

## **Video**

## Going Beyond the Certificate: The Role of Sustainability Assurance in Real

## **Estate**

Date: May 10, 2021

| 00:00:00> 00:00:03: | Welcome everyone to this session entitled going beyond the certificate,             |
|---------------------|---|
| 00:00:03> 00:00:06: | the role of sustainability assurance in real estate.                                |
| 00:00:06> 00:00:09: | My name is Brianna Wheeler and I'm the director of                                  |
| 00:00:09> 00:00:12: | operations for Berry in the United States.  |
| 00:00:12> 00:00:15: | Barry is 100 year old building science research organization.                       |
| 00:00:15> 00:00:19: | Very delivers standards and solutions that are trusted around the                   |
| 00:00:19> 00:00:22: | globe to enable real estate professionals to deliver sustainable,                   |
| 00:00:22> 00:00:25: | resilient, healthy and productive communities,                                      |
| 00:00:25> 00:00:29: | buildings and infrastructure. As a world leading authority on building              |
| 00:00:29> 00:00:31: | science and research,   |
| 00:00:31> 00:00:34: | the call in the late 1980s for sustainable development lead                         |
| 00:00:34> 00:00:37: | our organization to sit down and consider what sustainability really                |
| 00:00:37> 00:00:42: | meant for buildings reworking the sustainable development concept of environmental, |
| 00:00:42> 00:00:46: | social, and economic pillars, we determined that a sustainable building             |
| 00:00:46> 00:00:48: | was one that minimizes environmental impacts,                                       |
| 00:00:48> 00:00:51: | supports, and protects the health and well being of occupants,                      |
| 00:00:51> 00:00:55: | and ensures that the asset is financially viable and creates                        |
| 00:00:55> 00:00:55: | value.  |
| 00:00:55> 00:00:58: | But there wasn't a standard anywhere in the world that                              |
| 00:00:58> 00:01:00: | set out what that actually meant in practice.                                       |
| 00:01:00> 00:01:04: | So we created brain. Green was the world's first green                              |
| 00:01:04> 00:01:06: | building certification program,   |

| 00:01:06> 00:01:10: | launched in 1993 and today has over 2.3 million registered                |
|---------------------|---|
| 00:01:10> 00:01:14: | projects and over 594 thousand certifications in 88 countries.            |
| 00:01:14> 00:01:18: | The green family of standards are developed using building                |
| 00:01:18> 00:01:20: | science or practical to apply in all types of buildings.                  |
| 00:01:20> 00:01:24: | And flexible enough to encourage and recognize innovative                 |
| 00.01.20> 00.01.24. | solutions to  |
| 00:01:24> 00:01:26: | the impacts that it measures.   |
| 00:01:26> 00:01:28: | As well as drawing on the expertise and many years                        |
| 00:01:28> 00:01:29: | experience,   |
| 00:01:29> 00:01:31: | very staff scientists and experts.  |
| 00:01:31> 00:01:33: | We collaborate with the range of industry,                                |
| 00:01:33> 00:01:37: | stakeholder groups, professional experts and users to develop the brain   |
| 00:01:37> 00:01:37: | standards.  |
| 00:01:37> 00:01:41: | This collaboration ensures our standards are open to external an          |
| 00:01:41> 00:01:42: | independent scrutiny,   |
| 00:01:42> 00:01:45: | the brain, family of standards can be used for design                     |
| 00:01:45> 00:01:49: | and construction through to operations and renovations in buildings.      |
| 00:01:49> 00:01:52: | Buildings are one of the longest enduring human creations,                |
| 00:01:52> 00:01:55: | with most lasting decades and many lasting over centuries.                |
| 00:01:55> 00:01:58: | The choices we make, the design and construction phase are                |
| 00:01:58> 00:02:02: | critically important because they dictate the impacts the building will   |
| 00:02:02> 00:02:03: | continue to have over its lifetime.                                       |
| 00:02:03> 00:02:06: | Today we're left the legacy of those choices made over                    |
| 00:02:06> 00:02:09: | the last 100 plus years of design and construction in                     |
| 00:02:09> 00:02:10: | our existing building stock,  |
| 00:02:10> 00:02:13: | and we must deal with this head on to address                             |
| 00:02:13> 00:02:14: | climate change.   |
| 00:02:14> 00:02:18: | How buildings impact the environment as they operate is fairly            |
| 00:02:18> 00:02:19: | well known.   |
| 00:02:19> 00:02:22: | It's the energy that we use the refrigerants we choose                    |
| 00:02:22> 00:02:23: | the waste we produce,   |
| 00:02:23> 00:02:28: | and the transport transportation choices are site locations discourage or |
| 00:02:28> 00:02:32: | encourage the real estate industry's focus has recently been really       |
| 00:02:32> 00:02:36: | bout demonstrating how their assets are green or simply doing             |
| 00:02:36> 00:02:39: | less harm. But as we face the climate crisis,                             |

