

INTELLIGENT TRANSPORTATION SYSTEMS

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PROGRAM ADVISORY COMMITTEE

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MEETING

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WEDNESDAY  
APRIL 19, 2017

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The Committee met in the DoubleTree Crystal City Monument View Room, located at 300 Army Navy Drive, Arlington, Virginia, at 8:20 a.m., Sheryl Wilkerson, Committee Chairman, presiding.

PRESENT

SHERYL WILKERSON, Chair, Vice President,  
Government Affairs, Michelin North America  
STEVE ALBERT, Director, Western Transportation  
Institute, Montana State University  
SCOTT BELCHER, Consultant, Intelligent  
Transportation Systems  
ROGER BERG, Vice President, North America R&D,  
DENSO International America, Inc.  
JOHN CAPP, Director, Electric and Control  
Systems Research and Active Safety  
Strategic Lead, General Motors Corporation  
BOB DENARO, Consultant, Intelligent  
Transportation Systems  
DEBRA JOHNSON, Deputy Chief Executive Officer,  
Long Beach Transit  
J. PETER KISSINGER, Consultant, Intelligent  
Transportation Systems

SCOTT McCORMICK, President, Connected Vehicle  
Trade Association

RON MEDFORD, Director of Safety, Self-Driving  
Car Program, Google, Inc.

DANNY PLEASANT, Director, Charlotte, NC DOT

TINA QUIGLEY, General Manager, Regional  
Transportation Commission of Southern  
Nevada

BRYAN SCHROMSKY, Director of Technology, Verizon  
Wireless

GEORGE WEBB, P.E., County Engineer, Palm Beach  
County, Florida

ITS JOINT PROGRAM OFFICE

KEN LEONARD, Director

EGAN SMITH, Managing Director

STEPHEN GLASSCOCK, ITS PAC Designated Federal  
Official

ALSO PRESENT

ELFRIEDE CAMPBELL, Consultant

JASON GALLAGHER, Lewis-Burke Associates

KATHRYN MCGIRK, McAllister & Quinn

MADELINE SALINAS, Harris Wiltshire & Grannis

CRAIG SHANKWITZ, Western Transportation Institute

JOON SHIN, Fellow, ITS Joint Program Office

AL STERN, Citizant

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8:29 a.m.

MR. GLASSCOCK: Good morning, everyone. Welcome. We'll officially open the ITS Program Advisory Committee meeting. Restrooms are out and down the hall to the left and the right.

As always, our friendly court reporter down at the end is recording everything. It always makes his job a little bit easier if you can identify yourself, especially for those down here at this end of the table if you can say your name.

We have two new members that are joining us. First, Ron Medford, if you want to introduce yourself.

MR. MEDFORD: Good morning, everybody. Thank you for inviting me and I look forward to meeting you and having this meeting today. Thanks.

MR. GLASSCOCK: And then Danny Pleasant.

MR. PLEASANT: Good morning. I'm Danny Pleasant, the City of Charlotte. And I've pretty well concluded that I'm probably the least technically astute person in the room. But ITS is a big part of our business. We've got lots of folks who work in ITS space. And certainly, we're eager to embrace the next level of autonomous vehicles, self-driving vehicles and all the new technology that's coming our way and keep our cities driving and competitive.

MR. GLASSCOCK: Did anybody drive today? I have a

parking discount for you.

So, I am back here as always. Just let me know if you need anything. I'm going to have our public guests identify themselves.

MS. CAMPBELL: Good morning. I'm Elfriede Campbell. I'm an independent consultant in transitions. We work with companies, with all kinds of transitions that they're in, because we are working with a major global carrier whose client is an international fast food supplier. So, we're working with connectivity and automation. Thank you.

CHAIR WILKERSON: Thank you for being here.

MR. GALLAGHER: My name is Jason Gallagher from Lewis-Burke Associates. We're a full-service government relations firm that works primarily with universities and scientific research societies. And we represent the Human Factors and Ergonomic Society, which is why I'm particularly interested in this area.

MR. SHANKWITZ: My name is Craig Shankwitz. I'm with the Montana State University Western Transportation Institute. For the past 18 years, I've been involved with autonomous vehicles, driver-assist systems. I've been in Minneapolis for a lot of that time; most of our deployments there were rural.

Now I'm in Montana looking at connected vehicles, autonomous vehicles, rural mobility, rural safety and trying to

make an impact in rural America as well as the urban areas where a lot of the autonomous vehicles receive most of the attention. Thanks for having me.

MS. SALINAS: My name is Madeline Salinas. I'm a legal assistant with Harris, Wiltshire & Grannis, a communications law firm in Washington, D.C., representing one of our clients and a related federal communication proceeding.

CHAIR WILKERSON: Thank you.

MR. GLASSCOCK: All right. So I'll turn it over to our wonderful Chair.

CHAIR WILKERSON: I just have one request just on a safety, since we're on the 14th floor. Will you let me know where the exits are?

MR. GLASSCOCK: Certainly.

CHAIR WILKERSON: Or where the stairs are.

MR. GLASSCOCK: Yes.

CHAIR WILKERSON: I'm always thinking of starting with the safety message. Probably the top floor here. So, first I'd like to thank just on behalf of the Committee, the ITS JPO staff for helping set the logistics and our travel. They do a great job. I don't know about you, but my arrangements were well done. I commend the team that was so helpful.

MR. GLASSCOCK: The stairs or the stair door is as soon as you walk to the left. And then there's also stairs at the end of the hall.

CHAIR WILKERSON: Thank you.

MR. GLASSCOCK: No problem.

CHAIR WILKERSON: And then also congratulations on your appointments. I think Stephen basically did all my opening remarks for me. So, I don't have much.

The only thing that might be helpful is maybe, Ron or Danny, would you tell us a little bit about your background and the contributions you've made?

MR. MEDFORD: So I'm retired from DOT, from NHTSA, in November of 2012. When I first arrived there in 2003 I ran the Vehicle Safety Program for NHTSA, which had to do with compliance and data analysis.

Then I moved to the Deputy Director during the first term of the Obama Administration. I retired and left to go to Google as a safety director for the Self-Directed Car Program. So, I've been interested in technology to solve safety problems for a long time.

Prior to going to DOT, I served 25 years at the Consumer Product Safety Commission. I also ran technical safety and regulatory work. I have a long history of being interested in technology and trying to solve important safety problems, not just in transportation but all consumer products.

CHAIR WILKERSON: Great. How about you?

MR. PLEASANT: My background is transportation planning mostly. I currently serve as the Director of Charlotte

Department of Transportation. And we are a full-service organization that operates mostly street transportation. But we have a great liaison with the public transportation, too. They operate as a city department.

Charlotte is the 16th largest municipality in the United States. We cover about 300 square miles. We have a broad range of activities that we're responsible for with the Charlotte Department of Transportation. We support the Metropolitan Planning Organization with the regional travel demand forecasting model for our RMPO and collaborated with three surrounding MPOs and two states. We do all that kind of work.

We work on some ITS, some freight mobility and the standard regional plan for the MPO. But we're also in charge of street repair and traffic signal systems and the ITS components of that at the state level as well as through contact with our State Department of Transportation. We run all the systems in the metropolitan area and then other things like managing parking, development services. You name it, if it has to do with the streets, we're involved with it.

CHAIR WILKERSON: All right. Thank you for sharing that.

CHAIR WILKERSON: The next item I have is just to review the agenda. Does anyone have questions? Thanks to those of you who made recommendations or thoughts. We will go



over later the timeline that we have for getting our work done this year.

But in the meantime, we have quite a bit of time and some openings which we haven't had in the past. This will afford us an opportunity to review the subcommittees that we had discussed. We'll bring our new members up to speed on some of that dialog. Then we can go through that.

If you have any other modifications or recommendations, we can do this on the fly.

MR. MCCORMICK: Yes, we do. And I'll caveat it by saying John and I were both drinking last night when we talked about this.

CHAIR WILKERSON: We have a transcriber here.

MR. MCCORMICK: Yes.

I'm just saying that they may not be a good idea. But John and I thought that something we should consider at the onset of this meeting and I think it's an appropriate area of discussion before we start.

CHAIR WILKERSON: For what? I'm sorry.

MR. MCCORMICK: About our purpose.

CHAIR WILKERSON: I have our objective and scope and some other things we're going to talk about here. But, first, I was going to do that when we do our discussion of our 2017 work. Okay?

MR. MCCORMICK: You have a more detailed agenda than

I do.

CHAIR WILKERSON: No, it's the one that's on here. See where it says Discussion of 2017 Work?

MR. MCCORMICK: Oh, I see it. Sorry. CHAIR WILKERSON: Yes. No problem. It's following your discussion. If there are no other comments, we'll start with the JPO Update. Thank you for being here.

MR. LEONARD: All right. Always a pleasure to be here and meeting with the Committee. I must apologize on behalf of Egan and myself. We must be back at Headquarters at 11:00 a.m. for a meeting on autonomous vehicles, which is one of the things I'll just touch on here.

But I'll just give you a very quick recap of where we are. If you haven't heard, we're in the midst of a transition. But I think probably everybody knows that. And the Administration is standing up. We have a Secretary. We have maybe two dozen, new, non-career political appointees at the senior level, at the OST level, chiefs of staff and special assistants.

We have a nominee, Jeff Rosen, for Deputy Secretary and a candidate nominee for the Undersecretary of Policy, Derek Kan, I believe from Lyft, which again I view Lyft as a part of the ITS space. And of course, many of you I'm sure have seen some of Secretary Chao's public comments where she's talked about three priorities, safety, technology, the future. And

I've listened to her make several comments about self-driving vehicles and technology and the role of the private sector in getting technology moving forward.

I think from an ITS JPO perspective and from the program advisory committee, those comments resonate well with the view that we've had in the office and as a group of private and public representatives who are about bringing in an outside voice to technology changes in transportation.

We are operating under a continuing resolution that runs through April 28th. So, we haven't received our full appropriation. And we don't know what the Congress will do at the end of this month even though it's just about two weeks away.

But we have plans that we've been proceeding with, which are the body of work that we had planned. If there are minor adjustments in the budget, then we will make minor adjustments. And if there are major adjustments in the budget, we will make major adjustments. But we have a plan to move forward basically with the program as we had briefed it before and as we had planned it. I think you're all very familiar with the major elements.

We haven't been told to stop doing any work that we currently have underway. So, that body of work is proceeding and I think you're all very familiar with things like connected vehicle pilots, Tampa, Wyoming, New York City.

One of the exciting things is that, since we last met, we have completed the phase one and they're well into the deployment phase. Not that there's a lot of equipment on the ground in those three locations, but those cities are now procuring equipment. And we expect in fiscal year '18, and certainly in calendar year '18, we will start to see major demonstrations in those cities of the connected vehicle technology (in New York); now when I say cities, that covers Wyoming and I-80 Corridor, and in Tampa, the arterial road system. A lot of progress has been made; that program is proceeding well.

On automated vehicles, I think you are aware that NHTSA put out its policy in the fall. You may not be aware that all around the Department there is work ongoing. Federal Highway is working on an automated vehicle vision.

Federal Motor Carrier, I'm sure many of you saw the Budweiser beer delivery by Auto Truck in Denver a few months ago. Federal Motor Carrier has spun-up work in the automatic truck space. That may be of interest to our visiting members from the public here. Across the Department, there is a deeper and widespread interest in the autonomous vehicle space.

We continue to have a strong research program in that area, including work supporting both FMCSA and Federal Highways through funding of activities to support their visioning activities and to make sure that they get integrated.

We also have some work planned as part of our Smart City Columbus activity which is a third area which involves autonomous vehicles. I don't expect to see deployments of low-speed shuttles this year, but certainly Columbus is, because it was awarded a year after connected vehicles and still very much in the concept development stage. But that program is very important. And as you recall the vision elements, it integrates a lot of aspects of intelligent transportation systems, not only connected and automated vehicles, but low-cost sensor technologies, urban logistics, data analytics, user-oriented applications, a whole host of technologies and approaches to solve a wide variety of problems. As I think you'll probably recall, not only do we have truck platooning and improved residential access, but we're also actually taking on some issues outside the transportation space in public health, in infant mortality reduction, through transportation solutions to help people. Columbus has been working this infant mortality issue for a long time.

They have a neighborhood that has four times the national average of infant mortality. They've identified one of the root causes as being a transportation failure in that neighborhood. So, they're looking at ITS systems and ITS approaches to try and address a public health problem through transportation.

We also continue our work with other government

agencies and departments outside the Department of Transportation in the Smart City space. This is an area that there's broad interest in recognizing. You hear in the news discussions of things like Smart Infrastructure.

What we're talking about from an ITS perspective to me, ITS and Smart Infrastructure are almost synonyms. But it's how do we bring those technology solutions and integrate them not just into the transportation system, but in conjunction with other community services.

It's not smart if you have a smart transportation system, but a dumb utility delivery system or public safety system. The smartness comes from leveraging the resources that you bring together. We recognize that transportation is ubiquitous and plays a key role in that.

At the heart of that, it comes back to what I view as one of the root issues in ITS, which at its core, is information technology. One area that I would say we are focusing on this year trying to strengthening our program is in data and data management.

Many of you have met Ariel Gold who has been with us for about a year now. She has been threading together new activities to help us with our data program. I would like as you set an agenda for the next Advisory Committee meeting have Ariel come in and brief some of the data program activities that we've been trying to integrate and revise at JPO.

There is a lot going on, but there have been no dramatic changes. And if we get any changes in direction or any guidance, then we will act on those and share that with you. But right now, we're proceeding to deploy a lot of the work and complete a lot of the work that we've been working on in the connected vehicle space, continuing to explore automated vehicles and grow the smart city activities and integrate ITS.

With that summary, I'll stop there.

MS. QUIGLEY: Could I ask a question? It was recently just announced, another grant challenge. Can you speak on that?

MR. LEONARD: Absolutely. Thanks for bringing that up. If I continued to the accelerated deployment, we believe that we do all those because it gets out to where people can use it.

Last year I mentioned the ATCMTD, Section 6004 of the FAST Act.

MR. SMITH: Advanced Transportation and Congestion Management Technologies...

MR. LEONARD: ATCMTD, Section 6004 of the FAST Act established a \$60 million a year, for five-years, grant program. So, last year we awarded \$60 million in grants. Those are still in the process of getting out to states and localities. The deal is being finalized.

But the second-year solicitation is now out on the

street. So, that notice of funding activity went out I think this week, and it's for \$60 million.

Again, to fully understand it, I would point everybody to Section 6004 of the FAST Act. It requires geographic diversity, technological diversity over the five-year course of the program. It's an active solicitation. I encourage people who are eligible, in communities that are eligible, to look at transportation and ITS activities. If you read the language, you'll realize that it dovetails very nicely with the ITS portfolio.

Look at opportunities to use those funds. There are caps on the size of the grants and there's a match requirement. I think it's a 50/50 grant requirement. I think the most we can do -- we're limited in no fewer than five, and no more than ten, grants. That bounds the size of the grants to about the largest I think a grant could be under that constraint is \$12 million. And there is a match requirement.

But it's a great opportunity and it's something that we're working with Operations and Turner-Fairbank Research Center and JPO funding. I think over the next five years we're going to see a minimum of 25 projects and a maximum of 50, largely in the ITS space across the country.

Spread the word. We'll be re-tweeting and sending out email blasts to our mailing lists to let our people know that that's out on the street. I encourage organizations to



apply for this. I have a copy of it if anyone wants to look at it.

CHAIR WILKERSON: Can you email it to me?

MR. LEONARD: Sure.

CHAIR WILKERSON: It's probably on the website right on the front.

MR. LEONARD: Yes.

MR. DENARO: And the lead bidder on that must be a municipality, correct?

MR. LEONARD: There are some very specific requirements. For example, I think transit organizations are eligible.

MR. DENARO: Okay.

MR. LEONARD: I can't remember. Sometimes Congress changes the eligibility and I can't remember if tribal governments were included in that one. But the eligibility is spelled out in the application and in the legislation. And of course, we have a contracting officer who can answer any questions.

MR. KISSINGER: Have you got anything special to ensure communications between the grantees or collaboration, sort of sharing lessons learned?

MR. LEONARD: On the first round of grantees we aren't at the point where there's -- many of them are still getting their agreements in place. It was awarded in the fall

and some jurisdictions moved quicker and some moved slower. So not even all of the FY '16 grants are in place yet. The focal point will be Federal Highways management of those grants.

We tend to look for ways to share information. But we don't specifically have a website or anything set up yet to promote that coordination because there's nothing on the ground yet. There's no real lessons learned to be shared at this point in the program. It's very early days.

MR. WEBB: Bob, I'm looking at state government in Charleston.

MR. DENARO: Okay.

CHAIR WILKERSON: But they have a smart city's challenge, lessons learned.

MR. LEONARD: Yes, for example, on Smart City's Columbus part of the agreement is that Columbus must maintain a website. And we also share information. As the documents become finalized, in that agreement we made sure that Columbus does outreach with other communities to share those lessons learned.

I don't believe that is in the agreements with the ATCMTD recipients. But certainly, we look for ways to share information so that everybody gets the benefit from the investment that was made.

MR. SMITH: And the other programs, the Smart Cities and the city projects as well, they're open and there's a lot

of sharing and opportunities for ATCMTD grantees to actually learn from these programs. So, we open everything to full discussion, that way at least for the first go-round. But we'll try to establish something a little bit stronger in the upcoming ATCMTD.

MR. LEONARD: Yes, for example, when we had a technical exchange with the pilots we brought in other outside stakeholders who had similar work as observers so that they could benefit from the fact that the pilots were a year and a half ahead of, or in some cases two years, or more ahead of where they are. The idea here is through our technology assistance program to help share information and reduce costs for people.

MR. SMITH: We opened a CV pilots program to strengthen our technology assistance program or PCB program. So, we have that resource that's available for folks to learn how we set about developing this, sort of a technology and deploying of this technology. Ken indicated for the first year, we just went through the planning process where we went through concepts of operation. That's sort of the struggle where we learned a lot from and we made all that information available online to folks. We're trying to feed it nicely into the PCB program as well to draw in the community of practice in that way.

MR. DENARO: There's a lot of growing interest right

now in the application of artificial intelligence machines related to automated vehicles especially at level four and level five. And there's an interesting MIT review article on that.

That said, the difficulty is with tracing back why the systems make certain decisions. And this to me seems to be a potential testing and certification issue. And my question is, are you guys considering that at all? Or is that an area that would be appropriate for interest by the JPO?

MR. LEONARD: I think it's an area of interest. I mean it's not an area that I think we have extensive work going on. I'm familiar with some of the artificial intelligence issues. I think it's a long-term research area for us to understand how that is going to work.

But also, the private sector is doing extensive work in this area. So, I think our research wouldn't be so much to develop the technology.

MR. DENARO: No.

MR. LEONARD: But to understand how they interact as a transportation system when they're deployed.

MR. DENARO: Yes, and my point was -- and maybe it's more of a NHTSA issue -- in assuring the safety of these machines now making a lot of decisions and some incident happens is how do you trace back and figure out how that happened if fundamentally this was a machine-learning type application and can't figure out why it did that.

To me that introduces the challenge of testing. Everyone is saying how are we going to test these things because there are too many millions of use cases and you can't do that. So, if we're going to put them on the road, things are going to happen. We've got a different paradigm now of how automobiles are going to be deployed and tested and so forth. John, I'm sure you're struggling with that.

MR. CAPP: That's the reality.

MR. DENARO: Yes. And it seems to be a fertile area, there may be some sponsored research by a university in this area specifically looking at the test and thinking of issues; what are the implications of that?

MR. MCCORMICK: Well, an MIT H-Lab has a \$27 million funded activity.

MR. DENARO: What lab did you say?

MR. MCCORMICK: MIT's H-Lab. They have a \$27 million funded activity specifically to look at the challenges of artificial intelligence in the behavioral dynamics of interoperating, automated vehicles with self-driven vehicles because we're going to having that mix of vehicles for 40 years.

MR. DENARO: Right.

MR. MCCORMICK: And it's a very fertile area for understanding. You may be in an automated vehicle going down the expressway and you want to get off. He's not paying attention. Obviously, he's having a bad day. I don't like

people in automated vehicles. The car must know how to make the decision to do that.

Then the whole issue of algorithm morality. If the moral decision for your culture, background, whatever differs from mine. It depends on what's sensible.

MR. MEDFORD: Bob, you were talking about reconstruction and understanding what went wrong.

MR. DENARO: Yes.

MR. MEDFORD: So everybody's collecting lots of data and using that information to understand what happened to the extent that --

MR. DENARO: Right.

MR. MEDFORD: The first level is who made the mistake and whose fault is it. I think relatively we understand from almost the basic capture of the data from everyone's -- The question is -- California is proposing to have and has proposed and it exists now in the testing requirements that you have the ability to capture and store and make available 30 seconds prior to a crash and at least five seconds after or at least until the vehicle stops all the sensor data to be captured and stored and can be used for understanding what happened. Is that what you're referring to or...

MR. DENARO: Yes, pretty much. And specifically, you've got this neural net sort of processing with 30 seconds. Can you reconstruct why it decided to drive into that tree? Or

if you can't, what are we going to do about that?

MR. MEDFORD: Well, you can't. Right. You understand was it a perception problem, was it a planning problem. What aspect of what module is making the mistake? I think that people who are involved in that role know for sure.

It's not something that NHTSA is going to understand any time soon I don't think. It's complicated. But I think that it can be understood. And I think that the police and jurisdiction point of view is that they'll be able to see the video and information that can look at the vehicle's behavior with respect to the other vehicles and know what went wrong. I think that we're doing that all the time today at a level that I think the insurance industry feels comfortable in making determinations.

MR. DENARO: I see. Okay.

MR. MEDFORD: It's a little complicated today because you still have a human driver, a test driver, behind the wheel. So it's not fully implemented. Thank you.

CHAIR WILKERSON: Any more questions?

MR. SCHROMSKY: Great updates, as always. I know it's more internal for NHTSA, but one must think that if you put more technology in the vehicle and you take our hands off the vehicle, distracted driving is increasing. And most recently, obviously, is the church bus in Texas where someone was texting and driving and swerved over the lane. That person

killed many victims out there.

I'm wondering how the vehicle looks at -- obviously, if we inject more technology into the system, what are the unintended consequences? It dawned on me recently while I was doing a presentation and looking at our company's strategy is once you take the hands of the wheel to some extent what are the drivers going to do.

We already have this problem right now. Is it only going to get compounded that even though we rely on the computer to do this? And FAA, as a commercial airline pilot you rely a lot on the autopilot functions in the 737. But you still need to pay attention to different things.

If there are laws and people do what they do today, is it only going to increase? And what studies and research are going to be done as to now my vehicle becomes an office?

As you can see from the traffic outside here today and you're commuting in from Leesburg or I live in Northern Baltimore, that's an hour and a half to a two-hour drive. So, what are you going to do? You don't have to have your hands on the wheel. What are you going to be doing for two hours?

I'm just curious to see. Like you said before, it's all information technology. We inject that in there. What are the other unintended consequences?

MR. MCCORMICK: Well, I think it's more complex than



that if I could add to that. I mean if you put your aging mother in an autonomous vehicle to take it to a doctor's appointment and she has a heart attack or stroke or dies en route, the vehicle is going to have enough biometric sensors to know what happened and the ability to communicate to the right people. It may have to become an ambulance. It may have to intersect with going to the hospital itself.

I was talking with the head of biometrics from Ford and he said that they're looking at all these biometrics we can put in the car. But none of us are talking to any of our automated driving people. They realized that that is something they're going to need to do, but they need to get further down the road. And he said that basically the systems are coming online faster than the work they can do to keep up.

I think that whole question of what are you going to do has two lenses on it. One is what is the driver going to be doing. And the other one is what does the car need to be able to have the capability to sense and do.

MR. LEONARD: Yes, I think it's an interesting question. And I think you're going to see the private sector doing exactly what they're doing right now. Ford will eventually get their automated driving people talking to their biometrics people and GM and everybody will be making consumer products ten years from now that far surpass the capabilities of those vehicles today.

More to the original question though in terms of how hands-off can you be, I can tell you that the work that we've funded through the JPO in that level two/level three automated driving space is what we funded through NHTSA, through the human factors effort, specifically to address: (1) how to re-engage drivers and (2) to provide research that helps the manufacturers of vehicles understand the effectiveness of different re-engagement approaches and human factors.

I think there's a broad sense or maybe debate going on in the vehicle manufacturers themselves saying we're going to skip from level two directly to level four. Level three may be too hard. To have a vehicle that requires an intervention every six or ten seconds, the driver's not going to disengage. So, it's not a self-driving vehicle. So, you have an engaged driver.

But if you go to a vehicle that requires an engagement once every couple hundred miles, that may be a more severe problem of one that requires you to re-engage on a minute-by-minute basis. Now you don't know how many weeks can you drive in from Leesburg before you must engage. And if you must engage and you're completely zoned out of the loop to the point of being asleep, then you're not going to be able to re-engage.

I think manufacturers are struggling with exactly the question you're posing. Can they design something that can re-engage the driver at a lower level of automation? Or are

they going to have to bypass that altogether? I think we'll have to see what solutions people come up with.

MR. KISSINGER: Back to my original question about evaluation; you said something about you didn't think that any time soon, NHTSA would sort of be able to answer that specific reconstruction question.

MR. MEDFORD: Not at the level of understanding whether the algorithm was properly written is where the mistake is made. They would certainly be able to probably understand which module wasn't being done correctly and was contributing to the problem, like the perception module or the planning module of vehicle if that could be understood. But maybe they could with assistance get down to the algorithm.

MR. KISSINGER: The existing NHTSA policy perceives a safety and assessment plan and then assistance reports or whatever.

MR. MEDFORD: And they identify it, as most people know, the 15 areas in which you must provide a written description of the way that you approach the systems. And I think one of the things that is on there is just a core behavioral competency aspect of the vehicle.

So, something like what PATH had recommended to the California DMV. We submitted some additional behavioral capabilities which are a basic thing to any self-driving car would need to demonstrate. It doesn't mean that you won't have

other problems. But it does provide the basic capabilities testing aspect.

MR. MCCORMICK: I think you can do a methodological analysis, but it's rather tedious. I think it was the third DARPA challenge that the Ford's vehicle, the pickup, got stuck in that challenge in an urban area. It was a closed-out Air Force base. It was free of stuff. You got to one intersection and it stopped. And it moved a little bit, but it didn't move anymore.

It literally took them hours to figure out that it created this mathematical embolism in them when it said you can't cross the solid line. It was at a solid line and there was an object in front of it. But it had to get around to do that. It had to cross the solid line. So, it just sat there thinking and thinking and thinking because it wasn't sophisticated enough in its taxonomy to understand it's okay to cross it if I have to avoid something or go into traffic.

But I think you can find out why things make the decisions they make.

MR. MEDFORD: Well, that's happened every day for the last many years. But I'm saying for NHTSA to go in and try to understand what happened on its own by doing like a defects investigation. I think we would find that a big challenge. I think the companies certainly who are developing the technology would know quickly what happened.

