*** NOTICE OF PUBLIC MEETING ***

INFORMATION TECHNOLOGY ADVISORY BOARD

LOCATIONS:	Legislative Counsel Bureau 401 S. Carson Street Room 2135 Carson City, Nevada 89701	Grant Sawyer Building 555 E. Washington Avenue Room 4401 Las Vegas, Nevada 89101

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DATE AND TIME: September 16, 2013, 1:00 p.m. - 3:35 p.m.

Below is an agenda of all items to be considered. Items on the agenda may be taken out of the order presented**,** items may be combined for consideration by the public body; and items may be pulled or removed from the agenda at any time at the discretion of the Chairperson.

AGENDA

1. CALL TO ORDER

Joe Marcella: I'd like to call the September 16th ITAB Board Meeting to order. And then, Lenora, can I have a roll call?

2. ROLL CALL

Lenora Mueller: Assemblyman David Bobzien?

No response heard.

Lenora Mueller: Mr. Rudy Malfabon?

Rudy Malfabon: Here.

Lenora Mueller: Ms. Laura Schmidt?

No response heard.

Lenora Mueller: Senator Mo Denis?

No response heard.

Lenora Mueller: Mr. Paul Diflo?

No response heard.

Lenora Mueller: Mr. Kevin Farrell?

Kevin Farrell: Here.

Lenora Mueller: Ms. Laura Fucci?

No response heard.

Lenora Mueller: Mr. Joseph Marcella?

Joseph Marcella: Here.

Lenora Mueller: Mr. Jeff Mohlenkamp?

Jeff Mohlenkamp: Here.

Lenora Mueller: Ms. Carrie Parker?

Carrie Parker: Here.

Lenora Mueller: Mr. Mike Willden?

Mike Willden: Here.

Lenora Mueller: That constitutes a quorum.

Joe Marcella: Thank you.

3. PUBLIC COMMENTS

Joe Marcella: I'd like to open the meeting up for public comment. I don't see anybody down south. So is anyone from public wanting to speak? Hearing none, seeing a lot, let's move on to the next Agenda item.

4. APPROVAL OF MINUTES: September 24, 2012

Joe Marcella: Approval of the minutes from the September 24, 2012 meeting.

Kevin Farrell: You need a motion?

Joe Marcella: I need a motion.

Kevin Farrell: This is Kevin Farrell. I'd like to move approval of the minutes from September 24, 2012.

Joe Marcella: Do I have a second?

Jeff Mohlenkamp: Jeff Mohlenkamp, second.

Joe Marcella: Any discussion?

Rudy Malfabon: A question, Mr. Chairman. If a member was not present there, would it be proper to abstain from voting?

Jeff Menicucci: I think that's your choice, if you don't feel like you can cast an informed vote.

Rudy Malfabon: Thank you.

Joe Marcella: Just asking for advice. They're wonderful people, lawyers. Then can I call for the vote? All those in favor?

Group: Aye.

Joe Marcella: Okay. Let me move on to the next Agenda item.

5. WELCOME NEW MEMBERS

Joe Marcella: I wanted to welcome two new members, that's Laura Schmidt, who's not here. And is there a complication with Laura? Is it not yet approved by the Governor or her application's not in quite yet?

Lenora Mueller: That's correct. But I believe there's a dialog, so we expect her to be appointed and have paperwork in soon.

Joe Marcella: And then, Rudy Malfabon, did you have anything that you wanted to say based on this being your first meeting?

Rudy Malfabon: I'd just like to say I appreciate being a member of the Board. And I know with the Nevada Department of Transportation, we have a lot of issues with emerging technologies. And we love technology. It helps us to do our job more efficiently and effectively. And I'm just pleased to be a Board member.

Joe Marcella: Well, we congratulate you on your new position.

6. ANNUAL ELECTION OF CHAIR

Joe Marcella: This one's, the state statute contains the following provision regarding the election of the Advisory Board Chair. At the first regular meeting of each calendar year, the members of the Board shall elect a Chair by majority vote. Well, this is the first regular meeting for 2013, because we had that legislature in the middle, so we have to perform that duty at this meeting. And apparently, so we have a quorum, so we're in good shape. Nominations are now open for the Advisory Board Chair.

Jeff Mohlenkamp: Mr. Chairman, Jeff Mohlenkamp. I would like to, if you're willing to continue, I'd like to nominate Joe Marcella, yourself, for the Chair, and Kevin Farrell as the Vice Chair of this Committee.

Joe Marcella: Anyone want to second that? Thank you.

Carrie Parker: Carrie Parker, for the record. I'll second.

Joe Marcella: Any discussion?

Unidentified Male Voice: Discussion, Mr. Chair. I just want to be clear and maybe it's for counsel. So you just read that we have to do an election at the first meeting after each calendar year. So does this panel only serve until our next meeting in 2014 and then we have to elect again? Or -- I'm a little confused about that language you just read. So does this group only sit for four months and then we have to do an election after the -- or the first meeting in 2014?

Joe Marcella: Well, it depends on the frequency of the meetings.

Unidentified Male Voice: Well, assuming we're going to have quarterly or semi-periodic meetings, I'm just wanting to make sure I understand what the process is here. It does say at the first meeting of each calendar year. So I think we may be doing this again fairly soon. That's what -- that's when he was reading, I was hearing that. So I just wanted to make sure.

Joe Marcella: To counter that, I think we'll have monthly meetings in the (inaudible).

Unidentified Male Voice: Thank you, Mr. Chair.

Joe Marcella: Thank you. Okay. Discussion? All those in favor?

Group: Aye.

Unidentified Male Voice: We have to fundraise again.

Joe Marcella: I think there's a thank you in there someplace.

7. SAIC PRESENTATION - Opportunities/Issues related to consolidation -SAIC Representative

Joe Marcella: Okay. Part of our Advisory Board direction last year had included a couple of priorities, one of which was consolidation. We thought, not only was that extremely important, but we thought that was one of the initial moving parts that brings almost everything else that was on our priority list together. And I've asked SAIC, who's helped the entire community with several different initiatives, and consolidation is one of them, to see if they could talk through not only the importance, but the relationship of consolidation, not only to our community, but the successes in other communities as well. So, David?

Unidentified Male Voice: Well, thank you. (Inaudible) turn over to Charles Onstott, who is our Chief Technology Officer at SAIC.

Joe Marcella: Charles, welcome.

Charles Onstott: Thank you. Should I just sit here or? I appreciate you having me here. I have a presentation I've put together…

Unidentified Male Voice: (Inaudible).

Unidentified Female Voice: Can you speak into the mic?

Charles Onstott: Okay. Is this better? Okay.

Joe Marcella: Charles, how would you like to conduct this? Do you want us to ask questions as you go? Or do you want us to reserve those until the end?

Charles Onstott: Because there's a lot of content in here, it might be better if we wait until the end. And I'm going to try to pace through it pretty quickly. I'm trying to cover a lot of ground in a short period of time, recognizing that you will probably want to ask questions about specific parts of it. So if that's okay with you guys then.

Joe Marcella: It works.

Charles Onstott: Thank you. Okay. Well, my name is Charles Onstott. I'm the CTO for our Enterprise IT portion of SAIC. We deliver IT services to federal government, state and local, and commercial customers. And I'm joined here with Steven Howell (sp?) on the line, who is from Amazon. He heads up the state and local and educational sales portion of Amazon AWS, which is a cloud-computing provider. Steve, would you like to say an introductory statement?

Steven Howell (sp?): Yes. Thank you very much. I apologize for not being able to be there in person. It seems like the lovely weather that you're having there is balanced in some part by the somewhat unseasonable weather that I encountered yesterday trying to get out of Seattle and fly down. My flight was grounded, couldn't make it. As was mentioned, I run Amazon's state and local government engagement group in the United States. That group has only been around for two years. And we are very happy to be partnered with companies like SAIC, who lend a lot of experience and credibility to actual implementation in the real world. And my background has been application development with state and local governments for a few years. I'll just say I started with mainframes, and I've been working on government projects since the early days. So I'll turn it back over to you and then chime in later with some comments.

Charles Onstott: All right. Thank you. So what I thought I'd share with you today is that SAIC went through a similar journey to the one that, you know, I think the State of Nevada is going through with an IT consolidation project, except ours was for our company. And as I was looking at your IT strategy materials, it struck me that there's a lot of similarities between the kinds of activities that we took internally to our company and some of the things I think you guys are going to be facing as you look at implementing consolidation within the State of Nevada. I have a number of different agenda items that I'm going to kind of walk through pretty quickly, because I know we have some limited time here. But what I want to do is to kind of set the stage a little bit around what SAIC was doing and why we did what we did, talk to you a little bit about some of the lessons learned that we got out of that project. And when I say lessons learned, I mean I have battle scars from some of these lessons learned. And then also talk to you a little bit about kind of our thoughts on cloud security, which is a major issue that most of our customers have. And then talk to you a little bit about governance. And then I'm going to turn it over to Amazon to talk a little bit about some of their experiences in working with state and local government use of Amazon AWS.

I just put this here for context. I imagine you all are familiar with this. These were the recommendations out of the iTab. You know, in general, it's talking about the idea of consolidating IT services, consolidating governance processes and also implementing common security frameworks. There were some additional recommendations. One, which I'm personally very interested in, which was the application, modernization and lifecycle management area. And this is implementing DevOps and some more modern process and technology techniques to helping speed up the process of doing IT software development projects. As you probably know, that's not a -- there is not an existing solution for that today, per se, that you can just find. And so this is clearly an integration project. It's an area that I have a lot of interest in and that some of our customers are now asking us about within SAIC. And SAIC's planning to make some investments in developing some repeatable capabilities, some best practices, and reference architectures for known toolsets that can work together to achieve this particular model. And then in conjunction with the DevOps model and how you move from, say, a more waterfall to an agile software development approach and infuse ITIL, because a lot of organizations are, you know, coming from that background. DevOps is kind of a new model that pushes the boundaries there a little bit. And then, finally, of course, mobility being a major topic of interest in just about every quarter right now. Clearly the access to information that it provides systems and members within the government is profound.

So SAIC first got interested in cloud computing back in 2009. And what happened was that SAIC was wanting to continue along on an IT consolidation journey that we started. And as a part of that journey, we had to vacate a data center. And we also had a number of, you know, I'll call them data centers, but, you know, essentially large com-closets, we'll say, with computer servers standing in them that were owned by the business, and we needed to consolidate all of that. So SAIC's internal IT department had that challenge on their plate, okay?

And then I actually work on the service side of SAIC, so I'm more of a customer-facing person. I'm in the service-line part of the company. And I was interested in building capability around cloud computing because I knew that that was going to be the big next thing for IT infrastructure. And I wanted to have skill-sets and best practices and things that we could bring to our customer base. So I got with our internal IT department and worked with the CIO of our company on ways in which the IT business part of the company could work and support the internal IT department on their journey. And, you know, we were able to help them in a number of ways. But, you know, the kind of the key takeaway was, we were able to jointly work together to achieve a consolidation that built the cloud that the company uses. And then we were also able to build some critical skill-sets and capabilities within SAIC that we needed for the cloud business. And we were also able to help position the company to have a lot more flexibility. That's actually become extremely relevant in the last year because our company is actually splitting into two, which you may or may not be aware of. And having put this new infrastructure in place has actually made that job a lot simpler.

Just real quick in kind of the history here. We started out in a traditional, I'll call it, like a university model. There was a central IT department, but it had provided minimal services, mostly telecommunications. And then each of the business units had their own IT, they had their own servers, their own equipment, they wrote their own software. And the company started roughly 2006, 2007 to move away from that model into one that was a central IT service providing organization that would then essentially provide value-added services back to the company as a whole.

And I can remember one of the earlier conversations, you know, we were sitting in a meeting with the IT department as they were starting to embark on this first journey, and I remember one of the guys from the IT department that I've known for a long time, you know, actually use the work customer in the meeting, saying, you know, looking at the business as a customer. And it -- I realized at that moment, yeah, these guys are really starting to change the framework. You know, they're not -- they're no longer the people we have to go get blessings from. But they're realizing that they have to provide value-add to the business in order to become and remain relevant.

So the company went through this process of doing that. You know, we consolidated the number of software and hardware vendors that we had to a more manageable number. We implemented common governance processes across the company. We also kind of looked at -- they looked at IT services more in a horizontal fashion, and then how do we enable it within the business. So that today, you know, the vast majority of the IT is from the central organization and that there are still pockets of things that get done within the line, which we actually looked at the cloud to help address.

