

Transcript

Title: Webinar - Urban Futures: Designing the Digitalised City

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PROFESSOR JENI PAAY: The system seems to have stabilized. So, I will start this session which is a webinar and it's hosted by the Smart Cities Research Institute of Swinburne University. My name is Jenny Paay and I'd like to welcome you to the webinar and this is about a conversation between Mark Barry and the editor of the AD, Architectural Design journal, and today's topic is Urban Futures, designing the digitalized system, system, city. Yes, it's the digitalized city that we're going to talk about. Next slide, do I? I can't control them can I? Right.

But before I start I just like to give an acknowledgement of country. I acknowledge that I'm hosting this web from the lands of the Kurna nation. I also acknowledge the traditional custodians of the various lands on which you all work today and the Aboriginal and Torres Strait Islanders people who are participating in this webinar. I pay my respects to elders past, present and emerging and celebrate the diversity of Aboriginal peoples and their ongoing cultures and connections to the lands and waters.

Next slide. So, the way we're going to work this webinar and, of course, you don't get to...we can't see you all the time, so if you could, just if you have any questions, can you please type them in the chat so we won't be taking questions verbally. But I will be reading out any questions that come in the chat during the second part of this presentation.

And you were aware when you clicked to enter that this is being recorded. If you have any issues about the recording, please email Paul Lavey at paullavey@swin.edu.au and he can remove things that you might want removed before it gets published. Next slide.

OK, so 'Urban Futures: Designing the Digitalized City' is a special edition of Architectural Design Journal, which is edited by Mark Barry and was published in May June 2020. So, in this webinar we are including a 45-minute video of a conversation between Mark Burry and the editor of Architectural Design Neil Spiller about this special edition.

After this we're going to have a panel discussion involving 3 Australian leading urban futures and smart city influencers: Sarah Barnes, Marcus Foth and Meredith Hodgemen. But I'll give you their details after the video. Next slide. I said we're going to hear from Mark Burry, who is the director of the Smart Cities Research Institute. And he will be talking with Professor Neil Spiller who is a Chair of Architecture and Landscape at the University of Greenwich, but also the primary editor of AD.

So they're going to introduce themselves in the video, talk a little bit about the context of the idea of this special issue, and the contributors. Next slide.

And also during the conversation these are the questions that they will discuss, so if you just want to have a bit of a heads up, they're going to talk about how the pandemic might have changed the way this publication could look. Also, is architectural education going to be fit for the terms of the urban futures we're looking towards? How is big data playing a role in this digitised city? What are crucial research agendas over the next two to five years? And, finally, what is the notion of the precinct and why do we need to know about it? So if we move to the next slide, we can now start the recording.

PROFESSOR NEIL SPILLER: Well, it's a pleasure to be with you albeit virtually for this conversation with Professor Mark Bury. I'm Professor Neil Spiller. I thought I might introduce myself so you knew a little bit about me. I am the editor of Architectural Design Magazine/Journal, which is based in London and published by Wiley around the world. It has a 90-year history. It is probably the best and most prettily produced architectural magazine in the world. It's probably, I'm saying probably, but actually I don't believe it. It is the most progressive architectural magazine in the world and has been for decades and in the past it's championed postmodernism with its involvement with their particularly Charles Jencks, the late Charles Jencks, sadly, and Deconstructivism. And championed groups like Archigram and Cedric Price in the 60s. And, 25 years ago it produced some of the first architectural magazines to explore the notion of what was then called cyberspace, which I was involved with.

So, it's a very, very important magazine. It's a very, greatly read and highly influential magazine, and so I just wanted to tell you before we talk about Mark's issue and this wider sort of issues about urbanism and the getting towards the last the first quarter of the 21st century and urban futures. I just wanted to list a couple of editions. Each edition of AD is themed and those things change quite radically, so the current issue is guest edited by Ian Ritchie and that's called Neuro Architecture: Designing with the mind in mind. And it's particularly about spatial perception. And a little bit about phenomenology. So, it has a variety of scientists. Very eminent scientists from Oxford, Cambridge, the Salk Institute. Talking about perception and its kind of embodiment and trying to dispel this sort of Cartesian mind body duality.

The next one that's coming out in January is called Multi-form Architecture in the Age of Transition, so that's really sort of, I commissioned it really from our Owen Hopkins and Erin McKellar, who both, Owen latterly curated at the Zone, and Erin is still there and Owen's gone off to be the curator of the Terry Farrell Newcastle University initiative, where his archives are going. So that's really postmodernism version three. Again, very sort of outside at the moment in terms of what young people are seeming to look back to the time of postmodernism and creating new juxtapositions of form and colour and etc.

Then the other emphasis is we...the following one is guest edited by me, in fact, is on offer home on Alford Hall Monaghan Morris a very large architectural practice, focusing mainly in in the UK, but also have an office in Oklahoma, a building for Google in Delhi and various other places. AHMM constructing a practice and that's really about how you design a practice. AHMM, now have 530 people based in offices around or based in their own homes now currently and have an annual fee

income this year of £50,000,000. So a lot of...it's very interesting...get inside and do a kind of 360 on a very successful architectural practice.

Then after that we've got '21st Century Model Building: a World Building' which is guest edited by Doctor Mark Morris who is head of teaching and learning and fronting the AA at the moment in London and that's in conjunction with Mike Ailing who runs the Masters course at the University of Greenwich. And then after that I'm doing another issue about architecture schools around the world and talking to some eminent practitioners and teachers and allowing them to showcase their best students, so that's called 'Emerging Talents, Training Architects'.

And it goes on. There's issues on 'Production urbanism and the Metacity'. There's radical architectural drawing. There's an issue on AI. Called 'Machine Hallucinations' and an issue on the new 'Green Deal' and I'm currently....we currently work on five issues simultaneously in different stages and I'm just about trying to work on a proposal...well.... I'm working on various proposals, but the one that's nearest fruition at the moment is on the late great Will Alsop. So another kind of practice, but funky edition so I don't know....the one that's exciting me at the moment, which we've just started working on, is called 'Stufish Entertainment Architecture' and that's about the practice of that's called Stufish Studio Fisher, founded by again the late great Mark Fisher. And so it started off with Pink Floyd, The Wall. And now they do Black Sabbath, The End, ACDC, Michael Bublé, Madonna, you name it, they do those stage sets, so that's so quite a wide variety of things.

Anyway, so that's um. That's me, really. So Mark, would you like to give us a quick synopsis of your eminent career?

PROFESSOR MARK BURRY: Mark Burry Professor of Urban Futures at Swinburne University of Technology and Director of the Smart Cities Research Institute. AD's been with me my entire career now since when I was a student. In the late 70s early 80s, it was the only place you could go to get it well to escape the School of Architecture you're studying in to be honest; it sort of gave you the other view, so it's been fascinating to hear the issues you've got in mind, Neil. So your predecessor, Helen Castle, approached me, it seems recently, but it's probably quite a few years back now, saying what was I thinking about the city and the digital space. I suppose my reputation's been founded on parametric design. Inadvertently, it wasn't something I set out to do. Or what about parametric urbanism?

