

Webinar

Strategies for Coastal Resilience Webinar

Date: February 06, 2024

00:00:30 --> 00:00:34: Hi, good morning or good evening, depending on where you're

00:00:34 --> 00:00:35: calling in from.

00:00:35 --> 00:00:38: We're going to get started here soon.

00:00:38 --> 00:00:58: We're just waiting for people to log in as we're

00:00:59 --> 00:01:08: waiting for a minute.

00:01:08 --> 00:01:09: I'm just going to launch a poll.

00:01:09 --> 00:01:12: We would love to know where you all are calling

00:01:12 --> 00:01:12: in from.

00:01:18 --> 00:01:21: Just let us know where you're calling in from and

00:01:21 --> 00:01:22: what your industry is.

00:02:21 --> 00:02:22: Hello everyone, welcome.

00:02:23 --> 00:02:25: We're just waiting for folks to log in.

00:02:25 --> 00:02:27: In the meantime, feel free to fill out the poll

00:02:27 --> 00:02:29: and just let us know where you're calling in from

00:02:29 --> 00:02:31: and what your industry is.

00:03:06 --> 00:03:10: All right, I think we're going to go ahead and

00:03:10 --> 00:03:11: get started.

00:03:11 --> 00:03:13: Thank you for responding.

00:03:13 --> 00:03:17: I'm going to go ahead and end the poll.

00:03:25 --> 00:03:29: Well, this is utilize webinar.

00:03:29 --> 00:03:32: It's a global webinar on strategies for coastal resilience.

00:03:32 --> 00:03:33: I'm Marian Epic.

00:03:33 --> 00:03:36: I'm the senior director of resilience for the Urban Land

00:03:36 --> 00:03:36: Institute.

00:03:37 --> 00:03:40: And we're so excited to have you here today to

00:03:40 --> 00:03:41: join us.

00:03:41 --> 00:03:45: Just a quick number of announcements before we dive in.

00:03:45 --> 00:03:48: We're going to ask you to remain muted throughout the

00:03:48 --> 00:03:49: duration of the webinar.

00:03:49 --> 00:03:52: And at the end of the webinar, we're going to

00:03:52 --> 00:03:55: switch over to a Zoom meeting and have networking hosted

00:03:55 --> 00:03:57: by ULI, Southeast Florida and Caribbean.

00:03:57 --> 00:04:00: So we're so excited to partner with them on this

00:04:00 --> 00:04:00: webinar.

00:04:01 --> 00:04:04: We ask that you're welcome to use the Q&A function

00:04:04 --> 00:04:07: through Zoom to submit your questions for the panelists and

00:04:07 --> 00:04:09: then we'll have Q&A at the end.

00:04:09 --> 00:04:13: After all three presentations, we are recording this webinar

00:04:13 --> 00:04:16: and

00:04:16 --> 00:04:18: we'll share it with all registrants and we'll add it

00:04:18 --> 00:04:22: to utilize Knowledge Finder platform afterwards.

00:04:19 --> 00:04:22: And then just a quick note that the publisher, Island

00:04:22 --> 00:04:26: Press has generously offered a 30% discount on the book

00:04:26 --> 00:04:29: by one of our speakers, Stefan Al, on adapting cities

00:04:29 --> 00:04:32: to sea level rise, green and Gray strategies.

00:04:33 --> 00:04:36: So when you registered, you received an e-mail with details

00:04:36 --> 00:04:39: and there's a code in there for the book if

00:04:39 --> 00:04:40: you would like to use that.

00:04:43 --> 00:04:45: Our agenda is jam packed.

00:04:45 --> 00:04:48: Today we have an opening speaker, Stefan Al, author of

00:04:48 --> 00:04:51: Adapting Cities to Sea Level Rise.

00:04:51 --> 00:04:54: He'll give an overview and then dive in some to

00:04:54 --> 00:05:00: dive into some design strategies, followed by Edgar

00:05:00 --> 00:05:05: Westerhoff, Vice

00:05:06 --> 00:05:11: President of North America, Adapt Adaptation Solutions for

00:05:11 --> 00:05:17: Arcadis.

00:05:17 --> 00:05:18: And then finally a presentation on finance for by Isabel

00:05:18 --> 00:05:21: Decaris, Director of Investment Banking for CIBC First

00:05:21 --> 00:05:25: Caribbean International

00:05:25 --> 00:05:27: Bank.

00:05:27 --> 00:05:28: So we have quite a few different geographies covered.

00:05:28 --> 00:05:31: Two of our speakers are from the Netherlands, but they

00:05:31 --> 00:05:34: live in the US now and Isabel lives in the

00:05:34 --> 00:05:37: Caribbean.

00:05:37 --> 00:05:38: And then finally we'll have Q&A.

00:05:38 --> 00:05:41: And then after Q&A we'll switch over to networking and

00:05:41 --> 00:05:44: I'll share zoom details with you to switch over to

00:05:44 --> 00:05:48: that.

00:05:48 --> 00:05:51: So we're going to go ahead and get started.

00:05:51 --> 00:05:54: Our first speaker is Stefan.

00:05:54 --> 00:05:58: Yeah.

00:05:44 --> 00:05:47: Thank you, Marianne, and great to meet all of you.

00:05:47 --> 00:05:48: I see some familiar names.

00:05:49 --> 00:05:51: So thank you for attending this webinar.

00:05:53 --> 00:05:56: Yeah, I'm very excited to present you a couple slides

00:05:56 --> 00:05:59: on design driven adaptation strategies.

00:05:59 --> 00:06:00: So it's a little bit about me.

00:06:00 --> 00:06:04: I'm an architect and urban designer currently based in in

00:06:04 --> 00:06:06: New York where I practice with my firm and also

00:06:07 --> 00:06:10: a professor at Hunter College at the City of New

00:06:10 --> 00:06:10: York.

00:06:12 --> 00:06:16: So how how did I come up with this topic?

00:06:16 --> 00:06:20: Well, it kind of came to me that we all

00:06:20 --> 00:06:24: know that climate change is is happening and one of

00:06:24 --> 00:06:28: the impacts of that is sea level rise.

00:06:29 --> 00:06:31: We don't know yet quite how much this is going

00:06:31 --> 00:06:33: to be by the end of the century.

00:06:33 --> 00:06:36: It may be a couple feet, it may be more

00:06:36 --> 00:06:37: than five feet.

00:06:38 --> 00:06:43: However, the impacts are already quite noticeable in coastal areas.

00:06:45 --> 00:06:48: And you know of course we chose coastal cities for

00:06:48 --> 00:06:51: most of history for very good reasons.

00:06:52 --> 00:06:55: But the problem is that you know a very large

00:06:55 --> 00:06:58: portion of the population lives in low lying areas that

00:06:58 --> 00:07:01: will be at increased risk from sea level rise.

00:07:02 --> 00:07:05: And I was able to witness this first hand just

00:07:06 --> 00:07:09: a couple weeks before I moved to New York City

00:07:09 --> 00:07:13: when Superstorm Sandy hits and really caused major devastation not

00:07:13 --> 00:07:16: just in in New York City but also along the

00:07:17 --> 00:07:18: the Jersey coast.

00:07:19 --> 00:07:25: And this, this really triggered my interest because I saw

00:07:25 --> 00:07:29: a lot of approaches that were not I would say

00:07:29 --> 00:07:33: beneficial from a from a design perspective.

00:07:34 --> 00:07:37: And if if if you look at this slide, this

00:07:37 --> 00:07:40: was studied by the World Bank that made it clear

00:07:40 --> 00:07:44: that by 2050 there would be more than a trillion

00:07:44 --> 00:07:48: dollars at risk in major cities in terms of real

00:07:48 --> 00:07:51: estate assets as a result of of sea level rise.

00:07:52 --> 00:07:56: So this was a very typical response that happened in

00:07:56 --> 00:07:59: New Orleans by the Army Corps of engineer and although

00:07:59 --> 00:08:03: effective in stubbing flooding it does cut off communities from

00:08:03 --> 00:08:04: the neighbourhood.

00:08:04 --> 00:08:07: If you go to China across the globe, a lot

00:08:07 --> 00:08:11: of the coastline has been fortified with this new quote,

00:08:11 --> 00:08:15: UN quote, Gray wall, these concrete investments that are effective

00:08:15 --> 00:08:20: from an engineering perspective that maybe not contribute to kind

00:08:20 --> 00:08:24: of the overall quality of the shoreline and and biodiversity.

00:08:26 --> 00:08:29: If you look at the response in in in Jersey

00:08:29 --> 00:08:32: along the New Jersey shore, you know a lot of

00:08:32 --> 00:08:37: homes with financial assistance from several emerging funds are now

00:08:37 --> 00:08:41: you know doing this this approach which again is not

00:08:41 --> 00:08:45: something that seems like a very desirable solution if you

00:08:45 --> 00:08:47: look at it holistically.

00:08:48 --> 00:08:51: So that's triggered this interesting this topic.

00:08:51 --> 00:08:54: There's AI would say like a trend going on in

00:08:54 --> 00:08:58: in urban design and flood resilience that is looking at

00:08:58 --> 00:09:03: flood engineering approaches from more holistic standpoint and that is

00:09:03 --> 00:09:07: really taking a design LED approach and a lot of

00:09:07 --> 00:09:11: these solutions are happened to be from the Netherlands where

00:09:11 --> 00:09:12: I'm from.

00:09:13 --> 00:09:16: So I'll show you a couple of their approaches.

00:09:16 --> 00:09:19: But the philosophy there is really that it's you know

00:09:19 --> 00:09:23: these these are projects, these are projects that are are

00:09:23 --> 00:09:28: meant to be multidisciplinary, multi stakeholder, multi scenario and multi

00:09:28 --> 00:09:29: functional.

00:09:29 --> 00:09:32: And I'll get into that a little bit later as

00:09:32 --> 00:09:34: I go into the the projects.

00:09:35 --> 00:09:37: But if you if you think about the first one

00:09:37 --> 00:09:38: it, it really makes sense right.

00:09:38 --> 00:09:42: When we're trying to deal with flood solutions, of course

00:09:42 --> 00:09:45: we need to have engineering but this is not enough,

00:09:45 --> 00:09:46: right.

00:09:46 --> 00:09:51: We should also include urban planners, urban designers, architects, community,

00:09:51 --> 00:09:57: stakeholders, finance, real estate developers, obviously, and even stakeholders like

00:09:57 --> 00:10:01: insurance companies if we really want to come up with

00:10:01 --> 00:10:02: good solutions.

