



## Mpact Podcast Episode 87

### The Cognitive Experience of a Transit User, with Ren Yee, UNStudio

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[00:00:00] **Kammy Horne:** Welcome to the Mpact Podcast. This is Kammy Horne, CEO of Mpact, formerly known as Rail~Volution. More than a year ago, we launched our new name and tagline, Mpact: Mobility, Community, Possibility. We are a national organization working at the intersection of transit, related mobility options, and community development. The podcast is a chance to hear from a range of voices as we go deeper into how to leverage transit to make communities better for people.

[00:00:43] **Jeff Wood:** Hey there, I'm Jeff Wood, Principal of The Overhead Wire, and your host. This month on the Mpact podcast, we're joined by Ren Yee of UN Studio at the Mpact Transit + Community Conference in Philadelphia. We chat about the cognitive workload of pedestrians and creating safe opportunities for mind wandering and absorbing information.

[00:00:59] Stay with us.

[00:01:12] This episode of the Mpact podcast features a conversation with architect and urban designer Ren Yee from UN Studio in Amsterdam. We sat down with him at last fall's Mpact Transit + Community Conference in Philadelphia, where he was part of a session on using human behavior to inform transit decisions.

[00:01:26] On the podcast, he talks about using cognitive mapping tools to understand how people experience transit spaces, in order to make them better. We start with a little background about Ren Yee, then get into human centered design of transit spaces. Along the way, you'll hear about mind wandering, the horn effect, and using virtual reality to pre-design transit spaces.

[00:01:43] And heads up, if you'd like to be a speaker at this year's Mpact Transit + Community conference in Portland, Oregon, the call for speakers opens on February 19<sup>th</sup>. For more information on Mpact or the annual conference, visit [mpactmobility.org](http://mpactmobility.org). That's M p a c t mobility. org.

Ren Yee, welcome to the podcast.

[00:02:02] Thank you. Thanks for being here. Before we get started, can you tell us a little bit about yourself?

[00:02:06] **Ren Yee:** My name is Ren. I'm head of innovation strategy and forecast of UN Studio. Architecturally trained, living in Amsterdam. We're based in Amsterdam with offices all around the world, but myself, I'm from Kuala Lumpur. I have been living in Amsterdam for 20 years and now with through the organization, I get the opportunity to work across the globe. So I think this has both been really enriching professionally and personally. So there's a little bit about myself.

[00:02:34] **Jeff Wood:** So how did you get into architecture, design cities? Like, was it when you were a little kid in Kuala Lumpur? Or was it when you decided to go to school? Like, what was the push?

[00:02:43] **Ren Yee:** It's really stupid to say this, but my uncle, who is an architect. He drove a very fancy Mercedes. So I thought, wow, I want to be an architect because he drives a fancy Mercedes. When I was young, telling them, oh, I want to be an architect. Everyone says, oh, that's great. You know, that's a great profession. Little did I know what architecture is about. So I think from there I planted a seed, but over the time when I got older, I liked the creative process of things. I like to see things from different perspectives and there's so much to learn about architecture and city and even product design. And so one thing led to another, I went to Delft to study architecture and then I work with this really great firm that allows me to do great stuff, all around the world and now even transiting more and more away from architecture. So when people ask me, Ren, what do you do? I say I was an ex-architect

[00:03:43] **Jeff Wood:** because I'm like once an architect, always an architect.

[00:03:46] Is that, is that not a thing? I still

[00:03:47] **Ren Yee:** wear black as you can see. So that's stuck. But mainly because of the spectrum of what architecture is. working on. So for those who are an architect will know there's so many avenue that you can go with architecture. There's so many industry that needs this kind of problem solving, creative thinking, complex issues that we need to deal with.

[00:04:08] And there are a lot of industry that needs this way of thinking. So I think many of your listener would agree that architects are a good addition to many city planning or many organization that will need these kinds of skill sets.

[00:04:22] **Jeff Wood:** Yeah. It's always good to have a design. I, what types of urban experiences speak to you?

[00:04:26] You mentioned, you know, Delft and Amsterdam and my parents lived in Rotterdam for a year. And so I got to go visit when I went to Delft and Amsterdam and some other places around Germany and stuff. And it was really exciting to kind of see the differences between the small places. Like Delft is very different than Rotterdam is very different than Amsterdam.

[00:04:42] So it's like you think about the Netherlands, but it's not like a monolithic place. And so like what experiences speak to you specifically?

[00:04:49] **Ren Yee:** It's funny that you asked this question because I was. I was thinking, why did I continue to live in Amsterdam and do I still love Amsterdam? And I think it's many, many small things.

[00:05:04] There's so many charming nooks and corners in Amsterdam. Buildings are beautiful, the canal, obviously. The culture is great. But I think one thing that stuck to me is the, talking about it in this MPEG conference, is the mobility. I spend 10 minutes, 12 minutes max, door to door on a bike from my home to work.

[00:05:26] I don't spend more than that time to commute and for me that is a no brainer to just hop on a bike and bike to work. Sometimes it rains but most of the time it's a great moment for me to just refresh my mind or cleanse my, just really to reset before I go home. So biking is really an amazing aspect and that part for me changes my quality of life in the city.

[00:05:48] And that's something that I really, really appreciate. This idea of, this notion of 15 minute city is something that I didn't realize it, but I'm one of

the lucky few that actually could live this idea of 15 minute city. So, that component is something that's pretty intriguing when I go to cities and observe cities, apart from other cities that I go for food, that aside, but this mobility, this, this, this luxury of time that I still have, and the control that I have.

