

Webinar

The Materials Movement: Creating Value with Better Building Materials

Date: December 01, 2023

00:00:11 --> 00:00:13: Hi everyone, Welcome. 00:00:14 --> 00:00:16: It looks like people are trickling in from the waiting 00:00:16 --> 00:00:16: room. 00:00:18 --> 00:00:19: We'll get started in a couple of minutes. 00:00:20 --> 00:00:22: While we're waiting, feel free to introduce yourself in the 00:00:22 --> 00:00:24: chat and tell us where you're joining us from. 00:00:27 --> 00:00:28: Thanks for being here. 00:00:49 --> 00:00:49: All right. 00:00:50 --> 00:00:51: Well, go ahead and get started. 00:00:51 --> 00:00:52: So welcome. 00:00:52 --> 00:00:55: My name is Victoria Ostreich and I'm Senior Manager with 00:00:55 --> 00:00:58: the Urban Land Institute's Randall Lewis Center for Sustainability in 00:00:58 --> 00:00:59: Real Estate. 00:01:00 --> 00:01:02: I'm really excited to have you here and tell you 00:01:02 --> 00:01:05: a little bit about the materials movement. 00:01:05 --> 00:01:08: We've assembled an amazing panel of experts who are going 00:01:08 --> 00:01:11: to share their perspectives on the real estate industries movement 00:01:11 --> 00:01:13: towards healthy and sustainable building materials. 00:01:14 --> 00:01:16: We'll talk about why material choices are important for the environment, for future tenants and for communities. 00:01:16 --> 00:01:19: 00:01:20 --> 00:01:23: We'll also talk about how professionals across the value chain 00:01:23 --> 00:01:26: are successfully making more informed choices to integrate better materials 00:01:26 --> 00:01:28: that are good for people on the planet. 00:01:29 --> 00:01:31: We're really glad to have you with us, so let's 00:01:31 --> 00:01:31: get started.

| 00:01:33> 00:01:35: | I'm excited to introduce you to today's speakers. |
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| 00:01:36> 00:01:39: | Sydney Mainster is the Vice President of Sustainability and Design |
| 00:01:39> 00:01:42: | Management for the Durst Organization, one of the oldest family |
| 00:01:42> 00:01:45: | run commercial and residential real estate companies in New York |
| 00:01:45> 00:01:45: | City. |
| 00:01:46> 00:01:49: | Suzanne Fallander is the Vice President of Global ESG for |
| 00:01:49> 00:01:52: | Prologis, which acquires, develops and maintains the largest collection of |
| 00:01:53> 00:01:55: | high quality logistics real estate in the world. |
| 00:01:56> 00:01:59: | Heidi Creighton is the Vice President of Sustainability for Skanska |
| 00:01:59> 00:02:00: | USA Commercial Development. |
| 00:02:01> 00:02:04: | Skanska is a 135 year old development and construction company |
| 00:02:04> 00:02:07: | that began in Sweden and operates globally. |
| 00:02:09> 00:02:12: | Today's webinar was organized through the Uli Randall Lewis Center |
| 00:02:12> 00:02:15: | for Sustainability in Real Estate, which leads the industry in |
| 00:02:15> 00:02:19: | creating places and buildings where people and the environment thrive. |
| 00:02:23> 00:02:24: | Here's our agenda for today. |
| 00:02:25> 00:02:27: | First, we're going to do a quick poll to better |
| 00:02:27> 00:02:29: | understand who's in the audience. |
| 00:02:29> 00:02:32: | Then I'm going to provide a brief overview of the |
| 00:02:32> 00:02:33: | Materials Movement report. |
| 00:02:34> 00:02:37: | Later, our panelists will present their firm's approach to sustainable |
| 00:02:37> 00:02:40: | building materials and highlight example projects that are leading this |
| 00:02:40> 00:02:41: | movement. |
| 00:02:42> 00:02:45: | Following the presentations, we'll move to a panel discussion and |
| 00:02:45> 00:02:47: | then open it up for panelists to answer your questions. |
| 00:02:48> 00:02:50: | So as you're listening in, please enter your questions in |
| 00:02:50> 00:02:51: | the Q&A box. |
| 00:02:51> 00:02:54: | You can also use the upvote feature to elevate questions |
| 00:02:54> 00:02:55: | that you like. |
| 00:02:56> 00:02:58: | And finally, I want to flag that this webinar is |
| 00:02:58> 00:03:01: | being recorded and we'll share a recording with all the |
| 00:03:01> 00:03:04: | participants and publish it on UL Eyes Knowledge Finder website. |
| 00:03:06> 00:03:08: | It looks like folks are introducing themselves in the chat. |

| 00:03:09 → 00:03:10: Welcome. 00:03:11 → 00:03:14: So we're going to go ahead and launch our poll. 00:03:14 → 00:03:17: We this is a three question anonymous poll for you to answer. 00:03:18 → 00:03:22: We're just hoping to get a better sense of who's in the virtual room and what you already know about embodied carbon and material health. 00:03:25 → 00:03:26: Don't worry, it's not a test. 00:03:26 → 00:03:28: We're just hoping to learn a little bit more about you. 00:03:28 → 00:03:31: And if you've never heard of these terms, don't worry, sith sith ight. 00:03:31 → 00:03:31: We'll we'll define them for you in just a minute. 00:03:34 → 00:03:31: We'll we'll define them for you in just a minute. 00:03:34 → 00:03:31: So we'll give this about 30 seconds or so for people to respond. 00:03:54 → 00:03:54: Looks like we have almost everyone responding. 00:04:30 → 00:04:30: Great. 00:04:30 → 00:04:30: Great. 00:04:30 → 00:04:31: We'll go ahead and end the poll. 00:04:30 → 00:04:32: We'll go ahead and end the poll. 00:04:30 → 00:04:36: It looks like we have a diverse group and we have mixed levels of knowledge of these topics, which is really great. 00:04:40 → 00:04:40: on:04:40: on:04:41: So I do want to just provide a couple of quick definitions to make sure that we're all on the same page. 00:04:59 → 00:04:55: Embodied carbon is the greenhouse gas emissions that arise from the production, transportation, installation, and disposal of building materials. 00:05:02 → 00:05:05: 50% of a building's total carbon emissions over its lifetime. 00:05:09 → 00:05:12: larger share of a building's total carbon footprint. 00:05:16 → 00:05:12: larger share of a building's total carbon footprint. 00:05:16 → 00:05:21: like embodied carbon, this encompasses the health impacts that can | 00:03:08> 00:03:09: | Thanks for doing that. |
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| | 00:05:18> 00:05:21: | • |

| 00:05:21> 00:05:24: | occur across the entire life cycle of a product, so |
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| 00:05:24> 00:05:27: | this includes people who are exposed to that product while |
| 00:05:27> 00:05:30: | it's being extracted or manufactured, recycled, or put into a |
| 00:05:30> 00:05:30: | landfill. |
| 00:05:31> 00:05:34: | This graphic from the Carbon Leadership Forum shows the different |
| 00:05:34> 00:05:35: | stages of a product's life cycle. |
| 00:05:36> 00:05:39: | This is obviously for embodied carbon, but it's a useful |
| 00:05:39> 00:05:41: | frame for thinking about material health impacts as well. |
| 00:05:46> 00:05:49: | So diving into the drivers of this movement towards better |
| 00:05:49> 00:05:51: | materials, the first driver is regulation. |
| 00:05:51> 00:05:54: | It seems like almost every day there are new regulations |
| 00:05:54> 00:05:57: | and financial disclosures that are asking companies to report on |
| 00:05:57> 00:05:58: | the embodied carbon of their buildings. |
| 00:05:59> 00:06:00: | And it's not just regulation. |
| 00:06:00> 00:06:03: | In the embodied carbon space, we're also seeing increased scrutiny |
| 00:06:03> 00:06:06: | of certain classes of chemicals that are commonly used in |
| 00:06:06> 00:06:07: | building products. |
| 00:06:07> 00:06:09: | One class you might have heard of is P Foss, |
| 00:06:09> 00:06:12: | which is known more commonly as Forever Chemicals. |
| 00:06:13> 00:06:16: | Green building certifications are also motivating a shift in the |
| 00:06:16> 00:06:16: | industry. |
| 00:06:17> 00:06:20: | More and more, these certifications are demanding that real estate |
| 00:06:20> 00:06:23: | meet certain criteria for low embodied carbon materials, healthy materials |
| 00:06:24> 00:06:25: | or improved air quality. |
| 00:06:26> 00:06:29: | The next driver that we're seeing is demand from occupiers |
| 00:06:29> 00:06:30: | in tenant spaces. |
| 00:06:30> 00:06:33: | Building materials can be an important expression of a company's |
| 00:06:34> 00:06:37: | brand, and many large space users such as Google, Salesforce, |
| 00:06:37> 00:06:40: | Meta and Kaiser Permanente are leading the charge and demanding |
| 00:06:40> 00:06:44: | these better materials because they know that healthy materials create |
| 00:06:44> 00:06:48: | healthy spaces leading to greater employee health, Wellness and productivity. |
| 00:06:49> 00:06:52: | As a result of this demand, there's also financial benefit. |
| 00:06:52> 00:06:56: | Buildings that are sustainable and healthy, especially those with certifications, |
| | |

| 00:06:56> 00:06:58: 00:07:00> 00:07:03: | are transacting higher rent premiums and attracting tenants. And finally, ESG investing is another key driver towards |
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| | better |
| 00:07:03> 00:07:04: | materials. |
| 00:07:04> 00:07:08: | Investors are increasingly demanding ESG performance, and so many companies |
| 00:07:08> 00:07:12: | are formally integrating embodied carbon and material health in their |
| 00:07:12> 00:07:13: | ESG frameworks. |
| 00:07:14> 00:07:17: | Net 0 carbon targets often include ambitions for reducing Scope |
| 00:07:17> 00:07:21: | 3 emissions, which encompass all of the indirect emissions that |
| 00:07:21> 00:07:24: | occur both upstream and downstream of a company's activities in |
| 00:07:25> 00:07:25: | real estate. |
| 00:07:25> 00:07:28: | That includes the emissions from construction materials. |
| 00:07:30> 00:07:32: | So how do our material choices affect humans in the |
| 00:07:32> 00:07:32: | environment? |
| 00:07:33> 00:07:35: | There are five key impact categories. |
| 00:07:35> 00:07:38: | These categories were initially created by the AIA Architecture and |
| 00:07:38> 00:07:41: | Design Materials Pledge and are starting to form the basis |
| 00:07:41> 00:07:45: | of many conversations and initiatives for reducing material impacts in |
| 00:07:45> 00:07:48: | the industry, including the Mindful Materials Common Materials Framework. |
| 00:07:49> 00:07:51: | The first category of impact is climate. |
| 00:07:52> 00:07:56: | Around 11% of global carbon emissions are from the manufacturer, |
| 00:07:56> 00:07:58: | transportation and disposal of building materials. |
| 00:08:00> 00:08:01: | The second category is human health. |
| 00:08:02> 00:08:05: | We all spend about 90% of our lives inside buildings |
| 00:08:05> 00:08:07: | and are exposed to chemicals and other substances on a |
| 00:08:07> 00:08:08: | daily basis. |
| 00:08:09> 00:08:12: | The choices that development teams make about building materials directly |
| 00:08:12> 00:08:16: | affect the health of future tenants, workers and communities. |
| 00:08:17> 00:08:20: | There are also equity implications of our material choices. |
| 00:08:21> 00:08:24: | People of colour and those with low incomes are disproportionately |
| 00:08:24> 00:08:25: | impacted by toxic chemicals. |
| 00:08:26> 00:08:29: | They're more likely to have industrial manufacturing facilities sited in |
| 00:08:29> 00:08:31: | their neighbourhoods and face air pollution as a result. |