MR. MCCORMICK: Right.

MR. LEONARD: And some manufacturers are approaching the problem you described where the vehicle just doesn't know how to deal with the situation by having it phone home. Not having the equivalent of the air traffic control system, but some troubleshooting desk where you've got a controller who can assess the situation and decide that you're being instructed by a police officer to go the wrong way down a ramp because he's trying to clear off a highway that's going to be closed for 24 hours, you can break the rule in this case in a geo-defensive solution so that the vehicle can follow the police officer's instructions or something.

MR. MEDFORD: The DMV I keep referring to that because it's sort of like cutting new ground here, it requires remote monitoring and communication with the vehicle to deal with the kind of thing you're talking about, Ken.

MR. MCCORMICK: I have a question. I have not heard yet -- it could be out, but I just missed it -- what the assessment was with the increasing number of accidents and deaths over the previous years from the last crash report. Every time I asked, they said they were still analyzing to determine where the increase came from whether that's motorcycles or whatever -- but I haven't been told what the final assessment was.

MR. LEONARD: Well, I know there's -- I have not

read an analysis of causation. But I can tell you that the significant increases were in the areas of pedestrian, bicycle and motorcycle.

MR. CAPP: And total miles driven.

MR. LEONARD: Yes. I'm thinking it was high single digits like nine. And then one was 12 percent. That might have been motorcyclists or bicyclists. And I'm sorry. I don't remember the others.

MR. MCCORMICK: I remember the jury was still out on that as to how much of that was due to the change in the helmet laws.

MR. CAPP: Yes.

MR. LEONARD: And the numbers went from 33,000 to 35,000. And I believe the early indications are that we're looking at another increase from 35,000. This is not progress and not movement in the right direction. I think even adjusted for miles driven --

MR. CAPP: Yes, there's upticks in a few. We've tried to analyze it, too, and it's difficult as you know to take the fatal data and target it to when you want to talk about distraction. But you're relying on a police report. He walks up and he says I think that person was distracted. So, there's a lot of error in the data.

But I think most analysis would say there's upticks. And the pedestrian, motorcyclists, probably an uptick in

distraction. I forget. There are a couple other categories. But it's probably a series of upticks that would explain the seven or eight or nine percent overall increase.

MR. SCHROMSKY: Distracted driving distracts pedestrians, that's the other thing. I know in California the issue is they have their heads down looking at their smartphones and the other issue is with a high penetration of hybrid vehicles at the same time. So, there's a distracted driver hitting a distracted pedestrian.

MR. CAPP: Alcohol upticks.

MR. LEONARD: Yes, there are a number. Again, I have not seen and so I don't want to speak for the group. NHTSA was doing some analysis of the numbers. But there are several issues.

You're seeing some growth in cities. Some cities have seen population growth mirroring the increase in pedestrian strikes. So, is it just more exposure? Is it mode shift of transportation where you're now having people trying to use bicycles? And that's up.

It's easier to measure miles driven. Until everybody's Fitbit data is going to some central location, you're not going to necessarily get an uptick; also, are people just walking the streets more or are they walking in less pedestrian-friendly areas?

On the vulnerable road users piece, we are funding

a fair amount of research across our portfolio that is geared towards technology solutions for pedestrians, bicyclists, motorcyclists.

But I'm not sure that the entire solution is going to be a technology one. In some cases, it may be better sidewalks, better median strips, better lane markings and things like that.

I walked from the Pentagon bus bays to this location and its sidewalk almost the entire way. This construction site, however, created a very vulnerable spot for about 150 feet where you had to walk in the traffic lane or cross without a crosswalk and walk down a narrow median strip.

CHAIR WILKERSON: Okay. Go ahead, Steve.

MR. ALBERT: Something that was said tweaked my interest and it's more on the urban planning side maybe because of Charlotte being here today. If you think about subdivision design it takes water -- if you use a water analogy -- going from a smaller tributary to a larger tributary to ultimately then intersecting with major arterials.

I'm wondering if ITS can redesign subdivisions ultimately where you don't have to trickle down to this ultimately congested spot to have your own routes that you'd be able to take and maybe even make reservations so you can go down that route. I know this is being farfetched.

But I've never heard anyone bringing up if we had



this technology how does it change our ability to want more or drive less or connect to something that ultimately then reconfigures what we know of as tomorrow's subdivision. Crazy thought?

MR. LEONARD: No.

MR. ALBERT: I even looked at it from a policy perspective, a design perspective, Charlotte.

MR. PLEASANT: Sometimes the best solution is low tech. And I think one thing we've observed in the cities particularly our fast-growing, more suburban-oriented vulnerability in the cities like Charlotte or Houston, you name it, is the loss of fundamental skills of city building during the automobile age. We created sort of a dendritic system of it looks like small change going into larger change going into larger change which in the city block type of technology.

In our case, starting in about 2007 we went through the process that resulted in many of the subdivision ordinances that brought back city blocks and steered away from the subdivisions. It recognized a couple of things, health, the health of walkability, the health of traffic cops, the health of speeds, the health of bicycle connectivity and the health of transit penetration. Just every good thing that you could imagine in a transportation world comes out of the city block system rather than this dendritic type of system that we've seen lately.

So, we've got about 60-70 years of development to overcome. It's going to be hard. The new stuff that's going in is certainly more connected. So, we're all about street connectivity. That's old-fashioned, low tech reasserting skill set of city building that we seem to have lost.

And by the way, I think that shift from a block system which, remember most streets in cities are built by the developers but by the private sector has shifted that burden to the public sector if you're widening these arterials to accommodate more traffic.

MS. JOHNSON: How does safety play into that overall though? When we talk about connectivity and we want to entice people to utilize access transportation especially in this day and era, you just commented about Fitbit data and so forth. How does safety play into all of that when you talk about the accidents, deaths and things?

MR. PLEASANT: I think it's interesting and it's given a great deal of thought. And we, like many cities, want to be competitive. We are inviting people to walk, inviting people to bicycle just the way we're building our cities now differently than we were. So, I think it does provide more exposure at least in the short term to folks because we just have more people out and about. A driving public maybe isn't accustomed to it and it's aware.

I think over time, because --- the measures that

we're taking, the new initiatives that we have right now you hear it described as "Vision Zero." It's catching on in international platforms. It's focused on -- well, it's focused on a lot of things. It's a multi-lateral kind of an approach that is focused on speeds and awareness and designing cities so that their speeds get lower particularly on the surface street network. Over time, I think that will begin to resolve itself.

We're kind of in this gangly adolescence right now where we are seeing crash rates go up. And there's also some weird data out there that began to correlate aggressive driving with political instability. (Laughter.)

And we're seeing the accidents shoot up in the last two or three years.

MR. SMITH: But the low-tech solutions you speak of, I think also are very much related to some of the technology solutions, especially for example, the concept of the geo-fenced area that you can use automated vehicles within, like in Columbus. It would be used in a downtown area. A relatively low-tech solution in terms of, speeds are going to be low and you can utilize these automated vehicles that are in a geo-fenced area. They are very much aware of driving at low speeds and if assistance to drivers and folks you want to travel that they don't necessarily need to drive their vehicle into the downtown area anymore. They can take transit and use these "first mile/last mile" solutions.

I think it's a combination of the low-tech solutions and not letting technology drive the decision, but using the technology to assist and support these low-tech solutions.

MR. DENARO: I think it's inevitable that you're going to see or it's essential that cities and these vehicles collaborate on this. We already are seeing places like Gothenburg [Sweden] shutting down the center of the city, pedestrian only zones, and so forth.

And a lot of people are talking about that there will be parts of the city where only automated vehicles are allowed and so forth. That's the farther point there, the division for that.

But in the interim, the transition is going to be very important. How is Uber or Lyft going to have truly driverless taxis anywhere in this city? How is McDonald's going to get their stuff delivered by automated vehicles?

And I think it's going to start by cities having to designate certain routes. Let's work together. These routes look like they're doable and they're safe and we can accomplish it here. So, let's allow it on these routes.

There's going to be a tremendous push from industry to get these vehicles on the road because of the economic advantages. And the cities are going to have to adapt to say let's try it in these areas first. And eventually that might evolve to a different kind of network where instead of just

managing -- we're managing vehicles now for example.

MR. LEONARD: I want to come back to Steve's suggesting it's a crazy idea about land usage. If you go and you look at the 12 vision elements we put in the smart city challenge, land use was one of them.

Now it's a long-term reflection of how society decides to organize. And we've been very car-centric for a long time. We're starting to see some shifts.

I hear people talking about cities, but we were talking earlier about the city of Bozeman, Montana which is now one of the fastest growing places. But it's growing from a base of 20,000.

MR. ALBERT: To 100,000.

MR. LEONARD: Right. So, when you think about Tampa or Charlotte or Columbus or New York or LA, we think cities and we think millions and millions of people.

But there are a lot of cities that a lot of people would see as part of the heartland of rural America that are still where people come from farms and from industrial areas. And also, we've got these small city issues.

MR. ALBERT: We are having huge mudslides of people coming because they want to experience the downtown of Bozeman. They want to be able to ride their bike there.

But the roadways are still designed as they were back in the '40s or '50s with a four or five-foot lane for bikes at

best. But the demand is maybe more a seven-foot lane, but no one can afford to build that. And everyone is saying, why are we focusing on a car-centric city?

So, we're looking at doing something with geofencing and HOVs maybe only coming into downtown and parking is terrible. And this is in Bozeman, Montana. Where in the world is Bozeman? Well, it's an hour north of Yellowstone.

And we have just had huge influx of people. Five hotels going in downtown. A small city. And subdivisions of \$250,000 to \$450,000, anyway, just jumping up everywhere. But I think this whole thing of can technology affect policy is a valid discussion at whatever level.

MR. KISSINGER: Steve, there's a subdivision. There's a whole raft of policy research and usually it's described as "complete streets" which you're addressing. Most everything you've mentioned is information with a heavy emphasis on that.

MR. ALBERT: But there's a cultural shift, too.

MR. KISSINGER: Oh yeah.

MR. ALBERT: Huge.

MR. KISSINGER: Right. And Debra's original question there, the last decade there's been a tremendous amount of research or what we call safety-conscious planning, which is proactively thinking about the safety consequences of why the vetting process is on the way and that effort.

MR. WEBB: Steve, just a question. You said all the subdivisions are coming as better connected. Are they --- in my community, for the last 30 years, 85 to 90 percent of new communities are behind gates and have one entrance onto a major road. I mean that's a security issue. It's whatever they're doing.

And those are private roads behind, which is good from a public perspective. But from the idea of how you manage that, they're not connected to each other.

So, you've got to get out into the major road system to move. And the idea of when I'm dealing with trying to move cars and even if I provide sidewalks and those four-foot lanes or whatever, it's not conducive necessarily for those alternative types of transportation.

So, transportation planning and the whole idea of what we're going to is going to take a big mountain to climb over. I've got probably three new proposed developments in our 15 mile out western area, and they are going to be 99 percent car based. They're going to have some mixed-use type stuff. But they're going to be traveling from west to east in the morning and back the other way in the evening.

It is a big, big issue. And try and tell developers they've got to change the way they do stuff doesn't seem politically feasible, at least in our community at this point.

CHAIR WILKERSON: Right.

MR. WEBB: Chair, can I just?

CHAIR WILKERSON: Sure.

MR. WEBB: Ken, can you just give us an update of where and what is the NHTSA schedule for getting to a decision?

MR. LEONARD: I can't. I don't have -- I'm assuming you're referring to the light vehicle rule.

MR. WEBB: That's what I'm referring to.

MR. LEONARD: And what I can tell you is what you know. The comment period just closed on the 12th. So there are, I believe, in the neighborhood of 400 comments. So they're very much just at the beginning of organizing and categorizing those comments. So, there's going to be an analysis period.

And then once that analysis happens, a schedule will be a little bit clearer. But I have no details around the time frame for it.

MR. MCCORMICK: About 30 percent of comments had to do with concerns over the health impact of the radiation waves. There are many.

MR. WEBB: Which is very like the original one.

MR. LEONARD: You know when the ANPRM went out there were 1,000 comments. And that was I think one of the top five commentaries.

MR. MCCORMICK: We're in the aluminum manufacturing business.

MR. DENARO: So when NHTSA issued the light vehicle



rule they said a year later they're going to consider heavy vehicles. Do you know if there's any talk of that?

MR. LEONARD: I think the focus right now is on the light vehicle rule.

MR. DENARO: They probably haven't started work on that yet.

MR. LEONARD: I think at this point all their focus is on light vehicle. And I think we'll have to see where that goes.

CHAIR WILKERSON: If I may do a time check. Are we going to propose just one change? I know that Ken must leave at 10:30 a.m. So we should stay on the same track. But then I will merge the discussion on the 2017 work into the 10:15 a.m. to 12:00 noon period so that we can stay on track. And then we would have the DSRC & 5G next.

I know Ken will be here during the break. So, that will afford an opportunity to have some sidebars. Is that okay?

MR. LEONARD: Sure.

CHAIR WILKERSON: Any other questions? Otherwise they will be here until 10:30 a.m.

MR. DENARO: When will work begin on the next version of that?

MR. LEONARD: It's interesting. We now have to, under Section 6019 of the FAST Act, participate in an annual modal plan. Last year's was our first. And I am excited about

this. We just circulated a draft. This is something we coordinated around all the modes, integrated our story. The Secretary sends a letter to Congress identifying whether there's any duplication or repetitiveness and explaining the body of work across the Department.

I'm thinking we're going to do an even better job this year of integrating the ITS story into that. We're basically following the guidance we got under the FAST Act. We are doing some longer range strategic planning work. And we'll just have to see if we have a specific requirement for a five-year plan. But we will continue to plan with a longer horizon in addition to doing our annual modal plan.

MR. DENARO: Okay. Thank you.

CHAIR WILKERSON: Okay. Thank you so much. That was a good discussion. Appreciate it.

So, Scott, you're up next.

MR. MCCORMICK: Yes. I'll just do this very quickly.

CHAIR WILKERSON: We'll have until 10:00 a.m. Is that okay?

MR. MCCORMICK: Yes. One of the things I did earlier this year was to take a ten-day, five-city tour of China, of all their test beds, and wrote a comparative analysis on what they're doing, who has what capability, etc. And what I wanted to do was just go over a couple of elements to talk

about where they are with the 5G and DSRC.

And the three primary test beds are Shenzhen, which is as many of you heard a technology group was providing \$25 million over a five-year period to the University of Michigan to have them design a facility on their 54-kilometer area that they have in Fujian Province.

Essentially that organization is not a test bed. It's an equity investment company that's looking to do real estate plays. So, they're trying to capture the market that says "do you want to interested and connected in autonomous vehicles? We have some property. We'll build you some buildings. We'll sell you some land." So the likelihood that they can raise the \$200 billion to build the test beds that they talked about is very remote and is years away.

Shanghai has the Shanghai International Automotive City Group facility in Anting, which is an extremely large complex. It's included with the F1 track right next door to it.

And in Chongqing is INVISTA operation which INVISTA has been around not in the format but since the early '60s. They manufacture military vehicles there. They manufacture heavy-duty trucks. They do all the ECT testing. They do all the emission testing for manufacturers initially. Pretty much in the western part of China in an area that it could grow in.

This is a long report, but I just wanted to go over

it. And what I did was I created a survey that's about six pages long that's based on all the physical attributes that would be put there as well as what the compliance was to every element of the connected vehicle research implementation architecture.

I'll come back to this. This is the Chongqing facility and these eight areas here in red. And this is just the office area where they have 1600 people working. Those are where they have the roadside units using DSRC. And it's just within the complex where these people work. About 300 of their employees currently have DSRC outfitted trans receivers on their car. And they're harvesting all that data as they come into the work and share it. They also have DSRC units externally to the facility.

And there's about the same number. This is the physical tests that they have, the major loop, and I apologize for the size and the fact that it's in Chinese. It's about six kilometers around.

It doesn't have any embankments that allow you to do any kind of high speed testing. And this is where they did all the testing for the on-load and offload vehicles. And they have four phases that deal with -- you'll like this -- rural ITS which is this longer 110-kilometer route which I think has five tolls and six bridges that are also fitted with infrastructure as well as more urban areas in this space.

MR. SCHROMSKY: Scott, what frequency are they using?

MR. MCCORMICK: They're using 5.9. They have also tested the five eight shift for European. But they're primarily using the 5.9. I haven't released this report yet. So I apologize.

These are the kinds of questions that we're looking at, what's the tele-contiguous area, what are the road surfaces, what are the communication capabilities they have. And again, I ranked everything in the survey through the CVRIA.

If you go and say do you have curb speed warning, because of the language differences, they may not understand what curb speed warning is. What we're doing is we're putting this survey in an online format and sending it to all the test beds worldwide so that we can get an understanding.

For those of you who haven't seen the connected vehicle research in reference implementation architecture, it has enterprise, functional, logical, physical views, communication views. It talks about the standards and the resources.

This document I think took ten years to put together, this whole webpage. Not only are these functional diagrams descriptive, but each one of them is clickable. So, this is important because if you're saying I'm doing curve speed warning and I click on environmental sensors control, it will take me

now to the description of what that is. If I go back and say I'm looking at TSC speed warning, it also says -- this isn't a good example, but typically you would see a whole list of the other tests that require that module.

The problem is that you go to talk to somebody like Shanghai and they say we have these 25 tests. And you go and you compose what those tests are and you find out they're able to do about 58 tests.

I talked to Jim Sayer at UMTRI and I talked to the city folks. So, we're going to try to attempt to pull their members in. So, we're going to try to pull that information so that people have a good understanding of I'm in Oklahoma. Is there some place I can test my thing?

Or what's the reality because there's more effort in marketing in these test beds that are developing capability for them? Having said that, the compilation was then put into a large spreadsheet that described all the physical characteristics and doesn't compare to whether they have it or planned it, not planned or there's no response or it's not applicable for all three facilities to highway, rural, urban, parking and low speed parking.

Low speed parking is a different assessment. Parking is parking. But low speed parking is specifically critical for automated vehicles. That's how they park. They don't do typical parking. All that was there.

But now back very quickly to the actual test bed itself, both facilities and the Shenzhen planned facility all have the SRC and the Shanghai one has both European shift, flight spectrum shift. The Shanghai facility also has 5G installed. They have had it installed since July of last year. Both Huawei and China UNICOM are supporting the deployments there.

To give you an idea of the level of interest in approaching this market was I was there in April. I looked at their facilities and reviewed everything. And I said it would be nice if you had 5G here, too. When I returned six weeks later, they had 5G installed.

A year and a half ago, I was there to witness a test of 5G point-to-point. 5G point-to-point means I have a transceiver in my car with a miniature cell tower. And I can transmit messages up to a kilometer away -- I don't know what the current specs on it are -- without having to go to a base station. So, I'm not actually having to pay for any service charge for carriers.

They tested that and I witnessed the test. They do have a latency which is the speed at which it's communicated of less than one millisecond which is the same as the SRC.

Given that 5G has sufficient bandwidth and switching speed, I believe it's the equivalent of being able to download a full-length DVD movie in less than three seconds. You now

have a different kind of opportunity.

The question is China looking at DSRC or are they looking at 5G. And the answer is right now they're looking at LTE and LTV. And they have that deployed. They are putting in 5G, but they're still understanding how it works and how does it appear. Although they don't typically have the security issues that we have in the west.

But they're also looking at DSRC. They're looking at DSRC at the test beds because they want to engage the western auto companies and peers to come there and test their product. They're looking at it because they don't know if they can deploy 5G fast enough.

The other big issue that you have in China is they don't have a PSAP system. They don't have a public service answering point which is for those of you who may know it's a physical location where when you dial 911 they know where you are.

Well, you don't have that in China. They have had a decades long program to get one single phone number that says dial 90210 or whatever the number is and we'll get you to somebody that can figure out how to localize where you are. If you try to call 911 in China, you get somebody at the telephone company. And they haven't figure out how to solve that.

But if they put in the infrastructure for roadside units, now they have a proxy for the PSAP. For them, they're



looking at solving multiple problems with it. They are looking at all of it in terms of deployment. The jury is out.

Understand that in China a lot of what happens although it's sanctioned by state-owned entities at a central government level, what Shanghai implements versus what Chongqing or Shenzhen implements can be all a completely different thing. And the reason is you're typically not driving from Shanghai to Beijing. You fly or take the train. All the transportation there is local even though they're building a lot of roads. That's sort of the extent of what I know about it.

MR. DENARO: Scott, what implications are you concluding that has for what we do here, if any?

MR. MCCORMICK: Well, China has 183 automobile manufacturers. About 75 percent of them are capable of building electric vehicles. In fact, Beijing has just announced that all taxis in Beijing must be electric next year. Because the 7th Ring Road will be completed, the Ring Roads around Beijing define the city limits. When they finish the 7th Ring Road, that will be a city of 150 million people.

They're looking at the pollution aspects that are generated. When I was there in December, New York is 14 parts per million. LA is 20. Shanghai is typically 50. Generally, Delhi is 150 to 200.

When I was there in December, Beijing was 317 which is 80 times the maximum safe health limit from the World Health

Organization. I mean you can literally see the pollution. And it's not car pollution. It's because you've got over a billion-people heating their homes with coal.

The issues for them are substantially different issues than us. They've gone from when I first compared ten or 12 years ago being the world's chief manufacturer to recognizing that they're probably their own biggest market.

And when you look at how many electric car companies they've got going and how many autonomous vehicles, we have eight autonomous cars in the test on Beijing live roads for eight different companies in October. And understand that they just made automobile insurers mandatory of June of last year.

So, the actual of what's going on and how it's going on, they're very attentive to what's going on here. They very much don't want to go duplicate the research and the work that was done already to look at DSRC.

So, they're in the process of saying let's put it in. Let's see what it does. And they're the only place that I know of that has the capability to compare it to 5G.

MR. DENARO: So you believe they're going to put two radios in the car, a 5G and a DSRC.

MR. MCCORMICK: They're already putting three in.

MR. SCHROMSKY: We'll go with 5G, 3GPP is not finally distinguished from 5G.

MR. MCCORMICK: True.

MR. SCHROMSKY: So that's still out there.

MR. MCCORMICK: But if you live in China, it doesn't matter.

MR. SCHROMSKY: For the larger scale, right?

MR. MCCORMICK: Right.

MR. SCHROMSKY: But we have announced probably about a month ago that we're doing another city trial. Ann Arbor is one of them, as well as D.C. and New Jersey where our headquarters is. So, we're doing 11 cities. We'll have customer trial participants on there, a real wide range. I wouldn't be surprised if some of the manufacturers will be there.

MR. CAPP: These are vehicle trials.

MR. SCHROMSKY: Not necessarily. We don't know yet. Let me set the expectations here. It's fixed wireless. So, you're looking at a test device. I call them mobile devices. These are not the final devices. These are just to test the range and everything out there. So, this is not a global device. This thing will be about the size of probably a projector.

The idea is you'll get gigabyte speed. Everything you're saying there will be a little latency. So, it's fixed mobile. Does that make sense?

If I had an office in a building or something like this, I would drop it in there and I could light the whole

building.

MR. CAPP: Like a couple cell or something.

MR. SCHROMSKY: To some extent, but the other thing, too, is it's on the upper bands. So, we're looking at possibly on a license spectrum. We're also looking at 30 gigahertz, way, way up there. Some of the things that we'll see is that it will not be a kilometer. We're talking feet instead of yards or miles from the actual cell site.

And then it's fiber. So yesterday we just announced a large purchase for recording. Fiber. You're going to need a lot of infrastructure if you want to move at those speeds. Yes, there will be a little latency. Yes, you could do high speed data.

No, to some extent, John, you're going to put a 5G into a vehicle if it's the size of that. It's possible you could, but --

(Simultaneous speaking.)

There's a possibility that there is some mileage out there in say a GM facility, absolutely. But things that come to mind is if you're putting in a new rail line, if somebody is doing high speed rail, then offload from Netflix a 4K movie. Can I download that information out there?

So, the latency will be there. But the thing to keep in mind unlike today with 2G, 3G and 4G and most recently the spectrum that was won by a lot of companies out there at

600 megahertz, the area in the gigahertz range which means to do the densification you're talking small cells not being out there.

So, the point that was made earlier for every area does geo-fencing make sense. So, Boston would probably use our one fiber project which would be a high area. Then we could put the strains of fiber along the light poles and you could put 5G on the light poles. Then you could go not only to service you know, homes, FIOS or whatever it may be, but infrastructure, water, sewer, lighting and then obviously, vehicles in there as well.

So, this trial will kick off later this year. And we won't see commercial launch probably until later, if anything, not until 2018 at the earliest. But the standards haven't been written yet. There still must be a lot of customer feedback.

MR. MCCORMICK: Last year it was 2021. So 2018 is a huge advance in when they said they were going to start.

MR. SCHROMSKY: Yes. But I have those expectations in my own organization. There could be a 5G iPhone by this time next year. No. But it's exciting and we're partners with leading manufacturers like Ericsson, Samsung, LG. The initial trials, I've seen some stuff that we're getting very, very low latency which goes into the autonomous vehicle, autonomous anything, right.

One of the examples would be if I were a technician and I put VR goggles on, I could remotely instruct somebody. If you're Rolls Royce and you have an engine in another aircraft, can I put the VR on there and on the tarmac, fix and share that knowledge? So, that's the augmented reality that we're looking at.

But we're excited to launch it. And the other carriers will do the same as well. Keep in mind the 3G centers have not been finalized yet. And a lot of this data from this city trial will be fed back to the manufacturers. So, your Ericssons, your Nokias as well, that will build the infrastructure that all the carriers will have.

MR. MCCORMICK: And the other thing they're doing that I should mention is they're doing a lot more work in signal hopping. They might get the number of errors placed in a specific area, but they're saying that the agencies need to know the information. So rather than worrying about if I'm going to have to put it up where I can communicate this, they're saying since the signal is going to hop and I know that I've got 300 cars right here, that I can hop the signal if I go over to some place close to where I might have one RSU. I would say that work is probably much farther advanced than I've seen anywhere else in the world. And they're doing it for a valid reason I don't want to have to go wireless use everywhere.

MR. LEONARD: You mentioned the 3GPP that they're

still working on that.

MR. MCCORMICK: 5G point-to-point.

MR. LEONARD: But they're still working the standards on 5G for the 3GPP.

MR. MCCORMICK: Well, yes. But understand that when you have Huawei, China UNICOM, NTT GOCOMO and working with them and China Wireless, they basically put that on because they're all essentially owned by state entities except for NTT GOCOMO. They sit down and one of them in this case it was Huawei said, this is what we're going to build for right now.

MR. BERG: It becomes the de facto standard.

MR. LEONARD: Right, but you also mentioned it doesn't have security/privacy kind of considerations. On the 3GPP side, are they working that issue?

MR. MCCORMICK: Privacy is completely different with China. I was at their EV facility that had this massive wall that showed dots for every single one of the 105,000 EVs in Shanghai. And if you clicked on any dot, it would say here's who owned it, here's what make and model car it is, here's whether it's charging or not charging, whether it's fast charging or standard charging, where it came from, where it's going.

