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TRANSCRIPT:

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>> Somewhere across industry, act deem my, federal government, you name it. One of the things that has occurred recently is we have about ten times the amount of applications that we have capacity for.

So supply is not meeting demand.

And I would like to suggest that if there are industries or governments that would like to partner with us on receiving some of these applications that we already get we would be happy to pass on those applicant pools and those talents for everyone.

And you know, hopefully you could you know, rather than having to reinvent the wheel and advertise and stuff you can leverage utilizing that network.

>> We'd welcome other comments and if anybody wants to make a comment on the comments you're welcome to.

>> Just ask a question of the admiral, so do you have internships almost immediately thought was kind of a connection between OAIB kind of internship mapping and on your ships?

>> Not specifically, no.

We have -- we have --

How could I put this?

We have occasionally had interns and on occasion sent them to see as part of their --

As part of their year or whatever with us but we do not have a comparable program to OE explorer's and residents program where there's a specific track where we're reviewing applications and bringing folks aboard.

I would --

Which we would love to do.

I note that ocean exploration has education that explicitly part of their mission and we do not.

That's just the way the statutes were written and I'm not trying to suggest that we shouldn't do that, but it is not a program that we have in a permanent program in the way that OE does.

>> So related to that, I think is here in Puerto Rico and say Hawaii, if you were adding Guam or American Samoa it's another way to connect with those areas that don't see ships and don't get exposed to what you do and career paths and that and being able to connect the internships specifically to someone in Puerto Rico to American Samoa or Guam is another which I think to kind of expand --

>> Right.

>> Your region.

>> As I mentioned when it was Tuesday that is a function that we think the center of excellence potentially could help us with.

We're still working on the plans for that, but that does have workforce development and training as part of its --

As part of its statutory continue one of its statutory pillars.

And so we hope that that is --

That that is something that we can support that way.

.

>> Are there additional comments?

Other additional comments online?

Okay.

I think this is a wrap on the comments.

>> Thank you.

>> All right.

Moving along then.

Thank you very much for the comments.

And we're going to now talk a little bit about our working groups.

Ashley is actually going to finish your session on this OMP and whatever you want to say additionally and open it up for questions from the panel too.

>> Okay.

Well, I think I got through my presentation yesterday.

Or what day is it?

Tuesday.

Well enough.

The standard ocean mapping protocol just a quick refresh, it's bathymetry, acoustic and Lidar, water column, sub, side scan of magnetometer data, data management big emphasis on that.

So if you have questions on Tuesday that you didn't get to ask or want some follow-up questions I know Qassim has some thoughts.

>> I promise you would I would like to my thoughts on it.

Yeah just the missing part is a little bit --

Specification because specification either you written to support the project are going to include onshore and offshore topography.

And I said just for the specification I will adopt the UIGS data quality definitely.

And SPRS as a standard to report.

And measure things, but data quality, quality 1, quality 2, whether it be according to GS because that's where go with the IHO, you know, quality 1 and quality 2, definitely.

Because the way it is now there is no spec, not only that you're going to need for this contract to say I need 10-centimeter vertical accuracy or 20-centimeter or GS line basis verification will recover that.

Thank you.

>> Yeah.

And talking with Qassim earlier, I did ask that he just summarize that and send it to our the email noted in the federal registrar notice just so we can keep track of it that way but we can beef up discussion of topo within --

You know without adding it as a stand-alone element because I don't think we could do that stand-alone component but we could beef up the discussion of the topo in the Lidar.

>> [Away from mic].

>> Thank you.

>> Can I ask one for Julie too.

Formal requests, are you expecting a response from the --

Up here or the individuals?

>> Well, actually we should discuss that because I was on Tuesday I asked for the HSRP to review the standard ocean mapping protocol and provide feedback that we can incorporate into the final version.

And I think what we need to discuss is whether you all do that in your individual capacities or as a panel, if it is as a panel we could perhaps push things until sent to incorporate that comment --

Those comments, but if you're willing we could also hold a short interim session you know, a public session since your comments need to be provide in public.

So I'm open to anything but regardless would just love the review and feedback from you all.

>> Admiral Evans, this did come up yesterday because we knew that Qassim had a comment.

Lindsay, I don't know if you have any comments, but we should decide, are we going to submit this as a panel, would that be more beneficial if it had the HSRP panel logo on it, or you know, as individuals?

Do you have --

>> So Ashley and I really haven't had much chance to talk about this speaking a little off the cuff, but my gut reaction is having the HSRP imprint on comments and hopefully on endorsement and some --

And some tuning, would be very valuable to us as we move to finalize this.

And deploy it in the interagency space.

That's my first thought.

I don't think that that would preclude members from providing personal comment in a personal --

In a purely personal capacity as well if we couldn't get the full consensus on a course of comments.

That reasonable?

>> Yeah, I would prefer ideally to have the HSRP panel as a feedback as a panel.

>> Yeah.

And we can --

No, I agree totally with admiral and Ashley, I think we should all our review comments and their HSRP, I think the public can comment for 90 days actually right.

So we cannot wait until September but maybe Julie we can give a month, month and a half maybe for the HSRP members.

>> Right.

I was thinking maybe the next planning and engagement meeting that we have which would be we'll send out the date soon.

But it will be in April some time.

>> Yeah, no --

>> [Multiple speakers].

>> Yeah.

>> Then we could go ahead.

Hopefully we could have had a chance to read it by then.

>> Yes.

>> We can discuss it.

>> Yeah.

>> In April and get our comments together.

And that should be enough time to get any comments back to you, does that sound okay, Lindsay?

>> Yeah that sounds okay but for us to formally comment does that have to be done at the public meeting.

>> Yeah, so what do we do about that?

>> So that's where I was offering to see if I could work with Paul Turner and the team to --

In the --

Council which Admiral Evans is one of to you know, perhaps push that those receiving those final comments to the September meeting but ideally if you all would be willing to hold a short public virtual meeting not in person but virtual, in maybe July for an hour, hour and a half you know, I'd take on getting all the public notice and all of that.

>> Yeah.

>> If we do a virtual meeting it will be longer than an hour and a half.

We'll combine other things into that and we could combine anything else we wanted to even the co-meetings with other groups potentially like IUs or OERs group or anybody else because we've been having some discussions with them and that might solve all those logistics issues.

So we would probably have like a three or four-hour meeting. You guys remember a few years ago we did that too when we asked you to comment on a big document that we couldn't get to during the --

During the regular meetings.

>> That was actually another question I had, had you put the same request through the OEIB yet or not?

>> No.

>> Okay probably should --

I would suggest probably should --

>> Okay.

>> And then potentially then there is the combined response, I guess.

>> Okay.

>> Andy has a question.

>> Thanks.

I appreciate the logistics but I think it would be much better if we limit this meeting to only one topic.

This SOMP review.

I think if we try to do two topics we'll have a timetable and we'll run out of time on one and so for my part I would urge that if we have that virtual meeting for this purpose that we have it only for this purpose.

>> You know, why don't we --

I can talk with Lynn about it, but what I would suggest is let's --

Let's plan on April on our planning and engagement meeting to have read it to have gotten our questions together, because it's fresh in our mind now.

And let's get everything together and then we can see how our NOAA folks want to handle the public part of it.

I mean it could even be that we submit our questions and then the public meeting in September.

That we read them or something to make it into a public meeting.

No.

>> So you guys if you --

If they really need it in the time on the FRN you have to have a public meeting before --

>> Right, she said she might push it out.

>> I know --

>> September.

>> We'll have more internal discussions about this and then we'll know.

>> Many times you've asked for a volunteer to lead or volunteers to co-lead the development of pieces.

You may want to do that for this as well.

It's quite a large document.

And also propose like we've done many times sometimes we'll brief you guys multiple times, there are people who miss this who might have comments.

And also, so we'll just make sure that Ashley's available for the April meeting.

And she could brief again and then if you guys have additional questions, and she might even be able to guide you a little bit more on what are the section that they most want comments from the HSRP.

>> Shawn, did you have something?

>> Yeah, I just want to say I'll be honest, I'm probably not going to review this at all. It's not in my area, but I want to make very clear that having the document that's supported, this is a value to that.

I'll be --

I'll choose my words carefully, words matter, right.

So advocatng for things having that information is valuable even if we're going to do it independently if somebody choose to do so having that document, having something because I would get behind it.

And I'd be happy to use it, but there is a value to doing that and hopefully we can figure out the proper federal process to do so.

Thank you.

>> Okay.

First of all I volunteer to be on whatever's going to happen.

>> [Laughter].

>> But I have a couple of basic questions that you can help me with.

This is for data that's going to be collected under NOAA funding, correct?

>> No the standard ocean mapping protocol is to provide guidance and consistency for everyone doing ocean --

>> USGS, universities, donate data all that stuff?

>> Yeah.

>> Okay.

So if it's outside of --

Is it flexible enough that if it's data that was collected with some alternative sensors and/or from some other industry it's flexible enough to be able to include all that?

There's no real boundaries on it?

I haven't read it in detail obviously.

>> No I mean the standard ocean mapping protocol is really just a recommended way of acquiring data for the --

To make it most easily integrated with other data sets and you know, I think if data is collected that isn't --

>> Do you mean data collected with other --

>> [Multiple speakers].

>> Let's say the Falco goes out and collects a bunch of data.

And it's outside the boundaries of this for whatever reason for one sense or another, does that preclude using the data?

>> No, no.

>> Okay.

>> Again, it's just recommendations and references to --

>> It's not rigid.

>> It not regional.

>> Okay.

>> It's not sensor, specific sensor-based.

>> Okay.

>> Lots of openings but you know the one key thing there is to pay attention to the data management components good metadata, you know, explaining who, what, why, all that, how.

>> Okay.

>> And I'm still volunteering.

>> Ashley, Ashley is correct this is not the same as specifications and deliverables for contract surveys, definitely not.

>> All right.

Did you want to say --

>> Well, maybe just a point of clarification or a question hopefully a clarifying question:

Ashley do we --

If the choose to provide comment or provide input as the HSRP is that considered part of the --

Would that need to be a public comment?

I mean does that need to fall within the public comment period?

>> No, I was saying it could --

It could happen after.

>> It could happen after.

>> Yeah.

>> So we wouldn't need to extend the public comment and I'm not suggesting we drag our feet by any means.

>> Right.

>> But we wouldn't need to extend the public comment period to take input from this body.

>> [Away from mic].

>> I'm sorry.

>> Saying basically as a panel we give a recommendation it's actually not a public comment.

We're supposed to be a --

>> I may be --

That's just probably some semantic that is I'm not aware of and I should not try to speak to those.

>> No, I think it's just a deadline.

I think if you all are willing to provide comments as a panel, it's public.

You know --

>> Right.

>> You know, it's public comment but we don't have to pay attention to the June 2nd end of the federal registrar notice 90 days.

You know, you have --

>> That's the semantics but when we make our comments it's not really public comments, right.

>> Well, it's.

>> [Multiple speakers].

>> You are providing --

>> [Multiple speakers].

>> Yeah.

>> We're not responding to the FRN.

That's the distinction, I think.

Second point I was going to suggest or is that to Shawn's point, you know, you perhaps kind of a technical sub group to be established to review this in more detail and it sounds like Ed's willing to lead that and that the rest of the --
The rest of the panel could trust the experts and endorse their findings.

>> Yes.

I think that that's how it's actually been working where depending on the topic the experts within the panel chime in and then the others go okay.

And trust it.

So all right.

So let's leave it --

Yeah.

I'll get --

We'll do this P and E in mid-April or some time in April you'll get a notice.

Hopefully if you get a chance those that are going to come in on it to have read it and then we will discuss it.

If we need to make a subcommittee and seems pretty, there's a lot of comments and we need more discussion on it, then Ed can take it from there.

And and give the details --

Get the details going, does that sound okay.

>> That sounds good and I volunteer to help Ed on this as well.

One of the questions mentioned data management and I wasn't quite sure I haven't actually read it is one of the other discussions we've had is about data archive and standards and metadata and those sort of things and I think I had spoken to Brianna about I think that's another bringing up the priority matrix that we discussed about getting the data ready, I think there's a whole other discussion that just kind of joins into that, the back end of the --

The song it's like, I don't know whether that's part of it or we should make it separate probably.

