

## Webinar

## Resilience Hubs

Date: August 14, 2024

00:01:19 --> 00:01:23:

00:01:23 --> 00:01:25:

00:00:01 --> 00:00:05: Hello, everybody, and welcome to Resilience Hubs, essential Infrastructure for 00:00:05 --> 00:00:07: Resilient Communities. 00:00:07 --> 00:00:10: We're just going to wait another 30 seconds or minute 00:00:10 --> 00:00:13: or so to make sure everybody is here. 00:00:14 --> 00:00:17: And if you could share the next slide. 00:00:18 --> 00:00:19: All right, wonderful. 00:00:19 --> 00:00:21: Well, thank you all for coming today. 00:00:21 --> 00:00:25: My name is Mackenzie Jones and we're excited to talk 00:00:25 --> 00:00:27: about Resilience Hubs today. 00:00:27 --> 00:00:31: We will be doing a quick introduction to resilience Hubs 00:00:31 --> 00:00:34: and then we'll be hearing from both folks who've worked 00:00:34 --> 00:00:38: on resilience Hubs in Detroit and on Oahu will be 00:00:38 --> 00:00:42: doing a brief panel discussion and then take questions from 00:00:42 --> 00:00:43: the audience as well. 00:00:43 --> 00:00:45: And we are recording this discussion. 00:00:45 --> 00:00:49: You'll receive a link with the recording after this call. Next slide, please. 00:00:51 --> 00:00:52: 00:00:55 --> 00:00:56: Right. 00:00:56 --> 00:00:57: So I am Mackenzie Jones. 00:00:57 --> 00:01:01: I'm the Resilience Hub Director for the Urban Sustainability Directors 00:01:01 --> 00:01:02: Network. 00:01:02 --> 00:01:06: I'm joined today by Maria Galarza with the City of 00:01:06 --> 00:01:10: Detroit and Ilya Azarov with Plus Lab Architect. 00:01:10 --> 00:01:14: And we will be going through the value of new 00:01:14 --> 00:01:16: build resilience hubs. 00:01:16 --> 00:01:17: Next slide.

So just to get us all clear, what is resilience?

Let's have a shared terminology around this.

| 00:01:25> 00:01:28: | So at the Urban Sustainability Directors Network or USDN, we                                  |
|---------------------|---|
| 00:01:28> 00:01:32: | talk about resilience as the ability of a community to  |
| 00:01:32> 00:01:36: | anticipate, accommodate and thrive amidst changing climate conditions.                        |
| 00:01:36> 00:01:37: | Next slide.   |
| 00:01:39> 00:01:42: | And so within that context, if we're thinking about resilience                                |
| 00:01:42> 00:01:44: | hub in those terms, then what are resilience hubs?  |
| 00:01:45> 00:01:49: | Well, resilience hubs are trusted community LED facilities that enhance                       |
| 00:01:49> 00:01:54: | the well-being of marginalized communities before, during and after a                         |
| 00:01:54> 00:01:55: | disruption.   |
| 00:01:55> 00:01:56: | So they serve two purposes.   |
| 00:01:57> 00:02:00: | On one hand, they enhance the quality of life and   |
| 00:02:00> 00:02:03: | social connection for community members and then they also act                                |
| 00:02:03> 00:02:07: | as critical facilities that help communities stay safe and respond                            |
| 00:02:07> 00:02:07: | to disruptions.   |
| 00:02:09> 00:02:10: | Next slide.   |
| 00:02:12> 00:02:14: | So why do we need resilience hubs?  |
| 00:02:14> 00:02:18: | And we know that marginalized communities experience increased exposure to                    |
| 00:02:18> 00:02:21: | climate hazards and a reduced capacity to adapt.  |
| 00:02:21> 00:02:25: | So resilience hubs are really intended to build social connection                             |
| 00:02:26> 00:02:30: | and reduce social isolation, shift power to community members and                             |
| 00:02:30> 00:02:34: | then provide opportunities to address those root causes of disproportionate                   |
| 00:02:35> 00:02:38: | exposure as well as enhancing communities capacity to adapt.                                  |
| 00:02:40> 00:02:41: | Next slide.   |
| 00:02:43> 00:02:45: | So how do we develop resilience hubs?   |
| 00:02:45> 00:02:49: | Most importantly, resilience hubs are developed and implemented through deep                  |
| 00:02:49> 00:02:54: | collaboration between local governments, community leaders and community based organizations. |
| 00:02:54> 00:02:56: | And you're going to hear more about this from Ilya  |
| 00:02:57> 00:02:58: | and Maria on this call as well today.   |
| 00:02:59> 00:03:00: | Next slide.   |
| 00:03:01> 00:03:04: | When we think about resilience hubs, we're thinking about them                                |
| 00:03:04> 00:03:05: | across 3 modes.   |

| 00:03:05> 00:03:07: | So every day.   |
|---------------------|---|
| 00:03:07> 00:03:12: | So blue skies, normal operations, all of the infrastructure and   |
| 00:03:12> 00:03:14: | services are available.   |
| 00:03:14> 00:03:16: | There's no major disruptions present.                             |
| 00:03:17> 00:03:20: | And the primary focus is really on those community services       |
| 00:03:20> 00:03:21: | and relationship building.  |
| 00:03:21> 00:03:25: | So things like either serving as a food pantry or,                |
| 00:03:25> 00:03:30: | you know, if it's a Recreation Center, then providing             |
|                     | recreation  |
| 00:03:30> 00:03:31: | classes.  |
| 00:03:31> 00:03:33: | Oh, back one slide, sorry.  |
| 00:03:34> 00:03:38: | During a disruption, when we're thinking about that mode, that    |
| 00:03:38> 00:03:42: | disruption can include anything from a natural disaster to social |
| 00:03:42> 00:03:43: | unrest or pandemics.  |
| 00:03:44> 00:03:47: | And it really can vary from minutes to months or                  |
| 00:03:47> 00:03:47: | years.  |
| 00:03:48> 00:03:49: | And then the last mode is recovery.                               |
| 00:03:49> 00:03:52: | And so that's going to be the aftermath of the                    |
| 00:03:52> 00:03:55: | disruption during which the community works to really restore to  |
| 00:03:55> 00:03:56: | normal or better conditions.                                      |
| 00:03:57> 00:03:59: | And as we've seen in Maui and other communities, that             |
| 00:03:59> 00:04:01: | can last from days to years.                                      |
| 00:04:01> 00:04:02: | Next slide.   |
| 00:04:05> 00:04:07: | So at USDN we use a framework called the five                     |
| 00:04:07> 00:04:11: | foundational areas and they're really the core components of any  |
| 00:04:11> 00:04:11: | resilience hub.   |
| 00:04:12> 00:04:14: | We like to say that they're, you know, the line                   |
| 00:04:14> 00:04:17: | art for a resilience hub and that the community members           |
| 00:04:17> 00:04:20: | really fill in the colour and patterns that really meet           |
| 00:04:20> 00:04:22: | their own individual needs.                                       |
| 00:04:22> 00:04:24: | There are five areas.   |
| 00:04:24> 00:04:27: | The 1st is programs and services and that really can              |
| 00:04:27> 00:04:32: | be everything from being a food pantry or serving, providing      |
| 00:04:32> 00:04:36: | child care to having dance lessons or legal aid for               |
| 00:04:36> 00:04:37: | immigrants.   |
| 00:04:37> 00:04:41: | The communications is the next one, and that focuses on           |
| 00:04:41> 00:04:45: | communications inside the hub and also out into the service       |
| 00:04:45> 00:04:46: | area.   |
| 00:04:47> 00:04:51: | Everything from building social connection and making sure        |
|                     | •   |

**00:03:05 --> 00:03:07:** So every day.

that the 00:04:51 --> 00:04:53: neighbors are aware of the facilities there and that they 00:04:53 --> 00:04:56: trust it to how do you communicate during a disruption? 00:04:57 --> 00:04:59: Do you have radios, things like that? 00:05:00 --> 00:05:02: Then the third is the building and landscape. 00:05:03 --> 00:05:05: So the building and landscape can be, how does that 00:05:05 --> 00:05:08: support those programs and services year round? 00:05:08 --> 00:05:11: And also during a disruption, is the building safe and 00:05:11 --> 00:05:16: healthy and outside of a floodplain and electrified and efficient 00:05:16 --> 00:05:19: and does it really meet those needs as far as 00:05:19 --> 00:05:20: a landscape goes? 00:05:20 --> 00:05:22: Are there gathering places for the community? 00:05:23 --> 00:05:25: The 4th is the power systems. 00:05:25 --> 00:05:28: So does it have a backup power and that can 00:05:28 --> 00:05:32: be solar plus storage or some combination with a generator. 00:05:33 --> 00:05:36: And the final area is operations and maintenance. 00:05:36 --> 00:05:38: So do we actually have the staff, do we have 00:05:38 --> 00:05:42: the training in place to really operate these facilities year 00:05:42 --> 00:05:42: round? 00:05:44 --> 00:05:46: And just some last clarifying points here. 00:05:46 --> 00:05:49: So today we are going to be discussing new build 00:05:49 --> 00:05:52: resilience hubs because UL is audience really is composed more 00:05:52 --> 00:05:55: real estate and land use professionals. 00:05:55 --> 00:05:59: However, the majority of resilience hubs are an existing, well 00:05:59 --> 00:06:02: trusted and well loved buildings, and these buildings are often 00:06:02 --> 00:06:06: small or they function under less than ideal conditions. 00:06:06 --> 00:06:09: Some have asbestos or they're located in a flood prone 00:06:09 --> 00:06:09: area. 00:06:10 --> 00:06:12: A lot of them don't have air conditioning. 00:06:12 --> 00:06:15: These facilities are all working towards resilience and making improvements 00:06:15 --> 00:06:17: as they're able to based on the funding that they 00:06:18 --> 00:06:18: have. 00:06:18 --> 00:06:22: So when talking about resilience hubs, people often focus on 00:06:22 --> 00:06:25: that building and the backup power and things like that. 00:06:25 --> 00:06:28: However, the most important benefit that these facilities offer

factor during climate disruptions.

social connection.

00:06:28 --> 00:06:29:

00:06:29 --> 00:06:32:

00:06:32 --> 00:06:35:

So we know that social isolation is a major risk

| 00:06:35> 00:06:38: | So when we think about resilience hubs, our main focus                  |
|---------------------|---|
| 00:06:38> 00:06:41: | is on fostering an environment that people trust and feel               |
| 00:06:41> 00:06:42: | comfortable going to year round.  |
| 00:06:43> 00:06:46: | And so with that, I'm going to hand it off                              |
| 00:06:46> 00:06:50: | to Maria Galarza from the city of Detroit to talk                       |
| 00:06:50> 00:06:54: | more about her efforts with the AB Ford Community Center.               |
| 00:06:57> 00:06:58: | Thank you, Mackenzie.   |
| 00:06:58> 00:06:59: | Good afternoon, everyone.   |
| 00:06:59> 00:07:03: | Thank you so much for attending and having me here                      |
| 00:07:03> 00:07:03: | today.  |
| 00:07:04> 00:07:07: | I am Maria Galarza, I am the Deputy Director at                         |
| 00:07:07> 00:07:10: | the City of Detroit Office of Sustainability.                           |
| 00:07:11> 00:07:15: | And I was really fortunate to have worked on the                        |
| 00:07:15> 00:07:20: | community engagement and development of the 84<br>Community Center and  |
| 00:07:20> 00:07:24: | here on the Lower East Side in Detroit.                                 |
| 00:07:25> 00:07:28: | So as you guys can see and, and by Mackenzie                            |
| 00:07:28> 00:07:32: | sort of description, this is a new building that actually               |
| 00:07:32> 00:07:36: | just opened in the neighborhood college Jefferson Chalmers.             |
| 00:07:37> 00:07:40: | It opened on October of last year.                                      |
| 00:07:41> 00:07:41: | Next slide.   |
| 00:07:45> 00:07:48: | So I thought we would, I would share some of                            |
| 00:07:48> 00:07:52: | the key takeaways from the project and some of the                      |
| 00:07:52> 00:07:57: | challenges and obviously some of the project budget and specifications. |
| 00:07:57> 00:08:00: | And so, and, and I can also share like a                                |
| 00:08:00> 00:08:03: | bit of the history of the project and I can                             |
| 00:08:03> 00:08:04: | start with that.  |
| 00:08:04> 00:08:08: | So in Detroit, we've had a series of investments in,                    |
| 00:08:08> 00:08:14: | in several neighborhoods, including renovations to some of our parks.   |
| 00:08:15> 00:08:18: | And in this neighborhood, the community had identified the need         |
| 00:08:18> 00:08:22: | for a community, a Community Center, you know, place to                 |
| 00:08:22> 00:08:22: | gather.   |
| 00:08:23> 00:08:29: | And this was actually serving a purpose that was hired.                 |
| 00:08:29> 00:08:31: | You know, previously there was a rec center that had                    |
| 00:08:31> 00:08:33: | shut down in this neighborhood.   |
| 00:08:33> 00:08:35: | So this was a way to come back and sort                                 |
| 00:08:35> 00:08:38: | of provide that resource to the community.                              |
| 00:08:38> 00:08:42: | And so through that planning effort and you know, that                  |
| 00:08:42> 00:08:47: | this park, this location was identified and this all took               |
| 00:08:47> 00:08:51: | place, you know, in the years between 2018 and 2019.                    |
|                     |   |

