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Transcript

FirstNet Board of Directors Webcast, Boulder, Colorado September 14, 2017

OPERATOR: Good morning and thank you all for holding. Your lines will remain on a listen-only mode for the duration of today's conference. I would like to remind all parties the call is now being recorded. If you have any objections, please disconnect at this time. I would now like to turn the call over to Sue Swenson. Thank you. You may begin.

SUSAN SWENSON: Thank you very much, Operator. And good morning everybody. Welcome here to Boulder, Colorado. We were here, of course, yesterday for our committee meetings and some demonstrations by AT&T and some of our key vendors, which was a pretty exciting afternoon for all of us. Obviously, this is an important meeting because we're going to be talking about the budget and talking about a couple of other things, about how we do business with FirstNet today, because that's a bit of a change since we've gone into the contract mode, and some other updates about innovation and technology, which is obviously very critical to public safety. So, kind of a full agenda today, an important agenda, as part of our annual events here, particularly around the budget.

You know, if you listened to the meeting yesterday, I made some opening remarks, and I just would like to reiterate them today because we're, we live in interesting times, as they say. And, you know, the last couple of weeks have been pretty dramatic with hurricanes in multiple locations back to back, and also what didn't get publicity, and Chief Johnson and I are particularly pretty focused on that because we live out in the West, and there's a lot of, in case you hadn't noticed, there's a lot of fires out there, a lot of wildfires out there, to the point where actually I was talking to Chief Johnson last week, and he said there were so many concurrent wildfires going on that resources were completely tapped out. You know, there's a lot of mutual aid that occurs between the western states, and, you know, the call for help, there was actually more need than there was actual capacity to deal with the wildfires. So, it doesn't -- it's not lost on us that what we're doing is ever so critical. I mean, we were never in doubt before, but if anybody was ever in doubt, I think it's pretty clear today why we're doing what we're doing and why it's so important that we're moving with a sense of urgency.

So, we also, I think, you know, during the last couple of weeks -- and I'm sure many of you have been involved in some way or another, whether you were in an emergency operating center, whether you were providing financial assistance to either people or animals who were trying to be rescued. Several of you have been particularly involved, and I'd like to recognize that now.

Our board member, Annise Parker, who you may know as the former mayor of Houston, actually stood up a shelter pretty quickly as Harvey was approaching, been very involved in public safety and she was very instrumental in doing that. In fact, was actually in the center, in the shelter, and that's, frankly, why she's not here today. She's continuing to help with the recovery efforts down in Houston. So, I'd like to thank and recognize Annise's work, you know, personal involvement in that.

Tom Sorley, who you'll hear from a little bit later, of course, he runs our PSAC, we're delighted you're here, Tom, but just so everybody knows, Tom was working I think at least 12-hour shifts day to day, sleeping in his office. And we chatted last night about some of the interesting things you learn during these kinds of operations, but, Tom, thanks for your personal involvement in that. I know you'll talk about that a bit today.

We also had a couple of FirstNet folks involved as Harvey approached Houston. Brian Kassa from our Technical Team was involved in the team in Houston. Jackie Miller-Waring was involved in, I think she was in Louisiana, trying to help out there. And then we have Ehrin Ehlert was involved in one of the other hurricane events. So, we're all trying to work together. I think it's a, you know, you kind of see the best of people in situations like this, which is great to see that, you know, that our country comes together in times of need, but I think it makes what we're doing ever so more important as these things approach us. We're hoping we get a little reprieve here with Hurricane Jose because we have some recovery efforts.

And, of course, you're watching, you know, I made the comment yesterday, you know, there's a lot of news that happens around when the event is actually occurring, but there's really important work to be done now, too, in terms of the recovery, and there's still a lot of people who are homeless. There's a lot of people who are going to need a lot of assistance to get back their lives in order. And so, I hope that the effort and energy that went into publicizing the actual event, that we actually put as much energy into the recovery aspect of that.

You know, also, the event of last week, and we don't lose sight of that as, of course, we celebrated the 16th anniversary of 9/11 last week, and that was occurring at the same time as well. So, we obviously took time out to remember the thousands of lives and first responders who lost their lives in that event. And I don't think we'll ever forget that. You know, that certainly of course is the reason we're here, and that was, of course, an event from last week.

In terms of the effort today, we have a couple of housekeeping matters. We did talk in the committee finance meeting yesterday about the budget. We actually took some video yesterday. Like I said, we had the opportunity to see firsthand some of the technology that we'll have our first responders have access to in terms of the network, which is really great to see it hands on. And that was -- and I'm going to ask the board members to comment on that because I think that was very helpful for us to see it firsthand. And I'm very appreciative of all the folks who were involved in putting that together, Mr. Bratcher, you and your team, and a lot of other people, to prepare that. I think it was very, very useful and great to be able to see that, and appreciate, you know, AT&T and the other vendors who were there to help us see a firsthand of that.

And then obviously PSCR, of course, has been very involved, you know, the work that they're doing, that they've been doing for many, many years, and got to see the -- I think the future of technology that's out there, and the opportunities that exist. As I've said before, public safety is now mainstream, and it's really exciting to see that people really see an opportunity here to bring new innovation, you know, to first responders and not sort of after the fact. And so, it was exciting to hear what, Dereck, you and your team are doing in terms of that future innovation.

We're going to get an update on the Network Program office. Obviously, very important as we manage the contract, now that it was signed. And obviously there is a lot of work underway in the Network Program office. We knew that that was going to be a demand, but obviously very important work for the organization. And then Mike will, as always, finish with a CEO update, Mike, at the end of the meeting and get your thoughts on the organization.

So, with that, oh, and, of course, TJ talking about innovation. I'm sorry. I've talked about innovation, I didn't say who was going to talk about it. So, TJ, you're going to talk about innovation. In terms of the next steps here, I think we need to take a roll call and then a conflicts of interest review, or did you do that yesterday?

KAREN MILLER-KUWANA: I'll read again.

SUSAN SWENSON: Okay.

KAREN MILLER-KUWANA: Just to remind for those who are on the board call, but we'll start with roll call. Sue Swenson.

SUSAN SWENSON: Here.

KAREN MILLER-KUWANA: Jeff Johnson.

JEFF JOHNSON: Here.

KAREN MILLER-KUWANA: Ed Horowitz.

ED HOROWITZ: Here.

KAREN MILLER-KUWANA: Chris Burbank. Governor Douglas.

JAMES DOUGLAS: Here.

KAREN MILLER-KUWANA: Kevin McGinnis.

KEVIN MCGINNIS: Here.

KAREN MILLER-KUWANA: Annise Parker. Neil Cox.

NEIL COX: Here.

KAREN MILLER-KUWANA: Ed Reynolds.

ED REYNOLDS: I'm here.

KAREN MILLER-KUWANA: Richard Stanek. Teri Takai.

TERI TAKAI: Here.

KAREN MILLER-KUWANA: Kathy Kraninger.

MALE SPEAKER: Here.

KAREN MILLER-KUWANA: Okay. Is that Rich Stanek? I'm sorry. Who was that?

SUSAN SWENSON: It wasn't Kathy, okay, unless Kathy's voice has changed.

KAREN MILLER-KUWANA: Kathy Kraninger. And then Christopher Piehota.

MALE SPEAKER: Kathy stepped out of the office for one minute, but she is on.

KAREN MILLER-KUWANA: Okay. Perfect. Thank you. Apologies. And then Chris Piehota.

CHRIS PIEHOTA: Chris Piehota present.

KAREN MILLER-KUWANA: Thank you. Thank you, Madame Chair. We have a quorum for the board.

SUSAN SWENSON: And what did you want to do about the conflicts?

KAREN MILLER-KUWANA: I'm going to just read really as quickly as I can, very brief. We used to read the whole conflicts, so we're shortening this every time. But just in

advance of today's meeting, the management team has provided the board members with an agenda outlining the items to be discussed. The members were also provided with the conflicts of interest assessment, which was produced jointly by the Commerce Department at the Office of General Counsel and FirstNet's chief counsel. Providing these documents in advance of the board allows them to identify potential conflicts and to recuse themselves if required. We will remind board members at this time of their obligations relating to conflicts of interest and ask them to identify any recusals from deliberations or voting. In consideration of the meeting today, each member should consider his or her obligation with respect to the appropriate committee, and for some of you that might mean more than one. We are only doing one conflicts notification today for the board meeting. And, with that said, if any member believes that they should recuse themselves, please so state for the record. Hearing none, Madame Chair, we may proceed.

SUSAN SWENSON: All right. Thank you, Karen. I'd like to turn the agenda over to Vice Chair Johnson for a few words before we proceed with the agenda.

JEFFREY JOHNSON: Thank you, Madame Chair. Well, good morning and welcome to the FirstNet Board of Directors meeting. I think I want to start off, Sue, by thanking you for your insight. We did -- between Harvey and the wildfires and, you know, the cumulative natural disasters hitting this country, Sue and I were talking on the phone, which we do daily if not multiple times a day, and Sue's instinct was to not, at the board level, interfere with the emergencies by visiting. And I think a lot of people missed that. Their instinct is to go out and observe and to see how this organization and what we're doing could impact future responders. But, Sue, I think your instincts were right on. There's a time and a place for that. And as an incident commander for the majority of my career, I can tell you "not now" is my theme. We'll talk later. So, I want to really express my appreciation for your instincts there. It certainly isn't showing a lack of caring. It's actually showing respect for the job we have to do. There will be a time to go back and lessons learned and pick that up, which we will do.

And I also feel very fortunate that we have Tom Sorley, who is the Deputy CIO for the City of Houston, as the chairwoman stated. But the fact that Tom is our chair of our Public Safety Advisory Committee is a real bonus. He will take these experiences that he's had in Harvey, and he will roll that right into the experience that future users will have. And the fact is, of the over 40 members of the PSAC, that's what each of them do, they each bring their disciplines and their experience, and that's a differentiator for FirstNet. We have true touch and feel, direct public safety where we listen and we let that experience guide the path we're taking. So, Tom, I want to thank you. Your insight is invaluable.

Sometimes I wonder about your ideas. Your idea that you auction off the one shirt you wore in the EOC for 12 days, I don't know that that was the best idea you've ever had, but I do know that 12 days in the EOC is a killer. And I think this is probably something lost on the general public, and that's that, you know, yeah, I know it's your job, and it's a job of every first responder, but the fact is you have a family and you have farm animals

and you have properties, and those things have to be taken care of. So, I -- my hat's always off to the responders that take care of the public first. And hopefully we've made a plan for families and things we care about. So, Tom, thank you for that. Also appreciate the City of Houston and the State of Texas for the sharing they've already done and the sharing they're going to do, that will help FirstNet and our network partner, AT&T, learn from the experiences that they have.

I just want to reflect briefly on, before I turn it over to Tom, I want to reflect briefly on some of the demonstrations yesterday to our Chief Technology Officer Jeff Bratcher. I was so impressed with situational awareness demonstrations yesterday, and I expressed that at the time. That was the first time in my career as a fire chief or in technology in FirstNet, that was the first time I've seen a fully workable, logical demonstration of the kind of situational awareness the first responders are going to experience. It was fantastic. I wish people on the street had that today, and I can't wait for us to deliver it. So, congratulations to your team and to the AT&T team for the insight that they brought to the public safety experience. That was awesome. Other than that, Madame Chair, that's all I have to say, but thank you for a few moments.

SUSAN SWENSON: Great. Thank you, Jeff. And before we proceed, Tom, I just need a second. We did overlook our newest board member, Admiral Ron Hewitt, who's with us today. We've known Admiral Hewitt for a number of years. He's been involved in FirstNet since the inception actually. And, interestingly, on 9/11, he was officially made the board member to represent Department of Homeland Security. Ron, apologize for overlooking that. And we will reflect you obviously present at the board meeting. So, welcome to the FirstNet Board. Delighted to have you.

RON HEWITT: Thank you.

SUSAN SWENSON: Thank you very much. Tom, the floor is yours.

TOM SORLEY: Can everybody hear me okay? I just want to start out by saying I did have more than one shirt there, but I really liked that particular shirt, and so thank you for the kind words. Obviously, I was in a safe, dry emergency operations center when there were thousands of first responders out picking up people and saving their lives. So, what I did, obviously, was -- you know, pales in comparison to what they did.

So, and while I was sitting here this morning, I got an email that our last two wastewater treatment plants that were under water are now up and fully operational. This was a huge issue for us. Water plants, wastewater plants, when you have water, so much water, you think, well, it's a water plant, but it doesn't actually like floodwater on top of it. So, we had a lot of challenges with that, but -- I'm going to get into the PSAC update, but I just want to say, from the outreach from all of you, many others that aren't here, I got inundated with emails and text messages, 'We're thinking of you,' 'We're praying for you.' I just -- it's humbling to know so many people care. So, I really heartfelt appreciate that, so.

So, it's my turn for the update. So, first, I want to talk about the Tribal Working Group. We had an in-person meeting in July, in conjunction with the Tribal Interior Budget Council meeting in Flagstaff, Arizona. It was very well attended. Kevin McGinnis, our board member, was there for almost the whole time. It was a really positive meeting. We got a lot accomplished. We did an overview of what the offering was. We talked about the Tribal Consultation Policy, which we hope will be forthcoming imminently. We talked about potentially making some recommendations to FirstNet about ways we can streamline the rights-of-way issues on tribal lands because that's a long pole in the tent as far as fielding new sites on tribal lands. So, obviously the delegates in that working group have a lot of experience and wish to put forward some ideas on that.

So, they also have some ideas about federal agency participation and contract vehicles as it relates to the tribes. They do things a little differently, obviously, because they're sovereign nations, and the way they interact with the federal government is unique. And so, they basically want to ensure that we're set up for success from the beginning. So, it was a very productive, very positive meeting. During that in-person meeting, we had a chance to meet with the Navajo National Council, also the Navajo Nation Leadership, the President of the Navajo Nation. We thought, I'm going to say, I thought he would come in and spend a few minutes and go about his business. He was there basically for two hours, very fully engaged. It was a very, very productive meeting. We also, during the Tribal Interior Budget Council, met with their Public Safety and Justice Subcommittee. All of those things were very positive from an interaction perspective.

