INFRASTRUCTURE AND ENVIRONMENTAL MANAGEMENT COMMITTEE
Council of the County of Maui

MINUTES

December 15, 2014

Council Chamber, 8th Floor

CONVENE: 1:34 p.m.

PRESENT: VOTING MEMBERS:
>   Councilmember Elle Cochran, Chair
>   Councilmember Stacy Crivello, Vice-Chair
>   Councilmember Robert Carroll
>   Councilmember Donald G. Couch, Jr.
>   Councilmember Don S. Guzman
>   Councilmember G. Riki Hokama

EXCUSED: VOTING MEMBERS:
>   Councilmember Mike White

STAFF: Jordan Molina, Legislative Analyst
>   Raynette Yap, Committee Secretary

>   Dawn Lono, Council Aide, Hana Council Office (via telephone conference bridge)
>   Denise Fernandez, Council Aide, Lanai Council Office (via telephone conference bridge)
>   Ella Alcon, Council Aide, Molokai Council Office (via telephone conference bridge)

ADMIN.:   Jacob Verkerke, Chief Technology Officer, Information Technology Services Division
>   Karen Sherman, Information Security and Privacy Officer, Information Technology Services Division
>   Susan Underwood, Application and Information Management Services, Information Technology Services Division
>   Michael Hopper, Deputy Corporation Counsel, Department of the Corporation Counsel

PRESS: *Akaku Maui County Community Television, Inc.*

CHAIR COCHRAN: . . .*(gavel).* . . Aloha, will the Infrastructure Environmental Management Committee please come to order. I am Councilmember Elle Cochran, your Chair of the Committee, and it is December 15, 2014, roughly about 1:32 in the afternoon. Members, thank you for being here, and before we begin, please silence all cell phones or any noise-making devices. And with us here today is Vice-Chair of the Council, Bob Carroll.

COUNCILMEMBER CARROLL: Good afternoon, Chair.

CHAIR COCHRAN: Good afternoon. And also Councilmember Couch.

COUNCILMEMBER COUCH: Aloha and good afternoon, Chair.

CHAIR COCHRAN: Aloha. Councilmember Riki Hokama.

COUNCILMEMBER HOKAMA: Madam Chair.

CHAIR COCHRAN: Aloha. And Councilmember Don Guzman.

COUNCILMEMBER GUZMAN: Good afternoon, Chair.

CHAIR COCHRAN: Aloha. And Vice-Chair of the Committee, Stacy Crivello will be joining us shortly, and Mike White is excused. We have Legislative Analyst, Jordan Molina, Committee Secretary, Rayna Yap, distributing some paperwork for us. And joining us is Vice-Chair of the Committee, Stacy Crivello.

VICE-CHAIR CRIVELLO: Good afternoon, Chair.

CHAIR COCHRAN: Good afternoon. And for any individuals that may be wanting to testify, please sign up at the front lobby desk, and I believe I don't see anyone out there at this point, and anyone wishing to testify, please testify on the item on the agenda today. But I will check in with our District Offices right now. Hana Office, are you there, Ms. Lono?

MS. LONO: Good afternoon, Chair. This is Dawn Lono at the Hana Office and there is no one waiting to testify.

CHAIR COCHRAN: Thank you, Ms. Lono. On our Lanai Office, anyone there to testify?

MS. FERNANDEZ: Good afternoon, Chair, this is Denise Fernandez on Lanai and there is no one waiting to testify.

CHAIR COCHRAN: Thank you, Ms. Fernandez. Molokai Office, Ms. Alcon?

MS. ALCON: Good afternoon, Chair. This is Ella Alcon on Molokai and there is no one here waiting to testify.

CHAIR COCHRAN: Thank you very much, ladies, for being there, and Members, seeing no one here in the Chambers or our outer-lying districts for testimony, I shall now close public testimony.

COUNCIL MEMBERS: No objections.

COUNCIL MEMBERS VOICED NO OBJECTIONS. (EC, SC, RC, DC, DG, RH)

CHAIR COCHRAN: Thank you very much, Members, and thank you, ladies, and Merry Christmas to you folks.

ITEM NO. 53:   INFORMATION TECHNOLOGY INFRASTRUCTURE (MISC)

CHAIR COCHRAN: Okay, moving on, we have only one item on the agenda, but it's definitely very important and new to many of us. It is IEM-53, and it is a…we are in receipt of a Miscellaneous Communication, dated May 27, 2014, from the County Clerk. It transmits the matter relating to County's information technology infrastructure, including updates from the Management Information Systems program and development of the County's computer security preparedness plan. And this Committee will be receiving a presentation from the Department. At this point, we have Mr. Jacob Verkerke, who is Chief Technology Officer, Information Technology Services program. Aloha, Mr. Verkerke. Thank you for being here.

MR. VERKERKE: Aloha, Chair.

CHAIR COCHRAN: And also from Corporation Counsel, we have Michael Hopper.

MR. HOPPER: Good afternoon.

CHAIR COCHRAN: Aloha. And Mr. Verkerke, sitting next to you is?

MR. VERKERKE: We have Karen Sherman, our Information Security and Privacy Officer.

CHAIR COCHRAN: Thank you. And you have also have…aloha. And you have someone in the gallery here also?

MR. VERKERKE: Susan Underwood. She's the Section Head for Application and Information Management.