| 00:08:51> 00:08:54: | And as we all know, 2020 and sort of really                              |
|---------------------|--|
| 00:08:54> 00:08:56: | threw a ranch in everybody's plans.                                      |
| 00:08:56> 00:09:01: | And, and we began really community engagement that March when            |
| 00:09:01> 00:09:02: | the pandemic hit.  |
| 00:09:03> 00:09:06: | And so this idea of sort of this crisis mode                             |
| 00:09:06> 00:09:10: | or, you know, what do you do when you're, you                            |
| 00:09:10> 00:09:13: | no longer have those places together?                                    |
| 00:09:14> 00:09:17: | And there was a lot of uncertainty in the community                      |
| 00:09:17> 00:09:20: | was sort of really heavy on people's minds.                              |
| 00:09:20> 00:09:23: | And so for better or for worse, you know, when                           |
| 00:09:23> 00:09:28: | we started engaging residents, that was sort of an immediate             |
| 00:09:28> 00:09:29: | need, right?   |
| 00:09:29> 00:09:33: | Like making sure like public health was taking into account,             |
| 00:09:33> 00:09:36: | you know, outdoors and outdoor spaces.                                   |
| 00:09:36> 00:09:41: | So once we started sort of focusing conversations around the             |
| 00:09:41> 00:09:46: | building, I had learned about this concept of resilience hubs            |
| 00:09:46> 00:09:50: | and I had brought this idea to the community of                          |
| 00:09:50> 00:09:55: | like, OK, you know, we're already talking about designing a              |
| 00:09:55> 00:09:59: | new building in this park for as a Community Center.                     |
| 00:09:59> 00:10:03: | You know, how could this building now be used in                         |
| 00:10:03> 00:10:06: | times of emergency, whether it's like a pandemic or the                  |
| 00:10:06> 00:10:11: | neighborhood had also experienced flooding and, and, you know, people    |
| 00:10:11> 00:10:15: | were already gathering at the park to fill sandbags.                     |
| 00:10:16> 00:10:19: | And in other parts of the city, folks were using                         |
| 00:10:19> 00:10:22: | community centers as a place to pick up food boxes                       |
| 00:10:22> 00:10:24: | or resources for neighbors.  |
| 00:10:25> 00:10:29: | And so as we were thinking about building this new                       |
| 00:10:29> 00:10:33: | facility, we really wanted to think about both scenarios.                |
| 00:10:34> 00:10:37: | And so some of the, you know, key takeaways is                           |
| 00:10:38> 00:10:41: | that we truly stayed core to the mission.                                |
| 00:10:41> 00:10:45: | And first and foremost, the facility was meant to have                   |
| 00:10:45> 00:10:49: | spaces where community could gather, where, you know, community leaders  |
| 00:10:50> 00:10:52: | want to have their blog club meetings.                                   |
| 00:10:52> 00:10:54: | So there's meeting rooms.  |
| 00:10:56> 00:10:59: | There was a big interest in in food and having                           |
| 00:10:59> 00:11:02: | a kitchen and sort of, you know, there was a                             |
| 00:11:02> 00:11:06: | lot of needs that were identified through the engagement                 |
| 00:11:06> 00:11:10: | process. So, you know, listening to community members, listening to that |

| 00.44.40 > 00.44.44                        |  |
|--|--|
| 00:11:10> 00:11:14:<br>00:11:14> 00:11:15: | those programming aspects of the functions of the building                   |
| 00:11:15> 00:11:19:                        | was really important.  And once the community sort of had learned more about |
| 00:11:19> 00:11:24:                        | resilience hubs as a concept and through our engagement                      |
| 00.11.19> 00.11.24.                        | process,   |
| 00:11:24> 00:11:29:                        | we're really thought about, you know, asking questions like, OK,             |
| 00:11:29> 00:11:32:                        | what does each space look like in normal times?                              |
| 00:11:33> 00:11:37:                        | So, you know, what purpose is the facility serving and                       |
| 00:11:37> 00:11:40:                        | then how can you know these spaces serve a double                            |
| 00:11:40> 00:11:44:                        | duty and transform in times where maybe they become, you                     |
| 00:11:44> 00:11:48:                        | know, that resource to the neighbors most in need or                         |
| 00:11:48> 00:11:50:                        | those affected by a hazard.  |
| 00:11:53> 00:11:58:                        | Another sort of piece of I think resilience is that                          |
| 00:11:58> 00:12:01:                        | it can feel really abstract.   |
| 00:12:02> 00:12:08:                        | So communicating how each of the design elements really add                  |
| 00:12:08> 00:12:14:                        | value, it's you're not really sort of adding things or                       |
| 00:12:14> 00:12:17:                        | making things extra necessarily.   |
| 00:12:18> 00:12:22:                        | You are really thinking about sort of stretching that design                 |
| 00:12:22> 00:12:24:                        | element for example.   |
| 00:12:24> 00:12:27:                        | And the community really wanted a kitchen.                                   |
| 00:12:27> 00:12:33:                        | So thinking about, you know, should there be long counters?                  |
| 00:12:33> 00:12:36:                        | So if people are assembling food boxes, you know, you                        |
| 00:12:36> 00:12:39:                        | can serve that that function instead of just, you know,                      |
| 00:12:39> 00:12:42:                        | designing an area that had a place to, you know,                             |
| 00:12:42> 00:12:43:                        | heat up food.  |
| 00:12:43> 00:12:47:                        | So and things like that, you know, thinking about how                        |
| 00:12:47> 00:12:51:                        | can you like think of as many uses as possible                               |
| 00:12:51> 00:12:53:                        | on the challenges.   |
| 00:12:53> 00:12:56:                        | And again, you know, I touched on this and it                                |
| 00:12:57> 00:13:00:                        | could be hard to communicate the concept.                                    |
| 00:13:00> 00:13:04:                        | But really because we had some some scenarios where the                      |
| 00:13:04> 00:13:10:                        | community had experienced flooding and we're experiencing the pandemic, you  |
| 00:13:10> 00:13:13:                        | know, we were able to talk about it at the                                   |
| 00:13:13> 00:13:17:                        | same time, you know, we realized that calling back those                     |
| 00:13:17> 00:13:22:                        | memories or asking participants or residents to think about sort             |
| 00:13:22> 00:13:27:                        | of flooding that had happened in their neighborhood or talking               |
| 00:13:27> 00:13:31:                        | about the pandemic when people were, you know, whether he                    |
| 00:13:31> 00:13:36:                        | might have been grieving from family members passing                         |

away. 00:13:36 --> 00:13:39: It was it was sort of like a hard way 00:13:40 --> 00:13:40: to engage. 00:13:41 --> 00:13:44: And so making sure that you are aware that when 00:13:44 --> 00:13:48: you're asking folks to think about, you know, the worst 00:13:49 --> 00:13:53: case scenario that for some resident that might really sort 00:13:53 --> 00:13:56: of be a point of pain and sort of like 00:13:56 --> 00:14:01: really, you know, bring those topics out really sensitively and, 00:14:01 --> 00:14:05: and, and try to ease some of those anxieties by 00:14:05 --> 00:14:08: like having the preparedness conversation. 00:14:09 --> 00:14:13: And on the facility side, again, you know what, this 00:14:13 --> 00:14:17: is a municipal facility and, and we had, we have 00:14:17 --> 00:14:21: a limited staff in terms of new technologies and, and 00:14:21 --> 00:14:26: in talking about sort of solar and electrical work that 00:14:26 --> 00:14:28: was happening in the building. 00:14:28 --> 00:14:32: You know, we engage with the team at facilities very 00:14:32 --> 00:14:35: early on in the design so that they could ask 00:14:35 --> 00:14:40: all the questions and the engineering coordination calls and 00:14:40 --> 00:14:44: make sure that they were comfortable with the system that 00:14:44 --> 00:14:47: was coming in the the funding could be seen as 00:14:48 --> 00:14:48: a challenge. 00:14:48 --> 00:14:55: We actually started as a project that had received a 00:14:55 --> 00:14:58: visibility study for solar. 00:14:58 --> 00:15:02: So the facility is equipped with a solar system on 00:15:03 --> 00:15:07: the roof and battery storage that's able to provide 48 00:15:07 --> 00:15:12: to 72 hours of backup energy depending on the conditions. 00:15:12 --> 00:15:16: And and we had done the visibility study first and 00:15:16 --> 00:15:21: had continued with the design of the project and then 00:15:21 --> 00:15:26: through a separate philanthropic effort, we were able to fund 00:15:26 --> 00:15:29: the solar system and battery storage. 00:15:29 --> 00:15:33: So there were added and sort of design services to 00:15:33 --> 00:15:39: the design cost, you know, to get the engineering coordinated. 00:15:40 --> 00:15:43: So as a key take away, it's also like plan 00:15:43 --> 00:15:46: early, try to plan for the systems to be in 00:15:46 --> 00:15:50: place and work with your electrical engineers and your structural engineers and everybody involved in putting things on the 00:15:50 --> 00:15:54: 00:15:55 --> 00:15:58: early on so that you can always come back after 00:15:58 --> 00:15:59: and layer on. 00:15:59 --> 00:16:02: But it's obviously there's extra cost included to that.

| 00:16:04> 00:16:08: | So to the right is the project budget just in                        |
|---------------------|--|
| 00:16:08> 00:16:11: | terms of transparency of of what was spent in the                    |
| 00:16:11> 00:16:12: | project.   |
| 00:16:13> 00:16:17: | The next slide shows a full view of the park                         |
| 00:16:17> 00:16:17: | design.  |
| 00:16:18> 00:16:23: | So currently we have completed the project the the building          |
| 00:16:23> 00:16:28: | itself, but the engagement process and included the engagement for   |
| 00:16:28> 00:16:31: | all the activities happening at the park.                            |
| 00:16:32> 00:16:37: | The construction budget also included the design and construction of |
| 00:16:37> 00:16:41: | the a new parking lot with stormwater management system.             |
| 00:16:42> 00:16:46: | So really we were talking about a place, you know,                   |
| 00:16:46> 00:16:47: | like a holistic place.   |
| 00:16:47> 00:16:51: | It wasn't just a building, but also the activities that              |
| 00:16:51> 00:16:54: | were happening outside and just trying to bring people to            |
| 00:16:55> 00:16:58: | that future scenario how they were going to be spending,             |
| 00:16:58> 00:17:02: | you know, the afternoons at this park, which is very                 |
| 00:17:02> 00:17:04: | well loved in the neighborhood.                                      |
| 00:17:05> 00:17:06: | Next slide.  |
| 00:17:08> 00:17:12: | So because this was a new building, we went through                  |
| 00:17:12> 00:17:17: | an exercise to collect the, the priorities from the community        |
| 00:17:17> 00:17:21: | as to what they wanted to see, you know, and,                        |
| 00:17:21> 00:17:24: | and how they would prioritize the spaces.                            |
| 00:17:24> 00:17:28: | And so really, if you are, you know, working with                    |
| 00:17:28> 00:17:33: | community members, you know, I really encourage everyone to go       |
| 00:17:33> 00:17:37: | through an exercise where you do the programming with residents      |
| 00:17:37> 00:17:41: | to really figure out, you know, how they want to                     |
| 00:17:41> 00:17:44: | use the space and then next slide.                                   |
| 00:17:46> 00:17:50: | And then you're really able to translate, you know, those            |
| 00:17:50> 00:17:54: | spaces like a quiet area as like a small library                     |
| 00:17:54> 00:17:57: | zone or, you know, that multi purpose area into a                    |
| 00:17:57> 00:18:01: | big large room that could be transformed to either, you              |
| 00:18:01> 00:18:04: | know, a bridal party shower or, or, you know, a                      |
| 00:18:04> 00:18:08: | basketball, you know, room where you can just like play              |
| 00:18:08> 00:18:11: | with a ball or have lots of kids running around.                     |
| 00:18:12> 00:18:13: | Next slide.  |
| 00:18:15> 00:18:19: | So as you can see on the left, you know,                             |
| 00:18:19> 00:18:22: | we really planned for flexibility.                                   |
| 00:18:22> 00:18:27: | All of the diagrams really translated the community sort of          |
| 00:18:27> 00:18:31: | desires and feedback into the plan of the building and               |
|                     |  |