[00:06:15] Jumping on a bike. This is something that I really appreciate in cities.

[00:06:19] **Jeff Wood:** So you never got your Mercedes? No, I didn't get my Mercedes. Bike's better. Bike's better.

[00:06:25] **Ren Yee:** But now now that you're speaking of bikes, in Amsterdam recently, they had news about this fat bike. Do you know this fat bike? What's a fat bike?

[00:06:31] It was this kind of bike. It's an electric bike that is kind of, you don't even have to pedal assist. It just goes really fast. And a lot of teenagers. Get on this fat bike and they go really fast. So it's a big discussion now in the city that they not only harm other people, but they actually harm themselves more.

[00:06:48] So there's a lot of accidents related to that. So this idea of this fat bike and fast bike is something that it's something the city's needs to work on and try to figure out how this. Public spaces is for everyone and not just for a group of people with this fast fat bike.

[00:07:03] **Jeff Wood:** I feel like that's how we got to this discussion overall in terms of transportation cities is like people wanted to try to go faster and so that actually limits what public spaces can be and so Even if it's two wheels and you're going too fast, you're also like getting out of the the time and space design that we've, you know, grown up with, or we, we evolved from, you know, cities 5, 000 years ago, people were walking everywhere.

[00:07:24] And so now in the 20th century, in the 19th century, we've evolved the transportation system to kind of issue some of those original principles. It feels like we learned.

[00:07:33] **Ren Yee:** Is this something that for example, yourself. What are your thoughts on scooters? E scooters On scooters, there's two wheels. I

[00:07:40] **Jeff Wood:** don't, UI like, it's fun, but I don't use it.

[00:07:43] I ride my bike when I can. I walk most places to the grocery store, everything. I live in 15 minutes. I live in San Francisco and I also live in a place that's basically a 15 minute city. It's a quarter mile to the grocery store. You can get anything you want on. Mm-hmm . Like commercial street that I'm on.

[00:07:56] If I want to go outside of that to the mission or to somebody somewhere else in, in the neighborhood, I just hop on my bike or I take a bus. And then every once in a while, my wife and I, and my two year old will rent a car to go somewhere afar. But for the most part, we get everything done. You can go to the hospital, whatever it is, you can get everything done in close proximity, but I grew up in Texas.

[00:08:14] So I was born and raised in Houston, Texas. And you know, we had a really great system of trails and things that was like 85 miles of trails. You didn't have to cross a major street. It felt very very Dutch. But also, I mean, it was very auto centric in the sense that like, if you wanted to get out of the community, you had to drive or if you wanted to go to the movies or if you want to go anywhere else besides the grocery store, you had to drive.

[00:08:34] So it was a suburban in a way, but it was also kind of a gateway to like this larger world of sustainable. Transportation

[00:08:41] **Ren Yee:** nature. This nature trail is amazing. Yeah. Yeah. We also working project in Austin as well. And this is something that Austin, I really, really treasure

[00:08:49] **Jeff Wood:** and the green belt and the streams.

[00:08:52] Yeah. And I think

[00:08:53] **Ren Yee:** this is something that we would love to see this become the basic infrastructure that we provide for cities as well. What Singapore is doing now, they connect all these green belts as well. And now you have these across the city country, Singapore is a country city state, and they have all of this amazing.

[00:09:10] Bypass connections and, and, and green path, the green corridor to allow for not only plants and other type of animals and plants, but also for us to just, you know, get away from the car, bike for leisure, but also bike to work. So I think this kind of green infrastructure is something that, coming back to

your question, is something that I am very excited to see Citi evolve to embrace.

[00:09:30] Citi should actually bring in much more green infrastructure and not see this only as green space for nature, but it's actually should be seen as infrastructure.

[00:09:39] **Jeff Wood:** Yeah. It brings me to something that you mentioned in your session earlier that stuck my head in, it was really full. It was very popular session, the idea of mind wandering and just being able to like shut off a little bit maybe, and go to the place where you're at.

[00:09:52] And I feel like the green spaces that you can create. That would work for that, especially in a, from a transportation perspective, that maybe it would allow you to do that kind of mind shut off mind wandering that you were talking about.

[00:10:02] **Ren Yee:** This is, this is we're working with cognitive psychologists telling us that it is so important that we allow.

[00:10:09] people to feel assured and safe for them to go autopilot when they're navigating through public transit environment so that they're able to mind wander safely. And this is something that we thought that this is a very great opportunity for people, especially people who need to commute every day. day, like a rush hour, peak hour in the morning and in the evening, this should be seen as opportunity for them to disconnect, a kind of a mental discharge, kind of recharge, so to speak.

[00:10:39] And I think that if we're able to see more of such opportunity for people to not only disconnect from their daily task and their navigation task, but allow them to connect with nature and connect with people, this is great. So mind wonder, obviously you can just look out the window and just, you know, think of something and disconnect, but also will be nice when you have opportunity to connect people to other group of people next to them, like a kid, for example, or the group of elderly.

[00:11:11] So give this opportunity of mind wonder, but also opportunity to connect with nature, connect with people. This should be something that people could access during transit, so to speak.

[00:11:21] **Jeff Wood:** When do you come up with your best ideas?

[00:11:24] **Ren Yee:** In the shower. This is a typical answer for everybody. I thought

[00:11:28] **Jeff Wood:** maybe the unwinding of your trip home and to the office on the bike, maybe you had a couple of like, epiphanies.

[00:11:33] No,

[00:11:34] **Ren Yee:** it's funny that you say that. I've been talking to ChatGPT on the bike. I don't know if you do that. Now that they have this function that you can talk to it, my 10, 12 minutes of biking to work and back of work is a moment where I ask questions about subjects that I'm interested in. So I talk to, yeah, chat GPT, but also do a little bit of thinking.