And so the conversation coincided with my former role as Professor of Urban Futures at the University of Melbourne. And there I was looking at three things, which was urban analytics visualization and policy and it's it was I was curious because I'm not expert in any of those three dimensions, but I obviously have some claims to visualization. But I realized that actually there's nobody who can say that they're expert in all those, but, of course, without expertise in all those areas, we can't really think about the city and the future of the city and at the same time, embrace technology in with any real insight or commitment. So the challenge is to think of ways where all the expertise it ranges from hardcore engineering and data science across to the most creative and progressive in speculative thinking.

So that was the genesis of the 'Urban Futures: Designing the Digitalized City' issue of the AD that I put together and it's an extraordinary privilege to be offered, you know, the chance to edit an issue

like this because not only do you work to an agenda that's inspired, firstly by Helen and then by you Neil so that there's some bookends that you're working between but they're very, there's a big space between them, and so it's we set out to find a representative sample of minds, creative and engineering-oriented minds from around the world and a variety of ages to try and fill this enormous gap, which is urban futures. So that's where it came from.

PROFESSOR NEIL SPILLER: Yeah, and it was interesting because as you said, I kind of inherit. You've been commissioned by Helen my predecessor and I was very lucky too to be in a position to sort of help it help it grow to fruition. Do you want to say something a bit more about the selection of the contributors and why? Because there's a very rich mix of contributors and they do as you say represent sort of a variety of disciplines. Urban design, engineering, big data. What was the kind of sieve you put the contributors through?

PROFESSOR MARK BURRY: Well, it was quite it was quite interesting because the first sieve that I applied was too narrow and one of the great things about the AD is the review process. You know it's not just because you've been invited to put an issue together, doesn't mean to say you just get all your chums and get them going. So I had some very good feedback which was actually not only pointing out some holes, but also some interesting people that I might not necessarily have thought off.

So the people I know and admire that were no brainers were people like Vicente Guallart who not only was one of the founders for IAC in in Barcelona obviously one of the most progressive schools there is, and Areti Markopoulou who's the director. They were no brainers. Vicente was also the government, sorry, the city architect for Barcelona and but also at the other end so Vicente is like absolutely ultra progressive always been several years ahead of the pack thinking about well what will technology mean for cities and how to use it wisely and you can see from his piece, for instance, that he's moved that technology focused sort of argument to the.....he's more engaged with Bio thinking about the you know the city ecosystem and the relationship to greening it.

Whereas also from Barcelona we've got a friend Ferran Sagarra who is an urbanist and urbanism is something which sort off flows off the tongue but actually there's not a lot of expertise in it that I've really come across. There's urban designers who have got a particular way of framing, thinking about design and the city, but urbanists have that fantastic innate sense of philosophy and sociology as drivers.

So, I was able to use they're virtual bookends really that Vicente and Areti sort of finish on what a school of architecture might look like in the field of digitalising the city and the design of it and with Feran at the beginning and in in between that I've got Dan Hill and then some newcomers for me people I hadn't come across before, but this Wanyu He, who's the CEO and founder of X Cool? She had her career start with working with RMA and now she runs this very large startup looking at AI and its opportunities to harvest data from images of like just a Street View in Google and formulating a kind of lexicon of neighbourhood trays so that you can actually.

There is a vehicle going past. I'm speaking from the country, which normally guarantees there won't be traffic right now.

So yeah, so Wanyu He, was, you know, an inspiring and looking at a sensible, creative use of AI. And, of course, there's also Shan He, who's a visualization expert with Uber. When you look at her career, it started off as an architect and digital artist. And Refik Anadol, I was super pleased that he was able to find time to write about the overlay of digital creativity on an existing urban infrastructure. In this case it's the Disney concert hall, so that's a snapshot.

PROFESSOR NEIL SPILLER: Yeah. Now that's an interesting selection of contributors and the issue is that it as it develops became very well rounded, covering a variety of bases. Of course, it came out, I'm just looking at the cover it's so Volume 3, volume 90. So that's the years number 3, so that was last summer, so we were always, you know it takes about two years to get one an AD off the ground through to it actually being published and, of course, a lot's changed since then. Particularly in the last year. Or this year 2020, a bit of a , a bit of a , a bit of a duff year. Have you got any thoughts about how the pandemic might have changed the way that you constructed this publication if you were doing it now?

PROFESSOR MARK BURRY: Yes, I've applied the lense of, oh, that's unfortunate timing. Have I missed an opportunity if it had been two years later? Fortunately not. I think if you did a word search through the whole issue, you won't find the word pandemic and certainly not COVID. And I mean it was mostly in 2017 2018 and the production was 2019. So not even a whiff of COVID-19 at the time. However, the introduction certainly which I penned, certainly portends, you know, difficult times ahead. The industry is really calling out for what are we going to do as a team of people who are technically gifted across two highly creative to think about these challenges?

So the challenges I really had in mind are food security, water security, you know, obviously global warming, so these are all, you know, frog-boiling moments and you know with frog in the kettle we may not notice them. So, I was really more addressing that kind of condition stuff's happening to us. I mean, for instance, where I'm talking to you from it's Melbourne population of 5 million will be double that in 2050, although there is some speed wobble because our immigration numbers obviously aren't fantastic at the moment, but that means that you know Australian cities are among, if not the most fast developing cities in the developed world.

And I'm just curious that we're not doing the sorts of things that we need to do to take this into account. We react to problems as they emerge. So the pandemic really is just one of those things that's occurred, but instead of being the frog well, you know, sort of slowly being heated up. It's been jumped into this boiling pot and unless you've actually been afflicted or you have family members and that you know, of course, is if that happens that is the whole picture, but if you haven't, then you're just aware of how your life is being forced to change to accommodate depending on where you live, it's greatly or more or less, but certainly Melbourne as being one of the most locked in cities. So, it depends on your frame of mind, but I think the reaction to a pandemic is to look at life beyond it. And what will change for the better. What are the few positives as it were?

I don't think if I was putting the issue together now, I would change the emphasis obviously I would cover a sudden crisis. I mean, I'm from Christchurch, that's where I was born in New Zealand, and that had a crisis 10 years ago when the whole CBD was rubbed out from an earthquake. So it's not. You know, these things are not usually global. They're normally local, so I think the AD is looking at it

as a global perspective and would need to think about the once in a 100 event perhaps, but it shouldn't make that you know the condition of urban futures and its design.

So, the only difference I can I can think of is that I would be looking, you know, part of the selection of contributors would be looking at the changes that will necessarily come about versus the dark forces of capitalism that would probably try and prevent those changes from being implemented permanently.

PROFESSOR NEIL SPILLER: Yeah, absolutely the old normal as I call it as opposed to the new normal and there's, you know, there's quite an imperative I think for people wanting to return to our previous ways. You know, driving to the office. Uh, you know socializing and you know part of part of human interaction and the joy of being human is those sort of moments where you sort of bump into other people that you didn't know before or have a conversation that wasn't scheduled or minuted, whatever or recorded or Zoom or whatever.

PROFESSOR MARK BURRY: Does it have to be five days a week?

PROFESSOR NEIL SPILLER: Well, no, no, not necessarily. I mean there's there. Obviously, as you know from an AD editor's perspective, nearly every article that comes in at the moment mentions COVID, and of course the mentioning you know it's ubiquitous. But basically in terms of the ongoing impacts of the pandemic on urbanism around the world, you've got, oh, we won't need so much office space. So what do we do with that office space? That changes the economics of the centre of the Central Business District or whatever the economics. No-one is really addressing that.

