Webinar

The Future of Sustainable Building: Mass Timber???s Role, Rising Costs, and Meeting Provincial Code

Date: April 05, 2022

00:00:00 --> 00:00:02: Right on the corner in the bottom corner.
00:00:02 --> 00:00:06: 1st just ask folks can mute themselves as we get
00:00:06 --> 00:00:08: started here.
00:00:08 --> 00:00:09: I know we're we're not on.
00:00:09 --> 00:00:12: The on the whatever the format that allows us to
00:00:12 --> 00:00:15: focus just on the speaker. So we just ask that
00:00:15 --> 00:00:18: everyone please stay muted. Looks like we've got most of
00:00:18 --> 00:00:21: the people in from the waiting room, so I think
00:00:21 --> 00:00:24: we'll get started. So first of all, thank you all
00:00:24 --> 00:00:27: for joining us on this almost kind of sunny lunch
00:00:27 --> 00:00:29: hour here in Vancouver. My name is Duncan.
00:00:30 --> 00:00:32: I'm the chair of the Urban Land Institute of British
00:00:32 --> 00:00:35: Columbia and I'm just here to provide some welcoming remarks.
00:00:35 --> 00:00:38: So welcome to everyone who's here before we get started.
00:00:38 --> 00:00:40: As always, I just want to recognize that UIBC that
00:00:40 --> 00:00:43: does its work on the traditional and both the traditional
00:00:43 --> 00:00:47: unseeded territories and treaty territories here in British Columbia of
00:00:47 --> 00:00:50: the indigenous people in myself. I'm located in the traditional
00:00:50 --> 00:00:53: unceded territories at the Coast Salish people, the Musqueam, Squamish
00:00:53 --> 00:00:56: and slavery tough. And so I hope you'll just if
00:00:56 --> 00:00:58: you're on that territory, I'll take a moment to recognize
00:00:58 --> 00:01:00: that, and if not, please.
00:01:00 --> 00:01:02: Take a moment to recognize where you might be calling
00:01:02 --> 00:01:03: in from today.
00:01:04 --> 00:01:07: As always, I want to start by thanking our sponsors,
00:01:07 --> 00:01:10: our annual sponsors. They're back here behind me on the

00:01:10 --> 00:01:13: screen for their continued support of you IVC. It's because
00:01:13 --> 00:01:16: of their commitment to UIC that we're able to put
00:01:16 --> 00:01:18: on events such as this and and so I really
00:01:18 --> 00:01:22: appreciate their ongoing support of our organization and our efforts
00:01:22 --> 00:01:25: to have educational sessions like this. You know, today I'm
00:01:25 --> 00:01:28: I'm interested in the topic that we've actually had a
00:01:28 --> 00:01:30: couple of some of. You may have joined. We've had
00:01:30 --> 00:01:33: this conversation a few times over the last couple of
00:01:33 --> 00:01:35: years, and obviously, if you're doing
00:01:35 --> 00:01:38: this sort of business in the industry these days, mass,
00:01:38 --> 00:01:41: timber or CLT or whatever you wanna call it is
00:01:41 --> 00:01:43: a hot topic, and so we're looking forward to what
00:01:43 --> 00:01:46: I think will be a great comment discussion. I know
00:01:46 --> 00:01:49: myself, you know, this is a conversation I've had quite
00:01:49 --> 00:01:51: a bit both at our company here at UCI and
00:01:52 --> 00:01:55: and with government I think it's particularly good timing given
00:01:55 --> 00:01:58: you know there's a lot of conversation or we've been
00:01:58 --> 00:02:01: having a lot of conversation here at UCI about what
00:02:01 --> 00:02:03: we could be doing to have an issue more education
00:02:03 --> 00:02:06: on what the industry could be doing to.
00:02:06 --> 00:02:08: Have our own impact on climate action. You know. Recently
00:02:08 --> 00:02:10: you made some of you may have seen there was
00:02:11 --> 00:02:13: an IPCC recent IPCC report that said, you know, we're,
00:02:13 --> 00:02:16: you know we've been saying it for years. We're running
00:02:16 --> 00:02:19: out of time, but it does seem particularly important, and
00:02:19 --> 00:02:21: the decisions we're making today are going to have a
00:02:21 --> 00:02:24: massive impact, particularly in the industry like ours. Because, you
00:02:24 --> 00:02:27: know, embodied carbon and the buildings we build are going
00:02:27 --> 00:02:30: to have a significant impact both in today's emissions but
00:02:30 --> 00:02:32: over the life cycle of the buildings. And so I
00:02:32 --> 00:02:35: think having conversations with this great panel that we have
00:02:35 --> 00:02:37: about what that looks like.
00:02:37 --> 00:02:39: And and one of the pros and cons and how
00:02:39 --> 00:02:41: we can kind of build this sector in terms of
00:02:41 --> 00:02:44: both mass timber. But around this the how it is
00:02:44 --> 00:02:47: as a sustainable resource for building along with other drivers
00:02:47 --> 00:02:51: of carbon and technology and the regulatory changes necessary for
00:02:51 --> 00:02:54: industry to make those shifts and make that jump. So
00:02:54 --> 00:02:56: I'm really excited for what will be a great panel
00:02:56 --> 00:03:00: and I'm excited to introduce our host Rachel affection, who's

00:03:00 --> 00:03:03: a principal effects NPR? I'm also happy to report that

00:03:03 --> 00:03:06: she has joined our UIBC leadership team and so we're

00:03:06 --> 00:03:07: very excited to have her here.

00:03:08 --> 00:03:10: To host today, but also as a new leader here

00:03:10 --> 00:03:13: at UIC. She has over 2 decades of experience and

00:03:13 --> 00:03:17: strategic communication specializing in PR for real estate and developer

00:03:17 --> 00:03:20: and corporate clients. And she supports those clients and other

00:03:20 --> 00:03:23: in the other companies in the real estate industry through

00:03:23 --> 00:03:27: corporate communications. PR for Project launches, managing issues and as

00:03:28 --> 00:03:31: well as crisis and reputational management. You know Rachel, I've

00:03:31 --> 00:03:34: gotten to know her over the last year and she

00:03:34 --> 00:03:37: does a great job of helping develop engagement plans for

00:03:37 --> 00:03:38: projects that.

00:03:38 --> 00:03:41: Based community opposition or wanting to host have clients, uh,

00:03:41 --> 00:03:43: talk about you know what are they innovative things they're

00:03:43 --> 00:03:46: doing as a company like you know, like conversations like

00:03:46 --> 00:03:48: today. So I'm very excited to have her join us

00:03:48 --> 00:03:50: and I'm going to pass it over to her to

00:03:50 --> 00:03:52: be the Hostess for the rest of the day. Thanks

00:03:52 --> 00:03:53: very much, Rachel.

00:03:54 --> 00:03:57: Thank you Duncan. Thank you for the introduction. I appreciate

00:03:57 --> 00:04:00: it and I'm happy to be here. I apologize for

00:04:00 --> 00:04:03: my backdrop. I was hoping for a nice virtual one,

00:04:03 --> 00:04:05: but with Mac we had some some technology issues so

00:04:06 --> 00:04:08: my apologies. Yes, I think that this is going to

00:04:08 --> 00:04:11: be a great chat. We have a diverse group here

00:04:11 --> 00:04:13: to discuss the topic which I like. We have a

00:04:13 --> 00:04:16: group of of panelists who I think will each offer

00:04:16 --> 00:04:19: something unique and that's I think really important in this

00:04:19 --> 00:04:23: discussion. So let's just jump right into it. I'm going

00:04:23 --> 00:04:25: to pass a pass off to Peter Moonan.

00:04:25 --> 00:04:30: National sustainability manager with the BC Wood Council. Peter, I'll

00:04:30 --> 00:04:31: let you start.

00:04:32 --> 00:04:35: Thanks, Rachel, I hope everyone can hear me Duncan. I'm

00:04:35 --> 00:04:39: really glad that you sort of mentioned CLT or whatever

00:04:39 --> 00:04:42: you whatever you have, because there's more than just one

00:04:42 --> 00:04:45: mass timber product, this is CLT. It's for those of
00:04:45 --> 00:04:49: you who are not familiar. It's essentially lumber that is
00:04:49 --> 00:04:52: glued at right angles to layers above and below it,
00:04:52 --> 00:04:56: typically at the minimum of thickness is 3 layers, but
00:04:56 --> 00:04:58: it can go up to about 14 inches, which is
00:04:58 --> 00:05:02: about 9 layers. It's and that's a solid wood product.
00:05:02 --> 00:05:05: That is, you know is is serving as a panel.
00:05:05 --> 00:05:07: It can be structural as a as a as a
00:05:07 --> 00:05:10: wall or as a floor panel, but there's a couple
00:05:10 --> 00:05:14: of other mass timber products that I think I should
00:05:14 --> 00:05:17: mention too. I'm sure all of you are familiar with
00:05:17 --> 00:05:21: laminated veneer lumber. This is a product that is continuously
00:05:21 --> 00:05:23: fabricated in long and long.
00:05:23 --> 00:05:25: Length, maybe it is just as you say.
00:05:26 --> 00:05:29: And can be used as a wall, but it's typically
00:05:29 --> 00:05:31: used as a header.
00:05:32 --> 00:05:34: It's it's a a mass timber product and can be
00:05:35 --> 00:05:37: used in as a floor sheet as well. Another is
00:05:37 --> 00:05:41: timber strand lumber. This is made with very thin veneers.
00:05:41 --> 00:05:43: You may look look at it and think that it
00:05:43 --> 00:05:44: is OSB but it's not.
00:05:46 --> 00:05:48: The layers are very thin. It's very stable, very strong,
00:05:48 --> 00:05:51: and it's also typically used as a header. But like
00:05:51 --> 00:05:53: LVL can be used in a vertical application if it's
00:05:53 --> 00:05:54: glued up and made thicker.
00:05:55 --> 00:05:59: And finally, there's parallam, which is a parallel strand lumber.
00:05:59 --> 00:06:02: It is made with the same veneers as plywood and
00:06:02 --> 00:06:06: as LDL, and is an extruded and pressed product so
00:06:06 --> 00:06:09: it's put through a press that it compresses it on
00:06:09 --> 00:06:12: all four sides treated and then it is cured and
00:06:12 --> 00:06:14: it is used as a as a column or as
00:06:14 --> 00:06:17: as a beam. So those are all mass timber products
00:06:17 --> 00:06:21: that are available. So when I refer to mass timber,
00:06:21 --> 00:06:24: I'm not just referring to CLT which is sort of
00:06:24 --> 00:06:26: the the poster child for mass.
00:06:26 --> 00:06:28: Number, so why is it? Why is it important?
00:06:29 --> 00:06:32: The slide you're seeing there to me are some of
00:06:32 --> 00:06:36: the things that are affecting how we build. Certainly we're
00:06:36 --> 00:06:42: all aware of regulations, whether they're international reporting regulations, concerns
00:06:42 --> 00:06:45: over the the role of of of land based operational

00:06:45 --> 00:06:50: considerations like energy use, and high performance. And, as Duncan

00:06:50 --> 00:06:54: mentioned, embodied carbon. Those are are things which which are

00:06:54 --> 00:06:57: external to our sector, but which impact our sector and

00:06:57 --> 00:06:59: mass chamber has a role or.

