BRISTOL+BATH CREATIVE R+D

DIGITAL TOOLS FOR IMAGINING FUTURE PLACES

by Paul Clarke, Digital Placemaking Fellow, Senior Lecturer in Theatre and Performance Studies at University of Bristol, and Artistic Director of Uninvited Guests

Creative Clusters

Funded by the Creative Industries Clusters Programme managed by the Arts & Humanities Research Council as part of the Industrial Strategy.

CONTENTS

INTRODUCTION: DIGITAL SPACEMAKING

In my first blog post for the Pathfinder, 'Making Digital Space', which you can read here, I considered definitions of digital placemaking and wondered if we could use the term digital spacemaking instead. This arose from an interest in whether a city's digital layers could make space for more representative voices and cultural practices.

I don't want to spend too long on semantics, but I will start by returning to definitions of digital placemaking, which the fellows discussed both in early workshops together and in our concluding conversations with Jon Dovey that you can listen to here. Before getting into my own Pathfinder research I want to pick up on some things that came up and pose a few general questions. Admittedly what follows will involve utopian thinking, but hopefully this will help us reframe narratives around digital placemaking and consider possible future directions critically.

Digital Placemaking concerns the interplay between physical and digital worlds in public space, considers places as hybrid physical-digital, and addresses the ways in which off and online spaces, the public realm and private infosphere have become entangled. We might consider the city as a physical interface, with place-based content triggered by our bodies' movements through its streets; for instance, surfacing hidden histories, or targeted, person, time and place-specific advertising. We are used to shifting our attention fairly seamlessly between engaging with where we are and with our mobile devices in our day-to-day life; from checking directions or exploring local businesses on the Google Maps app, to listening to a locative historical audio tour on a day out at a heritage destination.

Dr Jo Morrison (Director of Innovation and Research at mobile app developer Calvium), who's been a consultant on the pathfinder, has written an excellent Guide to Digital Placemaking that I would recommend. I'm going to summarise and pull out a few key quotes here. For her, digital placemaking is about 'using location-specific digital technology to foster deeper relationships between people and the places they inhabit'. It involves the 'augmentation of physical places with' digital layers, 'services, products or [interactive] experiences', and has the potential to 'enhance or even radically transform an individual's experience of their time' in a location. *Future Places Toolkit*, the Augmented Reality (AR) project I will go on to discuss, uses digital means or layers to imagine improved built environments and aims to have an impact on physical placemaking, although it might also take in the socio-technical aspects of places and digital enhancements.

For Morrison, 'digital placemaking is focused on making places better' and has the potential to 'boost [their] social, cultural, environmental and economic value'. In her guide, she goes on to say that 'attention is the currency of digital placemaking' and 'the creative use of digital technology' has the potential to focus 'people's attention on the particular place in which they are located'.

I like Morrison's positive aspiration about augmenting places digitally in order to make them better, but it is important to keep asking, better for whom and for who is value added? Who are the tech tools or platforms made *with* and *for* – who can shape and participate in making a city's digital places and layers? How can we engage people who are representative of the centre and the margins of the city and its full diversity with digital placemaking, especially when the term itself sounds technical and could therefore be alienating and exclusive?

As Shawn Sobers said in one of the Fellows' meetings, we are being aspirational, and we should be wary of taking for granted access to the hybridity, augmentation and enhancements of physical places. Can a radically inclusive approach lead to every individual's experience of places being transformed and the new info, affects and feelings being distributed equally? Is access to digital layers equitable, or do they reproduce and amplify existing digital divides? Whose place-based content is published; how can we avoid reproducing existing privilege and erasure in what is represented there? Is it only content that is co-created or user-generated, or can platforms be co-designed with communities of local users, see: https://www.blackspace.org/manifesto

What about the commodification of our attention, if *it* 'is the currency'? In light of surveillance capitalism, who are we entrusting our location-based data to, is it being privatised or commercialised and how do we or our local neighbourhood/city benefit? (Shoshana Zuboff). Is the future private, as Mark Zuckerberg said in 2019?

We need to reframe and recuperate digital placemaking, because the term has become associated with surveillance and platform capitalism, despite Google's Sidewalk Labs ending their controversial smart city project in Toronto. Location-specific tech and digital layers have become new means for extractivism and territory for gentrifying places, bodies and minds; for marketing to and commodifying us, our data and desires. If we were to keep our locations private, own the digital footprints we create and hold our personal data as property – so our behaviours cannot be predicted, nudged and monetized – could online services and info still be freely accessed? As customers or users of digital providers can we resist being developed as assets and exploited as resources for Big Data analytics?

As I said in the recorded conversation, Franco 'Bifo' Berardi (2019) has suggested that it is not the streets we should occupy. Instead he proposes reoccupying ourselves, our locations and digital spaces, repairing or reclaiming our communities of interest, taking back our data, desires and attentions, refusing their extraction. He says, 'let's occupy each other', our collective bodies and social bodies.

For me this relates to the idea of digital spacemaking and making digital space. There could be a number of resistant strategies for this. It might mean intervening in, taking up or over (privately owned) public digital spaces, or making space there for underrepresented voices and cultures. And on the other hand, it could be about becoming silent: preferring not to do unpaid work as content creators, withdrawing

our free labour of liking, reposting, and boosting. Perhaps we could make space in the break between digital layers, away from all the excess information vying for our limited attention. Whilst he knows it is utopian, Berardi proposes 'blacking out the white noise of the infosphere to create the conditions for silence'. Roseanna Dias has spoken about digital spaces for rest or physical-digital spaces that centre care, which makes me think of Navila Acosta and Fannie Sosa's Black Power Naps project that aims to redistribute rest and digital downtime.

For Berardi, 'the only way to create solidarity and empathy is through the body'. In 'Geographies of Responsibility', Doreen Massey (2004) suggests that 'every place is a "meeting place" of cultures, experiences, and relationships', perhaps blended spaces can enable physical-digital meetings where we might rediscover listening, share silence and solidarity (Berardi 2019). Can we make common spaces to share-and-share alike, where content has mutual value? Can we reclaim and localise the infrastructure, for instance setting up grassroots, ad hoc community wireless networks? Can we become smart citizens, common all digital info and reclaim the rights to our location-based data? Can we make hybrid public meeting places, forums or agora, for those able to be physically present and those who are remote? And can we poach some space in the city for physical-digital clearings that are temporarily outside (whilst within) the infosphere and beyond surveillance.

This intro draws on exchanges between the fellows over the duration of the pathfinder and I hope it has raised some useful critical questions around placemaking.

BILLENNIUM AND DIGITAL PLACEMAKING

In 2018, I made the AR performance Billennium with Jessica Hoffmann of Uninvited Guests, sound artist Duncan Speakman, Michele Panegrossi and Luca Biada (Fenyce), and illustrator and animator Sam Steer.

Billennium was originally produced for Millennium Square in Bristol, commissioned by Watershed Media Centre and University of Bristol's Smart Internet Lab, for their *Layered Realities* 5G Platform in 2018, which showcased potential innovative and creative applications of 5G connectivity to the public. This led to interesting interdisciplinary and industry exchanges for an arts commission, as it involved working with Information and Communications Technology (ICT) researchers from University of Bristol's Engineering Faculty, since part of the remit was to test the capacity and latency of their 5G test network with our app and streamed creative content.

Billennium takes its name from the eponymous J.G. Ballard sci-fi short story (1964). It's a theatrical guided tour, not of historic sites, but of a city's futures, on which you walk through time to the locations of utopian and dystopian science fictions. Future architecture appears before your eyes and you hear what different worlds might sound like. Accompanied by performers as archaeologists of the future, you carry mobile devices that interpret and visualize traces of what's to come. The tour concludes with an opportunity to design tomorrow's city together and see the buildings you imagine layered onto the architecture of today using Augmented Reality (AR). Live-streamed, multichannel audio immerses you in sci-fi location sounds and speculative architecture is drawn in realtime over the existing buildings.

Billennium is place-specific, written and drawn anew for each location it is remade for, and tends to be staged in places that are undergoing rapid regeneration or urban renewal. After being shown in Bristol, *Billennium* was commissioned for *STRP 2019*, the festival of art and technology in Strijp-S, Eindhoven. According to STRP's curatorial statement, the 2019 festival focused on 'critical optimism' and 'aim[ed] to be a guide towards a positive future' (STRP, 2019).

Jess, Duncan and I started to ask ourselves whether aspects of *Billennium* could be applied; whether our fictional or theatrical set-up could be used in actual situations and have civic or social impact beyond the art world. *Billennium* was originally made as a piece of theatre, an artwork, but in each of the contexts we've shown it people have identified real world applications, in particular its potential as a way of engaging local communities with planning consultations.

This led to me applying for a Digital Placemaking Fellowship, the first pathfinder on the Bristol+Bath Creative R+D Cluster. The enquiry I proposed set out to explore whether approaches from *Billennium* could be applied in neighbourhood visioning, participatory building design and planning.

DIGITAL WAYFINDING

The name 'Pathfinder' makes me think of anthropologist Tim Ingold, who uses 'wayfinding' and then 'wayfaring' to describe feeling your way, in an embodied, on the ground way, whilst moving through life, the world and in process. He talks about places as knots where we encounter one another – our differing knowledges, cultural and lived experience – and our trails (physical and digital) are entwined.

The Digital Placemaking Pathfinder brought together industry, new talent, inclusion, and academic fellows like me, with industry partners, BBC R&D, City ID, Stride Treglown, and Niantic, makers of Pokémon Go. The Fellows selected had diverse professional and lived experience, but the cluster's producers established a space with little hierarchy that modelled best practice, in which everyone's ideas, from industry partners to new talent fellows could be heard. In a series of workshop activities, presentations and open space technology meetings, we interrogated our definitions of placemaking, introduced inclusion practices, shared emerging technologies, platforms and challenges for the industry, along with exchanging methods of co-creation. Through this process of workshopping, and with support from the B+B Creative R+D producers, we identified our target audiences and how to reach them, focused our research enquiries and methods.

Drawing on these initial workshops and critical reflection on *Billennium*, the questions that framed my Digital Placemaking research were:

- Can science-fiction storytelling and Augmented Reality (AR) inspire people to imagine preferable, more inclusive futures for their places together?
- Can interactive performance methods engage a wider range of people in discussing plans for their neighbourhoods, and are these conversations more effective in the sites that are being developed?

Early on in the Fellowship, I did some theoretical writing on *Billennium* and you can read the full paper I presented at *Theatre, Performance, and* Urbanism, in Shanghai, July 2019, here. In it I reflect on how *Billennium* critiques and refocuses our attention on the present through located science fictions, and on the relationship between site-specific sci-fi and AR. I'm going to share a couple of relevant extracts here:

1) CRITIQUING THE PRESENT THROUGH LOCATED SCIENCE FICTIONS.