You know those technologies I'm aware of a firm that make what they call pod servers for architects. You know they can. You want to have your desktop wherever you are. Onsite meeting a client or you know? Away from your office, but you want it to be agile and powerful, and they've invented this little server that can be hosted in their data rooms and power a whole, you know, firm of architects, so it's been....Hopkins are currently experimenting with it and you know. You can go one step further and start invoking the cloud and you know even with rows of desktops, for example, in an architect's office with no one there, when one crashes, someone has to go in and push the button so you know those things that you don't need all that hardware and that expense every three years of buying a new one. And then you know a hundred new ones. So that that in itself impacts on the way that architects organize the way they practice and staff the way they practice.

So different things, different technologies, whether they are viral technologies or whether they're digital technologies are impacting on the city all the time. And so some might seem very small, but might have a sort of massive rate of perturbation in terms of urbanism. So it's a it's a very complex thing, I don't think many people have, well, I don't think anyone's got their head round it totally in terms of, you know, the economics of the city. What do you do with all that office space? Make them into cheap accommodation for key workers? I don't know, and then who's going to pay for it or what you know how that, how that changes the way that we get into and out of urban centres.

PROFESSOR MARK BURRY: So I think I think we have to put ourselves in as designers we need to put ourselves now into the shoes of other people. So, if I'm a property speculator or property owner. Because I've spoken to people who have told me that when their lease came up in March or April,

they already knew that that the smart thing to do was not to renew it and wait to see what happens, because at the very least if they have to get another office space it will be cheaper. But in the meantime what will change? So if you own an office block building really you should be thinking about well, yeah, because I know as an academic, we're thinking about what will University life be like. Will we even have lectures? Do we need lecture theatres? I would imagine that universities and office blocks are the same.

It's how do you get that really very expensive real estate adapted for a different kind of human interaction and one of the most interesting things I read was very early in the piece and it was either in Washington Post or New York Times, which said, I'm responsible for the real estate for, you know, for a big office in the centre of New York, Manhattan, and it occurred to me that everybody who's in the office in a in a booth or hot desking never needs to be in the office for that purpose. So they were saying that they could see that their office of the future would be much smaller, but it would be a socially enabling space. A space that enables social interaction just like you were describing so that you would have the serendipitous bump in the corridor you know and spark ideas which won't happen in any other way. But you don't need people doing their emails in an expensive, but then you've got, you know, the kind of unintended consequences of people getting scared of being in public transport. So, roads in some cities are more congested than they were, despite the fact that they are servicing only a fraction of the number of people in the centre of the city. Then you've got all these small businesses that are like cafes and restaurants that were in the city centre, so there's a lot of thinking to be done and you would hope that the enlightened mayors would seize the opportunity to say, well "Let's not just react as we always do to the situation. Let's actually create a situation where we'll actually take half the roads out of commission for vehicles and not just put temporary bike lanes in." Just do it and then let the rest happen through, you know, just opportunity. But anyway, that's my ideal.

PROFESSOR NEIL SPILLER: Yeah osmosis, laissez-faire, well indeed. You mentioned universities and obviously you know there's huge sort of real estate assets there. But in terms of the kind of I always find it funny when I go to America, for example, and it's always 'Architecture and Urban design school', and there's not much urban design going on. And if you look at America generally there hasn't been any. Um and so I find that very funny. But in terms of educating architects, let's say, I mean, obviously architecture education is a very long and rarified and expensive thing and is it fit for purpose in terms of, you know, urban futures and how architects need to be at the pinnacle of or leading the collaborating and leading the thrust to a new kind of different, greener, ethical, more pleasant urbanism as a concept. Do you think architectural education generally gives students a good foothold in this kind of aspect of city design or city, city interactions, I suppose.

PROFESSOR MARK BURRY: When you when you visit, when you visit schools of architecture and Urban design and you're going around the crits, you can only feel super positive, very bright people, very creative, very visionary, and it's just a pity that they need Skyhooks or extraordinary budgets for them to happen; those extraordinary budgets do exist obviously in in in, you know, and in Qatar and the Arab Emirates but generally they don't. And then you got the real world and a real world who aren't even particularly keen on change so the NIMBY seems to be a kind of global phenomenon. The tension I see is a very real one is that concern of designers that if a client gets too involved, they'll dumb it down and but therefore we insulate ourselves typically by not letting that happen. So

schools of architecture will typically have other, you know, if you're having a crit, how often do you actually have a citizen jury along in the crit, you know, to see what will happen. I've not, I mean, I've seen some very worthy sort of sustainability-oriented projects where you will have, you know, the outside body there, the NGO, whatever. They'll send a representative and say good things. But what you really want is hard-hitting, informed people for whom these speculations are, you know, directed to so that they themselves are going to be informed about what experts do and how they think. But then the experts themselves could reign in some of the visionary stuff, at least tailor it to real needs so that's my School of architecture that - sorry my imaginary one - would be one where you would actually make the public super important as part of the syllabus and that would mean that a lot of interaction, but typically that would not be looked at as a positive initiative because it would end up diluting design excellence. And why do that to students as this is the only time they can think freely and unconstrained by budgets, but that's OK, that's the tension. It's the reality on one end and the unlimited vision on the other.

PROFESSOR NEIL SPILLER: Yes, I mean that schools of architecture do sell vision, don't they? If you think of places like Ciarle or Bartlett, or whatever, then they are selling this space of visionary speculation, I think, and sometimes that can go a bit off kilter. You know all speculation.

PROFESSOR MARK BURRY: But if you're drinking the same Kool-Aid. But if you're drinking the same Kool-Aid. It's just it's amazing. I never feel less than energized by going to any of the schools you've mentioned and participating in, or going for an end of year show. So, but then you only you only have to say if I bought 10 members of my family with me who aren't in this space, how would they see this?

PROFESSOR NEIL SPILLER: Sure, yeah, yeah. Yeah, yes exactly. I always...In recent years, I've always, I've been strangely shocked by how few students are engaging with the full gamut of technologies available to us as architects and urbanists. You know? AI, I know it's people are out there doing some of that stuff in the schools, but not many. A lot of schools are obsessed with the old one-armed robot. And still making sort of pavilions out of it which have no insulation, no front door, and let the rain in. Although that's kind of waning, and that of course digital fabrication is a whole other thing. So, I think schools are getting to grips with that. Some of the schools that I mentioned, but there are other issues aren't there? What about big data? Because that's a cleft stick, isn't it?

PROFESSOR MARK BURRY: Yeah, yeah, you set me up to give a very short answer to that very long diatribe. But the short answer is really an urban-futures designed, digitalized city, because that's what it's about. It's actually setting an agenda for what I think. If I was a young, creative person interested in my role as a designer and the city's development in the future I would look at that issue of urban futures to get a sense of what I need to know rather than the traditional footholds because we haven't now.... we've got this vastly expanded portfolio of skills that we could have in our own quivers. But we can't possibly have them all. So, it was a big task to become an architect in the first place. It was five years of studying. So how on earth can we presume to absorb all this other stuff?