00:06:59 --> 00:07:03: Contribution to solving some of those problems. When we look

00:07:03 --> 00:07:06: at technology and and the role that plays in codes,

00:07:06 --> 00:07:10: there's technology around design and whether it's BIM software, whether

00:07:10 --> 00:07:14: it's a static loading software, whether it's fire modeling, whether

00:07:14 --> 00:07:19: it's seismic modeling, technology is advancing our understanding of products,

00:07:19 --> 00:07:23: and that influences codes because codes must reflect what what

00:07:23 --> 00:07:26: a product or material is capable of doing, not what

00:07:26 --> 00:07:28: we would like it to do, and that that those

00:07:28 --> 00:07:29: are changing.

00:07:29 --> 00:07:31: Within the construction sector.

00:07:32 --> 00:07:35: Uh, I guess there's a whole bunch of factors which

00:07:35 --> 00:07:38: are affected are affecting us. There's the industrialization.

00:07:40 --> 00:07:45: Whoever could just mute please. Thanks, there's with construction capacity.

00:07:45 --> 00:07:50: We've got industrialized production which is occurring around the world,

00:07:50 --> 00:07:54: not just in wood but with with steel with concrete

00:07:54 --> 00:07:58: with with maystone and masonry and other materials, and that

00:07:58 --> 00:08:01: is critical for for, I guess, continuity of the in

00:08:01 --> 00:08:05: the in the construction sector. Given that we have trade

00:08:05 --> 00:08:09: shortages and to be honest, the productivity in the construction

00:08:09 --> 00:08:10: sector.

00:08:10 --> 00:08:14: Is not very great. It's something the industry is well

00:08:14 --> 00:08:18: aware of and just as an interesting little fact that

00:08:18 --> 00:08:22: I I garnered from a large global construction organization, the

00:08:23 --> 00:08:28: annual productive growth in productivity for the construction sector post

00:08:28 --> 00:08:30: World War Two is .1% per year.

00:08:31 --> 00:08:35: And you may think, well, that's that's crazy. It can't

00:08:35 --> 00:08:39: be that way. Remember that productivity is not production. Productivity

00:08:39 --> 00:08:42: is is basically how much each worker is capable of

00:08:42 --> 00:08:45: producing, and it's that which hasn't grown. So mass timber

00:08:45 --> 00:08:49: will play a role in enabling the construction sector to

00:08:49 --> 00:08:53: have industrialized production because of the ability to machine this

00:08:53 --> 00:08:56: material to very tight tolerances, which makes both assembly and

00:08:56 --> 00:09:00: performance improve. And it also can help address the trade

00:09:00 --> 00:09:01: shortages.

00:09:01 --> 00:09:05: In talking to many of you probably know urban one

00:09:05 --> 00:09:08: and and the the Brock Commons project. In that project

00:09:09 --> 00:09:12: there were nine members on the crew that that built

00:09:12 --> 00:09:15: 17 of the 18 stories on the bottom floor. The

00:09:15 --> 00:09:19: concrete sector there would have been up to 54 people

00:09:19 --> 00:09:22: working at any one time, so the ability to have

00:09:22 --> 00:09:25: a product go up quickly. A building can go up

00:09:25 --> 00:09:30: quickly and accurately, safely and efficiently, is enhanced when you've

00:09:30 --> 00:09:31: got a material.

00:09:31 --> 00:09:35: Like mass timber or like prefabricated components that enable you

00:09:35 --> 00:09:36: to do to do things better.

00:09:37 --> 00:09:41: There's also been change within the wood product development. The

00:09:41 --> 00:09:44: fact that we have CLT, the fact that we have

00:09:44 --> 00:09:47: a systems that to manufacture and basically go directly from

00:09:47 --> 00:09:50: design to fabrication is also an enhancement.

00:09:50 --> 00:09:53: But these are being driven by a number of things

00:09:53 --> 00:09:56: which affect the entire design and construction sector housing. We

00:09:57 --> 00:10:00: all know that cities are getting denser. Most cities don't

00:10:00 --> 00:10:02: have the opportunity to go out, so they have to

00:10:02 --> 00:10:05: go up. So we have densification, and we also have

00:10:05 --> 00:10:08: concerns over affordability. And codes are not lightening up to

00:10:09 --> 00:10:11: saying, Oh yeah you can. You can have a lower

00:10:11 --> 00:10:15: quality lower performing building so we're dealing with densification performance

00:10:15 --> 00:10:19: and affordability, and mass timber and prefabricated wood elements have

00:10:19 --> 00:10:20: a role to play.

00:10:20 --> 00:10:20: There.

00:10:22 --> 00:10:25: Finally, the last two are just starting to really gain

00:10:25 --> 00:10:30: ground the the healthful buildings and biophilic design. Increasingly, we're

00:10:30 --> 00:10:34: seeing that there are. There's there's science that proves that
00:10:34 --> 00:10:38: the building itself, not its operations, but the building itself,
00:10:38 --> 00:10:41: what it's made of the light, the sound, all of
00:10:41 --> 00:10:44: those play a role in how we perform as as
00:10:44 --> 00:10:47: an animal as a human being, because those the building
00:10:47 --> 00:10:52: itself, the materials, natural light, acoustics, air quality that affects
00:10:52 --> 00:10:53: our stress levels.
00:10:53 --> 00:10:56: And if we have less stress level in in our
00:10:56 --> 00:11:00: surroundings, we're better able to heal or learn or work
00:11:00 --> 00:11:03: or or even relax. And finally, I'm sure most of
00:11:03 --> 00:11:06: you are are aware of circular economy. We need to
00:11:06 --> 00:11:11: start designing for deconstruction just before they started. Chris mentioned
00:11:11 --> 00:11:14: that he's got recovered wood from in his back in
00:11:14 --> 00:11:17: his background, which you'll see.
00:11:18 --> 00:11:20: We need to be able to recover not just materials,
00:11:20 --> 00:11:23: but the function of those of those materials. And if
00:11:23 --> 00:11:27: you're designing a building to be deconstructed, you want to
00:11:27 --> 00:11:30: capture what that element does, not just what it's made
00:11:30 --> 00:11:33: of. No one's going to turn CLT back into lumber,
00:11:33 --> 00:11:35: but if you've got a CLT, wall or floor, you
00:11:35 --> 00:11:38: can reuse it as a floor, so so that's really
00:11:38 --> 00:11:41: where I think there are opportunities for mass timber. I
00:11:41 --> 00:11:43: will leave it at that and turn it back over
00:11:44 --> 00:11:45: to Rachel to the next person.
00:11:47 --> 00:11:50: Thank you so much, Peter. I appreciate that.
00:11:51 --> 00:11:54: OK, we're going to go next to to Chris Hill,
00:11:54 --> 00:11:58: President and partner of Bee collective Homes. Chris is going
00:11:58 --> 00:12:02: to speak to sustainable and innovative building solutions. He's going
00:12:02 --> 00:12:06: to talk about building to upcoming standards while navigating the
00:12:06 --> 00:12:09: current state of the supply chain that impacts timelines and
00:12:10 --> 00:12:13: budgets. This will also be explored. So Chris, I will
00:12:13 --> 00:12:14: pass over to you.
00:12:14 --> 00:12:18: Thanks, Rachel. I just this first slide I've used on
00:12:18 --> 00:12:21: a lot of my presentations. Now I sort of climate
00:12:21 --> 00:12:24: change is real. I think we've all felt this effect
00:12:24 --> 00:12:27: in the last last few months and last year with
00:12:27 --> 00:12:31: flooding, fires and and various disasters with NBC and.
00:12:32 --> 00:12:35: Uh, the the kind of unfortunate news right now is

00:12:35 --> 00:12:38: that the on the provincial level, the last data that
00:12:38 --> 00:12:40: I could find recently was 2019, but our sort of
00:12:40 --> 00:12:44: targets aren't. We're not trending in the right direction at
00:12:44 --> 00:12:47: this point, and we're far from meeting our 2025 emission
00:12:47 --> 00:12:47: targets.
00:12:48 --> 00:12:52: At this point I hope we all know that buildings
00:12:52 --> 00:12:57: are a contributing factor. 20.6 of the total emissions of
00:12:57 --> 00:13:01: that 68 million tons is from buildings, and there's a
00:13:01 --> 00:13:04: goal set by BC to reduce that by 50% by
00:13:05 --> 00:13:05: 2030.
00:13:07 --> 00:13:10: So we're focusing on the often ignored low rise building
00:13:10 --> 00:13:13: sector. We feel at least 50% of what gets built
00:13:13 --> 00:13:15: in North America, and I think it's quite a bit
00:13:15 --> 00:13:18: higher. Actually, in the Metro, Vancouver is low rise by
00:13:18 --> 00:13:21: square footage. I'm not quite a bit higher. I think
00:13:21 --> 00:13:25: it's about 60%. Small buildings are less reliant on structural,
00:13:25 --> 00:13:28: concrete, and steel. More material options exist in this sector.
00:13:28 --> 00:13:32: More existing carbon storing options for the sector, less barriers
00:13:32 --> 00:13:36: to innovation, and typically a large group looking forward-looking practitioners.
00:13:40 --> 00:13:43: I'll say it, regardless of the faults, energy step code
00:13:43 --> 00:13:46: is laid out the path forward, we sort of know
00:13:46 --> 00:13:49: in this sector we know what's coming for our business.
00:13:49 --> 00:13:53: We're typically targeting the highest level city of Vancouver for
00:13:53 --> 00:13:56: contact is also at step code level 4, albeit slightly
00:13:56 --> 00:13:58: different with their mandate.
00:13:59 --> 00:14:03: All new construction will be net zero ready, so this
00:14:03 --> 00:14:06: top line by 2030 in my opinion. That's 8 short
00:14:06 --> 00:14:07: years.
00:14:08 --> 00:14:10: If we take a closer look at energy and BC
00:14:10 --> 00:14:14: compared to the country, and I think the supply is
00:14:14 --> 00:14:17: good context, I apologize for this terrible graph. It's when
00:14:17 --> 00:14:20: I pulled out. I highlighted BC and red so the
00:14:20 --> 00:14:24: carbon impact of our primary energy renewable in BC. The
00:14:24 --> 00:14:27: electrical grid is pretty low. This is CO2 generated per
00:14:27 --> 00:14:30: kWh, broken down by the different provinces.
00:14:31 --> 00:14:35: And applying that with embodied carbon and operational carbon, this
00:14:35 --> 00:14:38: is a sample townhouse building. It's a full life cycle,
00:14:38 --> 00:14:42: operating and embodied carbon emissions. This would be a passive

00:14:42 --> 00:14:46: House level efficiency. We're showing three options of insulating materials,

00:14:47 --> 00:14:50: including the boss system, which is a dense back silos

00:14:50 --> 00:14:53: that I'll get into later. The jumps in this graph

00:14:53 --> 00:14:58: include heat pump replacement, refrigerant, charging window replacement, and end

00:14:58 --> 00:15:01: of life deconstruction and disposal right at the end.