Excuse me. I'd like to take a moment just to thank Brian Howard, our chair for the Tribal Working Group. He's been our chair for, I think, almost a year now, and he's just done an incredible job with that group. And I think it's -- you should know how great your two tribal liaison folks are, Margaret Gutierrez and Adam Geisler. FirstNet employees are just absolutely fabulous. The tribes respect them; it's obvious when you get in a room with them that they have the respect of the members. So, I think that's really great.

So, we have a couple of upcoming meetings. One is a webinar the last week of this month. We anticipate doing working group updates. We have also our in-person meetings, working on scheduling that for the week of December 11th, possibly in Atlanta. Next year, we hope to get back on a regular basis, where we'll have one of our in-person meetings will be on conjunction with the PSCR meeting. That's what our plans are. And that's normally in June. And the other we hope to hold in conjunction with the board meeting, as we have done in the past, because it gives the board and the PSAC an opportunity to interact in a much fuller way.

Some of the topics we're working on, we're working on a series of federal working group workshops for regional federal entities. The first one we anticipate being in El Paso. Our chair of that working group just stood up a new facility there. So, we're thinking of having that workshop there. Don't have the timeline yet on that.

We're, we have two of the, I think, six or eight past PSAC task team work product briefings with AT&T scheduled. So, basically, I've described this in the past as a 'this is

what we meant by that' session. So, we also, it's going to be bidirectional, so AT&T will be able to enlighten us on how they use those recommendations or what parts of their deployment address those recommendations. We'll look for gaps. We obviously, when we were doing the task teams, there were things we couldn't undertake because we didn't know the partner and we didn't know the solution. So, we're going to pull those parking lot items out and kind of do those interactively also with AT&T. So, we have two of those scheduled I think it's next week. So, that's a really good, positive thing.

We have a lot of PSAC members that were participating and are still participating on the State Plan Reviews Team. I participated in Texas, for instance. And they are able to provide a lot of insight based on their PSAC activities over the last five years. So, I think it's a really good fit that they're plugging in to that. And we do have some, working on scheduling some workshops at the October NCAI meetings to enlighten the NCAIA more about what the PSAC is doing on their behalf, so. And that, I think, concludes my update.

SUSAN SWENSON: Tom, could I just ask a couple of questions, if you don't mind?

TOM SORLEY: Absolutely.

SUSAN SWENSON: On the Tribal Working Group, really appreciate the work, Kevin, that you've done with that, and it's great to hear that things are going well. As you think about, now that we have a contract, what do you envision for, you know, the types of activities that we would be involved in? Just a continuation of kind of education engagement, or have you had an opportunity to talk about that?

KEVIN MCGINNIS: I'll let Tom fill in the details, but I think that the biggest challenge ahead of us right now is also the biggest opportunity, and that is getting past the opt-in decisions, the governors; decisions, because it brings us to a point that we've been looking forward to where we can actually do some of the types of consultations that tribes have wanted us to do, and that's nation to nation essentially. So, our hands were tied a bit by our legislation up until this time. Now that we are moving forward and able to do that, we have a consultation policy that is virtually here, and that will come just at the right moment. And then, as far as how we can solve and on what we can solve beyond the right-of-way issues will be a partner effort with our partner. And we haven't had real extensive discussions on that as of yet.

SUSAN SWENSON: Okay.

TOM SORLEY: So, I would agree with everything Kevin said, and say that we're just getting ready to undertake a new tasking to identify those things that the tribal working group can do to help us interact better with the tribes. So, we haven't actually set up that tasking yet, but I'm in receipt of it from Rich, and we're going to be working on that. So, I think that's really important.

The other thing I would say is, you know, because we have a limited staff, you know, we basically have two outreach folks for five-hundred-and-something tribes. And when we start doing more nation-to-nation consulting, we most likely will need to look at resource constraints, and how do we do that? Do we augment AT&T? You know, just how do we do that? I think that's one of the things that FirstNet's staff has to kind of figure out, working with AT&T, do Margaret and Adam become more of, you know, the coordinators, or AT&T staff is out there, boots on the ground, or some combination thereof. I'm not sure how that's going to work, but I just know when we really do get into nation-to-nation consultation, the tribes are going to expect a heightened level of interaction, and it just seems like that would be difficult with only two people.

SUSAN SWENSON: Okay. No, that's good to know. Any other questions from any -- go ahead, Kevin.

KEVIN MCGINNIS: Yeah, I would just, I would also add, I did attend a tribal meeting in California recently, and there were AT&T tribal staff there. So, you know, they do obviously have an operation going, and it's just a matter of putting those pieces together.

SUSAN SWENSON: Okay, good. That's great. And then on the parking lot items out of the previous workgroup, we didn't know who the partner was, I guess you're envisioning taking all that from the parking lot and boiling that down to another set of priorities I guess, and then taking that on. I'm just curious how you're envisioning going forward with that.

TOM SORLEY: So, some of the recommend -- we couldn't make recommendations on things, so pulling them out and basically reviewing those items, they may end up being, 'Oh, we've got that handled and this thing, so we don't need to worry about it,' or it may be, 'Hey, we need to do some more work in conjunction with AT&T to better define those items now that we know the technology solutions.' So, I think it's a combination of possible outcomes based on the interaction with AT&T. That's why it's so important that we do this, because we need to know -- we need to identify the appropriate way forward. And it may be that it's handled, and we don't need to do anything.

SUSAN SWENSON: Correct. Wouldn't that be nice?

TOM SORLEY: It would be, but it's probably not the case.

SUSAN SWENSON: I don't think that's going to happen. Hopefully it's a longer list than the list of things left to open, but I really appreciate the fact that we're going back on those open items and not just leaving them hanging. So, that's great. Any other questions or comments from the board on PSAC? Thank you, Tom.

TOM SORLEY: Thank you.

SUSAN SWENSON: Appreciate it. We're going to have some condensed committee reports today. We went pretty thoroughly yesterday on the committee reports. And I don't know, Governor, if you want to make any introductory comments for Kim's work? We've been, as you know more than anybody, been spending quite a bit of time on the FY18 budget, which is really important because obviously it sets the parameters for the work we're doing, but do you want to make any opening comments before Kim?

JAMES DOUGLAS: Very briefly, Madam Chair. Thanks. We did cover a lot of ground yesterday. We talked about the progress during fiscal 2017--that's about to end in a couple weeks--some of our accomplishments there under Kim's leadership with our CFO office. It's a time of transition in a way for our budget because, in the past, we had a single revenue source, a large allocation from the proceeds of the spectrum auction, and now we're getting into a time when we'll begin to receive payments for the operation of the network. And Kim's challenge, as we get into 2018, is to make sure that we match our revenues with our expenditures and stay on the right side of the ledger. And she's been able to present a budget, working with Mike and the entire management team, that is restrained, less than we've been spending during the current fiscal year, but one that I think is sufficient to meet our needs going forward. So, Kim, why don't you take it away and give us a few details. And, again, thanks so much for your leadership at this time of transition in our financial operations.

KIM FARINGTON: Thank you, Governor Douglas. And I have to thank my team because without the CFO staff and the collaboration with all the business units, I wouldn't be here presenting you with such a solid budget for fiscal year '18.

SUSAN SWENSON: They're just glad that it's over.

KIM FARINGTON: Yes, they are. Now comes execution. So, to begin our FY18 budget request, just wanted to let you know that this budget really focuses on innovation, customer services, and operations. And this year's budget request is a total of 73.5 million dollars. This actually represents a 13 percent decrease from our fiscal year '17 budget of \$84.6 million. So, we're very proud that we were able to streamline and reduce our budget request this fiscal year, knowing we're moving forward with such great things that we have planned for this fiscal year.

These reductions were actually based on three key items, first being that we streamlined processes. Now that we're in our post-award environment, we really looked at all of our processes, made sure we weren't duplicating processes, and just found ways to streamline our efforts across the board. We also focused on improved resource optimization, making sure that every dollar is utilized most wisely, and also looking at the skills and assets that we actually had internally to FirstNet to utilize that expertise in other areas. And we also are reducing our reliance on contractors and focusing on more full-time staff. We are just at that point where we really know more about this fiscal year and where we're headed, so we appreciate all the work our contractors have done getting us to this point, but now that we're stabilizing in our workforce, we're just shifting our focus to full-time staff. And with regard to the total budget request, this includes

funding for our staff and our board expenses, which total about 64 percent of the total budget, and all the other resources necessary to carry out the operations in support of our strategic goals and objectives in meeting the FirstNet mission, which total about 36 percent of this budget.

What I'd like to share with you now is just our approach to the Cumulative Obligations budget by quarter, and by workstream. We have the same three workstreams that we had last year. We have our public safety workstream focusing on our public safety users and implementation of the -- just government affairs that we do with the Hill and just focusing on our outward-facing customers. We also have the network operations workstream, which is, of course, focusing on the implementation, the operation, and the oversight of the nationwide public safety broadband network, our major contract. And the third workstream being our corporate services workstream, which focuses on the operations of FirstNet in support of the FirstNet mission.

And as we did last year, we're doing the same this year, really breaking out corporate services into programmatic operations and the administrative operations, just so we have greater transparency into the administrative costs that are hitting against the statutory administrative cap that we have of \$100 million. Fortunately, we're doing very well with regard to the administrative cap. Through the end of fiscal year '18, we will anticipate only utilizing 44 percent of that cap through the life of -- since the inception of FirstNet, which is a great news story.

The next slide shows you the cumulative expenses by quarter, by workstream. And this is supporting our expense budget of \$101 million. For fiscal year '18, our public safety workstream will represent about 29 percent of our total budget. Network operations will be utilizing about 35 percent of our total expense budget. And the corporate services workstream will be about 36 percent of our total expense budget. And here you can see the breakout by quarter cumulative throughout fiscal year '18.

You'll probably ask what are you going to do with all this money that you're going to give FirstNet. And what you see here is just a very high-level Gantt chart of our key milestones, only those high key milestones for fiscal year '18. We have so much work being done we couldn't fit it all on this slide, but these are really the key items that we have planned. We're going to be working on the RAN network implementation. We're going to be really looking at our lab testing, which I think a lot of you got to see yesterday. We're also going to continue to focus on governors' engagement and our outreach to our public safety community, as well as continue the typical operations that you've seen to date, and that is the legal support that we need covering all aspects of FirstNet. Maintaining the FirstNet system and the network that is utilized, the operations and maintenance there, as well as making sure that we're focusing on our human capital at the same time throughout the year, and also continuing the implementation of FRED, our FirstNet Repository for Enterprise-wide Decision-making, for our cost accounting and data analytics environment that's new to FirstNet this year.

So, altogether, that's just a very high summary -- high-level summary of our FY18 budget request. And what we would like to do today is request, through board resolution, that the board approve of the proposed FY18 budget of \$73.5 million on an obligations basis; as last year was the same, allow management to enter into all necessary agreements to meet the strategic goals and objectives of this budget; and this also -- we also request the board approve us utilizing a ten-percent reallocation option for funds transferring between those three workstreams that I discussed, and also, in the aggregate, ten percent -- no more than ten percent, or 15 percent in any individual major work stream.

JAMES DOUGLAS: Madame Chair, this is similar to the resolutions we've presented and approved in the past. The flexibility has been more than adequate for Mike and Kim. And, as the board members know, we discussed this at some greater length yesterday. And, on behalf of the committee, I'd like to move for adoption of the resolution.

SUSAN SWENSON: Are there any questions for Kim before we proceed with a recommendation? I mean, we've been pretty exhaustive in our efforts to date, which I think is important. I mean, I think it's important for everybody to know that, you know, it's not just a matter of coming here and saying yes. I mean, there's -- Kim knows very well that we've asked a lot of questions, a lot of follow up, and I think we continue the rigor around the budget planning that we have since the beginning. We're very concerned about obviously spending only what we need to do to achieve the objectives. And so, we want to make sure that the rigor is there. I think I'll have the secretary read the operative language of it. We'll entertain a motion, then obviously open it up for any further discussion before we vote. So, Karen, would you read the operative language on the resolution, please?

KAREN MILLER-KUWANA: Great. And this is Board Resolution 86 for fiscal year 2018 budget. "Now, therefore, be it resolved that the board hereby approve Senior Leadership's fiscal year 2018 budget of \$73.5 million on an obligations basis as presented by Senior Leadership for the three major activity categories: network operations, public safety, and corporate services of FirstNet's operations. Be it further resolved that the Board authorizes Senior Leadership to enter into the necessary agreements to meet the FY2018 FirstNet workstream milestones, and be it further resolved that the board authorizes that Senior Leadership may reallocate up to ten percent of the funds from any of the three major activity categories to another major activity category for an aggregate of \$7.35 million. Senior Leadership may exceed the approved obligation level of the three major activity categories by no greater than ten percent in the aggregate or by 15 percent in any individual major activity category. This budget amount of \$7.35 million may be apportioned commensurate with the \$73.5 million base budget for the availability at the beginning of fiscal year 2018.

SUSAN SWENSON: Great. I think we have a motion. Is there a second?

MALE SPEAKER: Second.

SUSAN SWENSON: Thank you. Any further discussion? You know, I would just like to make one comment, and that is we -- I think the only kind of more uncertain thing about the budget this year is really around program management, you know, the NPO office, Mike, in terms of -- I mean, you have some flexibility I think built into that, but I think that would be the only area that we probably are less certain about in terms of the expenditures this year. I mean, would you agree with that?

MIKE POTH: Right. You know, we have a pretty good snapshot of what we think the level of efforts will be based on our first six months of the contract, but we do have provisions in this budget that if we find that the workload, if we're working alongside AT&T and applying the proper oversight, more is needed, we do have the flexibility within this budget and also with this ten percent allocation, up to ten-percent allocation to surge, if need be, based on the circumstances as the contract gets into its next logical part.

SUSAN SWENSON: Okay, great. Well, I just wanted to make a point of that because I think every year I think we get more certain about parts of the business, and this is probably the area that has probably the least certainty this year, but everything else I think is pretty clear. So, with that, all those in favor, please signify by saying "Aye."

GROUP: Aye.

SUSAN SWENSON: Those opposed, same sign. Any abstentions or objection? Great. That resolution is passed, and I assume that will be on the board, the FirstNet site at the end of the meeting. With that, we'll go on to the governance update.