So, it seems to me that as a school of architecture and urban design of the future would be focusing on the things that other people can't do and help the emerging architect and urban designer understand these technologies not necessarily to be highly skilled in them, but to understand them well enough to work with all the people who are highly skilled in to direct the operation of them. So I

think one of the words I had used that came out of one of the original titles was going to be the architect as urban design impresario. The person who puts the show on. And there are lots of reasons for taking that out; in the background I still think that's part of the role that young architects should be thinking about. What is their role in understanding the technological advances? Robots is one of them; AI clearly another one. But there's all sorts of other, you know, analytical, the big data thing you know, grappling with the unknown unknowns and that that's in the issue that the stuff that emerges from big data that we would never have thought about. And I suppose I had hoped before my career hits the buffers to have some understanding of how we can anticipate the unanticipated consequences that we've been beset with that surely with AI we ought to be better at thinking about what might happen and to have a plan ready for that eventuality.

PROFESSOR NEIL SPILLER: I always say it's harder to be an architect or urban designer nowadays than it used to be. Certainly when we were students and like you said, it was hard then. But now there's a variety of new technologies, new ways of looking at the city, new ways of cartographically representing the city in real time, and it is just so much, so much stuff. It's it. To actually have any sort of traction in the world, I think that you know the new generation of students so it's the sheer bulk of the stuff that's on the table for their predilection, but also there the tools for which they can implement it is manyfold more than in our day, as it were. And I think that service.

PROFESSOR MARK BURRY: Sorry, there's a lag, so I'm rudely interrupting you because I've. I think there's a simple distillation which is to take the urban design blinkers off and put it on the urbanism, because urbanism must be the thing you should start with, and that's why I was really pleased that Sagarra from Barcelona was able to kick off this issue because you know the great thing about cities unless you're doing a brand new one, which is, you know almost zero chance in your career that you would actually be doing that. You're actually working with something that's existing, so the better we are able to understand what we have is as a tableau, the better we'll be able to embrace the technology, and I suspect with a lot of urban design strategies are around, you know, limitless budgets and just sort of treating the city as a that's the that's the that's the canvas you work from, but you're not actually reinvolving it as much as you could do, and that's why I think an urbanistic as opposed to urban design perspective is much stronger.

PROFESSOR NEIL SPILLER: Yeah, I can see that once you use the expression urban design it is about making design decisions in the city. That kind of implies, an aesthetic, series of aesthetic preoccupations, whereas urbanism, as you say, is more about the way that we operate in the city, the sociology of the city. It's kind of dynamic, it's economics. It's a much broader canvas within which to work, and of course, you know, going back to the COVID thing. Governments and cities are not going to have much tax money in in the future, so at least for a few years and that's going to obviously affect how proactive we are globally in developing, for want of a better expression, ethical cities, green cities. So there's a whole perturbation there, and as you were saying earlier about, you know immigration figures for Australia at the moment being or Melbourne being so it's very difficult to be predictive at all in this landscape it seems to me; it comes back to your boiling frogs, but yeah, I don't know what where's your head at the moment in terms of the most crucial kind of research agendas that that that would be ongoing in the next two to five years.

PROFESSOR MARK BURRY: OK, so the one word that hasn't come up in this conversation is the planner or the master plan and I'm going to answer your question in a sort of roundabout way, but I was very conscious that I didn't want any planner to pick up this issue of AD and be really hacked off, but I just think that one of the problems is that urban designers is linked to planning and the masterplan. So on the one hand you have got the masterplan and the urban designer's response to the masterplan.

So this brings me neatly to parametric urbanism as opposed to parametric design. I liked parametric design, before it became parametricism, because all it meant was that in computational terms you could have all your inputs as variables, so you could do "what if?" thinking around a design: you know what if I make this dimension different? Or what if I had a performance standard that changes? Well, we've now got the computer power and the smarts to think about the precinct if not the city, but I think actually precincts is the area where we should be focusing, so I think that the key topic for anybody interested in in digital design is thinking parametrically about the city at precinct scale with everything interconnected so you can say if we travel the population of this suburb, what will that mean in terms of the number of coffee shops and pubs that will be open? Will I get more variety? It never ceases to amaze me that Barcelona never became the model for every 20th century city in that its density supports everything to be close at hand and that's why it's such a lovely city to visit.

I'm so I think that's where I would, I would say anybody who's interested in scripting and coding and geometric modelling extend your repertoire to accessing data and data insights to use as your inputs to do a lot of scenario testing, point number one. Point number 2 we just actually opened a new facility called iHub, which for the first time ever anybody with a device, whether it's a phone or a tablet or a laptop, can put the contents of their screen straight up onto this very ultra-high density video wall so you can have a digital pin-up. So the importance for this is it's not just for experts of different disciplines to be able to talk about what they do. Not sequentially through a PowerPoint, but at the same time.

But more crucially, you can actually have the citizens involved, so the second dimension for me is involving the citizen and I think the COVID thing is great because if governments haven't got the money to spend, they're going to have to say, well, how are we going to do more with less and what are the things we're going to cut out from our repertoire? And they shouldn't be making, you know, the city needs to be designed with people, not for people. So a combination of parametric urbanism and citizen juries. That's my cocktail for the next two to five years.

PROFESSOR NEIL SPILLER: Right. And you mentioned the word precinct, can you can talk a bit more about urban precincts. When you said precinct, I suddenly thought of, sort of, 1950s post-war bits of where I grew up, Canterbury, in in Kent, in in the UK. They always used to call the precinct the 1950s rather drab bit that filled in where it had been bombed and flattened. And then I started thinking about how cities developed kind of specialist areas and I think you know jewellery in Hatton Garden or whatever is. How do those sort of ideas reconcile themselves in your precinct notion?

PROFESSOR MARK BURRY: Well, a precinct is an administrative district over which a person or body has jurisdiction; it's a division of a city, town, parish, etc. So the pejorative tone to precinct I, I'm in my 60s so I know where that's coming from but I think if we just look at the precinct I love the idea

that long long ago villages were located....the boundary of the village was clear: it was about how you defended yourself and your world was where you could go in a day to deliver your goods, sell them and get back before nightfall. In case you got set upon by foot pads in the woods on the way back and all that kind of clarity and I've always been fascinated with the village as being our natural urban condition for human being so a precinct. If you think of the precinct as being your village within the city, and that's obviously going to be the antidote for many of the problems we have in cities like Melbourne, which are just I mean there 60 something 70 kilometres of sprawl is the polycentric egalitarian and brings it back to Barcelona. That's was a plan for a polycentric egalitarian city. So that you have, you can get to the market, the hospital, school, entertainment, work and you're home within you know 15 minutes or so and the city is just a collection of these, so the precinct for me will answer a lot of our urban issues properly, not least all the movement. We could radically cut movement if we can make sure that people are living close to where they work. So again that brings us back to the situation where we've got a lot of opportunities now, but a society that's kind of been conditioned to another way of working just needs old political strategies to seize the moment and we can all be healthier at the same time.

PROFESSOR NEIL SPILLER: Well, also different cities I'm, you know, 'm sitting here in London in a place called Blackheath, which is Blackheath Village and it's in, you know, it's lovely. It's got Greenwich Park close by and there's a hairdressers as I said, a couple of shops with cafes, a pub, you know and it's within London, so London has always been described as a set of villages really. In a way yeah, the best ones being sort of where there's greenery around and often sort of surrounded by not-so-great places, but so different typologies of cities, some of which are, you know, have made a step in that direction historically anyway. So yeah, I'm.

