THE GLOBAL QUEST TO REINVENT THE CITY

Announcer 00:00

Please welcome the panel on the "Global Quest to Reinvent the City," moderated by Senior Director of Research at the Milken Institute, Maggie Switek.

Maggie Switek 00:33

So hello everyone, and welcome to this panel on the global quest reinvent the city. And so the importance of this panel lies at the fact that cities are really key to both the economic growth and also the climatic challenges that many—that the planet is facing. And in the next 25 years, urban population is expected to double. That means that by 2050, 7 out of 10 people will be living in a city. So with that—without further ado, I'm excited to be here with my esteemed panel to talk about the ways that we can make cities more livable, sustainable and digitally enabled. So, without further ado, let me start with you, Mikkel, you are—you co-founded urban partners, which is an asset management platform with over $20 billion in assets under management. As an investor, what are the main opportunities that you are seeing in cities?

Mikkel Bülow-Lehnsby 01:38

Thank you. Thank you so much for inviting me. So, you know, we essentially are in the business of trying to prove that doing good is good business. And we started our company more than 20 years ago on this observation—that within the world of real estate, there seem to be a lot of focus on assets rather than on products. And with that, I mean a little bit of lack of focus on understanding, how do you actually make better products? Because real estate is not just a large asset class, it's also one of the largest product categories in the world. And I think in the end, business is about solving problems, identifying demands of the future, and then creating or satisfying those demands. And on that journey, we sort of realized exactly your point, that there is this massive need for more city, and we realized there was a very important role to play for capital to ensure that we don't end up when creating new city districts with an all negation of 60 assets that are sort of dispersed and that are easy to sell to a pension fund, but instead, really try to prove that when you think of new city districts as a holistic whole, then you can create outcomes that are way superior for the users, but also for the capital. And that's, in very short, what we try

to work with, and I'm sure we'll discuss that a lot more, but it's in you know, our goal is to be the world's most competent investor in the creation of resilient, green, thriving cities and real estate.

Maggie Switek 03:13

Thank you. And Erin with that, let me turn it over to you. You at CSIS work mostly on the Indo Pacific and Southeast Asia region, in that region—in those regions of the world, cities are facing really serious climatic threats at the moment. So how do you view the challenges that cities in Southeast Asia and the Pacific are facing, and how are those cities working to resolve these challenges?

Erin L. Murphy 03:40

Right. Thank you for moderating this event, and thank you all for attending this panel. I had to bring notes because I can't remember facts and figures, and I want to give you the right stuff instead of making it up. But I think Southeast Asia is also urbanizing. All of its cities are growing at such an incredible rate, and plus, economic growth is also going at an incredible rate, but it faces incredible challenges, particularly from climate. It doesn't have the same issues that other countries might have in terms of aging populations, but a 2021 study showed that the Philippines, Myanmar, Thailand, ranked among the top 10 countries in the world for climate-related loss in the first two decades of this millennium. Cambodia and Vietnam were in the top 20. Nineteen of the 25 cities most exposed to rising sea levels are in Asia; seven alone are in the Philippines. The heat index, it's just going up and up. There's a hot season, and it usually goes from anywhere from 40 to 50 degrees Celsius, which in my American calculations, is about 1000 degrees Fahrenheit. And it's only getting worse. But there—all the major Southeast Asian studies are at risk of sinking, flooding, cyclones and typhoons, natural disasters, drought, and that's especially true for Bangkok, Ho Chi Minh City, Yangon, and Manila. So there is a real need to build in resilient infrastructure, but also to have mitigation and adaptation built into that system. And there are some cities that are doing well, and there are some places where there's really interesting projects that are going on, right in the heart of Bangkok, right in the heart of Ho Chi Minh City. And if you've been to Singapore, you see it everywhere, just by in terms of using nature-based solutions. A lot of it is community driven, but they've had success with some NGOs that have gone in, but there are other challenges. It requires money. In some of the panels that I've been in, some of the moderators pointed out that there are people here who have that money, so maybe you want to think about it. But it does require billions and billions of dollars, and now that the US has pulled out of the Just Energy Transition plans for countries like Indonesia in the Philippines and Vietnam were being considered as well. The need there is greater than ever.

Maggie Switek 06:09

Yes, and talking about being here in this room, Matthew, let me turn it over to you. You're a professor of economics at USC, so you're local to Los Angeles, and here in Los Angeles, we actually are no strangers to climatic threats with the recent wildfires that impacted a large part of the LA metropolitan area. But I know you, and I know that you are an optimist at heart, so tell me, what are the opportunities created by natural disasters to rebuild our cities.

Matthew Khan 06:45

Maggie, thank you, folks. I'm the nerdy professor on the panel, so I'm going to be brief. My optimism about the resilience of cities to rebuild, that Los Angeles suffered a terrible event in January, but every crisis creates an opportunity for entrepreneurs and architects thinking about design, thinking about quality of life. A silver lining of this tragedy is Los Angeles is about and is starting in Altadena, and the Palisades, thinking through investments that will last for decades. And so there's very strong incentives and billions of dollars of wealth to get these decisions right. And for the younger people in the room, I don't think I'm the youngest person in this room, there are tremendous opportunities in the resilience economy of investing in real estate and urban planning to boost quality of life, because in our emerging work from home economy, neighborhoods and cities with great quality of life, the mayor and the investors can be confident that those areas have a bright future. So Maggie, I'm going to, as usual, disappoint you. I am not going to reveal the magic formula for reinventing in LA, but I know that I believe in sort of the collective wisdom of young crowds, and when you have millions of potential entrepreneurs thinking about solutions to the very serious challenges we face of we're going to upzone. We're going to build with better design. We're going to make a series of steps so that more of us are living in relatively safer places, because you're absolutely right about the challenges that Asia's cities face and that LA faces. So the key here is for people and investors to have the information about the risks we face, and then I'm very optimistic that you can rely on the invisible hand. I'm going to wave my fingers at you of the power of the invisible hand and self interest to build a great LA, because we face such serious risks right now.

