I MINA'TRENTAI SINGKO NA LIHESLATURAN GUÅHAN
Informational Briefing/ Oversight Hearing / Roundtable Hearing

STANDING COMMITTEE / SENATOR	HEARING	COMMITTEE REPORT	HEARING DATE	DATE COMMITTEE REPORT FILED	NOTES
Committee on Federal and Foreign Affairs, Telecommunications, Technology, and Labor	Informational Briefing	Office of Technology.	5/15/20 1:00 p.m.	7/23/20 2:31 p.m.	

July 23, 2020

The Honorable Tina Rose Muña Barnes
Speaker
I Mina'trentai Singko na Liheslaturan Guåhan
163 Chalan Santo Papa
Hagåtña, Guam 96910

VIA: The Honorable Régine Biscoe Lee
          Chairperson, Committee on Rules

Subject: Committee Report on Virtual Informational Briefing with Office of Technology

Dear Speaker Muña Barnes,

Buenas yan Håfa adai! Transmitted herewith is the Committee Report on the Virtual Informational Briefing with the Office of Technology held on May 15, 2020.
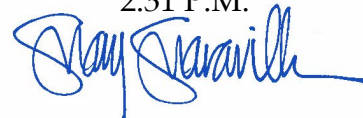
Respectfully,

Senator Régine Biscoe Lee
Chairperson

**COMMITTEE ON RULES
RECEIVED:**
July 23, 2020
2:31 P.M.

**COMMITTEE ON FEDERAL AND FOREIGN AFFAIRS,
TELECOMMUNICATIONS, TECHNOLOGY AND LABOR**

I MINA'TRENTAI SINGKO NA LIHESLATURAN GUÅHAN
35TH GUAM LEGISLATURE

Senator Régine Biscoe Lee
Chairperson

COMMITTEE REPORT

Virtual Informational Briefing

Office of Technology

May 15, 2020 at 1:00 p.m.

- Updates on cybersecurity measures;

- Status of proposed actions and plans regarding the government of Guam's establishment of an online interface amid the COVID-19 public health emergency; and

- Prospect of establishing programs to provide technology and internet access to Guam residents, bridging the island digital divide.

Régine Biscoe Lee <senatorbiscoelee@guamlegislature.org>

FIRST NOTICE OF VIRTUAL INFORMATIONAL BRIEFING — Friday, May 15, 2020 at 1:00 p.m.

Régine Biscoe Lee <senatorbiscoelee@guamlegislature.org>   Fri, May 8, 2020 at 4:45 PM
To: Régine Biscoe Lee <senatorbiscoelee@guamlegislature.org>
Cc: frank.lujan@otech.guam.gov
Bcc: PH Notice <phnotice@guamlegislature.org>, "Christian F. Valencia" <cfvalencia@guamlegislature.org>, Jean Cordero <jean@guamlegislature.org>, Jenelle Aguilar <jaguilar.senatorlee@gmail.com>, Kiana Yabut <kyabut.senatorlee@gmail.com>, Michelle Mafnas <mmafnas.senatorlee@gmail.com>, Orleen Villasoto <orleen.villasoto@guamlegislature.org>, Phill Leon Guerrero <phill.senatorlee@gmail.com>, Senator Régine Biscoe Lee <senatorbiscoelee@guamlegislature.org>, news@sorensenmediagroup.com, Chris Barnett <chris@kuam.com>, Chris Malafunkshun Barnett <malafunkshun@kuam.com>, "Dana M. Williams" <dmwilliams@guam.gannett.com>, "Dana M. Williams" <dmwilliams@guampdn.com>, "Eugenio, Haidee" <haidee@postguam.com>, "George, Duane M" <dmgeorge@guam.gannett.com>, John O'Connor <john@postguam.com>, Kandit News Group <news@kanditnews.com>, Kevin <kevin@spbguam.com>, KUAM News Reporters <reporters@kuam.com>, Nick Delgado <nick@postguam.com>, Pacific Island Times <pacificislandtimes@gmail.com>, Patti Arroyo <parroyo@k57.com>, The Post Editor in Chief <editor@postguam.com>, Troy Torres <troy@kanditnews.com>

Buenas yan Håfa adai:

Please find attached and copied below a notice from the Office of Senator Régine Biscoe Lee regarding a Virtual Informational Briefing on Friday, May 15, 2020.

Thank you for your attention to this matter. *Si Yu'os Ma'åse'!*

Respectfully,

Christian F. Valencia
Committee Director

Office of the People ● Senator Régine Biscoe Lee
Committee on Federal and Foreign Affairs,
Telecommunications, Technology and Labor

35th Guam Legislature
I Mina'trentai Singko na Liheslaturan Guåhan

Tel: (671) 472-3455
Email address: cfvalencia@guamlegislature.org

FOR IMMEDIATE RELEASE

MEMORANDUM

To: All Senators, Stakeholders, Media

From: Senator Régine Biscoe Lee
             Chairperson, Committee on Federal and Foreign Affairs,
             Telecommunications, Technology, and Labor

Subject: First Notice of Virtual Informational Briefing - Friday, May 15, 2020 at 1:00 p.m.

Buenas yan Håfa adai! Please be advised that the Committee on Federal and Foreign Affairs, Telecommunications, Technology, and Labor ("Committee") will convene a Virtual Informational Briefing on **Friday, May 15, 2020**, via Zoom Conference platform on the following:

Office of Technology

·   Updates on cybersecurity measures;

·   Status of proposed actions and plans regarding the government of Guam's establishment of an online interface amid the COVID-19 public health emergency; and

·   Prospect of establishing programs to provide technology and internet access to Guam residents, bridging the island digital divide.

The Virtual Informational Briefing will broadcast on local television, GTA Channel 21, Docomo Channel 117/60.4 and stream online via *I Liheslaturan Guåhan*'s live feed. Individuals wishing to participate in the Virtual Informational Briefing to provide testimony may contact the Office of Senator Régine Biscoe Lee via email at senatorbiscoelee@guamlegislature.org or 472-3455 <u>**no later than May 13, 2020**</u>, for further guidance.

If written testimonies are to be presented at the Virtual Informational Briefing, the Committee requests that copies be submitted prior to the public hearing date and should be addressed to Senator Régine Biscoe Lee, Chair of the Committee. Testimonies may be submitted via drop-box or email to the Office of Senator Régine Biscoe Lee at the aforementioned addresses.

Individuals requiring special accommodations, auxiliary aids, or services may contact and submit their request to Mr. Christian Valencia at the Office of Senator Biscoe Lee at 163 Chalan Santo Papa, *Hagåtña*, GU 96910, by phone at 472-3455, or by email at senatorbiscoelee@guamlegislature.org.

We look forward to your attendance and participation. *Si Yu'os Ma'åse'!*

📕 **05.08.2020_PH Notice 1 - OTech Info Briefing.pdf**
199K

COMMITTEE ON FEDERAL AND FOREIGN AFFAIRS, TELECOMMUNICATIONS, TECHNOLOGY AND LABOR

I MINA'TRENTAI SINGKO NA LIHESLATURAN GUÅHAN
35TH GUAM LEGISLATURE

Senator Régine Biscoe Lee   May 8, 2020
Chairperson

FOR IMMEDIATE RELEASE

<u>MEMORANDUM</u>

To: All Senators, Stakeholders, Media

From: Senator Régine Biscoe Lee
                 Chairperson, Committee on Federal and Foreign Affairs,
                 Telecommunications, Technology, and Labor

Subject: First Notice of Virtual Informational Briefing - Friday, May 15, 2020 at 1:00 p.m.

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We look forward to your attendance and participation. *Si Yu'os Ma'åse'!*

Régine Biscoe Lee <senatorbiscoelee@guamlegislature.org>

SECOND NOTICE OF VIRTUAL INFORMATIONAL BRIEFING — Friday, May 15, 2020 at 1:00 p.m.

Régine Biscoe Lee <senatorbiscoelee@guamlegislature.org>   Wed, May 13, 2020 at 8:00 AM
To: Régine Biscoe Lee <senatorbiscoelee@guamlegislature.org>
Cc: frank.lujan@otech.guam.gov
Bcc: PH Notice <phnotice@guamlegislature.org>, "Christian F. Valencia" <cfvalencia@guamlegislature.org>, Jean Cordero <jean@guamlegislature.org>, Jenelle Aguilar <jaguilar.senatorlee@gmail.com>, Kiana Yabut <kyabut.senatorlee@gmail.com>, Michelle Mafnas <mmafnas.senatorlee@gmail.com>, Orleen Villasoto <orleen.villasoto@guamlegislature.org>, Phill Leon Guerrero <phill.senatorlee@gmail.com>, Senator Régine Biscoe Lee <senatorbiscoelee@guamlegislature.org>, news@sorensenmediagroup.com, Chris Barnett <chris@kuam.com>, Chris Malafunkshun Barnett <malafunkshun@kuam.com>, "Dana M. Williams" <dmwilliams@guam.gannett.com>, "Dana M. Williams" <dmwilliams@guampdn.com>, "Eugenio, Haidee" <haidee@postguam.com>, "George, Duane M" <dmgeorge@guam.gannett.com>, John O'Connor <john@postguam.com>, Kandit News Group <news@kanditnews.com>, Kevin <kevin@spbguam.com>, KUAM News Reporters <reporters@kuam.com>, Nick Delgado <nick@postguam.com>, Pacific Island Times <pacificislandtimes@gmail.com>, Patti Arroyo <parroyo@k57.com>, The Post Editor in Chief <editor@postguam.com>, Troy Torres <troy@kanditnews.com>

Buenas yan Håfa Adai:

Please find attached and copied below a notice from the Office of Senator Régine Biscoe Lee regarding a Virtual Informational Briefing on Friday, May 15, 2020.