It feeds in you've got to have a good metadata on that but we're talking about getting an update on the external source data and how it relates to NCI and how it relates to USGS data and the national --

It's something I wasn't quite sure that you think that is related or it's part of it?

>> I think it's part of it.

We could certainly you know, Qassim wants to have a related session in September and perhaps if you know, if the sort of umbrella of the session is the SOMP, you know independent of your comments on protocol or maybe a follow onto those comments, the data management aspect perhaps could be part of that.

I don't know how you're quite envisioning it I know you're going to talk about it.

>> No, I know.

Should we --

Because it's good for the guidelines and best practices to have the focus on the metadata when you deliver data what you need to include in it definitely.

>> I did want to ask before you move onto another topic please share the federal registrar notice out among your many communities that would really help us get the word out.

>> And that's okay for equipment manufacturers and everybody.

>> Um-hum.

Yep.

>> Okay.

Great.

>> Thank you.

>> All right.

Are there any further comments on this topic?

We will move on then.

Thank you very much Ashley.

I really appreciate it.

Okay.

Do we want to hear from the tech working group to Qassim, Anuj has depart but Qassim, you might have some things.

>> Yeah, thank you Julie so the technology group we've been working for a while on comparing a --

The last several months actually and we reach a really good stage where we lined up the bigger player as a platform for digital twin which is Microsoft Azure, Bentley, Ashley but coming closer to the meaning they start building out.

They want to do virtual.

So some drop out.

And we thought really for the importance of the topic and the effectiveness of the panel, we need to do it face-to-face.

So we decided in the last couple weeks let's just push it to the next meeting.

And special emphasize in DC 8 and encourage those companies to send a representative, send them to Puerto Rico.

For some reason they consider it as just outside the United States unfortunately.

So that's what we still going to push forward to organize it in September meeting.

So that's on the digital twin just emphasize and we'll mix with it the precision navigation.

Because really it comes hand in hand with the digital twin to serve the precision navigation.

The other things topic I talked to Julie and Ashley like Ashley mentioned just now we really want a panel to educate this panel and the public on what we mean by data quality when we talk about all these multi beam and imagng and Lidar what does the quality mean and how we measure it and what best standard like some for example the American society of photo --

They have their specification now which I think is part of, Ashley, if I'm correct I think is part of the SOMP but they have their own specification for bathymetry Lidar.

So we thought to assemble a panel between NOAA and Corps of Engineers and I can represent --

For their standard and just brief you on all the standards of the including the SOMP which is the highest priority for us.

And thus hopefully it can make it to the --

To the next meeting.

And from the discussion it seems like there is initial agreement Julie on, like mentioned this morning forming a sub group on sustainability within the technology group.

>> Yes, that would be fine.

I think that falls well within the boundaries, right, to do subcommittee, sub group?

>> [Away from mic].

>> Just call it working group within a working group.

>> Yeah.

>> And so I think that you adding and proceed with that.

>> Will do and volunteer to lead that because he has a wealth of information and background to it.

So that will be exciting.

>> Could I just make one more comment there?

We'll just have to decide.

We've kind of just been mergng our P and Es with our tech work, you know, everybody's been on the phone at once.

For April if you think you would like just let us know if you really want a separate meeting or if we don't have enough for a separate meeting to wrap it into the P and E meeting too.

We can do half P and E or half tech or however you want to divide it.

>> We can do it half half probably especially if we dedicate an hour for it.

>> Okay.

>> We can cover both.

>> Think about it and we don't have to decide that right now.

>> Yep.

Thank you.

Yep.

>> I can ask Qassim a question.

So for the digital twin are you planning to have any before the September meeting having any P and E or tech meetings to --

>> That's a good question.

What we are to bring a few speakers you know, before we build an idea who we going to push to the panel on the next meeting.

So yeah, you see probably some speaker could we ask to come and one of these meeting not necessarily April but like could be May maybe.

Or something we can invite.

We plan on invitng couple of speakers.

>> Okay, yeah.

It's important to not just land on the --

We've found landing on a meeting it's kind of --

Yeah, okay.

Thank you.

>> Qassim, I'm really interested in this topic and I have some ideas as to people who might be good for a panel like that.

So I'd love to connect just maybe quick email, is that --

>> Absolutely, yeah.

And I just want to brief I think when we talked last year or maybe even in Hawaii about the digital twin, what does it really mean because as very confusing concept people confuse it with kind of 3D model and you can rotate it and things and people tell you what is the value, yes, it looks like, attractive you can turn it around, fly over it, through.

And that's what we trying to bring the you know, the real concept of digital twin.

Digital twin in today's value and definition is that digital replica of physical environment.

So you really have twin of the physical.

If I'm monitoring this home it's not building just like 3D model I want to see it in a digital form as if I am in it.

If they're sitting few blocks away he knows exactly which light bulbs went out, what temperature, people moving.

So it needs real time dynamic sensor put in it.

And that's why for NOAA it's great, you know, for coastal management for asset ship management because all these sensors and ports and things important real time.

So somebody could look at it and see digital replica of the physical environment.

Thank you.

>> I just want to add a couple of quick points to this discussion here one we had the NOAA center for AI involved in this discussion because they're really leading the evident for digital twin within NOAA but also something that was mentioned is that you know I think we should be looking at --

Coast and also what we talked about before about the AI working with like water level data and --

>> Oh, absolutely.

Yeah, thank you for bringing that.

I was going to bring it in my report.

Julie I'm saying just even in this meeting every meeting we bring deep technical report representation about NOAA great work on AI and deep learning and modelling.

I know like Marian is covering but we need to probably like maybe 20, 30 minutes on specific development on that because AI is the future for not only NOAA but for everybody.

And there is great teams within NOAA working on it.

So to give them the credit, highlight we give them feedback we really need to know what they doing exactly.

And that's could be from now on on our technology room you're going to see AI probably going to be discussed on our agendas.

Thank you.

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>> Great.

And I think that is so important to know what --

Okay, did you have something too, sorry.

To know what NOAA is actually doing as our point of departure in the discussions for AI and digital twin.

Go ahead.

>> I was just going to second that idea assuming that that falls within our lane, does it, that work sort of fits within our charge.

>> Well, that's a good point I'm going to let Admiral Evans and Marian talk but I think when you're suggesting to bring somebody in on AI we want to make sure that it really is AI that's going to be relevant here.

Let's.

>> So I'm fully in favor of this.

We've had some preliminary discussions about using AI to assist our data ingestion and evaluation process.

Now, I think there's --

Is that the --

Is that the lowest hanging fruit as we look to build and populate the national bathometric source.

But certainly in my mind that's an area of potential application it's an enabler it's a technique which can be applied to a wide range of topics. And I think that there's certainly --

So I would place it squarely in the lane of HSRP insofar as it can be potentially applied to the work of our offices.

>> Did you want to say something Mary?

>>> Just to add so we are exploring AI for data processing.

I --

Because of the latest developments I started referring to it as fancy statistics, we are working on that and I'd be happy to engage on the topic.

>> Can I --

>> Yes.

>> We're thinking about what we're doing what you're doing with the data and ingestion but I think you also got to think about as always the digital twin is not just --

It's dynamic and I think we'll talk about it when we talk about the people using products with automate shipping they're going to have AI within those future products.

I think part of it is you have to be ready for those data and services you're going to be, you know, providing.

And I think understanding that is important.

I think we sometimes forget that the chart is kind of static whether it's ENC or not.

You know, and there's a tide reading we see.

But that's not what the pilots and navigators do.

They're kind of --

They're dynamically in the environment and need what's happening in the future, right right when they're navigating and that's what pilots do any way you enable them but then you think you take the pilot out of the loop eventually because we are down the future going to have automate shipping.

So how does that get transferred and I think that's where the AI comes into this.

>> Julie if I can add, thank you, Lindsay for that --

You know, they are role in the digital twin really come hand in hand because the digital twin is all enable data --

Data enabled digitally or the physical environment.

So there is a great opportunity to release the AIs to to extract model and simulation there is a lot of things because everything become digital now, computer can go into an algorithm and that's why the AI has a great role in the digital twin.

Once you enable the digital twin.

Thank you.

>> Okay.

I'm going to stop this.

Nathan did you want to make a quick --

>> One minor comment with the digital twin concept I don't think it's an AI discussion it's serving out the data, right, so whatever data is being collected and provided need to have a way of serving it out so that that can be pulled into a digital twin because we don't know who's going to be doing that, right.

And so like the APIs that co-ops is working on an serving out the data for the national bathymetric source is important.

>> Okay, thanks I'm going to stop the conversation on this because it occurred to me that it's already 2:20 and I know that Gary needs to leave at 3:00 today.

So I wanted to give him a chance to give us the latest on --

And this will be preparation for one of our issue papers then that we'll be putting together.

Okay.

>> [Away from mic].

>> 3:30 now.

>> Okay, that's good update.

>> Thanks, Julie.

So at lunchtime we put together kind of a first draft that we'd like to present to the panel for review and revisions.

>> I think they're getting it on.

>> Okay.

We have a technology challenge with being able to share documents that we have here because when they appear up there they're nipped.

So so why don't you read the first paragraph.

>> I'm going to share it electronically with everybody right no you so you'll all be able to see it.

>> Thank you.

>> [Away from mic].

So this is a suggested paragraph for an HSRP resolution on the geodysy crisis.

Just a first draft definitely open for editing.

We had that the HSRP supports the rational and urgency of the resolution related to the crisis.

--

Following the approach of forging alliances between government, academia, non-profits and the private sector to work together to build geodyssey capacity within the United States.

While an appropriate focal point the HSRP sees this crisis as extending into the broader geospatial professions and we list the resolution itself.

>> So we can throw that out first and then we'll --

We had also three recommendations but let's do the paragraph first and get some discussion on that.

See if anybody has any suggested edits.

>> I totally support that.

My only concern is calling it geodyssey because once you say geodyssey that's really

--

It's my to conclude the real problem we are facing with engineering and sort of engineering for example.

So if we can have a term we can keep geodyssey but we can see genetic sciences what we call them just to open it.

So to know it's limited to geodyssey, only geodyssey.

>> Qassim, I will just draw your attention we did try to address that by saying the last sentence while geodyssey is an appropriate focal point the HSRP sees this crisis as extending into the broader geospatial direction.

>> [Away from mic].

>> I think the introduction highlight the geodyssey problem and that's what we need just to tweak it.

>> [Away from mic].

>> Yeah.

>>> Yeah, you've got geodyssey crisis in the title so maybe if you wanted to say geodyssey and geospatial or just geospatial.

>> [Away from mic].

>> Can I take a step back though, who's our audience for this paragraph?

>> The audience is --

I'm sorry your audience is always Dr. --

At NOAA.

>> Okay.

>> And I always think of your ancillary audience is anybody else at NOAA and hill people potentially.

It's all public document.

>> Right.

>> So it goes to anybody --

Please do define who's your ancillary audience.

>> The reason I asked the question is the word geodyssey is actually a really specialized word, what percentage of the population understands what that means. Surveying, could we use, is that useful or is it useful to be so specific.

The same goes with you know, I love the ASPA example but does that mean something to our audience, that going to be like you know, light bulbs or can we be maybe a little bit more specific about the approach that we're suggesting instead of giving an example.

Like if that was common knowledge to everyone then --

>> I just want to highlight the held that discussion the --

We talking about is not really geospatial professional because those people are finding job as not shrinking like the surveyors, the surveying engineering.

Surveying engineering not too many of them available around, not too many programs.

So we can just weave and surveyors surveying for example practices you know, think like that.

>> Yeah, by a little bit of context here there were two suggestions one is just to -- To put a resolution out sooner than later that just supports the statement one in the short-term and one that might take.

>> I mean, I think that was a great comment.

I think it's important what the crisis is, right.

It's not necessarily just, and Gary please speak to this if I don't get it correctly.

It's not just survey it's the geo --

That's the writes.