Maggie Switek 08:49

And so, Matthew, you bring up a lot of great points, but you are also talking about quality of life and well-being, so with that, let me turn it over to you, Thomas. You founded Heatherwick Studios, and you have written about something that you refer to as the blandemic facing global cities at the moment. So could you tell us, what do you mean by that, and also what inspired you to take this new approach to architecture?

Thomas Heatherwick 09:20

Yeah, well, it's really exciting to be here with amazing group of people. And the thing that I'm in as a designer of buildings. Normally, you are just showing your work, here's my work, aren't I great? And someone else goes, here's my work. Aren't I great? And that there hasn't been in recent times the bigger conversation. And the bigger conversation I've realized is really needed, because people feel so powerless about what gets built and we have had a catastrophe over the last 80/90, years. We used to build default smaller and human scale with techniques that made visual fascination, and that smallness meant that it kind of just worked at a human level, and then a kind of combination of factors meant that we super-scaled. And from an economic point of view, it wasn't worth doing a development unless it was big. We had the ability to have huge pieces to make buildings with and prefabricate it big scale. And inadvertently, we started making dead places, and I went for a walk yesterday to my friend's hotel, and was walking through the land of dead place to try to get to, as well as jayrunning and things to try and get there. And so we are—developments have got bigger and bigger, but we are still same size as about half a million years ago. And there are certain things about how we respond to place, and the bit I'm excited about and why I'm a partial introvert, basically, but I've kind of ended up talking because you kind of had to talk because no one else is

doing this bit of it from a design point of view, because the problem is that the economics are driven by inside, because no one's really buying the outside. So when you're buying your office space, it's like, Have I got a big lobby for my silly marble reception desk and my artwork, and have I got good ceiling heights? It's all about your insides. But the bit that we share in society is not really something—we talk about that almost as vanity, the vanity of the 'that's just the esthetics.' And in we've had a mindset of form follows function. It sounds great. I love that phrase. And less is more, and you think, yeah. And anyone who's involved with money will think, yeah, less is more. But when you then, actually—I've had, over many years, people who would talk to me very nicely, and they'd say, you know, Thomas, it's great what you do, but, you know, I do functional things, and you'd be there thinking grrr. And I writing this book called "Humanize". Was a forcer to do some thinking, and inadvertently found myself in a campaigning role, campaigning about a key function that we haven't been talking about, which is, emotion is a function, and so for the last 80 years or so, we've been making emotionally terrible places which might work from a passers by point of view. So I'm trying to advocate that we mustn't treat—our industry treats the public as if they're ignorant. If you don't like what we do, you're probably a bit stupid, and don't see ourselves as public servants. And that we have two clients. We have the person who wants a million square foot of office space, and they want the marble desk and they want the artwork in the reception for their kudos. But the other client is the public. And so there's an amazing opportunity, and our digital era now makes it urgent, because you can—in the past, you had to go to work, you so you had to go to that boring place, you had to go to the boring shops, and you had to go to the boring university. But now that you can lie in bed with your gadgets and get a PhD and you can work from home, emotion is the reason you go to work. Emotion is the reason that you won't buy online. And we have a science of emotion. It almost sounds like a funny thing to say. Is an incredible opportunity. And remember now if you don't love a place, we'll knock it down, or he'll knock it down, because we knock down what you don't care about. And now it matters places that we care about. So how do we make 1000-year buildings? Because the average age of a commercial building is 40 years at the moment, and the carbon is insane in that.

Maggie Switek 14:24

And so Mikkel, you just got called out, but at the same time, I see you nodding very avidly. So do you want to chime in?

Mikkel Bülow-Lehnsby 14:32

Yeah, there are so many things of what you've been saying that I want to comment on. So let me try to structure it so I don't bore you to death. So my life mission is to channel capital towards essentially solving problems. And there are areas where that's not possible because we have a financial system that doesn't necessarily value the things that are problematic. However, one of the reasons why I feel like one of the luckiest men in the world is because when it comes to the creation of new city districts, there is actually generally very good alignment between the ability to actually generate excess returns for investors and creating better spaces. And I think your point is spot on. In terms of there's historically been a lot of focus on the individual. I call it asset, but it should be a product, obviously. But there's a lot of real estate investment companies and developers who have fundamentally been in the business of creating an asset that it can sell to a pension fund that has been the most, biggest driver of a lot of new real estate been created in the world. And I think not only is that not serving the public interests, but it's also destruction of value. So you know to your point, people are essentially social creatures now, and while we can stay at home and do everything, most of us get a bit more joy out of life when we spend time together. And