[00:11:56] And I think more and more people. Is doing is people are now using this commute time with assistant of technology to figure out a new discretionary activity What can they do and how do they fill up this space? So this is how I feel it up But I don't know about other people.

[00:12:12] **Jeff Wood:** Yeah. No, that's interesting I mean I used to fill up my time when I was commuting to Oakland from San Francisco with podcasts, right?

[00:12:17] Listen sports podcast or Star Wars podcast or whatever it might be because it it's nice to kind of have that Empty space. Like you don't have to worry about the cognitive workload that we'll talk about in a second, but that, you know, fearing for your life, if you're on a bike and you have to, you know, stressful street or whatever it else, but if you're sitting on a bus or a train and somebody else is driving, you have this ability to kind of shut off or turn on, depending on whether you want to or not.

[00:12:41] **Speaker 4:** Yeah. I

[00:12:42] **Ren Yee:** think this is something that people do would like to do, but sometimes they do out of, out of boredom. Boredom is not a bad thing. I think sometimes it's really nice. We also think that the idea of while people are mind wandering, we were interested in seeing if those opportunity is

something that not only you engage with yourself, but if you can engage with the community.

[00:13:05] So one of the interesting thing that we have been observing in the work that we do in Austin was how children changes the vibe and the connection of the group of people waiting in a transit environment or taking transit. We notice that whenever there's kid coming in, like for example, especially toddlers or maybe kids below five and six where they don't respect their physical private sphere and they just go over and talk to people.

[00:13:32] They tend to connect with people and they bring in a little bit of sense of community, a sense of safety. So this, this idea of creating opportunity to connect with people, to allow for people, you can choose if you want to talk to the kids, obviously some people don't like kids, but, but sometimes these opportunities is also a nice moment to connect the community together.

[00:13:54] **Jeff Wood:** What other things do you see in those spaces when you're looking at people's experiences in a place where you're working like Austin? I mean, you all basically are trying to find out how people experience space, right?

[00:14:05] **Ren Yee:** Yes. Yes. I'm very happy that you attended the little talk that we had. We were sharing with people how, as a designer, we approach Public transit environment design.

[00:14:16] So transit environment includes not only the station area, but the area around the city that the station is connecting the fragment of the city is opportunity to create a space and therefore these are the things that transit environment are things that we're looking at as a designer, we try to understand if you talk about user centric design, human centered design, we want to make sure that we try to understand as much as possible, different set of public transit user.

[00:14:44] How they experience the spaces, how they would love to experience the spaces and what they would benefit from public transit experience. So there are many layers to that. And as you heard from the lecture, from the panel, we shared the way of looking at the experience from a cognitive lens. So we were bringing in eye tracking devices, for example, trying to measure the full journey of the trip from home, planning, going to the station, the last mile and transit and so on.



[00:15:14] And this eye tracking allows us to not only see from the first person's perspective, but also quantify what they're looking at. So, for example, we look at how often do they look at their phone. When they look at their phone what information were they seeking? Is it a leisure or is it public transit related information?

[00:15:32] If it's a leisure, is it, does it require high cognitive load? Do they need to use a lot of mental processes? looking at the phone. And it matters because when someone is looking at the phone with high cognition, we want to be sure that they are doing it in a safe environment for their own safety, but also for the other people's safety.

[00:15:50] So coming back to this idea of understanding the user from the cognitive lens, and cognitive lens here means also the way they perceive information, the way they perceive their stage of their travel, down to the way they perceive travel related information, or sense of direction, navigation, and wayfinding.

[00:16:06] Down to what they remember, and then what actions do they take? So these kind of methodology of understanding user is something that we're very excited with. And there's so much more to share on that, but to your question, one of the interesting thing that we've noticed was Apart from the navigation related type of journey, we were also interested in seeing how do people make mistakes when they go to stations.

[00:16:34] We were observing that there are so many decisions that were made based on sight visibility alone. So when they see something, they just make The heuristic decision making, so things that they know, so that they see, okay, this looks like a bus station. It has this color and it has this number, and I assume this is the correct bus station, whereby it might not be the right bus station, right?

[00:16:55] There are sometimes design two bus station that looks alike same name, but they're a different line, for example. So this kind of heuristic decision making based on sight is something that we do all the time. And there's another one that, based on salient bias, for example one instance was that one of the participants saw a huge station, and it looks like a station, and therefore, that was the station that she went towards.

[00:17:18] But it ended up taking a lot of her time, because the station that was supposed to be where the bus stops, it's not that station, but a smaller one. Something that is not so visible. So these type of findings, mistakes that people constantly do so easily, they might be small, But it end up making the experience not so pleasant and sometimes missing a bus because of a mistaken station based on these quick decisions that you do.

[00:17:46] They in fact causes a lot of frustration and frustration, as we also know, and from a psychological term, they might create a horn effect. So if you start a journey with a negative experience, you might end up looking at experiencing the rest of your journey with that lens. You will carry on this negative experience.

[00:18:05] So when someone asks you how was your journey, it was only the beginning that you mistook the bus or you missed the bus, but the rest of it was quite pleasant. But you probably might remember the negative one and

[00:18:15] **Jeff Wood:** complain about it

[00:18:15] **Ren Yee:** and complain about it. And therefore said, Oh, the bus is never great. The public transit is not reliable and so on.

[00:18:20] So this, this idea of this visibility making decisions and what it entails, what kind of negative experience that it gets. These are the things that we're looking at and constantly fascinated as a designer.

