getting stations a half mile apart. In this community that had already seen that disruption, were planning to get stations a mile apart. That really was continuing to send this message that this investment was not for this community. The community rallied around and elected leaders like I was the lead on this line and it was a tough thing, was to be able to continue to move this line forward trying to build confidence that we would get those three extra stations. We needed three but they couldn't be included in that budget. One of the most impactful things I had and I was at community meetings every single night for ten years almost, is I had an African American gentleman stand up and say, Commissioner McDonough, we will get nowhere on the central corridor light rail line until you apologize for what happened in 1955.

I looked at him and I said I was born in 1955, I was not a part of that process. I understand the impact of it and I can't necessarily apologize for that but I can commit that we will do better and we will include you in this investment. Success story, we ended up being able to, Obama Administration changed some of the rules. I got a call from Peter Rogoff, the Transit Administrator. They changed the rule on Thursday and I got a call on Friday afternoon at 3 o'clock. In seven days, we found the \$20 million to put those stations in and we were able to build that line with those stations in and it was used as a national model at the time on how to be responsive in infrastructure investment that is inclusive to all.

So I think with that I'll stop. I've got a lot more examples but I think that really highlights an example of when we're not looking at everybody's interest in making an infrastructure investment. When we're leaving a part of our community out, the damage it

does to our community, the damage it does all the way to individuals. And then the success, when we actually choose to include everybody, everybody's hopes and dreams when we're making these infrastructure investments and how that can benefit a community.

MS. MONKS: So from my perspective and everything, Jim that you just said, I think is spot on and I'll echo that. From my perspective and from a historical perspective, one thing that I think we've struggled with is making sure that our infrastructure systems don't just meet the needs of today but also the needs of the future. And are built in a way that are flexible, adaptable and can be changed.

So from my perspective coming from the resilience space especially, there have been a series of disasters, quite frankly, from recent history that have really, I think, changed how we think about infrastructure and change how we think about these issues and have jumpstarted a whole bunch of progress. From my perspective, I think you can point to Hurricane Katrina and really think of that as a seminal kind of event in recent history in terms of changing the way that we approach infrastructure and inclusive infrastructure especially. I think that really woke a lot of people up to some of these issues.

I think Hurricane Sandy, more recently, really was a turning point. I think it got a lot of folks' attention and I think in the wake of Hurricane Sandy, there were tremendous widespread calls to build back better. And it spurred on a whole conversation about what does it actually mean to build back better. And since Hurricane Sandy, I think that we have seen a whole bunch of barriers to actually doing that and to actually doing that successfully and we can obviously talk about that in more detail.

MR. RAINWATER: Good morning, everyone. I think I would echo what my two colleagues here on stage have said. And really kind of point to historically infrastructure drove cleavages between communities rather than bringing people together. What we've seen more and more in recent years is city leaders trying to use an

intentionality and thinking about infrastructure in ways that we can fix some of these historical wrongs.

One of the biggest challenges though is that much of the highway and road building, whether it was building highways through communities of color within many major cities, these kind of infrastructure challenges have already been built in to the system. So what we're doing now is trying to pull these apart, bring communities together as a result.

Another big challenge that we have is more and more people have moved back to cities, it's pushed people out of cities. The transit infrastructure and much of the infrastructure that takes people to the work that they need to do is focused within cities and surrounding cities. So when people are pushed out and no longer have ways to get to those jobs that they need, it creates a whole different and new dynamic that's a big challenge. I think as we talk about the different pieces here and as we build the future, we need to really make sure that we have all this taken into consideration.

MS. MISRA: Great, yeah. So let's talk about that a little bit more and approach it step by step. If I'm a local government and I want to create, I want to connect people and I want to create infrastructure that is resilient, one of the first obstacles, some would say the biggest obstacle I would face is funding. Does that sound accurate to you?

MR. RAINWATER: Yes that sounds absolutely accurate. First, I would point to the federal government and the lack of funding coming from the feds. I'd also point to the challenges between state and local government. For many years now, those priorities often have been at logger heads with many real interests at the state level kind of pushing more for road building rather than transit funding. I think depending on that state, this kind of plays out differently.

But figuring out a way to bring those folks together and really make sure that we're for electing community interest. If people in cities are saying, we need new

bus lines, we need new transit lines, that's what we need to be responsive to and making sure that all interests in any given state are taken into consideration.

MS. MISRA: Jim, do you have anything to add to that?

MR. MCDONOUGH: So when we were on the prep call, we talked about this question, funding is key. You can't do any of this without funding and how we move big mega infrastructure projects for the federal partner is a key to that. Our state partners are key to that, local funding is key to that. Developing priorities and then process or the community input.

One of the things that we've really changed in our community and part of it was somewhat driven by the federal partnership. Fortunately, the time as we started to get ready to move forward on a full funding grant agreement, the Obama Administration created the HUD Sustainable Communities Grant. They actually had money the first year. They kept the partnership together but they only had money for one year. We were fortunate, we had a \$5 million planning grant; the largest grant they gave was \$5 million. At the federal level it put DOT, HUD and EPA together working together. So when DOT was looking at a tiger grant, HUD and EPA were a part of that to really make those connections.

Well, at the local level, it really drove us to bring people to the table about priorities and funding and community input in a way that we had never done. So we've really changed this where instead of doing stuff to you or for you we are really working hard to do stuff with you. So we really worked on the community engagement piece first so that the communities helped to develop the priorities and then we're taking a look at how do we fund those priorities in our community. That has been a major change in how we take a look at major infrastructure investment in the Minneapolis, St. Paul, Hennepin, Ramsey County region.

MS. MISRA: Ellory, I know that you disagree that funding is the biggest issue.

MS. MONKS: So it's not that I disagree. So I do think that funding and finance is a huge barrier to infrastructure investment in the United States, absolutely. And especially during infrastructure week when we're talking a lot about the role that the federal government can play in increasing investment in infrastructure in the United States. I think funding and financing plays a huge, huge role. Don't get me wrong.

I do think that the barrier and the conversation is more subtle than just needed to jump up and down, wave your arms around and say, we need more money. I think it's more complicated than that. I think we should be having more conversations about how we can design projects so that they attract private investment while also protecting the public good and serving citizens' needs. We hear from private investors all the time that they want to invest in infrastructure more but they can't find projects that meet their investment criteria. That's a problem.

I think that there are also a ton of other barriers that come into play at the local level before financing becomes an issue and after. I think that identifying and empowering project champions, the folks at the local level who can really champion these efforts and really push things through and engage with the public and get the support of the elected is hugely important. I think procurement becomes a huge issue. I know it's super boring but I think it can be a big barrier.

So while I agree that funding and financing is a tremendous barrier I don't think it's the only one and I think that the conversation needs to be more subtle, more nuanced, more complicated than just funding and financing is a barrier.

MR. RAINWATER: One thing I wanted to add is, people in cities are actually willing to pay for these projects. 71 percent of all ballot initiatives on infrastructure have passed since 2000. So when you think about the fact that people are willing to put their money with their mouth is on these issues, what we need is then to kind of scale that up and make sure everybody is working together.

MS. MISRA: And by people, you mean taxpayers.

MR. RAINWATER: Yes, I do mean taxpayers.

MR. MCDONOUGH: I did want to add a comment, especially on the private investment because we're really seeing a change here at the federal level with this administration really encouraging private investment. I think there are opportunities there but I think the danger that we really have to pay attention to is that does set the stage for greater inequities in investment. That private money is only going to go where they can get a big return on investment. That means it's going to leave out the communities that need the biggest investment. That's my concern.

Minnesota, we don't have a history of private money really investing in the infrastructure. But coming along afterwards and investing because of the infrastructure, we have 19 fortune 500 countries in the Minneapolis/St. Paul region, almost all homegrown. They all will tell you, they are homegrown in their successes because of a public investment in infrastructure. So yes, is there opportunities for private money to get in on and we've seen some great projects around the country where private money have come in. But to me, that is a danger that really have to pay attention to or we're going to leave even more communities behind.

MS. MISRA: Can we talk about that a little more. Perhaps Ellory can give us some examples of cases where local governments haven't been able to attract private investment for really important inclusive infrastructure projects and have done it right but also give us projects of how that has gone badly. So that we know the do's and the definitely do not do's.

MS. MONKS: I'll start with a bad example because it is just really bad. And Brooks, you may know more about this but there is a pretty scary example out of Chicago with parking meters. It was a public/private partnership that essentially completely undervalued the city's assets and they're still dealing with that. There was a mismatch in the payments, in the value. It was poorly executed and as a result, taxpayers are paying. It has not been a success story.

I think there are some examples where this is being done well where especially again from the sphere that I come from especially in the resilience space where there have been efforts to match revenue generating components of a project with non-revenue generating components of a project. There is a great example out of the City of Hoboken, for example, that pursued, it was an integrated infrastructure project, different kind of layers, fondly called The Bathtub. The lowest level was enormous storm water detention that the city really wanted to pursue after Hurricane Sandy but also because of combined sewer overflow issues. Obviously non-revenue generating.

The layer above that was parking, underground parking, and that is potentially revenue generating. And then the very top of the design was held open for green space for green infrastructure, a park, all that kind of good stuff, great community amenities. The City of Hoboken is only one square mile so any kind of open space, recreational space that you can provide is fantastic.

So that's an example of where you can kind of match together, a revenue generating component with a non-revenue generating component to get more stuff done, to solve more citizen problems and to provide greater benefits. In my mind, that's a great success story.

MR. RAINWATER: I would just add that what I think is that public/private partnerships can bring a lot of values to communities nationwide. We shouldn't lose fact that the idea that infrastructure is a public good, first and foremost. When we think about certain types of infrastructure projects, whether that's new light rail systems, whether that's underground subway, many of these aren't going to pencil out. But the value that they bring to our communities, the value they bring in getting cars off the streets, should be what we're thinking about first and foremost.

And frankly, largescale infrastructure projects all the way down to small scale, make our country more competitive. So the more we're investing in these, the more that we're going to see returns as a nation. I think that often times we think about

these as individual projects and we don't think about how they scale up both the state and national level. The more we do that, the more that our country will be able to compete better.

MS. MISRA: Great. So I want to talk a little bit more about, so you have your funding. You have all of this money and now sort of the decision making process leads you to having to prioritize. There is a bunch of projects on the table and you have to decide which one you're actually going to put your money on. What does that challenge look like and Jim, for example, how did that pan out in Ramsey County?

MR. MCDONOUGH: Most of our, whether it's a light rail line, a road project, a bridge project or broadband, those core infrastructure investments have a number of funding components. Usually local, state and hopefully some federal partnerships. Whenever you've got funder as a part of it, they do have some influence on helping develop priorities whether it is based on at the federal level rules on how their dollars can be used. It can help shape a priority because it can include or lead out projects that might be a local priority.

In our state, working with our state legislature and the governor on the partnership of state funding with local funding, again the state, in many cases, will want to influence local priorities by attaching requirements or things about how that funding is worked. As a local leader, that becomes very difficult to manage because the priorities really need to be set at the local level. What is best for that community? But when we're going to our partners for funding, that can help change what those priorities are or shape, as I earlier mentioned, the rule and the Bush Administration about cost effectiveness as a pass/fail. Shape the priority for us at the local level about three stations on that light rail line.

So that's always the tension and, of course, in Minnesota, we struggle with our legislature and administration a lot because not just priorities but investment. We still struggle even though we've got two extremely successful light rail lines built in

our urban core, we've got the strong support from business leaders. We still struggle with the ideology divide of most of our Republicans hate light rail. They don't want to invest in it, they actually work hard to try to stop those investments in the economic engine within that state.

So fighting that where they're actually not even helping with funding but then actually passing laws or things that actually really tie our hands at the local level. So those priorities in helping develop those priorities to be successful, especially to be successful for all of our communities where we're not leaving people behind, really have to be developed at the local level. Local leaders like me really have to be careful about starting to chase the money. If it all becomes about chasing the money, we are going to leave people behind. Our values and principles have to be that commitment to the community.

That's why I flipped around that earlier question. Funding priorities community to community priorities and funding. If we stay focused there I believe we will have success. It can be difficult to gather the money but we will find a way to do it. If we stay focused in on what is the priorities and what those priorities are agreed upon with the community and how to move forward.

MS. MONKS: Yeah I'll just add. I think priorities at the community level and priorities at the citizen level. I think so much of being able to prioritize projects and efforts at the local level has to be done through really meaningful, thoughtful, upfront and continuous community engagement.

I want to provide an example of where this is working well. So one of our partner city's Kansas City, Missouri, just recently last year used their citizens survey as a way to engage with their residents about what their various priorities were, what their various pain points were and what they would actually support. They actually used that citizen survey data as a way to justify and \$800 million municipal bond that was then used to fund infrastructure improvements.