And there's a struggle because does that message mean much what does that mean to many people when it comes to Tuba's comment but we do want to have similar messagng right if NGAC is saying geodyssey crisis we don't want to say surveying crisis because we don't want to create confusion.

If we're trying to support the NGAC effort with this resolution we want to have similar messaging.

>> And I'll just comment again on that discussion why we --

That's exactly why I think we've got when we're having the discussion we think we need the resolution in this meeting to say we support the resolution of the -- Of the this.

But then we do also want to go on with discussion exactly what you're talking about, what does this mean and how does it impact NOS and beyond that.

And so as an example of that, I think was yesterday, yesterday Captain Way talking about that and looking at what Larry's been doing before all of those things then relate to the digital twins like you better get all of those things right.

So they included the bathymetry.

Well, there's many datums and how do we work that out.

And I'll take that forward as I said before the navigation down in that --

In the river, we're not interested and yes, we have to have that framework but it is a digital twin that's in real time that people can use to navigate for that specific example.

And across that all of it needs to be in the right datum vertical and horizontal and we really --

We talk about our datums but really have I think the future is a 3D datum right which we don't have now.

People think it is but in addition to that, OCS need to be solving this problem and presenting it different --

Without the user having to worry about that, right.

But you need to have that expertise available to get that right basically.

And it's not just NGS.

And I think you understand that, but it's not just NGS that got to deal with this it's OCS, NGS co-ops across all of it.

It's a foundation.

And so that has to be done.

And then to address the issue of education of it's not only we're not getting students through there's been a stagnation of the programs and some of them are gone if there's no faculty so you haven't actually trained the people to be the faculty and run those programs so maybe it leads onto foreign recruitment and immigration issues and all of those.

So that's not going to be done here now.

And that's why we saw we needed to have a resolution to say yes we support this and now let's also we think it's important enough that we have to address it with an ongoing meeting.

That was kind of --

>> Yeah, that's the approach that kind of two step is endorse the resolution of NGAC because there's already momentum going in and GA is taking some action and GS is taking some action.

So to do something for that current what's called geodyssey crisis but then follow that up with this panel and that's in some of our recommendations of what we want to follow-up with.

>> Then we don't have to get all the wording perfect for what our proposed issue paper's going to be and that can be --

I just --

That first paragraph is that what you're thinking?

Is that document right here going to go as our endorsement of the resolution?

>> That was our first draft, yes.

>> Okay.

>> So lift that paragraph there.

>> Right.

And the rationale we didn't want to take in Jackson and kind of worthworthsmith.

>> Yeah, then totally we do need to make sure we spell out everything and I'm not sure that ASBPA is exactly right here for our resolution.

>> Right.

>> Agreement.

That to me, would go more in the issue paper when we give examples of different things.

>> And we can also if with the chairs we can get the concept put --

Do some more wordsmithing and send it out for email approval.

>> Right, exactly.

And I think I cut off somebody.

>> I was looking at this from the standpoint of if this is coming from the HSRP, do --

What concerns me and I know y'all didn't come up with the term crisis, but from a marketing perspective, oh man, it gets out there now let's think of how somebody from the public domain is going to go the sky is falling.

I mean, kind of falls into geospatial but the point being this could be --

This could be taken as a huge --

It could be spun as a negative.

If some other entity wants to call it a crisis, let them do that, but as HSRP I would call --

I would stay away from that word.

>> And the rationale used in that, the paper that started this discussion that was the title of the paper.

And then the other argument was it is a crisis and we need to do something quickly and we need to get attention.

So yes.

They could spin it but we have very few students, we have very few geodesists in federal government.

So it is a crisis.

>> Gary we have Juliane on the line let's go ahead and hear her comments.

>> Thanks Julie thanks everybody for talking about this topic.

I'll try to be brief but I think a lot of good things have already been said.

Keeping the word geodesy and crisis in the message is critical.

This is something that is being communicated across the federal government as well as academia, hopefully also in the private sector.

And I think it's important to make sure that we are all calling it the same thing so that it can resonate and if people don't know what geodesy is or what the crisis is maybe that will be a good way for them to pay attention and learn a little bit more about what the issue is.

And as already been said by Nathan and Lindsay and Gary and others, this is about one in particular the U.S. government not being able to hire the talent that's needed with the expertise in geodesy and related sciences, whatever you want to call that geomatics, engineering survey, et cetera.

I think of it as broad but understanding what the science is behind so many of those geospatial related activities whether it's U.S. government, private sector, profit, whatever it is it's important to understand what the basic science and math is behind surveying and geospatial data.

Secondly, this is also brought up, the academic --

The universities in the U.S. the programs that teach this type of science are few and far between and they're getting fewer by the year.

And unfortunately until that can be refurbished we're not going to be able to have trained geodists and there's a big push again from NGA, from now, NGS, NASA and other entities who are trying to get this message out.

The third problem is even when individuals are trained, if they are not U.S. citizens, we cannot hire them.

Right we cannot hire them as employees.

And so while there may be people going through these programs the number of individuals who are receiving advanced degrees in geodesy and related sciences there are fewer of them that are U.S. citizens than you would --

We would like to see and that's really creating a drain on the pool of applicants that we have for our mission needs.

And so I do think it is worth ringing the bell raising the alarm whatever you want to do and doing it in multi phases whether there's a --

With the resolution here and some additional follow-up by how geodesy supports all these engineering surveying and geospatial communities and professions and how important it is that we have based geodesy both taught in U.S. universities as well as have trained individuals coming into our profession.

Thank you.

>> Thanks, Juliana.

Right, I'm just reading the first paragraph now.

I think to me it reads better.

Go ahead.

>> Yep.

So I fully support the paragraph that's on the screen now and I don't think that we should belabor this because this is a highly well respected group that has put a lot of work into an excellent paper that clearly defines a problem.

And we simply need to support it.

Thank you.

>> Thanks, Nicole.

Any further comments on this?

Can we agree as --

Go ahead, Gary.

>> Looks like we've made some edits up there.

>> Just as a suggestion before we removed the reference to the ASPA, we can add that back into the white paper.

>> I totally think, let's go into the Juliana put out the three bullets very clearly and I think we give examples for each one of those bullets, you know, drill down.

So I think it will be a really good white paper about but let's go ahead and see if we can agree as a panel to support this resolution.

Are there any further comments?

All rights.

What is the proper process for this?

We can submit this to Lynn?

What do we do with this then, do we send this?

>> Sorry isn't this just now going to the --

>> It will go to recommendation --

>> [Multiple speakers].

>> As an addendum probably like you probably wanted to --

Don't want it actually in the letter itself.

>> But I think we do want to say that just straight HSA supports the rational urgency of the resolution, period, that we want that in the letter.

>> Right, I agree with that.

I was really wondering Gary if there's anything that you would do with this further within --

>> Yeah, so --

Yeah.

What what I'll do is I'll --

I'm chair of the NGAC I'll take this back and tell them that another federal --

And I'm also a member of NASA position and navigation timing.

So at our next meeting I'm going to work to get a similar resolution at that committee also.

>> Okay.

>> And also I don't know if you want to take it separately but we have some recommended --

Recommendations that we like to present to the panel also.

>> All right.

Do you want to go over this?

>> Yes, um-hum.

>> Let's just wrap that one up there.

As far as NGAC pass a resolution we now are going to do a white paper on that, you're going to lead the white paper.

>> That's one of the --

>> Oh, you're talking about it here, okay, sorry.

>> So we currently have three recommendations.

First this was discussion as Lindsay was talking about that not only as we need in the workforce we need professors to do this.

So our first recommendation is, and we will recommend that this go into the letter that NOAA administrator work with other federal agencies which could be NGA, other ones, USGS, anybody, DOT that the geodesy crisis affects to work with the National Science Foundation promote funding opportunities for outreach and recruiting of the geodesy professions.

Second recommendation --

>> That was for not just recruit professionals that was for the academic institutions correct.

>> Right, right.

So we need to probably add in wording in there too for that.

Our second recommendation is the next HSRP meeting that we have a panel discussion on this topic.

And bring in some academia private industry other in a agencies and discuss this and the last one was the issue paper.

>> Okay.

Great.

Yeah thanks you're updating that in real time.

All right.

So if I can have a copy of this, I want the recommendation for the administrator letter verbiage there as one of the recommendations.

So if I can just have a copy of it it would be great.

>> Yeah and Lindsay will provide you a little wordsmithing on that.

>> [Away from mic].

>> Yeah.

Whoever has that master document there.

Okay, Lindsay.

>> [Away from mic].

>> Okay.

All right.

Gary, do you have anything further then?

>> Nope.

>> Do you have any other wrap up things that are off topic, off this topic but --

>> I don't think so.

I appreciate everybody's discussion on this.

And just what Juliana said it is an issue that we need to deal with quickly.

And the more attention we can bring to it especially in federal agencies the quicker we can start going in a different direction.

>> [Away from mic].

>> Yes definitely thank you very much.

And happy travels home.

Okay.

Let's see.

We have a few more minutes before our break.

Nathan we have down here the art take working group.

What do you think, do you have anything to say about that?

>> Sure, love to.

Let's see.

So, yeah.

The working group consisting of me.

So if anybody else wanted to join the working group would be great.

>> [Laughter].

>> We came up or I came up with some notes.

But it's educational for me.

So let's see.

I met with Meredith Westington a couple times the past few months and Ed Paige.

>> Do you want to say who Meredith is?

>> I don't know official title but I know she is involved with Alaska sea escape and admiral, I believe you --

>> I'm sorry, could you say that again.

>> [Away from mic].

>> Alaska sea escape regional coordinator?

>> [Away from mic].

>> Mapping coordinator, all right.

I think I had a correct

>> Yeah, I think that is correct.

I would just add she's a federal employee she works for coast survey.

>> Okay, yes.

Thank you for the clarification.

Yeah and then I reviewed some of the previous issue papers.

So as informative for me I'll just kind of go through some of the history but in October 20th is a there was a letter to the administrator with recommendations from the emerging arctics priority working group that covered topics like national security, better understanding shipping in the arctic, supporting -- Specifically for needs for gas exploration.

Actually in 2015, was talking about the small boat harbor issue also at the same time and identifying harbors at refuge and specifically for the arctic.

In February 2018, there is an issue paper on charting the U.S. maritime arctic.

Similar topics covered national security again increased charting in the arctic, improving access to the NSRS in the arctic, specifically addressing tides and current mention public private partnership so these are topics open to discuss for a while.

And then in September 2019, expanding those navigational service in the arctic. So evaluating new technologies specifically calling out ports and coasts so physical oceanographic.

So that was in September of 201.

And then I just kind of have a little summary of things that have happened since then.

Oh not exactly since then but in May of 2018, there was the kind of --

To my knowledge the first purpose built GNSS core station in Alaska that was specifically built for dual purpose for 3D positioning and also water levels using --

So that was some of the emerging technology that were being addressed.

Then in November 2019, so then there was the presidential memorandum on ocean mapping of U.S. zone and shoreline near the shore of Alaska.

Then in June of 2020, came out the mapping the coast of Alaska, so ten-year strategy to support the U.S. economy security and environment in December of 2020 arctic --

So arctic dredge port and --

Was authorized by the 116th congress in the water resources development Act.

And then in June 2022, there was the Alaska coastal map being strategy implementation plan for 2020 to 2030.

Then later that year so in August of 2022, the Alaskan native triable house consortium in NOAA announced a pilot project to establish a director of triable climate change initiatives at --

And some that have you know, driven by equity for underserved communities, you know, there's 574 fairly recognized tribes officially in the U.S. and 40% of those are located in the State of Alaska.

And then so in August of 2022, senator --

A U.S. senator Lisa Makowski introduced the -- Act.

Later in that year.

In September this was some foreign naval ships that were spotted within you know 86 miles of some Alaska islands.

September --

Later that year there was the typhoon that affected about a thousand mile of the coastline of the state and over 30 communities.

In October of that year there was the red king crab fishery was cancelled first time in since the mid-'90s.

And then in October of 2022, this was the white house announced the national strategy in arctic region.

So just kind of there's a lot of that's happened since our last issue paper on the arctic.