[00:18:32] **Jeff Wood:** The interesting thing, too, is like how you get this data from folks, right? So like you have biometric indicators.

[00:18:37] You say that you measure heart rate, skin conductance, eye movement. You also take some qualitative data. Does that influence? Like I saw some of the images that you had up where you have somebody following the person, but also you have the person with their glasses. They know that they're being tracked.

[00:18:51] Does that change like their behavior because they know that somebody is watching them?

[00:18:55] **Ren Yee:** This is a very good question. Since we partner with our subject matter expertise, the Cognitive Psychologists from ETH Zurich, from

AIT, they advise us there are methodology that we need to do to create a environment that is very realistic.

[00:19:13] So we have to do exercise to get them into the mindset of a user and to slowly ignore us. So these are safety precautions that we have to make to ensure that the data that we collect resembles as much as possible the real experience. So we would, for example, stay really far. The eye tracking that they wear, in fact, look like glasses is very light.

[00:19:32] So you don't really, you're not wearing a bulky device on the head. So that's easy to get used to. And give the tasks to the people so that in the end they will focus on the tasks and rather than thinking that my data is being collected, is this how a transit experience should be? Am I a representative of a transit user?

[00:19:50] We give them tasks to make sure that they stop thinking about that. So one of the interesting tasks that we did was The state of rush, because you know, you and I know that sometimes we're late and we have to run for the public transportation and we are rushed and then it creates all of this decision making process that we, a lot of heuristic kicks in, a lot of frustration kicks in.

[00:20:11] So we had to emulate the situation by giving the participant an impossible task. So she would have to, for example, get a coffee, knowing that getting a coffee in a long line will create a condition. So we went quite at length to make sure that these are baked into the experiment in order for us to really simulate the real experience.

[00:20:34] And I think all of it worked. So I think that it's something that we're very happy to do so, and we're very sensitive about this type of data sets. This is something that's super important for researchers, especially.

[00:20:45] **Jeff Wood:** And also when you're collecting the data and you're looking at the charts and you're looking at the information, you might know or you might feel like you know the answer based on that, but maybe that might not be the case.

[00:20:56] **Ren Yee:** Yes the confirmation bias indeed. So I think what we did was the process of looking at the data. First of all, we needed to clean the data. We needed to make sure that how can we present the data in a way that is useful for us as a designer and not as a researcher. So that's a big difference

between data that you collect to do research and data that you collect to understand a user for a designer.

[00:21:20] And so for us was trying to figure out the data sets that is important and then try to clean the data and put the data set together in a dashboard. So we had to make sure that these data sets are put in such a way that we can look at. And then from there, look back and forth, and then have intense conversation with different set of experts, subject matter expert, including not only the consultant, like us, the designer, not only the cognitive psychologist or the behavioral scientist, not only those.

[00:21:50] But also community engagement, people who represent the community on the client side and the client and a local. They became a strong representative of the user of different diverse user set. So with them, we constantly have a conversation about this is what we're thinking of. Is this observation right?

[00:22:09] To create conversation because our tasks in this particular work is not to verify certain behavior. It's to understand how these group of people experience it and understand and pinpoint the correlation. Like, what causes that experience? Can we change that experience? So that's more our task. And therefore, to ensure that our observations are not biased, we would constantly need to bring in different voices.

[00:22:34] In the process that we do, we look at the data ourselves. Put up the data and present it to the client and have conversation and then have different group of people talking about what we find. And I think that's the only way for us to make sure that we don't have the confirmation bias. But it's very difficult, as you know, we come in thinking that we know everything, but also with this kind of smaller subset of data, it won't tell you too much.

[00:23:02] It tells you things that you need to know. It tells you things that it matters as a designer, and we have to make sure that it is avoided. And now we're taking on to the next level, we are stepping into virtual reality to create a bit of more scalable methodology whereby different group of people we could invite not only in Austin, but also maybe in Amsterdam to go into the realm to the virtual reality and then give them the same task and then observe their behavior and figure out.

[00:23:30] And this is more interesting because. You could test something quickly, and that's what we're doing. We're going to test a few intervention. We have hypothesis But we will try to gather more Response and more data for us to figure out if this hypothesis is true because the conversation will be do we invest to do that?

[00:23:49] Intervention or not.

[00:23:51] **Jeff Wood:** So you make the design change in the virtual world and then you see how people react to it Based on your understanding of yes.

[00:23:58] **Ren Yee:** Yes, but the interesting thing about this stage is that there is no design yet There's no design of a station. There's no design of the canopy, but there are some decision made on space planning For example allocation of the platform area the allocation on where the location of the the ticketing machine And so so these are decisions design decisions engineering decision operation decisions that is made So those would be there to be the base, the constant, and then we need to figure out what is the variant.

[00:24:26] So those are the things that should be revolving around big topics like, for example, intuitive wayfinding that would not put themselves in danger. For example, so the idea of safety is quite interesting, the idea of crowd, a lot of crowd coming in at peak, how do people work and in some decision on crossing, for example.

[00:24:47] So these are all the things that we could test. And we believe in this because. It is relatively low investment to try and check and validate design.

[00:24:58] **Jeff Wood:** You're working right now on transit, the areas around in transit stations and stuff like that. But are you taking cues from like other spaces, other fields, like the urban design field, the environmental field, anything else where you're.

[00:25:10] Taking all these things and bring them together. So you can look at this one transit space and say, this is what we need to do here.

[00:25:17] **Ren Yee:** One of the professor that is on our discussion, the subject matter expert is an environmental psychologist. They are looking at cities, how behavior work in public spaces, for example.