00:10:05 --> 00:10:08: So start with the first one, a very unusual building

00:10:08 --> 00:10:12: in the Netherlands that won the Best Building of the
00:10:12 --> 00:10:13: Year award.
00:10:13 --> 00:10:17: This was a parking garage, you know, unlike the typical
00:10:18 --> 00:10:21: awardees that like museums and so on.
00:10:21 --> 00:10:22: It's kind of an exception.
00:10:22 --> 00:10:26: But what's so, so beautiful about this project is that
00:10:26 --> 00:10:29: it incorporates a flat wall, it incorporates A dune and
00:10:29 --> 00:10:33: it also includes parking all in one single project.
00:10:34 --> 00:10:38: So by doing that is able to address multiple problems
00:10:38 --> 00:10:42: in one multi and a stakeholder project including the need
00:10:43 --> 00:10:46: for parking of this coastal community in cutback.
00:10:47 --> 00:10:49: So it's a very beautiful project that's on the if
00:10:49 --> 00:10:52: you look at the section on the right, you see
00:10:52 --> 00:10:55: on the left it has this parking garage, then it
00:10:55 --> 00:10:57: has this big flood wall and on the right you
00:10:57 --> 00:10:58: have the dune.
00:10:58 --> 00:11:01: So it's a combination of the green strategy, the dune
00:11:01 --> 00:11:04: with the Gray strategy, the the flood wall and then
00:11:04 --> 00:11:07: combine it over the over the dike and then combine
00:11:07 --> 00:11:09: it all with a with a parking garage.
00:11:11 --> 00:11:12: And the parking garage.
00:11:12 --> 00:11:15: The way it opens up to the the beach is
00:11:15 --> 00:11:20: very beautiful with these almost like you know cuts through
00:11:20 --> 00:11:25: the dune and these very monumental staircases that that
allow
00:11:25 --> 00:11:28: for this, yeah, very sensibly designed project.
00:11:29 --> 00:11:31: If you look at the the top it has skylights
00:11:31 --> 00:11:34: that are detailed with Cortland steel.
00:11:35 --> 00:11:37: So this is a steel that rusted and fits in
00:11:38 --> 00:11:41: very beautifully with the the color of the dunes on
00:11:41 --> 00:11:41: top.
00:11:42 --> 00:11:44: So very, very successful project.
00:11:45 --> 00:11:49: So it it's not just a flood strategy, it's
00:11:49 --> 00:11:53: also parking and it's also improving access to to the
00:11:53 --> 00:11:54: beach.
00:11:54 --> 00:11:56: So in a way the way it was done in
00:11:56 --> 00:12:00: cutback is that it also helps with cross financing the
00:12:00 --> 00:12:04: flood management protection because all the infrastructure
can now benefit
00:12:05 --> 00:12:08: from the revenue that's generated through the parking
garage.
00:12:12 --> 00:12:14: The other two projects I'm going to show are from
00:12:15 --> 00:12:18: Rotterdam is a really good example because what Rotterdam

did,
00:12:18 --> 00:12:22: because it's at risk from multiple water threats, not just
00:12:22 --> 00:12:25: from the coast, also from the rivers and from increased
00:12:25 --> 00:12:29: rainfall, is that they reorganized their city departments to be
00:12:29 --> 00:12:33: one more multidisciplinary department that includes city
planning but also
00:12:34 --> 00:12:36: water management and real estate.
00:12:36 --> 00:12:41: And they created this this dike which is a multi
00:12:41 --> 00:12:42: functional dike.
00:12:42 --> 00:12:45: So if you look at the rights, I'm not sure
00:12:45 --> 00:12:48: if I can point this out, but this was the
00:12:48 --> 00:12:49: old dike.
00:12:49 --> 00:12:52: It was no longer high enough, so they needed to
00:12:52 --> 00:12:52: go higher.
00:12:52 --> 00:12:55: But if you would just make it bigger like this,
00:12:55 --> 00:12:59: it would really block the access to the city and
00:12:59 --> 00:13:02: would provide, yeah would would be this huge barrier.
00:13:02 --> 00:13:07: So instead of doing that, they created this, what we
00:13:07 --> 00:13:12: call a staircase dike with multiple steps and that's allowed
00:13:12 --> 00:13:14: to include types of programs.
00:13:14 --> 00:13:17: In this case, there's a parking garage as well as
00:13:17 --> 00:13:20: a retail space and a community park on the top.
00:13:21 --> 00:13:23: So what is the benefit of that besides housing the
00:13:23 --> 00:13:24: program?
00:13:24 --> 00:13:28: Well, at the same time, you're creating public space and
00:13:28 --> 00:13:31: you're also have a very kind of active and and
00:13:31 --> 00:13:32: appealing St.
00:13:32 --> 00:13:33: edge on the side.
00:13:35 --> 00:13:39: OK, how do I remove these adaptations?
00:13:39 --> 00:13:40: Let me just.
00:13:41 --> 00:13:43: OK, OK, Right here.
00:13:43 --> 00:13:44: Sorry.
00:13:50 --> 00:13:54: So very impressive project that includes all these functions in
00:13:54 --> 00:13:56: one single single project.
00:13:56 --> 00:13:58: So, so yeah, you're looking here at a typical St.
00:13:58 --> 00:14:02: front not too different from other pieces of Dutch cities.
00:14:03 --> 00:14:06: It's maybe a little bit longer than you would typically
00:14:06 --> 00:14:09: expect, but still it's it's much better than, you know,
00:14:09 --> 00:14:11: staring at a large styke, for instance.
00:14:12 --> 00:14:16: And it does also contain needs for for local people,
00:14:16 --> 00:14:18: including grocery store.
00:14:18 --> 00:14:24: And on the roof there's various recreational activities for For

00:14:24 --> 00:14:30: children, there's urban agriculture, there's even a small playground and

00:14:30 --> 00:14:35: and other types of facilities that are located next to

00:14:35 --> 00:14:40: the playground to allow for some sort of social supervision.

00:14:41 --> 00:14:44: So very thoughtful and a lot of that I should

00:14:44 --> 00:14:48: say was a result of intensive stakeholder meetings with the

00:14:48 --> 00:14:50: community over many, many years.

00:14:52 --> 00:14:56: So Rotterdam is really a very good example because it

00:14:56 --> 00:15:00: has many solutions and and many type of strategies that

00:15:00 --> 00:15:01: it uses across the city.

00:15:03 --> 00:15:05: So, so this is just one of them of course

00:15:05 --> 00:15:08: which is a multi purpose dike but there's you know

00:15:08 --> 00:15:11: many, many other strategies that the city have.

00:15:12 --> 00:15:15: But to to end on the nettles, I wanted to

00:15:15 --> 00:15:18: show you this other strategies called the Room for the

00:15:18 --> 00:15:22: River project, which is very different from the first two

00:15:22 --> 00:15:26: strategies which we call defense strategies like keeping the

00:15:26 --> 00:15:26: water

00:15:26 --> 00:15:26: out.

00:15:26 --> 00:15:28: This is about letting the water back in.

00:15:28 --> 00:15:33: It's kind of a historical, historical moment for Ananellas

00:15:33 --> 00:15:37: because

00:15:33 --> 00:15:37: for 800 years people have been reclaiming lands, taking

00:15:37 --> 00:15:40: lands

00:15:37 --> 00:15:40: from the ocean and now the opposite is is happening

00:15:40 --> 00:15:43: sort of considering that it will be very hard to

00:15:43 --> 00:15:45: keep the water outgoing forward.

00:15:46 --> 00:15:49: So along the river there's many sites where you know,

00:15:49 --> 00:15:53: former river beds have been restored to dykes have been

00:15:53 --> 00:15:58: relocated just simply to increase the floodplains of the river.

00:15:58 --> 00:16:02: So when there's times of heavy rainfall or times from

00:16:02 --> 00:16:05: a lot of river water coming, then this will be

00:16:05 --> 00:16:09: stored in those increased and a lot of them more

00:16:09 --> 00:16:11: more natural floodplains.

00:16:12 --> 00:16:15: So one very interesting situation is near and I Mesa,

00:16:15 --> 00:16:17: it's a major city in the southeast.

00:16:18 --> 00:16:22: What they did there is they created this secondary channel

00:16:22 --> 00:16:25: on the right and then they moved the dyke and

00:16:25 --> 00:16:29: by doing so reduce the risk of this overall area.

00:16:30 --> 00:16:33: And because now there's a reduced risk as a result

00:16:33 --> 00:16:36: of flooding, they decided that in in a way that

00:16:37 --> 00:16:40: makes the real estate or or the land more valuable.

00:16:41 --> 00:16:44: So then they they decided to create a another type

00:16:44 --> 00:16:47: of district which you can see in the second slide
00:16:47 --> 00:16:48: kind of on the top.
00:16:49 --> 00:16:54: So it's a very comprehensive strategy that includes you know
00:16:54 --> 00:16:59: digging another channel, moving the dyke, creating a new district
00:16:59 --> 00:17:04: and it even includes moving some of the existing historic
00:17:04 --> 00:17:08: buildings in this case this old historic farm higher or
00:17:08 --> 00:17:12: away from the from the to be flooded area.
00:17:13 --> 00:17:16: Now I must say that the Netherlands is a little
00:17:17 --> 00:17:20: bit of an exception because it has a nationwide flood
00:17:20 --> 00:17:24: management program like risk is allocated across the country and
00:17:24 --> 00:17:28: it's a little bit paradoxical that's that the most low
00:17:28 --> 00:17:32: lying areas in the Netherlands actually have the lowest amount
00:17:32 --> 00:17:32: of risk.
00:17:33 --> 00:17:33: And why is that?
00:17:33 --> 00:17:38: Because there's a calculation that's made that's that looks at
00:17:38 --> 00:17:42: you know what will be the impacts of a particular
00:17:42 --> 00:17:46: you know flooding events and and the the calculation is
00:17:46 --> 00:17:49: made is based on the number of people and and
00:17:49 --> 00:17:51: kind of the economic risk.
00:17:52 --> 00:17:54: So that's why the areas that have the most amount
00:17:54 --> 00:17:57: of cities and the most amount of people like Amsterdam,
00:17:57 --> 00:17:59: Rotterdam, those are the ones that highest protected.
00:18:00 --> 00:18:02: The town that I'm from, which is more from the
00:18:02 --> 00:18:04: center of the country, small town is, is not as
00:18:05 --> 00:18:05: protected.
00:18:05 --> 00:18:10: It doesn't have the same standard simply because it's, you
00:18:10 --> 00:18:16: know, there's there's fewer people and less economic, less economic
00:18:16 --> 00:18:17: value at risk.
00:18:18 --> 00:18:21: So this situation in in the Netherlands, the solutions have
00:18:21 --> 00:18:25: really been celebrated and they're seeing also, especially from New
00:18:26 --> 00:18:29: York as as a solution that could potentially be adopted
00:18:29 --> 00:18:31: for Manhattan and other parts.
00:18:31 --> 00:18:34: However, I must say that the Dutch cases are really
00:18:34 --> 00:18:39: quite exceptional because even before city governments
00:18:39 --> 00:18:43: were founded 800
00:18:39 --> 00:18:43: years ago, there were water management entities collecting
00:18:43 --> 00:18:46: taxes and
00:18:43 --> 00:18:46: and managing managing dykes and and and water.
00:18:46 --> 00:18:51: So that makes it somewhat exceptional solution.