Thank you for your attention to this matter. *Si Yu'os Ma'åse'!*

Respectfully,

Christian F. Valencia
Committee Director

Office of the People ● Senator Régine Biscoe Lee
Committee on Federal and Foreign Affairs,
Telecommunications, Technology and Labor

35th Guam Legislature
I Mina'trentai Singko na Liheslaturan Guåhan

Tel: (671) 472-3455
Email address: cfvalencia@guamlegislature.org

FOR IMMEDIATE RELEASE

<u>MEMORANDUM</u>

To: All Senators, Stakeholders, Media

From: Senator Régine Biscoe Lee
            Chairperson, Committee on Federal and Foreign Affairs, Telecommunications, Technology, and Labor

Subject: Second Notice of Virtual Informational Briefing - Friday, May 15, 2020 at 1:00 p.m.

Buenas yan Håfa adai! Please be advised that the Committee on Federal and Foreign Affairs, Telecommunications, Technology, and Labor ("Committee") will convene a Virtual Informational Briefing on **Friday, May 15, 2020**, via Zoom Conference platform on the following:

Office of Technology

· Updates on cybersecurity measures;

· Status of proposed actions and plans regarding the government of Guam's establishment of an online interface amid the COVID-19 public health emergency; and

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We look forward to your attendance and participation. *Si Yu'os Ma'åse'!*

📄 **05.13.2020_PH Notice 2 - OTech Info Briefing.pdf**
199K

Senator Régine Biscoe Lee   May 13, 2020
Chairperson

FOR IMMEDIATE RELEASE

<u>MEMORANDUM</u>

To: All Senators, Stakeholders, Media

From: Senator Régine Biscoe Lee
                  Chairperson, Committee on Federal and Foreign Affairs,
                  Telecommunications, Technology, and Labor

Subject: Second Notice of Virtual Informational Briefing - Friday, May 15, 2020 at 1:00 p.m.

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We look forward to your attendance and participation. *Si Yu'os Ma'åse'!*

Senator Régine Biscoe Lee   May 15, 2020
Chairperson

Virtual Informational Briefing

AGENDA

Friday, May 15, 2020
at 1:00 p.m.
Via Zoom Conference Platform

I.   Call to Order

II.   Opening Remarks/Housekeeping

III.   Introduction of Stakeholders

IV.   Presentation by the Office of Technology

- Updates on cybersecurity measures;
- Status of proposed actions and plans regarding the government of Guam's establishment of an online interface amid the COVID-19 public health emergency; and
- Prospect of establishing programs to provide technology and internet access to Guam residents, bridging the island digital divide

V.   Discussion

VI.   Closing Remarks/Announcements

VII.   Adjournment

COMMITTEE ON FEDERAL AND FOREIGN AFFAIRS, TELECOMMUNICATIONS, TECHNOLOGY AND LABOR

I MINA'TRENTAI SINGKO NA LIHESLATURAN GUÅHAN
35TH GUAM LEGISLATURE

Senator Régine Biscoe Lee   **May 15, 2020**
Chairperson

VIRTUAL INFORMATIONAL BRIEFING

OFFICE OF TECHNOLOGY

- Updates on cybersecurity measures;
- Status of proposed actions and plans regarding the government of Guam's establishment of an online interface amid the COVID-19 public health emergency; and
- Prospect of establishing programs to provide technology and internet access to Guam residents, bridging the island digital divide.

Friday, May 15, 2020 at 1:00 p.m.
Via Zoom Conference platform

SIGN-IN SHEET

NAME	AGENCY OR ORGANIZATION (IF ANY)	Please indicate with ✓		Contact Number	Email Address
		Written	Oral		
Frank L.G. Lujan, Jr.	Office of Technology	____	✓	(671) 635-4500	Frank.Lujan@otech.guam.gov
		____	____		
		____	____		
		____	____		
		____	____		

COMMITTEE ON FEDERAL AND FOREIGN AFFAIRS, TELECOMMUNICATIONS, TECHNOLOGY AND LABOR

I MINA'TRENTAI SINGKO NA LIHESLATURAN GUÅHAN
35TH GUAM LEGISLATURE

Senator Régine Biscoe Lee
Chairperson

COMMITTEE REPORT DIGEST

I. OVERVIEW

The Committee on Federal and Foreign Affairs, Telecommunications, Technology, and Labor convened a Virtual Informational Briefing on Friday, May 15, 2020 at 1:00 p.m. via Zoom Conference platform to discuss **updates from the Office of Technology**.

Public Notice Requirements
Public Hearing notices were disseminated via electronic mail to all Senators and all main media broadcasting outlets on May 8, 2020 (Five-day Notice), and again on May 13, 2020 (48-Hour Notice). In addition, the Public Hearing was noticed on the Guam Legislature website at www.guamlegislature.org.

Senators Present
Senator Régine Biscoe Lee, Chairperson
Senator Kelly Marsh (Taitano), Committee Member
Senator Amanda L. Shelton, Committee Member
Senator Telo T. Taitague, Committee Member
Senator Mary Camacho Torres, Committee Member
Speaker Tina Rose Muña Barnes
Senator Jose "Pedo" Terlaje
Senator Therese M. Terlaje
Senator James C. Moylan

Individuals Who Testified Before *I Liheslaturan Guåhan*

Mr. Frank L.G. Lujan, Jr.   Chief Technology Officer, Office of Technology (OTECH)

II. SUMMARY OF TESTIMONY AND DISCUSSION

The Virtual Informational Briefing was Called-to-Order at **1:00 p.m.**

Chairperson Régine Biscoe Lee:

Buenas yan Håfa adai todus hamyo! This Virtual Informational Briefing by the Committee on Federal and Foreign Affairs, Telecommunications, Technology and Labor is hereby called to order. It is now 1:00 p.m. For the record and in accordance with Section 8107 of Chapter 8, 5 GCA, public hearing notices were sent on Friday, May 8, 2020, adhering to the five (5) working day notice and a second public notice on Wednesday, May 13, 2020, forty-eight (48) hours prior. In addition, this Virtual Informational Briefing was noticed on the Guam Legislature website at www.guamlegislature.org.

Joining me here this afternoon are Legislative Secretary, Senator Amanda Shelton, Senator Kelly Marsh (Taitano), Senator Therese Terlaje, Senator "Pedo" Terlaje, Minority Leader, Senator Telo Taitague, and Senator Mary Camacho Torres. Håfa Adai, Senators. Thank you very much for joining us.

Before we proceed with the discussion of items on our Virtual Informational Briefing agenda, I would first like to provide some General Rules of Conduct for all who are in attendance. The conduct of this hearing shall be as follows:

- All participants must abide by all rules of conduct and quality assurance standards, including broadcasting from a quiet room with little to no interruptions; broadcasting from a room with adequate lighting—specifically to ensure the participant's face is visible and not backlit; and ensuring that the participant's face is visible at all times.
- When speaking, please ensure that you are "un-muted" and that you are speaking into your microphone.
- The Chair will invite individuals who have signed up to testify.
- Individuals testifying shall first be recognized by the Chair before speaking and shall state their name for record purposes.
- The order of questioning will begin with the panel of Senators, who shall complete their lines of questioning for each respective item on the agenda.
- Each member will be allowed to pose a question to an individual testifying for a round and will be provided another round, if needed.
- Questions and testimony shall be confined to the substance or nature of the agenda. Personal inference as to the character or the motive of any Senator, or any individual testifying, is NOT permitted. Any violations of this general rule of conduct will result in removal from the Meeting Room.

Håfa Adai everyone. I have called for this virtual informational briefing to provide our people with updates regarding the Office of Technology's government-wide cybersecurity policies and measures, our plans regarding our government's online interface amid the COVID-19 public health emergency, and potential programs to bridge the island's digital divide.

This Committee seeks to continue our work to provide oversight and support to the Office of Technology and to bring this necessary and timely information to our people, to

include the ways in which GovGuam is increasing its technological capacity to meet 21st-century demands and challenges.

Colleagues and all those viewing at home, I would like to call the panel of individuals who have signed up to testify. First off, we have Mr. Frank L.G. Lujan, Jr., the Chief Technology Officer for the Government of Guam, at the Office of Technology. Mr. Lujan?