therefore, when you create spaces where people want to come to which has to be spaces that offer diversity, that offers work, life and play, then you are creating destinations that draw people in and that create also better outcomes for investors. And I really honestly think that this is something that's gaining momentum. So we're working a lot with the C40, and have, together with them, created this blueprint for the 15-minute city, which is beautiful, simple, simple concept, but it's just this concept of creating an area within which you can both work, play and live, and which both addresses a lot of sustainability worries. Because basically, if you remove the transportation needs that you can deal with most of the things you need in life close by, it also addresses the whole social needs that we have as creatures. Because if you can do everything in one place, then obviously, you know, it makes you a happier person. It also ensures that people actually want to go to work, because it's a place where they want to hang out and want to play. And I think, you know, if I just can, end up with one quick little note, I've been spending a little bit time with the former mayor of San Jose. And, you know, I find it so odd that, you know, San Jose is basically the capital of one of the wealthiest regions of the US, no, and it's not a very thriving city. And it's very clear that most of the big tech companies, they are competing for talent. And in my head, there was this massive, glaring opportunity, which is actually also happening now slowly, of these different companies creating the campuses downtown, and creating much more residential in San Jose, and creating this work, play, live city, which everybody wins from. And I'll end here.

Maggie Switek 17:45

No, yeah, that's really wonderful everything you say. And I do want to drive it to a little bit of talking about public, private solutions, because Copenhagen is actually one of the most livable cities in the world, and in part, because of how well public-private partnerships have worked in Copenhagen, and let me turn it to a different part of the world. To you, Erin, prior to joining CSIS, you were a director at the US International Development Finance Corporation. How did that inform your view of the importance of public-private partnerships, and how do you see that opportunity?

Erin L. Murphy 18:25

So I think what makes a city run, and you know, for—and people can only understand this when you live in a city, because we are much more dependent on public servants. And I think in a town, or at least, we understand what the services are, whether it's the sewage system, the water, the electricity and whatnot. So it does require a lot of good governance, but also for—to have the enabling environment for the private sector to come into play. So there's a lot more engagement there, whereas if you're in a town or in a rural area, you're a little bit more on your own. You only know when something isn't working if it breaks and it requires a government to come in. So for a city government, you know, there's a lot more responsibility there. So with the DFC, we would be mobilizing private sector investments to support public initiatives, but also just how that all worked together. We could not do it without government support on the ground, we were primarily only investing in private sector capital or private sector led projects, but we needed to have that government support to enable their vision of what that city is going to look like, plus incorporate some of our best practices, making sure that they linked up with the right private sector investors that were going to obey the laws, the local governance, but also international standards as well. I mean, it's one thing to build something, but you need to build it well, build it to last and also build it to be appreciated. I mean, if it's you're just throwing up a bridge for the sake of it, you have to know it's safe. It should look nice too. I mean, you know, there's an aesthetic there as well.

Maggie Switek 20:01

Yes, no. And so coming back to you, Thomas, what are some of the levers that can be used in order to get the public buy in? And when I say public, I mean obviously from the people, but also from the city officials, to make them see the importance of building cities that have the human-centered approach that you advocate for?

Thomas Heatherwick 20:45

I'm trying to argue that the—I don't want to steal your question—that we need to think about how we think about buildings a bit differently, because in the UK we get into these silly arguments of—it's important to do beautiful, and then people go oh well beauty is subjective, and imagine it seems like we're discussing this, like how beautiful is something, whereas actually the problem is down here, it's how do we make things not totally rubbish. And so I'm trying to not use the word beauty. And you know when people say, "I will fight for the right for somebody to offend me," it's like, well I want to fight for the right for somebody to make something that I don't think is beautiful. But there are many, many buildings which are still engaging, they're still interesting, they still—and so there can't be sort of one language—but I'm trying to use language around, actually around food, because we are, we keep talking in styles like, "Oh do you like Brutalism, oh well, I like Modernism, oh I like Art Deco." It's like, stop, stop the style conversations, because actually humans are "infovores"—someone told me this, a neuroscientist we're working with, and I'd not heard this, which is that our brains need millions of bits of information every few seconds, we're processing and if you don't get that you go into stress. And there are a number of researchers now showing that your body needs that visual complexity, a bit like we talk about the microbiome, that we need the complexity in your gut. We now talk about how ultra-processed food is not good for you—40 years ago if you spoke about ultra-processed food, you were a hippie, and if you had ate seaweed and brown rice and like my mum used to give me dried bananas to take to school that look like cat poo, and you're like, "Oh no," when you go to school. But now everyone has seaweed and brown rice, and that was a shift in society— and we won't make change unless there is a societal conversation that changes—because it is cheaper to make buildings with very low visual complexity, it's the cheapest way. But you can, for 5 percent more, you can have visual complexity where it matters at the bottom, which is where we all are. So, I think we can make a change, but we have to start talking and demanding nutrition for our mental health and—so that's what—and it's going to take 30-40 years. But you see, otherwise, the pension funds, you know build their—get their asset as you're talking about because that—but that's actually, it's basically, that's ultra-processed architecture, which has very low nutritional value, very low societal value. And so we—and the dynamics of the economics are all about the insides, and the voice of society isn't there. One of the biggest industries ever in history, as big as oil and gas, oil and gas is measured, utterly measured the effectiveness of a dollar in the construction industry. The effectiveness of a building in the public realm, that is a wall of public life, no one's measuring. And so it's this kind of blind spot. You talk to anyone, and anyone will say characterless, soulless, sterile, even if they think a place is quite cool they'll still go, "Yeah but it's still quite characterless." And everyone knows it, everyone feels it, and we've got an industry that just keeps going, and I guess the challenge is there's the people who hold on to assets—I mean you sound like someone who holds on to assets—so there's a long-term person—you'd be stupid if you hold to something for a long time not to make somewhere that people care about. It's the short term asset—it's when someone builds to sell where it's just about to do the minimum. Because to do a building that will be there hopefully for decades and decades I only need to persuade a city official and my client, I've got two people to persuade and we do it and that's a wall of public life and where is the thing I don't think you have to consult everybody but somebody in my role and there are millions