So in my mind, that's a great example of how it can be done. There are examples from across the country of where this is happening well. A lot of that has to do with political leadership. In Kansas City, Mayor James has really made a commitment to saying, if we're going to undertake any of these efforts, I want to make sure that the entire community is represented and the entire community is involved.

MR. RAINWATER: I think there is no surprise here that I also agree that community decision making is where this should be taking place. Locals really have the priorities of the community members at heart. I would also kind of point to an example where we've seen a city that has had a lot of growth in recent years, Pittsburgh. Where Mayor Peduto has welcomed in autonomous vehicle companies and tried to work with companies like Uber and often times found challenges because they have their inclusive prioritization within their long range plan. They want to make sure that not only the infrastructure for today but things that they're building out for tomorrow, will make sure that it's taking into consideration all members of the community.

Frankly, I think this is where local leaders, whether you're talking about mayors, councilmembers or county board members, have the opportunity to right some of those historical wrongs. We want to make sure we're taking all of the community members' voices into these discussion. We also want to make sure we're prioritizing and think about if a highway did form that cleavage, how are we building back that neighborhood that was impacted most? So I think that's when we're thinking about prioritizing to make sure that we're not doing it in a bubble and just thinking about community members of today but community members that have lived in those cities for many, many years.

MR. MCDONOUGH: If I could just say something really quickly. My colleague here, Ellie, said something really important about community engagement, authentic community engagement. For too long, government really has taken this approach to community engagement more as a report back to community about what

they're going to do and they check the box of community engagement. That is not community engagement and we really have to relook at what truly authentic community engagement is. We're having those conversations in Ramsey County and have really put an emphasis on it.

Our two priorities as a county board has really been about equity and economic prosperity for all and authentic community engagement. And every single thing we do in the county has to be run through those two lenses before we even get a look at it at the board or before department heads or our county manager are making decisions. Everybody has to address those two issues before we make a decision. We say community engagement sometimes way too lightly because what we say is community engagement the community typically has not viewed as truly community engagement.

MS. MONKS: Yeah and just to add on to that, so much of that is meeting folks where they are. So thinking outside of community meetings or community workshops where a dozen people show up and it's the same dozen people. So using new methods, whether that is social media, there are a million different ways that you can engage with residents to get a better pulse on what their priorities are. But so much of it is meeting folks where they are. Whether it is through community partnerships, whether it is through technology, there is a lot of different options out there. I think there is some really great success stories out there of how it's being done well.

MR. MCDONOUGH: Just a quick good example of that. In our history as the community engagement is, all right, notice of public meeting. We send our county engineer out, he reports what we're going to do on that road project. Check the box, 12 people showed up, usual suspects, same 12 and we're done.

So in my district, we've got a 40 foot major road. When I grew up, there was parking on that road. The traffic on that road has developed to the point of 22,000 cars a day and parking was removed. It is a very narrow road to manage all that. We've had a number of deaths but we had one last summer. So the community, when we had

the meeting about the death to bring people together, somebody at the community says, what about a 4-3 conversion. Putting in the center turn lane and only having two travel lanes. Big deal, especially on 22,000 cars a day. The federal government, all the engineers modeling would tell you, after 15,000 cars a day, this really does not work.

We had an opportunity and I really pushed our folks that we could do a demonstration. We would come in and actually not make it permanent but we would actually live time test this. The community engagement on what we did on that is we brought interns in and we knocked on every single business and residence store, not only just on that street but three streets either way and then the major arterials that fed in, especially those businesses. We actually do what we call pop-up meetings now where we've got a little van and we hand out popsicles and we go right into the community and we get them there with the popsicle, but we get input. We had over 2200 comments about that test and investment in that community. In the past, it would have been 12 usual suspects.

MS. MISRA: One think that strikes me is I feel like there is also a need to reorient how you measure success. For example, putting in those stations in those communities where there is such high unemployment. And then connecting those people to jobs in the suburbs seems to be a very impactful way to plan infrastructure and an actionable way to measure success. For example, prioritizing another community that already has resources to either drive to work. Do you all have thoughts on that or ways that cities or local governments are managing how they measure success?

MR. MCDONOUGH: I'll refer to two reports that were done in Minneapolis/St. Paul region, Hennepin/Ramsey County. About 15 years ago, a group of business leaders came together and we formed what call, Itasca. Itasca is the state park where the Mississippi starts, just a little trickle. It becomes this mighty river throughout our country. It is a group of CEO's that participate, foundations, non-profits and local government. It is not an organization that actually implements things, it's an organization

to really think about the future of our region and to help tee up things.

So a part of that was, they took on the issue about light rail investment to what does it mean because it was such a partisan and such a dividing issue. They actually did a return on investment report to really try to come from a neutral place, try to come from a place where CEO's, major business folks are the traditional whatever Republicans in our community would listen you in a trusted voice. They did a really thorough investment. If you would Google Itasca return on investment, you could take a look at that.

Another report that we did in our community was through or Center for Transportation Studies at the University of Minnesota. It was called the Transit Way Impact Study. I was a big part of that and that study has actually been used nationally. I've gone to national conferences all over and all of the sudden I'll see it on a table somewhere and I'll smile because I think there is some really good work. Those two reports really tried to get to what you were teeing up.

We've heard this, drive until you qualify. This happens in St. Paul. People want to own a house or try to invest but they can't get nothing. They're driving, someone mentioned a two hour drive, an hour and a half out. Pretty soon, it's to the point where, yeah you can maybe qualify for that 1200 square foot house an hour and a half a way from your job, but when you add in transportation costs, you no longer can really make that work. Now it becomes 50 percent of your income to do housing and transportation.

Those connections to jobs and it is two-fold. Part of the HUD Sustainable Communities Act, we did a corridors to opportunity was to focus in on jobs in this corridor especially for folks that had been struggling. We had major corporations, Wells Fargo, major corporations. Most of these businesses were doing it. They are going to do a 300 person call center, entry level jobs into a career path in a major corporation. They would go to Greenfields Development out in the suburbs and then they could not

get ten applicants for those 300 jobs because they are entry level jobs.

So then they are pounding on our transit operator to get bus service out there. It becomes two or three transfers to get out there. It's very difficult. In working with them to actually build that call center right on the light rail stop they would have 400 or 500 people applying for those 300 jobs almost immediately. It's a two way street. It's about connecting people to the jobs but then it is also helping our investments to actually think about how do we leverage these public good infrastructures that will actually drive opportunity and communities with those jobs and bring those jobs to the community.

MS. MONKS: Yeah so I'll add that I think when you're thinking about infrastructure success, often times it is something that didn't happen. When you're thinking about successes in infrastructure, you don't really want it to be a story. You don't really want people talking about it. I mean, we do because it's the work that we do. But you don't want your run of the mill citizens really actively talking about and thinking about infrastructure. It's something that happens in the background that people often take for granted because it works. The lights turn on, you can cook your breakfast and all of those kinds of things.

I think figuring out how to tell infrastructure success stories in a way that is compelling and makes people care is a really, really important thing. This is a lot of what we do with our partner cities is help them tell their own success stories when it comes to infrastructure innovation. A lot of what we do is help them think about outcomes. So helping them think about communicating about the outcomes of a specific initiative, project, effort, whatever that may be.

I think when you're talking about how to communicate success stories in infrastructure, I actually think we have a lot to learn from our mayors and from our other elected officials. When you hear a mayor give a speech about anything infrastructure related, almost always, they choose a person. They tell a story. They talk about how the specific investment affected a child in a specific neighborhood or an elderly person. I

think we need to do a lot more of that, quite frankly. I think that's a really important component of engaging with citizens and I think it's a really important component of continuing to gain support and traction for infrastructure investment.

MR. RAINWATER: Yeah I definitely agree. This idea of storytelling and making sure we're shaping the narrative about the success with infrastructure, really helps drive even more successful infrastructure projects. I'd also talk about some of the work we've been doing on the ground. I see my colleague, Carlos, in the audience there with Equitable Economic Development. We've been working with a number of cities nationwide over the last two years to really think about some of these measurement questions. We want to make sure as we're thinking about equity up front, what the outcomes are that we can measure those and we can do more of this kind of successful investment.

The other thing I want to mention before we close is we've got built environment here in the title. I think one of the ways that we can connect people with those jobs is to think about the built environment and build cities denser. Often times, this is a challenge in many of our communities but denser development drives the ability for more people to live in those communities and then we don't have to drive as far to qualify. All of the sudden, house prices are driven down and more people are able to be part of our communities.

MS. MISRA: I want to be respectful so if you all would join me in thanking our panelists for wonder perspectives and great conversation. We have about 10 minutes for questions. If there are any questions for our panelists, please raise your hand and someone will come to you with a mic.

MR. GOFFMAN: I'm Ethan Goffman from Mobility Lab. There is a flip side to thinking local which is NIMBYism. So light rail project in Maryland this country club in wealthy town delayed it for years and years. It was pro and con organizations. I don't believe they did the outreach to a lot of poor neighborhoods that would have been

really helped by the light rail which is being built now. So I'm wondering if a wider local engagement like you're talking about would maybe actually be helpful for getting projects done and stopping NIMBYism or if there are other thoughts about NIMBYism that slows projects, helpful projects.

MR. MCDONOUGH: I can give you a real current example. The light rail line we're working on in our region right now is the Green Line Extension. It would go from downtown Minneapolis 12 miles out to Eden Prairie, a fairly large suburban community. When they were doing the alignment and having the conversations, the best alignment was actually going to take it through one of the most wealthy parts of downtown Minneapolis called Kenilworth. That's where a lot of very wealthy influential people live. Actually for the most part, they're kind of the wealthy Democrat supporters and influencers.

Normally, the folks that would be supporting these investments for all the reasons we've talked about. But this investment was coming through their community, it was like no, we don't want it. They've done lawsuits, they still continue to fight hard against it. So I think it's a really good example that even folks that would support these investments in a region, when it gets close to home, it changes things dramatically. It's been tough because they have influence with the governor. We have a Democratic governor right now. They have influence when the Democrats are in control of the legislature and the chairs of those committees to help fund to have influence. But it has been an interesting conversation about NIMBYism and that influence of a very small influential group and how it could affect a major investment like what we're talking about.

MR. RAINWATER: I think the one piece I would add is this is really where local leadership can really be the kind of the crux of the matter. Whether it's a mayor or county board member or councilmember just getting out there and making the case for how these infrastructure projects help the whole community. To really kind of dig and tell that story because frankly it's a challenge. I think we all know that it's a

challenge but you have seen some pushback. I'd point to California with the NIMBYA movement there that people are making the case that no, we actually need to build projects, we need more housing, we need transportation for all. I think it's difficult but it can be done.

MR. NELSON: John Nelson with Wall Street Without Walls. In terms of financing inclusive resilient infrastructure, you might also look at how cities and counties can better leverage underutilized assets that they actually have in their own balance sheet like vacant lots and things like that. Also, look at local, for funding, look at impact investment from foundations, pension funds, insurance companies that would buy those bonds if there was a guarantee or some other credit enhancement which the cities could help provide. That way you can broaden the whole comprehensive build better, more inclusive approaches.

MS. MONKS: Yeah I completely agree. I think a really positive trend recently has been in the innovative finance space. When you're talking about environmental impact bonds like the one D.C. Water recently did, social impact bonds, resilience bonds, getting to the insurance capture that you just mentioned. I think that's a really positive trend.

What I will say, because this panel is about inclusive infrastructure, what I will say is that at the local level, in order to pursue innovative financing mechanisms like that, it requires a tremendous amount of local technical capacity. To structure the deal, to do the upfront modeling that's required, not to mention the ongoing evaluation and monitoring that's often required. So I want to just make sure that as we're talking about innovative financing mechanisms for infrastructure, that we remember that often times that's only relevant in bigger, higher capacity, better resourced locations or regions.

MR. GLADNEY: Hi, Calvin Gladney, Smart Growth America. I wanted to ask the question about engagement and how do we add more empowerment and education to our infrastructure engagement. We often give the community a kind of

binary choice. Pick the bridge or not pick the bridge. Pick the sewer upgrade or not pick the sewer upgrade. We don't spend a lot of time saying there are a number of options and choices and how do we help them make those choices.

MR. MCDONOUGH: So as a local elected official, I run for election every four years. I firmly believe, even before I ran for office and this was nothing that I really ever wanted to do but I did and I've enjoyed every moment since I did this. Your point there is really important. I view my job, it's a two way street. I need to make sure I understand what is important to my community. I need to represent those voices. But I have to also educate them and help bring information back to that community so they can make really good educated choices about their priorities. Because they are coming to me with their issues, their priorities based on their learned experience, their life experiences and what they know at that point in time.