[00:25:29] And these are knowledge that is related to us because it might not be public transit environment. But it is really about movement and behavior and perception. And so these are information that we're very curious to learn and then bring this knowledge in for us to test. The other domain that we're looking at that we bring the experience from is for airport design.

[00:25:49] So for one of the projects that we did in LAX was to look at the journey of people. through this very efficient focus machine is basically a machine that you have to cross every stages and then perform a task for you to do the next task. It's almost like a, like a game level, level one, level two, level three, with all this related stress that comes with it.

[00:26:11] So these are another environment that we bring in, understand the behavior of such spaces and interaction with. The system system that they have to do a security check in, for example, immigration check in and to learn from that as well. And to bring it in, we also look at the environment of shopping centers.

[00:26:26] That's also very interesting to look at it from a commercial perspective, whereby maybe the operator interested to know where are the real estate of gaze, like where would people look at the most and therefore quantify the value of the space. And that will allow for more strategic. I mean, depends on how you argue as a designer, it's not only a strategic place of advertisement, but strategic place of a moment that we can create something that will maybe trigger you to mind wonder or maybe create a very interesting experience or memory about, wow, this is a good moment.

[00:27:02] So depends on how you discuss who wins the battle. These kind of real estate gaze has a lot of implication and impact on the user. So also from this domain of shopping malls and shopping streets that we're bringing in.

[00:27:14] **Jeff Wood:** It's interesting. I was talking with folks recently about kind of the design of spaces and especially the design of like entertainment spaces.

[00:27:20] Right? So you think about like a Disneyland or places that are kind of manufactured from that perspective where they're trying to create experience for you. And so that's interesting from that perspective, because you think about like, where does Walt wants you to look right? Where does he want you to see?

[00:27:34] What is the perception that he wants you to feel like when you go walk in the park? Right? They obviously they want you to feel happy. They want you to go spend money. They want you to have an experience that you want to come back. And so that's a kind of a manufactured experience, but in the real world and where we have these trans agent systems and stuff like that, where you have to navigate them, trying to recreate that for a place that's necessary, not necessarily like a vacation.

[00:27:55] **Ren Yee:** Yeah. Yeah. I think this is spot on because in those. Disneyland or gambling casinos. These are a domain where they applied a lot of behavioral science to create the effect, this manufactured effect that you're talking about. And I think they're so advanced. Actually, one of the project we work with is a project in Korea where it is quite similar to that.

[00:28:20] So the, the knowledge. They have there is amazing. This kind of skewed perspective to make you want to walk further. This idea of this space is bigger than it is. There is much more to explore. It gives you the feeling of FOMO that every corner is something else to bring your gaze to certain perspective for you to start to buy into, I don't know, some food or something.

[00:28:42] So these are all strategy that has been used over there. And we as a designer should. I think this is super important. We should understand the power of it. And then obviously it needs to fulfill some objective, I guess, if depending on the intention of the project. But if we're able to understand this tool, imagine this type of cities that we can design for everyday people.

[00:29:05] And the intention could be, for example, to make people walk more, to make people engage with people more, to make people slow down, I don't know. There are many great intention that we can build. And design and create in the community that we live in.

[00:29:19] **Jeff Wood:** It feels dangerous to a certain extent because you think about like what social media has done to us and like how they can kind of get you to keep clicking on things.

[00:29:26] And I want to open my phone. So I'm scrolling. That's the problem that you said even happens if you're in the transit environment. Like, why am I using my phone? Is it because I'm scrolling Twitter or tick tock or whatever it is? And that cognitive. Workload that's happening there is influencing the other cognitive workload that we should be paying attention to.

[00:29:43] And so it's dangerous almost from that perspective, all these, the casinos and everybody who are trying to maybe change your attention span versus something that you are supposed to be paying attention to, right. That might be dangerous.

[00:29:53] **Ren Yee:** Yes. Yes. Therefore I keep using the word designer because I think we as a profession have.

[00:30:00] It's kind of a code and conduct where we have some intention and objective we want to bring to the world that we're designing for. So I think the idea of understanding the power of certain technique and strategy should be guided by open ethical discussion about the field of design and what we do in a design.

[00:30:21] So it's a very interesting conversation. I think that this is something that not many designers step into, but. We should start to ask ourselves as a designer, what are our ethics? What do we want? What kind of space do we want our family to be in? You say you have a yeah, a two year old. Yeah. So I think, I mean, I don't have a kid, but I can imagine like, these are the questions that we have to ask.

[00:30:45] Like, if we're going to design something, what do we want to design for our family?

[00:30:50] **Jeff Wood:** As, as somebody who's, you know, I'm trained as an urban planner. I think about these design issues a lot and safety specifically in street safety. I mean, we talk about it on the show all the time, but as soon as she started walking and we were walking down the street and it's a very safe street.

[00:31:03] It's a slow, you know, it's not very fast. 24th street is not very fast. It's designed in a proper way where the cars are on the side and the streets narrow, so nobody can really drive super fast, but you always have this fear of like a car jumping a curb or something along those lines. And, you know, we have a rule.

[00:31:17] You have to hold my hand when you cross the street. And so I never thought about those things before, right. I never thought of it from the perspective of somebody who's one foot tall or two feet tall. Right. And so it's a different experience when you have to start like worrying about this other



person who might just change their mind and dart out into traffic at any time even though you've told them the rules, they're not quite following them, you know, and so thinking about design from that perspective.

