

# Webinar

## Brave the Storm: Strategies for Coastal Resilience

Date: August 11, 2021

00:00:04 --> 00:00:08: Hello everyone, good morning, afternoon or evening.

00:00:08 --> 00:00:13: Welcome today's ULI Global Webinar braved the storm strategies for

00:00:13 --> 00:00:14: coastal resilience.

00:00:14 --> 00:00:15: Today you'll be hearing from you,

00:00:15 --> 00:00:19: Li experts based around the country sharing best practices for

00:00:19 --> 00:00:23: industry professionals and city decision making makers on topics related

00:00:24 --> 00:00:25: to site and district scale,

00:00:25 --> 00:00:29: flood preparedness and equitable coastal management.

00:00:29 --> 00:00:32: Before we dive into this excellent content,

00:00:32 --> 00:00:34: I want to take a few moments to share technical.

00:00:34 --> 00:00:38: Reminders for the audience. After our initial presentations by our

00:00:38 --> 00:00:39: speakers,

00:00:39 --> 00:00:42: there will be opportunities for the audience to ask questions

00:00:42 --> 00:00:43: and engage in discussion.

00:00:43 --> 00:00:46: To do so, please use the Q&A functions at the

00:00:46 --> 00:00:49: bottom of your screen on the zoom toolbar to send

00:00:49 --> 00:00:52: your questions directly to the panelists.

00:00:52 --> 00:00:56: This webinar will be recorded and shared with all registrants

00:00:56 --> 00:00:57: within about a week.

00:00:57 --> 00:01:00: This weather is hosted by the ULI Urban Resilience Program,

00:01:00 --> 00:01:03: which focuses on how building cities and communities can be

00:01:03 --> 00:01:06: more resilient to the impacts of climate change and other

00:01:06 --> 00:01:07: environmental,

00:01:07 --> 00:01:11: social and economic vulnerabilities. The UI Urban Resilience program works

00:01:11 --> 00:01:14: with ULI members to provide technical assistance,

00:01:14 --> 00:01:18: advanced knowledge through research, and catalyze the adoption of transformative

00:01:18 --> 00:01:21: practices for real estate and land use policy.

00:01:21 --> 00:01:23: If you would like to get involved with the program,

00:01:23 --> 00:01:27: please submit your interest using the UI Navigator.

00:01:27 --> 00:01:28: Pivoting now back to the content,

00:01:28 --> 00:01:30: I'm pleased to turn it over to our speakers.

00:01:30 --> 00:01:34: Dr Lynette Cardos, the director of resilience and adaptation with

00:01:34 --> 00:01:36: Moffat and Nichol,

00:01:36 --> 00:01:40: doctor James A Moore, the Global Solutions director for cities

00:01:40 --> 00:01:44: in places with Jacobs who's also our moderator for today.

00:01:44 --> 00:01:49: Catherine Riley, senior development director for Brookfield Properties and Doctor

00:01:49 --> 00:01:50: Jill on White Newsome,

00:01:50 --> 00:01:55: founder of Empowering a green environment and economy,

00:01:55 --> 00:01:57: and with that I'll hand it over to James to

00:01:57 --> 00:01:59: turn his camera on and kick us off today.

00:01:59 --> 00:02:00: Thank you very much.

00:02:06 --> 00:02:10: Thank you Leah. Yes, we can jump to the neck.

00:02:10 --> 00:02:13: There we go. As we have mentioned,

00:02:13 --> 00:02:16: I'm James more on the Global Solutions director for cities

00:02:16 --> 00:02:18: and places with with Jacobs,

00:02:18 --> 00:02:21: and I'm delighted to moderate what should be a very

00:02:21 --> 00:02:24: interesting and relevant and important panel discussion.

00:02:24 --> 00:02:29: Next slide, please. Just to put a little bit of

00:02:29 --> 00:02:32: context around the issue,

00:02:32 --> 00:02:35: as the slide notes in the United States,

00:02:35 --> 00:02:38: about 127 million people live in coastal counties,

00:02:38 --> 00:02:42: so that's effectively 40% of the population.

00:02:42 --> 00:02:43: It's only 10% of the land area,

00:02:43 --> 00:02:46: so that means that these counties are more densely developed

00:02:46 --> 00:02:48: than most parts of the country,

00:02:48 --> 00:02:51: and it means that they are more impacted by some

00:02:51 --> 00:02:54: of the potential events associated with climate change and coastal

00:02:54 --> 00:02:55: resilience.

00:02:55 --> 00:02:57: So this is an issue that is important to a

00:02:57 --> 00:02:59: large percentage of the population.

00:02:59 --> 00:03:02: Already and will continue to become more important as we

00:03:02 --> 00:03:04: as we move into the future.

00:03:04 --> 00:03:14: Next slide, please. Next slide hello.

00:03:17 --> 00:03:21: There we go. Sort of frame the issue even further.  
00:03:21 --> 00:03:24: This so 22 main elements as part of this challenge  
00:03:24 --> 00:03:26: and one of them I think we're all familiar with  
00:03:26 --> 00:03:28: is the notion of sea level rise.  
00:03:28 --> 00:03:31: You can see the examples of from Florida.  
00:03:31 --> 00:03:33: I am currently in Florida and with even a two  
00:03:33 --> 00:03:36: degree centigrade warming which you see on the right.  
00:03:36 --> 00:03:41: Substantial portions of South Florida will essentially become  
submerged,  
00:03:41 --> 00:03:44: and if you saw the IPCC report that came out  
00:03:44 --> 00:03:46: earlier this week,  
00:03:46 --> 00:03:49: it looks like 2 degrees maybe about where we can  
00:03:49 --> 00:03:49: get.  
00:03:49 --> 00:03:52: Things if we're if we're very careful and as you'll  
00:03:52 --> 00:03:55: see that'll have an enormous impact on a state like  
00:03:55 --> 00:03:55: ours,  
00:03:55 --> 00:03:59: but also most of the coastal areas of the country.  
00:03:59 --> 00:04:07: Next slide, please. This is already happening in South  
Florida.  
00:04:07 --> 00:04:10: This is a photograph from Miami Beach.  
00:04:10 --> 00:04:13: Generally, about once a month you have where they're called  
00:04:13 --> 00:04:16: king tides and the water actually comes back up through  
00:04:16 --> 00:04:19: the through the storm water system and the streets get  
00:04:19 --> 00:04:22: flooded. That's an inconvenience at this point,  
00:04:22 --> 00:04:24: but it will continue into the future.  
00:04:24 --> 00:04:27: Arguably, it'll get worse and it will begin to impact  
00:04:27 --> 00:04:28: how communities,  
00:04:28 --> 00:04:31: how developers, how individual property owners think about  
their about  
00:04:31 --> 00:04:33: their properties and about their community.  
00:04:33 --> 00:04:39: Next slide. And obviously, in the worst case scenario's land  
00:04:39 --> 00:04:45: that is currently above water will be permanently inundated.  
00:04:45 --> 00:04:48: This is an example from the Gulf Coast in Louisiana,  
00:04:48 --> 00:04:51: and you can see how it has impacted the development  
00:04:51 --> 00:04:52: patterns as impacted.  
00:04:52 --> 00:04:56: This particular community as they are now effectively  
surrounded by  
00:04:56 --> 00:04:57: water all of the time.  
00:04:57 --> 00:05:04: Next slide. Now a second factor associated with the coastal  
00:05:04 --> 00:05:09: challenge is this issue of intensified rain events.  
00:05:09 --> 00:05:12: If you've been following the news,  
00:05:12 --> 00:05:13: even in this last month,  
00:05:13 --> 00:05:15: you've seen the examples from from Europe and from

Germany

00:05:15 --> 00:05:16: in particular,  
00:05:16 --> 00:05:22: of significant rain overflowing, overflowing the surrounding areas,  
00:05:22 --> 00:05:24: ending up in the in the rivers and streams,  
00:05:24 --> 00:05:27: which then of course over overflow their banks and cause  
00:05:27 --> 00:05:30: some amount of the immense amounts of flooding and other  
00:05:30 --> 00:05:30: damage.  
00:05:30 --> 00:05:33: And what's interesting. Is that a lot of these rain  
00:05:33 --> 00:05:35: events are not actually in coastal communities.  
00:05:35 --> 00:05:37: They're not they're far inland,  
00:05:37 --> 00:05:41: but they're still having the same significant negative impacts as  
00:05:41 --> 00:05:43: you see for this example here the next slide.  
00:05:47 --> 00:05:51: Clearly the the example that gets the most attention in  
00:05:51 --> 00:05:54: the United States or the seasonal hurricanes,  
00:05:54 --> 00:05:56: we're now into the into hurricane season.  
00:05:56 --> 00:05:59: I think we're all the way up through the ease  
00:05:59 --> 00:05:59: this is,  
00:06:00 --> 00:06:03: I think, a photograph of Hurricane Michael from 2018,  
00:06:03 --> 00:06:07: which caused substantial damage along the Gulf Coast of Florida  
00:06:07 --> 00:06:08: and as well inland,  
00:06:08 --> 00:06:09: you go to the next slide.  
00:06:09 --> 00:06:12: You can see sort of the power and the intensity  
00:06:12 --> 00:06:15: of these storms when they do strike land.  
00:06:15 --> 00:06:17: Be pretty impactful, pretty devastating.  
00:06:17 --> 00:06:22: Next slide, please. And part of that impact is just  
00:06:22 --> 00:06:24: increased wind damage,  
00:06:24 --> 00:06:27: saying, you know hurricane force winds over long periods of  
00:06:27 --> 00:06:31: time do substantial damage to buildings and infrastructure  
next slide.  
00:06:35 --> 00:06:37: You also have the problems with storm surge.  
00:06:37 --> 00:06:40: You have masses amount massive amounts of water coming  
in  
00:06:40 --> 00:06:41: off the off.  
00:06:41 --> 00:06:44: The off the water bodies causing damage as they come  
00:06:44 --> 00:06:44: in land,  
00:06:44 --> 00:06:48: but also causing damage as they recede back to the  
00:06:48 --> 00:06:48: water.  
00:06:48 --> 00:06:50: So a AA double whammy.  
00:06:50 --> 00:06:54: You see some examples from the Gulf Coast.  
00:06:54 --> 00:06:57: No, it's just the damage that's been done to the

00:06:57 --> 00:06:57: buildings.

00:06:57 --> 00:07:00: Even though the buildings were were elevated the next one

00:07:00 --> 00:07:00: please.

00:07:07 --> 00:07:11: And again you have the the problem of flooding flooding

00:07:11 --> 00:07:12: storm events.

00:07:12 --> 00:07:14: Spring intense amounts of rainfall.

00:07:14 --> 00:07:17: These are photographs from New Jersey after Hurricane Sandy back

00:07:17 --> 00:07:18: in 2012,

00:07:18 --> 00:07:21: and quite often that flooding stays for a long period

00:07:21 --> 00:07:21: of time,

00:07:21 --> 00:07:24: so it's not limited just to the period of the

00:07:24 --> 00:07:24: storm.

00:07:24 --> 00:07:27: It may even be weeks before all the flooding receipts,

00:07:27 --> 00:07:31: creating enormous damage to property and to infrastructure.

00:07:31 --> 00:07:32: So the next slide please.

00:07:35 --> 00:07:37: So typically we speak of three approaches.

00:07:37 --> 00:07:40: 3 responses to this. On the one hand,

00:07:40 --> 00:07:42: you can harden up and I'll talk about each of

00:07:42 --> 00:07:43: these in a little more detail.

00:07:43 --> 00:07:46: In the middle you can try to mitigate and adapt,

00:07:46 --> 00:07:47: and then as you see on the right,

00:07:47 --> 00:07:49: you can migrate or retreat.