And I'm like wow. How did you get that information?

They said, well, under Marxism, we don't have to ask.

(Laughter.)

And then they showed the charging infrastructure. And they finally got to the point which was this cloud map that had these great big blotches of red surrounded by orange and yellow and it was all over Shanghai. And they said that this is a six-month aggregate of the origin and destination of every single EV in a car.

I went wow. Can you overlay that on the charging infrastructure map for me?

A woman looked at it and she goes, that would tell us where we need infrastructure?

I'm not here because I'm good-looking.

(Laughter.)

But, yes, they collect a lot more information than we would likely ever want to. And they are appropriately using it. In North Shanghai across the river -- that's not the actual name but I forget the Chinese name -- they have built this massive transportation center that covers not only traffic, but it covers the wharf traffic, the aircraft, the rail traffic, the metro bus lines.

And they developed an app which I had for a while that you could as an individual go find out where your bus is or if your company has shipments coming in or that you're getting on a plane and what the schedules are. They have all that available to everybody. Things are done differently there.

MR. LEONARD: Yes, I don't think John has a map of



where all the bolts are in the west.

MS. QUIGLEY: We don't even know where aircraft carriers are all the time.

(Simultaneous speaking.)

MR. WEBB: Sheryl, just a comment.

CHAIR WILKERSON: Yes.

MR. WEBB: Just to inform the group what's happening with 5G. I'm aware of at least 20 state legislatures that are getting legislation to force local governments to allow air facilities within rights-of-way for anybody that wants to put up 5G infrastructure at no charge. Very true for any permit capability to do that so that they can put it up on traffic signals, street lights, poles, whatever. Local governments in our state are not reacting well to this. But it's rolling through our state legislatures as we speak.

MS. QUIGLEY: It's just in Florida.

MR. WEBB: It's in 20 states at least that I'm aware of.

MR. CAPP: How do they license the spectrum?

MR. WEBB: I'm not sure how they're doing it. They're just grabbing the rights. You must deal with the utility companies whose poles are in our right-of-way and lease space on the utility poles. So, they're going after locally-owned infrastructure and would be attaching to that.

It's an ongoing issue in lots of states. I think

some of them have already acquiesced and will be allowing it. I wouldn't be surprised if Florida ends up being one. Our legislature has got three more weeks in session, so we'll see.

MR. SCHROMSKY: So, Ken, you were asking about the standards for 3GPP. It's working on radio access for its standards. So, this was a big topic at Mobile World Congress in Barcelona. So 5G. You had to set the standards for the radio access network, so trying to set up an ecosystem with the baseline and then laying the foundation if you will.

Once you have the radio access network and then all the trials and all the inputs and once the standards are written, then that's when you get all the developers and manufacturers to start building the devices.

But the idea is designed to fix old. That's kind of like an oxymoron to some people, they say what do you mean, old doesn't fix. The idea is you would drop it. But the goal is you could do things out there that you couldn't do before in the speed and the latency.

If you're a firm, right, how do I provide high bandwidth at low cost? At the same time, what other industries could take advantage of high bandwidth, low maintenance which autonomous vehicles would be a prime candidate.

MR. LEONARD: So the international standard as opposed to the Chinese standard, is it going to incorporate more of the privacy and security?

MR. SCHROMSKY: Oh yeah. Obviously, it's a carrier. So, privacy and security, its core infrastructure. So, all that ability and all that wonderful stuff will come on top of that. So, this is nothing unheard of as we want. Bob, you know this. We went from 2G to 3G to 4G. It always starts with trials and doing new things out there.

Just recently, people forget. And this will start happening where carriers will start decommissioning GSM and CDMA and start reforming that frequency for other uses like LTE and 5G when it's out there. So, the frequency bands will change.

But the key thing about 5G that people don't realize is they're using a 1924. You're up in the gates now if you will, 30, 40, 50 and then also a licensed spectrum as well to deliver 5G. But the standards have not been finalized. The trials are being conducted.

Once the standards and the feedback, then the manufacturers can start building equipment. Once they make the equipment, now they're going to want to sell it to Verizon. And they want to sell to AT&T and T-Mobile, Sprint in the states and then also international as well. So O2, China Mobile, all the others, will be able to purchase that.

MR. MCCORMICK: Yes, in China, civil code and total liability laws protect and the recourse for infringements all the rights to privacy. And they have further protection by the decision of the standing committee and the National People's

Congress for network information protection.

That's one of the reasons that Google was thrown out because they would not adhere to the standing committee's recommendations and were trying to negotiate it out. And they basically said no. You can't be here if you're going to do that.

So, for them there's a different mindset like in South Korea. South Korea has telematics boxes in their cars and they have for at least 12 years to 14 years that I know of. And it transmits back to the police when an accident occurs information about do I send an ambulance, do I send a police car or do I send a tow truck.

And that's a huge problem because when we looked to harmonize that standard 12 years ago with our cells the different contingents were like "This is great. You can just email whoever is at fault a ticket."

And the South Koreans were like "No, you can't use it for that." So, there was a complete social/psyche difference in terms of who has the liability in using what information. There are cultural differences that allow certain things to work in certain regions and aren't transportable here for that reason.

MR. LEONARD: Just is there a time for moving beyond fixed mobile to mobile-mobile?

MR. SCHROMSKY: Oh yeah.

MR. LEONARD: When might we see something like that?

MR. SCHROMSKY: You're figuring fixed mobile, putting in mobile devices out there we're assuming thereafter. So, you're going to need the chips has to go to modules and the modules get made by whoever makes them or the manufacturers will make them themselves. The automobile, could be third party modem providers like Cisco --- who knows?

But there would be rapid deployment there. But at the same time, everything gets sped up. So just finalizing and rolling out their 4G networks and adding capacity. And we ran out LTE in 2010 and we're still -- And that network is going to be there for some time.

When you start talking about 5G and start commercial rollout in 2018, how long is it going to take to get where we are today in terms of ubiquitous coverage? It's going to take years to do that as well.

Now just like anything else hopefully economies of scale come into play like George mentioned, certain working the legislations to enable that because you will be where they probably have 60,000 cell sites to do what we do today on LTE roughly. You could easily put a fifth of that just in a city on small cells. But you'll get the same complications.

There are different things that must be done because there's physics involved in what you can do. Whereas, a traditional cell site can serve roughly 12 square miles. You're

thinking about a 5G node could do maybe say 1,000 square feet. I mean 1,000 feet in a radius. What does that break into squares? That's the challenge.

But you can do that between the different discussions and it's interesting. You have 5G in say an urban area wherever it may be and then you get it all to a 4G or whatever it may be whenever you go outside. That is all in the changes.

So, it's a paradox. The equivalent of it, I'd equate it to is basically when we went from analog to digital and then mobile, right. You had analog, and then you went to digital, digital can offer a lot more things, but suffered some things like propagation, which analog provided. And it took a while to get on the same level.

CHAIR WILKERSON: Very good. Any other questions? Comments? That's what I'm going to be talking about. We had two other people I think who joined. Would you like to introduce yourselves? And then we'll break.

MS. MCGIRK: Sure. I'm Kathryn McGirk. I'm from McAllister and Quinn. I'm here on behalf of Clemson University's online research center.

MR. JOON: Hi. My name is Joon Shin and I'm from Korea. I'm doing the exchange program between US DOT and the Korean government.

MR. LEONARD: I don't know if everyone is aware that for over 20 years the ITS Joint Program Office had an exchange

fellowship program with Japan. And Joon Shin is our second Korean fellow. So in 2013, we signed a memorandum of agreement with Korea.

We are currently without a Japanese fellow. We are in between Japanese fellows. But Joon Shin started with us two weeks ago, two and a half weeks ago. So please, if you have any work going on with Korea, feel free to chat with him about it. And he just wanted to see how the Advisory Committee works.

CHAIR WILKERSON: Okay. We'll take a break. We'll be back at 10:15, is that okay? And then we'll get started on our objectives that we hope to accomplish this year.

(Whereupon, the above-entitled matter went off the record at 10:01 a.m. and resumed at 10:23 a.m.)

CHAIR WILKERSON: So we're going to go ahead and get started again. This section I just have some highlights. Just for the remainder of the day, we have up until the time for lunch talk about the 2017 work and what we hope to accomplish. And I'll do some sort of reflections for the benefit of our two new members. Then we'll take a break and we'll determine hopefully in this next section how we want to use the remainder of our time.

It's not my time. It's your time. It's however you think is best suited. We welcome input from our new Advisory Committee members. And in the five minutes that we have with our ITS JPO staff if they have any thoughts or guidance or

counsel for us, that would be great, too.

I think when we last spoke I asked Ken and Stephen if they would list our objectives and charter. I thought it might be helpful for us to highlight what our objectives and the scope of our activity is. This often comes up when we go off on tangents or talk about different issues that sometimes - - to always have a nexus.

My goal here is to start and take the opportunity to reflect. Hopefully, you all have taken the liberty of reflecting on the documents that are on the website and reviewing some of the past Advisory memos and others.

But this is our current objective. I won't read it, but it's an opportunity for all of us to just reflect and understand what our purpose is here, what our deliverable is in putting our talents to best and highest use for ITS JPO. I think there is also the other parts of the duties.

MR. BELCHER: You guys are leaving in five minutes?

MR. LEONARD: Yes, we have a meeting.

CHAIR WILKERSON: And I'm going to ask for their comments, too.

MR. BELCHER: Can I interrupt?

CHAIR WILKERSON: Sure. Please do.

MR. BELCHER: I apologize for being late. But before you guys leave, I think it's important to at least for the group to talk a little bit about connected vehicles. The



Administration is silent right now. You've got a new FCC Commissioner who is not supportive. And you've got autonomous vehicles that is filling up this space.

I think this Committee should think about whether it ought to do something immediately because there's no voice right now on the 5.9 side. If we think that's important, somebody needs to say it.

CHAIR WILKERSON: We'll go over the subcommittee list and the direction that we took. I'm sure we can entertain a conversation about that during that time. But before they leave, I'd also welcome the opportunity for you to say what you think might be helpful for us. As we revisit our charter and our objectives, what might be a theme or focus that we should keep in mind as we move forward today? Connectivity?

MR. LEONARD: I would just start with what I opened up with. We are in a transition phase. And so many of you have been advising in ITS, advising the Department and the Secretary for some time.

Be mindful of the fact that there is a new team that you are advising that does not have the benefit of your previous counsel and your insights and as Scott was indicating has not fully -- We don't have a full picture of where this Administration is going.

But we do know, we've seen positive indications about technology. So, I would just make sure that you communicate

clearly and concisely. Be mindful of the kinds of public statements you're seeing from the Administration and what we know to be their focus. Then give them your best advice. That is your charge.

CHAIR WILKERSON: Yes.

MR. LEONARD: And then we will work through future guidance as it comes from Congress and the Administration.

CHAIR WILKERSON: Okay.

MR. WEBB: Sheryl.

CHAIR WILKERSON: Yes.

MR. WEBB: Ken, could you just comment about how you see -- I'm just looking to get the title right -- the new Federal Committee on Our Nation fitting with our working group as far as similar -- I'll just leave it open.

MR. LEONARD: What I can tell you is that the previous Secretary as one of the last activities that he undertook was a couple of things in automation. One of them was the stand-up of a Federal Advisory Committee on Automation. Again, this is one of those areas where we haven't heard anything from the new Administration.

The first meeting of that group was January 16th which many of you know is a holiday in D.C. and four days before the Inauguration. So, there hasn't been a second meeting of that group. So, we'll have to see.

MR. WEBB: Is there one next week?

MR. LEONARD: That I don't know.

MR. CAPP: I think I may have heard there's one next week.

MR. BERG: Yes, that's what I heard, too.

MR. LEONARD: Okay. Well, then I have not seen that. We'll find out and let you know. But clearly that is a group that's also working with the Secretary on automation. And we had talked to them about how to make sure of that because they recognized that there was some overlap. This is also an advisory group that also advises on automation. And we can talk mechanisms, we might use to make sure that we sync-up those groups at some point.

We'll have to see where that advisory committee goes because that's not a Congressionally-mandated advisory committee. It was a Secretarial discretionary committee. We'll have to see where the Secretary goes with that discretion.

CHAIR WILKERSON: Okay. Thank you.

MR. LEONARD: We apologize for having to leave but.

CHAIR WILKERSON: That's okay. Thank you for your comments.

MR. LEONARD: Oh, you don't have to worry about that.

(Laughter)

CHAIR WILKERSON: Appreciate it.

MR. LEONARD: All right.

CHAIR WILKERSON: Look forward to your feedback.

So just to highlight and if anyone has any questions, our objective is to make recommendations to the Secretary regarding the needs, the objectives, the plans, the approaches, the content and progress, to provide a forum for the national discussion and make recommendations on activities that will promote the coordination of the external ITS activities and at minimum provide input on the strategic plan.

Someone asked a question about the strategic plan. I think it was Bob who talked about that. We do not have a new strategic plan. There's always an opportunity to revisit. And it was encouraged during the full meeting.

And then annually look at areas of research being considered for funding by the Department. Some of those came up with respect to the smart cities and whether the activities are likely to advance ITS daily practices and whether technologies are likely to be afforded by users and, if not, what are some of the barriers. And then as well the appropriate role for the government and the private sector in investing in research and technology is being considered.

MR. ALBERT: May we make comments?

CHAIR WILKERSON: Sure.

MR. ALBERT: One of the areas that is significant to state economies and usually is the first or second largest part of their economy is tourism. And tourism is, like I said many times, the base of that state's core funding.

There is an initiative that was mandated by Congress to bridge transportation and tourism together and thus, there is an advisory board like this that is looking at transportation and tourism issues. I think ITS could be a very strong player as it relates to tourism as improving visitor experience, reducing congestion, assisting in people spending their money. Any thoughts?

CHAIR WILKERSON: Okay. Why don't I put that down as a topic? We've got a chart which I will put up for our subcommittee. Our new members can see what we've highlighted in the past.

Before I go there -- I did take a note of that. Thank you for raising that issue -- is just to highlight what we said the last time with respect to our items. We asked our members to review the summary of the recommendations that had been provided in the past. Again, we talked about discussing the context of -- Someone raised the idea of developing some type of portal to enable technological advances or ITS to ensure that the states -- I don't know if anyone remembers that, but that also came up.

We also had talked about people who might be helpful for us to hear from for future meetings, if you could be thinking about that. We had a couple, but they just didn't work out in between the appointment of the new members and our reappointments. And then looking at our face-to-face meetings,

what we're going to do next.

During the last meeting, we discussed and prioritized several key issues. And we highlighted some subject areas that we would address in the coming years. Is it possible to show the initial chart that we worked from and then we can show the new members from where we've come? There was another chart before that I think, the other big chart. Maybe it's not on there.

MR. DENARO: No, it's a separate Word doc.

CHAIR WILKERSON: Just to remind people what we were looking at and then we can go back to that. Last year we looked at -- These were the subject areas and we just had a couple others come up. We looked at automation, scenario planning, traffic safety culture, vehicle copying and cybersecurity, reaffirmation of the ITS program, accomplishments. What's the second one? Connected and automated vehicles, the interrelationship, technology and active transportation, and then rural deployment.

Then we ended up focusing -- if you could pull up the other chart -- on just five areas, five subcommittees. One was traffic safety culture, automation and interrelationship between connected and automated vehicles, rural development and then technology and active transportation.

Is that five, four or five? Am I missing one? What am I missing? I missed one. Traffic safety culture; we had

Debra Johnson and Tina Quigley working on that issue. John Capp and Roger were working on automated relationships. Steve Albert and Bryan were working on rural development. Scott McCormick on technology and active transportation.

Who had the last one? Let's see.

MS. JOHNSON: It's Steve.

CHAIR WILKERSON: I have Steve Albert and Bryan on rural. What am I missing up there? I can't see. I apologize. Can you make that a little bigger for us?

MR. WEBB: Review of ITS accomplishments.

MR. MCCORMICK: Yes, the second one, review of ITS accomplishments.

CHAIR WILKERSON: Okay. And that was something that we all agreed to do.

We also had talked about having someone like Linda Bailey come and speak. I don't know if that was something that's still an action item on our list. But that's where we ended it. And we had some initial discussions. So, that's one task.

Keep that in mind and think about whether this is something that we should continue to do, whether we should start from scratch. We can do something totally different. It's our advisory committee to do whatever we want with respect to our charter.

But the other timeline that we must take into consideration, can you show the timeline for everyone? So,

these are the current timelines that we have to work with and particularly for the remainder of 2017. Stephen, do you want to talk about the January date a little bit?

MR. GLASSCOCK: All right. This was circulated for your comments and it's the one that will make up the May 1, 2017 Report to Congress. I will take that to make the report. And then January 1, 2018 is not a hard date, but in government, it takes many weeks to get something approved and out of the building. The Report to Congress is due on May 1, 2018. Whenever you can get your remarks to me around January 1, 2018, then I can get the Report to Congress.

CHAIR WILKERSON: But the current one that's dated March 28th was on hold because there was a hold on the Federal Register Notice.

MR. GLASSCOCK: Right. That will be my statement of lateness that I must put in here; it will be late because there was a hold on the Federal Register Notices.

CHAIR WILKERSON: So the next thing is our Report to Congress technically. Is that what you're saying?

MR. GLASSCOCK: Yes, once you guys concur on that, I will take that to make up the 2017 Report to Congress.

MR. DENARO: Stephen, if we send it earlier on January 1st, do you promise to read it that day?

(Laughter.)

CHAIR WILKERSON: Is that clear just in terms of the



timeline and why you're looking at a March 28th notice for the May Report? It's impossible to understand the time frame.

MR. GLASSCOCK: I'm sorry. The January 1 date is not a hard date. In the six or seven years, I guess I've done this, one Report to Congress was on time. It just doesn't seem to happen.

CHAIR WILKERSON: Do you have a time frame by which given your experience? Is that something we should be targeted to send you by November?

MR. GLASSCOCK: It takes three to four months to get it out of the government.

CHAIR WILKERSON: Okay. I just wanted to know.

MR. GLASSCOCK: Especially if you have recommendations. We then will circulate that to whoever is involved in that recommendation. We need to get their opinions to concur or not concur with some of the information there. And that takes a little bit of a while to circulate that. Then once I make the Report to Congress, then it goes through all these levels all the way up to the Secretary.

CHAIR WILKERSON: Any questions on the timeline or does anyone have any recommendations for this?

MR. BERG: So this letter is what you're doing for 2017.

MR. GLASSCOCK: Yes.

CHAIR WILKERSON: And we at that time didn't make

any formal recommendations because we were just starting to put the subcommittees in place. This is an opportunity with what we can amend. We can say we got the advisement of that's due in January. So, we do have some time to reflection on that. Any thoughts on this time frame on how we should get there for the next deadline outside of the main deadline?

MS. JOHNSON: Well, I know we're going to have discussions around the subcommittees. But I think it would be prudent to revisit them to ensure that we're all still singing from the same sheet of music, ensuring that these are still the priorities for the committee. There's been a lot of change. We know that change is certain in these days and times.

So, I think having a discussion and recognizing that we have two new members and have them opine as to whether or not they feel that these things are feasible from their respective disciplines and so forth coming into the group.

CHAIR WILKERSON: Okay. Great.

MR. DENARO: Given that it's almost May and that report is due in January, there's a lot of work to do between now and then. And most of the good work gets done in meetings. It's going to be a challenge.

CHAIR WILKERSON: Yes, and I think we usually have like two more meetings, right.

MR. GLASSCOCK: Two or three a year.

CHAIR WILKERSON: Three a year I think it says

recommended in the guidance documents.

MR. GLASSCOCK: And we have done two-day meetings in the past, too, if necessary.

CHAIR WILKERSON: Yes.

MR. GLASSCOCK: So if that would be productive for one of these next meetings, we certainly could do that, too.

CHAIR WILKERSON: So one task would be to maybe think about whether we do want to have two meetings and get some consensus there and come up with the time frame. We could always do another survey to figure out those windows might look like.

MR. GLASSCOCK: Maybe if you could agree to a nut that might work. If you want to try August and October or whatever, then I can get poll out with quite a few dates for each of those months and get a consensus on your availability.

CHAIR WILKERSON: Any thoughts?

MR. BERG: I like the idea of a committee, because I think Bob is right. People try to get conference calls and hey, I've got to go. I've got something else going on.

CHAIR WILKERSON: Yes, get some true deliverables on this.

(Simultaneous speaking.)

MS. JOHNSON: So I'd say somewhere in August.

MR. BELCHER: Sooner rather than later.

MR. MCCORMICK: I think there ought to be a

teleconference somewhere in between now and whenever that next meeting is.

CHAIR WILKERSON: I agree.

MR. MCCORMICK: To make sure everyone has chaired their committee and has worked on something. I hate to say this, but calling up my committee and saying are you available, as Roger and I tried to, we might be able to find one hour between us. We must make a concerted effort to hold these committee meetings.

MR. GLASSCOCK: I agree.

MR. MCCORMICK: So I think somewhere we need in the middle a check by you to say: "report on this date when your meeting is scheduled or when you had the meeting." You don't have to tell us what you did, but just to make sure everybody is on track.

CHAIR WILKERSON: Are you saying a teleconference? I'm assuming you will have one every meeting. If you need to have a second --

MR. MCCORMICK: Yes, you just need an hour.

CHAIR WILKERSON: But the teleconference would be a joint. Is that what you're recommending? Yes. And my other recommendation would be that everything would be vetted ahead of time.

MR. MCCORMICK: Yes.

CHAIR WILKERSON: So that we have an opportunity to

opine. That certainly would be helpful.

MR. MCCORMICK: Our goal is having telecons just to report out that we had a meeting and who attended and solicited the info whatever that is. That will make a long telecon.

CHAIR WILKERSON: Okay.

MR. MCCORMICK: I just think it's a reporting point that forces everyone to do it the day before.

CHAIR WILKERSON: So between now and December, does anyone have any recommendations or months that we should do the two meetings and the teleconference?

MR. MCCORMICK: I think the teleconference should be no later than August.

MR. BELCHER: If I could. Maybe I would recommend that you do your two-day meeting sooner rather than later because so much of the work must happen.

CHAIR WILKERSON: Yes.

MR. BELCHER: So I would imagine that maybe being in June and then you could have the teleconference in August. Then you could have the follow-up meeting sometime in October or September or something like that.

CHAIR WILKERSON: Right. Any comments?

MR. GLASSCOCK: June 7th to 20th is a not an opportune time for the JPO.

CHAIR WILKERSON: That's good to know. The 7th through the 20th.

MR. GLASSCOCK: Yes. At the end of the month, the 28th and 29th.

MR. BERG: There's already going to be something, Scott.

(Simultaneous speaking.)

CHAIR WILKERSON: So tell me again. What was that? 28th and 29th you said that people might be away, okay.

MR. MCCORMICK: Well, I'm out. I'm out that week in China.

CHAIR WILKERSON: Okay. So one suggestion was early June.

MR. MCCORMICK: I would offer let's try the week of June 26th because you want to do before the July 4th holiday.

MS. QUIGLEY: There's that Smart Cities Connect Conference in Austin for those of us who are NPOs, etc. We'll be there.

MR. ALBERT: And it's in Austin you said.

MS. QUIGLEY: Yes, in Austin.

MR. GLASSCOCK: What date?

MS. QUIGLEY: The 25th through the 28th, Smart Cities Connect Conference in Austin. It's their annual.

CHAIR WILKERSON: Oh yeah. So, let's see. What about the first -- That was the week of the 26th. The first week is --

MR. DENARO: What about the week before?

PARTICIPANT: We've got planning that week. The 29th and 30th was out.

CHAIR WILKERSON: Right. Somebody else could chair that meeting, which I'm open to. I'd be happy to participate, but I have an offsite that's mandatory once a year. But somebody could always chair it and I could participate.

MS. JOHNSON: I don't even know if I can make that date considering it's the Friday before --

CHAIR WILKERSON: So right now, the windows are the first week of June and the last week.

MR. MCCORMICK: Not the first week. I can't make that.

CHAIR WILKERSON: But I mean for most of the people, who is available?

MS. QUIGLEY: Why don't we do a show of hands? Who is available the first week of June?

(Show of hands.)

MR. MCCORMICK: I'm available the 8th and 9th.

CHAIR WILKERSON: The first week of June. I'm sorry.

MR. PLEASANT: June 5th.

CHAIR WILKERSON: No, just the 5th through the 9th, that week. Are most people -- No, that's not a good time?

MS. QUIGLEY: I am available.

MR. WEBB: Available.

MR. GLASSCOCK: That's the NHTSA ESB conference.

CHAIR WILKERSON: NHTSA ESB, okay.

CHAIR WILKERSON: What if I try to hold out for the whole month of July?

CHAIR WILKERSON: Early July. Early August our teleconference.

MR. GLASSCOCK: Yes. So maybe the week of the 10th, sometime the 10th.

MR. MCCORMICK: Yeah, July is clear for me. I mean we typically don't schedule anything because conferences are out there and people go on vacation.

CHAIR WILKERSON: People go on vacation, okay. So, we'll look at some dates in July. How about that? Between maybe the 10th or should we do the second and third week of July maybe? Would that be good? The 10th through the 21st?

MR. GLASSCOCK: I'll get those out.

CHAIR WILKERSON: Okay. And then for August, are there any weeks that are better than others?

MR. GLASSCOCK: You're going to do a conference call in August?

CHAIR WILKERSON: Yes, a conference call in August.

MS. JOHNSON: One point of clarification.

CHAIR WILKERSON: Yes.

MS. JOHNSON: When we talk about the July meeting, we're talking about a two-day, correct?



CHAIR WILKERSON: Yes.

MS. JOHNSON: Okay.

MR. GLASSCOCK: And I tried to schedule all the meetings Tuesday, Wednesday, Thursday so that you don't have to travel on Friday. That's my reasoning when you see the dates. I will try that. I guess I will throw Thursday and Friday in there just as a last resort.

CHAIR WILKERSON: Okay.

MR. GLASSCOCK: I try to respect everyone who wants to be home.

CHAIR WILKERSON: Someone might want to be vacationing in D.C.

MR. BELCHER: Are we doing it offsite?

CHAIR WILKERSON: Right now -- I'll get to that. We had a conversation today. I asked about whether in the past what we've entertained and how productive the other meetings were when people met offsite. And I think my recommendation would be based on the subcommittees we wouldn't do an offsite unless it was related to one of our objectives. That would be my only recommendation.

MR. GLASSCOCK: I don't know who was here for the meeting we had in Oakland. If you remember that, we had a meeting in Oakland. And the second day the question was "Why are we here?" So all good intentions --

MR. BERG: We had one at the University of Michigan.

MR. GLASSCOCK: Sorry. We did one in Ann Arbor and Ron even happened to talk at that meeting in Ann Arbor to the Committee when he was at NHTSA. So, it's harder to do one offsite. There's just I think some problems in why you are doing it there.

CHAIR WILKERSON: Yes.

MR. GLASSCOCK: But it's your call.