So I'll just make the recommendation or suggestion that I'll work on an issue paper for the next public meeting.

That would be great.

And speaking of the next public meeting we'll touch base on that too to decide when and where.

Yes, you have a question.

>> Yeah, that was a good summary Nathan.

Thank you.

So it sounded to me like there was a lot of agency engagement technology was sort of happening and then you had Merkowski and a typhoon and then it took off.

I don't know if that's true or not.

>> Let's see.

I think it's been in works for a while now.

Actually the presidential memorandum that came out really initiate a lot of movement that happened that initiated the state of Alaska to become organized and come up with a strategy which then rolled into an implementation plan.

The idea of using technology emergng technologes in the state, I think is suggested often because it's a big state with lots of challenges.

And so it's a great opportunity to try to address emergng technologies to see how we can increase mapping for the state.

>> Thanks.

I'm trying to look at parallels between the things that we've been presented this week and the way that you have been so successful with Alaska.

So we've heard Ashley mention the idea of a Puerto Rico mapping strategy similar to yours.

So I've been reading through the recommendation paper that we put together a few years ago about the Alaska mapping strategy and just trying to kind of, you know, there's a lot of powerful things that happened to influence that like the presidential efforts there.

So perhaps we could think about this over the break and I'd love it if we could talk about this particularly related to the comments that we put in our memo is sort of learning from that experience Puerto Rico's already included in the full national mapping but how can we kind of pull that out and highlight it and perhaps use some lessons from your discuss

>> Yeah, I think another good example is the Florida mapping initiative they have parallel initiative that's going on at the same time.

And so we're kind of bouncng ideas back and forth is my understanding between the two states.

>> And thank you from me too Nathan that's a really nice summary of things that are happening.

I fully support there being a working group on this topic really important topic happy to contribute to it in any way I can to an issue paper.

I guess my question is one more of like the history.

Especially in the context of Julie's suggestion that the sustainability conversation take place under the technology working group.

What are some of the history of this, or maybe both the technology and the arctic working groups how do we form them, once they're formed, do they forever exist?

How do we form new ones?

Do we have sunset some, just a question from a rookie panel member.

>> I'm going to tell you and then turn it over and I'm going to turn it over to Lynn because she really handles the working groups.

We had a representative in Juno was on here and stepped off and as he stepped off Nathan came on.

In the U.S. so I would say that the arctic working group kind of has this history there when Ed was on I believe it was started in forming new ones is an issue for the --

Let me give her --

You've got it.

>> So the technology working group came about because Ed and Lindsay met each other at a meeting and just said gosh we're missing something big. And then the arctic was because I think Ashley probably can speak to this better but it was --

It's such a vast area and NOAA is doing a lot on it. And we were missing so much information that -- There.

Ashley if you want to add anything.

>> May I?

>> And then --

>> May I?

>> Yeah.

>> When this panel first started the mapping at Alaska dominated the amount of activity that was going on in the 2000s and senator Ted Stevens was around and that kept up for a long time.

>> Yeah I forgot about that, we forgot about that.

Andy.

>> I would just add this was also a time when the oil industry was actively doing exploration and actually planning test drilling.

And so suddenly they were going to be oil rigs and support vessels operating there. And so we were --

It was a bit of a urgent issue in regard to what our charting situation was relative to that as well.

>> Can I also comment on that related to equity and I totally agree with Nicole we should learn from this but there were those initiatives that drove it but then we're back to this well Puerto Rico doesn't have that drive now.

And so how do we take what was there.

Then we've forgotten already about the Pacific island we were there saw the problem and talked about having a Pacific remote island regional mapping thing we're onto the next meeting and we forgot about that one.

And I think half the year and that island are way past that and we have great territories out there that we just don't --

>> [Multiple speakers].

>> Is out there I know that but just as a coordinate national regional I think that's an area that also we didn't address from --

>> You guys did address but I think it's got --

What we talked about at the last meeting was that it has --

The drivers are different.

And that they weren't the same as Alaska and that there's not the same interest and had to really be locally led and hadn't been the interest.

>> But again it comes --

It's like what we're seeing the small ports right, the equity of what --

And so that one little port with a place of five hundred people it's like it's not critical but yeah it is to those five hundred people --

>> I defer this to the admiral and Ashley.

Let me just working groups you guys are official things.

So having a working group that encompasses technology and then anything else you want under it is totally fine.

It takes some work to keep them going.

So you know, they ebb and flow.

The other one we have is just like general anything else we want it to be and that's planning an engagement.

And we came up with that because at one point somebody on the HSRP want to engage the hill.

If you happen to be engagng the hill we're very happy if you go and say this is what's allowed hi I happen to sit with the HSRP but I'm not here with that hat on I'm here with my other hat.

And by the way here's a document that they did that says blank and here's the recommendations that they made that you should see.

So that's legal.

>> Part of the reason I was asking the question is exactly where Lindsay was going.

I mean, and later on when we do our summaries, I feel like there are so many parallels between Alaska, Hawaii and the Caribbean yet they're also different.

Could be there a broader working group that could encompass all three of those regions.

Or would that make sense --

>> [Multiple speakers].

>> That's not my intention.

>> Can I comment correlated to this?

Yeah, I think the history of Alaska issue paper the attention we give to it really it happen after the visit, the meeting was medical in Juno Alaska and they have taken the credited for it.

But that issue paper brought a lot of light and attention to Alaska and Alaska's strategy.

And you really think after hearing all this local communities we need to do similar things for the Caribbean here for Puerto Rico.

I mean why don't we issue an issue paper focused on their needs because there is a lot of demands for services and needs.

We can highlight it the way we highlighted Alaska.

So I'm just suggesting put in there for the admiral usually to see --

>> [Away from mic].

>> Just a quick comment.

And that almost works like a working group right.

When we write a white paper we form a small team and we have a targeted topic and goal sand deadline and it sunsets.

>> Right just to let you know we usually run those under the planning an engagement.

People are limited with their phone call time during the month.

And I think that's why I --

Anything that we can put on the topic on the agenda for planning and engagement, we can have small underserved communities you know, maybe that's our issue paper or our issue paper discussion.

And then if we feel like we need to have a further breakdown then we can always do it from there.

But I think it's nice to just get that one call in a month where we know it's really important to engage if we can.

Yeah, go ahead.

>> Just thinking about not so much the working group structure that's --

But how could we --

How could the panel frame this as a recommendation that's useful to the administrator kind of going back to Lindsay's point, from where I sit now, granted my window on the panel and the recommendations the panel is still relatively short, but, you know, I see opportunity to emphasize that here we are yet again.

We visited a community, a geography on the other side of the planet.

And we are seeing these same issues again very similar issues to what we saw in Hawaii last summer what we know from Alaska here we are in the Caribbean, we've got this group not a geographic cluster but a cluster of portions of U.S. territory which are underserved by the --

By the navigation services wordsmith but to kind of continue to beat that drum in the recommendation to the administrator.

And again I wouldn't presume to put words in your mouth whatever words you want to put there but I think, I don't know that --

I think rather than --

What am I trying to say?

I don't think we're necessarily leaving behind Hawaii if we also talk about how we're seeing the same things in the Caribbean.

>> Yeah, so perhaps what we're talking about here then is an issue paper that addresses just that, that isn't really focused on the Arctic per se, but maybe these geographic locations that are underserved the small boat harbor.

We could tie that in.

We've seen that in the Pacific definitely up in Alaska here.

The same issues that keep --

We could put, you know, have an issue paper that was developed from that.

>> I here Louisiana screaming in my ear.

We have our share of problems too, okay.

So --

>> Well --

>> [Multiple speakers].

>> I love Hawaii and Puerto Rico, you know we're all in it together but I have to speak up.

Sorry.

Louisiana calling happy afternoon.

>> We could throw it in there.

Nathan, what do you think?

>> Well, I was just going to comment when she represents active spoke earlier she talked about Puerto Rico, Alaska and grouped them altogether when she was talking about regional services.

So it's a very valid conversation that we're having here.

>> And we could have subsections that talked about each specific case's uniqueness, right, like we're not dumping them all in the same pot.

>> And you guys this falls so well within NOAA's priorities currently to think about representation.

And I would like for Ben to really comment on that.

Sincesits at all the much higher level meetings the I do.

>> I'm not sure which meetings you think I'm going to Lynn, but I'll say two things:

One yes if we look at the NOAA plan, the NOS strategic plan soon to be NOS strategic plan, I'm probably --

I'm using the wrong words here but equity of delivery of service is a really key foundational principle in all of those.

I would --

And so, yes.

I think this fits well with that.

And one of the things that we've thought a lot about in our deliberations on the NOS and NOAA strategic plan in our own strategic planning in coast survey is we want these teams to be durable.

And I would just caution against attaching too closely to the political language of the moment because we want these --

These themes have to go on for years and years.

Write these are the things we need to be working on.

So we want to cast this in terms and in methods that have that durability that last longer the last election or whatever change in winds may be coming.

>> I think that the equity of what was it --

The equity of delivery delivery of service, that's a good title for an issue paper, you know.

Okay.

So Nicole, Nathan, seems to me like you make a great group to kind of put something together that's a start.

I'm sure that Lindsay and that Shawn and I'd like to contribute tomorrow things too that you know y'all will get a lot of comments but maybe we could get kind of a draft going does that sound like something you can do Nathan work with Nicole and Tuba on that.

>> Yeah I can work on that I just want to be clear.

>> It's going to be broader than Alaska.

>> Okay.

>> Broader than arctic.

>> [Multiple speakers].

>> Okay.

>> I think so, does that sound like what we're going for here.

>> Yeah.

>> I think so.

Because like Lindsay brought up a good point every place we go and have a meeting we go oh my goodness these people need you know, help and assistance and we have to get this and then it can kind of die on the vine a bit.

So let's keep it alive and kind of bring it up maybe we can synthesize on this issue paper.

>> It seems to me focussing on some commonalities from a bunch of different areas, sea level rise, the metrics.

I know into Arctic is different than yours.

>> [Laughter].

>> I would say, I would say commonalities but it's also an opportunity there to have you know, break down the differences and also highlight that.

Of course all within two pages.

>> [Laughter].

>> Well, I mean Shawn has a great point.

There's underserved communities everywhere in every U.S.

territory it's not just these remote regions.

We'll have a lot to discuss when I try to pull this paper together and exactly what the issue is that we're trying to address.

And that's what I was trying to get clarification.

>> Yeah and you know on that comment underserved.

I mean, it's in southern California point conception now we have small boat harbors always crying for more instruments whatever but I don't think of them as underserved in the sense that they're liability, their livelihood relies on getting that cargo ship ashore, or that's kind of the distinction that I make.

>> I would not include east coast, West Coast, great lake.

Louisiana, maybe.

>> Right.

>> I can give examples of Oregon small boat harbors where their livelihood is connected to whether or not they get the dredge out there but I would still argue that that's not what we should include in this one.

Let's not broaden it too much.

I like the idea of keeping it to these sort of remote places that are outside of the continental U.S. that might have some unique needs.

That isn't to say there isn't anybody else who has needs.

And we can make that clear in our opening paragraphs

>> Yeah, I think that would be really good definition to start out at the top like who are we addressing.

>> You guys also in your --

In your packages online there's a list of all of the previous issue papers with links to them and also on the website.

So you can look at that.

We have a template that we're using.

So please use the same template.

Please don't start from scratch.

And also try to find you somebody to kind of help you from the expert side on NOAA on the NOAA side so we have somebody who could like back check and look at your stuff and we'll help with the layout into that template if you need it.

>> Oh, yeah, we'll need it.

Thank you very much for offering.

>> Yes.

>> Okay so I think these are the things I see left for today.

I would suggest we go to break.

I think when we first come back we'll throw the priorities matrix up on the screen we'll modify it update it as needed.

Nathan has so kindly offered to lead that charge.

I think we want to bring up the discussion of the September meeting, Lynn.

Admiral, I think that we want to just touch base on that and I think we want to go around round Robin around the room really specific ideas about what you want to include in the recommendation letter to the administrator.