00:07:49 --> 00:07:51: Each of these have pluses and minuses and hopefully will

00:07:51 --> 00:07:53: make that part of the discussion at the end of

00:07:54 --> 00:07:54: the presentations.

00:07:54 --> 00:07:59: Next slide please. The issue of hardening is very much

00:07:59 --> 00:08:00: as it sounds,

00:08:00 --> 00:08:02: it's it's very much as you see here.

00:08:02 --> 00:08:07: It's essentially creating a defensive barrier between the water and

00:08:07 --> 00:08:08: shoreline.

00:08:08 --> 00:08:13: It may involve building buildings up higher typically involves building

00:08:13 --> 00:08:13: walls,

00:08:13 --> 00:08:17: building barriers, something to keep the buildings,

00:08:17 --> 00:08:21: and the community in place of provided protective edge against

00:08:21 --> 00:08:24: the damages that can come in from the water the

00:08:24 --> 00:08:25: next slide,

00:08:25 --> 00:08:30: please. With respect to mitigation and adaptation,

00:08:30 --> 00:08:31: is more of a soft approach.

00:08:31 --> 00:08:34: It often involves the planting of,

00:08:34 --> 00:08:37: perhaps putting mangroves back, putting coastal plants back,  
00:08:37 --> 00:08:41: adapting the coastal shoreline, moderating dunes,  
00:08:41 --> 00:08:43: and even even subterranean water.  
00:08:43 --> 00:08:47: Subsurface water features to begin to buffer the impacts,  
00:08:47 --> 00:08:50: particularly of storm events, as they come on land.  
00:08:50 --> 00:08:53: You can see a picture here of people planting mangroves  
00:08:53 --> 00:08:55: at the edge of the coast,  
00:08:55 --> 00:08:57: so that when they grow up,  
00:08:57 --> 00:08:58: they will provide that buffer.  
00:08:58 --> 00:09:01: Against the community, which is further further in land and  
00:09:01 --> 00:09:03: then the next slide please.  
00:09:05 --> 00:09:08: And finally, you have the example of migration or retreat.  
00:09:08 --> 00:09:11: I picked this picture because it's a very graphic  
demonstration  
00:09:11 --> 00:09:12: of retreat.  
00:09:12 --> 00:09:17: It's a very expensive house in Nantucket,  
00:09:17 --> 00:09:20: up in Massachusetts that was too close to the shore.  
00:09:20 --> 00:09:22: The shore was beginning to crumble into the ocean,  
00:09:22 --> 00:09:25: and so the whole building was lifted and moved back  
00:09:25 --> 00:09:26: several hundred feet.  
00:09:26 --> 00:09:29: Obviously this is not a an approach that works for  
00:09:29 --> 00:09:31: most buildings and most people,  
00:09:31 --> 00:09:35: but the IT does highlight the larger issue that.  
00:09:35 --> 00:09:38: At times we will perhaps have to decide to move  
00:09:38 --> 00:09:42: away from places that are currently occupied to safer places,  
00:09:42 --> 00:09:46: safer havens havens. Whether that's on an individual building  
by  
00:09:46 --> 00:09:46: building basis,  
00:09:46 --> 00:09:50: or in terms of entire communities or entire neighborhoods.  
00:09:50 --> 00:09:56: Next slide, please. Ultimately, most practice involves multiple  
approaches,  
00:09:56 --> 00:10:00: and you can see those demonstrated here policy measures  
about  
00:10:00 --> 00:10:01: elevating buildings,  
00:10:01 --> 00:10:02: policy measures about moving buildings,  
00:10:02 --> 00:10:06: or relocating buildings. Structural measures such as  
elevating roadways,  
00:10:06 --> 00:10:09: improving drainage and then non structural measures,  
00:10:09 --> 00:10:12: typically around nature based solutions,  
00:10:12 --> 00:10:16: whether they be planting things like oyster reefs submerged  
like  
00:10:16 --> 00:10:19: a aquatic vegetation and the like.  
00:10:19 --> 00:10:23: And as you'll see, most of the examples involve combining.

00:10:23 --> 00:10:27: These approaches try to be the most effective for each  
00:10:27 --> 00:10:28: particular situation.  
00:10:28 --> 00:10:33: So next slide please. With this,  
00:10:33 --> 00:10:35: I'd like to turn it over to our first speaker,  
00:10:35 --> 00:10:37: Doctor Jill, on White News Dawn.  
00:10:38 --> 00:10:39: Hi, thank you so much.  
00:10:39 --> 00:10:42: James so good afternoon and thanks so much for the  
00:10:42 --> 00:10:45: opportunity to be here and it said my name is  
00:10:45 --> 00:10:48: Jalon or Doctor J whatever is easier and I am  
00:10:48 --> 00:10:52: CEO and founder of a consulting practice based in  
Southeastern  
00:10:52 --> 00:10:56: Michigan called Empowering a green environment in  
economy and I'm  
00:10:56 --> 00:11:01: calling from the original stolen lands of the Potawatomi  
peoples  
00:11:01 --> 00:11:04: here. And So what I'd like to really start out  
00:11:04 --> 00:11:05: with is a story.  
00:11:05 --> 00:11:08: Next slide please. So there was this elderly couple that  
00:11:08 --> 00:11:09: decided to downsize.  
00:11:09 --> 00:11:12: They were in a big home for most of their  
00:11:12 --> 00:11:14: lives and living on the east side of Detroit and  
00:11:14 --> 00:11:16: they wanted to move into a smaller,  
00:11:16 --> 00:11:19: modest home very much near the Detroit River and an  
00:11:19 --> 00:11:23: adjoining canal so their home was actually a couple feet  
00:11:23 --> 00:11:26: in front of the Great Lakes Water Authority,  
00:11:26 --> 00:11:30: which was the Regional Water Authority for Southeastern  
Michigan that  
00:11:30 --> 00:11:31: took up literally a block of space.  
00:11:31 --> 00:11:35: This was a huge pumping station run by the authority  
00:11:35 --> 00:11:38: a couple of months after they moved into this home.  
00:11:38 --> 00:11:42: Their first flood hit, it was intense rains that calls  
00:11:42 --> 00:11:45: the water levels to swell in the river and subsequent  
00:11:45 --> 00:11:48: subsequently make it into their basement.  
00:11:48 --> 00:11:51: Well then there was flood number 2.  
00:11:51 --> 00:11:54: In flight number 3 that not only brought rain water,  
00:11:54 --> 00:11:57: but sewer coming through the basement,  
00:11:57 --> 00:12:01: then there was flood number four and then flood #5.  
00:12:01 --> 00:12:04: That just happened in June of this year.  
00:12:04 --> 00:12:07: Now again, this time these are pictures from the June  
00:12:07 --> 00:12:10: flood that completely filled the basement.  
00:12:10 --> 00:12:13: That second picture up to 7 feet of water and  
00:12:13 --> 00:12:16: this is the front lawn in the backyard.  
00:12:16 --> 00:12:19: So essentially that elderly couple that I'm talking about is

00:12:19 --> 00:12:21: my parents and unfortunately they have been the victims.  
00:12:21 --> 00:12:26: Have failed infrastructure, poor planning and of course the devastating  
00:12:26 --> 00:12:27: impacts of climate change.  
00:12:27 --> 00:12:32: Next slide, I truly believe my parents and many others  
00:12:32 --> 00:12:36: are super resilient and the word resilience can have a  
00:12:36 --> 00:12:38: lot of different definitions.  
00:12:38 --> 00:12:42: So what resilience means to a land developer and ensure  
00:12:42 --> 00:12:46: someone in finance or researcher or in fact a resident  
00:12:46 --> 00:12:49: of a community that has been flooded multiple times is  
00:12:49 --> 00:12:53: different, but regardless. Your definition of resilience.  
00:12:53 --> 00:12:57: What I want to offer you is what resilience should  
00:12:57 --> 00:12:58: not be.  
00:12:58 --> 00:13:01: Resilience should not be measured by how much harm or  
00:13:01 --> 00:13:03: stressed that you can take on,  
00:13:03 --> 00:13:05: or how much a person can endure,  
00:13:05 --> 00:13:08: but unfortunately for many of our communities that I have  
00:13:08 --> 00:13:12: worked in and with being resilient has been Brazilian.  
00:13:12 --> 00:13:15: Has this like badge of honor and living through multiple  
00:13:15 --> 00:13:18: climate impacts which no one should have to deal with.  
00:13:18 --> 00:13:21: So equity is essential to real resilience,  
00:13:21 --> 00:13:25: particularly as it relates to addressing the multiple impacts of  
00:13:25 --> 00:13:28: climate change and in this case both coastal and.  
00:13:28 --> 00:13:32: Inland flooding next slide. So it's really necessary that we  
00:13:32 --> 00:13:36: think about the various types of infrastructure that we rely  
00:13:36 --> 00:13:38: on in our society,  
00:13:38 --> 00:13:41: because in many ways the infrastructures have failed.  
00:13:41 --> 00:13:45: People, particularly low income communities and  
communities of color.  
00:13:45 --> 00:13:48: A recent example of repeated failures is what I shared  
00:13:48 --> 00:13:50: that happened in my hometown of Detroit,  
00:13:50 --> 00:13:52: MI and that flood at the end of June has  
00:13:52 --> 00:13:53: deployed,  
00:13:53 --> 00:13:57: displaced hundreds of Detroiters. FEMA has declared a state  
of  
00:13:57 --> 00:13:58: emergency,  
00:13:58 --> 00:14:01: and again, many communities have not bounced back.  
00:14:01 --> 00:14:04: But what's striking is that in my hometown,  
00:14:04 --> 00:14:07: many other communities, and many of the communities  
across this  
00:14:07 --> 00:14:10: nation is that it's the same communities that continue to  
00:14:10 --> 00:14:12: get impacted over and over again.  
00:14:12 --> 00:14:15: And so let's think about a couple of reasons that



00:14:15 --> 00:14:17: we see this repeated insult.  
00:14:17 --> 00:14:21: Still one our physical infrastructure fails repeatedly.  
00:14:21 --> 00:14:22: Again, I showed you the first picture,  
00:14:22 --> 00:14:25: but what I didn't show you was the makeshift temporary.  
00:14:25 --> 00:14:29: I would say semi hard to James's presentation fix that  
00:14:29 --> 00:14:32: failed to hold off the water for my parents and  
00:14:32 --> 00:14:33: their neighbors,  
00:14:33 --> 00:14:36: putting them not only at a flooding risk but also  
00:14:36 --> 00:14:38: a health and safety risk.  
00:14:38 --> 00:14:43: Secondly, the financial infrastructure doesn't prioritize the  
gaps.  
00:14:43 --> 00:14:46: So when you think about older postindustrial cities,  
00:14:46 --> 00:14:49: the infrastructure in many cases has not been invested in  
00:14:49 --> 00:14:54: or maintained green stormwater infrastructure and other  
nature based solutions  
00:14:54 --> 00:14:55: have a slow uptake,  
00:14:55 --> 00:14:58: and as a former program officer with the Kresge Foundation,  
00:14:58 --> 00:15:01: we try to use all of our different forms of  
00:15:01 --> 00:15:01: capital,  
00:15:01 --> 00:15:04: grant capital and social investments to expand this uptake of  
00:15:04 --> 00:15:06: GSI and communities across the country,  
00:15:06 --> 00:15:10: particularly with new development. But we faced many  
challenges,  
00:15:10 --> 00:15:13: mostly around the fear of the unknown fear of innovation  
00:15:13 --> 00:15:16: and a really limited view of how investing in the  
00:15:16 --> 00:15:21: most climate vulnerable communities could actually improve  
your financial bottom  
00:15:21 --> 00:15:26: line. Third, the planning infrastructure might not even exist.  
00:15:26 --> 00:15:28: I recently learned after my parents did flood.  
00:15:28 --> 00:15:32: Unfortunately that there is no watershed management plan  
for the  
00:15:32 --> 00:15:33: city of Detroit,  
00:15:33 --> 00:15:36: particularly in the sub watersheds,  
00:15:36 --> 00:15:40: that drain to our, adjacent to or otherwise.  
00:15:40 --> 00:15:43: I would say interactive with the Detroit River and surface  
00:15:43 --> 00:15:45: waters on the Lower East Side of Detroit.  
00:15:45 --> 00:15:48: That is a problem, because this is the area that  
00:15:48 --> 00:15:50: has continued to flood over the past decade.  
00:15:50 --> 00:15:53: But these are also areas that were historically.  
00:15:53 --> 00:15:58: Redline and hydrologically predisposed to flooding sewer  
malfunctions in basement.  
00:15:58 --> 00:16:01: Septic backups and many other elements.  
00:16:01 --> 00:16:05: Next slide. So we've talked about some of the problems