CHAIR COCHRAN: Thank you, Mr. Verkerke. So Members, this matter is a Budget Session referral. During this past Budget Session, extensive discussions were made with Mr. Verkerke and many upgrades were spoken about underway for the County's Information Technology Services program so with that I have invited Mr. Verkerke to provide us with a presentation, and to just update us on the status of our IT infrastructure and the ongoing upgrades. Basically, today's meeting is to start an educational series on our County's IT infrastructure, and it's intended to provide us, the Council, a better understanding of it, its needs, and especially to prepare us for the upcoming Budget Session. I think, well, I'll speak for myself, I'm not all that knowledgeable. We always, you know, point to Mr. Couch as our tech guru so I'd like to get all of us in that same status as guru types for technology, and hopefully, by then we'll be experts and

it shall expedite our budgeting process, and we won't have to ask so many questions, and have it go over our heads. So Members, with that I shall turn the floor over to Mr. Verkerke, and I also want to mention that to my right we have this wonderful screen, and it will show Mr. Verkerke's presentation, and at any point…basically, it's, you know, we can stop it and talk about what's on the screen and get better, you know, better knowledge and detailed questions and answers about it. So by any, at any point do we have questions along the way feel free to just stop and we can, you know, pause and take questions, and address it as we go rather than wait 'til the end, 'cause I think a lot of times, especially with stuff like this, that may be new to us we might forget what we wanted to ask or how to bring it out so just, we can interrupt at any time to get more clarification needed. So at this point, Mr. Verkerke, the floor is all yours and it's very wonderful to have you here today.

. . . BEGIN PRESENTATION . . .

MR. VERKERKE: Thank you, Chair. Good afternoon and good afternoon, Members of the Committee. I'm very pleased to have this opportunity to come and talk story with you folks about what the IT Services Division is all about, what we trying to do. I know in a Budget context it usually gets condensed to the point where it ends up confusing more than clarifying things about what we're trying to do so, hopefully, we can shed some light and explain a little bit of why we're here and what we're trying to do. So the main points we're trying to cover today is to explain a little bit about our vision and mission, and how that leads us into trying to become a service-organized, or a service-focused organization, how we, how we service and provide services to the County and what that means as far as always being on our toes and continually improvising, improving--improvising too, there's a lot of that going on, I'll tell you--our services. So our vision is to be providing outstanding IT services in support of the County's goals and objectives. So we try to be business-outcome oriented. About four years ago, we wrote our first strategic plan and the main tenant in that plan was to shift from a technology focus to a service-delivery focus. That plan is wrapping up now. I think we have accomplished that. The new four-year plan is being reviewed, and hopefully, will be adopted by the end of the month. The mission connected with that vision is to serve the goals and objectives of the County through a focus on IT service excellence. What we mean by that is that we're really trying to recognize in our plans, in the objectives we set for ourselves and the goals we set for ourselves, what the benefit of that effort is in the goal of allowing and helping the departments to provide the best service possible to our constituents, whether it's internal to the organization or outside. And we want to be driven by that rather than by advances in technology, whether they really mean anything for this organization or come at the right time or not. We're really trying to find a way to coordinate that very well, and make sure that we provide the environment that the organization needs to meet its goals and objectives. Becoming a service management organization, IT service management is an operating model. That means that what we do is driven by the desire to provide services at the right time and the right place in the right manner. It also means that services evolve, and it demands change so there's a full lifecycle in IT Services that we need to recognize, and that means that we need to adjust to changing demands of the organization, of the environment that we work in. We need to define these services in a way that makes sense to the recipients of the

service so that their outcomes are measurably improved by the IT service that we deliver, and you know, of course, that means that we need to focus on these outcomes, and not just on keeping up with technology 'cause a lot of times technology may go in a direction that necessarily, not necessarily serves the needs of the various departments. It also means that we need to run IT like a business. We need to be able to understand the value that the various departments, our customers, look to receive from the IT service that we are providing. We need to define these services in context of the value, how much savings, how much efficiency, how much expansion of services the departments are providing to the community, how much do we contribute to that? And of course, like any business, there's a cost of goods delivered or a cost of services delivered and we need to do a better job of recognizing that. There's always a cost associated that will continue on, like in any business, it, you know, it's not a onetime thing; it just keeps going and going, and we haven't really done a very good job communicating the cost of ongoing efforts to deliver and improve services, and then relate that cost to the value that hopefully is recognized and achieved by our customers. Now IT Services is a somewhat nebulous concept, perhaps, so I want to relate it to a service that you may recognize better from our Parks Department, for instance, and I'm not picking them for any reason; it's just something that's obvious. Here we show you what's available on the website as far as recreational services around Kalama Park, and the two pictures show that there is a number of different aspects to the service of recreation at Kalama Park. We have tennis courts; we got softball fields; we have a skate park, and then on the left side of the screen you see kind of a listing of everything that's needed to provide that service, electricity, bathrooms, striping of course, all the facilities associated with the actual service of being able to recreate at this park, and that's kind of like how IT is. The end product, what's visible, a particular application that we provide is like the service of recreation, but there's a whole bunch of stuff behind the scenes, that infrastructure, the term that I keep using when I come to you for funding in the Budget, I keep telling you I need to fix my infrastructure. Well, it's like in the parks; you need to maintain the grass, you need to maintain the courts, you need to provide electricity for the lights, and all that stuff. That's the infrastructure that IT people talk about. Now of course, we don't do a lot of, you know, maintenance on grass in our job, but there is a similar aspect to that, and hopefully, this gives a little bit better idea of what we mean when we deliver a service. The service is the ability to issue Building Permits, the ability to, you know, manage a court case or something, and what's behind the scenes is the infrastructure that we are responsible for. So at this point on our Internet, we have listed a catalog of 32 services. These are outward-looking services, the service we provide to our customers whether they're within the organization, within the County or to the public through the website. Behind that, and associated with the services is always a portfolio of projects. Right now there's 48 projects, distinct projects, in that portfolio, and they're both projects that are obvious to the customers like a renewal of the permitting system that we're working on right now, but some of it is behind the scenes, you know, the network, the connectivity that we need to provide, the data storage, all those are projects that require effort, and that list keeps growing because more and more people are relying on technology to do their business, to provide the services to the customer. The infrastructure that we provide, you know, similar to the Parks, there's a whole bunch of things that you don't think of when you, when you swing at a softball, that need to be taken care of in order for you to be able to do that. Similarly, in IT there's a whole infrastructure. For us, that infrastructure stretches across three islands. We