PARTICIPANT: I'm fine with it being here.

CHAIR WILKERSON: Okay. So, we will do it --

MR. DENARO: I'm looking at the calendar and if you're planning to attend the Automated Vehicle Symposium it's the 11th through the 13th.

CHAIR WILKERSON: Of August?

MR. DENARO: That would be July.

(Simultaneous speaking.)

MS. QUIGLEY: Maybe we could do some tours.

MR. DENARO: Well it's the week of the 10th with various activities either side, so ---

CHAIR WILKERSON: And where is that? Here?

MR. DENARO: San Francisco.

CHAIR WILKERSON: Oh, San Francisco. And that's the -- can you give me the dates again just so that we can take those?

MR. DENARO: The Automated Vehicle Symposium.

CHAIR WILKERSON: The 10th. The 13th you said?

MR. DENARO: The 10th through 14th. The conference is the 11th through the 14th but.

MR. MEDFORD: Maybe we could do it in San Francisco.  
(Simultaneous speaking.)

MS. JOHNSON: Works for me.

CHAIR WILKERSON: How many people are going there?

MS. QUIGLEY: Going to what? Sorry.

CHAIR WILKERSON: To the meeting.

MR. DENARO: Automated Vehicle Symposium.

CHAIR WILKERSON: Raise your hand if you're going.  
(Show of hands.)

Six people are going there.

MR. DENARO: I invited Elaine Chao to speak there by the way as keynote. So, we'll see.

CHAIR WILKERSON: Okay.

MR. DENARO: We had Anthony Foxx last year.

CHAIR WILKERSON: Okay. Anyway, we'll look at the 10th to the 21st. See if you have any comments on that. Let's just look and keep that on the table as we look at what's going on. I don't know what the deliverables are for that. But we can also look at our agenda. Just thinking about that to see where people are for San Francisco and if there's some nexus there who knows.

MR. MCCORMICK: Okay.

CHAIR WILKERSON: And then August we'll do a

teleconference probably mid-month or something, so we don't interrupt.

And then October any ideas or windows in October?

MR. DENARO: For a call or?

CHAIR WILKERSON: For our in-person meeting.

MR. DENARO: Are we talking about doing a two-day on the one in July?

CHAIR WILKERSON: Two-day in July. Conference call in August and then now I'm looking at October for either a one or a two-day.

MR. DENARO: Okay.

CHAIR WILKERSON: And that would probably be our deliverable. I mean we're going to be working on getting our deliverable done and getting that closed. The last time we did one we were far along. We did a good job I think of getting that done.

MR. SCHROMSKY: Sheryl.

CHAIR WILKERSON: Yes.

MR. SCHROMSKY: Just thinking about this. Is it possible that in the July meeting possibly back in Michigan and having the October meeting back in D.C. in case we had to pull anybody from Headquarters to finalize and if they need any further information? I'm just saying it would be easier. I know some of you guys are coming from the West Coast and coming to D.C. It gets old after a while.

(Simultaneous speaking.)

Obviously, cost. But I mean something like Michigan seems to be a little bit easier.

MR. MCCORMICK: It certainly is for me.

MR. DENARO: But the issue is depending on who we invite as speakers, for example, looking at our charter if we want to do a deeper dive on the JPO programs and we want the extensive time on that, then they're not going to all can travel. So you would have to do it here.

CHAIR WILKERSON: Right. That's true. Okay.

(Simultaneous speaking.)

All right. So we'll think about the venue once we get the date. And then we'll look at the agenda for what you want to accomplish to figure out whether there's a nexus to Michigan or San Francisco.

Windows in October that people should avoid.

PARTICIPANT: I'm open.

PARTICIPANT: I have a couple.

MR. MCCORMICK: You know October is -- One of the reasons we moved our summit to September was that in October, it's just completely packed with a variety of events, conferences, etc. But I think what we do is just put it out on the poll and see what works for everybody.

CHAIR WILKERSON: Okay. I'll look for something. Maybe the first week, how about the 9th through 13th?

MR. BELCHER: I think that hits World Congress, I'm not sure we ---

CHAIR WILKERSON: When is that?

MR. DENARO: World Congress is at the end of October.

CHAIR WILKERSON: End, yes. So maybe that. I'll pull up some dates for that. That was productive. Thank you.

If we go back to the subcommittees, would it be helpful for those people who are on subcommittees to maybe reflect on them? Can you make that a little bit bigger? That might be helpful to some of the people who are --

PARTICIPANT: Older.

CHAIR WILKERSON: No, just sitting further back. Could you go a little bit bigger? Let's see. What's the first one? Transportation safety. Would you like to talk a little bit about that? Who had transportation safety? I just gave the list to you.

MS. JOHNSON: Tina and I.

CHAIR WILKERSON: Okay.

MS. QUIGLEY: I hope I'm vice chair.

(Laughter.)

CHAIR WILKERSON: It's supposed to be a partnership, Tina.

MS. QUIGLEY: Oh, my gosh. We have nothing to report. Can you not put that in the minutes?

CHAIR WILKERSON: Can you make that window a little

bit bigger just for that section? Ignore the other four columns on the right and then pull theirs up so you can see.

MS. JOHNSON: We took notes and those are some of the bullets we talked about. You guys had a good report last time.

CHAIR WILKERSON: Yes.

MS. QUIGLEY: Yes, we had a broad discussion and a dialogue.

CHAIR WILKERSON: But if you can just highlight that, some of those topics.

If you can just bold that and make that one square on the bottom be really big. You don't have to have the whole chart. Just the whole --

CHAIR WILKERSON: Just keep blowing it up until that box.

(Off the record comments.)

Or just do the one on the right-hand side. Can you guys see that? I would go bigger. Keep going.

So, for those of you who are new, this shows the committee members and then maybe you can give some highlights on some of the topics that we talked about.

MS. JOHNSON: Yes, Tina and I can tag-team. But I recall when we initially had the discussion. Some of this basically came up early on when we were talking about the behavior. We're so inclined for instantaneous information.

We're talking about people being distracted.

What all that boils down to one's behavior, which could help eliminate some of the accidents we have because basically they're preventable for all intents and purposes. When you talk about the psychological aspect of it, that goes hand-in-hand.

Roadway safety and the relationship with pedestrians and motorized vehicles, that's why I asked the question of Danny relative to subdivision development now. Are we thinking about the safety aspects attributed with that because we're so inclined to ensure that we have connectivity? But to what extent are we having connectivity? Or is it just the perception thereof? That basically is a nexus with the behavioral issues that we talked about before.

At this juncture, I could ramble on about my thoughts, but I don't want to not give Tina an opportunity to opine.

MS. QUIGLEY: Thank you.

MS. JOHNSON: Yes. Those are some of the prevalent ones.

MS. QUIGLEY: I do recall we started off with a pretty significant substantive conversation about this. But I'll admit that there has been no follow-through since the last conversation.

MS. JOHNSON: Right.



CHAIR WILKERSON: The report is in the transcript for anyone who needs to refresh.

MS. QUIGLEY: And I do need to go back and do that. Aftermarket technology, a lot of conversation since the last time that we met. We are partnering with GENIVI, which is a platform for Generic In-Vehicle Infotainment collaborative group to do a test corridor where we are tying in infrastructure and "sensorizing" infrastructure to their aftermarket applications to alert vehicles related to pedestrian locations, bus stop locations and other information. And I know in other cities it's going on as well in the aftermarket testing, technology, enablers, limiters, distracted pedestrian.

I know again lots of studies going on. We haven't had any follow-up conversations.

MS. JOHNSON: Right, and don't beat yourself up because what we talked about was having this dialogue and then at the next meeting basically delving deeper and try to discern if this is something which we wanted to pursue. When I raised the question earlier about looking at the various committees and getting everybody's opinion, do some of these overlays with some other aspect of the committees here? Considering our timeline, would it be prudent for us to do a consolidation considering that we're biting off a lot?

That's not to say let's totally shun this aspect because traffic safety is very, very paramount to what we're

doing here with ITS. But then basically deciding what aspect do we want to tackle because, as we saw last year, there are all these great ideas that were germane to our discussion. But then again, what areas do we need to dig deep on and put forward some sound recommendations to go forward?

MR. DENARO: Why are Peter and George italicized in TBD?

MS. QUIGLEY: I don't know. I just leaned over to him and said, "You've got your name on there once."

MR. MCCORMICK: I remember that day. There's a couple. They weren't at the meeting.

MS. JOHNSON: They weren't here before because nobody else wanted to play with us.

MR. MCCORMICK: So that's why.

MR. MEDFORD: Could I ask a question because I'm new and I'm not quite sure? Is the purpose of -- This is a full laundry list of things?

MS. JOHNSON: Right.

MR. MEDFORD: Is the purpose to help JPO and Congress and others to think about where technology funding should be directed to deal with a couple of core problems? Or is this intended to be a list of all the things that have the potential to need to be addressed?

MR. MCCORMICK: Where we thought we could add value based on the demographics of the group.

CHAIR WILKERSON: Yes. So, the goal is we could pick one of those, two of those, none of them. But this was sort of the compilation.

MR. DENARO: But all this is in the context in the charter we saw earlier which is three questions. Is it to reveal the JPO programs? Is the work JPO doing state-of-the-art? Is it likely to be deployed or going nowhere?

CHAIR WILKERSON: Finding and ending barriers, partnerships...

MR. DENARO: The balance between government and private, is it the right balance? So, what I was implying earlier about doing a deeper dive in JPO, how we can talk about the JPO work if we don't get really a good, in-depth presentation? In the past, people come and present PowerPoint and everything else.

CHAIR WILKERSON: Right.

MR. DENARO: And that allows us to go in and either critique what they're doing or probably more importantly identify gaps. Things are changing. Here are some other things you ought to be looking at.

And typically, Ron, it does not apply to funding. Typically, we can have concerns about that.

MR. MEDFORD: Right.

MR. DENARO: What are they going to say? If we recommend that they get better funded.

MR. MEDFORD: But it could be that, like you said, there are few areas where you think you could have a lot of impact.

MR. DENARO: Exactly.

MR. MEDFORD: Where there is not ongoing work either in JPO or somewhere else in the country or the world. But it's not addressing an important problem. For me, it seems like I'm just saying this as a --

CHAIR WILKERSON: That's great. We welcome your contribution.

MR. MEDFORD: -- new member who doesn't function very well and fast. But to focus on a few areas where a high impact could be achieved through some research and potential deployment eventually with the technology that could be used or if it's not a technology then some change in behavior. I don't know if that's what you're focused on, too.

MR. ALBERT: Just a comment on traffic safety culture. I know the organization I work for does a lot of this and we have a fully funded study going on with about 25 states and working overseas on traffic safety culture with a European group. Nick Ward, you might know him; I know Peter knows him. He's been heading that up. Some of this may have already been addressed quite frankly.

MR. MEDFORD: Is this safety stuff? Is that what you mean?

MR. ALBERT: Traffic safety culture, yes.

MR. MEDFORD: I mean also much of this is a laundry list of things that NHTSA is sponsoring work on and is concerned about. Knowing what they're doing work in these areas and getting their views would be important for this kind of work I think because they are the group that -- and not just them but Federal Highway also.

MR. DENARO: So we can request that both NHTSA and Federal Highway come to present to us on those issues that we know.

MR. MEDFORD: Are all these groups are going to stay? That's the question.

CHAIR WILKERSON: Yes, it's still open. I think if there are some that we think we need to take off the table because we know that they're being addressed or they're not relevant any longer.

MR. MCCORMICK: Or shift. The conversation that you and I had last night.

CHAIR WILKERSON: Yes.

MR. MCCORMICK: We might want to take and shift one of these to a different thought area.

MS. JOHNSON: Right. So, it's sort of a consolidation.

MR. DENARO: I think the elephant in the room is that we always struggle with what is the ideal role.

(Fire alarm system testing.)

CHAIR WILKERSON: Okay. Well, we know where the exit is. I think you were speaking.

MS. QUIGLEY: No, Bob was.

MR. DENARO: Well, I think I've pretty much finished. But I struggle with what is the relevant role for JPO and Roger is disappointing me because he's not speaking. He's the watchdog saying, they shouldn't be doing things that industry's already doing and so forth.

So finding that proper role that adds value and is relevant is a challenge for us. And frankly I think that's an important role of this committee is to help that direction so they are focusing on things that aren't going on other places and where the government should play a role in terms of research.

CHAIR WILKERSON: Right. That's right.

MR. MEDFORD: And I would say if I'm getting a report like this, I want one or two important areas with a carefully thought-out approach that is clear and that no one is doing it and funding here or research in this area would really make a difference. Other than a laundry list is not very useful because people already know what the laundry list is.

CHAIR WILKERSON: Exactly. I think this was part of our brainstorming.

MR. MEDFORD: I'm not criticizing. I was just --

CHAIR WILKERSON: Yeah, that's good. A fair point.

MS. QUIGLEY: But back to what you said, if we could just keep asking ourselves that or keep coming back to that as kind of our mantra and just using it as a litmus test.

MR. MEDFORD: This committee won't know and a couple of meetings will not know enough without some help and understanding what that means to make it useful. I think we should somehow figure out how to get the information needed to make meaningful and impactful recommendations. Otherwise we're just talking to ourselves.

CHAIR WILKERSON: So one recommendation or action item is for the traffic safety culture is to come up with a list of updates. Would that be our recommendation or an action item for you all to get briefing?

MS. QUIGLEY: I almost want to revisit it. Who brought it up? If there's another group or organization that's already getting funding to do this, is this our role?

MR. ALBERT: I could report back between what the list is here versus --

MS. QUIGLEY: Because I'm thinking it's not.

MS. JOHNSON: It's an exercise in futility if we want to spin our wheels and there's already --

MS. QUIGLEY: Even though we recognize that this is a big deal at a national or global level.

MS. JOHNSON: Right.

MS. QUIGLEY: Are we the ones to be making that

recommendation? Are we the experts on this?

MS. JOHNSON: No. At least, I'm not, but I'm concerned.

MS. QUIGLEY: That's one committee I'm off.

MR. ALBERT: Traffic safety culture is often --  
(Simultaneous speaking.)

CHAIR WILKERSON: What did you say? I'm sorry.

MR. ALBERT: That means you don't chair --  
(Simultaneous speaking.)

MR. ALBERT: Peter and I will look at what's being done by others that we know to see if there's any redundancy.

CHAIR WILKERSON: Okay.

MR. KISSINGER: I mean we can take it to this committee. Honestly, I think the only thing that would be valuable in my opinion is maybe to put forward a recommendation that they endorse all the efforts remaining, material efforts. To get that, you're going to eventually have to change the culture.

MS. JOHNSON: Right.

MR. KISSINGER: I just don't see JPO taking the lead on that with all the technology and stuff they need to be worrying about.

MS. JOHNSON: Right. Talking about the --

MR. KISSINGER: I don't think we're going to make a big impact on that.



MS. QUIGLEY: Fair enough.

CHAIR WILKERSON: That's fair. And you guys can come up with --- the committee can come up with a recommendation not to, right.

MS. QUIGLEY: Yes. Just like Peter just said.

MR. KISSINGER: Peter.

MS. QUIGLEY: Yes, got you. Endorsing and recognizing; endorsing that other work that's already underway.

CHAIR WILKERSON: Any other initial thoughts? We have plenty of time later to dive a little bit more and possibly use the time. We've got two breakout sessions. But I think this period before lunch we could just sort of reflect and then maybe go into a deeper dive on some of these.

I'll let you guys give some thought to that. Then we can go back to that during one of the breakout sessions. Any other comments on that?

MR. MCCORMICK: On the whole page or just that one?

CHAIR WILKERSON: Just that one. I was just trying to allocate about 15 minutes to each one before we break.

MR. ALBERT: You know one thing we might want to consider is some type of theme that we want.

A theme. Once we kind of refresh ourselves on what that screen says up there, maybe there's a way to revisit.

MR. DENARO: Do you mean a theme for the committee or a theme for the --

MR. ALBERT: A theme for the recommendation.

MS. QUIGLEY: A theme for these recommendations, yeah.

MS. JOHNSON: And then everything falls within that and we can see clearly the nexus.

MR. MCCORMICK: I think I need to read it and figure out what's going on before you tackle it.

CHAIR WILKERSON: Okay. On the review for ITS program accomplishment, I think we were all -- Maybe somebody else can speak to that. We were trying to take just a hard look to reflect on the accomplishments and the recommendations that were there. We can go back later and I'd be happy to look at that.

MR. KISSINGER: It came from the change in Administration.

CHAIR WILKERSON: Yes, change in Administration. I'm sorry.

MR. KISSINGER: I think the sense was you had a new Administration and they weren't going to go back and pull out the old advice memos and read them. We might want to go back and highlight those things that we think are still relevant and of priority and distinguish if the Secretary should look at it.

CHAIR WILKERSON: Yes. Maybe when we do a breakout session, some of us can go around the table and think about one or two of those that we could reflect on. Would that be

possible?

MR. MCCORMICK: Yes, I think we need to map out again the things that we think are relevant to Scott's comments about the Administration.

CHAIR WILKERSON: Okay. Like the smart city challenge or whatever.

MR. MCCORMICK: And where it is towards the DSRC, etc. Start with the ones that we think are of relevance and materially important to the Administration that we continue to advance.

CHAIR WILKERSON: Okay.

MR. DENARO: I have one problem with the word accomplishments because to me this should be a broad -- This to me sounds like a review of the JPO programs. In there will be some accomplishments for which we can applaud. But in there also will be all these different programs that we have opinions about whether it's the right thing to do or not and we should change.

To me, that review there by that subcommittee that would be the activity of diving into those programs. But at the end of the day, we would have determined or decided in common on whether the JPO is doing the right thing or not, per those three charter elements.

MR. BERG: If I remember right, I thought we were supposed to say "Here's what we advised you to do."

MR. MCCORMICK: Yes.

MR. BERG: "Here's what you did and didn't do."

"And here was what really happened?"

MR. MCCORMICK: That's correct.

MR. BERG: So to me I think it was supposed to be an assessment.

MR. MCCORMICK: Yes. It wasn't supposed to be a review of everything that JPO is doing. It was supposed to be exactly what it says. See our guidance recommendations and if it followed it, did it work out well or was it a disaster? And if they didn't, should they have?

MR. BERG: Okay. That's a good point.

CHAIR WILKERSON: Okay. So maybe we'll go back during one of the breaks and we'll maybe go around the table and see if there are some that stand out. Is that fair?

MR. MCCORMICK: Yes.

CHAIR WILKERSON: So we'll break out on that. Let's look at automation and relation.

MR. BERG: So if I describe what we wanted to do, John and I first thought what we should was exactly what Ron was talking about, look at the strategic plan for the JPO and look at where industry is going and see if there's an alignment or a misalignment or what the priorities are. There are 100 million things that you could be researching, but they have a limited budget.

What do we as an industry and public and private sector and academia think is the appropriate prioritization of what that strategic plan listed out? And are there things we think are missing? Or are there too many things?

So, what we did was we went through the plan itself and summarized which parts of it dealt with this interrelationship. There wasn't too many. It talked about automation and it talked about connected vehicles, but such that they're both automated and connected. There wasn't too much focus that was the result.

So, when we want to meet again, how would the Committee advise that is this enough focus, is it proper, is it not proper, is it put in the right direction, is it prioritized in the right manner? And we never got around to getting the Committee together to assess our analysis of the existing plan.

CHAIR WILKERSON: Okay. So, it would be helpful if later during one of the breakouts we could spend some time doing that. That would be super.

MR. BERG: Sure.

CHAIR WILKERSON: Any other comments on that? That's a great summary.

MR. BERG: We want to focus on the JPO and the strategic plan, not on Federal Highways, not on NHTSA or whatever. We think all that should be included in what JPO is considering as a multi-jurisdictional, as opposed to oversight,

path.

CHAIR WILKERSON: Okay.

MR. KISSINGER: Well, maybe we ought to do that exercise before we even worry about three, four and five.

MR. MEDFORD: You know one thing that I found when I was at NHTSA is the JPO was often used as a funding arm of NHTSA's priorities because NHTSA didn't have the money to do it and it was an important activity. So JPO, to serve the interest of some of the agencies that were lacking the money on their agenda, was accommodating that. It's not that they're not aligned because they are aligned. But they're not as controlled maybe by thoughtful interactions between those agencies.

The question is how much does JPO and NHTSA, PHMSA and Federal Highway coordinate their research needs and then come up so that there's a coordinated approach. I think that there's some of that but not a great deal. So I think JPO is somewhat reactive to the funding needs which that's probably a part of their role. Right. I think it would be interesting to see how well that happens there.

MR. BERG: One of our duties is to advise the guys in Federal Highway. I'm in Detroit every week; they don't see where the research is going. That's where we can provide --

MR. MEDFORD: Yes, I think the research at least in automated vehicles is lagging behind where the state-of-the-art is. So they're trying to learn what we knew four years ago.

And it's not possible for them.

CHAIR WILKERSON: It becomes a relevance issue, right.

MR. BERG: Well, we said that the private sector can move much faster than the Government can, especially in the areas that are important from a financial or practicability standpoint. It's not a role for the Federal Government to do privatized sector funding that's already being bolstered by the future profitability.

CHAIR WILKERSON: That's going to be a good discussion. Okay. So, we'll allocate some time to delve into that. That will be great. Any more thoughts on that? I know you talked about -- I think it was just said. Let me look at my notes. Is it Peter? You said maybe we should go into that now. But I was thinking maybe we can allocate one of the breakout sessions.

MR. KISSINGER: If we're looking for an exercise of the whole group, do a review of the guidance recommendations before we start tackling three, four and five. Because I think we can attach three, four and five in some way with our review.

MR. MCCORMICK: Well, we had some comments on four. So, I'd rather put that on first.

CHAIR WILKERSON: Okay. Well, we can go back to that. We'll have some time before lunch if you want to start on that. But you're recommending to go to four.

MR. MCCORMICK: Yes. We talked about this last night as I mentioned earlier. When we look at the fact that we have a new Administration, when there's a much greater focus on infrastructure improvements, that we didn't want to see the V2I seen as competitive to shovel-ready projects.

And what I wanted to suggest is that we take technology and active transportation and either make a slight steering course correction or just add it to one of the items to look at what value we as a committee can make in terms of recommendations to the Administration that helps them understand that these technologies can support a lot of the overarching needs that the states and agencies and Federal Government must improve safety and be part of that infrastructure improvement. In other words, move it more towards V2I's aspect.

We got this in December and we didn't know what the Administration was going to do. John, do you want to add anything to that?

MR. KISSINGER: No, no. That's all fair.

MR. MCCORMICK: Okay.

MR. BELCHER: Sheryl, can you read the ones we're talking about? I can't read them.

CHAIR WILKERSON: We're on number four, technology and active transportation. And some of the topics that we looked at should we promote frequency allocation and the role of ITS in establishing evolutionary roadmap and connectivity,



funding deployment issues and census NPRM, briefing on V2V, discussion on evolution of automatic braking, funding and procurement. And then we talked about possibility having some other speakers come in.

MR. MCCORMICK: Well, from that last meeting, a couple of other people said we're not going to add any value to the funding for procurement aspect. That's not anything that we would have relevant insight into or could provide. So, those topics tended to -- the funding deployment issues and the funding procurement issues kind of fell off.

And I'm saying these are -- we haven't met with the committee yet. Half of them were not around at the last one, or whatever. But I'm just suggesting that now that we have a new Administration, now that there's a focus on infrastructure --

And V2I kind of fell off the table, partly because of budget, partly because of a lot of reasons both in terms of how the states must deal with it and where we were with the technology, etc. But I think that was a shift back to how we make infrastructure.

I talked to Ken about this before he left on the break. And he fully agrees that he thinks that that whole activity is looking at how this technology can help satisfy and service those needs. It has multiple benefits. It's a collateral benefit to all the stuff done with V2V. And it helps

get exposure to this into the right environments. And again, it helps put it into context of when you look at making your budget put together for all your infrastructure improvements don't make them all repairing bridges, except the ones that need it.

PARTICIPANT: Puts you out of money.

MR. MCCORMICK: Right.

MR. ALBERT: Given the Administration you always hear partnerships out their mouths. Is there any opportunity for putting something related to partnerships in this?

MR. MCCORMICK: I think that should always be on the table. The problem though is that when you look at the history of public-private partnerships --

MR. ALBERT: It doesn't work.

MR. MCCORMICK: -- the privates are subcontractors. There isn't a good example of a viable private-public partnership of any level of quality.

MR. ALBERT: I agree.

MR. MCCORMICK: And the question is it doesn't need to be. I mean private-public partnerships are fine. You look at how the packages were put together and I talked to several cities putting together the smart city stuff. They have the CISCOs and the QualComms and everyone else saying, let me help you write a winning proposal. By the way, we'll use my stuff.

MR. BERG: Isn't that a partnership?

MR. MCCORMICK: That's a partnership.

(Laughter.)

But all those private partners were subcontractors to the public partners. And maybe that's okay. I'm not saying it's a bad thing. I'm just saying when we talk private-public partnership we need to come down off the podium and talk the reality of it.

MR. KISSINGER: For whatever it's worth, I think we should discuss that issue.

CHAIR WILKERSON: Yes, okay. I've got it on here for when we break into breakouts. These are great topics.

MR. PLEASANT: When you're thinking about the total ITS system though, isn't it part of the privatized, like the mobile cell phone providers and that sort of thing, that will house a lot of the data and transmit the data back and forth? Part of this can be public infrastructure obviously like roads and that sort of thing. It feels like it's a little different than a managed tolling like the private contractor is like the toll and they keep them. That's a contractual relationship.

MR. MCCORMICK: Yes, but I think the fundamental question is what is the advice we would provide the Secretary, Congress, the JPO of which we can provide valuable insight on.

MS. QUIGLEY: Related to PPPs?

MR. MCCORMICK: Yes.

MS. QUIGLEY: I want to talk more about this.

MR. MCCORMICK: We can do that when we have our breakout.

MS. QUIGLEY: I don't know. I guess what I want to do is just continue to listen to this conversation because I think it's an important one moving forward to talk about an Administration that wants to push PPPs. And I don't know the history of PPPs and their success and the challenges. Maybe that's something we can talk about.

MR. MCCORMICK: I can give you the 16 years of history to it.

MS. QUIGLEY: Yes.

CHAIR WILKERSON: Okay. Now, Scott, does this tie in? Does this area tie into your question? Is this an opportunity for you to talk about yours?

MR. BELCHER: Yes, I mean we talked about it.

CHAIR WILKERSON: I'm just opening it. Otherwise, we can follow up after. But it seems like there might be some nexus here.

MR. BELCHER: My observation is that US DOT's invested a lot in connected vehicles. We've opined on connected vehicles over the last number of years in support of connected vehicles, in support of their use of 5.9 gigahertz spectrum and try to continue to support that with Congress and with the Department and with the White House. Before the last Administration left, they issued a notice of proposed rulemaking

for light vehicles. Everything has changed. You now have a new Administration that hasn't really said anything about connected vehicles. You have a new FCC that is a Republican FCC that thinks spectrum ought to be made available to others that can use it more quickly and more actively.

