

#455 Turning Ceiling Tiles Into Thermal Batteries: Mick Dunn on the Future of Buildings | Transcript

00:02

Speaker 1

Welcome to Green Building Matters, the original and most popular podcast focused on the green building movement. Your host is Charlie Cicchetti, one of the most credentialed experts in the green building industry and one of the few to be honored as a lead fellow.

00:15

Speaker 2

Each week, Charlie welcomes a green building.

00:18

Speaker 1

Professional from around the globe to share their war stories, career advice, and unique insight into how sustainability is shaping the built environment.

00:26

Speaker 2

So settle in, grab a fresh cup.

00:28

Speaker 1

Of coffee, and get ready to find out why.

00:31

Speaker 2

Green building.

00:31

Speaker 1

Green Building Matters.

00:34

Speaker 2

Hey everybody. Welcome to the next episode of the Green Building Matters podcast. Can't believe we're at like 450 or so interviews. It's amazing. It just gives me energy to interview these amazing green building professionals. And today we've got Mick Dunn on with us. He's in the Charlotte area. I'm in Atlanta. We were just talking about how hot it is here as the summer wraps up, but Mick, welcome to the podcast. How you doing today, Charlie?

00:56

Speaker 1

Good to be here. Nice to meet you. Thanks for having on. Hey, congrats. That's a pretty good long commitment. 400 And Something episodes is nothing to shake a stick at. That significant.

01:08

Speaker 2

Really appreciate that. Yeah, 10 years once a week and just consistency. And I've got a good team around me that helps publish the podcast. So, you know, the podcast, we really want to get to know you and your career and different decision points, different challenges, just doors opened and of course we'll spend time talking today about the amazing things you're doing at Armstrong. So, Mick, just for our listeners and for me, take us back. Where did you grow up and go to school?

01:33

Speaker 1

So I probably the more I talk, the more it'll become apparent I'm not from around here. I'm from Australia originally. Born and raised in Melbourne, Australia. So yeah, I went to school at RMIT University in Melbourne, but ended up in the US so studying construction management. Ended up in the US via an exchange program at University of Florida. And now I'm just like a stranded tourist, I guess you could say. Right.

01:57

Speaker 2

So I love that. So construction though, were you around construction growing up? What? How'd you gravitate towards that?

02:05

Speaker 1

I think so, yeah. Dad was a. My father was in construction for many years, so I was around a lot. I think I wanted to be an architect. And then the more I understood the industry as, you know, a younger kid, the more I realized I just was actually interested in the whole way things come together. And construction management ended up being a really good fit for me. So that's kind of where I started my career more than anything the first 10, 15 years before starting my own businesses and doing my own stuff.

02:36

Speaker 2

So. Oh man, love that. Okay, so I also like to ask, you know, have you any mentors on along the way? Sometimes the mentor someone, you read their material, you see them on stage, they influence you. Sometimes it's someone you know in real life, they challenge you, maybe they open a door. Any mentors along the way?

02:53

Speaker 1

Yeah, of course, we all have many, right? We can all list, but probably defining one is an old boss of mine, Ralph Blackington. He's unfortunately passed away now, but up in New Hampshire. I lived in Maine for 18 or so years, worked for some really big construction companies before moving into a smaller sort of 10, 50 million a year company. And he was leading that and did just a great job of helping me learn about mechanical electrical systems. It sounds a little bizarre, but you can spend a long time in the world of the built environment, not have a really good understanding of how heating and cooling systems work, how electrical systems work. And I was definitely not sure what was going on a lot of those things. So he just did a really good job of explaining that.

03:37

Speaker 1

That's really sort of what pulled me into sustainability overall and just suddenly getting a fascination for not only how things work, but how improvements could be made and what to jump into to try to make a difference in that.

03:52

Speaker 2

And what a great mentor there too. So. Well, that's the next question I usually go to, is sustainability. So it sounds like you were influenced there some and maybe when sustainability first showed up for you, if you're on the construction side, was it recycling construction materials? Was it buying more eco friendly materials and lead says within 500 miles or was it energy efficiency? I don't know. What do you remember about early day green buildings?