| 00:02:39> 00:02:41:   | this approach is simply not enough.   |
|---|---|
| 00:02:41> 00:02:45:   | As the reality of the climate crisis and its potential  |
| 00:02:45> 00:02:48:   | impacts on asset values has really begun to sink in,  |
| 00:02:48> 00:02:51:   | we are seeing substantial shifts in what investors are requiring  |
| 00:02:51> 00:02:55:   | from asset owners about their sustainability performance,   |
| 00:02:55> 00:02:59:   | their interest in the data that underpins certification and expanding   |
| 00:02:59> 00:03:01:   | beyond the green to ESG has been driven by big  |
| 00:03:01> 00:03:04:   | trends and changes to how our societies live,   |
| 00:03:04> 00:03:06:   | work and play. As part of this,   |
| 00:03:06> 00:03:11:   | they are also demanding greater transparency and assurance of performance   |
| 00:03:11> 00:03:15:   | that goes beyond that green aspect to a more holistic   |
| 00:03:15> 00:03:17:   | sustainability measurement.   |
| 00:03:17> 00:03:20:   | The pandemic is underlined, the urgency of acting to manage   |
| 00:03:20> 00:03:22:   | the risk it is given our industry the opportunity to  |
| 00:03:22> 00:03:25:   | think about the world we want to see and the  |
| 00:03:25> 00:03:26:   | risk if we do not act in July.  |
| 00:03:26> 00:03:29:   | Last year, Brain launched our building back.  |
| 00:03:29> 00:03:32:   | Better series to highlight areas where Brain currently supports a   |
| 00:03:32> 00:03:35:   | pivot to a more sustainable and just world and what   |
| 00:03:35> 00:03:38:   | we're doing to strengthen the standards in these areas.   |
| 00:03:38> 00:03:41:   | These are critical areas where we must pivot now to   |
| 00:03:41> 00:03:44:   | ensure that sustainable development is achieved in the timeline we  |
| 00:03:44> 00:03:45:   | have left.  |
| 00:03:45> 00:03:47:   | I want to highlight a few of these areas and  |
| 00:03:47> 00:03:50:   | explain where we see existing buildings leading the way.  |
| 00:03:50> 00:03:52:   | The first is around net zero carbon while there is  |
| 00 00 E0  |   |
| 00:03:53> 00:03:55:   | much discussion at the moment about embodied carbon in the  |
| 00:03:55> 00:03:56:   | the construction cycle,   |
| 00:03:55> 00:03:56:<br>00:03:56> 00:03:59:  | the construction cycle, our industry still has a long way to go to  |
| 00:03:55> 00:03:56:<br>00:03:56> 00:03:59:<br>00:03:59> 00:04:02:   | the construction cycle, our industry still has a long way to go to address the legacy that existing buildings present to us.  |
| 00:03:55> 00:03:56:<br>00:03:56> 00:03:59:<br>00:03:59> 00:04:02:<br>00:04:02> 00:04:05:  | the construction cycle, our industry still has a long way to go to address the legacy that existing buildings present to us. The Rocky Mountain Institute notes that while demand for net   |
| 00:03:55> 00:03:56:<br>00:03:56> 00:03:59:<br>00:03:59> 00:04:02:<br>00:04:02> 00:04:05:<br>00:04:06> 00:04:07:   | the construction cycle, our industry still has a long way to go to address the legacy that existing buildings present to us. The Rocky Mountain Institute notes that while demand for net zero buildings has grown 700%   |
| 00:03:55> 00:03:56:<br>00:03:56> 00:03:59:<br>00:03:59> 00:04:02:<br>00:04:02> 00:04:05:<br>00:04:06> 00:04:07:<br>00:04:07> 00:04:11:                          | the construction cycle, our industry still has a long way to go to address the legacy that existing buildings present to us. The Rocky Mountain Institute notes that while demand for net zero buildings has grown 700% between 2012 and 2016, net zero buildings still represent a   |
| 00:03:55> 00:03:56: 00:03:56> 00:03:59: 00:03:59> 00:04:02: 00:04:02> 00:04:05: 00:04:06> 00:04:07: 00:04:07> 00:04:11: 00:04:11> 00:04:13:                     | the construction cycle, our industry still has a long way to go to address the legacy that existing buildings present to us.  The Rocky Mountain Institute notes that while demand for net zero buildings has grown 700% between 2012 and 2016, net zero buildings still represent a tiny fraction of our building stock,   |
| 00:03:55> 00:03:56: 00:03:56> 00:03:59: 00:03:59> 00:04:02: 00:04:02> 00:04:05: 00:04:06> 00:04:07: 00:04:07> 00:04:11: 00:04:11> 00:04:13: 00:04:13> 00:04:15: | the construction cycle, our industry still has a long way to go to address the legacy that existing buildings present to us.  The Rocky Mountain Institute notes that while demand for net zero buildings has grown 700% between 2012 and 2016, net zero buildings still represent a tiny fraction of our building stock, and most of those are new construction, |
| 00:03:55> 00:03:56: 00:03:56> 00:03:59: 00:03:59> 00:04:02: 00:04:02> 00:04:05: 00:04:06> 00:04:07: 00:04:07> 00:04:11: 00:04:11> 00:04:13:                     | the construction cycle, our industry still has a long way to go to address the legacy that existing buildings present to us.  The Rocky Mountain Institute notes that while demand for net zero buildings has grown 700% between 2012 and 2016, net zero buildings still represent a tiny fraction of our building stock,   |