| 00:18:31> 00:18:33: | the program of the building.                                    |
|---------------------|---|
| 00:18:34> 00:18:39: | You know, we'd layer that resilience portion, which really was  |
| 00:18:39> 00:18:44: | translated into like large rooms that can host, you know,       |
| 00:18:44> 00:18:48: | folks for, you know, whether it's a warming center or           |
| 00:18:48> 00:18:50: | a cooling center.   |
| 00:18:51> 00:18:54: | And we had, you know, those quiet areas for people              |
| 00:18:54> 00:18:58: | who might need more of a quiet space, that kitchen              |
| 00:18:58> 00:19:02: | classroom area, which we really sort of designed as a           |
| 00:19:02> 00:19:06: | place where people can learn about nutrition, but it could      |
| 00:19:06> 00:19:09: | also come and, and maybe packed food boxes.                     |
| 00:19:10> 00:19:14: | And then the most important piece, you know, the, or            |
| 00:19:14> 00:19:18: | one of the important pieces is that backup energy and,          |
| 00:19:18> 00:19:23: | and making sure we had enough plugs surrounding the each        |
| 00:19:23> 00:19:26: | of the rooms so that in case of a power                         |
| 00:19:26> 00:19:30: | outage, people could come and charge their phones.              |
| 00:19:30> 00:19:34: | So that, you know, it's also details with engineering teams     |
| 00:19:34> 00:19:38: | that we really paid attention and try to incorporate throughout |
| 00:19:38> 00:19:39: | the design process.   |
| 00:19:40> 00:19:42: | And I think that might be my last slide or                      |
| 00:19:42> 00:19:43: | there might be one more.  |
| 00:19:43> 00:19:44: | No, that's great.   |
| 00:19:49> 00:19:49: | Wonderful.  |
| 00:19:49> 00:19:51: | Thank you so much, Faria.                                       |
| 00:19:52> 00:19:54: | And we're just Cindy, one quick question after each of          |
| 00:19:54> 00:19:57: | our presentations before we do more of a a panel                |
| 00:19:57> 00:19:58: | conversation.   |
| 00:19:58> 00:20:00: | So Maria, can you walk us through the process of                |
| 00:20:00> 00:20:04: | identifying and engaging key community partners in the          |
|                     | planning and  |
| 00:20:04> 00:20:06: | design of your resilience hub?                                  |
| 00:20:06> 00:20:10: | And I'm curious how you ensured the process was community       |
| 00:20:10> 00:20:12: | driven and incorporated meaningful participation?               |
| 00:20:14> 00:20:15: | Yeah, that's a great question.                                  |
| 00:20:16> 00:20:21: | So for our engagement process, because it was sort of           |
| 00:20:21> 00:20:26: | the first time we're doing virtual engagement in the pandemic,  |
| 00:20:26> 00:20:31: | we actually came up with the idea of printing a                 |
| 00:20:31> 00:20:35: | bunch of yard signs and we placed them all over                 |
| 00:20:35> 00:20:37: | the neighborhood.   |
| 00:20:37> 00:20:40: | And because we knew people were taking, you know, long          |
| 00:20:40> 00:20:41: | walks or they were coming to the park.                          |
| 00:20:42> 00:20:45: | And so we had advertised and the the QR code                    |
|                     |   |

```
00:20:45 --> 00:20:48:
                          to, you know, getting to the Zoom and, you know,
00:20:48 --> 00:20:52:
                          the phone number if people wanted to call and leave
00:20:52 --> 00:20:55:
                          a message on their feedback or their questions.
00:20:57 --> 00:21:03:
                          We also placed a mailbox at the park where people
00:21:03 --> 00:21:07:
                          could like drop off comments or surveys.
00:21:09 --> 00:21:12:
                          So we had left sort of like paper copy surveys
00:21:12 --> 00:21:15:
                          with one of the nonprofit organizations that, you know, works
00:21:15 --> 00:21:17:
                          very closely with residents.
00:21:17 --> 00:21:20:
                          So if they were seeking any services, you know, we
00:21:20 --> 00:21:22:
                          had a survey delivered to to residents.
00:21:22 --> 00:21:25:
                          So really trying to kind of hit all your means
00:21:25 --> 00:21:28:
                          of communication, you know, from the people who are out
00:21:28 --> 00:21:32:
                          in the neighborhood looking at, you know, how to get
00:21:32 --> 00:21:35:
                          involved all the way to like, calling those community leaders
00:21:35 --> 00:21:38:
                          that are always very engaged to make sure that they
00:21:38 --> 00:21:42:
                          knew about the meetings and making sure that, you know,
00:21:42 --> 00:21:43:
                          they had all the information.
00:21:45 --> 00:21:49:
                          So yeah, we were very thoughtful and targeted in reaching,
00:21:49 --> 00:21:53:
                          you know, people who live at the proximity of the
00:21:53 --> 00:21:53:
                          project.
00:21:55 --> 00:21:56:
                          That's wonderful.
00:21:56 --> 00:21:57:
                          Thank you, Maria.
00:21:57 --> 00:22:00:
                          And we'll definitely have time to ask more questions for
00:22:00 --> 00:22:03:
                          For Maria after Ilya's presentation as well.
00:22:06 --> 00:22:10:
                          So with that, I'd like to introduce Ilya Azarov with
00:22:10 --> 00:22:13:
                          Lab Plus to share his experience in designing a new
00:22:13 --> 00:22:16:
                          build resilience hub on Oahu.
00:22:18 --> 00:22:22:
                          Thanks, Mackenzie and Maria, that was a great building.
00:22:22 --> 00:22:24:
                          I can't wait to see it in person next time
00:22:24 --> 00:22:25:
                          I'm in Detroit.
00:22:26 --> 00:22:27:
                          You know, it's, it's great to be here today.
00:22:27 --> 00:22:29:
                          I'm happy to take you through the Koala Loa Community
00:22:29 --> 00:22:30:
                          Resilience hub.
00:22:30 --> 00:22:31:
                          Again, my name is Ilya Azarov.
00:22:31 --> 00:22:34:
                          I'm an educator at New York City College of Technology
00:22:34 --> 00:22:36:
                          here in New York City and also the founder of
00:22:37 --> 00:22:37:
                          Plus Lab Architect.
00:22:38 --> 00:22:40:
                          Our mission is to give greater voice and visibility to
00:22:40 --> 00:22:42:
                          frontline communities all throughout the world.
00:22:43 --> 00:22:44:
                          So I'm very happy to give this presentation.
00:22:45 --> 00:22:48:
                          I'm working with Julio Haula, which is the five O
00:22:48 --> 00:22:51:
                          1C3, not-for-profit on the North Shore of Oahu.
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| 00:22:52> 00:22:54: | And when you think about vision, this is their vision.       |
|---------------------|--|
| 00:22:54> 00:22:57: | It's to perpetuate family knowledge and love.                |
| 00:22:58> 00:23:01: | And to do that, their mission is to support health           |
| 00:23:01> 00:23:06: | or to support health, safety, educational, cultural,         |
|                     | environmental, social and                                    |
| 00:23:06> 00:23:09: | economic resilience of all the Koala Loa communities.        |
| 00:23:10> 00:23:12: | So what I decided to do is take you a                        |
| 00:23:12> 00:23:15: | little bit through the process of this project because this  |
| 00:23:16> 00:23:18: | community has an existing building.                          |
| 00:23:18> 00:23:20: | And to Mackenzie's point, we always try to use the           |
| 00:23:20> 00:23:23: | existing building, but what we found is, is that this        |
| 00:23:23> 00:23:26: | building cannot meet the long term goals of the community.   |
| 00:23:26> 00:23:29: | It's a much older building, it's in a flood zone             |
| 00:23:29> 00:23:32: | and structurally it can't meet the challenges of high winds  |
| 00:23:32> 00:23:33: | and storms.  |
| 00:23:33> 00:23:36: | Its capacity is rather small to the population load of       |
| 00:23:36> 00:23:37: | the community.   |
| 00:23:37> 00:23:41: | And to support the community goals stated here, it was       |
| 00:23:41> 00:23:45: | found not to be the ideal building for their Resilience      |
| 00:23:45> 00:23:45: | Hub.   |
| 00:23:47> 00:23:50: | So in terms of process, how you engage a community           |
| 00:23:50> 00:23:53: | and get to the point of resilience Hub, you must             |
| 00:23:53> 00:23:54: | be ready for anything.                                       |
| 00:23:54> 00:23:57: | And here are the steps that I'm going to take                |
| 00:23:57> 00:24:00: | you through just in brief that how you begin to              |
| 00:24:00> 00:24:03: | assess the hazards of today and tomorrow, analyze the site   |
| 00:24:03> 00:24:05: | you plan with the community.                                 |
| 00:24:06> 00:24:07: | That's rather important.                                     |
| 00:24:07> 00:24:10: | And I think Maria put a finer point on that                  |
| 00:24:10> 00:24:13: | align with government funding programs.                      |
| 00:24:14> 00:24:16: | And then you go through the design process of the            |
| 00:24:16> 00:24:18: | site in the building only once you've gathered that basic    |
| 00:24:19> 00:24:19: | information.   |
| 00:24:21> 00:24:24: | So for our project in, in Oahu, here's the assessment        |
| 00:24:24> 00:24:27: | and it starts with your hazard mitigation plan.              |
| 00:24:27> 00:24:31: | Every community in the United States and its territories has |
| 00:24:31> 00:24:31: | an HMP.  |
| 00:24:32> 00:24:33: | And this is where you should start.                          |
| 00:24:33> 00:24:35: | You can see all of the hazards that are listed               |
| 00:24:35> 00:24:35: | here.  |
| 00:24:35> 00:24:38: | We have to have something that is ready for hurricanes,      |
| 00:24:38> 00:24:42: | tsunamis, sea level rise, climate change and rain bombs,     |
|                     |  |

|                     | tornadoes,  |
|---------------------|---|
| 00:24:42> 00:24:46: | earthquakes, volcanoes, landslides, and these are the, the,             |
|                     | the, the  |
| 00:24:46> 00:24:48: | effects of the environment.   |
| 00:24:49> 00:24:52: | Now our job as architects and a design team is                          |
| 00:24:52> 00:24:55: | to look at the effects of those hazards on the                          |
| 00:24:55> 00:25:00: | community we're working with, identify what the cascading effects might |
| 00:25:00> 00:25:02: | be in the short term and the long term.                                 |
| 00:25:03> 00:25:05: | This image, it just shows some of that process that                     |
| 00:25:05> 00:25:06: | we go through.  |
| 00:25:06> 00:25:09: | And the goal is to be aware of your vulnerabilities                     |
| 00:25:09> 00:25:12: | as a community and designed to meet those needs to                      |
| 00:25:12> 00:25:13: | become resilient.   |
| 00:25:15> 00:25:19: | And any assessment should be aligned with some of the                   |
| 00:25:19> 00:25:20: | federal guidelines.   |
| 00:25:20> 00:25:24: | You have to speak, federal speak, and government speak to               |
| 00:25:24> 00:25:26: | be able to move these elements along.                                   |
| 00:25:27> 00:25:30: | So here, for example, of the seven community life lines                 |
| 00:25:30> 00:25:32: | that we use as part of our assessment process.                          |
| 00:25:33> 00:25:36: | And this is the government framework put together by FEMA.              |
| 00:25:36> 00:25:39: | And you can see what a viable community is and                          |
| 00:25:39> 00:25:42: | understand where your gaps might be and where you can                   |
| 00:25:42> 00:25:44: | bring that to the forefront.  |
| 00:25:46> 00:25:50: | Ultimately, being sustainable and resilient is, is our goal and         |
| 00:25:50> 00:25:53: | the goals of the communities that we work with.                         |
| 00:25:53> 00:25:56: | And really these are two sides of the same coin.                        |
