Economic Architecture Podcast - Episode 13 Transcript:

The following transcript has been edited for clarity:

Stuart Yasgur: I'm Stuart Yasgur, and this is Economic Architecture, the podcast.

Stuart Yasgur: There's undoubtedly an increased risk to people, their homes and their communities because of fire today.

Stuart Yasgur: When we think about fire, we often think about calling the fire person in the case of emergency, our minds first go to putting the fire out—to stopping the fire. Of course, it's natural.

Stuart Yasgur: We think about suppressing the fire and in the context of wildfire mitigation approaches in the U.S., that was our stated policy for dealing with fires in wildlands in the United States, for the better part of a century. The good news and the bad news is that we were actually very successful. It was good, because there was a lot of damage that didn't happen because fires were suppressed. The bad news is that that same suppression of fire actually made the potential for damage much higher. How?

Stuart Yasgur: Because it increased the amount of burnable materials in those wildlands that we now refer to as fuels in a lot of conversations about managing wildfire risks.

Stuart Yasgur: And the increase of fuels actually increased the risk that we're now experiencing.

Stuart Yasgur: And we've seen that happen through some of these devastating major fires that are occurring at an accelerating pace in recent years—from the tragic Eaton Fire from January of this year to the many others across the United States.

Stuart Yasgur: One of the things we've learned from that is that we need to switch from trying to suppress fire to understand how to live with fire as a real element of our environments.

Stuart Yasgur: That's because the natural environments that we live within and next to require fire—fire is a natural part of their lifecycle. So, the question is how do we do it? How do we live with fire? Well, if we're gonna live with fire, one of the other things we need to be aware of is that it's not always the size of the fire that matters. It's the speed of the fire.

Stuart Yasgur: Fast fires have tremendous potential to create damage.

Stuart Yasgur: When fast fires come to what people refer to as the wildland urban interface, the WUI for short, which is a kind of boundary between where we have either grasslands or wooded lands and buildings. When those fast fires get to that interface, if they're not stopped right at that interface, they start to spread from building to building at a really rapid speed.

Stuart Yasgur: Going from building to building with that kind of speed then creates not a house fire, but what we might call a conflagration. To think about conflagrations, we really have to look back in time.

Stuart Yasgur: We have to think of things like the Great Chicago Fire in 1871 that forever changed urban landscapes or the massive fires that went through London in 1666.

Stuart Yasgur: Today, we're risking the same historic level events when we think about these kinds of complications of fire spreading, building to building in urban settings at that speed.

Stuart Yasgur: When we recognize that wildlands need fire and that there's a real risk from fire moving fast, we can better understand the risk calculus of today, which is further exacerbated by climate change and extreme weather.

Stuart Yasgur: The good news here is that it's incredibly actionable by individuals in their own homes.

Nancy Watkins: Thinking about protection and self-protection as our own obligation, not something that a fire personnel are gonna do for us, or utilities are gonna do for us, and we don't have to do anything. Like just realize that we're in a different world now. And for many of us, it's not a question of if fires will occur, it's when, and so think of it more like a seatbelt and less like somebody else's problem.

Stuart Yasgur: Nancy Watkins is a principal at Milliman in San Francisco. She manages an actuarial consulting practice that specializes in climate resilience and catastrophic property risk. Nancy is an innovator who is using information for the wildland urban interface, also known as the WUI, to better help people understand their own risks.

Nancy Watkins: WUI is Wild and Urban Interface. Just generally, it's like thinking about the coast where the water meets the land, the WUI is where the built environment meets the natural environment, there's ways to define it, but just in general, the concept being that we need to focus our efforts right now on areas where houses are close enough together to burn each other down because those are causing so much of the collective action problem that is turning into urban conflagration and having the biggest effect on insurance markets in fire exposed areas.

Nancy Watkins: The problem that we're trying to solve is that people and communities are being told you need to do these things to harden your structure. And they're doing other things like prescribed burns and shaded fuel breaks and investing in fire suppression—all kinds of things to respond to the fire crisis.

Nancy Watkins: It's not like no work is being done, it's just that people are not seeing this translated into insurance outcomes, and so that break in cause and effect stops momentum in its tracks. If you had clear evidence that you had done enough, then you would naturally think that insurance companies would wanna compete for your business and that

your premiums would be reflective of you doing whatever mitigation you had done.

