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Interactions in Hybrid Urban Space:
THE URBANIXD EXHIBITION

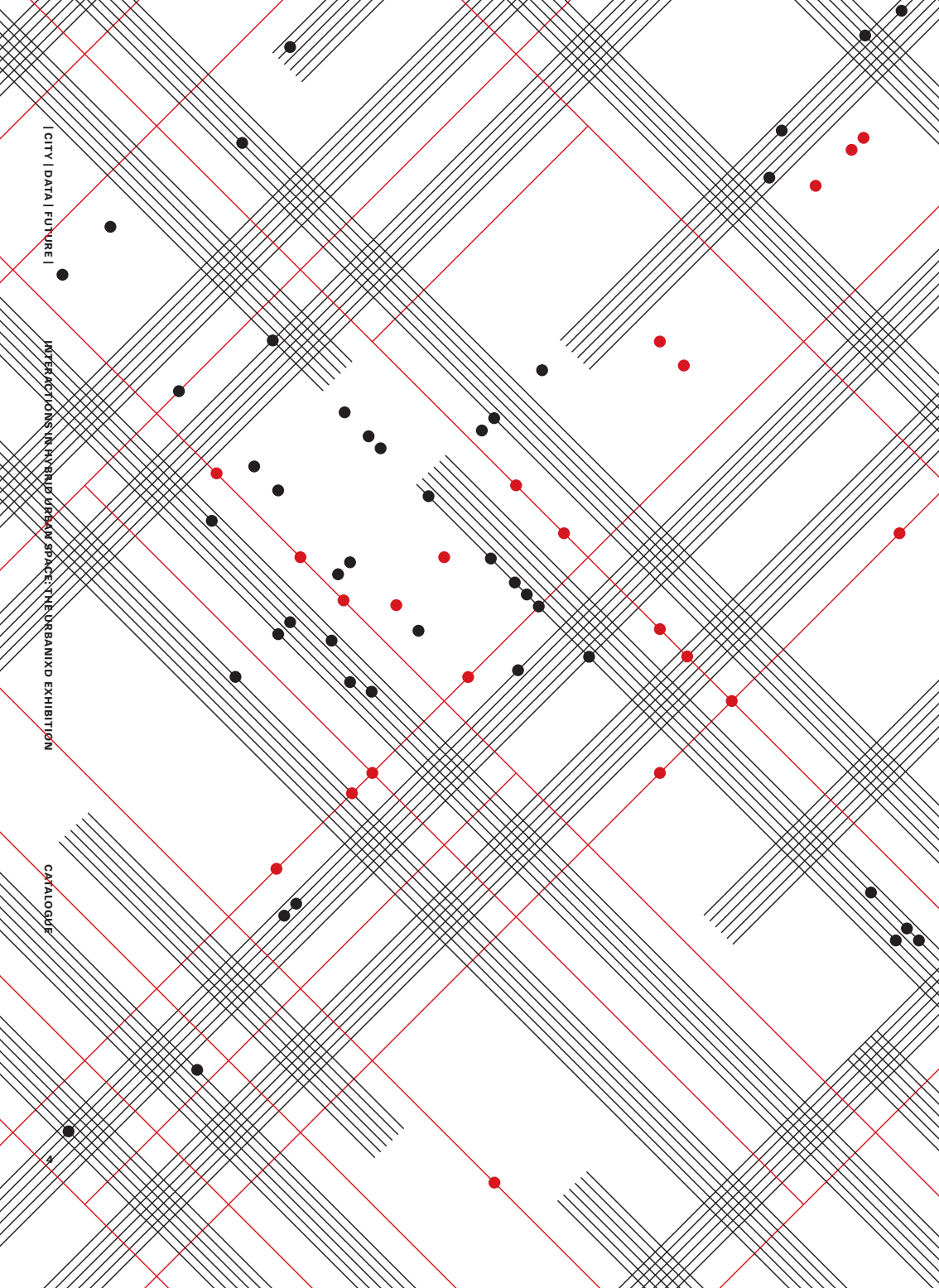### CATALOGUE

INTERACTIONS IN HYBRID URBAN SPACE: THE URBANIXD EXHIBITION

CATALOGUE

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▼ **INTERACTIONS IN HYBRID URBAN SPACE:**
THE URBANIXD EXHIBITION

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Interactions in hybrid urban space: THE URBANIXD EXHIBITION

1900

Timeline of Urban
Interaction Design

This timeline continues to be a work in progress.
To suggest additions email info@urbanixd.eu et
tweet to @urbanixd.

1928

"What became interesting to me with UrbanIxD was the 'critical' element. And perhaps this is where it starts to stand out as a nascent field. It does not seek to impose interventions on unwary populations like some maniacal shadow-thing of network-colonialism: Does not stroll into unguarded neighbourhoods and insist that it Knows What's Best For You. It is more interested in listening, learning and speculating. Cajoling, goading, occasionally provoking a response that initiates a chain of reasoning in it's audience (whoever that may be — another matter)."

— *Tobias Revell, UrbanIxD conversation, www.urbanixd.eu, 2014*

▼ Content

● 1964   **Walking City, Ron Herron**

Walking City imagines a future in which borders and boundaries are abandoned in favour of a nomadic lifestyle among groups of people worldwide.

● 1964   **Plug-in City, Peter Cook**

The Plug-in City is in fact not a city, but a constantly evolving megastructure that incorporates residences, transportation and other essential services - all movable by giant cranes.

• **1967**   **Haus-Rucker-Co**

Haus-Rucker-Co were a Viennese group whose work explored the performative potential of architecture through installations and happenings using pneumatic structures or prosthetic devices that altered perceptions of space. They were exploring the potential of architecture as a form of critique and possibility of creating designs for in tensely emotional experienced environments and utopian cities.

• **1975**   **Project for Public Spaces**

Project for Public Spaces is a nonprofit planning, design and educational organization dedicated to helping people create and sustain public spaces that build stronger communities. PPS was founded to expand on the work of William H. Whyte, author of The Social Life of Small Urban Spaces.

Aural Fixation

by Susanne Gustin, Mark Willar

It is the age of the smart city. Digital data is collected, processed, and utilised to optimise. Residents share both hopes and aspirations through the inter-se of our everyday as observed by the omnipresence of smartphone-led "smart city," while hidden in the vast and varied privy" while hidden in the vast and varied privy.

Current research focus is on clearing distinctions the way in adapted communication platform that the harmonious of the aerial pieces involved in the city walks. The subject it can return a selection of the im- lived scope and appearance of a social implications

▼ PREFACE

The focus of the emergent field of *Urban Interaction Design* is public space and the relationships between people – with and through technology. The currency of these interactions is data. Making sense of this data, and making it meaningful, transparent, useful and enjoyable is a challenge for interaction design. Building interdisciplinary networks of researchers, and defining this important research agenda is the concern of the *UrbanIxD* project, funded by the European Union under the FP7 programme from 2013 - 2014.

The *UrbanIxD* project takes the view that cities in the future will contain a tangled mesh of interconnected, heterogeneous technological systems. Technology will continue to evolve, and the data reading and writing capabilities of cities will only increase, but mess and complexity will still be the background context.

The | *City* | *Data* | *Future* | exhibition speculates about the possible futures that city inhabitants might experience. The exhibition described here is built on work created during the activities of *UrbanIxD* project, particularly the *Summer School* of 2013 held in Croatia.

For more information about the *UrbanIxD* project, and hiring the exhibition visit the project website: www.urbanixd.eu.

▼ ACKNOWLEDGEMENTS

The work presented in this exhibition is truly the result of collaboration, both in the generation of the concepts and in the creation of the works as they are displayed in the exhibition. All 40 of the *UrbanIxD Summer School* participants, their four atelier leaders and atelier coordinators contributed to the concepts that informed the works – through discussion, prototyping of concepts, shared feedback and more discussions. The production of the final versions of the works was managed by *Ivica Mitrović* and *Oleg Šuran* at the *University of Split*.

Extra works were contributed by *Tobias Revell, Factory Fifteen*, the *Arts Academy* at the University of Split and the *Centre for Interaction Design* at Edinburgh Napier University.

▼ *UrbanIxD Summer School participants*

- Niels Wouters, Belgium
- Mads Hobye, Denmark & Sweden
- Andreas Förster, Austria
- Søren Rosenbak, Denmark
- Bronwyn Cumbo, Australia
- Sergio Galán Nieto, Spain
- Sjors Timmer, UK
- Andreas Streinzer, Austria
- Assunta Matassa, Italy
- Sandy Claes, Belgium
- Rachid Belkouch, Canada
- Louise Jensen, Germany & Denmark
- Laura Boffi, Denmark & Italy
- Sara Adhitya, Australia, Italy & France
- Isil Ruhi-Sipahioglu, Turkey
- Jona Dajçi, Albania
- Joatan Preis Dutra, Germany & Brazil
- Peter Kun, Hungary & Netherlands
- Daria Casciani, Italy
- Caitlin Cockerton, UK
- Caroline Peta Comino, Australia
- Matthew Carreau, Canada
- Leyla Nasibova, Azerbaijan & Finland
- Bastien Kerspern, France
- Antonella Sassu, Ireland
- Luis Veracruz, Netherlands
- Han Pham, UK
- Mara Balestrini, UK
- Jenny Kempson, USA
- Robert Clouth, Spain
- Jure Martinec, Slovenia & Germany
- Sandro Engel, Germany
- Jakab Pilaszanovich, Hungary & Spain
- Lea Škrinjar, Serbia
- Karey Helms, USA & Sweden
- Olga Surawska, UK & Netherlands
- Pika Novak, Slovenia
- Sarah Baron Brljević, Croatia & Germany
- Ena Hadžić, Bosnia and Hezegovina
- Divya Viswanathan, India

▼ *Atelier Leaders*

- Chris Hand
- Carlos J. Gómez de Llarena
- Tobias Revell
- Gordan Savičić

▼ *Atelier coordinators*

- Hrvoje Živčić
- Damir Prizmić
- Sara Božanić
- Hrvoje Kedžo

▼ *Invited speakers*

- Nicolas Nova
- Dinko Peračić
- Susa Pop
- Andrew Shoben
- Liam Young

"...what is often revealed are negative aspects of our cities like crime, air and other forms of environmental pollution. I definitely don't want to blame anyone here. Rather I am just pointing out that there is a tendency in these early experiments towards revealing the problems of our lived spaces. Then there is also the existence of location-based applications that aim to describe the notable histories of urban places which tend towards nostalgia for the past when things were nicer and perhaps better than today. My point here is that it's as if most of what geo-information could deliver was frightening data about the present or comforting ideals from the past. Shouldn't there be other paths? Other things to show?"