| 00:25:56> 00:25:59: | And if we recognize that, we can really create true                     |
| 00:25:59> 00:26:00: | equity in the community.  |
| 00:26:02> 00:26:03: | On to analyzing.  |
| 00:26:03> 00:26:07: | So analyzing the site is something that we really rely                  |
| 00:26:07> 00:26:09: | on a lot of partners for.   |
| 00:26:10> 00:26:13: | We looked at storms and flooding for this community and                 |
| 00:26:13> 00:26:16: | you can see that green rectangle is where our site                      |
| 00:26:16> 00:26:20: | is located and the site selection was done by the                       |
| 00:26:20> 00:26:22: | community as as the most opportune site.                                |
| 00:26:23> 00:26:26: | And then you can you'll see why this shows the                          |
| 00:26:26> 00:26:29: | category one through 4 hurricanes and the number of houses              |
| 00:26:29> 00:26:33: | and businesses that will be affected, but This site is                  |
| 00:26:33> 00:26:35: | is out of those zones.  |
| 00:26:35> 00:26:40: | We also looked at future flooding projections using FEMA                |
| 00:26:40> 00:26:43: | maps<br>going all the way through 100 to 500 years.                     |
| UU.20.4U/ UU.20.43. | going an the way through 100 to 500 years.                              |

00:26:43 --> 00:26:46: And there's our site, the Red Rectangle. 00:26:47 --> 00:26:50: And we also looked at earthquakes and tsunamis. 00:26:50 --> 00:26:52: You can see our location, the western part of our 00:26:53 --> 00:26:55: site is up and out of the extreme tsunami zone. 00:26:56 --> 00:26:59: A tsunami is a tidal wave that's generated by an 00:26:59 --> 00:27:00: underwater earthquake. 00:27:01 --> 00:27:03: And this part of the island has been hit by 00:27:03 --> 00:27:04: 00:27:04 --> 00:27:07: You can see from 194657 and 1960. 00:27:08 --> 00:27:11: So it's really important that you're located in critical facility 00:27:11 --> 00:27:13: up and out of those zones. 00:27:14 --> 00:27:17: So the Koala Loa Community Resilience hub, we looked at 00:27:17 --> 00:27:19: the other vulnerabilities, Rd. 00:27:19 --> 00:27:23: access for one, power fragility, isolation of the community and 00:27:23 --> 00:27:24: the overall need. 00:27:25 --> 00:27:28: This entire area has 26,000 residents. 00:27:28 --> 00:27:33: It's largely an agricultural area, but there are no rated 00:27:33 --> 00:27:35: storm shelters in the entire area. 00:27:36 --> 00:27:37: There's also a single Rd. 00:27:37 --> 00:27:42: that comes in and out that's very vulnerable to storms. 00:27:44 --> 00:27:46: Yet knowing the science is just the beginning. 00:27:46 --> 00:27:49: The true resilience starts with that community engagement that was 00:27:50 --> 00:27:52: mentioned to really understand what the vulnerabilities. 00:27:53 --> 00:27:55: And this is my first shot of my first meeting 00:27:55 --> 00:27:57: with the community near some five years ago. 00:27:58 --> 00:28:01: My community is self aware, self actualized, and invisible. 00:28:02 --> 00:28:05: But who is the community we set to work very 00:28:05 --> 00:28:07: early on is to identify who the stakeholders are. 00:28:08 --> 00:28:10: And this is what part of that process is. 00:28:11 --> 00:28:14: It's not just the residents and land owners, but it's 00:28:14 --> 00:28:18: also businesses, institutions, whether it's universities or other government from 00:28:18 --> 00:28:20: city all the way through the federal side. 00:28:21 --> 00:28:22: And then of course the design team. 00:28:23 --> 00:28:25: And this is just a map of, of who our 00:28:25 --> 00:28:28: stakeholders are for this project. 00:28:29 --> 00:28:32: And what we found in this engagement is that food 00:28:32 --> 00:28:36: insecurity, even though this is an agricultural area, is, is 00:28:36 --> 00:28:37: very prevalent. 00:28:37 --> 00:28:40: Hunger is prevalent, poverty is big.

| 00:28:41> 00:28:44:  | Power outages are constant, even under blue skies, almost on  |
|--|---|
| 00:28:44> 00:28:47:  | a monthly basis, parts of the community lose power.   |
| 00:28:49> 00:28:50:  | The housing is vulnerable.  |
| 00:28:50> 00:28:53:  | 85% of the housing are projected to be damaged from   |
| 00:28:54> 00:28:55:  | a category one hurricane.   |
| 00:28:55> 00:28:58:  | So that tells you 26,000 people, that's a lot of  |
| 00:28:58> 00:29:00:  | folks who need a place to go in case of   |
| 00:29:00> 00:29:01:  | a storm.  |
| 00:29:01> 00:29:06:  | And then of course, daily flooding or high tide flooding,   |
| 00:29:06> 00:29:08:  | full moon flooding, Rd.   |
| 00:29:08> 00:29:11:  | access and erosion are part of the issues that this   |
| 00:29:11> 00:29:12:  | community faces.  |
| 00:29:13> 00:29:16:  | So when we think about that, if you look at   |
| 00:29:16> 00:29:18:  | the left side of the slide, that is all of  |
| 00:29:18> 00:29:21:  | the hazards from the hazard mitigation plan for the island  |
| 00:29:21> 00:29:24:  | all identified and it begins to tell us what the  |
| 00:29:24> 00:29:26:  | response is in our design.  |
| 00:29:26> 00:29:29:  | But as I said, it's the community engagement to get   |
| 00:29:29> 00:29:31:  | to the true program of the project.   |
| 00:29:31> 00:29:36:  | We held workshops with the community over the pandemic, a   |
| 00:29:36> 00:29:40:  | one month stretch of community engagements that were aimed at   |
| 00:29:40> 00:29:46:  | prioritizing and identifying the community needs through the  |
|  | stakeholders.   |
| 00:29:46> 00:29:50:  | stakeholders.<br>We also aligned with local resilience plan, the Ola plan   |
| 00:29:46> 00:29:50:<br>00:29:50> 00:29:54:   |   |
|  | We also aligned with local resilience plan, the Ola plan  |
| 00:29:50> 00:29:54:  | We also aligned with local resilience plan, the Ola plan is the island wide resilience plan for implementation and as   |
| 00:29:50> 00:29:54:<br>00:29:54> 00:29:56:   | We also aligned with local resilience plan, the Ola plan is the island wide resilience plan for implementation and as you can see here on the left side of the  |
| 00:29:50> 00:29:54:<br>00:29:54> 00:29:56:<br>00:29:56> 00:30:00:  | We also aligned with local resilience plan, the Ola plan is the island wide resilience plan for implementation and as you can see here on the left side of the slide, these are the actual written goals of the community.  |
| 00:29:50> 00:29:54:<br>00:29:54> 00:29:56:<br>00:29:56> 00:30:00:<br>00:30:00> 00:30:04:   | We also aligned with local resilience plan, the Ola plan is the island wide resilience plan for implementation and as you can see here on the left side of the slide, these are the actual written goals of the community. Once we came to the end of those workshops, family   |
| 00:29:50> 00:29:54:<br>00:29:54> 00:29:56:<br>00:29:56> 00:30:00:<br>00:30:00> 00:30:04:<br>00:30:04> 00:30:08:  | We also aligned with local resilience plan, the Ola plan is the island wide resilience plan for implementation and as you can see here on the left side of the slide, these are the actual written goals of the community. Once we came to the end of those workshops, family was number one with security and safety for families, health, social benefits, accessibility, communication, food resources   |
| 00:29:50> 00:29:54: 00:29:54> 00:29:56: 00:29:56> 00:30:00: 00:30:00> 00:30:04: 00:30:04> 00:30:08: 00:30:08> 00:30:13:  | We also aligned with local resilience plan, the Ola plan is the island wide resilience plan for implementation and as you can see here on the left side of the slide, these are the actual written goals of the community. Once we came to the end of those workshops, family was number one with security and safety for families, health, social benefits, accessibility, communication, food resources and this facility has   |
| 00:29:50> 00:29:54: 00:29:54> 00:29:56: 00:29:56> 00:30:00: 00:30:00> 00:30:04: 00:30:04> 00:30:08: 00:30:08> 00:30:13:  | We also aligned with local resilience plan, the Ola plan is the island wide resilience plan for implementation and as you can see here on the left side of the slide, these are the actual written goals of the community. Once we came to the end of those workshops, family was number one with security and safety for families, health, social benefits, accessibility, communication, food resources and this facility has to be self-sustaining.  |
| 00:29:50> 00:29:54: 00:29:54> 00:29:56: 00:29:56> 00:30:00: 00:30:00> 00:30:04: 00:30:04> 00:30:08: 00:30:08> 00:30:13: 00:30:14> 00:30:15: 00:30:17> 00:30:20:  | We also aligned with local resilience plan, the Ola plan is the island wide resilience plan for implementation and as you can see here on the left side of the slide, these are the actual written goals of the community. Once we came to the end of those workshops, family was number one with security and safety for families, health, social benefits, accessibility, communication, food resources and this facility has to be self-sustaining.  The community agreed on these goals and as we move  |
| 00:29:50> 00:29:54: 00:29:54> 00:29:56: 00:29:56> 00:30:00: 00:30:00> 00:30:04: 00:30:04> 00:30:08: 00:30:08> 00:30:13:  00:30:14> 00:30:15: 00:30:17> 00:30:20: 00:30:20> 00:30:23:   | We also aligned with local resilience plan, the Ola plan is the island wide resilience plan for implementation and as you can see here on the left side of the slide, these are the actual written goals of the community. Once we came to the end of those workshops, family was number one with security and safety for families, health, social benefits, accessibility, communication, food resources and this facility has to be self-sustaining.  The community agreed on these goals and as we move forward, they also identified a lot of potential new partners.   |
| 00:29:50> 00:29:54: 00:29:54> 00:29:56: 00:29:56> 00:30:00: 00:30:00> 00:30:04: 00:30:04> 00:30:08: 00:30:08> 00:30:13:  00:30:14> 00:30:15: 00:30:17> 00:30:20: 00:30:20> 00:30:23: 00:30:24> 00:30:26:   | We also aligned with local resilience plan, the Ola plan is the island wide resilience plan for implementation and as you can see here on the left side of the slide, these are the actual written goals of the community. Once we came to the end of those workshops, family was number one with security and safety for families, health, social benefits, accessibility, communication, food resources and this facility has to be self-sustaining.  The community agreed on these goals and as we move forward, they also identified a lot of potential new partners. But let's not forget the community has a face.  |
| 00:29:50> 00:29:54: 00:29:54> 00:29:56: 00:29:56> 00:30:00: 00:30:00> 00:30:04: 00:30:04> 00:30:08: 00:30:08> 00:30:13:  00:30:14> 00:30:15: 00:30:17> 00:30:20: 00:30:20> 00:30:23: 00:30:24> 00:30:26: 00:30:28> 00:30:30:                     | We also aligned with local resilience plan, the Ola plan is the island wide resilience plan for implementation and as you can see here on the left side of the slide, these are the actual written goals of the community. Once we came to the end of those workshops, family was number one with security and safety for families, health, social benefits, accessibility, communication, food resources and this facility has to be self-sustaining.  The community agreed on these goals and as we move forward, they also identified a lot of potential new partners. But let's not forget the community has a face.  This community has not had a voice, we have not   |
| 00:29:50> 00:29:54: 00:29:54> 00:29:56: 00:29:56> 00:30:00: 00:30:00> 00:30:04: 00:30:04> 00:30:08: 00:30:08> 00:30:13:  00:30:14> 00:30:15: 00:30:17> 00:30:20: 00:30:20> 00:30:23: 00:30:24> 00:30:26: 00:30:28> 00:30:30: 00:30:30> 00:30:31: | We also aligned with local resilience plan, the Ola plan is the island wide resilience plan for implementation and as you can see here on the left side of the slide, these are the actual written goals of the community. Once we came to the end of those workshops, family was number one with security and safety for families, health, social benefits, accessibility, communication, food resources and this facility has to be self-sustaining.  The community agreed on these goals and as we move forward, they also identified a lot of potential new partners. But let's not forget the community has a face.  This community has not had a voice, we have not been visible.  The community engagement, getting together, talking, |

| 00:30:41> 00:30:42: | the future of the community.   |
|---------------------|--|
| 00:30:43> 00:30:45: | These young ladies and some of their colleagues said we                          |
| 00:30:46> 00:30:49: | when we talk about sustainability and sustaining our future, I                   |
| 00:30:49> 00:30:52: | believe helping to sustain our culture is rather important.                      |
| 00:30:53> 00:30:56: | Culture became a huge theme in these engagements, and                            |