Mr. Frank L.G. Lujan, Jr., Chief Technology Officer, OTECH:

Si Yu'os Må'ase, Madam Chairman and the rest of the 35th Guam Legislature that's in attendance for this opportunity to speak about and answer questions regarding the Office of Technology.

As the Chairman mentioned, my name is Frank Lujan. My roots are from the northern village of Dededo, and I've lived in the village of Talofofo for almost 15 years.

I am the Chief Technology Officer for the Government of Guam, and I am grateful to the Leon Guerrero-Tenorio administration team for their leadership, confidence, and support for the Office of Technology during these trying times.

COVID-19 has proven to be formidable and one of our greatest challenges. This challenge has manifested not only a sickness, it also has manifested fear and anxiety as well stigma throughout our island community and the world.

I'm hopeful that this informational briefing will shed light and answer some of your questions on some of the things that OTECH is doing to support the Government of Guam as well as the people during this global pandemic. If you could put up my slide presentation, I can begin.

Okay, we can go to the next slide which has our agenda. So, I want to keep the scope of this meeting, this informational briefing focused on these three bullets. I will cover comprehensively the cybersecurity measures that we currently have in place as well as the status of many actions that we have in progress and my views of the prospects of establishing programs to provide technology and Internet access to Guam residents. Next slide please.

So, currently, these are the components that we have helping us monitor our posture in terms of cybersecurity with respect to how we protect our data here at the Office of Technology. These measures have been in place since I have come on board in 2015. I can say most of the last three measures haven't been in place until somewhere around 2016 where I was initially concerned about the fact that although we had some protection within the perimeter of our networks, we really didn't have any monitoring in place. Could we go to the next slide please?

Okay, this is a diagram of how we look today. I want to go in detail in explaining the technical aspect except for the fact that these are the components that protect us from any intrusions from the outside. In general, if you go to the next slide, we have sensors that are actually physically in our network. We have two of them for redundancy, and

they're actually monitored on a 24/7 duration-- 24 hours a day, 7 days a week. SOC stands for the Security Operations Center, and it's actually located in the cloud in the state of New York. It's owned by the Center of Internet Security, and it's also supported by the Multistate Information Analysis Center. We received tickets whenever there is any kind of detection of intrusion, and these are at the level of critical, informational, and advisory. When we first started out, we had a number of critical tickets that we had to address upfront, and I could tell you that, probably for the last six or seven months, we haven't had a critical ticket to address, which is kind of speaking to a lot of the defenses that we have in place. Next slide please.

Okay, again, what I want to talk about is the outward sensors that are actually physical sensors that were provided to us free of charge because we are a U.S. territory. All the states and territories are entitled to bring these sensors into their network and actually install them, so we have people on our team who actually monitor these sensors, and it's been, for the most part, they have been a lifesaver and timesaver for most of our team. Next slide please.

This is an example of where we're at today as far as our cybersecurity network level. The entire U.S. is monitored, and we have an alert level that's established. Next slide.

We see on the little corner the island of Guam. Next slide please.

This is a gauge for what these alert levels are. We are currently at… the color is blue. We are at the guarded level which indicates a general risk of increased hacking, virus or other malicious activity. Around this, you can see the levels. Since I've implemented this security measure, there've only been a few instances where we've moved to elevated, only for a few weeks, which is the yellow one. We've never been in orange or red, and I think for a few weeks, I do recall us going to green, but for the most part we've been at a guarded level and especially during this COVID-19 crisis, there is a lot of activity in the cyberworld with misinformation and as well as bad actors trying different networks between the states and territories. Next slide.

Another tool we use, and we get this on a weekly basis is a cyber hygiene weekly report. We go to the next slide.

This is actually a 40-page report, and this is an example of the report card that I get, and this is the more recent one up to May 10th. I get these every Tuesday morning, and I review this with my team to see where we're at. So, these are the different aspects of the report. Next slide.

The red indicates different items that we have our team focused on. Next slide.

This one is kind of a statistics on, you know, how many addresses we are actually monitoring. This represents the number of servers that we have in our server part. We have almost 300 altogether, and as you can see in the different numbers, these numbers flow. They go up and down. we've been as low as, if you look at the bottom right corner, we're at 104 vulnerabilities, and we've had this down to as many as 20 vulnerabilities. so this is…. Although this is unusually high, it's not uncontrollable at this point. Most of

These… Excuse me… Most of these vulnerabilities are really associated with the recent changes were things like support for Microsoft Windows 7 actually dropped in January, and because we have a number of desktops that are still at that level, these are vulnerabilities that we're actively mitigating. Next slide.

Sorry. Here, okay. Out of the hundred some-odd vulnerabilities that's broken down in different varying levels, we have one that's critical. Most of them right now are at the medium level, and again we've been actively working to resolve this with our team, but it's by no means under out of control if you will. Next slide please.

This is… potentially risky open services. The green indicates that most of our servers are actually in good shape. We have two that we are kind of, actually, a work-in-progress. One is the remote desktop programs as well as some of the file transfer programs that were actually, protocols, that we're actually using. Next slide.

Again, this is kind of an outlook of the different vulnerabilities that are out there in our network. Windows is one of the top ones at 28% detected. Also, the Windows 8 server site has also expired in January. So, that's another piece that we're currently working on. Next slide please.

Okay. Now, I've been talking about monitoring our network at the server level and all the different hosts that deliver our applications. This is a product that we're using currently. It's called Cylance protect, and this is, at the desktop level, most of the desktops. So, this particular slide has the dashboards that we monitor on a daily basis. This is a real-time view of what we look like with the various desktops we have today. We have almost just over 2000 desktops that are actively attached to our network. Next slide please.

Now, within the scope of this, at the desktop level, we've already monitored and analyzed over 315 million different files. This particular tool is a bit different, radically different, from tools like Norton AntiVirus as well as the other antivirus products. Most of the anti-virus products always have to actually loan in patches whenever there is a new breach that's out there in the, you know, cyber landscape if you will. This particular tool actually monitors for anomalies in the files and the different objects that are in our network itself. So far, we've actively looked at and analyzed and screened over 300 million files within our databases. Next slide please.

This is an example of when we analyzed these 300 million files. Anything that comes up as a threat, we automatically, on a real-time basis, quarantine them, and so this is an indication of, out of those 300 million that we have, we've already quarantined about 3400. Next slide please.

This particular dashboard tells us just through the colors and the percentages that we're really in good shape. If the coloring changed to yellow or green, those are all things that we'd be concerned of, and we can actually drill down to the desktop level to find out where the breaches are occurring. At this point, we're running at the high 90s, and this has been, you know, this has been where we've been operating for the last two and a half, three years. Next slide.

These are different categories of the threats that we have out there. Altogether, when we get these threats, they're classified. So we actually have four that are out there that are high, and thirty-four that are low. No medium. next slide please.

This actually depicts a different classification of the threats. They're divided up into two different sections one is actually malware... malware is detected, and the other side is actually what's called potentially unwanted programs. These are the different... The area depicts the amount of threats that we have out there, so whenever we scan our desktops, you can see that we have a number of trojan viruses that are detected in the malware side, and then on the potentially unwanted programs, there's a lot of adware that's there. Generally, we get when we're on new systems that are procured, and those are immediately quarantined to allow our system to be much more secure and much more efficient. Next slide please.

Okay. These are the top ten threats that are in the zone. These really have no meaning to the normal layperson except for our systems and our security team to look at what's actually been penetrated in our network, and with that, what the rate is. We do our research on how these infections actually occur and do our best to, kind of, mitigate that. Next slide.

This is the activity. This is a graph indicating on a daily basis the different classifications on whether the threats we see are unsafe, whether we have abnormal threats and also the counts in terms of threats that we have actively quarantined. So, as you can see, it's fairly leveled out. It's fairly flat all the way across the board. The left-hand axis is actually the count on the number of viruses, so we're still relatively low, which indicates we really have a good handle on how we're controlling attacks at the desktop level. Next slide.

So, with the agenda, this kind of concludes the cybersecurity piece. I want to move on to the next part of the agenda which is the status of proposed action plans. Next slide.

Okay. Since the COVID-19 virus has come up on our radar, if you will, we've made a lot of different adjustments on how we work it out there in the workplace, especially with our tech in terms of provisioning newer systems. One of the more recent things that have pushed out there as a as a policy, although it isn't written, I have instructions to our teams that are out there, whenever they're installing new desktops, that they adhere to certain standards which includes things like proper electrical and network security connections as well as assuring that the desktop or the laptop is installed in a position in a place that respects the the social distancing requirements. In the past, we used to be able to install desktops and laptops on a shoulder-to-shoulder basis where people are just, kind of, crammed in a particular workspace. That's no longer the case, so we are spreading them out, assuring that we're complying with the social distancing requirements.