Can utopia and dystopia be used as tools or lenses for focusing our critical thinking on today's places and how things are in them? Zygmunt Bauman (2002) describes 'active utopianism' as, 'measuring life "as it is" by a life as it *should* be (that is, a life *imagined* to be different from the life *known*, and particularly a life that is better and would be *preferable* to the life known' (222). *Billennium* invites audiences to measure actuality against an optimistic, progressive future – a better life – and also a pessimistic alternative, a regressive future. A utopian, and a dystopian future. Finally, life "as it is" is measured against – compared and contrasted – with a whole range of alternative realities that the participants invent collectively.

In their book, *Speculative Everything: Design, Fiction, and Social Dreaming* (2013), critical designers Dunne and Raby propose that speculated futures and sci-fi scenarios are 'aids for critical reflection' on our contemporary world (4). The comparisons and contrasts between the alternate realities and our contemporary world – and what takes place in these places now – aid a critique of the present. In reference to Brecht's *Verfremdungseffekt*, the sci-fi theorist Darko Suvin (1979) uses the term '*cognitive estrangement*', which effectively articulates the way these science fictions located and told in real places function dialectically (Suvin, cited in Dunne and Raby, 73).

This distancing effect of science fiction relates to the effect of Augmented Reality. Adam Greenfield talks about 'the conceptual shear between the physical world and the realm overlaid onto it' (Greenfield, 2017: 64) by AR. Augmented Reality gets described as "blended reality" but, in *Billennium*, the gap between our architectural line drawings of the future and contemporary Bristol/Eindhoven, both of which are visible to participants, is employed constructively. The augmented reality layer is both cleaved *from* reality and cleaves *to* the material place. The AR blueprints and sci-fi narratives work critically *with* the distance between the city "as is" and the imaginary "as if" of our sci-fi version. Rather than collapsing the distance or merging the visible present and simulated future, we're interested in the connections and dissonances being perceived and functioning dialectically. To use architectural language, the AR is a "digital twin" that has diverged from its "physical twin", rather than being a replica.

The science fictions told invite participants to project the futures described onto the present-day. Together with the animated drawings that appear on the group's smartphone screens they make possible versions of Strijp-S visible and more tangible.


Client Connected


GEEN GEEN ROBOT

2) OTHER-WORLDING AND TRYING OUT WAYS OF DOING PLANNING CONSULTATION DIFFERENTLY

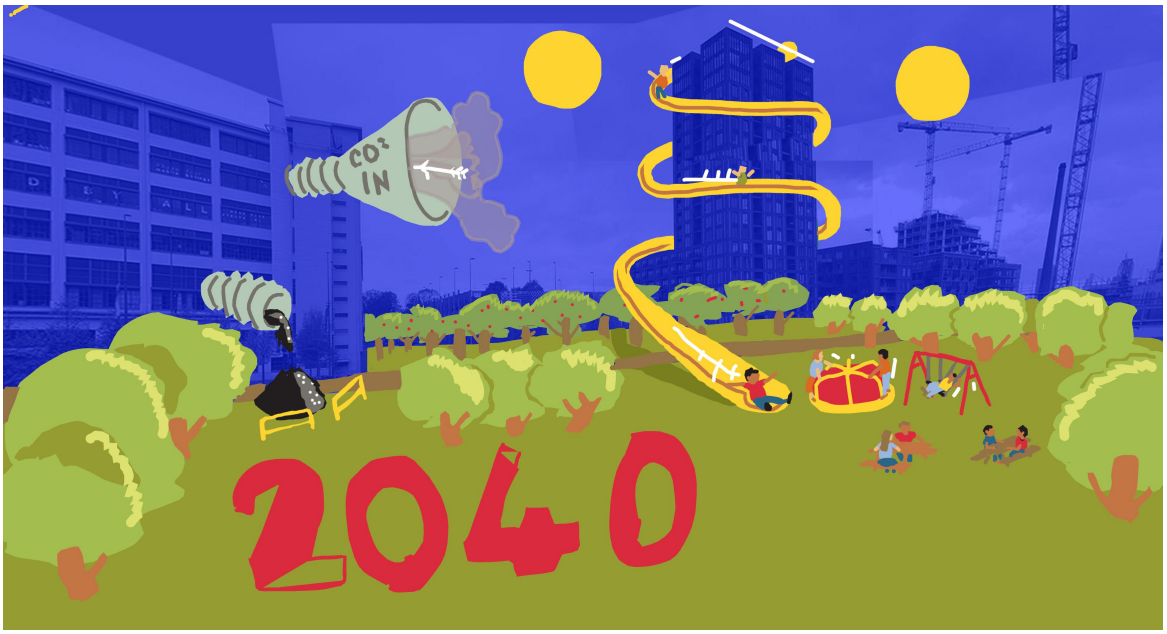
In the last location, the futurological guides invite participants to collaborate on co-creating speculative architecture together, imagining future worlds. *Billennium* performs a participatory and democratized approach to urban design and planning consultation. The idea – the fiction if you like – is that people take the place of architects, co-designing futures for their city and debating the proposals in situ.

We performed *Billennium* thirty one times in Strijp-S and some common themes recurred: more green spaces and trees, both on the ground and on buildings; water features; places to play; shared communal areas to meet in; autonomous ecological forms of transport, underground or in the air, including flying cars and bikes, skylifts and hyperloops; green energy and more companion animals, including dinosaurs recreated from their DNA; and, of course, various forms of robots and AI. *Billennium* encourages playful and imaginative thinking beyond the everyday, beyond planning constraints, regulation or structural concerns – in fact, sometimes beyond the laws of physics.

Each group collaborated on a preferable or predicted future and co-created their drawing. They actualized and materialized – at least in the form of the artists' impression – an as yet unrealized possibility, which often differed radically from what is probable or planned. Each group of participants drew a new AR overlay onto the square, visualising another non-identical twin, adding a digital layer to the palimpsest and rewriting Strijp-S with their distinctive imaginings. These also functioned as critical utopian or dystopian designs.

The purpose of speculating and visualizing various futures in the piece is to catalyse and facilitate critical debate that takes place in and about the present. We aimed to enable people, who would not conventionally find themselves in the same space – urban planners, developers and the public – to practice getting together, collaborating and listening to one another in a situation without hierarchies. The facilitators do not guide this meeting in and about public space towards consensus. The different competing futures envisioned remain as possibilities, not necessarily cohering, being finished or brought to a conclusion by the artist or performers. As Debatty wrote, this part 'engage[d] participants in lively debates about their local context and how it will be affected by the passing of time' (2019). As Anab Jain said in a talk for Civic Square's excellent 'Department of Dreams' conference, we want to hold participants in the 'possibility space', for the futures represented to 'embrace plurality' and 'keep all of their narrative threads open'.


LEARNING
SPACE
ADULT PLAY CENTRE
TO AUSTRALIA
2040


CO2 IN
2040


HOLO-FRIENDS
2049

DUTCH DESIGN WEEK

The success of *Billennium* at *STRP 2019* led to us being invited back to Eindhoven to present the piece again as a *STRP Festival* popup as part of *Dutch Design Week 2019 (DDW)*. *DDW* took place in October, during the Fellowship, and gave us the opportunity to showcase our work in a commercial design context, rather than an arts festival. *DDW's* concentration on 'the design of the future and the future of design', plus 'how designers from around the world shape a positive future', related closely to the social and technical aims of Uninvited Guests and our collaborators. *DDW* 'believes in the problem-solving capabilities of designers' and that '*the future requires responsibility*'. I will discuss responsible innovation in detail below, as well as our shared values around this.

Gill Wildman, the Pervasive Media Studio's Business Advisor recommended that we put together evaluation forms in preparation for *DDW*, which would provide us with testimonies from participants and help us build an evidence base. A number of those who participated at *Dutch Design Week* noted that *Billennium* could be applied effectively in urban planning. We received 69 feedback forms, of which 62 said they'd never experienced anything like this before. They said the methods "sparked their fantasies" and encouraged "speculative thinking about the place"; the performance "allow[ed] participants a role in it" and empowered them to collaborate on inventive ideas for the future of their city. Participants wrote that the approach was "really unique" and one said, "I had no idea how the world would look in the future, but now I suddenly have tons of ideas".

DESIGN FICTIONS FOR PLACES AND SCI-FI STORYTELLING AS PROTOTYPING

On the Fellowship I began to explore futures as critical tools and how writing collaborative science-fiction stories in places might be a way of prototyping; local horizon scanning or co-authoring design fictions in and for specific sites.

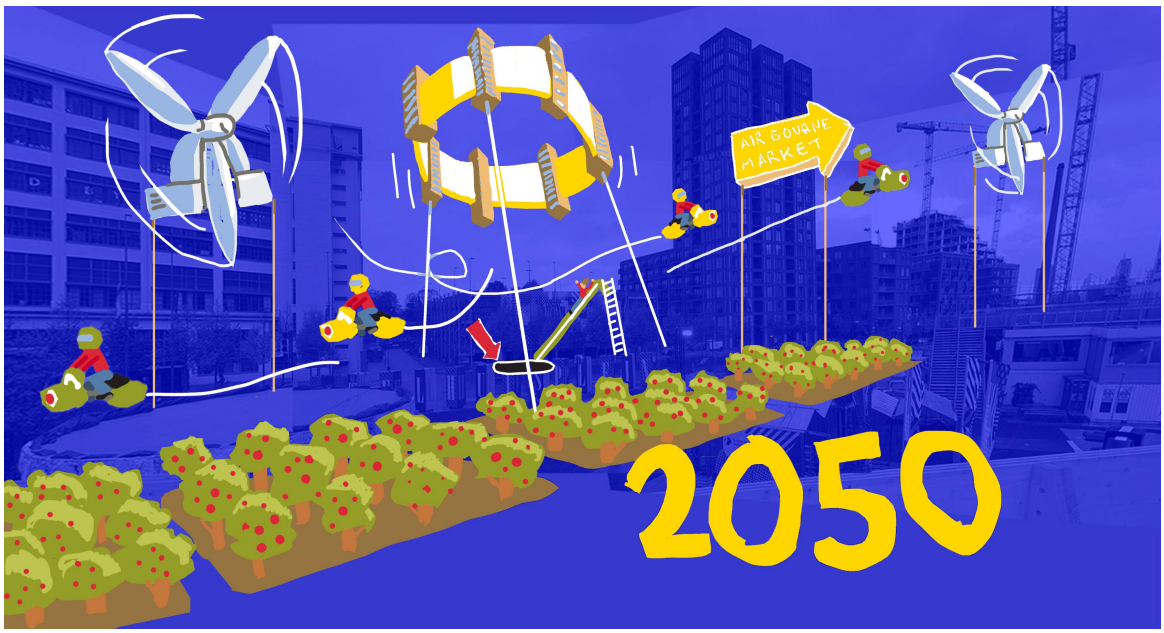
In August and September 2019, I ran a workshop at Watershed for other fellows, and then for delegates at the AHRC Clusters award-holders conference. This used an online form to take people on a walk into the future, then got them to imagine how the place could be in as many years to come as they chose; future architecture, technology, transport, work, behaviours, etc. When they returned, they heard their responses spoken over a sci-fi soundtrack as a collaged, collectively written story.