And then starting in 2010 -- this was after we got into the idea of actually having a project to consolidate the data centers and look at cloud computing as a part of that consolidation. And we kind of broke the, you know, journey, too, down into three principal phases. And the first was really to fix, stabilize and align. And so this was getting our assets -- first all, figuring out what assets we have, so we had to understand that; getting those assets out of the old data centers and into our new data center; putting new governance processes in place regarding those assets. This is all the internal-plumbing of the IT department that needed to occur first. And so we completed most of that in 2011 and started the process of migrating the applications out of the old data center into the new data center at that time.

And then, in 2012, the focus there was primarily around continuing to extend that capability, starting to look at alternatives to kind of historical or legacy technologies that were being used. So, for example, we were heavy Blackberry users. Of course, we were getting a lot of pressure to start supporting iPhones within the environment, so the IT department had to look at how they would accommodate that. You know, another part of that was looking at, you know, standardizing the desktop. So our IT department came up with this notion of the trusted desktop, which basically locked it down to the point where, you know, for a lot of folks it was functional, but for application-development types, it was really not functional at all. And starting to look at ways in which the IT could change to begin to support that.

So a lot of the activities took place around that in 2012. We implemented a Tier 4 Data Center. We consolidated assets into it. We started moving -- and the plan was to move into our future state, where eventually, you know, iPhone being one of the first mobile technologies; and then start looking at bring-your-own device and supporting any variety of technologies in the future; moving away from trusted desktop, which is, you know, the employee is issued a physical desktop to more of a virtual desktop infrastructure; and moving from data center consolidation to cloud.

And when we talk about cloud at SAIC, what we're really referring to is the self-service aspect of IT, or IT as a service; meaning that the business can directly request services through, say, a user portal, okay? And those services are instantaneously provisioned. And what that does is it enables the business to still maintain control over the IT that they need to get the job done. But it also enables the central IT to still provide common frameworks and common governance on how that IT is used. So it kind of tries to address kind of the best of both worlds in that framework.

Now, we actually got delayed in rolling out our production cloud into that framework in the past year because at the beginning of 2012, or sorry, 2013, SAIC decided to split into two companies. And so the focus of the IT department has really been on conducting that split. And the CIO of our company today will tell you that, without reservation, if we had not moved to this cloud model where we modularized the data center, the split activities would have been infinitely more complicated than they are going to be now.

So what did our Enterprise cloud look like? And so we had it broken into several major components. And the principal component we call our cornerstone block, and it consists of two data-center sites. We were able to pick sites that were within synchronous replication range, which greatly simplified our disaster-recovery approach. They happened to be in a city that actually has two power-grids servicing the same city, so we were able to keep them on separate power grids. We also did a tornado path analysis for 30 years to make sure that we didn't have simultaneous tornado strikes in those locations. And we determined that the risk of, you know, there being an issue in both sites at the same time was very low. We also moved about 32 of our internal software applications into a software-as-a-service. So part of our consolidation effort was just getting things completely out of the corporate data center and into outside service providers.

And then we established three primary blocks underneath that. One, we call our virtual desktop infrastructure. Today it was -- the initial strategy was really to look at it as an alternative to augment the workstation at the office. So it primarily provides office applications, so that if you're going home or you're on travel or on vacation, you want to check a document or update something, you can do that easily. The long-term vision for the VDI is that it will actually replace the desktop, so that you can use it on any mobile device and support a BYOD environment and it will be secure. And it has all of the things that an individual user will need to operate on that VDI.

Then we also built a production private cloud, and we migrated several hundred SAIC applications into that cloud, which we use internally. And then we set up the Enterprise solution lab, which I'll talk about in a moment. And then the long-term vision I mentioned earlier is to get to where BU, the business units, can now start using that IT and provisioning their own IT within the cloud, which will really be the next step in our journey once we finish the split of the company.

I just wanted to throw this up. This, to us, is kind of the ultimate envision for where we see the corporation going in terms for how it provides the IT back to the business. This, right now, is our Enterprise solution lab, so it's really targeted our internal research and development community as well as our developer community. And it has a few things that I think are particularly meaningful here. And one is, you'll see that there is a service catalog concept at the top. And what we've done is taken key IT services and defined them in the catalog, and so a user can access that catalog, so it could be a Unix server or a Windows server or whatnot, and provision it using that.

We also address security upfront. One of the challenges in SAIC's environment is, when you want to put something into production, you had to actually go through a security certification process to get it put into production. Well, when you're in this kind of a cloud environment, you have things going in and out of production all the time because you're launching a service. And then when you don't need it, you turn it off. And then when you need it, you start it up again. And you don't want to keep going back through the change-management process to get permission to start and stop these services all the time. It kind of defeats the purpose of having kind of real-time responsiveness of the IT. So we worked with our internal security department at SAIC to come up with a model whereby we're able to pre-certify certain images, so that anytime we launch those pre-approved images, then we don't have to go through the traditional change-management processes and security processes in order to use them within the environment.

The other thing about this is, there is a user portal as I mentioned. It is a VMware vCloud based solution. It's built on Vblock, which is a technology from VCE, which was a company that was formed between Cisco, VMware and EMC. They make basically modular data centers. They take data, they take the storage, the server and they compute and they put it all together in a rack and you can just build your data center out one module at a time. And that was actually the same solution that we used in SAIC's new corporate data center. We went that route because we saw that it would provide a lot of flexibility in how we wanted to add capacity and, as it turns out, how we split capacity in the near term.

And then we also have the ability to reach back to public cloud infrastructure like Amazon AWS. And so the majority of our workload sits inside the private lab cloud, and then we also have a fair amount of workload sitting out in Amazon AWS as a part of that lab infrastructure. And the toolsets and the governance and the management spans all of those environments. So I have visibility into what's happening in Amazon cloud. I have visibility into what's happening in the local private cloud. And that enables me to ensure that when images are approved, that those are the only images that can get deployed within those environments. And as we do monitoring and things of those natures, we're able to see that kind of end-to-end in those different environments.

And when you're thinking about your journey to consolidation in the future, one thing to think about is how to get that framework in place so that -- because your in-state is not going to be a single cloud. It just -- wherever you're starting from today, that's not where you're going to end up. You're going to end up with a multitude of clouds; private, public. And you're going to want some kind of common management framework in place to help ensure that you have consistency in that environment and make it actually easier for the end-users to provision out of that environment.

Just some other technologies that we have in here, we use QuickTest for automated testing. F5 is used for our load-balancing capability. And then Convol (sp?) actually is our backup. So what we do with Convol is we actually backup our lab daily to the Amazon cloud. So we have the private cloud being backed up to a public cloud. We wanted to take advantage of that because we just pay for the storage as we actually consume it. And, you know, the rate for Amazon storage is pretty -- very reasonable compared to what it would cost us to go buy, you know, another storage array, stick it in a second site, and do a backup to there.

So with that background, I just wanted to touch on some of the, kind of the key lessons learned that we've had out of our corporate project as well as some other ones that we've done for various customers. And the first one really comes down to the first three bullets there, really talk to how you get everybody on the same page. And the way that we did that in SAIC is we created a committee that -- or a Board that was responsible for the Enterprise private cloud approval. And that Board consisted of representatives from various equities within the company. So we had service-line business-user equities that were represented. We had, of course, the IT department had its equity represented. We had back-office, like your accounts-payable, accounts-receivable, human resources, those folks also had an interest in what happened to the data center, so they were represented. The CTO office was represented on this Board. And then critical decisions, you know, really the big ones, the things that would impact the operational model, things that would impact cost, significant cost impacts or big changes in the project, and things that would impact policies in significant ways were

brought to the Board.

And then proposals were made and the Board was able to vote on how they wanted to proceed based on that. We actually had a weighting system for the equities, so that if the decision that was being made actually had a larger impact on a certain equity than any of the others, then we actually gave that equity a little bit more weight in our voting process. Now, when we first started to do that, I actually thought that wasn't going to work, because then you've got this other consensus-building you got to do, which is to get everybody to agree on what the weight should be. But, in practice, we never really had trouble getting to that. Most people recognized pretty quickly who was impacted by what and was willing to agree on that.

Another key thing is around the cost models. You know, one of the things that a lot of people say is they want to do cloud to save money. And I'm not sure that, at the end of the day, we would say we saved a lot of money by going to cloud, okay? What I will say that we were able to do was, one, increase the flexibility of the infrastructure so that we are able to do things more quickly than we were able to do before. And one of the things I like to point out around this is, you know, depending on who you're talking to, cloud can really in some cases look more expensive. If you're talking to the guy who runs your data centers, right, they're probably going to view it as potentially cost-add and change to the model that they're used to operating. And that, to them, is going to look disruptive and it's going to look expensive, okay? But, in my view, the real beneficiaries of cloud isn't so much the data center function. It's really the application owners and the software developers within the enterprise that need to use that IT that are in the data center. They're the real beneficiaries of cloud.

And what cloud enables you to do is speed up the project lifecycle, because now they get things in 15 minutes instead of 3 months. And that will either do one of two things. It can help you lower your costs on your software development side because you're not waiting around as much. Or it can also help increase your project capacity, so you can actually get more done with less time. That's where we've seen the real benefit of cloud. One of the things, too, is, you know, there will be -- as you go through this journey, there will be many cases where people want to build comparisons between, "Well, what would it cost if we put in the cloud versus putting it in the data center versus not doing anything at all?" So these kind of models will come up.

These are actually fairly complex. They take a lot of effort to develop. So what I would recommend on that is just try to come up with that framework as early on in your project as you can in order to identify what that evaluation model is going to look like. And it really needs to consider everything. You know, there are certain hidden costs in IT that are borne by, say, a cloud service provider, and one would be power. You know, in your data center, a lot of times, the facilities budget isn't part of the IT budget, so the power costs are hidden, effectively. But now you're comparing it against, you know, an outside cloud service provider who actually has that embedded in their costs. So you're not getting to an apples-to-apples. It could also be that you're not accounting for, you know, the IT management costs that you have to have versus, say, just the infrastructure costs that you're getting from a cloud service provider. So your model needs to really be pretty comprehensive. And I'd recommend getting that done earlier in the project rather than later, because those comparisons will inevitably come up as people naturally want to understand why they're making the decision that they're making.

The other big thing is licensing. And this is another big area that, you know, I have some battle wounds over this. And, you know, for example, and I'm not trying to pick on any particular company, but this is just one that had a particular impact to us, was Oracle, okay? So Oracle has a complex licensing scheme.

Joe Marcella: I hate to interrupt you, but I've got the same problem.

Charles Onstott: Okay. So, you know, Oracle, we were looking at consolidating them onto our Vblock and how Oracle licenses things and how the Vblock is architected, the license costs were going to become astronomically expensive. So we actually ended up buying an Oracle Exadata platform instead. And if you're familiar with that, you know that that wasn't inexpensive. So it gives you an idea of just the

magnitude of difference in licensing that it can make. And if you're baselining off of, say, a traditional architecture, I can assure you that the costs are probably not going to be anywhere near in the ballpark of what it's really going to cost by the time you move to a new architecture using that.

Now, some cloud companies, like Amazon, are actually embedding the licensing costs inside the instances, so that you're actually effectively paying for that license as you consume it, and that's really convenient and really helpful. But the thing to also consider about that is, if you have enterprise license agreements, then you may actually be paying double for something that you've already paid for. So as you start, you know, as you start using more and more of those cloud services, you may -- you know, if you're only doing a few instances, you probably don't care, but when you start doing some significant volume, you may want to start having conversations with your software vendor around, you know, how you get credits back on your enterprise agreement for things that you're buying through a cloud service provider. So the nice part of that is, you know, it simplifies the licensing structure. The drawback is you have the potential to pay more than once for something, essentially.

And then SLAs are another key area. Cloud service providers, I mean, in my opinion, cloud service providers for the most part don't offer what I would call incredibly great SLAs. And the penalties that they are willing to give you for SLA violations, you know, if you're paying, say, a dollar an hour for a server and you have 400 servers that go down for an hour, they're going to refund you, say, four hundred bucks, which is not going to at all begin to offset the potential costs of losing that many systems. So you can't rely on the SLA -- the SLA rebate as any kind of real compensation for it. So you really need to plan around disaster recovery and continuity of operations when you're looking at that. The other thing, too, is when you're trying to compare cloud service providers, they will have different SLAs, so you'll need to do your best to try to baseline those.

And then there's another part to this equation that I see get overlooked a lot, which is your own SLAs. You know, when you're designing -- when you design your own internal private-cloud infrastructure, have you thought about what availability it's going to offer? And have you engineered it to do that? And it may turn out that some of these cloud service provider SLAs actually don't look so unattractive anymore as you start thinking about what it's going to take for you to actually match that SLA, right? So that's a key part of the equation. And, again, if you build an infrastructure without any thought put into how it needs to perform or how it needs to operate, then it's probably going to be a lot less expensive than if you said it has to have four lines of availability or it has to deal with a failover in this period of time.