Nancy Watkins: I think the problem that we're thinking about is changing our relationship to fire, specifically in the West right now, but I think that there's gonna be other parts of the country that are impacted more in the future.

Nancy Watkins: We think of fire in the U.S. as something to be stopped and something to be put out. But in reality, at least in California, where I live, it's a fire-adapted landscape and fire is a natural part of the environment. But in like the last a hundred plus years the policy of suppressing fires as soon as they've started has led to a buildup of vegetation, which actually means that when a fire does happen, it can get so much bigger and so much hotter.

Nancy Watkins: And burn out of control in a way that it can't be stopped before it starts hitting places where people live. We've seen so many events since 2017 where a fire may start in the wildland, but it quickly burns up to the level of the built environment, an urban or a suburban community.

Nancy Watkins: And at that point, the structures, the homes in the community start catching each other on fire. So, it stops being what we think of as a wildfire, which is, vegetation, and it starts being urban conflagration, almost like the Chicago fires, and I think there was one in Baltimore, in San Francisco in the early 1900s.

Nancy Watkins: So, we're having to think all over again about how to protect homes and communities and lives from this phenomenon of urban conflagration, which is a, a very, very tall order and requires many things to be lined up in order to do it effectively.

Stuart Yasgur: When you describe that as thinking differently about fire, that is really a big change in how we think about fire, right? When we think about a fire—you think about, okay, we've gotta put the fire out. You have to stop the fire; you have to call the fire department. But you

know, for a century of doing that, we've now inadvertently made the problem actually worse, right?

Nancy Watkins: Literally like, yeah, you can't talk about fire without cheesy analogies. But yeah, the difficulty is everyone who's alive now is accustomed to that preventing forest fires kind of approach.

Nancy Watkins: When you think about, oh, this is a problem, what should you do? The natural human tendency is to say, well, get more firefighters, get more helicopters, put more water out there, cut down trees or something, stop things from catching on fire.

Nancy Watkins: But in reality, the fast fires that are really causing most of the structural damage, I think, since 2001, there's been a study that said something like 2.7% of all the fires that happen caused almost 90% of the structural loss. So, it's very disproportionate. Fires that move really fast are causing the problem. Not big fires that burn slowly and burn lots and lots of acres but sometimes fires that have a smaller footprint**,** they burn so fast.

Nancy Watkins: I mean, you never want houses to burn down. You're always gonna put fire suppression on there. But if the fire is moving too fast and it gets too hot, then it overwhelms the fire suppression and that's where structures start being lost.

Nancy Watkins: Most of those fast fires I'm talking about happen in grassland, not forests. So, when you're thinking about logging and, and all sorts of, you know, normal tactics, that's not gonna work in grassland. There are lots of, essentially, it's gonna be very difficult to start, to keep these fires from happening. So, we have to have a different way of, of fighting them. Mitigating them, I guess.

Stuart Yasgur: Right? So, we're talking about not necessarily just preventing fire, but we need to recognize that fires a natural part of this landscape, so we're gonna have fires around, but we need fires that don't create risks. That's not these fast-moving fires that really put people, homes, buildings, communities, kind of at risk from them.

Stuart Yasgur: It's a totally different approach than just calling the fire department and saying, let's put out the fire. We now need to think about where are we putting our communities? How do we build our communities? What are some of those kinds of questions that we have to ask ourselves?

Nancy Watkins: We definitely have done tons of work, especially in California on reducing ignitions. Um, utilities have ended up with the liabilities for so many of these fires because, you know, where there's electricity, there's some risk of sparking fires.

Nancy Watkins: But even if those ignitions are reduced, there's other causes. Human-set fires are, are really, even unintentionally set like sparks from chainsaws or some kind of equipment.

Nancy Watkins: The energy in fuel reduction has been helpful, like trying to do prescribed burns around the outsides of communities and get rid of some of that built up fuel so that we don't have like a big pile of kindling if something does spark.

Nancy Watkins: But unfortunately, the conditions for fast fire are typically some periods of drought where vegetation is very dry and it's subject to catch a lot faster and high winds, and hot conditions. So, when you have the high winds, if an ignition happens the embers can travel a long distance because of the winds, and that's where you have these fast fires.