| 00:08:32> 00:08:35: | And complex global supply chains can hide unethical working conditions |
|---------------------|---|
| 00:08:35> 00:08:37: | and even modern slavery. |
| 00:08:38> 00:08:40: | The next category is ecosystems. |
| 00:08:41> 00:08:45: | Ecosystems around the world are impacted by material |
| | extraction, manufacturer |
| 00:08:45> 00:08:45: | and disposal. |
| 00:08:46> 00:08:49: | Insufficient regulation in certain areas can allow invasive and unethical |
| 00:08:49> 00:08:53: | extraction practices that deplete natural resource stocks before they can |
| 00:08:53> 00:08:53: | regenerate. |
| 00:08:55> 00:08:57: | And finally, circularity, which is just a fancy word for |
| 00:08:57> 00:09:01: | a system that reuses products indefinitely without waste, currently in |
| 00:09:01> 00:09:04: | the built environment, is one of the largest producers of |
| 00:09:04> 00:09:06: | solid waste and only a very small fraction of those |
| 00:09:06> 00:09:07: | materials are reused. |
| 00:09:08> 00:09:12: | In addition, many recycling processes require energy and |
| | release carbon |
| 00:09:12> 00:09:15: | to grind up, burn, or convert that material to different |
| 00:09:15> 00:09:15: | products. |
| 00:09:19> 00:09:21: | The good news is that there are many strategies that |
| 00:09:21> 00:09:24: | teams can implement at every stage of the development process. |
| 00:09:24> 00:09:26: | We won't have time to walk through every strategy, but |
| 00:09:26> 00:09:28: | I do want to highlight a couple of key points. |
| 00:09:29> 00:09:30: | The first one is to start early. |
| 00:09:31> 00:09:33: | By starting to think about materials at the outset of |
| 00:09:33> 00:09:37: | a project, you can consider alternative structural materials, engage manufacturers, |
| 00:09:37> 00:09:39: | and potentially save cost down the line. |
| 00:09:40> 00:09:42: | The second point is to reuse and repurpose as much |
| 00:09:42> 00:09:43: | as possible. |
| 00:09:43> 00:09:46: | The most sustainable building is one that already exists. |
| 00:09:46> 00:09:49: | Of course, we're in real estate and not building is |
| 00:09:49> 00:09:50: | not always an option. |
| 00:09:50> 00:09:53: | So it's important to look for ways to use salvage |
| 00:09:53> 00:09:56: | materials when possible and think about how to maximize efficiency |
| 00:09:56> 00:09:57: | in the design. |
| 00:09:57> 00:09:58: | To do more with less. |
| 00:09:59> 00:10:02: | #3 is to build your requirements for embodied carbon and |
| 00:10:02> 00:10:05: | material health into your specifications. |
| | |

| 00:10:05> 00:10:07: | This signals to potential partners that you are serious about |
|---------------------|--|
| 00:10:07> 00:10:09: | choosing better materials. |
| 00:10:09> 00:10:13: | Many organizations, including Building Transparency and |
| | others, offer example spec |
| 00:10:14> 00:10:15: | language to help you do this. |
| 00:10:16> 00:10:19: | And last, there are software programs and online resources, many |
| 00:10:19> 00:10:22: | of which are free, to help teams make more informed |
| 00:10:22> 00:10:22: | choices. |
| 00:10:23> 00:10:26: | These products can help model the embodied carbon and chemicals |
| 00:10:26> 00:10:27: | during project scoping. |
| 00:10:27> 00:10:30: | They can identify and evaluate low carbon or healthy products, |
| 00:10:30> 00:10:33: | and they can help teams report on its successes at |
| 00:10:33> 00:10:34: | project completion. |
| 00:10:34> 00:10:37: | This market is advancing rapidly and it's really exciting to |
| 00:10:37> 00:10:38: | see. |
| 00:10:39> 00:10:41: | There's obviously a lot more here, but in the interest |
| 00:10:41> 00:10:43: | of time, I'm going to keep going. |
| 00:10:43> 00:10:45: | So if you like this content and want to learn |
| 00:10:46> 00:10:48: | more, keep an eye out for the materials movement report |
| 00:10:48> 00:10:49: | coming out very soon. |
| 00:10:49> 00:10:52: | The report highlights more details around the topics that I |
| 00:10:52> 00:10:55: | just highlighted, including the market drivers that are inspiring a |
| 00:10:55> 00:10:58: | shift in the industry, how materials impact human health in |
| 00:10:58> 00:11:02: | the environment and strategies for incorporating better materials throughout the |
| 00:11:02> 00:11:03: | development process. |
| 00:11:03> 00:11:06: | It also shares 9 innovative projects that are leading the |
| 00:11:06> 00:11:08: | way, a few of which will be featured in this |
| 00:11:08> 00:11:09: | presentation. |
| 00:11:10> 00:11:12: | So with that, I'm going to hand it over to |
| 00:11:12> 00:11:13: | Sydney mainster Sydney. |
| 00:11:16> 00:11:21: | Victoria, thank you so much for introducing this entire webinar, |
| 00:11:21> 00:11:21: | man. |
| 00:11:21> 00:11:24: | Can you can introduce every panel I'm on because that |
| 00:11:25> 00:11:26: | was an amazing, amazing intro. |
| 00:11:27> 00:11:29: | So hello everyone. |
| 00:11:29> 00:11:30: | My name is Sydney Mainster. |
| 00:11:30> 00:11:33: | I'm the Vice President of Sustainability and Design Management for |

| 00:11:33> 00:11:34: | the Durst Organization. |
|---------------------|---|
| 00:11:35> 00:11:35: | Next slide please. |
| 00:11:38> 00:11:41: | So today I've been asked to speak about Durst approach |
| 00:11:41> 00:11:45: | to selecting and installing sustainable building products using Spen as |
| 00:11:45> 00:11:46: | a case study. |
| 00:11:46> 00:11:49: | So just a quick overview of this building, it's located |
| 00:11:49> 00:11:50: | in Long Island City. |
| 00:11:51> 00:11:55: | The architect was hand out Interiors done by Seldorf |
| | Architects. |
| 00:11:55> 00:11:59: | 978,000 square feet, 71 stories. |
| 00:11:59> 00:12:03: | It's that tall building you see in the back there, |
| 00:12:03> 00:12:08: | 958 residential units total, of which 288 are affordable units. |
| 00:12:10> 00:12:14: | That development also included the restoration of a historic 1927 |
| 00:12:14> 00:12:17: | Long Island City clock tower building. |
| 00:12:17> 00:12:19: | You can see it right in front of the of |
| 00:12:19> 00:12:23: | the building there, just next to the the elevated subway |
| 00:12:23> 00:12:23: | line. |
| 00:12:24> 00:12:27: | It opened in 2022 and it is the first building |
| 00:12:27> 00:12:31: | in the world, excuse me, first multi family building in |
| 00:12:31> 00:12:36: | the world to achieve lead before new construction platinum level |
| 00:12:36> 00:12:37: | certification. |
| 00:12:37> 00:12:38: | Next slide please. |
| 00:12:40> 00:12:43: | So before I go into more detail about the Durst |
| 00:12:43> 00:12:47: | approach at Spen, I think it's important to introduce Durst |
| 00:12:47> 00:12:51: | as a company as Spen really exemplifies decades of commitment |
| 00:12:51> 00:12:54: | to designing and constructing sustainable buildings. |
| 00:12:55> 00:12:57: | So as you see on the slide here, the Durst |
| 00:12:57> 00:13:00: | mission is to build, own and operate many of the |
| 00:13:00> 00:13:02: | world's most innovative and efficient buildings. |
| 00:13:03> 00:13:07: | We create value for our tenants by developing sustainable residential |
| 00:13:07> 00:13:10: | and commercial properties in which people live, work and thrive. |
| 00:13:11> 00:13:13: | There's that thrive word again, Victoria. |
| 00:13:14> 00:13:18: | As you can see, sustainability is, is directly integrated into |
| 00:13:18> 00:13:19: | that mission statement. |
| 00:13:20> 00:13:20: | Next slide please. |
| 00:13:23> 00:13:28: | As developers, owners and operators, we operate 13,000,000 square feet |
| 00:13:28> 00:13:32: | of premier office space in Manhattan, including 151 which |

| | was |
|----------------------|---|
| 00:13:32> 00:13:36: | formerly known as Four Times Square, the world's first green |
| 00:13:36> 00:13:41: | skyscraper, 1 Bryant Park, the first LEED Platinum |
| | skyscraper and |
| 00:13:41> 00:13:45: | One World Trade Center, the tallest building designed to |
| 00.42.45 > 00.42.40. | achieve LEED Gold certification in the US And so tall in |
| 00:13:45> 00:13:49: | |
| 00:13:49> 00:13:51: | fact that it actually goes off the slide. |
| 00:13:51> 00:13:53: | And if I try to actually scale this slide, all |
| 00:13:54> 00:13:55: | the other buildings become quite tiny. |
| 00:13:56> 00:13:57: | Next slide please. |
| 00:13:59> 00:14:03: | The nearest residential portfolio has 3400 units across 3,000,000 square |
| 00:14:03> 00:14:06: | feet with several thousand more in the pipeline. |
| 00:14:07> 00:14:10: | Spen is the most recently completed residential property. |
| 00:14:11> 00:14:11: | Next slide please. |
| 00:14:13> 00:14:16: | So all ground up development design decisions are made to |
| 00:14:16> 00:14:21: | balance these four sustainability focused areas, water conservation and quality, |
| 00:14:21> 00:14:26: | energy efficiency, material stream optimization and indoor Environmental Quality. |
| 00:14:26> 00:14:30: | There is a relationship and trade-offs between selections made in |
| 00:14:30> 00:14:34: | each of these categories and it's important to test out |
| 00:14:34> 00:14:38: | and weigh out options when you're making design decisions of |
| 00:14:38> 00:14:40: | how they impact each of these. |
| 00:14:41> 00:14:41: | Next slide please. |
| 00:14:43> 00:14:47: | So here's a very busy slide that I love to |
| 00:14:47> 00:14:52: | show because it shows how how our values around choosing |
| 00:14:53> 00:14:57: | materials play out in terms of decision making. |
| 00:14:57> 00:14:59: | A decision making tree, let's call it. |
| 00:14:59> 00:15:02: | The big take away from this slide is that when |
| 00:15:02> 00:15:05: | you work with us on a project, the project selection |
| 00:15:05> 00:15:08: | requires iterative review for many team members. |
| 00:15:08> 00:15:12: | That could include design team members, operations team members, people |
| 00:15:12> 00:15:16: | that are have used this before or even the manufacturer, |
| 00:15:16> 00:15:21: | excuse me, definitely the manufacturers themselves, the |
| | design team members |
| 00:15:21> 00:15:23: | will do initial product research. |

material

Consider the their sustainability goals as integral to the

selection and really the ideal selection balances

00:15:23 --> 00:15:28:

00:15:28 --> 00:15:33:

| | performance, sustainability, cost, |
|---------------------|---|
| 00:15:33> 00:15:37: | availability, appearance, maintenance, end of life reuse. |
| 00:15:37> 00:15:41: | But really few perfect ideal products exist on the market. |
| 00:15:42> 00:15:44: | One item to add is that I I created this |
| 00:15:44> 00:15:48: | decision flow chart actually back in 2015 and it is |
| 00:15:48> 00:15:51: | still how we assess and evaluate projects Excuse me which |
| 00:15:51> 00:15:54: | products go into our projects today right please. |
| 00:15:54> 00:15:58: | So at Spen and an all new Durst development projects, |
| 00:15:58> 00:16:02: | building products are pre vetted during the design phase with |
| 00:16:02> 00:16:07: | follow up confirmation of materials selected during |
| | construction administration. |
| 00:16:08> 00:16:12: | We do not want procurement and or installation the installation |
| 00:16:12> 00:16:15: | portion of the project to be delayed due to building |
| 00:16:15> 00:16:19: | products not meeting health or sustainable design criteria |
| | and not |
| 00:16:19> 00:16:23: | only being discovered through the submittal review process. |
| 00:16:23> 00:16:27: | Subs and our construction managers should not be selecting |
| | the |
| 00:16:27> 00:16:28: | building products. |
| 00:16:28> 00:16:31: | We want that to be overseen by the design professionals. |
| 00:16:31> 00:16:32: | I can't stress that enough. |
| 00:16:33> 00:16:36: | That means listed products in our specs. |
| 00:16:36> 00:16:39: | So when the submittals come through we are not seeing |
| 00:16:39> 00:16:41: | something for the first time. |
| 00:16:41> 00:16:43: | Is it 100% perfect? |
| 00:16:43> 00:16:46: | No, but we try to minimize as many surprises coming |
| 00:16:46> 00:16:49: | through or showing up on site as possible. |
| 00:16:50> 00:16:54: | During Spen we created our own building product database and |
| 00:16:54> 00:16:58: | workflow tool to enable the design team to better and |
| 00:16:58> 00:17:01: | more efficiently be able to complete that vetting process of |
| 00:17:01> 00:17:05: | material of building products and getting them listed into the |
| 00:17:05> 00:17:06: | spec. |
| 00:17:06> 00:17:09: | The slide you see shows a snapshot of the range |
| 00:17:09> 00:17:11: | of products in our tool as well as vetting status |
| 00:17:11> 00:17:13: | on those products of and as well as which are |
| 00:17:13> 00:17:15: | included in our best in class. |
| 00:17:15> 00:17:18: | So this is a number of product projects along the |
| 00:17:18> 00:17:21: | bottom and their status in the vetting process. |
| 00:17:22> 00:17:27: | Our residential project currently under construction 2030 Hollets Point has |
| 00:17:27> 00:17:30: | over 1400 products listed in our database, which is about |

| 00:17:30> 00:17:34: | the number we'll typically see in a high rise multifamily |
|---------------------|---|
| 00:17:34> 00:17:35: | project. |
| 00:17:35> 00:17:38: | Again, we try to avoid to the greatest extent possible |
| 00:17:38> 00:17:41: | leaving any spec section without a listed product option. |
| 00:17:42> 00:17:43: | Next slide please. |
| 00:17:44> 00:17:46: | So I'd like to talk a little bit about an |
| 00:17:47> 00:17:49: | example of some of the criteria we use for our |
| 00:17:49> 00:17:50: | building products. |
| 00:17:51> 00:17:56: | We each product category has bespoke criteria that is associated |
| 00:17:56> 00:18:01: | with either the installation or use or known health concerns |
| 00:18:01> 00:18:03: | around that product. |
| 00:18:03> 00:18:08: | I think this is well exemplified by our cabinetry criteria. |
| 00:18:09> 00:18:13: | So specifically with cabinetry we have criteria around FSD certification. |
| 00:18:13> 00:18:16: | We have criteria around formaldehyde content. |
| 00:18:17> 00:18:20: | But the one of the most important criteria we have |
| 00:18:20> 00:18:21: | is around emissions. |
| 00:18:21> 00:18:27: | And because the cabinetry on our project is manufactured bespoke |
| 00:18:27> 00:18:31: | for the project, we require that we do spot testing |
| 00:18:31> 00:18:35: | of that cabinetry for emissions throughout the project. |
| 00:18:36> 00:18:42: | So we require a CPH version 1.22017 residential scenario. |
| 00:18:43> 00:18:45: | We need to see the full report as part of |
| 00:18:45> 00:18:46: | this. |
| 00:18:46> 00:18:49: | This happens first immediately after reward. |
| 00:18:49> 00:18:52: | We require a mockup that gets sent for testing. |
| 00:18:52> 00:18:56: | And then because we don't want surprises coming off the |
| 00:18:56> 00:19:01: | full production line, we actually randomly pull select cabinets want |
| 00:19:01> 00:19:05: | from each delivery that we actually send ourselves to spot |
| 00:19:05> 00:19:08: | check and do emissions testing on to make sure that |
| 00:19:08> 00:19:12: | what we tested right after the buy is exactly what |
| 00:19:12> 00:19:13: | we're receiving. |
| 00:19:14> 00:19:17: | And you can imagine that helps keep the fabricator on |
| 00:19:17> 00:19:21: | their toes as they know that we are testing it. |
| 00:19:21> 00:19:25: | It also helps to remind the the Subs and on |
| 00:19:25> 00:19:29: | the trades that we take this quite seriously and that |
| 00:19:30> 00:19:34: | we indeed are going to be doing this random testing. |
| 00:19:34> 00:19:37: | We also conducted a full indoor air quality test at |
| 00:19:37> 00:19:38: | the end of the project. |
| 00:19:39> 00:19:41: | So it's as critical to the for those Subs to |
| 00:19:41> 00:19:45: | understand that in order to pass that IAT test, they |
| | |

| 00:19:45> 00:19:48: | need to make sure they're installing products that are listed |
|---------------------|--|
| 00:19:49> 00:19:52: | and tested and meet our criteria because that is the |
| 00:19:52> 00:19:55: | ultimate confirmation that we've met our target. |
| 00:19:55> 00:19:56: | Next slide please. |
| 00:19:58> 00:20:02: | One of the other pieces that we included in Sven |
| 00:20:02> 00:20:06: | was a post consumer glass in lieu of Portland cement |
| 00:20:06> 00:20:07: | in our concrete. |
| 00:20:07> 00:20:12: | This ground glass PUZZLIN or GGP was incorporated in a |
| 00:20:12> 00:20:16: | slab circled here in orange as a test of viability, |
| 00:20:16> 00:20:20: | poor ease of pouring and workability in a slab on |
| 00:20:20> 00:20:21: | deck scenario. |
| 00:20:21> 00:20:22: | Fairly low risk. |
| 00:20:23> 00:20:25: | This pour as well as a pilot in another Durst |
| 00:20:25> 00:20:29: | multifamily high rise project give us the confidence to incorporate |
| 00:20:30> 00:20:33: | ground ground glass pazlin at a much larger scale on |
| 00:20:33> 00:20:35: | our two multifamily towers currently underway. |
| 00:20:36> 00:20:39: | We've been able to incorporate it in over 18,000 cubic |
| 00:20:39> 00:20:43: | yards of concrete on the project as a partial replacement |
| 00:20:43> 00:20:46: | for Portland cement in the mixes, right please. |
| 00:20:48> 00:20:51: | And then finally as mentioned Sven is the the first |
| 00:20:51> 00:20:54: | multi family building in the world to achieve lead before |
| 00:20:54> 00:20:57: | new construction platinum certification. |
| 00:20:57> 00:21:01: | Durst views lead certification as a reflection of our core |
| 00:21:01> 00:21:06: | sustainability values and criteria and especially regards to materials, health |
| 00:21:06> 00:21:07: | and indoor quality. |
| 00:21:07> 00:21:10: | Indoor air quality, excuse me, but it's not the driver. |
| 00:21:10> 00:21:14: | While the sustain why the sustainability criteria is actually placed |
| 00:21:14> 00:21:18: | on building product selection without changes to our approach to |
| 00:21:18> 00:21:21: | sustainable building product specification and use. |
| 00:21:21> 00:21:25: | The project had over 100 contributing EP DS in the |
| 00:21:25> 00:21:30: | environmental product declarations and health project declarations HPDS. |
| 00:21:30> 00:21:34: | We also had fantastic success passing our IQ test which |
| 00:21:34> 00:21:37: | we rewrote to reflect the lower than lead allowed values |
| 00:21:37> 00:21:41: | we'd actually seen that we could accomplish on our other |
| 00:21:41> 00:21:44: | existing multi family projects due to the stringency of our |
| 00:21:44> 00:21:47: | health, our healthy building product criteria. |
| 00:21:48> 00:21:51: | Our aim with spend as with all our projects is |
| 00:21:51> 00:21:54: | not just to provide a place where residents can live |
| | |

| 00:21:54> 00:21:57: | and thrive, but to demonstrate to the entire community that |
|---------------------|---|
| 00:21:57> 00:22:01: | this high standard is achievable with the right criteria, correct |
| 00:22:01> 00:22:03: | processes and attention put into place. |
| 00:22:06> 00:22:06: | Thank you very much. |
| 00:22:09> 00:22:09: | Thank you, Sydney. |
| 00:22:10> 00:22:10: | Wonderful. |
| 00:22:11> 00:22:13: | So now we're going to transition to Suzanne. |
| 00:22:15> 00:22:15: | Great. |
| 00:22:15> 00:22:17: | Thank you and and great project Sydney. |
| 00:22:17> 00:22:20: | Looking forward to hearing even more in the discussion about |
| 00:22:20> 00:22:22: | that and and thank you everyone, really happy to be |
| 00:22:22> 00:22:23: | here with you today. |
| 00:22:23> 00:22:26: | I'm Suzanne Founder, I head up global ESG at Prologis. |
| 00:22:26> 00:22:30: | And for those of you not as familiar with Prologis, |
| 00:22:30> 00:22:34: | we're the global leader in logistics real estate and we've |
| 00:22:34> 00:22:37: | got 1.2 billion square feet in 19 countries. |
| 00:22:37> 00:22:41: | And our portfolio is really distribution centers, warehouses that we |
| 00:22:41> 00:22:44: | develop and lease out to customers around the world. |
| 00:22:44> 00:22:46: | This might be some of the largest global companies who |
| 00:22:47> 00:22:49: | are a key part of their supply chain as well |
| 00:22:49> 00:22:51: | as many small and medium sized businesses. |
| 00:22:51> 00:22:55: | And so what's important though in our strategies, we're not |
| 00:22:55> 00:22:59: | just providing the space and also helping them on kind |
| 00:22:59> 00:23:03: | of looking at how to incorporate green aspects into development, |
| 00:23:03> 00:23:08: | but we're also increasingly providing services related to renewable energy, |
| 00:23:08> 00:23:11: | helping them with their EV trucks to transition to more |
| 00:23:11> 00:23:16: | sustainable transportation as well as other sustainability services. |
| 00:23:17> 00:23:20: | We also when you think about construction, every real estate |
| 00:23:20> 00:23:22: | asset class is really different. |
| 00:23:22> 00:23:24: | So the things that Sydney can innovate on and multi |
| 00:23:24> 00:23:27: | family are different than what you could do at industrial. |
| 00:23:27> 00:23:30: | If you think about a warehouse and the roof space |
| 00:23:30> 00:23:33: | that we have, a big part of our strategy is |
| 00:23:33> 00:23:34: | being able to scale solar. |
| 00:23:35> 00:23:37: | And so we right now are #2 in the US |
| 00:23:37> 00:23:40: | for on site solar and it's a big part of |
| 00:23:40> 00:23:42: | our our strategy going forward. |
| 00:23:43> 00:23:48: | Next slide, we think about that scale just for context, |
| | |