04:17

Speaker 1

I feel like it was like a hot topic discussion point in the early 2000s. But I think a defining point for me actually taking a forward step was this same individual at a Christmas party saying, hey, I heard about these companies putting solar panels on people's roofs and owning it and selling the energy back. And wouldn't it be cool if we did that on all the schools we've been working on in the local area and we just put a company together to try to figure out how to go do that. And that was sort of my entry point into true sustainability. Because at that time it just felt like solar in particular, as an example, was not on every commercial construction project. It was like a whole different thing on its own. Nobody ever had it on construction projects.

05:02

Speaker 1

And were just starting to think like why is that? And just getting into it. So I think it's sort of like beginning to understand a problem statement that is interesting enough to start to investigate. And that was probably a leaping off point for me for, okay, let's start the company and help figure out how to resource and go after it. And for me that led into a fairly long 15 year period or so of really specializing solar heating. That's where I ended up. Instead of solar electric, I saw this gap in an opportunity in commercial solar thermal system, solar hot water, solar air eating and did many projects over the years with that before sort of getting into what I'm into now.

05:41

Speaker 2

Wow. Well, let's connect the dots on the career a little bit. I know you've started a couple companies, you've also got a role here with Armstrong. So yeah, just connect the dots on some of the things you've done to get us to present day.

05:53

Speaker 1

Yeah. So one of the really interesting things we're hearing more and more about today. Right. Is storage, like storage of energy is becoming a bigger and bigger problem. In the early days it was all about generation and renewable energy and things like that. I was looking at, I ran into this problem in the world of solar heating. The problem was storing the energy so it could be used at the time you needed. And so we'd store all this heat and hot water tanks, big, you know, gal, thousand gallon tanks and things like that in basements of buildings. That's a storage problem. And that's what got me fascinated in a technology called phase change material, which is any material, it's changing phase from a solid to a liquid or a liquid to a gas. You can think about ice in your cooler.

06:37

Speaker 1

When ice is melting, it's absorbing heat. That's what keeps the cooler at 32 degrees. It's not anything amazing going on. It's just transitioning from solid to liquid. And same thing happens with refrigerants. We're utilizing liquid to gas phase materials. And so this is a form of energy storage, it's thermal energy storage instead of what we might think of as battery energy storage and electricity. And as we're sort of seeing in today, that's become a much bigger focus of the industry and sustainability in general. A realization that there's a lot going on in the marketplace where we've got excess energy, we need to store it and give it later on and we can use it to balance our demands.

07:22

Speaker 1

And so that's kind of led into as I spent a number of years in a startup and a smaller business developing phase change materials that led into what we're now doing with Armstrong with phase change material integrated into ceilings at room temperature. So you can imagine a room warms up, you got a ceiling, it begins on the backside. A phase change material at room temperature is naturally melting, absorbing heat and helping regulate the need for temperature or air conditioning and heating systems to sort of do all of that work. So it's really intelligent, dynamic way to sort to introduce passive thermal storage into buildings.

07:59

Speaker 2

So well, first, way to go. I wouldn't even say against the grain, just hey, everybody's over here hanging out. Let's go over here for a minute. And that leads to kind of a blue ocean and a little head start. So that's fascinating. Well, I asked one more look back question, then we'll get to present day. So what are some of your proudest accomplishments, Mick? What's on the highlight reel?

08:18

Speaker 1

Well, it sounds like you're a business owner too and you probably appreciate this. I mean I've been self having been self employed for almost 15, 18 years kind of means that's a significant accomplishment to all you folks out there. We're making payroll every week. It's significant accomplishment. Any business owner you talk to, not.

08:41

Speaker 2
For the faint of heart.

08:42

Speaker 1
You're right, exactly right.

08:43

Speaker 2
Like already number one.

08:44

Speaker 1
It just never stops going. So that's a significant, proud achievement. I think, you know, in some of the earlier development of projects like doing some really unique building integrated solar heating systems that were just fun, sort of using that as a way to learn about energy was something I'm proud of in terms of the career side before kind of developing a product that ended up being part of a really exciting forward thinking large organization like Armstrong that sort of taken that and scaled it.