Nancy Watkins: The human nature is to say, to stop the fires, but the reality is you need to slow the fires. And the way to do that is through hardening the structures themselves and creating defensible space around structures at the point where the fire could transition into the community and turn into an urban conflagration. So, that's the mind shift we, we don't think about a firefighter stopping a hurricane or an earthquake or severe convective storm, we already know that, when those things happen, that we're just gonna have to wait 'em out and see, and hope that our structures can survive them.

Nancy Watkins: We have to think about that for fire as well.

Stuart Yasgur: And so much of the work we need to do then is, as with a hurricane, is before the fire happens. So, like, obviously we need firefighters, et cetera. Nobody's understating the importance of firefighters, but if we really wanna make a meaningful difference in how many buildings are, and people are at risk, we need to do that work before the fire even starts.

Nancy Watkins: It's easier, as you were alluding to community design, it is easier to start with new construction and to create natural barriers or manmade barriers.

Nancy Watkins: Like just hardened areas where you're most, I mean, you kind of know where fires are most likely to come from because we know about prevailing wind patterns and like if there's a big open space on the side of a community, that's where the fires most likely to come from, not from the ocean.

Nancy Watkins: So, you can eliminate some areas as being super, super risky. But beyond that we have so many existing communities that are, that they haven't traditionally been thought of as high hazard areas, but they still are at risk of having these effects. And so, you have to start somewhere. And so, starting at the edge of, the edges of these communities and working inward, and trying to design systems of hardened homes and structure homes and parcels so that the fire is less likely to start burning uncontrollably from house to house.

Nancy Watkins: So, it's, it's a really tall order because people like the way their communities are. And it's, I mean, you can't straighten out windy roads. You can't, you can't cut all the trees down. And, and, and we don't, need to, but you really have so much work to be done especially when the structures are spaced close together.

Nancy Watkins: If they're below 10 feet, it's much more likely that they can just directly catch each other on fire from radiant heat.

Stuart Yasgur: Part of what that means though, is that it's, we each have to be responsible for our own homes. Through that, we're also being, you know, we have to think about the effect we have on our neighbors. If I wanna be protected from fire, I have to take care of my own home. But I also have to think, are my neighbors gonna do that? How do we work together as a community to create hardening in the face of where that fire is most likely to come from?

Nancy Watkins: That's right, Stuart. It's a collective action problem, and sometimes those are the hardest ones to solve. It's almost like herd immunity with vaccines. If you have enough people who have been vaccinated, the spread of disease is much slowed down. But each one of those individuals has to make the decision.

Nancy Watkins: I think of it more like second hand smoke, actually. When I started work, everybody sat at their desks and had a little ashtray and smoked their cigarettes. And so that was very normal.

Nancy Watkins: And we didn't think about, you know, the effects that it had on each other. But years later, I mean, it's been a long time, but not that long, nobody would think about doing that in America. We are very concerned about the effects of second-hand smoke, and we pretty much acknowledge that we're not allowed to risk other people's health by exercising our own freedom and smoking.

Nancy Watkins: So, I think it's a mind shift that we have to get at with respect to neighborhood hardening and figuring out how to get entire blocks of houses to harden together and to create those islands of safety for themselves.

Nancy Watkins: And the more interesting thing is, a neighborhood hardening itself actually lowers the risk for all the neighborhoods downwind. You don't always know which way the winds are gonna go, but there's some patterns that are fairly predictable, so who pays for that? The first neighborhood that hardens or the other neighborhoods that get the benefit? It's a very tricky problem.

Nancy Watkins: And the question I think too is who are the entities that make this happen? So, thinking about your home ownership question, who made that happen? Like, how did it come about? Was there a tipping point that made government step up and make new laws and create new structures to reduce the barriers to home ownership. Like, why did that happen?

Nancy Watkins: What I am hoping can happen now is a policy decision that says we want our communities to stop burning down. That's something that I've heard various policymakers say, but then the way they go about addressing the problem is not necessarily enough. And in fact, what we're seeing in California especially, is that a lot of effort has been devoted at certain things and not enough effort has been devoted at really important other things like home hardening.

Nancy Watkins: And it's not to say that the state isn't saying anything like, you should do this, but they're not, there's not a mechanism to back it up and essentially make it almost impossible for people not to do it, make it economically advantageous.

