Appendix

1 Interview Guides

Interviewee 1

My project is to design new mobility services and systems that play out at an urban scale, are beneficial to the city & people, and are plausible in near future. For this, I wanna create a series of micro-futures of smart city and then design mobility services in them as a lens to depict and reflect the world within it.

You think a lot about the design and use of civic media to empower and inspire democratic innovation and social transformation What is exactly civic media based on your understanding? And how do you define the meaning of being 'civic'?

In a smart city context, someone believes that technology will change the world and society will follow, while others think new configurations of society, organizations, and government will drive progress and then technology will follow What do you think of these two ways of city-making and how would you combine them (with civic media)?

For AI as an integral element of the smart city, how will the AI-powered smart things (mundane) influence the rhythms and routines of our lives, and furthermore change our cultures, beliefs, and preferences? How should we deal with it?

I'm also curious how you would describe the relationship between things and media

Speaking of the stakeholders in smart city, there are mainly three of them: government, business and citizens.

Local governments are turning over entire tracts to leading technology brands, how could companies integrate a responsible mindset in their business strategy to help build a civic society and guarantee common good? Since big business will always demand the ability to extract some value in return

How can we design civic system that could be beneficial to individuals while also enable collective benefits when scaling up, in other words, how can we design a more symbiotic relationship (mutual beneficial)? (like private car)

For my research so far, I'm trying to seek the possible overlaps of Civic Qualities of Citizenship and Smart City Capabilities. Now I find four opportunities for cultivating civic citizenship: Meaningful Inefficiency, Freedom to City Remake, Mindful Belonging and Responsible Augmentation.

From your perspective, how citizenship will shift in future smart city? What are the rights and obligations people hope to have in the future? Will there be a smart citizenship?

Relatively speaking, what kind of civic empowerment do you think a smart city should provide to its citizens?

In what way can we encourage citizens to take a more informed and active role in city-making in their everyday life? How to empower individual choices to add up to new civic possibilities?

What do you think is the future of democracy if each citizen is capable of contributing to making smarter decisions for the city?

Interviewee 2

My project is to design new mobility services and systems that play out at an urban scale, are beneficial to the city & people, and are plausible in near future. For this, I wanna create a series of micro-futures of smart city and then design mobility services in them as a lens to depict and reflect the world within it.

You think a lot about the paradigm shifts in economic, political and social beliefs What are the most important insights you have gained in your research so far, about how cities will shift towards a smart city? What are the possible futures from your point of view?

From your perspective, how citizenship will shift in future smart city? What are the rights and obligations people hope to have in the future?

In the future, how do people want to dwell in cities? (future perspectives)

Technology becomes a integral part of the smart city How those high-end technologies will influence the rhythms and routines of our lives, and furthermore change our cultures, beliefs, and preferences?

What according to you are the drivers or weak signals to which design of smart cities should be paying attention? From a technological, as well as social and cultural perspective?

Speaking of the stakeholders in smart city, there are mainly three of them: government, business and citizens. While I learned that you have rich experience of trend research in advertising and marketing.

Since local governments are turning over entire tracts to leading technology brands, how could companies integrate a responsible mindset in their business strategy to help build a civic society and guarantee common good? Since big business will always demand the ability to extract some value in return

What would be a preferable future from your perspective and why? What measures could we take to pursue it?

What do you think is the future of democracy if each citizen is empowered by technologies to get involved in the progress of city making?

How do you do futuristic studies? What is the value by doing so?

Interviewee 3

My project is to design new mobility services and systems that play out at an urban scale, are beneficial to the city & people, and are plausible in near future. For this, I wanna create a series of micro-futures of smart city and then design mobility services in them as a lens to depict and reflect the world within it.

You think a lot in eliciting human values in the design process of meaningful interactive media and technology There are academic voices asking 'If smart city is the answer what is the question?' I guess the potential of enhancing human values maybe one question Based on your experience so far what kind of values are you trying to bring to light in the smart city context? And what kind of (new) values do you think may be important in the future?

Technology has become an integral part of the smart city Among which the automatization and robotization are a big trend now How do you think these kinds of technology which make people decentralize their agency to algorithmic things, may give rise to the emergence of new types of interactions or services in cities? And how do you think people's concerns about losing their authority to algorithms should be addressed?