09:13

Speaker 1
It's probably for me personally one of the most proudest things I've been involved in, helping put something together, knowing it was in my garage that turned into a product that a company like Armstrong has been able to look at and said, yeah, we see what you do and we really want to try to figure out how to make this an important thing in buildings and be part of a really exciting organization that's doing that.

09:34

Speaker 2
That's fantastic. Yeah. Okay, so let's talk present day, let's talk about your role Armstrong and let's talk about these energy saving ceilings. But we got to get back to this phase change material. I mean it's just so fascinating. I'll be the Naive person here that I've taught thousands of lead prep classes over my career. And I'd always, this is to Armstrong's credit. I say, you know, LEED says, hey, let's make sure these ceiling tiles have some recycled content. They come from within a certain distance. And I'd always use that as a simple example. The materials and resources category of lead, you know, sometimes it's not always there for the energy side. Of course we have acoustics. So. Yeah, tell us about your role. Let's talk about some of these materials and teach us a little bit.

10:23

Speaker 1
Yeah, so my role specifically is a little bit more technical support and sort of product management regarding this temp lock business. This is the name of the product that is assigned to this technology within the Armstrong product family. So Temploc is a backer with phase change material. Think of it like ice packs in your ceiling. It's a very lean and high performance solution that goes on the back of ceiling tiles that Armstrong already sells. So it's like you're effectively converting a ceiling into a thermal energy storage asset that's just passively absorbing and releasing heat in a building. So it's like leveraging all of the work that's already happening. The trucks are already rolling, the ladders are already there, the workers are up on the ladder, they're already putting a product into place. And then now it sort of gets a free ride.

11:09

Speaker 1
Deploying a phase change material on the back to really turn that into a high performance ceiling and then taking buildings that are maybe existing with existing known problems and having a new dial that you could turn and go, oh, this is something I could do to actually make an impact on a building that I already know I have challenges with a really sort of flexible, so retrofittable solution, a drop in ceiling. That's why it's such an interesting fit for this particular technology. Ceilings are easy to access and easy to make changes to. And that's what makes it a really interesting.

11:43

Speaker 1
So that's what I do in terms of supporting that, doing a lot of work with engineers, architects, specifiers that sort of need to get a little bit more into the weeds on how do I integrate this, how could it work, how could it help

me? And then in addition to that, working within a really broad forward thinking team at Armstrong and R and D and in the business in general, working out what else can we do, how can we make it better and what does the future look like?

12:08

Speaker 2

So with these materials, you know, I'm trying to understand so we've got like some encapsulated saw. I mean, so I'm trying to picture just the, you know, let's just say a two by two or two by four, you know, act. Is it similar to that? But we've just got these other materials that have now been embedded in. Yeah, okay.

12:28

Speaker 1

Yeah. So it's on the back side of it. It's like a laminate, if you like, that's on the back of the tile. So it has no change to the way that it looks.

12:37

Speaker 2

Okay.

12:37

Speaker 1

It's just on the full tiles themselves in a space. So it's actually a gelled salt formulation. So it's all domestically developed and manufactured with non toxic or no issues like that or flammability issues. So it's all completely safe and it's really discreetly sitting on the backside of the ceiling. So the only time you'd really be coming in contact with it would be when you pop the ceiling and you look up above. You'd have this quarter inch layer on the back of many of the full ceiling tiles. And it's on the full ones just so that we don't add extra sort of time and cost and hassle and having to cut and penetrate and modify it around all the sprinkler heads and things like that. And we're just placing enough quote unquote ice in the cooler to make a difference and it really works.

13:21

Speaker 2

And then that's that in a thermal massing. But now within a room. Right. You don't have to just rely on your structural materials. Right. That's what you're doing. You're encapsulating these rooms and it's able to kind of regulate the temperature a little bit.

13:33

Speaker 1

Yeah. So if you think about like the role, if we're thinking of it like in the world of building science, it's a thermal mass. That's what we're adding. It's very sort of passively helping regulate temperatures. In fact, a lot of what I'm often talking about in the sort of education around the. The topic is that we're stripping thermal mass out of buildings at a really fast rate. We've got lightweight construction methodologies we use. We don't build big cathedrals anymore. We build something that could be fabricated in Atlanta, shipped to Charlotte and assembled as quickly as possible. So we need it to be light and we're taking concrete out of buildings to decarbonize. So we've got less and less thermal mass in buildings. This is just an elegant way to reintroduce mass into buildings without adding all the weight.