Nancy Watkins: One focus that tends to happen early on in any of these decisions, I've seen it happen in other states like Florida for hurricane, et cetera, and for the flood insurance program is, they focus on insurance premium credits and they give people this idea that if they do something, that they should get a premium discount that's at least equal to whatever it costs them to do the something. But that's not really going to work for fire.

Nancy Watkins: If we're living in an a very, very vulnerable state and in some places, like in California, historically the premiums have been too low, then just getting up to a place where we're less likely to burn does not necessitate lower premiums.

Nancy Watkins: Now, it is true that insurance companies ultimately will price higher risk policies for a higher premium and lower risk policies for lower premium, but it's not gonna be a direct one-to-one relationship that necessarily pays for itself. It's like seat belts. Like I don't wear my

seatbelt because I get an auto insurance discount that pays for whatever, you know, the cost of the seatbelt is, and my time and aggravation in putting on a seatbelt. I put on a seatbelt, first of all, because it's built into every car I drive.

Nancy Watkins: Um, secondly, because it's always been the law, and I'll get a ticket if I don't wear one and third, because I really don't wanna fly through the windshield of my car if somebody hits me. I don't actually think I'm gonna have a wreck, but if I did have a wreck, I really don't wanna die. And so those are the reasons to wear a seatbelt.

Nancy Watkins: But that's because we've got a culture. And I think most people have those reasons, but they don't have those kinds of thoughts about hardening their homes. Even if there's never a fire, I'm safer because I did these things and or because my neighbors did these things. That the, the reasons that we haven't made that mind shift yet are one big problem is alignment—there's not been alignment on what needs to be done and who needs to do it.

Nancy Watkins: And second, I'd say a focus on just changing what's happening in the insurance market, as though that's a problem that's just arising all by itself, when in reality we have a personal responsibility to, even if we all had cheap insurance and it was guaranteed availability, if we keep having fires like the Palisades Fire, the Eaton Fire, the Lahaina Fire, we didn't win.

Nancy Watkins: We didn't solve any problems. I'm surprised that we're still having those conversations just about insurance when it's so evident how just relentlessly devastating it is to lose your entire community to fire. No amount of insurance proceeds can make up for that.

Stuart Yasgur: In some ways, the pain that people are experiencing on the insurance side is really kind of an indication of this larger set of problems that we have to address. If we don't address the risk, then we're never gonna address the insurance piece. And even if we were to make the insurance costs lower, we still have the risk of experiencing fire and the devastating effect it has on people's lives.

Nancy Watkins: The fire chiefs that I started working with, Frank Frievalt and Dave Winnacker back, I don't know, 4, 3, 4 years ago they came to this insurance issue because they would tell their residents in their communities you need to do all these things. Here's our ordinance. We will inspect when you're done.

Nancy Watkins: And then now, okay, you've passed this, great job Miss Homeowner, and then that same person would get a non-renewal notice from their insurance company the next day. And they would be given some information about why, but there would be like a complete lack of, of synchronicity between what your trusted fire personnel told you to do and what someone who you're financially dependent on told you that you didn't do.

Nancy Watkins: So, I could see that was happening. And then I could also see that the models that insurance companies use to price and manage, and measure risk were facing a lot of pushback from in the press, from policy makers, from regulators, from consumer advocates as black boxes as, you know, not trustworthy, probably bias.

Nancy Watkins: I mean, all kinds of things are said about those, when in reality, like we're all doing our best to wrap our minds around this extremely important, very complex, rapidly changing risk. You have to have some models that try to figure out what are all the things that drive the fire risk, and how to mitigate those risks.

Nancy Watkins: But those models were getting a lot of, I guess bad press and bad, a lot of suspicion. And I thought I, that a lot of the suspicion was not around how the algorithms worked, but what data was going in. Like, does this insurance company model, does it know that I cleared all these trees around my house and that I replaced my mulch with gravel?

Nancy Watkins: Like, do they know that I did these things? Like, that was an unanswerable question, and I thought that the, the knowledge of what the information was that the models were based on would help a lot to go a long way towards diffusing some of that black box kind of

claims. And that the collective action issue that we were talking about, the fact that my, my risk is not actually determined based on the four corners of my land.