— *Nicolas Nova, A synchronicity: Design Fictions for Asynchronous Urban Computing, 2009*

▼ Foreward

Michael Smyth—Coordinator, the UrbanIxD project
Edinburgh, UK, August 2014.

**"I'm trying to make the city as real as possible …
rich, colourful, noisy, gritty, full of textures
and teeming with life … this is a tangible future,
not so exotic as to be unbelievable …
like today only more so"**

— *Ridley Scott describing the world he wanted to
create in the film "Blade Runner"*

The *City | Data | Future* exhibition has brought together work created by artists, designers, technologists, social scientists, urbanists, architects, researchers and filmmakers. All of the contributors are motivated by a desire to explore how we experience urban living and what that might be like in the near-future.

Some of these speculations about our urban futures will make you smile, while others will cause you to stop and think, but the hope is that in all of the pieces you will recognise a shared humanity as cities, above all else, are about people. People like you and people like me who are drawn to, or find ourselves living and working, in the excitement and complexity that characterises cities.

Each of the works that comprise the exhibition seeks to activate the imagination, rather than to specify technology or make claims about our shared future – they are intended to start conversations about what that future could be like. The themes that emerge reflect our concerns and desires for today as well as our hopes and fears for tomorrow.

The research field of *Urban Interaction Design* is important because, at its core, it is concerned with people. Its focus is the technologically augmented, data-rich urban environments and the human activities, experiences and behaviours that occur there both now and in the near-future.

The *City | Data | Future* exhibition marks the conclusion of the *UrbanIxD* project, but this is only the beginning for *Urban Interaction Design*. A community of researchers has been formed around the activities of the project, but it is vital that it continues to grow.

One way that this can happen is through the exhibition which has been designed to be shown at different venues, and it is the hope of the project that the exhibition will travel to various venues and events and that it will continue to inspire conversation and debate about the field of *Urban Interaction Design*.

If there is one clear message from the work of the *UrbanIxD* project and the pieces that comprise the *City | Data | Future* exhibition it is that: The city is for all of us and the first step to making liveable cities starts by taking a human-centred perspective.

▼ Introduction

In this book we present a series of works that invite you to consider how technology might shape the city of the future. These works have been created not just by artists and designers, but also by technologists, social scientists, urbanists, architects, researchers and filmmakers. All of them share a curiosity about what is happening in our cities; about how hardware, software and networked data will change the way we live our daily lives. This process has already been underway for quite some time, but we don't know where it is taking us. We can guess, of course, extrapolating from the trends that we currently observe, and extending them as far as our imaginations allow.

Whether you call it the hybrid city, the sentient city, the media city, the smart city, or just the place where you live or work, what has changed in the last decade is the rapid technologisation of everyday urban life. Public and private spaces are filling up with smaller, smarter technologies. Software, as much as architects and planners, is organising and managing urban life. What will this mean for us as citizens, employees, consumers and, most importantly, social beings?

As a project, *UrbanIxD* can't predict the future, but we can ask questions, explore alternatives and consider possibilities. By creating "speculative prototypes", in this exhibition we are using design as a kind of cultural research. Critical design—where fictional objects and systems are created and presented—is becoming an established creative method that aims to provoke response. Through our reactions to these possible products, we examine how we feel about where technology might be taking us, soon.

The people who made these works can now call themselves *Urban Interaction Designers*, whatever discipline they work in and whatever training and qualifications they have received. What is *Urban Interaction Design*? Obviously, it has something to do with the three separate terms that make up the name of this emerging field. It's about the interaction of humans with their urban surroundings where technology is involved. The "urban" in urban interaction design signifies the emphasis on issues around the spatial aspects of human

relationships, drawing on approaches from the social sciences. "Interaction" refers to technology, particularly the communication and networked technologies that convert the raw material of information and digital data into meaning, at scales that range from citywide solutions to grassroots hacking and tinkering. "Design", the last part of the trilogy, draws on an interdisciplinary, arts tradition, bringing critique and creativity into the mix, with emphasis on both theory and praxis.

This is a domain that is getting more complex every day, and single discipline methodologies, expertise and theories are no longer enough to address the complex issues of how people are affected by the 21st century networked city. That's why increasingly we see designers of all kinds, along with information technologists, urban anthropologists, philosophers, artists and sociologists teaming up in coalitions that up to a few years ago were unthinkable. In the popular imagination, the city is a place of hope and opportunity, a destination that people of all kinds gravitate towards. Cities are magnets for humanity because they promise so much, offering a tantalising array of choices and pleasures as well as the frisson of the unknown that arises from the concentration of so many varied individuals living and working in close proximity. It is fitting therefore that urban life, and urban interaction design, should be a topic that concerns a wide range of professions and interest groups.

However, it's not enough to bring experts of various disciplines together to think about the future. All of us have a stake in what happens to our cities, and that is why we present this exhibition to you. We invite you to look at our work, question it, consider the implications of these products and systems. This exhibition is not intended to be either a utopian or a dystopian science fiction vision of the future, instead our aim is to enter into a dialogue about what might be.

You too can have your say.

▶ #citydatafuture

Interactions in Hybrid Urban Space: a speculative approach

▼

▼ SPECULATION AND THE CRITICAL APPROACH TO DESIGN

As an activity, design articulates our needs, desires and expectations in the form of tangible products and functional services. Observation of the world in its current state is a starting point for designers across all disciplines, as they strive to improve on what is already available. This implies that the next iteration of designed outputs are directly connected to the current situation, providing goods that are new and different, but not so strange that we cannot understand them and relate them to the present world.

Within the context of *Future and Emerging Technologies* —the strand of research that concerns the *UrbanIxD* project —we want to look further than the next stage of technological products, or even the stage after that. But how do you begin to explore design concepts when you don't know what the world will be like? How far into the future can we look, and what does this tell us about ourselves and our societies as they are now? These are the questions that we addressed at the beginning of the process of working towards this exhibition. We wanted to use a method to structure our work, and the critical or speculative design approach seemed to offer a way in. *Critical Design,* as described by *Dunne* and *Raby*[4] is emerging as a new strategy for exploring the space that lies tantalisingly beyond the current and the now. Through the creation of "design fictions" this approach attempts to challenge assumptions and preconceptions about the role that products and services play in everyday life. Critical design is an approach that demonstrates plausible products or systems to a public audience. Its practitioners are often trained as product designers or engineers rather than artists, and they use these skills to create objects that might well exist in the real world, however instead of purchasing these products in shops and online stores, we view them in public exhibitions and galleries, and read about them in online portfolios and blogs.

As well as the more commonly understood role of design to generate the items that we need and use, we suggest that design can be employed to provoke reactions in a manner

that echoes the way that artists have worked from the 20th century onwards. As designers ourselves, this is interesting to those of us involved in the *UrbanIxD* project, and in this exhibition we have put this notion to the test. If asked, many people might say that the role of design is to make functional, ordinary things beautiful or useful, following the influential view of *William Morris*, the 19th century writer, designer and social reformer. Others might say that the main purpose of design is to solve problems, or add value to products in order to improve chances of commercial success in the marketplace. *Adrian Forty*, writing in 1986[8], claims that design has rarely been seen as being concerned with the transmission of ideas. *Forty* argues that design in fact has a strong influence on how we think, and that it should be given credit for the impact it has on our culture. Comparing product design to information media such as television and advertising, he asserts that, "Far from being a neutral, in-offensive artistic activity, design, by its very nature has much more enduring effects than the ephemeral products of the media because it can cast ideas about who we are and how we should behave into permanent and tangible forms." It is exactly because design is used in the creation of the real objects that surround us constantly all through our lives, that is has such power. Design communicates whether we acknowledge its language or not.

Of course we in the *UrbanIxD* project are not at the vanguard of the critical design movement. In the last few years others have tried this approach and we have noticed how it has impacted on discourses, taking debates about new science and technology to popular audiences and examining potential social, cultural and ethical implications. Designers *Anthony Dunne* and *Fiona Raby*, in their recent book[6], discuss how they have addressed topics such as democracy, sustainability, and alternatives to the current model of capitalism. Similar themes are apparent in the works presented in *City | Data | Future*. *Dunne* and *Raby* are interested in the space between reality and the impossible, and they use designed objects as a way to express these ideas in exhibitions such as "What If…"[5]. This is an ongoing process of discovery and consideration, rather than a way to communicate a particular viewpoint. Their concerns include issues that may remain impossible to fully answer. Museum and gallery curators such as *Paola Antonelli* at *MoMA* the *Museum of Modern Art* in New York, have developed popular and critically acclaimed exhibitions such as "Design and the Elastic Mind"[3] and "Talk to Me"[9]

"...objects are not inert entities. They are social in the sense that they participate quite actively in shaping our perceptions, our ability to make sense of the world, and understand possibilities within the world. They are framing instruments that put outlines and contours on meaning. They have a kind of 'optical' characteristic in the way they align the ways in which we see the world."