You have a Republican Congress. And there aren't advocates out there right now educating the new Administration about this.

I don't know where this Committee is at this point. It could pass the buck. We could be in a position where if it works that's great and if it doesn't work that's great, too. The autonomous and 4GLT and 5G, you know things are happening.

I guess the question for the Committee is do we feel strongly that we should support US DOT's prior interest in utilizing and protecting the 5.9 gigahertz spectrum for connected vehicles. And if we do, we probably ought to send the Secretary a letter saying that. At least then she's hearing it from some constituency.

If we don't, that's fine. I mean we ought to then let US DOT know that we're no longer strongly four-square behind it. I just thought that since we're together we ought to at least have that discussion.

CHAIR WILKERSON: Okay.

MR. MEDFORD: Is that more of a public policy position or a research area of emphasis on advice? I agree

with you, Scott. I mean certainly so much money and time invested. But I'm wondering about the role of the Committee which is advisory on research.

MR. BELCHER: I think if you look at how the JPO's budget a significant part of it is still associated with connected vehicles. And so, the question is should it still be OSHA to be taken and pushed.

I would say rather than talking about no continuity between connected and autonomous and that they're two separate things. There's not a whole lot of money in autonomous. That's for sure. So is the private --

MR. CAPP: That's the priorities. The only way to go with this discussion is are they working on the right instructive. Limited, out of money. Are the priorities priced so that the research is going to likely contribute some strategic results down the road?

CHAIR WILKERSON: Things you don't need to worry about because it will happen.

MR. CAPP: Things you don't worry about because somebody else is doing it or maybe it's old stuff now. But I think that's where we probably came out the most is are the priorities proportioned in a way that's helpful.

CHAIR WILKERSON: Okay.

MR. BELCHER: You probably have a strong opinion about this. General Motors probably does.

MR. CAPP: We've invested a lot in it, too. If everything is going to go in different directions, then we'll reassess that. So, it's the same thing about aligning the priorities. Right. There are still going to continue to be priorities if there's still a likelihood. But we've got to keep invested.

MR. MEDFORD: Autonomy is going to be deployed anyway. Right.

MR. CAPP: Right.

MR. MEDFORD: And there's not going to be a government and a regulation to facilitate it or necessitate it. There will be some voluntary implementation of V2V but not like a technology. And there is a grid that the technology has over V2V. Again, I think that this is the time to come to some reconciliation. I think this group could play a major role in helping or at least advising the Secretary about what we think about that, which is tough. I think a lot of that kind of motion and investment went into V2V. But I think the reality has something else to say.

CHAIR WILKERSON: Isn't there a new autonomous vehicle?

MR. BERG: It may or may not be continued because, under the Secretary.

MR. KISSINGER: We certainly have -- This group has made recommendations on policies.

MR. MEDFORD: Not on this past one.

(Simultaneous speaking.)

MR. KISSINGER: This whole recent discussion I believe is why that third bullet is up there.

CHAIR WILKERSON: Yes.

MR. KISSINGER: We've sort of circled back that way.

CHAIR WILKERSON: Okay.

MR. GLASSCOCK: We must stop and start the third automation advisory committee to follow the schedule.

MR. DENARO: Ron, you said something interesting that maybe in 18 years since we first allocated the 5.9 spectrum technology has moved forward. And some of the use cases for V2V may have been supplanted by other technologies somehow.

(Simultaneous speaking.)

MR. MEDFORD: There are certain use cases and if the V2V data is accurate and precise enough that it could be helpful, I would say it would just be another input for certain use cases that would be helpful. You don't need it to do it.

But it does make it more efficient and a little bit more effective in a few important use cases. But generally, I think the thinking is you can't wait for that. You've got -- The technology is going to move and we've made ways to make it work without it.

MR. DENARO: So Scott was suggesting that we affirm or not our support to V2V.



CHAIR WILKERSON: Should we make a recommendation?

MR. DENARO: And if so --

MR. MEDFORD: Continued research into V2V or?

MR. MEDFORD: Any PSO in the context of where it is today and so forth. Frankly, I think that's a pretty good suggestion that we as a committee should come to a consensus on that. And then we should inform the Secretary of this body and what are our opinions. I think that's huge for us.

MR. CAPP: Yeah, I agree.

CHAIR WILKERSON: So I'll allocate some time for us in the breakout session and to come up with a time. We'll come up with a breakout into these subject areas and take a deeper dive into them. Is that okay?

MR. BELCHER: Yeah, it may one you want to do as a group. I don't know that we're going to -- You know, we may not be able to come to a consensus. It is getting increasingly more murky and challenging.

CHAIR WILKERSON: Yes.

MR. DENARO: That's important, too, if we don't come to a consensus.

MR. BELCHER: No, I agree. But I don't think you want -- I mean if you set three of us up in the corner to do it, it depended on the three you set up in the corner.

CHAIR WILKERSON: Yes or no. I agree. I think the purpose of this open dialogue is to sort of at least so that

the new members hear some of the dialogue. It brings a perspective to this chart that we did and the thought process that went into that.

Now we're sort of coming up with two or three little issues that we may want to break out to. And then I think the recommendation would be for the committee chairs to have the benefit of everybody. So, when they do go back into their subcommittees to really hone in those so that they can make proper recommendations. That's how I'm recommending based on the time we have.

MR. KISSINGER: One example, Scott, is I seem to remember a couple of meetings ago that you made a recommendation which I think was endorsed and ended up in the advisement letter that DOT put higher priorities on commercial vehicles and not just private vehicles. To me, that's --

MR. MCCORMICK: The previous committee we made unanimously the recommendation for V2V and V2I for commercial vehicles.

MR. KISSINGER: So to me that's the value of going through a review of the past recommendations and at least that's a place to start. And we may decide that we may want to emphasis or we want to get rid of an old recommendation and add a couple new ones.

(Simultaneous speaking.)

MR. BELCHER: Yes, I guess my only comment is I think

we have two exercises going on. We have the one that's going to drive the new memo that's going to come in December. And then we have a moment in time exercise. And I think they're different.

I think if we care about 5.9 we should decide that and if we do, we should weigh it in now. And we may not. I mean that's my opinion. And I'm a consultant. That may not mean anything anymore.

(Laughter.)

CHAIR WILKERSON: We can have that. I think each of these topics we're raising has time frames, right?

MR. BELCHER: Yes.

CHAIR WILKERSON: For which we need to engage. Is it now or later or not at all? I think when we get to that discussion we can say there's a sense of urgency or there's not a sense of urgency. And we move it up the time frame or not. Is that fair?

MR. CAPP: I think there's a strategic sense of urgency on the topic because the JPO still has a lot of eggs in this basket. And when you decide whether we think that's a good egg, there are people that are pushing to change the whole ecosystem. We must decide whether it's going to make sense to spend good money after bad or is it good money after more good money?

CHAIR WILKERSON: All right.

MR. CAPP: That's a good one.

CHAIR WILKERSON: So I have that down. Do we feel strongly to support US DOT prior interest in using spectrum for connected vehicles? If so, should we make a recommendation? Is time of the essence? Fair?

Okay. So, we have a few more minutes before break for lunch. The last one was rural development assistance. And do you want to talk about that? Can you blow that up a little bit too for Steve?

MR. ALBERT: The good news is we have much of this written up. Also, the good news is on the congestion management RFP. The paragraph I think that I wrote previously was embedded in this under rural technology deployment. This says and I know this is all because of my friend, Bryan.

MR. SCHROMSKY: Yes, the rural guy.

MR. ALBERT: I guess the issue is we're looking at incentives, political issues -- I'm reading this -- stakeholder groups, educational awareness, passenger rail regs overlay on bus. I'm not sure what that means unless it means steel wheel into rubber wheel vehicle. Funding and procurement of infrastructure, safety benefits, speaker connections, leadership forums, deployment coalitions.

I'm not entirely sure what those other things are, but I think I could form the group back together, write a paragraph and then treat that as a straw-man within the next

couple of weeks.

MR. BELCHER: It strikes me, Steve, that one of the things to consider, and Bryan, is obviously the recent incentive option and first thinking about what opportunities there might exist because of that because of what the ISPs are going to be forced to do on the communication side.

If there's a way to be opportunistic. Then the question there is how can the JPO advance that discussion or can they? And again, if they can't, then let's not -- I mean that, too, is a very murky, very nebulous. There's a lot happening right now in the telecom world on dual assets.

MR. ALBERT: I see a big part of this be written with the tone of rural being the last mile both from an applications standpoint and a communications standpoint. Then Bryan would weigh in on what the communication needs might be or what we could be doing or what we need to be doing. Right, Bryan?

MR. SCHROMSKY: Correct.

MR. ALBERT: Any other comments from the group on what was written up there or just wait until it comes to a theater near you.

(Laughter.)

CHAIR WILKERSON: How would you like to use the time for when we do our breakout session to help your committee? Are there other subtopics you think you want to dive into now

that we can move into? Maybe we can revisit some of those and help you target areas.

MR. ALBERT: I need a printout of what that says to be able to digest all those bullets.

CHAIR WILKERSON: Okay.

MR. ALBERT: And maybe what in the world were we trying to say. If the group wants to get together after lunch, that's great. And we'll go from there. And like Scott brought up and Bryan mentioned, try to marry both what we'd like deployed and how we need better communications to deploy those things.

CHAIR WILKERSON: Okay.

MR. WEBB: I feel like the shoe's on the other foot for a change. There are four of us at the table that represent our urban organizations. And I have an interest in some of those same things particularly as far as deployment and getting guidance out. So putting it into the category of rural development, I didn't see anything about how that could be transferred over to the more urban infrastructure needs that are out there as well.

Usually rural gets overlooked. This one I felt like okay.

MR. ALBERT: It's a wonderful feeling.

MR. WEBB: I thought you'd appreciate that. So just from that standpoint, particularly some of the deployment issues, local governments, I think I sent you a copy that US

DOT is out talking about "Hey, look. We've got things. You need to be thinking about this stuff. You need to be thinking about deployment, and so forth." But I don't think we have a very good necessarily road map yet as far as here is the first baby steps to get into that as far as trying to do this. So I'm just wondering particularly since I see the deployment and education and stakeholder. Some of the same stuff applies no matter what.

MR. ALBERT: What if we change the title of this to rural/local.

MR. WEBB: Just any local government, yeah.

MR. ALBERT: And there is a lot of stuff going. I know we're pitching it to the Feds of the rural ITS toolbox best practices or whatever. But maybe if we take it from that standpoint. I think everything is trying to be driven down to the local level including performance measures and metrics.

MR. PLEASANT: Yes, I would second that. I think it makes sense. And to add to that, I came in on the tail end of the conversation for some words that you had said, George, and that is what is the role of state governments here.

Thinking about this, I clearly see a role for the Federal Government, allocated spectrum and getting consistent platforms across the ecosystem to operate these systems well. We see at the local government level things as mundane as where do you park vehicles. Do they abide by the speed limits? Do

you set different regulations? Is there a difference in the way we need to maintain things like payment markings, signage and signals and blah, blah? So you go on and on at the local level.

I know our state legislature, there's legislation that is active right now. There's a bill moving through the General Assembly that speaks to autonomous vehicles. And it speaks to it in kind of non-technical terms, like adding the words "autonomous vehicles" next to driver-operated vehicles.

But then there's this big preemption down there that says local governments can pass no regulation that regulates autonomous vehicles.

MR. WEBB: If you hadn't done that then the state legislature would be focusing on that.

MR. PLEASANT: Yeah. You know the state legislature I think sees their mission as putting cities out of business.

MR. WEBB: Ours is trying to do the same thing.

MR. PLEASANT: So that's a different thing. You have this space that states are trying to get themselves into. But I'm not seeing a role for states.

MR. ALBERT: One of the things that has gone on -- and I can't remember. I don't think it was under you, Scott -- is that there are outreach meetings relating to local and connected vehicles and trying to educate them. I think one of the things we could probably recommend to JPO is a further and



a broader outreach effort. Most of the locals are just figuring out what ITS is, let alone what a connected vehicle is or autonomous vehicles are and understand the impacts to their organizations as well.

MR. WEBB: One of the big opportunities that I see coming up is that just coincidental. The National Association of Counties annual meeting is going to be held in Columbus, Ohio. So hopefully there will be lots of stuff on the program that we could get from Columbus as far as educating what they were doing and why they were doing it and so forth like that to try to open people's eyes as far as what might be going on and what they should be thinking about.

I'll be talking to our NACo staff people around how the program is set up as far as smart city.

MR. ALBERT: Who would have ever thought?

MR. WEBB: Yes.

CHAIR WILKERSON: Okay. So any other comments? Otherwise I think what we should do is break. We do have access online for those of you who don't have your computers. We could go back and look at the transcripts if you want during the lunch break and revisit what you said or didn't say.

And then my suggestion might be we've got two other time frames for which we can break out. We can break those up. One recommendation was to start with the automation interrelationship. Maybe we could start with that. Do we

think we need more time on that one? Go ahead.

MR. BERG: I think we want to talk about the guidance review.

MR. MCCORMICK: Yeah, the guidance review.

CHAIR WILKERSON: Sorry. I'm looking at -- Try it again.

MR. BERG: It's the blue one, the second one on the left.

CHAIR WILKERSON: Okay. So, is that one we think we need to spend a lot more time on?

MR. MCCORMICK: Yeah, we've got new members. And I think it's important that we do that one first so that they get the flavor for what we've done or failed to do in the past.

CHAIR WILKERSON: Okay. I'll come up with a proposed time to maybe get us out of here on time and keep that up. We can adjust it during the breakout if we need to. Is that fair? All right. We'll break for lunch.

(Whereupon, the above-entitled matter went off the record at 11:46 a.m. and resumed at 12:33 p.m.)

CHAIR WILKERSON: We're going to get started. With respect to the agenda for the afternoon Peter had a recommendation and I think -- Where are you?

MR. KISSINGER: I'm right here.

CHAIR WILKERSON: There you go. And I welcome innovation and new ideas and ways of thinking, so I think he

should be our facilitator for the rest of the afternoon.

But here are two options. So, Peter, why don't you go ahead and talk about how you are recommending that we might use the rest of our time this afternoon.

MR. KISSINGER: Well, under Option A here, I think what we left on and without making any other decisions, but I feel like that's what we had kind of decided to do, which was to use the full group to look at all the old recommendations and decide what we wanted to do with some of those and then go into the breakouts and then ultimately have the breakout reports and have a full discussion as appropriate.

And when I started thinking about that, I started realizing we could spend the whole afternoon with the whole group going through the recommendations, and maybe that's worthwhile, but if we want to expedite the process a little bit we could go to Option B which would be to go right to breakouts and have each breakout group focus on those recommendations that we have already made that are relevant to that group.

Now there may be some that aren't covered, there may be some overlap, but I think we could sort that out as we move forward. And I don't care, I don't have a preference either way, but I thought it was worth sort of getting the group to decide how we want to handle it as we go forward this afternoon.

CHAIR WILKERSON: So I have a question. So would that be looking at the Advice Memorandum from 2008 to 2015 or

just -- I'm trying to understand the scope?

MR. KISSINGER: Well whatever, you know, whatever that second column is where we talked about it. We were originally calling it accomplishments and then we decided it was just review of the old recommendations.

CHAIR WILKERSON: Yes.

MR. KISSINGER: I don't know how far back we want to go. I mean, to me, any of the ones that are still open that are relevant are worth I think raising the review and deciding whether we want to highlight those to the new Secretary.

CHAIR WILKERSON: Yes. Well, if they start -- There are currently one, two, three, four, five, six, seven Advice Memos starting in 2008.

There is May 2008, October 2008, none for 2009, there was one in 2010, one in 2011, none in 2012, and then '13, '14, and 2015. So probably going way back is not being useful.

MR. KISSINGER: It may be because, I mean this is supposed to be a strategic advisory committee, I think --

CHAIR WILKERSON: Yes.

MR. KISSINGER: -- or panel, or whatever we're called --

CHAIR WILKERSON: Okay.

MR. KISSINGER: So I think it would be better if we went over the older ones and if we got there --

CHAIR WILKERSON: Okay.

MR. KISSINGER: -- you know, what I mean, start from the most recent and go back and you'll probably see that some of them aren't that relevant any more, or not.

CHAIR WILKERSON: Yes.

MR. KISSINGER: I mean maybe they do have a track record of showing some changes or --

MR. MCCORMICK: Yes, and if they were implemented we can ignore them.

MR. KISSINGER: Right.

CHAIR WILKERSON: So --

MR. MCCORMICK: We vote on A or B?

CHAIR WILKERSON: The floor is open and then whatever we pick I think we should have somebody come up with a timeframe for how we manage our time for the breaks.

MR. MCCORMICK: I vote for Option A.

MR. KISSINGER: So do I.

MS. JOHNSON: So do I.

MR. WEBB: So do I.

CHAIR WILKERSON: Full group?

Anybody opposed or would prefer Option B?

(No audible response.)

CHAIR WILKERSON: So here -- So, explain, Peter, can you talk about how you, what your, how you think this should work, because we will need access to computers to look at the recommendations, or we could -- You're saying the full group we

could pull it up and then just scroll through it?

MR. KISSINGER: Yes.

CHAIR WILKERSON: Okay. And then how do you -- Can you figure out how, can you give me an idea about how to break out the time so that we can make sure that we don't get behind?

MR. MCCORMICK: Well, it's 12:30, right?

CHAIR WILKERSON: Yes.

MR. MCCORMICK: So we've got -- If we follow your breakout here we're got an hour and 15 minutes to do the review, if we do that first.

CHAIR WILKERSON: 12:45, but, yes.

MR. MCCORMICK: And we've got an hour and a half from 2:00 to 2:30 to do the breakout and then 3:30 to 4:00 to do a report out on the breakouts and then we can close.

CHAIR WILKERSON: Okay, all right. Is that okay?

MR. DENARO: And I think what we said was we are going to review these, we're going to review the response, and then assess whether our recommendation has been followed, you know, what's the status of --

MR. MCCORMICK: I don't think we need to go into the details of the recommendations.

MR. DENARO: No?

MR. MCCORMICK: Just do, just to point to the new people, do we understand it, if not then whoever fostered it can explain it and then yay or nay or if that's worth re-

advocating for or forget it.

CHAIR WILKERSON: Okay.

MR. MEDFORD: And at the end of the day, what, we -  
- What do we have?

MR. MCCORMICK: Well at the end of the day what we should have is a recap that we send back to the JPO for dissemination to the Secretary that says just so you know this is the past work of the committee and we would like to reaffirm that these were advices that we gave that we think are still valid and needed.

CHAIR WILKERSON: But that doesn't address the other categories, right, the other sections? This is just only -- If you pull up that chart this is only section --

(Simultaneous speaking.)

MR. MCCORMICK: This is just our previous submittals.

CHAIR WILKERSON: Right, but that's Section 2. That was that first blue column.

MR. MCCORMICK: Yes, right.

CHAIR WILKERSON: Then we must go back and the breakout sessions --

(Simultaneous speaking.)

CHAIR WILKERSON: -- to do the others?

MR. MCCORMICK: -- the other four, right, or three.

CHAIR WILKERSON: Okay, to do the other four. Is

that fair? And then do we have access to be able to pull up the --

MR. GLASSCOCK: The report, that report where you put all recommendations?

CHAIR WILKERSON: Yes.

MR. GLASSCOCK: Yes, that's what I'm --

(Simultaneous speaking.)

CHAIR WILKERSON: Okay, great, thank you. And then we can maybe --

MR. MCCORMICK: But there is one operational question. We have people here that are on multiple, I mean the breakouts --

CHAIR WILKERSON: Well, that's the concern, right.

MR. MCCORMICK: So if we just take a quick look here on how many duplicates we have. Tina is on two.

MS. QUIGLEY: Yes.

MR. MCCORMICK: John is on one.

(Simultaneous speaking.)

CHAIR WILKERSON: Well Tina would go to the one that she is chairing.

MR. MCCORMICK: Chairing.

MS. QUIGLEY: Well we just decided that doesn't exist anymore.

(Laughter.)

(Simultaneous speaking.)



MR. DENARO: Tina's going to Starbucks.

MS. QUIGLEY: I do have a flight at 3:20.

(Simultaneous speaking.)

MR. MEDFORD: Clarification?

CHAIR WILKERSON: Sure.

MR. MEDFORD: Have we affirmed that those groups will either stay or go the other way or --

(Simultaneous speaking.)

CHAIR WILKERSON: No, I think what we're going to do is spend some time during the breakout sections to --

(Simultaneous speaking.)

MR. MEDFORD: And to make that recommendation?

CHAIR WILKERSON: Make that recommendation --

MR. MEDFORD: Okay.

CHAIR WILKERSON: -- assess some of the issues that came up. I took some notes for some of those sections based on what was discussed and then we go from there.

MR. MEDFORD: Okay.

CHAIR WILKERSON: Is that fair?

(Chorus of yes.)

CHAIR WILKERSON: Okay. So, we're going to wait to get the update and then we'll work on that.

MR. GLASSCOCK: Yes, I'm trying.

CHAIR WILKERSON: And, again, people can switch if somebody wants to do another, you don't have to stay on those

committees, but I think if we could breakout with the leaders of those committees and then whoever is left over we can filter in as needed, fill in the group.

We could have done a Survey Monkey.

MR. ALBERT: Are we good? We're waiting for that, right, on the tables?

(Simultaneous speaking.)

CHAIR WILKERSON: Yes. Ask Peter if we are recommending -- I made a copy of the -- It was all emailed to us. What day was that email?

Do you remember what day you emailed that to us? I could, we could, maybe for those of us who do have computers it might be helpful to -- Let me see if I can find it.

MR. GLASSCOCK: Or I can just email it to you again.

PARTICIPANT: What are you looking for, the recommendations?

CHAIR WILKERSON: Yes, the date that he gave, Stephen sent it all to us, that summary.

MR. GLASSCOCK: I just sent it to you.

CHAIR WILKERSON: To the whole group, oh, perfect, then people can also look at it on their device.

(Off the record comments.)

CHAIR WILKERSON: Okay.

MS. JOHNSON: Oh, there it is.

CHAIR WILKERSON: How many are there on there total?

It's long, isn't it?

MR. STERN: I think there are 47 pages.

CHAIR WILKERSON: How much?

MR. STERN: Forty-seven.

CHAIR WILKERSON: Oh, wow.

(Simultaneous speaking.)

MR. DENARO: Well, do we want to look at this or do we want to look at the report to Congress?

PARTICIPANT: Report to Congress.

MR. DENARO: Congress has the responses from the JPO.

CHAIR WILKERSON: I think this is a summary of them.

MR. DENARO: Oh, it's a summary.

CHAIR WILKERSON: I think it's a summary and -- Is this correct? This is the summary that he gave us with the JPO's response.

MR. DENARO: Oh, I see, it's okay.

CHAIR WILKERSON: This was --

(Simultaneous speaking.)

MR. MCCORMICK: All right. From memory, we can skip this one because we did that and they responded to that and so that's what we are doing.

CHAIR WILKERSON: What is this one? I can't -- I haven't even read it yet.

MR. MCCORMICK: This is the one that issued the

universal access to the transportation systems and that this said we should ensure that this is under, overarching, meaning of the JPO's activities, which they basically said it is.

MR. GLASSCOCK: It starts with "Oh, listen" --

(Simultaneous speaking.)

CHAIR WILKERSON: Okay, great.

MR. MCCORMICK: I'd like to go the other way...

(Simultaneous speaking.)

CHAIR WILKERSON: Okay, that's great.

PARTICIPANT: Starting at Page 42.

CHAIR WILKERSON: We're getting there.

PARTICIPANT: Forty-seven.

CHAIR WILKERSON: Okay, Recommendation 17 --

(Off the record comments.)

CHAIR WILKERSON: You might have written that. I think you did write that.

MR. BERG: Clearly, nothing has been done yet. They are just discussing --

CHAIR WILKERSON: There is no action.

MS. JOHNSON: Right.

MR. MCCORMICK: Right. They participated in the university training world, but they didn't hold the summit. They do, they have, however, since in the last few years put together a comprehensive training set of modules online.

So, I don't know that this is something of a high

priority for us to re-reinforce it.

CHAIR WILKERSON: And they are doing it privately, too, right? There is a private sector component to that?

MR. ALBERT: The private sector is involved for fulfilling the demand that the workforce centers help identify, and it is still going on, all that.

MR. MCCORMICK: Right, this is still ongoing.

MR. ALBERT: Yes.

CHAIR WILKERSON: So on a scale of --

MR. MCCORMICK: One to five.

CHAIR WILKERSON: -- one to five, of one being we -

-

MR. MCCORMICK: I just think we are in a position of saying yay or nay, what do we want to tell the Secretary.

CHAIR WILKERSON: Yes, yes.

MR. ALBERT: Okay.

MR. MCCORMICK: Where -- I mean and reasonably you want four or five takeaway points. We're not going to suggest more than that.

CHAIR WILKERSON: Okay. So this is a nay.

MR. MCCORMICK: I vote nay.

PARTICIPANT: Yes.

CHAIR WILKERSON: Comments?

PARTICIPANT: Agree.

CHAIR WILKERSON: Okay. Sixteen?

MR. MCCORMICK: The same thing on this one.

CHAIR WILKERSON: This is another workforce center of excellence?

MR. MCCORMICK: Yes. And they are doing that through the PCB program, yes.

CHAIR WILKERSON: Okay. So nay on 16?

MR. MCCORMICK: Yes.

CHAIR WILKERSON: Fifteen?

MR. MCCORMICK: AASHTO was doing this. They have an ongoing -- The American Association of State Highway Transportation Officials has an ongoing program through their, I forget what it's called, the operations and group that does this.

CHAIR WILKERSON: So this is a workforce development again?

MR. MCCORMICK: Yes. And it's also part of their PCB efforts.

CHAIR WILKERSON: And JPO, did they, what -- Let's see who concurs, they concur --

MR. MCCORMICK: Federal Highway doesn't.

CHAIR WILKERSON: Okay. I am comfortable with a nay on that one. Anyone else? Comments?

(No audible response.)

CHAIR WILKERSON: Okay. Fourteen.

MR. MCCORMICK: I would offer that I think this one

is important, probably four out of five.

CHAIR WILKERSON: Susan would agree, too, I think on that one. Susan should be --

MR. ALBERT: Yes. Is this being addressed by the private sector?

MR. MCCORMICK: It is, but they had said that they were going to start the \$8 million joint fund.

And it already started, so given that they are going to be reevaluating all the budgets I think this one is important for them to know they should -- I'm not saying it's a five out of five, but I think it's a four out of five.

Eight million dollars isn't a lot of money, but to some states for sandboxes it is.

MR. ALBERT: Especially because it addresses the rural aspects as well.

MR. MCCORMICK: Yes. That's one of the few programs...

(Simultaneous speaking.)

MR. MCCORMICK: And it's one of the few programs that specifically addresses the rural areas.

PARTICIPANT: We did read these before the meeting.

CHAIR WILKERSON: Oh, good for you. Good for you.