of us around the planet has to think not about what do I think but think how will other people feel at what I create and we've had a catastrophe in that.

Maggie Switek 20:46

And so with that, let me turn it over to you, Matt, so how do we balance the need for accounting for the human and environmental needs of cities with the economic challenges and with the economic pressures that we see in cities.

Matthew Khan 25:45

So Maggie, I think that those two dovetail together. So some of my early work was that Pittsburgh, Pennsylvania, got rich with steel, making steel, and we don't see many cities even the developing countries in Asia—they're starting in heavy manufacturing, but then phasing into services. And so this idea that a clean environment, the mind functions better where the air is good, folks, the air is pretty good in this room, and that a key issue that we all have a better understanding of is lower air pollution in cities and within buildings. So Maggie, I think a key way to align Greta Thunberg's goals with Donald Trump's goals are that environmental performance and economic performance actually go hand in hand, because we're not Manchester, England and we're not Pittsburgh anymore, that we have come up with ways to use less coal, and very few cities in the developing world are relying on heavy manufacturing for their future. Maggie, I want to come back and piggyback on what Thomas was saying. That I think a key issue in building up the demand for the brilliant buildings that people like Thomas are designing is imagination. I have my students at USC sing the John Lennon and Yoko Ono song, 'Imagine'. And I wonder if we have sufficient imagination. And so in my classes, we use YouTube and we visit on YouTube, we visit neighborhoods, and we look at cities around the world. And I ask my students, what do they see what is attractive, what is ugly? And so Thomas, a question for you is, when we bring more people to see your buildings, is it an experience good? Should the design community be offering cheap bus passes to visit some of your constructions in Manhattan? An experience good? So boring economists say that heroin is an experienced good. Let's not talk about that. Let's not talk about the first Star Wars movie. If more young people and middle-aged investors were to see your construction, what you design, am I right that demand would increase for these structures?

Thomas Heatherwick 27:58

Well, I we've taken over —So the I think that joy sounds like a luxury. It isn't a luxury. It's something that actually is essential to all of us. And every one of us on the planet thinks we're special. All 8 billion of us think we're special, and it feels like we've been aggregating people together, as if they're *them*, that everybody, when you talk to your friend, you're talking about the weird thing that happened to you last week and the funny thing somebody said to you, it's like we're all hungry for idiosyncrasy and character. And for just some reason, we don't take that and manifest that into our built environment full of personality and character. Those are the things that we talk about. Those are the places you go to, because they're sort of unusual as fascinating. We designed the London buses, by the way, so we can do the buses that come to the project, but things like public transport, I also think we should think of designers the whole everywhere that you are. And I think we have a different mindset for buildings and a different mindset for transport. And I remember someone saying the best cities are the cities where rich people take public transport. And I love that, and that inspired us when we designed the new London busses, because you can drive around London in a Lamborghini if you happen to have one, and but the best view of London is from the

top of a red double-decker bus. You can't beat that. And so—and staircases this wide, but we could still say, how can we make it feel like you're in a castle, walking down the stairs, sweeping down so this kind of dignity, and I think that we need to make cities feel full of fascination and your safety and the dignity of public togetherness is this massive opportunity. But we have to stop thinking, oh, that's the infrastructure. Oh no, that's infrastructure now. Oh, an art museum. Make it artistic. Why is it always opera houses and art museums where people put that care. In the UK Victorian buildings. They built millions of them, and they're still the warehouses, the sewage works, the old prisons, they're still where you'd rather work in one of those buildings or live in one of those buildings. They're adaptable. They're flexible. Those were the IKEA sheds of 150 years ago. And so we've just lost our we've lost our ability to make engagingness, and it's a massive opportunity.

Maggie Switek 30:42

And you mentioned actually cities that just aggregate people. And with that, I actually want to turn to you Erin, because Southeast Asia and in the Pacific are home to some of the most densely populated cities. So there are certainly some demographic pressures that interact with the climatic threats faced by these cities. How do you see them responding to those double challenges?