The Governance Committee, unusually, has been more busy than usual. Usually, you know, the work that we do is not like the Finance Committee or the Outreach and Technology Committee, but we've been pretty active since last year. And we -- the thing that we've been busy with is really the board member nominations. We have a couple of reappointments that are up for reappointment, and we also have some open seats that we need to fill. So, we've been in the process of interviewing candidates. I think we started last year, like, in August or September, and we continued through the first part of this year as we got new submissions. We received quite a bit of interest. I think, just as a reminder, the legislation is pretty clear about the types of requirements and background that we're looking for. So, even though there may be a number of people in a particular category, you know, we have to make sure that we keep those things in mind as we do the appointments.

So, the Governance Committee concluded their work and we made a recommendation to NTIA, and NTIA has made that -- has moved that recommendation up to the Department of Commerce. A lot of background work and check occurs before that recommendation. So, NTIA did their preliminary work and felt that they could move forward with the recommendation, and it is in the Department of Commerce's hands now, and we'll just wait to see what they say. We're hopeful that we can announce the

new board members in due course. Until that time, our existing board members have been continued. We did that previously. I think we did that last year. And the existing board has been continued to the end of December, or, if the appointments come, then those changes will occur at that time. We also, you know, look forward to making those announcements, and we'll make those as soon as possible.

The other thing I want to cover on the Governance Committee is that we have some exciting news. Actually, you know, we've talked a lot about the RFP process. And, as you know, the team -- there was a team of people who worked very diligently with the 16 objectives. You know, there were a lot of people involved in that process. It was, I think, validated through the protest, just the quality of that work, and I'm very pleased to announce today that we have a FirstNet team winning a Commerce Gold Medal Award. And, as I understand it, you know I don't work in the federal government, but as I understand it, this is quite significant to be recipients of this. And so, I want to call out who the recipients.

And this is an event where the recipients, along with a guest, will be invited to Washington, D.C., to receive this recognition on September the 26th. And so, we have some of the recipients in the audience today, and so what I'd like to do is name the recipients and have you stand up and be recognized by the group, and congratulations. I mean, this is really terrific news, and I think very well deserved.

So, with that, Mouncef Belcaid. Mouncef, I think you're here. I saw you come in. Mouncef. Oh, he just stepped out. Okay. We'll have him step up when he comes back.

I don't think Terri Callahan is here today. She's probably back in Reston, but, Terri, congratulations. You know, Terri was involved in this from the very beginning. She was at the Department of Interior when this all started, and, of course, is a FirstNet employee, so it's great that she's on that team.

Brian Hobson, I see you in the audience. Brian, congratulations.

Brian Kassa, Brian's not here. He's probably in Texas somewhere, right?

Paul Madison, our Deputy Chief Counsel, who's very involved, and, of course, he's in Reston, very involved in the protest and the, you know, the resolution of that protest, and so congratulations, Paul.

James Mitchell, I see you in the front, James. James and I have had many conversations at the beginning of the RFP prospect. We chatted yesterday about that. I remember writing something on his whiteboard in the old offices in Reston, right? So, really excited that you're on this team, and the recognition very well deserved.

Peggy O'Connor, Peggy, can you stand up, please? And Peggy is in our Boulder office, and Peggy was very involved, obviously, along with Mouncef, in the RFP process, and still continues in her role at FirstNet in terms of overseeing execution of the contract.

John Quinlan, who's not here, he's the Deputy CFO in Strategic Planning. I met John in the early days of FirstNet when he was at OMB. We got off to a little bit of a rocky start, but he's recovered since then. So, I'm really happy that he's on the team and being recognized.

Matt Schiller, who is the Director of Financial Strategy and Development, but Matt -- is Matt still with us? Okay, because I haven't seen Matt recently, so. What's that?

FEMALE SPEAKER: [Inaudible].

SUSAN SWENSON: You're working him too hard. Okay, great. So, anyway, Matt, congratulations to Matt. You need to let him out a little more often I think. And then Patrick Schwinghammer, and Patrick, you're here, great to have you on the team and recognized. Congratulations, Patrick. Patrick's been with FirstNet for quite some time, and very instrumental in the RAN development and continued work, particularly now in deployment. So, congratulations for being on the team.

PATRICK SCHWINGHAMMER: This is the first contract [inaudible].

SUSAN SWENSON: Exactly. Yeah, I was thinking back to that exactly. So, you've been through the wringer, Patrick. So, congratulations. Nice to have you being recognized. But, anyway, I think we should just give them a round of applause. And we want pictures from the event, and I hope you have a good time when you go back and, you know, for those of you who would be traveling. I'm sure it's a great event and a great honor. So, congratulations.

We also would like to just take a moment today to congratulate Kevin McGinnis, recently he was the recipient of a NPSTC award, and actually the highest award that NPSTC gives, which is the Richard DeMello. Now, I don't know much about Richard DeMello. I did a little research on it, but, Kevin, do you want to talk about that a little bit? I mean, you're being recognized for obviously your, you know, your strategic vision, your input, your involvement, but any comments you want to make? This is quite a nice recognition.

KEVIN MCGINNIS: Well, thank you very much. I appreciate that. And I've been working with NPSTC I think for about 13 years or so now. And I got to tell you, I serve in this capacity as a telecommunications advisor for some national EMS associations. And when I first came into public safety communications, it was because I was a paramedic who kind of didn't step backwards fast enough, but I've enjoyed my participation. I've enjoyed being a policymaker among engineers who actually know what they're talking about. And I got to say that NPSTC is one of the premier public safety communications organizations in the country, if not the world. The volunteer talent that it brings to bear to do FCC filings on behalf of public safety, to do white papers and produce studies, to support FirstNet and the PSAC, the history has been solid, and they've made me look so darn good as a technology advisor. So, you know, I've told others that I'm getting an

award for what seems like eating chocolate ice cream for 13 years. Just a small cog in a really cool machine. And so that's what NPSTC's all about.

SUSAN SWENSON: I'm really pleased that they took the opportunity to recognize that contribution, Kevin, and we're proud to have you as a FirstNet board member. Additionally, our very own Tom Sorley received a NPSTC award as the -- you got the Leadership Award, Tom, so congratulations for that. You served on the Technology Committee, I think, as far as NPSTC. So, make a few comments about your involvement, just like Kevin did. It would be interesting, I think, for people to hear. You know, the number of years, I think, is staggering, you know, the amount of investment that you've made. So, I think it's always impressive. I mean, this is not like being on a committee for six months.

TOM SORLEY: I've been working with NPSTC for about 20 years, and I've chaired the Technology Committee for the last 10 years, and it's been -- like Kevin said, you go to these meetings with a lot of really smart people, and, you know, first you feel kind of dumb and then you come up with something that says, "Hey, that really won't work," and they're like, "Why?" And, to me, that's the big power of NPSTC, it's bringing all these disparate groups together and they produce good work because we each bring our own little piece of the perspective, and that's what really makes a good consensus document. And so, for me, I've just been blown away by who I get to work with at NPSTC. And, you know, being Chair of the Technology Committee when we produced so many of the public safety requirements that fed into the FirstNet network development and those sorts of things, it's just, it's so incredibly rewarding that, yeah, it's a lot of work, but the rewarding part of it is you really have an opportunity to make a difference, which I think is why we're all here today as well. So, I'm very humbled to get an award from them for that.

SUSAN SWENSON: Well, congratulations. Let's give a round of applause to Kevin and to Tom. So, that's great. We're, I think, up to the Consultation and Outreach. Chief Johnson, any comments before Rich gives us a little summary of the committee?

JEFFREY JOHNSON: Just a couple. Rich, I just want to thank you and the team, and the entire team, for the outreach efforts. The level of communication has met every expectation we could have hoped for. And I think no one could say they didn't know. And I'm really proud of you for that. And I welcome your report. Thank you.

RICH REED: Thank you, Chief Johnson. Is this on? Hello, hello? Thank you, Chief. Thank you, members of the board. As we talked about yesterday, we've been very busy. As I mentioned yesterday, as of the June board meeting, we had just released the State Plan for review by the states, and that started a 45-day window of review that allowed the states to take a look at the state plan content prior to it being delivered to the governor.

And I want to -- I always start out my briefs by saying thank you to my team, but I have a lot more folks to thank on this one -- on this particular board meeting. I want to thank

not only the State Plans teams for the outstanding work of developing the content that we delivered on June 19th, also the members of the AT&T team and the Sapient team to help produce that content, and the portal in which we shared it. I also want to thank the states who took the time and had the structure in which to review it in a timely fashion. They did a tremendous amount of work, both at the state and tribal level, and in each state, to do a thoughtful review and provide us the feedback that was provided on August 4th. And we received feedback from every state and territory on that content, either formally through the process we put forth or informally through the consultation that we executed. So, it was a really invaluable tool for us to do what we're doing now, which is going through all those comments and review elements, and actually modifying the portal and the content to be more reflective of the value proposition, as well as making sure states have the clearest vision of what we're going to deliver.

We're in the process of executing that and making that official plan available as early as September 19th. We have a couple of things that we're doing. We need to finalize those comments, get them through the legal review process, as well as, you know, include that funding level determination, as required by the Act. With that funding level determination being developed by NTIA, we'll officially kick off that 90-day window, and that will take us through that December timeframe in which the governor's decision is required. But the team worked very hard to make sure that value proposition was delivered properly and that the states saw the depth and breadth of the service we were offering them. And I think nothing can be more evident than the results that we've received. We have over two-thirds of the states already committed to the FirstNet deployment of the network.

MALE SPEAKER: One-third.

RICH REED: I'm sorry, one-third of the states.

MALE SPEAKER: [Inaudible].

MALE SPEAKER: I was going to say, that's a lot of progress since yesterday.

RICH REED: I'm sorry. A third of the states have committed to opting in. As you can see by the map, we have a large commitment, and that is the result of a lot of hard work by the teams that went out and consulted, by the AT&T team that helped us consult, as well as the states who reviewed the documents and got that decision memo in front of their governors for execution. Twenty is good. We have more coming in the very near future. We hope to achieve the execution of that official State Plan window, which will start the official review process that's required by the Act. And then ultimately, as everyone knows, the governor has a couple of ways to go. They can either make the decision to opt out or do nothing, which results in the opt-in. But very pleased with the team overall and the execution. Any questions before we move on?

So, one of the things we didn't get to yesterday was the participation in the response efforts for Hurricane Harvey, as well as the other storms that are currently active in the -

- or in the position of being watched for how they might hit landfall. I want to thank the team members we mentioned, Brian Kassa, Jackie Miller-Waring, and Ehrin Ehlert for their participation in those events. We looked at this as a continuation of our consultation activities. We wanted to, and we were invited to participate in those emergency operations centers to observe not only how the commercial networks performed and how the response was taking place by AT&T but also how the states prepare and how they respond to these activities. And we understand that every storm is going to be different, every event is going to be different, and, frankly, the response effort is going to be different. So, having FirstNet really firmly understand how that effort takes place and what the response looks like will make us better suited to respond to future events. And I want to thank the states that allowed us and invited us into their EOCs to observe those events. It was really beneficial. And we're going to develop some, you know, firm and official lessons learned and outcomes from that that will affect how we engage the states in future events.

Just a couple of things around Hurricane Harvey, as Tom mentioned. You know, this was an unprecedented weather event. And from everything I've heard, while having dialogues with the response teams, AT&T did a really nice job at not only responding to the event but also preparing for the event, prepositioning assets, making sure that they had the right assets and generators and equipment and personnel in place to effectively respond to that.

One of the things they had in Harvey, especially in the Houston area, as Tom has mentioned, was just inundation of water. It was not only a wind event, it was a flooding event. And AT&T did a good job at preparing their infrastructure for that water, as well as responding to that once, you know, COs were flooded and inundated with water. I think the other thing, and Tom can add to this if he would like, is that Texas did a good job partnering with AT&T to get their staffs out into those sites via air and water, to respond to central offices that were struggling or having problems. So, I think all in all it was a really well-executed event and everyone involved did a great job at minimizing the impact to telecommunications infrastructure.

Hurricane Irma, we chose not to send FirstNet personnel into harm's way. Obviously, the relationships in the territory is far more difficult, as well as the nature of the life safety risks in those events were much higher. It's not to say in the future we won't participate in a prepositioned activity there, but in the case of Irma we chose not to put people in harm's way. But, again, we are in contact with the response folks and the people that are doing the response, and making sure that we're providing any support we can, and I know that AT&T is doing that as well, both at the state, local, and federal level in providing the response and assets they need to communicate. And, as I mentioned, we're watching tropical storm Jose and making sure that we're doing everything we can to make sure the assets and personnel are in place to achieve good response if that hits land.

SUSAN SWENSON: You know, Rich, I'd be interested in other people's observations, but as we did and we had the opportunity to look yesterday at some of the new

technology and the capability, you know, I mean, I have been in a couple of emergency situations, not flooding but other kind of more earthquake-related, but it's really interesting to see the new technologies that are coming out and the new capabilities that are coming out that would be much different from experiences I've had, because we have different situations where you can't take in your typical legacy kind of emergency response things, but, you know, just the aerial capability and just the -- I mean, I thought that was really encouraging because obviously we're going to have other emergencies. And having this new capability to support public safety and make sure that they've got the communications capability to send data, to send information, do situational awareness, I was very impressed by that.

So, I don't know if the other board members have any reaction to that, but I'm really glad to have been able to see that. And Chief Johnson, you know, you missed a portion of it yesterday, but I just want you to know that there was a particular comment that I'm sorry you weren't there for, and they said, 'Even a firefighter could put up one of these -- you know, these COWs.' So, I mean, it's firefighter-proof. So, I just wanted you to know that that comment was made particularly for you.

JEFFREY JOHNSON: I did hear that. Yeah, it had to be my good friend, Sheriff Stanek.

SUSAN SWENSON: No, actually -- actually, it was the vendor who made that comment.

JEFFREY JOHNSON: The vendor formerly with FirstNet?

MALE SPEAKER: They did say it was fireman-proof?

SUSAN SWENSON: Kevin?

KEVIN MCGINNIS: Yes, they did, and they said that came from great experience with public safety. One thing that I was impressed with yesterday and the demonstrations that go directly to this, we've talked about a lot of these things, sort of as concepts; right? So, yesterday, we got to hold the devices and we got to throw the devices and sync the devices and just watch them work in push-to-talk and other modes, but we've also talked about how are we going to bring FirstNet to rural areas when these kinds of things strike. And we've talked about deployables, and we see these big trucks and we see things that get pulled behind trucks, and we see things that can probably get put in something, but we've talked also a little bit about making public safety response vehicles into their own systems on wheels. And, to me, that's going to be the ultimate solution for getting it where we need it. And yesterday, for the first time, I saw an eNodeB that was this big by this big by this big, and weighed ten pounds. We've got it, and that was what really stuck with me.