And I think the other thing is just mainly around knowledge transfer. One of the big thing -- big advantages of doing a consolidation project is you will start to gain a lot of information about your enterprise that you probably didn't have before. You just don't want to squander that. That's valuable. So you want to make sure that gets documented, put in someplace that's referenceable in the future.

On the technical side, one of the key things here that I would point out is just disaster -- going back to disaster recovery, this will really turn out to be an important part of your planning process for a couple of reasons. One is it's possible that you'll have, say, a system that needs to have -- that has a COOP plan associated with it. It's probably very well documented. It probably has system architecture showing how the COOP site's set up and how the failover process is going to work. And when you look at it on the surface, you think, "Wow, this is going to work. This isn't a problem." But then if it's never really been tested, I can guarantee you it probably isn't going to work no matter how well documented it is.

So one of the lessons learned from our own experience is you want to make sure that -- try to test your DR prior to going into the project, you know, prior to moving that particular system. You're going to need it for a couple of reasons. One is, some of your systems are going to require enough availability that you're just not going to want it to go down. So you'll actually failover while you're moving the assets into your new data center or into your cloud, and then failback. So you'll need it in that case.

And then in other cases, I mean, things will go wrong. They just will go wrong. You know, I've seen

everything from storage arrays getting dropped off the back of a truck to literally an elevator catching on fire trying to carry the equipment up to a data center on the third floor. And when that happens, you know, it's not a two-hour or one-hour issue, right, to fix it. And so you're going to have to failover, and you'll want to know that you can.

The other thing, too, is when you're doing these migrations, you're going to bundle your applications together and you're going to have all hands on deck doing that. There's not going to be a lot of extra bandwidth to handle issues that are outside that. So another reason to test the DR in advance is, expect that things will fail during the process anyway. You're going to have all hands on deck already. So you want to try and mitigate the failures as much as possible, because those guys are just not going to have the bandwidth to take on another major issue. And you really don't, and take it from personal experience, you don't want to be in the situation of trying to rationalize, do I take the system that's supposed to be up all the time and prioritize it, or do I take the other 35 systems that are down and prioritize those? So do I want to have 35 people mad at me or whatever, 350 people mad at me, or five, you know. And that's not a good place to be. I mean, there's other things on here and I'll leave this for you guys to take a look at. I'm happy to answer any questions around this.

Security considerations, I think, probably just a couple of key points here. And one is, definitely, when you're thinking about security, the fundamentals should never be forgotten. In fact, I can -- I would say with almost certainty that your vulnerabilities are not going to be in your personal or, I'm sorry, your private data center, they're not going to be in your cloud service provider's data center, it's going to be in your own people, okay? And so I can't underemphasize the importance of having basic security training for all your staff, helping them understand how to ward against phishing attacks, how to ward against social engineering, how to have complex passwords that are difficult to crack, how to, you know, having policies that keep people staying on top of that. Those fundamentals are critical. If you don't have that, it doesn't matter what you do on the rest of the infrastructure, it's not going to -- it's not going to be secure.

Secondly, you know, the future is really that this, you know, the traditional perimeter that we've always used to protect our applications is eroding. As more and more people begin to use mobile devices that are outside of it and more and more adoption of cloud becomes prevalent, you can't rely on that to be your primary means of how you secure your applications and systems. So early on in the design, I would recommend any new systems that you're looking at building, make sure security architecture is up front in that process and that it's looking at it from the perspective of how do we protect this, assuming that we don't have firewalls and that things are getting compromised.

I already talked a little bit about the service level agreements. One other thing I would point out is you may also want to have more than one -- so let me back up. You'll likely want to end up with multiple zone, I'll call them cloud zones, just my terminology for it, that can address different types of security for different types of workload, okay? So if you're dealing with a website that's, you know, facing citizens, it probably doesn't have sensitive information, so the big issue you have there is embarrassment, that somebody, you know, vandalizes the site or something along those lines. So that's very safe to put into a public cloud type of infrastructure.

You may have other types of applications that you look at it and you need to have a little bit more security around it, so you may look at a government -- there are, for example, Amazon is a government cloud. There are many cloud service providers building government clouds that are basically restricted to only U.S. Government, they follow ITAR controls, so that you know the users of that environment are following specific regulations and it's only U.S. citizens that are in it and so on. And that may be applicable for certain types of workload.

And then even within your private cloud, you know, there will be a difference between, say, things that need to have extremely high availability, maybe some of your healthcare systems and maybe some of your transportation systems versus, say, your back-office systems, in terms of, you know, the security

considerations, the privacy considerations around it and the availability. And so it's fine to have multiple cloud zones even within your private infrastructure, even if they're the same fabric, the same infrastructure fabric. You can still partition it off to address different security control schemes based on the workload.

And then the other thing I would point out is disaster recovery is not automatically in the cloud. And that may seem obvious, but I have this conversation a lot with folks. They think that if you just put something in the cloud, it's backed up or it's -- it doesn't need failover. That's not the case at all. And, you know, it's like anything else. You plan for failure in your data center. You need to plan for failure in a cloud service provider and architect accordingly.

Just real quick on this. This is SAIC's cloud management and governance framework. And basically, you know, the key takeaways here is that, you know, we've got this central portal. It is the back -- the process library that we're using in this particular model is ITIL. So there are a series of tools that are put in place to do the management and governance of the cloud infrastructure, some of which are pretty familiar and they're things you're probably already using like IT service management tools, say, like, Remedy or ServiceNow or something along those lines. They could also be your lock-type tools, you know, Nimsoft or HP Openview or what-have-you. And then you have, of course, the kind of newer tools that will come into play, which are like your cloud management tools that are fairly new like VMware, Scout, DaVeson (sp?), Runamation (sp?), maybe enStratus -- or Enstratius, Dell just bought them. So there's a number of different tools out there that you would want to add into the mix, but the point is that you need some kind of integrated tool platform that's designed to operate across these different clouds. And then supported by your ITIL process framework. And then underneath it, then you have your private cloud, whatever Legacy infrastructure you currently have that you can't move onto a cloud, and then hybrid in public cloud is a part of that.

This chart's just talking a little bit about some of the things to look at in terms of how you decide where to put things and whether to go with software as a service or whether you would put in a private or public cloud. You know, I think one is vendor support. You know, do they support in a virtualized environment and will they support it in a cloud environment? And that's a key question you need to talk to with your -- for software you haven't developed yourself, you need to have that discussion. Some systems just simply can't be moved into cloud. If they're not designed to work on Intel, it's not going to work in a cloud. And so you will just have some parts of your structure that will stay in whatever they're in.

We talked about the licensing model. Of course, compliance frameworks, any regulatory frameworks, those are going to be key determiners in where you can host it. You know, for example, with HIPAA, some cloud service providers are willing to accept risks around HIPAA, some are not. And so you need to take a look at whether you're willing to accept that or not. You know, cost structure's clearly going to be a key -- a key thing to look at. Application architecture's going to be a key driver as well. So just some things. And, again, I just put these up here. If there's things you want to ask about on these, you know, I'm happy to answer any questions around it.

So once we kind of get back on our journey, the plan for SAIC in the future is that we will, you know, continue to exploit the cloud infrastructure that we have in play. The next stage is really to begin to implement the self-service aspects within the production environment, so it's not just the folks working in research and development, but now it's the full development lifecycle that can take advantage of that cloud. And that's actually probably one of the biggest lessons learned that we had at SAIC was, you know, our decision was to go with putting our production workload in the cloud first. And I'll tell you that doing that, at least for the majority of our applications, we didn't extract the same value that we would have had we said, "Move development and test into the cloud first," because that's got such a clearer use case for it.

So today, the circle of self-service, you know, the number of people who can use the cloud for self-service within our company is very small. It's mainly infrastructure people sitting in the internal IT department. The next phase will be to start expanding that to include the application developers and application teams within the internal IT department, okay? And then the next phase after that will to expand it out now to

include the line and business units so that they can begin to use it. But we're kind of taking this sort of metered approach to rolling out who can actually use the cloud services for provisioning.

This is a notional roadmap. You know, there are some sequence things on here. I think the key things here are, you know, you will set a vision. You'll need to revisit that annually. As you do your projects, you'll find things are changing and priorities are changing, and needs are changing, technologies are changing, so you need to keep that as a part of your planning. I really do not recommend a, you know, kind of waterfall approach to doing this. You really should use more of an agile type of approach where you're constantly revisiting your assumptions. You do have to, however -- that being said, you do have to put a line in the sand. You've got to decide, this is the size of my sandbox, these are the major components of it, and we're going to try to make things work within that. And then maybe on an annual basis, revisit whether that's going to be adequate for the remaining things that haven't made it into your -- into your central environment.

You know, we have kind of a lifecycle here of assess, target, bundle, pretest, migrate, test production. That's kind of a repeating function that you'll do on all of your major systems. You'll need to clump systems together to do the migrations. That will largely be dependent on how they integrate with each other.

And then, of course, I've just got some notional things, like development and test probably can go into a public cloud. Things like healthcare systems and law enforcement systems probably should be kept in private cloud. So just some examples of how you might think about a roadmap in the future.
So I'm going to turn it over to Steve and he's going to talk a little bit about some of Amazon's experiences in using cloud with state and local governments.

Steven Howell: All right. Thank you. And before I launch in, would it make sense to do a brief time check at this point to see how much time you've allotted for the remainder of this presentation? I want to make sure that we stay within your schedule.

Joe Marcella: Well, David's going to have to implement all of this, so you need to do it rather quickly. No, I think we have time. Thank you.

Steven Howell: Okay. Good luck, David. So, once again, thanks for letting me talk to you briefly here. So I think SAIC's experience has been pretty representative of a large entity that looks at becoming familiar with cloud, developing some new muscle in the states, developing some new governance and process, and trying to make sure that it's mitigating risk while delivering new capabilities to the organization at large.

I (inaudible) with you some of the successes that our state and local government and customers are having within the Amazon Web Services cloud today. And I will point out that, while most of this infrastructure runs within our public cloud or what I call classic cloud, classic AWS, right? The stuff that you know about, same place that we run almost of all of Netflix infrastructure or Shell or (inaudible), any of those commercial entities. Some of these use cases and applications also run from within our (inaudible) cloud environment, which is a separate set of data centers, not one data center, but many data centers that run out of Portland, Oregon in a carbon-free environment that is also ITAR compliant. So we've got international traffic and arms compliance as well as American citizen staff only, much more intense background checks, and just a bit of a different environment there. So what we're seeing that state and local government customers are moving to the cloud, is a variety of these cases.

So let me start with first, and I'll call it web applications, websites, portals, like George's Portal (sp?) that is run by Acquia. Actually runs -- the back-end infrastructure runs on Amazon Web Services. 511 applications, a really fast-developing number of traffic-sharing DOT implementations out there, bus/subway time apps type work, and some workflow things that are primarily internal use, restaurant inspections, food-worker licensing, other types of things that are, I would categorize these as improvements over existing apps that have been in place that are low-hanging fruit because someone's identified that, you know, this is really a modular thing. We can tack on a functionality to an existing system. We can run the infrastructure

for that additional functionality somewhere else. And we can learn about this paradigm while we go. So let's go do that.

The second is in GIS, a huge movement for lots of folks out there in GIS. And I believe that's being caused by two things. First, Esri's ArcGIS Online all runs within Amazon's cloud today. So many customers are actually finding out, "Oh, I've been in Amazon's cloud and didn't know it, because I was running Esri ArcGIS Online." The second reason is because folks are seeing that if they put all their tiles and GIS data in one place, it's easier for them to create regional or statewide GIS service centers. The City of Philadelphia has recently decided it's doing that, as has State of Maryland and a few other locations. They're basically banding together, combining their or aggregating their data storage and getting better pricing and then creating a common platform for GIS.

The third I'll talk to you is what I am looking at as innovative applications and partnered with some kind of BYOD, Bring Your Own Device, or mobile-type aspect. So water metering, storm-water runoff, water-usage metering, fleet management where there are possibly hundreds of thousands of devices that are collecting information all at one time and sending that information back to a central source for analytics or big data analysis. If you check out an application called speedbump.org, it's a great example of exactly this type of innovation. The City of Austin wanted to create a better feedback mechanism to collect information on where the speed bumps were within the city. They got a quote in the traditional way to put devices on buses and fleets, and it was too much money and it was going to take a long period of time.