Last November Google's daughter company Sidewalk Labs announced that it will develop Toronto's Eastern Waterfront into the city's newest neighborhood What is your attitude towards this kind of urban development, in which a tech company can shape the urban environment to a large extent?

Speaking of the stakeholders in smart city, there are mainly three of them: government, business and citizens. While I learned that you also researched into making use of technology for meaningful brand experience.

First, what is the dimension of 'meaningful' according to your perspective?

Since technology brands such as Google and Amazon, and platform brands like Uber and Airbnb are taking more power and resources in the city How could companies integrate a responsible mindset in their business strategy to help build a civic society by providing what you mean meaningful experience? What would change in the future the ways of advertising and consuming?

Besides the bottom-up participatory approach and top-down authoritative control, do you think there are other ways for city making? What do you think is the future of democracy if each citizen is empowered by technologies to get involved in the progress of city making?

Interviewee 4

My project is to design new mobility services and systems that play out at an urban scale, are beneficial to the city & people, and are plausible in near future For this, I wanna create a series of micro-futures of smart city and then design mobility services in them as a lens to depict and reflect the world within it For this interview, topics will be around smart city through different lens (living, business, policy etc)

City Dwelling

For Waag Society, you said it has a meaning of 'scales for society'. Speaking of a society in the smart city context, what do you think are the important scales for social appraisal?

There's quote saying citizens should not only live in the city but also for the city. In what way can we encourage citizens to take a more informed and active role in city-making through their everyday life? What paradigm shift do we need for people to take more responsibility?

What will be the new ecological systems then?

City Making

In the Urgentcity interview, you chose 'commons' as the vocabulary for the urban assets. How do you consider the value and role of commons in smart city development? What's crucial with it?

When designing service systems at urban scale, there's always a missing link between the system and individuals. To tackle this problem, how can we design systems that could be beneficial to individuals (decrease exclusion) while also enable collective benefits when scaling up (symbiotic relationship) as for public and society?

Do you have any example?

Someone believes that technology will change the world and society will follow, while others think new configurations of society, organizations, and the government will drive progress and then technology will follow. What do you think of these two ways of city-making? Do you see any new way aside from them?

City Brands

Local governments are turning over entire tracts to leading technology brands, brands are also expanding while getting more resources around the city, can they be socially just city makers?

How could companies integrate a responsible mindset in their business strategy to help build a civic society and guarantee common good?

2 Emerging Issues & Trends from Horizon-Scanning

Emerging Issues

Emerging Technology	Domain	Resource
Peer to peer technology	Create	Waag Society
Things as citizens	Define	PACT
Network of smart infrastructure	Create	Dash Marshall
Robots will have personalities (Hardware Gets Even Warmer)	Create	Frog
Social groups in Virtual Reality	Relate	Facebook
Collection of low-fidelity data	Create	Frog
Nano-technology	Create	Pop-Up City
5G Networking	Connect	Ericsson
use large-scale industrial 3D printing to build inexpensive and environmentally friendly houses	Create	Space 10
Open source for city making	Create	Space 10
Biodegradable objects	Create	Space 10
In-Body sensor	Connect	SENSORY-MINDS GMBH
Proprietary, Homegrown AI Languages	Create	2018 Emerging Tech Trends Report, Amy Webb
A Bigger Role For Ambient Interfaces	Connect	2018 Emerging Tech Trends Report, Amy Webb
Deep Linking Everywhere	Connect	2018 Emerging Tech Trends Report, Amy Webb
Making AI Explain Itself	Define	2018 Emerging Tech Trends Report, Amy Webb
Religious AI	Define	Simone Rebaudengo
Natural Language Understanding	Create	2018 Emerging Tech Trends Report, Amy Webb
Machine Reading Comprehension	Create	2018 Emerging Tech Trends Report, Amy Webb
Voiceprint	Connect	2018 Emerging Tech Trends Report, Amy Webb
None-visual user interface replace visual ones	Connect	2018 Emerging Tech Trends Report, Amy Webb
Smart Dust	Create	2018 Emerging Tech Trends Report, Amy Webb
Predictive Machine Vision	Create	2018 Emerging Tech Trends Report, Amy Webb
Personality Recognition and Analytics	Connect	2018 Tech Trends For Journalism and Media, Future Today Institute
Software as a Service	Create	2018 Tech Trends For Journalism and Media, Future Today Institute
Drone Surveillance	Create	2018 Emerging Tech Trends Report, Amy Webb