have approximately 100, maybe more, distinct geographic locations where our service touches down, be it the network, be it customer offices. And of course, the variety of customers, in the middle, we have a desktop computer; it represents, you know, the bulk of the County employees that work in offices, but we have police officers, we have firefighters, we have water treatment, we have wastewater treatment, and I could go on and on like that. Kind of gives you an idea, it just…really we probably have close to 20 distinct lines of business that we need to support. The list of departments, and sections, and different functions, these lines of business I mentioned, it's probably larger than what I'm showing here, but it just gives you an idea of the variety of business needs that we're trying to meet.

COUNCILMEMBER COUCH: Madam Chair?

CHAIR COCHRAN: Yes, you have a question, Mr. Couch?

COUNCILMEMBER COUCH: Yeah. Back on that last slide. So for instance, I mean you've got all those different departments. Does each one of those departments have a unique application like I'm assuming that the Police Department has their laptops that are in their car and that's a special application, plus the 911 is a different application? I mean, these are big applications too, right? They're not what you see on your phone. When we talk application, we talk multiple programmers, and all kinds of stuff. So each one of those departments has their own unique, if not one, more than one?

MR. VERKERKE: Pretty much, pretty much. Yeah, if we go through the list, Fire has its own applications; Parks and Recreation, if you want to reserve a community facility or something there's an application that is specific for that. Planning, they have elements of that very comprehensive permitting and development management software. Right now we have KIVA. We're looking to replace that over the next couple of years, and that stretches across to Public Works, and Fire, and Water, so besides something native to that department there is these corporate applications that touch these various departments, but I can't offhand find any particular department here that does not have something specific to their needs. So, you know, even County Council, we have done this in the Clerk's Office, you know there's the election software that we support, and mostly through connectivity, and so I think it's fair to say that the majority have their own as well as corporate-shared applications that we support for them.

COUNCILMEMBER COUCH: And how many of them are purchased from a third party and maintained by a third party versus you guys programming them, or you guys purchase them, and then you maintain them, any upgrades and whatnot? How…can you give us a little sample of that or is that further down in your?

MR. VERKERKE: No, no. This is a good point to talk about that. We have always had the approach that we would never have the resources to develop software on our own, and we feel that there is very little that happens in this County that is so different from other counties or other jurisdictions that somebody hasn't already developed some software to do that, and then it's easier for us to just kind of tweak it for our purposes than build it from scratch. It's usually much

faster and usually cheaper to do that also. There are some applications in use that are not bought from a vendor, and I'm thinking specifically of the election software, I think that was developed by the State or by City and County on behalf of the State, and there is a few, the driver's license and motor vehicle application is one of those, so there's a few exceptions to the general rule that we buy it. When we buy it, 9 out of 10 times it will come through the ITSD Division to purchase and to maintain. Now it doesn't mean that we are responsible for the total maintenance. It means that the vendor is responsible for the maintenance of the software, but usually we are responsible for all the hardware it runs on, and the connectivity even if it's, you know a Cloud component to that, we're still responsible to make sure we can connect to the Cloud and have the proper connectivity for efficient functioning of that.

COUNCILMEMBER COUCH: Okay. Thank you. Thank you, Chair. And the last follow-up on that is even though you don't maintain them, you kind of are help desk type. If people have a problem, you're the first line of…somebody will call you and say, hey, this isn't working, and you have some expertise in potentially fielding some of those calls or triaging those calls versus going into the vendor?

MR. VERKERKE: Absolutely. The term "maintenance" we usually use that for some kind of contractual arrangement with the vendor and the developer of the software to make sure that the software stays current, but we provide an enormous amount of support to the departments to help them use it, to make sure that it is always operational, 'cause if something doesn't work we have to look at, you know, is it, is it the computer, is it a network, is it the software, all of that so all of that support. If departments decide that they want to be able to do more with that particular application we work with them to define it. We find ways within the existing version of the software or we help them develop, you know, there's requirements for an upgrade to the software to make sure that those operational needs are met. So you're absolutely right. There's a tremendous amount of work in supporting these applications, in supporting the business needs beyond just the maintenance of making sure the software version stays current.

COUNCILMEMBER COUCH: Okay. Thank you, Chair.