14:19

Speaker 1

It's just acting in much the same way. And so if we can drop temperatures in a room by 2 or 3 degrees at peak, that's meaningful, right? In things that we can do to help support comfort in. In the built environment so extremely.

14:34

Speaker 2

It's. I mean, hey, you can go to big cities like New York City with local laws and get into some peak shaving and all kinds of different strategies. It used to just be the lighting and.

14:43

Speaker 1

Right.

14:43

Speaker 2

It's big office buildings and the chillers. So. Okay, so Armstrong, though I'm sure a lot of our listeners, some are architects, some are in construction, some are real estate developers. You know, as I understand you're coming out with new products, but what are some of the products you're focused on now? I hear you on the ceiling tiles, probably some wall panels, but what else should we be on the lookout for when it comes to Armstrong?

15:06

Speaker 1

Yeah, so Armstrong is located in Lancaster, Pennsylvania. Publicly traded company. I forget how many years exactly. I should know the exact number. Over 140 years. And it's a really amazing legacy. The more you sort of dig into this company and what it's been doing and achieving over the years. A huge focus on acoustics and finishes in the built environment. Probably over the last five, 10 years, a lot of investment in companies and products bringing under the umbrella of Armstrong that help solve many different design and other solutions. So there's a quite an extensive portfolio that Armstrong now has with a lot of different spec divisions. But a lot of that is really driven around sustainability. So there's always a focus on having declare labels for every single product. Having, you know, that means EPDs, HPDs on everything.

16:02

Speaker 1

Just recently released the lowest embodied carbon ceiling tile in the market so that we can sort of continually break new ground when it comes to material selections and trust in the market. I think a lot of specifiers out there know Armstrong for that in terms of having that transparency and support when it comes to material selection, recycling, take back programs of ceilings that we have recycled, you know, tens and hundreds of millions of ceiling square footage over the years. So, you know, a lot of that is sort of the stable thing that we're known for in terms of mineral fiber ceilings. But more than that, it's taken the technical expertise in expanding it to more selective materials now as well that, you know, we can do so well.

16:45

Speaker 2

My AI assistant told me 1860, that's pretty. Oh, holy cow, 1860. The green building colleagues I've met that have worked at Armstrong. I understand you have a lead platinum headquarters there too. So practicing what you preach and just been doing it for a long time, I'd argue maybe what Ray Anderson did for the textile industry, you know, is in the DNA there at Armstrong for a while. So I've been a fan. And it's pretty neat that a company will bring in an innovator like you and your team too, to say, hey, we need to get this right. Let's bring in certain subject matter experts. It sounds like that's part of this relationship a little bit, huh, Mick?

17:20

Speaker 1

Yeah, for sure. And it's about like seeing things that could be, like we all should be trying to do as, you know, larger enterprises, like seeing an opportunity go. This is something we can really sort of invest in and do something with, which is what Armstrong has done a really good job of seeing an opportunity, seeing a technology, and seeing that it needs the support to be able to really go big. And you know, one thing I think coming from the energy space, for me in the background, that was mostly my background other than construction management, I didn't have an appreciation for acoustics and how we talk about that with sustainability. Right. But it's like, it's a really big problem in buildings. It's the number one problem.

18:00

Speaker 1

And so the more you kind of walk around the halls of a company like Armstrong and see the level of focus and attention around that problem in buildings, it's. It's given me a really different perspective and respect and understanding for just how important or a problem that is. If you've got kids that can't understand or hear their teacher, like, that's first and foremost the biggest thing that is needing to be focused on in schools when we talk about sustainability, for example, in addition to all the other things. So it's good to see those other things you're not thinking about come together.