00:16:05 --> 00:16:09: I've locked to offer three big actions that if infused  
00:16:09 --> 00:16:11: with engineering and technical.  
00:16:11 --> 00:16:15: Can hopefully create a more resilient infrastructure.  
00:16:15 --> 00:16:17: So the first is addressing spatial racism,  
00:16:17 --> 00:16:20: the sex. The second one is having the right data  
00:16:20 --> 00:16:23: and the third is centering people in the solution.  
00:16:23 --> 00:16:26: So let's start with the first month next slide.  
00:16:26 --> 00:16:28: So it's shown in this slide.  
00:16:28 --> 00:16:31: The National Academy of Sciences a couple years ago really  
00:16:31 --> 00:16:32: made it explicit.  
00:16:32 --> 00:16:36: Who are the folks that are vulnerable to flooding?  
00:16:36 --> 00:16:39: Racism has played a part in what infrastructure is or  
00:16:39 --> 00:16:41: is not available in certain communities.  
00:16:41 --> 00:16:42: I hope you can agree,  
00:16:42 --> 00:16:45: and this intentional deficiency puts certain.  
00:16:45 --> 00:16:48: In communities at risk. So as you think about when  
00:16:48 --> 00:16:49: development is planned,  
00:16:49 --> 00:16:52: the historical context of the community,  
00:16:52 --> 00:16:56: the existing baseline of vulnerability must be taken into  
account,  
00:16:56 --> 00:16:58: and so I want to really lift up an organization  
00:16:58 --> 00:17:02: called Groundwork USA that has developed through their  
climate Safe  
00:17:02 --> 00:17:04: Neighborhoods initiative.  
00:17:04 --> 00:17:07: This thing that looks at flooding and heat vulnerability plus  
00:17:07 --> 00:17:12: the combination of redlining maps to really support equitable  
development  
00:17:12 --> 00:17:14: and policy for city leaders and utilities.  
00:17:14 --> 00:17:17: So definitely check them out next slide.  
00:17:17 --> 00:17:20: Secondly, you must have the right data and I really  
00:17:20 --> 00:17:22: want to focus on data equity.  
00:17:22 --> 00:17:25: So flood studies, particularly urban flood studies,  
00:17:25 --> 00:17:29: climate modeling, are very important to identifying the best  
engineering  
00:17:29 --> 00:17:30: solutions.  
00:17:30 --> 00:17:33: But there is also a need for non traditional data  
00:17:33 --> 00:17:38: that's garnered from community experts and community  
experience to fortify  
00:17:38 --> 00:17:39: any solution.  
00:17:39 --> 00:17:41: So as an example, I want to lift up the  
00:17:41 --> 00:17:43: work of I see change in freshwater future.  
00:17:43 --> 00:17:46: I'll focus on I see change because they are working  
00:17:46 --> 00:17:49: across the country to help communities collect and share

data.

**00:17:49 --> 00:17:52:** Both quantitative data and qualitative data.

**00:17:52 --> 00:17:57:** Or stories from communities that can again influence policy and

**00:17:57 --> 00:17:57:** change.

**00:17:57 --> 00:18:02:** So this combination of engineering plus community reality experience can

**00:18:02 --> 00:18:03:** really help.

**00:18:03 --> 00:18:07:** I think with equitable development and validate their phine if

**00:18:07 --> 00:18:10:** the engineering and technical solutions are sufficient.

**00:18:10 --> 00:18:14:** Next slide. You must center people in the solution,

**00:18:14 --> 00:18:16:** so again, I want to uplift the work of an

**00:18:16 --> 00:18:19:** organization called Anthropocene Alliance.

**00:18:19 --> 00:18:21:** They are made up of flood survivors across the country,

**00:18:21 --> 00:18:25:** coastal and inland, and what's so awesome they created this

**00:18:25 --> 00:18:29:** flood survivors manifesto that speaks to several pieces,

**00:18:29 --> 00:18:31:** but three things are highlighted,

**00:18:31 --> 00:18:35:** helping the people that most needed stopping the harmful practices

**00:18:35 --> 00:18:39:** that caused flooding and really don't build where it floods

**00:18:39 --> 00:18:41:** and so again very simple,

**00:18:41 --> 00:18:44:** but things that. We can take their heart next slide.

**00:18:45 --> 00:18:48:** So in summary I would say that equitable development should

**00:18:48 --> 00:18:51:** not and can really not be done in a silo,

**00:18:51 --> 00:18:53:** and so you need multiple inputs.

**00:18:53 --> 00:18:55:** And most importantly I think you have to ask the

**00:18:55 --> 00:18:57:** right questions before you add.

**00:18:57 --> 00:19:00:** So I want to offer seven key questions.

**00:19:00 --> 00:19:03:** I think from my experience with advocating for flood victims

**00:19:03 --> 00:19:05:** in Detroit and across the country,

**00:19:05 --> 00:19:08:** that I think might be useful in any scoping or

**00:19:08 --> 00:19:11:** assessment process for whatever you know,

**00:19:11 --> 00:19:15:** whatever your role. As an insurance developer etc.

**00:19:15 --> 00:19:18:** So really understanding first how racism has played into the

**00:19:18 --> 00:19:20:** vulnerability of the infrastructure.

**00:19:20 --> 00:19:24:** Uhm, are there opportune iti's to create redundant systems that

**00:19:24 --> 00:19:25:** can reduce her?

**00:19:25 --> 00:19:28:** Do we have the right projections in the right data

**00:19:28 --> 00:19:30:** or the climate model solid again,

**00:19:30 --> 00:19:33:** have we prioritized more natural solutions so we can begin

**00:19:33 --> 00:19:34:** to live with water?

00:19:34 --> 00:19:38: Are there other financing or innovations that we need to  
00:19:38 --> 00:19:42: consider other partnerships to really invest in these high  
priority  
00:19:42 --> 00:19:44: communities and then last but not least,  
00:19:44 --> 00:19:47: when should development not be an option?  
00:19:47 --> 00:19:50: So again, everyone on this call and beyond has the  
00:19:50 --> 00:19:50: opportunity,  
00:19:50 --> 00:19:54: I think. To increase infrastructure resilience and reduce  
current and  
00:19:54 --> 00:19:56: future vulnerabilities,  
00:19:56 --> 00:19:58: particularly for low income communities,  
00:19:58 --> 00:20:01: communities of color or those climate vulnerable  
communities.  
00:20:01 --> 00:20:04: So asking the right questions at the right time with  
00:20:04 --> 00:20:07: the right people must be a part of any process,  
00:20:07 --> 00:20:10: plan or practice. If we're going to create and really  
00:20:10 --> 00:20:14: went really eliminate the inequities and the systemic and  
infrastructural  
00:20:14 --> 00:20:17: failures that remain a threat to public health,  
00:20:17 --> 00:20:20: welfare and justice for communities across this country.  
00:20:20 --> 00:20:22: So thanks so much and I'm looking forward to.  
00:20:22 --> 00:20:25: Discussion and I'm going to pass it on to my  
00:20:25 --> 00:20:25: colleague,  
00:20:25 --> 00:20:26: Dr. Lynette.  
00:20:30 --> 00:20:32: Well, wonderful, thank you. I'm Lynette Kardashian.  
00:20:32 --> 00:20:35: I'm based in Miami FL but I work a really  
00:20:35 --> 00:20:37: nationally with Moffett and Nicholas,  
00:20:37 --> 00:20:39: their director of Resilience and adaptation,  
00:20:39 --> 00:20:42: and so let's get going next slides.  
00:20:45 --> 00:20:48: Now as we start to think about coastal resiliency and  
00:20:48 --> 00:20:49: the challenges that we have,  
00:20:49 --> 00:20:52: one of the main things is this broad.  
00:20:52 --> 00:20:55: You know, this broad world of uncertainty and what that  
00:20:55 --> 00:20:58: means for me is working in two specific areas.  
00:20:58 --> 00:21:00: One is tackling the question of temporal uncertainty so that  
00:21:00 --> 00:21:03: big thing that we all have as we look towards  
00:21:03 --> 00:21:05: the future of when are we dealing with these questions  
00:21:05 --> 00:21:07: of sea level rise? What is it going to look  
00:21:07 --> 00:21:08: like?  
00:21:08 --> 00:21:10: When do I invest? When do I not invest?  
00:21:10 --> 00:21:13: And then the other side of the science of that  
00:21:13 --> 00:21:14: nonstationarity,  
00:21:14 --> 00:21:16: and what that means for us science geeks is,

00:21:16 --> 00:21:18: as you look towards the back towards the past.  
00:21:18 --> 00:21:20: It's not the same as what we see in the  
00:21:20 --> 00:21:23: future and the IPCC report has done a very good  
00:21:23 --> 00:21:26: job of spotlighting those changes that we're anticipating to see  
00:21:26 --> 00:21:29: with different scenarios. And this is the space that I  
00:21:29 --> 00:21:32: tend to work in the most when we're looking and  
00:21:32 --> 00:21:33: planning towards the future.  
00:21:33 --> 00:21:35: How do we build innovation?  
00:21:35 --> 00:21:38: How do we do adaptive measures and help our clients  
00:21:38 --> 00:21:40: and our communities make decisions of how they wish to  
00:21:40 --> 00:21:43: live and what they want their communities to look like,  
00:21:43 --> 00:21:47: particularly from the infrastructure, the ecology and the social  
00:21:47 --> 00:21:50: cyber.  
00:21:47 --> 00:21:50: So next step, like slides.  
00:21:50 --> 00:21:53: Now, one of the ways that we're able to look  
00:21:53 --> 00:21:56: at this coastal resiliency lens is really with the partnerships  
00:21:57 --> 00:22:00: that come along with different types of projects and one  
00:22:00 --> 00:22:03: of the ones that I'm gonna spot like today is  
00:22:03 --> 00:22:04: on coastal shore protection.  
00:22:04 --> 00:22:08: This is the army core of engineers study that's been  
00:22:08 --> 00:22:13: looking at different coastal storm risk reduction in Miami  
00:22:13 --> 00:22:13: Dade  
00:22:13 --> 00:22:13: County,  
00:22:13 --> 00:22:17: and they have different segments of the shoreline.  
00:22:17 --> 00:22:20: Different solutions all around, but there's been one particular.  
00:22:20 --> 00:22:23: Segment that has really caught the attention of the locals  
00:22:23 --> 00:22:26: and quite frankly the international community,  
00:22:26 --> 00:22:29: and that's been potentially a wall that in some cases  
00:22:29 --> 00:22:32: has been covered by about 20 feet high in the  
00:22:32 --> 00:22:34: downtown area of Miami.  
00:22:34 --> 00:22:37: And, uh, you know that's been a little bit jarring  
00:22:37 --> 00:22:38: to say the least,  
00:22:38 --> 00:22:41: and been highly criticized. But to be fair,  
00:22:41 --> 00:22:44: this study does look at different areas in the county  
00:22:44 --> 00:22:47: and have proposed different types of solutions,  
00:22:47 --> 00:22:50: much along the lines of what James mentioned before about  
00:22:50 --> 00:22:50: having.  
00:22:50 --> 00:22:54: Nature based features and being able to look at do  
00:22:54 --> 00:22:57: you have the right solutions in the right places?  
00:22:57 --> 00:23:01: So with that particular lens we started to look at  
00:23:01 --> 00:23:03: potential solutions that would.  
00:23:03 --> 00:23:05: Be much more ecologically friendly,