| 00:04:23> 00:04:25: | further 551 that they classify as emerging.                                       |  |
|---------------------|---|--|
| 00:04:25> 00:04:28: | So these are buildings that have publicly stated a goal                           |  |
| 00:04:29> 00:04:32: | of reaching net zero but have not yet demonstrated achievement.                   |  |
| 00:04:32> 00:04:36: | Even more recently, an article in Urban Land reported around                      |  |
| 00:04:36> 00:04:40: | 700 net zero buildings when off site generation can be                            |  |
| 00:04:40> 00:04:40: | counted.  |  |
| 00:04:40> 00:04:44: | But this is against a backdrop of 5.6 million existing                            |  |
| 00:04:44> 00:04:45: | buildings in the US.  |  |
| 00:04:45> 00:04:49: | It's simply not quick enough to ensure that we make                               |  |
| 00:04:49> 00:04:52: | that transition in the time that we have to.                                      |  |
| 00:04:52> 00:04:54: | The thing is, the pathway to net zero can feel                                    |  |
| 00:04:54> 00:04:56: | incredibly to intimidating.   |  |
| 00:04:56> 00:04:57: | We're so far from the goal,   |  |
| 00:04:57> 00:04:59: | and it seems like such a big lift.  |  |
| 00:04:59> 00:05:01: | But the key here is seeing this as a marathon,                                    |  |
| 00:05:01> 00:05:03: | not a Sprint. You're not going to get to net                                      |  |
| 00:05:03> 00:05:04: | zero overnight,   |  |
| 00:05:04> 00:05:07: | but there are incremental steps that you can take that                            |  |
| 00:05:07> 00:05:11: | are meaningful and provide the pathway towards meeting that goal.                 |  |
| 00:05:11> 00:05:14: | The first focus is to maximize the efficiency of the                              |  |
| 00:05:14> 00:05:16: | building envelope and systems in your asset.                                      |  |
| 00:05:16> 00:05:19: | Many buildings still have actions that can be taken to                            |  |
| 00:05:19> 00:05:22: | maximize efficiency that have reasonable payback periods.                         |  |
| 00:05:22> 00:05:26: | Bringing uses designed to help evaluate the sufficiency so the                    |  |
| 00:05:26> 00:05:30: | asset owner can identify potential areas for improvement.                         |  |
| 00:05:30> 00:05:34: | Regular retro commissioning and proactive maintenance can keep system performance |  |
| 00:05:34> 00:05:34: | at its best.  |  |
| 00:05:34> 00:05:38: | You'll also want to measure and monitor that performance overtime.                |  |
| 00:05:38> 00:05:40: | A metric based in carbon such as keyless is CO2                                   |  |
| 00:05:41> 00:05:43: | per square foot should be the basis of that measurement.                          |  |
| 00:05:43> 00:05:46: | To ensure that you keep the focus on net zero.                                    |  |
| 00:05:46> 00:05:49: | If you aren't measuring your performance in carbon terms,                         |  |
| 00:05:49> 00:05:52: | how will you know how close your asset is performing                              |  |
| 00:05:52> 00:05:53: | to that net zero goal?  |  |
| 00:05:53> 00:05:56: | Bringing uses always used carbon as the metric by which                           |  |
| 00:05:56> 00:05:57: | we measure an award.  |  |
| 00:05:57> 00:06:00: | Credits in our program and our program provides an easy                           |  |
| 00:06:00> 00:06:04: | way to calculate the operational energy performance where                         |  |

the data 00:06:04 --> 00:06:05: is available. 00:06:05 --> 00:06:06: If your building is reached, 00:06:06 --> 00:06:08: the limits of what can be done in economically feasible 00:06:09 --> 00:06:09: way, 00:06:09 --> 00:06:11: it's time to look at bigger steps to be taken 00:06:11 --> 00:06:12: with the asset. 00:06:12 --> 00:06:16: We know that most existing buildings will need deep retrofits 00:06:16 --> 00:06:18: in order to become next zero start planning. 00:06:18 --> 00:06:21: Now, many projects focus on what the ROI will be 00:06:21 --> 00:06:23: specifically to operating costs, 00:06:23 --> 00:06:26: but these projects should be seen in a larger context. 00:06:26 --> 00:06:29: For example, how can these projects help ensure that the 00:06:29 --> 00:06:32: asset complies with expected regulatory changes or prevent the asset 00:06:32 --> 00:06:35: from losing value in the future to investors or owners 00:06:35 --> 00:06:38: who've made net zero commitments? 00:06:38 --> 00:06:41: After considering efficiency, then you should look at shifting the 00:06:42 --> 00:06:43: energy sources from fossil fuels. 00:06:43 --> 00:06:46: So you first need to know obviously what fuels your 00:06:46 --> 00:06:49: building systems use and seek to reduce that usage through 00:06:49 --> 00:06:50: the efficiency. 00:06:50 --> 00:06:53: The second thing you can do is maximizing onsite or 00:06:53 --> 00:06:54: microgrid renewables. 00:06:54 --> 00:06:57: These support asset resilience as well as provide zero GHG 00:06:58 --> 00:06:59: emission electricity. 00:06:59 --> 00:07:02: And then finally, you'll look to source offsite renewables. 00:07:02 --> 00:07:05: Only once all the onsite options have been exhausted. 00:07:05 --> 00:07:07: So bring only accepts on site. 00:07:07 --> 00:07:10: Renewables in the way that we measure net zero. 00:07:10 --> 00:07:14: Our operational energy calculator takes into account the CO2 emission 00:07:14 --> 00:07:15: factor for the assets grid, 00:07:15 --> 00:07:19: which prevents any potential double counting where offsite renewables are 00:07:20 --> 00:07:20: sources. 00:07:20 --> 00:07:23:

00:07:20 --> 00:07:23: We don't accept green power purchased via utilities or any 00:07:23 --> 00:07:24: kind of offsets.

00:07:24 --> 00:07:27: Offsets simply don't deliver what we need, which is a reduction in the carbon emissions entering the atmosphere.