Rob Sargent (Director of Stride) enjoyed this future-gazing activity and, through conversations in B+B Creative R+D workshops, I developed a good exchange with architects Stride Treglown. This led to an invitation to present a lunchtime talk at Stride's Bristol offices, the chance to discuss *Billennium* and share my digital placemaking research in this professional context. Together with Stride, Uninvited Guests went on to propose a Prototype and make an application for R&D production funding in response to the Placemaking brief. We were shortlisted, partnered on a pitch and had the opportunity to present our idea, *Future Places Toolkit*, to the panel. Although the prototype was not one of those selected for funding at that stage, the partnership with Stride, and with Uninvited Guests' collaborators, Speakman, Panegrossi and Biada (Fenyce), has continued. The proposal was developed in light of reflection and we went on to receive a grant for prototyping from University of Bristol's Knowledge Exchange Fund, along with follow-on R+D funds from B+B Creative R+D for a second phase of development.

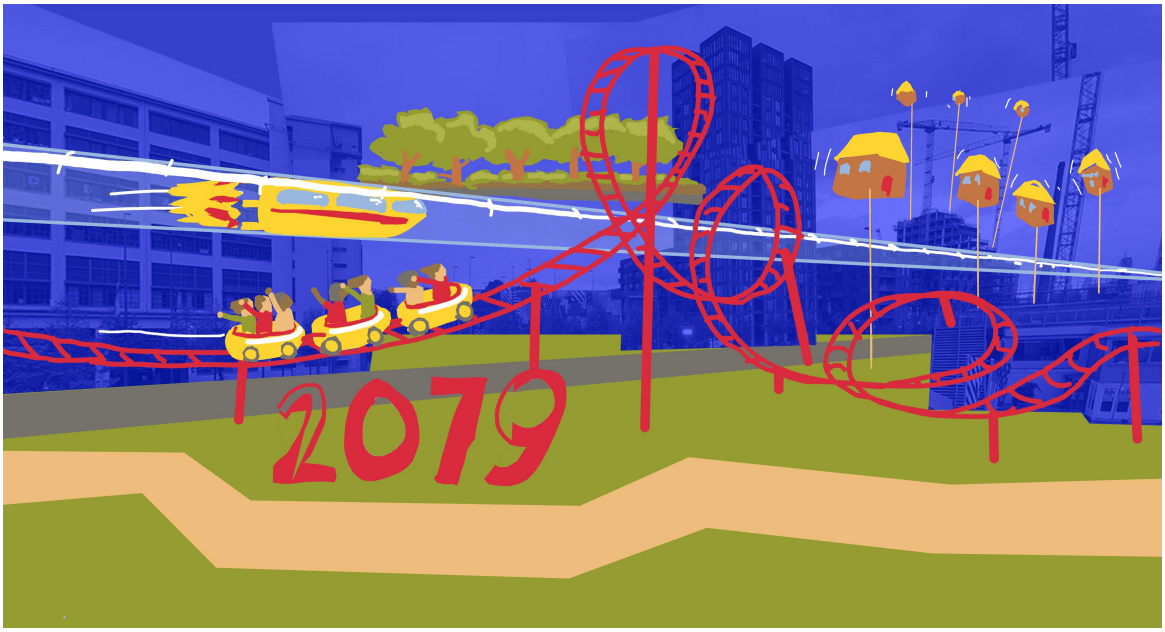
PROPOSING FUTURE PLACES TOOLKIT

Future Places Toolkit is a set of live and digital tools which aim to inspire people to imagine better futures for their places. Drawing on the conclusion of *Billennium*, the toolkit combines guided conversations and provocations with an AR app, in order to facilitate citizen-led conversations around the future of local neighbourhoods. The idea is that the toolkit can be applied at various stages of a planning process; that it will be scalable and transferable to a range of national and international contexts.

Funding has enabled us to develop these creative tools for imagining better places for all, and to start iterative testing. The prototype toolkit is being co-designed with partners, collaborators and communities; people will be able to get involved in trying it out in different contexts in Bristol and their responses – what they want from the tools – will feed forward into the next stage of development.


AIR GOUGNE
MARKET
2050


2075
LIBRARY
SKYLIFT
TO MARS


2079

PROBLEMS: CIVIC AND INDUSTRY CHALLENGES ADDRESSED

Future Places Toolkit (FPT) seeks to apply creative practices and immersive tech solutions to problems identified by industry partners around public engagement with planning processes. Stride Treglown have noted that planning consultation can be perceived as dry and the problem of engaging a broader range of people with neighbourhood visioning. For Rob Sargent, the Toolkit could enable developers to understand the vision of a community before they purchase potential sites, leading to proposed developments being more civic and aligned with local needs. Rather than communities feeling excluded and disenfranchised by developments that are parachuted in, they would feel listened to, be able to have an impact on development briefs and buy into more positive, inclusive plans for their neighbourhoods, which they were involved in coming up with. We have also partnered with Knowle West Media Centre (Digital Placemaking Inclusion Partner) and *We Can Make*, the citizen-led housing initiative on developing the project. For Melissa Mean, of Knowle West Media Centre, the proposed approach addresses 'legitimate feelings of lack of agency in consultation, people defaulting to a position of Not In My Back Yard', and has the potential to 'create a non-hierarchical space for discussion between all the stakeholders'.

A CREATIVE TECH AND SERVICE SOLUTION?

Consultation with local residents tends to take place away from the site of the development itself, with plans displayed in community centres or town halls. *Future Places Toolkit* allows collaborative drawings to be viewed layered over existing buildings and conversations to happen in situ, between members of the local community, council planners, architects and developers. The entertaining and engaging approach aims to get more representative people involved in sharing hopes and dreams for their place in a situation without hierarchy: everyone's stories about the future will be heard and the architecture they describe will be visualised immediately around them using AR. Live spatialised sound will bring their ideas to life, giving their future places atmosphere and supporting their imaginings. *FPT* lets participants see, hear and experience different futures, making them more tangible and giving people a better sense of what they would be like to live in. In this way we hope to help people understand and influence decisions around plans for their neighbourhoods. Ultimately the aspiration is to feed into better development briefs and for people to have more impact on the design of their public realm and what's built.

The Fellowship research questions listed above are being explored through the practical process of developing *FPT* with collaborators, communities and partners. After designers Dunne and Raby, we are exploring whether asking 'what if?' and visualising speculative architecture can facilitate debate about 'the kind of future people want (and do not want)'. Drawing on theoretical analysis of *Billennium* we will see whether coming up with science fiction scenarios gets people thinking critically about the places they live in and enables them to do what Dunne and Raby call 'social dreaming' together (2013).

In July 2020, I gave a Watershed PM Studio Lunchtime Talk with Jess from Uninvited Guests, which focused on the development of *Future Places Toolkit* out of *Billennium*, and addressed many of the ideas developed in this report on the Fellowship. You can watch our presentation, 'Dreaming Future Places' here.

RESPONSIBLE TECH DEVELOPMENT

For us, one of the most constructive and influential inputs during the B+B Creative R+D was a workshop with Alex Mecklenburg, then of Doteveryone. You can read about their work on, and learning from the Pathfinder here.

Doteveryone was imagined by Martha Lane Fox to 'put the public at the heart of the conversation around technology and help navigate the new [ethical] challenges that technological change poses for society'. For the last five years they have demonstrated the importance of developing technology responsibly, the 'need to change how tech is made and used, so that it works in the best interests of people, communities and the planet'.

Though they drew their work to a close in May 2020, I would highly recommend exploring their practical resources for innovating responsibly, which are now hosted by the Open Data Institute, and embedding their responsible development practices into your product or service design process, whether or not it involves digital tech. In particular, Alex introduced us and the teams developing Digital Placemaking Prototypes to 'Consequence Scanning'. You can download a how-to manual for running your own event here.

Since we got a lot out of this 'new Agile practice', we invited the *Future Places Toolkit* project team, collaborators, partners, critical friends, advocates and key stakeholders to come together for a workshop inspired by Doteveryone's approach. As recommended, we ran this event at the start of our collaborative process, the 'initial conception of the product', and as a way of marking the beginning of our iterative development. We collaborated with the B+B Creative R+D producers on designing the workshop, which they led, in order that Uninvited Guests and the rest of the project team could participate fully.

SHARED MISSION AND VALUES

We started with each participant, individual, company or organisation, sharing their interest in the project and what they wanted to get out of it. Then we collaboratively edited a mission statement we had drafted. Initially this led to a semantic dispute around what it should be called, with some having a preference for 'vision' over 'mission' and others suggesting 'purpose', or a set of principles that govern how the service or product behaves.

This is the co-created text we arrived at:

> To enable inclusive and imaginative conversations about the future of places between communities and stakeholders. To empower people to have influence over the future of their neighbourhood.

Originally, it said, 'to empower people to have agency'. 'Agency' is often applied to participatory performance like that of Uninvited Guests, in the immersive technology context of Fenyce, and by organisations like Knowle West Media Centre, which explores creative models for social change. But Rob of Stride Treglown suggested that 'agency' is not a word in common use among architects. This highlights the importance of interrogating specialist terms when working with interdisciplinary teams and developing shared language.

Knowle West Media Centre, who developed The Bristol Approach, for Co-Creating tools to address the digital divide and issues identified by citizens (211), state that, 'at the start of every project, it is essential to give time to defining and Co-Creating a shared mission of change … a clear headline intent' (King, Mean and Stewart-Hall 2020: 207). Whilst the different actors involved in our project had various interests in working together, aims and agendas, it was important to share common values and principles, an ethos that would be abided by, inspire and build trust in the collaboration.