Another part we're working to transform in all the different agencies is really the face-to-face business processes that are out there. We're in dialogue with different agencies like the Department of Revenue and Taxation as well as the Department of Public Health and Social Services, and even at the business permitting level, where we're looking at new

ways to transform the way we do business. So instead of coming in and submitting actual paper documents which lead to the potential for contamination, we're helping redesign that particular kind of workflow by using newer technologies that use digital authentication as well as technologies that actually secure the documents in place. Digital transformation of document handling includes areas such as the collections. When people apply for specific services, we're trying to get most of those services online so they could submit them online, as well as clearances, permits and one of the more voluminous kinds of documents actually includes things like building permits. Those are all things that we're working to get the applicants to actually submit those documents in a secured manner, but also in a way that allows us to or assure them that we.... Part of what our responsibilities are to ensure we have the infrastructure to store those large documents and ensure they're actually usable, and then lastly one of the proposed actions is, as you know, with the COVID-19, one of the newer terminologies is contact tracing, and today I can tell you we are doing that on a manual basis, and a lot of manual intervention is taking place. So, this is a slide where we're leveraging the GIS data that we have for Guam to help them in developing those contact tracing technologies.

If you go to the next slide, this is an example where we're beta testing this particular application. We stood up a website called safeplaces.guam.gov. Right now, if you go in there, you will only get the island of Guam, but basically when you're looking at these data points, these are actually data points that are actually on... I don't know if you can see me, but they're actually on your smartphone.

So, I do have an application right now that is tracking me, and if you go to the next slide, this actually is an application of redaction tool that has these points in there where I can actually go in and edit. These points are actually downloaded from my smartphone, and only my smartphone has this… This is in my possession. This is not in any kind of cloud-based form where, you know, a government agency like the NSA is looking at any of this data. This is a very secure platform where I'm working with our developers who actually assure that this application is usable. Overall, it's capturing the right data so we're in the process of announcing this within the next few weeks. We're hoping we can pull this out, you know, in the near future. Next slide.

Okay. This is actually, in contrast to the last slide, these are actually all these data points that were collected because I'm located here. This is the Office of Technology, and my phone's here, so you can see whenever I'm moving, it's generating a GPS point, but these are all points that... This kind of shows me the level of detail that I'm able to generate just with my phone, so what we're hopeful with is that, with these kinds of technologies, we can mature and automate the, you know, contact tracing workflow if you will. Next slide.

Okay, again, this is another example. You can see the different paths here that have been traveled, and what we hope to do is use this tool to identify the clustered areas of infections. So this has a lot of potential if we develop this correctly. Next slide.

Okay. I talked a little bit about the action plans. I want to go on to the last part of the agenda, which is the prospects. So if we can go to the next slide, and this one is... Go

ahead and click on that. This is an example of the checked... I don't know if the video will work there, but I put this particular slide up here because, over the weekend, I believe there was a cartoon out there depicting GovGuam with, you know, chisel and stone technology in the background there, and what I want to do is kind of emphasize here that by no means are we using chisel and stone, and pen and quill. We were able to get out 50,000 stimulus checks in a matter of nine hours. This is, although this printer... Nine hours might seem pretty slow, it's actually pretty state-of-the-art as far as printing goes. We want anything faster than that, then we'd have to spend more money in getting printers that I've seen go even faster, would be in the millions of dollars for those kinds of laser printer technologies, but this is an example we ran this weekend. Those checks, I believe, most of those 50,000 checks are being processed and getting out into the mail. Next slide.

Okay. Some of the things again that we're working on. The Guam Public Library system is working on two major things with their bookworm mobile to get wireless access into the bookworm mobile as well as another technology I've been discussing with the library system is they have a plan to have their patrons actually use check out mifis as if they're they were books, and so we're working with them to validate their process to assure that, you know, those technologies will actually work out there in the field. The other dilemma that we have over all is the fact that not all people on the island, all citizens have broadband or Internet access. So, I look at that as something that we need to work together as a community with the carriers because the infrastructure actually is in place to do something like that. It's more trying to understand how we can roll it out where it's effective, and it's bridging all the costs that are associated with it, so I'm still in the talking section, or you know, I'm just in dialogue, if you will, with some of the carriers regarding this concept, and I'm hoping to report more positive results on what we're doing with with these partnerships. Part of this would include transforming how we do payment collection. Although we have a framework to do collections online, there's still a lot of gaps in our processes where they still have to take the payments upfront. So we're looking at re- engineering those pieces. another thing that we're actually working on also with GSA is transforming their procurement, and rather than doing face-to-face bid openings, if you will, and the submission of actual hard documents, we're looking at having authenticating secured documents as well as as teleconferencing in these bid openings to minimize the contact, if you will. Then lastly, we're hoping to leverage more and more cloud-based services. There is a significant demand on the Internet as most people since the pandemic have seen. Our socialization has transformed to where we're doing many things on platforms such as Zoom and Microsoft Teams. Next slide.

I'm now ready to open it up to questions.

Chairperson Lee:

Great. Thank you very much, Mr. Lujan, for your presentation. It was very thorough and really kept to the agenda that we've established for this informational briefing. Can everyone hear me? Okay, just one question before I open it up to senators. I wanted to ask you whether the current measures are platform agnostic or only for a specific OS, a

specific operating system. Does OTECH or other agencies use non-Windows devices that are possible vectors for attack? In your presentation, you were mentioning Windows OS systems, so I just wanted to ask if OTECH or other agencies use non-Windows devices.

Mr. Lujan:

At the desktop level, there's not too many that are non-Windows. I'm not aware. The only thing that is not, perhaps, the Windows OS environment, we do have a number of Macs that are out there... Apple Macs, that are in the environment, and we're working to actually help secure those particular platforms, but we don't have many that are on the Linux component primarily because if we do have Linux, really, most of our Linux platforms actually are web-based applications. We do have one potential Linux exposure, but that's, you know, that's something we're working to mitigate. That's coming up in a lot of our reports right now, but it's not prevalent. It's not pervasive within our network.

Chairperson Lee:

Okay. I have a number of other questions, but I'm gonna just go around and do one round for my colleagues. I do apologize if I didn't acknowledge you earlier. Senator Jose "Pedo" Terlaje is with us, and I'd also just want to welcome our Speaker, Speaker Tina Muña Barnes as well as Senator James Moylan who have joined in the informational briefing this afternoon. Speaker, do you have any questions for Mr. Lujan? If not, I will turn the floor over to our... Sorry, Madam Speaker, did you have a question?

Speaker Tina Rose Muña Barnes:

Oh, thank you. Thank you very much, just thank you for the presentation.

Chairperson Lee:

Okay, great. Thank you. Legislative Secretary, Senator Shelton.

Senator Amanda L. Shelton:

Thank you very much, Madam Chair, and thank you, Mr. Lujan. It's nice to see you even if it's just over Zoom. It's good to see you again. I'd like to thank you for your presentation and for all the work you and your team are doing, not just and now in response to the COVID crisis, but even prior to that, and so thank you very much for what you're doing to meet our new needs as a government. I appreciated all of the information, especially about the library and the MiFi systems and the work that you're doing together. I was wondering if you have any collaboration with the Department of Education for distance learning as I understand many teachers and students are facing distance learning barriers to move on to the online platform, and so is there any work being done in that area to help us in any event that we need to continue some kind of distance learning in the next school year?

Mr. Lujan:

I haven't directly interacted with the Department of Education as of yet, although I'm very familiar with the platforms that they're using, especially on the wireless side. I think

there's a lot of potential to deliver things that are outside of the campus, if you will, but right now I haven't had that dialogue with them. I think you know they're really focused on trying to close off the this particular school year and move on to the next, but I'd be more than happy to, you know, reach out to them, and based on this conversation, I'll start the dialogue with them and see if they need any of our assistance.

Senator Shelton:

Thank you very much. That's great to hear. I'd like to continue to encourage that kind of dialogue. I know that we will be speaking to the Department of Education in the next few days. We also have a briefing with them so I'm sure that's something that they will also welcome. Very much appreciated, Thank you, Mr. Lujan.

Chairperson Lee:

Thank you, Senator Shelton. Senator Kelly Marsh Taitano, you're recognized, and then I'll go to Senator Therese Terlaje.

Senator Kelly Marsh (Taitano), Ph.D.:

Si Yu'os Ma'åse', Madam Chair, and I want to thank you, Madam Chair, for having this informational briefing. It's been very informative. I think the Office of Technology really helped me understand the level of, and the detailed type of work that the Office of Technology is doing, and you know, you covered some of the material that I was interested in, and it's working with our government agencies to help them become more user friendly-- to help us really upgrade what we can offer online so that we're doing our part to help minimize contact. There has been discussion on Instagram recently about so many of our government websites being older types of web pages and so forth. The language got too sophisticated for me pretty quick. I think they were talking about US platforms if I remember. I'm not even sure I remember that correctly, but it does seem that you're working hand in hand with a lot of the government offices to update what they offer. So in addition to what you were discussing, or perhaps if you could provide a little bit more detail, of the type of support that you can provide government agencies. I know there are a lot of them, and your staff is few, but is there something in the bigger scope when it's tackling the whole website itself, or is it parts of what they're offering at this point such as application forms and payment?