CHAIR COCHRAN: You're welcome, Mr. Couch. Mr. Verkerke, you can carry on. Thank you.

MR. VERKERKE: Thank you. So the 32 services we talked about in a couple of slides ago, this is the list of them. There's some missing that I already know about, a number of services we provide to the Police Department are not included in here, and of course, this is just the outward-looking, the business-facing services. Behind the scenes there are all those technical services, data backups, connectivity, security, and the list goes on and on, monitoring of connectivity to the Internet and what have you that is implied in these services that we provide to the departments. Project portfolio, I don't really want to go through each one of 'em, but just listed to give you an idea of what our projects that we're working on or that we expect to come up in the next 18 months or so, what that looks like. That list is growing every day, faster than we can complete tasks on this list, so it'll be larger next time we talk.

CHAIR COCHRAN: One moment, Mr. Verkerke, I just saw a real…as wordy as all that was, but at the far corner, right, my right, it says Maui Police Department Body Worn Cameras, a pilot. So currently MPD is trying out body worn type cameras like is it on their pocket holder or where…*(inaudible)…*?

MR. VERKERKE: They're not trying them out yet. They have talked to us about the desire to do a pilot for that, but we kind of had to ask them to give us a little bit more time, that we were really tied up in many projects that the resources weren't available to help 'em appropriately, 'cause when we do a pilot we'd like to do it right so that it has a fair result whether or not it's a viable technology, and that means that you have to provide support and resources as if it is a production system to make sure that everybody really understands the impact of introducing that new capability. So this is on the wish list.

CHAIR COCHRAN: Okay.

MR. VERKERKE: We probably expect to start on that sometime in 2015, early 2015.

CHAIR COCHRAN: Okay. Thank you. That's quite a list of projects going on there.

MR. VERKERKE: Yeah.

CHAIR COCHRAN: Thank you, Mr. Verkerke.

MR. VERKERKE: So in order to be able to do that, you know, we need to maintain, as we've been saying, a complex infrastructure. There's a number of data centers, we have a data center, of course, in this building. We have a data center that's in the Wailuku Police Station, and we're beginning to develop a disaster recovery site, in the Kihei Police Station there's some space for us there so that we have failover. The data center in this building and the Wailuku Police Station is quite, packed quite tightly so we don't have the ability to make those two be failover locations for each other, but fortunately, we have some space in the Kihei Police Station where we can do that. So these are, you know, just pictures of racks of servers and communication switches, and our phone system, the orange switches in the middle picture there are our phone system. Our data gets stored there. And this is just to kind of mess with you to show you a chart of our infrastructure. I just want to give you a little bit of appreciation what our network guys are looking at every day and dealing with, and without pointing out there's at least four or five different technologies in here: fiber optic, wireless, microwave, T1, frame relay. There's some places where we have what's called free-space optical, it's kind of like fiber cable without the cable, we just do it through the air, it's kind of interesting. So this is what they deal with every day and try to maintain it and make sure it all works right. This is kind of how it, how it maps out on the three islands. I don't have the ability to zoom in, but in Central Maui you may be able to see a little bit of light blue there, that's all the local connections from central points. There's so many offices in Wailuku, Kahului that have their fiber connection back to this building or back to key sites centrally. But we have the added challenge of having to provide all that connectivity and all that service on three islands, crossing water, and you know, crossing water is

a challenge for data traffic so, and of course, providing services is a challenge. The dark blue is the infrastructure that was provided to us and is continued to be provided to us through the franchise agreement for Time Warner Oceanic Cable, but you can clearly tell that they're not connected on the three islands, and even Hana, way out the right side of the screen is kind of separate so we have these kind of orange lines, microwave connectivity, in between. You've heard us talk about the cooperation of the Police Radio Project, the infrastructure they've been building. It's been a tremendous boon to us 'cause we can provide much better and much more reliable connectivity between these islands so we have information capability. Some of the red lines in the middle of this, the Waiehu Golf Course is an interesting location. It's kind of tucked in between or behind the sand dunes and there's not really good line of sight from anywhere in Kahului, Wailuku to create a connection so we had to bring that down all the way from Pukalani, and you know, it's a light beam hitting a target, and the target is maybe the size of a quarter or something like that so try that aim that from Pukalani across the Central valley to the golf course. You know, my guys are really good so I'm very proud that they've been able to do that. But it's, you know, it sounds glamorous working in IT for the County, but it's really an actual job, you know, and it's a tough job. Cyber security, of course, I can take you back to the slides that showed Kalama Park. We all know about Kalama Park, and there's all kinds of security issues there some time. The same applies to, of course, IT, and we've had the opportunity to talk with the PIA Committee on cyber security, and it's an everyday concern for us. It complicates our lives a lot. Nationally, we're in a guarded state. It's been worse, could be better. I'm not sure if the threat is back to perhaps elevated because the noise level on cyber security issues is definitely picking up. As you can see from this slide, in October of this year, we had a 300 percent increase compared to last year on attempts to contaminate our environment through phishing and other attempted access, probes, or what have you. It's not going to get any better; it's just going to get worse, and worse, and worse. So it means that we gotta try and get ahead of that, and by definition security is largely a reactive business because you don't know what somebody else is going to think of all the time so you try to plug the holes as best you can, but you will always find yourself scrambling to react. What we are really working on in the coming year is to protect our environment as much as we can by implementing a number of measures to prevent, you know, the not extremely sophisticated attempts from getting through, but there will always be people that are just so good at doing the wrong things that we're going to have to deal with that.