| 00:23:48> 00:23:53: 00:23:53> 00:23:57: 00:23:57> 00:24:00: | but 2.8% of the world's GDP goes through a Prologis building in a year and so and 1.1 million people work under a Prologis roof. |
|---|--|
| 00:24:00> 00:24:03: | So we think about that and and take that scale |
| 00:24:03> 00:24:07: | really we see that comes with great responsibility but also |
| 00:24:07> 00:24:09: | we see that as an opportunity for how do we |
| 00:24:09> 00:24:13: | enable all those customers and and really help Dr. |
| 00:24:13> 00:24:15: | sustainability not just for us but kind of more more |
| 00:24:15> 00:24:16: | broadly. |
| 00:24:16> 00:24:20: | If you go to the next slide, one back, we |
| 00:24:20> 00:24:26: | have been setting public goals for many years. |
| 00:24:26> 00:24:31: | We have sustainability goals related to building certifications. |
| 00:24:31> 00:24:34: | Every new development is either LEED certified or one of |
| 00:24:34> 00:24:37: | the other certifications in the countries where we operate. |
| 00:24:37> 00:24:42: | We also have a number of well certified buildings going |
| 00:24:42> 00:24:46: | on to the Wellness piece, but last year we levelled |
| 00:24:46> 00:24:50: | our upper ambition to drive a new net zero strategy. |
| 00:24:50> 00:24:53: | We'd already had an approved science based target, but we |
| 00:24:53> 00:24:57: | aligned with the science based targets initiative net 0 standard |
| 00:24:57> 00:25:00: | to drive net zero across our full value chain. |
| 00:25:00> 00:25:04: | So not only Prologis's own operations but also across our |
| 00:25:04> 00:25:07: | full portfolio and value chain by 2040. |
| 00:25:08> 00:25:10: | We have a number of interim targets that help us |
| 00:25:10> 00:25:13: | to get there including getting to one GW of solar. |
| 00:25:13> 00:25:18: | We're around 500 megawatts right now, but we're and we'll |
| 00:25:18> 00:25:22: | get to for own operations sooner than 2040 by 20-30. |
| 00:25:22> 00:25:25: | If you go to the next slide, one of the |
| 00:25:25> 00:25:29: | things put this in context and and Victoria did a |
| 00:25:29> 00:25:33: | great job kind of talking about different types of emissions |
| 00:25:33> 00:25:37: | and and what level of control you have over it, |
| 00:25:37> 00:25:41: | 99, .9% of Prologis's emissions are indirect, they're scope 3 |
| 00:25:41> 00:25:44: | and of that 75% is the energy use of our |
| 00:25:44> 00:25:46: | customers in our buildings. |
| 00:25:47> 00:25:50: | So for that we're working with them to drive energy |
| 00:25:50> 00:25:54: | efficient design and also helping them to reduce their, their |
| 00:25:54> 00:25:58: | energy needs, but also we're helping with renewable energy. |
| 00:25:58> 00:26:01: | So whatever energy they do use, they can use green |
| 00:26:01> 00:26:01: | power. |
| 00:26:02> 00:26:04: | The 25% is really what we're going to talk about |
| 00:26:04> 00:26:06: | in the case study today, which is related to construction |
| 00:26:06> 00:26:08: | and development and embodied carbon. |
| | |

| 00:26:08> 00:26:12: | And when you think about construction of an industrial building, |
|---------------------|---|
| 00:26:12> 00:26:15: | we don't have as many different products as Sydney. |
| 00:26:15> 00:26:18: | We don't have lots of very special beautiful cabinets and |
| 00:26:18> 00:26:21: | different things, but we have a lot of concrete, we |
| 00:26:21> 00:26:25: | have roof materials, steel and then a number of other |
| 00:26:25> 00:26:27: | things that we're we're looking at. |
| 00:26:27> 00:26:29: | And so a lot of our strategy has been how |
| 00:26:29> 00:26:32: | do we Sidney has done with her company, what are |
| 00:26:32> 00:26:35: | the standards we have to do in our specs and |
| 00:26:35> 00:26:37: | then what are the ways we can innovate. |
| 00:26:38> 00:26:41: | So next slide, so one of the first things we |
| 00:26:41> 00:26:45: | did after launching the net zero goal was to put |
| 00:26:45> 00:26:49: | in place new specs for our our new construction. |
| 00:26:49> 00:26:53: | And so this also is you know focused on making |
| 00:26:53> 00:26:56: | sure every building is solar and EV ready, you know |
| 00:26:56> 00:27:00: | making sure you have a roof life that can support |
| 00:27:00> 00:27:04: | solar for the long term, also high efficiency HVAC materials |
| 00:27:04> 00:27:08: | and also completing a life cycle assessment for every new |
| 00:27:08> 00:27:12: | building that helps us to really get that embodied carbon |
| 00:27:12> 00:27:13: | piece. |
| 00:27:14> 00:27:16: | The other thing we did is we had standards for |
| 00:27:16> 00:27:17: | retrofit. |
| 00:27:17> 00:27:19: | So going back to some of Victoria said at the |
| 00:27:19> 00:27:22: | start, we want to make sure everything is ready in |
| 00:27:22> 00:27:25: | our new buildings, but also how are we looking at |
| 00:27:25> 00:27:28: | our existing portfolio and making the right investments and upgrades |
| 00:27:28> 00:27:31: | as we have new tenants coming in or as we |
| 00:27:31> 00:27:32: | need to replace equipment. |
| 00:27:33> 00:27:39: | So next slide, so we have within piloting and testing |
| 00:27:39> 00:27:42: | different types of materials. |
| 00:27:42> 00:27:44: | Some of these I think Sydney had had covered in |
| 00:27:44> 00:27:45: | hers as well. |
| 00:27:45> 00:27:48: | And really the the key comes down to making sure |
| 00:27:48> 00:27:51: | because the buildings need to last for a long time |
| 00:27:51> 00:27:54: | and because of the industrial usage of the building, we |
| 00:27:54> 00:27:57: | need to make sure they still meet all of our |
| 00:27:57> 00:27:59: | long term quality needs, durability. |
| 00:27:59> 00:28:02: | But we, we do really approach this from an innovation |
| 00:28:02> 00:28:05: | perspective because we have in 19 countries, we have very |
| 00:28:05> 00:28:09: | different environmental climates, different weather and so some things that |

| 00:28:10> 00:28:12: | might work in one location or with one type of |
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| 00:28:12> 00:28:14: | build might not work in another. |
| 00:28:14> 00:28:18: | So we've really worked with our our local teams also |
| 00:28:18> 00:28:19: | to innovate. |
| 00:28:19> 00:28:22: | We go to the next slide. |
| 00:28:23> 00:28:25: | So this brings to me to the case study we'll |
| 00:28:25> 00:28:26: | talk about today. |
| 00:28:26> 00:28:28: | This is Prologis Evergreen. |
| 00:28:28> 00:28:30: | I'm really excited about this project. |
| 00:28:30> 00:28:33: | It's a project in Brampton ON Canada and it was |
| 00:28:33> 00:28:36: | a project that as the team was kicking off said, |
| 00:28:36> 00:28:40: | you know, there's lots of different things we could test |
| 00:28:40> 00:28:43: | and we could test mass timber or we could test |
| 00:28:43> 00:28:45: | you know, different things. |
| 00:28:45> 00:28:49: | And they had come across the supplier in Canada that |
| 00:28:49> 00:28:54: | creates a low carbon alternative to the concrete panels and |
| 00:28:54> 00:28:57: | they're called Nexi, Nexi panels. |
| 00:28:57> 00:29:01: | And what they they have a lower embodied carbon around |
| 00:29:01> 00:29:06: | in this project, 17% lower embodied carbon than a traditional |
| 00:29:06> 00:29:08: | concrete panel. |
| 00:29:08> 00:29:10: | And then they also have a lot of other benefits. |
| 00:29:10> 00:29:13: | And so we decided not just to test one or |
| 00:29:13> 00:29:15: | the other, but test those two things together. |
| 00:29:15> 00:29:18: | And I think that's one of the key learnings as |
| 00:29:18> 00:29:20: | we go through our, our testing and piloting is, is |
| 00:29:21> 00:29:24: | really understanding what we can accomplish when we're looking at |
| 00:29:24> 00:29:27: | the the whole design and the building and the different |
| 00:29:27> 00:29:28: | things we can test together. |
| 00:29:29> 00:29:32: | So you know when we think about Nexi panels, it's |
| 00:29:32> 00:29:36: | the lower embodied carbon but also some of the life |
| 00:29:36> 00:29:39: | cycle pieces it low uses less water kind of in |
| 00:29:39> 00:29:40: | construction. |
| 00:29:40> 00:29:43: | There are benefits in terms of the time to put |
| 00:29:44> 00:29:47: | that in place because it's pre poured and and we're |
| 00:29:47> 00:29:49: | able to pull that together quicker. |
| 00:29:51> 00:29:54: | You know from mast timber, everything we're using for mast |
| 00:29:55> 00:29:59: | timber is FSC certified, so for stewardship Council certified. |
| 00:30:00> 00:30:04: | And mass timber also allows you to really address that |
| 00:30:04> 00:30:08: | steel component which is the the second largest contributor |
| 00:30:09> 00:30:13: | to embodied carbon in one of our buildings and that results |

| 00:30:13> 00:30:17: | in a 62% decrease in embodied carbon than a traditional |
|---------------------|---|
| 00:30:17> 00:30:18: | steel skeleton. |
| 00:30:20> 00:30:23: | Again, a lot of this is very data-driven for us |
| 00:30:23> 00:30:23: | as well. |
| 00:30:23> 00:30:27: | So having a third party do the life cycle analysis |
| 00:30:27> 00:30:30: | on a building on a project that's when you have |
| 00:30:30> 00:30:34: | the different pieces coming together is helping then to drive |
| 00:30:34> 00:30:37: | that design back with our other teams and looking at |
| 00:30:37> 00:30:41: | where we can use this in other locations as well. |
| 00:30:44> 00:30:48: | So with next slide, so just a few other kind |
| 00:30:48> 00:30:49: | of details on here. |
| 00:30:49> 00:30:52: | On the other piece on terms of learn, well this |
| 00:30:52> 00:30:55: | will also have lead certification, but we're also looking at |
| 00:30:55> 00:30:58: | some other features, you know, cool roof LED lighting as |
| 00:30:58> 00:31:01: | a standard in all of our new buildings as well. |
| 00:31:01> 00:31:04: | So all these things to help drive the energy use |
| 00:31:04> 00:31:07: | down in addition to the lower embodied carbon. |
| 00:31:09> 00:31:11: | So I'll stop there and hand it back, but happy |
| 00:31:11> 00:31:13: | to discuss more when we get into discussion. |
| 00:31:14> 00:31:15: | Thank you so much, Suzanne. |
| 00:31:16> 00:31:18: | We're going to pass it over to Heidi. |
| 00:31:18> 00:31:21: | And just as a friendly reminder to the audience, please |
| 00:31:21> 00:31:23: | feel free to enter your questions in the Q&A box |
| 00:31:24> 00:31:26: | and we'll get back, we'll get to them after Heidi's |
| 00:31:26> 00:31:27: | presentation. |
| 00:31:27> 00:31:28: | So thank you. |
| 00:31:28> 00:31:29: | Take it away, Heidi. |
| 00:31:29> 00:31:30: | Thank you. |
| 00:31:31> 00:31:33: | Thanks everybody for joining us this morning. |
| 00:31:33> 00:31:34: | Happy December, everybody. |
| 00:31:35> 00:31:39: | Again, Heidi Creighton, I'm with Skanska Commercial Development, VP of |
| 00:31:39> 00:31:40: | Sustainability. |
| 00:31:40> 00:31:45: | So really overseeing Skanska sustainability initiatives across our US portfolio |
| 00:31:45> 00:31:48: | and just making sure that we're making the most sustainable, |
| 00:31:48> 00:31:52: | healthy, circular, resilient and impactful projects in in all of |
| 00:31:52> 00:31:53: | our markets. |
| 00:31:53> 00:31:57: | Next slide and as Victoria said at the beginning, we're |
| 00:31:57> 00:32:02: | an international construction and development firm, 135 years old and |
| 00:32:02> 00:32:05: | we're, we're headquartered in Stockholm and Sweden. |
| 00:32:06> 00:32:08: | And here in the US we have three different business |
| | |