CONSEQUENCE SCANNING

I will come back to Co-Creation, but first want to introduce Consequence Scanning, which Doteveryone suggest is a good way to shift from 'big, abstract conversations about ethics and values into something more tangible in the context of the product you are creating' (6). In this part of our workshop, we asked, 'what are the intended consequences of the product or service?' and what the unintended consequences could be. The intended consequences 'are the change or impact you are looking to make'; your intent and what you want to be responsible for. Both intended and unintended consequences can be positive or negative. All the participants came up with these individually to start with, generating consequences for *Future Places Toolkit* or its features, and writing them onto different coloured post-its for intended and unintended. Then they categorised the impacts, determining whether they were for: the makers, partner organisations and companies; the user and people who are engaged; the wider community or neighbourhood; more broadly for society and the sector, other architects, consultants, council planners or policy-makers; and finally noting any impacts on the planet or environment. Consequences were then sorted into groups according to affinities and discussed. We addressed the positive consequences that we would collectively like to focus on, prioritise and bring forward. Then we moved on to the potential negative consequences and what we could do to monitor or 'mitigate any potential harms, to [collaborating artists, business and partners, to our] users, and to the communities [we] operate in'.

Outcomes of this Consequence Scanning were interrogated further during mentorship sessions with Alex Mecklenburg for the core development team, which took place over Zoom during the lockdown of Spring 2020. For instance, one participant noted the unintended consequence of what they called 'conceptual asset stripping', the mining of the community's ideas by architects or developers, taking people's creative IP without appropriate crediting. Alex asked whether 'it was our responsibility to ensure mutual value', that the activity would benefit both those we were running the consultation for (council, consultation company, architects or developers) and the people/community participating. This fed into our scripting of the preface to the engagement activity/experience, which we recognised needed to be transparent about what would happen to people's data and the ideas they imagined, along with how they would feed into the public consultation and what influence they could have on the development plans or neighbourhood vision. The intention is, as Paul Seaver of Stride said, 'to contribute usefully to the Statement of Community Involvement (SCI) that accompanies a planning application'. This documents how local residents, businesses, community and interest groups have been involved in deciding on plans, whether those who will be affected accept the proposals and have had the opportunity to improve them.

If, as Rob Sargent proposed, *Future Places Toolkit* enables communities to influence and improve development briefs, leading to proposals that communities have a sense of ownership over and are 'aligned with local needs', then contributing to the SCI is a positive consequence. But, as Horvath and Carpenter (2020) note, there is 'the risk of co-option' (5) for Co-Creation methods: in our case that the engagement could be data mined by developers for evidence of local buy-in for plans that lead to gentrification; to displacement or the character of a neighbourhood changing in unwanted ways. Going forward, if we are to take *Future Places Toolkit* to market, we should monitor this. The way of mitigating is to clearly articulate our principles in publicity materials and only partner with civic-minded developers with shared values. It is certainly important to recognise the risk of becoming complicit in gentrification, art-washing and generating community buy-in for contested schemes, which is what critic Stephen Pritchard accuses creative placemaking of (2016).

ITERATIVE DEVELOPMENT

One of the Core Values of Bristol+Bath Creative R+D is Co-Creation, with the cluster website stating that they intend to 'bring in users and partners as co-commissioners and co-designers of challenges'. Similarly, Stride Treglown state that 'future places should be shaped with and by their communities' by 'joined-up thinking on the social, economic and technological issues they face', and 'by joined-up doing from people across different disciplines, sectors and areas of expertise'.

One of the shared values of the *Future Places Toolkit* project team is 'to co-create and test ground-up, citizen and community-led approaches, without hierarchy'. My applications to the Knowledge Exchange Fund and for B+B Creative R+D funding proposed that *FPT* would be designed *with* and *for* its users and iteratively tested with

different publics in at least two real-world contexts. We aimed to employ an Agile development process, adapting software features and facilitation techniques in response to user-feedback and evaluation of our engagement experiments. Agile refers to iterative software development methods 'where requirements and solutions evolve through collaboration between self-organizing cross-functional' or cross-disciplinary teams, through which features are delivered incrementally, rather than all at once. It encourages 'frequent [trials] and adaptation' and 'aligns development with customer[, or user,] needs and company[, or project] goals' (cprime, 2020).

COVID-19 and the March lockdown prevented us from beginning iterative testing in-person as early in the process as we'd intended. This led to shifting the development timeline and milestones, so that the initial emphasis was on scoping, research and design of a technology demonstrator and facilitation tools based on the functionality of *Billennium.* We focused on developing the drawing software and mobile app to enable a remote artist to create real-time renderings of the speculative ideas participants generate, and on how to guide this conversation in useful and inspiring ways. Michele Panegrossi and Luca Biada (Fenyce) explored network solutions and scoped-out the best platform/software development kit (SDK) for effectively blending the digital future worlds imagined and the physical place.

Jessica Hoffmann and I surveyed other influential projects engaging with participatory futures and critical hypothesising, whilst continuing to consult with architects at Stride around questions and provocations that would form part of the facilitation script. As a company, Stride also carry out research, and we drew on 'Shaping Future Places', along with *The Little Book of Provocations*, which summarised this initiative, and Paul Seaver's analysis of the components of place; 'things we try to think about with [stakeholders] when it comes to designing or regenerating places'. As we could not get together, we also met with the creative technologists via Zoom to do some paper prototyping of the app and to journey map the experience of participants through the consultation activity, borrowing both methods from service design.

CO-CREATION

Our partners, Knowle West Media Centre, provide a useful definition of Co-Creation as:

> a cooperative process whereby people with common interests, often with diverse skills and experiences, work together non-hierarchically towards a change they want to bring about (King, Mean and Stewart-Hall, in Horvath and Carpenter, 2020: 207).

A criticism of our approach could be that those we intended the toolkit to benefit, community members whose area is undergoing regeneration, were not there 'at the start of [the] project'. Whilst challenges were identified with the architects and Melissa Mean of *We Can Make*, citizens did not contribute to the 'shared mission of change'. Rather than exploring issues with people who had experience of, or were going through consultations in their neighbourhoods, to determine 'if and how technology … could be utilised', we saw the opportunity to apply an existing arts-based digital solution to the

problem of engagement with planning processes. In spite of that, our intention is to value 'different knowledge and expertise' equally, to cooperate with non-professionals and non-academics, to involve citizens and end-users in the co-production of *Future Places Toolkit*. Our design research will respond to potential beneficiaries' needs, those with lived experience of being part of consultations, or feeling excluded from them. We will engage local inhabitants as collaborators in each trial location, who will be given agency in how the AR software and facilitation methods develop, as these remain open to adaptation at each stage.

Like Brainport and Strijp-S in Eindhoven, KWMC is part of the European Network of Living Labs (ENoLL), which 'operate as intermediaries among citizens, research organisations [like universities], companies, cities and regions for joint value co-creation, rapid prototyping or validation to scale up innovation'. What is key to the Living Labs approach is 'placing the citizen at the centre'; testing and experimenting *with* people 'in real life settings' rather than testing *on* communities. Whilst multiple stakeholders participate, the ethos is to 'involve end users in constructing meaningful innovation with and for them through co-creation' (Rens Brankaert and Elke den Ouden).

What we are developing in this participatory way, drawing on co-creation techniques, is itself a tool for co-creation, which 'employs creativity through arts-based methods'; in this case sci-fi storytelling and our artist's live visualisations. The co-produced product or service aims to get people with different backgrounds and knowledges – including local knowledge – involved in generating research data around preferred futures for a place. In one of our mentoring sessions, Alex Mecklenburg suggested that *Future Places Toolkit* could become a visual means of engaging local inhabitants and stakeholders in location-based Consequence Scanning; generating and documenting ideas around potential positive and negative futures, plus the intended and unintended consequences of plans.

Above I noted the aspiration of the Bristol+Bath Creative R+D Cluster to 'bring in users', not only to co-produce hybrid physical-digital prototypes, but also to 'co-design… the challenges'. This is an excellent aim, but complex to deliver within the structure of a research project requiring a proposition in advance, in order to secure funding. The Digital Placemaking Pathfinder has commissioned prototype products, services and experiences to 'expand our understanding of the intersection of digital and physical space, as well as the role of culture in new digital infrastructure'. The brief for these was workshopped and co-created with Fellows on this Pathfinder, with New Talent Fellows representing the next generation of 'original, diverse, creative minds' and Inclusion Fellows attending to issues of digital access and inclusion. But users were not centred at this stage and socio-technical challenges identified by citizens didn't inform the brief. That said, the prototypes themselves were required to have engagement plans in place and, when ideas were pitched, the panel questioned whether development would be inclusive, sustainable, and lead to positive socio-cultural change, as well as having economic impact.

For instance, City ID and Calvium are making *PopMap*, a mapping app that displays time-based, as well as location-based information about activities, events and opportunities curated by the people, organisations and businesses of Bristol. The project is still in progress, but Jo Morrison writes that Calvium intend to bring 'user research and testing to the fore – to discover their wants, needs, and preferences and tailor-fit [the] digital solution for, and with, them'. You can read more about PopMap from City ID here.

The tendency, all too often, is not to co-create the placemaking platform or app in a way that responds to the diverse features citizens might want or need from such software, not to centre users at the start of development, but rather to open the testing process to participation when the designers need content to be generated. We are used to labouring in our leisure time to populate commercial platforms with personal content that we provide for free, as unpaid content creators. Likewise, we accept 'the asymmetry of the sharing' of information and lack of mutual value (Wark, 2019: 1); not benefitting financially from the data extracted about our location, private experience, behaviours and likes (Shoshana Zuboff, 2019). And all for advertising tailored to our interests, rather than bespoke software or personalised platforms. Although it sounds like a dystopian narrative from *Billennium*, as McKenzie Wark observes, 'if you are getting your media for free, this usually means you are the product. If the information is not being sold to you, then it is you who are being sold' (1).

The same issues pertain to engaged university research. It is rare for citizens or communities to co-create a project's research questions, to identify the societal challenges to be addressed, or co-design the methodology. Even with practice as research, communities' personal stories and private experiences can be extracted and exploited for their potential affects. Or predetermined research propositions and methodologies are tested *on* communities, rather than creative outputs being made *with* and *for* people and their places. Elsewhere I have written about 'The Impact Market' (Clarke, 2015) and the complicity of applied and practitioner-researchers in 'the spread of the university beyond the university' (Harney and Moten, 2013: 37). By this I meant the territorialisation of our social, political and professional practices, 'how our socio-cultural and entrepreneurial engagements', interactions with communities and businesses become commodified by institutions, measured and captured in the Research Excellence Framework (REF). In this article I argued that engaged researchers might find themselves mining communities for data about change to evidence impact case studies, and that positive personal or social transformation has become a product that universities can capitalise on. This returns us to the problem of asymmetrical sharing: the 'responsibility to ensure mutual value' (Mecklenburg) and benefit from engaging with projects for all stakeholders; university, professional and citizen researchers.