00:18:51 --> 00:18:54: But there's also good examples in the US Edgar is
00:18:54 --> 00:18:56: going to talk about New York.
00:18:56 --> 00:19:01: But if you look at Florida for instance, there there's
00:19:01 --> 00:19:06: some architecture projects that are are built on elevated
platforms
00:19:06 --> 00:19:09: like this one, the Paris Art Museum.
00:19:10 --> 00:19:12: Now why is that an appropriate solution for Miami?
00:19:12 --> 00:19:15: Because it's built on limestone, so you can't really build
00:19:15 --> 00:19:16: dikes.
00:19:16 --> 00:19:19: So because the water would just sit seep from underneath.
00:19:20 --> 00:19:23: So in this case, there's a museum that was designed
00:19:23 --> 00:19:27: be by the Swiss architects and they they elevated on
00:19:27 --> 00:19:31: this platform and underneath that platform is a parking level.
00:19:31 --> 00:19:35: So this then can get flooded in case there's a
00:19:36 --> 00:19:37: major flooding event.
00:19:39 --> 00:19:42: So I wanted to show this as well as the
00:19:42 --> 00:19:45: city of Miami Beach is raising their roads and it
00:19:45 --> 00:19:47: kind of goes back to my first point.
00:19:48 --> 00:19:51: You know, obviously this is a good solution because
whenever
00:19:51 --> 00:19:54: there's flooding that means you can still drive home safely.
00:19:54 --> 00:19:56: But it does lead to a lot of issues.
00:19:56 --> 00:19:59: So for instance, in this case and on the left
00:19:59 --> 00:20:01: you see the the City of Miami Beach engineer.
00:20:02 --> 00:20:05: Who explained it to me is that what what happens
00:20:05 --> 00:20:09: is that when there's not a coordinated response, it can
00:20:09 --> 00:20:11: lead to some potential fallout.
00:20:11 --> 00:20:13: So in this case in the city of Miami Beach,
00:20:13 --> 00:20:17: because the road was raised after a flooding event, the
00:20:17 --> 00:20:21: insurance refused to pay out some of the restaurants
because
00:20:21 --> 00:20:23: they said, yeah, you used to be on the ground
00:20:23 --> 00:20:26: level and now you're at a basement level.
00:20:27 --> 00:20:30: So it just shows the need for kind of putting
00:20:30 --> 00:20:32: all the stakeholders together.
00:20:32 --> 00:20:35: And I think Utili is a great entity for that.
00:20:35 --> 00:20:40: And to think about these things holistically, from insurance
companies
00:20:40 --> 00:20:44: to real estate developers, from engineers to urban planners,
architects
00:20:44 --> 00:20:46: and urban designers, thank you.
00:20:50 --> 00:20:51: Wonderful.
00:20:51 --> 00:20:52: Thank you so much, Stefan.

00:20:53 --> 00:20:57: We're going to transition over to our next speaker one
00:20:57 --> 00:20:57: second.
00:21:01 --> 00:21:06: Our next speaker is Edgar Westerhoff, One second.
00:21:06 --> 00:21:06: Yeah, thank you.
00:21:08 --> 00:21:11: I hope you can hear me well for state setting,
00:21:11 --> 00:21:14: there's a little bit of overlap at the beginning between
00:21:14 --> 00:21:16: what Stephen is explaining.
00:21:16 --> 00:21:19: I hope to to bring my own Dutch water engineer
00:21:20 --> 00:21:23: perspective to to some of these these examples and trained
00:21:23 --> 00:21:27: in the Netherlands as a water engineer also a planner.
00:21:27 --> 00:21:29: I've been in New York City for almost 12 years
00:21:29 --> 00:21:29: now.
00:21:30 --> 00:21:33: So it's interesting to compare you know how the the
00:21:33 --> 00:21:37: strategies that have been in the works for so long
00:21:37 --> 00:21:40: coming out of the Netherlands now translate to to some
00:21:40 --> 00:21:44: of the projects, the studies that we are leading in
00:21:44 --> 00:21:47: in the US So focusing on engineered and nature based
00:21:47 --> 00:21:51: solutions at scale what does that actually look like?
00:21:51 --> 00:21:54: So I'll be talking about the systems approach to flood
00:21:54 --> 00:22:00: control and about integrated multifunctional, better watershed
scale solutions apply
00:22:00 --> 00:22:04: the Netherlands and how they translate to to the Netherlands
00:22:04 --> 00:22:07: store, sorry to the US focusing on Houston and and
00:22:07 --> 00:22:08: New York City.
00:22:09 --> 00:22:12: So to touch on, you know, on what we just
00:22:12 --> 00:22:16: saw and Stefan's presentation, I think you know what what
00:22:16 --> 00:22:21: these images, these examples projects have in common that
there's
00:22:21 --> 00:22:24: a very high level of risk reduction in each of
00:22:24 --> 00:22:28: these examples, not just a high level of risk reduction,
00:22:29 --> 00:22:32: also a very strong way of multifunctional use of of
00:22:32 --> 00:22:36: public space and how public space and private space are
00:22:36 --> 00:22:38: connected together.
00:22:38 --> 00:22:41: So the top left image you see an urban yeah
00:22:41 --> 00:22:46: water square floodplain if you will, just outside of the
00:22:46 --> 00:22:49: train station of Rotterdam.
00:22:49 --> 00:22:52: On the normal circumstances it's a beautiful place to be,
00:22:52 --> 00:22:56: but when it does extreme precipitation it will fill up
00:22:56 --> 00:22:59: but it will fill up such that it doesn't harm
00:22:59 --> 00:23:01: the borrowing communities.
00:23:01 --> 00:23:05: The same with the bottom left cutback example that they
00:23:05 --> 00:23:09: found already touched upon solving multiple problems.

00:23:09 --> 00:23:12: The parking issues that used to be the case here
00:23:12 --> 00:23:14: before this work was was implemented.
00:23:14 --> 00:23:18: Also the need to upgrade the the risk reduction strategy
00:23:18 --> 00:23:22: through this these berms, the natural Dune system and how
00:23:22 --> 00:23:27: beautifully incorporated giving protection to the community of
once in
00:23:27 --> 00:23:31: a 10,000 year to yeah the more adaptive strategies that
00:23:31 --> 00:23:34: you see in the bottom right where people actually live
00:23:34 --> 00:23:35: in a floodplain.
00:23:36 --> 00:23:39: So all of these examples and to focus a little
00:23:39 --> 00:23:42: bit or zoom in on the next one, the Duck
00:23:42 --> 00:23:46: Park example and mentioned before you know shopping mall
integrated,
00:23:46 --> 00:23:50: high levels of risk reduction but also turning a struggling
00:23:50 --> 00:23:54: community into a place that is has become very vibrant.
00:23:54 --> 00:23:56: This is a place where now people want to be.
00:23:56 --> 00:23:58: So for people on the line, if you have an
00:23:58 --> 00:24:02: opportunity to travel to the Netherlands, please do face it,
00:24:02 --> 00:24:04: not just Amsterdam but also go to the city of
00:24:04 --> 00:24:05: Rotterdam.
00:24:05 --> 00:24:09: It's very worthwhile to see these kind of flood protection
00:24:09 --> 00:24:13: strategies fantastically integrated in in public space.
00:24:16 --> 00:24:19: So that's not all of course the Netherlands, we host
00:24:19 --> 00:24:23: the biggest delta in in Europe, the Rhine deltas are
00:24:23 --> 00:24:26: a lot of water usually melting snow in spring is
00:24:26 --> 00:24:28: coming through the Netherlands.
00:24:28 --> 00:24:33: We've just experienced tremendous amount of water in the
country
00:24:33 --> 00:24:37: as well giving near flooding situations and that is something
00:24:37 --> 00:24:41: that is being addressed through an important strategy room for
the river.
00:24:41 --> 00:24:42: You see two on the left, you see that stress
00:24:42 --> 00:24:46: circumstance where where water is creeping it up in the
00:24:46 --> 00:24:50: floodplain and you see here the concept applied throughout
00:24:50 --> 00:24:54: the
Netherlands with about 40 places where where strategies
00:24:54 --> 00:24:59: have been
constructed.
00:24:59 --> 00:25:00: They started after the 95 floods so well over 25
00:25:01 --> 00:25:05: years ago.
00:25:05 --> 00:25:06: I think a good lesson take away from from these
00:25:07 --> 00:25:10: strategies that have been implemented is that it takes a
00:25:10 --> 00:25:13:

00:25:13 --> 00:25:14: long time.

00:25:14 --> 00:25:17: You know this this program has been well over 15

00:25:17 --> 00:25:21: years in the making in terms of planning also construction

00:25:21 --> 00:25:25: and it's now you know it shows it's working really

00:25:25 --> 00:25:25: well.

00:25:25 --> 00:25:29: But there's also a realization that you know going into

00:25:29 --> 00:25:32: the future addressing climate extremes that there's room for the

00:25:33 --> 00:25:36: river concept may need to be adjusted at certain places.

00:25:36 --> 00:25:40: So again, taking that time scale, keeping that time scale

00:25:40 --> 00:25:43: in mind, you know we need to plan way in

00:25:43 --> 00:25:47: advance in order to to incorporate these these strategies.

00:25:48 --> 00:25:48: Fascinating.

00:25:48 --> 00:25:52: Here you see the the images, the concepts on the

00:25:52 --> 00:25:55: left and you see how it functions on the real

00:25:55 --> 00:25:58: life circumstances to the right.

00:25:59 --> 00:26:02: This is really what you know what makes it so

00:26:02 --> 00:26:06: valuable to work with architects for the visioning and that

00:26:06 --> 00:26:09: has been a very important part of the work that

00:26:09 --> 00:26:12: we do in the US So talking about flood strategies

00:26:12 --> 00:26:16: implemented at skill, this is a great example just north

00:26:16 --> 00:26:18: of city of of Rotterdam.

00:26:18 --> 00:26:21: This is where we can store millions of gallons of

00:26:21 --> 00:26:25: water on the extreme circumstances and we will see these

00:26:25 --> 00:26:29: type of strategies incorporated throughout the country much

00:26:29 --> 00:26:32: more.