18:33

Speaker 2

Yeah. You brought up one of my favorite lead. Not just credits optional, but prerequisites required. I'm a little

removed from the day to day lead certifications. We exited our green building, consulting and education companies. Now I'm building a tech startup. It's lead for schools and they have a prerequisite that. Yeah. In that classroom you have to make sure you have a certain overall level of acoustics. Right. If that H vac system is humming above your head and your students in the back of the room can't even hear the teacher, it's not productive. Yeah, we want to get into the natural light, we want to get into better air quality, but that's a big One too. So, huge deal. You've spent months, maybe years earning that LEED certification. Don't let it go unnoticed.

19:17

Speaker 2

Building Plaques creates custom lead recognition plaques that tell the story of your project's sustainability achievement and put your design or operation team's work front and center. Their online plaque designer lets you build a fully customized plaque in under 10 minutes. Just enter your lead project number and you're off. Plaques are made from architectural grade anodized aluminum using sustainable materials and subsurface printing. So they're built to last as long as the building itself. Recognize the work, educate the visitors, show the world what green building looks like. Check them out@buildingplaques.com so let's talk for a little bit about certifications. There's the green building movement. There's great programs like LEED. You've got EPDs, HPDs, you've got all these. The Clair label, it sounds like on the products. And so you're kind of compatible. You're ready to help the certification programs around sustainability.

20:15

Speaker 2

But then we got this other one or two called well and fit well. And so it's just fascinating that maybe post pandemic, we're getting back to maybe the healthier building movement too. So I don't know, can you kind of connect the dots on green buildings, healthy buildings? And then you're right, we're going to talk about the future of decarbonization. So anything else on those two themes, green buildings versus healthy buildings?

20:37

Speaker 1

Yeah, I think that the healthy building part is probably if you're spending more time in the world of sustainability, that term has been coming up more and more. And it was certainly something that I feel like at least coming into an organization like Armstrong, I became much more aware of than I was before. And I just hope that trend continues. And it seems like it is, but it is a really important aspect to how we think about sustainability. Right. Because it's like even the term sustainability is just such a wide, varied what do we think about what we think about? But really the chief goal of a building should be for it to be sustainable, to live in, heal in and work in. And that acoustical problem, thermal comfort, are really big aspects to that.

21:31

Speaker 1

That is why something like this phase change material plugs in, right? Yeah, it's kind of about energy efficiency, but it really, the driving force is the comfort of people in buildings and making sure that buildings last and that they're a pleasure to be in. And you know, that's really important.

21:48

Speaker 2

So important. And it all isn't as hard as it used to be to do. And to our listeners, something that Mick mentioned, it's not just the new construction. Easy retrofit here as you're really refreshing some space, some buildings really consider this. And you know, next thing you know, there might even be some energy saving money out there. We'll just have to teach the utility companies, but I bet that's happening too.

22:10

Speaker 1

So I'd like to what there is actually, and it's worth mentioning too, because if folks are out there listening and there is the federal investment tax credits that can apply to this is that thermal storage? So it's just like battery storage or ground source heat pumps and things like that where you can get a federal investment tax credit like you used to be able to get with solar and wind. So that is a real driving factor here in terms of you add this technology to a ceiling, suddenly your ceiling qualifies for a federal tax credit. And if you plan that correctly, then you can essentially have a cost less than not using it in the first place. So you can imagine how big of an opportunity that kind of presents.

22:47

Speaker 2

So thanks for connecting the dots there. So let's talk about the future. I love to ask my podcast guests, you know, Mick, hey, what's next? What are you reading up on? What's kind of exciting? What's next?

22:57

Speaker 1

I really think in terms of, for Armstrong, it's thinking and working through how on. On this particular technology for if we're sticking with the templocon phase, change materials for a second, like how we can do more to influence more issues and opportunities in buildings and operational carbon focus in terms of how we can be a greater tool in decarbon modernization of buildings and improving efficiency overall. In terms of how we can help support projects, having more centralized solutions and different products that kind of service the community that we're already connected to and tapped into.

23:32

Speaker 1

And then, you know, I guess there's different things for me personally, but you know, we're really focused on this as being the ground level of this particular technology and entry to sort of a different world for at least Armstrong, which is kind of getting into the world a little bit more of thermal confident energy.