PROFESSOR MARK BURRY: London's particularly unusual isn't it because it never had – I gather we should be wrapping up, but yeah London's atypical because it seems to have got, well, I mean the Greenbelt constrained the sprawl; the instinct for your Londoner is to have a semi-detached house at the very least or some vestige of a village situation as opposed to medium density. And I was always curious because when I was a student Darbourne and Darke were the go to people. They were doing medium density, just par excellence, but London seems to be able to skip round that and still be, you know, an incredible city. And with you know if you landed in a parachute at night anywhere in London, if you know London, you will know exactly where you are, which you can't say that for many cities. I think for the reasons that you set out. I don't know but if you think of Blackheath village as Blackheath precinct that's going to ruin it for you, but essentially that's what the precinct is, you know.

PROFESSOR NEIL SPILLER: Yes yeah yeah yeah yeah. You wouldn't call it a precinct over here as it would affect house prices I suspect but I get that I get the drift. I mean, I'm conscious we need to wrap up, but I was thinking about this, you know the French Department, they are much bigger pieces of land aren't they? You know on a smaller scale it's the same sort of thing and each one has a mayor. You know I'm thinking now of Bratislava. Last time I went to Bratislava. You've been there much more frequently recently than I have, there were eight city mayors I think in Bratislava. Yeah, each vying for power, each vying for development and, you know, and what that entails. So each city is very different and that's one of the great things about urbanism and architecture is, you know, we

haven't even scratched the surface in relation to sort of Asia and China? But that's another discussion I guess. So is there anything you want to wrap up with or shall we just thank you?

PROFESSOR MARK BURRY: Your last point is interesting. Australia is very different. Sydney, for instance, the same size as Melbourne, but it has one administrative authority whereas Melbourne doesn't. We've got a state you know, very strong state government, but Melbourne is comprised I think of 32 local government authorities, each with a mayor. And so it's fascinating in Australia seeing how the different states have set up because Australia is composed of city states in my humble opinion. And so these major cities are the fact that they're different makes it a very lively conversation because we can actually compare and contrast how we do things differently, so that's a note to finish on.

PROFESSOR NEIL SPILLER: Yeah, no, that's a good note. Well that's it, we've had our time. I, I hope that the conversations been interesting, elucidating and that I've asked him reasonably sort of half decent questions and you've certainly given some great advice to my rather fumbled questions and probing.

PROFESSOR MARK BURRY: Just thank you again Neil for the opportunity of getting my thoughts down and getting such an amazing group of contributors.

PROFESSOR NEIL SPILLER: I forgot to say that there is. Mark prompted us to at Wiley to offer anyone who's interested a 10% discount off the AD, Mark's AD, and we have a code for that which I'm sure Alex or Paul will proffer to anyone who's interested, so that's good. Thank you, Mark. It's been a pleasure and fun and it's good to see.

PROFESSOR MARK BURRY: Likewise, thanks Neil.

PROFESSOR JENI PAAY: Welcome back and we hope the conversation has raised some issues that you find intriguing or perhaps it's prompted new thoughts that hadn't occurred to you previously. Some interesting things I heard were the future of the city; spaces for working; spaces for social interaction may be more important; big data as predicting the unpredictable; involving the citizen as a way forward, and I really like the last one: city as a collection of villages and I think Melbourne sort of does that. It has its special streets and all the local cafes and I think it wouldn't be a big stretch for Melbourne to go village wise, but it's a really nice idea.

So, I'm not the one who you want to hear from. It's actually our panellists, expert panels that we have here, which is Doctor Sarah Burns, Professor Marcus Foth and Meredith Hodgeman. So if I'm next slide, please. Next slide please. I'll just give you a little bit of detail on each of them.

Doctor Sarah Burns is a research consultant and advisor. She's an urban digital strategist, researcher, and creative producer who concentrates on building future focused digital tools, experiences, and planning frameworks for public spaces. Right in my area. That's brilliant.

The next one please is Marcus Foth, Professor Marcus Foth. Marcus is a Professor of Urban Informatics and invented the whole discipline of urban informatics within HCI, well brought it into HCI anyway (Human Computer Interaction). Marcus's transdisciplinary work is at the international forefront of human computer interaction, research and development. With a focus on smart cities,

community engagement, media architecture, Internet studies, and ubiquitous computing and sustainability. Next one please. Yeah.

Finally, we have Meredith Hodgman who is chair of the Smart cities Workstream for the Internet of Things Alliance of Australia, which is IoTAA. Meredith is the international engagement manager for the City of Sydney and chair of the Internet of Things IoTAA: Co-founder and International Director of Women in Smart Cities Global. And Meredith has just come from giving away awards, which is also a very nice giving away some of the Smart City awards for that alliance so that's great. So, now if we just yes now we discuss if each of you would like to maybe I could invite you to actually compose whether anything in the special issue or in the talk that you have just seen. And Mark Burry's here as well to join in the conversation, which is nice. There you are. And with the same background, great continuity. We had that planned folks. So now panel members, who would like to go first on raising an issue out of either your reading of the special issue or something that's just happened in that conversation there. Nobody, so will I propose someone.

PROFESSOR MARCUS FOTH: Has to be ladies first.

DR SARAH BURNS: I'm happy to. I'm happy to kick off.

PROFESSOR DR SARAH BURNS: OK Sarah, please do.

DR SARAH BURNS: Thanks very much for having me. I am suffering from a head cold so I may be a little bit stuttery but apologies. Look it's really it's a pleasure to be here virtually today. I certainly enjoyed reading the collection and, you know, I felt I find that it's even though written, in fact, prior to this global pandemic is more relevant than ever. So, congratulations Mark on the and an all of the contributors on the great publication. I am certainly someone myself who is really interested in the histories of how we have imagined our digital cities and the future of our digital cities has kind of been my field for the last 20 years. I really enjoyed this publication the way that you did imbed the pieces in a kind of recognition that the digital is not something you and in fact data, working with data in cities, has a very long history and is foundational to a lot of urban planning, urban design and, indeed, architecture.

And I guess it was great to kind of see that that that recognition kind of built into the to the front end if you like. I was interested though in you know in in terms of in terms of where we've come to, particularly in a pandemic year, in how we actually think about the participatory potentials of digital lives of data and of digital infrastructure. I think there's a lot of excitement and I'm always, you know, I'm someone who's not come from an architecture background. I actually came more from politics and historical geography into that field of urbanism. And I always love architecture and design for being really positive about the potentials of digital. And I've loved, you know, Dan Hills work and Carlo Ratti's for some time as well as yourself Mark's.

But ultimately you know we were now I think particularly in this pandemic year in at a time when the digital means some actually quite dark things. It can mean some quite precarious things, and it would be, you know, it's actually provoking some more and more inequalities in our cities than ever before, and so I guess that's something that I was really interested in discussing today is how do we kind of, you know, thinking about design and the future of urban design or urbanism, actually really

engage with those questions about whose data, who participates and what contexts and forums that participation actually takes place in. So that's a kind of just a bit of an opening kind of question or reflection from me, but yeah, happy to open up from here.