00:26:29 --> 00:26:32: And this is really an example of you know how

00:26:32 --> 00:26:36: scale, how size matters, how volume matters and also

00:26:36 --> 00:26:40: volume

00:26:36 --> 00:26:40: explained in the terms of costs that are associated with

00:26:40 --> 00:26:42: these type of strategies.

00:26:42 --> 00:26:45: So to me there's always, you know, makes me think

00:26:45 --> 00:26:48: about you know what we do in places in cities

00:26:48 --> 00:26:52: like New York incorporating bioswales or trying to to address

00:26:52 --> 00:26:56: the natural water cycle by having water infiltrate in the

00:26:56 --> 00:26:57: streetscape.

00:26:57 --> 00:26:57: That is great.

00:26:58 --> 00:27:02: But also keep in mind that large scale full storage

00:27:02 --> 00:27:05: of water is is still a necessity.

00:27:07 --> 00:27:08: It shouldn't stop there.

00:27:08 --> 00:27:13: Water boards in the Netherlands also, yeah, assess their

00:27:13 --> 00:27:18: risk,

00:27:13 --> 00:27:18: their climate risk by playing with circumstances, various risk

factors,
00:27:19 --> 00:27:23: by letting levees break and see what happens and then,
00:27:23 --> 00:27:26: you know, what should the result be in terms of
00:27:26 --> 00:27:29: evacuation, accessibility, evacuation time.
00:27:30 --> 00:27:34: So there's digital models to play with this and to
00:27:34 --> 00:27:38: assess how an extreme circumstance will unfold if something
bad
00:27:38 --> 00:27:39: were to happen.
00:27:40 --> 00:27:43: And I think what is interesting here to mention too
00:27:43 --> 00:27:47: is that you know the, the the risk perception also
00:27:47 --> 00:27:51: relates to personal so-called survival threshold that the Dutch
have
00:27:51 --> 00:27:52: incorporated.
00:27:53 --> 00:27:55: So it's not just you know the once in a
00:27:55 --> 00:27:59: 10,000 year that is oftentimes being discussed, but every
person
00:28:00 --> 00:28:04: in the Netherlands has a so-called survival statistic that
means
00:28:04 --> 00:28:06: a chance of living and dying.
00:28:06 --> 00:28:07: Its once in 100,000.
00:28:08 --> 00:28:11: So if you are below that statistic you are in
00:28:11 --> 00:28:14: a good place and otherwise, yeah the country need to
00:28:14 --> 00:28:17: up strategies or what reports need to step up And
00:28:17 --> 00:28:20: I think that's an important way to compare also which
00:28:20 --> 00:28:24: parts of the country are safe and which parts of
00:28:24 --> 00:28:27: the country are less safe and may need strategies.
00:28:29 --> 00:28:32: So bringing that to to the US, we've brought a
00:28:32 --> 00:28:36: comparable program to to the city of Houston.
00:28:36 --> 00:28:39: Harvey 2018 killed nearly 100 people.
00:28:40 --> 00:28:44: Economic damage was close to hundred 125 billion.
00:28:44 --> 00:28:48: And this is where we've practised room for the river
00:28:48 --> 00:28:49: at a very very different scale.
00:28:50 --> 00:28:52: But the principles are exactly the same.
00:28:52 --> 00:28:55: So how can you utilise, use your landscape, in this
00:28:55 --> 00:28:59: case the Prairie landscape to temporarily store water And
there's,
00:28:59 --> 00:29:03: yeah, multiple benefits here, not just, you know, keeping the
00:29:03 --> 00:29:07: peak flows away from from the reservoirs, which you know
00:29:07 --> 00:29:10: by itself can cause a tremendous risk factor if they
00:29:10 --> 00:29:13: were to break under actually extreme circumstances.
00:29:13 --> 00:29:17: So how can you reduce pressure by utilizing your Prairie
00:29:17 --> 00:29:21: landscape And that was done by, you know, incorporating
the
00:29:21 --> 00:29:27: spot risk management techniques through permanent

retention, temporary detention.

00:29:27 --> 00:29:31: So how can you utilize the landscape?
00:29:31 --> 00:29:35: By bringing in small berms, ways to store water and
00:29:35 --> 00:29:38: as such keep it away from from communities.
00:29:38 --> 00:29:41: Very comparable to the example that you that you saw
00:29:41 --> 00:29:43: in the city of Rotterdam with that that urban flop
00:29:43 --> 00:29:44: name.
00:29:45 --> 00:29:46: And this is the result.
00:29:46 --> 00:29:49: So here on the left you see the landscape without
00:29:49 --> 00:29:54: water management interventions and you'll see how you
know how
00:29:54 --> 00:29:56: exposed the region is, the area is.
00:29:57 --> 00:30:01: And on the right to see how water management interventions
00:30:01 --> 00:30:05: will limit the pressure not just on watershed but also
00:30:05 --> 00:30:09: downstream will limit pressure to the urban centres of of
00:30:09 --> 00:30:10: Houston.
00:30:12 --> 00:30:15: So bring that to the last example city of New
00:30:15 --> 00:30:15: York.
00:30:16 --> 00:30:17: I've been here.
00:30:17 --> 00:30:19: I was here during Hurricane Sandy myself.
00:30:20 --> 00:30:23: Has been 10 years in the making here as well.
00:30:24 --> 00:30:24: Stay home.
00:30:24 --> 00:30:28: Show how you know how Manhattan was, was was fully
00:30:28 --> 00:30:32: inundated along the edges, many casualties further away
from the
00:30:32 --> 00:30:33: city centre.
00:30:33 --> 00:30:35: I live in Manhattan myself.
00:30:35 --> 00:30:38: I biked through the city centre and saw how ill
00:30:38 --> 00:30:42: prepared you know this, this metropolitan place was and also
00:30:42 --> 00:30:46: experienced the response through rebuilt by design.
00:30:46 --> 00:30:50: Hank Golfing brought this competition to the sandy affected
region.
00:30:50 --> 00:30:53: New Jersey, New York and the big hue was one
00:30:53 --> 00:30:58: of those strategies, 12 mile alignment following the waterfront
edge.
00:30:58 --> 00:31:01: You see that that green line here along along the
00:31:02 --> 00:31:05: waterfront, it's currently being constructed.
00:31:05 --> 00:31:06: You see the needs.
00:31:06 --> 00:31:09: You see how it's trying to address not just the
00:31:09 --> 00:31:13: future tidal effects but also coastal storm surges.
00:31:14 --> 00:31:15: And this is what it looks.
00:31:16 --> 00:31:18: This is what we take, what it looks like.
00:31:18 --> 00:31:21: If we take a closer look at the numbers, you

00:31:21 --> 00:31:24: see the four feet dotted mark that is the the
00:31:24 --> 00:31:27: lowest waterfront edge and that that ranges from 4 to
00:31:27 --> 00:31:28: 8 feet.
00:31:28 --> 00:31:31: And you see the current high tides on the left.
00:31:31 --> 00:31:34: And you see how you know the high tides are
00:31:34 --> 00:31:37: creeping up on on the waterfront edge to to reach
00:31:37 --> 00:31:41: a level by 20402050 where every high tide will break,
00:31:41 --> 00:31:43: will break the edge.
00:31:43 --> 00:31:45: And I think that is going to be, yeah, an
00:31:45 --> 00:31:49: important moment of realization, not just in New York, but
00:31:49 --> 00:31:53: throughout the US coastal cities like Boston, Miami, who was
00:31:53 --> 00:31:57: already experiencing these these sunny day floods when
water is
00:31:58 --> 00:32:00: creeping over the edge during high tides.
00:32:00 --> 00:32:03: That is a moment of realization and that's already the
00:32:03 --> 00:32:06: case in the Rockaways, in the Bronx, Coney Islands.
00:32:06 --> 00:32:11: They are starting to to inundate and through extreme or
00:32:11 --> 00:32:16: sorry through precipitation that is only being exaggerated for
the
00:32:16 --> 00:32:17: big hue.
00:32:17 --> 00:32:20: East side, coastal resilience, the Lower East Side, this is
00:32:20 --> 00:32:22: one of the lower spots in that alignment.
00:32:22 --> 00:32:26: This is where construction is, is taking shape in two
00:32:26 --> 00:32:27: phases.
00:32:27 --> 00:32:30: This is the parts just South of 20 1st St.
00:32:31 --> 00:32:34: You see the concepts here by 1 architecture and the
00:32:34 --> 00:32:37: PRK Ingles group who are part of our team and
00:32:37 --> 00:32:40: here you see how the floodgates are being installed.
00:32:40 --> 00:32:45: This is the Northern quarter of that that alignment floodgate
00:32:45 --> 00:32:50: 18, which indeed implies that there's another 17 floodgates
just
00:32:50 --> 00:32:53: in this segment, a very important moment here.
00:32:53 --> 00:32:57: This will take 100,000 people, 110,000 people out of the
00:32:57 --> 00:32:59: 100 year floodplain.
00:33:00 --> 00:33:03: It will take another two years to be completed.
00:33:03 --> 00:33:04: You'll see the flood wall.
00:33:04 --> 00:33:07: You see how a park landscape is built up to
00:33:08 --> 00:33:08: that wall.
00:33:10 --> 00:33:14: It's a beautiful young landscape to to, to appreciate when
00:33:14 --> 00:33:19: there's no flood or storm surge and it's definitely, yeah,
00:33:19 --> 00:33:21: having the eyes of the world on it.
00:33:22 --> 00:33:22: Here.
00:33:22 --> 00:33:25: I had the honour to to host the Dutch King

00:33:25 --> 00:33:28: last year during the UN Water conference.

00:33:28 --> 00:33:30: He is a water expert himself.

00:33:31 --> 00:33:34: So the conversation here was very much about you know,

00:33:34 --> 00:33:37: public perception, how the community was involved in the planning

00:33:38 --> 00:33:40: process and was in a big part responsible for you

00:33:40 --> 00:33:42: know, for what we are currently seeing.

00:33:42 --> 00:33:45: And you know many of these lessons learned are currently

00:33:45 --> 00:33:48: being applied to the financial districts.

00:33:48 --> 00:33:52: So effectively the second phase of the big you, the

00:33:52 --> 00:33:55: first phase you can say is the Berry Park City

00:33:55 --> 00:33:56: alignment.

00:33:56 --> 00:33:59: What we are doing here is, I can say it's

00:33:59 --> 00:34:00: a hybrid solution.

00:34:00 --> 00:34:02: So we are also touching the East River.