00:07:30 --> 00:07:36: Our focus is on meaningful and verifiable carbon emission

reporting. 00:07:36 --> 00:07:38: So what happens if you're asked that doesn't have access 00:07:38 --> 00:07:39: to the energy data? 00:07:39 --> 00:07:43: Maybe the tenant is directly responsible and doesn't share information, 00:07:43 --> 00:07:46: so BRIHM allows for the independent assessment of the physical 00:07:46 --> 00:07:48: building and its operational performance. 00:07:48 --> 00:07:51: So these types of assets should start with where they 00:07:51 --> 00:07:54: have control and utilized the process to develop or improve 00:07:54 --> 00:07:57: their relationship with the tenant with the aim of beginning 00:07:57 --> 00:07:59: the data sharing process. 00:07:59 --> 00:08:03: The final action to take is looking to address refrigerants. 00:08:03 --> 00:08:06: This is not something that's often talked about and this 00:08:06 --> 00:08:09: is not something that traditionally is in the definition of 00:08:09 --> 00:08:11: what a net zero carbon building is. 00:08:11 --> 00:08:14: But refrigerants are potent GHG's and leaks are a small 00:08:14 --> 00:08:17: but significant source of building emissions. 00:08:17 --> 00:08:20: All assets should look to ensure that leaks are prevented 00:08:20 --> 00:08:23: and refrigerants with a high global warming potential or replaced 00:08:23 --> 00:08:26: with those with a low global warming potential. 00:08:26 --> 00:08:28: The Bring USA in use standard provides a list of 00:08:29 --> 00:08:30: commonly used refrigerants. 00:08:30 --> 00:08:34: And their global warming potential for reference. 00:08:34 --> 00:08:37: The second topic I want to talk about today is 00:08:37 --> 00:08:38: resilience. 00:08:38 --> 00:08:41: So resilience was rising in importance before the pandemic, 00:08:41 --> 00:08:44: thanks to the increasing number of weather related disasters and 00:08:44 --> 00:08:47: the impacts that these are having on insurance premiums. 00:08:47 --> 00:08:50: Insurance was once seen as the primary method for protecting 00:08:50 --> 00:08:50: asset value, 00:08:50 --> 00:08:54: but it's becoming clear that there are aspects that insurance 00:08:54 --> 00:08:54: doesn't cover, 00:08:54 --> 00:08:56: such as a depression in property values. 00:08:56 --> 00:08:58: Post event. 00:08:58 --> 00:09:02: The second factor, an arguably driving the urgency today, 00:09:02 --> 00:09:05: is that investors are demanding to know more about the risks to their investments. 00:09:05 --> 00:09:06: 00:09:06 --> 00:09:10: There are multitude of investor tools to report ESG risk 00:09:10 --> 00:09:14: and specific regulation in this area is expected very soon.