00:23:05 --> 00:23:09: but also really try to preserve the social fiber that  
00:23:09 --> 00:23:10: we have in Miami Dade County,  
00:23:10 --> 00:23:14: and in this case we partnered with Swire Swire Properties.  
00:23:14 --> 00:23:17: They're the ones that took the lead to bring together  
00:23:17 --> 00:23:20: a group of people to really foster the dialogue that's  
00:23:20 --> 00:23:22: needed between these public agencies,  
00:23:22 --> 00:23:24: private entities and the broader community.  
00:23:24 --> 00:23:27: So next slide. Part of what we were doing was  
00:23:27 --> 00:23:31: really approaching it with a different design philosophy.  
00:23:31 --> 00:23:32: You know, James mentioned this.  
00:23:32 --> 00:23:35: Multiple lines of defense, and that's precisely the the the  
00:23:35 --> 00:23:36: you know,  
00:23:36 --> 00:23:38: the philosophy that we were using was being able to  
00:23:39 --> 00:23:39: say.  
00:23:39 --> 00:23:42: How do we incorporate some nature based features?  
00:23:42 --> 00:23:44: Some holistic systems thinking approach,  
00:23:44 --> 00:23:49: something that would really allow us to have a much  
00:23:49 --> 00:23:53: more adaptive design that would bring in some of that  
00:23:53 --> 00:23:55: temporal uncertainty.  
00:23:55 --> 00:23:56: So instead of planning out for,  
00:23:56 --> 00:23:57: let's just say the end.  
00:23:57 --> 00:23:59: Saving this game with 2079?  
00:23:59 --> 00:24:03: How do we start to look at opportunities in the  
00:24:03 --> 00:24:05: near term to be able to bring in?  
00:24:05 --> 00:24:08: Different features that will continue to enhance the ecology,  
00:24:08 --> 00:24:11: provide protection and at the same time preserve that social  
00:24:11 --> 00:24:12: fiber that we have in Miami,  
00:24:12 --> 00:24:14: which is just so water oriented.  
00:24:14 --> 00:24:17: So now that we start to look at this particular  
00:24:17 --> 00:24:17: slide,  
00:24:17 --> 00:24:20: if I Orient you, we look at the stop start,  
00:24:20 --> 00:24:23: start at the left. He starts to see some of  
00:24:23 --> 00:24:27: the nature based features such as oysters and.  
00:24:27 --> 00:24:29: Uh, and muscle reefs and the intention of that is  
00:24:29 --> 00:24:32: build a system that would operate together from the left  
00:24:32 --> 00:24:33: to the right,  
00:24:33 --> 00:24:37: bringing in some break water features just under high tide  
00:24:37 --> 00:24:40: that would be considered kind of your first wave attenuation  
00:24:40 --> 00:24:41: system coming in,  
00:24:41 --> 00:24:44: moving up towards the right of the slide you hit  
00:24:44 --> 00:24:46: the revetment that puts some mangrove,  
00:24:46 --> 00:24:49: so not just providing some additional habitat,

00:24:49 --> 00:24:53: but again slowing down some of the waves.  
00:24:53 --> 00:24:55: The armoring like that revetment,  
00:24:55 --> 00:24:57: and that Greenway that would be built with the with  
00:24:57 --> 00:24:59: the foundation that looks towards the future.  
00:24:59 --> 00:25:02: So as you know, skipping ahead it would.  
00:25:02 --> 00:25:05: It would be elevated, but at this point in 2030  
00:25:05 --> 00:25:08: it would be of a particular height that would allow  
00:25:08 --> 00:25:10: us to still have a walkway and a boardwalk in  
00:25:11 --> 00:25:14: that area, moving in towards the next basin where you  
00:25:14 --> 00:25:16: see some of those seagrasses.  
00:25:16 --> 00:25:19: That's intended to be not just a habitat,  
00:25:19 --> 00:25:22: but also potentially provide some water quality benefits,  
00:25:22 --> 00:25:26: provide some. Other absorptive capacity for the energy as it  
00:25:26 --> 00:25:29: starts to come in and then again moving up to  
00:25:29 --> 00:25:31: the second wall with a seawall,  
00:25:31 --> 00:25:35: potentially including some permeable pavers.  
00:25:35 --> 00:25:40: Sidewalks, bioswales, and incorporating things that are a.  
00:25:40 --> 00:25:44: A little bit more adaptable as we go towards the  
00:25:44 --> 00:25:45: land side as well,  
00:25:45 --> 00:25:48: so there would. We could have some wave overtopping.  
00:25:48 --> 00:25:50: It would still be caught in that storm sewer and  
00:25:50 --> 00:25:51: brought back out.  
00:25:51 --> 00:25:55: Let's go to the next slide so 2079.  
00:25:55 --> 00:25:58: In 2079, what we see here is that we we  
00:25:58 --> 00:26:02: can continue to evolve that same foundation towards the  
future.  
00:26:02 --> 00:26:06: So you notice that that particular revetments a lot higher.  
00:26:06 --> 00:26:08: You bring it up. You've already built it with the  
00:26:08 --> 00:26:08: foundation,  
00:26:08 --> 00:26:10: so you don't need to go back.  
00:26:10 --> 00:26:12: The other part is that it gives us some time  
00:26:12 --> 00:26:15: to also look at as we're looking towards the future.  
00:26:15 --> 00:26:16: Are there things that we may need to accelerate?  
00:26:16 --> 00:26:21: Or are there areas that we need to decelerate?  
00:26:21 --> 00:26:23: If there's some studies out there that show that oysters  
00:26:23 --> 00:26:25: and some of these mangrove systems,  
00:26:25 --> 00:26:26: depending on where they are,  
00:26:26 --> 00:26:30: can actually evolve at the same rate the sea level  
00:26:30 --> 00:26:30: rise,  
00:26:30 --> 00:26:32: should we find that that wouldn't be the case,  
00:26:32 --> 00:26:35: and these systems could be again augmented with some  
additional  
00:26:35 --> 00:26:36: substrates,

00:26:36 --> 00:26:41: additional tree planting, etc. It's really,  
00:26:41 --> 00:26:44: you know, it's really trying to build something that allows  
00:26:44 --> 00:26:46: you to have this adaptable system.  
00:26:46 --> 00:26:50: A phased implementation approach that can also help you  
match  
00:26:50 --> 00:26:53: some of the financing and really continuing to preserve the  
00:26:53 --> 00:26:56: the social fabric that we have of that continuity and  
00:26:56 --> 00:27:00: that that connectedness that we have with the ocean.  
00:27:00 --> 00:27:03: So the next one. This is what a promenade would  
00:27:03 --> 00:27:04: look like,  
00:27:04 --> 00:27:07: and it's really an example of how such a highly.  
00:27:07 --> 00:27:10: If you want to consider it highly structured system can  
00:27:10 --> 00:27:14: really evolve into this blue green solution and you know  
00:27:14 --> 00:27:16: you notice there's no way along this.  
00:27:16 --> 00:27:20: This diagram where the water has a direct hit to  
00:27:20 --> 00:27:21: that coastwide.  
00:27:21 --> 00:27:24: The other part is that you would start to have  
00:27:24 --> 00:27:27: different recreational uses along the way too,  
00:27:27 --> 00:27:29: so you continue to have the the pathways,  
00:27:29 --> 00:27:32: some kayak launches etc and allow.  
00:27:32 --> 00:27:36: Or some operational flexibility as you're looking at the use  
00:27:36 --> 00:27:37: of the coastline next one.  
00:27:40 --> 00:27:42: This is what it would look like from the side  
00:27:42 --> 00:27:42: view.  
00:27:42 --> 00:27:44: Now one thing that I do want to point out  
00:27:44 --> 00:27:46: is as you start to see the different uses and  
00:27:46 --> 00:27:49: the different lines of defense at that building level,  
00:27:49 --> 00:27:53: you would start to anticipate that there would be migration  
00:27:53 --> 00:27:56: of uses and also building level adaptations.  
00:27:56 --> 00:27:58: So that's the other part is not just looking at  
00:27:58 --> 00:27:59: the broader coastal resiliency,  
00:27:59 --> 00:28:03: but how each section can really adapt to a different  
00:28:03 --> 00:28:03: use.  
00:28:03 --> 00:28:08: Next slide. And this one really just spotlights that need  
00:28:08 --> 00:28:12: to have building level adaptation features,  
00:28:12 --> 00:28:15: so we're not going to look towards the future and  
00:28:15 --> 00:28:18: pretend that we don't have different areas and sectors of  
00:28:18 --> 00:28:21: the population that won't be having to contribute.  
00:28:21 --> 00:28:23: We're definitely going to have to look at different ways  
00:28:23 --> 00:28:26: to keep our coastal systems in our coastal roadways dry.  
00:28:26 --> 00:28:31: Potentially add additional areas to building level adaptation  
features and



00:28:31 --> 00:28:35: keeping in mind that ultimately when we're looking 50 years  
00:28:35 --> 00:28:35: out,  
00:28:35 --> 00:28:38: we're not living the way we lived 50 years ago.  
00:28:38 --> 00:28:41: So being able to do something that could be much  
00:28:41 --> 00:28:42: more of a managed come,  
00:28:42 --> 00:28:47: if not retreat a managed migration abuses along the  
coastline.  
00:28:47 --> 00:28:50: And with that I'm going to pass it along to  
00:28:50 --> 00:28:51: Kathy Riley.  
00:28:51 --> 00:28:53: Thank you. Great,  
00:28:53 --> 00:28:57: thanks Lynette. I'm Catherine Riley.  
00:28:57 --> 00:28:59: I'm disappearing into my background.  
00:28:59 --> 00:29:02: I am with Brookfield properties out in San Francisco and  
00:29:02 --> 00:29:05: really excited to be part of this panel so I  
00:29:05 --> 00:29:08: am going to be talking about one of our projects  
00:29:08 --> 00:29:11: on the next page slide called Pier 70.  
00:29:11 --> 00:29:15: It's located on the eastern edge of San Francisco located  
00:29:15 --> 00:29:18: to the South of downtown downtown.  
00:29:18 --> 00:29:20: Being to the right and this slide and so I  
00:29:20 --> 00:29:23: think really one of the reasons I think I'm last.  
00:29:23 --> 00:29:27: In the speaker lineup is we started started really broad  
00:29:27 --> 00:29:31: with James setting the stage on the issue as well  
00:29:31 --> 00:29:34: as solutions July and then moves us into how do  
00:29:34 --> 00:29:39: we make sure we the solutions get to everyone equitably  
00:29:39 --> 00:29:43: equitably and then Lynette talking about kind of a larger  
00:29:43 --> 00:29:45: scale Miami approach.  
00:29:45 --> 00:29:49: I'm going to be talking about something specific 28 acre  
00:29:49 --> 00:29:52: parcel which is under construction to kind of get into  
00:29:52 --> 00:29:53: that granular.  
00:29:53 --> 00:29:56: How do you then? Implement all that we've been talking  
00:29:56 --> 00:29:57: about the next slide,  
00:29:57 --> 00:30:02: please. So Pier 70 is a designated historic district.  
00:30:02 --> 00:30:07: We're doing redeveloping 28 acres of a 70 acre site.  
00:30:07 --> 00:30:12: Next slide. And this gives you an aerial view of  
00:30:12 --> 00:30:15: the site at time it started construction,  
00:30:15 --> 00:30:17: and some of the things I want to just call  
00:30:17 --> 00:30:19: your attention to as we for the next slides.  
00:30:19 --> 00:30:23: Talk about would not next slide jets keep on this  
00:30:23 --> 00:30:27: one is just it's this is a infill site heavily  
00:30:27 --> 00:30:29: industrialized.  
00:30:29 --> 00:30:32: A lot of Phil that's occurred over the years and  
00:30:33 --> 00:30:37: also no access from the public to the waterfront and

00:30:37 --> 00:30:38: over 100 years.