— *Julian Bleecker, A synchronicity: Design Fictions for Asynchronous Urban Computing, 2009*

that consider the relationships between design and technology, and between people and objects. They are recognising that the strength of design is in its familiarity and inclusiveness, rather than the exclusivity that still characterises much of the art world. Design is closer to our familiar experience, to popular media and culture, and our everyday consumer culture.

Confronted by provocative fictional products and systems, we instinctively wonder about how we, ourselves, would use, or be affected by, such things. As an illustration, *Noam Toran's 2001* series of eight fictional objects; "Accessories for Lonely Men"[10], make us reflect on the details of human intimacy, and wonder whether these needs could be adequately met by interactive objects. The intention here is that we then consider the wider world that supports and enables such designs to exist. Is this a world we like or fear? How would we fit into this world? What would change and what would endure? The ideal, perhaps over-ambitious and rather grandiose, is that this kind of consultation will ultimately shape strategies and research agendas for future generations. Whether this will succeed will be hard to judge, but we are optimistic and we must start somewhere. If our use of the speculative design approach encourages debate, reflection and some critical thinking, then we can consider this approach to be successful.

The role of critical design is characterised in the following statement from the introduction to the "What If …" exhibition. "There are no solutions here, or even answers, just lots of questions, thoughts, ideas and possibilities, all expressed through the language of design. They probe our beliefs and values, challenge our assumptions and encourage us to imagine how what we call 'reality' could be different. They help us see that the way things are now is just one possibility, and not necessarily the best one."[5]

▼ CRITICAL DESIGN AND RELATED APPROACHES

Critical design sits amongst a range of related approaches, and many terms are used, each implying a rather different emphasis. Just as a sample, commonly used terms include; design fiction, design futures, antidesign, radical design, interrogative design, adversarial design, discursive design, futurescaping and design art. *Anthony Dunne*, in his 1999 book "Hertzian Tales"[7], uses the term critical design, but broadens out to include the description, speculative practice[6]. Similarly, *James Auger* in his overview of this design practice,

talks mostly about *Speculative Design*. In a recent paper[2] he provides a comprehensive overview of the definition of this term and its close relatives.

Auger states that: "There is much overlap between these practices, the differences are subtle and based primarily on geographical or contextual usage: all remove the constraints from the commercial sector that define normative design processes; use models and prototypes at the heart of the enquiry; and use fiction to present alternative products, systems or worlds."[2]

In his blog, he expands on his own approach: "Speculative design combines informed, hypothetical extrapolations of an emerging technology's development with a deep consideration of the cultural landscape into which it might be deployed, to speculate on future products, systems and services. These speculations are then used to examine and encourage dialogue on the impact a specific technology may have on our everyday lives. The familiar and engaging nature of the designed output is intended to facilitate discourse with a broad audience: from experts in the field such as scientists, engineers and designers to the consumers and users of technological products and systems."[1]

So the common thread between these approaches is that the creation of items that are fictional yet realistic, provides what *Auger* terms as the "perceptual bridge", that leads from experiencing the products to considering concepts and ideas. The making of prototypes and the presentation of narratives is important here, these objects and systems seem familiar and possible, yet they are somehow different, strange or uncomfortable.

▼   REFLECTING ON METHODS IN USE

During the *UrbanIxD summer school* in 2013, we started out using the *critical design* approach as way of initiating and structuring dialogue; as a process or way of thinking. The open-ended nature of critical design seemed potentially useful for generating ideas amongst the group of summer school participants. However, when looking into the future there are few practical design constraints and everything seems possible, so how then do you judge when something is critical enough? In this phase of opening out and expansion, ideas were examined and conceptual boundaries were defined. At this stage, critical design's interest in the social and cultural, the provocative and the imaginary, provided a useful framework.

During the making and thinking phases of the summer school, *design fiction* emerged as a preferred term amongst the participants themselves to describe their creative outputs, the forerunners of the works in the *City | Data | Future* exhibition. The end results of this group work became stories or scenarios that encapsulated the earlier discussions and were presented in a form that was legible to others, such as video, text or interactive medium. So critical design structured the thinking, while the design fiction approach supported the creative making.

As we look back and reflect on the whole process, we find much to like about the term speculative design, although we recognise that all these terms are closely related, and include many overlaps. Perhaps, within our project at least, this is semantic quibbling, and this discussion can continue. What we can agree on is that all these methodological toolboxes have offered much to us that has been useful in both structuring our thinking, and in shaping the final presentation of the exhibition.

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"Urban Interaction Design isn't a seamless experience—perhaps part of emergent nature of this field will be to reveal the seams, not it's seamlessness—to call attention through digital technologies the unique possibilities humans bring: Vulnerability. Uniqueness. Security, being seen. Transparency; rebounding.

My focus is often on the changing role and avatar of trust in our hybrid society: the future is not a done deal. We are not impervious or all powerful, despite the promise of ubiquitous computing and analytics. There is a sense of both empowerment and vulberability arising in this brave new world. Beyond the politics of online security, safety is an emotional quantity; a social beast."

— _Han Pham, UrbanIxD conversation, www.urbanixd.eu, 2014_

▼ The City | Data | Future exhibition: Themes

▼ CITY

▼ *The view from above and from below*

In the fictional future cities in this exhibition, technology is everywhere, it is embedded and ubiquitous. It can read citizens' minds, control their movements, communicate feelings, and it is accessible to everybody. People become elements within the vast mesh of information. They are living sensors, emitters or receivers of data in the hybrid city network. Systems are planned, designed, implemented and regulated, but still it can be hard to predict what happens when they meet the real, social world. When we consider the officially sanctioned and authorised systems, we also have to consider scenarios that describe reactions to these systems. Whether these activities are hacking and abusing, or modifying and appropriating, depends on your point of view. In the hands of a few motivated individuals these activities taking place at the edges can be both disruptive and powerful.

In the film *Chupan Chupai*, the near future is heavily influenced by the imminent boom of the Indian subcontinent. Within this emerging technological and economic superpower a new digital city has developed. The scenario shows us a group of young children as they play a game of hide and seek in the bustling streets of this strange yet familiar, smart city. Through their play the children reveal the city control mechanism, and discover how to hack the city, opening up a cavernous network of hidden and forgotten spaces behind the scenes of everyday streets. The film blends dreamlike images of digital interfaces, the built environment, and wild organic undergrowth. The children move seamlessly between these worlds, at home in the physical and the virtual space that surrounds them. The children in *Chupan Chupai* seem to accept their world as it is, perfectly at ease as they explore their city. In contrast, in the *Future Cloud is Buried* fiction, the citizen is portrayed as a more active and questioning agent, challenging our notions of what "the cloud" really is and how this understanding shapes our choices of what we save and where we save it. In this story, the city has decided to bury all its local,

most valued data in an off-grid cloud just outside the city. A personalised, DNA activated, physical interface allows future citizens to access only their own precious data from the past, but hackers work out ways to plug in and experience immersion in forbidden data. This underground approach to accessing illicit data gives birth to a new pirate tourism industry as well as a new drug scene. Acting with more overt political motivations, the *Ministry of Misinformation* is an emergent digital movement that also aims to subvert the reality that is imposed from above by distorting real-time urban data. These City Hackers act as a collective, and use the trust implicit in the digital layer to subtly change the flow, behaviours and perceptions of how others interact and perceive the city. They play with data, they like to create confusion and serendipity, to destroy but also to inspire.

▼ *The public domain*

Negotiating use of public space within the city was the focus of the project *Coordination of Urban Busy Areas (CUBA)*. Here the city authorities are collaborating with a big tech company to optimise all its resources with the objective of being on the list of Data Improved Certified Cities and increasing the tourist economy. Citizens are encouraged by tax incentives to avoid the better micro places in the historic city centre - the shady bench, the pretty street - at the busy times of the day, leaving them free for tourists to enjoy. This system is managed in real-time according to specific regulations and software algorithms, managed by the CUBA programme. These fiction is raising question how these top-down optimisations will prevent us from exercising free choice over our public city spaces. By contrast, in the *Ministry of Misinformation* scenario, the grassroots movement focuses on use of (mis)data as a tool to re-empower communities to address these issues of public interest. Tobias Revell's film *The Monopoly of Legitimate Use* takes the very physical notion of inhabiting a space or territory into the technological world, where networks can form political territories and places where people can gather and align themselves to particular ideological beliefs. *Blackspot* looks at how moving through physical space can also mean moving through networked space, and in an age of privacy concerns and overt sharing, the use of this space will become more important.

▼ **DATA**

▼ *Big Data*

The exhibition reflects on the expanding trends of Big Data, the Quantified Self and the Internet of Things. The exhibition scenarios are attempting to understand where Big Data resides and who gets to know it's there, let alone make sense of it or use it. We are particularly exploring the places where data collects at the boundaries of the physical and the digital. The projects ask questions about what will the toolkits of "data hunters" contain, and how will they mine the data sediments between and beyond buildings as they seek to understand the urban environment through interaction.