Mr. Lujan:

Well, there's a number of things that we're working on, but to be really honest, in terms of resource, we can be efficient we can be overall in supporting agencies is assuring that we have the infrastructure to host the website, and you know, encourage them to actually use the website to publish the content that they need to get their message out overall. Now, the website facing most of them today… The dated part of it is about maybe, I say two years. It's not that far out of date. When I first took over, it was, I'd say more like five or ten years out of date, and it was very static. There was not a lot of dynamic content. There's much more content. You can take a look at, for example, the Department of Public Health and Social Services website. That was pretty dynamic. It's

probably one of our well used websites to get the information on COVID and other things that the Department wants to get out there to the public, so that particular website's getting a lot of traffic, but each individual department has autonomy of how they want their websites actually to look like and how to modernize it, and so one of the particular resources that we're lacking internally is really, what I call web developer and webmaster kinds of expertise. We're relying on outside partnerships to, you know, to bridge that gap. I'm, you know, that's something that I'm hoping in future we can develop and have ownership on so we can actually drive the content where it's much more modernized. Many other states still have that kind of problem also, but I'm looking forward to kind of actually making it much better, improving it, and having more content, much more dynamic for our people. I hope that answers your question.

Senator Marsh (Taitano):

Absolutely. That was a lot of really good information, and you shared it in a way that was very easy to understand so thank you so much, and Si Yu'os Ma'åse', Madam Chair.

Chairperson Lee:

Thank you very much, Senator Kelly. I'll recognize Senator Therese Terlaje and then Senator Jose "Pedo" Terlaje.

Senator Therese M. Terlaje:

Thank you, Madam Chair. I have several questions so I'll stick to one for now, but could you just tell us… We've been here, you know, every agency has to change going forward because of the, you know, the risk and the threat of the COVID-19 virus, but did OTECH get any money independent of these agencies to just do a government-wide improvements or are we just working agency by agency on these types of changes?

Mr. Lujan:

Unfortunately, it's an agency by agency method. I mean, I do wish we would have more money, but at this point, just the way just the limitations that we have with revenues and how the budgets are distributed, we're limited in that scope. I haven't had a budget increase in about three years, but with that said, all the other agencies that do need our assistance, you know, for example, with the public health, we've been able to work with them as long as they're funding different aspects of things. We're able to engage and help support them, but to answer your question, it's an agency by agency methodology, if you will, and you know, so far it's working, and we'll continue to try and figure out how we can bridge that.

Senator T. M. Terlaje:

Did you put in a request for CARES funding? You know, for part of the CARES funding budget?

Mr. Lujan:

I did put in the request. There was a second round of requests, and I did put one in, I believe, earlier this week with the BBMR. I'm sorry.

Senator T. M. Terlaje:

Thank you.

Chairperson Lee:

Yes, we'll definitely come back around. Senator "Pedo" Terlaje, and then Senator Telo Taitague.

Senator Jose "Pedo" Terlaje:

Thank you, but some of the things that you put on, I don't really understand. Do you assist other agencies here as far as setting up their, you know, their equipment and things like that? So, you did request under the CARES, that you request for monetary, you know, funding for your agency, so what do you need that money for?

Mr. Lujan:

Well, I did request. Actually, there are a number of things that were worked for. I can share with you the details of it. I don't have enough on hand of what the… I can't call it… We call the specific line items, but I can take that offline with you if you like, and send you, you know, the details of that.

Senator Jose P. Terlaje:

Okay, thank you very much.

Chairperson Lee:

Thank you very much, Senator Terlaje, and yeah Frank, so we'll get back in touch with you after this hearing is over, and just kind of a rundown any of the questions that remain outstanding, and if you can just get back to the committee, that would be really helpful. So, Senator Telo Taitague and then Senator Mary Torres.

Senator Telo T. Taitague:

Si Yu'os Ma'åse', Madam Chair. Hafa Adai, Frank. How you doing? How's the family doing? You know, tell the other half hi for me. But, you know, your office is going to be a very important office considering, you know, we're all in your backyard right now using technology to get from point A to point B, so I think you're gonna get that long-awaited three years of no increase into your budget. Now, this is a good opportunity to ask for that money right now considering everything that's involved, and I do, Madam Chair, have more than a couple questions so I'll just boil it down to one of them. So Frank, you're familiar with what had happened in 2019 with the Guam Solid Waste Authority where they lost close to three hundred thousand dollars in project funding from a fraudulent company online so I was wondering if you… Basically, have you done anything right now to provide some safety mechanisms that are similar to what happened last year in 2019? I know you mentioned some of the security measures that you have placed

and cross checks. We met last year, actually, and had an extensive conversation on how these little alerts come up every... I think it's like almost every second. When I was in your office, there were quite a few coming in, but what have you gone further from our last conversation to ensure that doesn't happen to any of the agencies moving forward?

Mr. Lujan:

Well, just real quickly, I did have a chance immediately when I was informed about the debris itself. I did meet with the principals at Guam Solid Waste to understand how the breach actually occurred. So, literally days later we put plans in place and we actually executed getting them on board with their own domain with respect to their emails so it's protected behind our firewall. The, you know, their major breach was the fact that they were using just the generic Gmail email, and there's a lot of bad actors out there that know how to exploit it, and they definitely did, and there was timing that was involved in how that could be executed. That's not to say the same thing can't happen. It's just more detectable once it's behind our firewall. So, you know, I hope that answers your question. We did help, and in terms of putting in some processes that will help them avoid this recurrence, if you will.

Senator Taitague:

Because when we did meet, you mentioned that there's certain agencies, autonomous agencies, that are not under your, I guess, I want to say, jurisdiction, but, I want to say safety net, of all the things that you have provided at your office for the other online agencies. So autonomous agencies don't have that same kind of protection. So, I was just wondering if you did assist them and the concern is, you know, even though we have DOA, other agencies Guam Memorial... Water, power, these are critical agencies that need that same type of protection, you know, for everyone. So, thank you, Madam Chair. I'll reserve for the other questions I have. Thank you.

Chairperson Lee:

Thank you very much, Senator Taitague. Senator Torres and then Senator James Moylan.

Senator Mary Camacho Torres:

Thank you, Madam Chair. Mr. Lujan, in one of your slides titled proposed action plan, you discuss transforming face-to-face business processes. Are you also working on government agencies interfacing with each other? For example, the Department of Revenue and Taxation with the Department of Administration for real-time tracking of revenues received, and another example would be the Department of Revenue and Taxation Motor Vehicle Division interfacing with the Guam Election Commission for identification verification. Is that also one of your ongoing tasks?

Mr. Lujan:

Yes, it is. Yes, it is. We have been working... It's been... with respect to, for example, the Department of Administration and Revenue and Tax, so we've been working on, you know, interfacing some of the gaps that were identified. Unfortunately, it stops in its

tracks because there's an evaluation going on in changing the financial management system. So, if we continued on with the existing system, then those are things that we've been… We had been actively engaged in, and until we get to that point where they want to move forward, we still are kind of in this holding pattern in addressing that issue with the interfaces. Now, with respect to DRT, and I believe you're referring to the motor voter initiatives that…

Senator Torres:

Well, I'm talking specifically about the ability of the Guam Election Commission to verify identification because GEC has an online registration process that requires verification of ID with DRT, and this issue is very critical right now as we're exploring options for voting in the upcoming 2020 election, the verification of identification specifically. So that's the type of interfacing that I'm referring to with GEC, verification of ID.

Mr. Lujan:

Yes, and we've been actively engaged between DRT and Guam Election Commission. My understanding is that the capability to interface is actually there. We are just awaiting the processes that need to be validated between, you know, the Motor Vehicle Division and Guam Election Commission. Once that's in place, there is a manual process where they are submitting the applications to the Election Commission where we're working to actually, you know, the ball really is in their court to just hammer out the policy piece of it, and once that's in place then we can get them connected.

Senator Torres:

Very good to know. Thank you so much.

Mr. Lujan:

You're welcome.

Chairperson Lee:

Thank you, Senator Torres. Senator Moylan, you're recognized, and then we'll go back to the Speaker if she has any questions.

Senator James C. Moylan:

Thank you, Madam Chair. Good afternoon, Frank. It's a question… It's actually been mentioned by Senator Therese and also Senator Pedo regarding the CARES Relief Fund, and I know you'll be providing us additional information about your budget request for the first and second round, but could you give us a vision of what you are proposing the use of this money and possibly when do you plan to receive the money, and if you have an amount that will be helpful as well please.

Mr. Lujan:

Actually, in terms of the details, it really hasn't been divulged to me what the timing is on that because in terms of the money itself, most of… I haven't seen anything move over to

any respective agencies yet, but I can get back to you on the timing. I don't have that information at this point, but in terms of what my submission is… Really, the monies that I've asked for, really just to address a lot of the gaps that we have, and just the newer requirements to comply with COVID-19, if you will, and a lot of it focuses on, you know, for example, we're working with GPD on somehow allowing their clearances, something as simple as a police clearance, to be done online with the secured and trusted authentication that will work, and a lot of that is defining those processes, so it convinces, you know, GPD that, you know, the data is getting to the right person and that they have a valid clearance in place. So, those are, you know, those are different things that we're working on with different agencies.