00:30:38 --> 00:30:40: So what we're going to have to?

00:30:40 --> 00:30:43: What we've had to respond to as part of this

00:30:43 --> 00:30:46: is how do we respond to the historic nature and

00:30:46 --> 00:30:48: incorporate that into design.

00:30:48 --> 00:30:52: Next slide. This is just a pretty picture of what

00:30:52 --> 00:30:55: it'll look like at full buildout,

00:30:55 --> 00:30:58: looking north to the downtown next slide.

00:31:01 --> 00:31:04: One things though is you know I'm going to be

00:31:04 --> 00:31:08: talking mainly about design and technical things to address

00:31:08 --> 00:31:09: sea

00:31:08 --> 00:31:09: level rise in the area,

00:31:09 --> 00:31:13: but I did want to recognize that it's all entwined,

00:31:13 --> 00:31:17: so in our mind the sea level resiliency.

00:31:17 --> 00:31:19: Had to be taken into consideration with some of the

00:31:19 --> 00:31:20: other community benefits.

00:31:20 --> 00:31:26: The historic renovations, infrastructure, parks and then also

00:31:26 --> 00:31:29: getting to

00:31:26 --> 00:31:29: some John was talking about equity,

00:31:29 --> 00:31:32: so we don't have an existing community right on site,

00:31:32 --> 00:31:35: but we wanted to make sure that the project benefited

00:31:35 --> 00:31:39: some of the communities within SF that have not been

00:31:39 --> 00:31:42: targeted as much in the past for some of the

00:31:42 --> 00:31:45: benefits and kind of what you think of San Francisco

00:31:45 --> 00:31:47: specifically or southeast.

00:31:47 --> 00:31:52: Community in the Bayview, so we've really targeted our local

00:31:52 --> 00:31:54: business and hiring practices,

00:31:54 --> 00:31:59: prioritizing getting jobs and money into those communities,

00:31:59 --> 00:32:02: and the resiliency part of that contributes to it.

00:32:02 --> 00:32:05: So it's it's a lot of money that we're putting

00:32:05 --> 00:32:08: back in and and able to help support some of

00:32:08 --> 00:32:11: those communities through jobs and contract ING.

00:32:11 --> 00:32:15: Next slide. Summer start kind of going back to some

00:32:15 --> 00:32:20: of James where he mentioned about the different

00:32:20 --> 00:32:20: approaches for

00:32:20 --> 00:32:20: solutions.

00:32:20 --> 00:32:23: A lot of what we're doing would fall under the

00:32:23 --> 00:32:25: hardening in the sense that we're raising the site.

00:32:25 --> 00:32:29: We're also going to be using that waterfront is kind

00:32:29 --> 00:32:30: of our main barrier,

00:32:31 --> 00:32:33: but that said is we don't want.

00:32:33 --> 00:32:37: We didn't want to create a barrier visually or socially,

00:32:37 --> 00:32:42: and so we've also decided to incorporate retreat into the

00:32:42 --> 00:32:43: design.

00:32:43 --> 00:32:46: What we've seen on this cross section is the top

00:32:46 --> 00:32:50: part is about 15.5 is what we've designed to for

00:32:50 --> 00:32:52: to meet sea level rise in 2021.

00:32:52 --> 00:32:56: But for folks like me who likes likely not be

00:32:56 --> 00:32:58: around in 2021,

00:32:58 --> 00:33:00: we didn't want to just create a barrier for the

00:33:00 --> 00:33:01: next 100 years.

00:33:01 --> 00:33:04: We wanted to also make sure that we provided that

00:33:04 --> 00:33:08: interface and connection with the waterfront in the meantime,

00:33:08 --> 00:33:10: so that 20 the level that you see with the

00:33:10 --> 00:33:13: person with their little kid down at 11.5.

00:33:13 --> 00:33:16: That is the level of where we have some existing

00:33:17 --> 00:33:18: historic structures.

00:33:18 --> 00:33:22: And So what we've done is that you can see

00:33:22 --> 00:33:23: on the next slide.

00:33:23 --> 00:33:27: Is we're creating a dual system where that bottom level

00:33:27 --> 00:33:30: walkway is that that level of where we have some

00:33:30 --> 00:33:31: historic peers,

00:33:31 --> 00:33:34: so we've incorporated in that walkway there so that during

00:33:34 --> 00:33:37: the next 50 odd years till sea level rise starts

00:33:37 --> 00:33:38: really overwhelming this area.

00:33:38 --> 00:33:42: People can still get closer to the water feel connected.

00:33:42 --> 00:33:46: Utilize those historic structures. Then eventually once we

00:33:46 --> 00:33:48: start having

00:33:48 --> 00:33:52: too much impact from sea level rise,

00:33:52 --> 00:33:57: will have to retreat from that lower level.

00:33:57 --> 00:34:00: Going in and redesign that likely more to incorporate more.

00:34:00 --> 00:34:02: A kind of landscaping and such that can be over

00:34:02 --> 00:34:04: washed occasionally,

00:34:04 --> 00:34:06: so this was one of the great features and one

00:34:06 --> 00:34:06: things I think was great with having a good design

00:34:06 --> 00:34:10: team on.

00:34:10 --> 00:34:13: Is having someone who's able to think through and not

00:34:13 --> 00:34:15: simply think hard barrier that's all we can do,

00:34:15 --> 00:34:18: but how can you incorporate what we have there?

00:34:18 --> 00:34:21: Provide that protection but do it in a way that

00:34:21 --> 00:34:22: kind of blends in seamlessly so you don't feel that

00:34:22 --> 00:34:25: barrier next slide.

00:34:25 --> 00:34:28: Another feature I want to talk about as I mentioned

00:34:28 --> 00:34:29: is this is a historic district,

00:34:29 --> 00:34:32: so we weren't simply doing it.

00:34:32 --> 00:34:34: We weren't starting with a clean slate.  
00:34:34 --> 00:34:37: We needed to think about how we were going to  
00:34:37 --> 00:34:39: incorporate our resiliency strategy,  
00:34:39 --> 00:34:43: but also be reflective of the historic structures.  
00:34:43 --> 00:34:45: So I'm going to go through quickly some of the  
00:34:45 --> 00:34:48: different ways each of the different buildings we were  
working  
00:34:48 --> 00:34:50: with had took a different approach.  
00:34:50 --> 00:34:54: We are our group is doing a building 212 and  
00:34:54 --> 00:34:54: 21,  
00:34:54 --> 00:34:56: which you'll see here. As well as little 15 which  
00:34:56 --> 00:34:57: doesn't show up,  
00:34:57 --> 00:34:59: but I'll talk about two we're lucky with.  
00:34:59 --> 00:35:05: That's a large structure concrete that is located where we've  
00:35:05 --> 00:35:05: had to.  
00:35:05 --> 00:35:06: It's in the low spots.  
00:35:06 --> 00:35:10: That's where we're draining all of our storm water and  
00:35:10 --> 00:35:10: sewer.  
00:35:10 --> 00:35:12: It also was designed so that the first floor is  
00:35:12 --> 00:35:13: actually lifted,  
00:35:13 --> 00:35:14: so that's an easy one.  
00:35:14 --> 00:35:17: We're just simply going to be lifting up the soil  
00:35:17 --> 00:35:17: around it,  
00:35:17 --> 00:35:20: and we don't have to impact the building at all.  
00:35:20 --> 00:35:22: It works well. Next slide,  
00:35:22 --> 00:35:24: though, will show you building 12,  
00:35:24 --> 00:35:26: which was a little trickier.  
00:35:26 --> 00:35:28: This is a 60,000 square foot building,  
00:35:28 --> 00:35:33: 3 stories. It's located where we were raising the site,  
00:35:33 --> 00:35:38: the highest to allow flows for infrastructure to blend into  
00:35:38 --> 00:35:41: our shoreline resiliency lift.  
00:35:41 --> 00:35:42: And so we had two choices.  
00:35:42 --> 00:35:44: One was to leave it kind of an emote,  
00:35:44 --> 00:35:47: or the other was to lift the entire building,  
00:35:47 --> 00:35:49: and while it looks fairly substantial,  
00:35:49 --> 00:35:52: it's actually relatively light, so we actually show is to  
00:35:52 --> 00:35:55: lift the whole building up about 10 feet in the  
00:35:55 --> 00:35:56: air,  
00:35:56 --> 00:35:59: put in a new below ground foundation,  
00:35:59 --> 00:36:01: which allows us to do below ground parking,  
00:36:01 --> 00:36:05: and then ultimately then, this will now still retain the  
00:36:05 --> 00:36:08: same feel it had in its original location,

00:36:08 --> 00:36:12: because it'll now be flush with the surrounding streets.  
00:36:12 --> 00:36:17: Next slide. Adjacent to 12 is what we call building  
00:36:17 --> 00:36:17: 15.  
00:36:17 --> 00:36:21: This little structure low frame structure on the right here  
00:36:21 --> 00:36:24: IT roads originally connected to building 12 and we had  
00:36:24 --> 00:36:27: that same concern of what do we do with this  
00:36:27 --> 00:36:29: now that we're raising all the streets?  
00:36:29 --> 00:36:32: So we decided to retain this both from a design  
00:36:32 --> 00:36:35: feature and we're going to have sorry the street actually  
00:36:36 --> 00:36:37: goes straight underneath.  
00:36:37 --> 00:36:39: It is kind of a gateway,  
00:36:39 --> 00:36:41: but it meant that we had to roller skate this  
00:36:41 --> 00:36:43: guy over to the right.  
00:36:43 --> 00:36:45: The picture on the left shows it.  
00:36:45 --> 00:36:49: At the original level, we then last month raised at  
00:36:49 --> 00:36:52: 10 feet in the air and kind of skated it  
00:36:53 --> 00:36:55: back into its final position,  
00:36:55 --> 00:36:59: and so again, another opportunity where we could have  
00:36:59 --> 00:37:01: simply  
00:37:01 --> 00:37:04: thrown away the building too.  
00:37:04 --> 00:37:08: Raised the streets to address our sea level rise,  
00:37:08 --> 00:37:09: but in this case the designers were pretty creative and  
00:37:09 --> 00:37:12: it's now.  
00:37:12 --> 00:37:14: What we think could be one of the kind iconic  
00:37:14 --> 00:37:18: entrances to the project.  
00:37:18 --> 00:37:20: Next slide, please. And then our last little building is  
00:37:20 --> 00:37:21: what we call building 21,  
00:37:21 --> 00:37:25: so it's the little double peaked guy.  
00:37:25 --> 00:37:27: Here we're going to be moving him so that he's  
00:37:27 --> 00:37:29: flush with the graded,  
00:37:29 --> 00:37:30: graded soil that you see on the right hand of  
00:37:30 --> 00:37:33: this picture.  
00:37:33 --> 00:37:34: That's going to be one of our the park that  
00:37:34 --> 00:37:37: goes out to the waterfront.  
00:37:37 --> 00:37:39: This is another one because of its structure,  
00:37:39 --> 00:37:39: we're actually going to have to D assemble it and  
00:37:39 --> 00:37:41: reassemble it.  
00:37:41 --> 00:37:45: And now in its current location,  
00:37:45 --> 00:37:48: it's got some concrete base inside so it doesn't allow  
00:37:48 --> 00:37:48: us to move it the same that the building 12  
00:37:48 --> 00:37:52: did.  
00:37:48 --> 00:37:52: Last slide. And this kind of just shows how it