MIKE POTH: I think one of the things that -- as Rich mentioned, you know, this was just a continuation of our consultation, and that's what we're going to be doing for years to come. We certainly don't profess, just like -- although we have people that have probably spent hours and days and months in EOCs, we just -- we're in observation

mode to figure out how we can now better tie into and support public safety and the first responders, how we can better tie into the rest of the federal response we will be developing after action and working with our federal partners to figure out where we can support and tie off to make it even that much more effective for public safety. So, I thought it was unfortunate these events happened, but we did have people that happened to be right there in those locations where we could get some lessons learned. Just like with the other public safety components, you know, we're trying to anticipate what public safety needs, but we need to hear from and watch and learn from them.

RICH REED: Yeah, the goal is to really achieve that ground truth, as Chief Johnson said yesterday, the truth point for what response looks like and what the needs are. And I think that will help us make better decisions as we make future decisions around planning, investments, and response.

SUSAN SWENSON: Yeah, you know, I'd like to add just an additional comment. Kevin made me think of something else seen yesterday is, you know, we think about -- and, you know, people are used to hearing about apps and, you know, different things, but it was really how those things are going to be integrated and information delivered to public safety in a way that's good for the people who are actually day to day. And it's that -- you know, it's that, I think, that's going to make the difference here for public safety. It's that, you know, instead of, you know, a piece over and a piece over here, you know, there's been a real effort and it was evidenced yesterday how those pieces are coming together in an integrated fashion instead of in all these disparate parts, leaving it up to public safety to figure out, you know, we're talking about actually doing that for them.

And I was, to your comment, you know, just seeing the work that had been done, it was very encouraging because it not only shows what's available today, but I think as we see more of that it is stimulating more innovation for things that, you know, as people start to use this, they're going to think of all different ways to use this, you know, going forward. So, that was really nice to see that integration. And, you know, not everyone's willing to do that. I mean, I think that's really important to understand.

JEFFREY JOHNSON: That's true. I think in addition to the response piece that we're talking about, and Kevin, I'm with you, that eNodeB on a fire engine, that's magic, right? But, in addition to the response piece is the whole change that happened with NORTHCOM, with Presidential Order Five, this notion that in anticipation of an emergency we can anticipate and preposition resources. It's actually a huge part of this because what you can't do is you can't throw resource into the path of a hurricane just to have it wiped out. What you can do is preposition it in a safe location so it can come out when it's usable. You can anticipate where it is and preposition around the edges and have preordained and arranged ways of getting those resources in and getting it up quickly.

This prepositioning thing, this planning component to response is actually one of the most important pieces to response. And I think, I think I saw that yesterday in our team.

I'm seeing that in how we're deploying resource. We're seeing that in AT&T. And I love watching, you know, kind of our allied associations from NPSTC, SAFECOM. I love it that people are thinking about it. That's going to be a big part of what we do in terms of being successful when the emergency hits, because some of these things are just not survivable from an equipment and a human perspective. You got to get on the edge and move in when you can.

SUSAN SWENSON: Right. Admiral Hewitt, you and I had a conversation yesterday. Why don't you make a comment about just the kinds of things we were thinking about in terms of the resources that exist within the federal government today, and just the ability to leverage those resources in addition to what we're doing. I mean, you think there's possibilities to do more than we're doing today is what I heard you say to me.

RON HEWITT: Well, just, thanks, Chairwoman Swenson. What we were talking about yesterday was the fact that for both Irma and Harvey, we are, within DHS, we support FEMA in terms, which is part of DHS, but emergency support function two, which is communications. And so, our group works with that and coordinates that. FEMA has a bunch of MERS, or mobile emergency communications suites, and stuff, and we also work with the vendors to preposition. And now with FirstNet coming online, we -- looking at how do we roll you into the ESF 2 response, and that's what we'll be working on over the next few months.

RICH REED: So, if I may, just a couple of more points. So, I know that AT&T did a couple of unprecedented things during these responses. One, they made quality and priority available to the first responders in the affected areas, whether they had opted in or not at this point, it was really an unprecedented effort, and I think it was very beneficial to public safety. I know they rolled a lot of assets and equipment down to Florida, for example, and they were the first ones handing out equipment and providing service in the areas that were most affected in Southern Florida. And they made quality and priority available, even though Florida had not opted in on those devices they issued. And I think those efforts where public safety can see the commitment that AT&T is making on behalf of FirstNet to those public safety officials are really important. And everything we're hearing from all the anecdotal, without the official after-action reports coming out, is that it makes a huge impact, and public safety is seeing the commitment that FirstNet's making to them in terms of emergency communications. And we look forward to having dialogues around ESF 2, Admiral. That's all I have.

SUSAN SWENSON: That's it. Great. Any other questions or comments for Rich while we have him? The last report -- committee report is from the Technology Committee. And, of course, we had a -- it felt like a technology meeting yesterday, complete meeting, but, like I said, really, really good. And, like I said, we had Dereck Orr from PSCR there, you know, talking about, for those of you who were at the PSCR meeting in June, in San Antonio, I think it was in San Antonio -- some pretty exciting stuff there in terms of the grants, the awards that they're giving out, in terms of really stimulating innovation, you know, in the public safety arena. So, exciting to see Dereck, what's happening in that area, and also meet with some of the folks that, you know, are

involved in that. Like we said, people are really excited about public safety and the future there. But, Neil, any comments before we get started with our CTO?

NEIL COX: Yes, Madame Chair, just a couple comments. First of all, I'd like to thank Jeff and his team for putting together yesterday afternoon. It was really a pleasure to see the lab come to life with our partners and other vendors, and the PSCR there. It was really a pleasure to see it come to life. And second, I'd like to also thank my fellow board members and committee members for spending the time with us yesterday afternoon to see this technology in action. And it kind of reminded me of something, Madame Chair, of our comment when we were driving from the airport to the restaurant in the hotel, and I think there was a comment made in the car, 'How did we ever find our way around without GPS,' and to the point where we were going pinpointing, seeing the picture of the building, everything was at our fingertips. And I think you're going to see the same thing with public safety five years from now. They're going to say, 'How did we ever do our job without FirstNet,' and that's going to happen. I think yesterday was a peek into the future in what that will do. And, with that, I won't talk anymore. I'll turn it over to our CTO, Jeff Bratcher. And I'm looking forward to seeing the video today.

JEFF BRATCHER: Well, thank you, Madame Chair. And thank you, Mr. Chairman. Thank you, board members. I want to start off by thanking the team that helped pull that off yesterday, and that team is much bigger than just the FirstNet staff. Coming out of the June board meeting, I got on a call and challenged the AT&T teams, our teams, let's set the bar high for this in-person Technology Committee demos with the technology that's available today and what's going to be coming in the future on FirstNet. They far exceeded that bar. The bad news is they've got to keep exceeding that bar. So, setting it high, it's going to go higher next time. So, again, my thanks to all the teams that participated. Lots of planning and effort that went into what you saw yesterday. And, Sue, as you mentioned to me previously, there's a lot of minor details that never get talked about, but all of that was done and handled very professionally by the team, and there was -- I didn't hear anyone say no to anything, and we threw some crazy ideas on the table. They pulled it off, and I think you saw that yesterday with the demonstrations. So, again, thanks to that team.

As we've talked about in my previous updates, I usually lead off with our network standards focus, with 3GPP and things we're doing. I'm going to flip that this, for this update. I think Sheriff Stanek said it yesterday, the network is on its way. We know that's coming. What's going to be our bigger areas going forward? And that's really one of the drivers that created FirstNet is the need for interoperable communications among public safety users, but we've got to start thinking bigger than voice. The broadband data network's going to bring a huge opportunity for those applications in mapping and GPS and sharing of information across public safety agencies and users. And this is the next big challenge in our mind that we've been working with our teams at AT&T as well on the application side of this. We've got the standards for the network through 3GPP, but we firmly believe we've got to continue and start making concerted efforts to drive the standards for the applications community as well, and drive those economies of scale, improving the user experience, minimizing the interoperability challenges.

So, what we've put together, you see on the slide here, is four pillars that we've consolidated on how we're going to have a strategy for driving those application standards. We have the technical side. Technical work is absolutely necessary, but those are insufficient just to drive the standards. There's a lot of standards that are on paper today that are never actually implemented anywhere in hardware or software. We have to also leverage the marketing, creating those strategies for development, use of the apps that employ the standards, lower those barriers to entry. I shared some of the stories yesterday. We've been contacted by firefighters that are creating their own apps now, 'How can I get this into FirstNet and start using that?' We want to start driving that towards standards-based solutions as well.

And then the legislative, what -- you know, driving those grant programs for public safety, being able to encourage and require the use of standards for applications and data-sharing capabilities that they'll be using. And last but definitely not least is our stakeholder involvement, including our Public Safety Advisory Committee, NPSTC, APCO, all the organizations that are very active in this space want to continue and help support us in driving this for the standards. AT&T is our partner for the networks fully committed to this as well; academia and some of the associations in the federal partners that need standards as well for their mission-critical duties. Again, we're going to deliver an open standards-based innovative applications ecosystem for creating these public safety applications and solutions. We welcome all vendors and solutions providers to the ecosystem that can benefit public safety, because that's what we're here to drive on behalf of public safety.

Some of the focus areas that we're leveraging, and hats off to the team. I thought they did a great job of tying this to our actual logo, the FirstNet logo and the four key primary areas that we focus on at FirstNet with the law enforcement, fire, EMS, and the emergency management and public safety communications disciplines. And there's some examples here, I won't go through all of those, but ones that were focused for those key disciplines in driving these applications standards.

The box you see on the left are some of the base technologies that we feel are crosscutting across all the different applications. The location capability, information exchange, that situational awareness that Chief Johnson saw and is impressed with how that will change the public safety operations in the future. And then data analytics, that's a huge one that I know PSCR is focused on as well. How do we consolidate and anonymize all this data coming in to be able to use it for public safety to do their jobs better, respond quicker, and not waste time trying to parse all that themselves?

And then some of the future technologies, the z-axis acquisition, that 3D geolocation, getting to that, you know, sub-meter, meter resolution that public safety needs to do their jobs and save their fellow public safety in bad situations. The mission critical standards-based services that are coming in the future, and I've got a little more on this later, those applications, internet of things, the virtual assistance, ARVR that we saw some of that happening today now in industry. And then ICAM enhancements, again,

that Identity, Credential, and Access Management of those users, so when they sign on to their device or on the system, it knows who they are and they know what data they need to do their jobs without them having to put a lot of thought into that.

Moving on to devices, so I was very pleased that AT&T brought a full suite of devices that are available, you know, to those opt-in agencies today to get priority services on the AT&T network, with preemption coming later this year. But we also have devices that public safety has told us we need this type of device to do our jobs, and we're focused on the disciplines and driving that ecosystem with AT&T and their equipment manufacturers to bring those devices to bear for public safety in the future around the protection, connection, and situational awareness driving that for the disciplines. We've had great involvement with our Public Safety Advisory Committee, the different organizations.

In the future, we're definitely going to be leveraging our user groups, people that are actually using FirstNet. We're going to have some announcements in the near future, I think, on how we're going to start driving that and making sure the technology team and the customer office team understand what those users need in the field and distilling those needs to influence the device ecosystem into the future.

A big topic area we've been spending a lot of time on recently is the -- and even in industry, there's a huge push for the internet of things, those connected devices that aren't your phone or other things. It's your sensors and things that have internet connection capability on these networks. We're focusing on the internet of life-saving things, and that's a term we've been kicking around. We went through different iterations. I believe TJ, in his innovation speech, will be talking more about this, but focusing in for public safety on these personal area networks, the sensors for firefighters, police officers.

We saw some examples yesterday of the holster sensors and the video cameras that the police officers wear. So, we have a team dedicated on this now. We're be leveraging again, public safety direct involvement with this. We're really excited about the future in this space, as well as AT&T and their vendors that are supporting that as well moving forward.

So, I've talked about applications. I talked about devices. Our radio access network, and I want to reiterate again the solution that AT&T has brought to the table for public safety, and I think it's really illustrated in the right box here, top right box, that when we developed the RFP and leading up for the last, you know, 10 years, I would say, even before FirstNet was created, was getting the spectrum for public safety to do this, and that was the Band 14 Spectrum.

We developed an RFP, creating a Band 14 dedicated network for public safety. As we got through the evaluation and proposal phases in working with AT&T, they brought to the table, we've decided not just to create this Band 14 for public safety. We know public safety has wanted priority and preemption for their wireless communications for

many years. We're going to offer that on all of our LTE bands. We want to accelerate time to market, because, honestly, public safety needs this network now.

Madam Chair, as you mentioned, it's been 16 years since 9/11. The final report out on the 9/11 Commission was in 2004, so it's time. They need it now. And AT&T stepped up and said, while we're getting Band 14 deployed into our network and continuing on, because you may not always have Band 14 or other bands, any LTE band we have, public safety will get priority and preemption on those bands on the FirstNet network. And I want to stress that. I stress that every speech I give in other presentations. That is a game changer. It is the first in the world, and there's other countries watching this, and we've been told, we're shocked that they did this. And I think it comes from the CEO down at AT&T, who said it's the right thing to do. It's what public safety in the United States needs. We're going to make that happen. And thanks to FirstNet for spurring this with our spectrum and the funding we had to get this going.

So, in the graphic we used on the bottom right is what really resonates, I think, with me and with public safety. Top left of that, we were focused on a Band 14 one-lane highway, you know, two ways of traffic on that lane of highway for public safety, dedicated to them. Commercial users would be on it a well. We'd kick them off with the priority and preemption.

Now AT&T is bringing a multiband interstate of data for public safety to use, and when they need that full lane of highway, all the lanes of highways, just like we do today, when you hear the sirens or see the lights go on the vehicles for ambulance, fire, and police officers, everyone gets off the highway. They're doing that for public safety on commercial network, as well as Band 14, as it's rolled into the network. So, we're really excited about that. You saw that in the lab yesterday. We have the commercial bands. We have the Band 14 equipment that will be integrated and on line here in the near future, with the dedicated FirstNet core that AT&T is standing up.