And Ed has offered to --

And I know Amanda also is making some notes on that.

So we really want to capture those.

If you have an idea you want to get in there give it to us now.

It's your chance.

Okay so should we take a ten-minute break.

Thank you.

.

>> Don't forget that you have coffee in the other room and snacks every day.

So, yeah.

.

For those who are going on the site visit tomorrow, Lindsay, Larry, Tuba we're being picked up at 8:30, please meet at 8:20 at the front we'll be on a small bus that fits 20 people please wear comfy shoes, five stops, a observation tower, a visitor center, a lunch, there's a path that might be a little muddy.

You should either bring your bathing suit and change into it if you want to jump in the river, change into it at the visitor's center or wear it.

Bring a towel, a hat, water, snack, forget anything comfy shoes, I would suggest no flip flops.

If you need any more data on that, also there's a few slots left if anybody wants to join us you're welcome to.

And because we didn't fill all our slots we actually have to pay a little extra and I will get that info to you.

Okay.

And you can change afterwards.

We'll be visiting something the restaurant afterwards, I think or one of the other places you could change and everybody said that the last group who went the IUs group was here they all jumped in the river.

They said it's very beautiful.

We'll just take one minute here to get the priorities matrix up on the board and then Nathan's going to carry it from there.

Nathan do you want to go ahead and take it then?

>> Yeah sure so going through the planning engagement matrix, any chance you could make that screen bigger, yeah.

Yeah, that's better.

All right.

So I'll try to fumble my way here Julie I might need some assistance.

Just go through this matrix here and see where our priorities are or if they're a priority or tracking them or they've been archived.

I think there was a number of other topics that came up that I don't know if they bid into existing items that we have on this list or if we want to add them.

Go ahead and start with the first one integrated ocean and coastal mapping.

Looked like we have it as ongoing.

I don't know fully the history of this one but anybody have a comment on it?

>> I think we're --

>> [Away from mic].

>> I think what might be helpful is to start over on the left and then just slowly let's get all the columns go through --

Just so we can see what the very last column is.

>> And Julie can you also just back up one more step and tell us about sort of the purpose of this matrix?

>> Oh, sorry.

That's right.

You and Mary Page aren't familiar with this matrix.

This is what's called a priorities matrix.

It's an excel spreadsheet that anyone can update or change words anytime with any topic they want to add or update.

We try to do it at the end of each meeting kind of based on the discussions and there's really three broad categories, one is kind of our first category that says hey this topic is still right there, it's ongoing.

We're actively working on it one way or the other.

The next section is it's ongoing, we want updates but we really the HSRP doesn't see anything that they could --

That they could actively do to change that right now.

And then the third section is really our kind of offed topics that we've addressed --

Archived topics that we've addressed just to keep track of them.

So it's kind of a very --

Really a spreadsheet here because there's many columns but really the most important ones to me are the first two columns and then the very last one so we're talking here about the mapping and then if you scroll over that ongoing, that's really all of these are probably in the --

Within this first section it will say ongoing it might have another comment there. Okay.

Back over to you Nathan and I know Lindsay has a comment.

>> Yeah, this I think it was in February it kind of had a few brought into that from other sections and we really haven't done anything.

Go ahead.

My bad.

But it was what I mentioned before about archive of data.

And it was --

We had some discussions with Brianna who's not here I think about the external source data at OCS that slightly changed I think the path and management I understand, and we haven't heard about that.

We've also talked about how the data at NCI, metadata licensing, it's all slightly different and then how the data federally get archived from you know, USGS, Corps of Engineers.

And now, we've got the national bathymetric, how does that all relate together.

And it's kind of confusing right now I think is the end and it's not --

It's something I think we need to make less confusing.

What else was --

Yeah and again it's related to digital twin, day items and all of those sort of things.

Getting the data through.

I think it's a little bit of a stopper and it came up initially when I raised it at a very low level.

It was a survey we did up in Thunder Bay.

But it didn't get through the queue so nothing ever happened to it.

It didn't get to NCI which means it wasn't public.

That's changed now being addressed, but that's important for getting it out and if you want to use it many times people need to know it's there.

So I will also just if I can just comment there was something that was on this week actually was a seminar on data bathymetry discovery of access of data which was hosted by the technical subcommittee and also the DCDB digital --

Digital bathymetry which is actually at NCI, so it's Jennifer Jenks, so it's a --

We want --

Didn't --

And I think it's bringing those people to this.

And I'd like to see this as an ongoing.

I know I spoke to Brianna we'd actually like to spring this forward and potentially have something at the meeting in sent to bring a bunch of people in.

So that --

That was a long short story.

Go ahead, Larry.

>> I just wonder kind of turning around those comments and can we look at this ongoing issue of IOCM and say that things like the bathymetric source.

I think we also should acknowledge that progress is being made but we have to be careful that it really does end up being integrated with other things and doesn't create another --

[Away from mic].

>> Some of the things that's been great progress in isolation and part of the immigration issues that's still to be and under and does relate to digital deployment and relates to day datumdatums.

>> Admiral, why don't you go ahead?

>> I was going to say I think from my perspective, NOAA's perspective I think this would be a very worthwhile conversation to have these pipelines challenges you've highlighted, Lindsay, are real.

And we are working to iron this out and get things sequenced correctly and decouple things that don't need to be coupled.

I mentioned in my remarks earlier this week the updates to the hydrographic specifications, deliverables but still --

It is confusing.

And it's, I think the convening power of the HSRP would allow us to bring some that have together to kind of put all the spaghetti on the table and start to take the next step forward in ironing that out.

>> And part of the confusion is again we come back to it, it's the outreach and help us do some of the outreach for you and that confusion.

>> So the SOMPS came up a number of times, I mean, we're going to be talking about that in the next public meeting or I guess in a virtual meeting, does that fall under this topic, or is that a separate topic that we're going to add to the matrix?

>> I would just say that I see that as separate.

I think the issues that at least as I hear Lindsay's comments the issues he's referring to are the connective tissue between you know, data sets and public access.

And the pieces and the various different paths that those can take and connections between the various organs that have a hand in this.

That, to, me is a separate topic.

>> Make sure you have the best data --

>> Okay, wait.

>> [Multiple speakers].

>> Before we go any further.

Let's just go through the matrix because I actually think we --

Because, because I agree totally Lindsay, I think there is.

I just don't find the document online right now.

I think we did make an entry for exactly what you're talking about.

So what I was going to suggest is let's start on Row 1, it is true that we made a lot of updates, Ashley, are you still here?

Okay.

I would --

>> I agree.

Can I just say then we'd like to have Brianna and I would kind of lead the meetings and then propose that it would be in the September meeting?

>> Back to your original question about what your role --

>> To finish this line to say instead of ongoing too we add --

>> Oh.

>> That's it.

And then we can move on.

>> That's all I was going to --

Just assign it to somebody to have them update the row is all you need to do.

>> Gotcha, okay.

>> Otherwise we'll be here for a whole other day.

>> Lindsay you'll update that status row.

>> I'll update that.

>> Okay.

Thank you.

Thanks or that Julie.

>> Amber has a comment.

>> I am the IOCM exec sec so I'll tell Ashley.

>> Perfect.

Okay.

So between ash leap and Lindsay let's just get the wording updated.

It doesn't have to be ongoing it can be whatever you want to put in there.

This is just our document so you can do whatever you want.

I know I account you off Qassim.

>> Okay, we'll move onto the next row then sounds good.

So precision navigation who's going to be updating this row.

Maybe I'll start the conversation with that first.

Oh Anuj.

Qassim.

>> Yeah, we --

I think this already was put maybe before we took over that topic.

It's meant a little bit different but we probably need to update it, Nathan.

The precision navigation we brought it very --

Last year and have a session on that.

And landed to revive that first and next meeting definitely will combine it with the digital twin.

So I probably can if you put it on my list I can update this toto --

>> Or, Qassim, I'll just say that as precision navigation moves forward I mean one of the next places is the Mississippi River I'd like to have some input on that.

And I can't remember how old that paper was but it's of course been a while and there's been a lot of changes.

But anyway, I'd like to work on that with you too.

>> [Away from mic].

>> Already discussed that.

Just needs to be combined here.

So we need to change the --

Sorry, Nathan.

>> Go ahead, no, digital twin's another item on the list.

So I don't know if we're going to combine it but Qassim go ahead it looks like it's update here but if you can update it for it will be a panel discussion at the next meeting, is that what we're hearing?

>> [Away from mic].

>> Microphone.

>> Okay.

Lynn wanted to make sure that people understood there's a lot of topics that are under discussion for the next meeting.

I think digital twin has been one that's been on the books for quite a while.

So I would just suspect that that one has high priority.

>> That makes sense.

This sounds like the precision navigation and digital twin are being combined.

So it will be covered in that.

I'll go ahead and move onto the next row.

Army Corps and NOAA partnership.

Who's taking this one on?

>> I'll speak on it a little.

I man, this has always been a big deal to me.

We've seen a lot of interagency coordination.

I don't think there's anything to do.

We probably could add some additional government agencies to that discussion.

You know, having USGS here, try to make sure we cover everybody, but I don't think there's anything to do, the support has been appreciated, and I see differences in meetings in New Orleans with Corps and NOAA staff and working on some complicated changes.

So I don't think there's anything to do.

>> I'll make the comment I'll make every year when we hit this one I think it's important to keep it simply as an Army Corps NOAA engagement element, the core was glaringly absent from this meeting and I hope that we can --

>> [Away from mic].

>> Yes, but in terms of sort of the technical and data gathering needs.

Yeah I apologize.

Sharon was here.

But I didn't feel them in the other sessions I guess is what I'm getting at.

So I think that is important for to us keep on the agenda and happy to help foster that relationship in any way I can with other panel that I sit on with Tuba and other relationships with the Corps.

>> All right sound good ongoing with that one.

Next one private public partnerships.

Who wants to --

Who's updating this one?

>> [Away from mic] sorry.

We publish an issue paper.

So I'm not sure how long you want to keep it or what's the purpose of this draft of the issue paper?

>> Well, yeah, I mean we could change the status of this to --

>> Yeah.

>> Completed or to --

>> Completed encourage and endorse I think is kind of what we have.

>> So do we keep it in this upper category or there's I believe there's another category down below it of kind of continue to track.

>> Unless you want to keep as a place holder to monitor the activity like NOAA involved in this PPP for example, you know.

Because we publish and we send the issue paper but maybe for the interest of all we keep --

We have to change it here.

I'm not sure what we saying.

Just to monitor the success of the PPP in the next few years for example before we sense that it --

That's my suggestion.

>> It won't be sunsetted we can track it and move it down to the next section that's all.

>> I think when a couple got merged last year something happened because it's got partnerships and addressing quality control of data.

And I think something's got messed up there because the quality control of data is related actually I think it kind of should be up in this first --

First --

The comment I raised the issue regarding some of the Bathymetry data and I think it just got merged incorrectly.

And I didn't review it.

I apologize.

And I think that section of it should be ripped out and put up with the first one.

I don't know how that got there.

>> Right.

What I would suggest --

>> I think this is mixed up between giving data to NOAA and --

>> Partnership.

>> The public private partnerships which is all about money and working and that type of thing.

>> So do you want to take that, I think that Amber --

Let's see it's Amber and Amanda which are actually updating and maybe you could just meet with one of them afterwards Amanda show her what needs to be moved where and you can move it.

>> Thank you.

>> All right.

Thanks or that.

The next one we have is disaster response coastal resilience relative sea level change and coastal flooding.

Who's --

Looks like I mean, status we have an October'22, is the status.

Who's taking that one on?

Nicole Elko.

>> Yeah we just completed that white paper.

So we'll need to update the status.

>> Do we move that to completed or continue to track?

>> I suppose whatever we were doing with the previous one on public private partnerships, similar.

>> Okay, yeah.

>> Don't want to lose sight of it but we're good for now.

>> Sounds good.

We're moving that to continue to track then.

Hydro dynamic modelling and validation.

Julie looks like you have a comment.