00:37:52 --> 00:37:54: all comes together.  
00:37:54 --> 00:37:56: So again, is I think really what we've tried to  
00:37:56 --> 00:37:58: do is resiliency is important,  
00:37:58 --> 00:38:01: but it shouldn't. Be to the detriment of kind of  
00:38:02 --> 00:38:05: the design and and what can be done to create  
00:38:05 --> 00:38:05: a fun,  
00:38:05 --> 00:38:09: exciting community. In the last slide,  
00:38:09 --> 00:38:11: is talking about a little bit of boring stuff is  
00:38:11 --> 00:38:11: just kind of.  
00:38:11 --> 00:38:13: How do we fund this is what this is.  
00:38:13 --> 00:38:17: One thing that I also appreciate about the project was  
00:38:17 --> 00:38:21: it thought through funding from resiliency from today as well  
00:38:21 --> 00:38:22: in the future.  
00:38:22 --> 00:38:26: So there were special taxes created to reimburse the  
development  
00:38:26 --> 00:38:30: for the initial construction that you just saw both for  
00:38:30 --> 00:38:34: the historic preservation as well As for the lifting and  
00:38:34 --> 00:38:37: the new infrastructure. But there was a recognition as well  
00:38:37 --> 00:38:38: that in the future.  
00:38:38 --> 00:38:41: There's going to be need to be additional improvements to  
00:38:41 --> 00:38:42: address sea level rise,  
00:38:42 --> 00:38:43: not just on the site,  
00:38:43 --> 00:38:47: but regionally. So there's another special tax that will kick  
00:38:48 --> 00:38:51: in in the future that will help offset to be  
00:38:51 --> 00:38:52: determined.  
00:38:52 --> 00:38:55: Sea level rise improvements either locally or more regionally  
and  
00:38:55 --> 00:38:56: then finally,  
00:38:56 --> 00:38:58: because the parks really are that frontage,  
00:38:58 --> 00:39:01: there's another tax that the project has that will pay  
00:39:01 --> 00:39:03: for those ongoing maintenance.  
00:39:03 --> 00:39:05: So with that I'm going to turn it back to  
00:39:05 --> 00:39:05: James.  
00:39:17 --> 00:39:19: Just realized that I was on mute.  
00:39:19 --> 00:39:21: Thank you, thank you all the speakers,  
00:39:21 --> 00:39:26: three wonderful presentations covering sort of three different  
facets of  
00:39:26 --> 00:39:29: what is really a very multifaceted.  
00:39:29 --> 00:39:31: Situation an issue? I'm going to start with one broad  
00:39:31 --> 00:39:34: question and then I'd like to dive into some of  
00:39:34 --> 00:39:36: the questions that are coming up on the on the  
00:39:36 --> 00:39:39: Q&A. They're really quite good.  
00:39:39 --> 00:39:42: You know this last presentation that Catherine showed us is

00:39:42 --> 00:39:43: 28 acres.

00:39:43 --> 00:39:46: They used multiple approaches. Clearly an enormous meta thought went

00:39:46 --> 00:39:49: into it and clearly a significant amount of money was

00:39:49 --> 00:39:51: spent to mitigate and to address a lot of these

00:39:51 --> 00:39:54: issues. At the scale of a of a community at

00:39:54 --> 00:39:56: the scale of a neighborhood,

00:39:56 --> 00:39:57: or even an entire city,

00:39:57 --> 00:40:00: how do you begin to approach a problem such as

00:40:00 --> 00:40:01: this?

00:40:01 --> 00:40:05: How do you to begin to decide what to do?

00:40:05 --> 00:40:07: I opened that up to all three of the of

00:40:07 --> 00:40:09: the speakers and.

00:40:09 --> 00:40:12: Just sort of a general thinking through at the big

00:40:12 --> 00:40:13: picture level.

00:40:21 --> 00:40:23: Perhaps Lynette you have them,

00:40:23 --> 00:40:25: probably have the most experience of that,

00:40:25 --> 00:40:26: so you take

00:40:26 --> 00:40:28: sure happy to take a take a stab at it.

00:40:28 --> 00:40:31: I think you know the the question of what to

00:40:31 --> 00:40:32: do and when to do.

00:40:32 --> 00:40:35: It is always. There's always a big one and there

00:40:35 --> 00:40:37: are already hot spots and most of our coastal areas

00:40:37 --> 00:40:40: where we know that there are there are significant problems,

00:40:40 --> 00:40:44: be it with flooding concerns or the broader issue of

00:40:44 --> 00:40:45: coastal mobility.

00:40:45 --> 00:40:48: Just thinking very broadly on the quality of life we

00:40:48 --> 00:40:50: we already know where those hot spots are.

00:40:50 --> 00:40:52: The question that I think that.

00:40:52 --> 00:40:55: Becomes. I think the answer becomes a little bit more

00:40:55 --> 00:40:57: tricky when you start to weave in the questions of

00:40:58 --> 00:41:00: is that the correct spot to continue to invest in?

00:41:00 --> 00:41:04: And what about the areas that traditionally have had under

00:41:04 --> 00:41:07: investment and maybe those areas that actually are more

00:41:07 --> 00:41:09: impacted?

00:41:07 --> 00:41:09: So really going back to the you know,

00:41:09 --> 00:41:11: falling more along the lines of where doctors it.

00:41:11 --> 00:41:14: You know Doctor Jay works and is this issue of

00:41:14 --> 00:41:14: equity.

00:41:14 --> 00:41:16: So as we start to decide what to do and

00:41:16 --> 00:41:17: how we do it,

00:41:17 --> 00:41:21: there's going to be some obvious areas of economic

powerhouse.

00:41:21 --> 00:41:23: You know, economic units. So like you know,  
00:41:23 --> 00:41:24: like the downtown Miami area.  
00:41:24 --> 00:41:28: It's an incredibly dense population,  
00:41:28 --> 00:41:31: employs a great portion of Miami Dade County.  
00:41:31 --> 00:41:33: Lots of services are there,  
00:41:33 --> 00:41:34: the ones that get a little bit trickier,  
00:41:34 --> 00:41:38: or areas that are potentially underserved and have that lower  
00:41:38 --> 00:41:41: economic value when you start to look online to kind  
00:41:41 --> 00:41:44: of like the traditional benefit cost analysis and need to  
00:41:44 --> 00:41:47: be quite frankly seen at that with that broader lens,  
00:41:47 --> 00:41:52: so I'll stop there and allow my other panelists to  
00:41:52 --> 00:41:53: chime in too.  
00:41:53 --> 00:41:54: Well,  
00:41:54 --> 00:41:56: I'm hoping Jill and you can pick up on that.  
00:41:56 --> 00:41:59: 'cause one of the very first questions brings up that  
00:41:59 --> 00:42:00: exact issue.  
00:42:00 --> 00:42:02: How do you make the case that investing in the  
00:42:02 --> 00:42:05: most vulnerable communities benefits everyone and the  
bottom line?  
00:42:07 --> 00:42:10: Yeah no, I mean definitely building on what Doctor Loomis  
00:42:10 --> 00:42:11: said as well.  
00:42:11 --> 00:42:13: I I think there's two ways that I think about  
00:42:13 --> 00:42:13: it.  
00:42:13 --> 00:42:17: The cost of not doing what's right in the cost  
00:42:17 --> 00:42:19: of not keeping people a priority.  
00:42:19 --> 00:42:21: You're either going to pay for it now or pay  
00:42:21 --> 00:42:22: for it later,  
00:42:22 --> 00:42:25: and I would again in some of my experience is  
00:42:25 --> 00:42:28: kind of the delayed not only the delayed maintenance,  
00:42:28 --> 00:42:32: but kind of the delayed a prioritization of communities that  
00:42:32 --> 00:42:34: continue to get hit the hardest.  
00:42:34 --> 00:42:36: It it, it. It all comes to a head.  
00:42:36 --> 00:42:38: It it comes to the light.  
00:42:38 --> 00:42:40: And so there's two ways that I think about.  
00:42:40 --> 00:42:43: You know? How do you make the case?  
00:42:43 --> 00:42:47: The first is thinking about OK with anything you know.  
00:42:47 --> 00:42:48: I'm going back to my engineering,  
00:42:48 --> 00:42:51: like if you don't solve for the weakest link that  
00:42:51 --> 00:42:54: is going to mess up your whole process,  
00:42:54 --> 00:42:55: and I'm a chemical engineer.  
00:42:55 --> 00:42:59: So again, if you're thinking about communities and were  
deprioritized



00:42:59 --> 00:43:03: and kind of the stress on the system coming from  
00:43:03 --> 00:43:04: the same community,  
00:43:04 --> 00:43:08: the same whatever those costs are going to add up  
00:43:08 --> 00:43:08: so.  
00:43:08 --> 00:43:11: It doesn't make real sense for me to not again  
00:43:11 --> 00:43:12: solve for the weakest link,  
00:43:12 --> 00:43:15: which is oftentimes again, those communities that have been  
under  
00:43:16 --> 00:43:17: invested not invested,  
00:43:17 --> 00:43:20: not painting. The second piece is more of like the  
00:43:20 --> 00:43:20: human angle.  
00:43:20 --> 00:43:24: So when we talk about really trying to achieve environmental  
00:43:24 --> 00:43:25: justice,  
00:43:25 --> 00:43:28: that is again setting this thing out that everyone,  
00:43:29 --> 00:43:31: regardless of where you come from what's on the end  
00:43:31 --> 00:43:32: of your W2 statement,  
00:43:32 --> 00:43:34: the end of the year that you deserve to be  
00:43:34 --> 00:43:35: in a place where you can live,  
00:43:35 --> 00:43:38: work, play and pray and not be scared every time  
00:43:38 --> 00:43:38: it.  
00:43:38 --> 00:43:41: Rains or floods 'cause literally people are scared and get  
00:43:41 --> 00:43:44: stressed when it rains or floods and so when I  
00:43:44 --> 00:43:48: think about the unfortunate reality that again is the same.  
00:43:48 --> 00:43:51: Communities low income communities, communities of color  
that are typical,  
00:43:51 --> 00:43:53: typically suffering from multiple things.  
00:43:53 --> 00:43:56: So where we see the highest rates of COVID where  
00:43:56 --> 00:43:59: we see the most food deserts or food apart by  
00:43:59 --> 00:44:00: where we see more heat,  
00:44:00 --> 00:44:02: more flood. It's these same communities.  
00:44:02 --> 00:44:05: So if you begin to address those impacts in these  
00:44:05 --> 00:44:08: places that are filling these multiple.  
00:44:08 --> 00:44:12: Impacts you or again, removing stress and costs from all  
00:44:12 --> 00:44:13: the systems.  
00:44:13 --> 00:44:15: So not just your water utilities,  
00:44:15 --> 00:44:17: it's your your health system,  
00:44:17 --> 00:44:21: your insurance system. So to me the the financial reasoning  
00:44:21 --> 00:44:24: or the case should not be that hard because you're  
00:44:24 --> 00:44:26: going to end up paying for it anyway.  
00:44:26 --> 00:44:29: So why not address it up front and be more  
00:44:29 --> 00:44:31: proactive instead of responsive?  
00:44:34 --> 00:44:37: I I'd like to follow up on your response to

00:44:37 --> 00:44:38: that you know.

00:44:38 --> 00:44:41: You point out that there are many parts of the

00:44:41 --> 00:44:43: community where they are most impacted by these.

00:44:43 --> 00:44:49: By these issues, most impacted by a variety of events.

00:44:49 --> 00:44:52: At what point do you take seriously the idea of

00:44:52 --> 00:44:55: some sort of a managed retreat or communities like that?