They also got another quote for $25,000 to write an app that would run on people's iPhones and Android devices. And if the person permitted the data to be collected and proactively opted in, whenever the accelerometer in that little device was jogged up and down by, you know, a foot-and-a-half at a time, and when hundreds of thousands of those devices sent the exact same (inaudible) the exact same up-and-down experience, somebody figured it was either -- there was probably something at that location that should be looked at, whether it was a speed bump or something else.

So the nontraditional approach of using the citizens' equipment, with it -- do it in proper privacy and security controls in place in collecting hundreds of thousands of data points a second, allows the city to do some different things. And so we see that kind of innovation where folks are saying, "Well, you know, quite frankly, we would know -- we don't have no idea how to do capacity planning for that kind of an application if it were the first time that we were to write something like that." So it'd be very hard to even figure out what that initial order for hardware would look like if you were going to do give an on-premise implementation. And that's one of the places that cloud implementations, I think, can play a key role in helping government innovate, is that it can be faster to succeed or cheaper to succeed or cheaper to fail. If that application hadn't gone big, the city would have simply shut it off and stopped paying and not had any capital investment at all and moved on to something they thought was a better priority.

As Charles mentioned, capped and development environments with SAIC, with almost any entity there is out there, we see a huge opportunity for folks to reduce cost in the test and dev environment. It is not without its challenges. Any test environment -- test and dev environment has its challenges. But you've got to introduce controls and change management to that process to make it efficient and make it, quite frankly, possible to realize the cost reductions. I would submit to you, it is possible, when you have a cloud infrastructure as large as Amazon's, that if you let developers in there and you don't put controls around them, they can set up all kinds of really cool things that might look good. But someone has to have their eye on exactly how big that infrastructure is and who's paying the bill for that. Developers have a tendency not to think about those types of ramifications until someone's in trouble.

Shared services, we've got several counties across the United States, and probably in the next four months, I'd be coming back to you and saying there are 20-plus, that are creating shared services environments where counties -- multiple counties are banding their IT requirements together and solving particular workflows and particular process workflow-related things by movement to a cloud service like Amazon Web Services.

(Inaudible) for storage, again, as I mentioned earlier, aggregation is key. Just as an example, Amazon creates one list price that we have on our public website, and that's all that we have out there. But that assumes that you can put one terabyte of data in and then take the one terabyte of data out an hour later. Aggregation in the cloud paradigm means, "Hey, I'm a state. I'm going to put 100 petabytes in here. I'm probably going to leave it in there for 15 years. So what does that look like and how does that change the cost paradigm and our ability to execute within that overall, shared, aggregated storage model?"

And, lastly, I'll comment on elastic workloads. Anything that's seasonal, anything that has scientific analysis, so the shorthand way to think about this one is that in the cloud versus a traditional data center, you can afford to have either one server running a thousand hours or a thousand servers running one hour. So the State of Washington Fish and Wildlife, for instance, does some scientific and genetics analysis on fish at a certain time of year. And they want to get those results faster than they have in the past. So they use Amazon Web Services cloud to run a thousand services for an hour. We've also got other workloads with similar scientific analysis and timeframes for air quality and other environmental reporting.

And it's an interesting paradigm when you start talking to the business folks, the legislators that are in charge of the operation of that program, when they start to see that it might be available to ramp up a huge amount of infrastructure and run it for a very, very short period of time, a few hours, maybe less than a day, and then turn the whole thing down, or turn it down into kind of a pilot-like scenario where only a bare minimum of servers are running to maintain functionality.

Lastly, just a few comments, and I will go through these quickly because I think Charles touched on a lot of these in SAIC's experience. I see the customers moving to the cloud in the public sector are generally successful in controlling costs, in reducing their capital expenditures, in reducing their operating expense, if they start with governance. If they start, specifically, with how are we going to control this thing? How are we going to report on it? How are we going to ensure that there is security and privacy in place and that accounts are created according to a workflow that we understand?

Second, is an entirely set of new (inaudible). See the apples-to-apples comparison gets so far. It's when you get to apples-and-watermelons at this point, and as Charles
noted, some of those things are just -- structurally, for instance, electricity is almost 50 percent of the cloud paradigm in terms of cost. And yet electricity is generally not borne by the IT department itself. So there's some new math that needs to be learned with regard to TCO, so once you compare existing costs to cloud costs. But once that math is understood, not only do you get a good grasp of the comparison and the cost, but it actually -- in going through the math, it actually shows you how to think about cloud applications, how to leverage the best (inaudible) the cloud has to offer, how to use spaces that work for that TCO, and how that determines which things stay in your traditional data center because they make more sense in the traditional data center. So the TCO analysis is two things. There's math around the financials aspect, but there's also a very informative way of thinking that comes from truly understanding TCO and comparing traditional on-premise implementations to cloud implementation.

And finally, to -- folks that are successful learned to differentiate managed services from infrastructure of the service. An example is that Amazon Web Services, in and of itself, operates an infrastructure of this service. We can set up a thousand servers in nine minutes. We can turn them off two hours later. What happens to those thousand servers is the differentiation between infrastructure as a service and where managed services begin. Whether your organization itself is creating a managed-services offering that would be, you know, created by your IT staff and offered out to the various agencies and cities and counties across the state, or whether you've got a strong partner in place that is taking that infrastructure and putting another layer on top of it to create a managed-service environment. It is very important to understand that differentiation and understand where you may want to have a managed-service engagement and where you may only need to have an infrastructure as a service-type engagement.

I will just say that if you're expecting one and get the other, there can possibly be a rude awakening there.

It's very important to understand those two concepts and to be able to differentiate them in the way you procure, in the way you scope out projects, in the way you have discussions with your internal stakeholders as well as your external partners. So with that I'll conclude. I hope that this has been helpful for you.

Joe Marcella: For the record, Joe Marcella. A couple of things. One is, marvelous presentation and a lot of information. So given that there was a lot of information, I watched everyone take notes, so I know there's a good couple of questions. I wanted to make a couple of framing comments. One is, is the reason for consolidation. And I see John back here from Gartner (sp?), and if Gartner has told me once, he's told me a dozen times, that they have this nexus of forces, or at least they advise government organizations, that's mobile, social, intelligence, which is business intelligence, big data and the like, and then the last one being cloud, thank you. And what we've heard a lot about is cloud.

One of the other things -- one of the things that I did hear is that it was selective sourcing. Not everything needs to be in the cloud. Not everything fits in the cloud. So there could be a government cloud. That government cloud could be the State of Nevada. Or it could be wherever, selectively, and I heard you say, in three priorities; infrastructure as a -- I'm sorry, platform as a service, infrastructure as a service next, where there's a share of those systems that are out there, and then software as a service as you get a little bit more intelligent.

Given that those things exist, the other thing that I wanted to bring to light is when we talk about software and we talk about infrastructure, whether you're using it for any of the three reasons, whether they're in a local shop, government or a provider, cloud, every one of them is under (inaudible) in infrastructure, sort of the foundation along with the software. The real intelligence and the real purpose for all of this is the first thing I mentioned, was the nexus of forces, is the ability to deliver services. Is that what you just told us?

Charles Onstott: Yeah, essentially that's -- I think that's a good way to summarize it. One thing I would just tweak a little bit is the decision between going into infrastructure as a service versus, say, software as a service, can be done at the start. You don't really have to wait until you've figured out your infrastructure-as-a-service solution and then proceed into doing software next. So the remaining things that are early candidates, it's easier just to go straight to software-as-a-service for those things and not even try to factor them into whatever your infrastructure plans are going to be.

Joe Marcella: Joe Marcella, for the record. One of the opportunities there is to preserve the vertical, and therefore the infrastructure is the only thing that's really necessary at that time for some of the things that I think the state needs to do. The vertical nature of the individual divisions probably need to be preserved, at least in the product delivery.

Charles Onstott: Yes.

Joe Marcella: Questions from the Board?

Jeff Mohlenkamp: Thank you. Jeff Mohlenkamp, for the record. You know, just a quick question. There's a couple things that you mentioned that really resonated with me and I think they're things that we need to be aware of. And the first one, you mentioned that somehow or another, and I can't remember exactly how you defined it, maybe you can help me out, it migrated from IT being kind of more of the watchdog, more of the control feature, to more of a customer-service mindset. Could you elaborate on how that transition took place? Was it directed from above or was it an experience? And how did that transition take place?

Charles Onstott: Yeah, I think it was -- the original catalyst for it, I think, came from a couple of different directions. And I think, one, is that as the company was growing, you know, the cost of IT was growing too fast relative to the size of the company. So I think there was a top-down

interest in, how do we control costs? We don't even really have visibility into them right now because they're kind of buried in the businesses, but we know that it's happening. So how do we get our arms around that? So I think that was one key factor. And then the other is, I mean, frankly, SAIC is a federal government contractor. We work with intelligence agencies, Department of Defense, and so on, and so there's naturally interest in SAIC's assets. And so we had to think about how do we better protect those assets from, you know, potential misuse. And that's just really hard to do if you don't even know where they are or you don't have visibility into them. So I think, you know, those two factors were the main drivers behind it.

But I think what the IT department realized is that, you know, just coming to us and saying, "Well, now we're the, you know, we're the IT guys and we're going to approve everything." And some of that, you know, still happens to some degree. I don't know that you can really avoid that. But I think they've recognized that the best way to win over the business was to actually begin to talk to us in terms of -- as being customers, and that they needed to establish certain standards. And so what it meant was, they wanted to have consistency in how they delivered the service, so that if I'm in -- I'm from our facility in Tennessee or if I'm in our Mclean, Virginia facility, or if I'm in Alabama, whatever, I'm getting a very consistent type of service. I think that was one key part of that. I think another is that when you're dealing with IT, they're really thinking about it in terms of how do I add value to the business organization versus what am I permitting them to do, you know. And it was definitely, you know, from my perspective as a consumer of the internal IT, it started out in more of a permission mode. But it has really evolved into more of, okay, how can we help you enable the business?

And I think to do that, they had to do a few things. They had to implement consistent processes, so they adopted ITIL as their standard for the IT operations and management. And then they used CMMI for, you know, for the software development. And more recently it moved to an Agile process. But now they have a consistent standard on how they do all IT projects in the company. And so that helps. And I think the other is they actually did define a service catalog. And now I'm not talking about the kind that you order from, say, you know, cloud services, but the more generalized, you know, portfolio service catalog. It says, this is a help desk, and this is what it does. These are the hours it operates. These are the types of problems it solves. This is the speed at which it will answer the phone. And this is how quickly it will resolve a problem, and so on. And then they just did that service-by-service. So that as a business, I knew what to expect from the IT department.

And, in fact, I can say, for example, one part of our company is an IT outsourcing center itself, okay? It sells IT services to customers. And, in fact, SAIC buys some of its services for internal use, okay? Well, that particular service does not sit on the corporate network because it has contracts with customers that require availability that exceed what the company really thinks it needs for the vast majority -- we've got 45,000 employees. You know, say, 1,000 of them are doing IT outsourcing. So they're, you know, they -- they're on their own infrastructure because there's no point in trying to build something to the maximum spec when it's really only impacting a small group.

So I think that's kind of the things that I saw them do that I think really helped turn the IT department around. And then just remaining -- I think the other thing was remaining consistent in that throughout the years as they went to execute. They really never lost sight of that vision that the customer was key. And that's been the key to their success.

Jeff Mohlenkamp: Just a follow-up. I thank you for your response. I think that was exactly what I was looking for. I just -- I've long been of the mind that we need to continue to move in the direction of having it be a customer-based model as opposed to a control-structure. That's critical. I think you're right. I mean, I don't know that you ever get away from that, but I'm really interested in your concept of how you moved over and how that transition took place. I appreciate your response.

Charles Onstott: Mm-hmm.

Mike Willden: Well, I have a question about security. I think it was on your slides a couple of times. I'm on with HHS, Health and Human Services. We're obviously rolling out the Affordable Care Act and, you know, it's interesting to me. We had a big rollout set of conferences this weekend, and I'm talking about the, really the man on the street. You know, the low-income person. We were getting questions about security that were unbelievable this weekend. I thought they were going to be asking questions about, you know, "When do I get my healthcare card?" But it was, "I want to know where my data is. I want to know where my data's going. I want to know who's looking at my data. I want to know if the NSA's getting it. I want to know if Google's going to sell it." I mean, I was shocked with the line of questioning.

And so sort of curious about, you know, I mean, there's some messaging along there. You know, how do you help, you know, we got off on maybe a bad message this weekend, and I quickly spun into secure, secure, secure, safety, all those kinds of things. And I was shocked. And so I'm kind of curious. You know, people have a different -- I have a concept of the cloud or where it's at, but the man on the street has this, "My data's going somewhere and it's not secure anymore."