>> Yeah, I'd like to comment on this one because actually my discussion with Admiral Evans a couple nights ago, this is something that keeps coming up when I'd listen to co-ops present --

The director's presentations their models that are being developed within each of these program --

I don't want to call them program offices but each of these offices.

And I would love a presentation at one of the meetings preferably the next meeting, that really talked about more in-depth about what programs coastal --

Yeah, hydrodynamic modelling, coastal water level the ocean forecast system behalf is being developed this in the three offices so that we can really understand more about the vision and what the happening, what's being addressed and also not only a presentation on what they are doing in their model or what type of validation and verification is being performed for the models.

So to me, that's actually a very active.

I'm happy to take this line but it is an active subject that I'm very interested in.

And --

Go ahead.

>> Julie, yeah, this what you just mentioned really goes into what I suggested earlier.

Maybe you could leave it all in one which is technology and science support, you know, for what NOAA great job is doing during the year for example.

If we get the report at every meeting for half an hour or more to address some is all on what is the latest and greatest.

And this can include any modelling and things like that.

>> Yeah, so in the director's reports I know that each one of you speaking to the directors here have given a little one slide as far as what water levels are being developed.

But I think that this is deeper efforts that are going on in each of these divisions. And I've been involved with them a little bit.

And also with some of the verification a little bit.

But I think it would be really instruct active to the panel to know a little bit --

Because even in OCS we don't really talk about the hydrodynamic modelling that they're doing and yet I've been working with some of the molders this and I think it would be interesting to have the panel to have a deeper dive into this topic.

Yeah, Tuba.

>> Just a suggestion, would it work --

My impression is every meeting the directors give a report out, would it make sense for that to be folded into their report out a little subsection with some information or is that not deep enough.

>> See what I want is like on the page together.

Go ahead.

>> So I think that the challenge at least as I understand it from Julie and the challenges I feel is that within OFS there are pieces of modelling kind of scattered around again the convening power of the HSRP could help us to get that all on one page and draw the wiring diagram.

And then to be fair and I think I want to be fair to Nicole because she has prioritized sorting that out and it's an active project in NOAA is to better organize ourselves within NOS to better organize ourselves around or modelling efforts.

So I think the time is appropriate.

>> Yeah.

>> But to bring that as its own --

As its own topic that draws a big circle around the offices represented here.

>> If it helps you we should totally do it right.

>> And I would suggest we could have this following directors reports which I think is invaluable I think maybe add an extra half hour or whatever whatever you directors feel would be an appropriate time to go into this little deeper dive and put these pieces of modelling together for us.

>> Julie, does the advantage of it, I mean definitely helps us as panel members to give feedback and within our expertise if we have for them to do better idea to follow or to use that.

Will give us good opportunity to see what they doing and whether we can help.

And that's --

>> All right.

So sounds like it's definitely an item that we want to continue to track and it will -- Julie you will work on pulling something together for the next meeting?

>> I'll work on working with the directors to pull something together for the next meeting.

>> Sounds good.

>> Next item digital twins.

Qassim.

>> Beat it to death.

>> [Laughter].

>> Definitely the importance of digital twin as measurable for NOAA.

Let me give you example what we saw today.

Of course now --

Digital course and you see great product from NOAA but in my opinion segregated as not connected.

And that the beauty of --

When you look at the Puerto Rico we saw in all this presentation, you look at the coastline or the map it is one map, you know, we don't need to go to this viewer to get the wind and that viewer I get the bathy and another I mean you get very confused.

Where to find the data.

And that's the digital twin for NOAA.

Put everything in one database.

And the user can select what they want to.

Because that's going to prevent datum problem, in connection because this is government --

You can't put data if it's not in --

NATBA for example, things like that so we have a lot of data published by different agency within NOAA and all geographically located and can be in one place.

So that's all I want to say.

>> Go ahead.

>> I would recommend the answer is to be presented in September.

>> Yeah, Qassim, if you could update that status then --

>> Amanda did it.

>> All right got it, okay.

Great.

Thank you.

Next item hydrographic survey fleet.

Is that.

>> [Away from mic].

>> Yeah.

Is this something that we want to keep tracking or --

Yeah, Admiral.

>> I think we should --

My recommendation would be to continue to keep an eye on it.

We've, you know, I think we've advanced the ball significantly since our last meeting.

We collectively, we're not in extremis as we were at that point but you know, recapitalization of the in-house fleet including our and a half gags response team assets and continued discussion of what the right blend of assets is, large crude vessels small uncrewed vessels that's going to be a issue that's continued of interest to this panel.

I wouldn't want to lose track of entirely and call it done.

>> I would just like to add I think it would be good to be kept updated too on what the needs are.

It's always good to have exact numbers or the same numbers.

>> Yeah sounds good.

Sounds like a lot of progress was made but not completed yet.

So we want to continue to track.

So those are all the items that are priorities essentially this pen we're moving down to the next section which are I believe this --

Oh, Julie.

>> I'm not sure if we don't want to --

I don't know what everyone thinks but do we want to add another item in the top section that's just addressing these --

This delivery of services to underserved communities or something like that?

That going along the line with the issue paper that we will be writing?

I'm not really sure we have that called out here.

>> Yeah, I agree.

Julie I think we should put something, a line in.

>> [Away from mic].

>> Yeah.

So maybe Amanda we can go ahead and just add another line in there and I can give you some further --

Perfect.

Okay.

Next.

>> Well, I mean, do we --

I don't know if --

We don't necessarily want to have a discussion about adding other things or not I mean this were a number of items like we have the sustainability conversation that came up.

And is that something that we would list here if it's not already included I mean we had the geodesy crisis, education, small ports, those sort of things.

So --

>> Do we want to put a sustainability line in there?

>> I don't really think we need it because this is not --
We not going to track we going to establish sub group on the technology focused
on the sustainability.
So I'm not sure --
>> I'm not sure I agree.
>> Issue metrics.
>> I think we just got all the items we don't want to lose sight of that just because it
get addressed --
This is just saying this is something we want to address and we can put as our
actions being addressed by the technology working group.
I think those items should be added.
>> I think there's going to be growing in importance.
>> Yeah.
>> And going to be coming back to it and be reminded of it so I think having it in the
matrix.
>> [Multiple speakers].
>> How we address it is separate, I think.
>> So, Amanda if you could get both of those in there and Qassim will give you the
verbiage or Ed one of you for this sustainability.
And.
>> [Away from mic].
>> Yeah.
>> What was the other one you mentioned there was something else too you
thought we should be adding?
>> Oh, well --
>> [Multiple speakers].
>> So I just wrote down a few of the things that I could remember that we
discussed.
So education outreach, essentially, you know, geodesy crisis which we've
addressed.
We're addressing with the resolution but there will be a white paper that --
An issue paper that we're working on.
So I don't know if that's something we would want to list here.
We're going to be --
We need to review the SOMP and give feedback on that.
I don't know if that's appropriate for tracking here again.
But then small ports was something that came up a number of times.
>> No, that kind of gets wrapped into the delivery of service.
Tinge Admiral Evans has a comment too.

>> Thanks just on number 10 delivery of service I was going to recommend not only underserved but remote underserved specifically and critically dependent on our products.

>> So it's --

>> Isolated, yeah.

>> Non- --

>> I don't think necessarily be non- --

But at least from my perspective but the examples that come to mind are non- --

>> Yeah.

If it's non-Shawn doesn't get to add in.

>> [Laughter].

>> Well, New Hampshire's pretty remote too.

>> [Laughter].

>> Michael.

>> --

Nicole.

>> The marix may not be the right place for it but this concept of a specific Puerto Rico mapping strategy we've been talking about near shore bathymetry since I came onto the panel and I think this is the perfect opportunity for us to strategize once use many times.

Could be something that we could then replicate in the other areas that we're concerned about because it has so many of the challenges that we will end up highlighting in this paper.

So it may just be a subset of what we write about in this white paper but I just wanted to say it out loud.

>> Nicole is that under this Item 10, the future action is to include a white paper for the recommendation of those regional mapping.

>> You know, possibly I think, at least from what I'm hearing it sounds like that white paper is going to be far more broad and include things like small harbors and their needs.

So this is a specific mapping suggestion that I wanted to throw out there.

>> Okay.

>> And for I kind of lost track.

>> We're focussing on the matrix right now.

>> Okay.

Then I'll save my comment for when we talk about the letter unless we did already.

>> No that will come up after this, is that correct, Julie?

>> So you mentioned outreach, is there something generally that we want to put in here or not outreach and education.

It's in all of them so --

>> Yeah, I think that's all encompassing.

It's kind of like the equity and inclusion topic to me, and the outreach and education it should be our all encompassing guidelines for going forward.

>> Maybe in general this is our outreach and education with these ideas.

Mine, I don't know if it was a specific topic that we need to add but those are my thoughts.

Okay.

So then I think it's okay to move onto the next section of the priorities matrix.

So we have incorporating non-authoritative sources my hydrographic products.

>> Can you go into the topic, are these issue papers formal --

>> Oh, formal response position papers.

>> Yeah.

>> Thanks.

>> So we really don't even have to go through this section because this is all online. People know what we've submitted hopefully.

>> Okay.

Great.

The next section is issue or white papers, is that one we can pass on too?

>> Keep going there.

And then --

>> So then we have the archive section after that.

>> I think that this is a track --

Oh we don't have --

>> Julie, I don't know that paper that we put in in October is --

>> Good point.

>> Is on the list.

>> We need to put that.

>> We need to get that one.

>> Amanda can you make a note in there make sure all our recent issue papers are in there?

>> I think there was --

So we have like sea level rise as a topic and there was a status in there about the paper that we pulled together on that.

Maybe we didn't just -- maybe we didn't separate it out as a separate line --

>> Right that was the coastal resilience paper formerly it was the sea level position paper and updated it to broaden the topic and update the statistics.

So same.

Same one.

>> So do we want to go through these archive items?

No.

So then that wraps you the priority matrix or planning engagement matrix here.

Oh.

Well, thank you.

>> Thanks, Nathan.

Always a pain in the neck to go through this because it's such a large file.

But that was great.

Okay.

Are we touching --

We have let's just take two minutes to talk about the fall meeting where we're at with it.

Do we want to --

One of you two want to say anything about that.

>> [Laughter].

>> There will be a fall meeting.

>> [Laughter].

>> Scheduling is proven to be a significant challenge.

We've got a number of events in addition winding up staff support.

And then working to site the meeting at a place whereas many people can attend as possible, whether that's DC or some place else the additional considerations of if we have a DC meeting do we want to do that in the fall or do we want to do that more in the spring?

There are a lot --

There's not a clear best answer at this point and I think all we can say is we're going to continue to work on that and we'll provide an update as soon as we can.

>> Julie.

>> Yes.

>> Can we have few minutes before we adjourn about going sole on high level, what our recommendation for the director going to be, the topic at least?

I mean did we discuss any --

>> No so actually Qassim I'm about ready to do a whole round Robin of everyone.

So if you'd like to include it in your comments then, that will be all right.

>> Now--

[Inaudible] Z. Okay.

.

>> I'm on the round Robin.

.

>> So I will admit I'm a little confused there will be a fall meeting we just don't know where?

>> Correct.

>> Okay.

>> Sorry if that was a little obtuse.

>> That's okay.

Ed and I wouldn't want to miss our last meeting.

So that's why.

>> [Away from mic].

>> It is our intent that it will be an in-person fall meeting.

Yeah.

>> Okay.

If there's --

Okay, we're just going to do --

We have two issue papers, one is this geodesy crisis as we're calling it now and the second one is on underserved communities defined, that is great.

And now, as we go around the room I'm going to go backwards on the alphabet so Mary Paige doesn't feel on the spot.

And remember any details you can give for recommendations that you want to see show up in the paper please let me know.

All right.

So Nathan you're first.

>> I had an opportunity to talk quite a bit over the last section.

I think in general so geodesy crisis I mean that need to be in our recommendation letter we talked about that.

And I will also continue to suggest we support the Corps programs as a priority to fund those.

And that's really all I have to add right now.

>> Great.

Thank you.

Gary.

Oh, Gary's gone.

Ed Saade.

>> Main thing I want to point out on wrap up is the system works.