00:44:59 --> 00:45:03: I you know, I am definitely not a managed retreat

00:45:03 --> 00:45:04: expert,

00:45:04 --> 00:45:06: but I will. I will make a couple of comments,

00:45:06 --> 00:45:09: then defer to my panelists that probably have more

00:45:09 --> 00:45:15: knowledge.

00:45:09 --> 00:45:15: There's a wonderful, equitable managed retreat toolkit that

00:45:15 --> 00:45:19: Georgetown Climate

00:45:15 --> 00:45:19: Center has on their website that goes through all the

00:45:19 --> 00:45:22: different kind of scenarios and issues.

00:45:22 --> 00:45:25: And I guess for me when I think about some

00:45:25 --> 00:45:27: of my colleagues that are,

00:45:27 --> 00:45:30: you know, in Louisiana. And I think killed is John

00:45:30 --> 00:45:33: Sharp Charles and in that area when I think of

00:45:33 --> 00:45:36: some of my folks that I know that are in

00:45:36 --> 00:45:39: the gully, Beachy, nations, and the Carolinas.

00:45:39 --> 00:45:42: When I think about the folks in Detroit that have

00:45:42 --> 00:45:43: had to.

00:45:43 --> 00:45:46: Do somewhat of a managed retreat from their homes that

00:45:46 --> 00:45:48: they're still not able to go back to.

00:45:48 --> 00:45:50: You know, when is the right time?

00:45:50 --> 00:45:52: I think that's going to depend on the situation.

00:45:52 --> 00:45:54: The geography of the local resources,

00:45:54 --> 00:45:58: the response, if there are any solutions left,

00:45:58 --> 00:45:59: I mean to your point,

00:45:59 --> 00:46:02: that picture that you showed your last slide with the

00:46:02 --> 00:46:04: House actually being moved.

00:46:04 --> 00:46:06: How many people can do that?

00:46:06 --> 00:46:08: And and so. I guess when I think about managed

00:46:08 --> 00:46:11: retreat there it's all those questions,

00:46:11 --> 00:46:13: but if that does happen,

00:46:13 --> 00:46:15: I think one of the things that are most important

00:46:16 --> 00:46:18: that raised that a couple of folks have raised is

00:46:18 --> 00:46:20: that if folks are are forced to move,

00:46:20 --> 00:46:23: how do you make sure that they have the proper

00:46:23 --> 00:46:26: level of resources to to really begin to build their

00:46:26 --> 00:46:26: lives?

00:46:26 --> 00:46:29: So making sure that their payout or whatever is is  
00:46:30 --> 00:46:33: something comparable to what they had and then is there  
00:46:33 --> 00:46:35: a way to keep that cultural?  
00:46:35 --> 00:46:39: In that community together, because that is something you  
lose  
00:46:39 --> 00:46:41: when you are forced to retreat,  
00:46:41 --> 00:46:43: whether it's managed or not.  
00:46:43 --> 00:46:45: So those are just two thoughts,  
00:46:45 --> 00:46:48: but again, I defer to my panelists for their expertise.  
00:46:50 --> 00:46:53: Annette, Catherine. Any thoughts you might want to add to  
00:46:53 --> 00:46:53: that?  
00:46:56 --> 00:46:57: This  
00:46:57 --> 00:46:58: is my own personal thought,  
00:46:58 --> 00:47:00: 'cause I'm definitely not an expert,  
00:47:00 --> 00:47:02: but you know, I'm just watching all the fires out  
00:47:02 --> 00:47:03: here out West.  
00:47:03 --> 00:47:08: And how? Similarly, there's questions of retreat and kind of  
00:47:08 --> 00:47:11: wildland interfaces and how.  
00:47:11 --> 00:47:14: Personally, I'd like it to be more of a discussion  
00:47:14 --> 00:47:17: versus a reactive 'cause I think this touches into insurance,  
00:47:17 --> 00:47:19: which again I'm not an expert about,  
00:47:19 --> 00:47:22: but you're hearing stories of people being forced into retreat  
00:47:22 --> 00:47:25: because the insurance companies are deciding that they're  
just not  
00:47:25 --> 00:47:26: going to insure.  
00:47:26 --> 00:47:28: So whether we want to have that conversation about retreat  
00:47:28 --> 00:47:29: or not,  
00:47:29 --> 00:47:31: it's going to be coming from the private side,  
00:47:31 --> 00:47:34: and I'd love 'cause I think it would be a  
00:47:34 --> 00:47:36: lot less emotional and we can help support the folks  
00:47:36 --> 00:47:38: like John was mentioning.  
00:47:38 --> 00:47:41: If there's more of that discussion versus just letting it  
00:47:41 --> 00:47:41: be.  
00:47:41 --> 00:47:44: Insurance driven or 'cause that you lose that personal touch  
00:47:44 --> 00:47:45: at that point?  
00:47:46 --> 00:47:49: Well, this is this is great foreshadowing because there is  
00:47:49 --> 00:47:52: actually a question from the audience about retreat,  
00:47:52 --> 00:47:55: about insurance and their role in all of this.  
00:47:55 --> 00:47:58: It's specifically addressed to adjust to you Lynette.  
00:47:58 --> 00:47:59: So again, to put you,  
00:47:59 --> 00:48:00: put you on the spot,  
00:48:00 --> 00:48:04: says, do you know of any insurance companies that are

00:48:04 --> 00:48:07: considering building level adaptations in their rates?  
00:48:07 --> 00:48:09: Idea being that if you do these things,  
00:48:09 --> 00:48:11: you'll rates will go down,  
00:48:11 --> 00:48:12: or possibly stay the same or not go up so  
00:48:13 --> 00:48:13: much.  
00:48:13 --> 00:48:17: But if you don't, insurance will ultimately be pushing people  
00:48:17 --> 00:48:18: to leave.  
00:48:18 --> 00:48:18: Particular,  
00:48:19 --> 00:48:22: I haven't seen it get down to the individual,  
00:48:22 --> 00:48:25: kind of like private home level as much as.  
00:48:25 --> 00:48:27: You know when folks raise if they choose to raise  
00:48:27 --> 00:48:28: their structure,  
00:48:28 --> 00:48:32: that makes the change. I haven't seen it coupled with,  
00:48:32 --> 00:48:36: let's say, kind of. You know tiger dams or individual  
00:48:36 --> 00:48:39: deployment features for that.  
00:48:39 --> 00:48:43: Overall, the conversation is much more lines of or the  
00:48:43 --> 00:48:45: rate does break.  
00:48:45 --> 00:48:47: Match the risk, and that's been the big controversy in  
00:48:47 --> 00:48:48: the United States,  
00:48:48 --> 00:48:52: specifically with the NF IP is.  
00:48:52 --> 00:48:54: Do we really have actuarial rates and so?  
00:48:54 --> 00:48:57: I welcome that conversation of getting down to the granularity  
00:48:58 --> 00:49:00: where people can do different mitigation,  
00:49:00 --> 00:49:03: but I think that the first step is probably  
00:49:03 --> 00:49:06: going to have to be a more appropriate match of  
00:49:06 --> 00:49:09: the actual risk and location.  
00:49:09 --> 00:49:09: Right?  
00:49:09 --> 00:49:12: OK. Because without a doubt,  
00:49:12 --> 00:49:13: certainly in the state of Florida,  
00:49:13 --> 00:49:17: insurance companies do have a significant role to play.  
00:49:17 --> 00:49:19: And you know, if rates get to the point where  
00:49:19 --> 00:49:22: people may decide they can no longer live there,  
00:49:22 --> 00:49:25: that's an impact. If you're simply denied access to insurance,  
00:49:25 --> 00:49:29: that becomes an impact, so it's it's clearly something looking  
00:49:29 --> 00:49:30: forward.  
00:49:30 --> 00:49:30: There's  
00:49:30 --> 00:49:33: and then we did know I was going to say  
00:49:33 --> 00:49:35: we did see that example several years ago,  
00:49:35 --> 00:49:36: and with the bigger Waters Act,  
00:49:36 --> 00:49:39: when it was folks really tried to get to actually  
00:49:39 --> 00:49:40: wear extra rates.  
00:49:40 --> 00:49:41: And it was so quick.

00:49:41 --> 00:49:44: That it effectively condemned areas.  
00:49:44 --> 00:49:46: With folks either not being able to sell and others  
00:49:46 --> 00:49:47: not being able to buy,  
00:49:47 --> 00:49:52: and so it is a real struggle to appropriately have  
00:49:52 --> 00:49:55: a market signal for risk without.  
00:49:55 --> 00:49:59: Uhm, you know impacting folks that may wittingly or  
unwittingly  
00:49:59 --> 00:50:01: have bought an area that had that risk.  
00:50:01 --> 00:50:03: And the price signal wasn't there to let them know.  
00:50:05 --> 00:50:08: Can I? It's not. A question or comment?  
00:50:08 --> 00:50:11: James to your comment, something that I'm seeing and  
maybe  
00:50:11 --> 00:50:14: folks in the audience know as well is it's not  
00:50:14 --> 00:50:15: only the insurance rates,  
00:50:15 --> 00:50:19: which is again a lot of concern for folks,  
00:50:19 --> 00:50:21: particularly those with limited incomes,  
00:50:21 --> 00:50:25: but it's also the fact that I've seen after events  
00:50:25 --> 00:50:31: happen flood events that the insurance agencies actually  
changed their  
00:50:31 --> 00:50:36: policy so they make their policies cover less events and.  
00:50:36 --> 00:50:39: This is again within the span of a couple years  
00:50:39 --> 00:50:42: and I'm just wondering again.  
00:50:42 --> 00:50:44: It's kind of a question in a comment and a  
00:50:44 --> 00:50:45: concern you know,  
00:50:45 --> 00:50:48: how do we? Keep that from happening because if the  
00:50:49 --> 00:50:50: risk hasn't changed,  
00:50:50 --> 00:50:55: but you're changing these policies that limit coverage to folks  
00:50:55 --> 00:50:59: that are actually going to be paying higher rates because  
00:50:59 --> 00:51:01: the risk is increasing.  
00:51:01 --> 00:51:04: Then again, that's a failure of a system that people  
00:51:04 --> 00:51:06: are relying on that people have paid into,  
00:51:06 --> 00:51:10: so I just yeah, it's a it's a concern for  
00:51:10 --> 00:51:10: me.  
00:51:10 --> 00:51:13: Well, and I think it's a very valid concern,  
00:51:13 --> 00:51:15: and it's something that again,  
00:51:15 --> 00:51:17: I have no way, shape or form an insurance expert.  
00:51:17 --> 00:51:21: Although I do pay for insurance or precisely all these  
00:51:21 --> 00:51:21: issues,  
00:51:21 --> 00:51:23: but it is something that you you have to keep  
00:51:24 --> 00:51:25: in the back of your mind.  
00:51:25 --> 00:51:27: There are two questions that are related and I think  
00:51:28 --> 00:51:30: Jalonon may come back to you and it's I'm going  
00:51:30 --> 00:51:33: to read the question because it's really quite interesting,

00:51:33 --> 00:51:35: and I think Lynette you could speak to it.

00:51:35 --> 00:51:39: It's about Miami and it says to Doctor Jones,

00:51:39 --> 00:51:42: Equity and Justice Point the Miami Haitian community settled on

00:51:42 --> 00:51:43: higher land.

00:51:43 --> 00:51:47: I've heard stories about how developers are focused there because

00:51:47 --> 00:51:48: it is dry land.

00:51:48 --> 00:51:52: Is there a plan to prevent gentrification in that particular

00:51:52 --> 00:51:53: area?

00:51:53 --> 00:51:56: It's almost the reverse. Inadvertently,

00:51:56 --> 00:51:58: you end up in a location that is actually fairly

00:51:58 --> 00:51:59: safe and secure,

00:51:59 --> 00:52:03: and now there's development pressure because that land will be

00:52:03 --> 00:52:05: above you know above the floods.