| 00:09:14> 00:09:18:  | The task force on climate related financial disclosures has provided   |
|--|--|
| 00:09:18> 00:09:21:  | a framework to think about not just the impacts of   |
| 00:09:21> 00:09:24:  | events that could physically damage the assets and investments,  |
| 00:09:24> 00:09:27:  | but also thinking about the transition risks to a low  |
| 00:09:27> 00:09:28:  | carbon economy.  |
| 00:09:28> 00:09:32:  | Many more companies are reporting using this framework and this  |
| 00:09:32> 00:09:36:  | is expected to grow significantly in the coming years.   |
| 00:09:36> 00:09:37:  | I bury our Center for resilience.  |
| 00:09:37> 00:09:40:  | Has worked to identify the critical issues that need to  |
| 00:09:40> 00:09:43:  | be addressed as we develop and improve the homes,  |
| 00:09:43> 00:09:46:  | buildings and communities that underpin our lives into the future.   |
| 00:09:46> 00:09:50:  | We undertake collaborative research and seek to develop new standards  |
| 00:09:50> 00:09:53:  | and create the next generation of resilient materials,   |
| 00:09:53> 00:09:56:  | products, designs, and innovations that will ensure the robustness and   |
| 00:09:56> 00:09:58:  | longevity of our built infrastructure.   |
| 00:09:58> 00:10:03:  | This research has helped inform the development of resilience aspects  |
|  |  |
| 00:10:03> 00:10:04:  | of bringing to date.   |
| 00:10:03> 00:10:04:<br>00:10:04> 00:10:07:   | of bringing to date.<br>So we know that brain helps shape decision making at   |
|  |  |
| 00:10:04> 00:10:07:  | So we know that brain helps shape decision making at   |
| 00:10:04> 00:10:07:<br>00:10:07> 00:10:08:   | So we know that brain helps shape decision making at all phases.   |
| 00:10:04> 00:10:07:<br>00:10:07> 00:10:08:<br>00:10:08> 00:10:10:  | So we know that brain helps shape decision making at all phases.  Is built building life cycle all over the world bream  |
| 00:10:04> 00:10:07:<br>00:10:07> 00:10:08:<br>00:10:08> 00:10:10:<br>00:10:10> 00:10:13:   | So we know that brain helps shape decision making at all phases.  Is built building life cycle all over the world bream and all the other rating systems that have come after  |
| 00:10:04> 00:10:07: 00:10:07> 00:10:08: 00:10:08> 00:10:10: 00:10:10> 00:10:13: 00:10:13> 00:10:16:  | So we know that brain helps shape decision making at all phases.  Is built building life cycle all over the world bream and all the other rating systems that have come after us have pretty exclusively focused on mitigation to date.  So essentially about minimizing the environmental impacts   |
| 00:10:04> 00:10:07: 00:10:07> 00:10:08: 00:10:08> 00:10:10: 00:10:10> 00:10:13: 00:10:13> 00:10:16: 00:10:16> 00:10:20:  | So we know that brain helps shape decision making at all phases.  Is built building life cycle all over the world bream and all the other rating systems that have come after us have pretty exclusively focused on mitigation to date.  So essentially about minimizing the environmental impacts that come from  |
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| 00:10:04> 00:10:07: 00:10:07> 00:10:08: 00:10:08> 00:10:10: 00:10:10> 00:10:13: 00:10:13> 00:10:16: 00:10:16> 00:10:20: 00:10:20> 00:10:21: 00:10:21> 00:10:24:  | So we know that brain helps shape decision making at all phases.  Is built building life cycle all over the world bream and all the other rating systems that have come after us have pretty exclusively focused on mitigation to date.  So essentially about minimizing the environmental impacts that come from buildings.  Breen has also included some aspects of adaptation,  |
| 00:10:04> 00:10:07: 00:10:07> 00:10:08: 00:10:08> 00:10:10: 00:10:10> 00:10:13: 00:10:13> 00:10:16: 00:10:16> 00:10:20: 00:10:20> 00:10:21: 00:10:21> 00:10:24: 00:10:24> 00:10:27:  | So we know that brain helps shape decision making at all phases.  Is built building life cycle all over the world bream and all the other rating systems that have come after us have pretty exclusively focused on mitigation to date.  So essentially about minimizing the environmental impacts that come from buildings.  Breen has also included some aspects of adaptation, but they were fairly minimal and the number of credits   |
| 00:10:04> 00:10:07: 00:10:07> 00:10:08: 00:10:08> 00:10:10: 00:10:10> 00:10:13: 00:10:13> 00:10:16: 00:10:16> 00:10:20:  00:10:20> 00:10:21: 00:10:21> 00:10:24: 00:10:24> 00:10:27: 00:10:27> 00:10:30:   | So we know that brain helps shape decision making at all phases.  Is built building life cycle all over the world bream and all the other rating systems that have come after us have pretty exclusively focused on mitigation to date.  So essentially about minimizing the environmental impacts that come from buildings.  Breen has also included some aspects of adaptation, but they were fairly minimal and the number of credits offered were small in the context of the whole rating   |
| 00:10:04> 00:10:07: 00:10:07> 00:10:08: 00:10:08> 00:10:10: 00:10:10> 00:10:13: 00:10:13> 00:10:16: 00:10:16> 00:10:20:  00:10:20> 00:10:21: 00:10:24> 00:10:27: 00:10:27> 00:10:30: 00:10:30> 00:10:30:   | So we know that brain helps shape decision making at all phases.  Is built building life cycle all over the world bream and all the other rating systems that have come after us have pretty exclusively focused on mitigation to date.  So essentially about minimizing the environmental impacts that come from buildings.  Breen has also included some aspects of adaptation, but they were fairly minimal and the number of credits offered were small in the context of the whole rating system,   |
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| 00:10:51> 00:10:52:   | buildings.  |
|---|---|
| 00:10:52> 00:10:57:   | This category includes resilience alongside environmental   |
|   | performance and human health  |
| 00:10:57> 00:10:57:   | and well being.   |
| 00:10:57> 00:11:00:   | As part of how we define a sustainable asset.   |
| 00:11:00> 00:11:03:   | Rain encourages assets to understand and take action.   |
| 00:11:03> 00:11:06:   | To protect the asset against the physical risks as it   |
| 00:11:06> 00:11:08:   | is done for many years.   |
| 00:11:08> 00:11:11:   | But this has now been expanded to include transitional risks  |
| 00:11:11> 00:11:13:   | as recommended by the CFD and social risks.   |
| 00:11:13> 00:11:16:   | It really is a game changer for measuring and reporting   |
| 00:11:17> 00:11:19:   | sustainability holistically for buildings.  |
| 00:11:19> 00:11:22:   | Further work is being done to expand resilience through the   |
| 00:11:22> 00:11:24:   | bring family of standards.  |
| 00:11:24> 00:11:27:   | The resilience category will be incorporated into all of our  |
| 00:11:27> 00:11:31:   | standards and the criteria specific to the lifecycle phase will   |
| 00:11:31> 00:11:32:   | be developed around the four ours,  |
| 00:11:32> 00:11:35:   | so resistance, reliability, redundancy and response.  |
| 00:11:35> 00:11:38:   | Slash recovery.   |
| 00:11:38> 00:11:41:   | The final topic I want to highlight today is social   |
| 00:11:41> 00:11:41:   | impact.   |
| 00:11:41> 00:11:45:   | So poor building performance has real consequences beyond the impact  |
| 00:11:45> 00:11:47:   | on the financial bottom line.   |
|   |   |
| 00:11:47> 00:11:50:   | Our industry is only now just starting to fully acknowledge   |
| 00:11:47> 00:11:50:<br>00:11:50> 00:11:54:  | Our industry is only now just starting to fully acknowledge how the environment performance of our built environment impacts health   |
|   | how the environment performance of our built environment  |
| 00:11:50> 00:11:54:   | how the environment performance of our built environment impacts health   |
| 00:11:50> 00:11:54:<br>00:11:54> 00:11:58:  | how the environment performance of our built environment impacts health mortality outcomes in our communities and how that in turn  |
| 00:11:50> 00:11:54:<br>00:11:54> 00:11:58:<br>00:11:58> 00:12:01:   | how the environment performance of our built environment impacts health mortality outcomes in our communities and how that in turn impacts on our Community and our economic resilience.  |
| 00:11:50> 00:11:54:<br>00:11:54> 00:11:58:<br>00:11:58> 00:12:01:<br>00:12:01> 00:12:05:  | how the environment performance of our built environment impacts health mortality outcomes in our communities and how that in turn impacts on our Community and our economic resilience.  We are all impacted, though it's critical to acknowledge the  |
| 00:11:50> 00:11:54:<br>00:11:54> 00:11:58:<br>00:11:58> 00:12:01:<br>00:12:01> 00:12:05:<br>00:12:05> 00:12:07:   | how the environment performance of our built environment impacts health mortality outcomes in our communities and how that in turn impacts on our Community and our economic resilience. We are all impacted, though it's critical to acknowledge the impacts are not equally experienced or equally shared. The negative impacts are disproportionately experienced by   |
| 00:11:50> 00:11:54:  00:11:54> 00:11:58:  00:11:58> 00:12:01:  00:12:01> 00:12:05:  00:12:05> 00:12:07:  00:12:07> 00:12:12:  | how the environment performance of our built environment impacts health mortality outcomes in our communities and how that in turn impacts on our Community and our economic resilience. We are all impacted, though it's critical to acknowledge the impacts are not equally experienced or equally shared. The negative impacts are disproportionately experienced by lower income communities  |
| 00:11:50> 00:11:54:  00:11:54> 00:11:58:  00:11:58> 00:12:01:  00:12:01> 00:12:05:  00:12:05> 00:12:07:  00:12:07> 00:12:12:  00:12:12> 00:12:13:   | how the environment performance of our built environment impacts health mortality outcomes in our communities and how that in turn impacts on our Community and our economic resilience. We are all impacted, though it's critical to acknowledge the impacts are not equally experienced or equally shared. The negative impacts are disproportionately experienced by lower income communities and communities of color. In particular, these negative impacts ripple through our   |
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| 00:11:50> 00:11:54:  00:11:54> 00:11:58:  00:11:58> 00:12:01:  00:12:01> 00:12:05:  00:12:05> 00:12:07:  00:12:07> 00:12:12:  00:12:12> 00:12:13:  00:12:13> 00:12:17:  00:12:21> 00:12:21: | how the environment performance of our built environment impacts health mortality outcomes in our communities and how that in turn impacts on our Community and our economic resilience.  We are all impacted, though it's critical to acknowledge the impacts are not equally experienced or equally shared.  The negative impacts are disproportionately experienced by lower income communities and communities of color.  In particular, these negative impacts ripple through our societies and undermine the social resilience and cohesion of our communities.  The expectation that the built environment should create tangible benefits |