PROFESSOR JENI PAAY: OK, I'm going to make Marcus go last, so Meredith. Would you like to talk now?

MEREDITH HODGEMAN: So is thank you very much for having me and congratulations to Mark and, of course, the Smart Cities Research Institute as a whole. I feel quite humbled. I think I'm the only one here without some sort of academic credentials. I come from the perspective of sitting at the intersection of government and Industry, so I'm constantly doing my best to take communication from different sectors of the society in our, indeed, industry groups. And basically use it to bring together people to move towards a common future. So, I take great delight in hearing all sorts of concepts really when they are utilized in such a manner in both this publication of course, but in also in the conversation that we have just witnessed around Parametrics, and of course, the 20 minutes city etc etc.

And you know when you think a lot about how do we just get on with doing this great work? You know, had quite a great track record of getting on with prophetic yet pragmatically applicable work. I really think a lot of it comes down to communication. And the nostalgia that comes through from the reading, the collection of readings, and indeed the conversation this afternoon is something that's really important and um, the relevance of it is something that excites me because it's not that I think it's any more or less relevant, but I think that the audience is suddenly wider than it ever could have been imagined to. And that, consequently, you know, we've had this wonderful, unprecedented, and almost an unexpected exponential shift in digital participation, which means that now the language that's being utilized to describe these nuanced and meaningful terms about the relationality of the buildings and the place and the technology to the data is something that will be digested by more and more people. So, I mean, it really is to me is sort of heralds the beginning.

PROFESSOR JENI PAAY: Marcus

PROFESSOR MARCUS FOTH: Yes, thank you for having me on this panel Mark Jenny. It's been fantastic. That you've put this together, especially at this busy time as Oscar is happening at the same time. I would also like to acknowledge the traditional owners I'm talking to you from Brisbane from Meeanjin and I pay my respects to the Turrbal and Yuggera people and elders past, present and emerging.

Um, this is quite a fantastic tome Mark. We had a little bit of trouble going through the Wiley ebook reader, but as those pages loaded it was quite clear why there was a bit of a delay because there was such intricate additional material, so it wasn't just the text and the thoughts, but it was also the artistic work, the creative work that the authors have put in there and which was fantastic and it's quite unusual for an academic Journal to actually and for publisher to allow that to happen because that takes a lot of effort and time, not just in terms of the creators but also in terms of the copy editors and publishers to actually be able to reproduce it and put it together so nicely. So, I think for you as the editor of this of this special issue, it must have been quite a an extra task, even just dealing with all the visual creation and curation of it. So yeah, very amazing work.

Um, I have a whole bunch of thoughts, so I'm trying to channel them into three points that might be useful for further discussion in the remaining time that we have; one is around the kind of hype that data often kind of instils. I'm not an architect by background; my original background has actually been in computer science and I kind of by accident got into the space of interaction design of urbanism of looking at urban informatics and smart cities. And obviously the technology piece features now in such a ubiquitous and often not very much questioned anymore kind of way. But at the same time I think that there is some sort of fallacy, and believing that only because something is digital or something is data driven, then it's automatically better and I think there is still a lot of work to be done to actually look at where we really gotta be heading.

Like, if you look at, for instance, this often cited example of air pollution in Beijing and by now I visited it more recently. It has actually been resolved and not, as you know, as what these stories are usually about, but it is about the deployment of environmental sensors and this data driven governance approach where the joke goes that why do we need that level of detail and granularity like I can...a blind person can tell the governance of the city that they have an air pollution problem.

So the deployment of IoT sensors at that level is actually sometimes, and not just in that city, but in other cities preventing governance from just looking at the data and making decisions. And sometimes these decisions are very uncomfortable and I think what is missing in our data driven urbanism is the level of confidence to actually talk to the population and bring across and perhaps educate and take them along very rough journeys and I think that is, I think, an element that is coming through in a lot of these chapters and contributions and articles that there is a lot of potential for this to translate into action, but it needs more than just the designers and architects to do their piece; it actually needs the political will. It needs the public sphere and the journalism and the Murdochs of the world to do their piece too. So that is one thought.

The other thought I had is around the indigenous element that I was, that I've been kind of looking at for a little while, and then I was thinking would make an interesting additional contribution to this to this discourse. So, with regards to sustainability and climate change, we're often talking about the notion of the circular economy and how cities and the built environment need to embrace a much more sustainable framework, but again I feel that this data-driven urbanism is actually holding us back, because what is easy to quantify and to number crunch - it's energy. And so what we found in our research is that is a lot of the built environment, assessment tools and appraisal frameworks, they just focus on what's easy, which is, you know, let's number crunch our energy profiles. And then we also just look at efficiency gains. Now, Janis Burklund, who is also in in Melbourne now used to be a professor here with us at QUT has been a pioneer of, you know, advocating for a net positive contribution for architects and urban designers to bring about positive developments that actually make a net positive contribution to the environment, not just the built, but the natural environment.

I think that connects to these indigenous concepts of stewardship and caring for country. And perhaps we have to work together to identify some sort of, you know, caring for city framework that actually connects us to this treasure chest of epistemologies and experiences that we are sitting on. Um, I think it is fantastic that we have Indigenous rangers looking after our natural environment, but perhaps we need those kinds of, you know, indigenous urban designers to sort out the way that we

are stuffing up cities in Australia, so I'll leave it at as at that at the moment. I think there is plenty of great inspiration that's coming out of this this issue and I'm already looking forward to the next one.

PROFESSOR JENI PAAY: So who wants to take on Marcus and the fact that we're stuffing up the cities? And how did these comments work with your ideas about participation, Sarah?

DR SARAH BURNS: Did Mark want to respond? Or is it straight over to the panellists? Sorry I.

PROFESSOR MARK BURRY: I don't want to. I don't want to.....I had a good and I've got a I've had a good input. What I would I would say though is because I just think this will answer all three of you. I think the COVID app and the fact that the states have come up with their own COVID sort of, what they call it, QR code type thing which doesn't seem to work. And in the United States, apparently there's 50 different COVID apps there tells us just going back to Sarah's point.....if we can't do the basics. I mean, how much work is it to make an app that actually does the job at that level. And we've got a society that's really nervous about what is the what's really behind the app; it's not just your health, is it? It's something else. So we can be as ambitious as we like, but if we can't even get these basic moves implemented with enthusiasm from the public, we can't fool ourselves. That's what I would say to all of you in response to that.

MEREDITH HODGEMAN: Mark, I'm going to have a slight pop at you and say, yeah, I don't disagree that a lot of the redundancy and, indeed, fear around those apps doesn't necessarily flag well, but I do think that it starts as a benchmark for federal collaboration that we haven't seen before. One that was perhaps echoed in the in the political layer as well. I think there are some quite exciting moves at the moment that will basically will effectively better help us to collaborate across sectors across industries around city, and I think that's in Data whether that's the reform review of the Privacy Act, whether that's the establishment of the Office of the National Data Commissioner, whether it's the promise to potentially propose a new government data sharing scheme, or additionally the upcoming Reform Series paper by Infrastructure Australia around data for good. All these questions come back down to the notions of things like data sovereignty, and you know things that are so important for citizen generated data in the public realm and public infrastructure. And I don't think they would have got this much traction had we not had that, had we not been forced to collaborate in a manner that perhaps we hadn't before.