Charles Onstott: Yeah, that's interesting. I wouldn't have expected that either. And so it is really interesting that that came up. And I guess in some respects it makes sense because it's getting so much press right now with the whole Snowden, you know, episode and I think people are really starting to think about "Wow, you know, where is my --" and then, of course, you know, Facebook's recently made the news with changing the privacy policies and so, you know, it is interesting. And I hadn't really thought about it that way, but, you know, I guess the average Joe is starting to really think about this.
So, I guess, the thing that -- the only thing I can really -- the only thing I can think of at the moment, and it probably could take some time thinking about this, but is I think having a consistency in terms of how you -- how you evaluate the different cloud service providers and how they fit in your portfolio is important. And meaning that, again, we go back to the idea that not all workloads are probably appropriate for all clouds. And so being very open in terms of how you're making that decision-making, why this cloud versus that cloud, and then having mechanisms in place that can control that, will begin to give you the things you need to answer those questions, because now you can say definitively, well, for ACA things, it sits in this cloud because this company has implemented, you know, HIPAA privacy controls and whatever other things you need to make it safe. And we know that they only have two data centers and they're in these states or whatever.

And by doing that, then you can begin to get to closer -- I'm sorry, you can begin to get to where you have more definitive answers. And then things that are, say, less sensitive, then, you know, if there's 500 data centers involved and you don't know exactly where the data is, probably not as important, but you can explain it because, well, it's website, you know, it's citizen facing, it's stuff that, you know, you're going to get access to anyway, so why do you care as long as you can gain access to it. Kind of my initial thoughts on that.

Mike Willden: Yeah, I just, you know, following what Jeff's, and several things about it, it's the customer. You know, who is the customer? But, again, I was just shocked. I mean, people were very vocal this weekend about -- because one of our presentations, somebody said our data was going to be in Pittsburgh. Oh, my gosh. You would have thought that the world was going to end, you know. They thought it was right here in Carson City and it wasn't going anywhere but here or there. And when the processing center was moved from Georgia to Pittsburgh, the world almost ended for 20 minutes while we had this big debate about, you know, "Where is my data? I'm the customer. It's my data. You better be protecting it. How do you assure us that our data is protected?" And so I just think it's going to be -- there's a much more educated populace, including the people that, very low income, very poverty, everybody has a something anymore, BYOD. And there's a ton of concern about security.

Charles Onstott: Yeah.

Steven Howell: This is Steve Howell up at Amazon. Could I just add on to that?

Joe Marcella: Please, Steve.

Steven Howell: So I will say that from the earliest time that Amazon started thinking about its own security and its own data storage and developed Amazon Web Services as a competency within Amazon and then started delivering that service to other companies, we knew that in order for any entity to trust an external group, now called a cloud provider, with its data, security and privacy had to be our number one priority. And, in fact, if that security and privacy were ever in question, that it would be very hard to conduct business as a cloud provider or as an external group that manages infrastructure on behalf of someone as we do today. So after having been out there for seven years and delivering these cloud services, I can tell you that that's one of the strongest reasons why Amazon has chosen to build what we call basic building blocks of services. And to allow the end customer, whether that's HHS or state highway patrol or whatever that is, to determine the security paradigm that is used for that data.

So I would say that whenever you're looking at anything, whether it's your own data center on-premise or a cloud provider, you, of course, need to look at all the things you would always look at with regard to security. Is my network physically isolated, you know? What kind of building isolation do I have? Who's allowed to actually go in the building? Are the data bases on their own network (inaudible) appropriately? And on and on, right? Just like you would in your own physical data center that you might operate, you should look for those same controls to be replicated in any infrastructure that you use, so that you can assure the end-users that that's truly what's in place. And that you could possibly be improving your security standpoint by going through the process of reevaluating your infrastructure, determining which pieces should be in cloud and which pieces should be on-premise. I think it's a valuable exercise. And we have had customers come back to us that say, "Now we know that we have no servers under a desk or no data centers with less security than this (inaudible), and therefore our analysis and our re-architecture has improved our security posture, even including a move to cloud computing.

Joe Marcella: Thank you, Steve.

Jeff Mohlenkamp: So two questions, one, this is Jeff Mohlenkamp again, just a follow-up on what Mike was talking about. Are we getting anywhere with cloud computing, and I really know very little about it, where there's, like, ratings like triple-A and double-A-plus? I mean, are we getting to a point where the security, the consistency, reliability of this cloud process has a defined tech-rating structure? I wonder if that exists and if anybody happens to know whether we're getting closer where we can really shop and have some credible knowledge about the, you know, the careful structures of how that information is secured.

And then the second thing is I wanted to follow-up, you mentioned a concept of having a Board or some sort of group that was essentially helping to manage this change process. And I'm kind of curious what the composition of that was and what would you recommend in the composition of that type of Board that essentially oversees, whether it's a consolidation or movement to cloud or any large-scale change in an IT environment?

Charles Onstott: Okay. Well, on your first question, there is not -- there is not a, what I call an independent rating service that I know of for clouds. But there are some resources, okay? You have analyst organizations that are looking at the cloud service offerings that are out there and they do provide their own take on the ratings. And they typically do evaluate things like the maturity of the operation and the security and so on. And so that's one source. There are certain types of companies that are called cloud brokers, okay? And what cloud brokers do is they basically enter into contractual agreements with a number of different cloud service providers that they've selected using whatever criteria they have. And a lot of times those cloud brokers work for their, you know, for the offerings they have, will have ways for you to evaluate, you know, the capabilities of the different clouds within that brokerage.

And the only other thing I thought I'd mention on this is you might take a look at the FedRAMP standard that the United States Government has adopted. And while it doesn't get into the details of, you know, say, SLA comparisons and that. And I can say for certainty that NIST is working on how to deal with cloud metrics and how you compare one cloud service provider to another. So there's actively a committee at NIST working on that very problem. But there is a program that GSA has established called FedRAMP, okay? And what FedRAMP does is it enables a cloud service provider to get their cloud certified against a set of security controls that adhere to FedRAMP.

And I think in some ways FedRAMP was really pretty brilliant, okay? Because one of the things they did is they got, you know, they got multiple federal civilian agencies, they got the Department of Defense, they got intelligence agencies to come together to agree on what these security controls should be, okay? And what happens is a cloud service provider then can get certified against FedRAMP standards. And then any agency can accept that as a baseline. They don't have to redo the C&A process every time. So that makes things a lot more efficient for, you know, for cloud service providers, because they're not having to go through C&A processes constantly. And it also gives a kind of standard that the government can say, "Well, if you're FedRAMP certified, I know you meet certain minimal qualifications that make you a secure provider anyway." Okay?

And the other thing about FedRAMP is there's a chicken-and-the-egg problem that we have in cloud that I have experienced a number of times, especially since cloud is more of an emerging technology, which is, you know, we'll go to somebody and we'll say, "Hey, we've got this great cloud and we could take this and put your app here and we could do this." And then they're like, "Well, have you done that where you've gotten a C&A before?" "Well, no, we haven't -- we haven't done it where we got a C&A, but we think we can get this done." "Well, when you get somebody else to do it and you get a C&A with them, then come back and talk to me and then we'll look at it." Okay? So then you can't really get in the door because they're giving you, you know, a hurdle to jump through that no one wants to jump.

So one of the brilliant things that FedRAMP did is they created a third-party assessor program. So what a CSP can actually do is go and have an independent third-party company, they pay them to do the C&A for them. These third-party assessors are also blessed by the GSA; they meet certain requirements. So that now the CSP is no longer dependent on an actual customer to say they're secure. They can go through a third-party assessor. And that helps them, you know, grease the skids, so to speak, in terms of getting government agencies to adopt.

FedRAMP has a few problems. Its biggest problem is that they're not certifying clouds fast enough, and I think that's going to be a real hindrance in cloud adoption in the federal government. They've got to figure out how to fix the bandwidth problem. And the other thing is that, you know, they went to this kind of committee approach to develop FedRAMP standards. Well, as a result, they actually created more challenging standards than maybe any of those standards would have been standalone. So meeting FISMA moderate is easier than meeting FedRAMP. And meeting, you know, say, DIACAP is easier, or whatever. So that has actually caused some CSPs to re-architect or have to reinvest in their cloud solution in order to meet this more rigid standard. And it's delayed some cloud service providers from actually getting it.

But I think, you know, those two issues aside, those will work out over time, I think in the long run FedRAMP is going to prove to be a good thing. And I think as you all are looking at how you might do common security controls across the State of Nevada, a model like that might be worth taking a look at as an example of a way to do that. Let's see. Your second question was on, I've forgotten, I'm…

Unidentified Male Voice: The Board.

Jeff Mohlenkamp: Yeah, the concept -- okay.

Charles Onstott: Oh, the Board. Yes, the Board. Yeah, so the Board, I think the Board should, you know,

should consist of, you need your, of course, your -- any of the IT departments that are involved in the process are going to be key equity owners, especially the owning -- ultimately the owning organization, okay? And then, you know, I would say any part of the business that -- and the problem is, you don't want this Board to get so big that now you've got 400 people on it and you can't get any decisions made. So you kind of want it -- what we did at SAIC is we sort of abstracted it and we said, "Okay, there's going to be a single representative that represents the interests of all the business units."

Now, that may not be as easy to do in the case of the State of Nevada, but you may still be able to find ways to kind of reduce it to where you have one person representing the state's key functions or something along those lines. Then what they would often do is, if, depending on the decision being made, they might actually delegate somebody else to attend that decision who is maybe more of a subject-matter expert in the thing being decided, okay, so somebody from the business areas that are impacted by this. Any of your back-office, you know, your procurement functions, your human resource functions, all of those folks should have some kind of representation on it. And then any -- you know, I probably don't appreciate the way the government's organized well enough, but whatever your executive functions are that ultimately oversee the execution of these things, you'd want to have some stakeholder representation from that. And then if you've got like a technology visionary organization or a standard organization or something along those lines, you would want to have that also as a stakeholder.

Joe Marcella: Any other questions? I wanted to personally thank SAIC and Amazon for a marvelous presentation. This becomes public record, so we've got this as a reference. And certainly you're very knowledgeable and actually gave us some direction that I didn't -- absolutely didn't expect. So thank you very much.

Charles Onstott: Well, my pleasure.

Steven Howell: My pleasure.

Joe Marcella: Are we in a position to take a break? Does anybody need a break? Or we can continue with the Agenda.

Unidentified Male Voice: I vote for five.

Joe Marcella: I vote for five as well.

8. LEGISLATIVE UPDATE
-David Gustafson, CIO, State of Nevada

Joe Marcella: Director, Joe Marcella. David, I understand from -- the Advisory Board actually had some input and actually assisted you in not only your strategic planning over the last year as well as your legislative input as well as some of the financials. So I'd like you to give us an update of what's happening both with the legislature and the financials. David.

David Gustafson: Good afternoon. David Gustafson, for the record. I feel like this is my chair, like the proverbial hot seat that I'm always in all the time here. I want to thank the speakers earlier. That was a very good presentation. I also add -- Joe, I want to add a little bit to what Mike was talking about. Actually, before I do that, Mr. Chairman and Mr. Vice Chair, congratulations on your new appointments that you have. For anybody watching, we haven't had an ITAB meeting in about a year. You'll notice by the camera that I have not gained a single hair since that day. It's continued to just elude me, if you will.

Joe Marcella: You have to tell them, or a pound.

David Gustafson: That's right. But I wanted to say something a little what Mike was talking about with the

security. I gave a speech to the military officers' association last week, and essentially the whole -- my whole speech was about the NSA, what they're up to, and cyber attacks, and the FBI can turn on your cameras. And I use publicly available sources of information. There's no classified information in my entire speech. And at the end of that I just said, "Look, we're about to have a real national debate on privacy versus national security, because if we let these guys go where they're going, they're going to have everything about you. And there's going to be no ifs, ands or buts about it. That's just the facts."

And so I think this whole Syria situation sort of took us off track, but people were outraged. And I just was pulling things that were commonly available off The New York Times, The Washington Post or anything. I wasn't doing anything magical. And if people -- people say, "No, no. The government has gone too far." And they were animated and they were really upset about it. And I just thought that was -- I'd meant to sort of stir up some emotion. That was kind of the whole point of it. But I thought that Mike should know that he's not alone, that everybody feels the same way.

So having said that, I'll move on to my legislative update. Just a couple quick things here. And we've got a lot of topics and I'm sensitive to the time as well. Maybe I should start off, does anybody have any immediate questions for me right away?

Joe Marcella: Did you get your budget dollars?