| 00:32:09> 00:32:09: | units. |
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| 00:32:09> 00:32:11: | We have our civil group, we have our construction group |
| 00:32:11> 00:32:14: | and we have commercial development and commercial |
| | development is where |
| 00:32:14> 00:32:14: | I sit. |
| 00:32:15> 00:32:19: | You know slightly different from Durston, Sydney, we we also |
| 00:32:19> 00:32:22: | do all new construction but we don't hold on to |
| 00:32:22> 00:32:23: | our properties. |
| 00:32:23> 00:32:26: | We we get them leased and then we divest and |
| 00:32:26> 00:32:27: | sell to investors. |
| 00:32:28> 00:32:31: | So a little bit different model there, but this gives |
| 00:32:31> 00:32:33: | you a pretty good snapshot of when we opened up |
| 00:32:33> 00:32:37: | our offices here in the US for commercial development, how |
| 00:32:37> 00:32:40: | many projects we finished and how many we have we |
| 00:32:40> 00:32:40: | have underway. |
| 00:32:41> 00:32:44: | But you know we're a self funded business model and |
| 00:32:44> 00:32:45: | which is really exciting. |
| 00:32:45> 00:32:48: | It gives us really great opportunity to kind of take |
| 00:32:48> 00:32:52: | some risks and really invest in sustainability and an innovation |
| 00:32:52> 00:32:56: | and have aggressive sustainability goals somewhere to to Prologis and |
| 00:32:56> 00:32:57: | Durst. |
| 00:32:58> 00:33:01: | And we're really motivated to kind of do do that |
| 00:33:01> 00:33:05: | innovation and leading edge technologies and investment |
| 00.22.05 > 00.22.00. | and really share |
| 00:33:05> 00:33:08: | that with with the broader industry and share with all |
| 00:33:08> 00:33:10: | of you and venues like this. |
| 00:33:11> 00:33:15: | But yeah, it's you know working for a Swedish company |
| 00:33:15> 00:33:20: | really prioritizing sustainability is is extremely ingrained in all of |
| 00:33:20> 00:33:24: | Skanska's values and and decisions that we make and then |
| 00:33:24> 00:33:27: | it's actually extremely helpful, right. |
| 00:33:27> 00:33:29: | We've got great partners with our construction arm. |
| 00:33:30> 00:33:33: | It gives us just so much more control and visibility |
| 00:33:33> 00:33:35: | over what we do, gives us a ton more accountability, |
| 00:33:35> 00:33:36: | right. |
| 00:33:36> 00:33:38: | We have the same governance, we have the same values, |
| 00:33:38> 00:33:40: | we have the same climate targets that we're reaching for. |
| 00:33:40> 00:33:44: | So it really helps us have much more collaborative and |
| 00:33:44> 00:33:47: | long term conversations and and decisions that we make on |
| 00:33:47> 00:33:48: | our projects. |
| 00:33:49> 00:33:52: | And it's been really fantastic working for a company that's |
| | |

| 00:33:52> 00:33:54: | been doing sustainability for so long. |
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| 00:33:54> 00:33:59: | We actually created our first sustainability report in 1996 and |
| 00:34:00> 00:34:04: | it was one of the industry's first environmental reports and |
| 00:34:05> 00:34:09: | you know like Suzanne and Sydney shared too, we also |
| 00:34:09> 00:34:12: | are really you know and do a lot of third |
| 00:34:12> 00:34:14: | party certifications. |
| 00:34:14> 00:34:17: | We think that's really important to have that that third |
| 00:34:17> 00:34:18: | party verification. |
| 00:34:18> 00:34:22: | And so 100% of our commercial development USA portfolio |
| | is |
| 00:34:22> 00:34:27: | the certified or pursuing certifications and many of those projects |
| 00:34:27> 00:34:31: | also pursue well or fit well and other certifications on |
| 00:34:31> 00:34:32: | top of that. |
| 00:34:32> 00:34:35: | But proud to say we've got 4.7 million square feet |
| 00:34:35> 00:34:39: | of LEED Platinum certified space to date and we've got |
| 00:34:39> 00:34:43: | another million and a half targeting Platinum in our pipeline |
| 00:34:43> 00:34:43: | right now. |
| 00:34:43> 00:34:45: | Next slide. |
| 00:34:47> 00:34:51: | So this graphic is really showing our sustainability target, so |
| 00:34:51> 00:34:54: | 0 emissions by 2045 and then we've got some interim |
| 00:34:55> 00:34:57: | goals listed there on the slide for 2030. |
| 00:34:58> 00:35:01: | So yeah, we've got a lot of work to do |
| 00:35:01> 00:35:04: | and and as you can imagine the decisions that we're |
| 00:35:04> 00:35:07: | making today are going to be really impacting our emissions |
| 00:35:07> 00:35:08: | in in 2030. |
| 00:35:08> 00:35:10: | So we need to be really proactive on top of |
| 00:35:10> 00:35:13: | this and be really strategic about the decisions we're making |
| 00:35:13> 00:35:15: | in what we're investing in. |
| 00:35:16> 00:35:21: | And our you know our targets are are science based |
| 00:35:21> 00:35:27: | targets which means that they're in line with Paris 1.5??C |
| 00:35:27> 00:35:31: | capping our emissions at at that EC3 tool. |
| 00:35:32> 00:35:34: | Hopefully many of you have heard of this hopefully many |
| 00:35:34> 00:35:36: | of you are using this tool. |
| 00:35:36> 00:35:38: | The the link is right there. |
| 00:35:38> 00:35:41: | It's a free tool to use, but it's called it's |
| 00:35:41> 00:35:45: | embodied Carbon and construction calculator, that's the EC3. |
| 00:35:47> 00:35:50: | So Skanska Co created this tool with Microsoft years ago |
| 00:35:50> 00:35:53: | and it's we use it in all of our design |
| 00:35:53> 00:35:57: | and construction projects and it's basically kind of like you |
| 00:35:57> 00:36:00: | know, Sydney was talking about the EP DS. |
| 00:36:00> 00:36:03: | So it's a database of a huge you know hundreds |

| 00:36:03> 00:36:07: | of thousands of environmental product declarations which are basically like |
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| 00:36:07> 00:36:10: | a a nutrition level of embodied carbon. |
| 00:36:11> 00:36:13: | So there's lots of tools out there. |
| 00:36:14> 00:36:18: | You know, there's there's some other tools that probably more |
| 00:36:18> 00:36:21: | teams might use during design to really inform, well, do |
| 00:36:21> 00:36:23: | we want to do a concrete or steel or a |
| 00:36:23> 00:36:27: | mask timber scheme and really selecting the best structural scheme |
| 00:36:27> 00:36:28: | for the project. |
| 00:36:29> 00:36:31: | EC3 tool can be used for some of that early |
| 00:36:31> 00:36:35: | modeling, but really it's best for helping make those procurement |
| 00:36:35> 00:36:36: | decisions, right. |
| 00:36:36> 00:36:40: | So you put the material quantities into the database at |
| 00:36:40> 00:36:43: | your site location and then it will show you kind |
| 00:36:43> 00:36:46: | of the best in class, best version of the materials |
| 00:36:46> 00:36:49: | that you want to specify and procure for your project. |
| 00:36:50> 00:36:52: | So please use it. |
| 00:36:52> 00:36:55: | The more, the more people using it, the more kind |
| 00:36:55> 00:36:58: | of you know demand across the subplay chain that we're |
| 00:36:58> 00:37:01: | all asking for these EP DS, the more transparency and |
| 00:37:02> 00:37:05: | the more information we'll have to make better and better |
| 00:37:05> 00:37:08: | decisions as we are all driving down to to 0. |
| 00:37:09> 00:37:13: | And just just really quickly you know we're finding that |
| 00:37:13> 00:37:16: | on our projects we can easily see like a 10 |
| 00:37:16> 00:37:19: | to 30% reduction in body carbon by using a tool |
| 00:37:19> 00:37:22: | like this with no, absolutely no cost impacts. |
| 00:37:23> 00:37:25: | And then it's also really helpful. |
| 00:37:26> 00:37:29: | You know there's still some markets where there aren't many |
| 00:37:29> 00:37:29: | or any EP DS. |
| 00:37:30> 00:37:33: | So you know asking these questions, having those conversations with |
| 00:37:33> 00:37:36: | your suppliers is is super helpful and we've we've seen |
| 00:37:36> 00:37:38: | good willingness to engage in those conversations. |
| 00:37:40> 00:37:43: | Next slide, so I'm gonna get into the case study |
| 00:37:43> 00:37:47: | that I'll be sharing with you today and that's 1550 |
| 00:37:47> 00:37:48: | on the green. |
| 00:37:49> 00:37:50: | So that's the rendering of it right there. |
| 00:37:51> 00:37:52: | The envelope is up. |
| 00:37:52> 00:37:55: | So you know the photograph of that view, it looks |
| 00:37:55> 00:37:59: | pretty much like the rendering you see there, but it's |