So I think that panel that we just had this morning who came out and listed a bunch of needs and multiple aspects of what their issues are, and in real time a whole bunch of parts of NOAA responded with real solutions as with Ashley and Marian, I think that's a great example of the HSRP functioning like something that's really worthwhile.

So I want to say congratulations to everybody on that.
Of course sustainability will wind up being on the summary.
I think we've talked enough about it.

I won't go into my more.

And I wanted to personally thank the whole support staff.

You guys did a great job.

And this worked out really well.

So thanks.

>> All right.

Do we know if any of our remote panel is on Eric Peace could not join us today,
Ann, Deanne.

Tuba.

>> Thank you.

So some of the things I already heard I just want to make sure we get it all done.
We talked about I guess the two issues papers we're going to have some verbiage
regarding them is going to end up in this letter I'm guessing right so those
commonalities between the underserved communities, the geodesy crisis, that
should be in there.

I think what I just heard you say Ed this holistic engaged approach that we saw in
this region I think we should just shine a light on it and really praise them for this
amazing work that they're doing with all of these different federal and local
agencies and universities and really pushing the same cart up the same hill.
That's amazing and we should shine a light on that and maybe encourage more of
it, right.

Let's praise the behavior we're seeking.

And then the other thing I would love for us to shine a light on is it feels to me from
where I sit that this is an exciting time for NOAA.

This willingness, ability to engage, I think NOAA's doing some really exciting work.

There seems to be really lots of great positive energy and leadership.

Again, let's praise the behavior that we're seeking.

It feels like this is like you know when I go back home I will tell my students wow get
a job at NOAA.

This place is hopping.

So we should --

I would love for us to highlight that.

And finally some of the issues that were brought to us I feel like one that we really
haven't addressed or talked about this is captain Figuerora's desire to have more
guidance.

Maybe we can pass that on.

That seems important.

>> So I'll just say that Admiral Evans did meet with him afterwards.

And you know I think what --

That's correct, right, yeah.

>> Wouldn't call it a meeting.

>> No but you followed up with him and --

>> Okay.

>> You know, I think that one of the most important things I heard admiral Evans say was that he really wanted --

It was NOAA's responsibility for the integrated approach for the ENC's not the user. So we don't expect Captain to know oh yeah that's the Coast Guard's fault, it's NOAA's fault, whatever.

So I think that NOAA is taking that responsibility very seriously and I'm sure that there will be follow-up at their end on that.

>> Wonderful.

Thank you and while I have the microphone I want to thank you all.

This was my first in-person meeting and I think this is just a phenomenal group.

I learned so much.

So thank you for having me part of group.

And thank you for everyone who organized this really smooth meeting with all of technology and whatnot.

You all are pros.

Thank you.

.

>> It was great having you here in person so thank you.

>> [Away from mic].

>> All right.

Lindsay your turn

>> Yeah, I thank everybody.

Really a great job.

And I'd like I think we should include something about just the positive steps that have been taken, the engagement and enthusiasm of all the staff.

And the willingness of Nicole to come and also Admiral to get her to come for that time and be so open and engaged in that.

And I think as not only that but we've seen a change.

That says this is working.

And I think hopefully --

We think that the --

It works for NOAA as well.

And we're seeing it in that transparency.

I also agree with you about the small dynamic and what happens here and I think it's amazing.

I think it's similar in Hawaii.

So if we could tie that in the letter that that would be good.

One of the things that concerns me a little bit and I'm not sure how I spoke briefly to the admiral about it but I'm not sure how to put it in.

There are many times where we hear we just can't do that us or because of the regulations.

And if the --

Has a vision and he has goals and some are not being done I think in the way he probably expects because you know we talk about examples of that.

And this is not being critical but it's just the SOMP at the beginning we saw that it was to be a private partnership with the feds to get that --

The no neck strategy implemented.

But Step 1 getting the SOMP done we couldn't be engaged in it directly.

Just two and a half years later a we're getting to comment right.

We heard about the hydrographic surveys, the contracts.

Like to managing it better but it always seems to be a bit of a hard to do it, sustainability, I think Admiral Evans said it hasn't been done and these other contracts people are like it hasn't been done, it's like how do we phrase this in the letter to say the vision is great we're seeing this enthusiasm but there seems to be this blocker.

I don't know how the right way to do it.

Maybe I'll just stop and let others comment on that.

But I think it's important to do that.

And the related to sort of it's not the same but related to Captain Figuerora.

I think the comment should be in the letter even if it's been addressed and we could acknowledge that it's been addressed but I think that's important again we're listening and not just telling how to do business kind of thing.

That's it.

Thanks.

>> Okay.

Nicole.

Thanks, Lindsay.

>> Thanks, Julie.

Yes, great job everyone.

Thank you to all of the local hosts and all of the wonderful panels and events and logistics that have happened to make this week possible.

It's been --

It's been delightful.

A few --

Three items I hope that will make it into our memo include the needs that were mentioned during this morning's coastal resilience panel which were to increase the frequency of Lidar missions, and by the way, a lot of that need is to measure sediment just to circle back on my opening comment about how NOAA is really good at measuring sediment.

Aerial photography on regular intervals not just post storm, I think that you know, proactive mapping is a real theme that we heard over and over.

And then finally real time data and predictions on water levels and currents.

So they're asking for local Puerto Rico products.

And I've been hearing this from Puerto Rico for over a decade now.

And Maritza comments on ASBPA reports all the time or you know comments that we send into federal agencies and she says, you know, not only do I not have comments but Puerto Rico's not even mentioned in here.

You know do a search for it.

So very important for us to continue to include local Puerto Rican products.

Okay.

That's one.

The second is this challenge that was kind of brought up during the CARICOOS session that we're seeing I think a lot more as we get into low cost sensors and other observations that are kind of like almost NOAA data, but not quite.

So had this conversation with many of you throughout the week.

You know, we want the regional associations the other, the industry folks that you're engaging to collect this data.

You know, Nathan's involved with some of this too with title datums so there's a lot of work going on that NOAA is funding but then can't really incorporate into your products and services.

And we understand that.

And especially when it's kind of those life or death kind of services.

But there are other services that y'all provide that we really want this to be included in we want it to be as useful as possible in models and operational forecasts and things like that.

I don't think any of us know the answer to that question yet.

But it's an important one as we --

As we aim to meet those needs of local stakeholders that are asking for more hyper local data and no can't collect everything all the time everywhere.

So I think that the a big challenge that this panel can help with, help navigate the answer over the years.

We don't have it yet but I'm excited to work on that one.

And then finally Nicole Elko's comment about engaged congress, Lindsay comment got into it in a little bit as well.

I wonder how we can word --

Something like the HSRP find it very beneficial to engage with academia, private sector and non-profits and their advocacy arms could be very helpful.

I don't know how we would write, would say that kind of this idea on Captain Cruz's panel and how powerful they could be potentially help demonstrating the need for NOAA's products and services.

Thank you.

>> Thanks, Nicole.

Marian.

When I'll use as a regional association it was just starting to be talking about water level gages.

That were non-NOAA and I know this is Alaska opinion and you do have a way to bring those in don't you?

Do you want to just comment on that?

>> Yes, working with the Alaska IUS.

So they have cortex standards.

So has developed a hole QAQC approved standards.

So if association is using those standards then we can address the data.

>> So I think there is a path there.

I don't know if you're familiar with the quality of real time data and I think there is a path for these non-instrumentation observation at some levels.

They clearly mark them, don't you, that they're non-NOAA data, but it is coming.

I think they've been working on that just as a comment.

Okay.

>> Thank you, Julie.

Well, appreciate again being in Puerto Rico.

The work of our hosts, staff and I want to touch on a couple of things really coming into my world.

Some of it was the discussion of congress and what both Nicole --

Said and congressman, the ocean caucus.

So what I heard was an invite for somebody to show up and present testimony and it's very important to do so.

Having connections of congress I will tell you advocating is a very --

I say I live in a mind field and that's just not in Louisiana it seems to travel with me too because I never know exactly what's going to come up but being able to engage and as we heard about the funding for the survey vessels.

We know that some national associations were out there promoting that.

I think promoting NOAA promoting our government agencies is something that we should continue to do and I'll come off of that for a second to say things like you know, when I look at the CARICOOS system I come back to the misses River.

So we have an air gap sensor for a bridge, key bridge, I 10 bridge.

We can't get it installed and it's not because of anything other than dealing with a non-federal sponsor.

It has nothing to do with NOAA but I think it's one of the problems that will come back to digital twin is it's only going to be able to use the data that's available.

So we have to look at some of those shortfalls for --

And some of the things that hold back these projects are --

I mean who would expect a \$65,000 cost to shut down one lane of traffic at night on a bridge.

But inflation is impacting the costs of not only the sensors but the O and M.

And I think these are things that we have to add when we are able to advocate for the services based on the important and we know we need them and we need more of them.

With that, thank you.

I will say I heard looking for a place to have a meeting.

New Orleans has a lot of problems with you we'd be happy to host a meeting and I say that in gest.

>> I think we're still recovering from that period of time party --

Party along from last night, yes.

Okay, Alex, speaking of parties.

>> Not my fault.

>> [Laughter]

>> Yeah but your wife.

>> Blame it on the wife.

That's good.

>> First of all thank you for coming to Puerto Rico.

This is extremely positive for the island.

As you can see the importance we had the congresswoman come and she gets to know more about us and especially she's been on the ocean CARICOOS and she's also on the transportation committee of the house.

Going through small ports I want to say it's more ports not only because of remote necessities whether remote or not or also because they are disadvantaged ports around the nation that have to be looked upon.

And a good example of improvement is what CARICOOS did for the port of -- That you saw in Miguel's presentation.

They make a good model where we can see weather modelling, forecasting and real time weather.

That can be used as an example to be produced in other areas of the nation.

Port and captain Figuerora's issues is that NOAA has to wait to talk to the Coast Guard about it because the Coast Guard is their regulatory agency that will deal with that specific issue but if NOAA gets past the work on that that will be really appreciated and I think that will be the right path to do it.

So safe travel home and hope to see you again in the near future.

>> Thanks so much, Alex.

Okay.

Qassim.

>> Thank you, Julie.

So I want to start by thanking NOAA and Admiral Evans definitely sand Lynn and the staff, Amber, Virginia, Nick and everyone here.

And I'd like to thank our local host, Captain Cruz, Julio, all of them made us feel at home definitely.

As for recommendation on the letter topics one definitely we witnessed the local community need for NOAA's extended service.

They not deprived from NOAA service but they want more.

So we can emphasize that, one example we could NOAA could expand the ports program to have at least one station in this area for example or whatever their need.

I would like to really focus efforts NOAA's efforts in the next five years on digital twin and AI and be glad Admiral he have advance has any clear idea where NOAA should go with the AI at least.

So whatever the focus there.

Highlight like my colleagues mentioned highlight positively the importance of NOAA service, great service not just services and the reliance of local community and user even Coast Guard and others on these services.

And we can highlight like somebody mentioned too how open the direct service and --

In their reports and reflecting their issue and suffering of --

Especially the directors Nicole, the Admiral Evans, they definitely they were attentive to new ideas.

That's what I really like.

I mean like they just a sponge absorbing for what we say and they catch the buzz word which means a lot for the future in technology.

Whether AI, sustainability and all that.

So that's really great things to know.

Definitely.

And I can suggest to help Nicole with advocacy efforts maybe it's time some of us volunteered like Julie with me where we did advocacy session to the --

For example.

Maybe this time to organize another one you know where we can bring great --

Some of these great representation and we did to them.

So I would love to do that if there is interest by NOAA for that.

That's really all I have.

Thank you very much.

Nice seeing all of you here.

>> Well, thanks, Qassim.

I've been thinking about that hill advocacy too.

I'm just kind of paralyzed by the whole thought of HSRP and individual and whatever.

So I think I will --

We can --

We can talk to Admiral Evans to NOAA people and talk about how they can really contribute to what they want to do.

Doesn't have to be discussed right now.

Maryry Page.

>> I hadn't realized until Tuesday morning that I not only had the primary effect on everybody with my opening comments first thing in the morning but I get the recency effect on having the near last.