Nancy Watkins: It's really based on. The whole patchwork quilt that I'm a part of in the community and what other neighbors have done. But all of that information at the home level is invisible to modelers. Because in order to really understand, you know, the most important things, like what's, what's the construction of my roof?

Nancy Watkins: Do I have ember screens that keep, or little mesh screens that keep embers from going into my attic? Is the six inches at the bottom of my structure flammable or not? You know, what's, what kind of, uh, vegetation is in the five feet around my house or is there vegetation at all?

Nancy Watkins: Are there flammable materials or not? You can't figure those things out reliably from drone imagery or aerial imagery. You have to have a person walking around the house, and that's expensive. So, all these inspections to understand what had or had not been done at the home level, insurance companies would do them for their own purposes.

Nancy Watkins: Fire suppression personnel might do them for their own purposes. But nobody has a holistic view of the community. Nobody has the ability to generalize and say, well, 40% of the houses in this neighborhood are, fairly structurally hardened, but the other 60% are not.

Nancy Watkins: And we're actually going backwards. We were better last year and we're doing worse now than we used to be. Like that kind of information to shape investment and to prioritize materials, and to assess the risk on an ongoing basis—it wasn't available. So, that's what the WUI data commons was all about.

Nancy Watkins: To connect the pathway to, to create a relay race between, someone's told to do something, they do something, it gets inspected, the inspection verifies that it got done, that information is now

aggregated up with whatever else happened in the neighborhood. It's available to insurers, fire scientists, utilities companies, catastrophe modelers all at appropriate levels of aggregation so that consumer privacy is protected and, if I'm the person that owns the home and did the mitigations, I can look at my data and see who did the inspection and what did it say.

Nancy Watkins: Just like I can look at my credit report. I can see how many open lines of credit I have, how many bankruptcies, late payments, whatever. I'll never understand the algorithms that feed my credit score, but I know that closer to a thousand is better, and closer to zero is worse. And bankruptcies are bad and late payments are bad, and that the facts are things that I can have some control over.

Nancy Watkins: So, I'm trying to give consumer control back as regards the facts of what they have done and what they have not done, and give the insurance industry better information to reward the actions when they've actually bent down risk, which it's gonna be easier to do if the information is more available to them. So, that's the concept. It's a complicated thing.

Stuart Yasgur: There's many moving pieces to this, but if we think about how many people are possibly going to be affected by fires or could be affected by fires and the fact that in order to kinda reduce the risk, we need mitigation to be happening in people's homes and people's communities by people.

Stuart Yasgur: We really need a clear signal to them of what they need to do, when they need to do it, and whether it has been done and that has to be synced up, not just to them, but also to folks like the insurance industry and, and others who have a role to play in this larger solution suite. And the WUI data commons is a step towards kind of providing that source of information that can feed into everybody's decision making.

Nancy Watkins: Yes, and the interesting thing is policy makers have already recognized how important it is to connect the risk signals that

insurance is giving to people's actions. But the policies that have resulted from that realization are catastrophe models must reflect, if the state has bought a helicopter, we must have the risk reduced accordingly.

Nancy Watkins: If a consumer has done one thing, then their, the insurance company or the model must be able to see it and recognize it. Well, that's like saying, you know, the horse must drink the water, but the horse is nowhere near the water. There is no water that's close to the horse. If you gave water to the horse, the horse would drink the water.

Nancy Watkins: If it was water that could be drunk, but the insurance companies and the modelers can use good data, and they would like to use good data. Insurance companies don't necessarily want to contribute their own data, and they don't wanna ingest data that's unreliable or unverified.

Nancy Watkins: And so, they don't like mandates because, you know, garbage in, garbage out from the insurance perspective. And so that's why it's really important to involve the insurance industry in the design and the specifications and the verifications that all come along with the WUI data commons. But it's also important to involve consumer groups and communities and government officials because it does not work if there's no benefit to communities, it does not work if there's no benefit to the insurance industry, it has to work for everybody, which of course, makes the design so much harder, but it's the only thing that's worth doing.

Stuart Yasgur: Yeah, absolutely.

Nancy Watkins: And it's almost the converse too, if you do bring the insurance fairy to your town and somehow get magical, typically government sponsored subsidized insurance, um, that's guaranteed and the premiums are nice and affordable, then it gives you this false sense of security.