| 00:37:59> 00:38:02: | a 28 story building and it's 387,000 square feet office |
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| 00:38:02> 00:38:05: | tower and it's on track to be one of the |
| 00:38:05> 00:38:09: | most sustainable projects in the Houston area which we're really |
| 00:38:09> 00:38:12: | thrilled about and it's located next to Discovery Green. |
| 00:38:12> 00:38:15: | That's the point of view from that that photo there. |
| 00:38:15> 00:38:18: | That's Discovery Green Park, which is a 12 acre park |
| 00:38:18> 00:38:20: | in the heart of Houston Central Business District. |
| 00:38:21> 00:38:24: | And this is the first phase of a three block |
| 00:38:24> 00:38:28: | mixed-use development that that we own and we'll be developing |
| 00:38:28> 00:38:31: | the next blocks over the next couple of years and |
| 00:38:31> 00:38:32: | decades. |
| 00:38:33> 00:38:36: | But there's retail at the base about about 7000 square |
| 00:38:36> 00:38:40: | feet and then there's beautiful terraces on levels 1220 and |
| 00:38:40> 00:38:41: | 28. |
| 00:38:41> 00:38:44: | You can see some of the trees popping up there |
| 00:38:44> 00:38:47: | and just absolutely stunning views of Discovery Green and |
| | the |
| 00:38:47> 00:38:48: | city. |
| 00:38:48> 00:38:52: | The architect for this project is big, the Archangels group |
| 00:38:52> 00:38:55: | and we're about to wrap up construction and we'll be |
| 00:38:55> 00:38:58: | delivering the project in in early 2024. |
| 00:38:59> 00:39:02: | And next slide, so you know in addition to to |
| 00:39:02> 00:39:07: | Well and leave Putnam certification for the project, we're also |
| 00:39:07> 00:39:10: | pursuing Wired Score and Fit Well certifications. |
| 00:39:12> 00:39:14: | And you know we've been working closely with the city |
| 00:39:14> 00:39:15: | and the Mayor of Houston. |
| 00:39:16> 00:39:19: | So it's aligned with with the city's environmental goals. |
| 00:39:20> 00:39:22: | We've got 30% more fresh air than a typical Class |
| 00:39:22> 00:39:24: | A building in the project. |
| 00:39:24> 00:39:28: | There's a listing of other sustainability features that I'll just |
| 00:39:28> 00:39:31: | let you you scan through there on the slide. |
| 00:39:31> 00:39:34: | But you know it's surrounded by greenery and that really |
| 00:39:34> 00:39:37: | allows the tenants to experience the benefits of nature. |
| 00:39:37> 00:39:40: | You know when they're working inside or outside the building, |
| 00:39:41> 00:39:43: | we have floor to ceiling vision and glazing and so |
| 00:39:43> 00:39:46: | really great natural light coming into the space. |
| 00:39:46> 00:39:49: | And then we also have a unique side core design |
| 00:39:49> 00:39:53: | and really open floor plates and that really allows for |
| 00:39:53> 00:39:56: | our tenants that that have a very kind of airy |
| 00:39:56> 00:39:59: | flexible office environment when they come to work in the |
| | |

| 00:39:59> 00:40:00: | building. |
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| 00:40:01> 00:40:01: | OK. |
| 00:40:01> 00:40:02: | Next slide. |
| 00:40:04> 00:40:07: | So just wanted to dive in more specifically on the |
| 00:40:07> 00:40:09: | embodied carbon for this project. |
| 00:40:09> 00:40:11: | So we use the EC3 tool to track the, the |
| 00:40:12> 00:40:16: | carbon intensive materials, right, like the carbon, sorry, the concrete, |
| 00:40:16> 00:40:19: | the the rebar, the aluminum etcetera to really find out |
| 00:40:20> 00:40:22: | where those key reductions could be made. |
| 00:40:23> 00:40:26: | And we discovered really quickly and early in the process |
| 00:40:26> 00:40:30: | that the local suppliers, especially the concrete suppliers, we didn't |
| 00:40:30> 00:40:32: | have EP DS in place for their products and we're |
| 00:40:33> 00:40:36: | just starting to become more transparent about embodied carbon. |
| 00:40:36> 00:40:40: | And so for the manufacturers, as you've probably many of |
| 00:40:40> 00:40:43: | you heard, that process can be pretty lengthy to get |
| 00:40:43> 00:40:43: | EP DS. |
| 00:40:43> 00:40:46: | So you know us having those early conversations and showing |
| 00:40:47> 00:40:49: | the supply chain that we were going to be demanding, |
| 00:40:49> 00:40:52: | this was really important to to prompt the market to |
| 00:40:52> 00:40:55: | move forward and be more transparent and get those EP |
| 00:40:55> 00:40:55: | DS. |
| 00:40:56> 00:40:58: | But I'm really proud to say the numbers up there |
| 00:40:59> 00:41:01: | on the slide, but we've we've achieved a 45% reduction |
| 00:41:01> 00:41:03: | in embodied carbon from the baseline. |
| 00:41:05> 00:41:08: | And so the scope of that is the foundations and |
| 00:41:08> 00:41:13: | the basement construction, the superstructure, the enclosure, the roofing and |
| 00:41:13> 00:41:17: | then some corn shell interior construction scope of work. |
| 00:41:18> 00:41:22: | And so the materials that that had the most impact |
| 00:41:22> 00:41:25: | are are listed in the box there, but it is |
| 00:41:25> 00:41:30: | the concrete rebar, metal framing, aluminum fins, gypsum board, acoustic |
| 00:41:30> 00:41:34: | ceiling tile acoustic ceilings and the carpet tiles as well. |
| 00:41:35> 00:41:39: | And then specifically in the foundations, we were able to |
| 00:41:39> 00:41:43: | replace 55% of the cement with a low carbon intensive |
| 00:41:43> 00:41:46: | cement and just to to give you a reference point |
| 00:41:46> 00:41:50: | that's similar to taking you know 2 million vehicle miles, |
| 00:41:50> 00:41:53: | not driven just as a carbon equivalency. |
| 00:41:53> 00:41:58: | So these decisions we're making are, are very powerful. |
| | |

| 00:41:58> 00:42:01: 00:42:01> 00:42:03: 00:42:03> 00:42:04: | And then I think I just have one last slide if you'd like to learn more about the project. This is the development team. |
|---|--|
| 00:42:04> 00:42:06: | So I just wanted to put their names and faces |
| 00:42:06> 00:42:08: | up there, that's their LinkedIn profiles. |
| 00:42:09> 00:42:12: | So if you or you know anyone who'd like to |
| 00:42:12> 00:42:16: | to leave some really stunning office space that's also low |
| 00:42:16> 00:42:19: | carbon and healthy, reach out to me Or or any |
| 00:42:19> 00:42:21: | of these three fantastic people. |
| 00:42:22> 00:42:23: | That's it for me, Vic. |
| 00:42:25> 00:42:26: | Excellent. |
| 00:42:26> 00:42:28: | Thank you so much to all three of you for |
| 00:42:28> 00:42:30: | your wonderful presentations. |
| 00:42:30> 00:42:32: | I'm going to go ahead and stop sharing my screen |
| 00:42:33> 00:42:35: | and if you'd like to pull your videos on and |
| 00:42:35> 00:42:37: | we can open it up for discussion. |
| 00:42:38> 00:42:40: | I was watching the Q&A function throughout and it looks |
| 00:42:40> 00:42:43: | like there's lots of good questions that are coming in |
| 00:42:43> 00:42:44: | from the audience as well. |
| 00:42:45> 00:42:48: | And I'll just plug another quick reminder, if you have |
| 00:42:48> 00:42:51: | questions, please feel free to continue to enter them. |
| 00:42:51> 00:42:54: | As we're chatting, I have a couple of first questions |
| 00:42:54> 00:42:56: | that to direct to the panelists. |
| 00:42:57> 00:43:00: | So first one being, you know as I was researching |
| 00:43:00> 00:43:03: | for this materials report, one of the big discoveries for |
| 00:43:03> 00:43:05: | me and maybe this is obvious to people who are |
| 00:43:05> 00:43:08: | working in this space all the time, but supporting better |
| 00:43:08> 00:43:11: | materials in many ways is more about the process changes |
| 00:43:11> 00:43:14: | that you can make to the development process to incorporate |
| 00:43:14> 00:43:16: | those better materials, better specs. |
| 00:43:16> 00:43:20: | Talking to manufacturers and Sidney, you highlighted some of those |
| 00:43:20> 00:43:21: | changes. |
| 00:43:21> 00:43:23: | I wonder if you might just be able to elaborate |
| 00:43:23> 00:43:25: | a little bit more on some of the things that |
| 00:43:25> 00:43:28: | you found to be most successful and if there's any |
| 00:43:28> 00:43:31: | low hanging fruit that people listening in can do right |
| 00:43:31> 00:43:33: | now to start to incorporate better materials. |
| 00:43:34> 00:43:34: | Yeah. |
| 00:43:34> 00:43:39: | I think I can't emphasize enough that one of the |
| 00:43:39> 00:43:44: | biggest pieces we really tried to change was leaving any |
| 00:43:44> 00:43:49: | product or material selection in the CA space after |

procurement 00:43:49 --> 00:43:55: and shifting the majority of those selections to the design 00:43:55 --> 00:44:00: process because you means that you have better ability to 00:44:00 --> 00:44:05: vet it early without running into possible delays or impacts 00:44:05 --> 00:44:09: to construction or submittal schedules. 00:44:09 --> 00:44:13: So really pulling, pulling that out of submittal review, which 00:44:13 --> 00:44:16: is where it kind of traditionally lived and really living 00:44:16 --> 00:44:19: with the Subs to make sure that all the criteria 00:44:19 --> 00:44:22: was met and placing it back on the design team 00:44:22 --> 00:44:25: to make sure that you're really careful about what you're 00:44:25 --> 00:44:28: putting in the specs to begin with. 00:44:29 --> 00:44:32: And I think the other piece as I mentioned, really 00:44:32 --> 00:44:35: improving A workflow around how to take what we learned 00:44:36 --> 00:44:39: on past projects and be able to give design teams 00:44:39 --> 00:44:40: a starting point. 00:44:40 --> 00:44:42: There was one of the questions actually in the chat. 00:44:42 --> 00:44:45: There was do we do we prescribe A spec from 00:44:45 --> 00:44:49: the beginning or do we ask designers to go and 00:44:49 --> 00:44:50: research this? 00:44:50 --> 00:44:53: And my answer is we really do both. 00:44:53 --> 00:44:56: But we wanted to make it as easy as possible 00:44:56 --> 00:45:00: for the designers to start with Stuff already vetted that 00:45:00 --> 00:45:03: we knew met are really intense criteria like drywall or 00:45:03 --> 00:45:07: sealants or fire stopping or which is something maybe you 00:45:07 --> 00:45:10: know you don't want to spend a lot of time 00:45:10 --> 00:45:13: researching, you want to do the designers want to do 00:45:13 --> 00:45:17: the fun stuff they want to do the finishes and 00:45:17 --> 00:45:18: the cool technology stuff. 00:45:19 --> 00:45:21: So if I can kind of shepherd them and and 00:45:21 --> 00:45:24: give them a great starting point for that kind of 00:45:24 --> 00:45:25: material. 00:45:25 --> 00:45:27: The behind the wall stuff that we've spent a lot 00:45:27 --> 00:45:30: of time with the manufacturers really refining like insulation for 00:45:30 --> 00:45:31: example.

00:45:30 --> 00:45:31: example.

00:45:31 --> 00:45:35: It lets them kind of focus and and do some

00:45:35 --> 00:45:39: fun questions with some of them maybe more innovative or

00:45:39 --> 00:45:44: or present materials in the project sort of visible materials.