[00:31:39] I mean, we had one of the things that hit home for me was, you know, recently, unfortunately, we had a whole family that was killed by a driver in San Francisco because. Something had happened where the driver lost control of their vehicle and they crashed into a bus stop. And, you know, when I think about it, I'm like, oh, that could have been me and that could have been us going to the zoo, which is what the family was going to do.

[00:31:59] And so you think about all these design decisions that you're making and who has influence over them, right? Like the merchants in the area, there was a plan that MTA designed to kind of push car traffic in a certain way and make it more pedestrian friendly. And then the merchants were like, well, no, we need our parking.

[00:32:12] We need our this and that. And so. There's like the, the battle between like safety and good design and other aspects of things like people's livelihoods through their shops and things like that. So that's the thing too, is like, what are the trade offs? And like, we can design the best place for whatever our goals are, but are our goals all the same?

[00:32:31] And that's like something that's interesting to think about as well.

[00:32:34] **Ren Yee:** You touched on two interesting topics. One is designing cities for children. If it's safe for children, it is safe for everyone. I do believe in that, to make sure that we strategically design those safe spaces where it should be, and slowly transition the city.

[00:32:54] The city's changing with the type of mobility that is being invented, so we need to strategically place those kind of child friendly, safe environments that we should want more, because I think everyone likes it. We are all pedestrian at the end of the day. We might drive a car, but we're all pedestrian at the end of the day.

[00:33:11] So

[00:33:12] **Jeff Wood:** I think we also might all be children. Exactly, exactly, exactly.

[00:33:16] **Ren Yee:** So, so the idea of designing for children in a specific location for safety is something that I think that we should design more for. I think this is something that we should do. And then the other thing is on the safety, the safety discussion in public transit is obviously a very big one.

[00:33:31] And it is so complex, as you say. You need to navigate with planners, you need to navigate with traffic engineers. Do we divert a car lane, a street lane? And merchants will complain. And I think this is where the process kicks in. The idea of creating a very clear, objective for everyone requires a lot of conversation to figure out who has what problem to put on the table.

[00:33:57] And then if you start to create this conversation and moderate this conversation, there will be compromise. But I think if you don't engage in those in discussion, if you don't have such process baked in and don't have the right framework to step in those conversation, at the end of the day, we're not, we're not going to solve it.

[00:34:14] We'll always be blaming and finger pointing. So, and I do think that. If we set the tone right, we set the process right, we set the right frame of mind, I have confidence that we will get the right direction and movement of what the specific community would need more. Because I don't think that there will be one solution that fits all.

[00:34:36] A different community might really want a different solution for a period of time. So I think this is going to be important. The process matters. And I think it's difficult. People don't want to go through the process. It's very time consuming. It's very energy consuming. And it could be very political quickly.

[00:34:52] **Jeff Wood:** Confrontational.

[00:34:53] **Ren Yee:** Yeah. Yeah, I think that's where maybe designers needs to come in and be, we could be facilitator as well. I mean, we were not the best facilitator, but we could use the design process to facilitate conversation. We could use facts and figures and data. We can use methodology and getting the right facts.

[00:35:11] Like for example, if a merchant claims that no parking nearby will reduce my footfall, my sale, that's actually a lot of data is proven that wrong. A lot of data shows that you would have higher footfall without the car and

higher footfall equals a higher chance of people walking into your shop. So therefore designers could also bring in the right expertise and the right information and data and share that.

[00:35:32] So I think in that case we could play a role in the process too.

[00:35:35] **Jeff Wood:** It's funny too. I mean, like that happens a lot in San Francisco where there's a lot of merchants who are presented with the data that shows that they would have more, you know, more sales and more customers, but their mindset is already set on a car centric feeling.

[00:35:48] And so. I wish, you know, maybe they should go visit you and Amsterdam for a little while, or, you know, go to Delft or wherever, you know, it might be, but just kind of get themselves out of the, cause if you're in a place where, you know, you have certain preconceived notions and biases that exist, but if you can get yourself out of that a little bit, and I've found that with myself, when I go to a number of different places, whether it's Europe or Asia or wherever else is that, Oh, well, maybe this wouldn't have worked in San Francisco or maybe it does work in San Francisco and I saw it here and so I can bring that back with me.

[00:36:17] **Ren Yee:** Yes. I think. Trial and error, that could be interesting because in, I think there are some cities that tries to create a small little trial version of something. For example, in, in Amsterdam, we do that quite a lot. There are some big decisions, for ex they wanted to close off a road. And instead of just trying to argue and put facts and figure, they say, why don't we try that?

[00:36:39] So the city rolled out some program and said, we're going to announce this, we're going to try to create this street whereby we only allow for specific traffic at a specific time, and then we want to see how it works, because they want to study also how people respond to it, but also how the infrastructure and the system of the city recalibrate.

[00:36:59] Once you create a intervention, so the car might start to drive in a different route, for example, or the people might realize that, ah, because of this inconvenience, and the strategy was to try by giving another substitute. That could be a moment that people realize the substitute is not so bad. So this idea of slowly testing like a test ground done together with the community would be one of the way that we could see how we can transform.

[00:37:28] **Jeff Wood:** I have a question about confusion, anxiety. Some of the things that you find out when you're looking at through the data and what causes that, like, what are some of the things like we talked with Megan Ryerson at Penn about cycling and they looked at the cognitive workload of cyclists and how much they were being impacted by what was surrounding them.

[00:37:44] And one of the biggest things was an intersection, right? People's eyes start darting, they start sweating, they start getting nervous because. Well, nobody wants to get hit by a car, right? Nobody wants to have a collision. And so what are some of the things that you found that are like some of those kind of pain points for people that cause the stress levels to increase?