Speaking of the core network, so the dedicated FirstNet Public Safety core network, that will be implemented by March of 2018. We have completed the critical design review of the core network, and, again, this is another wireless industry first that AT&T is doing. This is in addition to their commercial core network that's operating now, running their system that will also be available as fail-over if there's any components of this. They're building in the hardening and resiliency. I'm not worried that that's going to happen. And this is a geographically redundant core dedicated network for FirstNet, and it will be implementing our network identifier that will identify every public safety user and direct all their encrypted traffic to our dedicated core with FirstNet and AT&T.

It's going to provide those basic network services, the mission critical services in the future, and secure access for those public safety enterprise networks and PSAPs and agencies that want to connect and host their applications, their use of what they do today for their responders, make that available. And, again, I mentioned the full network sharing among Band 14 and their other LTE commercial bands. And this is leveraging a standardized capability that's called multi-operator core network, and that is in the 3GPP

network standards. They're implementing that, and there's a lot of other operators across the world looking to understand and implement this as well. Again, it's driving. Yes, sir.

JEFFREY JOHNSON: Jeff, would you mind talking -- we talk about 3GPP, and for some of us we know what that is. But coming out of a career where it's been a little bit of a digital free for all, could you speak to what is 3GPP and why that is important.

JEFF BRATCHER: You are a great straight man. That's my next slide, so I'll move to that one now. So, what is 3GPP? It's the Third-Generation Partnership Project. And this standards body is a global initiative that creates the specifications and standards for long-term evolution. LTE is the technology that public safety chose back -- you know, Tom referenced some of the requirements work that NPSTC did, and others. They chose LTE to be their technology of the future for broadband. And it was a great choice, because, as I gave some bullets yesterday, LTE connections are forecasted to hit 2.5 billion by the end of this year, that's worldwide; 3 billion in 2018; and 5 billion in 2022. So, this is a continually expanding connection for LTE worldwide. The 3GPP body creates those standards and specifications that all the carriers and vendors implement to ensure it's interoperable at the network level.

And this is a huge effort. I've got teams in Japan this week, along with AT&T. We've got a great partnership with their standards team now post-award, that are focused on the public safety requirements into this body, and we're talking thousands of participants in all the different committees that make up 3GPP. The meetings going on this week in Japan are called the plenary meetings. It's where all the working groups roll up and get approval for their future work. And I'll mention, they're focused on 5G now as well, and we're there making sure that public safety requirements and needs aren't left behind in this group moving forward.

And I led off the presentation talking about applications. Again, 3GPP's focused on that network interoperability, the network that we're building. They are now also based and leveraging the mission-critical core functionality within the network that the applications developers will be able to take advantage of in the future as those standards are finalized. We talked about mission-critical push to talk, mission-critical video, mission-critical data that are now being worked on heavily within the committees. It's not just for the U.S. and FirstNet. We're talking worldwide. There's over 15 to 16 different countries now that are focused on developing or implementing or building a dedicated LTE network for their public safety users, following the lead that the United States has taken in developing this for our public safety users.

So, again, I can't stress enough how, when we're talking five billion connections, there's a huge commercial drive with this technology. Public safety is at the same table now, getting their requirements into this huge effort. The vendors and the carriers are all focused on this. They created a special architecture group focused on public safety within 3GPP to do this moving forward.

SUSAN SWENSON: And God bless the people who attend these meetings.

JEFF BRATCHER: Absolutely.

SUSAN SWENSON: Because you talk about unsung heroes. I don't know how many people in the audience have ever attended a standards meeting. When I hear the word "plenary," it's like, oh, you know. I mean, these are -- I've been to some, and they are exhausting. I mean, this is very important work, and having public safety at this table is critical, but God bless the people who do it.

JEFF BRATCHER: Absolutely. And I'll get the call from Mike every now and then. He's like, what are they doing? Are they having fun out there?

SUSAN SWENSON: No.

JEFF BRATCHER: I'm like, no. They're 14 to 15-hour days minimum.

SUSAN SWENSON: Yeah.

JEFF BRATCHER: With thousands of people.

SUSAN SWENSON: I know.

JEFF BRATCHER: And, again, there's other companies in there that don't think public safety deserves this level of attention.

SUSAN SWENSON: Yeah.

JEFF BRATCHER: And we're there to make sure it does, and we're very happy with a lot of the support with AT&T and their vendors and others that are focused on public safety helping push this forward.

SUSAN SWENSON: Yeah, this is a forum that, if you're not there, you're going to get left behind, and there's billions at dollars at stake at these meetings. So, I mean, to have public safety there, I think, you know, is pretty significant, so, please thank your people who do that, and please thank the AT&T people.

JEFF BRATCHER: Absolutely. And I'll give a little more flavor. They rotate the country, you know, for these meetings quarterly. And sometimes they're in nice places, sometimes not so nice, with 20-plus hour flights to get there on government travel, as you're all aware of, so -- exactly. So, hats off to the team that do that, and they're really committed in helping drive the public safety input and what they need in these standards to make them happen.

I'm going to talk quickly. I tried to get Dereck to come up and speak, but he's shy, so he's going to stay in the audience. We also heard yesterday from the Grant Program,

the \$300 million that was set aside as part of the legislation that created FirstNet as well. That, you know, I can't say enough with what Dereck and the team have done to kick that off, driving public safety's needs into this. They released the federal funding opportunity for that in 2016, late 2016. They've made some initial grants for these areas. And, again, to remind the board and those listening, the focus areas for these are mission-critical voice, location-based services, the analytics, data analytics, that demand model, prototyping platforms, and resilient systems. So, great progress on that moving forward.

That grant round received over 162 applications. In June, they announced at their conference in San Antonio that we referenced earlier. They made awards to 33 grant recipients, totaling more than \$36 million for this first round, and this shows the breakout of those grants and where they're located, and it's across industry, academia, and even public safety institutions that are focused on public safety, and those organizations for them. So, I think it's fantastic. You'll see much more out of Dereck and his team coming in the future, and very excited for what they're doing and leveraging those R&D dollars, that, honestly, FirstNet doesn't have to put out of our budget. Mike and Kim will be happy about that for R&D, because it was already in the legislation, and Dereck's driving that for them.

Quick update on the next conference. So, they announced their next conference will be in San Diego June 5th through 8th, back in your backyard, Sue, so I think you will be happy with that. No, you did not. No, you did not. I think the previous ones held there were such a success that they wanted to get back there.

There's going to be a different meeting structure since there is so much activity with the different grant awardees happening, multiple tracks and participation from those actual grantees. Public safety who attends these every year will have an opportunity to interact with the grantees, and these prize winners and see what they're doing to drive the technology, you know, that's 10 to 15 years out, and accelerate that to get it into public safety's hands shorter timeframes than waiting on that. They're going to possibly do three live challenges during this in June; drone load lifting for LTE systems, security hack, and user interface for in-building navigation.

And what we're excited about is we're close to finalizing a memorandum of understanding of PSCR, FirstNet, and AT&T to sponsor these and hack-a-thons and other capabilities that we hope to announce in the near future, for that application developer community and others working in the space that have commercial viable technologies that public safety could benefit from and drive those as well. So, we're really excited with that and moving that forward.

So, I think that was my last slide. I will end on a comment. Chief Johnson, I'm sorry you missed it. But you had both Tom Sorley and Richard Reed to my left fight a virtual fire with a demonstration that Dereck and the team brought. They did pretty good. We all wanted to see how you might have done, though, so, too bad you missed that.

JEFFREY JOHNSON: Well, I can say this about fighting a virtual fire. I don't know what they saw in their helmet cam, but I can tell you, if you fought a real fire, you might as well just close your eyes and turn on a heat lamp, because you can't see anything and it's hotter than heck. So, that's got to be the easiest thing to ever build.

MALE SPEAKER: Everybody in the Navy is a firefighter.

SUSAN SWENSON: Hey, Jeff, just a comment, And I'd be interested in other people's comments. But one of the things that struck me yesterday is it's great that we have -- and TJ will talk a little bit about innovation and everything that's coming, but it's a lot coming at people who are going to be using this technology. So, one, I think as we think about whether it's application or situational awareness, how do we make this very usable for the person who has to use it, and then secondly, a couple of us had the conversation yesterday that, I think from a public safety perspective, there are going to be some jobs that are going to need to be created to actually be able to manage all of this that enables the end user. So, I think from the public safety perspective, and I don't know if that's something, you know, the PSAC might look at or something, but I think you're going to need some, what I call, jet jockeys around data analysis. So, I don't know. What do you think?

JEFF BATCHER: Absolutely.

RON HEWITT: Madam Chair, Ron Hewitt.

SUSAN SWENSON: Yeah.

RON HEWITT: And one of the areas that we're working with FirstNet on, us, meaning, SAFECOM, and we have a communications unit working group. Whenever an incident occurs, they follow the NIMS ICS construct, which is the National Incident Management System, Incident Command System, structure. And with that there is a communications unit assigned under logistics that actually supports communications for that incident. In the past, that's been primarily land mobile radio, and that's the --

SUSAN SWENSON: Protocol.

RON HEWITT: Skill set that public safety and responders have. We've been working with FirstNet on how do we integrate to make it an LMR/LTE integrated environment.

SUSAN SWENSON: Okay.

RON HEWITT: And we're moving forward with that. And hopefully we'll have something within the next couple months for that plan.

SUSAN SWENSON: Yeah, I think it's going to be critical. Teri, did you have something?

TERI TAKAI: I just also wanted to also mention, Sue, in terms of, you know, your point around skill sets, and certainly data analytics is one, but there's a whole raft of those kinds of technologies, if you will. And I think Tom could probably speak to this as well.

SUSAN SWENSON: Yeah. Right.

TERI TAKAI: I mean, the CIOs, both at the state and the city and the county level, really at all levels, number one, are really working to develop those same skills, because I think that's a challenge, whether it's a public safety question or not. The second thing is, I'm certainly talking to some CIOs. I was talking to the CIO at the City of Detroit, for instance, who is spending a great deal of her time right now with public safety, just around things like data storage for body cam information, you know, working with, in fact, things like the Prosecutor's Office around how long do you keep those data.

SUSAN SWENSON: Right.

TERI TAKAI: Or how do you manage them. So, I think it's going to be an effort that's going to really bring in -- it's going to need to bring together all of the technical resources from an organization.

SUSAN SWENSON: Right.

TERI TAKAI: That's really going to mean that, you know, the CIOs are going to work more closely with public safety around some of those skills that are not only specific to public safety, but are needed across the, you know, all of that particular arena of government. Tom, I'm sure you've seen the same thing.

TOM SORLEY: Yeah. I think a couple lessons learned from our Super Bowl experience, application admin is generally -- application administrators are people that sit in an office somewhere, and they do this stuff Monday through Friday 8:00 to 5:00. When you start talking about deploying data applications on the scene, now you need an application administrator that is available during the incident that can do things like change passwords, assign permissions, do things that we've never really had to do, sort of on the fly.

SUSAN SWENSON: Right.

TOM SORLEY: So, that's a skill set that we don't typically have in a traditional first-responder organization. That resides over on the IT side of the house.

I think, also, you know, who owns what data and how you parse it out, how you deliver it, all of that kind of stuff, are a lot of questions that, really, we need some best practices around those kinds of things developed, and, lastly, I've got some folks working on the SAFECOM working group, but I would say one of the challenges, I believe, we continue to have in the communications unit is it's a subset of logistics. While that made perfect sense before, it doesn't make sense anymore, and it really needs to be elevated. And I

know there's a lot of resistance to that from, you know, NIMS, purists, and ICS folks, because they like their communications people, you know, they just want a bigger seat at the table. But the truth of the matter is, communications is not just radios and phones and push-to-talk.

SUSAN SWENSON: Right.

TOM SORLEY: It's all of these IT elements that get rolled in, and when we start adjusting priority and saying, you know, we need this person's video to have a higher bandwidth because something's happening out there, these are things that have to happen, maybe not instantaneously, but pretty darn close to it. And if you don't have a seat at the table in the command center and you're merely called when needed, you don't have the ability to affect and really make a difference in the response.

So, you know, anybody that's listening to this, I really wish you would think about this from a long-term perspective. Just like our kids spend all their days on their smartphone and they don't call anybody anymore, the same thing is happening in public safety, and if you don't have the people at the table that can affect the -- tweak the knobs, make the changes, you're going to have a real problem going forward.

SUSAN SWENSON: Okay. Go ahead. Chief Johnson and Rich.

JEFFREY JOHNSON: Admiral, you couldn't be more correct. And I'm glad to hear that we are getting down to that planning section coms unit level, because that world changes. We do have at the PSAC, FirstNet, we have more work to do in terms of how we execute local control. I think those of us that are ICS aficionados, you know, we go to the grocery store using ICS. I think, for those of us, we know that everything, from what data gets permissioned, what data streams get permissioned and de-permissioned for operational purposes, who changes the priorities and how that happens within ICS, if you need access to the NOC and the duty officer in the NOC for some unknown reason, how that's done, who does that. You know, and ICS provides that framework. I did not know and I'm thrilled to hear that we're considering this right down to the ICS level, so, thank you for making me aware of that, and, Tom, thanks for participating.

TOM SORLEY: Thank you.

RICH REED: So, just a couple of additional points, and I appreciate the partnership with DHS, as well as the work that's being done by the PSAC. This is the future role for the CCO organization, and we're going to continue to have this dialogue. In addition to what's been mentioned in terms of COMU modification and the training associated with it, and the operational work that the PSAC is going to help inform. There's also a contract component with AT&T, and they're committed to providing reasonable, short, efficient training, along with all of the tools that they're developing, and we're going to have that available as we, you know, roll out new services and products. And that training component is also requirement of our Act, and also part of the contract, and AT&T is going to help us with developing those tools so that public safety know how to

use the services and applications that we're going to provide. But I think it will be informed by the operational support that we get through, you know, our federal partnerships, as well as the operational knowledge we get from the PSAC, so I think it's going to be a good team, but tremendous work to be done.

SUSAN SWENSON: Go ahead, Jeff.

JEFF BRATCHER: I was going to add, in that, really, what I led off the technology update presentation with, and I think Sheriff Stanek said it very eloquently yesterday, It's just got to work. When I need it, it's got to work. I don't want to have to worry about it. You know, how this is going to move forward, keep it simple for the users. Their job is to save lives, not to worry about app permissions or what's happening, just be able to do their job with what they're doing. If there's no other further questions, I'll introduce the video.