Erin L. Murphy 31:09

It is a challenge. I mean it some of these cities feel incredibly crowded, incredibly dense, but South Asia is also another story. But I will leave that for a different panel, but I think you know, some of the importance of building these cities and addressing increased urbanization, because that's where the jobs are, that's where life is, that's where, you know, you can actually build a nest egg and maybe achieve your dreams, but it's to get what makes it a livable city. I think Singapore has done this incredibly well, and a lot of this is around public transportation. Whenever I used to travel to Southeast Asia, I spent a lot of time in Myanmar, which doesn't have a whole lot of infrastructure or public transportation, or I'd also go to another place that was a bit chaotic. Just go to Singapore to be like, oh, thank God, everything works here. Like I can just get on the MRT go where I want to go. I can understand where I'm going. The lights are on, things are functioning. I'm not going to get bit by a snake or fall through a sidewalk, which often happened in Yangong—I did not get bit by a snake; I'm actually fine. But a lot of it is also having available public space for people to go, to meet, having I forget what the term is, but it's like the third place where it's not work or home, but it's some place that is free and available, that you can go and meet, whether it's a public park. I think Southeast Asia has done an incredible job. I mean, it's super hot there, but it's a place that you want to be outside. And again, I think Singapore has done an incredible job in trying to do that. It's, again, a smaller city state only of about 5 million people that live there, but for other cities where you have tens of millions of people, it's trying to figure out where you can have these public spaces. Bangkok has an incredible project, and it's right in the middle of the city where it was taking dead space and hundreds of thousands of acres, and what they've turned it into was actually an organic urban farm. They've mimicked rice steps, and it's also a place for people to hang out and move, and so you feel like you're in this big open space, but you're right in the middle of Bangkok. It's also a reservoir. It's also a place that they've planted mangroves and other types of plants that absorb the flood waters that go through. So it's just completely multi-purpose. It's green and for also for the mental health. And you know, the Japanese have this concept of forest bathing, and I'm sure the Scandinavians do as well, where it's not even all the pixels, and, you know, nutrition, visual nutrition that you need, it's also the colors of nature. And the more that you have these green spaces, especially outside or even inside. Another wonderful feature

about Southeast Asia are these plant walls, where they'll go up, you know, multiple stories, and you know, the air quality, and you just feel like you're in, you know, a jungle in a mall. And, you know, I think those spaces that are both climate controlled, but also have these sort of environmental or sort of forest touches, or jungle touches are really important, but having those spaces, but you also have to learn to be good to your neighbors and cities, which is something true there.

Maggie Switek 34:25

And so let me get the investor's perspective. Mikkel, how do we make sure that the returns of investment that you use in your decision making actually incorporate some of these metrics that account for social, environmental and human needs.

Mikkel Bülow-Lehnsby 34:43

But I think in principle, it's very easy. It's like any other product. In the end, it's about how many people want it, you can see, and I really enjoy what you were talking about, Thomas, the sort of user interface more than the esthetics. Because I think I've had multiple discussions over the years with architects, and I'm, you know, not putting you in that camp at all, but where you know what they mostly care about is that they want to have something others can look at and say, Wow, you've built a beautiful thing. And this focus on like the outside, which I know, yes, I would rather have something that has some esthetics qualities, but I'd much rather have something that people want to be inside and that one of people want to walk around and that is user friendly. Essentially, in the end, I think creating a city district or creating even a building is no different than creating any other good product. You want to create a product that attracts basically customers, that people want to buy, that people want to use, that people want to be in. And that ultimately is the sign of whether you have achieved or not. And when you go into, for example, neighborhoods also in the in the Nordics, where we are active, on Northern Europe, where they have, you know, ended up doing this thing that we've now touched upon a few times, that they've basically let developers create an asset where the incentive, I mean, it's not because the developer is a bad person. It's just because the business model of this developer is to say, I got this piece of land, and I now want to maximize, basically, the profit of building something on this land. And generally speaking, it the easiest is to build an office building and get a 15-year lease with Price Waterhouse Coopers. And there's nothing wrong with them either. But if you do 60 of those next to each other, you are not creating a product that people want to be in, that people want to go to, and as a result, you are missing the opportunity of, you know, creating more value also for the investors. So, now, obviously, then we work with a lot of KPIs, because we've got experience as to, you know, what is likely to then drive more customer satisfaction and more interest in the area. But I'm just saying in the end, that is, you know, it's the people that vote with their people, with their with their feet, reality. And if I can just say one more thing, so one thing that I is my big dream is that, in my head, there is no reasons why every new building you create or to the district should not be a carbon sink that increases biodiversity. No. So, as you just talked about, you know, this is just a design and supply chain problem, so our supply chain has not been optimized for that. There is no reasons why we should not assimilate, you know, what? Nature and reality has been doing much more and ensure that buildings and cities are part of the solution and not part of the problem, as it's been historically. And historically. It's a big change needed, because the biggest challenge is that all the supply chains that you use to create cities and buildings have obviously been optimized in the old paradigm. And it's super easy for an investor to sit and say, oh, I want to do it now green and Brazilian all that, because I'm not cannibalizing my

own business, no. So I'm sitting in the easy side of this. We have to be respectful that there are tons of businesses out there that have spent many years optimizing their supply chains to deliver in the old model, and they need to be incentivized to change it. But if you think of it, there's absolutely no reasons why future buildings should not be massive solutions to both the climate challenge, the social challenges, and the biodiversity challenge. And that is, I really hope that that's where we will get to yes.

Maggie Switek 38:31

And let me shift gears for a moment, because you also want to talk about technology and the opportunities created by technology. So, and I would like to ask this question to each one of you, if we can take a lightning round, but from each of your perspectives, what are the main opportunities created by AI and also, more generally, technological advancement, and how do we make sure that those opportunities are also balanced with the actual social needs of a community? And Erin, let me put you on the spot and begin with you.