So I better be prepared regardless unless I change my name.

A couple of points that I'd like to share with you from the recreational votng side of things of being here in Puerto Rico.

There are 65,000 registered votes in --

Boats in Puerto Rico.

The vast majority of those are less than 25 feet in length.

So there are almost 12 million registered boats in the United States.

So there are some pretty big numbers that we're dealing with from a standpoint of how the products that are being produced affect boaters in a grand sense, grand scheme.

And EMC is definitely a big issue for those recreational boaters but also an opportunity to expand the education with and for those --

For those organizations that deal first hand whether it the --

It's the state boating law administrators, whether it's organizations such as the ancillary, it is an opportunity.

Part of the other, I guess it was actually this morning the Puerto Rican climate change council slide had a pie chart that I thought you was phenomenal split into quarters.

And one of those quarters was on volunteer organizations on those outreach agencies with whom they are partnering that was --

That spoke volumes to me.

Because it came into their long-term goals or their --

Their it's a component of their strategy and programming.

It also phenomenal or beyond my comprehension how phenomenal the actual disaster impacts have been on this island or islands of Puerto Rico.

For the last six years not only have they had hurricanes, earthquakes, floods, a pandemic, supply chain issues yet they're --

The residents are amazingly positive in attitude.

I can't guarantee that it was probably like that during the disasters and such.

But I Peter identified for me that many of those citizens are basically dealing with PTSD because of that and it's being keenly aware that we can ask them and we can pat them on the back but they're all --

They're all challenged, we're all challenged.

So educate the message to educate to keep people informed.

We need to utilize a team of partners to teach end users about ENC, ECDS which I had no idea what it was until the other day, custom chart development, it was fin.

--

Phenomenal and source sharing like CARICOOS.

But I also wanted to let you know here had no idea who CARICOOS was, is.

So we suffer from the same disease of we might think we're doing wonderful things but until the end user knows who you are, they can't even talk about it or even tap into the resources.

And lastly, I thought it might be kind of fun to share with you and I know Nicole had to depart but the coastal resilience I have an opportunity --

Have, that's current, opportunity to participate in a on Sanibel Island it's a session called emergency --

Excuse me, emerging from hurricane Ian stronger and more resilient.

And it sponsored by the sand cap in collaboration with the city of Sanibel, conservation foundation concerned citizens and an alliance of community organizations.

That's next Thursday.

And their discussion points are going to be a two part, two session meeting.

Porter Gossa repeat --

Resident --

We're faced with questions regarding our recovery and where do we go from here, such as will we rebuild in a way that makes us more resilient to future events because we will have future events.

And then what were the successes in the community response, how can we believe better prepared, how can we continue to collaborate and support one another.

And the second session is going to get into local expert in key areas of community resilience exam what we got right in our preparation and response to the storms and what lessons can help us in the future.

Topics will cover built infrastructure natural systems, and emergency responses.

I've obviously got everybody's contact information.

And they're looking for guest speakers.

So I thank you very much.

I really enjoyed meeting all of you and working with you.

And I look forward to doing so in the future.

>> Great.

Thank you, marijuana --

Mary Page.

We're going to move on Marian.

Marian it has been such a pleasure meeting you and having you here we're so happy not that we didn't love Rich.

Everyone here has commented on how they've enjoyed conversations with you.

So thank you for attending.

>> That's really my comment is thank you for making me just feel so welcome here in my acting role.

It's been just a true joy.

And I'm just in sponge mode.

So just thank you.

It's been great and to know that we have access to this brain power, moving forward into an uncertain future it makes me feel confident.

So thank you very much.

>> Great.

Okay.

I'm going to go onto Larry.

>> Okay.

We're running late.

So I'll be very short, again, like everybody, I thank all the organizers it's just been fantastic, a really near perfect meeting.

With respect to closing comments in the letter I think the geodesy crisis it hurt to just keep hounding on that and we should all be working in many directions to try to address that and broader issues about education.

The issues we heard from the folks here and I really resonated with Lindsay's point that we heard very similar issues in Hawaii.

And yet they kind of, now, we've moved on, but we haven't and I think Admiral Evans really hit the nail on the head.

I think in a letter that we write pointing out the similarities is a very, very powerful message to get across.

We have constituents and they share this tremendous similarity of problems and many of the needs that Nicole addressed are shared more broadly in these underrepresented areas.

And so I think that's a very powerful way to present that.

And we should try to focus on that.

Sustainability I'm not --

You know, we've discussed it, I'm not sure what we're ready to say in a letter about it except that we're thinking about it.

I don't think we have --

We have real recommendations or answers to that.

I think it doesn't hurt to mention it.

I think with respect to the shared issues of the small communities, that addresses the concerns of the administrator and the administration about equity and about blue economies.

I think that's a really powerful message.

And in terms of Lindsay's comment about risk taking, I think that is a message that certainly Dr. --

Has time and time again when I've heard him speak directed his people to take risks.

Maybe we should be reminding him that this is a good idea.

And that's the way things get pushed forward.

And the final --

Last thing is really not part of the letter but I wanted to comment on something that marijuana roadway --

Mary Page --

Have some time with the people as we think about future meetings if we can think about scheduling long breaks after panel sessions not have one panel leave run away and just some way that we can have a little more time to interact with the panels, it would be really nice.

That's it.

>> I feel the same way.

I was wondering if we couldn't just always have a break, even have coffee or something, I know that NOAA has regulations about how much money they can spend on all of this, but --

>> Just half cups.

>> Half cups.

>> [Laughter].

>> The little Dixie cups.

>> [Away from mic].

>> Excuse me.

>> A cookie, something.

[Laughter].

And try to schedule our break after the panel and maybe make it a 20-minute break would be really nice because there's always individual questions that you have for someone that you don't want to take up time.

So all right.

I'm going to hold you for a minute.

Juliana, are you on the line?

>> Yes, I am.

Just briefly I want to thank everybody for their attention to the geodesy crisis issue and all the issues that were presented this week and all of your thoughtful recommendations for us and for the NOAA administrator.

Also just want to mention that I was listening and I heard about the request for consolidated modelling presentation perhaps at our next event.

So certainly want to support that as well as the other topics that have been discussed this week.

So thanks again.

And look forward our next meeting.

Thank you.

>> Great.

I'm glad that you're onboard with that modelling request because that is getting higher and higher on my list of things to hear about.

So all right.

Andy.

>> Thanks h Julie.

--

Thanks, Julie.

As all of us have I want to thank Captain Cruz and all our hosts here in Puerto Rico for having us.

I've told many of you but this was a home coming for me a bit.

I grew up in a house about a mile and a half from here.

On the east --

Boulevard.

And I went to school over in the Team Mobile district right where we were having dinner last night.

So this has been a great experience for me.

To the content, I think as Tuba said, I also was really impressed with the way the navigation, the coastal zone, the CARICOOS folks were all working in concert and pulling together and delivering the same message.

They didn't have this message, that message, they had a --

They had a unified message that I thought was impressive and effective.

And I want to express my appreciation for representative González Colón taking the time to come and visit us and I'm not sure who led that setup, but arrangement, but it was very well done.

And I was impressed how prepared she was to talk about our issues.

And in that regard she mentioned the value that she thought would come from a -- From a list of five and five list, five things that were most urgent and five things that we wanted to address in long-term.

And I'd encourage the panel to think about that as perhaps a strategy for the near future.

And so thanks to everybody for making this such a great meeting.

>> Great.

Hello.

I'm standing up because Julio is still in the back and I wanted to just acknowledge CARICOOS, I think they brought a lot of richness to our meeting.

And I think they've had some participation as far as sponsoring some of the activities that we've been doing.

And so I just wanted to give a big round of applause to CARICOOS.

>> [Applause].

>> And of course, all of the support staff that CARICOOS have.

>> Thank you.

>> Thank you.

We're so glad you're sitting in until the bitter end.

Next I'd like to thank our wonderful trustee host here, Alex.

And Alex it has been great.

I think we've just had such positive feedback from everyone that tours on the three boat yesterday E yesterday were incredible so diverse experiences and let alone all of the social events that we're all recovering from.

So I think we should give Alex a big hand.

>> [Applause].

>> And next I wanted to thank our NOAA leadership between Juliana and Marian and the Admiral here, I think we have incredible people that we are responding to. They listen.

It's like, you know, it just been really a pleasure working with them.

So I wanted to give you guys a --

>> [Applause].

>> And of course our trustee NOAA staff, Lynn, even with her broken hand and you know, kind of limping along here I think that everyone all the NOAA staff and Amanda I know you had a lot to do with getting the representative here and so Amber and Virginia running over there with our AV people, I think between the AV people the NOAA staff we'd just had wonderful support.

I'd like to give them a hand.

>> [Applause].

>> I want to thank Nate as well, Nate is our knew west --
Newest person helping us.

We always could use more help and --

Give a ton of assistance.

We really appreciate it.

And all of the CARICOOS staff were incredibly helpful to us.

So thank you.

>> [Applause].

>> I was going to get to Nick the photographer and of course the --

Can you ditch throw away all the ones from last night though because I'm not sure what all you captured.

Any way.

>> [Away from mic].

>> Oh God.

Salsa dancing, okay.

Yeah no it's just been a real pleasure and to the panel of course I always enjoy the engagement I'm not going to go over any bullets because I have so many notes we're going to simulate them all Ed and I already have our coffee date because he's been helping me keeping track of some of the letter recommendations to the

administrator and I know Amanda has been taking some of these town too we will follow through a few weeks down the line you'll get a letter down to administrator to comment on.

I'm going to turn it over to closing remarks to Admiral.

>> I can stand up.

Thank you all.

It's been a really invigorating week.

Exhausting and the opportunity really immersed in these topics and get away is invaluable.

I also deeply appreciate the positive comments on what's going on in the programs because a lot of the time you know, down in the salt mines doesn't feel like that.

So that's --

That's the really it's quite energizing to have such a body of experts such as this, you know, to get even a drop of positive feedback is very valuable.

And I will bring that back to our staff.

Because I think it will mean a lot to them.

I want to echo the comments on communication.

That was one thing that really resonated with me this week was the fact that there's just as much as we think we're doing, it's never enough.

And also commend the HSRP on the recognition of your mega phone and your willingness to use it to help share information about these programs because it's never enough.

The convening authority and the personal authority that each of you bring to these topics is really very powerful.

I also want to note the point that Lindsay made and that Larry followed up on, and it just is a request to the panel as we think about recommendations to the undersecretary to Dr. Spinrad, that connection between vision and reality.

And Arnold Smith used to call this the top not being bolted to the bottom and we see that at every level in every organization.

And I don't think that this is --

This is not anybody active obstructing agenda but simply reminding him that there are pieces that need to come --

That need to come together if we're going to achieve his vision.

And encouraging him to continue to work on that.

However you want to phrase that.

But that would be --

I think that would be helpful for us.

I suspect it would be helpful for Marian, for NGS as well.

So thank you for recommending that and weave that in in some way.

Lynn asked me to ask to think about new candidates for the panel.

A constant cycle of rotatng on and rotatng off, I think we have four folks rotatng ashore this year.

So we don't need no we don't need 4 excellent people we just need 30 excellent people, right.

>> People are rotatng off can I start crying now?

Ed, Lindsay, Ann --

And I've lost my train of thought, it all --

It's all --

Shawn's wife's fault.

Too much aged rum.

I'm not sure I should admit that.

And.

>> In any case please think about candidates, think about I would ask think about segments of this community that maybe you're not as well represented on this panel as they could be or should be.

And we'll be standing there with the catcher's mitt open.

And lastly just thank you to Captain Cruz to Nick, to our friends at CARICOOS, everybody who helped us put this week together as well as the support staff that pulled off the week.

And lastly, I want to thank and congratulate Julie for doing for yet another well run outstanding meeting.

Thank you very much and I will turn it back to you.

>> [Applause].

>> Thank you very much.

All right.

Any last comments?

And we're just going to say meeting adjourned.

>> [Applause].

Re E.

>> Reminder that drinks are at 5:30 free of charge.