In *Eutropia* the city authorities have signed an exclusive agreement with a consortium of mega corporations trading the vast amounts of data generated by its citizens. In return *Eutropia* has been provided with the latest infrastructure for data collection. In *Eutropia* "privacy" is just an ideological delusion. The *Future Cloud* scenario also questions how we place value on data, in this case it is so precious to its owners that it is taken off-grid and stored locally in our very own cloud, buried underground. *BetaCity* tracks citizens' movements through the urban space. In this scenario, the citizen is just a node in the network, an individual, identified unit travelling in the crowd. The city is harvesting these data trails, making

their presence known, shared and visible. *BetaCity* knows who everyone is, but the city is in control, choosing what to reveal. This may seem transparent to the city's inhabitants, but the motivations and purpose of this vast data gathering remains unclear, and the city keeps those reasons to itself.

▾   *Humanside*

What about the people among all this quantifiable data collected and processed to maximise the efficiency of the city? Will this human element of the smart city fall through the cracks in the bricks and mortar during the digital age? These projects are also striving to understand how to make meanings from the urban data store.

In *Aural Fixation*, privacy amongst residents is maintained through the rare art of conversation. This analogue form of data cannot be detected or processed by the smart city's digital sensors. Friends and families share their personal thoughts within the closed walls of intimate spaces - their own home, a friend's living room, a favourite bar. But by using special hacked devices, new city voyeurs roam the streets peering into the windows of these intimate spaces hoping to catch glimpses of these secret stories. In *Blackspot,* a businesswoman leaves the City in search of a blackspot, a near-fabled place where network coverage drops out so that she can receive a secret and important message over an independent mesh network. In *Chupan Chupai* we see children's street games, this rapidly disappearing activity, as a way of revealing city control structures, and discovering secret, organic, parts of the city.

▾   **FUTURE**

▾   *The Hybrid Citizen*

How does the city look through the eyes of people who live in the hybrid city? They are not only just humans living in an environment that comprises both the tangible and the virtual, they are also becoming hybrid citizens themselves - technologically augmented humans. Hybrid Citizens are struggling to reclaim the city as a site for human interaction and expression. In *Aurora* the desire for efficiency and optimisation firstly leads to the development of highly sophisticated sharing systems that preclude social interactions. As a reaction to this dystopia, the second wave of technological development, brings back social

interactions, where even memories can be shared. To ensure maximum social connectedness, this data is only unlocked when two or more users reach certain levels of specific neuromodulators, through close contact.

▼   *New Economies*

The projects exhibited also speculate about new economies, new systems of organisation and new policies. In the city described in the *Coordination of Urban Busy Areas (CUBA)* scenario, citizens can use the most valuable city public spaces according to their ownership of Usage of Public Space units. The individual UPS will be calculated according the taxes paid for the maintenance of the public heritage, but also with the participation in restoration or touristic support programs. Citizens will be also able to exchange local currency with UPS. The time spent in pleasant public spaces becomes a tradable commodity. The *Aurora* scenario presents the sharing economy as new hope for humankind, supporting encounters, trust and social capital. In a society that relies on data sharing for most of its processes, reputation needs to be quantified. Personal Aura points determine people's aggregated reputation and whether others can trust them for sharing or not. Aura points are the new social capital in the Aura City. In *Eutropia,* during the Great World Recession of the 21st century, the City authorities signed an exclusive agreement with a consortium of mega corporations trading the vast amounts of data generated by its citizens. The result has been the creation of a new economy based on the gathering and exportation of data that has secured the independence and well-being for the City and all its inhabitants, but the cost is personal privacy.

"Some urban interaction interventions either invent a new problem to 'solve' or just act as a spectacle to distract from a real problem."

— *Tobias Revell, from the UrbanIxD Summer School Reader, 2013*

"Design and society are not separate things; they do not interact through a mediator where design helps society or society helps design."

— *Gordan Savičić, from the UrbanIxD Summer School Reader, 2013*

| **city** | **data** | **future** |
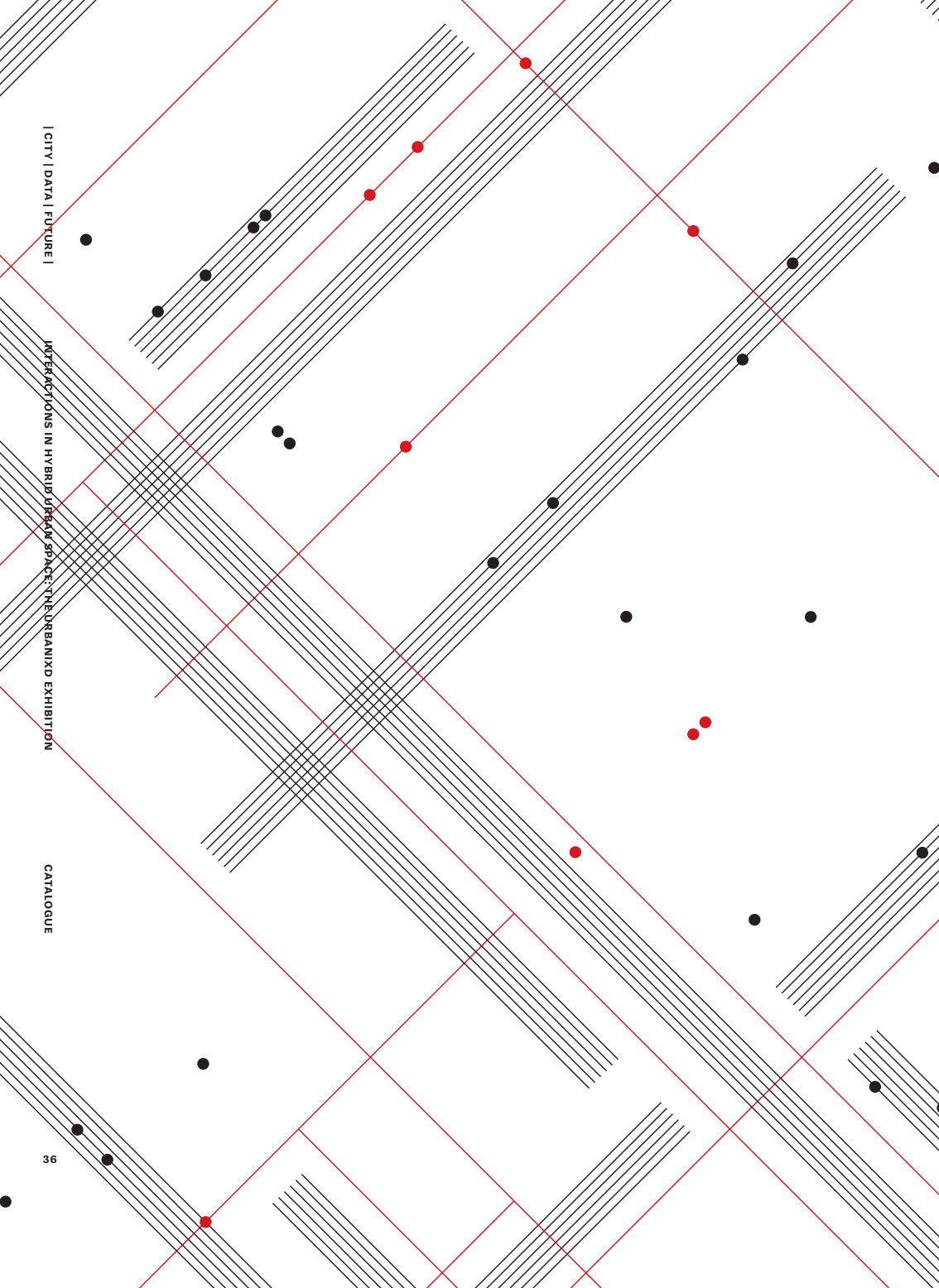
Interactions in Hybrid Urban Space:
THE URBANIXD EXHIBITION

THE EXHIBITION WORKS

connect lenses
A HYBRID VIEW

2 x connect lenses

Hidration fluid

1. *Aurora, the Aura City*

AUTHORS: Mara Balestrini, Sandro Engel, Ena Hadžić, Assunta Matassa;
ATELIER LEADER: Tobias Revell; ATELIER COORDINATOR: Sara Božanić.

• Video (2:12), contact lenses packaging and case

By around 2050 the urban population had grown dramatically and resources were scarce. Despite attempts to achieve sustainability, the human obsession with owning resources led to the collapse of society. The first wave of hope came in the form of collaborative consumption. Citizens started to share their resources to ensure access to shelter, food and transport. Ownership had become a historical luxury. In the beginning the sharing economy enabled human encounters, trust and social capital. But desire for efficiency and greater optimization led to the development of highly sophisticated sharing systems that precluded social interactions. Gradually, equipped with all sorts of sensors capable of recording information from brain activity to visual stimuli, smells and somatic experiences, we began to share remotely the most sensory data about our human experience. As time passed by the streets were empty, people lost agency with the physical world and with others. This led to public funding being given to researchers working on interactive systems to foster social connectedness.

Now it is 2113 and this is our second wave of hope. Wearing our new technologies, we have achieved ultimate connectivity: we enjoy augmented experiences as long as we sync our senses with others in proximity. Sharing visual data requires that people look in each other's eyes; sharing feelings can only occur if people actually touch. Even memories can be shared, but this data is only unlocked when two or more users reach certain levels of specific neuromodulators. In a society that relies on data sharing for most of its processes, reputation needs to be quantified.

Personal Aura Points determine your aggregated reputation and whether others can trust you for sharing or not. In an Aura economy, finally, what you give is what you get.