Erin L. Murphy 39:04

Oh, boy, that was a big question. I mean, there's a lot to be afraid of for the AI, I think, but I think that the Milken conference, there's been a lot of proponents of it. I mean, I think there are great opportunities in health, but I think what AI can do is aid city planners in terms of how to model, especially for Southeast Asia, for climate, what are we going to see? What's going to, you know, where are we going to see the ocean levels rise? You can start, you know, kind of generating ideas. Because some of the things that countries have been, you know, doing is like, okay, Jakarta is thinking, well, we'll just create a new city over here, New Santara. That's a lot of money, and now it's like a sunk caution, the idea that it's going to be a smart city. But also what AI can do is start trying to identify a good energy mix. What is useful for these countries to do, for these cities to do? How do we implement these things? To just kind of aid in the policy process of, sort of what technology is going to be best. It shouldn't decide it, but I think it can certainly aid. I mean, these cities, and I think Indonesia is already, or no, it was Vietnam that said they were going to have the first AI powered city. So, you know, Southeast Asia is taking this seriously. They're going to try to leapfrog, I think, in many ways, of using this technology to make them the destination. They have an incredibly young population. So it's also, I think, in terms of job creation and how can you use AI to build these cities?

Maggie Switek 40:33

Matt?

Matthew Khan 40:33

So I'm excited about something mundane, of resource pricing in cities. So when I'm in Singapore, I never get stuck in traffic, because there's dynamic pricing on the roads. You pay more in the morning, you pay more in the rush

hour commute. So Maggie, where I get excited about AI and big data in cities, is dynamic pricing. I hear a round of applause for dynamic pricing.

Maggie Switek 41:00

I was thinking, when would you drive it down to prices as the economist in the room.

Matthew Khan 41:04

And so in my fantasy world of dynamic pricing for electricity, insurance, water, what this would do is this would raise operating costs for inefficient buildings, nudging them to seek out better design and to ask questions that could create business for this side of the table. I also—and it would chip away at the tragedy of the commons issue in cities. Maggie, one more twist, and then I'll be quiet. In cities like Baltimore, we haven't talked about declining cities. Baltimore, Maryland, where I live two years, has lost hundreds of thousands of people—when cities are in decline, there's vacant land and there's questions for young people thinking of implementing their dreams. There's there can be very cheap property, but some of it is brownfields. Some of it needs remediation. We need city governments to have up to date land inventories of what are these vacant parcels. Who owns them? What is the first step to launching your effort to do, to unlock your dreams there of lowering transaction costs, to maximizing the gains to trade in cities? And that's my boring vision of how we revitalize cities.

Maggie Switek 42:16

No, but that's a great point. I mean, with all the data that we have nowadays, we need to be able to use it to build resilient cities, to optimize even mundane issues such as traffic in a city. And technology really does open up ways for progress. So with that, let me turn it over to you, Thomas, how do you see technology as an opportunity.

Thomas Heatherwick 42:39

Architecture often boasts that it's the combination of science and art, and we've ended up with something that's actually incredibly unscientific and not very artistic either. And so we're kind of in no man's land. And so what we've been interested in is to try and properly get together the scientists who are looking at how our brains respond to place, and instead of the dumb conversations about beauty, or dumb conversations that are assuming that if something is big, it's bad, and Hong Kong taught me that you can have very human districts with big buildings. So it's not that if you're proposing a bigger project, that oh, it's bad because it's big, it's about how you treat at the human scale, the big project. So particularly spending more money at the bottom, which is where you are on the landscape, on the actual detailing, because our heads move more easily this way than this way. So we always look down at our impressive architectural models, and everyone looks and does fly throughs. That's not how you experience the world. You're at this this level, but you've got me all excited about dynamic pricing now, because we've been looking at how you can get the science of unboringness, because we've had an epidemic of boringness, and so I'm interested in whether we could change the building permit costs to do the more boring

you're building, the more expensive your building permit is to build it. So I think dynamic pricing could be a useful tool. We're going to spend some time after this, I feel, but that could - I mean very seriously, we've been developing a boring-omitter. It's like because there are factors boring buildings are a combination of too flat, too plain, too shiny, too serious, too anonymous and too monotonous. Sometimes two or three of those can be fine, but all together, it's like overdosing on lots of things at the same time. And so actually you can develop technical tools that assess boringness. And so I can see a future where—or you call it nutrition, nutritional content for society who are hundreds of times more than the people who go inside, so that there is dimension to do with the outside, which, because it doesn't quite fit on the economic map, is the neglected bit by developers often.

Maggie Switek 45:08

And so Mikkel, let me turn it over to you. How do you see the use of technology, the opportunities created by the use of technology for livable cities?

Mikkel Bülow-Lehnsby 45:17

Just before I go there, I think one of the actually problems in particular Europe, is that because of sort of anti-corruption worries, then municipalities have been set up to be very stringent on selling land to the highest bidder, and that is fundamentally unwise, because you don't want to put most of the money into land. You want to put most of the money on top. So I think one of the things we need to start working on from the Federal side is is not just to sell, you know, to the highest bidder, but to sell to the bidder that actually is creating the best product from the municipalities point of view. So just as one point, because one of the reasons for the boringness and for that, you know, well anyway—but on the deep sensation, which is something that's very close to my heart. So you were already talking about before, like the construction industry is one of the only large industries in the world that has decreased productivity over the last 50 years. So it's twice or three times as expensive to build, the same as it was 50 years ago. There is no other industry of scale where that has happened. All our industries have become more efficient.