23:49

Speaker 2

So and that side of this movement, some of our podcast guests, we talk, we might call it decarbonization, we might call it resiliency. Right. I, I think the umbrellas are changing a little bit. And, and while when I really built up my lead career in the late 2000s, all through the 2010s lead was the strategy, hey, it was a Cover all. It was good enough. And that is a strategy now. It's maybe one of many things we should be doing, so. So, yeah, anything else on just how you work with certain customers and opportunities, and then we'll get to know you a little more here.

24:24

Speaker 1

Yeah, I think a lot of it is perhaps what you might call master planning, like master spec, like helping educate and support some of these, building portfolio owners to sort of help figure out solutions that can kind of serve them well into the future. Leveraging some of the opportunities with technologies like this. That's a lot of what I'm spending my time and days on at the moment and taking that. That information of what people need to work out. Can we generate products and solutions that fit some of those needs? And a lot of that we're hearing is around problems like thermal storage or energy storage and comfort, so.

25:02

Speaker 2

Well, then you're on it. You know, what's next? Well, let's get to know you a little more. This is kind of the rapid fire part of the interview. You know, do you have any good habits or routines? What keeps you on point?

25:13

Speaker 1

I'd love to say I have an amazing routine to be able to share with you. I think probably workout routine is probably the most common. Just kind of keeps refreshing, you know, multiple times a week, having that with a group. But maybe in terms of something I tend to do, that's not too much of a routine. It's just utilizing drive time. If I've got drive time, I tend to always be trying to do something. Listening to an audiobook, listening to podcasts like this, trying to, like, further, you know, connect or get ideas from outside that sometimes you don't have that opportunity too. So those two things are pretty consistent things that have always been helping me in the last five, ten years. So.

25:49

Speaker 2

Good. Thanks for sharing. Well, how about what would you say is your specialty or gift? Or maybe those around you, what would they say is your specialty or gift?

25:57

Speaker 1

I kind of think of my life as a series of projects. So I tend to flow in and out of projects with deadlines and goals

of some kind. So kind of that ended up being in product development, you know, sort of developing products that's something I really enjoy doing. And turning something from nothing into something that exists is something I really enjoy doing and like working through, which sort of gives you that opportunity. And, you know, a larger group that has a lot of resources and tools to kind of do is a really fun thing to be able to participate in. So it's probably the main thing That I keep coming back to. So cool.

26:40

Speaker 2

Oh, thanks. That's great. As we get to know each other more. I'm a fan of the bucket list. Not everybody has a bucket list, but those that start to put it together, sometimes it's adventure or travel or write a book. I don't know what's on the bucket list, Mick.

26:54

Speaker 1

I grew up playing music. Haven't had a lot of time to do that over the years when you got kids in a busy work life. So I would probably, you know, definitely want to return back to that and maybe pick up a few new instruments like piano. I always thought cello was a really cool instrument that would be good to learn. And you know, with remote work these days, like I've found, I think it'd just be great to go live in some international town somewhere, sleepy hollow town, somewhere in Europe, and just live there for a month or two and just go experience a different lifestyle, kind of similar to what I've done in Australia. Moving around after a while you get a real appreciation for different cultures and people and seems like a really fun thing to do.

27:37

Speaker 2

Oh, man. What? You've put some thought into that. I love all of that bucket list. Is there a book you'd recommend to our listeners? It doesn't have to be about buildings. If not a book, maybe a documentary or a podcast. Just kind of a pro tip. Hey, you might enjoy this.

27:52

Speaker 1

Yeah, it's probably a couple like and they're more sustainability or business minded. So one is for the sustainability folks that I really enjoyed a bunch of years ago, a book called the Green Metropolis by David Owen. And it was really kind of unpacking why he thought Manhattan is the most sustainable place or example of sustainability. Just because of the fact that everybody's walking and public transportation and systems are close together. And he was sort of unpacking. Why? You know, just got me really thinking about my lifestyle and the way that things move and all of that in terms of markets and economies and people. And so it was a really enjoyable book to read. That really got my brain ticking. And on the product side, I've always enjoyed this book, Crossing the Chasm by Geoffrey Moore.

28:43

Speaker 1

That's for anyone who is in the space of building a new technology. It's just an incredibly helpful book to try to help you figure out through the mud of like trying to get product development and moving through product development life cycles. Anyone that's in the product space usually knows that book. It's just like really helpful.