Biometric Data	Define	2018 Emerging Tech Trends Report, Amy Webb
Self-Assembling Robots	Create	2018 Emerging Tech Trends Report, Amy Webb
Collaborative Robotics	Connect	2018 Emerging Tech Trends Report, Amy Webb
Brain-To-Vehicle Interfaces	Connect	2018 Emerging Tech Trends Report, Amy Webb
Robot Vision	Create	2018 Emerging Tech Trends Report, Amy Webb
Real-Time Language Translation	Connect	2018 Emerging Tech Trends Report, Amy Webb
Responsive Infrastructure	Connect	103 Urban Trends: A Glossary of Ideas from the BMW Guggenheim Lab
Potential Policy Issues	**Domain**	**Resource**
Integrated branded platforms will define the very fabric of city experience	Consume	The Future Laboratory
Companies integrate a responsible mind-set in their business strategy	Create	Raft/Waag/Interview/The Future Laboratory
City residents will increasingly be asked their opinion of civic matters	Relate	The Future Laboratory
Access becomea a basic human right	Define	The City of Tomorrow
Environmental tax to combat pollution for citizens	Define	Future Center
Government helps to reconnect people to the natural world with policy and measures	Relate	Civil Society Futures
City as a brand	Define	Droog
Tech Companies replace Banks	Create	Michael K Spencer
Tech companies take over government	Relate	npr
Platform Capitalism	Consume	Nick Srnicek
Repairability is becoming a matter of public policy	Create	Space 10
Natural Language Generation for Reading Levels	Create	2018 Tech Trends For Journalism and Media, Future Today Institute
Digital anonymity	Connect	2018 Emerging Tech Trends Report, Amy Webb
Universal Basic Income (UBI)	Define	2018 Emerging Tech Trends Report, Amy Webb
Anti-Trust Lawsuits	Define	2018 Emerging Tech Trends Report, Amy Webb
Cautious Capitalism	Define	The Business World in 2025 Four scenarios to stress test your strategy
Regionalized and protected economies	Define	The Business World in 2025 Four scenarios to stress test your strategy
Commons-driven government	Relate	Smart Cities as Democratic Ecologies, Daniel Araya
Nation-as-brand Phenomenon	Relate	Droog
Policy Simulation	Define	Interview with Roy Bendor
People vote for companies	Relate	Interview with Roy Bendor
New Ideas / Concepts	**Domain**	**Resource**
People want to live with a diverse group of people	Relate	Space10
Coliving has begun to transform our notions of ownership and habitat	Relate	Christelle Gautreau

Civic Commons become the animating spirit for public spaces and public goods across the city	Define	Dash Marshall
The emerge of No Fixed Address System for Urban Nomads	Connect	NO FIXED ABODE
Inhabitants of urban housing become important and active co-designers of their own environment	Create	MINI LIVING, Salone del Mobile 2018
The Subscription Neighbourhood	Relate	Space 10
New currency within ecosystem / community	Connect	Observation
Humans will lose their authority to algorithms	Destroy	Pop-Up City
Parking could be slashed significantly	Connect	Carlo Ratti
Aggravating urban sprawl generated by autonomous cars	Define	Carlo Ratti
Subscription of relationships	Relate	New Yorker
Local Urban Culture Goes Global	Define	Pop-Up City
DIY Currencies For DIY Communities	Relate	Pop-Up City
Gentrification Through the Sharing Economy	Consume	Wachsmuth, David, and Alexander Weisler
Responsive Crosswalk	Connect	Umbrellium
AI makes the best decision for people	Define	Discussion
Predictive Policing	Create	Beware of Smart People!
Consumption as work	Consume	Ericsson
People don't only get credits for active productive efforts but also for desirable "consumer" behavior	Consume	Ericsson
Government giving credits to citizens for shaping behaviors	Relate	Ericsson
The disappearing of the smartphone in an age of talking things and smart devices	Define	Amy Webb
Human body as interface	Connect	Amy Webb
Upgrade of human skills	Define	Designing Agentive Technology
Decreasing Expertise	Define	Designing Agentive Technology
Repetitive work being taken over by ai	Relate	Observation
Co-performance of people and things	Connect	Elisa Giaccardi et al (2018)
Meaningful Inefficiency	Define	Eric Gordon
On the grid 24/7	Connect	The rise of Generation C: Implications for the world of 2020
As "off-grid" time becomes more rare, it will become increasingly valued	Relate	The rise of Generation C: Implications for the world of 2020
The opportunity to meet face-to-face will be accorded primarily to top management	Relate	The rise of Generation C: Implications for the world of 2020
Business travel will have declined in the face of costs and alternative meeting technologies	Relate	The rise of Generation C: Implications for the world of 2020
Social networks, which will prioritize accounts and posts that come from credible sources	Connect	2018 Emerging Tech Trends Report, Amy Webb
Ethical Manufacturing	Create	2018 Emerging Tech Trends Report, Amy Webb