David Gustafson: I got some budget dollars. It's a good start. Actually we got a lot of the things we were looking for. But there were some major themes that sort of came out of the session. One of them was that we needed to really look at our long-term strategic IT plan, document that plan, whatever it is, and be able to bring it to the next session, because I was hammered on frequently and often about where is the big plan. What the legislature hears from agencies is they need more people, they need more money, they need big money. You know, whether it's systems are $100 million, $50 million, $20 million here. And so what I heard from legislators was, "Where's the big plan? Because these guys need hundreds and hundreds of millions of dollars and they're kind of off doing their thing." And so it wasn't very long before they figured out that they needed to really have a real good plan on how we're going to spend all this money, because a lot of these Legacy systems that we've been depending upon for the last 10, 20 years, are now up for renewal. And there's a lot of big money out there.

So we are starting that process tomorrow with some of the state leadership. And I don't want to get into too much detail on that, but we're starting to sort of look at that and what that should be. One of the areas that, I'm going to say it, that, you know, now that we're all over the big consolidation word, the big "C" word, everybody's over it now, so what do we want to be when we grow up? I can say that. I'm kind of a young guy. But what do we want to be when we grow up? Do we need to be more streamlined, more efficient, more agile, more secure, more what? And so I noticed these guys with the slides, one of them was, you know, to define the end game, the end goal. What is it? We're going to find opportunities where insourcing is the right opportunity, outsourcing is, cloud is the right place. Sometimes leaving IT people in agencies is the right time. Sometimes, no, that's not the case, let's move them all. Sometimes -- well, I can't think of many occasions where multiple data centers is the right thing, but you're going to find that we need to target those solutions, whatever they may be, when we look at a big plan, if you will.

Another thing out of the legislature session was Windows XP. We know that there are thousands of them still out there. I'm only laughing -- those are tears of laughter that I have here. But the time is running out. And, you know, I usually see these, you know, on the news every once in awhile, you know, on your favorite news website, you know, every 30, 60 days, there'll be another Windows XP thing pop up. We now have reports that the bad guys are waiting, because they know that there's going to be vulnerabilities, and they've identified them, but they're not telling anybody about them, because on the first day, April 9, 2014, they're going -- their plan is to sell or to use those exploits, because they know there are going to be a lot of Windows XP computers out there. So people are waiting. And they're not notifying people and taking the, you know, the $5,000 or whatever they get to identify these vulnerabilities, because they'll be worth a lot more money as

soon as it's out of support.

And so I sort of alluded to that the funding was largely approved. We went through -- we fared better than most, and we're not the only people in the executive branch of government. I think a lot of people, including Mr. Willden, probably took a lot more beatings than I did. I didn't take that many. They had a lot of questions and Tina was holding up all the questions we had. It was -- you just showed -- that's double-sided, all the questions and responses that we personally had to answer. That's double-sided. So it's, you know, it's a couple of inches thick just on our side of the house. But other than that, you know, we did pretty good.

The Chairs of the legislative committees sent us three letters of intent that have direct implication to us. Actually, I should say that they sent them to Mr. Mohlenkamp. He loves the attention. He's the Director of the department. He loves getting all the -- all the flaming mail. So he received these. But they were largely sent to us and the Controller also received one. We're not sure. There's a little dust up, usually, about these letters of intent, whether the executive branch actually is going to answer them or not, whether, you know, where the powers of separation of the executive branch versus the legislative branch. Last time the decision was made not to respond to all of them, but that decision is certainly above my pay grade. But we're going to do our best. And if we're asked to report on them, we will do so.

I wanted to go through what they were. The first one was implementation of a program to deploy desktop security software throughout the state. Chris Ipsen was going to talk a little bit more about that today, but he's on a plane to D.C. on state business. So what we're going to do is we're going to -- would like to postpone that particular one. For next ITAB, maybe we can have security.

Joe Marcella: For the record, Joe Marcella. We're going to re-Agenda that item. And I talked to Chris earlier today.

David Gustafson: Okay. Great. Thank you. This is Dave.

Second, was when we merged with the Department of Public Safety's IT organization, there was concern about appropriate levels of reserve funds. Because we're an internal service fund and we were bringing on an agency where responsibilities that do not have a reserve account, so we weren't sure how the feds were going to handle that, if there was a concern there or not. So that was the second letter of intent. We believe, now, I just heard the other day that the accountants do not believe that the feds are going to require us to come up with any special monies. That is -- that is the belief though. We're going to work to solidify that. But that is the second letter of intent.

And the third one, which involved the Controller, was about a computer training room. There was a decision made -- let's see, this was the 13/14 session, so then it must have been the 11/12 session. There was a decision made to cut the Controller's training room, in an effort to probably save some money. And then they re-appropriated it again this session, because there's a statewide need for training. And so now we've been working closely with the Controller's office when -- to set up the new training room. Once it's established, then next session we're going to take it over as part of the Enterprise IT organization. And that was the third letter of intent.

Mr. Chair, that will conclude my legislative update. I'll be happy to answer any questions you have.

Joe Marcella: Any questions from the Board? David, please continue to the next Agenda item.

9. ENTERPRISE IT SERVICES MAJOR PROJECTS
-David Gustafson, CIO, State of Nevada

David Gustafson: Okay, moving on. Enterprise IT Services Major Projects. This is where I have a small laundry list of items here I'd like to share with you guys. I'll start off with the major RFPs. We're working

on a cloud email and productivity suite RFP, which has been drafted and is delivered to purchasing now. So it should be hitting the streets imminently, I would say. We've done some interesting things in there, including an option for the offeror to provide mobile phone smart devices as a line item, to actually move the provisioning of those assets to a contracted source. So we thought that was a -- I pulled that off of the Department of Labor's RFP and I thought that was a pretty nifty solution.

Another thing of note with that specifically is that we're requiring a HIPAA and a CJIS compliant solution. So we're just not even going to go there if you don't, because sort of like Director Mohlenkamp was saying, "How do you certify these guys and these cloud solutions?" You really don't because it doesn't exist. So what we're doing now is we're saying, "Okay.

We'll put the burden back on the vendors and say, 'Give us a HIPAA compliant solution or a CJIS, the criminal justice information system solution, so then we know that the bar's already set fairly high as far as the security's concerned. So we've got a -- and by the way, if there's any questions, if you want jump in, just ask, okay? Because I have a -- quite a lengthy list here.

The second one is, I'm working on an e-government portal RFP, if you will. And this one I'm still drafting, but essentially what it is, is this is the one, you might know this from other states where NIC has gone in and they provide the upfront development costs to go ahead and provide a no-cost to the state, but what they do is they'll find -- they have convenience fees and they tack on services that is a recovery model for them to develop applications and bring services to a centralized portal. I only mention NIC because they're the prominent player in the business. They have about 28 to 30 states, I think, that are following suit under their contract and I only mention them as a reference. So I'm working on that.

We have a state telephone system.

Mike Willden: Mr. Chairman?

Joe Marcella: Please.

Mike Willden: May I have this question?

Joe Marcella: Yes, Mike.

Mike Willden: Mike Willden, for the record. So, David, I'm not really sure when you say e-government portal. So what, bill paying? I mean, what is all in the e-government portal? Maybe I haven't followed that one close enough.

David Gustafson: Yep. Dave Gustafson. So it could be all of the above. I start off by thinking about all the licensing. I think about occupational boards. I think about, this is just me again, hunting tags. I think about a one-stop shop for the constituents to go to. So in my head, the plan that I have is that the constituents would go to one portal, some state website. And in that state website they would be able to access, "Oh, okay, you're a licensed cosmetology person. Do you want to renew your license? Click here button, right?" And then what happens is all your information is then transferred to that engine, that licensing engine. And the engine -- the license piece comes out of there. The cost goes into a shopping cart, which you can pay later for services that are adding up.

I look at this and I say, "Okay," and I'm only using these as examples that I have not -- not that I'm chasing down agencies or anything. But I think about wildlife, where they say you have to be a Nevada resident in order to get the tag for the special animal. And so we can validate that through a centralized portal through a common identity, and then say, "Okay, that tag is, you

know, $1,000." Add up all these things in a shopping cart, hit the "pay me now" button, and it all processes it centrally in one place.

I also envision as part of that portal also, you're eligible for the following HHS programs. I also envision looking at this and saying, "Based on your employment history that the state has, you have x-amount of weeks of unemployment, or whatever." You know, we're, I mean, adding up all of these services. "We see that you're also a resident agent. Click here to renew your license." I mean, all of these things building up. This is really kind of important because when you look at the payment processing of something like this, you're talking potentially billions of dollars.

And what a lot of states have done is they've built this e-government solution. Utah, for example, has over 1,500 online services. So you can go as a constituent, and whether it's renew your license or get your over-the-road permit or whatever you need to have, centralized these to a common portal. And on the backend of the house, we'll tie to other state systems. But essentially the whole point of that is to bring the constituent services to the front -- citizen approach.

Joe Marcella: Joe Marcella. Now, you're talking about an aggregate -- the portal being more or less the ability to aggregate services. And essentially if you've got five things to pay, you pay once. If you have three or four licenses to consider, the backend systems then, that are proprietary systems, has you going through consolidation or merging or modernization of those systems, can remain as is. But the portal makes it invisible to the customer?

David Gustafson: That is correct. That is my plan.

Joe Marcella: Okay.

David Gustafson: Yeah.

Joe Marcella: I just wanted to understand that.

David Gustafson: That's my vision, at least, of what it should be. And so, Mr. Willden, does that answer your question?

Mike Willden: Yeah, I mean, I guess I'll watch that closer, because, as you know, we have several of those consolidation efforts, particularly like licensing where we regulate, you know, 50 different kinds of facilities and multiple kinds of individuals. And we have a common licensing portal under development now. So I guess you'd be talking about a front-end to that front-end to more front-ends.

David Gustafson: Yeah.

Mike Willden: So you could come in and do ours and get your fishing license, too, I guess, or whatever -- pay it all at one place. But I'll follow that closer. I just wasn't aware that that was a concept, because we had some of those consolidation of licensing and child-support payment, those kinds of things, initiatives going now.

Dave Gustafson: Dave Gustafson again. And I think what I'm trying to do is I'm trying to bring a citizen approach to the services of the government. And I know that those systems are not under my control in most of those agencies. But what we can do is start with the front-end. We'll start with the user experience and have them tie to all the Legacy and disparate systems, and then we, the IT people, can figure out how we're going to actually make all that work. And then, of course, there's a whole accounting exercise here that, you know -- I'm just giving you the hundred-thousand-foot level. But I think it's just important that, not unlike my customers having a business approach, I also want to bring the state government services to the constituent and in that data, that resident focus. Mr. Chair?

Joe Marcella: Joe Marcella. Can I sell you back the mynewnevada.gov URL?

Dave Gustafson: Is that a trick question?

Joe Marcella: It surely was.

Dave Gustafson: Oh, my seat's on fire, I think, right now.

And so let me move on to number three. So we have the state telephone ERPs, about a $4.5 million RFP there that I believe has already hit the street. There we're replacing, or upgrading, I should say, the core phone system. Once we get the core phone system upgraded, then that will allow us to extend voice-over IP to other systems out there. We'll start to really start to bring a lot of the decentralized phone systems in together.

And this one I want to, my next one, I'm centralizing the information security. I want to thank ITAB, members of the IT Advisory Board. This is one of their recommendations. I thought it was a good one, the Governor thought it was a good one and so we're now moving forward with that, centralizing security of about 15,000 endpoints. We have a consultant. We've already signed the agreement, about $100,000 worth of contractors that are going to hit the street here pretty soon to really help us get this thing out. So I want to thank ITAB for that.

We have put in a Department of Homeland Security, a cyber analyst, as part of the Homeland Security commission. This particular person -- let me say this, it passed the state mechanism. Now we're waiting for the feds to appropriate the money, if they agree as well. What this person will do is sit in the state fusion center and actually go through the cyber intelligence. Right now our capabilities are limited and we'd like to extend those capabilities of sifting through all the Homeland Security data that's coming in. This particular analyst will also be in charge of setting up briefings, also with local governments. It also provides a continuous monitoring piece of it as well, which will allow us to monitor feeds from local governments, just like we do at the state. We're extending that service out, putting on an analyst on top of all that, so we can have -- really get our hands on even better of what we're doing with the Homeland Security there.

I also wanted to briefly just throw out there FirstNet. This one you guys don't hear too much of me talk about. This is a massive, massive project. This is the coast-to-coast, including territories, public safety communications network that is new, that is about a $7 billion project to start with from the federal government. And we're sure they don't have enough money, just to give you an idea how big it is. They're claiming that they want to be able to have a LTE communication network that will span the entire continental United States. That is going to be a massive undertaking and a lot of money. But we -- they engage and that there's -- at some point there's going to be a decision that the Governor has to make about whether he opts in to the federal service or he opts out. And so we're really keeping a close eye on this one. But I just want to let you guys know that I know about it and we're watching it.