|                     | this   |
| 00:30:56> 00:30:58: | is from Ronnie there on the left.  |
| 00:30:58> 00:31:00: | We may be poor, but we're rich in our culture.                                   |
| 00:31:00> 00:31:02: | That's why we still hang on and still do what                                    |
| 00:31:02> 00:31:03: | we do.   |
| 00:31:03> 00:31:05: | We fight for the next generation so that we don't                                |
| 00:31:05> 00:31:06: | forget our culture.  |
| 00:31:07> 00:31:09: | They don't forget where they're from and what their roots                        |
| 00:31:09> 00:31:09: | are.   |
| 00:31:11> 00:31:13: | So what that brought us to is this entire group                                  |
| 00:31:13> 00:31:16: | of partners that the community already had engaged and new                       |
| 00:31:17> 00:31:21: | ones identified to really provide services identified for the community.         |
| 00:31:21> 00:31:25: | And whether that's green jobs and youth programs or the                          |
| 00:31:25> 00:31:31: | local energy authority, Verizon for our communications, veteran services, Native |
| 00:31:31> 00:31:34: | Hawaiian healthcare programs, so on and so forth.                                |
| 00:31:34> 00:31:38: | These are the programs that are supported by partners and                        |
| 00:31:38> 00:31:42: | will and are part of the current Community Center.                               |
| 00:31:43> 00:31:44: | That brings us to the design.  |
| 00:31:45> 00:31:48: | So there are two ideas that underpin the design.                                 |
| 00:31:48> 00:31:51: | The resilience hub is rooted in culture itself.                                  |
| 00:31:51> 00:31:53: | the BA for the building, I'll talk about that.                                   |
| 00:31:54> 00:31:57: | And the other is the Ahupua and that's the relationship                          |
| 00:31:57> 00:31:58: | to the land.   |
| 00:31:58> 00:32:01: | So just as Mackenzie said, we're looking at the site                             |
| 00:32:01> 00:32:03: | and the building as as part of this.   |
| 00:32:04> 00:32:07: | So first for the site itself, you can see here,                                  |
| 00:32:07> 00:32:10: | this is the campus of three buildings on A5 acre                                 |
| 00:32:10> 00:32:10: | site.  |
| 00:32:11> 00:32:14: | We're restoring the relationship of land through the Ahupua Ah.                  |
| 00:32:15> 00:32:20: | It's a water management, ancient Hawaiian water management food production       |
| 00:32:20> 00:32:26: | system that produces agropharma for indigenous practices and agroforestry.       |
| 00:32:26> 00:32:30: | So we begun the implementation of this of this design                            |
| 00:32:30> 00:32:33: | practice as the underpinning of this project.                                    |
|                     |  |

| 00:32:36> 00:32:40: | Changing slides, there it is here on the site you                   |
|---------------------|---|
| 00:32:40> 00:32:44: | can see that it supports agricultural practices to the right        |
| 00:32:44> 00:32:48: | side of the site and the cultural regeneration is really            |
| 00:32:48> 00:32:52: | rooted in all of that, the community engagement and rooted          |
| 00:32:52> 00:32:53: | in indigenous wisdom.   |
| 00:32:54> 00:32:57: | The building locations are up on the highest part of                |
| 00:32:58> 00:33:01: | the site, away from the flooding hazards and tsunami and            |
| 00:33:01> 00:33:02: | storm surge.  |
| 00:33:03> 00:33:06: | So we're responding to those technical things but also engaging     |
| 00:33:06> 00:33:10: | what the community has brought forward through culture and cultural |
| 00:33:10> 00:33:11: | practice.   |
| 00:33:11> 00:33:15: | The site design further reduces risk by identifying hazards such    |
| 00:33:15> 00:33:16: | as wildfire and earthquakes.  |
| 00:33:17> 00:33:20: | Here you can see defensible space and how we're designing           |
| 00:33:20> 00:33:22: | around the buildings to keep wildfires away.                        |
| 00:33:23> 00:33:27: | Very important after the fires in behind on to the                  |
| 00:33:27> 00:33:28: | the building itself.  |
| 00:33:28> 00:33:31: | The main hub, the main resilience hub is based on                   |
| 00:33:31> 00:33:35: | talk story with many of the elders, specifically with Doctor        |
| 00:33:35> 00:33:39: | Tusi who is a cultural leader throughout the Polynesian culture.    |
| 00:33:40> 00:33:43: | And we talked about the value of the Baha or                        |
| 00:33:43> 00:33:47: | the canoe and flipping the canoe over so you can                    |
| 00:33:47> 00:33:50: | take shelter underneath called Huli.                                |
| 00:33:50> 00:33:53: | The Baha became the basis of how we engaged culture                 |
| 00:33:53> 00:33:54: | and design practice.  |
| 00:33:55> 00:33:58: | And here you can see this is the rendering of                       |
| 00:33:58> 00:34:02: | the Koala Loa Community Resilience Hub based on that canoe          |
| 00:34:02> 00:34:06: | or the BAA being turned over and harboring underneath with          |
| 00:34:06> 00:34:10: | your family, surrounded by your community members during the worst  |
| 00:34:10> 00:34:11: | parts of storms.  |
| 00:34:13> 00:34:16: | And here is just a snapshot of what that project                    |
| 00:34:16> 00:34:16: | provides.   |
| 00:34:18> 00:34:22: | To answer health security, there's a Health Center and a            |
| 00:34:22> 00:34:26: | dialysis program embedded in the project for power security.        |
| 00:34:27> 00:34:30: | We have 30 days of stand alone and renewable energy.                |
| 00:34:31> 00:34:33: | So this this we can be cut off from the                             |
| 00:34:33> 00:34:35: | community, can be cut off from the rest of the                      |

| 00:34:35> 00:34:36: | island for 30 days.  |
|---------------------|--|
| 00:34:37> 00:34:40: | Food security it has on site gardening, but also has                   |
| 00:34:40> 00:34:44: | a program with Hawaii food bank that pre positions food                |
| 00:34:44> 00:34:47: | to provide meals for 30 days after disaster.                           |
| 00:34:47> 00:34:51: | Water security It has water catchment on site as well                  |
| 00:34:51> 00:34:54: | as a new well has been been is being dug                               |
| 00:34:54> 00:34:59: |  |
| 00.34.54> 00.34.55. | or tanks for pre positioning freshwater to support 1500 people         |
| 00:34:59> 00:35:00: | for 30 days.   |
| 00:35:01> 00:35:06: | The structure itself meets FEMA 361 guidelines, which will which       |
| 00:35:06> 00:35:10: | will resist a category 5 hurricane and tsunami resistant.              |
| 00:35:11> 00:35:14: | Because it's located up and above the tsunami level, it                |
| 00:35:14> 00:35:18: | also generates jobs, income and supports all of the programs           |
| 00:35:18> 00:35:21: | that were listed earlier on in the presentation.                       |
| 00:35:23> 00:35:25: | In part of this alignment, we've been working with the                 |
| 00:35:25> 00:35:26: | Department of Energy.  |
| 00:35:26> 00:35:30: | The community received an E tip grant working with Sandia              |
| 00:35:30> 00:35:34: | Labs to design our entire sustainable off grid operations for          |
| 00:35:34> 00:35:38: | 30 days leveraging solar, wind, hydrogen and geothermal along with     |
| 00:35:38> 00:35:39: | battery backup.  |
| 00:35:40> 00:35:43: | This hub is to jump start the community after disaster.                |
| 00:35:44> 00:35:46: | Remember, 85% of the housing is going to be damaged                    |
| 00:35:47> 00:35:48: | in the category one.   |
| 00:35:48> 00:35:51: | So how do we jump start the community back online?                     |
| 00:35:51> 00:35:54: | So the hub will be that anchor for that, for                           |
| 00:35:54> 00:35:57: | bringing the community back after disaster.                            |
| 00:35:58> 00:36:00: | So now I'm winding down to talk about where we're                      |
| 00:36:00> 00:36:00: | at today.  |
| 00:36:01> 00:36:04: | So the community relationship with Land is well on the                 |
| 00:36:04> 00:36:04: | way.   |
| 00:36:04> 00:36:06: | The site has been cleared.   |
| 00:36:06> 00:36:10: | The environmental assessment and early design has been completed.      |
| 00:36:11> 00:36:14: | They're going to be planting native trees over the course              |
| 00:36:14> 00:36:15: | of this next year.   |
| 00:36:15> 00:36:18: | And then adaptation funding from the state has been secured,           |
| 00:36:18> 00:36:22: | as well as pursuing other federal funding for ecological regeneration. |
| 00:36:24> 00:36:27: | As of today, on the weekends, there's farmers markets that             |
| 00:36:27> 00:36:29: | take place in the five acre site, bringing in the                      |
|                     |  |

| 00:36:29> 00:36:29:   | community.  |
|---|---|
| 00:36:29> 00:36:32:   | There's a playing field that's used almost on a daily   |
| 00:36:32> 00:36:34:   | basis and hiking paths that go up and around the  |
| 00:36:34> 00:36:34:   | site.   |
| 00:36:35> 00:36:37:   | There are many grants that have been received by the  |
| 00:36:37> 00:36:38:   | community thus far.   |
| 00:36:38> 00:36:41:   | And just to be clear, this is a very economically   |
| 00:36:41> 00:36:45:   | challenged Indigenous community that had almost no money to start   |
| 00:36:45> 00:36:47:   | this work five years down the line.   |
| 00:36:47> 00:36:48:   | They're very far along.   |
| 00:36:48> 00:36:52:   | We have a a FEMA brick technical assistance grant to  |
| 00:36:52> 00:36:55:   | continue to help us complete the design work.   |
| 00:36:55> 00:36:57:   | And of course, we're going after another one of those   |
| 00:36:57> 00:36:58:   | Department of Energy grants.  |
| 00:36:59> 00:37:02:   | But the good news is, is this community engagement and  |
| 00:37:02> 00:37:05:   | visibility and voice have brought the state senators on board.  |
| 00:37:05> 00:37:10:   | This community has received earmarks from the Senate \$5.4 million  |
| 00:37:10> 00:37:12:   | as of June of this last year.   |
| 00:37:13> 00:37:16:   | We will start breaking ground on the horizontal infrastructure for  |
|   |   |
| 00:37:16> 00:37:18:   | the site in very short order.   |
| 00:37:16> 00:37:18:<br>00:37:18> 00:37:20:  | the site in very short order. That brings me to a close and I want to   |
|   | •   |
| 00:37:18> 00:37:20:   | That brings me to a close and I want to   |
| 00:37:18> 00:37:20:<br>00:37:20> 00:37:21:  | That brings me to a close and I want to leave you with this. The branches grow because the trunk without ancestors  |
| 00:37:18> 00:37:20:<br>00:37:20> 00:37:21:<br>00:37:21> 00:37:24:   | That brings me to a close and I want to leave you with this.  The branches grow because the trunk without ancestors would not   |
| 00:37:18> 00:37:20:<br>00:37:20> 00:37:21:<br>00:37:21> 00:37:24:<br>00:37:24> 00:37:25:  | That brings me to a close and I want to leave you with this.  The branches grow because the trunk without ancestors would not be there.  This is the essence of community engagement, especially  |
| 00:37:18> 00:37:20:<br>00:37:20> 00:37:21:<br>00:37:21> 00:37:24:<br>00:37:24> 00:37:25:<br>00:37:25> 00:37:30:   | That brings me to a close and I want to leave you with this.  The branches grow because the trunk without ancestors would not be there.  This is the essence of community engagement, especially with Indigenous  |
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| 00:37:18> 00:37:20: 00:37:20> 00:37:21: 00:37:21> 00:37:24:  00:37:24> 00:37:25: 00:37:25> 00:37:30:  00:37:30> 00:37:34: 00:37:34> 00:37:36: 00:37:36> 00:37:39:   | That brings me to a close and I want to leave you with this.  The branches grow because the trunk without ancestors would not be there.  This is the essence of community engagement, especially with Indigenous communities relying on the the wisdom of of the people who were there.  Launch these projects into where they could be and where   |