My job is to bring them much more information that might actually get them to a different spot about a potential infrastructure investment because they better understand what that opportunity might be to them. I take that really seriously. I spend as much of my time actually listening and working with my community as I do trying to bring back information, trying to expose them to things that they haven't been exposed to, to help them have a better understanding about making decisions about what is important to them.

MS. MONKS: I'll add, so I shared the example from Kansas City, Missouri earlier where they used their citizens' survey to get feedback and to gain a better understanding of what citizens priorities were so that they could pass that municipal bond. I'll share another example from the City of San Diego that is getting ready to embark on a really big smart cities push and has committed to piloting all of their smart cities efforts in the neighborhoods that are historically least served by the city. They have committed to developing those pilots into choosing the technologies into choosing the problems that they're going to try to solve in those specific neighborhoods.

That is an essential part of what they're doing in San Diego. It is still early days, obviously. I don't think there have been any outcomes to point to yet but it is super inspiring and I think encouraging what is happening there.

MS. MISRA: Great. I think with that, we're going to seed the floor to the next panel which is going to be led by Mitch. I want to thank our panelists one more time for a wonderful conversation. I feel like we could complain for a lot more time but hopefully we left with some hopeful nuggets of things that are happening around the country that are creative and interesting. Thank you so much.

MR. HERCKIS: Okay. Can folks hear me all right? Okay.

So let's get started. My name is Mitch Herckis. I'm senior director of Programs for Route Fifty. For those that don't know, Route Fifty is a state and local government publication. Route Fifty -- some people say route, some people say route. I say routefifty.com. Shameless plug over.

More importantly, I have a great panel here to explore these issues with me. Going from the far end forward I have Shauen Pearce with me, who is director of Economic Development and Inclusion Policy for Minneapolis. Followed by Mark Fisher, chief policy officer for the Indy Chamber. Followed by Stephanie Gidigbi of the NRDC. She directs the Policy, Capacity, and Systems Change for the Strong, Prosperous, and Resilient Communities Challenge (SPARCC).

Did I get that all right? All right.

So just to start off with, I want to note that I'm not not interested in you all. I actually put my notes on my phone, so if I'm staring at my phone, it's really that I'm trying to manage what questions I'm going to be asking next.

And you know, I was thinking a lot about this issue in the lead up, and it's one of these things that, you know, while we haven't talked about explicitly forever, it's been in our lexicon forever. Right? I mean, if you talk about -- just think about some of the words we use, like the "wrong side of the tracks," "the other side of the tracks." We

talk about infrastructure and its impact on our environment and where people live and how people live. And that's been around for 100 years plus. We've been talking more intentionally about it, I think, which is obviously a good thing. And I'm excited to kind of delve deep with you all today.

So just to start off with, let's talk a little bit about each of your backgrounds and what lens you come at this with. You know, I expect everyone can google your names here. So let's kind of talk about why you're on the stage today and what your background is and how it influences how you approach the issue of inclusivity.

Stephanie, let's start with you.

MS. GIDIGBI: So good morning, everyone.

AUDIENCE: Good morning.

MS. GIDIGBI: I'm excited to be here. And I really want to thank Brookings for really thinking about, as we celebrate Infrastructure Week and really highlighting the opportunity that we have, leading with this notion of what inclusive infrastructure looks like.

My name is Stephanie Gidigbi, and prior to joining the National Resources Defense Council, I had the opportunity to work at the Department of Transportation under Secretary Foxx. And Secretary Foxx really boldly talked about the history of our infrastructure, and I think that in any community across the country, what you can see embedded in the concrete are those social inequities, as well as the environmental segregation. I think one of the things that we recognize is that when we were building our infrastructure 50 years ago, it was a different America, and those values still remain. And it is why you live on the other side of the tracks. But I think as our infrastructure is aging, we have an opportunity to really do things differently.

And that's why I'm excited about the work that we're doing at SPARCC. SPARCC is an opportunity. It's a \$90 million investment, really looking at how we build for the future, thinking about racial equity and calling out race, health, and climate,

because we recognize that the same communities that are dealing with a lot of the environmental issues from the impact of climate change are the same communities that are dealing with social and health challenges as well. And so we feel and believe that this is a great opportunity and a great time to really harness the collective energy of communities to help build. And we truly believe that every community clearly has a vision. What they lack is the financial resources.

There's no community that is lacking in vision for where they see their infrastructure and what they want to build. What they don't have is the money. And so the greatest thing that can happen is really for Congress to really take action and release the resources that communities can use to harness their future and get it as local as possible. Ninety percent of USDOT's money goes to state DOT's, as well as MPOs. And so there is a real opportunity, but also a blockage in getting it as local as it needs to be. But I think that what we'll hear today are some innovative practices and realities of how states can take actions, how local communities can take action and what they're doing, and the reality that they are not waiting. That they are truly taking action and being able to invest in their future together.

So thank you.

MR. FISHER: Thank you. Good morning. Mark Fisher with the Indianapolis Chamber of Commerce.

The Indy Chamber serves as a traditional chamber advocacy member services, but we also, about six years ago, merged in three economic development entities. One is an entrepreneurship focus, small microenterprise, SBA intermediary. One is the Indianapolis Economic Development Corporation. So we do the front-end work on economic development site location incentive negotiation on behalf of the city of Indianapolis. And then a regional entity called Indy Partnership, which really represents the nine county areas to an external audience.

We recently have been working with the Brookings Institution on the

Global Cities Initiative, on the Export and Import Strategies, FDI strategies. And that led us into the first cohort for the Inclusive Growth Learning Lab. And really, that was an exploration of how our economy in Central Indiana has fundamentally changed. Both the nature and the locations of jobs have changed, and that's impacting workforce mobility, concentrated poverty, environmental issues, and really, it helped us understand better how all of these issues are compound to keep people in poverty and what happens if we don't start to address these issues of workforce mobility, bringing jobs closer to the people and providing integrated housing policy, transportation policy to make sure that we have true workforce mobility throughout the nine county area.

And so it's great to be here, and I really look forward to the discussion.

MS. PEARCE: Good morning, everyone. How are you?

Oh, that is so sad.

How are you?

AUDIENCE: All right.

MS. PEARCE: You're all right? All right.

I was going to say it's Infrastructure Week. We should all be celebrating here. This is how we get our communities built; right?

Shauen Pearce. I work for Mayor Frey and the City of Minneapolis.

Prior to this role -- some people have asked, well, how long has the mayor been here? Since January 2nd. So we're new in this role. The mayor did serve as a city council member for a number of years prior. Before taking on this role though, I had the pleasure of serving as the Center Cities Competitive Initiative Director, which was a partnership between Hennepin and Ramsey County, St. Paul-Minneapolis, the St. Paul Port Authority, which actually does work in the entire state, a regional economic development organization, both Minneapolis and St. Paul Chambers, and the McKnight Foundation really focused on accelerated job growth and capital investment. And even prior to that, I was an executive director at a nonprofit focused on -- I think there was an earlier question

around how we transform engagement and do that in a real way. So I worked with a community group and really got into the nitty-gritty on environmental justice, economic development, and assuring that the community was an advocate for the things that made sense for a community instead of, in fact, being a barrier. And prior to that, served more time here on the East Coast doing more national/international economic and community development, and really looking at what I would call economic development infrastructure development from a public health lens.

So I'd say that's really what I bring to this work. We can have a conversation until we're blue and orange in the face about the morality, the good case for making sure that investments land in communities of color, making sure that investments reach rural America, but that's really tough to do when it's stuck in a public health department, and it's really tough to do when it's stuck in a civics classroom, because there oftentimes aren't dollars that follow that. Right? There aren't corporations that follow that. There isn't government investments at every level in our municipalities that follow that. And so I've found that over time, if you're serious about building an inclusive economy, the way that we do that is ensure that the investment lands in the places where they haven't for generations.

I also come at this work from a place of truth. Right? So understanding that there was a very -- we talk about 100 years, I think you referenced, Mitch, there was a very clear intentionality around building the United States on the backs of people of color and indigenous communities through forced and free labor, and protective covenants that run with the land. And so I really bring with me to this work a realization that this is not about charity. This is not about giving something to poor people. This is about returning to people the investment that they've made since the inception of the country and acknowledging that for all of us, we actually get a lot further when we make that investment. In Minneapolis-St. Paul, you heard the commissioner speak earlier about our region. That's about \$31.88 billion that we stand to gain by 2040 if we actually

reach parity between people of color and white counterparts.

(Applause)

MS. PEARCE: Thirty one; right? \$31.8 billion. And that's for our region. That's not even our state. Right? And we're Top 50 cities, but imagine if each one of our cities and each one of our regions did that work. That's trillions of dollars back into our communities, which makes every one of us much more successful in what we do. So I try to bring a practical approach and understand that all of the other resources that we spend start to go down if we actually make the investments where people have made their investments in communities for a long time.

MR. HERCKIS: So let me pull on that last piece a little bit because I think that has to do with how you start the conversation; right? And I think you talk about coming at it from a practical standpoint. You're saying there's, you know, you can meet people on the economic side. You can meet people a lot of different places. How do you -- is that how you begin the conversation when you're talking with folks about it? Is that how you open it up?

MS. PEARCE: Every time. I'm consistent.

MR. HERCKIS: All right.

MS. PEARCE: I'm very consistent.

MR. HERCKIS: And obviously, Nimbyism came up earlier. And I want to kind of open it up to the panel to say, you know, when you're having this conversation, each of you come at this with some intentionality, which is a big word in this space. But when you're talking about, as you said, siloed in the health department, siloed over here, there's a lot of silos, and their outcomes are, does the person get water? How many people do I serve at the public clinic? So on and so forth. And that may not necessarily align directly.

So how do you have that conversation both across siloes? Well, let's talk about internally first. Let's talk about within the structure of government. Who do you

talk to and what practical arguments will you guys make to your internal colleagues and allies to say this is why this should be on your radar?

Let's just start with Stephanie on this end.

MS. GIDIGBI: I think it really is an economic argument. But I also think from a very real space, it's also that we can't simply afford more of the same. Our infrastructure is aging. We do have to do things differently, and we can't afford to continue to reinforce those same inequities. The dollars just don't make sense in that state of things. And I think for some people it is. And honestly, for others, it's really starting at the kitchen table.

So if you have a high energy burden, right, we think about places like Memphis, one of the highest energy burdens in the country, it makes more sense to really think about how we build in more green infrastructure? How do we build in more energy efficiency homes? How do we make sure that you can actually afford to live where you work; right? And even if you can't, how do we ensure that there are more mobility choices and options? I think oftentimes we fail to recognize that there's more that unites us than divides us and that starts at the kitchen table.

MR. HERCKIS: And you're coming from the outside when you come into these cities. So if you're coming from a nonprofit, what are some of the common -- obviously, you're being invited in, but certainly, cities are diverse. The people who work in them are diverse. What are some of the common misperceptions about you coming in to the city from the outside to talk about these issues?

MS. GIDIGBI: Well, I think you said the first thing, which is we are invited; right?

MR. HERCKIS: Right.

MS. GIDIGBI: I think oftentimes when we come into a community, we come with a socially engineered solution already planned out, already mapped out. NRDC isn't perfect even in the way that we have shown up in the past as an

environmental organization in dealing with communities, particularly communities of color. So we've been more intentional to make sure that we show up not with our already planned solutions for how things are going to be solved; we make sure that we really ask what it is that they are trying to solve for, because sometimes we're solving for issues that aren't the challenge.

And, we also then work with them because, honestly, every community already has the vision for how it needs to be solved. If you go to any place where you can really break bread and you say, what's going on? They'll tell you in a laundry list what the mayor needs to do. As someone who was a chief of staff for a local community, there was never an absence of ideas. Let me be clear about that. What there might be in reality is an absence of the resources to fund it. And again, I think one of the things that did go well, and I think to the notion of silos in answering this question, is also recognizing that we don't stop within the lines of a department. So the previous administration did a really good job with the Sustainable Communities Initiative by bringing USDOT, EPA, HUD together. And I think some of the best cities and counties in this country that are doing this work are bringing together the departments to leverage the various resources to build for the visions that they see for their community. Because honestly, USDOT brings a lot of capital financing dollars. But the CDBG dollars that could be given by HUD also offer some leverage resources to do some small business and other pieces. Our CDBG dollars were critical for being able to advance a lot of those things. And so we couldn't stop at the lines. We had to make sure that we brought the full team of our departments and our department heads to ensure that we're having the right conversation and solving the right solutions.

MR. HERCKIS: Now, Mark, obviously, your organization is quasi-public, quasi private, so you're probably distrusted by both sides I'm guessing coming into the conversation. How do you make your argument and build that coalition to have that conversation?