Another one that came from the IT Advisory Board was mobile. So we went to the legislature and we asked for some mobile money and we got it and we're working on a few mobile apps, our web, if you will, to get started. One of them is time tracking. So we want to be able to go in and put in timesheets, approve timesheets and that kind of stuff through a mobile. Also, this is my personal one, where we're going to display performance metrics through either mobile web or mobile apps for, in my case, critical infrastructures. Things are up, things are down, we're at data centers, what's going on, all that kind of stuff. Also reporting on a lot of our performance metrics, I think we have about 25 different performance metrics that we're required to report on, and so we can capture that data realtime and display it all through mobile.

And I also want to put up an employee directory right now. We call it NED, the Nevada Employee Directory, that you can go and search for, you know, employees and things like that. We want to bring that to

mobile as well. So a couple of things we're just warming up to on the mobile front.

Kevin Ferrell: Yeah. This is Kevin Ferrell. On the e-government RFP, does that have a segment in it for mobile as well that's citizen-focused?

David Gustafson: Dave Gustafson. Yes. And that one -- that one is quite an animal, I have to be honest with you. I was talking to the guys at Utah, and their vendor has 27 full-time employees, at no cost to the state, that are working on bringing these services -- everything from the bar association to DMV services, whatever they are. And you know what? It's in the best interest of the vendor, because then they can tack convenience fees onto it, right? And so there's a whole Board that sets up, what is a convenience fee, should some services not have fees, some should, all that kind of stuff. But I imagine and envision a lot of those services will come from that e-government solution.

Joe Marcella: Joe Marcella. David, have you considered, in your strategic planning, that if data is exposed, in other words, open data, and having that available through hackathons and others, that you actually can have citizens as part of your workforce in developing some of those applications, not only developing, but keeping them current? And then they tend to be a lot more innovative than we are, like Adopt a Fire Hydrant.

David Gustafson: Dave Gustafson. That's one I would not have thought of as well. So I take my hat off to the creative community. Yes, that is a fact. Yep. It's just that right now we don't have a framework by which to deploy those services. And so we'd be looking to have those APIs available so that people could actually build those applications. And this goes a couple years back, but, you know, the guys are always saying, "Well, we're always worried about the hackers and everything." And I said, "Great. How do we recruit some of these guys to actually test our systems?" Right? "The ethical hires -- where do we get these guys? Bring them into my office. Let's see if we can recruit a few of them."

Joe Marcella: Mike says they're all in Pittsburgh.

David Gustafson: Is that right? Pittsburgh? They moved from Georgia. So anyway, yes, I imagine that would come from that as well.

Another was, this was also from the legislative session, we were appropriated a disaster recovery position. And so we filled that position, and now we're looking at revising and updating and building, in fact, a new disaster recovery plan for state critical infrastructures. That's underway. Interviews for Deputy CIO. I've probably interviewed about five or so individuals. I still have some to conclude on my list before we sit down and actually make any decisions. But those -- that's also from the legislative session. That is underway.

The insurance exchange is going live on October 1. I've been asked to be involved in that one. So I've got a little bit of stake in that one, sort of what Mr. Willden was talking about earlier.

And I also have been spending quite a bit of time on planning our next budget asks, if you will. I always imagine a stool, and the legs of the stool are going to be those things that which my budget will be built upon. So what are they? I'm going to throw out a few things that I'm just tossing around as ideas. And perhaps if anybody has any feedback, I'd be happy to hear about it. If not, that's fine. But I have a recurring theme that I get cornered, whether it be at the Governor's office with the elected officials or with the directors. Statewide IT recruiting, retaining and rewarding is broken and has failed. And I did not personally want to spend a lot of what I call political capital fixing this, but I do recognize -- I know that it's broken. I just know that it's going to take a tremendous amount of energy to make that -- to get that moving. I'm not

sure I'm going to get a choice this time, because there's too many people who keep cornering me on this one. So that one I have to work on the IT -- on the IT guys there.

Looking at alternative IT funding opportunities, what are ways that we can find new creative and innovative ways, whether it's public-private partnerships, whether it's -- uses a -- I don't mean to call Rudy out on the floor here, but, you know, or finding ways for the private sector to pay for certain things, like they've done with the highway, you know, down in the south, down in Vegas. NEON?

Rudy Malfabon: Yes.

David Gustafson: NEON, there you go. Yeah. I just know the buzzwords, Rudy. But how do we -- we look at these opportunities that may be out there, maybe they aren't. But I don't know, let's at least start talking about them.

Office space, I kid you not, this is one, you know, in IT we don't really worry so much about everybody being in the same location. It's not really that big of a deal. We work remote and telecommute and things like that pretty well. But I wasn't even out of July before people were already asking me, specifically with our former DPS employees, "When are you moving out? When are you going to --" I go, "Guys, they -- not even one month out of the biennium in the chute here and you guys are already asking me when we're moving out." So we need to start, if I'm going to move people around, we need to move them back to where we can centralize them again, at least to the best of our ability. So that's something that I'm aware of and I've been thinking about, because when we do that, we'll probably move about 100 people here in Carson to some place. And it's, anyway, something that I've been looking at there as well.

We're also following up on an Advantage benchmarking study that's already kicked off. Now, you guys know Advantage is our ERP solution. So we've kicked off a benchmarking study to sort of tell us where we are with the rest of the world. Following that, next session, we'll probably be asking for some money to actually start developing requirements to replace the statewide ERP, which my vendor friends are telling me is probably somewhere in the $75 to $100 million dollar range, just to put it out there. And so these are the kinds of things that the legislature keeps hearing about and they say, "Wait a minute. Everybody's got $100 million project. It seems like $100 million is the new $1 million or something." And so where's the big plan for all this stuff? And that's, you know, the recurring theme is -- which is why they keep asking me about that. Mr. Chair, do you have a question on that one?

Joe Marcella: No, just smiling.

David Gustafson: Oh, just smiling. Okay. Okay. So working on the -- on the benchmarking study now. We also have some bill draft requests we're looking at, cleaning up the NRS 242. One particular case in that, this is probably something that the ITAB should probably be thinking about as well, is the changes to the language. Now that we have merged with Department of Public Safety IT, I think that the Director of Public Safety now, who is probably, if not our largest customer or our second-largest customer, should probably be represented probably somewhere on the Board, you know, those kinds of things, you know, kinds of changes there.

And then we'll be looking at the grand scam -- the grand scheme of things, Phase II of modernizing IT. What does that mean? Where do we go from here? We've kind of got the DPS thing going on. We'll talk a little bit about that in a minute. We're moving around some other things, where there's consolidations occurring in other agencies. So where do we go from here? This is where I'll be looking at the IT Advisory Board for some guidance as to where you guys think we're going. I think these guys, you know, at SAIC, the presentation was right on. You know, where do we go from here? And I thought that Director Mohlenkamp's questions were spot-on. "How do you get from where you are to where you need to be?" And so, you know, really what that means. And so I'll be looking for that.

We'll be looking at revising the IT strategic plan after we sort of meet with some of the state leadership to talk about, you know, what I say, "What do we want to be when we grow up?" And that's my short list of things that I'm contemplating right now. Any questions, Mr. Chairman?

Joe Marcella: No, I think it's a marvelous long list. Are the any questions from the Board? Except panic. David, can I ask you to move on to Agenda Item No. 10?

10. DPS INTEGRATION
-David Gustafson, CIO, State of Nevada & Catherine Krause, Unit Chief, Public Safety Technology Unit

David Gustafson: Sure. I'll go ahead and ask Catherine to come up here, if she doesn't mind. I'm going to run through, I've sort of saved out a lot of the DPS stuff for this specific item. And I'll start it off and then I'll let Catherine jump in as she sees fit.

In July we had a few unplanned outages that caused a bit of a panic. And so we had to move quicker than I had originally thought. My original plan was sort of let it bake a little bit, we get the people working together, we build a proper plan. And then we get all warm and fuzzy about the plan. And then we execute at some point in the future, and then everybody's happy, and there's lower risk. Cool. That was the plan. Well, some of the outages, and it was only two for DPS, there was another one for another agency, but what we realized was that we kind of needed to move a little bit quicker, that the former DPS IT environment was needing serious upgrades as far as equipment, training, services, those kind of things. And to delay was only increasing the risk rather than lowering it. So the decision was made to go ahead and to move quicker on that consolidation. Do you guys have this, my CIO message? If you guys don't have it, let me know. And then a follow-on there with the announcement of a reorganization, which is that pretty, colorful Visio that you have there.

Joe Marcella: Joe Marcella. David, are you saying that you had a migration plan, you just had to move quicker on that plan?

David Gustafson: I'm saying the plan changed. Dave Gustafson. And also, we've been attempting to hire a project manager, a consultant. And we are now on our fourth consultant and I just got an email while I was sitting here that this new person is starting on the 23rd. So we had a few that -- we had one that didn't quite make it through our background check process, a couple were unavailable, and so now we're down to the fourth one on the list. She's got to be a great asset to us. She's a naval intelligence officer, speaks Russian. Her job in the Navy was to build and migrate NSA data centers. And if you can imagine, she was fourth on the list here. That's a pretty impressive list that we had before us.

Anyway, we're excited about gaining her onboard, but we need a lot of her expertise. My plan was always to get her onboard and have her develop these plans, working with the teams and things like that, build a consensus before we -- and a schedule before we actually implement it. But we just didn't have the time for it, so we had to move a little more aggressively.

Yeah, and I'll just leave it at that and just say that the segregation of the team was actually creating a higher risk profile, so it was in our best interest as well as the Department of Public Safety to move quicker. So we did. We executed. And now we have a new organization we're moving forward with.

And what we'll do with the project manager is to go ahead and finish the job; develop the plans, work with the teams, build the schedules that they need. Another thing that we were looking at is major system upgrades, you know, networks and routers and we have data centers now. How do we start to build plans and start to pull all these things together? And then we need to start thinking about business applications and standardizing the desktops and moving to a 24 by 7 help desk. I mean, all kinds of things that we -- that the sooner we move on, the better off we're going to be. And waiting does nothing but raise risk.

So with that, if Catherine has anything to say, she doesn't have to say anything, but if she wants to, she can.

Catherine Krause: Catherine Krause here for the record. Just add a couple things. You'll notice, since this Agenda was published about a month ago, it says I was the Unit Chief of the Public Safety Technology Unit. You'll notice that doesn't exist on this org chart. And so when David's talking about moving a little more quickly than planned, basically, what we did through a lot of discussion as a result of really realizing that, you know, through no fault of anyone's, but, you know, needing a little more senior leadership in some of the more technical areas than we really, frankly, had in the Public Safety Technology area, whereas I think where our strengths were maybe compared to the rest of the Enterprise, I'm more in the customer service type area, which is what we heard about in the presentation from SAIC earlier today.

So this new reorganization, basically, I'm now in charge of a new client services unit, and that really is taking all the kind of customer focused areas. And so I've got help desk all consolidated, although it's really two help desks right now, but we're already cross-training people and moving pretty quickly to try to get really the whole Enterprise at a 24/7 help desk. We've always had that for Public Safety, obviously, with, you know, need. Law enforcement doesn't just work Monday through Friday, 8:00 to 5:00. So we're cross-training people so we can provide that relatively quickly, at least to the rest of the Department of Administration.

We've got all of the project oversight in planning that area. We have project management in some processes for DPS. It's been, for the rest of the Enterprise, it'd be kind of decimated, I'd say, by the -- all of the budget cuts over the last several years. So we're trying to rebuild that. Consolidating some of the other areas as far as desktop support, but really trying to build kind of a customer-oriented focus. And I think that's something that, frankly, Enterprise IT probably wasn't very good at.

And so, you know, it's going to be a lot of work. I need to meet and learn about more of my new customers, since -- and right now it's only been a few weeks. So we're kind of just trying to learn about each other and what everyone's doing, how to work in an organization where the technical resources are in a different structure than kind of how the service requests come in. And so excited about figuring all that out. And we're just kind of getting started.

But we have started on a few things already. There's a few things that we had been doing with DPS that I think we want to bring to the rest of the organization, basically a process where the business defined the IT priorities. IT doesn't decide what projects we're going to do. And so they present something on a board, and basically we give input and say, "Well, here's the cost. Here's approximately the timeframe. Here's where we'd have resources to do that. What's the priority?" But they decide. And so, you know, we have been talking about bringing that to the rest of the organization, and we'll be starting with Administration and the current customers we have. And as the Board gives input on what the next phases might be of IT consolidation, we'll have to see how that will all fit in. So I'm excited about it. But we're just learning about everything right now. Any questions?