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| 00:37:18> 00:37:20: 00:37:20> 00:37:21: 00:37:21> 00:37:24:  00:37:24> 00:37:25: 00:37:25> 00:37:30:  00:37:30> 00:37:34: 00:37:34> 00:37:36: 00:37:36> 00:37:39: 00:37:40> 00:37:40: 00:37:40> 00:37:41: 00:37:45> 00:37:46: 00:37:46> 00:37:47: 00:37:47> 00:37:50:   | That brings me to a close and I want to leave you with this.  The branches grow because the trunk without ancestors would not be there.  This is the essence of community engagement, especially with Indigenous communities relying on the the wisdom of of the people who were there.  Launch these projects into where they could be and where they will be.  Thank you very much.  Thank you, Ilya.  What an amazing story.  It's it's so exciting to see all the momentum that's                                   |
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| 00:37:59> 00:38:00: | of a resilience hub.  |
|---------------------|---|
| 00:38:01> 00:38:04: | How does a space become trusted by its community, and             |
| 00:38:04> 00:38:07: | what role can real estate and other stakeholders play in          |
| 00:38:07> 00:38:08: | supporting that?  |
| 00:38:09> 00:38:10: | That's a great question.  |
| 00:38:10> 00:38:13: | And you know, you know, resilience, I mean, there's a             |
| 00:38:13> 00:38:14: | lot of quotes around this.  |
| 00:38:14> 00:38:17: | Resilience and adaptation move at the speed of trust.             |
| 00:38:17> 00:38:18: | And that is the truth.  |
| 00:38:19> 00:38:23: | You saw the first piece about the meeting five years              |
| 00:38:23> 00:38:23: | ago.  |
| 00:38:24> 00:38:26: | Gaining the trust of the community takes takes a great            |
| 00:38:26> 00:38:27: | deal of time.   |
| 00:38:27> 00:38:30: | But first and foremost, you you really need to understand         |
| 00:38:30> 00:38:31: | two very important things.  |
| 00:38:31> 00:38:33: | One, communities understand the plight.                           |
| 00:38:33> 00:38:40: | They also have many of the resources and solutions for            |
| 00:38:40> 00:38:42: | building resilience.  |
| 00:38:43> 00:38:47: | You're playing a role of either support or communication of       |
| 00:38:47> 00:38:50: | what those are to unlock the funds and push their                 |
| 00:38:50> 00:38:51: | vision forward.   |
| 00:38:51> 00:38:55: | So trust starts with listening, listening and respecting the fact |
| 00:38:56> 00:39:00: | that these communities are very powerful already and what you're  |
| 00:39:00> 00:39:03: | doing is translating their goals to funding streams.              |
| 00:39:05> 00:39:06: | So that's the way that we've done it.                             |
| 00:39:06> 00:39:10: | And with, with specifically with real estate, make sure that      |
| 00:39:11> 00:39:14: | if you're in the community that you're there for the              |
| 00:39:14> 00:39:18: | long term, that they know you're not going to leave.              |
| 00:39:18> 00:39:20: | That's the big, big take away.                                    |
| 00:39:20> 00:39:21: | Thanks.   |
| 00:39:23> 00:39:23: | Thank you.  |
| 00:39:25> 00:39:29: | So we're going to transition into a panel conversation between    |
| 00:39:29> 00:39:32: | Ilya and Maria and I for the next 10 minutes                      |
| 00:39:32> 00:39:32: | or so.  |
| 00:39:32> 00:39:35: | And then we'll address some audience questions as well.           |
| 00:39:35> 00:39:36: | So keep up voting.  |
| 00:39:36> 00:39:39: | If you see something there that you can keep adding               |
| 00:39:39> 00:39:40: | questions to the Q&A.   |
| 00:39:40> 00:39:43: | And, and if somebody else said something that really resonates    |
| 00:39:43> 00:39:45: | with you, please upload it as well so that we                     |

| 00:39:45> 00:39:47: | can prioritize the questions that are most important to you            |
|---------------------|--|
| 00:39:47> 00:39:47: | all.   |
| 00:39:49> 00:39:52: | So with that, I'm going to ask a question for                          |
| 00:39:52> 00:39:52: | both of you.   |
| 00:39:53> 00:39:55: | Maria, we'll start with you.   |
| 00:39:56> 00:40:01: | What important design consideration should go into the creation of     |
| 00:40:02> 00:40:03: | a resilience hub?  |
| 00:40:06> 00:40:10: | I would say that's very much sort of like community                    |
| 00:40:10> 00:40:11: | specific.  |
| 00:40:11> 00:40:17: | And however so much of the space has to enable                         |
| 00:40:17> 00:40:20: | that social cohesion.  |
| 00:40:20> 00:40:24: | So like really thinking about like, you know, who are                  |
| 00:40:24> 00:40:27: | the people gathering in the space?                                     |
| 00:40:28> 00:40:31: | Like, for example, like if you're gonna have seniors, like             |
| 00:40:31> 00:40:33: | think about chairs that have like armrests.                            |
| 00:40:33> 00:40:36: | So like they can have like an easier sort of                           |
| 00:40:36> 00:40:37: | time like getting up.  |
| 00:40:37> 00:40:40: | Or like, if there's gonna be moms with kids, like                      |
| 00:40:40> 00:40:43: | think about a space that, you know, might be big                       |
| 00:40:43> 00:40:46: | enough that you can put some floor mats for kids                       |
| 00:40:46> 00:40:47: | to play.   |
| 00:40:48> 00:40:52: | So I think it really depends on your user and                          |
| 00:40:52> 00:40:53: | your audience.   |
| 00:40:54> 00:40:57: | But like, if you we are trying to create sort                          |
| 00:40:58> 00:41:01: | of a community and be in community, like, think about                  |
| 00:41:01> 00:41:04: | how you would design A space that is conducive for                     |
| 00:41:05> 00:41:05: | that.  |
| 00:41:05> 00:41:07: | So yeah.   |
| 00:41:08> 00:41:08: | Wonderful.   |
| 00:41:08> 00:41:11: | Thanks, Maria and Ilia, back to you on this one.                       |
| 00:41:11> 00:41:15: | So do you, what important design considerations would you think        |
| 00:41:15> 00:41:17: | about for Resilience Hub?  |
| 00:41:18> 00:41:21: | Yeah, I think it took you through some of the                          |
| 00:41:21> 00:41:24: | the assessment process from the science side, understanding the design |
| 00:41:24> 00:41:27: | of today for tomorrow and and tomorrow to understand what              |
| 00:41:27> 00:41:31: | that looks like and understanding that the short sighted nature        |
| 00:41:31> 00:41:33: | of I want to put a Band-Aid on it rather                               |
| 00:41:33> 00:41:36: | than really looking at what the major surgery looks like.              |
| 00:41:36> 00:41:37: | ls, is is important.   |
|                     |  |

| 00:41:38> 00:41:42:  | So in terms of design, that science piece presented to          |
|----------------------|---|
| 00:41:42> 00:41:46:  | the community, so they have the ability to weigh in             |
| 00:41:46> 00:41:50:  | on and, and, and bring forward what has to happen               |
| 00:41:50> 00:41:52:  | there is rather important.                                      |
| 00:41:53> 00:41:56:  | And I, I think the other thing about design is,                 |
| 00:41:56> 00:41:58:  | is, is understanding what's not there.                          |
| 00:41:58> 00:42:01:  | What we found in our community is that, that the                |
| 00:42:01> 00:42:03:  | youth leave because there's no economic opportunity.            |
| 00:42:04> 00:42:07:  | When they turn 19, they don't, they leave and they              |
| 00:42:07> 00:42:10:  | don't come back until they're like 38 to raise a                |
| 00:42:10> 00:42:10:  | family.   |
| 00:42:11> 00:42:13:  | And that's because there's no jobs.                             |
| 00:42:13> 00:42:15:  | And so when you begin to think about that and                   |
| 00:42:15> 00:42:17:  | you get that information, well, our project has to have         |
| 00:42:17> 00:42:18:  | vocational training.  |
| 00:42:19> 00:42:22:  | The vocational training will support jobs, local jobs, so those |
| 00:42:22> 00:42:23:  | kids don't leave.   |
| 00:42:23> 00:42:26:  | So I think when we think about designing a space,               |
| 00:42:26> 00:42:27:  | there's the technical side.                                     |
| 00:42:27> 00:42:28:  | So it withstands these things.                                  |
| 00:42:28> 00:42:30:  | It's going to be around a long time and you're                  |
| 00:42:30> 00:42:31:  | designing for tomorrow.   |
| 00:42:31> 00:42:33:  | And then the other thing is really look at a                    |
| 00:42:33> 00:42:36:  | gap analysis that goes deeply into the issues of your           |
| 00:42:36> 00:42:36:  | community.  |
| 00:42:37> 00:42:39:  | So when you're looking at solution sets, it's not putting       |
| 00:42:39> 00:42:40:  | a Band-Aid on it.   |
| 00:42:40> 00:42:43:  | It's actually doing severe healing.                             |
| 00:42:44> 00:42:44:  | Thanks.   |
| 00:42:46> 00:42:46:  | Thanks, Ilya.   |
| 00:42:48> 00:42:49:  | Here's a question for both of you.                              |
| 00:42:50> 00:42:54:  | What opportunities are there for the private and public         |
| 00.42.54 > 00.42.56. | sectors   |
| 00:42:54> 00:42:56:  | to collaborate on Resilience Hub creation?                      |
| 00:42:57> 00:42:59:  | I'm not sure if either one of you want to                       |
| 00:42:59> 00:43:00:  | volunteer to go first on that.                                  |
| 00:43:04> 00:43:04:  | Sure.   |
| 00:43:04> 00:43:05:  | I think it.   |
| 00:43:05> 00:43:06:  | So there's a couple of things.                                  |
| 00:43:06> 00:43:09:  | If you really look at the CDRZ zones as well                    |
| 00:43:09> 00:43:12:  | as the Justice 40 zones, there's incredible amount of federal   |
| 00:43:12> 00:43:16:  | dollars pouring into communities all across the US.             |

| 00:43:17> 00:43:20: | Those are aimed at making sustainable, resilient, healthy and equitable  |
|---------------------|--|
| 00:43:20> 00:43:21: | communities.   |
| 00:43:22> 00:43:26: | The trigger or design that's needed to bring that forward                |
| 00:43:26> 00:43:28: | already lies within the community.                                       |
| 00:43:28> 00:43:30: | They, those communities know what they need.                             |
| 00:43:30> 00:43:34: | So to play the translating role, that's the design community,            |
| 00:43:34> 00:43:37: | but to play the role of procurement of the right                         |
| 00:43:38> 00:43:41: | sites, unlocking that funding and moving it forward as a                 |
| 00:43:41> 00:43:46: | partnership is a great 3P partnership opportunity with community groups, |
| 00:43:46> 00:43:49: | local government and developers in the private side.                     |
| 00:43:50> 00:43:53: | That enormous amount of money is, is sitting there.                      |
| 00:43:53> 00:43:56: | And until these projects get rolling, it's going to keep                 |
| 00:43:56> 00:43:56: | sitting there.   |
| 00:43:56> 00:43:59: | And so I think if you really look at your                                |
| 00:43:59> 00:44:02: | profile of what you're doing as a business, I the,                       |
| 00:44:02> 00:44:03: | the question is, why not?  |
| 00:44:04> 00:44:07: | And then lastly, insurance is, is no longer insuring a                   |
| 00:44:07> 00:44:10: | lot of places that have high, high vulnerability and high                |
| 00:44:10> 00:44:11: | risk.  |
| 00:44:11> 00:44:14: | So part of this process is, is that you're building                      |
| 00:44:14> 00:44:18: | to a standard that alleviates that issue with insurance.                 |
| 00:44:18> 00:44:21: | So if you look at the business side, there's a                           |
| 00:44:21> 00:44:24: | huge ROI on this on the social side, but also                            |
| 00:44:24> 00:44:27: | on economic and economic benefit to it.                                  |
| 00:44:30> 00:44:30: | Yeah.  |
| 00:44:30> 00:44:34: | I would say, yeah, there's a huge opportunity to sort                    |
| 00:44:34> 00:44:38: | of think of resilience as a, you know, strengthening piece               |
| 00:44:38> 00:44:42: | to whether it's like the private or public sector sort                   |
| 00:44:42> 00:44:43: | of buildings.  |
| 00:44:44> 00:44:48: | You know, if you think about sort of grocery stores,                     |
| 00:44:48> 00:44:51: | for example, in a grocery store losing power and all                     |
| 00:44:51> 00:44:54: | that food waste that happens if, you know, there were                    |
| 00:44:54> 00:44:57: | to be without power for a long time, you know,                           |
| 00:44:57> 00:45:00: | like, what does it mean to design, you know, the                         |
| 00:45:00> 00:45:02: | future and grocery store?  |