00:15:01 --> 00:15:05: Of note, it doesn't include the lumber panel salvage. As

00:15:05 --> 00:15:08: Peter noted, my background is from unbuild years heritage numbers,

00:15:08 --> 00:15:12: and they have the ability to salvage and potentially reuse

00:15:12 --> 00:15:14: wood fiber and the boss system, but it's much more

00:15:15 --> 00:15:17: difficult to reuse other products like spray foam.

00:15:19 --> 00:15:22: For context, I found this graph is really kind of

00:15:22 --> 00:15:25: interesting. This is the exact same building all we have

00:15:26 --> 00:15:29: done is change the geographic location. This puts it in

00:15:29 --> 00:15:32: Alberta, which dramatically changes the GHG and the carbon impact

00:15:32 --> 00:15:33: so.

00:15:33 --> 00:15:36: For me, what the point of this is, this is

00:15:36 --> 00:15:39: still a passive house building. It's just the GHG electricity

00:15:39 --> 00:15:40: higher in that.

00:15:43 --> 00:15:46: The point is, material choice matters. For low rise construction,

00:15:46 --> 00:15:49: this is all about using the existing advanced light frame

00:15:49 --> 00:15:52: technology we have and combining with carbon storing insulating as

00:15:52 --> 00:15:54: the walls get thicker, we're going to have to increase

00:15:54 --> 00:15:56: our value in our R values of our walls and

00:15:56 --> 00:15:58: they're going to get thicker. So how do we do

00:15:58 --> 00:15:59: this?

00:16:00 --> 00:16:03: In my opinion, the answers there for us now we

00:16:03 --> 00:16:06: use passive house or high efficiency. Building higher R values,

00:16:06 --> 00:16:10: low embodied carbon electrify everything utilizing clean energy. We can

00:16:10 --> 00:16:13: get to 0 carbon meetings and change that trajectory.

00:16:14 --> 00:16:17: There still needs to be innovation, but in general we

00:16:17 --> 00:16:19: have the path forward. I believe there be a paradigm

00:16:19 --> 00:16:23: shift in the residential construction industry and this really becomes

00:16:23 --> 00:16:25: an exercise in change management to a new way.

00:16:26 --> 00:16:29: As Peter pointed to our construction industry, we can no

00:16:29 --> 00:16:33: longer build the way we've been currently doing it, and

00:16:33 --> 00:16:35: this is obviously from 100 years ago, but a lot

00:16:36 --> 00:16:39: of construction sites are still following the exact same process,

00:16:39 --> 00:16:43: something that we've noticed as well as our projects.

00:16:44 --> 00:16:47: Across the board and a lot of people are complaining

00:16:47 --> 00:16:50: about this. They're getting very complicated. Construction is is is

00:16:50 --> 00:16:53: more attuned to rocket ships and those sort of pieces.

00:16:53 --> 00:16:56: So how do we deal with this ever growing complexity?

00:16:58 --> 00:17:01: A solution that I won't talk about is if we

00:17:01 --> 00:17:04: take those values that I've already listed is is off

00:17:04 --> 00:17:07: size construction and the the various benefits that off site

00:17:07 --> 00:17:10: construction can do. I believe it can reduce the overall

00:17:10 --> 00:17:13: cost when you look at full picture, even though comparing

00:17:13 --> 00:17:16: stick framing or other systems to that on the immediate

00:17:16 --> 00:17:20: cost is higher, but overall cost can be reduced. Timeline

00:17:20 --> 00:17:22: is definitely able to be reduced. I think a big

00:17:22 --> 00:17:25: one is going to be a major factor of supply

00:17:25 --> 00:17:27: chain. Factories can smooth out a lot of the supply

00:17:28 --> 00:17:28: chain industries.

00:17:29 --> 00:17:31: Use less waste and you can start to look at

00:17:31 --> 00:17:34: more stronger buying power. And as Peter alluded to, I

00:17:34 --> 00:17:36: think we're all aware that there is going to be

00:17:36 --> 00:17:41: some significant labor shortages in skilled trades and offsite construction,

00:17:41 --> 00:17:43: and factory is is a potential answer for that.

00:17:45 --> 00:17:48: What we've discovered is a massive balancing act between flexibility

00:17:48 --> 00:17:52: and standardization. Offsite constructions with the balance between these two

00:17:52 --> 00:17:54: buildings need to be unique, but we need to be

00:17:54 --> 00:17:58: able to produce them in more efficient ways through standardization.

00:17:58 --> 00:18:01: So where is that balancing point? And that's something I

00:18:01 --> 00:18:03: think the industry still needs to discover.

00:18:04 --> 00:18:08: It's also key. Off-site construction is not simply about the

00:18:08 --> 00:18:11: use of simple wall panels. It's a holistic, systematic approach

00:18:11 --> 00:18:15: to building faster, better, smarter, safer, and more sustainably. It's

00:18:15 --> 00:18:19: not about panels, it's about process improvement. In the panels

00:18:19 --> 00:18:22: are simply only one component. In that process, they're merely

00:18:22 --> 00:18:26: output of a very detailed process improvement exercise and

so

00:18:26 --> 00:18:28: on. That idea of this idea of off-site process in

00:18:29 --> 00:18:31: 5 minutes I can't go too deep on this, so

00:18:31 --> 00:18:33: there's a bit of a repeat, but.

00:18:33 --> 00:18:34: Umm?

00:18:35 --> 00:18:39: This process is really what happens before construction starts, so

00:18:39 --> 00:18:42: getting the team together for an integrated design process at

00:18:42 --> 00:18:46: the very start and understanding the project delivery method and

00:18:46 --> 00:18:48: creating a plan, what often this creates is is.

00:18:49 --> 00:18:51: About it's about choosing a system. What is the wall

00:18:52 --> 00:18:54: panel? What are what are we choosing in a system

00:18:54 --> 00:18:54: to go for us?

00:18:55 --> 00:18:58: In the industry right now, this could potentially mean choosing

00:18:58 --> 00:19:01: a single source supply chain or specifying a specific firm

00:19:01 --> 00:19:03: that supplies the proprietary system.

00:19:04 --> 00:19:07: Right, in my opinion this can increase the risk exposure

00:19:07 --> 00:19:10: on a project and in an emerging and changing industry.

00:19:11 --> 00:19:12: Umm?

00:19:13 --> 00:19:17: Inherently, prefab creates shop drawings and forces the creation of

00:19:17 --> 00:19:20: a digital twin. This is a critical component on this

00:19:20 --> 00:19:22: place, but how do we? How do we eliminate the

00:19:22 --> 00:19:25: system piece? So with this sort of plot pieces in

00:19:25 --> 00:19:26: place?

00:19:27 --> 00:19:30: I was successful in writing a grant, and we've developed

00:19:30 --> 00:19:34: a system we called Boss Building off-site sustainable systems. The

00:19:34 --> 00:19:37: idea is to reduce the learning curve for a fragmented

00:19:37 --> 00:19:40: industry, so it's a complete system for building homes that

00:19:40 --> 00:19:43: are affordable and carbon neutral. Following the values that I

00:19:43 --> 00:19:47: showed you and our approach is collaborative, open source and

00:19:47 --> 00:19:50: benefits the entire industry. So this is we want to

00:19:50 --> 00:19:53: distribute this widely. It's and there's no IP, it's not

00:19:53 --> 00:19:56: a proprietary system that is just to find some standardization

00:19:56 --> 00:19:57: across the board.

00:19:58 --> 00:20:01: Give everyone a detailed system that can be constantly improved

00:20:01 --> 00:20:04: and advanced. The close panel market, so we've chosen to

00:20:04 --> 00:20:07: to not franchise or do anything with this app, so

00:20:07 --> 00:20:09: it's literally free for everybody.

00:20:11 --> 00:20:14: Obviously open source term is stolen from the the software

00:20:14 --> 00:20:17: industry, but the term open source refers to any program

00:20:17 --> 00:20:20: system, the source code content is made available for use

00:20:20 --> 00:20:23: or modification as users or other developers see fit. Unlike

00:20:23 --> 00:20:27: proprietary content, open source programmer system is developed as a

00:20:27 --> 00:20:31: public open collaboration and made freely available. This means it

00:20:31 --> 00:20:34: can be produced by multiple factories and suppliers in the

00:20:34 --> 00:20:36: industry. This is how we I think we can see

00:20:36 --> 00:20:40: the industry advance and move past the proprietary single source

00:20:40 --> 00:20:41: systems and have a a spec.

00:20:41 --> 00:20:45: Where you can spec off-site prefabrication systems and have it

00:20:45 --> 00:20:49: supplied by multiple suppliers. I also believe collaboration in the

00:20:49 --> 00:20:54: industry will move innovation forward, increase the potential capacity available.

00:20:54 --> 00:20:57: This is really just the start of something that we're

00:20:58 --> 00:21:01: hoping to see, grow and definitely need assistance and help

00:21:01 --> 00:21:05: and and and adopt adoption of a collaboration with everybody.

00:21:05 --> 00:21:07: So that's what I got. Thank you.

00:21:09 --> 00:21:12: Thanks very much Chris. Appreciate all that detail. I look

00:21:12 --> 00:21:15: forward to the discussion around your program.

00:21:16 --> 00:21:20: OK, we're going to move on to Zach Ross, President

00:21:20 --> 00:21:23: of the Cape Group. Zach is on the front lines

00:21:23 --> 00:21:27: of residential and commercial building of all kinds in BC

00:21:27 --> 00:21:31: and beyond across Canada. He's going to speak to financing

00:21:31 --> 00:21:36: mass timber projects, the challenges of rising costs, how the

00:21:36 --> 00:21:41: company is structuring their team with sustainability talents, front and

00:21:41 --> 00:21:44: center. So I will pass off now to the President

00:21:44 --> 00:21:46: of Cape Group, Zach Ross.

00:21:48 --> 00:21:52: Thanks Rachel, firstly thanks everybody for being here today with

00:21:52 --> 00:21:55: us. It's a pleasure to be here with everyone's Cape.

00:21:55 --> 00:21:58: Groups of three generational family business I'm. I'm a third

00:21:58 --> 00:22:02: generation. My my grandfather started the company and the prairies

00:22:02 --> 00:22:04: in the 1950s and this has been in the forefront

00:22:04 --> 00:22:09: of construction development development methodologies since since our inception.