00:52:05 --> 00:52:06: So any thoughts or comments on that?

00:52:08 --> 00:52:13: This issue of gentrification pressures associated with the the.

00:52:13 --> 00:52:15: I would say the most resilient sites within a city.

00:52:18 --> 00:52:22: I mean, so this is Doctor Documnets geographic area of

00:52:22 --> 00:52:23: expertise,

00:52:23 --> 00:52:26: but I will just say one of my former grantees,

00:52:26 --> 00:52:29: the fair share housing center worked with a couple of

00:52:29 --> 00:52:32: organizations in Miami on that exact issue,

00:52:32 --> 00:52:35: because it's kind of the again reverse gentrification.

00:52:35 --> 00:52:37: So how again do you,

00:52:37 --> 00:52:39: you know, just in general?

00:52:39 --> 00:52:41: How do you protect these spaces?

00:52:41 --> 00:52:44: Where in this case, the black and brown communities are

00:52:44 --> 00:52:45: on higher land,

00:52:45 --> 00:52:47: and now that's the land that everybody wants,

00:52:47 --> 00:52:48: and you have these folks.

00:52:48 --> 00:52:51: Cheating so uhm fair share housing center.

00:52:51 --> 00:52:53: I would say folks to to look at they they

00:52:53 --> 00:52:56: put together a couple of briefs with these community groups

00:52:56 --> 00:52:58: in South Miami that look.

00:52:58 --> 00:53:00: Right at that issue, But Dr.

00:53:00 --> 00:53:01: Lynette, I want to defer to you.

00:53:04 --> 00:53:07: I have to admit that that whole issue of gentrification

00:53:07 --> 00:53:11: and having those higher ground areas being purchased with

00:53:11 --> 00:53:15: communities that have traditionally been there and now they're displaced it.

00:53:15 --> 00:53:19: It's just an area that's completely out of my area  
00:53:19 --> 00:53:22: of expertise in terms of professional from the from living  
00:53:22 --> 00:53:23: in the,  
00:53:23 --> 00:53:26: you know, the Greater Miami Dade community.  
00:53:26 --> 00:53:28: I think this forum at this this,  
00:53:28 --> 00:53:31: you know, ULI is one of the areas that we  
00:53:31 --> 00:53:33: can continue to host that conversation.  
00:53:33 --> 00:53:34: I, you know, we clearly.  
00:53:34 --> 00:53:36: Haven't cracked that nut and we're going to continue to  
00:53:36 --> 00:53:37: see it happen,  
00:53:37 --> 00:53:39: and I just I really.  
00:53:39 --> 00:53:42: I just can't add meaningfully to the conversation because it's  
00:53:42 --> 00:53:45: so complicated and so out of my area of expertise  
00:53:45 --> 00:53:48: and I I really welcome broadening the conversation for it.  
00:53:49 --> 00:53:51: OK, I'll make. I'll make sure this is.  
00:53:51 --> 00:53:53: This is all being recorded will make sure this gets  
00:53:53 --> 00:53:54: noted,  
00:53:54 --> 00:53:56: because as you know you lie at the District Council  
00:53:56 --> 00:53:58: level is very much engaged in local issues.  
00:53:58 --> 00:54:02: Local and it certainly sounds like opportunities not just for  
00:54:02 --> 00:54:04: Miami but for many coastal communities.  
00:54:04 --> 00:54:05: In addressing some of these,  
00:54:05 --> 00:54:06: you know more more subtle,  
00:54:06 --> 00:54:11: subtle issues going to ask Catherine a question that came  
00:54:11 --> 00:54:11: up.  
00:54:11 --> 00:54:14: It says the San Francisco example is a very hot  
00:54:14 --> 00:54:17: market with constrained constrained land supply in an elite  
city  
00:54:17 --> 00:54:20: where there are tailwinds of economic.  
00:54:20 --> 00:54:23: Demand. Uhm, what can be learned and shared from this  
00:54:23 --> 00:54:27: experience that extends the lessons of this project into  
implementation  
00:54:27 --> 00:54:28: in quote unquote,  
00:54:28 --> 00:54:30: lower value markets.  
00:54:32 --> 00:54:33: Yeah, I mean I will admit as some of this  
00:54:33 --> 00:54:35: and I saw some of the other questions too about.  
00:54:35 --> 00:54:39: How do you underwrite raising a building versus  
redeveloping?  
00:54:39 --> 00:54:42: So I mean in some ways we are fortunate in  
00:54:42 --> 00:54:45: San Francisco that the land values allow us to do  
00:54:45 --> 00:54:49: things that otherwise may not be cost effective in other  
00:54:49 --> 00:54:53: places, but I think getting back to that last question  
00:54:53 --> 00:54:54: about gentrification,

00:54:54 --> 00:54:57: you've got the flip side is that we're constantly struggling  
00:54:57 --> 00:55:01: with that in San Francisco is all the community benefits  
00:55:01 --> 00:55:01: add value.  
00:55:01 --> 00:55:04: No cost to the buildings.  
00:55:04 --> 00:55:06: To what we're producing, and so we are.  
00:55:06 --> 00:55:10: You know, the joke is always the developers typically won't  
00:55:10 --> 00:55:12: be able to afford what they build,  
00:55:12 --> 00:55:14: and they make too much for the affordable housing.  
00:55:14 --> 00:55:16: So what do you do for that middle part?  
00:55:16 --> 00:55:19: I do think, though, is it's also very expensive to  
00:55:19 --> 00:55:20: build here,  
00:55:20 --> 00:55:24: so I think there's other places where it's the kostof  
00:55:24 --> 00:55:25: of land.  
00:55:25 --> 00:55:27: The costs, all the construction costs may be lower,  
00:55:27 --> 00:55:30: so I do think that there is still opportunities to  
00:55:30 --> 00:55:31: be creative,  
00:55:31 --> 00:55:33: and I think a lot is again bringing in a  
00:55:33 --> 00:55:34: good designer.  
00:55:34 --> 00:55:36: And folks who can find ways to crossover,  
00:55:36 --> 00:55:41: so you're not simply having \$1 going towards your resiliency,  
00:55:41 --> 00:55:42: \$1 going towards your park.  
00:55:42 --> 00:55:45: You can cross that over so that same dollar gives  
00:55:45 --> 00:55:46: you the benefits,  
00:55:46 --> 00:55:48: and I think it's just getting creative.  
00:55:48 --> 00:55:50: I think a lot of what you saw in the  
00:55:50 --> 00:55:53: design from our design is if we didn't have,  
00:55:53 --> 00:55:57: we're working with James Corner J CFO without having that  
00:55:57 --> 00:55:59: creativity on board.  
00:55:59 --> 00:56:02: We would have missed some of those opportunities.  
00:56:02 --> 00:56:05: So investing with having a good team on who can  
00:56:05 --> 00:56:05: help.  
00:56:05 --> 00:56:09: Figure out ways where you can split that dollar and  
00:56:09 --> 00:56:10: have multiple uses.  
00:56:10 --> 00:56:13: I think really does give you broadens that opportunity and  
00:56:13 --> 00:56:15: then also can get into the equity and some of  
00:56:15 --> 00:56:17: those other issues as well.  
00:56:19 --> 00:56:21: So it's good sounds as if what we see is  
00:56:21 --> 00:56:24: the emerging emerging sort of almost a new discipline within  
00:56:24 --> 00:56:26: the business that does look at that integrated approach,  
00:56:26 --> 00:56:31: balancing the environmental, not recognizing the financial  
aspects,  
00:56:31 --> 00:56:34: absolutely recognizing the socio cultural equity aspects.



00:56:34 --> 00:56:38: And somehow we're trying to create integrated solutions that address

00:56:38 --> 00:56:39: so that it's not,

00:56:39 --> 00:56:40: you know, 1 + 1 + 1.

00:56:40 --> 00:56:42: It's all of these combined.

00:56:42 --> 00:56:45: Add up to a better a better solution.

00:56:45 --> 00:56:46: We're almost at the end,

00:56:46 --> 00:56:48: but there is a question similar,

00:56:48 --> 00:56:50: I think to this that talks about.

00:56:50 --> 00:56:54: Working in historic districts or with historic district regulations and

00:56:54 --> 00:56:57: how you know historic preservation should adapt to the future

00:56:57 --> 00:57:01: conditions of extreme storm events and sea level rise.

00:57:03 --> 00:57:07: Any thoughts on that? 'cause it's cash.

00:57:07 --> 00:57:09: I wish my colleague was on 'cause he's excellent at

00:57:10 --> 00:57:12: working at this historic districts and has done a lot

00:57:12 --> 00:57:13: of work.

00:57:13 --> 00:57:16: We're really seeing it in in Saint Augustine specifically.

00:57:16 --> 00:57:19: You know such a historic city 400 something years old

00:57:19 --> 00:57:22: and and and and that question of what to preserve

00:57:22 --> 00:57:23: and not preserve.

00:57:23 --> 00:57:25: And the most I can add to that is that

00:57:25 --> 00:57:29: there are definitely grants out there that focus specifically on

00:57:29 --> 00:57:32: historic districts and wish my colleague was here to implant

00:57:32 --> 00:57:34: all his knowledge. 'cause he's so brilliant at it.

00:57:34 --> 00:57:37: But uhm, there is that question of what to preserve

00:57:37 --> 00:57:39: and not preserve and how do you change that?

00:57:39 --> 00:57:42: Flavor so I I love the question and I hope

00:57:42 --> 00:57:45: maybe James you've seen some of those examples yourself,

00:57:45 --> 00:57:49: but uh, it's there. It's definitely gonna change.

00:57:49 --> 00:57:51: And so how do we keep that fiber is a

00:57:51 --> 00:57:52: good one.

00:57:52 --> 00:57:53: Love the question.

00:57:55 --> 00:57:55: San

00:57:56 --> 00:58:00: Francisco's interesting. They're undertaking whole waterfront resiliency plan and so

00:58:00 --> 00:58:02: how do you protect all of downtown?

00:58:02 --> 00:58:06: And then you've got all of the historic peers which

00:58:06 --> 00:58:08: are already at at Bay level,

00:58:08 --> 00:58:10: so it's going to be really tricky.

00:58:10 --> 00:58:12: And that's a lot of what San Francisco as a

00:58:12 --> 00:58:15: whole is having a struggle with is what are you

00:58:15 --> 00:58:15: retreating from?

00:58:15 --> 00:58:17: What are you investing in?  
00:58:17 --> 00:58:19: How do you invest in it in a way where  
00:58:19 --> 00:58:21: you can keep that historic flavor?  
00:58:21 --> 00:58:23: 'cause it really also does contribute to the success of  
00:58:23 --> 00:58:25: the community as the city as a whole is?  
00:58:25 --> 00:58:28: That character. It's a tough one.  
00:58:31 --> 00:58:34: Alright, well Leah we are one minute to the top  
00:58:34 --> 00:58:35: of the hour.  
00:58:35 --> 00:58:38: I'm not sure if I should turn it back to  
00:58:38 --> 00:58:38: you.  
00:58:38 --> 00:58:39: I  
00:58:39 --> 00:58:41: would just say that's an excellent note to end on.  
00:58:41 --> 00:58:44: Thank you to our speakers and to everyone who participated  
00:58:44 --> 00:58:45: in this webinar today.  
00:58:45 --> 00:58:49: Again, we will be sharing the slides and I'm recording  
00:58:49 --> 00:58:52: of this webinar with all the registrants and Yep,  
00:58:52 --> 00:58:54: thank you nice big round of applause for our speakers.  
00:58:54 --> 00:58:56: Lynette James. Katherine, Angela.  
00:58:57 --> 00:59:00: Thank you all. Have a great have,  
00:59:00 --> 00:59:01: a great rest of your day.  
00:59:03 --> 00:59:05: You do thank you. Thank

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