2.   *Aural Fixation*

···

AUTHORS: Bronwyn Cumbo, Mads Hobye; ATELIER LEADER: Chris Hand; ATELIER COORDINATOR:

Hrvoje Živčić; CAST: Divya Viswanathan; HEADPHONE DESIGN: Daria Casciani and Oleg Šuran.

···

•   Video (2:14), headphones

It is the age of the smart city. Digital data is collected, processed and utilised by the city's systems. Privacy amongst residents is maintained through the rare art of conversation. An analogue form of data that cannot be detected or processed by the smart city's digital sensors. Friends and families share their personal thoughts within the closed walls of intimate spaces. Their own homes, friend's lounge room, a favourite café. These thoughts, dreams, and aspirations for a better future are unheard by the smart city. The bricks and mortar of the city are the caretakers of these citizens. Watching over them as they meet to converse. Capturing the stories exchanged within its walls. Aural prints of words unheard.

A young voyeur lives in the city during these times. Each day and night she roams the streets peering into the windows of these intimate spaces to see how people live their lives, hoping to catch glimpses of the stories they might share. She senses that the city is full of lost and unheard aspirations. In a local flea market she buys an old military communication device and extends its listening capabilities to tune into the frequencies of aural prints. Wearing the device she is able to virtually travel to all corners of the city and eavesdrop on lost fragments embedded in its walls. She makes it her mission to collect these unheard hopes of the citizens.

Aural Fixation
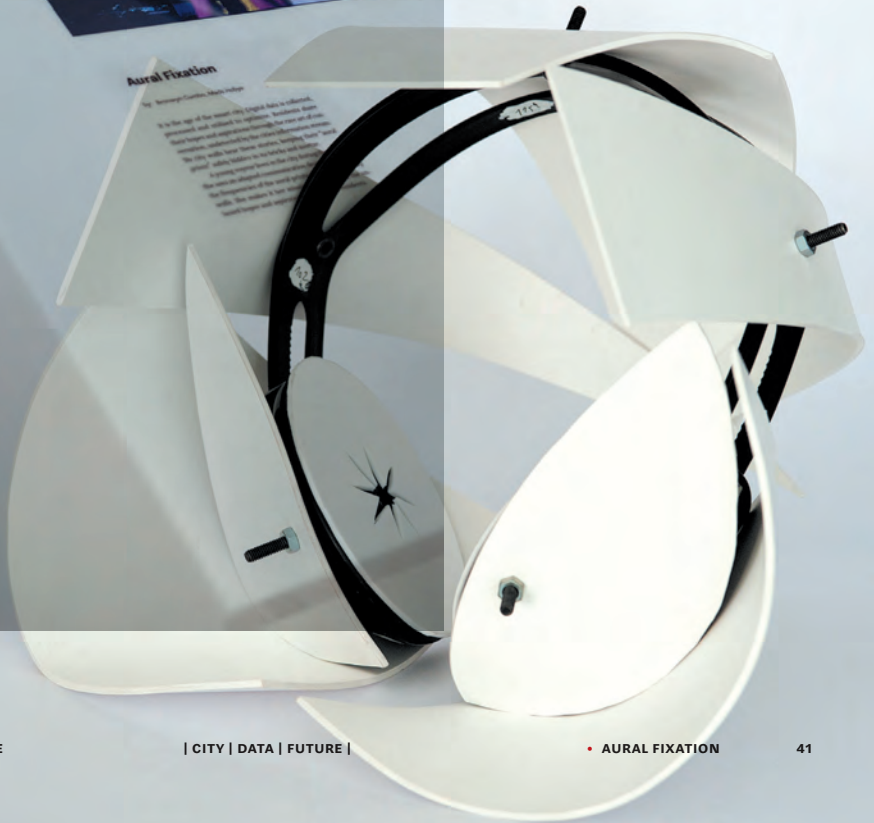
3. *Coordination of Urban Busy Areas* (CUBA)

AUTHORS: Luis Veracruz, Jona Dajçi; ATELIER LEADER: Chris Hand;

ATELIER COORDINATOR: Hrvoje Živčić; MOBILE APPLICATION: Ivo Holanec.

- Mobile app, poster

Since 2030, the city has been collaborating with mega corporations to optimise its limited amount of public space. The analysis of data, with the collaboration of the citizens will help to maintain the growth of visitors to the city witnessed over the last few years. Citizens will be required to balance their usage of certain areas of the historical center according to specific regulations, managed by the program "Coordination of Urban Busy Areas" (CUBA). The CUBA App will help citizens to know how many Usage of Public Space units (UPS) they have and the exact value (UPS/hour) of any specific spot on the city in real time.

The individual UPS available to each citizen will be calculated according taxes paid for the maintenance of the public heritage. Citizens can gain extra UPS by participating in restoration or touristic support programs. The UPS per hour of each spot of the city will be calculated according to real-time data analysis. The UPS per hour is dynamic and based on the economic incomes made in that area; social media posts about or from that spot, and also weather conditions and popularity at peak hours. The CUBA App will help citizens to know how many UPS they have and the exact value (UPS/hour) of any specific spot on the city in real time. Of course, there are also free spots in the less desirable places inside these busy areas, making the city accessible for all the citizens.

Be a good citizen!
Leave public spaces free for tourists

||||| CUBA

Tourists are the city's
most important resource.

Visitors help the city economy
so let them enjoy the best
public spaces in our city.

During the summer months,
we ask citizens to balance usage
of areas of the historical centre.
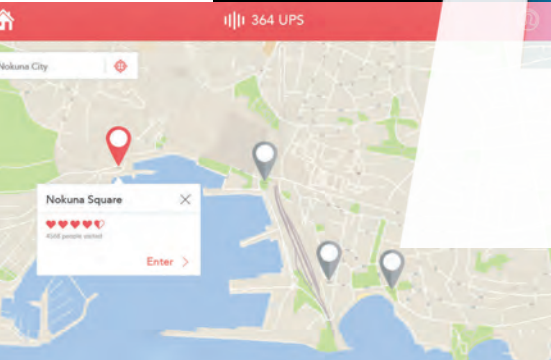
EVOLUTIONARY PROGRAM

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Coordination of Urban
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Nokuna City

Nokuna Square
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You will be charged 8 UPS for
60 minutes in this zone

OK

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3
UPS/h
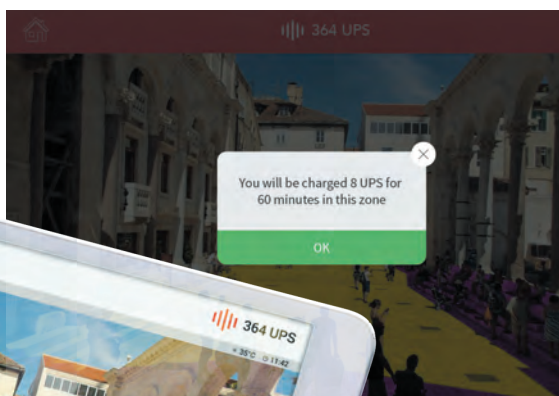
WE PUSH YOU TO REALISE THAT YOU LIVE IN A WORLD WHERE YOU CANNOT BLINDLY TRUST...

BITE IT, BULLY HACK A CLOAK OF INVISIBILITY FOR VULNERABLE TEENS ONLINE, EVERYWHERE

MOMI MINISTRY OF MISINFORMATION

...HE REALITY IS DISTORTING DATA IS DI

COOK UP ACTIVISM

SPICE UP POLICY WITH A LITTLE MORE MISINFORMATION

NO S^1

CO^2

...RTING DATA IS DISTORTING THE REA

4.   *MoMi: Ministry of Misinformation*

....

AUTHORS: Robert Cloud, Sergio Galán Nieto, Han Pham; ATELIER LEADER: Chris Hand;
ATELIER COORDINATOR: Hrvoje Živčić; POSTER DESIGN: Carmen Alía G. Ruiz.

....

• Video (3:03), posters

Distorting Data is Distorting the Reality.
People Rule.

People are flowing into the future city, and so is the wave of data they bring. The data flows over the city, sticking to the physical. Layers and layers of pixels over the old bricks, transforming our streets, hiding in our homes, showing up on store shelves, manifesting desires, calculating possible behaviours, driving decisions. But what if people become discontented with this future in which big data becomes inextricably enmeshed with the realities, desires and decisions of those living in the physical world? If increasing amounts of data flow into the city, how does it change how we relate to the city and who is using this data to influence us? Is there still room for democracy in a world of digitised decisions?

The Ministry of Misinformation is an emergent, populist digital DIY movement to distort reality by distorting urban data. Everyday people are using MoMi tactics and benevolent (and mischievous) acts of misinformation to influence their world by adding surprise back into the mix. How can you hack how people relate to and create the virtual and physical by distorting data? Welcome to the Ministry of Misinformation. Data, fiction and reality merge in a world you cannot just trust. Reality is what you make it.

Our Manifesto: You are a part of this. We are everybody, everywhere. You are us, even if you don't know it.

CATALOGUE   **| CITY | DATA | FUTURE |**   **• MOMI   45**

5. *The Future Cloud is Buried*

....

AUTHORS: Soeren Rosenbak, Andreas Foerster, Leyla Nasibova; ATELIER LEADER: Gordan Savičić; ATELIER COORDINATOR: Hrvoje Kedžo; ARTEFACTS, VIDEO AND POSTER DESIGN: Oleg Šuran; SOUND: Ante Frankić.

....

• Video (1:37, loop), gloves, model, poster

The Future Cloud is Buried is exploring and challenging our notions of what 'the cloud' really is and how this understanding shapes our choices of what to save and where to save it.