00:45:45 --> 00:45:49: And then finally, I think the biggest thing is that

00:45:49 --> 00:45:53: we think it's important for everyone in the project to

00:45:53 --> 00:45:57: understand their role and how critical they are to meeting

00:45:57 --> 00:46:01: the sustainability and health expectations for the project.

| 00:46:02> 00:46:05: | So sitting with contractors making sure my face or one |
|---------------------|--|
| 00:46:05> 00:46:10: | of my team members face is there one-on-one talking |
| | through |
| 00:46:10> 00:46:15: | exactly what the expectations are, educating them about material health, |
| 00:46:15> 00:46:19: | making sure it's clear there are consequences if they do |
| 00:46:19> 00:46:23: | not provide the documentation they're looking for or again that |
| 00:46:23> 00:46:27: | we're going to go ahead and test the whole project. |
| 00:46:27> 00:46:28: | So they better do their part. |
| 00:46:30> 00:46:33: | I think just making sure that that everyone's got buy |
| 00:46:33> 00:46:37: | in whether you're dragging them along or they're ready team |
| 00:46:37> 00:46:40: | members is is super key to to getting success. |
| 00:46:40> 00:46:42: | Oh, when you wanted low hanging fruit, sorry. |
| 00:46:42> 00:46:45: | I think going back to the behind the wall stuff |
| 00:46:45> 00:46:49: | like literally just hand over a drywall spec and an |
| 00:46:49> 00:46:53: | insulation spec and a concrete sealer, like give the stuff |
| 00:46:53> 00:46:57: | that like studs, you know, again like all the stuff |
| 00:46:57> 00:46:59: | that duck sealant etcetera. |
| 00:46:59> 00:47:00: | Like get that out of the way. |
| 00:47:00> 00:47:03: | Make that your basis for all of your projects if |
| 00:47:03> 00:47:06: | possible, so that you have a good list to start |
| 00:47:06> 00:47:10: | from, and then make the bespoke kind of project finishes |
| 00:47:10> 00:47:12: | or or pieces that are really visible. |
| 00:47:13> 00:47:16: | You can make that, you'll make those changes over time, |
| 00:47:16> 00:47:19: | but if you can start with like really good behind |
| 00:47:19> 00:47:21: | the wall stuff as a firm or as a company, |
| 00:47:21> 00:47:23: | I think you're already, you know, 50% of the way |
| 00:47:23> 00:47:26: | there with hitting some sustainable, healthy targets. |
| 00:47:28> 00:47:29: | Thank you so much. |
| 00:47:29> 00:47:32: | So many good Nuggets in that you talked a little |
| 00:47:32> 00:47:36: | bit about ensuring that everybody knows their role and |
| | having |
| 00:47:36> 00:47:38: | those conversations, Heidi. |
| 00:47:38> 00:47:40: | I know that was a big piece of 1550 on |
| 00:47:40> 00:47:44: | the green and having those conversations early with manufacturers and |
| 00:47:45> 00:47:48: | suppliers locally who at that point did not have environmental |
| 00:47:48> 00:47:50: | product declarations in place. |
| 00:47:50> 00:47:54: | But through those early conversations you were able to get |
| 00:47:54> 00:47:55: | them, you know, pull them along. |
| 00:47:56> 00:47:58: | So any additional thoughts that you wanted to add on |
| 00:47:59> 00:47:59: | that topic? |
| | |

| 00:48:00> 00:48:01: | Yeah, thanks. |
|---------------------|---|
| 00:48:02> 00:48:02: | Yeah. |
| 00:48:02> 00:48:04: | And you know, I think if you're just really understanding |
| 00:48:05> 00:48:07: | what's most material and where you could have the most |
| 00:48:07> 00:48:10: | impact and focusing on that, right, don't let perfection get |
| 00:48:10> 00:48:11: | in the way of great progress. |
| 00:48:12> 00:48:15: | So yeah, we we proactively reached out to the key |
| 00:48:15> 00:48:18: | Subs, you know prior to bidding really to inform them |
| 00:48:19> 00:48:20: | of what our expectations were. |
| 00:48:20> 00:48:23: | We wrote an advocacy letter, we had a bunch of |
| 00:48:23> 00:48:27: | calls and basically told them that their ability to provide |
| 00:48:27> 00:48:29: | us with specific EP DS would be part of the |
| 00:48:30> 00:48:31: | selection and the word process. |
| 00:48:31> 00:48:34: | So that signalling was really important. |
| 00:48:35> 00:48:38: | And then you know as we reached out to suppliers |
| 00:48:38> 00:48:41: | just making sure that the EP DS would be created |
| 00:48:41> 00:48:45: | during the project since they weren't there at the beginning |
| 00:48:45> 00:48:48: | because when we started 1550 on the green, there were |
| 00:48:48> 00:48:51: | no concrete DP DS in the entire state of Texas. |
| 00:48:51> 00:48:54: | And now now there are because because of of the |
| 00:48:54> 00:48:56: | work that we did there and I'm sure other people |
| 00:48:56> 00:48:58: | are are building off of the work that we've done. |
| 00:48:58> 00:49:01: | But it's just so important to get everybody on board |
| 00:49:01> 00:49:04: | and and really just signal to them that you |
| 00:49:04> 00:49:06: | know this is going to be heavily weighted in our |
| 00:49:07> 00:49:09: | decision making and you need to get on board. |
| 00:49:11> 00:49:11: | Thanks for that, Heidi. |
| 00:49:12> 00:49:14: | And Suzanne, I know you know going back to that |
| 00:49:14> 00:49:18: | process piece, there's a couple of different things that Prologis |
| 00:49:18> 00:49:21: | has done to incorporate better materials and embody carbon goals |
| 00:49:21> 00:49:23: | into your processes. |
| 00:49:23> 00:49:24: | Do you mind speaking to some of those? |
| 00:49:25> 00:49:25: | Yeah. |
| 00:49:25> 00:49:28: | So I think the first thing it starts, you know, |
| 00:49:28> 00:49:29: | with our capital deployment process. |
| 00:49:29> 00:49:32: | So again, I think I always think about ESG and |
| 00:49:32> 00:49:35: | sustainability as making sure it's not a separate process, but |
| 00:49:35> 00:49:37: | how do you build it into your processes like Sydney |
| 00:49:37> 00:49:39: | and Heidi have talked through. |
| 00:49:40> 00:49:43: | But the first thing is every investment committee memo, |
| | anytime |

| 00:49:43> 00:49:46: | we're gonna build a new building, anytime we're gonna do |
|---------------------|--|
| 00:49:47> 00:49:50: | a major project, there are sections in that investment committee |
| 00:49:50> 00:49:53: | memo that have our new net zero requirements. |
| 00:49:53> 00:49:55: | So we can include the cost of the underwriting in |
| 00:49:55> 00:49:56: | that project. |
| 00:49:56> 00:49:59: | And then also it's an opportunity for teams when they |
| 00:49:59> 00:50:02: | are able to do different innovations or requests to kind |
| 00:50:02> 00:50:05: | of test things we're seeing that come through that process |
| 00:50:05> 00:50:05: | too. |
| 00:50:05> 00:50:07: | So it can really be discussed at the highest levels |
| 00:50:07> 00:50:09: | of the company in terms of what the learnings are |
| 00:50:09> 00:50:12: | and there's a learning section of what we've learned through |
| 00:50:12> 00:50:13: | the projects as well. |
| 00:50:13> 00:50:16: | So I think that has been a real key for |
| 00:50:16> 00:50:18: | us and and moving this forward. |
| 00:50:18> 00:50:21: | And then the other piece of that just from a |
| 00:50:21> 00:50:24: | data and learning perspective, our global ESG team reviews every |
| 00:50:24> 00:50:27: | investment committee memo that goes through to. |
| 00:50:27> 00:50:29: | And then we have that discussion back and forth with |
| 00:50:29> 00:50:32: | the teams when they have choices to make or when |
| 00:50:32> 00:50:35: | they're trying to move to a higher certification level or |
| 00:50:35> 00:50:38: | where they're trying to engage with our you know procurement |
| 00:50:38> 00:50:41: | team on different types of materials to make sure they're |
| 00:50:41> 00:50:42: | meeting our standards. |
| 00:50:43> 00:50:47: | The other thing I'd say from kind of the integration, |
| 00:50:47> 00:50:51: | we're lucky to have a Prologis Ventures arm that has |
| 00:50:51> 00:50:55: | invested 180 million and 40 early in the growth stage |
| 00:50:55> 00:50:56: | companies. |
| 00:50:56> 00:51:00: | But we've been having good conversations with them about circularity |
| 00:51:00> 00:51:04: | and you know basically the embodied carbon aspects and and |
| 00:51:04> 00:51:08: | all the innovations they're seeing in the market related to |
| 00:51:08> 00:51:10: | some of these new materials. |
| 00:51:10> 00:51:12: | So that's another piece. |
| 00:51:12> 00:51:14: | One new thing that they invested in last year related |
| 00:51:14> 00:51:17: | to our solar business is a company called Solar Cycle. |
| 00:51:17> 00:51:20: | So as we are scaling more solar installations, we're also |
| 00:51:20> 00:51:25: | investing and partnering with organizations that are really thinking about |

| 00.51.25> 00.51.27. | that hie cycle approach to those as well. |
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| 00:51:29> 00:51:31: | So I am happy to add more. |
| 00:51:31> 00:51:33: | I know there's a bunch of questions in the in |
| 00:51:33> 00:51:33: | the chat that I it's. |
| 00:51:34> 00:51:34: | Perfect. |
| 00:51:34> 00:51:36: | Yes, there are a bunch of questions in the chat. |
| 00:51:36> 00:51:38: | I just have one more that I wanted to get |
| 00:51:38> 00:51:38: | to. |
| 00:51:38> 00:51:40: | Talking about measurements. |
| 00:51:40> 00:51:43: | Obviously, there's some great tools on the market both to |
| 00:51:43> 00:51:47: | measure embodied carbon and material health a little bit |
| | more, |
| 00:51:47> 00:51:49: | a little easier for the embodied carbon piece. |
| 00:51:49> 00:51:52: | Right now, material health is maybe a little bit less |
| 00:51:52> 00:51:53: | tangible in some ways. |
| 00:51:53> 00:51:58: | Obviously there's health, product declarations and other labels that can |
| 00:51:58> 00:51:59: | help get us there. |
| 00:52:00> 00:52:02: | Vinny, you could speak to a little bit about what |
| 00:52:02> 00:52:05: | are you using to measure your success when it comes |
| 00:52:05> 00:52:06: | to material health? |
| 00:52:06> 00:52:08: | You talked a little bit about indoor air quality and |
| 00:52:08> 00:52:09: | some of those other pieces. |
| 00:52:09> 00:52:11: | I wonder if you could expand on that. |
| 00:52:12> 00:52:13: | Yeah, it is. |
| 00:52:13> 00:52:15: | I would say we honestly still also struggle with how |
| 00:52:16> 00:52:18: | to communicate the success in this area effectively. |
| 00:52:18> 00:52:22: | To your point, it's the the metric based idea of |
| 00:52:22> 00:52:26: | communicating material health in a or visually or graphically or |
| 00:52:26> 00:52:30: | even how do you put the the metrics together around |
| 00:52:30> 00:52:33: | this is I I certainly do not have a great |
| 00:52:33> 00:52:34: | solution off hand. |
| 00:52:34> 00:52:39: | However I do think luckily we have healthy building network |
| 00:52:39> 00:52:43: | which is working on a footprint tool which I think |
| 00:52:43> 00:52:47: | is going to be I really like what they're trying |
| 00:52:47> 00:52:47: | to do. |
| 00:52:47> 00:52:50: | And I was even thinking as, as I think about |
| 00:52:50> 00:52:53: | this question, that might be an opportunity for us to |
| 00:52:53> 00:52:57: | kind of retroactively actually go back through a project and |
| 00:52:57> 00:52:59: | and put it in there to sort of demonstrate a |
| 00:52:59> 00:53:03: | starting point and against the baseline of how much better |
| 00:53:03> 00:53:07: | our building is actually performed given the selections we've |
| | |

00:51:25 --> 00:51:27: that life cycle approach to those as well.