Senator Moylan:

Okay thank you, Frank. Thank you, Madam Chair. I have no further questions.

Chairperson Lee:

Thank you very much, Senator Moylan. The speaker is still here with us. I'm gonna move to Senator Kelly Marsh (Taitano). Do you have any questions?

Senator Marsh (Taitano):

I really appreciate Senator Mary following up from this morning's hearing, and so again it's really good to hear about this different type of work that's going on. I think it's important for our community to be hearing about the many things that the Office of Technology is doing, and so it's really good to hear that there's progress that's been made from the Guam Election Commission and the Division of Motor Vehicles already, and that things are getting into place as well as the other work that you're doing. So, I just wanted to comment on that, and also Chairwoman Lee had also brought forward that that was some of the type of work that you could offer. I am interested in hearing more about the COVID-19 related efforts that you're doing, but I'll just look forward to what you're gonna be sending us later. *Si Yu'os Ma'åse'*, Madam Chair.

Chairperson Lee:

Thank you very much, Senator Kelly. Senator Therese Terlaje and then Senator Pedo.

Senator Therese M. Terlaje:

Thank you, Madam Chair. I was looking over the spreadsheet that we received from BBMR regarding the request for CARES Act money and it shows that OTECH had requested 14.8 million which is actually one of the highest requests made by any agency except for payroll and public assistance requests. This is a huge request, and it makes sense to me because every other state… This is where they're putting their money because they're trying to convert our government into an electronic capable government, right? Moving forward because of the threat but it also shows that you received zero because it was submitted after the transmittal date, and so you're saying at this point, you don't have a time frame of when to expect a response on the second round right? But if I could… Yeah, so it just kind of adds to my worry of things that we

recognize that your agencies, you know, it's small. It's lacked resources, and I appreciate that, but I am very concerned because we have some issues going back that have not been resolved yet, right? For example, and so there's two I'm really concerned about. One is that central website where we're supposed to be putting all our notices for meetings so that people know instead of going to every agency's website. They were supposed to go to one website. That was a statutory requirement that, I think, we've been waiting for, and the other one was an even bigger concern to me is this land management. You showed us this GIS capability on your phone, and we used to have this type of capability, I don't know what it was called but you know, anyone in the public could access that management, or I don't… It was like maps of Guam determined lot numbers, you know, and then it helps us to do research, and I remember using that a lot up until like summer of 2018. It would take it offline, and in my communications of the Department of Land Management, they said this software was no longer… or they were told it's proprietary information with the contractor, and so the government is not able to access that anymore, and that type of thing concerns me because, you know, we put in millions of dollars into getting these systems up, maybe for revenue and taxation purposes, land management purposes, and the progress is very slow. In this case, it feels like we went backwards, you know what I mean? We had all of this capability, and now we have none, you know, from remotes and so, I don't know. I know they've tried to explain to me these issues, but I'm very concerned about taking care of those old issues and then adding on all these new responsibilities that we are going to be looking for, you know, to convert every agency to electronic capability so I don't know. Maybe, just tell us a big picture. How confident are you, and how do you see proceeding with this type of huge task we have ahead of you?

Mr. Lujan:

Well, Senator, I appreciate your comments. Let me first address the two that you're concerned with. The central public notice website that has been one of my, you know, big focuses are trying to get that launched. We're very close to launching it. We've done our testing and our development on it. We have one thing that I needed to push out, and that is to have it hosted and having more cloud-based as opposed to putting it behind our servers because it's such a mission critical application. So we're working with GSA to tie the loose ends on that one, and it's not very expensive. It's just that with all the other things that GSA is doing, it probably isn't that much of a priority until now, so I'll be working with the chief procurement officer to see what we can do about launching that, and I can tell you that if we're successful, we can probably launch it before the end of the month. That's something I know we've been working for years on together with yourself. I'm getting that out, and I'm hopeful. We've done our preliminary testing on it, and we're very satisfied with the workflow. We just need to now get the infrastructure in place. So, again, that's something I think we can roll out before the end of the month.

I lost track of the second thing… We've got no land management… With respect to land management, that app was up there for the longest time without any commitment to its maintenance of the particulars. That particular software, as well as database, and so

there was just that gap where, you know, unfortunately, because at the time, DLM did not have any budget for that maintenance, it fell off the radar. That doesn't mean it's not working, it just means that once they get their budget back, we can probably get that particular application lodged. I know there is a similar application that is on board, but it's not available to the public. It's available as a subscriber level to most of the real estate personnel because they've pretty much taken the same code, and the way it accesses those records, and they've developed it in more in a more secure site outside Allen private sectors worth as opposed to being in the government side, but I'll be working together with DLM to see how we can launch a public version because, you know, once they establish how they're gonna fund it, I think it shouldn't be a problem on getting that application out, but it's all overwhelming as long as you don't have enough resources. Today, I have 14 people who support 30 line agencies with over 60 different lines of business all the way across, and so it's not enough resources, but we're, you know, we're managing and we're doing our best to kind of keep our heads above water.

Senator Therese M. Terlaje:

Alright. Well, it's a big task. I mean, we really need to develop that capability. We can't come out of this COVID period even by December, you know, without that type of capability. Frank, we really, really need it so I hope you can push yourself into this budget somehow, and you know, really be assertive if you have to. I'm not sure what the issue is. I'm sure your committee chair is going to and just make sure about that, but thank you.

Mr. Lujan:

You're welcome.

Chairperson Lee:

Thank you, Senator Therese. Senator "Pedo" Terlaje, and then Senator Telo Taitague.

Senator Jose P. Terlaje:

Thank you very much once again, Frank. What is the most important asset or resources that you need to facilitate your operation in total, and what is your estimated cost?

Mr. Lujan:

The assets that we need are kind of two fold. One side of it actually includes people. One of the biggest gaps... We actually have two major gaps in terms of people. One is, since we've become a department two years ago, we haven't had the ability to really work with administrative people. Most of my people are technical, so the administrative side such as procurements have been very difficult for us, but we're managing. We can get it through, but you know, we don't... Like other agencies, they have their own administrative assistants or administrative services officers. We have none at this point, but that's one gap in our assets, and as I mentioned before, to modernize, a lot of our position descriptions we don't have, for example, a webmaster or web developer on staff. Those are gaps that I really wanted to bridge, but we haven't been successful in doing that, and in the last part of the asset requirement, and you'll see this in my budget.

As you know, across the street, the whole building was demolished there where we're located. So, we're located in the corner right next to the old precinct, but we're actually located in a flood zone. So, it's problematic to be a data center and to be in a flood zone. So, one of my priorities is to get us out of this mode. We're in a building that is almost 60 years old, and since the fire over at Mangilao with Public Health, we've relocated all their facilities over here and got them up and running, but we pretty much saturated our electrical requirements here. So we don't want to, you know, violate any building code and find out that, you know, the fire marshal is going to come in and shut us down. So, we're very careful right now, but we're at capacity. So, part of my plan is to stand up a new data center, and I have a plan in place that could possibly get that up before the end of the year so those are some of the priorities.

Senator Jose P. Terlaje:

Thank you very much, Frank. Thank you.

Chairperson Lee:

Thank you very much, Senator Pedo. Senator Telo Taitague and then Senator Mary Torres.

Senator Taitague:

Thank you, Madam Chair. Frank, you know, according to the governor's CARES Act budget, there's about 3.5 million dollars in the budget to cover credit card fees joined by the Government of Guam. What is the status of the Government of Guam chairman of a credit card vendor which would secure a fixed rate per transaction, example GPA and GWA secured less than 70 cents per transaction fee?

Mr. Lujan:

Well, I am familiar with GPA's transaction rates, and in contrast, one of the reasons they were able to yield that kind of rate... It's just because those kinds of charges are actually specifically for utilities, and because we're not a utility, most institutions aren't able to offer that particular rate to us. The Department of Administration is actually administering that piece of it, but I know they're going back and forth in terms of trying to figure out whether we go back to the convenience fees being paid by the taxpayer or the government paying the convenience fees, and so I'm not really... We'll converse with them on what the status of that is. The Department of Administration would be able to answer that better.

Senator Taitague:

Thank you so much, but do you know when the expiration date is or when the renewal for that is?

Mr. Lujan:

I know that's ongoing. It hasn't, as far as I know, I'm not aware of it being awarded yet.

Senator Taitague:

But, it expires in July, is it? Is it... When... That's when it expires, July or June?

Mr. Lujan:

I think it's being renewed so they can get through the procurement.

Senator Taitague:

But, you don't know the month? They don't know? Okay, thank you, Madam Chair. I'll save mine for the next round.

Chairperson Lee:

Thank you, Senator. I'm just gonna go to Senator Torres, and then I have questions also. So, yeah. We'll loop back around. Senator Torres, you're recognized.

Senator Torres:

I'm good, Madam Chair. I don't have any further questions related to this presentation. Thank you.