SUSAN SWENSON: Yeah.

JEFF BRATCHER: So, I want to recognize Guy Noffsinger, who is on our team. He's the FirstNet videographer, where is he at? Is he in the room? There he is. So, Guy came out early, and as we were doing demos and preps for the demos, he was taking video. I should mention Guy is an Emmy Award winning videographer as well. He's won an Emmy on his past work as well, and we're fortunate to have him on our team. He spent most of last night putting a video together that highlights what we all saw yesterday, and some of the effort that went in behind that. So, Guy, thanks again for this. And I think we're going to kick off this video for your entertaining pleasure.

SUSAN SWENSON: Yeah. He's actually a producer, right?

JEFF BRATCHER: Yeah. Absolutely. Great to have him on the team.

[VIDEO].

In the heart of Boulder, Colorado sits FirstNet's technical headquarters, where innovation is being driven forward for America's first responders. The centerpiece of our technical facility is a state-of-the-art laboratory that we opened for business in November 2016. The lab was designed from the bottom up to test public safety functionality and features unique to the FirstNet broadband network.

Recently, FirstNet operationalized the lab, loading it with high-tech equipment and capitalizing on our staff expertise and the knowledge of our technology provider, AT&T. Our plan is to deliver quality tools for public safety: apps, services, and devices that are tried and true, meet their needs and are ready for use in the field.

Together, FirstNet and AT&T have met our first major target with this lab by demonstrating the initial operating capability solutions and services for the network. This includes Band 14 devices, deployables, applications, and priority access. We have also begun addressing future network solutions that public safety expects to have once the

core is operational, such as preemption and mission-critical push to talk. And with an eye on innovation, we are also supporting research and development related to public safety broadband technologies.

Our work in the lab supports the work public safety does in the field; meaning our job is to ensure the network delivers when public safety needs it most. And since public safety is the best to tell us what works and what doesn't, we look forward to having first responders participate in our lab demonstrations and user evaluations.

The FirstNet lab is a difference maker for public safety. In addition to being cutting edge, the lab has been designed for them. It is inclusive, collaborative, and accountable to the future users of the network, first responders. To learn more about FirstNet's world class innovation and test lab, please visit our website at www.firstnet.gov or email us at info@firstnet.gov.
[END VIDEO].

JEFF BRATCHER: So, what did you think? Guy, good job, Guy. So, I'm sure that will be posted and available soon on the website. And, again, thanks to Guy for putting that together.

RICH REED: It was just yesterday.

JEFF BRATCHER: We drive hard, Rich. You know, TJ, Mike, Sue set a hard barge for us, so that should be up soon.

MIKE POTH: I want to apologize on behalf of Ed Horowitz, who discovered throwable devices. And, so, Guy, wanted some filming of that, and Ed proceeded to throw about eight phones at him in rapid fire.

SUSAN SWENSON: Lucky he didn't get injured.

MIKE POTH: Yes.

MALE SPEAKER: I'll do whatever it takes to serve.

KAREN MILLER-KUWANA: I will say Guy was hit in the head the day before, so he was ready to take another blow for the team. So, thanks, Guy.

JEFF BRATCHER: And I think one of the key points in that video I want to highlight again, public safety, it's open to them. If they're in the area, please come by. Please come visit us. See what's going on. See what we have working for the future for them, as well as what's available today. So that's an open invitation for public safety users out there.

SUSAN SWENSON: The door is always open, right?

JEFF BRATCHER: Absolutely.

SUSAN SWENSON: Always welcome. Before we proceed with TJ. TJ, I know you're going to talk about innovation, you know, obviously you can tell. I mean, that's pretty key to what we're doing here. But, Mouncef, are you in the room, or did he leave again? Mouncef, you weren't here when we announced the Gold Medal winners, and so I'd like to take the opportunity for the group to take the opportunity to recognize you for your work. Thank you. Thank you. We're very excited about the recognition and hope you enjoy the event on the 26th of September. That's great.

TJ, obviously, I mean this is what we're about. I mean, obviously we spent the last five years getting to be here. But it's about the future, and so I think you're going to give us a view today into how do we promote this so that we support public safety in the way they need to be supported, because it is about the doing it for them. So, the floor is yours.

TJ KENNEDY: Thank you. And it's an exciting time to follow up, just with what Jeff Bratcher went through. And I don't know if this mic is --

SUSAN SWENSON: Yeah.

TJ KENNEDY: The fact that we have designed the entire network and have laid out what's happening with the core network that's being built today, and that this is the enabling platform, really, that public safety will utilize across the entire country, gives us the ability to promote innovation. And the fact that the impossible is now possible, we have not just Band 14 that will be deployed across the entire country, but we also have immediate access to multiple LTE bands, priority today, preemption in just a few months. It's absolutely an exciting time for the technology industry to really notice that public safety is going to be at the same cutting edge and front end as everyone else is in the technology industry today.

And I think when you saw the standards focus that Jeff's team has taken, where, literally, they are at the same table at the same time as everyone across the world, making sure that public safety in the United States gets everything they need, and that public safety in other countries is actually there fighting with us for the same things so that we will have an operable network in the United States, but the fact that across the world, everyone wants to have interoperability. Everyone wants to have the ability for applications to be able to share data in a way that makes it easy to enable public safety to succeed.

So, we have this rare opportunity now to know that we have confidence in this public/private partnership; that it's going to deliver the mission critical network that public safety has asked for. We have confidence in the FirstNet and AT&T team that they're beating deadlines, they're exceeding expectations, and we saw that in the lab yesterday. And, you know, one simple example, and you saw a little bit of it in the video, the way disaster recovery is done is changing in a whole new way. And we saw that

with everything from having the ability to have, you know, satellite backup and other capabilities on every vehicle, if we so need it.

But also to the capabilities that tethered and untethered UAVs are now bringing those cells on wings versus cells on wheels to the scene, and we know just last week in Texas, over 50 of those were deployed, in addition to all the normal ground assets that have been there in the past. And what it's going to do is it's going to create this public safety network that delivers when public safety needs it to the point of Sheriff Stanek, it just works. And, to me, I think for FirstNet that's what's so exciting.

And I think the great part for the technology industry, whether it's an investor, it's a CEO or a board deciding to build things for public safety, it's that assurance that this successful network, the FirstNet network, is built on international standards, where all the investment that they make here can be leveraged around the world, and also they can be leveraged for every single police, fire, and emergency medical services agency in the United States, is changing the way technology gets built for public safety.

Your point was also very valid, that we literally are changing how public safety will utilize these tools to enable what they do every day. And when I talk to EMS chiefs and I talk to fire chiefs and I talk to police chiefs, they all tell me, you know, their firefighters, their police officers, their EMTs and paramedics are utilizing their own personal technology if they're not providing them with the tools that they need to do their job, and they want to, and so it's an exciting time, where now it's about making this enterprise level, making it so entire departments and entire regions can have that technology to make a difference.

I'm going to cover a couple of things in our approach and kind of where we're going from the innovation, and at the end of the day, the most important thing is this is being driven by public safety. This is not an effort where just FirstNet is trying to think of the best way to do it. A couple of the pictures on the screen are just some recent examples of with Major City Police Chiefs. We've been out to Major County Sheriffs. We've been out to the International Association of Fire Chiefs and to different key engagements and asked for folks who wanted to volunteer to come and interact with the FirstNet team.

And specifically, Bill Schrier, and a number of key players on Rich's team, are doing nothing but staying focused on making sure that we get recommendations from firefighters, police officers, emergency medical technicians, paramedics in the field for what they need on this new broadband technology, and this new FirstNet platform to be successful.

And this gets into, how do we make it operationally easy for them to use. This gets into how do we make their job more efficient and more effective, and that's going to come from the line. That's going to come from people out in the field today. And we're literally finding many different ways to continue to do this -- and you heard Jeff talk about a few of the others -- that, you know, going into hack-a-thons and going into other elements and being driven by public safety, and being, you know, enabled with technology companies, both legacy folks that have key applications today that can be modified for

public safety, and entrepreneurs, including public safety personnel, that have great ideas that haven't even been touched yet. It is such an exciting time to see that start to happen.

There are a number of high-priority applications, and a big part of this is being pushed, certainly, through the great work being done by PSCR, and we see that when we talk about location-based services and key devices and the interoperability that we want to see. But we also know that there are other key standards that have to be driven. And one of FirstNet's roles in this entire operation, and it was empowered by the Act, was to make sure that we drive open standards. And, certainly, the use of 3GPP and being, you know, heavily invested in that is one big part of it, but it's not the only part.

We also need to be invested in making sure whether we're looking at other ways to access key data. You see mapping up here. Everyone in public safety uses mapping, and they use it in ways well beyond what the average consumer does today. And one of the things that we can make sure that these things remain interoperable, and, for that matter, become very operable on the FirstNet network, so that regardless of how somebody interacts with mapping, for instance, that it's always done in a way based upon open APIs, based upon open standards, that are being driven by the public safety stakeholder community.

And I want to pause on that, in that this is the new world, and this is a great time. We've always had amazing groups that have focused on standards around mobile radio, and now we're going to be taking that to the efforts related to broadband and LTE, and certainly FirstNet is trying to gather those voices and make that a part of it. But this is a very important time, because this network is now live. People are starting to get onto the FirstNet AT&T network, with priority services today.

SUSAN SWENSON: You know, just a comment, TJ, and you're going to talk a little bit about this, I think, in terms of how to interact with FirstNet, because you know, because we generated so much interest, there's a lot of people, of course, wanting to know more about how can they support public safety. But I think sometimes those questions come from -- and obviously, I mean, they're self-interested, because these are companies who, you know, see an opportunity, a business opportunity, but I think it's really important that, you know, we will continue to advocate for public safety and so it's not about just the business opportunity, it's about meeting the requirements and the demands of public safety.

So, you know, I would just say to everybody listening that, you know, it will sound like a broken record. It's going to be, you know, are you meeting the public safety requirements, because if you aren't, it's a non-starter. Getting good enough, I don't think, is going to get you there. And, until you kind of meet those standards, you're not going to be part of this.

And so, I mean, I think that's different from you know -- because, as we know, there's a lot of companies out there who do just good enough, and it's good enough for the

business. But it isn't good enough for public safety, so I think that's important to stress. And, you know, I know you'll talk a little bit about how people should interact with us. But I just really want to emphasize that, because this is an opportunity for public safety. Like we said, they're the ones who lobbied for it, they're the ones who designed it, they're the ones who are building it. That mantra will continue, and we can never back away from that. I mean, just go ahead, Chief. You may have a thing or two to say about it.

JEFFREY JOHNSON: I just think you're right on. I think, for EMS agencies, police agencies, and fire agencies in the United States, there's actually a parallel here. There are many of us that ran accredited or run accredited organizations. And there's accredited public safety organizations and unaccredited organizations, and the primary difference is, in an accredited organization, you are held to external standards that are proven to achieve the stated goal, and then there's an outside group that holds you accountable to those. And on the other hand, you have, I just say what I do and you kind of take my word for it. That's what's going on here.

In AT&T's case, they've made a commitment to public safety, and FirstNet will hold them accountable to that. And on the other hand, it's like an unaccredited fire department. You just say what you do, and people can take that for what it's worth. We're not going away at FirstNet, and this contractual arrangement we have with AT&T is simply that. They made commitments to public safety and made investments to public safety, and we're going to hold them accountable. We are here for public safety. That never changes. Really appreciate your comments.

SUSAN SWENSON: Thank you.

TJ KENNEDY: And you're both absolutely dead on, and this goes to the example we saw yesterday, with one of the main roles of the lab beyond standards, obviously, is certification of devices and applications. And when we look at the devices that were in there yesterday, I mean, you're seeing mainstream devices from major manufacturers that are now coming out with waterproof capabilities, push-to-talk buttons on these devices for the apps that are now available, and new ones that are coming in the future. And we're also seeing, because of the open standards and competition that's out there, the price point. I mean, some of these devices are at \$550, very affordable for what public safety needs to do, and great ways to enable that and put that in their hands today, with a hardened device that will do what public safety needs to do immediately. And we don't have to wait. And, to me, that's exciting.

I think you're going to see in the next 12 to 18 months the rest of the industry, and certainly being driven by our partners, as well as the public safety needs. You know, Band 14 will be coming out in a huge plethora of devices over the next 18 months. But it's not just about Band 14. It's about making devices that public safety can use in the way that public safety needs to. It's meeting that public safety requirement, as you described, Sue. And I think it's so important. And the fact that our team is going to test that, you can't even just tell us that it's going to work, we're going to test whether it

works. And I think that's also a big change for public safety. You can't sell us vapor; right? It has to work as it's advertised.

And as Chief Johnson noted, when we talk about heat and we talk about water and we talk about stressors that are going to be on this, these devices and applications have to survive that. And I think that that's really critical as we go forward, and it's with modern technology at the latest revolution when we look at -- or evolution of, you know, release 13, that 3GPP standards for instance, that these devices that public safety get to leverage are devices that are up to speed with the greatest technology that's out there today, and will be two years from now and five years from now and seven years from now.

So, a couple things on the ever-evolving devices and accessories, and we have a couple examples up here from police and fire. And there's numerous examples in emergency medical services as well. I mean, one of the things Chief McGinnis and I have talked about a number of times is, we certainly believe that emergency medical services is already a huge adopter of broadband technology. They use it for medical records. They use it for communication with hospitals. Cellular communication is by far the number one communication going to an emergency room today from an ambulance, and has been for many years. And we're going to see an adoption of these tools that make the roles of paramedics and EMTs, you know, more effective and more efficient in what they do.

And it's not about replacing the telemedicine. It's about enabling everything from pre-hospital, after-hospital care, to all of the emergency medical care, and the fact that the continuity of health care is changing in America and around the world, and the roles of paramedics and EMTs are being broadened on top of that. But, also, giving everyone in police, fire, and EMS the immediate situational awareness that, often, we have only gotten through voice. And the good news is, we won't lose that. Mission critical land mobile radio is a key component. Also, the voice capabilities and the hands-free voice and the hands-free heads up display kind of technology that already exists today, and is now coming down to a very reasonable price point, that it can get into the hands of public safety is something we're seeing change very, very quickly.