| 00:12:32> 00:12:36: | to better understand the broader social impacts from the built                      |
|---------------------|---|
| 00:12:36> 00:12:37: | environment,  |
| 00:12:37> 00:12:39: | and this has created a need to identify how the                                     |
| 00:12:39> 00:12:44: | built environment can best deliver social value throughout the lifecycle,           |
| 00:12:44> 00:12:49: | including ways to quantify, manage and improve social value outcomes.               |
| 00:12:49> 00:12:52: | So many organizations are seeking to align their activities with                    |
| 00:12:52> 00:12:57: | international initiatives such as the United Nations Sustainable Development Goals  |
| 00:12:57> 00:12:58: | and these goals in particular,  |
| 00:12:58> 00:13:00: | seek to address global challenges,  |
| 00:13:00> 00:13:04: | including poverty and other societal inequality's                                   |
| 00:13:04> 00:13:07: | Similarly, more businesses are starting to use environmental,                       |
| 00:13:07> 00:13:11: | social and governance factors or ESG to evaluate how successfully                   |
| 00:13:11> 00:13:16: | they have introduced sustainability strategies to improve performance and outcomes, |
| 00:13:16> 00:13:19: | manage risk, and ultimately grow business value.                                    |
| 00:13:19> 00:13:22: | So this rearrangement of the SDG shows how the alignment                            |
| 00:13:22> 00:13:24: | really sits between SGS and ESG,  |
| 00:13:24> 00:13:27: | and this is a great graphic from the Stockholm Resilience                           |
| 00:13:27> 00:13:30: | Centre because it really shows in this pyramid fashion how                          |
| 00:13:31> 00:13:32: | one thing underpins another.  |
| 00:13:32> 00:13:35: | The natural environment underpinning our society.                                   |
| 00:13:35> 00:13:39: | Which underpins our economy. Ensuring that our built environment contributes        |
| 00:13:39> 00:13:43: | positively to social value is really critical to our social                         |
| 00:13:43> 00:13:46: | cohesion and the resilience of our communities to face the                          |
| 00:13:46> 00:13:49: | challenges ahead.   |
| 00:13:49> 00:13:51: | For bream we've taken a number of steps in this                                     |
| 00:13:51> 00:13:51: | area.   |
| 00:13:51> 00:13:54: | In early 2020 we mapped each of our standards for                                   |
| 00:13:54> 00:13:57: | buildings to the SDGS and published this on our website.                            |
| 00:13:57> 00:14:01: | This helped us further strengthen social impact through debris menu                 |
| 00:14:01> 00:14:03: | standard which launched in May 2020.  |
| 00:14:03> 00:14:07: | Some of the ways that bring news addresses social impact                            |
| 00:14:07> 00:14:07: | include.  |
| 00:14:07> 00:14:12: | Referencing and linking our categories to the relevant sustainable development      |
| 00:14:12> 00:14:13: | goals.  |
| 00:14:13> 00:14:18: | Including information on the links between environmental                            |