Joe Marcella: Comments from the Board? Questions?

Mike Willden: Yeah, I don't want to put anybody on the spot, but I'm just kind of curious, in your re-org, or, you know, you've got communications and computing and development and client services and security. And under some of those, you've got, you know, four different colors of boxes. And I can see the key to these budget accounts. And so I'm just kind of, you

don't have to do it right now, I'd just be kind of curious as to the -- what's the meanings of the different budget accounts. Because, again, communications, you've got four different colors of boxes in there, and what's the link to those budget accounts. And is that a, you know, we went through that in, obviously, in HHS. And we moved, we're probably talking to the people here that don't care to even hear me say this, but in budgeting, there's the E900 deck unit. And we moved 1,000 people around through deck units and realigned them into the right kinds of budget accounts.

And so it doesn't look like you guys did that this time around. And is that something for the future, to align people that -- people that are in the communications division would all be the same color in the future, and computing would be in a budget account, and development would be in a budget account. I mean, I don't really understand your budget accounts. I guess I could spend a little bit of time doing that. But, like I say, I see two to four different colors of boxes in each thing and trying to think in my head what kind of budgets go along with the boxes.

David Gustafson: Dave Gustafson, for the record. I tell you what, Mr. Willden, I couldn't have said it better myself. The reason why the boxes are colored is so that the accountants don't get that mad at me, because what happens is this is identifying funding sources. And so if I take the colors away, then they'd really get mad at me, because then they don't know where people came from.

Mike Willden: No. No, I get that. But, I mean, on -- just pick a color. So if I pick, you know, 1388, I assume those people maybe are all DPS employees. I don't know. But what does that mean to me?

David Gustafson: Yeah. So if you're -- if you're asking me what my long-term plan would be, is I definitely want to consolidate these accounts, because there's no value to having all these little accounts other than it's easier for, I don't want to say the bean counters, it's easier for the accounting people to keep them separate. But what I'm -- this is another thing I wasn't going to say, but I'll say it now that you brought it up, Mike. I'm trying to get people to think about IT services from the accounting perspective and a means of cost pools. So I don't want people to think about it in terms of budget accounts. I want the accountants and the budget office to understand that for us to deliver services and for federal reporting, it's about the cost pools, because the feds care about cost pools. They care about what's the revenues and expenses for a cost pool. They don't care about budget accounts. That's not something that's really -- and so all we do is make our life really complicated by having all these budget accounts all over the place. So if you're asking me, I clearly want to streamline and consolidate those and then, more specifically, spend more time talking about those cost pools, because that's actually the conversation we probably should be having. And that's the world according to an IT guy. I see Jeff moving his microphone.

Jeff Mohlenkamp: No, no. Actually, Jeff Mohlenkamp, for the record. No, I think you described it. I think Mike's point is exactly right. We intended to have those separate, but, you know, when David described going faster, some of the things that we did ended up having some pieces in different places than what we had initially intended. And so we'll at the next budget be resolving that and making sure that those cost pools are the same colors. Whether they're in the same budget account or not, we'll work on that. I think we'll probably want to do some consolidation of budget accounts, because having a lot of budget accounts doesn't help us do anything more than lots of work programs.

But I actually just wanted to make an observation, if I could, Mr. Chairman. First of all, I want to thank David and Catherine for what I think is the first nice step in developing that customer service model within the ITS, because to me that is really the way that we get directors across this state to embrace what we view as a larger consolidation plan, is that they believe that they're going to receive that service. And not just, I get in a queue, help desk service, but ultimately, customer service representatives, higher level managerial representatives, that people like Mike and Rudy and other directors can go directly to when they end up needing answers to questions and things like that. That already happens, but primarily, in fairness, David, it happens usually because you're the one picking up the phone, and not a good model for a long-term solution.

So I really, I want to applaud you for that first step, because I think that that will start to give us an indication of where we need to go. And as we have these high-level meetings starting tomorrow and over the next several months and we identify how we can integrate the IT resources in this state, but make sure that directors get that responsiveness that they need, this model will be the first step in trying to achieve that. And so I want to thank you.

David Gustafson: Thank you. Dave Gustafson. I also want to add, just -- yeah, like I said, it was out of necessity that we needed to do that, but we all have known that we needed to have a more customer service focus, mindset. And so I'm sort of looking at those same qualities when I look at a deputy. You know, we're a department of IT people. We probably don't need any more of us. You know, we probably need more people who are customer focused, who can really help elevate our game to a new level. And so this is -- this, you know, thanks, Jeff, for pointing that out. This is really just one step in the right direction. We know that there are areas including project management and planning and things that are severely under-funded, but we've tried to throw some bodies at it at least, so we can at least get it going, at least start it, get people thinking about it, so we can really improve our service delivery going forward, so thank you.

Joe Marcella: Joe Marcella. I wanted to make one comment. And it's just following up on the heels of what Director Mohlenkamp had said. It started out as a proof of concept, moved over to a pilot. But I think what's most important, even with all of the moving parts not quite defined and in the right relationship, you've got a commitment. And that's the best place to start, is that, we're not going to unwind it, we're not going to do something else. We're just going to continue moving in one direction and making it right. Is that what I'm hearing?

David Gustafson: Dave Gustafson. Absolutely. And one thing that Enterprise IT, we were really good at is we've got a lot of really technical folks. We've got the best guys in the business. But they're -- how do I say this so that people outside of government will understand? They are siloed in budget accounts, which is one reason why I'm going to have to break the budget accounts, because guys associate themselves with a budget account instead of a service, because that's what they've been trained to do, because that's why we have all these budget accounts. And so we put people in budget accounts and they associate more with the budget account than they do providing IT services.

Having said that, they are -- there's also what I'll call the DOIT blackhole. And DOIT was our former Department of Information Technology. When you have a server problem only, our server guys are very good at fixing that problem. When you have a server problem that also includes maybe a network problem or also a programmer, that's what I call the blackhole. The server guy picks up the ticket and he says, "Oh, server's fine. Close ticket." Right? But you still have a network problem and you still have a programming problem. And so there's nobody there to really provide that governance, it's not the word I'm looking for, but to provide that oversight.

And so this group here, including Catherine, is going to be able to start to provide it. There's also a position in here, Catherine didn't mention it, is a cube manager. Now, what that position does is it also manages the tickets that are going on in all the different groups and centralizes the reporting structure of these things, make sure that there aren't things that fall through the hole, because that's what IT groups are famous for. You close the ticket and the problem is not solved, right? But the server guy says, "Hey, servers up." The network guy says, "Network's fine." But the service isn't being delivered. So anyway, shameless plug there. But it's a complete mindset change on the IT side of how we move to a more customer service oriented.

Joe Marcella: Any other discussion item?

11. STATE LOCAL SECURITY PROJECTS OVERVIEW
-Chris Ipsen, CISO, Enterprise IT Services

Joe Marcella: All right, let me move on. This is Joe Marcella. Let me move on to Agenda Item 11. And in the absence of Chris Ipsen, we'll go into detail on this one at our next meeting. I do want to at least frame what Chris is going to talk about. There's a lot of inter-local activity and it's taking its lead from the state, which is again part of what we wanted to talk about from a consolidation perspective, and consistency across-the-board, including the rest of the state.

DSR, disaster recovery, is an inter-local project and it's project funded. The continuous monitoring, which I think the City of Las Vegas will adopt and somebody looking over our shoulder. I think that continuous monitoring, because of the resources that it's -- that are required, coming from a third party starts to make perfect sense. And then the third item is access management, ID management, credentialing and the like, some level of standardization across-the-board. Chris will talk about that and what's happened inter-locally as to where the standards are coming from, the direction we're taking, how that can be done in a practical, intelligent fashion without breaking the bank and without breaking what currently exists and causing a more secure Nevada. So my comment.

12. BOARD MEMBER DISCUSSION

Joe Marcella: I'd like to open it up for Board Member discussion from everything that's heard before I give some closing remarks and also open it for public comment.

Jeff Mohlenkamp: Thank you. Jeff Mohlenkamp, for the record. You know, I had a chance before this meeting to go back and look at the ITAB recommendations, and I saw that they were actually cited in some of the documents we had seen earlier. And, you know, I think it really is the platform that we are using and we used for the strategic plan for EITS, and so I think this committee really served a good purpose for us last year in trying to help get us that first start. And now I think what we're trying to do in state government is to say, "Well, where do we go?" As David said, "When we grow up, what do we want to be?"

So I'm excited that the committee has now reconvened to kind of help us through, now, not so much of a vision as much as the nuts and bolts of how do we get from here to there, because the next steps that we need to take need to be actionable items that we can move forward with. And so I'm really interested in the Board providing continued guidance, but now, maybe now, at the next step-level down of helping us, who need to be the key players involved in the discussions of our migrating our IT environment? What needs to come first, second, third? What are the pitfalls? I really appreciated those and I'm going to have to get a copy of that hopefully, what those lessons learned, both from a structural standpoint and from a technology standpoint, because that to me is going to be the real value. And we have Gartner, our consultants that coming in to give us some guidance.

And so I'm excited about this. I think that state government is now ready to make these next steps. Certainly we heard the legislature loud and clear. And David and I are in contact with the Governor's office, and they're absolutely wanting us to move forward with a fairly robust approach towards taking the next steps for our IT evolution. So I thank you and I look forward to the next meetings.

Joe Marcella: Now, a lot of what you just said, Director Mohlenkamp, was somewhat of how I wanted to sum up some of what we were talking about.

Jeff Mohlenkamp: I'm sorry.

Joe Marcella: No, that -- I think it's marvelous. I had written myself a note and talked about the purpose of the Icad Group, and it's basically been to expose what's required in all of the disciplines and, in particular, to technology. But it's related specifically to the needs of the community, internal and external. And I think we've started to have that dialogue. And, matter of fact, I think we've had some successful dialogue and some successful influence.

The other is we also needed to be able to assist, particularly, Enterprise Information Technology Services to move forward. But I agree with you 100 percent that it's now time to figure out how. So that will be part of what we need to do next year, or this year as well.

I had written down another note for myself, and I wanted to make sure that I was talking about 2013 and 2014's direction. I think we continue to frame some of those things that are particular to our organizations and their necessary items to get enough information so that we continue to make decisions as well as incorporate what we hear in some of the decisions that we make, because like SAIC, we're getting a global view.

My recommendations for at least the next conversation will be in communications, that's one, where standardization, consistency, across the State of Nevada and this enterprise are absolutely necessary, and security as well, and tying those two together. So from an information perspective, I'd like to cover those two items. And I'll see if I can get some volunteers to do that. And what's kind of interesting, and I'd like to introduce some folks that are here, Steve Jennings (sp?) if -- I don't want you to stand up, but I want to recognize. Steve Jennings is the former Chief Information Officer for Harris County. By the way, how long ago was the hurricane? Four years, five years?

Steve Jennings: Yeah, 2008 (inaudible).

Joe Marcella: Well, he single handedly saved Texas from certain disaster. But you're from Alcatel-Lucent today, that's who you're representing. I believe that there are folks out there, like SAIC, that may be able to give us some insights that we wouldn't get otherwise, particularly if they live and breathe it.

13. PUBLIC COMMENTS

Joe Marcella: So I'd like to open up the meeting to public comment. Is there anybody in the public who would like to speak? Anybody down south? I've been looking at those empty three chairs for -- through this whole meeting. Even anyone from communications?

Unidentified Male Voice: We'll be more than happy to help (inaudible).

Joe Marcella: Steve. Okay. Thank you. Hearing none, seeing none, I'll close the meeting for public comment. And we wanted to give you next meeting opportunities, and before we have to elect another Chair, that would be December 2 and December 9. So if you'd look at your calendars and if we could choose a day, and then you have to make sure that we've got a room. Can I poll the Board?

Unidentified Male Voice: The 2nd works better for me.

Unidentified Male Voice: Yeah, the 9th is bad for me.

Joe Marcella: I didn't want to get too far into December.

Unidentified Male Voice: The 2nd would be just fine.

Joe Marcella: 2nd is fine for me? Okay. Then it's the 2nd, if we can get that date.

14. ADJOURNMENT

Joe Marcella: Can I have a motion for adjournment?

Jeff Mohlenkamp: Move to adjourn. Jeff Mohlenkamp.

Joe Marcella: Second?

Kevin Ferrell: Second. Kevin Ferrell.

Joe Marcella: All in favor?

Group: Aye.

Joe Marcella: Thank you.

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Legislative Building, 401 N. Carson St., Carson City, NV 89701
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Capitol Police, Grant Sawyer Office Building, 555 E. Washington Ave, Las Vegas, NV 89101 Brad Carson: bcarson@dps.state.nv.us

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