| 00:45:02> 00:45:06: | And, you know, again, I'm incredibly fortunate to live in                |
| 00:45:06> 00:45:11: | Detroit where there's people who are already thinking about this.        |
| 00:45:11> 00:45:15: | And there's a neighborhood grocer that is, you know, has                 |
| 00:45:15> 00:45:16: | a walk in freezer.   |
| 00:45:16> 00:45:19: | And they're thinking about backup power because, you know,               |
|                     |  |

they 00:45:19 --> 00:45:21: don't want that food to go to waste. 00:45:22 --> 00:45:25: But not only that, they're thinking about like, OK, like 00:45:26 --> 00:45:29: if we're going to have backup freezer, that's going to 00:45:29 --> 00:45:31: be, you know, operational backup power. 00:45:32 --> 00:45:34: How can we serve the community and have that be 00:45:34 --> 00:45:37: a space where people bring containers with their food if 00:45:37 --> 00:45:38: they lost power in their house? 00:45:38 --> 00:45:43: So I think like there's this hyper community examples, but 00:45:43 --> 00:45:48: resilient and maybe it's better conceptualized. 00:45:48 --> 00:45:49: It's sort of like that if you lose power and 00:45:49 --> 00:45:51: make sure you have some some backup, right? 00:45:51 --> 00:45:55: And like as a business, whether you know your community 00:45:55 --> 00:45:58: is you know, your customers, like thinking about those things 00:45:58 --> 00:45:59: is important. 00:46:00 --> 00:46:04: And if you have a a service that's community driven, 00:46:04 --> 00:46:07: I think thinking what else could you let layer to 00:46:07 --> 00:46:12: serve your customer, your residence and and even more so 00:46:12 --> 00:46:17: those residents who are most vulnerable or higher need wonderful. 00:46:17 --> 00:46:17: Thank you. 00:46:18 --> 00:46:21: So based on your experience, what advice would you give 00:46:21 --> 00:46:25: to real estate professionals and developers looking to incorporate resilience 00:46:25 --> 00:46:26: hubs into their projects? 00:46:27 --> 00:46:29: Are there any common pitfalls to avoid? 00:46:34 --> 00:46:34: Pitfalls. 00:46:34 --> 00:46:36: You know, it's Go ahead. 00:46:36 --> 00:46:37: Go ahead, Marie, you first. 00:46:37 --> 00:46:41: No, I, I mean, you know, like very early on 00:46:41 --> 00:46:44: to like that side analysis piece. 00:46:44 --> 00:46:47: Like if you are thinking about solar as your backup 00:46:47 --> 00:46:51: energy source, you know how you design your roof and 00:46:51 --> 00:46:55: like which way your building's facing and your utilities, like 00:46:55 --> 00:46:59: how much power supply you have to go into, into 00:46:59 --> 00:47:00: the site. 00:47:00 --> 00:47:03: Like all of those things are considerations that have to 00:47:03 --> 00:47:06: come in really early on because you might have a 00:47:06 --> 00:47:09: beautiful tree that you thinking about placing your building next 00:47:09 --> 00:47:12: to and that might not make your building as favorable 00:47:12 --> 00:47:14: to, you know, solar energy.

Or you know, maybe the size of your building and

00:47:15 --> 00:47:17:

| 00:47:18> 00:47:20: | your roof and you know, won't allow you to fully                     |
|---------------------|--|
| 00:47:20> 00:47:23: | power the entire roof and you might have to look                     |
| 00:47:23> 00:47:25: | at a off site location for additional solar.                         |
| 00:47:25> 00:47:33: | So I think like thinking about your resilience, energy               |
|                     | generation   |
| 00:47:33> 00:47:35: | is really important.   |
| 00:47:35> 00:47:40: | Obviously, we're encouraging everyone to move away from fossil fuels |
| 00:47:40> 00:47:43: | and not have a diesel or natural gas generator.                      |
| 00:47:43> 00:47:46: | But we know that that is also a piece of                             |
| 00:47:46> 00:47:47: | resiliency.  |
| 00:47:47> 00:47:51: | Like some folks do need and have those generators, but               |
| 00:47:51> 00:47:54: | doing that double duty of having that solar system that's            |
| 00:47:55> 00:47:58: | like, you know, reducing your energy costs on like your              |
| 00:47:58> 00:48:02: | normal days and then picks in with the battery storage               |
| 00:48:02> 00:48:04: | when there's a power outage.   |
| 00:48:04> 00:48:07: | I think thinking about the benefit of that is really                 |
| 00:48:07> 00:48:09: | important early on, as early as possible.                            |
| 00:48:11> 00:48:14: | Yeah, I would, I would add to that just to                           |
| 00:48:14> 00:48:15: | say your site selection.   |
| 00:48:16> 00:48:18: | If you have a site that is already risk adverse,                     |
| 00:48:18> 00:48:20: | then you're that's half your battle.                                 |
| 00:48:20> 00:48:24: | And then the other thing is multiplicity resilience is, is           |
| 00:48:24> 00:48:26: | much about slacking the system.                                      |
| 00:48:26> 00:48:29: | So you have extra, but it also is backup systems.                    |
| 00:48:29> 00:48:34: | So Maria mentioned, for example, backup power or multiple            |
|                     | ways   |
| 00:48:34> 00:48:34: | of input.  |
| 00:48:35> 00:48:37: | You should be thinking about that in your in your                    |
| 00:48:38> 00:48:38: | your project.  |
| 00:48:38> 00:48:42: | And sometimes that is the pitfall is that, well, you                 |
| 00:48:42> 00:48:45: | know, we can afford only this recognize that in your                 |
| 00:48:46> 00:48:49: | all hazard assessment that the the thin nature of a                  |
| 00:48:49> 00:48:52: | single system is your vulnerability.                                 |
| 00:48:52> 00:48:55: | And so how do you look long term to make                             |
| 00:48:55> 00:48:58: | sure that I have a a project that here's where                       |
| 00:48:58> 00:48:59: | l open.  |
| 00:48:59> 00:49:01: | And then in five years, my five year plan is                         |
| 00:49:01> 00:49:04: | to make sure that I have extra battery backup system                 |
| 00:49:04> 00:49:07: | than the 10 year plan is something else and something                |
| 00:49:07> 00:49:07: | else.  |
| 00:49:08> 00:49:10: | So the pitfall is, is that is that, that, that                       |
| 00:49:10> 00:49:13: | getting a project up and running should be the beginning             |

| 00:49:14> 00:49:17: | of a long standing relationship with that project to increase          |
|---------------------|--|
| 00:49:17> 00:49:18: | its resilient capacity.  |
| 00:49:19> 00:49:20: | If your budget is stressed from the beginning.                         |
| 00:49:21> 00:49:23: | So in others don't settle for, for, for less.                          |
| 00:49:24> 00:49:26: | It's it's here's where I'm going to start.                             |
| 00:49:26> 00:49:29: | And my plan is, is that hear what the improvements                     |
| 00:49:29> 00:49:30: | are down the road.   |
| 00:49:31> 00:49:35: | That's going to save you a lot in the future                           |
| 00:49:35> 00:49:37: | and avoid avoid interruptions.   |
| 00:49:38> 00:49:40: | I think that's an excellent point.                                     |
| 00:49:40> 00:49:42: | And you know, one thing that we do hear from                           |
| 00:49:42> 00:49:45: | our clean Energy Partners is like please bring us in                   |
| 00:49:45> 00:49:45: | early.   |
| 00:49:46> 00:49:50: | So it's so much easier when they're brought in early                   |
| 00:49:50> 00:49:51: | and often.   |
| 00:49:51> 00:49:54: | I think another piece that you mentioned Ilia, was the,                |
| 00:49:55> 00:49:58: | that it's always, you know, resilience is in, in progress.             |
| 00:49:58> 00:50:00: | It's not ever done.  |
| 00:50:00> 00:50:02: | You don't just build a fancy building that you know,                   |
| 00:50:02> 00:50:05: | meets everybody's needs and then you don't need to adapt.              |
| 00:50:05> 00:50:08: | When we're thinking about these buildings, it's, it's that we're       |
| 00:50:08> 00:50:11: | constantly evaluating how they meet the community's needs and how      |
| 00:50:11> 00:50:12: | they need to shift.  |
| 00:50:12> 00:50:15: | And some of that is that, you know, when you're                        |
| 00:50:15> 00:50:19: | thinking about designing or designing flexible spaces, but that's also |
| 00:50:19> 00:50:22: | just being able to think about how things are are                      |
| 00:50:22> 00:50:24: | changing with time we've received.                                     |
| 00:50:24> 00:50:26: | So we're gonna switch over to audience questions now.                  |
| 00:50:27> 00:50:30: | And a question that a lot of you say to                                |
| 00:50:30> 00:50:34: | upvoted is if a resilience hub is mostly about social                  |
| 00:50:34> 00:50:38: | connection, how is it different than a Community Center or             |
| 00:50:38> 00:50:43: | other social service organizations within with a physical building?    |
| 00:50:43> 00:50:45: | So that's a great question.  |
| 00:50:45> 00:50:47: | And I think this is probably in part in response                       |
| 00:50:47> 00:50:49: | to what I was sharing at the beginning about that                      |
| 00:50:49> 00:50:51: | need to build social connection.                                       |
| 00:50:51> 00:50:55: | I do think there's probably a lot of community centers                 |
| 00:50:55> 00:50:59: | that are not actually building a social connection or meeting          |
| 00:50:59> 00:51:01: | their community needs.   |
|                     |  |

| 00:51:01> 00:51:04: | So we use that kind of as a standing point                       |
|---------------------|--|
| 00:51:04> 00:51:07: | of, oh, it's just a Community Center with the power              |
| 00:51:07> 00:51:08: | system, but it's not.  |
| 00:51:08> 00:51:11: | And so I think a big portion, at least in                        |
| 00:51:11> 00:51:15: | my understanding of this, is that sometimes cities or or         |
| 00:51:15> 00:51:19: | counties start with a building and they'll say, we created       |
| 00:51:19> 00:51:22: | this cooling center and nobody goes to it and we                 |
| 00:51:22> 00:51:24: | don't understand why, right?                                     |
| 00:51:24> 00:51:25: | And that's because they started with the building.               |
| 00:51:25> 00:51:28: | And so when you're thinking about that social connection, you    |
| 00:51:29> 00:51:32: | can build this gorgeous building, but it doesn't mean anything   |
| 00:51:32> 00:51:33: | if people don't go to it.  |
| 00:51:34> 00:51:37: | And so when we talk about it, we're really thinking              |
| 00:51:37> 00:51:40: | about like, OK, well, people need to go to a                     |
| 00:51:40> 00:51:41: | place every day.   |
| 00:51:41> 00:51:42: | They need to go there as their food pantry.                      |
| 00:51:42> 00:51:44: | They need to go there as their child care facility,              |
| 00:51:45> 00:51:46: | something along those lines.                                     |
| 00:51:46> 00:51:49: | So that when there is a disruption, they go the                  |
| 00:51:49> 00:51:51: | place that I'm going to go is the Lennox Center                  |
| 00:51:51> 00:51:53: | or sorry, the AB Ford.   |
| 00:51:54> 00:51:56: | So yeah, I don't know if either of you have                      |
| 00:51:56> 00:51:58: | anything to add on that question as well.                        |
| 00:52:00> 00:52:04: | Yeah, I think, I think that's exactly it, that like              |
| 00:52:04> 00:52:04: | it.  |
| 00:52:04> 00:52:06: | It could be like a House of worship.                             |
| 00:52:06> 00:52:11: | You know, it could be sort of a smaller gathering                |
| 00:52:11> 00:52:16: | place that, you know, you're used to going.                      |
| 00:52:16> 00:52:17: | Maybe it's the library.  |
| 00:52:17> 00:52:21: | But I think like we in the city of Detroit                       |
| 00:52:21> 00:52:25: | are working on a network of hubs of smaller nonprofit            |
| 00:52:25> 00:52:28: | organizations that have space that can host.                     |
| 00:52:30> 00:52:33: | We're setting sort of our own sort of like requirements          |
| 00:52:33> 00:52:35: | based on the community that we serve here in the                 |
| 00:52:35> 00:52:36: | city.  |
| 00:52:37> 00:52:41: | And there is, for example, homes in each neighborhood.           |