MR. FISHER: Yeah, so it's interesting because the Indianapolis Business Journal just posted -- they're the front page story about the growing -- increasing rates of poverty in Indianapolis. I think from our vantage point as a Chamber of Commerce, a business community, I'm guessing -- I'm going to be speaking or preaching to the choir a lot in this room. And so I think it's incumbent on a lot of people. Indianapolis is probably not very unique where we have a very fast-growing successful, economically dominant metro area, city, surrounded by Republican suburbs. But our legislature -- we are not a home rule state. Our legislature is very rurally dominated. And so my job a lot is to go to the legislature and to convince them that it is in their best economic interest to make very strategic, inclusive investments in the urban core.

And so we are all kind of likeminded. Brookings posted the agenda and what the topics were, so I'm guessing this is a friendly audience. But it's not all that fun to go to a hostile audience. One of the things that we recognized, and we went through the learning lab, was that Indianapolis and the Metro area has gone from the 53rd to the sixth most economically segregated community.

And so a lot of people are blind to what is happening and how rapidly the impacts of deindustrialization have taken hold in Indianapolis. And so this IBJ area is like, well, yeah, all the social service agencies have been saying, yeah, we've been working on this forever.

Where the business community can come in is going to nontraditional allies, nontraditional groups and making the case. So we work very closely with our mayor of Indianapolis, but the regional mayors, the Republican mayors outside the City of Indianapolis that can go in a unified voice to our legislature and help them understand really why it is in their long-term best interest. We have 92 counties in Indiana. Only 19 put more into the state coffers than they receive back. Only 14 are going to see a working-age population increase of five percent or more the next 30 years. The state as a whole will be more and more reliant on fewer and fewer communities to foot the bill.

And so that is the case that we make to our legislature as a non-home rule state. Anything we want to do locally, we've got to go ask mom and dad at the Tate General Assembly for permission, but it is making strategic investments in transit. Making strategic investments in early childhood education. Brownfield redevelopment, public health, because it is, as you said, much more expensive in the long term if we don't start to nip these issues in the bud than we do if we try to, you know, really treat the cancer.

MR. HERCKIS: All right.

MS. PEARCE: So, this is an interesting question to try to answer, right, because I think that we're at a point in our country where we've talked for a long time about how business as usual needs to be stopped, but we're being forced to stop it. Right? Like, cities, counties have to be responsive to local needs because the federal reality is different. Right? And people talk about republicans and democrats, but that changes party lines when you cross the Mason-Dixon often; right? So I'll just say a republican in the South is a democrat in the North and vice versa depending on what the actual values are.

And what I found to this earlier point of Nimbyism is oftentimes we have shared realities; right? So our neighbors who would yell about Southwest LRT are also going to be upset about the Blue Line LRT extension that runs through probably just as viable an area as Southwest would. The difference is, the communities in the northern part of our particular county have been asking for these investments for a long time; right? In the southern part of the county, they've been asking for a different set of resources, so I found it from a city perspective, and in partnership with the business community and with our counties, it's important to draw together those requests, to help people who are in the southwest suburbs understand that what they're asking for, what they've been demanding from our cities and our counties for literally decades, is not disconnected from what we've been advocating for in the city. Right? And that part of

our reality and our responsibility as people who work at a local level, is to get rid of the urban-rural divide. And we actually cannot afford it.

Earlier, you heard Senator Klobuchar refer to the 35W bridge collapse. That happened in the middle of our urban -- part of our MSA. We always talk about as a community, right, you all do infrastructure. We always talk about roads and bridges as if they're something that happen way out in some county that we barely visit, that doesn't have any sort of connectivity. And when that bridge collapsed in our city, we all had to stop -- the universities, the city, the county, our businesses, everyone who came into the hundreds of thousands of people. Three hundred to 400,000 people come into our cities every day to go to work; right? Our phone lines were down. So I think we're at a place right now where we have to stop and say, you know what? When we talk about childcare in our cities, it matters for our suburban and our urban and our rural counterparts. And when we start to talk about investing in affordable housing, like deeply affordable at 30 to 50 percent AMI, it matters; right? When some of us can afford to pay \$2,000 to \$5,000 for rent but there isn't enough supply at a market level, we take affordable housing, which puts an even greater strain on people who actually need deeply affordable housing. So overall, we have to create the stock that's required to stabilize the entire field; right?

Figuring out ways to make sure that when investment lands it happens with community is one way that we as a city are really reevaluating the work that we do. We have great programs. I think billion dollar permit values; right? We're not struggling as a city. We're certainly not struggling as a region. We're quite prosperous. But we have some of the worst disparities in the country when it comes to race and age and education and unemployment. And for us, that's over 106,000 job vacancies in our market; right? I refer to the \$31.88 billion.

Well, there are some other facts that we know; right? When you have small businesses that are supported and that grow locally, and if they're owned by people of color, they actually generate three times more wealth in community. Three times more

wealth in a community than -- no slight to our big business, right, but then a Walmart would coming into that same block. That's more taxes for our municipalities. So we as a city have a really interesting reality, right, where we want to support all of our businesses, but we can't afford to do that at the expense of local companies or engagement of community.

That also means that we've been looking at our programs that we have on our books. We have two percent loan programs. I can go on around the economic development assets that we have available to our local community. But what we know is if you're a member of any of our communities of color, you have a harder time accessing our programs because our financial institutions in the market -- these are not city-owned financial institutions, right -- the financial institutions in our market don't lend as frequently to communities of color outside of home ownership.

So then we, as a city, working with the county and with others, have an opportunity to create structures that actually benefit the communities that we're trying to serve and that help to land the investments. That's really where we've been focusing. It's stopping business as usual and saying we can continue to support people but we have to partner in a different way.

MR. HERCKIS: So one thing I want to ask is, because both on the last panel and this panel, federal funds have come up a lot. And just being honest, you know, everyone is saying we need to do a bit more. This is vital to us. The way things are going, just to be honest, is not in that direction. What the federal government tends to agree upon across party lines is that more local investment generally and more public-private partnerships are the two things hand in hand that you're hearing more and more of.

I'd love you all to kind of comment on that generally, but also, where does that leave you all and how are you all reacting to that? Obviously, it's important for that federal investment to be there, but recognizing that the cavalry may not be coming,

how are your localities, as well as the localities you're working with, addressing and then reacting to it?

Open it up to whoever wants to go first.

MS. PEARCE: Why does it say the cavalry is already here? That's the beauty of this; right? So you have -- in our market, we have an amazing chamber of commerce. Literally amazing. Whether it's our Minneapolis regional chamber, our ethnic chambers, we have a strong business community in our market. Hands down. You heard Commissioner McDonough earlier refer to Itasca partnership. They've doubled down in the areas that we would refer to as market challenged; right? Places where the commercial and residential rates are higher than the market would support, basically. So that's a part of our reality.

The other pieces, we actually have a lot of foundations. We have quite a bit in the city coffers that we can leverage if we do it well, so we have some really great examples. I referred to the Blue Line Extension earlier. The Blue Line Coalition is actually a partnership of communities from Minneapolis all the way up through about six or seven suburban cities of groups that do community engagement, work on the ground, who have been instrumental in supporting the counties' development process of the Blue Line Extension. And I want to be clear. I'm referring to light rail because the light rail was the way that we started to, as a city, rethink zoning years ago before our comprehensive plan started to move forward. It is one of the ways that we saw funding coming in to a community that was otherwise not getting any dollars or wasn't even perceived as getting any dollars. So the light rail is huge in our market.

And then I think more recently, we have opportunity zones. Now, I don't know if you all are tracking us, but I hope you are. The Opportunity Zone Fund process has been instrumental in its first, what, 130 days of Mayor Frey's administration; right? Because it hit, we had to run really quickly, and as a city, we grappled with the reality that a lot of our community is experiencing displacement. You might call it gentrification. It

depends on the city you're in; right?

Because of that, and because of the other reality I was sharing with a couple of folk earlier, we have folks in our market who actually get awards for being like best gentrifiers. So we've been able to use the Opportunity Zone's process as a way of saying we're going to designate zones around areas where we have publicly-owned land because then we have some control, where we have private sector interests or a pipeline developed for business development so that we can actually catalyze the market. And where we have financial institutions that are saying, you know what? We think we can accept a higher level of risk and we have stacked infrastructure needs. It means that we can get the roads. We can get the power lines. We can get the grid systems. We can get the housing. We can get the economic development components. Then we start to turn a corner in a real way and in areas that we don't otherwise have --

MR. HERCKIS: And this is so new. I do want to touch on it and allow the rest of the group to as well. But do you feel you have enough structure? And any of you can answer this. Do you feel you have the ability and structure to manage these areas? Or do you feel you're doing your best with this new and very unknown program?

MS. PEARCE: Well, you just referenced what we know about the current administration, which is local control. So we are hoping that this will be another instance where we'll have quite a bit of local control in the design of the fund. In our market, we've already started to get together. Hennepin in Ramsey County, Minneapolis-St. Paul, private partners, some of our suburban counterparts and actually start designing terms and conditions and everything required for the fund thus far, but it's hard to say.

MR. HERCKIS: Okay.

MR. FISHER: You know, I think with regard to the federal funding, when promises are made, promises need to be kept. You see the locals stepping up, putting in their money, passing transit referendum, for example, overwhelmingly in a lot of communities. And those plans were developed based off of a level partnership with the

federal government.

That said, I think, you know, you take CDBG as an entitlement city. You get kind of addicted to this money. And for a long time -- so we're 400 square miles in Indianapolis, Marion County. We are a unigov, a unified government system. We took the peanut butter approach. We're just going to spread all this money as evenly as possible across the community. And what happened is our CDCs, our nonprofits got kind of addicted to it. And we saw worsening statistics. And so we've had to take a step back with the city, with our philanthropic partners. The Lilly Endowment, our Central and Community Foundation, are tremendous assets that we have that we probably take for granted. The United Way, all the grant-making organizations. Why are we continuing to put good money after bad? And we're not seeing the results. And how do we realign and really do node-based or zone-based, very focused and very intentional investments? And a lot of that has to do with capacity-building of the nonprofits.

I have a masters in nonprofit management. I can say that without a doubt, we need stronger leadership in our nonprofits. We need to really be very intentional in focusing on developing the leadership of our community organizations so they can have a bigger impact and they can really lead their individual communities to greater prosperity. And so again, getting away from the peanut butter approach and really focusing our efforts where we're going to see the highest return.

MS. GIDIGBI: I'd like to add a couple pieces here in terms of when you talked about P3, I want to bring up, since we talked about Pittsburgh in the previous panel, one of the things that I love that the mayor talk about is a P4 model, which places people at the center of it; right? And I think one of the things that we recognize is that when you allow for your community to help to be at the center of the vision, they will support it.

And so one of the things that did come, one of the good things that came out of the 2016 election cycle was this referendum on transit investment. And people

went to the polls and they voted to tax themselves and increase for the things that they wanted to see. When you make the case and you build it with the people who are going to have to pay for it, and also live through it, you do see the return on your value. And I think that that's a powerful thing.

One of the things that NRDC has been promoting is a high roads approach. Before we even have the project, how do we make sure that we build in early in advance the visions of the community and have a performance-based metric that would allow for people to see themselves through the project? Because the other thing is infrastructure takes a long time to build. But the money that comes through can transform generations. And if we do it right and you build it in properly and you have the right mechanisms in place for accountability, you will see changes happen.

And one of the great examples is actually locally here in Prince Georges County. They had and put out an RFP that had specific performance measures, and they are over exceeding the goals in meeting the small business requirements, ensuring that minorities are part of their contracting. It has been incredible to see how they have taken the notion of building in the community vision and seeing it through completion, not just from the plans, and I think that that's the concern.

I think the other thing that this administration has talked a lot more about is their solution for infrastructure is streamlining. And the issue is not streamlining; the issue is money. The money that is going in and is being requested out are taxpayer dollars that they paid into the system for. And so I do respect the notion of folks feeling like there's an entitlement, but it is their resources. And I would say that when you make the case properly, people are willing to pay into the system that they'd like to see that reflects them. And for a very long time, our infrastructure system has not reflected the people who live in the communities that we're trying to serve for.

MR. HERCKIS: So I want to bring up something that was brought up on the last panel, and it had to do with the fact that to do these things right, right, to get the

right data in, to do the right sort of outreach, it's hard work. You have to have a savvy staff, or at least savvy partners coming in. You have to be thoughtful about it. Is this going to be another haves and have nots in how we approach these things? And how do we ensure that communities don't get left behind when it comes to these things? Not every community has the ability or kind of civic community that can bring in some of these outside actors or internally build up actors to do this.

So what would your advice be to those who may be in a regional area where there is not that sort of support network or wants to build that sort of support network or bring folks in? Or where to start even.