Chairperson Lee:

Thank you very much, Senator Torres. Frank, I do have one... Well, I have a number of questions for you, but I just wanted to ask: Has the agency considered efforts in providing Wi-Fi to members of the community who lack access to the Internet? I know in your presentation, you were talking a little bit about mifi devices that might be available for checkout at public libraries, and I love that idea, but I wanted to know if OTECH has considered something similar to the concept of Wi-Fi on wheels. I know that's something that they're doing in the CNMI and that will help to support continued learning enrichment communication, obviously access to info for students and community members who don't have internet access at home. So I wanted to ask you about that and about the possibility of maybe using Internet service agreements at our schools or other government offices, like maybe mayor's offices and opening up the access to this Wi-Fi network to our village residents who might need it.

Mr. Lujan:

Okay. Thank you, Senator, for that question be from my perspective, I can only offer more of an opinion than what I've done out there dialoguing with DOE, or I have talked with some carriers about the concept of bringing broadband access out into the community during this pandemics so that we're able to, you know, better serve the public for those who don't have those service, and that is something that's kind of an ongoing discussion. It's in consideration, but it still requires more, I guess, the discussion at the at the carrier level with the different carriers that have the infrastructure out there, but going back to Department of Education, they do have a substantial wireless infrastructure in place at all the schools, and I am familiar with the Wi-Fi on wheels. In terms of how they're delivering that particular technology, my first opinion of that is it's very labor intensive because of the components. When you talk about having to provision a school bus to go out there on the site to make the, you know, the Wi-Fi

available for students of that school, for example, in the parking lot. I mean, I think it can meet all the COVID-19 social distancing requirements, but it's still something that could be potentially problematic in terms of just finding the resources. To do that, we have school buses. We have people who can do it. The technology sounds straightforward, but again there's a lot of components of scheduling it. Any, you know, short term basis... This is the current infrastructure at each one of the sacred things like that. There isn't any vandalism of any of the buildings, and that kind of thing that happens when they open the gates, but those are some of my ideas. I'd be glad to dialogue with them too, you know, find out whether some of these things... we can latch like, a proof of concept if you will.

Chairperson Lee:

Thank you very much, Frank, and yeah, we're certainly looking forward to hearing feedback from your discussions with DOE, and how you're moving on projects like this. I think it'll really help to bridge that digital divide, that digital gap. I'll just go back around if... I just want to acknowledge the Speaker. Speaker Tina, do you have any questions for Senator... Okay, Senator Kelly, any questions this round?

Senator Marsh (Taitano):

Si Yu'os Må'ase', Madam Chair, and that discussion really reminded me of my living in Palau. We did that. We drove around, and we figured out if the museum had internet access. We hung out in the parking lot. we used it. It was something that really benefited the community-- to be able to do things like that. So, I like the way that everybody is thinking, that kind of out-of-the-box thinking proposed by the Chairwoman, proposed by others, proposed by Mr. Lujan are really important to help us get to those solutions. The small question, I think that I had, was, continuing to work with all of those agencies, so I agree with you. It's a bit unfortunate to hear that the reach, sort of handling these issues of their updates and their maintenance, and those sort of issues each up to their own where I think there could be a lot of synergy if was to be otherwise, but at least to help them from your point of view, since you do have that expertise, have you developed any guidelines for them, or have you thought of developing guidelines as to what they should be having as minimum requirements for their websites and for maintenance especially as we're going into COVID-19? It's just so more necessary to have that accessibility compared to the past.

Mr. Lujan:

Well, thank you for that question. One of the thoughts, or one of the things we actually have been working on as an initiative with these websites when we talk about modernization is the compliance with, I believe it's the ATA 508. We do have one site that is fully compliant and that is the distance it-- and we have plans to actually work and get all the other sites compliant. I think Public Health is is probably at the 50th percentile level of being compliant, but in terms of the modernization, it's always kind of problematic when we talk about modernization because one of the things we need to focus on is really just how each one of the department's individual websites are

compliant with with the federal government requirements. So, we are actively engaged in that and we're working towards it. That's one of the initiatives that I've had on the table so just the fact that we've made DISA, the distant website, fully compliant, that I have an unwritten policy that I would like all of our websites to be compliant all the way across the board. But, you know, in terms of guidelines at the department level, most of them do consult me directly on their questions, and they're very satisfied with what they have, but what's interesting is I get a lot of the people who really are pleased with what they have, but I don't get a lot of them to come up front, say, well how can we improve this? How can we make it better? I'm always open to those, you know, that kind of feedback, so it's an ongoing process, and I'm hoping that, as we get more resources, we can be more proactive and keep the websites more current or having a more modern look, if you will.

Senator Marsh (Taitano):

Si Yu'os Ma'åse' for that, and it's good to hear what you're saying, that they're not asking how they can improve because we can be then encouraging the agencies under our oversight to perhaps, take that step that they might not have been thinking on their own, and it's also good to know that even though you have a small staff that you're able to, at this point, really consult with the different entities and help them to their satisfaction so *Si Yu'os Ma'åse'*, Madam Chair for the opportunity to ask the questions.

Chairperson Lee:

Absolutely. Senator Therese Terlaje and then Senator Pedo.

Senator Therese M. Terlaje:

Thank you again, Madam Chair. Thank you again, Frank. I guess I wanted to just talk about a couple of things. So, when I brought up that exam ordeal and one of the issues that I just want to, you know, put on your radar is when we're outsourcing our technology and the data ownership right. So, that was the part that really concerned me is who owns that data and, you know, when we have land records being put into somebody's technology, and then in the end we can't access it. I I find that to be a big problem, and I'm just hoping that going forward, you can write it in that to all your specs, that we own the data or, you know, even whatever you can get out of it at the end so that we can always... If we're gonna put more money in, we're gonna put more money in at our choice. You know, to build on it or whatever, but we're not held hostage to, you know, one company holding the data away from us after after all of our investment to... because the government puts money and time to put those records in, and the second thing is this this Wi-Fi capability, and in the villages, you know... I've been hearing this since I first became a senator. I remember UOG was going to bring in... They were gonna be the hub for some cable that was going to be like an education cable that was running across the Pacific, and they were gonna be the hub, and we talked about it at that time, you know, the the possibilities of extending that to DOE, the possibilities of extending, you know, or making the deal so that it would extend to every village, and then we talked about it again when we talked about mayor's offices receiving Wi-Fi like or computers,

like the Chairperson discussed, and so many different parts, but recently... the Government of Guam looks like they received 54 million dollars for education purposes for getting them you know up to speed post COVID. Forty-one of that, DOE is managing and DOE talks about exactly what you're talking about. You know. putting this into every home so that the students have 12.5 million of that money the governor is going to control, and so the lieutenant governor was on the radio, and he talks about the exact same thing: getting this capability into every home, but my issue is... so we've got lots of money. Now it seems to me, we've got everybody talking about it, but it doesn't sound that's if they're talking about it together as much, but my concern is really the timing. You know, I just saw an announcement that the Cal State Universities... they've already announced they're going electronic in the fall, that they're planning ahead, and I just think we have to have this capability in like two or three... It's that urgent, and not only that, but when we've seen this unemployment, it's going to be electronic. The unemployment assistance, the public health assistance that I just think you know, if if we can we've got to we've got to build the capacity of our entire community to be able to access any part of the government electronically like in the next two months, I feel like we did them a disservice to them not having this type of capability. In the last two months, we've got to have it in place for the next two months, three months and going forward hopefully, but you know public health is that... I just feel like public health shows us the urgency we can't wait for, and if you put that Wi-Fi into their house, they can apply for assistance and not only that, they can look... it just expands their potential tremendously to look for jobs - and you know training anything and it really, I'm hoping, brings families out of poverty. I mean, you know, I think that's how we can…. It's completely justified, and everyone around the world is moving to this, and I really think Guam…. We can do this, and I can't stress to you enough the urgency of doing this, like it's got to be the next two months, Mr. Lujan, please, you know, if you can get in with these people, lead it because it's taken too long, but I know that you can do it. I've seen you in two different agencies. You can do it, and it's just a matter of getting the big picture and getting it in as quick as possible. Thank you very much.

Mr. Lujan:

Thank you. I'm not sure there was a question there, but I'm looking forward to the dialogue. I can comment that... I do know we have the framework. We have the infrastructure to make it happen. I think perhaps one of the biggest gaps we probably have is really just the business process, and that's a process that requires, you know, dialogue and leadership within each agency to just come together and figure out how do we deliver your existing services out there to the public. So, it's more efficient and more effective, and when we come to the answer that question, I can tell you that we have the potential to deliver. It just needs to happen really collectively as a collaboration with the agencies including Public Health.

Senator Therese M. Terlaje:

Thank you.

Chairperson Lee:

Thank you, Senator Therese. Senator Pedo and then Senator Telo Taitague.

Senator Jose P. Terlaje:

Madam Chair, thank you very much. Frank, thank you very much. I don't have any questions on this thank you.

Chairperson Lee:

Thank You, Senator Pedo. Minority Leader Senator Telo Taitague, you're recognized.