Nancy Watkins: Oh. Problem solved. I'm safe. Nobody's gonna make me do anything differently. The government has assured me that I'm insurable for this much money, and that is a very, very false sense of security.

Nancy Watkins: So, that's why some of the policy prescriptions, where they sound so beneficial to consumers, we need to have affordable available insurance. We can't get it from the private market; therefore, we must set up a government program.

Nancy Watkins: And there's never really any detail with that about who's ultimately gonna pay for that excess risk that's not priced into the premiums. Oh, it's people in Massachusetts who never agreed to take on the expenses of our house in California.

Nancy Watkins: It's really important to me that these policy decisions are made in a transparent way, which is where actuaries come in. I do believe in subsidizing certain things for people who can't afford them, but I don't believe in doing it in an opaque way where they're fooled about their risk and I really don't believe in some sort of peanut butter spread, where no matter what your income level is, you get a government subsidy for your insurance premium just 'cause you don't wanna pay more and you don't wanna know how risky your house is.

Stuart Yasgur: I think we share some intuitions there, so then, if that doesn't work, if asking the government to set up the program is not a solution to the underlying risk problem, 'cause the risk is there, where should we be looking? What kind of policies should we be focused on

Nancy Watkins: Mitigation.

Stuart Yasgur: Mitigation.

Nancy Watkins: I would say education, but there is so much information out there about what needs to be done. That is something that the insurance industry really is doing is investing in research about what will make a change, what will help with vulnerability—fires especially. The Insurance Institute for Business and Home Safety has created new

standards for wildfire prepared home and wildfire prepared neighborhood.

Nancy Watkins: All of this has happened since like 2017, it might feel like, what's going on? Why hasn't the insurance industry done something? But everything has changed in less than 10 years.

Nancy Watkins: The very experienced fire chiefs that I've run around with all say things like, I've never seen this in my whole career. This is just a whole new world for us. Now that said, a lot of the principles around home hardening were already known back in, you know, 1991 when the Oakland Hills fire happened. So, there's not a lot of, it's not so much that all of this is new information, more so that in the past eight years we've seen so many of these fires that you can't ignore the problem anymore.

Nancy Watkins: It's not like a one-off thing that really is only gonna happen once in a generation. It's happening like every year, and it's not just California. It's lots and lots of other states. More and more states will be impacted by this too.

Stuart Yasgur: Yeah, absolutely. And while this is an innovation in this space, we also have models of places where data commons can work, have worked, are robust features of other parts of our markets that work really well. And so it's a direction that we should have a degree of confidence could really contribute.

Nancy Watkins: I hope you're right, Stewart. I'd like more of those examples. So, it's easier for me to make my case. Specifically a person who's in a wildfire exposed community I would say, reading the IBHS Wildfire Prepared Home materials and talking to the local fire service professionals and thinking about protection and self-protection as our own obligation not something that a fire personnel are gonna do for us, or utilities are gonna do for us, and we don't have to do anything.

Nancy Watkins: Like just realize that we're in a different world now and for many of us, it's not a question of when fires will, or if fires will occur,

it's when, and so think of it more like a seatbelt, and less like somebody else's problem.

Stuart Yasgur: Yeah. And we have that responsibility, but that responsibility comes with agency. So, this is also a problem where we can make a meaningful difference.

Nancy Watkins: That's true. It's an, that's why I like fire, because you can actually do something. It's not a hopeless situation. It just is a hard, hard cultural mindset change to achieve what we need to.

Stuart Yasgur: Great. Nancy, thank you so much for the conversation today. It's been fantastic.

Nancy Watkins: Thank you, Stuart.

Stuart Yasgur: There's several really interesting points that leapt out at me from my conversation with Nancy.

Stuart Yasgur: First of all, we need to be clear that there's some good news, there are steps that individuals can take to harden their homes in the face of fire.

Stuart Yasgur: Zone Zero is an actionable and implementable standard that homeowners can adopt that will lower the risk that their home will catch on fire, but the overall risk that their home has in catching on fire depends significantly on whether their neighbors and the other members of their community also harden their homes in the face of fire.

Stuart Yasgur: One of the points that Nancy made is that when it comes to fire, we can't go it alone. We have to think about the effect that we have on others and that others have on us. So, if we wanna reduce the risk from fire, collectively, we have to act collectively, and that creates some challenges.