In 2030 people asked themselves: What data do we value so much that we will take it off-grid and store it locally in our very own cloud, buried underground? Twenty years later people are enjoying this decision greatly as they can access the buried cloud through a specially designed interface that uses personal DNA recognition. However, a new bio-hacking tourism industry has emerged that replicates this DNA interface for anyone, at a price. A local drug scene is also blossoming as people have created illicit ways to access this precious store of experiences from the past.

The Future Cloud is Buried
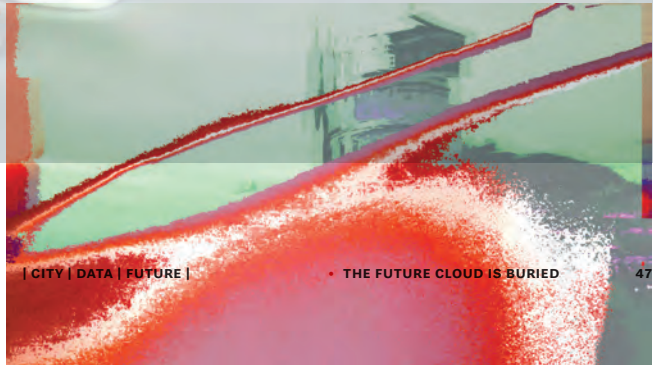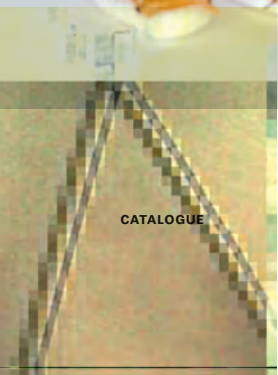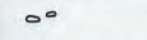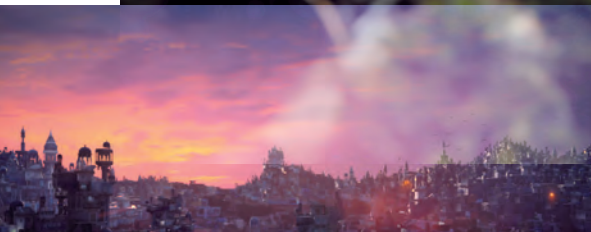
Chupan Chupai

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6.   *Chupan Chupai*

• Film Installation (8:17)

In a near future heavily influenced by the imminent boom of the Indian subcontinent, an emerging technology and economic superpower a new digital city has developed. The film follows a group of young children as they play a game of hide and seek (Chupan Chupai) in the bustling streets of this smart city. Through their play the children discover how to hack the city, opening up a cavernous network of hidden and forgotten spaces, behind the scenes of everyday streets.

The narrative of piece focuses on how the children interact with their built environment, we explore the smart city through the device of the classic children's game. The design of the future city fuses technology and built matter as one programmable environment. Using gestures and signs as a language, the project takes the concept of gesture based control to the level where we can interact and control all elements of the built environment, creating a symbiosis between technology and the city.

The film splits the physical architecture of the city into two categories; the synthesised lived in city, and its organic wild undergrowth.

The project was shot on location in India and uses a mixture of animation and visual effects to embellish the design of the city and locations that are pictured.

7.   *Blackspot*

....

Blackspot is taken from *The Monopoly of Legitimate Use*; WRITTEN, DIRECTED AND PRODUCED BY: Tobias Revell;
DIRECTOR OF PHOTOGRAPHY: Joseph Popper; WOMAN: Emma Kelly; OTHERS: Cat Kiiza, Ian Macnaughton,
Andres Ayerbe; TAXI DRIVER: M. Phillips; ASSISTANCE: Ian Hutchinson; MAKEUP: Hannah Kirk; Originally a commission
for HOUSE Festival 2014 with Lighthouse Arts; With thanks to Superflux and LCC Design for Interaction and Moving Image.

....

•   Film (6:30), map

The Monopoly of Legitimate Use takes the very physical notion of inhabiting a space or territory into the technological world, where networks can form political territories and places where people can gather and align themselves to particular ideological beliefs. Project raise questions about the tools and methods we use to identify ourselves politically as well as the rebalance of control caused by network technology that is simultaneously globalising and localising.

In Blackspot, a businesswoman leaves the City in search of a blackspot, a near-fabled place where network coverage drops out so that she can receive a secret and important message over an independent mesh network. Blackspot looks at how moving through physical space can also mean moving through networked space and in an age of privacy concerns and overt sharing, the use of this space become more important.
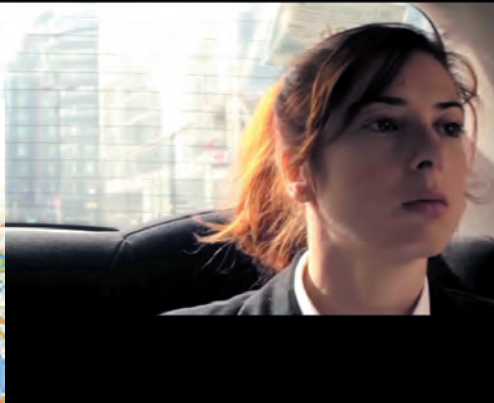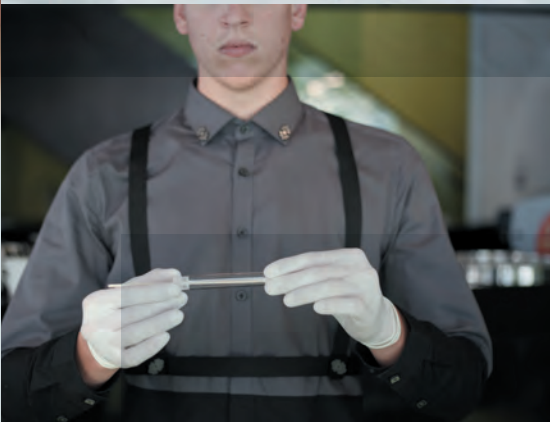
....

8. *Eutropia*

• Video (4:41), samples box, cigarette pack, mobile, accreditation

Eutropia is a city with more than 300.000 inhabitants, located on the northern shores of the Mediterranean Sea. Surely, the mention of this city, to every average post-liberal European, causes a little bit of jealousy. Thanks to the excellent entrepreneurial and political capabilities of the city authorities, for nearly 30 years this city-state has lived in total material security and prosperity.

During the Great World Recession of the 21st century, the authorities of the City of Eutropia signed an exclusive agreement with a consortium of mega corporations trading the vast amounts of information the city generates. During the 10 years investment, Eutropia has been provided with the latest infrastructure to collect all data generated by its citizens (from private housing to public institutions, facilities for rest and entertainment, work spaces, and public spaces). The local government maintains the system integrity and helps with the collection of data, together with the citizens who provide a constant stream of information.

The new economy of the city is based on data and its export. Through the exportation of data the city has secured independence and well-being for all its inhabitants. This is a city with no unemployment, a city in which no one needs to work.

In Eutopia "privacy" is just
an ideological delusion.

9.   *BetaCity—Seeing, Sensing, Sharing*

DESIGNED AND CREATED BY: Michael Smyth, Ingi Helgason, Michael McKellar;

Centre for Interaction Design, Edinburgh Napier University.

• Interactive Installation, two videos

BetaCity tracks your movements through the urban space. You are a node in the network, a unit travelling in the crowd. The city harvests your data trail, making your presence known, shared and visible to all.

But BetaCity knows who you really are. Watching, recording and storing your information, the city chooses what to reveal. Is your true identity safe within the city walls?

The density of cities has always provided people with physical and emotional sustenance, as well as the anonymity of the crowd that we sometimes crave. In the near future this could change against a backdrop of increased technological systems both in the fabric of the city and among its citizens. Imagine a city that can continuously monitor and track our movements and habits, silently gathering data, extracting meaning and making decisions on our behalf, protecting us from harm through unseen eyes.