Everything you see (and even the things you can't) will become searchable via a distributed network	Connect	2018 Emerging Tech Trends Report, Amy Webb
Future inhabitants of urban housing will be co-designers of their own environment	Create	MINI LIVING, Salone del Mobile 2018
Peer-to-peer organization is the new system	Relate	Ericsson
Problem-solving entrepreneurship	Relate	Ericsson
People are become increasingly aware that consumption is a political tool at their disposal and that they can affect their own society and standard of living depending on how they choose to consume	Consume	Ericsson
Express political views through consumption	Consume	Ericsson
Companies take back control of their data and turn to privacy-friendly companies	Relate	The Business World in 2025 Four scenarios to stress test your strategy
Active citizenry over passive consumerism	Define	Foth, M , & Brynskov, M (2016) Participatory action research for civic engagement
Human actors over human factors	Define	Foth, M , & Brynskov, M (2016) Participatory action research for civic engagement
Culture over infrastructure	Define	Foth, M , & Brynskov, M (2016) Participatory action research for civic engagement
Prosperity over efficiency	Define	Foth, M , & Brynskov, M (2016) Participatory action research for civic engagement
Collective Cityn Manifesto	Define	102 Urban Trends: A Glossary of Ideas from the BMW Guggenheim Lab
Transportation Psychology	Relate	103 Urban Trends: A Glossary of Ideas from the BMW Guggenheim Lab