For whom is value created or added? Solely the developer or researcher, or is joint value co-created? Whose data – about change and social transformation – is extracted and is this a one-way transfer? I should note here that, as a performance and technology practitioner-researcher rather than a social scientist, for me, the research

output will be the AR app and facilitation tools, as well as documentation of the engagement activity, rather than analysis of the data produced.

I want to turn to Campbell and Vanderhoven to sum-up 'the potential of co-production' and why knowledge from meaningful exchange matters. They write that co-created 'research is undertaken with people rather than on people', it is 'a collaborative, iterative process of shared learning'; the relationship of researcher and participants is not 'extractive or transactional', but rather 'interactive'. This approach to engaged research blurs the 'boundaries between … academic and non-academic' (2016: 12). KWMC similarly argue that impact should not only be one way, on the public and communities, but also on researchers, the project, business partners and institution (King, Mean and Stewart-Hall, 2020). In co-production, all of these partners and relationships undergo change, exchanges can impact on the framework and lead to new or altered research questions. I will return to this in relation to the idea of 'nonscalability' below (Tsing, 2015: 38).

BUSINESS MODELLING AND IP

Part of what we have been developing with partners, alongside the toolkit, is the appropriate business model. With consultation from Gill Wildman, Watershed's Business Advisor, we have researched the package of services or product that could be offered and how to scale up our potential technology start-up. We also sought support from University of Bristol's Research and Enterprise Development (RED) team, and Adam Powell, Business Development Manager for B+B Creative R+D, who advises on future investment.

These were the initial options or packages that we came up with:

a) **Full consultation service:** delivered by Uninvited Guests and partners. This could be at a chosen planning or design stage or run iteratively from beginning to end of process. With inclusion work to engage community groups, documentation and presentation of data gathered.
b) **Toolkit, training and license to deliver:** software system with initial set-up, demonstration from Uninvited Guests and collaborators of live and digital tools, guidance on facilitating the activity in an example real-world context, before licensing for use, with further consultation and support available.
c) **Toolkit as product:** downloadable app and manual of facilitation tools, for DIY and remote use. For instance, a set-up fee, or free initial download from App Store, Google Play, etc., then a monthly subscription after a trial period.

The focus for the Pathfinder and prototyping in 2020 has been on a), from which b) and c) could be developed and would enable us to scale up. Whilst our initial engagement and impact will be local to Bristol, in our funding applications we proposed that we would develop a scalable model, replicable nationally and internationally.

The other key learning for collaborative or partnership working is around IP and licensing. It is essential to agree principles around intellectual property rights at the conception or start of a development process, and certainly before growing or scaling the research or production. This is especially the case when the artists and creative technologists are: using underlying approaches or code from previous projects; writing applications they do not wish an academic institution or industry partner to hold exclusive rights to; keen to have permission to use software modules developed, without limitation, in future creative and commercial work. With *Future Places Toolkit*, we brought the technology collaborators into our discussions with University of Bristol's Research Enterprise Development (RED) and co-created a collaborative document outlining principles for the contracts, along with milestones and deliverables. An integral part of our research and development, which I hadn't fully anticipated or accounted for, concerned IP and the appropriate form of license.

SCALING UP AND NONSCALABILITY

As the Creative Industries Cluster Programme is funded by the Industrial Strategy Challenge Fund, one of its aims is to 'accelerate growth in a range of creative sectors' and to 'drive the creation of companies, products and experiences that can be marketed around the world'. B+B Creative R+D takes an approach that focuses on inclusive and sustainable growth, but the cluster is still looking to fund cultural platforms, digital services and marketable applications, which are created by regional teams but have the potential to be delivered at scale. Hence, in my request for follow-on funding for the Fellowship project, I argued that I would explore the commercialisation of *Future Places Toolkit*, ways of scaling this service or product, and routes to market, nationally and internationally.

I want to talk about the drive towards accelerating growth, 'rapid prototyping' and to 'scale up innovation', which is also there in the aims of the European Network of Living Labs I mentioned above (ENoLL, 2020). If a project, platform, model, product or service scales well, it is able to perform as effectively when its scope and workload are expanded, and in different contexts, without needing changes to be applied. Growth is linear and suggests that income increases at the same pace as the amount of labour and investment put in. If the system developed is scalable, revenue can be added more efficiently, at a far greater rate than the time and resource cost to the developers. Scalability is often the aspiration when arguing for the commercial potential of university research and knowledge exchange projects. So, I used this technology industry buzzword in my proposals.

Whilst there might be quantitative and financial benefits, it is important to consider the potential qualitative loss from scaling up and what cannot be smoothly scaled. Anna Tsing (2015) suggests that in research, to "scale up" involves 'the ability to make one's research framework apply to greater scales, without changing the questions' and for her it has become, the 'hallmark' of contemporary knowledge production, not only of expansionism in platform capitalism. She tries 'to build a critical distance from

scalability' (39), suggesting a 'scalable business [... that] does not change its organisation as it expands' is only possible 'if business relations are not transformative', if the business model – and by implication their piece of technology or platform – does not change 'as new relations are added'. Elsewhere, Tsing (2012) likens technology companies' 'ability to expand – and expand, and expand – without rethinking the basic elements' to digital media's 'power to make the great tiny and the tiny great in an effortless zoom' (505). Think of the universality, consistent aesthetic, and powerful functionality of Google Maps and Streetview. Tsing argues that such platforms get in the way of 'our ability to view the heterogeneity of the world'. It is the homogeneity of such mapping applications that City ID and Calvium's *PopMap* prototype attempts to counter, with the idea of a local platform, which changes temporally and has a bespoke city-specific aesthetic. To use 3D Building Information Modelling (BIM) in architecture as an analogy, as you zoom out, in fact you decrease the scale of the model, view at a lower level of detail, lose accuracy and refinement.

In order to 'allow smooth expansion', a scalable research project or digital service would need to exclude 'the indeterminacies of encounter' and the kind of 'meaningful diversity ... that might change things', require adaptation of the underlying framework or platform (Tsing, 2012: 507). So, efficient, financially viable research and development could necessitate removing from consideration stakeholders, users or citizens who behave in diverse, unpredictable ways and not engaging in meaningful ways with 'real life communities and settings' (ENoLL). Hence scalable design could involve de-centring citizens/users with radically different life experiences, backgrounds or knowledges, along with neighbourhoods that have less social capital. This could lead to denying access to R&D, and also to the tech tools produced, for those who have already been marginalised, are under-privileged and under-represented, thus exacerbating existing digital inequities. I'd recommend checking out Sasha Costanza-Chock's *Design Justice: Community-Led Practices to Build the Worlds We Need*, **here**, and the excerpt of Sara Hendren's *What Can a Body Do? How We Meet the Built World,* available **here**.

Anna Tsing turns to '*nonscalability*' (505). Whilst developing *FPT* it has been important to consider which aspects are not scalable and will need to be changed in relation to the specifics of each new physical and social location. Whilst *FPT* is modular and parts of it – especially the AR drawing app – are designed to be flexible and transferrable to a range of contexts, it is important to acknowledge that elements of the toolkit will not be universally usable or applicable. As users, real-world settings, communities and their challenges are not interchangeable, the service will need to continue to be agile and responsive to each new site or iteration.

For instance, the introduction and facilitation script should include input from a diverse range of inhabitants; conversations around changes in recent years, needs and wants for their place, research around existing neighbourhood plans and planning applications. This ethical commitment to researching-with, a thinking-with that in our case might take in such methods as walking, talking, remembering, reflecting, critiquing,

imagining, dreaming and hypothesizing-with, brings to mind Donna Haraway's 'situated knowledges' (1988). There is also a relationship with Shannon Jackson's (2011) observations in 'Tech Support', about the casting of 'non-professional … "experts" or "specialists" as actors in the documentary theatre work of Rimini Protokoll. The 'unique angle', in our case of living or working in a place, 'makes the label "amateur" inappropriate' (167). This also chimes with Knowle West Media Centre's acknowledgement and valuing of 'different knowledge and expertise', including lived experience of a place. In relation to Tsing's critical take on scalability and which communities tend to have privileged access to R&D, I would note our decision to exchange knowledge and expertise with KWMC and engage with Filwood, an area of Bristol that 'ranks highly in government indices of deprivation' (King, Mean, and Stewart-Hall, 2020: 209).

Care will need to be taken to localise the *FPT* service to each new site and situation. As Seaver of Stride noted, the components of place – points to think about with stakeholders – and questions asked, would need to be 'adapt[ed] to suit each setting' and the consultation's remit. In addition to investing in making the introduction site-specific and situating the guided conversation, resources need to be assigned to engagement and inclusion work; building relationships with community organisers and diverse local groups, in order that those who participate in the consultation activity are representative of the neighbourhood and all those with something at stake in the redevelopment.

In relation to transferability, as well as inclusive development, it must be acknowledged that, as Doteveryone write in their Consequence Scanning Manual, 'not everything about what you create is going to be good for everyone in every context.' But, as responsible tech developers, you should 'mitigate any potential harms … to the communities you operate within' and barriers to access for participants or users.

TECH DEVELOPMENT

In terms of software development, Michele and Luca (Fenyce) have moved away from the marker-based approach to AR tracking we used in *Billennium* in favour of an 'anchor' based system: the phones use their built-in cameras to recognise surfaces and create a 3D version of the surroundings that can be synched across multiple devices. So, *Future Places Toolkit* enables users to turn 360 degrees and see visualisations appear all around them, rather than solely being able to look at the scene from a single perspective. Now they are also able to move physically within the virtual 3D environment, rather than seeing their drawings at a distance. This will make it possible to place content created in 3D instead of 2D, give participants additional agency, and make the experience more immersive.

The drawing software and mobile app will enable the artist to work remotely to create the real-time renderings of the ideas people come up with in the guided conversations.

The aim is that architects can also upload existing designs, so plans can be seen, discussed and adapted in situ. Ideally this will be integrated with BIM (Building Information Modelling). We will explore how the visions that each group of participants have drawn can be displayed using the AR app, for others to browse through, interact and explore *in* the site.

Whilst the focus is on presenting in the place, we want to make the 3D sketches and the annotations of them with people's sci-fi imaginings viewable online. That way the consultations will be documented, and a community's hypothetical proposals, their hopes and dreams for their place will be made accessible remotely – for developers or the council for instance. And also, for those in the community who are unable to participate in person.

ARCHITECTING: EXCHANGING EXPERTISE WITH STRIDE TREGLOWN AROUND DESIGN AND PLANNING

Over the summer we have continued regular meetings with architects at Stride over Zoom, workshopping *Future Paces Toolkit* with Senior Associate Urban Designers, Sarah Jenkinson and Paul Seaver.