MS. GIDIGBI: Okay. I just want to make sure that we also -- I want to add a new term to this conversation, which is trauma-informed communities. The issue of why people don't come out is because they've come out year after year for decades and they never saw the projects that they had spent hours debating being built. And so what happens in that is they get tired and they get planning fatigue, and they just want to see things actually occurring.

And so I want to make sure that we really address the root cause of why people are not coming out, right, and address a lot of those system inequities that we see happening. And I think one of the things that Aly in the earlier panel did well is talking about how we address some of those system issues. How is the government -- and I would look to the local officials -- how are you continuing to reinforce those inequities? And I think Minneapolis has done a good job in being able to call that out and say, if this is not benefitting and not doing the things that we're saying, then we're not moving forward on it. If we're saying we're going to build this project, what are some quick wins that we can put out there in being able to show that there is progress being made? And I think those are some initial first steps to having more proper engagement in the process. But we haven't kept our promise. We haven't kept it at a federal level, and in a lot of communities we haven't kept it at a local level. And yet, we need both. And I think one

of the things that Indianapolis has done well is even the transfer of power. We have an election every four years in any region, and so the political power changes but the people power stays the same. And if we make sure that we -- I hate when people say empower because they are already empowered. If we clear ourselves out of the way and ensure that they have a seat at that table, it will continue.

MR. HERCKIS: And Mark and Shauen, just quick remarks because I want to make sure we get to Q&A real quick as well and make sure we have time for that.

MR. FISHER: If you're at a table and you feel uncomfortable that's good. You know, if you're trying to address these issues as a city alone and not bringing in your regional partners, you're doing it wrong and you lose every time, especially in a state like Indiana, a state like Minnesota. So you need to evaluate your comfort level. And if you are completely comfortable with everybody around the table and the decision-making process, you're doing it wrong. And making sure that you are bringing in groups and going to groups where you are not -- you don't have traditional allies, and that's how you really -- it's really an "all hands on deck" approach to solving many of these problems, but it has to be done at a regional level. It cannot be done city versus suburbs. But that's a long-term project.

MS. PEARCE: So I always caution people when it comes to data because there's an underlying assumption that you're going to do a study or write a report and then you're going to convince people to behave differently. And oftentimes, studies and research in general, and conversations, and bringing people along are intentional pathways to prolonging the issue. And we have to acknowledge, and I think coming from a really prosperous region, we have to acknowledge that most of us, and sometimes we are these people, most of us are actually surrounded by people who don't want things to change. And if you can't be honest with yourselves and say maybe I've been a block sometimes and I need to figure out how to get out of the way and find somebody who is really passionate about this, even if they don't have the degrees or

other credentials so that they can do the work, then you're actually part of the problem. If you need a study to convince 70 percent of the people that you're working with, then you need to go find the 30 that don't need the study to get it done. Just do it. You will move much faster. You will fail forward much faster if you simply say we know the outcome that we're trying to reach and we're going to build a path to it, and we are going to go and we're going to evaluate, then you will if you say, oh, I'm going to try to figure it out. Let's see how people feel about it. We want to try to bring people along. You don't need to. You have a lot of people around you -- at least for us. I know we have a lot of people around us that already have an inherent infinity for the work. When we start talking about hiring in communities of color, our business community fills that because they're sitting with hundreds of vacancies in those companies. If they can't make the gap, nothing that I or anyone else can say is going to convince them. They have to feel that pain. If as a city we want to grow and we have saturated downtown Minneapolis and we have saturated uptown in Minneapolis and we know we need to grow in communities of color, and we know we want to do that equitably, then we know we can't railroad community. We have to start that engagement process and a partnership with community early enough in the process. So I would say acknowledge that if not you, then someone on your team is freaking out and scared out of their wits. Acknowledge that it will be uncomfortable. It's going to be painful. And acknowledge that you will have incredible gains and you will look back and say I can't believe that it took me 10 years to be okay with trying this.

MR. HERCKIS: All right. Well, let's get to some questions from the audience as much as I have like 10 more questions I want to ask each of you.

Go ahead. Right in the -- yellow tie. I'm sorry; I made that as hard as possible on you guys.

MR. WAYAN: Hi, Patrick Wayan, mayor of College Park, Maryland.

So I appreciate, first of all, I know a couple of you have public health

backgrounds and also I want to touch on -- because Minneapolis -- Minneapolis and Indianapolis have done a great job in recent history of investing in trails and safe bicycle and pedestrian infrastructure. And I was wondering if you could talk a little bit about how that's impacted low income communities in particular, because I think there's a couple of disparities that safe bicycle and pedestrian infrastructure can work to address both the public health disparity and the fact that low income communities and communities of color tend to have poor indicators of health. But also, the disparities in pedestrians, and well, particularly, pedestrian safety, which are well documented, and bicycle safety. And how has that worked in your communities in terms of building out that infrastructure? And have you seen -- how have your low income and communities of color engaged on that? And what impact has it had? Thanks.

MR. FISHER: Certainly, we do not do a good job at tackling public health. I'll say with regard to privatization of the parking meter deal, we actually did it right. We did not try to plug a budget deficit, but we made long-term investments in our infrastructure. And we had a mayor that you would not think would be the champion of pedestrian and bicycle infrastructure. He was a former Marine colonel. Came in as kind of a Tea Party Republican but was a big cycling enthusiast. So when we sold our water and waste water company to our public charitable trust gas company and we privatized our parking meters, we were able to put about half a billion dollars of investment into our roads, streets, pedestrian infrastructure. And the mayor said, when we're repaving these streets, we're going to go from under 10 miles to over 200 miles of bike trails. That connected to the cultural trail, which has seen over a billion dollars in AV growth in a very, very short amount of time.

I'll say the interesting thing about the bike infrastructure is we've gotten pushback from African-American communities that see bike infrastructure as a sign of impending gentrification. And we have horrible, horrible health disparities. If you live on the Southside of Indianapolis, you have a 14-year life expectancy difference than people

who live on the Northside, the affluent areas. And so pedestrian infrastructure, one of the things that we're doing with our transit investment, with our BRT routes, is because we've built out as a city after World War II, when we built out from the core, we did not put in a lot of pedestrian infrastructure. So we are very intentionally making investments in the pedestrian infrastructure and this bike infrastructure using dollars from our transit investment. And so, again, you've got to listen to the community but there is a lot of fear and mistrust about what happens if bike lanes start to come into your community.

MS. GIDIGBI: I just want to elevate the thought process in terms of the concern it being a valid one because oftentimes the bike wasn't requested. What they may have wanted was something else in terms of the investment. You can often tell the value of a neighborhood based off of the sidewalks and the roads, sadly. And we are also seeing -- and this is where when we talk about infrastructure it has to be broader. You have to have the full team.

We have used the safety argument to then be really the case -- I think we saw it -- we literally saw it in the Twin Cities where traffic stops and safety stops have been what have targeted black men of color. And we watch people being stopped, while black as part of that. So there is an inherent tension there. I think if you engage the community, if you actually ask them what they want, maybe it is not necessarily a bike trail but it is a cultural trail, I think we are seeing it within SPARCC and being able to have more of those cultural trails that highlight the history of a neighborhood. Being able to celebrate what that neighborhood was and where it is going I think are all great value sets where people can then see themselves. And I think that the cultural trail is also a great example of, in my mind at least, the private sector really taking the lead on how this investment has been. And yet, I think that there are still some challenges. We haven't arrived, but I think if we do it in the right way and we think about who is going to be benefitting from it and we allow people to see themselves, those have been some of the best examples of some of those investments.

MS. PEARCE: So Minneapolis has the number one park system in the U.S. as you probably know since you track this. What I think is important about your question around impact is that sometimes there are corollary impacts that are not the intended outcomes. So, to the point of people protest the thing that they didn't ask for when it takes millions of dollars of investment away from the things that they need, we have seen impact -- a positive impact. And what I've found is that some of the opposition comes because people forgot their history. You also see communities of color that were protest co-ops, but the reality is, particularly in the black community, we have a legacy. Since bikes have been created, we have a legacy of actually being cyclists. Just as we have a legacy of being owners and operators and educators. And we've actually used our bike trails and our park system as a way of reconnecting people to that history, not as a way of co-opting their story to facilitate an investment that other groups want, so you've got to be careful about that, but helping people reclaim a part of a history as a process of making an assessment about if they want the investment in their community has actually been really positive. Our Parks Empower program, if you look that up through -- I think it was Hope Community -- was instrumental in that. And I would say the work. And the arguments that have come up, rightfully so around park and bike and pet investments, have made all of the difference in the ways that people in government actually approach community. It also helped us reevaluate the way the state designed some of our highways as we are making things like the Blue Line Extension investment, so that as a community we were able to come together and say, you know what? That four, six lane highway, I don't think if you have a walker you can actually cross that in the allotted time. And so we're not going to support this project -- I mean, multiple mayors, multiple county commissioners raised this, right, because community across age and race and class had a shared background as a result of doing the bike engagement, and they changed the cross times in the design of the system.

MR. HERCKIS: I feel like I've been neglecting this side. Is there anyone

on this side real quick? We have time for one more. In the back.

MR. ALBANESE: Good morning. Adam Albanese with the Department of Employment Services here in D.C.

Our mayor has invested a lot of money and brought in a lot of private investment for the D.C. Infrastructure Academy, which is really designed to make sure that the communities that are benefitting from all these infrastructure investments and maintaining our critical infrastructure are also reflecting the communities and that they're hiring our communities.

I was wondering if you could take a minute or two to talk a little bit about those efforts in your areas.

MS. PEARCE: I'll just say quickly, way to go. That's awesome.

The other piece though is procurement, particularly finding, make sure that any sort of discretionary spend is also going to communities of color. Because the other reality is as governments in particular, we have the opportunity to transform an economy in a major way because we usually have some of the largest spend. So that's really helpful.

As the City of Minneapolis, and also Hennepin County, we've actually been investing more time and resources in pathway models. So you can get entire cohorts into a system, train them, for example, in inspections. You can get a housing inspector, a fire inspector and, you know, name the other departments, to go through the beginning of that process together. It builds for them a set of allies, if you will, but it also makes it a career pathway, so we don't have folks go through things like Step Up, which is our youth employment summer internship program. Just kind of drop off. This gives them another step. And then in our workforce system, we have an evaluation period that is at least a year out. So if we fund you, we expect you not to just train people, but to make sure that they're placed, and then for those employers to retain the employees that come through the pipeline.

MS. GIDIGBI: We need everyone involved to build the future that we see for ourselves. And I think that that is really what a lot of these academies offer. One of the things that we are supporting within SPARCC, our Act LA table has been doing a lot of the train the trainer models and being able to educate community leaders and empower them with the information that they need to go to the various board meetings, to really push for the things that they'd like to see. I think that those have been some of the best examples.

And also a reminder because although we said broad and we said that they needed to not work in silos, money flows from the Department of Transportation for transportation projects. And so we have to have conversations about, okay, you don't want this bike lane, perhaps, but you do want affordable housing, but the Department of Transportation is not paying for that. So maybe we put that in and we will get the next step and being able to talk through those pieces. I think again, to the notion of an MPO, I think some of the best community groups in the country have been training to get more community leaders on the boards to make sure that it reflects the values. Because where the resources are, when you are really in the center -- power is really in the center of dollars and decision-making. And when we're able to get more people from the community in those spaces, you get to see that more.

One other plug is that the Department of Transportation in the previous administration did something called the Transportation Leadership Academy. It's a great training guide that I would encourage anyone to take advantage of. It gives you a summary of the work, the resources, how you leverage it, and it's a great 101 tool for community leaders.

MR. FISHER: I'll just say, when we created a tip district for our innovation district, the city council, as they were creating the district and then when they went out to bond to make some infrastructure improvements, they set up three funds. One was a geographically targeted workforce development fund that really was set up to

train people to get jobs in the innovation district. They created a microlending pool, geographically-targeted microlending for the people that may not be able to qualify or get a job in the innovation economy but could really self-employ. And then they created a community benefit fund where a certain percentage of dollars per square foot will go into both workforce development and entrepreneurship training and funding around the innovation district. So that's just one example of what we've done locally.

MR. HERCKIS: All right. I think, unfortunately, we are out of time, and I'll get in trouble if I keep going.

We do have a 15-minute break here, but stick around. There's one more panel to go.

Another round of applause for our awesome panel here.

(Applause)

MR. HERCKIS: And thank you all for joining us. And we'll be here. Fifteen minute break and right back here. Ten. Ten minute break. That's probably my fault, too.

(Recess)

MR. TOMER: I'm half looking at my colleagues actually from Infrastructure Week who has been with us here today. I've been part of this for at least six years, kind of leading our team for the last three during Infrastructure Week, at least. I think this is the first Infrastructure Week event I've ever been to where the terms concentrate of poverty were used; engaging community; funding flows at a local level is often talked about; but the way we talked about it was different, and this is the exact kind of outcomes I think we wanted to have from this event is to note that infrastructure; federal funding flows; federal legislation; public/private partnerships, which we also talked about here today, they're all essential.