| 00:52:41> 00:52:44: | And there's an organization called Brilliant Detroit.            |
| 00:52:45> 00:52:49: | They just received their solar and backup battery storage system |
| 00:52:49> 00:52:52: | and they are able to host a family, you know,                    |
| 00:52:52> 00:52:55: | and they have, you know, it's, it's a house so                   |
| 00:52:55> 00:52:59: | that they can have a shower, whatever their needs of             |

| 00:52:59> 00:53:02: | the family might be, they're able to host it.                             |
|---------------------|---|
| 00:53:02> 00:53:03: | And, and that's a resilience hub.   |
| 00:53:03> 00:53:07: | And it's not necessarily your typical like warming and cooling            |
| 00:53:07> 00:53:10: | center, but it's like resilient in a way that it's                        |
| 00:53:10> 00:53:13: | going to be available and like a staff are trained.                       |
| 00:53:13> 00:53:15: | And so we're also working on the training of like,                        |
| 00:53:16> 00:53:19: | you know, could you point people to other resources or                    |
| 00:53:19> 00:53:21: | like, do you have a certain level of mental health                        |
| 00:53:22> 00:53:25: | training so that if there is an emergency, like someone                   |
| 00:53:25> 00:53:28: | floods or there's a fire, that you're able to respond                     |
| 00:53:28> 00:53:30: | to that family and that those residents.                                  |
| 00:53:30> 00:53:33: | So I think we're all sort of adapting as we're                            |
| 00:53:33> 00:53:37: | seeing sort of these shocks and crises kind of like                       |
| 00:53:37> 00:53:41: | emerge, but I think it's sort of layered to serve                         |
| 00:53:41> 00:53:43: | the community where you are.  |
| 00:53:44> 00:53:48: | Yeah, for for me, yeah, there's there's a difference A                    |
| 00:53:48> 00:53:52: | a Community Center could be the great basis of a                          |
| 00:53:52> 00:53:53: | resilience hub.   |
| 00:53:53> 00:53:57: | A resilience hub is a near absolute protection cannot fail                |
| 00:53:57> 00:54:01: | and jump starts the community after severe shocks and stresses.           |
| 00:54:02> 00:54:06: | And that comes from working a lot with FEMA and                           |
| 00:54:06> 00:54:10: | their guidelines about disaster safety preparedness.                      |
| 00:54:11> 00:54:14: | And to Maria's points, the the resilience hubs that we                    |
| 00:54:14> 00:54:17: | work on are usually identified as part of a network                       |
| 00:54:17> 00:54:20: | that is advancing on the island of Oahu.                                  |
| 00:54:20> 00:54:21: | They're building seven of these.  |
| 00:54:21> 00:54:23: | This is the first that will be built.                                     |
| 00:54:23> 00:54:27: | That network is meant to do exactly what Maria highlighted                |
| 00:54:27> 00:54:30: | is that in the worst case scenario, this is something                     |
| 00:54:30> 00:54:33: | that will not fail and support those families in the                      |
| 00:54:33> 00:54:37: | neighborhood identifying in our case, for example, dialysis machines have |
| 00:54:37> 00:54:40: | to be there because if you lose power, you're on                          |
| 00:54:40> 00:54:41: | dialysis, you're going to die.  |
| 00:54:42> 00:54:43: | That's just what it is.   |
| 00:54:43> 00:54:46: | So when you think about a resilience hub, it looks                        |
| 00:54:46> 00:54:49: | at the absolute do not fail, but responds specifically to                 |
| 00:54:49> 00:54:50: | those community needs.  |
| 00:54:51> 00:54:52: | And it's different for every community.                                   |
| 00:54:53> 00:54:55: | It is, it is, it should be different for every                            |
| 00:54:55> 00:54:58: | community, but it's also something that is living and                     |
|                     | <i>,,</i>   |

|                     | constantly   |
|---------------------|--|
| 00:54:58> 00:54:59: | changing.  |
| 00:54:59> 00:55:01: | So that to me is is the base is the  |
| 00:55:01> 00:55:02: | main difference.   |
| 00:55:03> 00:55:06: | Most of these have to be islandable, meaning they have                     |
| 00:55:06> 00:55:09: | to operate without external inputs of power and water for                  |
| 00:55:09> 00:55:10: | a certain amount of time.  |
| 00:55:11> 00:55:13: | I did see with Maria's it's 72 hours, 72 hours                             |
| 00:55:14> 00:55:17: | is the minimum standard from Red Cross and the federal                     |
| 00:55:17> 00:55:17: | government.  |
| 00:55:18> 00:55:20: | So all of these start to adhere to things that                             |
| 00:55:20> 00:55:22: | community centers do not have to adhere to.                                |
| 00:55:23> 00:55:25: | So it's easy to take a Community Center and move                           |
| 00:55:25> 00:55:29: | them that direction, take an existing facility building and a              |
| 00:55:29> 00:55:32: | great a great active group and bring them there to                         |
| 00:55:32> 00:55:33: | meet these guidelines.   |
| 00:55:34> 00:55:36: | But it's really hard if that you don't have that                           |
| 00:55:36> 00:55:39: | social cohesiveness that will make that happen.                            |
| 00:55:39> 00:55:43: | And then lastly, who runs these facilities is really important.            |
| 00:55:43> 00:55:47: | So that community group, whether it's Community Center, faith-based group, |
| 00:55:47> 00:55:50: | super important because city budgets are so strained, the city             |
| 00:55:50> 00:55:53: | is not going to run these and something that is                            |
| 00:55:53> 00:55:56: | maintained on a daily basis, daily use, daily knowledge will               |
| 00:55:56> 00:55:57: | always function.   |
| 00:55:57> 00:56:00: | If you leave it there as a dusty building that                             |
| 00:56:00> 00:56:02: | you unlock the door during disaster, it's going to fail.                   |
| 00:56:03> 00:56:06: | So I I love the question because yes, it's a                               |
| 00:56:06> 00:56:07: | Community Center.  |
| 00:56:07> 00:56:09: | And what must it be?   |
| 00:56:11> 00:56:12: | I think that's a great point.  |
| 00:56:13> 00:56:16: | And I would just add that, you know, one of                                |
| 00:56:16> 00:56:19: | the things that we've heard a lot from our, our                            |
| 00:56:19> 00:56:23: | partners on Maui was that frequently when a disruption occurs,             |
| 00:56:23> 00:56:27: | what happens is an American Red Cross and other entities                   |
| 00:56:27> 00:56:30: | come in and they start operating the facilities.                           |
| 00:56:30> 00:56:33: | And then when people show up to their neighborhood Community               |
| 00:56:33> 00:56:36: | Center, resilience hub, they're seeing strangers, right?                   |
| 00:56:37> 00:56:40: | And so it's so, so important.  |
| 00:56:40> 00:56:42: | And this is part of why you do that work                                   |
|                     |  |

constantly

| 00:56:42> 00:56:45: | before disruptions that the people see friendly faces that they          |
|---------------------|--|
| 00:56:45> 00:56:45: | know.  |
| 00:56:45> 00:56:48: | And this there's, you'll hear us talk a lot about                        |
| 00:56:48> 00:56:53: | the importance of mental health programming every day during disruptions |
| 00:56:53> 00:56:54: | and also during recovery.  |
| 00:56:54> 00:56:58: | But we've really seen that in Maui in particular, that                   |
| 00:56:58> 00:57:01: | doing that work to make sure that the front desk                         |
| 00:57:01> 00:57:05: | folks are your neighbors and that they aren't strangers from             |
| 00:57:05> 00:57:08: | off the island or from out of state, that that's                         |
| 00:57:08> 00:57:09: | really important as well.  |
| 00:57:10> 00:57:14: | Maria, we received a question about what the programmatic components     |
| 00:57:14> 00:57:17: | of your building are as well as the size.                                |
| 00:57:20> 00:57:20: | Yes.   |
| 00:57:20> 00:57:25: | So it is 8600 square feet.   |
| 00:57:26> 00:57:32: | It contains two meeting rooms, one large multi purpose room,             |
| 00:57:32> 00:57:36: | a classroom, kitchen, sort of that we call it the                        |
| 00:57:36> 00:57:40: | lab, a small library area and the reception.                             |
| 00:57:41> 00:57:45: | So really it's it's a small ish building for                             |
| 00:57:45> 00:57:49: | us, for some of our community centers, but it definitely                 |
| 00:57:49> 00:57:52: | packs a lot of functions and I'm happy to put                            |
| 00:57:52> 00:57:54: | in the chat too.   |
| 00:57:54> 00:57:55: | So you can live as part of the recording.                                |
| 00:57:56> 00:57:57: | Wonderful.   |
| 00:57:57> 00:57:57: | Thank you.   |
| 00:57:58> 00:58:00: | And we did receive, I know that you all touched                          |
| 00:58:00> 00:58:03: | on this a little bit earlier, but what the monetary                      |
| 00:58:03> 00:58:06: | incentives are to real estate developers to developing resilience hubs.  |
| 00:58:06> 00:58:09: | And I will just start by saying, I know we're                            |
| 00:58:09> 00:58:11: | in our last minute or so, but one of the                                 |
| 00:58:11> 00:58:14: | things USDN has done over the last several years is                      |
| 00:58:14> 00:58:18: | to work with the federal government to explain what resilience           |
| 00:58:18> 00:58:21: | hubs are so that when they are releasing grant funding                   |
| 00:58:21> 00:58:25: | and federal funding and appropriations that they can be focused          |
| 00:58:25> 00:58:27: | on resilience hub construction.  |
| 00:58:27> 00:58:30: | So there are so many federal dollars going into these                    |
| 00:58:30> 00:58:31: | projects right now.  |
| 00:58:32> 00:58:33: | To either of you have anything to add on that                            |
| 00:58:33> 00:58:34: | subject?   |

| 00:58:35> 00:58:39: | No, just I've been working with USDN specifically for this |
|---------------------|--|
| 00:58:39> 00:58:41: | kind of work and unlocking that funding.                   |
| 00:58:42> 00:58:43: | So that's a great resource.                                |
| 00:58:44> 00:58:47: | And yeah, there's more money out there than you can        |
| 00:58:47> 00:58:49: | possibly imagine for this work.                            |
| 00:58:49> 00:58:52: | It does take a good team of grant writers and              |
| 00:58:52> 00:58:55: | working with USDN and others will give you a leg           |
| 00:58:55> 00:58:56: | up to do that.   |
| 00:58:56> 00:58:59: | So I'm just giving you a shout out because it's            |
| 00:58:59> 00:59:00: | been been great.   |
| 00:59:00> 00:59:01: | Thanks.  |
| 00:59:01> 00:59:02: | We appreciate that.  |
| 00:59:02> 00:59:03: | And we, I have to echo, I've heard that from               |
| 00:59:03> 00:59:06: | folks who are working on their resilience hubs and they've |
| 00:59:06> 00:59:07: | been historically community centers.                       |
| 00:59:07> 00:59:09: | And they said in the time we've been trying to             |
| 00:59:09> 00:59:12: | raise money for the last 20 years, we've raised more       |
| 00:59:12> 00:59:14: | money in the last two to three years when we've            |
| 00:59:14> 00:59:16: | been thinking about ourselves as a resilience hub than we  |
| 00:59:16> 00:59:17: | did in the prior 20.                                       |
| 00:59:18> 00:59:21: | So there are many resources out there with that.           |
| 00:59:21> 00:59:23: | We are at the hour.  |
| 00:59:23> 00:59:26: | Thank you all so much for coming and thank you             |
| 00:59:26> 00:59:28: | to Maria and Ilya for sharing your experience and your     |
| 00:59:28> 00:59:29: | expertise on this.   |
| 00:59:30> 00:59:32: | We will be sending out the recording and slides in         |
| 00:59:32> 00:59:35: | the next few days and we hope everyone has a               |
| 00:59:35> 00:59:36: | wonderful rest of your day.                                |
|                     |  |

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