00:34:04 --> 00:34:06: So we are building out into the water where we

00:34:06 --> 00:34:07: have to.

00:34:07 --> 00:34:10: There's not a lot of space to implement the strategies

00:34:10 --> 00:34:11: on land completely.

00:34:11 --> 00:34:15: So we are also touching the water for land reclamation,

00:34:15 --> 00:34:19: something that has happened many times over the years.

00:34:19 --> 00:34:22: So those are the strategies that we reapply here.

00:34:23 --> 00:34:27: Building of nature nature based solution features are

00:34:27 --> 00:34:27: incorporated here

00:34:27 --> 00:34:27: as well.

00:34:29 --> 00:34:33: It's not just the city who is you know working

00:34:33 --> 00:34:37: hard to on these these resilience studies also the US

00:34:37 --> 00:34:41: Army Corps of Engineers they they launched the head study

00:34:41 --> 00:34:42: a big year ago.

00:34:42 --> 00:34:46: The head study is taking a more regional longer term

00:34:46 --> 00:34:50: perspective on the safety the water safety of of the

00:34:50 --> 00:34:51: region.

00:34:52 --> 00:34:55: It's a very good attempt and and goal to you

00:34:55 --> 00:35:00: have to stitch the various strategies together, bring them

00:35:00 --> 00:35:02: together

00:35:00 --> 00:35:02: in a more holistic approach.

00:35:03 --> 00:35:07: You see the various strategies represented here on the map.

00:35:08 --> 00:35:11: I want to call out the Jamaica Bay Area so

00:35:11 --> 00:35:16: also storm surge barriers are being incorporated here.

00:35:16 --> 00:35:18: This is a very good way.

00:35:18 --> 00:35:22: You're not talking about that systems approach to

00:35:22 --> 00:35:26: incorporate levees

00:35:22 --> 00:35:26: to work with, building of native features, eco engineering

features

00:35:26 --> 00:35:29: that have been work by the New York district for

00:35:29 --> 00:35:32: a long time incorporated here in tandem with with storm

00:35:32 --> 00:35:33: surge barriers.

00:35:34 --> 00:35:37: There's oftentimes you know discussion about about barriers.

00:35:37 --> 00:35:40: It's never would take the place to start as it

00:35:40 --> 00:35:44: comes with reducing flood risk, but it's it's definitely a

00:35:44 --> 00:35:47: consideration planning and thinking long term.

00:35:48 --> 00:35:51: This is something from an economic perspective that can

00:35:51 --> 00:35:52: make

00:35:55 --> 00:35:58: a lot of sense.

00:35:58 --> 00:35:58: I think New York is also coming to an end

00:35:59 --> 00:36:02: here.

00:36:02 --> 00:36:06: The place where we are, yeah, allowing ourselves to have

00:36:06 --> 00:36:07: honest discussions on you know what the future of certain

00:36:07 --> 00:36:10: communities is.

00:36:10 --> 00:36:14: This is the Rockaways and you know as much as

00:36:14 --> 00:36:18: we plan for to adapt to defence through engineered solutions

00:36:18 --> 00:36:22: or eco engineered solutions, there should also be an honest

00:36:22 --> 00:36:22: conversation on where you know communities may not be

00:36:23 --> 00:36:28: able

00:36:28 --> 00:36:29: to adapt.

00:36:29 --> 00:36:32: Where we may have to facilitate coastal repurposing or

00:36:32 --> 00:36:34: managed

00:36:35 --> 00:36:38: retreats over time.

00:36:38 --> 00:36:42: And you know I think this is one of these

00:36:42 --> 00:36:45: locations where we may have to look in the mirror

00:36:45 --> 00:36:49: and design A process for these these communities as well.

00:36:49 --> 00:36:50: So to wrap up a couple of yeah, summarizing conclusions

00:36:50 --> 00:36:54: just to call out the first one and the last

00:36:54 --> 00:36:57: one, Urban Resilience is about preparing for the extreme and

00:36:57 --> 00:37:01: avoid loss of life.

00:37:01 --> 00:37:04: You know the the, the standards design practices will no

00:37:04 --> 00:37:07: longer, you know keep our communities safe.

00:37:07 --> 00:37:11: We are currently seeing the flooding in California, you know

00:37:11 --> 00:37:15: 10 inches of rain in urban environment like Los Angeles.

00:37:15 --> 00:37:19: How do you manage those kind of volumes?

00:37:19 --> 00:37:22: What is your strategy to to keep your your people

00:37:22 --> 00:37:25: alive?

00:37:25 --> 00:37:29: And the last one, you know, we need to find

00:37:29 --> 00:37:33: ways to expedite procedures plus all of the studies, the

00:37:33 --> 00:37:37: examples, the best practices that you've seen here take 10

00:37:37 --> 00:37:41: years, decade or more to incorporate.

00:37:25 --> 00:37:28: And we simply don't have that time knowing that sea
00:37:28 --> 00:37:32: levels will creep up in our communities in the next
00:37:32 --> 00:37:33: 10 to 15 years.
00:37:34 --> 00:37:36: There really is no time to to plan and to
00:37:36 --> 00:37:38: engineer our way out of this.
00:37:39 --> 00:37:41: We have to speed up and be faster and more
00:37:41 --> 00:37:42: agile.
00:37:42 --> 00:37:45: And with that, I would like to thank you.
00:37:48 --> 00:37:49: Thank you so much, Edgar.
00:37:50 --> 00:37:53: And we're going to transition now to our final speaker,
00:37:53 --> 00:37:53: Isabel.
00:37:54 --> 00:37:55: One second, Isabel.
00:37:58 --> 00:37:58: Go ahead.
00:38:00 --> 00:38:00: OK.
00:38:00 --> 00:38:01: Let me just see if I can.
00:38:02 --> 00:38:03: Perfect.
00:38:04 --> 00:38:06: Well, thanks very much for for having me.
00:38:06 --> 00:38:08: My name is Isabel De Carries.
00:38:08 --> 00:38:10: I work with CIBC Caribbean.
00:38:11 --> 00:38:13: We're a large commercial bank in the Caribbean.
00:38:13 --> 00:38:16: I'm based in Barbados but I lead our hospitality and
00:38:16 --> 00:38:19: real estate practice for their region in itself.
00:38:21 --> 00:38:24: So I I, you know I'm speaking predominantly from a
00:38:24 --> 00:38:26: from a Caribbean contacts.
00:38:26 --> 00:38:29: But to put it into perspective as my Prime Minister
00:38:29 --> 00:38:32: Mia Motley would say, we're really sort of on the
00:38:33 --> 00:38:36: the front lines of climate change just given one.
00:38:37 --> 00:38:42: There are susceptibility as as island states within the region
00:38:42 --> 00:38:46: to rising sea levels, but also as it relates to
00:38:46 --> 00:38:52: what is increasingly turbulent hurricane seasons And the
Caribbean really
00:38:53 --> 00:38:57: has a ton of reliance on tourism with the expectation
00:38:57 --> 00:39:02: that our growth in tourism is actually going to double
00:39:02 --> 00:39:05: the the global sorry expectations.
00:39:05 --> 00:39:08: And a lot of what will influence our ability to
00:39:08 --> 00:39:12: achieve that will be down to investments in infrastructure and
00:39:12 --> 00:39:14: the impact of sustainability.
00:39:15 --> 00:39:18: So from a from a firm perspective and more and
00:39:18 --> 00:39:23: more commercial banks are looking at their ESG policies and
00:39:23 --> 00:39:26: I just will touch very briefly on some of the
00:39:26 --> 00:39:30: areas that are important to us and and try and
00:39:30 --> 00:39:34: link those to how we look at financing solutions.

00:39:35 --> 00:39:38: I'm sorry, I'm seeing a note that my camera is
00:39:38 --> 00:39:39: off, but my camera is on.
00:39:39 --> 00:39:41: I'll just turn it off and turn it back on
00:39:41 --> 00:39:42: again and see if that makes a difference.
00:39:43 --> 00:39:45: OK, great.
00:39:45 --> 00:39:47: Thanks for the the feedback.
00:39:48 --> 00:39:51: So, so one of the first areas that we're looking
00:39:51 --> 00:39:53: at is, is obviously biodiversity loss.
00:39:53 --> 00:39:57: So as I said tourism is a very heavily infrastructure
00:39:57 --> 00:40:01: dependent industry and we have seen a considerable
amount of
00:40:01 --> 00:40:03: growth in the last number of years.
00:40:04 --> 00:40:07: A a good example of this from my island Barbados,
00:40:07 --> 00:40:09: is 15 years ago in a in a section along
00:40:10 --> 00:40:13: the coastline you had houses and infrastructure on both
sides
00:40:13 --> 00:40:14: of the road.
00:40:15 --> 00:40:17: You know, today there's only houses on one side of
00:40:17 --> 00:40:18: the road.
00:40:18 --> 00:40:21: So it's really just a a very kind of easy
00:40:21 --> 00:40:24: example of the impact that the expansion into some of
00:40:24 --> 00:40:25: these projects can have.
00:40:26 --> 00:40:28: And so it's really important to us that we look
00:40:28 --> 00:40:31: at, we're starting to take an even more medium to
00:40:31 --> 00:40:33: longer term view on a number of the projects that
00:40:33 --> 00:40:36: we're financing and and the impact that they're going to
00:40:36 --> 00:40:37: have.
00:40:37 --> 00:40:40: Another area that's of of importance is going to be
00:40:40 --> 00:40:42: a resource scarcity.
00:40:42 --> 00:40:45: And we talked there, the two panelists spoke a little
00:40:45 --> 00:40:48: bit in terms of of worker management and solutions and
00:40:48 --> 00:40:52: that becomes ever more important again as we look at
00:40:52 --> 00:40:55: you know, newer, bigger projects and the impact of those
00:40:55 --> 00:40:58: and also just in terms of the impact then on
00:40:58 --> 00:41:01: resource scarcity when it comes to food.
00:41:01 --> 00:41:03: So the region in itself is a net importer and
00:41:03 --> 00:41:07: there's a lot of reliance which means that we're very
00:41:07 --> 00:41:10: success susceptible, sorry to commodity prices.
00:41:10 --> 00:41:13: And so a lot of when we're looking at financing
00:41:13 --> 00:41:17: of individual projects, we need to contextualize this and how
00:41:17 --> 00:41:22: the financing industry is looking generally at the broader
financing
00:41:22 --> 00:41:25: in support of some of these areas and then of

00:41:25 --> 00:41:28: course environmental regulations and compliance.

00:41:28 --> 00:41:31: So this is a key aspect for any project developer

00:41:31 --> 00:41:35: or borrower that they really understand the environmental policies in

00:41:35 --> 00:41:39: each of the islands that they are looking to invest

00:41:39 --> 00:41:39: in.