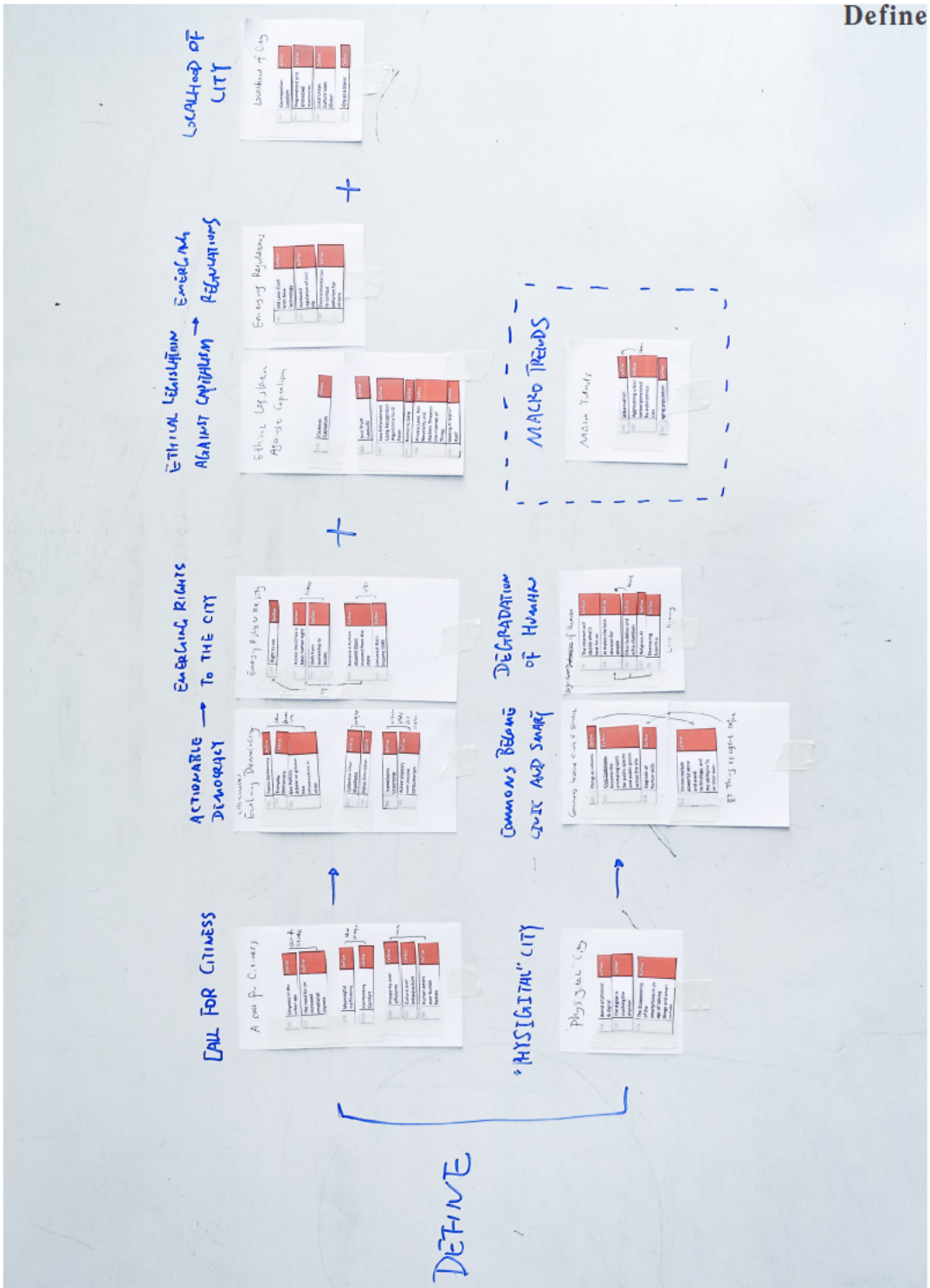
Trends

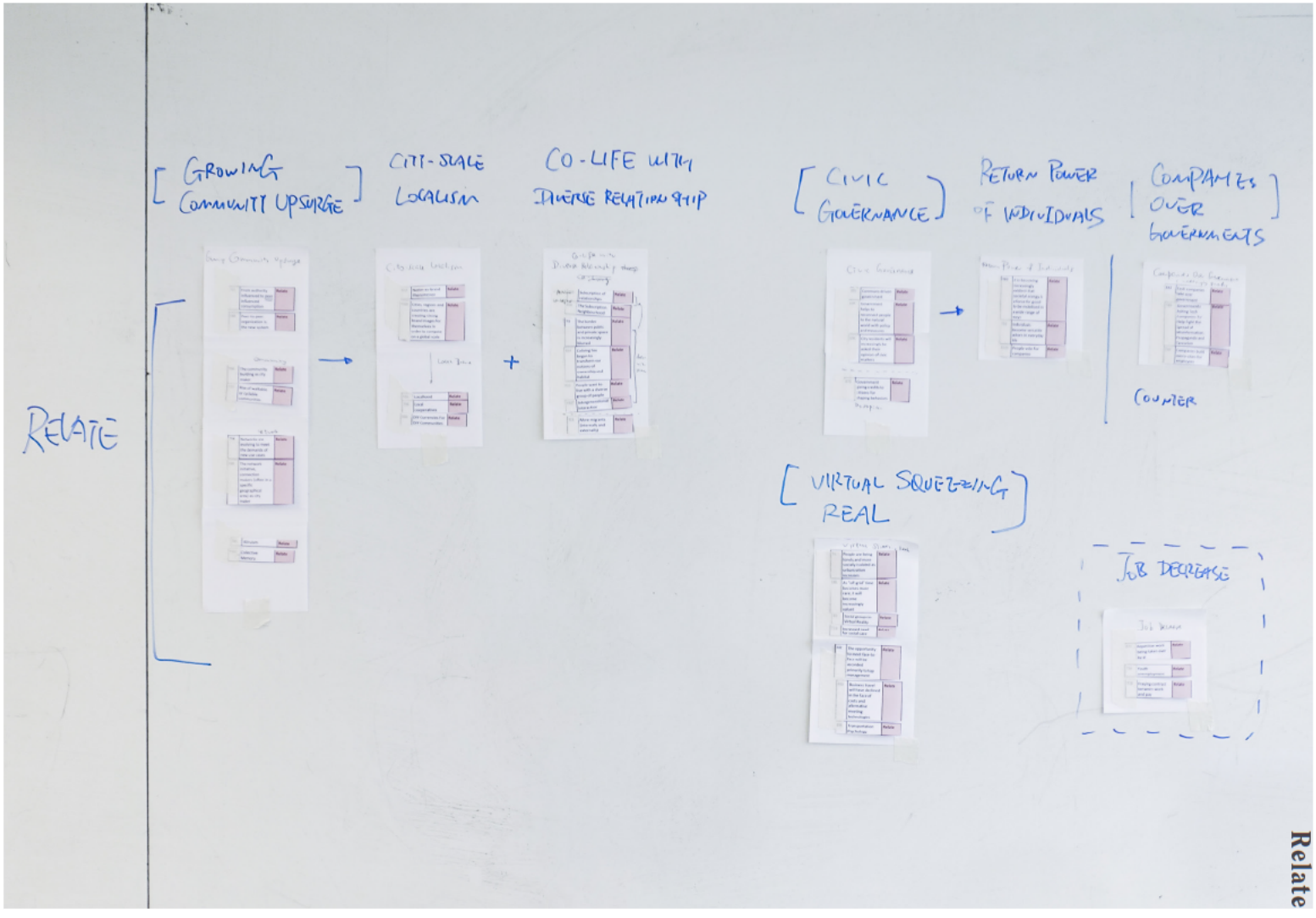
People are being lonely and more socially isolated as urbanization increases	Relate	1	Space 10
People spend much more time on social media	Connect	2	Space 10
The border between public and private space is increasingly blurred	Relate	3	Space 10
States are increasingly competing on their ability to build the most technologically advanced urban environments	Create	4	The Future Laboratory
Local governments are turning over entire tracts to leading technology brands	Create	5	The Future Laboratory
Loss of civic space	Destroy	6	Futures Centre
Score/credits as new currency	Consume	7	Observation
The analytics is moving offline into the physical world	Create	8	Raft Trend Report 2018
The internet will decide what's best for us	Define	9	Raft Trend Report 2018
The digital is crushing the physical	Define	10	Raft Trend Report 2018
Maker movement and grassroot innovations	Create	11	Observation
Topics Democracy	Define	12	Interview
Increased need for social care	Relate	13	Futures Centre
Aging population	Define	14	Futures Centre
More migrants (internally and externally)	Relate	15	Futures Centre
Youth unemployment	Relate	16	Futures Centre
Rising inequality and insecurity	Destroy	17	Futures Centre
Fraying contract between work and pay	Relate	18	Futures Centre
Increased regulation of civic life	Define	19	Futures Centre
Automation of transport (and more)	Connect	20	Civil Society Futures
Rise of community business	Consume	21	Civil Society Futures