The other thing is look at just a couple of examples, and I'll just throw a few out there, and happy to jump in with anybody who has thoughts on it. But, you know, a good example is just the amount of time a police officer spends, you know, in their given day doing reports. If we look at the tools and the capabilities of having a smartphone and a body-worn camera and having technology for heads up displays and voice communications that are all fully integrated for situational awareness, the need to go back and spend 30 percent of your shift writing reports will disappear.

The reality is, there will be innovators out there that will take the video of an officer responding to a scene, where that scene happens to be at, who are the homeowners and the call takers and the victims and the things that are going on in a particular scene, the officer describing what he's doing when he's walking up. And he talks to somebody

and gets their driver's license and it snaps a picture of that, and that automatically populates a report. And he talks through the different things and he gets a witness statement by talking to somebody, and that's magically now a witness statement on a video. And all this information, then, can be compiled and being augmented from a perspective. And now it's just a matter of reviewing the video and the audio and the data that comes from that particular scene, so that that police officer can get back in the field and respond to the next call that comes on and not go back to an office, and not spend a couple hours on a laptop writing a report. That can happen today.

And now that we will have a network that is going to be there 24/7, 365, and given the ability to share video and share data in a way they never have been able to before, it will instantaneously change the way that happens. We're going to see that in EMS. We're going to see that in all parts of what goes on for firefighters and having the ability to have real-time data on where those firefighters are inside of a burning building, what's happening on them, and, you know, we know the great push to get z axis and have that 3D location capability is critical.

But also think of the fact of having heads up displays in the future of building designs and having that information automatically sent to all the first responders that are going there, livestream cameras, having sensors that would detect hazardous materials. Having heat and humidity sensors, and even firefighter health and wellness data that's provided to an incident commander on an iPad or some quick display, literally, you know, at the scene, at a fire engine, at a command vehicle in a very simple way. And all of this is done automatically, and that's the difference. We talked in the beginning, it has to be easy for them to use and be enabled, otherwise they're not going to use it. And that's what we're going to be driving through the lab and others to make sure that we're not making someone's job more complex.

SUSAN SWENSON: You know, one of the things -- and I've never worn a uniform as far as public safety is concerned, so I would be very interested in the public safety folks' comments. But, I think this is all great. But, you know, one of the things I noticed yesterday is, you know, the people who are designing these -- and I think this is a role we can play, is the integration of all of that. And I don't know how long it takes for public safety to get dressed in the morning and put all this crap on, but, you know, I mean there's just so much stuff, and I think we're going to have to be helping -- because, you know, because somebody made a comment, "Can you make that camera a little smaller." I mean, it's like this big -- it looks like a tumor on your shoulder. No, I mean, no, it was big, and with miniaturization, you know, that exists today, I think we need to think about the totality of this, and how it affects, otherwise you're going to be just completely loaded down with technology, and I hope like heck it all works together, right, Mike? I mean, you've worn a uniform. Do you want to be loaded up with, like, 600 items, you know, on your body?

MIKE POTH: Changing batteries all day.

SUSAN SWENSON: Yeah. So, I mean, I just, I mean, as a non, you know, uniform-wearing person, I mean, I don't know. That just sort of -- I react to that.

MIKE POTH: A lot of this technology's new. Think about your old stereo in your dorm; right, how massive that was.

SUSAN SWENSON: I didn't have one. I was studying, Mike. I wasn't listening to music.

MIKE POTH: Well, my massive woofers and tweeters are now about this big, so I'm hoping technology shrinks.

SUSAN SWENSON: Yeah.

MIKE POTH: Continues to shrink for the public safety.

SUSAN SWENSON: Yeah. But I think even initially we can take a look at that and make sure that we don't overwhelm with just -- you know, we're going to have to wear body armor, complete body armor.

TJ KENNEDY: And we've started those discussions, and, Chief McGinnis, jump in as well.

SUSAN SWENSON: Yeah.

TJ KENNEDY: And the reality that this has to be easy to wear.

SUSAN SWENSON: Yes.

TJ KENNEDY: Easy to use, easy to charge. Wireless charging is something that's obviously coming as well.

SUSAN SWENSON: Right.

TJ KENNEDY: And it has to be integrated.

SUSAN SWENSON: Yes:

TJ KENNEDY: You know, Teri mentioned some great points, you know, that when we talk about how do we store all this data and leverage all of this data, it has to be done in a way that's seamless to the officers and the firefighters and the paramedics.

SUSAN SWENSON: Yeah.

TJ KENNEDY: And, literally, that's going to require a lot of integration that happens on the back end as more and more of this data is available, and that will allow analytics to

change the way that we do things. But it has to be really thought through. And it's going to require some new roles, like you mentioned.

SUSAN SWENSON: Kevin.

KEVIN MCGINNIS: I agree with everything that's been said. But, you know, one of the things that we've got to realize is we have all have a today perspective of what we do, and it's the things we wear, the things we carry. It's the things we know, and it's going to be totally different tomorrow. People are so worried about having this device with a million apps to choose from while you're going to the scene of the crash to get something. It's not going to be that way. There's going to be tons of analytics going on behind the scenes, which will tell me what app I need at this moment, and what information I need at this a moment, and it will put it there, someplace useful.

And I think the same thing is going to happen with the equipment. One of the things that I think is of great value in our network-- and I work, again, in my rural perspective, my EMS perspective -- is that today we are limited by what an EMT in a rural setting can know. The solution to that is to teach them more, give them more capabilities so they have more training. But they only go on 20 calls a year or a hundred calls a year, so they need to be retrained every year. Well, we've got a substitute for that, and we've got the power here. When I can put a device in the hands that they can pull out of the ambulance when a car has crashed to simply put up against the patient and then let FirstNet send the image that it's generating to a doctor in a hospital to tell that EMT it's okay to take him to the local hospital, as opposed to calling for the helicopter, you've just saved tens of thousands of dollars to the system. You've enabled this EMT to do something they otherwise would never have been able to do with the amount of training and experience that they will ever have, and that's the future mindset, and we've got to adopt a future mindset.

SUSAN SWENSON: [Inaudible].

TJ KENNEDY: So, a couple of things, and I could talk about these all day, and certainly you were exposed to a number of elements yesterday. But it really is about creating a public safety ecosystem to ride on the public safety platform known as FirstNet. And one of the great things, because we have the confidence in the network being built, and the team executing on that, because we're seeing it each and every day, we now have parts of the team that are really focused on driving the internet of life saving things in that public safety ecosystem, because, you know, this is really what's going to drive adoption, because public safety will have confidence in the great network that FirstNet is; that they're going to utilize, that they're going to adopt it, and to Kevin's point, they're going to innovate on it. And the fact that tech companies now can feel comfortable and safe that we're doing it in a standards-driven way, in a very open standards-driven way, they'll invest.

And, you know, recently I met with a group, NACIE, that was very focused on what's happening in public safety. And I'll read what NACIE is so I make sure I get it right, the

National Advisory Council on Innovation and Entrepreneurship. And this is a key, you know, nationwide committee that really looks at how do we make sure that we're enabling the private sector to be able to invest in what we're doing to drive innovation, and literally to at T, whether it was a university, and, you know, these research universities that are really coming out with the latest and great technology, whether it was the investment community that was in the room, whether it was entrepreneurs or key companies that really focus on driving innovation, that they now feel comfortable, and they are excited about the capabilities that can be delivered to public safety in the same way nationwide, and that this large number of police, fire and EMS users is a community they want to serve, that they want to listen. They want to engage and hear what public safety wants so that they can deliver on it.

They want public safety to describe the problems they're having so that they can take existing devices and new devices, whether it relates to airborne vehicles, whether it relates to just think of police cars, fire trucks, ambulances, fire engines, ladder trucks, all the different capabilities that go into responding every day and making sure that they have the technology in a mission-critical sort of way to give them capabilities that probably have a secondary commercial value.

So, if we look at systems that will allow a heads up display, and we look at systems that will allow hands-free capabilities, the reality is we're going to have the Alexa and the Siri for public safety that allows an officer to request the kinds of things that they would normally have picked up a radio and pushed a button on, and to be able to do that in real time, to that level, it actually will be augmented, and some of it will be done automatically, reading a license plate, being able to run it to see whether it's stolen. Those kinds of things are going to be more and more automated. And so, there's so much that's going to change. And the amount of apps and investment that's already out there in different communities today, in both devices and applications, it's just a matter of getting them to focus on public safety, which now they are, and it's an exciting change.

A couple of other things when we talk about the internet of life saving things and we talk about Smart Cities and communities, we heard Dereck yesterday talk about PSCR. I mean, literally, they're going to be pushing for Smart Cities that are focused on public safety and what's going to happen next year. There will be a huge push for that, a huge push for what sensors matter most and can make the biggest impact early on for police officers, firefighters, paramedics, and EMTs. And that, really, this goes to something you brought up earlier, Madam Chairwoman, with the real-time analytics and the real-time operations that change in a city.

You know, today, we very much value the important role of the 911 PSAP and all of the elements that come into it. And with the FirstNet network, that will provide, and especially with next gen in the future, even better capabilities that can be delivered all the way to the first responders in the field. But we're also going to be getting live data from the field now that is coming from all of our first responders, as well as other key sensors that exist in Smart Cities and cameras and other things that are out there, and

pulling that all together. And we saw a great example of this with Chief Lewin in Chicago, and what they're doing and they're adding ShotSpotter and they're adding analytics and apps in the hands of smartphones and police officers, and then we're taking all of that and putting that together to do predictive policing and responses. And that's being done at an operational level, real time. And that's going to happen in different police and fire departments and EMS agencies across the country, that will give that real-time capability to deploy resources in a more effective way, and to be able to respond quicker to changing circumstances that happen almost every minute.

One of the things you mentioned at the beginning, and I want to bring it up before I end for today, is that we really want to engage the technology community, and we want to be open to that. As part of our core values, we've always been open, and we're going to continue to be very open, and that includes working with industry, and that includes working with public safety and everyone who wants to have a capability to come in and share with us, either something they have thought up, something they're designing, something they're investing in. And so, there is one main way to do that, and we tried to make this as simple as possible.

We've actually updated our website for doing business with FirstNet, and we've done it in a really simple way. If you want to come in and brief the FirstNet technology team, or you want to come in and brief the FirstNet team, if you go to firstnet.gov/business, you'll find all of the elements, the instructions, and the capability to submit a request very easily by going to our website to do that. And, so, we've tried to just make it really simple. You'll get a response, and, certainly, we'll be following up to that.

We also often get asked for a contact for AT&T, and because of the public/private partnership and the massive amount of investment being done by AT&T as part of that, we have Bradley Blase's contact on our website as well, and this also gives you the ability, if you want to contact them and the kinds of roles that they're investing in as part of the deployment, or as part of the core network infrastructure -- and we have a lot of companies that come looking for that -- we also want you to know you can directly go to AT&T with that as well. So, there are parts that certainly we're going to be doing to fight for the innovation for public safety and be a voice and a conduit for taking all of those requests from public safety and making that part of the network, and for holding AT&T and our partnership accountable for delivering on that. At the same point, we want to enable folks to get in with AT&T, with the roles that they have and make sure that there are quick ways to be able to do that.

SUSAN SWENSON: Could we take a look at putting this more prominent, like on our homepage, at least for a while. Because when you say you have to dig in a little bit to find it, I'd like to have it on the front page for a while, just because there's a lot of interest out there, and we're fielding a lot of calls and e-mails from people. So, I think if we can get the word out, because we've kind of been in a little bit of a quiet period, not have this and so, if you wouldn't mind taking a look at this, that would be great.

TJ KENNEDY: Great idea.

SUSAN SWENSON: Okay?

TJ KENNEDY: I'll do it.

JEFFREY JOHNSON: Madam Chair, TJ, I'd like you to think about -- so this is beautiful and we need to do it. I'd like you to think about how we take that to the next level; meaning, we might take a call from someone at 10:00 a.m. that would engage with us as a business saying, "Okay, here's what I'm offering. You know, how do I get plugged in," et cetera? May take a call at 1:00 in the afternoon, and the person at 1:00, the only thing they don't have to complete their picture is the person that called at 10:00. I would like you -- these businesses often have a piece but not the full picture, and I'd like you to think about a strategy where we can create an environment where they can come together and complete each other's picture, as it were.

TJ KENNEDY: I agree. I think we'll definitely take that and we'll make sure that we work together as a way to tie people together, where they have solutions on both ends. That's a great idea. Other thoughts from board members on innovation and what else we should be doing that we're not yet.

SUSAN SWENSON: No. It's pretty exciting. I mean, this is real fun stuff, so that's great. Appreciate the update. I think, Steve Fletcher, you're up next, giving us an update on the program office. Obviously, like we said, we're deep in the weeds on this, and, obviously, execution of the contract is critically important, and so this organization and this role and the people in it are critically important, so a quick update from you would be appreciated. Thank you.

STEPHEN FLETCHER: Thank you. And I appreciate the opportunity, Madam Chairwoman, to talk about what you referred to last time as a very mundane blocking and tackling exercise.

MALE SPEAKER: She is candid, if nothing else.

STEPHEN FLETCHER: But I think it's pretty exciting, mostly because I get to see all of the task teams and the activity that they are involved in with Rich's team, with Jeff's team, with the RAN team, all of these teams with their technology, I kind of -- I don't refer to myself as the chief cat herder, but I do refer to myself as enabling those folks to be able to structure where they are and be able to target achieving their goals and the objectives to bring out these technologies. So, it's really exciting to see that, and we have a lot of opportunities, as we've seen, just to see all these teams at work and the wonderful activity that they're doing.

As I mentioned last time, we have formulated ourselves in and organized ourselves in areas of task teams. So, the task teams really are focusing on workstreams and those various areas. We have workstreams for State Plans. We have it for the core. We have it for the RAN development and operation. So, we are focusing on those. And within

these task teams, we have subject matter experts, we have project leads or task leads, and we also have project management folks, skills, capabilities, and the reason for that is, is we want to be able to complete our task, but we also want to make sure that we get all the deliverables that are called out in the contract, that we meet those milestones, and that we are going along our proper pathway in order to finalize those.

So, with all of the tasks that we put in place, and task orders that we put in place, there are a set of deliverables. There's a set of milestones that we need to meet, and so that's one of the things that we're focused on, making sure that everybody is successful in working with AT&T, working with all the task teams.

It was very interesting, as we started, one of the things I wanted to highlight is, first real intense activity coming out of the gate was the State Plans, and there was two parts to this. One was the delivery of the State Plan Portal, and the other was the delivery of the State Plans themselves. And this was very interesting, as we started putting it forward, a lot of activity, and Rich kind of gave you an update on where that was.