00:41:39 --> 00:41:43: There are different frameworks and they are constantly evolving.

00:41:43 --> 00:41:46: And it's a lot of collaboration, which I'll speak to

00:41:46 --> 00:41:49: you in a later slide between the private sector and

00:41:49 --> 00:41:53: the sovereigns and sharing information and ensuring that we do

00:41:53 --> 00:41:57: have stakeholder engagement as I think the previous speakers really

00:41:57 --> 00:41:57: spoke to.

00:41:59 --> 00:42:02: And then also a challenge for us and in our

00:42:02 --> 00:42:07: area is also enforceability of some of those environmental policies.

00:42:07 --> 00:42:09: So it's it is an area that from a risk

00:42:09 --> 00:42:13: standpoint is of important to us and then the community

00:42:13 --> 00:42:14: and social impact.

00:42:14 --> 00:42:17: So I think some of the examples that we just

00:42:17 --> 00:42:21: saw are great in terms of the integration of stakeholders.

00:42:21 --> 00:42:23: What we've seen is maybe on the, on the downside

00:42:24 --> 00:42:27: of that of where you can have local opposition actually

00:42:27 --> 00:42:28: halt or stall projects.

00:42:29 --> 00:42:32: That has a huge impact obviously to developer returns.

00:42:32 --> 00:42:35: So really ensuring you have stakeholder engagement early on can

00:42:35 --> 00:42:39: help from a return standpoint for the developer, which obviously

00:42:39 --> 00:42:43: has an impact on the, you know, cash flow availability

00:42:43 --> 00:42:44: ultimately to repair debts.

00:42:45 --> 00:42:49: And then also looking at the integration of infrastructure as

00:42:49 --> 00:42:52: it relates to projects and doing so as much as

00:42:53 --> 00:42:55: possible in a more holistic way.

00:42:55 --> 00:42:59: There are areas that we see where you look at

00:42:59 --> 00:43:04: expansion, say of birthing facility for cruise structures, but the

00:43:04 --> 00:43:10: significant then increase in volume from passengers hasn't necessarily translated

00:43:10 --> 00:43:16: to the external infrastructure around those areas, which puts pressure

00:43:16 --> 00:43:21: on communities, but also in terms of the commercial viability

00:43:21 --> 00:43:23: just given how the connectivity is.

00:43:23 --> 00:43:26: So again, it's very important.
00:43:27 --> 00:43:28: And then I spoke a little bit to the impact
00:43:28 --> 00:43:29: of climate change.
00:43:29 --> 00:43:33: Obviously, rising sea levels and some of the challenges just
00:43:33 --> 00:43:36: in terms of the hurricane seasons and more extreme events.
00:43:37 --> 00:43:41: And this really has three kind of critical pieces for
00:43:41 --> 00:43:42: us is 1.
00:43:42 --> 00:43:46: The more intensity it's looking at how resilient has existing
00:43:46 --> 00:43:50: infrastructure to withstand, what's the damage going to look
like?
00:43:50 --> 00:43:54: And then more importantly, at least what we're seeing is
00:43:54 --> 00:43:57: the impact to insurance, not only from a cost standpoint,
00:43:57 --> 00:44:00: but actually the availability at all of sub limits for
00:44:01 --> 00:44:02: both windstorm and flooding.
00:44:03 --> 00:44:05: And that in itself will have a huge impact in
00:44:06 --> 00:44:10: terms of financing because lenders will always want to
ensure
00:44:10 --> 00:44:13: that or an extreme event to take place that the
00:44:13 --> 00:44:15: banks and we are commercial banks.
00:44:15 --> 00:44:20: So ultimately we're we're lending depositors funds that we're
going
00:44:20 --> 00:44:23: to be repaid in that in those scenarios.
00:44:23 --> 00:44:26: And we're seeing more and more examples of where there
00:44:26 --> 00:44:30: is not actually the availability of that type of cover
00:44:30 --> 00:44:33: to cover what would be a more traditional level of
00:44:33 --> 00:44:35: financing for these projects.
00:44:35 --> 00:44:38: And so that in itself can have a hindrance in
00:44:38 --> 00:44:43: terms of the ability of projects getting financed and ultimately
00:44:43 --> 00:44:47: then completed and and and then finally we're looking more
00:44:47 --> 00:44:51: and more at the long term environmental risks.
00:44:51 --> 00:44:53: So you know I mean I gave the example of
00:44:53 --> 00:44:55: homes being on both sides of the of of the
00:44:55 --> 00:44:55: road.
00:44:55 --> 00:44:58: But if we think about you know large and and
00:44:58 --> 00:45:02: again this is maybe more specific to our area, but
00:45:02 --> 00:45:05: the growing number of all inclusive resorts and you know
00:45:05 --> 00:45:09: the country that I'm from you typically or originally would
00:45:09 --> 00:45:12: have had a hotel for 50 guests or 50 rooms,
00:45:12 --> 00:45:13: 80 rooms.
00:45:13 --> 00:45:17: We're now looking at financings for projects in excess of
00:45:17 --> 00:45:18: 1000 rooms.
00:45:18 --> 00:45:22: And so the infrastructure that that takes and particularly
tourists

00:45:22 --> 00:45:24: like to come to, you know, warm sunny beaches, what
00:45:24 --> 00:45:27: impact does that level of infrastructure look like and the
00:45:28 --> 00:45:30: impact that it's going to have on the surrounding areas,
00:45:30 --> 00:45:33: particularly, you know, biodiversity as we spoke about.
00:45:33 --> 00:45:36: So it's really important and we're taking a look at
00:45:36 --> 00:45:39: balancing what are going to be the short term gains
00:45:39 --> 00:45:43: with the really the long term environmental impact and
sustainability.

00:45:49 --> 00:45:50: OK.

00:45:50 --> 00:45:54: So, oh, apologies, I've gone too quickly.

00:46:01 --> 00:46:02: OK, Sorry.

00:46:02 --> 00:46:04: I got a new computer yesterday and I'm having an
00:46:04 --> 00:46:06: immense amount of challenges.

00:46:06 --> 00:46:08: So appreciate your patience.

00:46:09 --> 00:46:09: OK.

00:46:09 --> 00:46:11: So what does that look like now in terms of
00:46:11 --> 00:46:12: finding solutions?

00:46:12 --> 00:46:16: So really, we're looking at an enhanced risk assessment
framework.

00:46:16 --> 00:46:19: So it's really important that we make sure that we
00:46:19 --> 00:46:22: have the right amount of expertise helping us guide to
00:46:22 --> 00:46:25: understand the risks of these projects.

00:46:25 --> 00:46:28: And the more we can minimize the risk, the the
00:46:28 --> 00:46:31: greater we'll be able to provide in terms of flexibility
00:46:31 --> 00:46:32: on financing solutions.

00:46:33 --> 00:46:35: You know, if you think of an airport as an
00:46:35 --> 00:46:39: example under a 30 year concession and you're providing
financing

00:46:39 --> 00:46:41: of let's say 15 to 20 years, you want to
00:46:41 --> 00:46:44: know that there's going to be viability of that project.

00:46:45 --> 00:46:47: And so we look at 1:00 whether there is the
00:46:47 --> 00:46:50: need for an environmental impact assessment.

00:46:51 --> 00:46:54: We're also placing reliance on independent engineers to give
us

00:46:54 --> 00:46:57: a third party assessment to ensure that the type of
00:46:57 --> 00:47:00: project is you know fit for purpose and it's going
00:47:00 --> 00:47:02: to have the type of longevity.

00:47:02 --> 00:47:05: And then finally, we're also look not finally.

00:47:05 --> 00:47:08: So we're also looking at the insurance reports to ensure
00:47:08 --> 00:47:11: that there's coverage enough and the more we can get
00:47:11 --> 00:47:15: comfortable from a risk standpoint, from a project
perspective, again,

00:47:15 --> 00:47:18: the more flexible we can be, the longer we can

00:47:18 --> 00:47:21: go out on the tenors and frankly the less expensive
00:47:21 --> 00:47:22: it's going to be.
00:47:22 --> 00:47:25: And the final piece as it relates to the the
00:47:25 --> 00:47:28: kind of reliance on on expertise that's really around the
00:47:28 --> 00:47:29: appraisal or the value.
00:47:30 --> 00:47:33: Ultimately what we're looking for is for cash flows to
00:47:33 --> 00:47:36: be sufficient to repay the debt and hopefully make sure
00:47:36 --> 00:47:38: that the equity gets a decent return.
00:47:38 --> 00:47:40: And so from that perspective, a lot of it's going
00:47:40 --> 00:47:42: to be driven by as I said, appraisals and those
00:47:42 --> 00:47:43: cash flows.
00:47:43 --> 00:47:46: Well, it's if those cash flows are at risk in
00:47:46 --> 00:47:50: five years time because of external structures that relate to
00:47:50 --> 00:47:54: climate, then that makes it harder for banks and financiers
00:47:54 --> 00:47:58: in general to provide the length that often is required
00:47:58 --> 00:48:00: to to meet the developers return metrics.
00:48:02 --> 00:48:05: And then looking as I mentioned earlier on the regulatory
00:48:05 --> 00:48:07: compliance and really the collaboration.
00:48:07 --> 00:48:10: So we're as an institution, we're looking not only at
00:48:10 --> 00:48:15: the regulatory frameworks that exist, but we're also looking at
00:48:15 --> 00:48:18: our own frameworks to ensure that we are meeting some
00:48:18 --> 00:48:22: of those challenges that I mentioned earlier and that also
00:48:22 --> 00:48:25: our sponsors are committed to a lot of these kind
00:48:25 --> 00:48:29: of green initiatives that will support the sustainability of their
00:48:29 --> 00:48:32: operations on a more holistic basis.
00:48:33 --> 00:48:36: And so that really kind of leads into sustainable practices.
00:48:36 --> 00:48:41: Then looking at green technologies, reducing their carbon
00:48:41 --> 00:48:44: footprint and
00:48:44 --> 00:48:45: how generally they're set up to be as clean as
00:48:45 --> 00:48:48: possible.
00:48:48 --> 00:48:52: And also when it comes to the architecture and the
00:48:52 --> 00:48:55: the project design, you know with lead and other
00:48:56 --> 00:48:59: certifications
00:49:00 --> 00:49:03: that it's really set up with sustainability in mind and
00:49:03 --> 00:49:07: that really helps in terms of capacity building and knowledge
00:49:07 --> 00:49:10: sharing where you can bring stakeholders together.
00:49:10 --> 00:49:14: We have a client in the Cayman Islands who's developing
00:49:15 --> 00:49:18: as a lead certified extension of their commercial program
00:49:18 --> 00:49:20: that's
00:49:10 --> 00:49:14: being done within the context of the Georgetown
00:49:15 --> 00:49:18: rehabilitation project.
00:49:18 --> 00:49:20: So it's very much integrated and supported by what the
00:49:18 --> 00:49:20: government is also doing and that also helps I think

00:49:21 --> 00:49:24: from a more sustainable, sustainable, sorry and long term planning

00:49:24 --> 00:49:25: perspective.