Experiences and access to items are more desirable than ownership	Consume	22	Civil Society Futures
Rise of walkable or cyclable communities	Relate	23	Civil Society Futures
Walled garden approach by companies	Connect	24	Dash Marshall
Smart devices are the interface of companies instead of people	Destroy	25	Raft Podcast Let's Fix Things
Citizen experienments in urban space	Create	26	Futures Centre
Ecosystems of Value I Robust subscription services that will be bundled together	Consume	27	Michael K. Spencer
A dramatic rise of nomads	Create	28	NO FIXED ABODE
Receive a human stipend (basic income) from the state	Define	29	Michael K. Spencer
Companies build micro-cities for employees	Relate	30	Interview
Inclusivity goes mainstream	Create	31	Frog
Your voice as an identity and and audio as an interface	Connect	32	Observation
Brand urbanism	Consume	33	Golfstromen
Health services are using a 'gamified' approach to patients monitoring their own personal health	Consume	34	Urban Transformations
Localhood	Relate	35	Pop-Up City
Pop-Up activities in cities	Create	36	Pop-Up City
Shift from ownership to access	Define	37	Pop-Up City
New forms of exclusivity emerge in cities across the world as a form of urban lifestyle and a city-making	Relate	38	Pop-Up City
Local Urban Culture Goes Global	Define	39	Pop-Up City
Companies offer customisable manufacturing as a service	Consume	40	Space 10
Platfomised services	Connect	41	Cozy/Flat
Filter bubbles and echo chambers	Define	42	Cozy/Flat
Premium mediocre	Consume	43	Ribbonfarm
Tailored advertising	Consume	44	Observation
Urbanisation	Define	45	Mega Trend