Matthew Khan 46:21

Universities—

Mikkel Bülow-Lehnsby 46:22

Okay, maybe universities, but, but the point is, this obviously points to a massive opportunity in terms of digitization, in terms of using basically technology to reduce costs and increase in efficiency. This is also one of the reasons why we have such a massive affordability issue. Obviously, one is driven by land, because it's scarce and it drives up pricing, but it's also because it's so damn expensive to build that it makes this hard. So one of the big things we need to figure out how to solve is how we can basically simplify this industry and create a value chain that is much, much more modularized, and that is fundamentally taking advantage of what other industries have

gone through. And you know, we have actually created a venture capital company. So we basically try to identify all these problems we see in the supply chain, and then we invest into companies that can help us try to both reduce, you know, carbon emissions and make this supply chain more efficient. And one of the companies as just to make very concrete was called Spacemaker. And what they had done, they used AI to—when we do, like—new city districts, or even, like, larger buildings. I mean, there are so many variables that you're actually trying to optimize for, in terms of topography, in terms of sunlight, in terms of, you know, and there's no human brains that can deal with the complexity of that. So with Spacemaker, what we could do is we could essentially increase the utilization of land to have the best possible apartments, if you will, with most sunlight, reducing wind tunnels. And that would, you know, they would basically go out, and that would simulate, you know, a million different scenarios, and they would come up with the 30 best and on average, we could sort of increase utilization of the land plots to get better space with roughly 2 percent. It doesn't seem like a lot, but obviously that really accumulates. So just as one very concrete example of how AI and how technology can help us basically ensure that we maximize value of land, which is very aligned with obviously, again, trying to address affordability. But I think the big holy grail in my head is this lack of industrialization. In some ways, industrialization sounds like a bad word in that sense, because that sounds like boring and bland and like standardized. But there is this lack of modularization and standardization in that building value chain where I think there's a massive opportunity, which is also, I think, the opportunity to really drive decarbonization, because once you get into standard materials, it becomes much easier to also use bionic materials and other materials that are absorbing carbon, rather than, you know, putting molecules together in a stupid way to basically extract—to put out a lot of capital.

Maggie Switek 49:02

Yeah and I want to turn to some of the questions from the audience also. And I actually really like this one, because it calls out an example. So let me read it out. In large US cities but let's just think about cities in general, not just US. Infrastructure and building projects often take many years. How can cities act nimbly and complete capital projects with a sense of urgency? And are there any good examples of great municipal projects completed on a reasonable timeline? Who wants to go

Matthew Khan 49:35

So I won't say California, high speed rail. So this is a terrific question of, why does it take so long and I in my urban classes, I contrast the US and China. So Maggie, there's a very interesting trade off here, of economists, libertarian economists debate the role of public sector unions. And construction costs and getting zoning permits. So we're going to see a lot more work on why the California High Speed Rail has taken so long and been so expensive. And so I—this is a terrific question. And the Biden administration, to its credit, made large investments here. And we're still sort of, we're still learning whether those investments will pan out, but I give myself a B-minus for this one. I don't know the answer to this question.

Erin L. Murphy 50:30

Yeah. I think we have a lot of examples of things that are not going well, cost overruns, things take a long time. I grew up in Massachusetts in the shadow of the Big Dig, which was this multi- decade long infrastructure project to

sink the highway, build more public spaces and whatnot. And I mean, for we have our Tufts connection, but for all the Tufts engineers, it was their worst nightmare that they end up in the black hole of the Big Dig, because that's where the jobs were. But, yeah, it's, it's also corruption—ends up being a big part of this. And we, we typically see this in Southeast Asia cities. It's not just unions and permitting and regulations, but it's also, you know, we're going to have our cousin work on this project, and we're going to do this, and, you know, we need at least 10 people, and only two people are working. So there's a lot of opportunities corruption. And I think the city of Boston, you know, rose in the ranks of transparency as soon as the stupid, Big Dig was over. I mean, it's, I shouldn't say stupid, because there are a lot of good parts of it, but there were also some terrible parts, like, you know, tunnels leaking, and that's terrifying. In some ways, yeah, there was, there was this libertarian, I think, idea, and this is where, you know, my, my more liberal, you know, good government side really fights with this libertarian—hey, maybe authoritarians aren't that bad, because I would love for us to have a high speed rail. Why would? Why don't we have one? And it's like every town—everything becomes a Christmas tree where everyone's putting on their ornament, and it just bogs projects down. So I think there are projects to look at on the smaller scale, the bigger ones do tend to get bogged down, but you do need a kind of a strong authoritarian hand. Again, Singapore is a great example of where some things have worked well. And, you know, this Bangkok project. There's also a small city in in Indonesia called, I think it's Makassar, and sorry if I'm forgetting the name, where was very community driven. Be like, we need this stuff. So we need good, you know, sexy stuff, like good sewage and good—you know, smart meters for water, we need to know when floods are coming. So you do need kind of community driven - we absolutely need this, and then just someone who is willing to take the bullets to be like, this is a plan. It has been approved. We have public commentary, and now we're going, no more input, yes.

