The following transcript has been edited for clarity:

Stuart Yasgur: Hi, I'm Stuart Yasgur and welcome to Economic Architecture. At Economic Architecture, we believe that the market can be a really powerful tool to improve people's lives. But for the vast majority of people on the planet, our markets are not working nearly as well as they could. In fact, in many cases, it seems like the market itself is the cause of the problem. When that happens, when our markets fail us in this really important respect, we need to recognize that collectively, we have the ability to redesign the structure of our markets.
The question is, how do we do this effectively? The Economic Architecture team has been focused on that question for a long time. And we've learned how to identify the kind of structural innovations that can drive change in our markets that create impact on a large scale. In our conversation today, we're going to talk about the housing affordability crisis and the climate crisis.

One of the things we're seeing today is that. In people's homes, they have a real sense of fragility in the face of extreme weather. Whether it's the increased frequency and severity of fires that we're seeing, especially on the West Coast, but also across the country. The hurricanes that we know through the Gulf and the Atlantic Coast, the increase of flooding and wind, not to mention the heat.

Krista Egger: There is an endless number of challenges to solve the challenges that folks who are living in affordable housing face are just exacerbated when you have a big storm or when you have a heat wave, or when you have cold temperatures in the winter.

Yasgur: Our homes are, yes, it's absolutely about the building. It's also where we live. It's where we raise our families. It's where we form community. It's where we lead our lives.

In our inaugural episode, we sat down with Krista Eggers, an expert in healthy housing initiatives and climate resilient solutions. She's also currently the vice president of Building Resilient Futures at Enterprise Community Partners. We discussed the intersection of the housing and climate crisis, green properties, and the threat that is multiplying the effect of climate change.

Yasgur: What led you to focus on housing and housing and climate in particular?

Egger: For me personally, it's kind of been a lifelong journey. I grew up in South Georgia in a rural area and my father's family, is from West Texas and we're farmers and ranchers and we would go out. To visit family out there every year, and I really grew to understand howthe weather and climate affects a family's

wellbeing by, by having, family members who were in agriculture and like the health of the land directly affects the health of a family. I think from early on I just understood that our wellbeing is connected to the wellbeing of the environment. And at the same time, I was always really interested in housing and spaces and how where you are affects your quality of life. And to make a long story short, although I flirted with the idea of architecture school way back when I was up in an AmeriCorps position working with Habitat for Humanity in North Carolina. focused on energy efficiency and had one of those, like, this is what I wanna do with my life moments, because it was bringing together the climate change, the energy efficiency, the housing that's affordable for families. I've been chasing that, that path ever since.

Yasgur: I mean, to focus on housing, you know, Enterprise Community Partners, one of the best places you could be to focus on housing is Enterprise's mission. Also, kind of adapting and changing to address the climate issue.

Egger: So yeah, enterprise has been looking at the intersection of climate and housing for at least 20 years now. Because our principles have to do with creating good homes for people and being cognizant of the situations in the environment and in our economy. We've got three main pillars of our strategic plan that have been around for a while, and we'll continue in the future. One of them is about increasing the number of affordable homes that are available in this country. Another is about advancing racial equity through housing policies and practices. And then the third one is about continuing to build resilience and to build upward mobility for people who live in homes that are affordable. So where you live is such a foundation for your life, no matter who you are.

Yasgur: So affordable housing, as we're speaking today, huge housing, crisis. Housing. Housing is becoming less and less affordable for many, many people who live in this country. How does that go along with, um, kind of creating resilience, the need to create more affordable housing, but also the, you know, the need to do it in a way that's cognizant enough, the, the kind of increased weather challenges that we're all experiencing.

Egger: I think because the housing crisis is accelerating and our climate crisis is too, we have to think about them together. I think I remember back to like the earliest days of my careers and people were like, green building isn't for affordable housing. It's, it's a luxury, you know, they don't go together.