[00:38:02] **Ren Yee:** One of our participants is a wheelchair user. And that was quite a lot of learning that we get from the data sets. Not only from the lower vantage point, they see the world in much lower perspective, but this subject, this participant's experience was quite sad to see because every little thing that we take for granted, for example, crossing the street is a moment where there's a high anxiety, high stress moment.

[00:38:30] We observed that she has a bit of a trust issue. She wasn't sure if the driver saw her. Therefore, she's really reluctant to just step in on the zebra crossing, a crosswalk just to cross whereby you and me would just step over and just walk because we know this is our right and we acknowledge it through the side.

[00:38:49] But for the person on the wheelchair, that is the situation. And then interacting with the system, that was also quite sad because we are more agile. So when we are in a train, getting off a station, we really move towards the door. When the door opens, you know, you just jump out of it and things, people will just go around you.

[00:39:08] But for a wheelchair user, they need much more preparation time. Where they stop in the train matters. Which direction are they facing matters. How convenient is it from the park, place where they are allocated to the exit matters. And the system, transit system, are pretty fast. They're not so forgiving.

[00:39:25] So, we've also observed Stress, when, when the train is pulling in the station, we observe stress level increase because obviously she has been

there before and it is also what we have captured. She took more time than required. In the end, she got out in time, but she caused a few people in the train not getting out in time because when she got out, the door closed and the system didn't respond and there are people who were supposed to get out of the station, were stuck in the train.

[00:39:52] So, and I think this is also the issues where they feel more stress is because not only if they can make it, they sometimes feel that they are causing a lot of inconvenience for other people.

[00:40:03] **Jeff Wood:** Yeah. That seems like it would be pretty, pretty stressful. Also just like certain like intersection designs, maybe it's the design of the pavement, even like how it's undulating, you know, things that stress people out.

[00:40:14] Are there anything like design specific that are ticking off the sensors as it were?

[00:40:19] **Ren Yee:** The cross intersection design is a very big topic. Of course. I want to share with you an example in Amsterdam. In Amsterdam they're trying this whole idea of shared space, this Warnhoft, the idea that this space is shared between Pedestrian, cyclist, maybe even car, whereby the speed should be slowed down and then everyone should have a mutual respect with each other.

[00:40:44] So there's one really cool intersection that they tried. It's in the north of the train station in Amsterdam, where there's a flow of people coming up from the train station towards the north side of the station where they get on the ferry. And that's a really interesting crossing because they have to take a ferry and go across.

[00:41:02] So there's a huge traffic of people walking there. And that intersection is crossing perpendicular to a bicycle scooter intersection. It's perpendicular crossing. And that intersection is so interesting because it really forced people to navigate. It's what you see in Vietnam. The whole navigation of space, you, you witness it.

[00:41:24] And everyone is locking eye to eye and everyone's anticipating the speed. And that might not be something that I think culture adapts to quickly. We think people needed time.

[00:41:35] **Jeff Wood:** Can you explain that a little bit for folks that might not understand like the Vietnam experience, like where traffic's just going and you just start walking, you have to walk at a certain pace.

[00:41:43] Yes. In order for the people around to understand that you're not going to be in that place. You're there now, but you're not going to be there in a second. And so you drive your, your scooter or your trike or whatever. Yes.

[00:41:52] **Ren Yee:** Yes. It's in a way, imagine a flow of water. So if you have a flow of water and you are throwing a stone across the water, the water in this case is the motorcycles.

[00:42:02] They are the one that will go around a pedestrian. So it's quite insane for those who have seen that. It's a quite insane phenomena that you just have to trust and you walk across the street and then everyone will go around you.

[00:42:14] **Jeff Wood:** Yeah, the trust is there. You have to have the trust. They're not just going to roll you over.

[00:42:18] **Ren Yee:** Yeah, it's obviously dangerous. It's not an intersection that we want to design for. But there is something interesting about navigating and negotiating space in some street condition.

[00:42:30] **Jeff Wood:** What are you interested in right now? Like what's exciting outside of this work? Obviously this is really interesting and exciting, but like, what, what are you caring about right now?

[00:42:40] **Speaker 4:** Pulling you out of the mode.

[00:42:43] **Jeff Wood:** Oh, I, it could be a professional or it could be private. It doesn't matter. I mean, I talk about star Wars on the show all the time, so we can go that direction if you want, but

[00:42:52] **Ren Yee:** at this moment is perfumery. Perfumery. Yes. I say this because my partner. It's looking at perfumer as a profession and there's a lot of conversation about how smell the sense of smell gives an identity, but also the sense of smell create a set of mood and therefore people understand what kind of vibe or how should I be acting in the space.

[00:43:14] So this idea of smell is in my mind and you probably read the book. What is it called? That's perfume. I haven't,

[00:43:21] **Jeff Wood:** but it sounds interesting. It's

[00:43:22] **Ren Yee:** about smell. I've never read any book that just talk about smell and all the adjectives of smell describing a city, a place an activity is all from a scent perspective.

[00:43:32] So currently this is a little bit of what I'm, that's super

[00:43:36] **Jeff Wood:** interesting. I had chatted with folks who were at Cambridge and they were using Twitter and Flickr and other like social media to like map smells to find out where certain, cause people would describe what the smell was in a certain spot. So they could.

[00:43:49] Find like smelly spots in London, right? Like, so they could, they could say like, Oh, well, this street has more propensity for people to report the smell of a place. And it actually really makes sense because you have all this sensory stuff. And you mentioned earlier using your eyes mostly to make these decisions, but we also have.