COUNCILMEMBER COUCH: Madam Chair?

CHAIR COCHRAN: Yes, Mr. Couch?

COUNCILMEMBER COUCH: And I know this is right up Mr. Hokama's bailiwick too 'cause that's his big thing is cyber security nationwide. When you talk about somebody trying to break in, you're not…we're no longer talking about, you know, the 13-year-old in the basement and playing on their computer. We're talking about multinational groups, if you will, or even national groups trying to undermine security, is that what we're looking at right now?

MR. VERKERKE: We're looking at all of it actually, you know. You still have the 13-year-olds that just for grins trying to see if they can get in. You have, of course, the economic criminals that are

trying to extract money in one way or another by either gaining access to your bank information or by, you know, this ransom where there's been a lot of publicity about that recently, and yeah, the nation/state perpetrators. Sony ring a bell? You know, speculation is that there's a combination of economic and political motivation behind that, so it's a very, very varied landscape of threats that we have to deal with, and fortunately, we have the ability to rely on organizations who specialize in that, because on our own we would really be in serious trouble because you can't keep up with the sophistication of these attacks. So we rely on others; we rely on vendors who develop products that are supposed to really reduce your vulnerability to that so, you know, and those products are getting more sophisticated and more reliable so I think we have opportunities to reduce the risk, but there's…I don't really think we can eliminate risk, but, you know, we're trying to do the best, and we really have to call in the experts outside, and of course, that's all cost associated with that, but I think it's cost well expended compared to the risk of not doing anything so.

CHAIR COCHRAN: Thank you. Done, Mr. Couch?

COUNCILMEMBER COUCH: Thank you.

CHAIR COCHRAN: Okay. Okay.

MR. VERKERKE: Thank you. So I talked about this already a little bit. You know, we try to become proactive rather than reactive because it's like trying to keep those plates spinning, you know, in the old variety shows. It just really doesn't work very well. So we're looking at, and Karen has been really, extremely helpful since she's come onboard in advising us, and selecting a number of critical security controls and solutions we can implement so, hopefully, we can reduce our exposure over the next year by quite a large margin. And the last time we were here talking about that in Mr. Hokama's Committee, we are looking to take advantage of best practices and of all the information that's out there, so we've completed this self-assessment in the context of the NIST cyber security framework, and NCSR framework so we've submitted that, and we'd like to come back probably at the end of January, if we can, and share the results of that assessment, and the recommendations moving forward on what to work on first, and you know, the low-hanging fruit kind of thing and highest risk, how we can address that. So and NIST of course was initiated by directive from the President, and everybody's is really working on making that a single national framework to measure yourself with, and to prepare yourself to be as protected as possible so we take this very serious, and as we should. And we talked about this a little bit already too, you know, here's the results that we're looking for from those various assessments, and that will become an annual thing so that we can achieve a certain maturity. You know, typically these results of the self-assessment come back in a maturity ranking, and we expect a maturity ranking right now to be fairly low. Then year after year as we submit the results and evidence of the practices that we've implemented, and the policies, and tools that we've deployed, we expect that maturity level to rise to a point that fits in with the expectations for our particular industry, if you will, you know, local, state and local government. So we're hoping that the assessment results and the evaluation will come back with a roadmap on how to get to that point. Lots of policies need to be updated, and of course, we need to find ways to enforce

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the policies. It's just not enough to issue a policy, but we have to have the tools and organizational determination to follow up and enforce those policies. And that means, for a lot of you, just things will get a little bit more restrictive, but you know, that's just the times we live in, I think. Now again, here's another chart to just kind of confuse you and it confuses us too, but really, what we're trying to show here that it's a continual effort, you know. What did you do? How well does it work? Where can it be improved? How do the expectations and demands change? Where do you need to go due to meet those demands and improve your service? And it will never stop, and we recognize that, and of course, that means that the resources will always have to be available, and they may always grow in certain areas. It's just a cost of doing business. There's no way around it anymore. I'm not sure anybody's ready to go back to Post-its as a means of communicating. And so we try to reflect the world we live in and the needs of the organization, and these are the four strategic initiatives in the strategic plan that's being reviewed right now that we want to have approved by the end of the month, and it will be part of the Budget package to kind of explain what we're doing. Obviously expand IT Service focus to support organizational strategies. You know, we really hope through our project portfolio to make sure that we are responsive to the organizational strategies, and hope to help prioritize the various projects that need to be on the take, and to implement those strategies. Operational excellence through reliable and secure IT infrastructure, hopefully, I've been saying this for years now, hopefully this makes a little bit more sense when I say that. It needs to be reliable. It needs to secure. It needs…we do our job best when nobody notices us, because then, you know, connectivity is there, and the availability of services, the data can be found, and everything like that. We're not quite there yet, clearly, but that's our goal. So that operational excellence is really we'd like to not be noticed. And to do that we need to have a talented and engaged workforce and we've talked about that, the staffing levels and everything else, the challenges that we have here on the islands and in the State of Hawaii to some degree, attracting the expertise. We like to develop that, you know, develop that talent and that engaged workforce internally. It's really, without that, any of the other ones don't really make a lot of sense. And then the last one, to find a stable financial base. We'd really like to get everybody thinking about IT as just a cost of doing business and not as an extra, or a luxury, or what have you, but we'll have plenty opportunity to talk about that, I hope. So what are our challenges? We've talked about it a little bit. You know, service demands keep increasing. Everybody, the public and the departments, and the County workers all expect to be able to do everything that you hear about and read about. We try to deliver that, but that infrastructure behind it, all these other hidden services that are necessary to be able to deliver that, are taking up a lot of our time and require attention. We have, of course, we're still struggling with the age of a lot of the information systems that we have. The economic downturn really set us back quite a bit and we're still struggling to get out of that. I don't want to go in too many details 'cause there's a security component with the age, and of course, that's really a very important factor that we can't allow that to happen again, the implied security vulnerability that it represents. And the resources staff, we have been able to attract experienced people, but they all coming or many of them are coming to Maui kind of in the third stage of their career, you know, winding down, wanting to settle down on Maui and work for the County for a few years. It means that we'll have turnover all the time just because of the demographics associated with that, and the local talent pool for the needs that we have is pretty limited. We're not hardcore code writers. We don't do lot of webpage