00:49:26 --> 00:49:29: And then you know capacity building and knowledge sharing.

00:49:29 --> 00:49:32: So we provide a lot of support generally to to

00:49:32 --> 00:49:35: the university and we also have a a forum re

00:49:35 --> 00:49:41: annually, sorry the Caribbean Infrastructure Forum which really brings together

00:49:41 --> 00:49:45: thought leaders from around the the region to share knowledge,

00:49:45 --> 00:49:49: to share information and to hopefully try and leverage each

00:49:49 --> 00:49:53: other's expertises in different areas for the benefit of the

00:49:53 --> 00:49:54: broader Caribbean.

00:49:58 --> 00:50:06: And no too quick, OK.

00:50:06 --> 00:50:08: So when it comes then down to our commitment to

00:50:08 --> 00:50:09: sustainable finance.

00:50:09 --> 00:50:13: So again looking at this on a more holistic basis,

00:50:13 --> 00:50:18: we have a very strong commitment to renewable energy investments.

00:50:18 --> 00:50:22: We've arranged more than \$600 million across the Caribbean in

00:50:22 --> 00:50:26: renewable energy, solar, wind, battery storage and that's really just

00:50:26 --> 00:50:28: helping to support an overall community.

00:50:29 --> 00:50:33: I mentioned blue financing, we we more most recently won

00:50:33 --> 00:50:37: an award for 140, 6,000,000 blue loan that we did

00:50:37 --> 00:50:38: for Barbados.

00:50:38 --> 00:50:42: And we're also looking at other blue-green and many other

00:50:42 --> 00:50:46: colors that would repair in terms of providing support to

00:50:46 --> 00:50:51: governments to unlock savings in their debt schemes to finance

00:50:51 --> 00:50:54: the type of sustainable projects.

00:50:54 --> 00:50:57: So for those of you that may not be familiar,

00:50:57 --> 00:51:03: it's essentially redo, it's replacing higher costing debt, existing debt

00:51:03 --> 00:51:08: with lower funding and using those savings towards conservation projects

00:51:08 --> 00:51:12: in in the example of Barbados it was for marine

00:51:12 --> 00:51:17: conservation and then also looking more generally at sustainability linked

00:51:17 --> 00:51:18: financing.

00:51:18 --> 00:51:21: So I mentioned earlier in terms of how reducing the

00:51:21 --> 00:51:25: risk can result in more flexible financing structures, but also

00:51:25 --> 00:51:29: then that is extended to, you know LEED certifications and

00:51:29 --> 00:51:33: also the facilitation on the retail side of more sustainability,
00:51:33 --> 00:51:35: sustainability linked financings.
00:51:37 --> 00:51:40: And then just a bit of an extension of that.
00:51:40 --> 00:51:44: And again maybe more specific to our region, a lot
00:51:44 --> 00:51:49: of the Caribbean sovereigns have relatively high debt to GD
00:51:49 --> 00:51:49: PS.
00:51:49 --> 00:51:52: And so the impact of that really is helping to
00:51:52 --> 00:51:57: support looking at PPP frameworks to again reduce their
external
00:51:57 --> 00:52:01: sovereign debt amounts and allow for the expansion of
infrastructure
00:52:01 --> 00:52:02: projects.
00:52:02 --> 00:52:05: So it is an area that we're very committed to
00:52:05 --> 00:52:09: in helping to support the overall region and in creating
00:52:09 --> 00:52:12: a more sustainable sort of future.
00:52:13 --> 00:52:14: And that's it.
00:52:15 --> 00:52:16: So thank you very much.
00:52:17 --> 00:52:19: Thank you so much, Isabel, and a huge thank you
00:52:20 --> 00:52:21: to all of our speakers.
00:52:21 --> 00:52:25: We'll now go into the Q&A portion.
00:52:26 --> 00:52:30: And please for all the audience members enter your
questions
00:52:30 --> 00:52:34: into the Q&A function in Zoom and I'll stop sharing.
00:52:35 --> 00:52:36: Yeah.
00:52:36 --> 00:52:38: So let me just take a look there.
00:52:40 --> 00:52:43: Adam Greenfader asked if all of these projects take 10
00:52:43 --> 00:52:46: to 15 years, what can we do to speed up
00:52:46 --> 00:52:47: the resiliency works?
00:52:48 --> 00:52:50: And any of the panelists are welcome to to respond.
00:52:55 --> 00:52:56: Maybe Edgar, do you want to start on that?
00:53:00 --> 00:53:02: Sorry, I don't see the questions here.
00:53:02 --> 00:53:04: I'm just reading them out loud.
00:53:04 --> 00:53:07: So if all of the projects take around 10 to
00:53:07 --> 00:53:10: 15 years, what can we do to speed up these
00:53:10 --> 00:53:11: resilience projects?
00:53:13 --> 00:53:16: Yeah, I mean that is, I mean there's I think
00:53:16 --> 00:53:19: a political load in in that in that question.
00:53:20 --> 00:53:23: I think when we know what the risk is, if
00:53:23 --> 00:53:28: we have a good understanding of where the solutions are
00:53:28 --> 00:53:31: headed, then procedures should follow.
00:53:31 --> 00:53:34: I mean a procedure, a process, a permit, you know
00:53:34 --> 00:53:37: is is never a goal and objective by itself.
00:53:37 --> 00:53:41: So I think we simply need need to cut through

00:53:41 --> 00:53:46: certain ribbons and and be faster, more agile and how
00:53:46 --> 00:53:49: we get to to implementation faster.
00:53:49 --> 00:53:52: And there's different ways to to do that.
00:53:52 --> 00:53:55: I mean if if the the investment is too large
00:53:55 --> 00:53:59: or if the strategy is too big, too complex.
00:53:59 --> 00:54:01: I mean the big you by itself is a good
00:54:01 --> 00:54:01: example.
00:54:02 --> 00:54:03: You know trim it down.
00:54:03 --> 00:54:06: Is there an opportunity to make a project or intervention
00:54:06 --> 00:54:07: smaller?
00:54:07 --> 00:54:09: Is there a way to start off with a pilot
00:54:09 --> 00:54:13: project to kind of test the landscape, test the collaboration
00:54:13 --> 00:54:17: with multiple stakeholders including that the finance piece to
to
00:54:17 --> 00:54:17: that.
00:54:18 --> 00:54:21: So there's a lot of opportunity I think to to
00:54:21 --> 00:54:25: learn and to apply those lessons learned to, you know,
00:54:25 --> 00:54:29: the bigger investments that are needed to to adapt in
00:54:29 --> 00:54:30: our, our urban centres.
00:54:30 --> 00:54:34: But I mean foremost it needs a mindset of, you
00:54:34 --> 00:54:38: know, how can we be faster, be more agile and
00:54:38 --> 00:54:41: not, you know, well allow put our cards on the
00:54:41 --> 00:54:44: table, we're all on the same site.
00:54:44 --> 00:54:47: I think New York isn't is a very fascinating place
00:54:47 --> 00:54:51: where the city is is collaborating with the encore of
00:54:51 --> 00:54:51: engineers.
00:54:52 --> 00:54:55: You know, what do these processes look like knowing that
00:54:55 --> 00:54:57: federal funding takes time to be allocated.
00:54:57 --> 00:55:00: So let's start that process as soon as possible and
00:55:00 --> 00:55:01: try to find each other.
00:55:03 --> 00:55:04: Great answer.
00:55:04 --> 00:55:07: And then just to add to that, there's adaptive solutions,
00:55:07 --> 00:55:10: so you can start with a smaller size project and
00:55:10 --> 00:55:12: then add on to that project over time.
00:55:14 --> 00:55:15: Edgar, is that how?
00:55:15 --> 00:55:18: Or maybe Isabel, is that easy to finance when you're
00:55:18 --> 00:55:22: doing it in an adaptive way over time, incrementally?
00:55:24 --> 00:55:25: I think it it really does depends.
00:55:25 --> 00:55:28: So what often happens is the level, the base amount
00:55:28 --> 00:55:32: of infrastructure, it tends to be quite expensive and it's
00:55:32 --> 00:55:35: not yet going to yield cash flows that are going
00:55:35 --> 00:55:38: to be look which you're going to be your source

00:55:38 --> 00:55:39: of repayment.

00:55:39 --> 00:55:41: So it reach needs to reach a point that it's

00:55:41 --> 00:55:44: going to start generating returns in order to be able

00:55:44 --> 00:55:45: to repay the debt.

00:55:45 --> 00:55:47: So it's not to say that it's impossible, but it

00:55:48 --> 00:55:50: does need to be looked looked at in a more

00:55:50 --> 00:55:51: structured way.

00:55:52 --> 00:55:52: Great.

00:55:53 --> 00:55:55: OK, another question from the audience.

00:55:55 --> 00:55:59: Does the panel have suggestions for working with local code

00:55:59 --> 00:56:01: adaptation for innovative design?

00:56:01 --> 00:56:05: For example, dunes and sea turtle nesting are heavily

00:56:05 --> 00:56:08: protected

00:56:08 --> 00:56:11: along the Florida East Coast, so any project remotely similar

00:56:11 --> 00:56:15: in concept to the Dune project shown in the first

00:56:15 --> 00:56:17: presentation would be an incredible challenge with the

00:56:17 --> 00:56:19: existing code.

00:56:19 --> 00:56:21: Not to mention Florida's coastal geology.

00:56:21 --> 00:56:21: So maybe Stefan?

00:56:21 --> 00:56:22: Yeah.

00:56:22 --> 00:56:25: No, that's that's a good question.

00:56:25 --> 00:56:28: And yeah, even in the Netherlands, sometimes these things

00:56:28 --> 00:56:29: can

00:56:29 --> 00:56:30: really hold up projects for a long time when they

00:56:30 --> 00:56:32: discover a particular species.

00:56:32 --> 00:56:33: So.

00:56:33 --> 00:56:36: So yeah, I think it goes back to what Edgar

00:56:36 --> 00:56:36: was saying.

00:56:36 --> 00:56:38: If there's a political will there, there will be a

00:56:38 --> 00:56:42: way.