And I think we all have different proof points about how that's not. True. Like it's a false choice, you know? Because actually the people for whom it matters most that

their housing be affordable are also the people for whom it matters most. That your energy bills are reliably low. You're not gonna be flooded out during a major storm and have to figure out how to relocate without the resources to do that, you know? So I think there. They're really, just interwoven. We call climate change a threat multiplier because you know the challenges that folks who are living in affordable housing face are just exacerbated when. When you have a big storm or when you have a heat wave, or when you have really cold temperatures in the winter.

On our team, the Building Resilient Futures team, we're looking nationally at how issues of affordable housing and environment go together. So we're looking at how can we help affordable housing owners and policy makers and decision makers. Create homes that are going to be resilient to the impacts of climate change for years to come. So that, um, for all of the like hazard and disaster reasons that we're, we're familiar with.

So we're doing a good amount around climate risk reduction. That's one pillar. Another pillar that we're working on is bringing down or eliminating the amount of. Emissions that affordable housing produces because we know that buildings are one of the most significant contributors to climate change in this country. There are ways that Housers can make a difference in a cost-effective way about that.

There’s beneficial decarbonization work that we're doing, which is a second pillar. And then the third pillar is really. Our longest running one, which started about 20 years ago, is our green building work. So, working with affordable houses to create homes that are healthy. Efficient, resilient, and climate smart. From beginning to end, from design to construction to operations. We do work through a green building program that we lead called Green Communities. And we have certified projects in almost every state and DC and Puerto Rico now. Those homes are saving more than $30 million a year together from utility bills, from households that really can benefit from having those lower bills.

And they're healthier and they're a more stable, resilient place to live. The climate risk reduction work, the beneficial decarbonization work, and then the green building work explicitly for affordable housing are the three main pillars, um, that we're working on. And whenever we can, we try to combine those, you know, so it's not just mitigation, it's not just adaptation, it's really looking at how can we help affordable, like how can we help transform affordable housing development practices so that. Um, people will be able to live in a good home despite how we know our climate will be changing in the coming years.

Yasgur: So with the Green Community certification, so what if you see a certification, what does that tell you? As somebody Yeah. On the outside that sees that.

Egger: Yeah, it tells you that um, the team that designed and owned and like Project Manage, like created that building was intentional about creating a holistic green property and that a third party verified that those features were realized in the property.

And you know that there are. Elements of energy efficiency and water efficiency and healthy material selection, that all go into that property. So, it should be a place that has reliably low energy and water bills, um, that's going to be healthier than your average home because of the material choices and the ventilation that's there, and hopefully just a, a really great place to live. And many of those features you won't actually see because they're behind the walls. Um, right. But the folks who put the effort into like designing and building and maintaining the property, put a lot of like careful thought into how it all comes together.

Yasgur: You know, as residents or homeowners or, or kind of developers, people may not have the expertise to be able to kind of just understand, um, the differences in materials or how the materials were put together to create the efficiencies. But the certification helps give you an indication of okay, you can have an expectation of, of performance and different dimensions.

Egger: Yeah, exactly. Exactly. Like when we started the program about 20 years ago, as I mentioned. Folks were like, green buildings were just becoming more mainstream. And, but it wasn't, there wasn't really a pathway for folks to create green buildings in the residential space. Commercial buildings were the first focus point.

We got together with some close partners to create the standard. So just like you're saying, like what's the recipe to create a green building? In the affordable housing context in particular. And how many properties are covered by the green certification? We are doing about 10,000 new certifications a year now.

Yasgur: Wow.

Egger: So we're close to 200,000 certified homes today. And this year so far, we're actually on a higher trajectory of certifications than we have been, um, in the past. It, it keeps on, it keeps on growing, so hopefully that trend will just continue.

Yasgur: That's incredible. And is there some hope that, uh, that third parties like either funding or insurance or other parties will to kind of take note of the certification and, and that can effect start to kind of create additional benefits for the homeowners?

Egger: Yeah, absolutely. Our goal, one of the phrases that we use a lot is that we don't want green building in affordable housing just to be best practice. We want it to be standard practice. There are several states and city housing departments where one of the characteristics of how they decide to allocate their funding for affordable housing, whether or not a property is certified to green communities or not. And so that's been very impactful.