Is this our future? Is this a choice or is it already reality?
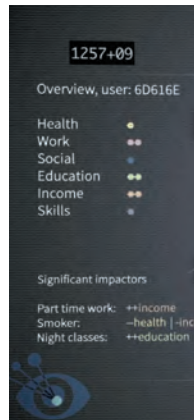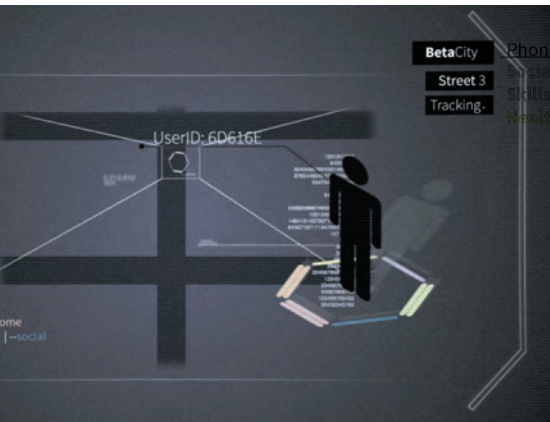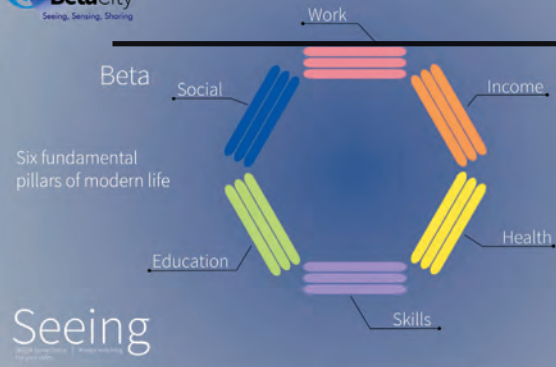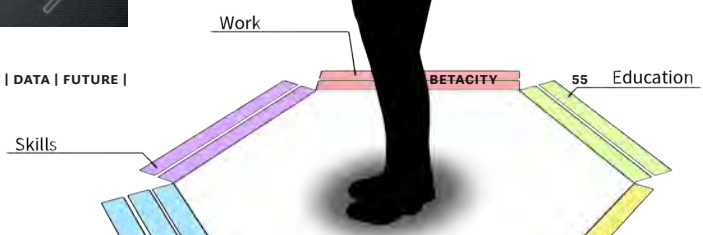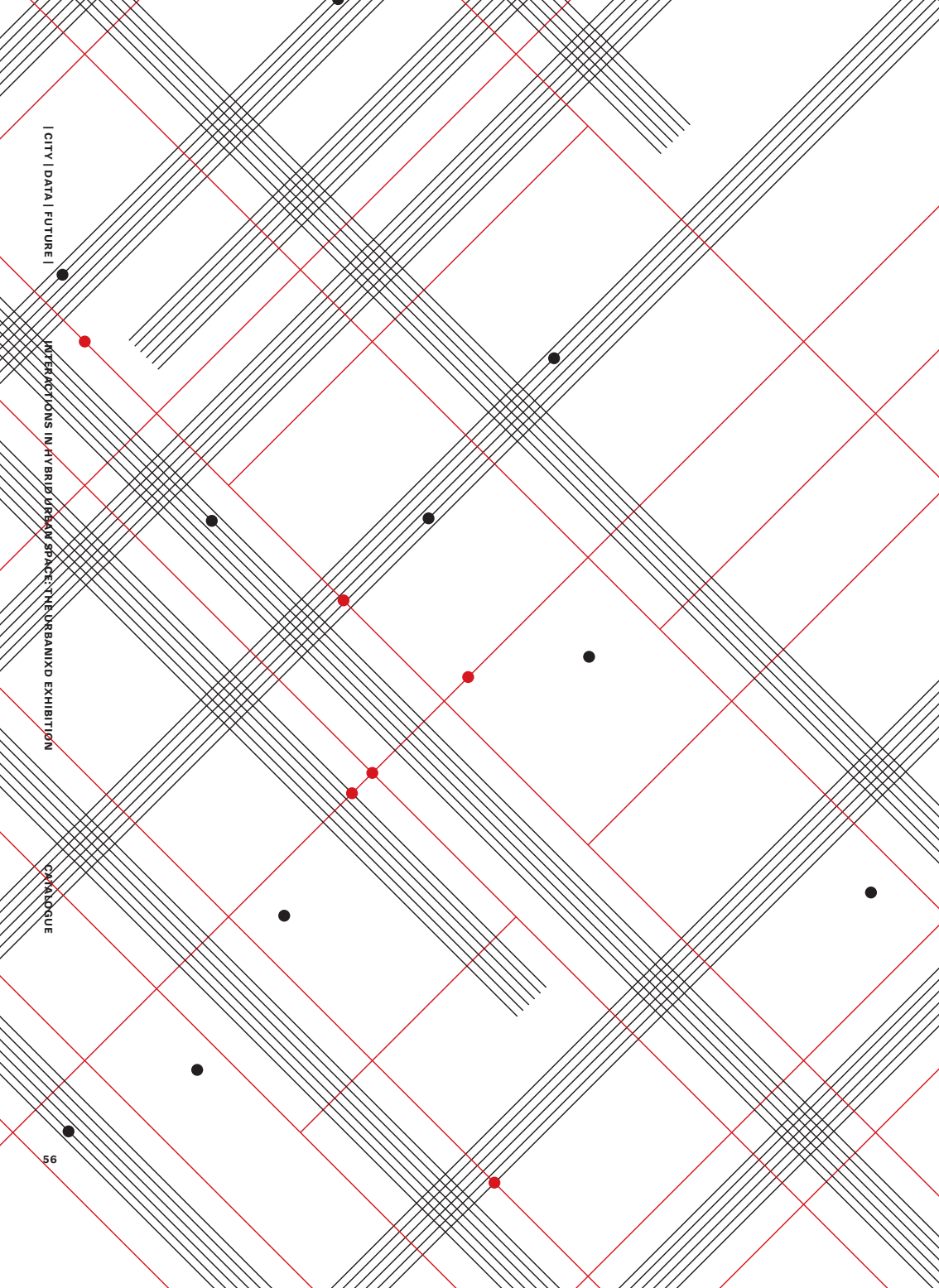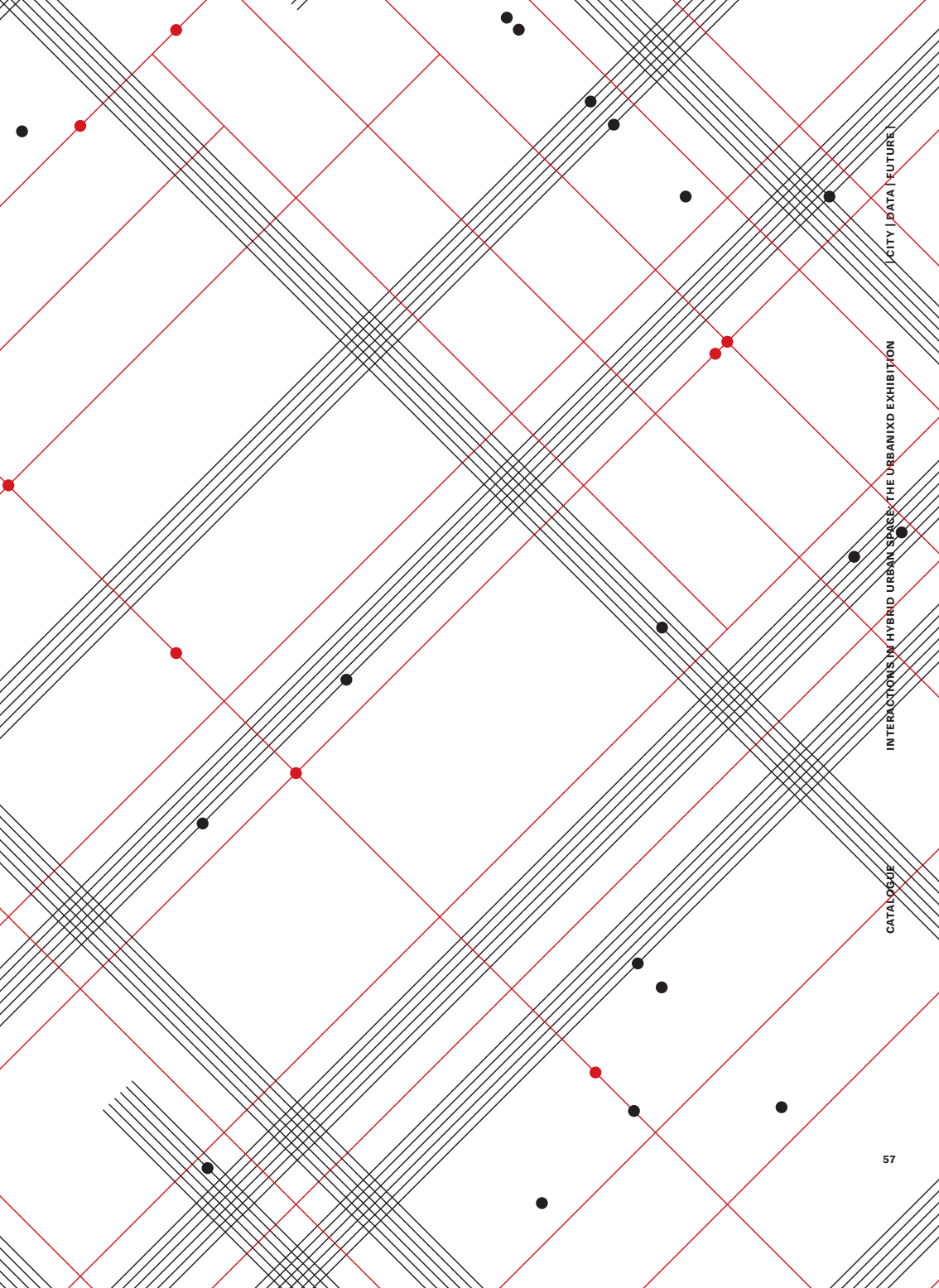
INTERACTIONS IN HYBRID URBAN SPACE: THE URBANIXD EXHIBITION

CATALOGUE

Chupan Chupai

By: Factory Fifteen

In a near future heavily influenced by the imminent boom of the Indian subcontinent, an emerging technology and economic superpower a new digital city has developed. The film follows a group of young children as they play a game of hide and seek (Chupan Chupai) in the bustling streets of this smart city. Through their play the children discover how to hack the city, opening up a cavernous network of hidden and forgotten spaces, behind the scenes of everyday streets.

58

Be a good citizen
Leave public spaces free for tourists

iili **CUBA**

YOUR BALANCE WILL BE MANAGED BY THE REVOLUTIONARY PROGRAM

iili **CUBA**   Coordination of Urban Busy Areas

The CUBA App will let you know the exact UPS/hour of any public place in the city in

Augmented reality through any smart device displaying:

INTERACTIONS IN HYBRID URBAN SPACE: THE URBANIXD EXHIBITION

CATALOGUE

Eutropia

"On the one hand, this should also include the large question our world faces – the exploitation of our ecological systems and of course the question of inequality (who are the people facing daunting poverty, ecological catastrophe and displacement because of drought, the clearing of woodlands and rainforest). On the other hand we should not make the mistake of seeing people only through this lens of them being poor. Humans with less possibilities (what inequality is ultimately about) have meaningful relationships, jokes, joy and love – and technology interactions as well (even if it is the scanners at the Frontex facilities)."