00:22:10 --> 00:22:13: So really, the question that we get asked all time
00:22:13 --> 00:22:16: is here from Pierre Chris about all these factors. But
00:22:16 --> 00:22:19: how do we actually do this now? Like how do
00:22:19 --> 00:22:22: we take all that information and actually bring a tangible
00:22:22 --> 00:22:25: product to the market so we get tossed every day
00:22:25 --> 00:22:27: with trying to figure out how do we design these
00:22:28 --> 00:22:30: buildings? How do we finance them? How do we end
00:22:30 --> 00:22:34: up getting people into these buildings and actually living and
00:22:34 --> 00:22:37: using them? So some of the challenges that we face
00:22:37 --> 00:22:40: are actually discussions with financing institutions.
00:22:41 --> 00:22:44: Just getting some education out there about, you know this
00:22:44 --> 00:22:47: is a wood building, but it's actually, you know, classified
00:22:47 --> 00:22:50: more as as a a mass timber building so the
00:22:50 --> 00:22:53: the fire ratings are different. We have to have conversation
00:22:53 --> 00:22:56: about the lifespan of these buildings. You know they're not
00:22:56 --> 00:22:59: going to fall over. Some people don't really understand that
00:22:59 --> 00:23:03: this is a different methodology than wood frame construction, so
00:23:03 --> 00:23:06: there's a big education piece we've been working with the
00:23:06 --> 00:23:10: municipal governments, the federal governments, the provincial governments to try
00:23:10 --> 00:23:12: and understand and educate.
00:23:12 --> 00:23:15: Uh, and and to create programs to actually facilitate the
00:23:15 --> 00:23:19: construction of these mass timber buildings. One thing that we
00:23:19 --> 00:23:22: face as a challenge is the actual constructability of these
00:23:22 --> 00:23:25: projects, because mass timber is actually it wants to be
00:23:25 --> 00:23:28: a square box and so the question is, is how
00:23:28 --> 00:23:32: do you actually provide articulation and architectural features to the
00:23:32 --> 00:23:36: building spectrum aesthetically pleasing at the same time fitting within
00:23:36 --> 00:23:39: the zoning and policy guidelines outlined by the city.
00:23:40 --> 00:23:43: As an example, Toronto has a zoning and design guideline
00:23:43 --> 00:23:46: that requires an angular plane to be applied to the
00:23:46 --> 00:23:50: buildings that can be a challenge with step back terracing
00:23:50 --> 00:23:54: in these projects as it creates various different loading on
00:23:54 --> 00:23:56: the building that isn't susceptible for.
00:23:58 --> 00:24:01: Mass timber construction so you know trying to educate and
00:24:01 --> 00:24:05: that's working groups like Peter to try and actually have
00:24:05 --> 00:24:08: systems in place to allow these units to come into
00:24:09 --> 00:24:12: the market faster. And as people talk about affordability, we
00:24:13 --> 00:24:16: talk about it being difficult to actually bring these units

00:24:16 --> 00:24:19: onto the market. We have to get them on to
00:24:19 --> 00:24:22: the like into the system as fast as possible. So
00:24:22 --> 00:24:25: how do we take a property from green dirt?
00:24:26 --> 00:24:29: To actually becoming a livable space. And so the you
00:24:29 --> 00:24:32: know the question is is is a city process getting
00:24:32 --> 00:24:36: our permits in place. It's about working with our pre
00:24:36 --> 00:24:40: construction teams and and Chris mentioned a lot about the
00:24:40 --> 00:24:45: pre manufacturing prefabrication off-site construction. That's absolutely critical in this
00:24:45 --> 00:24:49: and it's creating a process exactly what Chris mentioned. This
00:24:49 --> 00:24:53: is 1 giant process from from inception to completion.
00:24:54 --> 00:24:57: And so if we're going to bring housing starts on
00:24:57 --> 00:25:01: and focusing a lot on the environmental components of being
00:25:01 --> 00:25:04: sustainable builders, we need to find better ways to have
00:25:04 --> 00:25:08: everybody sitting at the table at the beginning rather than
00:25:08 --> 00:25:11: trying to, you know, get down the path and hitting
00:25:11 --> 00:25:14: a stumbling block and saying, Oh well, you know we
00:25:14 --> 00:25:17: need a better process for getting our approvals done, or
00:25:17 --> 00:25:21: a better process for actually shipping these materials to site.
00:25:22 --> 00:25:25: And then it's it's an education for the buyers in
00:25:25 --> 00:25:28: the market. Our background is actually as rental builders, so
00:25:28 --> 00:25:31: it's a little bit less of an education there. But
00:25:31 --> 00:25:33: if you're going to go spend, you know your life
00:25:33 --> 00:25:36: savings on a down payment, you want to know that
00:25:36 --> 00:25:38: this is a very sturdy and quality product, and I
00:25:38 --> 00:25:42: think the market needs a little bit more education. Understanding
00:25:42 --> 00:25:45: a bit more about the fact that mass timber actually
00:25:45 --> 00:25:47: provides a happier and healthier lifestyle.
00:25:48 --> 00:25:51: It's something that us as a community and people who
00:25:51 --> 00:25:55: are looking to bring these buildings into fruition are going
00:25:55 --> 00:25:58: to have to spend some time actually educating the buyer
00:25:58 --> 00:26:02: market and the marketing teams to actually sell this as
00:26:02 --> 00:26:06: a premium to concrete construction or wood frame. So those
00:26:06 --> 00:26:08: are the changes that we face.
00:26:09 --> 00:26:12: As a development and construction management company and looking forward
00:26:12 --> 00:26:15: to answer anybody's questions that they might have when it
00:26:15 --> 00:26:17: comes down to the questions. So I'll pass back to
00:26:17 --> 00:26:17: Rachel.
00:26:20 --> 00:26:22: Thanks very much Zach, appreciate that.
00:26:23 --> 00:26:26: OK, we're going to move on to our final speaker.

00:26:26 --> 00:26:30: Stefan Labbe is a journalist with Glacier Media Solutions journalist

00:26:30 --> 00:26:34: covering climate and environment, and he's on the panel today.

00:26:34 --> 00:26:37: It was actually something that I thought would be would

00:26:37 --> 00:26:41: be interesting to have a journalist join us who cover

00:26:41 --> 00:26:44: sustainability. He will highlight some of the issues and trends

00:26:44 --> 00:26:48: he has witnessed in speaking with sources and covering issues

00:26:48 --> 00:26:53: related to sustainability, in particular sustainable building, so I'll pass

00:26:53 --> 00:26:54: it on to Stefan now.

00:26:54 --> 00:26:55: Thanks very much.

00:26:58 --> 00:27:01: Hi, thanks for having me. I appreciate the invitation.

00:27:02 --> 00:27:05: And I'm coming at this from a different angle. I'm

00:27:05 --> 00:27:07: obviously not an expert like a lot of people here

00:27:07 --> 00:27:11: today, although I'm sure I'm alright. And explainer about mass

00:27:11 --> 00:27:12: timber in the near future.

00:27:15 --> 00:27:18: What I'd like to bring to this conversation is some

00:27:18 --> 00:27:20: of the reporting I did last year on how.

00:27:21 --> 00:27:23: Climate change is affecting people now.

00:27:24 --> 00:27:28: It's reporting that raises questions not only about how or

00:27:28 --> 00:27:31: what we build, but what's lost along the way, so

00:27:32 --> 00:27:36: this reporting really got started last summer during the heat

00:27:36 --> 00:27:39: Dome, when something like 600 people died in BC alone.

00:27:39 --> 00:27:42: You know, we we all learned a couple of weeks

00:27:42 --> 00:27:45: later that it was made 150 times more likely due

00:27:46 --> 00:27:49: to climate change, and we'd be seeing such heat waves

00:27:49 --> 00:27:51: again as early as the twenty 40s.

00:27:52 --> 00:27:55: So as a reporter I started looking for patterns. You

00:27:55 --> 00:27:58: know, where did people die who suffered most? What did

00:27:58 --> 00:28:01: they have in common, and how could we do better

00:28:01 --> 00:28:02: the next time?

00:28:03 --> 00:28:06: Just let me add one more point to walk through

00:28:06 --> 00:28:09: the downtown east side, a place called Crab Park with

00:28:09 --> 00:28:12: a woman named Vanessa. She lives on the street.

00:28:13 --> 00:28:16: When the heat don't came, she was measuring. She told

00:28:16 --> 00:28:19: me she measured survival in those spaces between shade. You

00:28:19 --> 00:28:22: know, getting into the life of a building or water.

00:28:22 --> 00:28:24: You know she drenched herself when she could find a

00:28:24 --> 00:28:25: tap.

00:28:26 --> 00:28:29: Really, the reporting says you know in a city that's
00:28:29 --> 00:28:32: known for its green spaces, you know where Vanessa lives
00:28:32 --> 00:28:35: as she put it, you don't have these big lush
00:28:35 --> 00:28:35: trees.
00:28:37 --> 00:28:39: So by the end of the summer, I've finally got
00:28:39 --> 00:28:42: some data to back up the anecdotes I was hearing
00:28:42 --> 00:28:46: compared to lush areas of Vancouver like Shaughnessy or point
00:28:46 --> 00:28:50: Gray heat related. ER visits, tripled the neighborhoods where trees
00:28:50 --> 00:28:53: were scarce and where temperatures were highest.
00:28:54 --> 00:28:57: So what does that mean? Some modeling that's been done
00:28:58 --> 00:29:01: here in Vancouver suggested a pedestrian standing under a tree
00:29:01 --> 00:29:04: can feel up to it. 17 degree drop in temperature,
00:29:04 --> 00:29:07: and if you multiply that across an urban forest, you
00:29:07 --> 00:29:11: can drive down temperatures across an entire neighborhood. This has
00:29:11 --> 00:29:14: been shown in city after city. So another way to
00:29:14 --> 00:29:17: put it is a well placed tree can save lives.
00:29:19 --> 00:29:22: The problem here in Vancouver and Metro Vancouver is that
00:29:22 --> 00:29:26: tree canopies are facing an overwhelming decline, and experts tell
00:29:26 --> 00:29:28: me the biggest culprit is is development.
00:29:29 --> 00:29:32: You know it tears up the land where these mature
00:29:32 --> 00:29:32: trees grow.
00:29:33 --> 00:29:37: Something like 32 percent is left according to calculations done
00:29:37 --> 00:29:38: several years ago.
00:29:39 --> 00:29:42: What I'm hearing from all of my fellow panelists is
00:29:42 --> 00:29:46: fascinating, and I hope these solutions work. These stakes cannot
00:29:46 --> 00:29:49: be higher, but you know, we we all hear leading
00:29:49 --> 00:29:52: climate. Scientists say that we're facing things like a a
00:29:52 --> 00:29:56: global wildfire crisis, and we need industries to step up
00:29:56 --> 00:29:59: and find ways to remove billions of tons of wood
00:29:59 --> 00:30:00: fuel from our forests.
00:30:01 --> 00:30:03: It's kind of the way I think of it as
00:30:03 --> 00:30:07: a hangover from 150 years of of shortsighted forestry practices.
00:30:08 --> 00:30:11: We also need ways to lower our emissions from cement
00:30:11 --> 00:30:14: and construction. As we all know here and we've heard
00:30:14 --> 00:30:17: about we need to house next generation to withstand climate
00:30:17 --> 00:30:17: change.