In light of initial conversations, Sarah raised the issue of how to maintain the 'balance of inspiring creativity' alongside developing 'a tool that is effective in built environment [design] processes and [satisfies formal] requirements'. For her it was important to return to the fundamental questions of, "what is it that we are offering?" and, "what do we want to, or have the capacity, to deliver?" By this she was getting at whether *Future Places Toolkit* is an end-to-end consultation process, or an engagement activity that would ideally be offered at a specific stage. As creatives, are we interested in processing the data from feedback, analysing priorities and presenting reports? And would we want to be responsible for preparing a pre-application Statement of Community Involvement? We would be able to document our *FPT* public consultation activity and evidence how the community were engaged in a meaningful way through it. We could collate and present their feedback in an imaginative, visual way. But we might not want to summarise the findings, draw conclusions and make recommendations, or outline the design responses. This could require having a professional architect or planning graduate on the team, which will only be feasible if we scale up. So, Sarah suggested that we initially offer our in-location AR engagement event to established community consultation companies, which share our values, for instance Make:Good, 'an architecture and design studio involving people in shaping neighbourhood change'. That way we could work with them to encourage 'positive participation in local change', but also to 'effectively communicate [the] ideas and share [the] insight'. An alternative might be to explore collaborating with providers of an online engagement platform, like Commonplace. We could also continue partnering with Stride Treglown, or with LUC, landscape planners and environmental consultants whose Bristol office we have begun a conversation with about trialling our approach.

Paul suggested we take a look at the RIBA Plan of Work, which is a 'framework for architects to use on projects with their clients' and explains the different stages of a building project and planning tasks. That way we could use the right industry terms when promoting *FPT.*

Sarah went on to pose key questions she would want to know the answers to as a potential client, and worked with us to develop pragmatic responses. I will summarise some of these here. In terms of what *Future Places Toolkit* is for, its purpose can be summed up as 'to enable communities and stakeholders to create, visualise and communicate their ideas for shaping the places they inhabit'. For Sarah, as *FPT* 'is about ideas generation and discussion', it is 'an ideal event for the start of a consultation and engagement' process, to engage people 'during the brief setting stage of the project'. If held at this point, RIBA Stage 1, the outcome would be 'a community or resident's brief'. This would draw on ideas generated by the AR activity and also 'follow up events to discuss and develop' them. These could take place in the development site and involve reviewing and debating the existing AR drawings made with community groups. Alternatively, visualisations could be projected, discussed and added to in a local community space. Or viewed, commented on and annotated online by those unable to attend. Both Stride and LUC advised that it would also be 'a useful activity for working with a community to design the detail' of a public realm or building project at RIBA Stages 2 or 3; especially 'a specific community park, garden, public space' or playground.

Addressing how the ideas would be documented – ways of fully evidencing the engagement – we talked about regular screenshots, or making a screen recording to capture each stage of the live illustration, which could be accompanied by edited audio or video of the discussion. In addition to displaying on the web and making them accessible there, we also considered working-up the co-created designs for distribution as a zine, print leaflet or booklet, where they could be accompanied by people's stories of preferred futures.

The other thing that came up when exchanging with Stride was the importance of setting clear and realistic expectations around the scope of the activity. This returns us to ethical issues raised by Alex Mecklenburg in relation to responsible tech development. Sarah articulated the aim of the activity as being 'to inspire creativity in, and unlock the aspirations of, local people'. She recommended that it would be important to clearly explain the boundaries, 'so that the activity isn't misleading' for participants 'in terms of its purpose and outcomes'. She anticipated clients wanting to know that we would make 'clear where the community have the ability to influence placemaking decisions and also why certain ideas can't be taken forward'. Sarah thought that, in addition to skilled facilitators, council planners or developers would expect 'planning and design specialists to be involved in the brief setting and analysis of the event'.

Stride felt there could be a range of additional benefits, for instance co-creating clear objectives to refer back to through the development process, building trust and

relationships between consultants, stakeholders and the community from the start, and enabling engagement to be proactive rather than reactive. In particular – as was born out by testing in Filwood – the AR app encourages participants to say what they want for the site, and then to move rapidly into positive discussion about what it could be like, rather than speaking negatively about what they don't want there. One aspect Sarah was interested in exploring was whether the benefit of *FPT* lies in bringing the community together to hear one another's opinions, or if it could in fact be a tool for consensus-making.

Consultations with Strides' urban designers were very valuable in terms of exchanging knowledge: we are now in a position to prepare a promotional document that effectively promotes *Future Places Toolkit* to clients and answers questions they are likely to frequently ask. Whilst it might be necessary to include some technical language from design and planning, a key learning has been to try to use the same plain language for everyone, so that all stakeholders in a process are on the same page.

Finally, before bringing this section to a close I'd like to turn briefly to the 'Planning for the Future' White Paper, which outlines the Government's plans for 'reforms to … the planning system'. The paper states that 'we will work with tech companies and local planning authorities to modernise the software used for case-managing a planning application to improve user-experience' (36). Sarah also noted that they are 'certainly aiming for a more digital engagement process' in these proposals. In recent years UKRI's Connected Places Catapult has been funding innovative digitally enabled systems that could transform the UK planning system. You can read about Plantech and the future of planning here, including some speculative design/design fiction around how planning will be different in 2050.

As Sarah writes in her analysis of the White Paper's pros, one of the expressed aims is around inclusion; 'to make planning accessible and easy to engage with' so that 'a lot more people will be inclined to get involved in placemaking and planning issues' (Sarah Jenkinson, 2020). This aligns with the purpose of *Future Places Toolkit* and – with the Government's drive to invest in tech solutions and digital expertise – the publication of 'Planning for the Future' may present opportunities for us. Saying that, Sarah also addresses the cons of the White Paper, which has been critiqued for deregulating and called 'a developers' charter' by Labour. *The Guardian* suggests it will 'reduce the public debate and scrutiny that currently come with planning applications'. In fact, what appears to be proposed should increase the emphasis on public engagement and consultation in the local 'plan-making stage', which 'will enable communities to be proactive rather than reactive to new development', but could exclude citizens from having input later, feeding back and improving the detail of 'specific planning applications' (Jenkinson, 2020).

TESTING WITH KNOWLE WEST MEDIA CENTRE ON FILWOOD BROADWAY

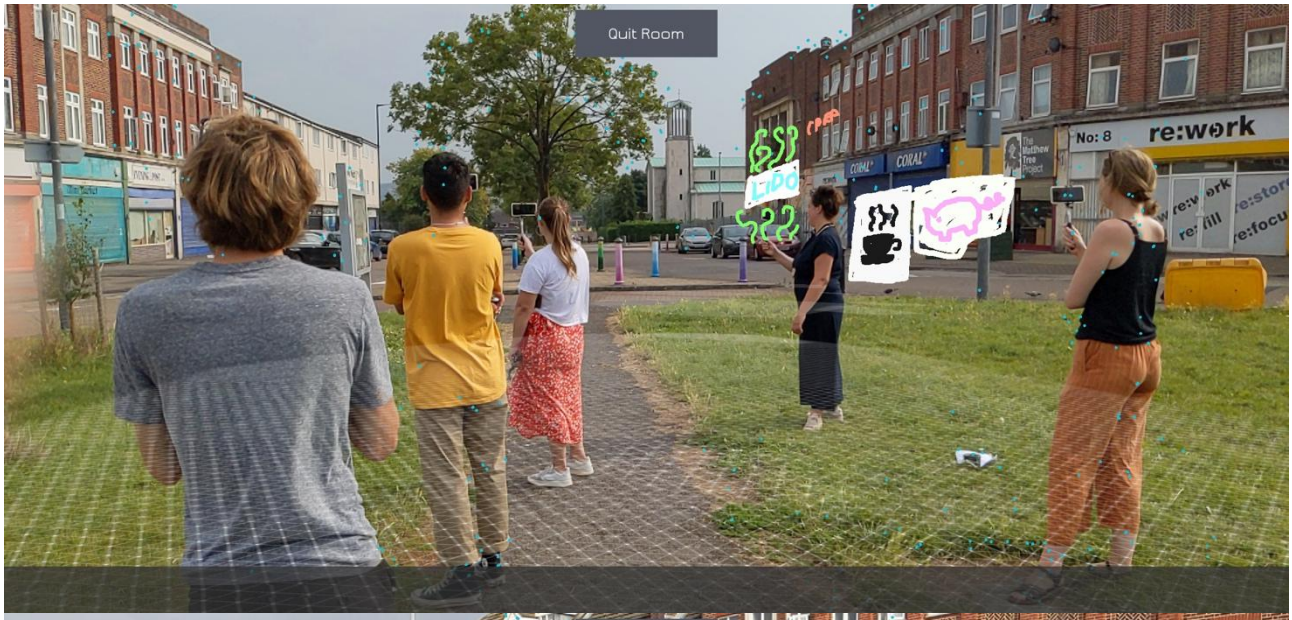
In early August, collaborators on *Future Places Toolkit* were able to meet in person for a residency at KWMC and Filwood Community Centre, and to carry out our first iteration of testing with the initial version of the AR app. Having limited participants to six at a time and put in place COVID-safe measures, such as social distancing and sanitising selfie-sticks, we ran two rounds of public tests. We worked with producers at KWMC to engage local residents, community organisers and people from various teams at the Media Centre. We also collaborated with three different illustrators over the week, Andy Council, Camille Aubry, and Sam Steer. They joined us at the community centre, or worked remotely, and were able to offer user-feedback on the functionality of the 3D drawing software, the drawing tools and interface.