We'd love to land on a pathway or a mechanism so that. Insurance providers like could recognize green community certification, for instance, as, a badge that that verifies or that vouches for this property will be better able to withstand certain disasters. And so insurance premiums could be reduced, perhaps, or, you know, the level of confidence about that property could be increased.

Screen communities is a national standard and there are some things that we know, um, that are valuable regardless of what type of climate hazard you're dealing with, that we've baked into the program. Things like, you know, having backup power for critical loads, you know, um, and flood proofing and, and things like that. But, really looking at what individual regions need in terms of being able to better respond to hazards that are more likely there is, and it was really a revelation for me to learn more about the health side. And now I just see it everywhere and really like every decision that's made in how you design or build or operate a home is going to impact. The health of the people who live there, like whether or not you're thinking about it intentionally or not.

So, we are trying to take that like, um, positive intention about how these decisions that we're making about design construction operations can improve, like, provide benefit to resident's health. Like making sure you don't have lead pipes for your water and controlling for radon and, and things like that. What materials you're choosing to build a property out of and what they off gas and you know how that all affect your health. More property owners are implementing smoke-free building policies because not just firsthand smoke, but secondhand smoke and third hand smoke are significant, um, indicators to health. There are ways of how you design a building that are going to influence how physically active you are in that property. And There's a whole field called active design. It's about, you know, when you go in a building and whether you want to go up this beautiful staircase, or whether you just take the elevator.

You know, how we are seeing extreme temperatures change? We are realizing that even in, you know, parts of the country that traditionally haven't installed air conditioning or cooling are needing it today. We all know that the southeast. You know, needs air conditioners in the summer, but places like Denver and places like the Pacific Northwest, Seattle, Oregon, traditionally haven't installed cooling, but, but really do need it today just for health and safety.

You know, there are more. Fatalities due to extreme heat than to any other type of climate disaster. Yeah. And in some ways, they don't get enough attention because the building stays up. Right. But it's the people inside who are really impacted. It's tough in some cases too, because if you haven't. Paid for cooling before, you know, how can you manage the operating expenses on the back end too?
And I, I do, I agree. I think people are just learning, becoming to appreciate how big an impact heat is having on people's lives.

Yasgur: As we're talking today, I'm in Washington, DC. We're also, you know, there are, fortunately there are not wildfires near Washington DC but we are expecting the smoke from the Canadian wildfires. Yeah. Um, and that will affect air quality outside and inside people's homes, depending on, uh, what they do about heating and cooling and all those kinds of things.

Egger: Yeah, exactly. Filtration and ventilation and cooling, we're looking at different demands of the mechanical systems that we put in buildings now. Because of how our environment is changing. And Enterprise is also doing, because you're also have thoughts on kind of the industrialization of like how we build homes. Moving from kind of assembling on spot to kind of industrial production.

Because one of our goals is to. Increase the amount of housing that's available. I think we are looking at, you know, what are innovative ways to build more affordably and create more units and stick-built housing, you know, has been around for a long time and will continue and can be done very well. But looking at industrialized construction is something that is more and more, in our focus areas because of the quality control that you can have, because of the scale of production that you can have and, and so on and so forth.

We're supporting a couple of industrialized construction approaches through the housing affordability breakthrough challenge that enterprises are leading in partnership with Wells Fargo. Some really cool examples there of different ways to scale the production of housing industrialized production of homes and housing.

Yasgur: Makes so much sense. It's kind of a no brainer, right? Like, you wouldn't ship like all the parts to manufacture your car to your driveway and then hire some people locally to assemble a car. But that's how we build houses. And it doesn't have any of the efficiencies and economies of scale that you can get from doing things in an industrialized setting and then shipping it and I think people have really started to move past some of the prenotions that they had earlier days of kind of manufactured homes. But what do you see as some of the barriers that to really move kind of forward with industrialized home building in a larger magnitude?