— *Andreas Streinzer, UrbanIxD summer school participant, 2013*

"...we've both been very interested in the space between reality and the impossible, a space of dreams, hopes, and fears. Usually this space is occupied by future forecasts (commercial world), design scenarios (corporate world) and utopias and dystopias (literary and cinematic worlds). It's an important space, a place where the future can be debated and discussed before it happens, so that, at least in theory, the most desirable futures can be aimed for and the least desirable avoided."

— *Anthony Dunne and Fiona Raby, Curators, "What If...", 2009*
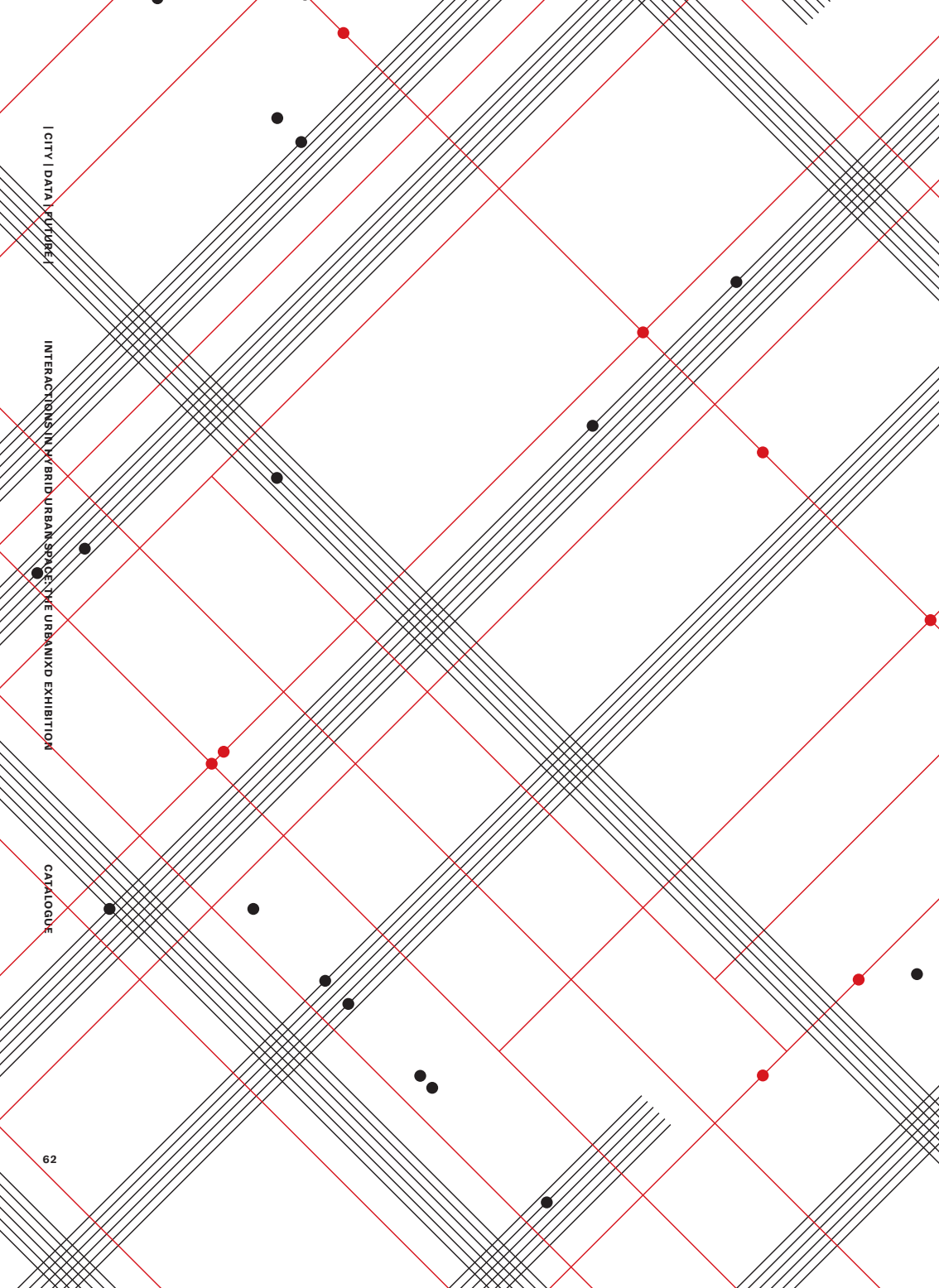
▼ Further Reading

▼ **URBANIXD PUBLICATIONS AVAILABLE
AT WWW.URBANIXD.EU**

▼ *The UrbanIxD Manifesto*

A research agenda for the future of urban interaction design.

▼ *Urban Interaction Design: Towards City Making*

How do you describe emerging trends within a forming field?
In this book, you will find a distilled conversation, filtered
through the collective and embodied practices and experienc-
es of eight diverse individuals. We cannot claim that the result
is a perfect representation of the current situation. However,
because of the experience, commitment and generosity of the
contributors, this book does now exist. We have, in our hands
and online, an attempt to characterise and discuss the emerg-
ing trends within urban interaction design, freely available for
anyone to read, reflect upon and improve.

▼ *From Urban Space to Future Place*

A document describing how the 2013 UrbanIxD Summer
School applied critical design & design fiction to future urban
technologies. Produced in collaboration with the Book Sprints
for ICT Research FP7 project.

▼ *Summer School Reader*

From the UrbanIxD project Summer School that took place in
Split, Croatia in August 2013.

New
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Globalisation

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Digital
aesthetics

Human-computer
interaction

Interaction

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Participatory
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Social
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Community
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- Inclusive cities

- Radical geography

- Human geography

- Urban planning

- Urban design

- Environmental geography

- Environmental psychology

- Geography

- Urban anthropology

- Media studies

- Tech. studies

- Psychology

Cyber

Sentient

City

Hybrid

Smar

▼ *Design and layout*

Oleg Šuran

▼ *Photography*

Vicko Vidan,
Oleg Šuran

▼ *Typeface*

Marlene (Nikola Đurek, Typonine),
Mote (Hrvoje Živčić, Typonine)

▼ *Paper*

Munken Print White 1,5 115 $^{g}/m^2$ & 200 $^{g}/m^2$

▼ *Print*

Zelina, Croatia

▼ *Exhibition contributor*

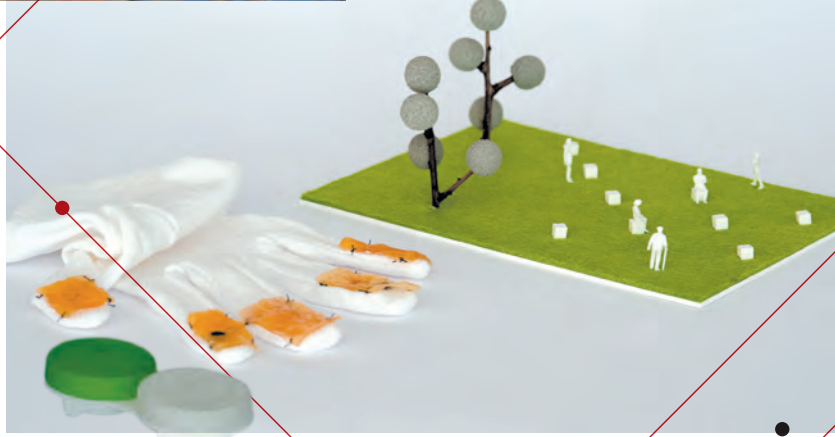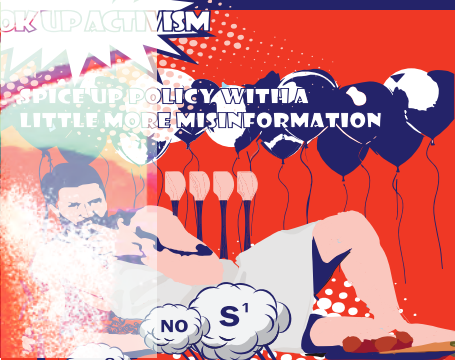Studio Manifakturist

▼ *ISBN*

978-0-9562169-4-6

▼ *Publisher*

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364 UPS

Nokuna City

Nokuna Square

4546 people visited

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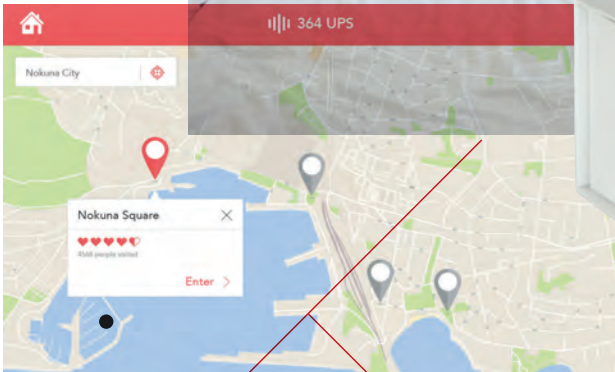
| city | data | future |

INTERACTIONS IN HYBRID URBAN SPACE: THE URBANIXD EXHIBITION

Edited by

Ivica Mitrović, *University of Split*

Michael Smyth, *Edinburgh Napier University*

Ingi Helgason, *Edinburgh Napier University*

Published by

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