But we also have to put people at the middle of these conversations as our motivation. So a huge thank you to the past panelist, and especially the two

moderators for keeping our conversation going. This is the exact kind of outcomes we wanted to have today.

So this panel is explicitly about technology; although that's really such a cumbersome term. We're really talking about digital technology here, to be explicit; and we have an amazing set of panelists that have joined us. So, I'm actually going to go from this end, this way. So all the way opposite from me is Angela Siefer who's the Executive Director of the National Digital Inclusion Alliance. Angela is one of the most tireless advocates for the importance of connecting digital tech to people and making sure they have an opportunity to benefit from it. She has over 20 years of experience in this sector. She's worked at the local level, at the federal level, and is building an incredible community of practice with local constituents all over the country. So we are really, really humbled to have Angela in from Ohio today with us.

Next to her -- to stay with our almost exclusive Midwest theme until we get to Shoshana for the whole day -- and a lot of Minnesota today too -- is Tom Schenk who is the Chief Data Officer for the City of Chicago. You're going to hear a lot about Chicago's incredible programming that they've been doing recently; but that's really just kind of scrapping the surface of what Tom's experience is here. His depth of scholarship of network building with his fellow kind of CDOs and past work across a range of topics is really, really impressive, and you're going to hear it in the way he frames his comments today. So we are really humbled also to have Tom join us here from the City of Chicago.

And then, finally, to Tom's right we have Shoshana Lew, who I -- in full transparency -- is a former colleague of ours at the Brookings Metro Program. Although many years ago and many more degrees in the rings of the circle of her in a tre-metaphore of her career, Shoshana over the prior, to the last year, eight years before that -- during the prior federal administration here -- is really a model of how to build a successful career with impact in our community. So, both as chief financial officer; working on admission standards for trucking; working on finance through building the new

financial-related bureau inside the USDOT, Shoshana has made a real impact in our communities; and now she is the chief operating officer of the ocean state, Rhode Island; and so we're going to hear a lot about the innovations happening there.

So, before we jump in, I just want to stress what we're looking at here. We're looking at both a mix of federal experience, currently working at the state; currently working at the civil level; currently working at the civic level. And so all of these kind of are critical components in how we can make sure that digital technology -- both those infrastructure investments, but also the programming around it -- helps build a more inclusive economy for all.

So here's what I want to toss out to the panel so you can get a chance to know them a little bit, the softball, and then we'll get into more questions. So, what are the core challenges and opportunities that exist in each of the spaces that you tend to work in. Let's start with you Angela.

MS. SIEFER: I'm definitely feeling like the new kid on the block, right, because I want to talk about broadband. And I was looking at our neat little icons up there for Infrastructure Week, and nobody's talking about broadband, which is essential to do all of these awesome things where we want to engage people -- maybe social media -- we need infrastructure of broadband kind, right.

So challenges with that -- it's urban and rural, right -- so, misconception that it's only a rural problem. And that's because we need both speed, that makes us ready for the future, not speed that makes us ready for today; and also we need it to be affordable.

Digital redlining is real. We had data from a provider that shows us digital redlining is real, right -- that there is not investment in poor neighborhoods. So there are neighborhoods where you can't get the speeds you need because there was not an investment because we don't regulate broadband, right -- we really don't. Nobody's in charge. So, those are kind of the big things; and then -- you mentioned the

wraparound, the programming of that -- is that once we build it, we need to make sure everybody has skills -- digital literacy skills -- and the right devices; and the infrastructure itself, that broadband, needs to be in people's homes -- public access is insufficient.

Okay, I'm going to pass it on.

MR. SCHENK: So, my role at the City of Chicago is to direct our teams to use data to improve the quality of life and improve the efficiency of city operations; and it cuts across a lot of different ways. One, what Angela just said is absolutely true, and something that we do see in Chicago. We do see the digital redlining that does occur; we see a broad different uses of what type of devices people are able to access on a day-to-day basis. Some people are only really accessing broadband Internet through their phones. You can imagine trying to do your homework that way -- that's your sole source of information. Well, yes, you can access broadband, that's not a sufficient way to be able to access a lot of information and resources that are necessary to be able to participate in school.

But beyond that, that sort of digital access is important for being able to achieve what we need to do from the data perspective. One, we need to, of course, need to be able to treat data as an asset -- make it available to everybody. And we do that within our own city employees, make it widely available; but we also do that for the public. You can go to data portals which are quite popular these days across a number of different cities -- Chicago is one of the first. Or you can go and you can download data ranging from every single crime that's occurred in the City of Chicago to every permit that has been issued, to every single employee and the salary that they make who work for the City of Chicago; to every single taxi trip ever taken in the City of Chicago for the last three or four years; and then a lot of everything in between -- where the roads are at; a bunch of maps of what is all built throughout the City of Chicago. So, as you talk about infrastructure; where is the infrastructure at; where is the data for that? And this is something that we make broadly available through our data portal sites.

And then we also use things such as predictive analytics to predict what's going to happen across the city. When we talk about aging infrastructure, one of the problems that we have is, of course, lead paint poisoning. Children who are under two years old who ingest lead paint, that's costly. It can cost between 10 and 40 IQ points off of that child depending on the length and the severity of the exposure. Normal childhood, a childhood where that's 100 IQ be able to comfortably graduate from high school, go to college, to a livelihood that's going to be very difficult for that child, for the parents, with a very different life outcome.

So, we've built predictive analytic models in the example about which kids are most likely to succumb to lead paint poisoning and offering up free services so hospitals can sign up for free and get predictions. As their patients come through we can inform them that a child have elevated likelihood of getting lead paint poisoning.

Two other projects too about being able to connect people with digital services; and, of course, I'm going to pull this out because it's one of my favorite projects that we've worked on lately. But this is the City of Chicago; it's called CITYKEYS, a municipal ID card. I'm going to cover that up for the camera right there so you can't quite see everything. This ID card that you have here is something they can use to access the CTA buses, the trains, the regional trains throughout the city, the commuter trains throughout the city; it's your library card. You can use it to access city services. If a police officer pulls you over or stops you for something that is benign, you can show them this ID card and it's your proof of identification. You're not going to get locked up because you don't have an immediate identification on you. All you need to do is prove residency within the City of Chicago to be able to hold on to this. Permanent residency within the United States is beside the point with this particular ID card; but it's also completely protected. There's actually no data base showing that I'm holding on to this card right now; but it's also designed to work with all of our city systems.

So, this is a way that we can think about how to use technology to

connect people with services, maintain their privacy; but also provide a broad value that's useful for everybody throughout the City of Chicago so you want to use that card. So, I'll stop there and I'll pass it on.

MS. LEW: Thank you; and I am going to take us back to transportation for a moment -- unusual for that to be the outlier during Infrastructure Week. From the perspective of a state transportation department, we sort of deal with technology challenges in kind of two different vectors. The first is how it interfaces with the infrastructure itself, the, you know, mobile-sourced technology that uses the infrastructure, the people who use it to move. The second, how we kind of deal with technology for the purposes of our internal planning and the way that we make decisions in ways that sort of serve the public interests.

To take the first, you know, we in Rhode Island, like many other states and cities across the country are thinking about how kind of changes in transportation technology be it the development of autonomy in vehicle technology, you know new methods of ride sharing that sort of challenge our conventions of how people get around. You know even traffic light technology sort of interface with people. And you know, we over the pass years or so have been really going through a concerted effort to ask ourselves the big questions about how we think about this impact; and we've come to some sort of human-centered themes that I'll talk about just briefly.

You know the first is that we really have to think about how these technologies affect sort of place making goals and people. You know the technology is not itself an ends, but rather a means to achieving certain goals in thinking about how we kind of deliberately employ you know new kinds of technology for moving people in places that fill gaps and make communities better is not something that is going to just happen.

The second is thinking about the kind of workforce employment implications; and, you know, thinking about autonomy is a good example because it could

change -- you know take the example of what a bus driver does. You know there are still going to be humans interfacing with public transportation you know as the way that the kind of mode exist changes, but probably the kind of jobs that people will need to be prepared for in 10, 20, 30 years could change; and getting ahead of how we train people to be part of the transportation workforce in the future is something that we are thinking about very actively now.

And a third that I'll just hit on kind of in that vein is the kind of environmental and climate goals as they play out in the space. There is a sort of tendency to think about you know new innovative technology as being better for the environment; a tendency to think of autonomy and electrification in the same breath. You know that could be -- it is not necessarily the case; and, again, it's a space where we have to think about you know how we are trying to achieve these ends and how we sort of steer them in a way that complements.

The second vector that I'll talk about just briefly is how we sort of go through internal processes in a way that make decisions that kind of have the human impact that we seek to achieve. You know we at the Rhode Island Department of Transportation have gone through very sort of systemic set of reforms over the past few years to take on an asset management approach to planning; and that is, instead of doing a piecemeal project because someone says they want it, you sort of think about the system as a whole and make very educated data-driven decisions about where the sort of needs, the ability for a project to kind of live out and maximize it's utility for a certain period of time, and the kind of different impact whether that safety, you know, access or otherwise, sort of interplay with one another. You know that is heavily reliant on technology; and sort of building the internal infrastructure you need to make that work.

You know there are a great number of sort of software packages that make that possible; but we are working to sort of deploy and integrate with one another; and there is also, I think, an ability to think differently about how we sort of use the

technology to sort of fill gaps in the vein of inclusion.

And you know just one quick example that I will close with here is that I was part of a meeting a month or two ago where we were talking about getting stakeholder feedback, and you know someone raised the point that there was a sort of disparity in who was attending the listening sessions that they were having; and, you know, expressing some concern that the listening sessions were not sufficiently inclusive in you know gathering the range of stakeholders whom they wanted. And I posed the question, you know, could we use the technology to kind of help us use data to sort of overlay where the anchor institutions, the other you know sort of parts of the community that help people connect with one another are at; and instead of saying how do we get more people to come to listening sessions, can we use data to make sure that we're sort of thinking equitably across the system. And you know, I think, the conversation we had in the past panel, there are always going to be sort of challenges in getting people to the table in kind of the same ways, in some ways we can use data that's gathered through technology to bridge some of those gaps.

MR. TOMER: Yeah; great. So, let me talk out to all of you; and thank you for the background there. I think you all started to touch on some of the objectives we want to achieve here, right; but I think what's coming across all three of these panelists is the idea of inclusion is really putting people at the center, right. It's not about just the infrastructure for infrastructure sake. It's about achieving some kind of very explicit human centric outcomes, right. So, I know both mics are down here, so I'm going to let you all fight over who wants to jump in here first. Ideally, you kind of can go in any order you want; but what are those kind of core human centrically objectives you want to see? Let me almost say it in a slightly different way, right. What does a better world look like, right? You know, let's say 5, 10 years right down the road based on your specific kind of sectors of expertise and, ideally, how they kind of integrate with one another too?

MR. SCHENK: So, one of the ways that people are, of course, using to

interact with their cities is technology. That can be as simple as websites or applications where you're looking up when the bus is going to arrive; when things are going to be open; when is something going to shut; get a notification that you should move your car because we're going to be sweeping the streets, and so you want to move that so we don't ticket or tow you. So, these sort of things are more common in how people are anticipating and expecting to interact with us -- let alone more narrowly defined constituents such as businesses and others who are filing permits with us but those are narrow. And at the same time, people are using technology and other means of technology to be able to commute across the city to be able to transport across the city.

So as we've regulated new industries -- new industries such as ridesharing and others. We have a dock-less bike pilot that's launching in the Southside of Chicago this summer. We're trying to collect more data about those services as they're being offered so we can coordinate those services across the entire spectrum. So as you reach out to this application using this service and not the CTA, as you're interacting with us (a) that there is actually technological infrastructure for you to interact with; and then (b) we're using data behind the scenes to be able to coordinate those activities to plan better to see where it is.

To bring it back to transportation as Shoshana mentioned earlier, when I take a look at the data that we are collecting within the city, the largest growth area is in the transportation sector. With the growing number of companies offering different services and options, we're seeing more data being collected there than anywhere else. We take a look at rideshare companies, for instance. Rideshares roughly outnumber taxicab trips 4-to-5-to-1 at this point. It's getting quite disproportional. So that information is quite important to us as we're trying to coordinate our services. And, of course, as some people know, we're taxing some of these new services such as rideshare companies to be able to help fund improvements to the CTA, to our transit systems so that we can make sure that there's improved systems across the entire city and there's a

good amount of equity across the city.