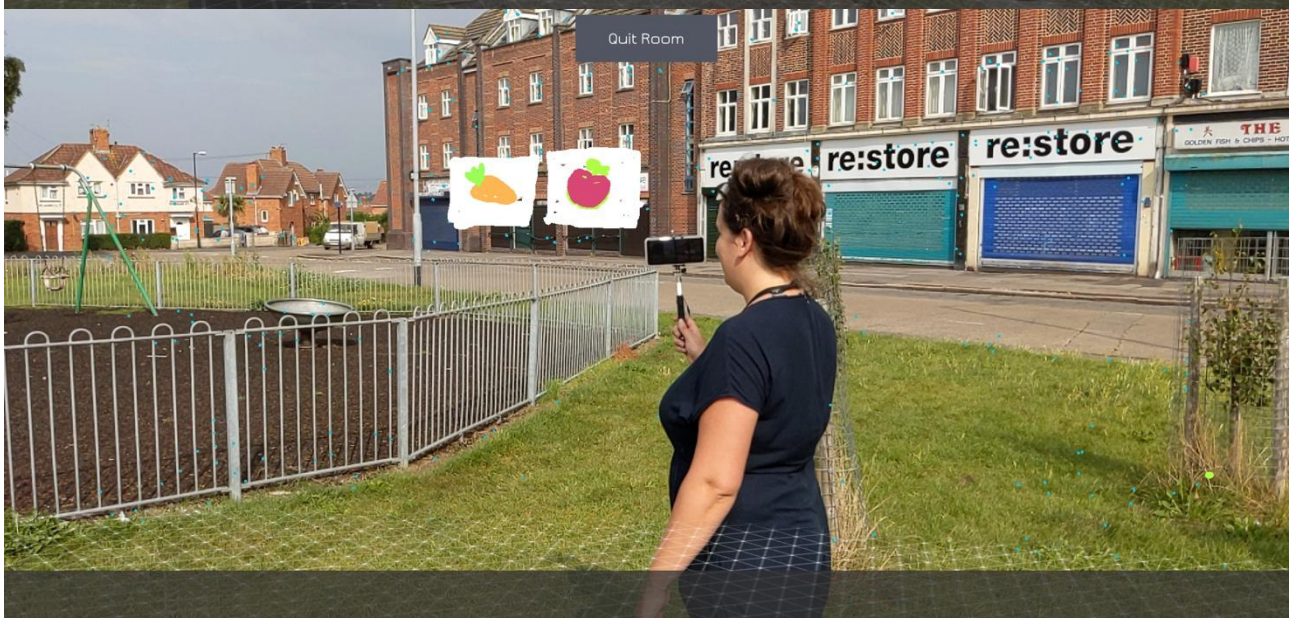
Bristol City Council is currently looking at the re-making of Filwood Broadway and have been inviting people to have their say since December 2019. Shortly before lockdown, on March 13th, we attended a public consultation event run by Knowle West Alliance and Knowle West Future, which offered the local community the opportunity to view, influence and shape the development briefs and designs. Redevelopment plans were displayed, along with analysis of the sites, planning constraints and why the council is supporting building in this location. The reasoning focused on helping to meet demand for more housing in the city and area, particularly social and affordable homes. The current plan is for a mixed-use scheme, mostly residential with a mix of new council housing, shared ownership and private homes, with an opportunity for community spaces and commercial frontage on the Broadway. This consultation took place in Filwood Community Centre, at the end of Filwood Broadway, and used analogue means, a map of the neighbourhood, pens and Post-it Notes to gather and place participants' issues, needs, and wants for their area.

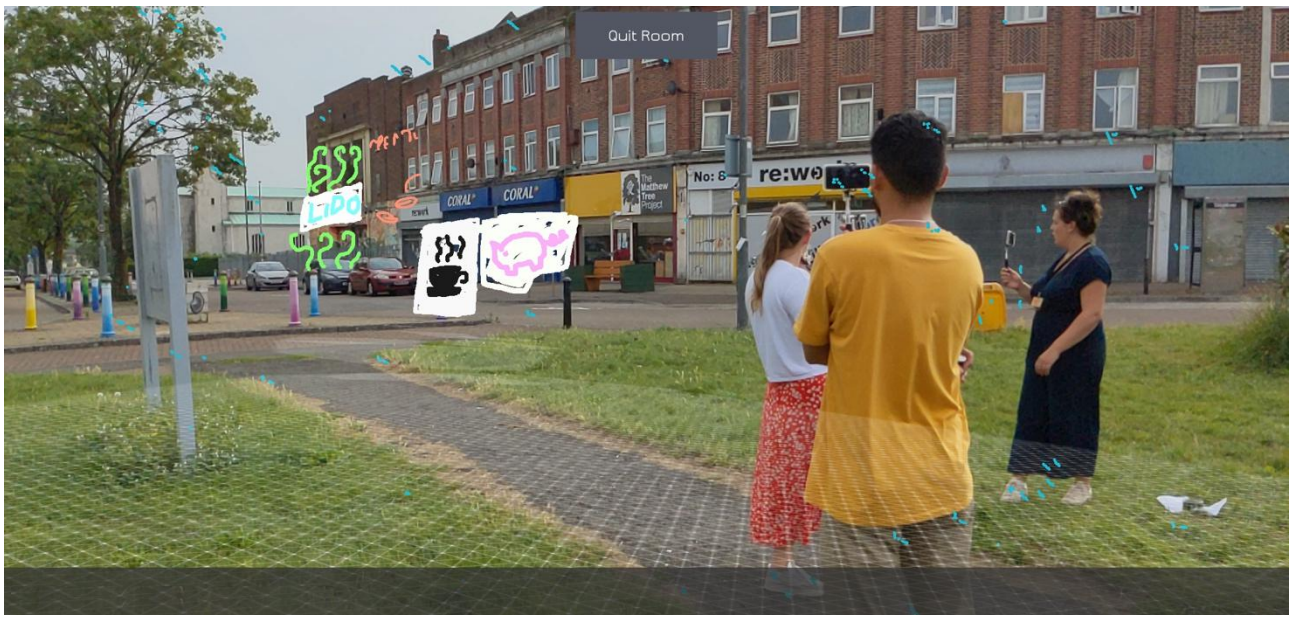
We were able to draw on these when we introduced *Future Places Toolkit*, contextualise the engagement activity in relation to the ongoing City Council consultation and how they aim to develop the land, along with giving some historical info, such as how Knowle West was constructed on Garden City principles. Thus, the framing of our

physical-digital and social service was localised (rather than personalised) and custom-made for the specific situation, community and site.

There were a mix of technical and dramaturgical learnings from this iteration of testing to take forward into the next phase. Positive responses from enthusiastic participants were validating, confirming for us that the approach is engaging and functions as a standalone activity outside of the performance *Billennium*. Whilst the groups were inspired to dream-up futures for Filwood Broadway, we observed that their hopes tended to be more concrete. Not as far into the future or science-fictional, they arose out of and responded to real, immediate needs and wants. It is interesting to reflect on the difference between the highly 'speculative fabulations' (Haraway) people tended to envisage in Strijp-S and Millennium Square and the pragmatic near-future possibilities proposed for sites on the Broadway, for instance; better retail provision, a bakery, green-grocers and butchers, a café with pavement tables and a bar, pedestrianizing one lane of the street, a weekly local food and craft market, and a lido where the former swimming pool was demolished.







Prompts/provocations included:

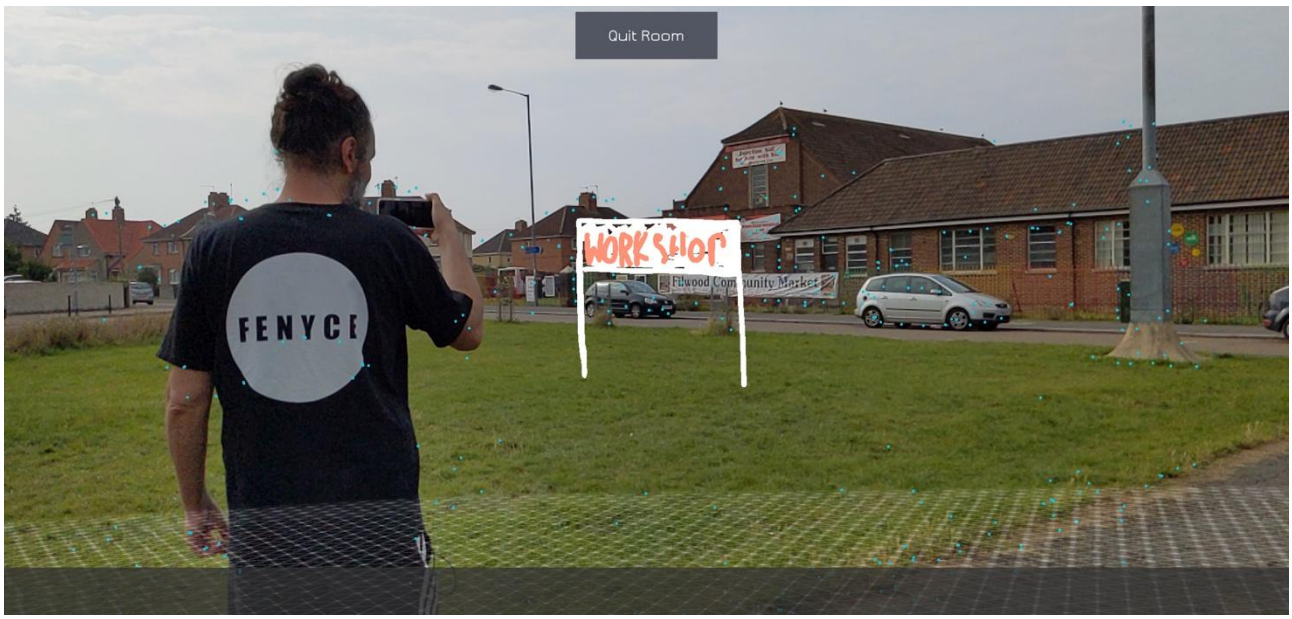
- How will people get here, get about, or get into the centre and back?
- What about energy; where does the power come from in your future?
- Is there anywhere to work here?
- Where do people live and are homes here affordable?
- What is there for young people to do, is there somewhere to play, for leisure or recreation?
- Is there any green space?

The engagement activity began with an imaginative journey from 2020 and the times of the pandemic, out of your present-day concerns and everyday realities, further and further into the future. To a Bristol-specific sci-fi soundtrack, participants were encouraged to think about how the city and world beyond Knowle West might differ, and to visualise the buildings around them changing. In our draft structure we had anticipated that, after taking participants imaginatively into the future, their initial ideas would be highly speculative, not anchored to this place or constrained, and hence that there might not be a believable path to their utopian no-places. In our dramaturgy we planned to co-create an otherworldly future together before returning, in conclusion, to concrete, achievable possibilities; asking those assembled, "what about in 5-10 years' time, what would you prefer to see here then? How might we get there and what are the first steps/changes that could be made?" Instead we found it necessary to reverse this dramaturgy. Participants started to be more playful once community needs had been named and they realised that whatever ideas they expressed would appear around them as AR drawings onscreen. For instance, once asked for details about what the playground they wanted to extend would look like, they described a slide twisting its way down from the roof of the Community Centre's hall and a skatepark built on top of the Broadway's tall art deco buildings. When addressing the issue of connecting the city centre and Bristol's Metrobus to Filwood Community Centre, one group conceived autonomous solar-powered pods and another a Knowle West narrow-gauge railway run by local volunteers.