Senator Taitague:

Si Yu'os Ma'åse', Madam Chair. I just have a couple more questions and some of them very short, and one of them is just... Frank, the governor would have transferred out of your agency one hundred and seventy three thousand four hundred and sixty four dollars from that seven million that she transferred all around to the Government of Guam. Can you verify if that money must return back? I don't have access to... I can come back to you with that question. I haven't looked to see what's been... We just make sure... You're really lacking a lot of funding so I don't want them to skip you, you know, and return that money to you. So thank you for that short question there. You know, and I wouldn't go off with... Senator Therese mentioned earlier, because I know it was PL 33-39 that created the law, written, signed into law in June 2015 regarding the mayor's free Wi-Fi internet access in all the village community centers, so I was just wondering if tech was familiar with that law, and whether the Guam mayor's have implemented that program.

Mr. Lujan:

To be honest, I'm not familiar with that law. I would be more than glad to follow up and find out where they're at with that.

Senator Taitague:

Yes, that would be good, Frank, because it is already codified so I'm hoping that you do look at, and then sure... It's just a real quick question - if I may, since there's not that many people, or I could wait. Not a problem. I have one more question, then, Chair, is it okay? Frank, earlier in your presentation, you brought up contract tracing, which you know, it's been proven throughout, you know, the other countries that it's worked. In some countries, it's really worked, and I see that the efforts that you're making and this is, I think, why it's so important because this is not going to end you know in the next two or three months. This is going to be here for another year, maybe two years. So, contact tracing is very vital, and you mentioned that earlier, that it's gonna take about a month for you to do what... and I didn't catch that exactly, what you said... you mentioned it would take about a month, no I'm sorry, about a couple weeks to do exactly what? The contract tracing is the first part of the question. The second part is how much funding just for that area would you need to implement this.

Mr. Lujan:

Well, let me go back to your last question. As far as my understanding, the way we've approached this is that... this is through the open source forum. It was the initiative started with MIT, and with the open source forum, there are no fees. There is no cost right now. At this point, our objective is to get the simplified workflow out there. The public can kind of prove that it actually works. So, as far as I am aware, nobody is asking for fees on this. It's all being developed from a glow standpoint because we all have the same concerns. Yes, it is working in different countries, but one of the primary pain points, if you will, is delivering this application in a private and secure manner because most people don't want their personal data, you know, out there on the internet. So, we're working to make sure that is secure, and this is a framework that looks very promising. I've been working with other developers again. I don't know if I mentioned this. We started out with 46 developers. We now have over 1200, and we're thinking there'll be more than 2,000 developers, and that we'll be working towards maturing this particular application, but I do agree that contact tracing is a mission-critical initiative too, so that we can have at least a tool the to bridge the gap and build their confidence, that you know, we're moving in the right direction when it comes to this virus, but I'm not aware of any. There hasn't been any costs associated with this. Everybody is getting on board with this in terms of the development. There are some costs in terms of putting this up in the cloud, but that's very minimal. It's like two or three hundred dollars a month that we're anticipating. Those are just costs associated with hosting the environment if you will.

Senator Taitague:

Frank, but you mentioned something that in a couple weeks you do... Exactly what is... when we're seeing in a couple weeks coming up?

Mr. Lujan:

Well, in a couple of weeks, I'm hoping to have the app that is downloadable on your smartphone as well as the framework for the Health Authority, which is Public Health, to be able to use this in their logistics of contact tracing, because right now it's not automated. It's a call center-oriented paper-and-pencil process, and so this is now a process where we hope to, you know, make it more you know digital, if you will.

Senator Taitague:

Thank you so much for that, Frank. I really appreciate your time and all that you're doing at the agency. Thank you, Madam Chair. I have no word for their questions.

Chairperson Lee:

Thank you very much, Senator Taitague. I will certainly spend the remainder of my questions into you, Frank. Oh, I'm sorry, Senator Torres, did you have any other questions you'd like to pose at this time?

Senator Torres:

No, I don't have any questions. I just appreciate all the information. I'm just also listening remotely, but thank you.

Chairperson Lee:

Thank you very much, Senator Torres. Frank, I did want to ask one question. I know that we're hearing some changes that are being made a DRT, possibly DOA, but I know that in our last information briefing about earlier this week, that Department of Labor had shared with us that they recently procured technology resources to help them implement some of their federal unemployment programs, and so I just wanted to ask you if the Office of Technology was consulted in this and what recommendations you might have shared with them to make sure that were procuring the best possible software and other tech resources?

Mr. Lujan:

Well, they didn't give me, because again, the timeline didn't give me a lot of time to absorb it, but I did get a chance to actually go through the details of it and expedite my approval to move forward with it. I am aware of the vendor that they're using and their capabilities. I am never the person to... This is a sole source, or not a sole source, this is always a procurement issue, but ultimately I looked at all the basic technical components, and it looked okay to me, and I approved it, but they did pass it through me, and they had my blessing. They went forward. They have a monumental task at hand especially dealing with unemployment and trying to mechanize that piece so that they could, you know, deliver the services they need to effectively... So, we are supporting it, and I'm hoping, you know, I'm monitoring it from a background standpoint, but I do know that they're working hard to get the software delivered timely.

Chairperson Lee:

Alright, thank you very much, Frank. Also, just one last question: we've heard it brought up in the news recently and, you know, our office sometimes, from time to time, we've had to use electronic, or I guess do our complete electronic transactions to include the use of electronic signatures. I know that it's cited in our code, the Guam Code, but I wanted to ask if the Office of Technology has formulated a policy for standards concerning the development of electronic transactions to include the use of electronic signatures.

Mr. Lujan:

We haven't delivered standards per se. I have been working with each one, the individual agencies in mechanizing that piece for authentication. This is foremost. This is a new thing. I've been doing my own digital authentication because that's something I do... it's the best practice, but every one of the agencies have their own, and they have their reasons why they don't do digital in the past. Now, I can tell you that all of them want digital so they're moving forward and we'll be developing a policy to help give them more guidelines. We're looking at two more mainstream products like Adobe Sign and DocuSign. Those are major products out there that are used in the industry for

authentication, and so we're going down that line, and yes every agency, I can tell you all of them are talking with me about that.

Chairperson Lee:

Excellent. Well, we're certainly keeping posted and hope that you share your policy with the legislature as well the judiciary, as the entire government will likely be moving in this direction, if not already. With that, I want to encourage my colleagues, if you have any additional questions for Mr. Lujan, please feel free to email our office and we'll try to get you a response as soon as possible.

I do want to thank Mr. Lujan so much for taking the time to provide us the presentation and answer all of our questions. As we close, I just want to express an *Un Dångkulo' Na Si Yu'os Ma'åse' todus hamyu pot i finatan miyu' på'go!* The Committee on Federal and Foreign Affairs, Telecommunications, Technology and Labor hereby concludes this Virtual Informational Briefing. Written testimonies may be submitted through email at senatorbiscoelee@guamlegislature.org or may be submitted via drop-box at 163 Chalan Santo Papa, *Hagåtña*, Guam until close of business on Monday, June 1, 2020.

This Virtual Informational Briefing is now adjourned. The time now is 2:40 p.m. *Si Yu'os Ma'åse* everyone and please stay safe.

— The public hearing adjourned at **2:40 p.m.** —

— END —

III. FINDINGS AND RECOMMENDATIONS

The Virtual Informational Briefing allowed the Guam Legislature to receive updates from the Office of Technology regarding cybersecurity measures, internet access programs, and plans for the establishment of an online interface for the government of Guam amid the COVID-19 public health emergency.

On cybersecurity matters, the Office of Technology reported that they receive security tickets whenever there are any forms of intrusion, at different levels: critical, informational, and advisory. OTECH received several critical tickets which they had to address upfront when they were first established, but they have not received critical tickets for the last six to seven months, which speaks to the OTECH's defenses in place.

On the issue of internet access, OTECH reported that they are in discussion with the Guam Public Library System to plan for patrons to check out mobile Wi-Fi hotspot (MiFi) devices similar to the process for checking out books. OTECH is currently working with GPLS to validate the process to assure that they will be fully-functioning in the field.

On the issue of moving the government of Guam online, OTECH is currently in dialogue with various highly-frequented agencies such as the Department of Revenue and Taxation and the

Department of Public Health and Social Services (DPHSS), to transform the way the government conducts business, such as redesigning workflows to use newer technologies that utilize secure digital authentication.

OTECH has also been working to develop a web-based application to help DPHSS conduct contact tracing by leveraging Geographical Information System (GIS) data for Guam. This technology is currently under beta testing and OTECH has established a website called safeplaces.guam.gov.

The Committee will continue to be in contact with the Office of Technology on further updates regarding the government of Guam's online infrastructure and ways we can bring the island forward in continuing an open government approach and using digital communication channels to provide reliable information on COVID-19 developments and any future crises.

This Committee will seek to continue its work to provide oversight and support to the Office of Technology and to bring necessary and timely information to the people of Guam, to include the ways in which GovGuam is increasing its technological capacity to meet 21st-century demands and challenges.