00:30:18 --> 00:30:21: But experts also tell me that we can't simply build
00:30:21 --> 00:30:24: our way out of a climate out of climate change,
00:30:24 --> 00:30:26: and as many of you know, mass timber will never
00:30:27 --> 00:30:29: be sustainable without sustainable forestry practices.
00:30:31 --> 00:30:32: The same time.
00:30:33 --> 00:30:36: In cities where most of humanity lives now, urban forests
00:30:36 --> 00:30:40: will matter too. So to protect our cities from dangerous
00:30:40 --> 00:30:43: heat islands, flooding even cold snaps, I'm told we need
00:30:43 --> 00:30:46: to roll out development that can find a way to
00:30:46 --> 00:30:49: keep these mature climate resilient trees alive.
00:30:50 --> 00:30:51: Here's where it gets even trickier.
00:30:53 --> 00:30:56: The way the trees are planted in the city.
00:30:58 --> 00:31:01: It means that we can't plant them at mature. They
00:31:01 --> 00:31:05: they're small, spindly trees that we plant as of the
00:31:05 --> 00:31:09: head of Vancouver's Aubrey Department. Put it to me. Our
00:31:09 --> 00:31:12: built spaces are really limiting us, so I guess my
00:31:12 --> 00:31:16: question to the people here looking to build more mass
00:31:16 --> 00:31:17: timber buildings is.
00:31:18 --> 00:31:21: What are you doing outside of your buildings? What are
00:31:21 --> 00:31:24: you doing to make sure our cities have enough matriarchies
00:31:24 --> 00:31:24: left to?
00:31:26 --> 00:31:26: To keep us safe.
00:31:29 --> 00:31:30: Thanks.
00:31:33 --> 00:31:37: Thank you very much, Stephen. I appreciate that that information.
00:31:37 --> 00:31:40: And yes, we can clearly see over the past couple
00:31:40 --> 00:31:44: of years in BC that the climate is changing drastically
00:31:44 --> 00:31:46: and quickly, and it's.
00:31:46 --> 00:31:49: It's been frightening, so I appreciate you bringing that to
00:31:49 --> 00:31:49: the table.
00:31:51 --> 00:31:55: OK, we're going to move on to some moderated discussion
00:31:55 --> 00:31:58: and take some questions from our.
00:31:58 --> 00:32:01: Audience as well. I'm going to start off with some
00:32:01 --> 00:32:03: questions that that I have kind of put together based
00:32:03 --> 00:32:05: on kind of what the speakers have brought up, and
00:32:05 --> 00:32:07: then we'll open it up to the audience. If that
00:32:07 --> 00:32:08: sounds OK with everyone.
00:32:10 --> 00:32:11: Umm?
00:32:12 --> 00:32:16: Just based on on on Stefan having you just spoken,
00:32:16 --> 00:32:20: I think we should maybe start there by focusing a
00:32:20 --> 00:32:22: little bit on solutions so.
00:32:23 --> 00:32:26: Anyone on the panel can answer this question. I'm going

00:32:26 --> 00:32:27: to open it to anyone.
00:32:29 --> 00:32:30: When it comes to.
00:32:31 --> 00:32:32: Solutions.
00:32:33 --> 00:32:36: Outside of the buildings themselves, so as Stefan brings up,
00:32:36 --> 00:32:40: so when you're looking at your landscape outside of your
00:32:40 --> 00:32:43: lower high rise when you're looking at your single family
00:32:43 --> 00:32:47: home, your yard, your space, Umm, are there any solutions
00:32:47 --> 00:32:50: that have come to the table outside of the building
00:32:50 --> 00:32:53: itself that would help to maintain and protect trees and
00:32:53 --> 00:32:56: environment that can help in in in keeping keeping our
00:32:57 --> 00:32:59: earth cool and and providing the shade that we so
00:32:59 --> 00:33:03: desperately need? If you would like to speak to that.
00:33:11 --> 00:33:14: I can attempt to put my hand on that one.
00:33:16 --> 00:33:19: I think what we're I mean, we're trying to apply
00:33:19 --> 00:33:21: a holistic design in in the buildings that we're doing,
00:33:21 --> 00:33:23: and I know that there's this.
00:33:24 --> 00:33:28: We're fighting against two like housing in general, to house
00:33:28 --> 00:33:31: more people so that we're we're, we have the environments
00:33:32 --> 00:33:35: that are made like shelter. One of those basic human
00:33:35 --> 00:33:35: needs.
00:33:36 --> 00:33:39: So I think there's this. There's this juxtaposition between we're
00:33:39 --> 00:33:40: seeing more and more.
00:33:40 --> 00:33:43: Development and I think soft density is critical. I think
00:33:44 --> 00:33:46: that I I believe missing middle is a good place
00:33:46 --> 00:33:49: and I'm hoping that the Multiplex piece that the City
00:33:49 --> 00:33:52: of Vancouver is putting through in zoning can go through
00:33:52 --> 00:33:53: and that that.
00:33:54 --> 00:33:57: Has the potential to increase the number of people that
00:33:57 --> 00:34:00: have a house and can provide the appropriate shelter within
00:34:00 --> 00:34:03: a healthy space and then specific to trees.
00:34:04 --> 00:34:06: I don't know anything. I also state that I don't
00:34:06 --> 00:34:10: there's anything sustainable, single family homes. I think that's sort
00:34:10 --> 00:34:11: of a thing of the past.
00:34:12 --> 00:34:15: They're they're just not there, and I'm saying that as
00:34:15 --> 00:34:17: a single family home builder that is quite quickly changing
00:34:17 --> 00:34:19: and working our way up the missing middle.
00:34:20 --> 00:34:20: Umm?
00:34:22 --> 00:34:24: The the trees on on the size scale toward doing
00:34:24 --> 00:34:26: it. We're we're trying to save as many trees as
00:34:26 --> 00:34:28: we can in in our neighborhoods, but I thought is

00:34:28 --> 00:34:31: that balance of where the density comes for the appropriate
00:34:31 --> 00:34:32: housing in that space so?
00:34:33 --> 00:34:35: That's what I see, and I think it's a. It's
00:34:35 --> 00:34:37: a common. It's a. It's a big issue though. We
00:34:37 --> 00:34:39: need to. We need our green space and to avoid
00:34:39 --> 00:34:41: this extreme heating that's going to happen in our cities.
00:34:45 --> 00:34:45: Thank you Chris.
00:34:47 --> 00:34:50: I'm going to shift a little bit here to to
00:34:50 --> 00:34:54: cost. Lately that's been a topic that has been high
00:34:54 --> 00:34:55: on everyone's.
00:34:56 --> 00:35:00: Discussion point and that is around the fluctuating cost of
00:35:00 --> 00:35:03: mass timber and how that's affecting projects, whether or not
00:35:04 --> 00:35:06: they're moving ahead, how they're moving ahead.
00:35:08 --> 00:35:10: Maybe I can ask you Peter, what are your thoughts
00:35:10 --> 00:35:14: about the fluctuating mass timber costs? I mean, right now
00:35:14 --> 00:35:17: they've they've spiked quite a bit and it can affect
00:35:17 --> 00:35:18: a projects.
00:35:18 --> 00:35:22: You know viability, so I'll pass that question to you.
00:35:22 --> 00:35:26: Fair enough yeah. Thanks Rachel. Yeah yeah the the fluctuation
00:35:26 --> 00:35:30: wood has been bigger than anything I've ever seen in
00:35:30 --> 00:35:32: the last, you know 30 years. Or actually my my
00:35:33 --> 00:35:35: father was in the industry as well. We just we
00:35:36 --> 00:35:39: just don't see prices of $2000 a thousand. I don't
00:35:39 --> 00:35:42: think it'll get up that way. I'm not. I'm not
00:35:42 --> 00:35:45: a fortune teller certainly, but I think that every material
00:35:45 --> 00:35:49: has its cycles. Right now we're seeing fuel costs.
00:35:49 --> 00:35:51: Go up and then we we see steel costs have
00:35:51 --> 00:35:54: gone up. I think it's it poses a real challenge
00:35:54 --> 00:35:58: for anybody who's planning a project to three years down
00:35:58 --> 00:36:01: the road. And Zach, you're a builder and developer and
00:36:01 --> 00:36:05: I think you'll you'll. You know that that's probably one
00:36:05 --> 00:36:08: of the biggest challenges and I think from the point
00:36:08 --> 00:36:11: of view of wood there are going to be fluctuations.
00:36:11 --> 00:36:14: But I think we also have to recognize that the
00:36:14 --> 00:36:18: materials that build the structure are about 20%, you know,
00:36:18 --> 00:36:19: 18 to 2825%.
00:36:19 --> 00:36:22: Of the total cost of the building, what the building
00:36:22 --> 00:36:25: has inside it is also an important component.
00:36:25 --> 00:36:28: So we're always going to see prices go up and
00:36:28 --> 00:36:33: prices go down. Increasingly we are having mass timber producers
00:36:33 --> 00:36:37: and glue land producers try to establish longer term supply

00:36:37 --> 00:36:41: agreements with with sources of wood, and that's in the
00:36:41 --> 00:36:44: in the best interest of both, because if prices go
00:36:44 --> 00:36:48: way up, the mass timber producer, if he doesn't have
00:36:48 --> 00:36:51: their own supply, can can have a a guaranteed maximum
00:36:51 --> 00:36:55: price and a primary producer can say look if the
00:36:55 --> 00:36:55: price.
00:36:55 --> 00:36:58: Was down to 400. You're still going to pay 500,
00:36:58 --> 00:37:00: but if it goes up to 900 you're not gonna
00:37:00 --> 00:37:04: pay more than 750. So I think those relationships are
00:37:04 --> 00:37:07: developing, but the construction sector is always having to deal
00:37:07 --> 00:37:11: with price fluctuations and I I don't think that that's
00:37:11 --> 00:37:13: ever going to change, but I think Zach might have
00:37:14 --> 00:37:17: a bit more experience with the difficulties of pricing for
00:37:17 --> 00:37:18: projects down the road.
00:37:19 --> 00:37:21: Yeah, happy to jump in on that one too. Beer,
00:37:21 --> 00:37:23: then you nailed on the head and then we're we're
00:37:23 --> 00:37:25: in conversations with our suppliers and.
00:37:25 --> 00:37:28: All the way down the supply chain, it's it's really
00:37:28 --> 00:37:31: important to have some kind of cost certainty. If you
00:37:31 --> 00:37:34: look at the last 10 year average for lumber, I
00:37:34 --> 00:37:37: mean it hovered around 500 ish per thousand and you
00:37:37 --> 00:37:40: know in the last year you've seen price fluctuations of
00:37:40 --> 00:37:43: 1000 plus or minus $1000, so you know when you're
00:37:43 --> 00:37:47: planning and and you know the structure of the building
00:37:47 --> 00:37:50: is one of the most important decisions you can make
00:37:50 --> 00:37:52: at a very early stage of the design, so you
00:37:52 --> 00:37:56: know you're making decisions that aren't actually to come into
00:37:56 --> 00:37:56: fruition.
00:37:56 --> 00:38:00: For potentially one to three years, depending on permitting and
00:38:00 --> 00:38:03: design that timeline so you know you have to take
00:38:03 --> 00:38:06: a best guess and you know sometimes you get lucky
00:38:07 --> 00:38:09: and sometimes you get stuck and your point is is
00:38:10 --> 00:38:13: very valid. If you're like you know, you look inside
00:38:13 --> 00:38:17: these buildings and these materials people think you know steel
00:38:17 --> 00:38:20: and and aluminum and all these things are just relative
00:38:20 --> 00:38:23: to big picture items, but you actually look at the
00:38:23 --> 00:38:27: components of all the electrical items and mechanical.
00:38:27 --> 00:38:30: These things are all manufactured from these materials, and so