Maggie Switek 52:59

And now let Thomas, let me turn back to you. You called us out in LA for having a boring city. But here's a question for you that just came out from the audience. If you had absolute power to reinvent Los Angeles. What are the big strokes you would take right now to imagine the city to make it the best city in the world for the future?

Erin L. Murphy 53:29

Public transportation.

Thomas Heatherwick 53:32

Public transportation? Well, I think there's so much that public infrastructure can do. Well, one thing I was going to quickly respond to what you were saying earlier, was that it—here's this tension between the grueling endurance of building anything at all, and how you mix that with a sort of the lightness to build humor and idiosyncrasy and quirks and specialness and because you think of the character traits that can hang in there for 12 years and take all the blows of all the permissions and things like that. So it's really - because originally, when I was a student, I was so indignant. I thought, why do people build this rubbish? And then I went and interviewed lots of people who give permits, people who build, people who design, teach. And I realized how hard it is and how hardened people became. And I remember just thinking, how do how do I build a studio and a career and not become hardened, you know, because there are a lot of people, they'll roll their eyes as soon as they start talking about things. And there's

a million excuses that are really genuine as to why you become cynical and hardened. But there used to be this toy called a Weebly. And I don't know if you had them here, but it's a kind of plastic toy with a smile on it. And you knock it over and it won't, and then it just comes, keeps coming back up smiling. And always think, like, that's you've got to be like a Weebly, because things are all—you're constantly getting knocked back by a million different things. And the challenge is that sort of marathon running, endurance, but of optimism and enthusiasm. Because actually, enthusiasm drives projects. Everybody actually wants to make something that matters. Everyone who seems to be the difficult people, actually, all of them want to do something, and often it's for the best reasons that projects take a long time because of the consultation. We were involved. We were leading a big part of the master plan of San Jose. And what was amazing working with Google is the conversations, the depth of community conversation was special. You could bypass that. But actually that enriched everything. But so coming back to LA, I do think, personally, I, you know, when people think of London and think of, oh, the architecture of London, or the design of London, they think of post boxes. They think of phone boxes. They think of buses. You know, I think that the architecture of a city, the feel, the mood of a city. The thing about, and say, a London bus, it's a two story building, small building, but it's on wheels, and there's 8000 of them, that you're more likely to see a bus than any building. So I really do think things like the bus, the buses, if you just buy a conventional off the shelf bus. There's the opportunity for it to be LA-ish, like LA leads the world in telling stories. This is the story telling capital of the world, and so the city should be full of stories. And we—I think the human scale is what—the luxury of space that America has had is also your curse, isn't that you spread and so, but actually, places we love are walkable. And so I think focusing on more walkable areas, and really thinking about that at this human scale that we're like half a million years ago with the same size. Getting rid of the car, park the car, whatever. But make somewhere small. Getting small —the space for serious—a big amount of smallness would be loved and cherished. It's universal. It's the places we love are always old towns. And LA doesn't have enough old town, thank you.

Maggie Switek 57:41

And so we have only three minutes left, but I do want to finish on an optimistic note. So with that, I just want to do a little bit of a right lightning round. And 30 seconds or less. Mikkel, what is the biggest piece of optimistic news that you can tell us about the future of cities. Or not news what makes you feel the most?

Mikkel Bülow-Lehnsby 58:10

I honestly still think that what I—can repeat what I said before. I think that creating city districts and buildings that are carbon-sinks, that increase biodiversity and that are livable is super doable. And this is actually one of the places where you can truly prove that doing good is good business, and that, I think fills me with optimism.

Maggie Switek 58:30

Perfect.

Thomas Heatherwick 58:32

Conversation. The reason that developers are caring about green factors is because society is talking about green factors, and that, you know you'll look an asshole if you don't—the boards of all your they're all going to ask you as well. They're going to say, is this, if we're going to move into that workspace, is it green? Because all our investors say we need to do something green, but that's because there's a public conversation. There's no public conversation about the human side of—are you making a good place for society? And if we all, if everyone here goes and just talks to somebody about it so that it becomes normal that you'd look an asshole if you didn't make — you can't say that. How can you you'd look like a less nice person if you're not making somewhere that the society thinks is engaging and would be good for your grandmother to walk past and your girlfriend who isn't your grandmother would want to come and see you at your work or whatever it is.

Matthew Khan 59:32

Maggie, there's 8 billion of us. We're going to live this century in cities. And good ideas are public goods, as Thomas makes his breakthroughs, people all over the world can learn about these and these ideas can be mimicked and built upon in Africa and in cities in Asia. And so, because there's so many of us, that's the fuel of my optimism.

Erin L. Murphy 59:54

So I think with COVID, everyone thought cities were over, but they are so resilient. There's so many good things about it. And, you know, getting out of Asia, I live in Washington, DC, which I don't think anyone wants to visit these days, but to give a pitch for DC, what I love about it is that it's walkable. We have it's like a series of neighborhoods within a city. And I think that people who don't live in a city have a view that is a chaotic place, but it's where ideas come from, where you have great restaurants, people, strangers, that you learn from, that you also tell stories about, because they did crazy things. But there's art, there's history, and you know, you get that in a city, and that you don't necessarily get in a town. So it is resilient. It's worth the effort to build great places, because that's where we're all going.

Maggie Switek 1:00:42

Well, thank you so much. This has been a really wonderful conversation, and so with that, let me thank you all, also the audience for being here and wrap up the panel.

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