29:04

Speaker 2

Well, we're building our tech startup right now. An AI tool for not just architects, but also direct owners. So Crossing the Chasm is required.

29:12

Speaker 1

You write it.

29:13

Speaker 2

Yeah. Required being around the state. Right.

29:16

Speaker 1

It's a great book. Right. So help you kind of understand, just kind of see where you're at. What should I be focused on?

29:22

Speaker 2

And, yeah, no Crossing the Chasm. And then another one is Innovator's Dilemma there. Christian.

29:29

Speaker 1

Yeah. Such a good book, too. Right? I mean. Yeah.

29:32

Speaker 2

All right, we'll put those links to these books in the show notes. I'm glad you called that out, you know, because you've. You've been around, you know, materials inventing new materials and processes, and it's. It's not just a piece of software. Right. Well, that's the world I'm in right now. It's a lot of different things that you're. You're bringing to life and to market. So.

29:52

Speaker 1

Yeah. Yeah.

29:53

Speaker 2

Last couple things. Mick, this has been great. As you look back on your career, is there anything you wish you'd have learned earlier or just some career advice you wish someone would have told you earlier?

30:02

Speaker 1

I don't feel like there's anything I wish I had known, but I feel like as I look back, you know, for any of us, what has worked is just starting kind of as a generalist in something and just looking around for problems to solve. So, like, especially if you are listening and you're younger in career, like, in my role, I was in construction management. Maybe you're an interior designer, maybe you're an architect, maybe you're an electrician. But it's like being in that space and just seeing a lot of things going on around you is sometimes really helpful before you find the problem you want to go really work on. And really not criticizing yourself for not doing enough early, I think is a good thing. Like, it's. It's okay to just, like, hover around and look for problems.

30:44

Speaker 1

And that seems to be something that has worked for me over. Over time. And, you know, a good friend of mine was saying how it's like, there's just no replacement also for staying in the game for a long time. Like, so it just. It takes decades or more to really start to kind of create an impact or to stay connected to something. So jumping from one industry and category and things like that to another is sometimes a hurdle, but there's just no replacement for staying in the game for a long time. And I think that can serve us all if we can find something we can really enjoy in an industry like this, that where there's just no end to problems to solve. As long as you're interested in sustainability, you'll be fine.

31:25

Speaker 2

Oh man, that's some good encouragement. And maybe that's already leading to my final question. Just let's say there's someone listening right now. They're getting really excited about your story. Who knows, maybe they grew up internationally, came here and are getting into this green building movement. Any words of encouragement to someone that's just now jumping in, we'll wrap up.

31:46

Speaker 1

Yeah, I, I think in terms of encouragement, I. If you haven't found the thing you want to go focus on or work on yet, then don't feel anxious about that, but try to get involved in local committees and communities and have that be the thing that you focus on first. So if you feel like you're not making enough of a difference or not working on something important enough, even just joining your local. In my case it was joining my local

USGBC chapter and getting involved and showing up to like green eggs things in Maine for breakfast. Networking was really helpful to like help me figure out ways I was moving forward that I might not have been in my everyday work as much.

32:31

Speaker 1

So there's still stuff you can do on a personal level to further the movement and further what you're doing, even if you don't feel like you're able to do enough on the home or the workfront. So I guess I would just encourage like small steps and finding something to connect to let the rest of the community pull us forward and figure out what to get involved in and.

32:51

Speaker 2

You got to just, you know, I think in this post pandemic world, even though I work from home a lot, there's nothing like going out being with people in this community, this green building community and you never know who you're going to meet and get encouraged by. So to all of our listeners, hey, make sure you connect with Mick on LinkedIn. Check out the really cool things he's doing and the team at Armstrong. I learned a little bit today. I got a lot more to look into in the phase change material side of things and who'd have thought we should be putting that into our projects right now? So Mick, love your energy and appreciate you sharing your story on the podcast today.

33:22

Speaker 1

Thanks Charlie. Thanks for having me. It's been really enjoyable. Nice to meet you and yeah, let's bump into each other again.

33:30

Speaker 2

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