[00:44:06] Four other senses, right? And so thinking about that, I mean, I know that for me, like I'm very sensitive to that, so I can smell like in the plenary session this morning, I felt like I smelled like there was somebody vaping or somebody like smoking weed or something, you know, or you go into a space and it smells a certain way and it makes you comfortable, right?

[00:44:24] It makes you like feel good or, or it turns you off. Like there's an urban design, urban planning perspective for that as well.

[00:44:31] **Ren Yee:** Yes. I think the retail industry use that a lot.

[00:44:34] **Jeff Wood:** I can't deal with that. I like perfumes and stuff like that. They make me like my eyes water and stuff. So whenever I walk into like a Macy's or something, I'm just like, Oh, I got to get through to the other side.

[00:44:42] Cause it's assaulting you. This is killing me. Yeah. That's really interesting. I mean, like, so have you thought about how to bring that into your work or is it just kind of like a side perspective?

[00:44:51] **Ren Yee:** I think bringing it to the aspect of work is not there yet, but we constantly talk about how people experience it and smell is one of the people experiencing it.

[00:45:01] Sound, for example, is very important climate, comfort. These are all layers of experience, and I think smell is not so much. Talked about maybe because people don't feel that they could control that. It's not a, it's not an environment that you can control. But nonetheless, smell is very important for, speaking of diversity, there are some people who this is so strong that it keeps them going out in public spaces.

[00:45:24] For example, so I think this is interesting also to understand that we should design public space from all senses for many, many type of people. Ideally being sensitive to it is a good beginning. I don't know. I don't think we can design a space that fit everyone, but being sensitive to understand what are the different subset of user need and how strongly they are affected by that is important perspective for us as a designer.

[00:45:48] **Jeff Wood:** What's your favorite experience where smell is a big part of it?

[00:45:52] **Ren Yee:** The morning commute where I smell coffee and bakery. I think this is something that I really like. Going past, cycling certain paths and routes where I will stop for a traffic light. And then there's a bakery nearby. It's just very nice when these things remind me that, oh, this is a very nice day.

[00:46:10] Today's a very nice day. A smell of coffee on the street and bakery. So sometimes I think these are, these are moments that I think reminds me that, ah, it's so nice to live in the city.

[00:46:20] **Jeff Wood:** Yeah. Oh, my gosh. Yeah, that's awesome. I just, I love that idea. And also like, it might get me in trouble cause I'd stop and get all those chocolate crisps and all the baked goods that all these wonderful places are creating.

[00:46:31] Well, where can folks find out more about what you're working on around the globe?

[00:46:35] **Ren Yee:** We should do them better. We should put in a lot of this case study and put it on our website, but currently. It's not so many online



avenue that you can find. I think on our website, we did talk a little bit about it, but coming to conference like MPAC these are the places that we could do, or just reach out to me, just send me something.

[00:46:53] And that's my next

[00:46:54] **Speaker 5:** question is where, where can folks find you if you wish to be found?

[00:46:57] **Ren Yee:** Yeah. My email. LinkedIn, my email, shoot me an email. We're more than happy to share the methodology. And I'm excited with this because we are trying to reinvent or innovate the design process. And this means that there's a lot of things that we need to improve and a lot of subject matters expertise that we need to include for us to diversify the tool set that we have and methodology that we have.

[00:47:19] So I come to conference like this and MPEG and share this with people hoping to more designers. Like, it's not only one way of looking at the understand the user, there are much more tools and techniques, especially now with. Technology. There's so many different tools that we can lean in and try.

[00:47:38] **Jeff Wood:** What's been the reaction like today?

[00:47:40] Did you have a good reaction from the session today?

[00:47:42] **Ren Yee:** Yeah. Yeah. The reaction, when we shared the work that we do, the reaction is generally very positive. People find that it is very relevant because a lot of these attendees are planners or they're from this side, or transportation planners or transportation engineers.

[00:47:58] They are, at the end of the day, user themselves. So they find a lot of these. thing either resonate and they say, Oh, I, that's why I felt that or that's correct. That's interesting point that you point out so that there are ways for them to connect with us, but they also, therefore we're trying to find a way that we can share more and get these kinds of response and see if we are places we can roll out and try and test and continue to deliver results because that's very important for us.

[00:48:26] We are consultants, consultancy, but because we bring in researcher. We also want to find a platform, a space that we could continue to innovate and bring in applied sciences onto the design world. So we would love to create these spaces where we can find clients or consortiums that says, I like this output.

[00:48:48] This is something that I could use that helps me make this and this and that decisions. But at the same time, quite interested to know more about maybe their user and allow for these spaces for expert to come in and try and learn things and continue to learn more. So I'm hoping that people will just maybe reach out and get to know about the methodology and share some ideas and together try to improve and make better tools and better toolkits and better framework.

[00:49:13] a better perspective for us, a public space designer.

[00:49:16] **Jeff Wood:** That's awesome. Well, Ren, thanks for joining us. We really appreciate your time.

[00:49:19] **Ren Yee:** Jeff, thank you so much. I thought I will shut down. As I told you, I've been flying from different time zones, but this has been very entertaining.

[00:49:27] **Jeff Wood:** Oh, good. Good. I'm glad we invigorated you.

[00:49:35] **Kammy Horne:** Thanks for listening. And thank you to Hilary Reeves, who leads Mpact Voices and the development of this podcast. Find out more about our work by visiting our website, [mpactmobility.org](http://mpactmobility.org). That's M as in Mobility and Pact as in agreement. [mpactmobility.org](http://mpactmobility.org). Sign up for our newsletter to make sure you hear about new podcasts as they come out.