development. We, you know, my son just…he's still kind of in the educational process, and for most of his age group, writing games is much more exciting than doing business applications, you know, boring. So we're struggling with that and so it's kind of a fact that we have to recognize.

COUNCILMEMBER COUCH: Madam Chair?

CHAIR COCHRAN: Yes, Mr. Couch.

COUNCILMEMBER COUCH: You mentioned something, Mr. Verkerke, about the security risks. I think it might be important for the Committee to know those. Is there something or maybe, Mr. Hopper, is that something that we might need to or even able to go into executive session for?

MR. HOPPER: I want to look into that more and at the very least we would probably need to agendize something like that. I don't think there was a reference to that on the…an executive session for today. So I would probably, I mean, if you're getting legal advice that's one of the exceptions, but we'd have to look at the other exceptions, and would probably like to post something like that on an agenda.

COUNCILMEMBER COUCH: Okay. And the reason I ask, Madam Chair and Mr. Verkerke, is that I think that issue there has come up in Budget, and just need to know where we are, where our risk is versus our, you know, we're trying to save money versus risks so that's something I think we really need to take a look at and discuss.

MR. VERKERKE: Mr. Couch, I'm, as I said earlier, I'm hoping to be able to come back to you, you know, late January with the results of the security assessment. I think that would be a very good opportunity to get into more detail and post a meeting with the opportunity to go in executive session that we can get in all the detail that you might want to hear about.

COUNCILMEMBER COUCH: Okay. Good.

MR. VERKERKE: Hopefully that will…

COUNCILMEMBER COUCH: 'Cause, yeah, that's something I think we really need to pay attention to.

MR. VERKERKE: I agree with you completely. Yeah.

COUNCILMEMBER COUCH: Okay. Thank you. Thank you, Chair.

CHAIR COCHRAN: Thank you, Mr. Couch and Mr. Verkerke. I agree, and so yes, Mr. Verkerke, your request, I will take note and looking forward to it. I will definitely check my calendar and make

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some room for you to attend, and also we can post for executive session. But as I'm told from a previous questioning maybe, Mr. Hopper, that I guess there is no need for posting technically --

MR. HOPPER: Well, no.

CHAIR COCHRAN: --via this body. Is that true or is that…

MR. HOPPER: I'm saying that if the discussion, this was…seemed to be a general discussion and if we're going to get into the specifics of a, of the security risks of the County or additional information that may not have been on the agenda. We don't always have to post --

CHAIR COCHRAN: Right.

MR. HOPPER: --I understand that, but it is a matter of course, if we anticipate it it's usually posted, and you know, that's not the reason you couldn't go into executive session today, but I think that making sure something like that is described on an agenda as an item --

CHAIR COCHRAN: Uh-huh.

MR. HOPPER: --would be important, and as a matter of course when that's done, when you know that's a possibility, it is best practices to have that on the agenda, but I want to be clear that's not the reason you couldn't go into session today. It's to check into this a bit more, and in fact, it sounds like there's additional information that the, that the staff has to provide to you pending a study right now.

CHAIR COCHRAN: Yes. Thank you, thank you, Mr. Hopper.

COUNCILMEMBER COUCH: Thank you.

CHAIR COCHRAN: Okay, Members. And you have further discussion?

MR. VERKERKE: Yup.

CHAIR COCHRAN: Okay.

MR. VERKERKE: Just a couple more. So what we're trying to do is change how we approach this because clearly we haven't been as successful as we'd like to have been in addressing some of these concerns and getting the resources that we need so we're trying to, you know, think out of the box, and do things a little bit different, and present them to you in a way that makes sense to you, and that you can support for us over the long term. So the critical infrastructure, you know, we're looking and we have been working on virtualizing systems. I'm sorry if the font is pretty small, but by the time the slide is done it will be pretty full, and it wouldn't all fit on the same slide. One of our big challenges is to manage the enterprise capacity, and what we mean by that is just the amount of storage, and connectivity, and support for applications that we need. We