|                     | performance and social  |
|---------------------|---|
| 00:14:19> 00:14:19: | equity.   |
| 00:14:19> 00:14:25: | Encouraging inclusive spaces using universal design principles.             |
| 00:14:25> 00:14:28: | Encouraging assets to see their own resilience is linked to                 |
| 00:14:28> 00:14:29: | their community's support.  |
| 00:14:29> 00:14:33: | The broader community, by acting as a resource in times                     |
| 00:14:33> 00:14:34: | of crisis.  |
| 00:14:34> 00:14:38: | And finally, considering the impact of security arrangements at assets,     |
| 00:14:38> 00:14:44: | how that impacts equity in their neighborhood and community.                |
| 00:14:44> 00:14:47: | In summer 2020, we published our first report on where                      |
| 00:14:47> 00:14:50: | we see Brain contributing to social value in real estate,                   |
| 00:14:50> 00:14:54: | and it was just the beginning because as we've seen,                        |
| 00:14:54> 00:14:57: | there's very little industry cohesion around this conversation.             |
| 00:14:57> 00:14:59: | If we're just getting started,  |
| 00:14:59> 00:15:02: | and in fact in March this year you'll I published                           |
| 00:15:02> 00:15:04: | a report expanding on these issues,   |
| 00:15:04> 00:15:09: | an highlighting that we have significant opportunity as an industry         |
| 00:15:09> 00:15:13: | to rethink and re purpose real estate to address inequities.                |
| 00:15:13> 00:15:14: | And our report from the form,   |
| 00:15:14> 00:15:17: | the basis of that research for that report,                                 |
| 00:15:17> 00:15:20: | and we're really excited to see this topic gaining traction.                |
| 00:15:23> 00:15:26: | So finally to the role of asset certification,                              |
| 00:15:26> 00:15:28: | the next 30 years are going to be times of                                  |
| 00:15:28> 00:15:30: | fast-paced changed in real estate,  |
| 00:15:30> 00:15:34: | there is significant of that investment available now for asset             |
| 00:15:34> 00:15:37: | owners who provide confidence that they can,                                |
| 00:15:37> 00:15:41: | will and do deliver on their sustainability commitments.                    |
| 00:15:41> 00:15:44: | So when setting commitments that require action to be taken                 |
| 00:15:44> 00:15:45: | year over year to meet them,  |
| 00:15:45> 00:15:50: | organizations must think really carefully about how the asset certification |
| 00:15:50> 00:15:53: | programs they are using help them deliver those goals while                 |
| 00:15:53> 00:15:56: | protecting asset value over the long term.                                  |
| 00:15:56> 00:16:00: | This means continual improvement pursued over many years to drive           |
| 00:16:00> 00:16:01: | towards this longer term goal.  |
| 00:16:01> 00:16:05: | So when you're choosing a certification for an asset or                     |
| 00:16:05> 00:16:07: | multiple assets in a portfolio,   |
| 00:16:07> 00:16:09: | I want you to ask yourself three questions.                                 |
|                     |   |

performance and social

| 00:16:09> 00:16:12: | The first is if my asset got a perfect score.                              |
|---------------------|--|
| 00:16:12> 00:16:15: | Using this system, would it be recognized as one of                        |
| 00:16:15> 00:16:19: | the most sustainable buildings in the world on a global                    |
| 00:16:19> 00:16:20: | scale?   |
| 00:16:20> 00:16:23: | The second one is does going through the process help                      |
| 00:16:23> 00:16:26: | me deliver a better performing building while protecting and growing       |
| 00:16:27> 00:16:28: | that asset value for the future?   |
| 00:16:28> 00:16:32: | And the final question, does this process contribute to my                 |
| 00:16:32> 00:16:37: | organization's risk management processes and deliver investor confidence?  |
| 00:16:37> 00:16:40: | I can tell you how brain delivers in each of                               |
| 00:16:40> 00:16:41: | these core areas,  |
| 00:16:41> 00:16:44: | so the first thing is that bring provides a kredible                       |
| 00:16:44> 00:16:46: | and rigorous definition of sustainable value.                              |
| 00:16:46> 00:16:49: | It is science based. It goes beyond just green to                          |
| 00:16:49> 00:16:53: | incorporate people an prosperity and provides a method that can            |
| 00:16:53> 00:16:57: | be used regardless of the asset types the organization has.                |
| 00:16:57> 00:17:00: | It also provides quite crucially a pathway to improvement brain            |
| 00:17:00> 00:17:02: | meets buildings where they are.  |
| 00:17:02> 00:17:06: | We welcome those buildings that are the highest performing already         |
| 00:17:06> 00:17:09: | and we welcome those that are just getting started.                        |
| 00:17:09> 00:17:13: | We need all these buildings to complete this journey and                   |
| 00:17:13> 00:17:17: | bring can help any asset achieve and improve.                              |
| 00:17:17> 00:17:20: | The second thing is that bring supports measuring and managing             |
| 00:17:20> 00:17:23: | performance scale one building at a time.                                  |
| 00:17:23> 00:17:26: | A demonstration project here and there to show best in                     |
| 00:17:26> 00:17:28: | class is great to show us all what is possible,                            |
| 00:17:28> 00:17:32: | but it doesn't move the needle fast enough to address                      |
| 00:17:32> 00:17:32: | climate change.  |
| 00:17:32> 00:17:37: | Continual improvement of building performance is critical and the solution |
| 00:17:37> 00:17:40: | needs to encourage this at a scale that is both                            |
| 00:17:40> 00:17:41: | accessible and cost effective.   |
| 00:17:41> 00:17:45: | It needs to be focused on building performance outcomes and                |
| 00:17:45> 00:17:48: | transition data into actionable information.                               |
| 00:17:48> 00:17:52: | Our program is focused on providing the insights needed to                 |
| 00:17:52> 00:17:53: | make this possible.  |
| 00:17:53> 00:17:56: | In addition to certification.  |
|                     |  |