00:38:30 --> 00:38:33: they're it's not just a matter of or is it
00:38:33 --> 00:38:36: a steel building? Or is it a wood building? Concrete
00:38:36 --> 00:38:39: rebar? There's a lot of materials in.
00:38:40 --> 00:38:43: Pieces of these buildings that you don't even see, and
00:38:43 --> 00:38:45: so that does have a very, you know difficult. It
00:38:45 --> 00:38:48: gives us a difficult time in terms of trying to
00:38:48 --> 00:38:52: price these buildings, especially when they're so far down the
00:38:52 --> 00:38:54: line. So I guess that's that's what makes our job
00:38:54 --> 00:38:57: fun. Is that we get to try and forecast and
00:38:57 --> 00:39:00: foresee what these changes are going to be, but that's
00:39:00 --> 00:39:02: why it can be a challenge, and I don't think
00:39:02 --> 00:39:05: the people in in the market give people in our
00:39:05 --> 00:39:08: industry enough credit for what we actually do because it
00:39:08 --> 00:39:09: is quite challenging.
00:39:12 --> 00:39:13: Thank you both.
00:39:14 --> 00:39:17: Chris, I just wanted to ask you quickly your your
00:39:17 --> 00:39:21: boss program. Let's say a call it a recipe for
00:39:21 --> 00:39:25: for meeting code and and and building with sustainability. Top
00:39:25 --> 00:39:28: of mind, you're doing this open source and you want
00:39:29 --> 00:39:32: to provide it to the industry, correct for free. So
00:39:32 --> 00:39:36: how? How does that work and what is that something
00:39:36 --> 00:39:40: that you're doing because you want the industry to benefit
00:39:40 --> 00:39:42: from it to? For explain it to us.
00:39:44 --> 00:39:47: It it is open source and then in theory it
00:39:47 --> 00:39:48: is. It is going to be free.
00:39:50 --> 00:39:53: It's a system that we put together. We wrote a
00:39:53 --> 00:39:56: grant part of the clean BC Innovation Fund to develop
00:39:56 --> 00:39:59: the system, and it hasn't been just developed by me.
00:40:00 --> 00:40:04: We didn't fully integrated design process with structural engineers, envelope
00:40:04 --> 00:40:09: engineers, architects, other builders, and I've had quite a feedback
00:40:09 --> 00:40:12: loop over the last year. The intent with an open
00:40:12 --> 00:40:15: source or piece is to reduce the learning curve. This
00:40:15 --> 00:40:17: is an exercise in in in change.
00:40:19 --> 00:40:22: There's there's a comment that I that I quite like
00:40:22 --> 00:40:25: from Manuel on the chat about changing our civilization goes
00:40:25 --> 00:40:28: and and whether it be mass timber or we we
00:40:28 --> 00:40:31: have to change. We can't continue on the current current
00:40:31 --> 00:40:34: path we're on as Stefan has real world examples of
00:40:34 --> 00:40:36: that in his in this conversation. So how do we
00:40:36 --> 00:40:40: change that? And the feeling with something in this place

00:40:40 --> 00:40:41: was the proposal we put.

00:40:43 --> 00:40:46: Allowed us to to develop something that we can give

00:40:46 --> 00:40:50: away. Much more prescriptive in nature. So here is a

00:40:50 --> 00:40:55: defined system that conceptually anyone or everyone can pick up

00:40:55 --> 00:40:58: and and build and use to to push this along

00:40:58 --> 00:40:58: to.

00:40:59 --> 00:41:04: Better quality buildings within the operation, operational efficiency and then

00:41:04 --> 00:41:08: dramatic reduction reduction in the the materials, and the carbon

00:41:08 --> 00:41:09: usage in there.

00:41:10 --> 00:41:13: And do you think it could? It could at some

00:41:13 --> 00:41:16: point be a program that could be implemented into not

00:41:16 --> 00:41:19: only low rise but middle, middle to high rise projects.

00:41:19 --> 00:41:21: Is that maybe sometime in the future?

00:41:22 --> 00:41:26: I mean my focus and my bandwidth has been in

00:41:26 --> 00:41:29: the missing middle. I would be happy that.

00:41:29 --> 00:41:32: If it was to take it on that level, and

00:41:32 --> 00:41:35: I think more speaking to the process could be taken

00:41:35 --> 00:41:39: on, not necessarily the specific details, but how it was

00:41:39 --> 00:41:42: executed, how would have the potential to to do that

00:41:42 --> 00:41:46: if if there was a common system you're starting to

00:41:46 --> 00:41:48: see it. I mean, building code is a is a

00:41:48 --> 00:41:53: an aspect of standardization. There are lots of building standards

00:41:53 --> 00:41:56: out there, but I think specific to our region and

00:41:56 --> 00:41:59: the way we're building and looking for in this exercise.

00:41:59 --> 00:42:04: To change, which we're we're going to need to do

00:42:04 --> 00:42:05: more.

00:42:05 --> 00:42:10: More collaboration, more sharing, more open source is probably a

00:42:10 --> 00:42:14: positive thing. IP, all though it rewards the person and

00:42:14 --> 00:42:17: the inventor and the creator I it can often stagnate

00:42:17 --> 00:42:22: that ability for especially in construction. We've got some big

00:42:22 --> 00:42:25: examples in the news in the last few years of

00:42:25 --> 00:42:29: large organizations trying to tackle this big problem and with

00:42:29 --> 00:42:33: lots of funding still going bankrupt. So I think how

00:42:33 --> 00:42:36: do we actually progress at as an industry?

00:42:36 --> 00:42:39: Which has been very, very slow to progress. And how

00:42:39 --> 00:42:41: do we do that quickly? So I think this is

00:42:41 --> 00:42:44: is one of the tools, not necessarily the answer.

00:42:46 --> 00:42:51: Thanks very much Chris. Stephan, in your investigations that

you've
00:42:51 --> 00:42:54: done that you described around really looking at the city,
00:42:54 --> 00:42:58: the climate, etcetera. Is there a solution that came to
00:42:58 --> 00:43:02: the table, either from the development side or the builder
00:43:02 --> 00:43:05: side or from from anyone who's developing a program that
00:43:05 --> 00:43:08: really stood out to you that you wanted to to
00:43:08 --> 00:43:11: bring up any solutions that have hope, at least to
00:43:11 --> 00:43:14: kind of, you know, consider moving forward.
00:43:18 --> 00:43:21: Sure, I. I guess it kind of ends up being
00:43:21 --> 00:43:24: more of a question for me though, because I haven't
00:43:24 --> 00:43:28: had a satisfactory answer, but but I'm curious about sourcing
00:43:28 --> 00:43:32: the materials for these mass timber buildings and how far
00:43:32 --> 00:43:34: along our supply chain locally is to to link up
00:43:35 --> 00:43:37: with the problems that we hear ecologists.
00:43:39 --> 00:43:43: Fire ecologist and regular ecologists talking about NBC Sports like
00:43:43 --> 00:43:43: we're.
00:43:45 --> 00:43:47: Expecting what they call like a ticking time bomb like
00:43:47 --> 00:43:49: there's so much dry fuel in our forests that we're
00:43:49 --> 00:43:52: expecting, you know, huge wildfires that we've never seen before
00:43:52 --> 00:43:54: over the coming decades, so.
00:43:54 --> 00:43:57: How do we at one time at one moment like
00:43:57 --> 00:44:00: solve that problem and then monetize it, turn it into
00:44:01 --> 00:44:04: a product that we can use? Perhaps in these these
00:44:04 --> 00:44:07: masks and we're building? So what who are? Is there
00:44:07 --> 00:44:08: anything underway?
00:44:10 --> 00:44:13: Is the question that I'm left with two people have
00:44:13 --> 00:44:16: been working on this forever? It doesn't seem like there's
00:44:16 --> 00:44:19: two sides are talking enough, you know, like we hear
00:44:19 --> 00:44:22: the the problem and and it sounds like mass timber
00:44:22 --> 00:44:24: could be a solution or at least part of the
00:44:24 --> 00:44:27: solution. But where are these people coming together to to
00:44:27 --> 00:44:30: feed that industry to to build it from the ground
00:44:30 --> 00:44:32: up? You know, find ways to create jobs, find ways
00:44:33 --> 00:44:33: to.
00:44:34 --> 00:44:35: Produce a viable product.
00:44:36 --> 00:44:39: That can actually end up building homes.
00:44:41 --> 00:44:43: Pretty nice looking homes from what I've seen so far.
00:44:44 --> 00:44:46: I don't have a good answer, but maybe maybe someone
00:44:46 --> 00:44:47: else here could help me.
00:44:48 --> 00:44:49: Answer that in some way.

00:44:51 --> 00:44:53: Peter, do you want to speak a little bit just
00:44:53 --> 00:44:55: to, Umm, to try to challenge? It's a challenging one,
00:44:55 --> 00:44:57: I know and I'm sorry to pass that to you.
00:44:57 --> 00:44:59: But do you want to tackle that one?
00:44:59 --> 00:45:02: You know, if I had the solution, I'd probably be
00:45:02 --> 00:45:05: a lot wealthier than I am right now, but I
00:45:05 --> 00:45:09: think there there's a number of things here, certainly depleting
00:45:09 --> 00:45:12: our forests so we can build stuff is is is
00:45:12 --> 00:45:15: not smart in any part of the world. Not in
00:45:15 --> 00:45:18: BC not anywhere else. And the concerns that we hear
00:45:18 --> 00:45:21: about forests are one is the quality of wood.
00:45:21 --> 00:45:25: There, there's there's the fire hazard and and so then
00:45:25 --> 00:45:28: you you you raise a really good point because we
00:45:28 --> 00:45:31: we have to manage our forests and and that includes
00:45:31 --> 00:45:36: removing future hazard and that's something the provincial government which
00:45:36 --> 00:45:39: owns most of the forest. I know that they struggle
00:45:39 --> 00:45:42: with that because there's so much for so many years
00:45:42 --> 00:45:46: we've been concerned about stopping forest fires when they were
00:45:46 --> 00:45:50: natural events from the point of view of forest management.
00:45:51 --> 00:45:55: British Columbia has has among the best legislation and enforcement,
00:45:55 --> 00:45:57: but it's not perfect. We still have human beings who
00:45:57 --> 00:46:00: mess up, and that's that's not going to change either.
00:46:00 --> 00:46:03: As far as supply concern, some people say, well, we
00:46:03 --> 00:46:06: can't build all our building with massive. We don't have
00:46:06 --> 00:46:06: enough wood.
00:46:07 --> 00:46:11: Just to give you a sense of perspective, if the
00:46:11 --> 00:46:16: entire global would a global CLT sector were to supply
00:46:16 --> 00:46:19: old get their wood supply only from BC.
00:46:20 --> 00:46:23: It would amount to about 15% of 1 of BC's
00:46:23 --> 00:46:28: annual harvest, the global capacity for mass for CLT is
00:46:28 --> 00:46:32: anticipated by 2025 to be about 2.6 to three 3,000,000
00:46:32 --> 00:46:36: cubic meters, and that could be met by about 15%
00:46:36 --> 00:46:41: of 1 year's harvest from British Columbia, the global supply.
00:46:42 --> 00:46:46: In contrast, the global capacity for concrete by 2025 is
00:46:47 --> 00:46:51: and is anticipated to be 25 billion cubic meters.
00:46:52 --> 00:46:56: Which is 4 orders of magnitude by volume and five
00:46:56 --> 00:46:58: orders of magnitude by mass.
00:46:59 --> 00:47:02: So to to the to the comment made earlier that
00:47:02 --> 00:47:06: we can't build a civilization on wood. Well, you're right,

00:47:06 --> 00:47:09: we can't. Nor should we. But the the and then

00:47:09 --> 00:47:12: the issue of wood supply. If you've got the wood

00:47:12 --> 00:47:15: supply there, do we have the capacity to make these

00:47:15 --> 00:47:18: products? And that is usually going to be a business

00:47:18 --> 00:47:19: decision.