MR. PLEASANT: Do we know whether this recommendation discussed capturing data from shared vehicles -

-

(Simultaneous speaking.)

MR. MCCORMICK: It did not.

MR. PLEASANT: -- services?

MR. MCCORMICK: It did not. And given that I think as John pointed out a couple years ago the automakers believe that they are the custodian of the vehicle owner's data.

I think getting into the data issue is outside the scope of this committee.

CHAIR WILKERSON: But if we raised that before --

MR. BERG: Can we say that's the big part of their research going forward, too?

CHAIR WILKERSON: Yes, he did say.

MR. MCCORMICK: Yes.

MR. BERG: And it's definitely in their plan, it's all over that.

CHAIR WILKERSON: Yes.

MR. MCCORMICK: For ITS JPO's plan, so --

CHAIR WILKERSON: That's right.

(Simultaneous speaking.)

CHAIR WILKERSON: So 14 we are saying yes right now?

MR. MCCORMICK: Yes.

CHAIR WILKERSON: Okay, let's keep going. That's one. Number 13, shared mobility. What's different from this one versus the other? This is --

MR. MCCORMICK: This one had to do with developing



policy guidance, the other one did not.

MR. PLEASANT: I think this is on ADA considerations.

CHAIR WILKERSON: Oh, that's right, we did say that that was an issue.

MR. MCCORMICK: To me this is a three out of five. If we're trying to pick four or five of the most important topics this is like second place. I wouldn't put it in the top five.

CHAIR WILKERSON: Any other comments or thoughts anyone? Danny?

MR. PLEASANT: You don't say it from an inclusiveness and equity perspective, the shared vehicle, a big hole in the shared vehicle infrastructure and the ecosystem is people disability, it's just not available.

So to me that and the data capture, for those of us who deal with Department of Transportation issues and try to use data to figure out that, I've got this one and conditions of streets and conditions of public transportation and all that. It seems sort of important to me.

MS. JOHNSON: And I would echo that as well because often times that disenfranchised population isn't considered but when you talk about shared mobility and you look at the transportation network companies and what we do in the public transit arena, i.e. moving people, with paired transit services

that came into existence with this Act back in 1990 we have to consider that these people need to move to and from and we talk about access to healthcare, and I believe we had a discussion in this forum, we would be remiss not to include this going forward, especially when we are talking about autonomous vehicles and connectivity, because we are clearly leaving them out of the equation.

CHAIR WILKERSON: And this addresses Ken's issue about what public service needs are being met through the use of public transportation.

MS. JOHNSON: Exactly, right.

CHAIR WILKERSON: Okay.

I see. And it was listed on our -- We talked about it at the last meeting --

(Simultaneous speaking.)

MR. MCCORMICK: Can you scroll down and look at the JPO's response?

CHAIR WILKERSON: I'm sorry?

MS. JOHNSON: They probably told us to kick rocks.

MR. MCCORMICK: The Mobility Services for All Americans covered with \$1.3 million, so the deal currently has -- so is the JPO actions satisfactory or do we re-recommend it because we want more funding going there?

PARTICIPANT: Just make sure it stays there.

MS. JOHNSON: Yes.

MR. MCCORMICK: Stays there, okay.

MS. JOHNSON: Yes, right, because there was a limited amount of funds that were made available in the FAST Act, but I mean good God it was only like --

MR. MCCORMICK: \$1.3 million.

MS. JOHNSON: Yes. To go across the country. What can we do with \$1.3 million divided up by 50 states and a couple territories?

MR. BELCHER: You could fund a consultant.

(Laughter.)

CHAIR WILKERSON: Okay, Number 12. Okay, so that's a yes, and stay there. Okay, so 12. We're getting there.

MR. MCCORMICK: Can you scroll up a bit? I don't think that's the top.

(Off the record comments.)

MR. MCCORMICK: There you go.

CHAIR WILKERSON: Oh, I'm sorry, there we go.

MR. MCCORMICK: Okay.

CHAIR WILKERSON: Oh, it's Number 12, okay, "should be integrated."

MR. BERG: I think this and the other one should be combined.

PARTICIPANT: It seems so.

CHAIR WILKERSON: Bike sharing and shared use together?

MR. BERG: Yes.

CHAIR WILKERSON: There's a typo in there.

MS. JOHNSON: Yes.

CHAIR WILKERSON: "Although the program is still in its initial stages" -- Okay, so maybe merge two at 12 and 13. That's a keep, okay.

PARTICIPANT: Ready for 11?

PARTICIPANT: Yes.

CHAIR WILKERSON: It's a short one.

MR. BERG: I think this one is stating the obvious.

MS. JOHNSON: Right, and if money is available funding is available, that's with everything.

CHAIR WILKERSON: Okay. And that can be tied into the other two, right?

MS. JOHNSON: Yes.

CHAIR WILKERSON: Okay. So 11, 12, and 13 merged.

MR. BERG: Right. So if you look at the answers to all of these it says if money is available --

CHAIR WILKERSON: If money is available.

MS. JOHNSON: Right.

(Simultaneous speaking.)

MR. BERG: -- that's why we focused on prioritizing..

CHAIR WILKERSON: Yes.

MS. JOHNSON: Yes.

MR. GLASSCOCK: Yes, maybe if I can --

CHAIR WILKERSON: Go right ahead.

MS. JOHNSON: Yes.

MR. GLASSCOCK: Wherever you are suggesting and saying that more funding would be appropriate, we have already agreed.

MS. JOHNSON: Okay.

(Laughter.)

(Simultaneous speaking.)

MR. GLASSCOCK: I just, you know, we're sort of, you know, we do what we get.

(Simultaneous speaking.)

MS. JOHNSON: Trust me, I get it.

MR. GLASSCOCK: You know, I mean I don't know how we could --

MR. MCCORMICK: Well, but if we recommend that they allocate funding to these certain specific areas at least there is a voice in the darkness --

MR. GLASSCOCK: True.

MR. MCCORMICK: -- you know, coming out of the --

MS. JOHNSON: And it's prioritized.

MR. MCCORMICK: Right.

(Simultaneous speaking.)

MS. JOHNSON: Yes, maybe that's what, we try to think of an alternative funding source where the onus isn't on the federal government.

(Simultaneous speaking.)

MR. MCCORMICK: Right. I mean the current Administration may have to take it away from the "milk for kids" or something, but go ahead. That's not in the record just so you know.

MR. PLEASANT: Yes, I think as we go through there is like, it looks like Recommendation 7 and 8 --

MR. BELCHER: And that's McCormick?

(Laughter.)

(Simultaneous speaking.)

MS. JOHNSON: Yes, get the right Scott, right.

(Simultaneous speaking.)

CHAIR WILKERSON: Okay, I'm sorry, Danny, you were reading. Are you reading 11?

MR. PLEASANT: Yes, I was just saying it looks like funding is in, kind of written in detail in Recommendation 7, 8, and 9.

CHAIR WILKERSON: Yes.

MR. MCCORMICK: It's a standard response from the JPO.

MS. JOHNSON: Yes.

MR. PLEASANT: It's a good idea if we could get the funding for it.

CHAIR WILKERSON: Yes.

MR. MCCORMICK: All right. What's the next one,

ten?

CHAIR WILKERSON: So 11, 12, 13 are somewhat merged if we do do that. Ten, so we're still only two right now, that's good.

MR. MCCORMICK: You see, and JPO responded to a lot of these that all this is part of their mod sandbox deployment program, which had a total of \$8 million.

So, either the issue is that I think this is part of that whole sandbox set of recommendations, then maybe our recommendation is that they consider, you know, substantially increasing the funding in order to accomplish these goals.

CHAIR WILKERSON: Or prioritize which ones they spend funding for, right, what they --

MR. MCCORMICK: Or prioritize them, correct.

CHAIR WILKERSON: Which seems to be the way the current Administration is looking at things, right, what things can we do given the cost, right? We've got two for one --

MR. MCCORMICK: We don't even know what the current Administration is doing.

CHAIR WILKERSON: No, but I mean think about just the trends, I mean they're two for one regulations, they've got, you know, how they are looking at --

MR. MCCORMICK: Yes, and that's the most difficult and confusing Executive Order because it takes just as long to remove a regulation as it does to insert one, and are beneficial

owners of --

(Simultaneous speaking.)

CHAIR WILKERSON: I am not challenging that, I'm just looking at the context in which we are -- the landscape in terms of how we shape the tone of our recommendations should take that into consideration if we are going to recommend that there be funds then we may also want to say, here, if you have to choose here are the ones we recommend you focus on first. That might be helpful. So --

(Simultaneous speaking.)

MR. MCCORMICK: Yes, we may want to when we get done combining these, like 10, 11, 12, and 13, we may look at it and say maybe the recommendation is to just concentrate on advancing the mod program, which then has these elements underneath it rather than getting into four different recommendations.

CHAIR WILKERSON: So this is different though. This was on transit customers and single occupancy motorists.

MR. MCCORMICK: Right.

CHAIR WILKERSON: So --

MR. MCCORMICK: But, again, they are saying they would do it all under their mod program so it just becomes, these become sub-tiered bullet points under the mod program.

CHAIR WILKERSON: But in terms of the mod program is this a higher priority over the other ones we have seen or not?

MR. MCCORMICK: I don't have the materials --



(Simultaneous speaking.)

CHAIR WILKERSON: I mean I am just looking for your thoughts on that.

MR. MCCORMICK: I don't know that we can say that without putting that together and looking at the four of them and saying are the priorities here, are they all equally important.

I think they're all equally important in my opinion it's just you apply different levels of funding to each entity.

CHAIR WILKERSON: So on ten -- Are you saying that ten should be merged with 11, 12, and 13? Does everybody agree? You are the only one speaking so I'm just --

(Simultaneous speaking.)

MS. QUIGLEY: -- I would say, yes, then, like Scott said it's probably not our task to identify which one of them has a higher priority over the other if they are currently included into the mod sandbox jurisdiction.

CHAIR WILKERSON: Okay.

MR. BERG: If you have three or four points you want to make out of the eight years' worth of advisories you got to kind of --

MS. QUIGLEY: Call.

MR. BERG: -- categorize them some way.

CHAIR WILKERSON: Yes.

MR. BERG: Or consolidate.

CHAIR WILKERSON: Okay. So, categorize under mod, okay. All right.

MR. BELCHER: Sheryl, I'm still, I'm thinking about a comment earlier about what would be useful at the agency.

CHAIR WILKERSON: Yes.

MR. BELCHER: I keep thinking about Ron's comment that sending a laundry list of things they probably wouldn't read, and I guess my -- I am kind of curious, so we are all, we have all been decision makers and we all know what we like.

Ron is the only one here who has sat in as a, you know, in that chair at US DOT. I mean I am kind of curious, Ron, what you think about this exercise.

(Simultaneous speaking.)

MR. MEDFORD: So one thing I think would be helpful, like if categorize like what you are trying to address, like what's the goal of a recommendation.

So, you know, are these congestion issues, mitigation issues, are they safety issues, are they -- then say for, you know, or for, you know, improving, you know, the availability of transit, and whatever the uses are.

If you could -- For me, if you could have classes up here, say here are three or four recommendations to address this area, and it's a transit issue, or whatever it is, or vehicle safety, or, you know, traffic safety, whatever it is, and then have a few there that hit home that are helpful and seen as

impactful, right.

And, I don't know, but I don't know what JPO thinks about that, that's just from my perspective, and I don't know, maybe it would be good to hear what JPO thinks about if we wanted to modify in the future some way to present the recommendations so that they would be, you know, easy to read and kind of seen by the people that read them as, hey, these are important and significant and they have kind of crossed indexed in areas of important, you know, you hit on transit, you hit on NHTSA traffic safety issues that you've hit on that kind of have some of the stuff the Federal Highway does, and so you've got those categories that are important to them.

That would seem to make a lot of sense to me, but these seem so, if you've got five or six recommendations addressing kind of this little niche area that seems awfully "weedy" to me.

CHAIR WILKERSON: Okay.

MR. MEDFORD: But maybe that's what JPO wants, I'm not sure, but that's how I view it.

MR. BELCHER: What did you get from your Federal Advisory Committees?

MR. MEDFORD: So we would want more; we thought that this committee was useless.

(Laughter.)

MR. MEDFORD: And I'm just being honest, right.

MR. MCCORMICK: Yes.

MR. MEDFORD: Yes, yes, so --

CHAIR WILKERSON: That's what he told me on the break, too --

(Simultaneous speaking.)

MR. MEDFORD: And so when Ken called me to ask me join, I'm not sure if this is going to be worth my time, you know, but...

CHAIR WILKERSON: Yes.

MR. MEDFORD: -- I think we'll see. I mean -- So I think you should put yourself in the position of understanding that people are getting it and, you know, if it doesn't align with what they think is important maybe the JPO will give some light to it because you are recommending it and make you feel good.

I don't know, but I think from kind of a senior policy person you'd like to see some alignment between the priorities that the people in the Administration have that are coming from this group, and then some things that maybe they are not thinking of that you want call their attention to because you think they are significant, right.

And so, I think that in order to be relevant you've got to be kind of current and elevated and zoom out to some higher level of thinking about what to do that has a program that can be associated with it, but at least that's my thinking.

MS. QUIGLEY: So on a scale of one to ten as to how effective some of these recommendations that you are looking at right now are, what would you, where would you put them?

MR. MEDFORD: Well, so, see, some of these I don't know enough and I think it would be wrong for me to -- I can't judge these because I don't have the background in some of this area, so I don't think it's fair of me to critique them because I don't know much about them.

So, I think in the area of transit and the rail I am not very knowledgeable at all, and so I don't think it would be fair of me to try to judge them.

But I just noticed there are lots of recommendations with kind of like the same theme here, just slightly different. And I have heard you say, well, let's combine them, which would, you know, be a thoughtful way of trying to just pick one theme there and --

CHAIR WILKERSON: Well that was the shared use and disabilities --

MR. MEDFORD: Yes.

CHAIR WILKERSON: -- and that we might be able to categorize that.

MR. MEDFORD: Yes.

CHAIR WILKERSON: They all fit in that mod sandbox deployment --

(Simultaneous speaking.)

MR. MEDFORD: Yes, but I do think having, you know, what is it, what's the theme or what's either the modality and the goal of this recommendation, because it's not -- I mean it's stated here like tools that increase speed and efficiency, the outlying advantages of both public trans. departments and single, you know, but if it's really -- Is it, you know, speed and efficiency for people to make decisions about what to use, right, or -- I don't know what this is, but somehow it's right.

CHAIR WILKERSON: Yes.

MR. MEDFORD: But I think that for me it would be better if you could pick some themes. I don't know if "themes" is the right word, specific areas that policymakers at the higher level at DOT would say, hey, yes, okay, here, what are they recommending about congestion mitigation in these recommendations?

What have they said about safety? What have they said now that, you know, now that the connected vehicle thing is so old, what are they saying about that, or are they saying anything about that now?

So, think about what they are thinking about and try to align some of the use to make them current and helpful. I don't know.

CHAIR WILKERSON: Well I think the shared use issues are current.

MR. MEDFORD: Yes.

CHAIR WILKERSON: Right, so if we want we can go back and look at 14 through 10 and say come back with some common --

MR. MEDFORD: You can say shared use, right, so --  
(Simultaneous speaking.)

CHAIR WILKERSON: -- shared. We've got shared use, civil disabilities, and then what was the last one? I'm trying to think of the last one.

MR. MEDFORD: Yes.

CHAIR WILKERSON: Single use.

MR. PLEASANT: Yes, I think what I am hearing from Ron is people who are trying to advise very busy and smart people that don't have a lot of time to read a lot of text, that if we could just hit harder some of that overriding things, such as in order for shared use to be available to everyone and equitable and -- You just need the values.

MR. MEDFORD: Right.

MR. PLEASANT: And then say we what need to do, bullet this --

(Simultaneous speaking.)

CHAIR WILKERSON: Bullet, yes.

MR. MEDFORD: Yes, exactly, yes.

CHAIR WILKERSON: So you can just lead from that, yes.

MR. PLEASANT: And just keep it succinct. And then

if we've got some additional explanation that kind of goes to the bottom of the page, and so if it catches someone's eye and they are really --

(Simultaneous speaking.)

MR. PLEASANT: -- interested in well why did they come up with that then they can read it.

CHAIR WILKERSON: Okay.

MR. PLEASANT: It intuitively seems to make sense, because I think committees like this do a couple things, not the least of which is to get people covered and make good decisions that they already need to make.

If they can refer back and say they had a team of experts tell us you need to do this, then that's useful.

CHAIR WILKERSON: Yes.

MR. PLEASANT: So you kind of have to think about where is it going to be most useful and most impactful to people. And then the things that feel a little secure, maybe, we just, we don't deal with them, we just deal with the top four or five and --

CHAIR WILKERSON: Okay.

MR. MEDFORD: And what are the major transportation priorities that this committee knows or kind of in alignment with what the nation thinks are important and are we aligned in those areas then in that way.

CHAIR WILKERSON: Yes. Well, right now then I see



between the numbers we have done, 14 through 10, that it's a shared use and we come up with some bullets.

I mean that seems to be the common theme and then we come up with some bullets to support that and move on.

MR. DENARO: Well, what year are these the recommendations from, the ones we are looking at right now?

MS. JOHNSON: '16.

(Simultaneous speaking.)

CHAIR WILKERSON: The last one --

(Simultaneous speaking.)

CHAIR WILKERSON: -- with the response.

(Simultaneous speaking.)

CHAIR WILKERSON: So if there is something about shared use we would certainly include -- Go ahead.

MR. DENARO: I just want to comment that when, if I remember correctly in that memo we put together, in fact, there was a little narrative first, here is the issue around this and they said, and then, therefore, here is the recommendation.

And that context I think provided, we saw so many problems and then it just seemed like random recommendations coming.

So, if you're talking about a theme, those little narratives talked about a theme about, you know, here is the overall issue and then, therefore, here is some recommendations specific to this.

So, I don't think it appears in this format that --

MR. GLASSCOCK: No, it's not. All I did was pull your recommendations, our response, and our actions to --

(Simultaneous speaking.)

MR. DENARO: Okay. Is there a different presentation then for...

MR. GLASSCOCK: Well, there is the report to Congress...

CHAIR WILKERSON: That's what I am looking at, yes.

(Simultaneous speaking.)

MR. DENARO: Well, looking at the report for Congress it's got these narratives explained there.

MR. GLASSCOCK: Yes, it does.

MR. DENARO: So --

CHAIR WILKERSON: Well they had summaries.

MR. DENARO: Yes.

CHAIR WILKERSON: So each section had a one-bullet summary. So, we had a data summary and then we had recommendations under that, which we will probably get to going backwards.

MR. DENARO: Right.

CHAIR WILKERSON: We had another section on funding, which had a subtopic, and they are very --

MR. DENARO: Succinct.

CHAIR WILKERSON: -- succinct, and then the

recommendations followed under those.

MR. DENARO: Yes.

CHAIR WILKERSON: And then we had public transit and shared mobility.

MR. DENARO: Yes.

CHAIR WILKERSON: And the shared mobility was quite simple. If you want I can -- Do you have --

MR. MEDFORD: No, it sounds like you've done it, so, okay.

CHAIR WILKERSON: Yes. So I think the key is we might revisit that shared mobility and maybe, so taking those recommendations, make bullets out of those.

MR. MEDFORD: Okay. I'm sorry, I didn't -- I had -

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(Simultaneous speaking.)

CHAIR WILKERSON: No, no, no, it's all good.

MR. MEDFORD: Yes.

CHAIR WILKERSON: It had -- I will just give you an example. We just went through five, right, on shared mobility.

(Simultaneous speaking.)

CHAIR WILKERSON: So it says shared mobility, "the shared use of a vehicle by simple or other low-speed mode as an innovative transportation strategy that will enable users to have short-term access to transportation modes on an as-needed basis."

"Shared mobility includes but is not limited to car sharing, personal vehicle sharing, fractional ownership, bike sharing, scooter sharing, shuttle, and micro transit services."

"Ride sharing (carpooling, van pooling, and ride-sourcing), which are also known as ride hailing. Given the current state of shared mobility and its potential to dramatically impact the U.S. surface transportation system public policy needs to evolve alongside these shared mobility modes to support its growth and innovation without compromising safety and accessibility. Research could also accompany this policy work."

(Simultaneous speaking.)

CHAIR WILKERSON: Yes. Well, I -- It's a little, it's six sentences.

(Simultaneous speaking.)

CHAIR WILKERSON: Yes.

MR. DENARO: It's got a preamble --

CHAIR WILKERSON: Yes.

MR. DENARO: -- and then, therefore, it gives the recommendations --

(Simultaneous speaking.)

MS. JOHNSON: Right, because you could extrapolate because there is --

CHAIR WILKERSON: -- all the recommendations.

MS. JOHNSON: Yes.

CHAIR WILKERSON: Right. So Recommendations 11 through whatever were shared mobility. Okay. So --

MR. MEDFORD: So that's a congestion mitigation strategy, right, so I don't know how many other mitigation strategies there are for congestion in your group, but I would put them all under, you know, to the extent that they are going beyond that I would --

CHAIR WILKERSON: Are you looking at this one or --

MR. MEDFORD: No, I'm not looking at --

CHAIR WILKERSON: Oh, okay.

MR. MEDFORD: Like this, these, many of these are, so congestion mitigation, right, do we have other congestion mitigation things that would go along with these, right. This is --

(Simultaneous speaking.)

MR. MCCORMICK: But why don't -- In the interest of time why don't we just keep --

(Simultaneous speaking.)

CHAIR WILKERSON: Yes. I think Susan would -- Yes, I don't know how she would -- I don't think she's ever defined it as congestion, but --

(Simultaneous speaking.)

MS. JOHNSON: But it is when you look at it when you talk about your mobility because you are taking a vehicle off the road because you are trying to share.

MR. BERG: But that's not -- I don't --

(Simultaneous speaking.)

CHAIR WILKERSON: It's a --

MR. BERG: -- use a bus to take my vehicle off the road. I use it because it is a convenient way to get from here to there.

MR. MCCORMICK: So that's what it's about, yes, okay.

MR. BERG: Yes. I don't -- As a person I don't care how many vehicles are on the road.

CHAIR WILKERSON: Yes.

MR. DENARO: But DOT does.

(Simultaneous speaking.)

MS. JOHNSON: Well, yes, I was going to say it's contingent upon where you are because when you talk about sustainability and reducing the carbon footprint there is a lot of different jurisdictions within the country that basically are putting forth policy acts in which one needs to adhere to that to be able to utilize certain roadways.

MR. BELCHER: So let me ask you, can I just -- So if I listen to what Ron had said and then I listen to what we wrote I think what you would rather see, Ron, and not to put words in your mouth, but as a front end you wouldn't even have the -- the front end would be continue to fund --

(Simultaneous speaking.)

MR. BELCHER: -- shared mobility and then you can have all the rest of the stuff later, the definition and how important it is and all that stuff so that if you are the Secretary or the NHTSA Administrator or the ITS JPO director you can look at those first four bullets and say I'm doing this one, I'm doing this one, oh, I didn't think about that one, or, oh, is that --

CHAIR WILKERSON: Yes. I mean I think it's making this a little bit more concise if we say yes or no.

MR. MEDFORD: Yes, I don't want to sideline the discussion, but I would like to conclude or not conclude --

CHAIR WILKERSON: Yes.

MR. MEDFORD: I was asked and that's why I was saying...

CHAIR WILKERSON: No, I think it's a -- I think it's well taken, don't you. Okay.

MR. SCHROMSKY: Oh, I'm sorry. Going back to I guess in Ken's earlier comments when we first started, we were talking about getting data and getting information, and I am looking ahead and I looked at the three Ps and how is that working out.

And I know we talked about those four, you know, proprietary information inside of the vehicle that is owned by the OEM to some extent, but I am curious to know if it is shared mobility. For instance, I was walking last night and I saw the

bike share, or if a city grants say ZipCars a license or a franchise from the city, what if any information are they required to share back to the municipality or city, because we see this, and Joe is not here, but he'll tell you he knows in the back of his head what his ridership is. He has hard data that he can crunch and justify for budget, but when we get into shared mobility, are we going to run into the same issue that, you know, the entity or municipality doesn't have access to any of that information?

MS. JOHNSON: That's right.

MR. SCHROMSKY: Right. So, it's great, but how do I know if I am Tina in Las Vegas and George wants to do something similar in Palm Beach County, he might not even have the right to look at that data to see if it's working or not working before he makes an investment or grants, you know, an awardee on an RFP.

So, I am just curious to know, a lot of it is about getting data, but for public if you want to even get a grant, it's good to get that data, but I am curious as we go to the three Ps, does JPO look at this and say what kind of data sharing is going to be available, if any?

MS. JOHNSON: I don't think so.

MR. MCCORMICK: To my knowledge they have not.

MS. JOHNSON: I was going to say no. I was going to say no because there are discussions we have had with the Federal



Transit Administration being on the public transit side of the house whereby we are looking at, you know, first and last mile partnering and basically where public agency data is readily available.

To your point, Bryan, no we don't have access to that data. We have been told by Uber they are not disclosing that information to us, but we are looked at in some aspects of competing with them but we actually don't in the sense we want to be a complimentary, you know, entity to them, but we can't plan in the absence of having that data.

So, you hit the nail on the head, nobody had done anything, and we are having conversations with the American Public Transit Association, but how can we get them to the table and basically leverage some advocacy, you know, around having dialogue about that.

MR. PLEASANT: It's a little bit more than that. The NACTO is kind of in that space of having to get the shared transportation providers to release some of that data and I think they, Uber has released some to New York City, for example.

So, we're readily trying to chip away to get through that data so that we can share that among transit agencies and transportation departments in the cities, but it's still a little bit of a hard enough --

MS. JOHNSON: Right.

MR. SCHROMSKY: And if it is being done through the

PLC in New York City that is enforcing Uber, that's the overseeing body to do that, right?

MS. JOHNSON: Yes.

MR. SCHROMSKY: To get that data?

MR. PLEASANT: Yes, I think there is some compelling

--

MS. JOHNSON: Yes.

MR. PLEASANT: -- leverage in New York that some of us don't have.

MS. JOHNSON: Exactly.

MR. SCHROMSKY: Because I mean it's not unheard of, right? Because you'll have, if it's LPR cameras where there is, usually it's a rev share agreement that the county or city doesn't have the funds to deploy this so they grant a franchisee with a revenue sharing agreement.

So, other than dollars the question is around the data. You could be anonymous, whatever it may be, to protect the innocent, but I just look at the shared mobility and I just start questioning my mind and I'm hearing about data.

What data are we getting, or do you even have access to?

MR. WEBB: Well, it's very tough. As has been said, we've got SunRail, a commuter rail in the central part of the State; four local cities have entered into an agreement with Uber to subsidize part of the ride cost to try and encourage

their residents and tourists to come back and forth.

And yet when asked to share how much money was spent, or whatever, Uber says, no, we're not going to share that information with you at all.

So, that gets into parts that run contrary -- it necessarily isn't part of the law regarding public records and so forth, but they are very close to the best as far as not releasing information.