00:56:42 --> 00:56:46: So you know, there's also a saying that it actually

00:56:46 --> 00:56:50: takes 2 disasters to really change people's mind that the

00:56:50 --> 00:56:52: the after the first one, people still don't realize that

00:56:52 --> 00:56:56: this this could happen again.

00:56:56 --> 00:57:00: And then when it happens the second time, that's when

00:57:00 --> 00:57:02: the political situation changes and then suddenly all these

00:57:02 --> 00:57:04: reforms

00:57:04 --> 00:57:06: are are seen as necessary.

00:57:06 --> 00:57:09: Good point.

00:57:09 --> 00:57:12: And then a similar question.

00:57:12 --> 00:57:15: One of the images discouraged raising individual homes out

00:57:15 --> 00:57:18: of

00:57:18 --> 00:57:21: the floodplain as a mitigation measure.

00:57:12 --> 00:57:14: Why is this a bad idea for protecting homes in
00:57:14 --> 00:57:16: existing neighborhoods?
00:57:16 --> 00:57:17: Probably stuff in again.
00:57:17 --> 00:57:18: Yeah.
00:57:18 --> 00:57:20: So those examples are from the Jersey Shore and actually
00:57:21 --> 00:57:23: the state of New Jersey is walking back from these
00:57:23 --> 00:57:25: type of policies because it's still kind of a very
00:57:26 --> 00:57:29: threatening situation even for the homeowner by raising
themselves up.
00:57:30 --> 00:57:33: You know the it's it's could still lead to very
00:57:33 --> 00:57:34: dangerous situations.
00:57:35 --> 00:57:40: And on top of that, it does not really contribute
00:57:40 --> 00:57:46: to, you know, high quality living experience unless it's really
00:57:46 --> 00:57:48: done properly.
00:57:48 --> 00:57:52: But most of those cases are not done in a
00:57:52 --> 00:57:54: in a proper way.
00:57:54 --> 00:57:57: So so that leads to these issues.
00:57:58 --> 00:58:02: Maybe to build on that, Mariana, it's, you know, elevation
00:58:02 --> 00:58:05: of course is is your friend in mitigating thought risk.
00:58:06 --> 00:58:09: But you also also have to realize that the road
00:58:09 --> 00:58:14: infrastructure and the utility infrastructure, everything still sits
with the
00:58:14 --> 00:58:16: the house raising at that same elevation.
00:58:16 --> 00:58:19: And you know, it's not just the sea level rise,
00:58:19 --> 00:58:23: it's also the the precipitation, the backflow issues that may
00:58:23 --> 00:58:27: cause flooding in streets that will, yeah, will result in
00:58:27 --> 00:58:31: in limited livability in these kind of communities where you
00:58:31 --> 00:58:33: see these, these raised houses.
00:58:33 --> 00:58:36: So yes, it can buy you time, it can buy
00:58:36 --> 00:58:37: you maybe a few decades.
00:58:38 --> 00:58:43: But after that, beyond that, bigger strategies are needed.
00:58:43 --> 00:58:47: And and part of that approach, you know, would probably
00:58:47 --> 00:58:50: likely would be close to retreat or retreat up to
00:58:50 --> 00:58:55: higher ground, which means repurposing, taking certain
developments out of
00:58:55 --> 00:58:57: the floodplain, out of harm's way.
00:58:59 --> 00:58:59: Good point.
00:58:59 --> 00:59:00: Thank you.
00:59:00 --> 00:59:01: I have two questions for Isabel.
00:59:02 --> 00:59:05: Does the 1st is, does your bank follow us a
00:59:05 --> 00:59:09: specific sustainability framework for your project evaluation
or have you
00:59:09 --> 00:59:10: developed your own?

00:59:11 --> 00:59:14: How do you include real estate, physical climate change risks
00:59:14 --> 00:59:15: into your evaluations?
00:59:15 --> 00:59:19: What frameworks would you say are presently useful to
provide
00:59:19 --> 00:59:23: financial incentives for climate, coastal physical resilience?
00:59:23 --> 00:59:24: And then the second, I know that's a lot of
00:59:24 --> 00:59:25: questions going on.
00:59:25 --> 00:59:29: And the second question is, I'm from Krakow living in
00:59:29 --> 00:59:29: New York.
00:59:29 --> 00:59:33: Wondering if your bank also engages in the kind of
00:59:33 --> 00:59:35: sustainable financing structures?
00:59:36 --> 00:59:38: I'll take the second one first because it's super easy.
00:59:39 --> 00:59:43: Yes, we did the the wind farm for new carousel.
00:59:43 --> 00:59:47: We're actually currently divesting of our operations there, but
it
00:59:47 --> 00:59:49: won't stop us from looking at us more from terms
00:59:49 --> 00:59:50: of our retail presence.
00:59:51 --> 00:59:54: But we're absolutely still looking at at other projects in
00:59:54 --> 00:59:57: the renewable sector and other infrastructure projects.
00:59:58 --> 01:00:01: With respect to the first question, so CIBC has a
01:00:01 --> 01:00:05: very strong internal and sustainability framework which we've
been leveraging,
01:00:05 --> 01:00:06: but we.
01:00:06 --> 01:00:08: We also need to adapt it to the realities of
01:00:08 --> 01:00:11: living in the Caribbean, which I'm sure we would all
01:00:11 --> 01:00:15: appreciate is slightly dissimilar to a North American context.
01:00:15 --> 01:00:18: So that's what we're currently developing and I think it
01:00:18 --> 01:00:22: will continue to evolve as you know, more information
becomes
01:00:22 --> 01:00:25: available when it comes to the real estate, physical climate
01:00:25 --> 01:00:25: change.
01:00:25 --> 01:00:29: And I'm hoping I'm interpreting, interpreting this question
correctly.
01:00:30 --> 01:00:32: So that's really where we're going to be looking a
01:00:32 --> 01:00:36: lot at the, you know, the architecture, the design, the
01:00:36 --> 01:00:39: contractor, whether it's LEED certified or otherwise.
01:00:39 --> 01:00:42: And that will help us in terms of our overall
01:00:42 --> 01:00:45: assessment in terms of financial incentives.
01:00:45 --> 01:00:48: There are other multilateral banks that have a more
established
01:00:49 --> 01:00:52: framework where you meet certain sustainability goals and
that has
01:00:52 --> 01:00:54: an impact on your financing.
01:00:54 --> 01:00:56: And then there are also other other banks that we

01:00:56 --> 01:00:58: know of where it's more punitive.

01:00:58 --> 01:01:00: You don't hit those goals and your interest rates go

01:01:00 --> 01:01:00: up.

01:01:00 --> 01:01:03: We haven't yet reached a stage where it is as

01:01:03 --> 01:01:04: prescriptive as that.

01:01:05 --> 01:01:07: But I will say that the more we can reduce

01:01:07 --> 01:01:10: the risk, so the more we can maybe take a

01:01:10 --> 01:01:14: step back, the more we can understand the project, its

01:01:14 --> 01:01:18: impact to the environment and its overall sustainability, which should

01:01:18 --> 01:01:19: drive cash flows.

01:01:20 --> 01:01:23: The more we can then understand and mitigate those risks,

01:01:23 --> 01:01:26: the more we'll be able to price in that mitigation

01:01:26 --> 01:01:28: and reduce the overall cost of funding.

01:01:29 --> 01:01:30: Wonderful.

01:01:30 --> 01:01:32: Thank you all so much for your answers.

01:01:32 --> 01:01:35: We are hitting the end of our time on this

01:01:35 --> 01:01:38: webinar, but we still have time for everyone to join

01:01:38 --> 01:01:42: us for networking and we can continue these questions and

01:01:42 --> 01:01:43: answers.

01:01:43 --> 01:01:45: So I'm just going to do a quick little wrap

01:01:45 --> 01:01:46: up here.

01:01:47 --> 01:01:49: We have also I just wanted to do a quick

01:01:49 --> 01:01:51: plug for an event we have coming up.

01:01:51 --> 01:01:56: It is the, it's the Southeastern Coastal Development Forum.

01:01:56 --> 01:02:00: This will be in person May 13th through 14th in

01:02:00 --> 01:02:01: Savannah, GA.

01:02:01 --> 01:02:04: So I'm just going to put the link to register

01:02:04 --> 01:02:05: in the chat box.

01:02:06 --> 01:02:08: Actually, I don't know if everyone can see this.

01:02:09 --> 01:02:09: Nope.

01:02:09 --> 01:02:10: I'll put it to everyone.

01:02:11 --> 01:02:12: There you go.

01:02:12 --> 01:02:15: And then, yes, please take a look at that link

01:02:15 --> 01:02:19: to learn more and to register And then to join

01:02:19 --> 01:02:20: us over at networking.

01:02:20 --> 01:02:24: I'm going to put the Zoom details.

01:02:25 --> 01:02:27: We have to switch because we're in a webinar currently

01:02:27 --> 01:02:29: and you can't do breakout rooms.

01:02:29 --> 01:02:31: But if you use these Zoom details, I just put

01:02:31 --> 01:02:32: in the chat.

01:02:32 --> 01:02:34: You can join us over in the Zoom meeting where

01:02:34 --> 01:02:36: we'll do networking and breakout rooms.
01:02:36 --> 01:02:38: We'll have discussion questions.
01:02:38 --> 01:02:40: The speakers will hopefully join us as well.
01:02:41 --> 01:02:45: And then finally, we'd love for you to please fill
01:02:45 --> 01:02:49: out this survey which helps us improve our programming
over
01:02:49 --> 01:02:50: time.
01:02:50 --> 01:02:52: So I mean also put a third link in the
01:02:52 --> 01:02:53: chat box to everyone.
01:02:54 --> 01:02:56: If you could just take a moment to fill out
01:02:56 --> 01:02:58: the survey and let us know how we did with
01:02:58 --> 01:03:01: this webinar and what you are hoping for for future
01:03:01 --> 01:03:02: webinars that would really help us.
01:03:03 --> 01:03:05: So thank you so much for joining us for this
01:03:05 --> 01:03:06: webinar.
01:03:06 --> 01:03:09: We look forward to seeing all of you in the
01:03:09 --> 01:03:13: Zoom meeting where we're going to do some networking and
01:03:13 --> 01:03:16: that Zoom is hosted by ULI, Southeast Florida and the
01:03:16 --> 01:03:17: Caribbean.
01:03:17 --> 01:03:20: So we really thank them for their partnership on this.
01:03:21 --> 01:03:22: OK, great.
01:03:22 --> 01:03:31: We'll see you over there and all the speakers.
01:03:31 --> 01:03:33: If you can also try this link, I think we
01:03:34 --> 01:03:35: can stop recording here.

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