PROFESSOR JENI PAAY: Interesting. Anyone want to argue?

DR SARAH BURNS: Now I think I certainly would agree with Meredith to the extent that you know, this year has really forced us all to understand the importance of effective data sharing regimes for population health. And that's you know, going back to the origins of, you know, urban planning. I mean, that's population health is what it's all about. I think we've now got much, much sort of clearer lens on the need for effective data architecture across agencies. I mean, it is sometimes said that that's the difference between a New South Wales health approach or Victorian health approach, or I don't know if that's true or not, but just around we've actually had those data footprints of our government agencies exposed much more clearly this year.

I did I did want to pick up actually on a point that you were making Mark in the discussion around Australian cities and we're all here speaking in Australia and I think one of the challenges that we've

certainly faced from a smart cities point of view, from a digital futures point of view for some years now is that kind of patchwork governance environment that that we are all working with. I mean, the City of Brisbane is certainly has, uh, has the large footprint the city of Sydney's footprint in terms of Governance here in Sydney is quite small. The Committee for Sydney's sort of governance remit is quite weak so not the community. Sorry. The Greater Sydney Commission. And so Metropolitan Greater Metropolitan Sydney as an example, is such a patchwork of separate cities. But again, I think you know, going to that point of, that Meredith was making, was that with this shift towards the precinct scale, and I think we have been encouraged in that way this year that there is that kind of emboldening of the local government. And seeing ways to actually empower local governments to better, better be custodians of their of their data assets and working with citizens in that way. And I think that that's something that where we don't. We see a lot of planners in that space obviously, but we don't see that many architects and we don't see that many designers. I'm not. I'm not sure why. It's a space I've sort of dappled in. Dabbled in, but it's it often gets quite quickly down the path that I think what Marcus is talking about. Kind of quite instrumentalist view of space and place, of people, of custodianship of country. And you actually need sort of multiple epistemologies and multiple sort of sensory ways of understanding and knowing place and these are really critically important as local governments as precincts look to look to data to improve the way we connect.

PROFESSOR MARCUS FOTH: If I just quickly pick up on that example of the COVID safe app or the contact tracing in general... and what I find quite peculiar is that here is, from a technical point of view, what we're trying to do there is actually not that complicated, right? So it's not really that we're lacking the science. It's not like sending you know another robotic mission to Mars. It's an app, and the app is actually, you know it does a whole bunch of things and not only that, Google and Apple have partnered and have offered an entire development framework that is called exposure notification that they're making available for any developer that you know in these different jurisdictions elsewhere, and a lot of these countries have actually taken them up, and they're developing their apps on this privacy preserving framework and Australia has decided not to.

But what is even more peculiar is the fact that very similar kinds of, um facial recognition, privacy intrusive technologies are used every day; for me to unlock my phone I look into the camera, people use Snapchat and different facial filters to, you know, get an entire 3D view of their contours; TikTok is tracking data. Like all of these platforms, if you are not paying for it, you are the source. You are the employee producing data profiles for them, and so there is this conundrum in in the sense that these commercial platforms seem to be doing this so well. And if a government comes along that is led by government and Scott Morrison, then people run to the hills. So that begs the question of why do we love TikTok and Snapchat so much? And why do we hate Scott Morrison and Peter Dutton so much? I might. You know that's a rhetorical question, but you can you can see where this is going.

It's not about the complexity of the technical architecture; it's about the lack of trust that the people have in these levels of governments. And this goes all the way to the local government level. If we look at the way cities have employed data here in Southeast Queensland, coming back to Sarah's point about the piecemeal governance approaches on the local level. Well, Brisbane is the largest local government in Australia. It covers a big chunk of southeast Queensland with the city deal that was negotiated and is kind of doubling along and I don't. We don't really know exactly what will

happen to the CDL discussions. Is collaboration also with the other councils across southeast Queensland. Well, what's interesting is some research that has been produced at the University of Queensland about data driven value capture and value uplift, which is really, really powerful and can produce tremendous benefits in infrastructure projects. I'm thinking of, for instance, the Gold Coast light rail developments of Stage 1, two and three, and it can reduce the burden on taxpayer money if it's done in an ethical manner.

So, if the data is kept between the decision makers and they're using these data driven analysis tools that we are producing as researchers behind closed doors we can make decisions and say, well the station is going to go here and then I'm going to talk to the Land Leasers and developers of the world and we engage in insider trading. And that's exactly what's been happening in local government. And that has exactly been investigated by the Crimes and Corruption Commission in Queensland and the research from our colleagues at UQ was used as expert evidence to put a whole bunch of people at local government level in prison, so this is the other kind of dystopian side of data-driven urbanism that we've got to be aware of, and that isn't about the technology. It's not about the architecture of the design, it's actually about the humanities and the ethics of the governance arrangements that are actually not actually caught up, and the fact that you know our federal government is defunding the humanities to keep this all in check and not have more of that research going on is actually quite frightening because of anything, and if you also look at what Genevieve Bell is doing at A and U, we need more of this work. We need more of the anthropologists and critical data scientists that actually keep up with these developments because without it we'll just end up in Back to the Future Part 2.

MEREDITH HODGEMAN: Lovely. It took us about 15 minutes to get to trust and the Treaty of Westphalia. It reminds me of a comment that Mark made in the discussion actually around the call for citizen juries and, you know, whether or not, you know Marcus you talked about, obviously, how we've all sort of we've got particular notions about the way we use our data when it comes to private entities, and we have completely separate particular notions when it comes to the way we use data with our public entities, but more often than not it is our precinct developers etc that are actually owners of what could or should be public data. So, I mean, personally, I think that there's an awful lot of top-down thought and which is to be expected, especially when you're working with system designers, be they technological or architectural or in visual. But the notions of where will we find more citizen science; how will we generate more citizen juries?; how do we have a bottom up approach to regenerating trust is something that we spend a lot of time thinking about these things?

PROFESSOR MARCUS FOTH: Yeah, yeah, that's a good point.

PROFESSOR JENI PAAY: Sarah, you raised an interesting issue in an email to me about data shadows. Does that sort of enter into the conversation here?

PROFESSOR MARCUS FOTH: Yeah, I saw that as well Sarah. I'm really interested to hear to hear more about that.

DR SARAH BURNS: Well, that old term data shadow is, you know that one Marcus I'm sure.

PROFESSOR MARCUS FOTH: I think it would be good to revive this.

DR SARAH BURNS: Sure, yeah, yeah. I mean, I think there's um, so a lot of my research in recent years has been around this concept of platform urbanism, and that's really looking at the importance of platform business models in shaping productive urban spaces. And I think when you, when you look and interrogate the platform business model itself you kind of and the many examples that we have of the ways that platforms like Uber, Air BNB and others would be shaping conditions of urban life. I've it's quite clear that the earlier you know, say early 2000s or thereabouts that kind of perception that that that data is kind of accessible and should be open. Well, that is obviously a really strong current that continues to exist, and I think we see that in many of the contributions into this publication. We are actually increasingly working in a framework or an environment where platforms will look to make that data, essentially, can modify that data and, therefore, making it more and more inaccessible.