00:47:21 --> 00:47:26: Companies like Kolesnikov they invested their, their and their a

00:47:26 --> 00:47:32: fourth generation family Zach. They invested their personal stake, their

00:47:32 --> 00:47:36: houses and their business to build a CLT plant. And

00:47:36 --> 00:47:37: I'm grateful for.

00:47:37 --> 00:47:37: That

00:47:38 --> 00:47:41: but we're going to be needing more companies that are

00:47:41 --> 00:47:44: willing to say I'm going to try that I I've

00:47:44 --> 00:47:47: seen it done elsewhere. I may not, you know.

00:47:48 --> 00:47:51: Capture the whole market, but I think what we're what

00:47:51 --> 00:47:54: we have to do is support those. Create a demand

00:47:54 --> 00:47:58: for a product that can be sustainably produced, NBC.

00:47:59 --> 00:48:01: And and and focus on that and all of those

00:48:01 --> 00:48:04: buildings. All the mastery buildings. I don't know a single

00:48:04 --> 00:48:07: master building. It doesn't have a concrete and steel component.

00:48:08 --> 00:48:08: So.

00:48:10 --> 00:48:12: Just add that here. I think I remember we were

00:48:12 --> 00:48:15: chatting before and I think you gave me a stat

00:48:15 --> 00:48:18: that if you take the entire lumber basket that a

00:48:18 --> 00:48:22: standard six story CLT building is grown every seven seconds.

00:48:22 --> 00:48:26: Something in that range and so that was pretty astounding

00:48:26 --> 00:48:29: to me. You know, if if that's such a sustainable

00:48:29 --> 00:48:32: resource that we can be producing the amount of fiber

00:48:32 --> 00:48:33: on the planet to.

00:48:33 --> 00:48:34: Produce.

00:48:34 --> 00:48:36: A building every seven seconds.

00:48:38 --> 00:48:41: I don't think supply is the issue. It's actually getting

00:48:41 --> 00:48:43: it to market and your your point about you know

00:48:43 --> 00:48:47: additional CLT factories and mass timber production facilities is crucial

00:48:47 --> 00:48:51: like I've toured the closing the call factory. They're amazing.

00:48:51 --> 00:48:54: Amazing group this structural and there's an element five out

00:48:54 --> 00:48:57: in the Ontario who just opened up a new factory

00:48:57 --> 00:49:00: afterward. That factor as well. These guys are doing really

00:49:00 --> 00:49:03: innovative stuff and their challenge is to put it on

00:49:03 --> 00:49:06: to groups like ours to say hey now we've got
00:49:06 --> 00:49:08: the capability to produce these panels.
00:49:08 --> 00:49:11: Let's see if we can get them into buildings and
00:49:11 --> 00:49:14: you know one of the biggest challenges when it comes
00:49:14 --> 00:49:17: to mass. Timber construction is logistics and if you don't
00:49:17 --> 00:49:21: have the logistics network set-up to actually get the product
00:49:21 --> 00:49:23: from the facility to the actual building site.
00:49:25 --> 00:49:28: There's just no reason to do it. It doesn't become
00:49:28 --> 00:49:32: economical. It doesn't become feasible or practical so that the
00:49:32 --> 00:49:36: logistics network is also something that needs to be invested
00:49:36 --> 00:49:40: in to actually bring these products to the building sites.
00:49:40 --> 00:49:45: In the most quickest and efficient way possible without actually
00:49:45 --> 00:49:49: impacting the communities that these trucks and trains are are
00:49:49 --> 00:49:50: going through.
00:49:50 --> 00:49:53: And I think one of the other sort of misperceptions
00:49:53 --> 00:49:55: is that if we build with mass timber.
00:49:55 --> 00:49:58: We're going to be cutting down more trees and that
00:49:58 --> 00:50:00: that is not true. If anything. What we will do
00:50:00 --> 00:50:03: is make better use of the the lumber and and
00:50:03 --> 00:50:07: extract more from those trees, and that's where engineered wood
00:50:07 --> 00:50:10: products are. So they're so good because you don't have
00:50:10 --> 00:50:12: to cut down a big tree to make a panel
00:50:12 --> 00:50:15: like this. You can cut down that you know the
00:50:15 --> 00:50:19: trees that are much smaller, get a greater efficiency, make
00:50:19 --> 00:50:22: use of those because under our system, at least in
00:50:22 --> 00:50:25: Canada, we're over 92 or 93% of the forest. Land
00:50:25 --> 00:50:25: is owned by.
00:50:25 --> 00:50:29: Yes, it's not owned by companies. The government can say
00:50:29 --> 00:50:33: that's great that you've got a market, but you don't
00:50:33 --> 00:50:36: get to cut down any more trees, so it'll it'll
00:50:36 --> 00:50:39: cause a trans. A transfer of perhaps low quality wood
00:50:39 --> 00:50:43: that that can't be used structurally but can be used
00:50:43 --> 00:50:45: in this middle layer of, you know in a non
00:50:45 --> 00:50:47: structural fashion.
00:50:47 --> 00:50:50: It extends our our use but we don't get to
00:50:50 --> 00:50:52: cut down anymore wood because we've we've got an A
00:50:52 --> 00:50:55: market opportunity to sell it. I think that's a key
00:50:55 --> 00:50:56: component.
00:50:56 --> 00:50:59: Our annual allowable cut. Is it what you choose to

00:50:59 --> 00:51:02: do with that, and whether you want to make money
00:51:02 --> 00:51:06: or whatever is important, and that's where even salvaging would
00:51:06 --> 00:51:09: like. Like on builders is is doing is it's extending
00:51:09 --> 00:51:12: the life and the utility of of wood that we
00:51:12 --> 00:51:14: are going to cut down. We don't get to cut
00:51:14 --> 00:51:16: down anymore would because of it.
00:51:18 --> 00:51:19: Thank you, Peter.
00:51:19 --> 00:51:23: I'll just echo a a warning from some people that
00:51:23 --> 00:51:24: I've spoken to.
00:51:26 --> 00:51:29: Even small trees don't capture sometimes the amount of carbon
00:51:29 --> 00:51:32: that gets released when when a forest is cut down.
00:51:32 --> 00:51:35: So if you take just Canada's boreal forest, some people
00:51:35 --> 00:51:36: have calculated that.
00:51:37 --> 00:51:41: The logging was something in the last 20 years. The
00:51:41 --> 00:51:44: that we've logged roughly an area the size of Ohio.
00:51:45 --> 00:51:45: In Canada.
00:51:47 --> 00:51:50: These forests are do have relatively small spindly trees, but
00:51:50 --> 00:51:53: a lot of that carbon that they hold is actually
00:51:53 --> 00:51:56: locked in the soil and these people kind of bogs
00:51:56 --> 00:51:57: that around them so.
00:51:58 --> 00:52:00: I mean, this just goes to we need standards when
00:52:01 --> 00:52:03: we're doing this, so we're not just going after small
00:52:03 --> 00:52:06: trees that look like they're they're not going to. You
00:52:06 --> 00:52:09: know, really impact our carbon budget when really we just
00:52:09 --> 00:52:12: don't. Unless we understand the full ecosystem.
00:52:12 --> 00:52:16: We're gonna we're gonna shoot ourselves in the foot carbon
00:52:16 --> 00:52:19: wise so yeah it's something we don't have a lot
00:52:19 --> 00:52:22: of boreal forests in in BC relative to other parts
00:52:22 --> 00:52:23: of the country but.
00:52:24 --> 00:52:27: You know, targeting the right forest, figuring out what works,
00:52:27 --> 00:52:29: and having that kind of.
00:52:30 --> 00:52:32: Those two sides talking to each other, I think. I
00:52:32 --> 00:52:33: mean it's the only way it's going to work.
00:52:33 --> 00:52:37: From where there's a couple of really good resources on
00:52:37 --> 00:52:40: that one is a fellow named Verner Kurtz. She's on
00:52:40 --> 00:52:43: the IPCC he he covers all of the land based
00:52:43 --> 00:52:46: emissions from Canada. That's his. That's part of his job.
00:52:46 --> 00:52:49: He's based in Victoria. If you wish you know you
00:52:49 --> 00:52:53: can contact him at the through Canadian Forest Service in
00:52:53 --> 00:52:56: in Victoria and from a from a harvesting point of
00:52:56 --> 00:52:59: view, Canada's got over about over 400 million.

00:53:00 --> 00:53:03: Hectares of forests, but only about a third of those
00:53:03 --> 00:53:07: are within the commercial land base and the other forests
00:53:07 --> 00:53:10: are either set aside or they're they're not not viable,
00:53:10 --> 00:53:13: or they're they're too small or too slow growing. But
00:53:13 --> 00:53:17: there's still forest fires in those areas, so I know
00:53:17 --> 00:53:20: that that that that government would like to sort of
00:53:20 --> 00:53:23: consider. Let's manage all of it, even if we do
00:53:23 --> 00:53:26: nothing. But you're right, we have to make sure that
00:53:26 --> 00:53:29: our our resource is is providing a net benefit.
00:53:29 --> 00:53:32: To us, either because we leave it standing or because
00:53:33 --> 00:53:36: it offsets other materials by by cutting it down and
00:53:36 --> 00:53:39: we have a responsibility to make sure that lands that
00:53:39 --> 00:53:43: are growing forests, either big forests or small spindly forests
00:53:43 --> 00:53:44: remain as forests.
00:53:44 --> 00:53:46: And I think that's that's one of the key factors
00:53:46 --> 00:53:48: that we have to have it. It doesn't do any
00:53:48 --> 00:53:50: good to say we're going to build everything out of
00:53:50 --> 00:53:52: wood and oops, we ran out of trees. Doesn't make
00:53:52 --> 00:53:53: any sense.
00:53:53 --> 00:53:56: Yeah, I think I think you're you're right Stephen about
00:53:56 --> 00:54:00: the communications piece. I know I'm biased in my profession,
00:54:00 --> 00:54:03: but I think that you know there needs to be
00:54:03 --> 00:54:06: more accountability on having you know us all. Come together.
00:54:06 --> 00:54:11: Organizations from developers to you know environmental groups to the
00:54:11 --> 00:54:14: city, municipal groups. Having more dialogue around around.
00:54:14 --> 00:54:17: The material and the process and the code and kind
00:54:17 --> 00:54:21: of really getting together to discuss on a regular basis.
00:54:21 --> 00:54:24: I don't think that's done enough. I want to shift
00:54:24 --> 00:54:27: a little bit here because I have some questions from
00:54:27 --> 00:54:30: the audience. One of them is related to insurance, saying
00:54:30 --> 00:54:34: that insurance has been a concern for mass timber building,
00:54:34 --> 00:54:38: either availability or cost. Anyone want to comment on that?
00:54:38 --> 00:54:41: Zach, I don't know if you have experience with that
00:54:41 --> 00:54:42: challenge or anyway.
00:54:42 --> 00:54:44: We we got insurance so.
00:54:45 --> 00:54:48: We have used a broker for our insurance for many
00:54:48 --> 00:54:50: years. Our brokers. Wilson beck.
00:54:51 --> 00:54:53: They've been fantastic. I saw Peter wrote BFL no. So
00:54:54 --> 00:54:56: I, you know you got to find someone who understands.