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also want to avoid falling into the situation that we are trying to get out of now that funding was just not available for economic reasons to maintain a minimum level of currency on the infrastructure, and also what we need to do is kind of find a way to use IT governance, and IT governance is kind of a term that could mean anything to everybody and anybody. What we really looking to do is use the governance to have the organization, and IT and Council be in a conversation all the time about priorities, about the importance about the quality of service that we deliver so that we can do the right things at the right time, in a way that this organization can sustain. And of course, that's one cog. The second cog is the staff augmentation that we need to look at. We've been challenged in getting the resources in place and filled to provide all these services so what we're looking to do is shift quite a bit of that, and especially the repetitive, routine, predictable tasks to a lifecycle managed services arrangement with outside vendors so that they…we can offload a lot of the routine tasks that take up the bulk of our time. I would say probably 80 percent of our time is dealing with things that somebody else is as well or better equipped as we are to take care of, and if we can shift that away to a predictable service model based on lifecycle replacement and maintenance of equipment, we deal with the security, we deal with the currency of the infrastructure, we deal with the service reliability for our end users, and it will allow us to look at the value-added services that we want to provide, help the departments go the extra mile if they can, and getting the right technology in their hands to provide, you know, excellent service to the community. And then the third cog, and it all ties together, is to look at, you know, handing some of our maintenance and support requirements in the technical operations area, you know, our servers, our data storage, off into the Cloud, do some managed data center hosting so that, again, it's some of these repetitive, predictable services and maintenance requirements that we could contract with third parties. That's kind of where the whole business is going. The idea of Cloud computing is to hand off the maintenance and responsibility of keeping things operational to third parties so that we can focus on making sure that we, you know, really deliver outstanding services and not just be busy with keeping things running. And data storage management is, you know, we are learning that there's maybe three types of data that we store: stuff that everybody gets to everyday, stuff that you don't get to as often, and archival stuff that you only need to get to if something really exceptional happens. We treat it all the same and that's expensive. There's much cheaper ways of storing stuff that you hardly every need to get to, and the Cloud is a very good opportunity for us to reduce the onsite responsibilities for data storing and data retrieval, and not have that mixed in with things that we need to be able to get to all the time. So there's, you know, IT is evolving in general, and we're learning how other people are solving some of the same problems we're faced with, so these may be some of the opportunities, if we kind of change our thinking, that we can take advantage of. And similarly with enterprise application management, you know, really look at how across the board we can consolidate and simplify the suite of services we offer so that we don't have these pockets of similar but different capabilities that we're having to support now. Okay. Hopefully, I've added to your understanding rather than added more confusion, but here's the question to…an opportunity to ask some questions to try to get some more clarity on what I've been trying to say here.

. . . END OF PRESENTATION . . .

CHAIR COCHRAN: Thank you, Mr. Verkerke. And Members, if you have…do you have further need for detailed clarification of Mr. Verkerke and the Department? I know, Mr. Couch, you asked questions along the way to help us. But Mr. Verkerke, if you don't mind, can we learn a little bit more about Karen who's next to you.

MR. VERKERKE: You bet. Yup.

CHAIR COCHRAN: I don't…we never get the opportunity for your staff people to come and join us.

MS. SHERMAN: Hi. I'm Karen Sherman, Information Security and Privacy Officer. I joined the team back in August, and I've been charged with assisting with the information privacy and security so cyber security related items. Some of the first things, and Jacob mentioned that we've been working on, is really kind of getting an understanding of where we currently are in our environment so that we can assess our current…where we are and figure out a path to move forward. We started that with, and Jacob mentioned, in this framework which is…was originally signed by the President back in February of 2013, and last, just this past year in 2014 in February, he…the organization finally came out with what the recommendations are. And the team of people that were put together were both public sector and private sector leaders to come up with a non-vendor specific, in other words, agnostic set of guidelines and rules for not only government, but all businesses to take advantage of in order to secure their environments more specifically. So that's what we've been working on at this point. We did complete a questionnaire survey back in November, and what Jacob discussed earlier was that at that point they're expected to provide us that guideline and that feedback in January, and at that point we'll have a much better understanding of where we are. The wonderful thing is that there's a great team here. Everybody's moving forward and working towards getting us more secure, understanding where we are and the limitations that we've had in the past, and from that point creating that path and that roadmap for us to move a little bit farther down the road, and again, like Jacob mentioned, thinking out of the box with some of our capabilities. Thinking that we have limited pool here and what we need to do in order to take advantage of the staff we have and then augment that where we can in some different ways.

CHAIR COCHRAN: Great. Thank you, Ms. Sherman, and welcome on board.

MS. SHERMAN: You're welcome. Thank you very much. Thank you. It's great to be here.

CHAIR COCHRAN: Thank you for your expertise. Members, any need for further questions of the Department? Mr. Hokama?

COUNCILMEMBER HOKAMA: I appreciate Mr. Verkerke's efforts in helping us to reach a point where we can have a financial number. I would agree with him that what they do provide is value, and I would like to have…I applaud his efforts to have it quantified so that when he comes to us as an appropriation request we can kind of make sense of it, but I would agree with him it is value, and we're going to need to see how we're going to one, capture the resources to provide

that value that not only the Department but the community is asking the County to provide, but at the same time I for one, have no problem putting the resources to protect that valued information. There's other people out there with not good intentions that want that value of information also, and you know, it's part of our responsibility to protect that privileged information on our residents' behalf. So I look forward to their findings in January, and look forward to their budgetary submittals in the upcoming months so thank you for your good work.

MR. VERKERKE: Thank you.