My work on real time cities asked, you know, some years ago I kind of came to realize that anything that is real time is oftentimes data captured within a platform ecosystem, and so we often we're increasingly now when we look across, you know, urban environments with that data lens. It's kind of. It is about trying to negotiate between platform ecosystems via APIs, ways in which data can be shared so that idea of sort of data being free and free and open and too much, too abundant, big data too and, therefore, needing the analytical skills to be able to use data effectively that I think we need to always remember that, yeah, the infrastructures of data capture are significant and, hence, I think we've had reference to the data sovereignty movement and that kind of attempt to move beyond just open data, but actually thinking about more significantly about who owns who owns data.

I was interested actually Mark in in in your work with Barcelona in Barcelona, and whether you'd come across the decode project there, that's one of the probably most prominent data sovereignty projects that's come about in recent years, and whether any of any, any of those that you work with have had experience of its benefits in recent years. That's the question.

PROFESSOR MARK BURRY: The answer's yes. I not directly, but I know that the colleagues at IAC, which you know he actually Institute of Advanced Architecture of Catalonia. They have deeply involved with that. The thing about Barcelona is that it's the as far as I can tell, it doesn't have silos. There seems to be a fluency across all the different areas, and I suspect it's because they have an urbanistic tradition as opposed to, you know, the designer sets the sets, sets the tone.

But I did see as I said in my talk that originally I had this this remit of looking at data analytics visualization and policy; policy was the thing that I was least qualified, I mean I had zero qualifications, except that I've had a sort of a residual interest and I realize it's everything. Because if we don't actually find a way to influence governance at any level, whether it's at the street level or whether it's that the people are making the decisions, and then we think about the overlay of corporate life and their expectations, data privacy, data ownership, and it's, it's it's something that's waiting to be unpacked.

That's not answering my question that decode, but I know that Barcelona is ahead in thinking about this, but I've also thinking about the polity of cities. When the mayor changed to Anna Kalau, Vicente Goya immediately lost his job as the city architect and a major company that makes tiny little sensors...I won't mention who they were, went to the Council and said "Look we can sell you for 50

cents each one of these little sensors that can go on to every rubbish bag that gets put into your hoppers and we'll be able to tell you exactly where every single bag starts and finishes." And see I would imagine that that would have been something that would have responded to the ideas and thinking of Vicente in the previous administration. But the new administration simply turned around said "How much is that going to cost?". You know, it's several million euros and they said "And what is the value that we will get that will be equivalent of that investment?" And sent them on their way.

And this is all just from my point of view, I think it's just. It's still very much early days and we just need to keep our eyes open on the space and think about speaking as a designer, every subversive means possible to access good data without having to pay for it and without disturbing privacy. But I'm not sure that's the answer you're expecting.

PROFESSOR JENI PAAY: Meredith you look like you've got something to say.

MEREDITH HODGEMAN: Look, you know having literally just walked out of the Smart Cities Council Australia, New Zealand 2020 awards this year and just reading 90 applications for the 4th year running it was the first year when I could say with confidence that we are now seeing tangible ROI and metrics against the investment. And it has certainly plagued us. So has the buzzword 'smart cities' I might add, but you know, realistically speaking, we're getting outcomes now from smart infrastructure investment, urban futures investment, and we've got the data to show it and to prove it. And it's been heartbreaking for so many amazing small pilot projects and amazing creative ideas and initiatives that unless you are able to command that answer upfront without using just models, economic modelling, we haven't really seen some of that grassroots type bottom up stuff that I keep hoping for, but I do feel excited this year for the first time in a long time that actually despite the focus on, you know, a very meaningful, you know, frontline and vulnerable communities, this year we're seeing city councils across Australia really start to apply advances in technology and AI and analytics to look at things like waste contamination and to use um, to leverage the assets that they already own to actually deliver more efficient services in other areas as well. So normally I'm the first person to be the negative Nelly, but today I'm feeling optimistic.

PROFESSOR MARCUS FOTH: I know we've got to wrap up, but if I can just add on to that and it's to Meredith's credit and to Adam Becks as well, I think what is also really nice about the Smart City Awards is that a lot of regional cities have been awarded not just this time but also in the in the past. So to recognize that there is an uptake not just of the technology *per se*, but actually also translating it into what's regionally specific and what makes sense in the, in a more regional context.

So I think that is quite encouraging, because I'm a bit fearful of just this cookie cutter approach where Metropolitan Smart City kind of growth models get imported into the regions and will just drive gentrification. I mean, you've seen extreme cases of mining booms happening in Carrathool and other places of WA in Queensland as well. Where all of a sudden the local population gets displaced because of a mining boom, but something quite similar could happen if regional cities are just blindly adopting the same mistakes that the Metropolitan cities have been making. And so I think it's actually also quite urgent that we are identifying a data-driven urbanism for the regions that is leapfrogging them away from, you know, these kinds of trends towards inequality that we've been witnessing after Florida.

PROFESSOR JENI PAAY: OK, we've actually come to the end of our time and the discussion bit went really fast. But what I'd like to do is just ask each of my panellists to come up with one word about who should be designing the digitalized city. So who should be in charge of designing the digitalized city.

PROFESSOR MARCUS FOTH: Is this a particular person or a profession or what?

PROFESSOR JENI PAAY: What do you think? Who should be designing the digitalized city?

DR SARAH BURNS: Everyone.

PROFESSOR JENI PAAY: Ah, there you go, Sarah.

MEREDITH HODGEMAN: At the risk of sounding biased, I'm going to side with Mark on the citizen jury.

PROFESSOR JENI PAAY: Citizen jury, well that kind of, the citizen jury is representing everyone. Marcus?

PROFESSOR MARCUS FOTH: My one word has two hyphens. It's the 'more-than-human' which has been our main topic to actually look at the more ecosystem approach. So it's not just looking at what's good for us, but what's good for the planet.

PROFESSOR JENI PAAY: And Mark you get the final say.

PROFESSOR MARK BURRY: Yeah, well the ones I would have said have been said so I'll just add another one which is the informed Citizen.

PROFESSOR JENI PAAY: Ah, OK, not so. Not not the architect.

PROFESSOR MARK BURRY: No I think we've had our go. We should offer the creative umbrella to which Collective decision making is expertly guided. But if we don't have ownership from those people who are actually going to be living with the consequences of decisions, it's never going to be as good as it should be. We need the architect to make sure we don't dumb down. The trouble of just relying on the citizen is we get usually a version of what already exists, because that's the extent of their imaginative resource sometimes.

PROFESSOR JENI PAAY: A faster horse. I need a faster horse. OK, thank you very much panel. This has been an excellent panel. Sadly, we've run out of time, but if anyone wants to contact the Smart City Research Institute, our email is somewhere. There. So please contact us if you want more information about this or again the link to the 10% off book if you want to read the edition of Architectural Design then that is a good idea and thank you all for coming today and for your participation. There will be a recording. I assume it will be available on the Smart Cities website, at some point in time, so if you want to revisit any of this, go to the Smart Cities website and thank you very much Marcus, Sarah and Meredith for giving us your time and participating in this.

PROFESSOR MARCUS FOTH: Thank you for having us. Thanks Jenny. Thanks Mark.

[END OF TRANSCRIPT]