Egger: Yeah, it's a good question. I think on the one hand, because it is more of a nascent space, there aren't as many lenders who have experienced financing, um, industrialized construction techniques.

And so, having lenders become more comfortable and have more just experience with the different types of financing that are needed for industrialized construction. I think will help break through I think we've seen some real progress with industrialized construction approaches that are taken.

Kind of like a hub and spoke approach. So they have a main production facility in one location, but then may have several different locations where they feed their main production to that then really finish the homes so that they can be finished, um, you know, by a workforce that's local to where the homes will actually be produced. And I think the more that we see that integration within the community, I think. Then we'll see more demand for those, those types of housing.

You know, the self-insurance model is one that some of the larger housers are able to move forward with. There have been some insurance pools that have been created.

Yasgur: Wait, so self-insurance amongst affordable housing providers?

Egger: Yeah, there have also, in addition to just like self-insurance, there have also been pools created between several like-minded affordable housing owners to better offset the risk just with a larger, larger pool there. And then there have been, there are currently other models being explored.

In terms of just how to measure and manage risk and who bears the cost. And I think those conversations need to be seen through, to see how we set up these questions of risk and benefit, in different situations. Because like with the affordable housing community, there isn't much margin for error. There's no extra cash laying around. Right. We need to be confident that we're going to be able to

put people in, in homes that they can afford, even from the insurance perspective too.

Yasgur: Right. And for new builds, but also existing builds, right? Like existing builds?

Egger: Yeah, exactly. I mean, we are seeing insurance providers change their policies about where coverage is provided in part, based on what hazards and vulnerabilities are being experienced in different parts of the country. So yeah, existing homes as well as new construction.

Yasgur: Right, right. And this is kind of early days for people grappling and really wrapping their heads around what, where the risk is, what the magnitude of it is, what the costs are, who should bear it, right. And how they, how they pay for it.

Egger: Because we are seeing hazards increase, right? The need to rebuild is increasing and that's costly. So we are in a different paradigm than we have been before. We can't keep going with the models that we've used in the past, but we're not quite to the point yet of recognizing what the best model is to lock into yet.

Yasgur: And hopefully this is a frontier for a lot of innovation to come. I'm really curious about the Enterprise resilience academies. Can you share a little bit about that?

Egger: These resilience academies are regional. And what we've been doing is working with affordable housing owners and operators in a particular region of the country. So taking the southeast or the Gulf Coast region or the West Coast where there are some similarities in building stock and some similarities in hazards. Um, and we've been, um, putting together these academies, which last three to four months. We've had an in-person kickoff, and then the rest of the education sessions have been virtual and about every other week. So, it's pulling together a peer network of affordable houses to learn from one another about, um, what's worked, what hasn't worked in terms of risk reduction.

It's delivering some education sessions with local experts. It's providing technical assistance to help the affordable hazard identify like what are their greatest hazards in their portfolio, um, as well as specific properties as well as their organizational structures. So then you can start focusing in on, let me improve this property rather than not really.

Knowing where to start in terms of bang for your buck. Um, and we've also been able to provide some pass through grant funding so that some of the participants

have been able to implement the strategies that they've identified are, are most important. So, it's been really. Really fun work to, um, you know, pull these like cohorts together.

And to realize there are some, there are a lot of similarities across the country, but you know, there, there are nuances also. And we're preparing right now to. Deliver Resilience Academy later this year in the Southwest US. So, in the Four Corners region like Arizona, New Mexico, Utah, Colorado with Tribal Housing Partners and it's been really fun to dig into the planning there to see how climate resilience shows up in a slightly different way in the tribal context.

Yasgur: That's amazing. And so, and how many like just order magnitude, trying to picture like wrap my head around like how big are those learning communities? How do you think about it? Is it number of organizations that participate, how housing units that are represented? How do you think about it?

Egger: Yeah. We've had between 10 and 20 housing organizations. Uh, participate in each one, each one. The one and the number of housing units varies dramatically. For instance, the one we held in New York, New Jersey included nycha, which, you know, the New York City Housing Authority, which has so many units.