CHAIR COCHRAN: Thank you, Mr. Hokama. Members, any further discussion needed? Well, I want to say that I just want to thank the Members and everyone participating, and this is my final IEM meeting of the year, and so, or the term, and I want to thank everyone who participated. I think we got a lot done. I thank everyone's participation. But want to thank Mr. Verkerke and Department here today to, you know, get us up to speed on what Mr. Couch is more apt to know in regards to IT stuff, and I just want to thank you and looking forward to our next year Budget Session too. Yes, Mr. Hokama?

COUNCILMEMBER HOKAMA: I hate to drag on your meeting longer, but --

CHAIR COCHRAN: No, no problem.

COUNCILMEMBER HOKAMA: --I need to ask Mr. Verkerke this question, because it's not the…the answer's not the same for everybody, but from the County's perspective, what is the broadband issue from our, from just our perspective? Is it the width, the ability of speed to…for transmission purposes to capture or send data? Or connectivity is the key primary component of our broadband issue? Can you tell us what is, for the County's perspective, the broadband issue?

MR. VERKERKE: Mr. Hokama, the challenge that we have in providing and maintaining broadband connectivity throughout our system deals with the fact that we are geographically quite unique. And I don't mean to be disrespectful, but Hana is an isolated community also, and so we have four isolated pockets of networks and connectivity that all require adequate bandwidth between them to be able to provide these services. As I mentioned, we have been able to make good progress in Hana and Molokai thanks to the Police microwave radio upgrade project. Lanai is scheduled to see the benefits of that, I think, in the next year. Once that's in place, it won't be what people really believe to be high-speed broadband bandwidth like you would have if you have a fiber connectivity, you know, a gigabit and up, but compared to what we have now, the microwave will provide us the kind of capacity that at least will make video conferencing and things like that possible. The other aspect of broadband that concerns me is the age and with it the diminishing outlook for reliability of the interisland fiber connectivity, and that has kept me from embracing Cloud computing because I am really worried that if something happens we don't have access to our functionality or to our data if we put too much in the Cloud. Now I understand that there are projects ongoing to improve some of that, but mostly the installation of new fibers seems to be focused on trans-Pacific cable and not necessarily interisland. So I'm trying to find out if my concern about the interisland cable is justified, and if so, what is the

outlook for the future, and that's really something that really limits our options, I think, from what typically in the industry is being considered to be an obvious solution, and that's put as much as possible in the Cloud because of presumed cost savings and what have you. And if you can't get to it then it doesn't do you any good --

COUNCILMEMBER HOKAMA: That's right.

MR. VERKERKE: --and I'm really concerned about that, but maybe more than I need to be, and we're trying to find out as much as we can about what the real risks are there.

COUNCILMEMBER HOKAMA: No, I appreciate that response, Mr. Verkerke, because I have my concerns about the Cloud also because while we may not be the direct maintenance on our data somebody has to maintain the Cloud on our behalf.

MR. VERKERKE: Yeah.

COUNCILMEMBER HOKAMA: So I understand what you're saying and I would agree with you.

MR. VERKERKE: Yeah.

COUNCILMEMBER HOKAMA: The reason I ask that is because people are asking people like myself what part of the broadband infrastructure are you really concerned about? And that's why I asked you the question because --

MR. VERKERKE: Yeah.

COUNCILMEMBER HOKAMA: --there's still part of the 48s that still have no cell or broadband connectivity yet, I mean, it's not just the islands have issues, but I mean, there's issues within the 48s currently without communication technology so I can appreciate.

MR. VERKERKE: In the very long term, there may be an opportunity to improve that because there is, and there has been for a number of years now, a very determined effort from the Federal government to implement what's known as FirstNet, and it's really focused on first responders, public safety, but its intent is to bring broadband to the belt, in other words, have broadband available to people out in the field providing public safety services and what have you. And you know, that's 10, 15 years out perhaps, but when that happens, the infrastructure should be in place to support public and commercial bandwidth delivery to people anywhere like their cell phones now, and so that may be an opportunity to deal with those gaps in coverage that you mentioned and some of the weaknesses that we have in our infrastructure. But boy, that's a big job, and I'm glad I'm not really in charge of that.

COUNCILMEMBER HOKAMA: Thank you very much for your comments there, Mr. Verkerke. Chair, thank you for your indulgence.

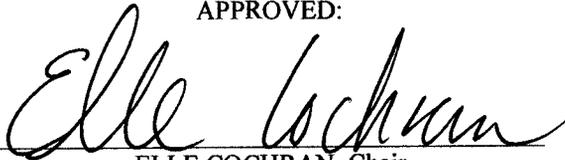CHAIR COCHRAN: Thank you. Oh, yeah, not a problem. Thank you.

COUNCIL MEMBERS VOICED NO OBJECTIONS. (EC, SC, RC, DC, DG, RH)

    ACTION: **DEFER pending further discussion.**

CHAIR COCHRAN: Well, Members, it looks like without further discussion or any items on the agenda then this meeting is now adjourned. . . .*(gavel)*. . .

ADJOURN: 2:32 p.m.

APPROVED:

ELLE COCHRAN, Chair
Infrastructure and Environmental
Management Committee

iem:min:141215:jz

Transcribed by: Julie Zaner

CERTIFICATE

I, Julie, hereby certify that the foregoing represents to the best of my ability, a true and correct transcript of the proceedings. I further certify that I am not in any way concerned with the cause.

DATED the 7th day of January, 2015, in Wailuku, Hawaii.

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Julie Zaner