MS. SIEFER: I often get asked so what data is there to show that it is important for everybody to have access to the Internet. That really kind of makes me mad. Like, well, is it important for you to have access to the Internet; is it important for your kids to have access to the Internet? So I think the data point more has to do with the programs themselves, right. So, how are we getting folks access to the Internet? That's what we want to measure are those, because which ones of those are successful and should be replicated.

Because the end result of that is the technology, but it's what people are doing with the technology, and what they're doing with it is so varied. And so it's really hard to measure like if you're measuring -- you know, did someone's economic life improve because of access to the Internet or digital skills; and then it turns out no it didn't but now they have a better relationship with their kid's teacher. Well, we weren't measuring relationships on education, we were measuring economic. So the impact is so wide that it's almost kind of silly to try to narrow it down; but what we can measure is are those programs successful and being able to get at the best ways to rollout low-cost, high-speed infrastructure everywhere and to look at the specific policies that influence that.

MR. TOMER: I actually want to stay with you for a second Angela.

MS. SIEFER: Okay.

MR. TOMER: Because this is really important, and you're exactly right it's not only not talked about enough today going into other sessions it's normally not, we just assume it. To some -- and I think what Tom was saying was right -- but like talk about some of the points -- even let's say like through the lens of dock-less bikeshare, right, and sounds like where it's a nuisance on our sidewalk, but think of all the -- because you speak to kind of how digital skills can go into something -- it doesn't necessarily mean dock-less bikeshare, right, that's obviously on banking, let's say, but all

the elements we need to be digitally connected that are related digital skills, right.

MS. SIEFER: Right. So like banking is a good example. How much time does it save any of us to do online banking? I love online banking because I don't have to get myself to the bank to deposit checks or whatever it is I needed to do. But if you don't have that and the bank isn't right around the corner, then transportation works in, right because then you have to figure out how to get to the bank and you just waste all that time getting to the bank when you could have done it at home.

So there's different examples of how people use it; and it not only waste their time and energy, it's also the time and energy of the bank, right; that they have to have people in those locations. But then the data collection is also wrapped into that because if we're making decisions based upon data but we don't have data from everyone because if you have a data cap on your phone, do you care to give the city or anybody else any information? No, because you're saving that for when you really, really, have to have it for emergencies because you only have half a meg on your phone, and otherwise you only use it when there's free Wi-Fi, right.

So a good example I heard was a local government had set up some data collection where residents were voluntarily telling them where there were problems with certain intersections. Well, all the problems that the high data points came back in the wealthier neighborhoods. What, there's no problems with intersections in poor neighborhoods. No; those folks just weren't participating in this particular data collection

MS. LEW: I will start like a transportation person and say safety first, but I think the kind of challenge of what that means in a world of changing technology looks different than the way we sort of typically think about it in the world of the Federal Highway Administration regulating the size and shape of (inaudible). You know, I think, with sort of different kinds of assets using roads, bridges, trains, etc. you have a challenge of kind of integrating different kinds of technology in the same space. You know we think about that a great deal not only in the sort of world of autonomy but even

with the kind of technologies that are in people's cars changing.

This week we have a hands-free law going into effect in Rhode Island. We're behind the curve and, thankfully, we have this in place now; but it just, I think, underscores the eminent challenges that we have as people start to use different kinds of digital technology while they are moving about in the transportation network and, particularly, as people are adapting to kind of technologies that they weren't used to while using sort of very dangerous means. You know it creates something that has to be dealt with right now.

I would also so say in the kind of safety vein, that using the kind of data-driven decision-making tools that I was talking about before has substantial safety and equity implications. You know there is a tendency to, again, think about the kinds of infrastructure investments that support equity as being you know the ones that are typically the place makers -- the new, the innovative ones. Actually, you know it is often the kind of state of good repair type work that can have really significant impact. We had a sort of fascinating but troubling trend before the current governor of Rhode Island. There was a year where we spent more money on bike paths than on the interstate. You know in one sense for the changes in modal shift sounds great -- you know what that meant is that sort of across the state there were critical state of good repair projects; lots of bridges; lots of them in poorer communities that were being neglected; and making sure that we're sort of not just taking the shiny object but using the information that we have to sort of protect people equally and making sure that they have the means to get around -- I think is very important.

The two other sort of things that I will point to -- building on the comments that I made before -- the first is making sure that we have a way to kind of think measurably about economic impact and what that means; and a lot of the models that we have to sort of do a cost benefit analysis on a project with respect to economic impact, in particular, are not very good. You know they're rough; there is opportunity for

refinement, and people just don't think that critically about how to do it and how to kind of you know take the things that we know impact people and put it into a model that you don't have to be the expert to implore. And I think there is a lot of sphere of opportunity to improve the way we make decisions in that space.

And you know, finally, I would just point to the sort of obvious looming concern about resiliency and sort of thinking about what a changing climate means for our infrastructure assets and how we make investments that will continue to be relevant in the years added and sort of continue to have the kind of connecting effects that they need.

MR. TOMER: Right; and that point connects stuff that's been said, especially on the first panel with regards to resiliency. And also we asked on that panel is this kind of an element of performance measurement. So let me just toss out -- do you all feel in the communities you work in across jurisdictional lines, that there's alignment on those objectives? Are people working in the same direction; and when they're not, how does that cause problems, right? Even to your point Angela, you talked about in certain neighborhoods -- and Tom, you confirmed, right, on the digital redlining, right -- how much do you even at the city or county level do they know it's happening, right, and they're deeply concerned about it?

MS. LEW: I can start with an example that I think is a success story. You know I mentioned at the beginning that we had a serious wholesale change in the way that we made decisions in our department about two or three years ago now, which was very driven by kind of working towards the goal of achieving 90 percent bridge structural sufficiency by 2025. You know it does not sound like the sexiest goal, but when you have the worse bridges in the country that's what you've got to do. And the effort that it took to rally people across the state around that goal was herculean, most of it was actually before I got there; but what's been remarkable about it and very much supported by data and the way that we do analytics is that it's been sustained; and it kind

of gives you a way to make hard choices if you're working towards a goal like that. You know that one in some ways you know I never miss a good crisis. It gives you sort of -- there's a statutory mandate to have 90 percent structural bridge sufficiency. You know it's kind of obvious from a movement perspective that you need it, but it is very hard to kind of keep people focused on a goal like that, and having clear metrics that people are brought into and where you can kind of monitor performance and sort of keep dollars steered in that direction, I think has a tremendous impact and you know there's real opportunity to kind of use that model and move forward with it.

MR. TOMER: Yeah.

MS. SEIFER: In broadband infrastructure world, the most common goal is the physical infrastructure available at a particular speed. FCC is currently saying 25/3 -- 25 down, 3 meg up. But then the next measurement is how many of those folks have -- how many of your community members have broadband in their homes, consistently in their homes -- not just when they can afford it? So that is a number that is strikingly of concern, right, that the infrastructure might be there but folks aren't subscribing to it because it's too expensive.

We used to say that we thought there was barrier of relevance. Folks don't see the value, so they don't sign up. That is quickly becoming a very small barrier. Most, when you ask, you know, like do you subscribe to the Internet and somebody says no; and you say, why, the answer most common is I can't afford it. So that is the measurement that we have.

In the UK, they measure digital skills. We haven't gotten there yet. We're still trying to make sure folks have Internet at home, but we will get there, right. Like it's not the kind of thing where you can just wait until later to make sure everybody has the skills. So I suspect very soon we'll start to see that wrapping into our conversations.

MR. SCHENK: Obviously, equity is a significant concern within a city,

especially a very large metropolitan area like Chicago and the core City of Chicago. And when we work with technology, we work with data. We're usually working with another department to achieve their ends and to be able to round that out to be a useful product. So, for instance, the City of Chicago is replacing all of our street lights, replacing them with smart street lights that are going to be connected with our 311 and 911 system. So as a 911 call comes in, for instance in a car crash during the middle of the night, we will automatically raise the brightness of those lights so first responders can see those scenes earlier -- but also getting feedback from people making sure that, ambiently, that these things aren't too bright to begin with because a lot of people care about the color, temperature, and all of that stuff. So these are the things to help achieve ends and, ultimately, a lot of people want to be able to have these nice new things in their neighborhood. Except we have to be careful sometimes especially a lot about smart city technology.

If we only go into communities of color or underserved communities -- however you want to define that -- with sensor-based technologies, things that contain cameras, that could appear that we are, in fact, picking on those communities, trying to surveil those communities when, in fact, that's not the intention of that. So we always need to talk with folks; talk with community organizations that exist there that have the pre-existing relationships to understand how they are going to perceive some of these new technologies and these new approaches because despite our best intentions it could be perceived wrongly and not what we are trying to get at in the first place, and that caused a lot more political heartache than it needed to in the first place because we didn't reach out early on to get feedback on a plan and thought.

MS. LEW: Can I build on that with one further point. I think you're hitting on a really critical point with respect to the utility of performance measures which is that you kind of have to know what you're doing with the information before you collect it, and you know sort of collecting metrics just for the sake of collecting metrics is not useful; it

takes a lot of time;, it takes a lot of taxpayer dollars in many of our cases; and you know it can be perceived as quite intrusive if there isn't kind of a clear goal to which people are brought in and the reason why you're collecting it. And I think there are -- you know we've pointed to some examples of realistic success in collecting data to help us manage performance goals, there are also examples that don't work as well.

You know I will briefly pick on a program I used to work with closely. I think if you look at the way performance measures are employed in some of the early years at the TIGER Program. You know they were very well intentioned, but there were these sort of project-by-project goals that were built into specific applications by the urging of the transportation department. And you know what resulted from it was a set of data that was not streamlined across projects much less programs and, you know it didn't actually do a whole lot of good in terms of management; and you know, I think, that was something that was corrected in the later years of the program, but it's an example of why you have to be sort of holistic and goal oriented in the way that you collect and manage the information and not just sort of do it because it seems like a good idea to have data points.

MR. TOMER: Right; totally. I want to stay on this. I want to go up on the idea of both managing collaboration, and it would be -- I'd be remised if we don't ask about Washington when we're in Washington. Is Washington here to help? And let me not just try to be like provocative with it. I'm saying it like that it meaning do you feel like Washington hears the issues that you hear in your communities, right?

So often to be really -- to try to set it up here -- my pet peeve on this is we talk so much about autonomous vehicles; thinking about the safety design really essential, how are we going to make sure it rolls out to all people that these digital gaps can connect with them. So that's just one point, right; but on that do you feel like Washington hears the issues that you need, and they have programming out there to help you get at those objectives you all been showing some commonalities on?

MS. SIEFER: No. In terms of digital equity, there is still not an understanding that it's a thing, that there's a problem. If you and everybody that you know had something, do you think about people who don't have that thing, right? So everybody you know has a phone, right. I was told recently (inaudible) somebody in a leader of a tech think tank here in D.C. had a large event and she made a directive about everybody having phones. Most people have phones, but not everybody have phones; then if you do have a phone you might have a crappy data plan. So how we use those phones varies a lot. The term digital native kind of also -- lots of things make me angry, I should have started with that. (Laughter) Being a digital native doesn't necessarily mean that you have the digital skills to be successful professionally. You might be really good at Snapchat. My 17 year old is really good at Snapchat. Would I want her to create a spreadsheet for me? No; I would not. I actually did have her friends help me with a spreadsheet one time and it was disastrous. I thought they knew how to use it, and they don't.

So being a digital native doesn't mean you have skills to be in a job, right. So, no, D.C. right now there's a misunderstanding of what we need; there's a misunderstanding of kind of what's out there.

Also, it's really important to note Internet service providers are really powerful. They have really, really big lobbying arms. So the needs of the communities are not getting the same attention in the offices of our elected officials as the needs of the Internet service providers.

Internet service providers are really important. I don't want any of them to be mad at me. They're really important, but they also will acknowledge they go in and they state their case for what they need. The rest of us don't go in and state our case about what we need in terms of Internet access, right. I mean that happens in lots of fields but it definitely happens in this field.

The fact that we don't regulate broadband at all -- I mean it really should

be a utility, right, it's not -- not in the U.S. -- it means that when decisions are made by the providers, they're made for their bottom line; and we should all be like hey, that's the way it is, right. Why do we pretend that's not the way it is; but we do actually kind of pretend that's not the way it is, and then we end up with areas that are digitally redlined and then like gee, I can't believe that this happened. Well, it's because their interests are not the interests of the community. Like, we don't need to beat them over the head about it; we just need to state the facts.

MR. TOMER: I specifically want to ask you because so many of us use federal data, right? How often do you find federal data resources? And, in particular, are there federal programs that help you staff up, right; so you can be responsive to your community, but do they hear what you need, right, to do that?