| 00:17:56> 00:17:59: | And finally, this needs to be about assurance.                             |
|---------------------|--|
| 00:17:59> 00:18:01: | Certification with dream is more than a prize.                             |
| 00:18:01> 00:18:05: | It is a true and Fairview of the sustainability performance                |
| 00:18:05> 00:18:09: | to provide assurance to stakeholders whether they be investors or          |
| 00:18:09> 00:18:12: | tenants or even your own employees.  |
| 00:18:12> 00:18:13: | So why does insurance matter?  |
| 00:18:13> 00:18:16: | Well, let's think about how we treat financial data of                     |
| 00:18:16> 00:18:17: | companies.   |
| 00:18:17> 00:18:20: | We expect companies to be audited by an independent external               |
| 00:18:20> 00:18:24: | auditor to confirm that their financial performance has been calculated    |
| 00:18:24> 00:18:27: | using an industry standard or industry defined approach.                   |
| 00:18:27> 00:18:30: | The ultimate goal of these standards is to ensure that                     |
| 00:18:30> 00:18:33: | a company's financial statements are complete,                             |
| 00:18:33> 00:18:36: | consistent, and compatible. Most importantly,                              |
| 00:18:36> 00:18:40: | it provides investors transparency of the performance.                     |
| 00:18:40> 00:18:44: | Bring provides the same thing but for sustainability performance in        |
| 00:18:44> 00:18:45: | assets.  |
| 00:18:45> 00:18:48: | So in our program asset owners contract with an independent                |
| 00:18:48> 00:18:51: | licensed assessor could be known as an auditor to confirm                  |
| 00:18:51> 00:18:55: | that their performance meets the brain standard which has been             |
| 00:18:55> 00:18:59: | set by BRER. Accreditation ensures that our certification program operates |
| 00:18:59> 00:19:00: | in a competent,  |
| 00:19:00> 00:19:04: | consistent an impartial manner and we are externally audited to            |
| 00:19:04> 00:19:07: | monitor compliance with international standards.                           |
| 00:19:07> 00:19:11: | Trust is critical trust in the rigor and credibility of                    |
| 00:19:11> 00:19:12: | the standard and process,  |
| 00:19:12> 00:19:15: | as is accessibility. Bring is designed to be for all                       |
| 00:19:15> 00:19:16: | these buildings,   |
| 00:19:16> 00:19:19: | not just in the standard but in the affordability of                       |
| 00:19:19> 00:19:20: | the program.   |
| 00:19:20> 00:19:24: | With billions of dollars in investment money being made on                 |
| 00:19:24> 00:19:26: | the basis of ESG performance,  |
| 00:19:26> 00:19:29: | the importance of the quality of the data and the                          |
| 00:19:29> 00:19:33: | independent verification that the performance is sound is                  |
|                     | growing.   |
| 00:19:33> 00:19:37: | With investors. This kind of assurance also supports good                  |

| business |  |
|----------|--|
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| 00:19:37> 00:19:41: | decision making to bring certified data provides the basis for        |
|---------------------|---|
|                     |   |
| 00:19:41> 00:19:45: | being able to stress test portfolios against risks and potential      |
| 00:19:45> 00:19:48: | future regulatory obligations. And we know these are coming.          |
| 00:19:48> 00:19:51: | This can work with any any size portfolio.                            |
| 00:19:51> 00:19:55: | And our program provides a platform that can support this             |
| 00:19:55> 00:19:56: | risk management approach.   |
| 00:19:56> 00:20:00: | So holistic, scalable, cost effective,                                |
| 00:20:00> 00:20:04: | incredible. This is what all asset owners should be demanding         |
| 00:20:04> 00:20:06: | of their building certification programs,                             |
| 00:20:06> 00:20:09: | our industry, our people and communities,                             |
| 00:20:09> 00:20:12: | and ultimately our economy depends on real action.                    |
| 00:20:12> 00:20:17: | Bring provides the science lead solution to today's built environment |
| 00:20:17> 00:20:17: | challenges.   |
| 00:20:17> 00:20:21: | You can learn more about brain by visiting our website                |
| 00:20:21> 00:20:25: | at www.green.com/USA or you can reach out to me directly              |
| 00:20:25> 00:20:28: | my email address and phone number are shown on the                    |
| 00:20:28> 00:20:31: | slide. Thank you for your time today to learn more                    |
| 00:20:31> 00:20:33: | about the role of sustainability assurance in real estate.            |
| 00:20:33> 00:20:37: | I hope you enjoy the rest of your day.                                |

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