MR. PLEASANT: And we hope that for planning purposes, the original destination date --

MR. WEBB: Oh, absolutely.

MS. JOHNSON: Yes.

MR. PLEASANT: -- so you can do some sort of planning and understand how your system is working in its totality.

MR. WEBB: That's not a big issue for the State guys as far as how we are going to get this information coming out of the connected vehicle, so --

CHAIR WILKERSON: Okay. So going back to the guidance document --

(Simultaneous speaking.)

CHAIR WILKERSON: I have that up, too, here. Nine and ten -- So we agree, 17, no, 16, no, 15, no, 14 through 11 are sort of shared use and we will find a way to concise, to make a very short consensus on how to pull those out.

Nine and ten as we defined it was public transit

ridership and here we were saying that ridership is at I think at a year high, it's one of the safest modes of travel, it has the ability to pick up the increased capacity of our transportation system in a more efficient way, and that's what nine and ten dealt with, you know, developing best practices and whatnot.

So is that still a topic? I mean do we want to -- based on the recommendations here and their response, it's basically they are saying they continue to work in the researching, but is there anything else with respect to that? And if we're good -- Be candid.

MS. JOHNSON: Well, no, I was just going to say it's interesting we do this well in advance and transit ridership has been steadily declining across the country, so just hearing that 50-year high aspect we're trying to discern basically what is happening to transit ridership.

Everybody wants to say it's due to the --

CHAIR WILKERSON: From 2014?

MS. JOHNSON: Yes.

(Simultaneous speaking.)

MS. JOHNSON: They want to say it's attributable to TMCs and so forth, but when you look at the average transit user most of them are low income and don't have a banking relationship according to statistics from 2014, like 70 percent don't have a banking relationship.

So, anyway, I give that diatribe to say I don't know if that's really relevant considering what we have talked about thus far, sort of the blob that's on as well.

CHAIR WILKERSON: Yes.

MS. JOHNSON: Even though I'm a pro public transit advocate.

CHAIR WILKERSON: Interesting. That's a good perspective. Any other thoughts on that from anyone?

(No audible response.)

CHAIR WILKERSON: So you would recommend a no on that?

MS. JOHNSON: Yes.

CHAIR WILKERSON: In light of where the industry is?

MS. JOHNSON: Yes.

CHAIR WILKERSON: Interesting, okay. Any other comments on that one, anyone?

(No audible response.)

CHAIR WILKERSON: And that goes to nine and ten, those were both public transit.

MS. JOHNSON: Yes. I mean I -- Let me just qualify my statement. I do think it's great when we look at V2V to use public transit as that vehicle, but I think that will come in time, but to call it out specifically because I know we have to think in broader terms.

CHAIR WILKERSON: Okay.

MS. JOHNSON: And then the other recommendation we have when we talk about community transit and we talk about, you know, mobility, well shared mobility and things like that.

There is a clear-cut nexus with this as well, so I am just saying I still think it's important but I don't think we should sort of, you know, latch this on to everything else because we'll get mired down.

CHAIR WILKERSON: Okay. Yes, okay. So, eight and seven, which we're getting ready to go to, dealt with funding, and here we said the level of funding has not kept pace with system needs creating a significant challenge at all levels of government.

Let's see. We talked about mini mobility, safety environmental concerns of public investments, and ITS continued to compete directly with critical core maintenance and capacity needs and the greater public and private investment in ITS would be necessary to realize the potential benefits.

So, eight and seven dealt with our recommendations on that.

MR. MCCORMICK: Yes, my comment on this is that in the context of a new Administration, a new secretary, with new issues about the budget --

CHAIR WILKERSON: Yes.

MR. MCCORMICK: -- the discussion of public private partnerships is below the radar because --

CHAIR WILKERSON: Is what?

MR. MCCORMICK: Is below our radar. Because until you have a budget authorization, until you have funding allocated to work on the areas that they are going to define, whether or not you are partnering with private entities or public entities or anything else is a tertiary consideration.

The first effort is to get the funding. The second effort is to define your priorities. The third effort is, well, how am I going to execute.

(Simultaneous speaking.)

MR. BELCHER: I don't know that I agree with that, Scott. I mean --

MR. MCCORMICK: I know, and I offer it up for discussion. I'm just --

MR. BELCHER: Okay. Yes, because I was going to say I mean if you think about the infrastructure bill there is no real money that they are talking about associated with that.

It's all about public private partnerships; there are only so many toll roads you can build.

(Simultaneous speaking.)

CHAIR WILKERSON: Right.

MR. MCCORMICK: Yes, if there is no money, who are you going to partner with?

MR. BELCHER: Right.

CHAIR WILKERSON: Yes.

MR. BELCHER: Yes, exactly.

CHAIR WILKERSON: So, let's --

MR. MCCORMICK: I am just putting it in terms of what we would identify as our top half-dozen recommendations to reinforce, and I'm not sure this fits, but I defer to the intelligence of the group.

CHAIR WILKERSON: Any other comments or thoughts? What's your --

MR. PLEASANT: Other than just it's hard to argue funding for the sake of funding. It's either argue --

CHAIR WILKERSON: Specific, yes.

MR. PLEASANT: -- this whole accomplishment and what it's going to take to fund it. So, I am always reluctant to put funding as a priority knowing that it is an absolute necessity in order to make progress.

So, I just offer that into our policymaking framework. I am always going to sell my goods on the benefit of agreeing to the community and then ask for the funding rather than ask for the funding and say --

CHAIR WILKERSON: Yes.

MR. PLEASANT: -- if I get this funding then I will do --

(Simultaneous speaking.)

CHAIR WILKERSON: So in this case --

MR. BELCHER: So I think the question -- Oh.



CHAIR WILKERSON: Go ahead, no.

MR. BELCHER: I was going to say the question really should go to the operators. And so, if we are talking about funding do we think that funding technology as opposed to --

PARTICIPANT: Solutions.

MR. BELCHER: Yes. I mean as opposed to what your bread and butter is, is it a better investment than new busses, new roads, new bridges?

I mean that's something we can weigh in on. You know, we live in an era of tight resources; a new Administration is going to have to make choices.

You know, they are going to fund this and they're not going to -- It's a zero-sum game. In a zero-sum game, the question always is how does technology stack up against basic, you know, keeping the infrastructure operating, and do we have an opinion about that.

And I know, if I am an operator, I don't want some fancy group telling me that I ought to buy new sensors or new signals instead of a new bus.

I mean that's kind of the question. That's kind of what we are doing if we prioritize technology higher than we prioritize the operations.

MR. MCCORMICK: Well I think we characterize it differently. I think we look at, and this is what the ITS Advisory Board, as you remember, used to do, we looked at it

and said, these are what you have identified as your fundamental transportation issues, these are the areas where technology can support you.

MR. BELCHER: Yes.

MR. MCCORMICK: And so in this case they had \$42 million in grant money that they were going to put out and they did it for a small number of places and, I don't know, did the JPO declare victory and go home or is this something that we say we should continue doing?

That's kind of where I am at. Is this something we should continue funding and recommend that for the -- because it does support, you know, they only get \$100 million.

MR. BELCHER: Right, right.

MR. DENARO: And that's what Ken talked about this morning.

MR. MCCORMICK: Right.

MR. DENARO: They had \$60 million a year I think, right?

MR. MCCORMICK: Yes, right.

(Simultaneous speaking.)

MS. QUIGLEY: I was going to say always continue to support these competitive grants related to regions in the realm of technology.

The reason being is that those, like that Smart Cities Grant app competition pulled together communities like I

have never seen before, at least in my community.

Oh, my God, all of a sudden the cities and the county

--

CHAIR WILKERSON: Started talking to each other.

MS. QUIGLEY: -- and the State and the transit agency and private sector were all like let's win this, and so it like pulled together disparate groups like I have never seen before, and you're not going to get that in any other way than --

MR. MCCORMICK: And fundamentally it helps them educate about what these process capabilities improvements are.

MS. QUIGLEY: Yes. I joked that Smart Cities actually made us a smart city, not because of the technology, but because it forced us to talk to each other.

MR. MCCORMICK: Right.

MS. QUIGLEY: And as a result we'll be a smarter region in other areas beyond just the technology part.

MR. CAPP: So I --

CHAIR WILKERSON: That's a good bullet.

MR. CAPP: Yes, so what do we -- Would that suggest that we would propose doing more things like that in lieu of -

-

MS. QUIGLEY: Yes, I would say that it's the most effective thing you can do as a nation.

MR. CAPP: Yes, that was effective. So, would we propose you do that in lieu of other types of research that the

JPO does on their own? I mean we could say, look, spend Federal money --

MS. QUIGLEY: Yes.

MR. CAPP: -- instead of giving it to Ken's team to do their own research, have Ken's team run another contest --

MS. QUIGLEY: Yes.

MR. CAPP: -- I mean that could be a message that was sent.

MS. QUIGLEY: Honestly, because now you've got private sector and public sector coming together to solve real problems --

MR. CURTIS: In terms of prioritizing the same money.

MS. QUIGLEY: -- and if you are solving social problems like Columbus did on top of everything else it's like --

MR. CAPP: Well, I can believe it. They probably got all kinds of --

(Simultaneous speaking.)

MR. MCCORMICK: I don't know that you'd want to make it an either/or.

CHAIR WILKERSON: Yes, it's --

MR. MCCORMICK: I mean you had \$8 million for the sandbox and you had \$60 million for here --

CHAIR WILKERSON: Yes, it's -- I think you commend

it for having done it --

MR. DENARO: Yes, that's it.

CHAIR WILKERSON: -- and talk about the --

MR. DENARO: List it as a priority and consider other approaches like that, right?

CHAIR WILKERSON: The benefits were unforeseen.

MS. QUIGLEY: Yes.

CHAIR WILKERSON: So maybe you could highlight that. Maybe you could -- Would you come up with something on that? Would you --

MS. QUIGLEY: I'll write it, yes.

CHAIR WILKERSON: -- come up with a couple words or so --

MS. QUIGLEY: I'll write -- I get a little passionate about it, so you'll have to weed out the passion --

CHAIR WILKERSON: No, I see it, that's why I am saying that.

(Simultaneous speaking.)

MR. ALBERT: The RFP that Ken referred to does have Smart Cities in it and you can prepare an application for it for the \$60 million they have available.

CHAIR WILKERSON: Yes.

MR. ALBERT: But I agree 100 percent. I have seen nothing ever like it in almost 20 years.

MS. QUIGLEY: And I think it was purely accidental.

It was like --

(Simultaneous speaking.)

CHAIR WILKERSON: Yes.

MR. BERG: So, Tina, do you think the same outpouring would happen if it was a \$2 million program?

MR. WEBB: No.

MR. BERG: Because, you know, \$40 million is -- you can do things with that.

(Simultaneous speaking.)

MS. QUIGLEY: It's a lot of work to put together the application.

MR. BERG: There is no match to it.

MS. QUIGLEY: The \$60 million one that we're talking it's a 50/50 match, so you get -- and the grants, like you said, will only maybe be up to \$10 million each.

MR. BERG: Yes. Well, yes --

(Simultaneous speaking.)

MS. QUIGLEY: But it's a lot of work to put together the application. I mean it takes staff time plus consultants plus collaboration, so \$2 million would be --

MR. BERG: So what brought all of those people together that you said never talked to each other? Was it --

(Simultaneous speaking.)

MS. QUIGLEY: That Smart Cities app and it was \$40 million app, but admittedly that was kind of the precedent

setting, at least for us, that was the first time that we got involved, and so now these other ones that come out, like the one you just talked about today, we're putting together a team, it will be the same team, we're just going to figure out, we're looking at lessons learned from what other cities have done --

MR. MCCORMICK: Plus the other one had a boundary. The other one had a boundary that said you had to be less than 800,000 and more than 200,000 or something so you discounted a lot of smaller communities and a lot of larger cities and my understanding is the new one doesn't do that, the new categories don't do that.

MS. QUIGLEY: Okay.

MR. MCCORMICK: So now you can have smaller communities to apply for \$12 million and that makes a lot, a big difference to a small community.

(Simultaneous speaking.)

MR. PLEASANT: -- and that was part of it, they framed it into being competitors instead of making it -- you know, frankly, smaller cities, if it's in a realm that Chicago, New York, and L.A. are going to get all the dollars --

MS. QUIGLEY: Right.

MR. PLEASANT: -- you know, why bother --

MR. MCCORMICK: Well the other problem with that, there was no city in Michigan that qualified within those population boundaries.

MR. BERG: Why is that a problem?

(Laughter.)

(Simultaneous speaking.)

MR. BERG: I mean there are different places around the country besides Michigan, right?

MR. MCCORMICK: Of relevance?

MR. BERG: Yes, absolutely.

PARTICIPANT: You sure about that?

MR. BERG: I am.

CHAIR WILKERSON: Okay, so what I am hearing is seven and eight we'll say yes. We will synthesize and have, you know, take our little recommendation summary and then highlight some of the bullets we have talked about the benefits in here, the benefits from that.

Would that be helpful?

CHAIR WILKERSON: And you'll send something for us to do that?

MS. QUIGLEY: I'm going to draft something up and then you can --

CHAIR WILKERSON: Okay, we'll put that together. We'll put a skeleton together. Okay, six and seven --

MR. DENARO: Sheryl --

CHAIR WILKERSON: I'm sorry.

MR. DENARO: -- let me make a comment on this.

CHAIR WILKERSON: Yes.



MR. DENARO: I remember the discussion on these particular items of recommendations and you got to consider a little bit the back story, and we're going to come up with our own on our new recommendations, but the back story on this one was we were --

CHAIR WILKERSON: Which one are you saying? Which one are you talking --

MR. DENARO: The seven and eight, the funding.

CHAIR WILKERSON: Okay, go ahead.

MR. DENARO: And we are questioning should we be, you know, saying that and so forth, and the back story on this was we were quite concerned that Europe and Japan and other places are funding their ITS activities much richer than we are doing in this country and we put these together to support the JPO in at least keeping their budget and we said it should be \$100 million more than that, but, you know, that was part of the recommendation.

And it also gave the JPO a chance to respond with just what you are talking about, Tina, when they said, oh, we've got this FAST Act and that's another \$60 million and look how that is working and so forth.

So this kind of all came together in terms of us trying to support them, them being able to respond with that, and so forth. Now if we have specific recommendations we think make sense, like more Smart Cities or another -- He was talking

about the next FAST Act this year, those are good and we should make those specific recommendations.

But there are reasons why we were supporting the JPO, because this isn't about buying busses or buying technology, we have nothing to do with buying busses.

Our job is to oversee the JPO's research agenda, that's their mission is research, and that's all we should be commenting on in terms of their research, in my opinion.

CHAIR WILKERSON: So what is your recommendation? If you had to summarize that in a bullet what would your --

MR. DENARO: I am find with going forward with what Tina is suggesting, getting specific about some funding opportunities and incentives and things like that.

But I just want to make sure we understand that this whole funding thing, you know --

CHAIR WILKERSON: Yes, and it wasn't either/or.

MR. DENARO: We're basically a committee of experts that have been selected around the country and we're trying to tell the Secretary, hey, these guys are doing important stuff.

CHAIR WILKERSON: Yes.

MR. DENARO: You know, don't ignore it and don't de-fund it and so forth.

CHAIR WILKERSON: Okay.

MR. DENARO: And that's an important role for us if we believe it.

CHAIR WILKERSON: Okay.

MR. PLEASANT: Yes, I was just wondering you kind of struck a thought when you mentioned that. Is there any place in the narrative that we can just call out, you know, relative to other countries and other nations --?

MR. DENARO: Well, sure.

MR. PLEASANT: -- what they are spending relative to what we are spending in this area?

MR. DENARO: Sure.

MS. JOHNSON: That's a good idea.

MR. PLEASANT: And really, and kind of make the point that we are looking out repeated.

(Simultaneous speaking.)

MR. DENARO: -- those kinds of things would be great to say because the people we are addressing this to, like the Secretary and all that staff, and Congress for that matter, they might not know all that, you know, and for us as these experts to bring that information I think is real valuable.

CHAIR WILKERSON: Is there someone who might be willing to -- Would you be -- Is there somebody here who --

MR. DENARO: I don't have the information myself.

CHAIR WILKERSON: -- would be able to have access to that data?

MR. PLEASANT: I don't either, but --

(Simultaneous speaking.)

PARTICIPANT: Scott McCormick --

MR. PLEASANT: -- I bet somebody in the JPO has that information. What?

PARTICIPANT: Scott McCormick just talked about China today, so --

MR. PLEASANT: Yes.

PARTICIPANT: -- maybe he knows about this funding in other places.

MR. PLEASANT: Yes, there you go.

CHAIR WILKERSON: Yes.

PARTICIPANT: I bet the JPO knows themselves, we can get the data from them.

MR. MCCORMICK: Yes, I didn't mention this. In August, the U.S. State Department appointed a transportation consultant to all of the Asia-Pacific Economic Community, which is basically all administrative government entities and I have been looking at where they have got their funding.

Obviously, China has got the largest percentage. Japan is with their smart way program has a consistent amount of funding that goes into it every year to advance their mile-over-mile completion of their goal.

South Korea has pretty much backed off mostly infrastructure investments that they were making.

CHAIR WILKERSON: Okay.

MR. MCCORMICK: The rest of Asia-Pacific, India, are

basically concentrating on 3G.

CHAIR WILKERSON: Would you be able to do a couple bullets for us?

MR. MCCORMICK: Sure.

CHAIR WILKERSON: Okay, that would be great. Super. All right, another deliverable. So moving from funding, Numbers 4, 5, and 6 dealt with -- Oh, actually, three -- Oh, the last five deal with data.

We highlighted some data earlier and we said, the summary we had was that automated and connected vehicle promised to transform the transportation system through the use of wireless communications networks that have the ability to generate, capture, and share real-time data about our environment, mobility and personal safety, increasing concerns about the vulnerability, security reliability and ownership will likely have a dramatic impact on consumer adoption and the emergence of such vehicle applications.

An assessment of how other industry sectors have addressed similar data issues to provide guidance for handling automated and connected vehicle data.

And so, one through four deal with these recommendations. Four, I'll go backwards like we are doing now, was to convene a forum to invite technology presentations, we talked about GPS -- I'm sorry?

Oh. So, you see Number 4. That was more about

evaluating solutions for natural loss of signal, GPS, corruption, intentional malicious denial of signal and accuracy.

The third one dealt with identifying our industries that engage successfully in consumer data sharing, policies and procedures of public outreach.

And the second was based on data content, data source, and data destination, analyzing the data from the connected vehicles to characterize it in levels of sharing sensitivity.

And then the first one was the Department CIO should convene a forum of State representatives. So --

MR. MCCORMICK: I don't see any of these as primary priorities of the recommendations. I know, Bob, you had some ownership of a GPS one.

The question is, is if they don't have the budget to do any of these things even for them it is second tier importance.

MR. DENARO: To do, what?

(Simultaneous speaking.)

MR. MCCORMICK: Yes, so they convene a forum.

CHAIR WILKERSON: It's all on data sharing, and this ties to the connectivity that they were talking were about, right?

MR. MCCORMICK: Well, the problem with the JPO convening a forum is, and I don't mean to fault anybody in the

JPO or the US DOT, but historically they give you too little notice about when the event is going to occur.

I have gotten notices as late as three weeks before they are having a face-to-face meeting in D.C., and I book three to six months out, right, and I can't reasonable get that to the 20,000-contact database and have them expect to participate, because they all must look for somebody in their organization that does this.

Also, when Shelley Row was running it they had -- Stephen was going to, you know, convene a meeting of standards organization so I gave him the contact point of all 24 world standards organizations dealing with automotive standards.

He invited six people. Two of whom were consultants and one of whom was a Beltway, what do you call them here, Beltway patriot, and only two standards organizations, and one of those wasn't even the right standards organization --

CHAIR WILKERSON: But I --

MR. KISSINGER: Scott --

(Simultaneous speaking.)

MR. MCCORMICK: -- there is a problem with them holding forums because they don't know who to invite, they don't do it in a timely manner.

When they turned it over to ITS America you guys did a good job at it, all right.

MR. KISSINGER: Think of Steve Steele, by the way.

CHAIR WILKERSON: Yes, not just Steve.

(Simultaneous speaking.)

MR. MCCORMICK: -- problem and a solution, so that's great.

CHAIR WILKERSON: Okay, but there were other parts to this recommendation under data.

MR. MCCORMICK: Right. Well, I was just talking to the first one on the forums.

CHAIR WILKERSON: I hear you on that. Okay.

MR. KISSINGER: I think these four are all noteworthy in the fact that they concur with them and they don't say if funds are available.

MR. DENARO: And then the magic question is -- and then the question is did they do them, and I am here to tell you no.

MR. KISSINGER: No.

MR. MCCORMICK: The answer was no, correct.

CHAIR WILKERSON: So any concept --

(Simultaneous speaking.)

MR. DENARO: And by the way, just to counter what Scott said on the Number 4, on GPS --

CHAIR WILKERSON: Which Scott, Scott McCormick?

MR. DENARO: -- that comment came from map use, that came from map use of NHTSA who said we are very concerned that that's about the vulnerability of GPS when it comes to both



connected and automated vehicles.

CHAIR WILKERSON: Exactly, he did say that.

MR. DENARO: That's why it made its way into our recommendations. But that comes from NHTSA I think I'm concerned anyway.

PARTICIPANT: Okay, but does NHTSA solve that problem?

MR. CAPP: Well, even if they haven't they are going to have to, right, as part of executing a final rule and they need to address a solution to this. So does Ken's team need to work on research on that or --

(Simultaneous speaking.)

MR. CAPP: -- which is fine. But I don't know that we need to steer that, right? If NHTSA goes forward with rulemaking they must make sure that GPS has a --

(Simultaneous speaking.)

CHAIR WILKERSON: So maybe it's Recommendation 4 that we continue rather than the other three which was evaluating the solutions and develop a path to resolving vulnerability issues for connected and automated vehicles. Is that right?

MR. MCCORMICK: Well, I think that's too broad. I think the GPS is an extremely valid consideration, but worldwide we have never had a malicious attack on a vehicle in the wild.

And so, if we give them that broad of a description

of vulnerabilities you have every enterprise and internet networking security coming out of the woodwork trying to sell John and Roger a solution they don't need.

I think there is a very important point that both John and -- that they both made that said, look, we do have a vulnerability with GPS and it must be addressed.

CHAIR WILKERSON: Yes.

MR. MCCORMICK: The rest of it is smoke and mirrors right now. There are people working on it. There are threat services, they are working on sealing them, we don't have -- and a reason there hasn't been a real threat is because we don't have anything valuable in our cars to break into and steal, right.

It's not about terrorist activity, it's about whether or not there is a commercial reason to do it. So, I think if we focus our recommendations on the GPS we would address something concrete, something that's real, and something that has to be addressed.

CHAIR WILKERSON: There were other parts of that, too, which was the pilots themselves. They said, their response was in order to ensure that the vehicle devices meet basic performance requirements that the locations for the first group of pilots will likely need certification testing and some other things, so --

MR. MCCORMICK: But the JPO funded the \$2 million

with Southwest Research.

CHAIR WILKERSON: Right. I don't know.

MR. MCCORMICK: Dan Rah and I forget who the other one is, Amir, one of the two, worked on to develop that evaluation specification.

So, I think they did that, but I don't know that we can continue doing that.

CHAIR WILKERSON: So one and four are up for discussion. Anyone else besides Scott?

PARTICIPANT: Can you scroll back to one?

CHAIR WILKERSON: He has -- He's scrolling.

I'm looking at the main one that we did to provide context for what we discussed, our five recommendations.

MR. DENARO: I'm not sure I understand your question, Sheryl.

CHAIR WILKERSON: No, I mean I'm just trying to get some more clarification. I heard in my notes one person say they don't do forums well. Okay, fine, but we've got two other, three other issues here which they talked about, which they responded to in two, three, and four. One I think we are saying no and --

(Simultaneous speaking.)

MR. CAPP: One seems like a sensible idea but it also seems almost like a little trivial.

MR. MEDFORD: It seems trivial yes.

(Simultaneous speaking.)

MR. MEDFORD: -- you don't have to tell a JPO member if they don't have enough, you can just turn around and tell them, right?

MR. MCCORMICK: But this one is specifically between State and Federal --

(Simultaneous speaking.)

PARTICIPANT: I agree with four. The GPS four is like a critical issue that needs to be resolved and I think if you hit that --

CHAIR WILKERSON: Okay.

PARTICIPANT: -- because I mean everybody knows that, right, and it's not solved.

CHAIR WILKERSON: Yes, that was the -- And three, can you go to two and three just for people to see, please? That was on --

MR. DENARO: The back story on two was that they were concerned that as the government they couldn't share any data because of privacy issues and our discussion said, well, not so fast.

Some data certainly has privacy implications, other data doesn't necessarily and still might be very useful. So why don't you guys go in and take a look at and propose that maybe the government can share some data after all as long as you can determine that it doesn't violate any privacy.

MR. MCCORMICK: I thought it really had a FOIA issue about it.

CHAIR WILKERSON: I don't think so.

MR. MCCORMICK: I'm trying to remember.

MR. DENARO: I don't recall if we discussed FOIA, but...

CHAIR WILKERSON: I don't either. I don't think it came up in our data committee.

MR. MCCORMICK: Okay.

CHAIR WILKERSON: So two and three, anyone? One was no, four is a yes.

MR. MCCORMICK: Well, how much data is the Department collecting, as opposed to the test beds and the pilot programs that are pending now?

CHAIR WILKERSON: I don't know. I don't have that information.

MR. MCCORMICK: I don't believe they are collecting any data past the Ann Arbor pilot. Are they, do you know, or if there are any programs that they actually work on to collect data?

MR. DENARO: That wasn't the point, Scott, I don't think. It might be worded poorly. I think the point was come up, consider a policy where data can be shared from vehicles as opposed to the actual test they are going on now.

MR. MCCORMICK: Yes, but, see, fundamentally you

have to have an understanding and an agreement as to who the data actual belongs to, and we do not have that first.

And before you can have a policy that says how you share it you should know what it is you are talking about that there are rights to share.

MR. DENARO: I don't think that's JPO's job.

MR. MCCORMICK: I don't either.

Once you have that then they can go off and do this, but until you have that understanding of what -- My analogy is I buy a TV and I am using a remote control and I don't want the government or TV manufacturer or Tina to know what shows I am watching, but that doesn't give me the data rights to the RF stream coming out of the remote.

That's probably IPd to one of the tiers of the OEMs making the TV, it's the same thing with a car.

CHAIR WILKERSON: Okay. So, any comments on two and three? Do they stay or do they go?

MR. PLEASANT: Yes, I think from a high level, you know, to me, talking about intelligent transportation systems is not worth talking about unless you are talking about data and talking about how you manage the data and what uses that you put to that data.

I think the difference between the TV remote and the ITS system is the ITS system operates in a public space, in the public realm, it's owned by the public.