done. 00:53:08 --> 00:53:11: I think mainly the piece that I used to talk 00:53:11 --> 00:53:16: about hitting success with healthy materials criteria is talking about 00:53:16 --> 00:53:20: the rigorous process we use to actually make the selections 00:53:20 --> 00:53:23: in the 1st place and ensure that what we've put 00:53:23 --> 00:53:27: in the design documents and we've selected actually makes it 00:53:27 --> 00:53:30: to the project and is what is installed. 00:53:30 --> 00:53:33: Because we don't just assume that what is in a 00:53:33 --> 00:53:35: set of documents is going to get there. 00:53:35 --> 00:53:39: There's a lot of checks and balances and oversight, and 00:53:39 --> 00:53:42: I think that is just as important to relay to 00:53:42 --> 00:53:46: somebody that we're serious about looking out for human 00:53:46 --> 00:53:51: environmental health by implementing these process and putting human resources 00:53:51 --> 00:53:54: on it to watch this as it is through the 00:53:54 --> 00:53:57: vetting process itself and the selection itself. 00:53:57 --> 00:53:59: So that's typically what I use to convey it. 00:53:59 --> 00:54:02: One day I'll have a beautiful graphic and it'll be 00:54:02 --> 00:54:05: amazing and easy to understand, but we're not quite there 00:54:05 --> 00:54:05: yet. 00:54:07 --> 00:54:09: Be excited to look forward to it. 00:54:10 --> 00:54:12: So let's shift to some of the questions that are 00:54:12 --> 00:54:13: in the chat. 00:54:13 --> 00:54:16: Thanks to everyone who has plugged their questions in. 00:54:16 --> 00:54:19: We have a couple of questions that have been highly 00:54:19 --> 00:54:19: voted. 00:54:20 --> 00:54:21: I like this one. 00:54:21 --> 00:54:24: What do the presenters think is the major roadblock for 00:54:24 --> 00:54:28: developers to implement more and healthier buildings building materials? 00:54:28 --> 00:54:32: Is it cost, performance, lack of information and that can 00:54:32 --> 00:54:33: go to anyone? 00:54:33 --> 00:54:33: Yeah. 00:54:34 --> 00:54:34: Yeah, I can start. 00:54:34 --> 00:54:36: I think I think it's a mixture of things and 00:54:36 --> 00:54:39: sometimes and there's a lot moving in the external environment 00:54:39 --> 00:54:40: that's shifting this too.

especially you know, I think there were some other questions

But I think cost is you know, still an issue,

00:54:40 --> 00:54:42:

00:54:42 --> 00:54:45:

| 00:54:45> 00:54:48: | in, in the chat around size, organization and what you're |
|---------------------|--|
| 00:54:48> 00:54:51: | able to do in one project versus scaling across multiple |
| 00:54:51> 00:54:51: | ones. |
| 00:54:52> 00:54:55: | And I think it's a time horizon thing as well. |
| 00:54:55> 00:54:58: | Some of these, as they mature, I think the costs |
| 00:54:58> 00:55:01: | are going to change and become you know more useful |
| 00:55:01> 00:55:02: | as we go forward. |
| 00:55:03> 00:55:06: | I think the other piece is just human nature, resistance |
| 00:55:06> 00:55:08: | to change, you know what works, risk aversion of trying |
| 00:55:08> 00:55:11: | something new that you might have to replace if it's |
| 00:55:11> 00:55:13: | not durable enough or if there might be a risk. |
| 00:55:13> 00:55:16: | And then the third part is regulation. |
| 00:55:16> 00:55:18: | I think you had highlighted Victoria, some of the positive |
| 00:55:18> 00:55:21: | regulation moving to some of these, but I think there |
| 00:55:21> 00:55:24: | might be some of these more innovative materials that don't |
| 00:55:24> 00:55:26: | they're they're the regulations haven't caught up to them in |
| 00:55:26> 00:55:29: | certain jurisdictions and so you have to kind of balance |
| 00:55:29> 00:55:30: | that timing as well. |
| 00:55:30> 00:55:34: | So, but I think it's about changing your conversation internally |
| 00:55:34> 00:55:37: | to you know make sure you have the right processes |
| 00:55:37> 00:55:40: | and I like Sydney's never get surprised but also about |
| 00:55:40> 00:55:43: | creating that space for innovation, that space for testing that |
| 00:55:43> 00:55:46: | space for local teams to kind of identify local suppliers |
| 00:55:46> 00:55:49: | that then could be really you know part of that |
| 00:55:49> 00:55:52: | that project at that level and maybe scale across. |
| 00:55:53> 00:55:55: | In Victoria, if I can just build off of that |
| 00:55:55> 00:55:57: | too, there's there's just so many Co benefits when you |
| 00:55:58> 00:55:59: | look at it holistically, right. |
| 00:55:59> 00:56:02: | I mean and I forgot to mention at the beginning |
| 00:56:02> 00:56:04: | that we do, we do office and multi family and |
| 00:56:04> 00:56:05: | a couple of labs. |
| 00:56:06> 00:56:09: | So for the residential we're you know we're doing the |
| 00:56:09> 00:56:13: | interiors but for the office we're just doing corn shelf. |
| 00:56:13> 00:56:16: | So we have opportunities with with both. |
| 00:56:16> 00:56:18: | But you know I think we can really advocate for |
| 00:56:18> 00:56:21: | our tenants moving into our office spaces too. |
| 00:56:21> 00:56:25: | Like we've given them this really beautiful healthy, it's |
| | sustainable |
| 00:56:25> 00:56:28: | corn shell building and really encourage them when they do |
| 00:56:28> 00:56:30: | their fit outs to to do it with the |
| 00:56:30> 00:56:31: | same mindset. |
| 00:56:31> 00:56:34: | But you know I think when you focus on healthy |
| | |

| 00:56:34> 00:56:38: | materials and when you focus on embodied carbon and and |
|---------------------|--|
| 00:56:38> 00:56:41: | maybe think about the entire supply chain and who's being |
| 00:56:42> 00:56:45: | impacted by all of the work that we're doing, There's |
| 00:56:45> 00:56:48: | just multiple benefits, right As we get off of petroleum |
| 00:56:49> 00:56:53: | based products and we're healthy natural products, those products have |
| 00:56:53> 00:56:55: | a lower embodied carbon. |
| 00:56:55> 00:56:58: | So I think it's just that holistic look and you |
| 00:56:58> 00:57:01: | know, you know, asking our teams to to to do, |
| 00:57:01> 00:57:04: | to do the legwork and like Suzanne said, you know, |
| 00:57:04> 00:57:07: | it's change or so it makes everybody a little bit |
| 00:57:07> 00:57:11: | uneasy because they're not doing things the way they had |
| 00:57:11> 00:57:12: | been doing it. |
| 00:57:12> 00:57:15: | But that's everything we're doing in sustainability is always asking |
| 00:57:15> 00:57:17: | people to change what they're doing today to to make |
| 00:57:17> 00:57:18: | it even better for tomorrow. |
| 00:57:19> 00:57:21: | And I love what you said high to about Co |
| 00:57:21> 00:57:23: | benefits because I think there were some other kind of |
| 00:57:23> 00:57:25: | questions in the chat about, you know what are some |
| 00:57:25> 00:57:27: | of the health impacts of doing mass timber and and |
| 00:57:27> 00:57:27: | other things. |
| 00:57:27> 00:57:30: | And I think one thing we've learned through this project |
| 00:57:30> 00:57:32: | is you know the the next site panels that we |
| 00:57:32> 00:57:34: | used, they were the the, the wall units that they |
| 00:57:34> 00:57:35: | had for us. |
| 00:57:35> 00:57:37: | They were quicker to install. |
| 00:57:37> 00:57:39: | There were other health benefits and things. |
| 00:57:39> 00:57:43: | When you think about mass timber, there's you know, research |
| 00:57:43> 00:57:46: | studies out there with satisfaction from laborers liking to work |
| 00:57:46> 00:57:48: | there that's safer you know in terms of some of |
| 00:57:48> 00:57:50: | these other pieces sometimes. |
| 00:57:50> 00:57:53: | So I think really you might make a decision based |
| 00:57:53> 00:57:56: | on sustainability and you find it helps your time to |
| 00:57:56> 00:57:56: | build. |
| 00:57:56> 00:57:58: | It helps on some of your other metrics as well. |
| 00:57:59> 00:58:02: | I'm sorry to piggyback again, but then you just reminded |
| 00:58:02> 00:58:05: | me of something that on 1550 on the green, because |
| 00:58:05> 00:58:07: | we were so focused on the embodied carbon, we asked |
| 00:58:07> 00:58:10: | our engineer well to be more to really kind of |
| 00:58:10> 00:58:13: | find any opportunities to reduce and not oversize the |
| | structure. |

| 00:58:13> 00:58:16: | And so they were able to shave off I think |
|---------------------|---|
| 00:58:17> 00:58:20: | 3/8 of an inch on the floor system on every |
| 00:58:20> 00:58:22: | single of those 28 floors. |
| 00:58:22> 00:58:25: | And that was equivalent to 700 cubic yards of concrete |
| 00:58:25> 00:58:28: | and 70 truckloads of concrete in and out of the |
| 00:58:28> 00:58:29: | neighbourhood. |
| 00:58:29> 00:58:32: | So even just thinking of all of the X, you |
| 00:58:32> 00:58:35: | know, all of that noise and traffic and you know, |
| 00:58:35> 00:58:39: | combustion from those trucks and the air quality impacts to |
| 00:58:39> 00:58:41: | the neighbourhood, reducing that. |
| 00:58:41> 00:58:43: | So 3/8 of an inch might not sound like a |
| 00:58:43> 00:58:46: | lot, but it had significant positive impacts. |
| 00:58:47> 00:58:49: | Amazing, wonderful. |
| 00:58:49> 00:58:52: | We're coming right up against the top of the hour |
| 00:58:52> 00:58:54: | and I'm so sorry that we weren't able to address |
| 00:58:54> 00:58:56: | all of the wonderful questions that came in through the |
| 00:58:56> 00:58:57: | chat. |
| 00:58:57> 00:59:00: | I want to thank the panelists so much for joining |
| 00:59:00> 00:59:04: | this conversation, for presenting and sharing about their impressive projects |
| 00:59:04> 00:59:06: | and for engaging in this discussion. |
| 00:59:06> 00:59:09: | We're so thrilled to be able to watch this change |
| 00:59:09> 00:59:13: | happen in the industry towards a better sustainable and healthy |
| 00:59:13> 00:59:17: | materials and we're glad that you were able to join |
| 00:59:17> 00:59:18: | this webinar. |
| 00:59:18> 00:59:18: | So thanks. |
| 00:59:18> 00:59:21: | Thanks for joining us today, Audience. |
| 00:59:22> 00:59:24: | We dropped a link for a short survey in the |
| 00:59:24> 00:59:28: | chat and we'd be grateful for your feedback If you |
| 00:59:28> 00:59:30: | might be able to share your thoughts. |
| 00:59:31> 00:59:34: | And again, keep an eye out for the recording of |
| 00:59:34> 00:59:36: | this webinar as well as a link to the Materials |
| 00:59:37> 00:59:39: | movement report which is coming out very soon. |
| 00:59:40> 00:59:42: | Thanks again and I hope you all have a wonderful |
| 00:59:42> 00:59:42: | day. |
| 00:59:43> 00:59:43: | Take care. |
| 00:59:43> 00:59:43: | Thank. |
| 00:59:45> 00:59:45: | You. |
| | |

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