But one of the things that we sort of discovered, this was the first one out of the chute, the State Plan Portal, we decided and, Rich was saying what we need to do is deliver the State Plans. They need some time to look at them, analyze them, give comments before we finalize them, and gave them to the governor. So that means that task order number one, which was the State Plan Portal, we moved up three months, so we delivered that early, three months early, which was wonderful, which was great, except for that, according to the IMS, our Integrated Master Schedule, it wasn't supposed to be delivered until three months later, so we were very focused on making sure that the deliverables were all completed properly, that we had met the milestone and all of those things. And it sort of taught us a lesson.

We said, all right, we need to prepare for that. So, we can't just do it at the very end here and say, you know, what is it that complies with the contract, what is it that we have to do. And so, we have now, for IOC-1, which is the initial operating capability or a milestone that we have that's coming up in September, which is what the task order one was focused on, all the things that we have to do, what is the acceptance criteria, what are the things that we are going to evaluate, what are the things that we have to approve, both from AT&T side, as well as from our folks' side and make sure that we have those resources available, and we can achieve that. And so, that was a great example for the first task.

The next task that we have was the State Plans delivery, and that will be done -- that's due, IOC-1, which is in the middle of September. In addition, we have the task order three, which includes a lot of things preparatory to building the core. So, it's, we had a critical design review, we're doing the application ecosystem. We're doing the device validation, and we're doing security activities, what's the core going to look like, as well as all the regular data and voice services that are going to be included in the core. So, all of those things, we have to put a plan together to say, how are we going to validate

that, how are we going to test it, how are we going to make sure that that is delivered as per contracted with.

And, so, there's hundreds of things that we have to put in place that we have to either test or document or identify and artifact to make sure it satisfies the conditions of the contract, which was bid. And so, we've done a lot of those things. We're checking them off right now. We've been to the labs in Redmond, Washington. We've been to the labs - the AT&T labs in Austin, Texas, for the application ecosystem, as well as the device in order to make sure that they are validated. So, this is a lot of activity that we kind of facilitate to structure and then make sure that we can put in place, we can achieve the goals of the contract. So, this is quite exciting to see all this go forward, but it is still a lot of work that all the teams are participating in.

And the last one that we're looking at here is the RAN deployment and operations, and I'll talk about that in just a minute. But with that, we want to make sure that we have all the metrics for how we're going to evaluate it. What's the process for seeing, measuring our progress, as well as what are the metrics for the coverage, for the signal strength and all that kind of stuff that is part of the laying out of the network.

So, with that, I just want to highlight a couple of dates here, and one of the ones that we didn't show on here that's probably really important to keep in mind, I think Jeff had it on one of his slides, and that's IOC-2, which is March of 2018. That, IOC-2, will be the delivery of the core, so that's the one we're focusing on now. Right here, IOC-1 for the core, it's the design. So, we're doing all the design work and checking to make sure that all those pieces are available and are going to be applied to the core. IOC task order 1, we've already done. We've completed that.

Task order two, which is the State Plan official delivery to the governor, we just delivered it to the state previously. We will deliver it to the governor, and that starts, as we said, starting the shot clock, the 90-day shot clock to be decided by the middle of December. So, there's some deliverables associated with that, and that's going to be put into place. IOC-3, as I said, that will be the design of the core. And then another key piece is we're going to put task order number four, which is the RAN development and operational pieces, how we are going to install those. There will be a plan that's going to be put in place with the task order, and there will be some dollars associated with building that. That will be given to the contractor, and they will then start building. We'll start tracking that at that particular time. So, we'll do it toward the end of December, when we know when all of the opt-in states take place, they've decided to, and that's because this is for all the task order number four, which is the RAN deployment, will be done by AT&T, so that's the one that they will be doing.

We also have to prepare for, and we have to put plans together for those that opt out, and that will be managed by us, but it won't be deployed by us. It will be deployed by the opt-out state. So that will be done toward the end of December, once we have a better idea what the opt-out or the opt-in states are.

SUSAN SWENSON: Right. Because their process, they have to go through a couple of things before we even get involved in that deployment.

STEPHEN FLETCHER: That's right. So, we will put our plans together after that. But we do want AT&T to start as quickly as possible on the RAN deployment.

SUSAN SWENSON: Correct.

STEPHEN FLETCHER: The Band 14 RAN deployment that they are going to be building out.

SUSAN SWENSON: Correct.

STEPHEN FLETCHER: So, those are the key items that we're tracking. We have September, we have December, and then we have March of next year, which is a great date, because it is the date when we deliver the core and we're live, and that's the operational system.

SUSAN SWENSON: Well, I didn't mean to make you feel like I made a derogatory comment about being mundane. I consider managing the mundane a real skill, and not everybody has that skill. And, frankly, I kind of view this as like building a house.

STEPHEN FLETCHER: It is.

SUSAN SWENSON: I mean, we're building a house here, so you've got to have it. So, all that exciting stuff that TJ is talking about would not be available to us if we don't have the house built. So, I take back -- I just want you to know it wasn't a derogatory comment. It was compliment, and I appreciate all the work that that team is doing, because without that, we wouldn't be able to do all the things that we've talked about, you know, in advance of your report. So, thanks to you and the NPO team, because I know it is sweating the details, and sweating the details is really important at this point. It's no longer up here, you've got to get down, and if we don't do it right, public safety is going to suffer. And so, we owe it to public safety to sweat the details.

STEPHEN FLETCHER: Well, and I would say that most of our folks are fairly pedantic, fairly focused.

SUSAN SWENSON: They have to be.

STEPHEN FLETCHER: And, so, when you do things like change the schedule, that throws some of these folks for a loop. In fact, well, they know that they can't exceed the time, but to do it quicker takes a little adjustment.

SUSAN SWENSON: Well, that's what we have the Employee Assistance Program when those things happen, right? We're happy to have that happen. But we want to give them support. But no, in all seriousness, you've got to have people with this skill set and

this mentality, otherwise it would -- I mean, you've got people in different parts of the organization with different skills, and we're lucky to have a very strong NPO organization, which is really critical.

STEPHEN FLETCHER: But they were happy to do it. They thought this was really cool.

SUSAN SWENSON: Yeah. Yeah. Exactly. Well, thank you, Steve. I appreciate it. Any questions or comments from the board on the NPO and the program? If not, Mike, I think you have a few closing comments for us today.

MIKE POTH: Right. Yeah. Thank you very much. First off, Admiral Hewitt, welcome aboard as you probably say in your previous career, we're glad to have you. You know, DHS and DOJ and OMB and DOC and NTIA, and probably a bunch of other acronyms, are critical, and it's really exciting to see how everyone's kind of coming around and coalescing around, helping FirstNet be successful to actually pull this off. So, we're really excited to have you on part of the team.

You know, this has been a pivotal year for FirstNet, and another critical year is ahead of us. We're focused on getting the network built out. And thank you, board, for the \$73.5 million infusion of cash to help us get to that next level. When you think about the things that have been accomplished already in calendar '17, and what's on tap, it's kind of remarkable. So, as we stay on track, we will not only have made an award in '17, started a contract, delivered State Plans, but we'll also have the final opt in/opt out determinations by the end of this calendar year, and we'll absolutely then have the definitive map of how quickly we can continue to work with AT&T to get the things implemented.

As you recall, you know, we appreciate your \$73.5 million, but also last year, you approved \$6.5 billion, and that coupled with \$40 billion that AT&T is putting into this investment, this is a true commitment to public safety.

SUSAN SWENSON: [Inaudible].

MIKE POTH: Yeah. We could always use more, yeah. You know, but everyone is counting on us, and as the board's remarked, you know, we've got to build it and it's got to work, bottom line, and this is going to help a long way to that effort. You know, and these investments were intentional public safety on behalf -- by the federal government and by AT&T. This wasn't just for marketing, for market share or competition. Because, you know, public safety really doesn't care or concern themselves with market competition when they're trying to use the technology. They need the technology to work when they need it, how they need it, and where they need it, and this is going to help a long way to that. We find ourselves now in a true position to make a major impact for public safety.

As you guys saw yesterday, and as our CTO said, our lab is open for public safety. It's not just drawings on a schematic. Many people that walked through that have been

around were remarking last time they were in the building it was just barren walls and maybe a few expired carrier pigeons, which was truly the first wireless network. But we're pleased with the progress that's been accomplished. Twenty states have opted in already, and territories, which is remarkable. But we can't lose sight of what FirstNet's responsibility is. We have one job; it's to deliver the network we've been entrusted with. We've made tremendous progress and achieved the first milestones, but Congress gave us this mission, and public safety expects us to get this right. We've got to get this thing built on schedule, deploy Band 14, priority/preemption, role coverage, all those factors are critical, and we have to stay laser focused on it.

You know, the measures of success, as we kind of continue forward, is not just getting this network built, but it is ensuring that public safety can actually use the network, the applications, and the devices that are critical. That's when I think we can say we're successful. But until that point, we have to keep working. You know, this is all about trying to help them get their jobs done better and safer, and that's what this mission is about.

As you mentioned at the start, you know, this is a sobering week yet again, a reminder of 9/11, the hurricanes, the fires out West, and the continual line of duty deaths. One of our board members, Sheriff Stanek, lost one of his officers, and that's why he's not at this meeting today. He's attending the funeral of one of his officers that left a wife and a seven-year-old child. While we focus on budgets and business, and is this built and is that built, we have to remember what we're really trying to do, and, unfortunately, it's a sobering reminder every single day how critical the work that this entire group and AT&T, and the entire public safety community is trying to do. You know, being in the life-saving business for first responders, they have to be resilient, agile, and able to manage risk, and we have to be able to do that on our side for them too, 24 hours a day, 7 days a week, 365 days a year.

You know, the other important measure is we have to make sure that AT&T delivers what public safety expects from the network. We're investing, on behalf of public safety, \$7 billion and 20 megahertz of spectrum, and we have to make sure that their investment is maximized. It's a 25-year binding contract obligation by AT&T to deliver what public safety needs, and they're not just doing this as a marketing tactic by them. This is a commitment. We've already seen the organizational and personal commitment of AT&T, and its employees to do whatever it takes to make and serve public safety, which is awesome. But, you know what, that's the minimum bar going forward, and they're rising to that challenge every single day, and raising the bar every time they have to step up, which is awesome. This board and the FirstNet team must continue to hold them, and equally important, ourselves accountable to get this accomplished.

Public safety is our only business. We only have one priority, to make sure the network delivers what they asked for. And we'll do so with continual advocacy and accountability, as Rich and his CCO team has pivoted towards that mode now. You know, we're still, for the next 25 years, going to be on a listening tour. But we're also

going to be advocating and, also, working side by side with AT&T to make sure that this is successful.

We take our role in innovation, advocacy, and accountability very serious. We're a hundred percent dedicated to public safety, and so this is network. This isn't something that can just be replicated over night by flipping on a switch. You know, this isn't about capturing or retaining wireless subscribers. This is about delivering a wireless broadband network for the entire country and do everything we can for public safety. So, FirstNet, on behalf of the states, federals and local communities throughout this great country, we're going to continue to work alongside AT&T to make this successful and to make them successful. And with the board's continual involvement, your involvement yesterday, some of the things that keep coming out, that's the way we're going to continue to grow and operate, and this board has set a bar that's pretty high, that the team will continue to strive to hit. So, thank you very much, and I want to thank Jeff Bratcher and his team, and the entire FirstNet team. I want to thank Kim Farington for dragging us all painfully through yet another budget cycle, and we look forward -- she's probably -- next week we'll start planning for FY19.

SUSAN SWENSON: Exactly.

MIKE POTH: So, thank you very much.

SUSAN SWENSON: Thank you, Mike. You know, before I close and ask to adjourn the meeting, I just want to make just a quick comment about the fact that -- I mean FirstNet, we just need to continue to remember that FirstNet is here to advocate for public safety. I mean, that is our purpose, and that is our role. And with the challenges that public safety continues to face, you know, they operate as individual agencies, with a set of values that guide their daily activities. I mean, that's how they run their organizations, and that's how the organization, you know, just interacts with one another. I just want to make a comment that, as a board and as FirstNet management, we support those values, you know, as they go about their daily business and deal with the emergencies. So, I think it's important to mention that, because it just continues to reinforce why we're here. We're not here just because of us. We're not here because of FirstNet. We're here because of public safety.

So, I just want to make that comment, you know, with the wild fires and the hurricanes and everything that they face every day, it's those principles and those values that keep them focused and keep them able to do their job and how much we appreciate that. And we will continue to be there for public safety.

Any other comments, closing comments, or anybody want to make before we close. I want to give everybody an opportunity. We've had a lot of good discussion today, I think, and hopefully the listening audience and the viewing audience continues to see how focused we are, how committed we are to public safety, and to delivering on the commitments we make. We take that very seriously, and we will continue down that path. If there's no further comment.

ANNISE PARKER: Madam Chair?

SUSAN SWENSON: Yes.

ANNISE PARKER: Madam Chair?

SUSAN SWENSON: Go ahead.

ANNISE PARKER: This is Annise Parker calling in from Houston, and I've been on the call. I've been silent, because I'm actually in the shelter, and I'm simultaneously listening to the radio.

SUSAN SWENSON: Okay.

ANNISE PARKER: But as someone who is here on the ground, I just want to thank everybody for moving this project forward. I'm very excited to have been a part of this effort. And the folks in Houston appreciate all the support we've been getting.

SUSAN SWENSON: Excellent. Well, thank you, Mayor Parker. Really appreciate you listening in. And, as I said at the beginning of the meeting, thank you for everything you're doing out there in Houston. You and your colleagues and all the volunteers that you have out there are doing an incredible job, and this is an important part of the emergency, is the recovery. And, you know, that can be some of the most challenging. So, look forward to seeing you when it makes sense. We understand why you're not here, and we look forward to seeing you next time.

With that, I would entertain a motion to adjourn. Teri. Thank you. Is there a second. Any further discussion, I don't think. All those in favor, please signify by saying "aye."

GROUP: Aye.

SUSAN SWENSON: Opposed, same sign. Any abstentions or objections? I think we are adjourned. Thank you everybody. Thanks for joining us today. Have a good rest of your week.

OPERATOR: Thank you, and this does conclude today's conference. You may disconnect at this time.

END