So there is a certain right to have that data and I agree that it doesn't need to be personalized, it can be anonymous data, but I don't know how the system is operating and where investment might be necessary, where changes might be necessary, how we can optimize the operation of that system.

CHAIR WILKERSON: Okay.

MR. BELCHER: John, who owns the data coming out of a car?

MR. CAPP: The customer owns the data ultimately.

CHAIR WILKERSON: Yes, that's what the new --

MR. CAPP: That's the official why.

CHAIR WILKERSON: -- official.

(Simultaneous speaking.)

MR. CAPP: Why? Because we know customers like we, you know, as customers these things agreed to let other people borrow it, use it, share it.

CHAIR WILKERSON: No agreement.

MR. PLEASANT: I mean we use data today through INRIX that comes off of cell phones being pinged, you know, within the transportation system and they tell us what speeds are with traffic that are moving through a particular area.

So, that, you know, like it or not that data is in the public realm and it's available for purchase.

CHAIR WILKERSON: So is there a recommendation here on the floor or in the committee for -- We talked about the

fourth item. I am trying to figure out a way to summarize what this bullet might look like or whether we keep it and find a way to work it in or --

MR. BERG: So I think we are losing sight of -- Our task here was to identify the impact that our recommendation made on any kind of JPO activity.

CHAIR WILKERSON: Yes.

MR. BERG: And the ones we ought to bring out to the incoming Administration.

CHAIR WILKERSON: That's --

MR. BERG: So has this had any impact on what they have done, or were they doing it already?

CHAIR WILKERSON: That's what -- I have the same question. We said four, yes, but on these two we don't have any --

MR. DENARO: Well, I think the answer, Roger, is what, I mean Scott said earlier they said, yes, they concur with all this but the question we are trying to answer is, okay, you agree, but did you go execute?

(Simultaneous speaking.)

MR. DENARO: The real question is on execution here.

MR. BERG: They might not have had time to do this since they got this, when, last, July?

CHAIR WILKERSON: This was --

(Simultaneous speaking.)



MR. DENARO: You know, maybe that's the valid step is to ask them to go back and respond did you do anything on this before we reiterate it.

CHAIR WILKERSON: Okay. Why don't I just hold that as a potential question, I mean for us to review.

MR. WEBB: So in the last sentence "conduct more public outreach," anybody think they have done any of that?

MR. MCCORMICK: No, they have not.

CHAIR WILKERSON: Okay. All right, so before we break if you look at the one before this was, what year, the one we are looking at now is October.

MS. JOHNSON: 2016.

PARTICIPANT: We were looking at '14.

CHAIR WILKERSON: No. The one we are looking at now is October 5, 2015.

November 20, 2014, we did not make recommendations or the Advisory Committee did not. It did, it's -- I'll give you the quote, it says "The ITSPAC makes no formal recommendations to Department. However, during a wide range of discussions they identified the following topics for further discussion."

So, I am just mentioning those. And the topics were the strategic plan, multimodal transport, which is something we haven't talked about, data policy, which we just did, institutional issues, which we didn't clarify, and then the

future, you know, looking ten years out.

So, I just raise that because that's a way of leaving it before we take a break to figure out whether there is anything from that we might want to be considered in terms of -- It's not accomplishment, right, but it is a topic that we recommended that they didn't have to respond to. Is that okay?

MR. BELCHER: Well with respect to the future, you know, Roger identified earlier when he reviewing research funding there was research funding for connected vehicles and research vehicle for autonomous vehicles, but very little kind of coordination or integration.

And regardless of what we think about or decide to, whether we decide to recommend or communicate with respect to connected vehicles, it seems that a useful comment might be just that that integration is necessary to be effective in the future.

CHAIR WILKERSON: Oh, at the integration of?

MR. BELCHER: Of connected and autonomous vehicle research.

CHAIR WILKERSON: And where does -- Okay.

MR. BELCHER: It's not on there.

CHAIR WILKERSON: Okay. Oh, I see what you're saying.

MR. BELCHER: It falls under the category of future.

CHAIR WILKERSON: Okay. Any other comments on that?

MR. DENARO: Sheryl, you know, we wanted to talk about this all in the group so new members could see how we do this and everything.

CHAIR WILKERSON: Yes. No, I think it's great.

MR. DENARO: We all kind of refresh ourselves. Maybe at this point it's time to send it to that subcommittee now and say, okay, you guys carry on and do the rest.

CHAIR WILKERSON: Yes. I think that's where we are.

MR. DENARO: Rather than trying to do it all here.

CHAIR WILKERSON: Right. I think -- I am just pulling that out because we only did one year.

MR. DENARO: Yes.

CHAIR WILKERSON: So I just thought it, for benefit to let you know that the year prior there was not one, just those five areas, and then they can go back.

MR. DENARO: Yes.

CHAIR WILKERSON: And just for your information the other, the next year was global harmonization of standards, technology strategies, security framework, which may fall into the data, and then outreach. So, I think we've hit on a lot of them.

MR. DENARO: Yes.

CHAIR WILKERSON: Okay. So, we'll take a break and then we'll come back and then we'll divide up the last, between those other four and open up the floor on those, or we can break

into subcommittees.

I think it was Option A, correct? I'm sorry.

PARTICIPANT: Whatever you want to do.

CHAIR WILKERSON: Okay. So, we'll do that when we come back. So, that's good.

(Whereupon, the above-entitled matter went off the record at 1:50 p.m. and resumed at 2:10 p.m.)

CHAIR WILKERSON: Okay, we had two folks leave, Scott and Tina, so you are on the --

MS. JOHNSON: It's all good.

CHAIR WILKERSON: It's all good. So, what we are going to do until --

PARTICIPANT: Do we make our assignments now?

MS. JOHNSON: Right.

CHAIR WILKERSON: Make the assignments? Well, let's see where are. So, we have -- Someone took the liberty of we have places to break out so we can sort of see where people are.

One was traffic safety culture. They are going to be in this room at the entrance back there somewhere in the chairs. We have the automation --

MR. MEDFORD: I thought -- Didn't they decide the traffic safety culture was going away?

CHAIR WILKERSON: I didn't hear that.

MR. MEDFORD: Yes, it --

CHAIR WILKERSON: Did we say it was? I didn't take

that in my -- Let me look at my notes, hold on. I'll look at my notes. I don't know if anybody else had different --

MS. JOHNSON: We said that early on, but said we would revisit I guess the breakout, but --

MR. MEDFORD: Oh, okay, so we'll decide in the breakout.

CHAIR WILKERSON: Ginger and team will assess --

(Simultaneous speaking.)

MS. JOHNSON: But if there is consensus now we could glob that on to something else. I am totally amenable to it. I know Tina's feelings.

CHAIR WILKERSON: So I have, I had Steve Albert would assess what has been done by others.

MS. JOHNSON: Right.

CHAIR WILKERSON: We would have a recommendation, possibly or do a recommendation, George wrote to zero, or other kinds of things. We requested information in a briefing and that -- Yes, those were the three deliverables.

So maybe not do that one today and follow up on these two things?

MS. JOHNSON: Well, that's what I would think.

CHAIR WILKERSON: Okay.

MS. JOHNSON: That would maybe be the most prudent course of action.

CHAIR WILKERSON: I see what you are saying.

MS. JOHNSON: Because what are we going to talk about if we are going to wait to see what's been done thus far.

CHAIR WILKERSON: Yes, got you.

MS. JOHNSON: Okay.

CHAIR WILKERSON: So then we --

(Simultaneous speaking.)

CHAIR WILKERSON: -- still have three rooms then for that.

MS. JOHNSON: And then one, another one.

CHAIR WILKERSON: Automation, Capital view or in this room, technology in the Valor Room, and rural -- You had another room, right? I thought we had three -- Oh, I see.

MR. STERN: No, there was the Capital View --

CHAIR WILKERSON: Okay. And the rural will be in this room. Is that fair?

MR. ALBERT: Sounds like a lot of people, I mean not enough people rather in each group.

MS. JOHNSON: Yes.

MR. ALBERT: And I am wondering either as options to the group --

CHAIR WILKERSON: Yes?

MR. ALBERT: -- Peter and I can probably do the traffic safety and write something up outside of this room because we know what's going on.

CHAIR WILKERSON: Yes.

MS. JOHNSON: Yes.

MR. ALBERT: And we don't have those titles maybe off the top of our head. Or the rural, I can write up, I am sure, and have a paragraph.

CHAIR WILKERSON: Who is heading the rural -- Yes.

MR. ALBERT: So maybe just concentrate on the other things.

MS. JOHNSON: All the other two.

MR. ALBERT: All the other to get some light.

MS. JOHNSON: Yes.

CHAIR WILKERSON: That's great if you would like to do that.

MR. ALBERT: Between myself and Peter and Bryan we want the New Jersey, New York, and the rural --

(Simultaneous speaking.)

CHAIR WILKERSON: So you'll do something separate and apart?

MR. ALBERT: Yes.

CHAIR WILKERSON: Okay. So, this means that we can split up into two groups.

MR. STERN: Either way. You can have them both in this room or you can use the other rooms, whatever works.

CHAIR WILKERSON: Okay. So --

MR. STERN: There is more privacy if you want to just...

MR. ALBERT: Well by a raise of hands can we find out who is going to which meeting?

CHAIR WILKERSON: So --

(Simultaneous speaking.)

CHAIR WILKERSON: I'm sorry, can you blow that middle section up just a little bit for me?

MS. JOHNSON: Yes, because I can't see.

CHAIR WILKERSON: Thanks.

MR. STERN: Just the names you need, you don't need

--

CHAIR WILKERSON: Just the top part. Go to the very bottom and move that little thing all the way over on the right.

(Off the record comments.)

CHAIR WILKERSON: Oh, okay, whatever.

MR. STERN: Is that better or worse?

CHAIR WILKERSON: Keep going. Keep going.

MR. STERN: I can't -- Is Scott coming back?

CHAIR WILKERSON: You don't have to keep -- Do you need the bottom? Does anybody need the bottom?

(Chorus of no.)

CHAIR WILKERSON: And I can remind folks on the fourth and fifth one, so on strategic plan and looking where the industry is going for John and Roger, some of the notes I took was alignment, JPO budget, you know, what the JPO should be looking at and prioritization.



What's missing? Are there too many things? How would the committee determine if the focus is prioritized in the right manner? The JPO strategic plan is the focus.

Private sector, not the rule of government to do private sector funding already bolstered. Okay, so those were just some of the things we talked about.

And then technology and act of transportation we talked about what value can we make to the Administration, support the needs that the federal government has, and be part of that improvement, partnership, public.

Scott talked about privates or subcontractors and then Scott Belcher asked about do we -- strongly to support the US-DOT's prior interest in using DOT spectra for connected vehicles and if so should we make a recommendation now.

MR. MCCORMICK: Since there are only three of us, is that what it is in each group?

CHAIR WILKERSON: And then the other we have new folks who could pick either one, the new committee members who can go to either, focus on one or hop into both of them, but that's where we are.

So, we will let the -- Let's see, Scott McCormick will be leading the technology one. Do you want to go in the Valor Room?

MR. MCCORMICK: Yes, we'll go to Valor.

CHAIR WILKERSON: And we've got folks there. Do you

have enough people? How many people will go to the automation?  
So, you've got a big group.

Okay, and then the other remainder will be the  
technology group. Okay, all right.

MR. MCCORMICK: All right. Where is Valor?

PARTICIPANT: Is automation staying here?

(Simultaneous speaking.)

CHAIR WILKERSON: Oh, moderation was the Capital  
View Room and then technology is the Valor Room.

MR. STERN: Out the door and then left down the hall,  
all the way down the hall.

MS. JOHNSON: Yes, because who is staying here?

CHAIR WILKERSON: Do you want to stay here? Anybody  
can stay here? We were just -- If you want to stay here you  
don't have to go.

MS. JOHNSON: Oh, because we did away with the other  
two committees, so that's why I was wondering no one would be  
in this room.

CHAIR WILKERSON: So we could stay here.

CHAIR WILKERSON: For technology? Are you in  
technology?

PARTICIPANT: We're going to stay here.

CHAIR WILKERSON: Okay.

MS. JOHNSON: Yes. I'm sorry. You're in charge.

CHAIR WILKERSON: You're in charge.

(Whereupon, the above-entitled matter went off the record at 2:15 p.m. and resumed at 3:30 p.m.)

CHAIR WILKERSON: Yes, we are convening. I am just trying to figure out who was missing.

(Off the record comments.)

CHAIR WILKERSON: So does anybody want to -- Do we need to spend one or two minutes talking about what happened in the breakouts? Just maybe do a quick summary and then we can just get signed off on the advice memorandum that you all have and then if you have issues or questions let me know and then we will just confirm the dates for our follow-up.

So, I know I enjoyed -- I thought Roger led a great session, so, Roger, do you want to --

MR. BERG: Sure. If you can click on the last file in there for me.

Yes. Next slide. Second slide. Those are the only ones I have. So, we kind of wanted, I won't go through all this with you, but we kind of changed the scope from the original committee definitions and this is what we decided on moving forward with it.

So, we want to focus only on the idea of the intersection of connected being an automation, and in this case connected doesn't necessarily mean like DSRC, or they could be part of it.

And so, what we are going to do is including a gap

analysis of the ITS strategic plan to JPO's strategic plan, establish prioritization of those elements that are included, but also if we find a place where there is a gap on, you know, prioritization to that gap as well, or if there are research development in an adoption outcomes based on the collective intelligence of the subject matter expertise in the Policy Advisory Committee.

We also wanted to consider the consolidation or to cross-populate the different modes. Since the bulk of, at least our assessment is, the bulk of automated vehicle research has focused on light vehicle, we think commercial vehicle and transit are just as important, or perhaps more important.

And then methodology is very standard, summarize the strategic plan document, review and analyze the focus area programs and the perspectives of this intersection of connectivity and automation, not specifically either one of those in and of itself, and then advise the committee at large and include the agreed upon content in the letter to the Secretary.

CHAIR WILKERSON: Yes.

MR. BERG: Go one further slide now. Give a timeline, here is today's meeting. We're going to do a meeting conference call in May and assess the summary of the, you know, the JPO's strategic plan.

And then include a prioritization recommendation

based on our analysis of those missing pieces, or that prioritization that we've done in May, and then document the results for the July reconvening of the committee meeting.

CHAIR WILKERSON: Meeting, yes.

MR. BERG: And then after that kind of an assessment from the group at large to really include our consensus in the document based in October.

MR. MCCORMICK: Are you going to send us all this so I can plan --

MR. BERG: Sure.

MR. MCCORMICK: Consistency.

MS. JOHNSON: We did talk about information sharing was paramount to what we do here.

MR. MCCORMICK: Okay. So, having just said that we are going to use the same process. What we are going to do on the technology committee is a couple things.

Given the Administration's, you know, stated position to increase funding for infrastructure one of the things we are going to do is go through the JPO's list of all of its activities for all mobility, whether that's pedestrian or bicyclists or motorcyclists or transit for prepared transit, the other mobility aspects, and then we're going to look at where we think on a crosscutting basis funding ought to be included in the infrastructure assessments for each of these areas in a crosscutting area for educational, for intermodal,

for -- and not look at it from the context of vehicle to infrastructure, but of communication to the infrastructure, regardless of the source.

So, it could be from vehicles, it could be from cell phones, it could be from other points of infrastructure. It could be from private sources for all that matters.

I am going to reach out to the ITI Deployment Coalition, which I believe is created by AASHTO and ITE at ITS America. Siva Narla is the point person on the work that they have been doing in that space, because they have been looking at it across all of the different state boundaries as well.

And so we are going to make a case for all forms of the mobility so that when somebody looks at, okay, I am going to do infrastructure funding, that rather than saying I am doing infrastructure funding just for shovel-ready projects that the JPO can have a consistent set of coordination and outreach to list the best practices, to state the lessons learned, that they can be shared in each one of those areas, and to identify the areas of the technology that is relevant and appropriate to meeting the goals of any one of those projects. In other words, make that a requirement.

And so, what we are going to do is essentially the same thing. We haven't discussed whether we'd meet in telecon in May or not, but we certainly will have that telecon before our July meeting.

CHAIR WILKERSON: That's great. Okay.

MR. MCCORMICK: So what we're going to do is I'm going to write this up, we're going to circulate it among the committee and then we are going to wordsmith it and think about the others that we want to have included but in the context of how we would recommend this to the JPO.

CHAIR WILKERSON: Okay. Any other comments or guidance, recommendations?

(No audible response.)

CHAIR WILKERSON: I think simplification came out as a theme for being concise.

MS. JOHNSON: Yes.

CHAIR WILKERSON: And thank you for that perspective. Really making this something not -- I mean to the extent that we can illustrate, you know, we may even want to illustrate something that is quick and easy for them to see so that they don't feel compelled to have to read.

Anyway, I just thought the comments you made, Rob, were really great.

MR. MCCORMICK: Yes, and I think that struck me from an earlier review was that we had a lot of those, the last items, that we ended up grouping and the response by the JPO basically grouped their response.

Their response was fairly duplicitous across several of the elements. So, getting down to a set of core

recommendations I think will help a lot for both parties.

CHAIR WILKERSON: Okay. All right.

MR. BERG: So what's the to-do activity or the exit points for the review? I know we established something for these two subcommittees, but what about the review --

CHAIR WILKERSON: For the others?

MR. BERG: Yes.

CHAIR WILKERSON: You mean for the other -- Well I think --

MR. BERG: What's the next step on the --

(Simultaneous speaking.)

MS. JOHNSON: Right.

CHAIR WILKERSON: Yes. Steve was going to be doing the same thing. So, Steve, I don't know if you want to follow the same timeline.

MR. ALBERT: Yes.

PARTICIPANT: He needs your PowerPoint, too.

(Laughter.)

CHAIR WILKERSON: The only comment I have is to the extent we can put most of our ideas on paper so we can have something to work from, it's better.

MS. JOHNSON: Yes.

CHAIR WILKERSON: Because I think it's hard if someone ends up trying to interpret the recommendation. So, if you have an idea draft it and then we can work from there.



I think that's one of the best ways for us to be, to work more efficiently. But I think keeping up with the same timeline that you have we did say that we would have, the only other action items I had with respect to this was the dates that we pick, we agreed on a potential 2-day meeting.

So be thinking about that as you meet with your committees or your talks, what you might like that to look like, what we would like to accomplish in that timeframe, and then we would have a conference call.

We also talked about having one in October, in which case we might have, hopefully, some new intelligence. We might even as part of our conference call get another update from the ITSJPO as part of that conference call.

MR. MCCORMICK: Well, I have a suggestion to what you just said.

CHAIR WILKERSON: Sure.

MR. MCCORMICK: Given that we are all going to be working to this excellent timeline here, we'll already have by the time of the 17th to have hopefully sent out to the committee the recommendations that we want to --

(Simultaneous speaking.)

CHAIR WILKERSON: A draft, yes.

MR. MCCORMICK: So rather than have our breakout sessions and then a connect session, I think maybe we want to think about reversing that and say, okay, let's get together

and talk about what everyone else's info was to that recommendation and then have a breakout to incorporate it if needed.

CHAIR WILKERSON: That's fine. You could -- I mean we have plenty of time to make that suggestion.

MR. ALBERT: We better get each other's schedules then.

MR. MCCORMICK: Because if we both have done our jobs by the time we get to the meeting we will already have our packet to present to the group and they'll have already hopefully read.

CHAIR WILKERSON: Yes.

MR. BERG: So that was kind of my idea what the July thing would be is a discussion or a refinement and more discussion.

CHAIR WILKERSON: Yes.

MR. BERG: More refinement and then hopefully 80 percent or 90 percent of the work is done by the end of that meeting.

CHAIR WILKERSON: Yes, unless something crazy happens, right.

MR. BERG: Unless something crazy happens, right.

CHAIR WILKERSON: And we need to feel like we need to modify or tweak something, or some other, address some other need that ITS JPO might hatch.

Okay, so that's where we are. We have the survey that Stephen has put out, so provide your feedback. And then, lastly, if you have any modifications to the advice memo that would be great. Otherwise, I mean that's pretty much done. So unless there is --

MR. ALBERT: Did they pass out an agenda sheet or contact information?

CHAIR WILKERSON: For today? Oh, it's -- Did we circulate that, our membership list? I know we have the roster online. Is there one that we circulate with everyone's contact information?

MR. GLASSCOCK: I can send it out to everyone.

CHAIR WILKERSON: That would be great.

MR. GLASSCOCK: Well, it's in the email that we got.

CHAIR WILKERSON: Yes, but I think that email has a lot of staff support, too, for the meeting.

MS. JOHNSON: Yes.

CHAIR WILKERSON: So sometimes it's hard to determine who is -- I mean --

MR. MCCORMICK: So should we talk briefly about what -- we might want, especially if we have a full meeting --

(Simultaneous speaking.)

CHAIR WILKERSON: Yes, that was another recommendation that we talked about. I mentioned one person. Bob has the floor right now. So, Scott, if I may --

(Laughter.)

CHAIR WILKERSON: Well, we'll --

(Simultaneous speaking.)

MR. GLASSCOCK: The survey monkey, that's why I don't use it usually, it's hard for me to tell who has responded unless -- so if you can tell, like you can put your email in there or somehow see, because otherwise if you just respond, because it comes back anonymous and so --

MR. MCCORMICK: Oh, did mine come back anonymous?

MR. GLASSCOCK: No. Yours is the only one that came back with your email.

MS. JOHNSON: Oh, gosh.

MR. GLASSCOCK: Ron and Bryan responded but it says

--

CHAIR WILKERSON: Well, you must change your preferences in your survey.

It's in the preferences.

MR. GLASSCOCK: Yes. All right, you're going to have resend that, sorry.

CHAIR WILKERSON: I mean you can just keep it --

(Simultaneous speaking.)

CHAIR WILKERSON: Because by being anonymous, I mean you probably --

(Simultaneous speaking.)

CHAIR WILKERSON: But I can help you, and I'll show

you that, too.

(Simultaneous speaking.)

CHAIR WILKERSON: But, otherwise, go by the majority.

PARTICIPANT: Yes, the non-acting one.

CHAIR WILKERSON: Okay. So this is approved. One other comment that Bob raised was whether or not for any of these meetings or calls if there are suggestions please send them to me and Stephen or the group I think would be great.

MR. DENARO: Well I just want to throw out two ideas with respect to speakers. First, we talked about getting a little deeper dive on the JPO programs.

CHAIR WILKERSON: Yes.

MR. DENARO: So if we agree with that we ought to be explicit as we can about what we are looking for, and that's not just --

CHAIR WILKERSON: You mean an update, yes.

MR. DENARO: -- sitting and giving us a summary, it's people getting up and saying here is the program, objectives, here is where we are, and this is where we hope to be, and so forth.

I think we should have NHTSA come and talk to us. We often have them, and Matt is used very often as the person and he is always full of information and I believe that's that.

(Simultaneous speaking.)

CHAIR WILKERSON: Yes. Then we will have some new people there, too.

MR. DENARO: What about the automation committee?

MR. MCCORMICK: Well, I would offer that the automation committee is not just vehicles, it is all forms of transportation and automation. It's aircraft, it's ships, it's...

(Simultaneous speaking.)

CHAIR WILKERSON: That might be good for multimodal.

PARTICIPANT: Its mission is broad and it's --

(Simultaneous speaking.)

CHAIR WILKERSON: So you don't think it's good, okay.

MR. CAPP: Yes, I am interested, too. I would like if there is to hear what are they and work it out, what is the scope.

PARTICIPANT: Maybe we can add --

(Simultaneous speaking.)

MR. CAPP: But we're not going to steer that --

(Simultaneous speaking.)

PARTICIPANT: No, that wasn't the intent.

(Simultaneous speaking.)

PARTICIPANT: Chris Gerdes is the Vice Chair, right, so Chris could probably get on the phone, right.

CHAIR WILKERSON: Hold on one second.

(Simultaneous speaking.)

PARTICIPANT: And maybe have Chris Gerdes get on the phone, yes.

MR. GLASSCOCK: Yes, when they created that committee they added a de facto member and that de facto member was supposed to be on our committee and that committee to --

(Simultaneous speaking.)

MR. GLASSCOCK: -- to communicate. I might have said that's great, but you haven't appointed this committee yet. So, until you appoint the committee you don't need the committee, and that kind of helped things and then the Secretary thought he had already signed the letters and he hadn't, and, anyway, so I need to follow through.

I did ask John about that and I never got a response, so -- I can't remember the guy's name, but they did set up a person just so he could communicate back and forth with the two committees.

CHAIR WILKERSON: Well, that's great.

MR. GLASSCOCK: So I will follow through with that.

MR. DENARO: So if they are contacted by then it would good maybe to have somebody come by and we could ask specifically to focus on ground transportation or automation.

MR. GLASSCOCK: Yes.

CHAIR WILKERSON: Okay. So why don't we -- How about this, if anyone has recommendations list those and provide

them to us by April 30th, at the end of April, the last day of April, that way we have plenty of time to get people on the calendar. That would be -- Okay.

MR. BERG: Ken even mentioned the Ariel as the one

--

CHAIR WILKERSON: I'm sorry?

MR. BERG: Ken this morning mentioned Ariel --

MR. DENARO: Yes, Ariel, she wants to come help you guys, yes.

CHAIR WILKERSON: Okay.

(Simultaneous speaking.)

CHAIR WILKERSON: Okay, that sounds great. So you've got that down --

(Simultaneous speaking.)

CHAIR WILKERSON: Yes, very good.

MR. ALBERT: Who is she?

MR. GLASSCOCK: Ariel Gold. She is our data person.

CHAIR WILKERSON: Oh, super. Oh, super, okay. She's great.

MR. GLASSCOCK: She is taking the bull and running with it.

CHAIR WILKERSON: That's awesome. All right, that's it. If there are no other recommendations -- Oh, one more?

MR. WEBB: Sheryl, just to comment that Scott said he is going to reach out, but I think you might, you need to be



maybe even a little bit more than that to the current V21 deployment coalition.

That is a major group that has been working on this. So it would almost be helpful to frame our charge to their executive committee and say given what we are trying to do what suggestions might you have for us to consider based on what you have learned and what you are going to be working on.

MR. MCCORMICK: Do you want to do that in advance or do you want to invite them to the July meeting?

MR. WEBB: I would like to do it in advance because they work, you know, on conference calls and so forth like that.

MR. MCCORMICK: Okay.

MR. WEBB: The executive committee is a broader coalition of both staff members and committee chairmen for the various five working groups.

MR. MCCORMICK: When are we going to look at doing the conference call?

CHAIR WILKERSON: We said the conference call in the middle, in August.

MR. MCCORMICK: August, okay.

CHAIR WILKERSON: Is there anything --

MR. WEBB: I mean I just don't see a downside. I am just concurring that -- I'm just looking to see if you guys have any problem of us making that request and asking them to furnish us with thoughts, comments, or whatever.

CHAIR WILKERSON: Sure.

MR. WEBB: Okay.

CHAIR WILKERSON: Okay. Okay, that's it, we're done. The meeting is adjourned.

(Whereupon, the above-entitled matter went off the record at 3:47 p.m.)