Whereas most audiences for *Billennium* in Eindhoven had travelled to *STRP* festival or *Dutch Design Week* from elsewhere in the Netherlands or Europe, those testing with us in Filwood were local residents or community organisers, so they had a higher investment in the neighbourhood and its future. They also brought with them historical knowledge and information about plans that they were able to feed in. As with co-created knowledge, the ideas proposed will 'be deeper and stronger if … co-produced with actors' who have a stake in the neighbourhood and the lived expertise of inhabiting a place. And, as with research, the preferred futures visualized are 'more likely to effect change if [they] are owned by people' in the community and other stakeholders 'who have the capacity to effect change' (Lupton & Dyson, 2015, cited in Campbell and Vanderhoven, 2010: 10).

To draw on Andy Lavender's (2016) definition of 'engaged performance', the *FPT* activity 'provide[s] a seeing place'. In this case the *theatron* is the site viewed through the frame of mobile devices and overlaid with AR. In this hybrid space, 'matters of significance' for the future of the neighbourhood 'are shared communally' between those gathered and involved, in a 'socially committed' way (26).

In light of participating in the initial tests Makala Cheung of Filwood Community Centre suggested we return and host the activity as part of the ongoing planning consultation. She is Project Lead on Filwood Fantastic, funded by Creative Civic Change, which aims to 'transform local spaces using creativity in order to bring people together'. Having participated, KWMC's young people's project team were also keen to see if they could get the young people they work with involved.



Although the Digital Placemaking Pathfinder is coming to an end, the prototype is still being developed and the story of my collaborative, interdisciplinary research on *Future Places Toolkit* is not yet concluded. There's a plan for the next round of testing to take place in Prewett Street, Redcliffe in October 2020, as part of a series of engagement experiments around the future of the street, organised by Melissa Mean. These arise out of Bristol City Council's experimental pedestrianisation, bike lanes, and traffic regulations, brought in to encourage walking, cycling, and allow better social distancing. In an admittedly small-scale way, these engagements with local residents' groups would take up Arundhati Roy's proposal to consider the pandemic as 'a portal', which forces us to 'break with the past' and through which we can 'imagine [the] world anew'. In this case, the focus of our imagining would be on redesigning the public realm to make it more liveable beyond COVID-19, reclaiming streets for people rather than cars and enabling traffic evaporation.

With this project, as well as with Stride, there is the potential to collaborate with Molly Claypool from The Bartlett, one of the SWCTN Automation Fellows and a Co-Director of Automated Architecture (AUAR). This could lead to physical interventions in the public realm, such that some of the changes dreamt-up with those engaged by *FPT* could immediately be – albeit temporarily – realised and enacted in some form. You can read about Block West, the temporary pavilion at Knowle West Media Centre 'designed by local residents using a new app developed by AUAR' in 'Exploring New Ways to Build Shared Spaces'.

CONCLUSION: UTOPIAN INTERVENTION AND CRITICAL HOPE

In line with Jaap Bakema's ideal of an open society, *Future Places Toolkit* stages a participatory and democratised approach to urban design and consultation (Dirk Van Den Heuvel, 2015). People take the place of architects, collaboratively imagining the future of their city, co-designing in situ and debating their proposals together. In addition, in our ground-up model of citizen-centred planning, participants invent novel uses for familiar spaces, imagining new ways of working and socializing together there.

In Jen Harvie's (2013) terms, perhaps *Future Places Toolkit* can be considered a 'micro-utopian intervention', a 'provocation [for people] to reconsider' their neighbourhood and also an intervention into conventional planning processes (124, see also Dolan, 2005). Dunne & Raby propose that speculative design might help 'people participate more actively as citizen[s]' in 'creating more socially constructive imaginary futures' (5). In *Cruising Utopia*, Muñoz (2009) draws on Ernst Bloch's *The Principle of Hope* (1986). I am interested in whether discussing futures together might, as Muñoz writes, 'fuel [the] critical and potentially transformative political imagination' of a community (3).

SOCIAL IMAGINING AND HOW TO FUTURE EQUITABLY

My Digital Placemaking research, which I've outlined here, has focused on using digital means to convene people to imagine better futures for their local neighbourhoods. At the beginning of this report I interrogated the aspiration to improve or 'make places better' with digital placemaking. The same issues come up with imagining 'better futures' and we need to keep asking, better for whom? Just as

we must be responsible when coming up with possible future directions for placemaking, in order that we don't create barriers to access, we should develop inclusive ways of futuring; and envision equitable futures.

We need to be attentive to who is included in each future. Who is involved and who gets excluded from processes of visioning, and the futures that are imagined? Who has the time and space to imagine, to imagine a future, and to imagine themselves in it?

Ingrid LaFleur, who has been working in Detroit on 'the practical implementation of Afrofuturism to alter destinies', and on 'participatory Afrofuture experiences' says that she is on a mission to ensure 'equal distribution of the future'. For Walidah Imarisha & adrienne maree brown, 'we're living inside the imagination of someone else' and 'we have to get into the game of imagination'. As Black visionary fiction writers and activists they say, 'we believe it is our right and responsibility to write ourselves into the future.'

Part way through, the Digital Placemaking Pathfinder was interrupted by the pandemic, the lockdown of March 23rd and the rapid migration of our working, cultural and social lives online. As I said above, Arundhati Roy has suggested that the COVID-19 crisis could be 'a gateway between one world and the next' (2020). With much talk of a "new normal", it is especially pressing to think critically about how things are, what we want to change, and that we 'imagine another [more equitable] world'. Rob Hopkins, writer of *From What Is to What If: Unleashing the Power of Imagination to Create the Future We Want* (2019), has talked about the deteriorating state of our 'social imaginations'. In our extreme present, it seems all the more imperative to exercise our sociological imaginations, and to do so collectively.

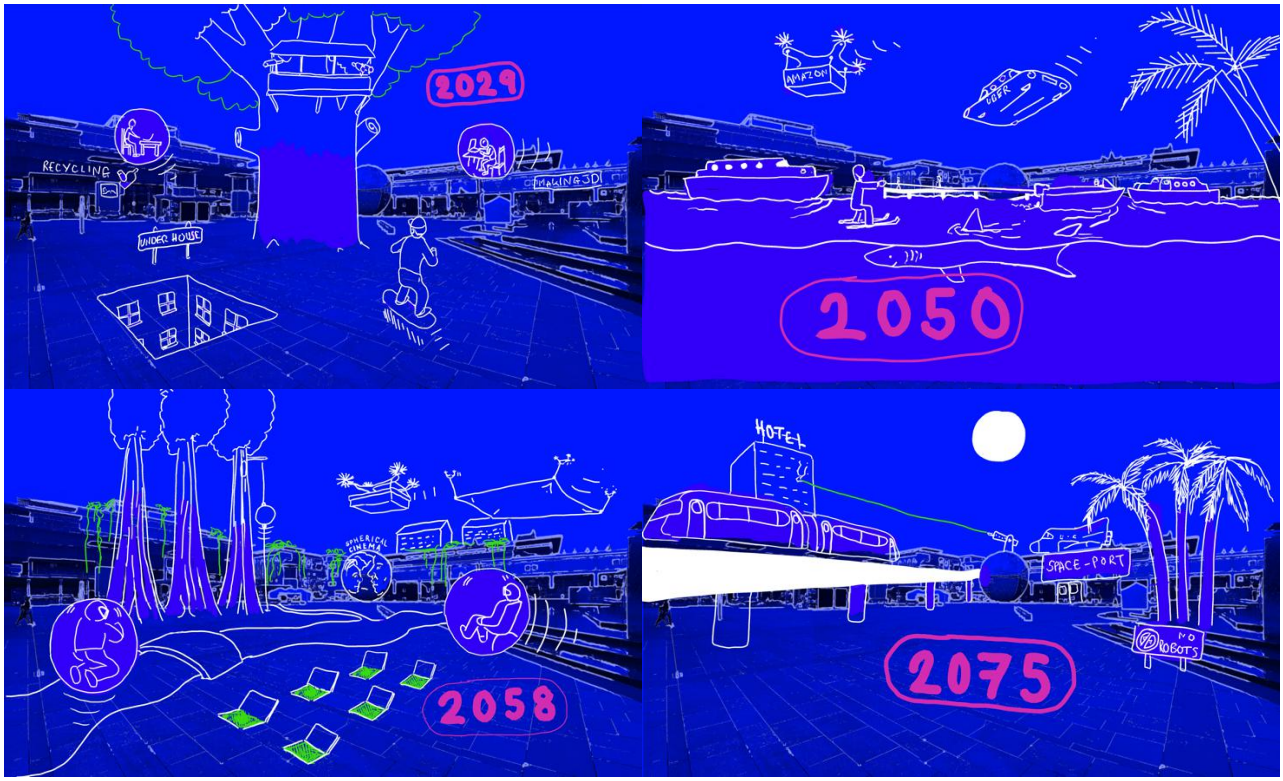
For science fiction writer Ursula Le Guin, 'the most powerful tool is the imagination – the willingness to imagine alternatives to reality as we know it … is always the first step toward making different and better realities possible'. Of course, it should be acknowledged that it may not be 'the willingness to', but rather the privilege to.

I'm going to quote from a vox pop after *Give Me Back My Broken Night*, our earlier locative media performance, in which live drawings were projected onto blank maps from portable projectors worn by participants. The audience member really captures how this made his speculations tangible:

> When you picture something [some imagined architecture] in your head, it stays in your head, but when you see it being drawn it makes you feel like it's coming alive and it's a real possibility and you engage with it in a very different way than if it is just in your imagination (Uninvited Guests and Speakman, 2012).

Régine Debatty, who blogs on the 'use [of] technology as a medium for critical discussion', wrote of *Billennium* that the conjunction of performance and Augmented Reality (AR) 'managed to materialize a reality that isn't here yet' but one day could be (April 15, 2019).

In this report I've described the process of co-creating and iteratively developing a set of live and AR visioning tools with collaborators, partners and communities. In relation to the issues raised in my conclusion, this Placemaking project aims to give people who are representative of local neighbourhoods the agency to narrate themselves into times to come, and to see themselves in their preferred futures. As Anab Jain (2019) of Superflux writes, we also 'hope that through the lens of the future', *Future Places Toolkit* helps people 'reflect better on the present, on the decisions and the actions we take today, on where we want to be', and what we can do to get there.



Photos by Jon Aitkin, Boudewijn Bollmann, and Michele Panegrossi.
Animations and live illustrations by Sam Steer, with live sketches in Filwood by Andy Council and Camille Aubry.

Funded by the Creative Industries Clusters Programme managed by the Arts & Humanities Research Council as part of the Industrial Strategy.