Stuart Yasgur: Why? Well, the person who may be really well situated to take actions to reduce the risk of fire may be different from the person

who has the resources to do it and may be different still from the person who benefits most from it. So, let me make it concrete:

Stuart Yasgur: If there are homes that are along that wildland urban interface that we were talking about before, it's really important to make those homes hardened in the face of wildfire because if they can resist catching on fire, then that fire won't catch to the homes that are deeper into that community.

Stuart Yasgur: That means everybody in that community has an interest in those homes being hardened. Those may not be the homeowners who have the resources to pay for hardening of homes, and also, if they do pay for it that may not reflect the fact that it's the community members behind them who really stand to benefit.

Stuart Yasgur: So, how do we think about this? There's another factor that really complicates this.

Stuart Yasgur: In the United States, we tend to think of home ownership as an individual act. Individuals or families own homes, and they take actions that are at the individual or family level. But here we really need them to take actions that are collective. So, how do we do it? How do we solve a collective action problem?

Stuart Yasgur: Well, collective action problems are notoriously thorny, but we also really do have an incredible track record of addressing collective action problems. In fact, I think it's interesting to note that the collective action problem we're facing today is in some ways a result of a solution to another collective action problem we faced a long time ago.

Stuart Yasgur: So, let me just zoom back in history to take a look at this. Individual ownership of homes in the United States—the kind of home ownership that's pervasive in the United States, we often call fee simple ownership in which a person or an individual or a family owns a home, often a building and the land underneath the building, and they have the right to decide what happens to that land, largely. That's a form

of home ownership that's so pervasive, it's hard for us to even recognize that you could do it in a different way, but it wasn't always the case.

Stuart Yasgur: For example, in the UK, we used to own individual homes but then have grazing lands in common. That arrangement created real advantages when we were in agrarian society, but it also led to a collective action problem of its own, famously called the Tragedy of the Commons. Fee simple ownership was in some sense a response to the Tragedy of the Commons, and that was really in the ascendancy in the UK at the time that the U.S. separated from the United Kingdom.

Stuart Yasgur: It's a result of that historic accident, that fee simple ownership is a preponderant form of ownership in the United States. So, now we have individual home ownership, but we are facing the need to work together collectively to stop fires. How do we do it?

Stuart Yasgur: We now need to think not just as individuals, what am I gonna do about my house, but all my neighbors in my community?

Stuart Yasgur: So, if one community has done a great job of hardening all the homes and creating defensible space around the wildland urban interface, then the communities who are downwind from that community are also protected.

Stuart Yasgur: As Nancy pointed out, she and several other fire chiefs, one of them whom we had a previous conversation with on the podcast, David Winnacker, are helping to make risk more transparent for folks by utilizing the data itself. And nobody currently has that.

Stuart Yasgur: So, they're trying to work to build what's called a data commons, a wildfire data commons. One of the things that she points out is that in order for this to work, it has to be in everybody's interest. They have to voluntarily wanna do it. It can't just be mandated.

Stuart Yasgur: It actually has to be compelling for everybody to participate. In Economic Architecture, we use the phrase that something has to be a big win for all the key stakeholders. Everybody who's

involved in this has to see that it's valuable to them to participate in doing this.

Stuart Yasgur: And the fact that Nancy and other structural innovators in this space are creating models for helping to do things like create this kind of wildfire data commons, which can help folks better understand risk and move towards necessary action to harden their homes means that we can learn lessons from their work to ultimately create market-based models to address these problems.

Stuart Yasgur: At Economic Architecture, we're particularly interested in finding ways to scale solutions so that defensible space around homes, home hardening, and other wildfire prevention measures become not only more cost effective, but also the dominant strategy in the market.

Stuart Yasgur: I am Stuart Yasgur, and this is Economic Architecture, the podcast.

Stuart Yasgur: Stay tuned for the next episode in our Fair Chance Hiring series this Wednesday at 9:00 a.m. Eastern Time.

Stuart Yasgur: If you enjoyed this conversation, please join our event on November 5th. It features Nancy Watkins and other previous podcast guests, including Carolyn Kousky for discussion on the modern insurance market and risk, where and how we build, how we measure and manage risk, and how innovations can contribute to viable and effective insurance industry that protects people and property.