MR. SCHENK: So this is something that we've lost. Chicago we have a lot of tiffs right now with the current federal administration, and those have played out in the press; but to focus on the technology and data side -- one, federal data sources have been tremendously important to us. A lot of what we do wouldn't exist. We wouldn't know what our communities look like in a data informed way without the census. And a lot of this has been scaled back. Even in previous legislation where we've gone from a rich 10-year census to a very watered down 10-year census, and this matters a lot because it's getting harder and harder to understand that smaller geographic communities across different segments of folks what's happening around Chicago, and that is hurting us.

One of the things that we did this past year when EPA took down their climate change website -- this was a big deal for us -- so we captured that and we reposted it online on our web page, and 24 other cities also doing the same. To amplify that if data is going to go missing, if information is going to go away, we're going to amplify that noise about it going away. And what you're seeing from us on the city side to more and more is peer collaboration. It's been talked about before today. In particular

ways that's been done in the data realm is that the chief data officers we've banded together; we've created our own group based out of Harvard Kennedy School where we meet on a regular basis. In fact, I'm actually missing the in-person meeting that we do twice a year; and we talk on the phone every single month. When you look at chief data officers and these heads of data, heads of analytics that you're seeing throughout the cities, these are new disciplines. There is no major, there is no textbook on this; we're coming into this fresh anew, so we need to learn rather rapidly, and oftentimes we're learning from others because somebody else may have already tackled the project; and we can simply adapt that. And we also have the technological resources to be able to share more efficiently and effectively.

For instance, one of the projects that the City of Chicago did early on when I was appointed there was to predict -- it's not infrastructure really -- but to predict which restaurant was going to fail their food inspection and to allocate our food inspectors to that location. Well, we took that source code that we did to create that model and we posted it online and other people have adapted that. Other projects have gone down the same way. This summer we're working on a project where we're going to work with a code that was developed by San Francisco, New York City, and Seattle to predict where fatal traffic accidents were most likely to occur so that we can better coordinate and plan, and proactively respond to where we think things are going to happen.

So the technological infrastructure is there; we can obviously communicate; we can share code easier, and that has allowed us to learn through peer networks to help try to make up for some of the information, and data, and processes, and mentorship that we have lost from the federal agency side.

MS. LEW: I think transportation is sort of an interesting space to answer this question because you know as many of you know it's an area where -- you know, certainly, on the east coast most of the dollars are federal; most of the kind of project-level decisions are state with some local; and kind of how you maximize the value of the

roles that those different entities play in making decisions is an area where there you know could be a lot of optimization using kind of each role strategically, which you know, I think, sometimes happens, sometimes doesn't, and often we're driven by kind of inertia at agencies in anyone's political agenda.

You know, I think, the question of how you kind of set the standards at the federal level so that you get the information and kind of prompt the kind of decision-making you want to happen without being sort of heavy handed about how the, you know the city of X makes decisions about which road needs to be fix first, you know is an area with a lot of opportunity. There are kind of control mechanisms through the money stream that could you know if fully achieved have a lot of impact. The one that I worked on quite closely when I was at the federal level was the implementation of the Data Act, which sort of grew on the heels of the Recovery Act Information, tracking information to kind of get a better sense of where dollars were going with an eye towards human impact. You know, done right, there's a tremendous potential to kind of use the requirements at the federal level to track certain kinds of information about dollar flow from top to bottom, and kind of use that to make better decisions. It's very hard to do; it's never been funded. You know the Data Act was passed as an unfunded mandate, and has never been able to be sort of fully implemented you know in the way that would probably achieve that because of money.

You know the USA Spending, which is the website that is sort of supposed to do that, has never been populated with the kinds of information to make it the kind of tool I think those of us who care about it would want to be because it just doesn't have the cash of information.

You know but to take the microcosm of the Recovery Act dollars, it wasn't perfect. It was kind of a pilot in many ways, but there's a tremendous trove of information about sort of where those dollars went; where you can sort of see the potential for what that would be able to do if you had it at scale and if you had it

consistently over years and decades so that you could really see where dollars are going.

You know at the state and local level a lot of that information is collected, but it's sufficiently hard to make decisions about how you collect it. But I actually think that achievable guidance with resources would be helpful you know.

I look at my own agency. An experience I had yesterday -- I was told that it was difficult to tie our own planning information to our own project management information because a year ago someone had neglected to put a unique identifier code. My head practically exploded. (Laughter) I said like we're getting together and this problem will be solved in a month -- like we don't have that many projects in Rhode Island -- it's doable.

But you know there's a world where the Data Act, if it was budgeted the way it was supposed to be would have solved that problem from the outset so that nobody would be having to make those decisions alone.

MR. TOMER: That's great. Karen's already looked to me; we need to have questions, is that right? (Inaudible); that'll be good; okay. So, I'm done asking so you all can ask. We've got at least a few minutes left and we keep looking at Karen. So let's, at least -- how much time do we have left?

SPEAKER: Ten minutes.

MR. TOMER: Oh, okay. So let's do this. Raise your hands, I'm going to try to take two questions -- standard Brookings thing that we ask, please, whatever you're going to say just end it in a question mark, right. It's meant to be a question, not just a comment. You can up to the (inaudible) and make your comments here if you want then -- but whoever wants to ask someone on the panel? Okay, let's go right here; okay, we'll go back there first; and please announce who you are.

MS. KLONCHER: Hi, I'm Wendy Kloncher. I'm with the Metropolitan Washington Council of Governments; and I work with people with disabilities in low-income communities; and my question is about autonomous vehicles, TNC, app-based

services for low-income people and for people with visual disabilities who maybe can't use the kind of apps, or for people who are excited about autonomous vehicles but don't know if they're going to be built in a way where people with wheelchairs can get in them. What are you seeing as some of the ways in which those issues are being addressed today among researchers in your own agencies and regions?

MR. SCHENK: So within the City of Chicago, part of the mandatory data reporting requirements that come to the city is reporting people reaching out -- and I'll have to say, in particular, around physical disabilities of wheelchair access -- and so taxicabs in the City of Chicago have long offered those services, special hotlines, and, specifically designed vehicles to be able to deliver that; and there's been a lot of debate there and that's probably still imperfect. And we've been using that data to help enforce for the TNCs or the rideshare companies to be able to better enforce whether or not those needs are being adequately met throughout the community, and we're actually in active conversations right now using that data to approach companies and saying how can we work together to improve that.

But if you look at the generation of the applications that they've been used in Chicago, a lot of that information was buried about how you could even access these wheelchair accessible vehicles, and just by using application, just trying to better surface that up closer and closer to the front so it's on parity with being able to access these services like you would in a normal app has been important for us -- so using data to help improve that. However, I will say other forms of physical impairment that you talked about, we have not stressed as much lately; and we've mostly been stressing on the wheelchair accessible vehicles.

MS. LEW: I think one area where sort of nationwide we're seeing a lot of really positive training is on the collaboration that's starting to happen between TNCs and other forms of ability and the healthcare community. There is a lot of really interesting work going on that kind of pairs medical services to you know connecting people with a

ride based on data that shows that people's ability to access the healthcare they need is often inhibited by proper transportation access. You know, I think, that seems like it's sort of a model for how you can cut across some of these jurisdictions when you're thinking about the technology side of it and sort of human impact side particularly with respect to dealing with challenges in the mobility space but also some of these services will actually take some of the steps out of the TNC for the person who is using the access.

You know, I think, one of the areas that I would also point to -- this is not in Rhode Island, but in our neighbor to the north -- Boston has done some very interesting piloting of taking some of their paratransit services and seeing if you could use kind of a Uber, Lyft-like model to replace traditional paratransit. They're finding tremendous cost savings but also that people like it. You know, instead of having to book the service you know 48 hours in advance to have the cab vacant, user (inaudible) have a Uber come in the time frame many of us could as well. So I think that -- you know there's lots of challenges to implementation you know whether it's the sort of liability issues associated with the scaling up, making sure that the workforce is kind of sufficient to be able to cater to the need that it could create. But you could see how that could really transform mobility actions and help people you know be active in ways and for periods of time that might not be possible otherwise.

MR. TOMER: Yeah. I would just quickly add myself that the unbanked issue though really comes into play here because it connects to that digital recordkeeping even if they have a smartphone, let's say, right.

Let's go to this last question here, and I think we're going to wrap for the day.

MS. DURAN: Hi, I'm Danielle Duran. I'm a former city counselor from a very rural poor area, but I live here in D.C. now. And just following up on the D.C. question on how can Washington be helpful? Yesterday, I was at the meeting of the News Smart City Caucus. That's led by Representatives Issa and Clark. And one of the

points was made was that everybody will need digital skills; everybody needs to know some amount of cyber; everybody needs to know some amount of coding for almost every job in the future; and that includes our Congress. So, do you have any thoughts about digital skills for Congress and what they need in order to make informed good policy decisions?

MR. TOMER: Now that's how you close an event. (Laughter) Thank you.

MS. SIEFER: There are still people, elected officials, whose assistants or secretaries print out their emails for them. How can they make decisions about the technology that the rest of us need if they don't use the technology, right? (Laughter) Yeah; so there is a movement now around technology public policy to educate policymakers. There are multiple programs along this line. We have to have them understanding, and so there's this big education gap. I am super excited about the potential for smart city movement. It's kind of sexy, right, smart cities, right, digital equity -- I think it's cool but not a lot of other people do -- but there's an overlap. In the smart city movement there is a growing recognition that we can't have smart cities for just some people. How smart are we if only some of our folks have access to these cool new tools? That it is for everybody; and then that gets the folks who are working on smart city initiatives to also look at does everybody have broadband in homes; are they going to know how to use it; do they have the right device -- because, as mentioned, mobile phone is not the right device for every task. So there's an opportunity there. So I'm excited to hear that there is a caucus -- yeah, and we'd love to chat with you some more - - because right now most of those solutions are really local. So because you know, they're not federal. But they are local and that's exciting; and so there's that clear opportunity for there to be more local solutions because there's already excitement around smart cities.

MR. SCHENK: Yeah. Obviously, to legislate this, to enact policy around

this, you need to have some substantive understanding of what's going to happen at the end of the day. We've seen that within cities as they started to appoint chief data officers; cities have been able to better interpret data and use that towards policy ends.

To the same extent, it's frustrating when we're -- if you're working with a policymaker who does not understand the fundamentals of that technology; does not understand how it can be used; what's really capable versus not capable. Data and technology, in general, is a black box. It is technical; it's hard to understand. So without that knowledge and understanding, it's going to be harder and harder for that to come from the federal level, and you're going to see more and more cities, states, and counties banding together to try to substitute in for that; banding together trying to advise on these sort of issues.

MS. LEW: I'll be a bit of a contrarian just for the heck of it. Why not?

You know I think there is sort of a basic threshold question about how we educate everybody in a way where they'll be able to use technology in a way that you know interaction with the modern world will be possible. I also think that you know as we think about how we deploy technology and to what ends, there's always a question of meeting people where they're at in the kind of disciplines in which they've grown up in ways where it will be sort of meaningful to them in the context in which they're working. And you know not the same as policymakers but you know an example we have is you know helping people who are in the field during construction oversight to use an iPad. We're just in the process of doing this. The recordkeeping -- you know like some of the ones you've been talking about -- has been on note cards for you know, longer than I've been born -- and one of the questions is what software package do you use that is meant for somebody who has grown up in that culture to be able to learn how to use it; and actually, there is a software package where the target audience is considered to you know not necessarily have had a lot of data background but where in the way that you know an iPhone is supposed to cater to being into your own intuitive which actually seems to be

demonstratively the case, you know; this program is designed so that if you are short of acculturated to the you know the terms of art and the ways decisions are made in this field, it makes sense to you. And I think some of the burden is on the people who make the technology to make it usable to different constituencies.

MR. TOMER: That's a great way to close. The thought that hit me was when -- not to throw him under bus -- but when Senator Hatch asked the question of Zuckerberg computer of how he can survive; and he actually showed some emotion. He says we sell ads. What are you talking about man? So I think it's all come home to us all across the country seeing what the discrepancies are here when we have different knowledge levels.

First join me in thanking the panel for taking all the time to sit with us here today; and honestly, a huge thank you to all of you for both joining, for sticking it through. Enjoy the rest of Infrastructure Week. There's some amazing programming that's not just going on the rest of the week, more programming today. In fact, you can go probably find lunch somewhere for free. So there is a lot of stuff happening in D.C. So enjoy this time thinking about these topics and we hope this helps you out a little bit. Oh yeah, and come back on Thursday; we're having another event here. It's not just everyone else, it's us too. And before I forget while I'm still hot-mic'd, this event will be on our website -- the video -- so in case you want to reference anything.

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I, Carleton J. Anderson, III do hereby certify that the forgoing electronic file when originally transmitted was reduced to text at my direction; that said transcript is a true record of the proceedings therein referenced; that I am neither counsel for, related to, nor employed by any of the parties to the action in which these proceedings were taken; and, furthermore, that I am neither a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action.

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