Yasgur: Enterprise itself is doing so much and, and kind of building resilient futures team. You have so many things going on, within the team ask, what are some of the things that we most need now? What are the structural changes we, that are most critical right now?

Egger: I think it comes back to me to this core mission that I mentioned earlier about transforming affordable housing development practices to consider how. We need to make slight adjustments given how the climate is changing. Like the homes that we're designing now need to be able to keep someone warm in the winter 50 years from now, right?

So we need to design a little bit differently. And so, um, I think there does need to be more consideration upfront than traditionally about. You know, doing energy models and doing resilience assessments so a greater focus in pre-development would really be helpful, both in terms of available funding and time for Housers to be able to invest in that.

We're really focusing on preservation more than we had in the past. And so how can we ensure that the homes that exist today that maybe haven't been repaired in a long while have access to the capital that they need and the management structures

that they need to be able to, be updated to continue to provide like decent, affordable housing for people in the future.

So, you know, we're seeing, we're seeing upheaval, of course, in government programs that provide financing and support, to affordable houses. And the more consistency and reliability I think housers can expect from those partners is really helpful as well.

Yasgur: The preservation and the need to update existing housing stock and the order of magnitude of it, is kind of underappreciated at this point, just how big this is.

Egger: Right. In the early eighties was when a lot of the multifamily, affordable housing was first being financed in this country. And, um, it's time for those homes to be repaired and to be updated to serve the next generation of households. And so, investment there is critical. There is so much innovation happening across the sector that's actionable. I'm really excited about, you know, some of these industrialized construction processes that are integrating mechanicals into exterior shells that could be installed for a retrofit that happens from the outside in. It's amazing. Really cool if that can be scaled.

There's also just lots of innovation and creative problem solving that's happening throughout the sector. To consider all of the issues that we're trying to grapple with at once. So thinking about energy and health and climate resilience and affordability all at the same time, you know, in different climate zones and in different utility rate structures and so on and so forth. So, um, there is such a, a bright promising field of people who are focused on these issues that keeps me going every day.

Yasgur: Yeah, I agree with you. And, and seeing it as remarkable seeing these pieces that are starting to emerge. To whom would you get make the call to action to and what would you ask them to do?

Egger: Oh, man. Um. Everyone has a role to play in making housing better, and we're not talking about perfect housing. We're talking about, you know, affordable, like efficient housing, that that's healthy, uh, for households. Well right now, this very moment for housing owners and for. Sustainability professionals. I'd encourage folks to join into our process of updating our Green Communities criteria. Because we're looking to, you know, set the standard for the next, um, generation of homes that are being built and we'd love additional input.

Yasgur: That's great. Yes. A really concrete ask that you know would benefit all of us. Krista, thank you so much. It's, you know, it's amazing to learn about the different work that you're doing and we need this leadership now at this time when climate and weather are really touching people in their homes right now as we're facing an increased number of disasters and I think everybody recognizes the extent to which their fragility and exposure. To some really important things in, in the place where they live, lead their lives. So I think in making progress on this collectively, this is critically important right now.

Yasgur Conclusion: One thing I think that's interesting about the conversation with Krista is she really helped me to see what our horizon should be, right? They have this line where they say green building practices shouldn't be best practice, they should be standard practice. And I think it's critical because it helps us recognize how far we must go and how to address one of the really big problems here, which is that for too long green building practices have been kind of associated with kind of higher priced homes, more affluent areas.

I think Krista really helps focus attention on the fact that those practices are as even more important for us to build into affordable housing. So, when we look at affordable housing, which is often then located in places that are more susceptible. To the kinds of disasters and perils that, uh, that threaten our homes, that those are exactly the homes that need to have green building practices built into them right from the outset. One of the themes that I think we're going to see in future episodes is really how are we starting to move from this kind of pioneering work? The early days of helping to create green building practices of hardening homes, of fortifying homes in the face apparels to those practices starting to become more mainstream and move towards the kind of scale that's needed to really create the resilience that we need.