00:54:56 --> 00:54:58: We spent a lot of time educating.
00:54:59 --> 00:55:01: So either those two if you give them a call.
00:55:03 --> 00:55:05: They will be happy to help as long as you
00:55:05 --> 00:55:08: just let them know you're looking for mass timber ahead
00:55:08 --> 00:55:08: of time.
00:55:10 --> 00:55:12: Should that should help put you in contact with the
00:55:12 --> 00:55:12: right person.
00:55:14 --> 00:55:16: But yes, it is more expensive than it. It is
00:55:16 --> 00:55:18: a challenge and it does take more time, but it
00:55:18 --> 00:55:20: is. It is there and it is available.
00:55:22 --> 00:55:26: And how about myths? There's a lot of myths around
00:55:26 --> 00:55:27: mass timber building.
00:55:28 --> 00:55:32: Any suggestions on debunking those or how we can educate
00:55:32 --> 00:55:36: the public on? You know there's concerns around fire hazard
00:55:36 --> 00:55:39: or whatever it may be. There's a lot of people
00:55:39 --> 00:55:43: who are still cautious around issues related to the product.
00:55:43 --> 00:55:46: Any thoughts on educating the public or those in the
00:55:46 --> 00:55:48: industry? Buyers, builders?
00:55:50 --> 00:55:53: Well, the wood the Wood Council has done an awful
00:55:53 --> 00:55:56: lot of work on fire because that's a concern for
00:55:56 --> 00:55:58: light frame and it's a concern for mass timber.
00:55:59 --> 00:56:02: But anyone who's ever tried to light a log in
00:56:02 --> 00:56:06: a campfire can understand that you just can't do it,
00:56:06 --> 00:56:09: and that's one of the things about mass timber that
00:56:10 --> 00:56:14: increasingly fire officials recognize that there's a char effect for
00:56:14 --> 00:56:18: mass timber and the way that the buildings are designed,
00:56:18 --> 00:56:22: and they they are. They're designed so that you have
00:56:22 --> 00:56:25: to have enough mass, timber, or wood, or steel or
00:56:25 --> 00:56:29: concrete that is there to allow people to get out
00:56:29 --> 00:56:30: of the building.
00:56:30 --> 00:56:33: Before collapse, but Wood has a unique feature and that
00:56:33 --> 00:56:35: it burns at a very predictable rate. So architects and
00:56:35 --> 00:56:38: engineers can say, hey, if I need to have a
00:56:38 --> 00:56:40: 2 hour fire rating, I've got to have this much
00:56:40 --> 00:56:42: wood to support the building and I'm going to add
00:56:42 --> 00:56:44: X amount of wood to give me a 2 hour
00:56:44 --> 00:56:47: fire rating so the Charter effect is something which is
00:56:47 --> 00:56:48: better understood now.
00:56:49 --> 00:56:52: And but you know you, you're not gonna get people
00:56:52 --> 00:56:55: to say you can't tell people. Don't be afraid. I
00:56:55 --> 00:56:58: think there will always be a concern on about natural

00:56:58 --> 00:57:02: disasters. Whether it's a hurricane, whether it's a flood, whether

00:57:02 --> 00:57:05: it's an earthquake, whether it's fire, and we have to

00:57:05 --> 00:57:08: address that. And that's addressed in our building codes, and

00:57:08 --> 00:57:12: they have to be made manifest by contractors and designers.

00:57:14 --> 00:57:18: Thank you, thank you Peter. This is all it can

00:57:18 --> 00:57:22: be complex and the code for the provincial codes are

00:57:22 --> 00:57:26: coming up quickly. As Chris mentioned 8 short years. Anyone

00:57:26 --> 00:57:29: like to share Zach, I don't know if you have

00:57:29 --> 00:57:33: any tips on resources, how do you stay educated on

00:57:33 --> 00:57:37: how to advance the company, how to how to keep

00:57:37 --> 00:57:41: up with this? Any resources and tips for those listening?

00:57:42 --> 00:57:44: Obviously the the best thing I could say is you

00:57:45 --> 00:57:47: got to talk to everybody, everybody and anybody you can

00:57:47 --> 00:57:49: who's in the industry? Who's?

00:57:49 --> 00:57:52: During disruptive things like that, you know, Chris and his

00:57:53 --> 00:57:56: group and all doing amazing stuff there. Peter and his

00:57:56 --> 00:57:59: team working on education and policy. You know you got

00:57:59 --> 00:58:02: to be always talking to different people in the industry

00:58:02 --> 00:58:05: about what's available, what's happening, you might not have heard

00:58:06 --> 00:58:08: of some very amazing technology coming out of.

00:58:10 --> 00:58:13: Quebec or Alberta or BC that's helping to push this

00:58:13 --> 00:58:16: conversation along. So the best thing I could say is

00:58:16 --> 00:58:18: I just try and stay in touch with as many

00:58:18 --> 00:58:21: people as I can and try to always keep an

00:58:21 --> 00:58:24: open year and just try and learn what's out there.

00:58:24 --> 00:58:26: That's that's the best way to stay on top of

00:58:27 --> 00:58:29: it and you know we need people out there pushing

00:58:29 --> 00:58:33: the envelope and doing things that you know. Chris mentioned

00:58:33 --> 00:58:36: the old to the new like that couldn't be more

00:58:36 --> 00:58:39: accurate. You know we have to start thinking about.

00:58:40 --> 00:58:43: New ways of construction in order to meet our sustainability

00:58:43 --> 00:58:47: targets. And so we just got to keep the conversation

00:58:47 --> 00:58:47: going.

00:58:48 --> 00:58:49: Great great.

00:58:50 --> 00:58:53: I could probably add to that on. I think for

00:58:53 --> 00:58:57: our organization it's kind of been pushing the envelope a

00:58:57 --> 00:59:00: little bit. I'm an accountant so the BC job grant.

00:59:01 --> 00:59:04: Is pretty significant. You can have to stay on top

00:59:04 --> 00:59:08: of education for not just the leaders of an organization,

00:59:08 --> 00:59:11: but all throughout it. There is a lot of knowledge

00:59:11 --> 00:59:14: out there and I'll shout out to Peter and his

00:59:14 --> 00:59:17: group that have been doing wood tours to Europe.

00:59:18 --> 00:59:21: In my office today this morning I had a job

00:59:21 --> 00:59:25: like Proclama technical advisor from Germany. We were just comparing

00:59:25 --> 00:59:28: where the German industry is at versus here and and

00:59:28 --> 00:59:32: the different what we're working with and dealing with within

00:59:32 --> 00:59:35: off-site construction and just the the industry as a whole.

00:59:35 --> 00:59:36: So being able to.

00:59:38 --> 00:59:41: To travel around and see where where there is more

00:59:41 --> 00:59:44: advances and we have an ability to, what I would

00:59:44 --> 00:59:46: call leapfrog that as well as we have a we

00:59:46 --> 00:59:50: have an industry that is fairly progressive in certain areas

00:59:50 --> 00:59:52: and that we can that we can take and see

00:59:52 --> 00:59:55: where that goes. So big one is busy job Grant

00:59:55 --> 00:59:56: it's like.

00:59:56 --> 00:59:58: Actually, Chris, we've we've actually used that, so thanks for

00:59:58 --> 01:00:01: bringing that up. Yeah, that's been. That's been great. We've

01:00:01 --> 01:00:04: been using it for various strains of passive house and.

01:00:05 --> 01:00:07: There's a few of the different courses that the team

01:00:07 --> 01:00:10: here has been taking, so it's been definitely a resource

01:00:10 --> 01:00:11: for us. It's a good point.

01:00:13 --> 01:00:15: I don't quote me on this, I should look it

01:00:15 --> 01:00:15: up.

01:00:17 --> 01:00:20: This is free advice from accountant. I think it's like

01:00:20 --> 01:00:22: $10,000 per employee per year. It's not. It's not an

01:00:22 --> 01:00:26: insignificant amount up to like 300K per company or something

01:00:26 --> 01:00:27: like that. Like it's yeah, it's.

01:00:28 --> 01:00:28: Not.

01:00:30 --> 01:00:32: OK, so there's opportunity for education. Shannon, I will. I

01:00:32 --> 01:00:35: know we're running a little bit overtime, so I'll pass

01:00:35 --> 01:00:37: it to you to conclude. Thank you all. I really

01:00:37 --> 01:00:40: appreciate you participating in this dialogue with me. Thank you.

01:00:41 --> 01:00:44: Yes, great yeah I would like to just thank everyone

01:00:44 --> 01:00:47: for joining us today. And of course a big thank

01:00:47 --> 01:00:49: you to all of you, our speakers and Rachel as

01:00:49 --> 01:00:53: our moderator. That was a very insightful discussion including forward

01:00:53 --> 01:00:56: thinking and planning on sustainable buildings and the climate impact.

01:00:56 --> 01:00:59: I would also like to once again thank our annual
01:00:59 --> 01:01:02: sponsors you can see here on my virtual background for
01:01:02 --> 01:01:05: their continued support of our programs and initiatives here in
01:01:05 --> 01:01:07: BC. And I just wanted to share too. We have
01:01:08 --> 01:01:11: some upcoming events, our annual real estate outlook event and
01:01:11 --> 01:01:11: cocktail.
01:01:11 --> 01:01:14: Perception is taking place later this month on the 27th
01:01:14 --> 01:01:17: and our Spring Happy Hour on the 28th. So I
01:01:17 --> 01:01:19: just posted the link in our chat. You can see
01:01:19 --> 01:01:22: those two events and what else is coming up and
01:01:22 --> 01:01:24: again, thank you to our speakers. That was great. I
01:01:24 --> 01:01:27: know I took a lot of food for thought out
01:01:27 --> 01:01:29: of this discussion today so have a great afternoon and
01:01:29 --> 01:01:32: we'll hopefully see you at an in person event coming
01:01:32 --> 01:01:33: up soon.
01:01:33 --> 01:01:35: Thank you very much.
01:01:37 --> 01:01:37: Thanks all.
01:01:38 --> 01:01:39: Thanks a lot.