The individual as a co-creator	Consume	46	Ericsson
The individual as an enabler	Consume	47	Ericsson
The individual as an ennobler	Consume	48	Ericsson
The individual as a producer	Consume	49	Ericsson
From accumulative consumption to smart consumption	Consume	50	Ericsson
From authority influenced to peer influenced consumption	Relate	51	Ericsson
Mass customisation	Consume	52	Space 10
Individuals become versatile actors in everyday life	Relate	53	Ericsson
Automation of consumption	Consume	54	Ericsson
The shift from products to services	Create	55	Ericsson
Local cooperatives	Relate	56	Ericsson
Consumption is being organized by grassroots movements	Consume	57	Ericsson
Networks are evolving to meet the demands of new use cases	Relate	58	Ericsson
Social business	Create	59	Ericsson
Repair Movement	Consume	60	Space 10
People increasingly tend to reward the purveyors of ethically, socially and environmentally sound brands with loyalty	Consume	61	Space 10
Internet-of-Services	Consume	62	SENSORY-MINDS GMBH
Predictive Purchase	Consume	63	SENSORY-MINDS GMBH
The community building as city maker	Relate	64	Ten Types of Emerging City Makers
The community garden / playground as city maker	Connect	65	Ten Types of Emerging City Makers
The community platform / group as city maker	Connect	66	Ten Types of Emerging City Makers
The supporting platform / institute (often on a specific topic) as city maker	Connect	67	Ten Types of Emerging City Makers
The network initiative, connection makers (often in a specific geographical area) as city maker	Relate	68	Ten Types of Emerging City Makers
The building with room for events, experiments, artist hosting etc. as city maker	Create	69	Ten Types of Emerging City Makers
The maker space / lab building as city maker	Create	70	Ten Types of Emerging City Makers
The collective entrepreneurs / event building as city maker	Create	71	Ten Types of Emerging City Makers
The bright idea / innovation as city maker	Create	72	Ten Types of Emerging City Makers
The alternative system (monetary, energy, water, food, etc.) as city maker	Connect	73	Ten Types of Emerging City Makers
Blend of physical & digital	Define	74	Fjord
Surveillance technology	Connect	75	Futurism
The ethics economy is booming	Create	76	Fjord 2018 Trends
Digital Assistants Become Ubiquitous	Connect	77	2018 Emerging Tech Trends Report / Amy Webb
Drones include powerful sense and avoid technology, and the ability to fly on their own	Define	78	2018 Tech Trends For Journalism and Media, Future Today Institute
Faceprints as identity	Connect	79	2018 Emerging Tech Trends Report, Amy Webb
Law Enforcement Using Recognition Algorithms To ID Faces	Define	80	2018 Emerging Tech Trends Report, Amy Webb
Vehicle-to-Vehicle (V2V) Communications	Connect	81	2018 Emerging Tech Trends Report, Amy Webb
Crowdlearning becomes an incentive-based learning platform for crowd	Connect	82	Nilesh Padhariya, Kshama Raichura (2014)
Privacy Laws, Net Neutrality and Hackers Threaten the Internet of Things	Define	83	2018 Emerging Tech Trends Report, Amy Webb
Old Laws Clash With New Technology	Define	84	2018 Emerging Tech Trends Report, Amy Webb
Governments Asking Tech Companies To Help Fight the Spread of Misinformation, Propaganda and Terrorism	Relate	85	2018 Emerging Tech Trends Report, Amy Webb
Internet of Physical Things	Create	86	2018 Emerging Tech Trends Report, Amy Webb
A loss of identity	Destroy	87	MINI LIVING, Salone del Mobile 2018
Avoiding big brands	Consume	88	Ericsson
It is becoming increasingly evident that societal energy is a force for good to be mobilised in a wide range of ways	Relate	89	Smart Cities as Democratic Ecologies, Daniel Araya
Open Networks	Connect	90	Waag Society
Open Hardware	Create	91	Waag Society
Cosmopolitan Localism	Define	92	Ezio Manzini
Diffuse Design	Create	93	Ezio Manzini

Bike Politics, debate on greater bike infrastructure in cities	Define	94	100 Urban Trends: A Glossary of Ideas from the BMW Guggenheim Lab
Altruism	Relate	95	101 Urban Trends: A Glossary of Ideas from the BMW Guggenheim Lab
Citiyness in the urban age	Define	96	102 Urban Trends: A Glossary of Ideas from the BMW Guggenheim Lab
The need for an increased emotional cityness	Define	97	103 Urban Trends: A Glossary of Ideas from the BMW Guggenheim Lab
Chameleonic Citizenship	Define	98	104 Urban Trends: A Glossary of Ideas from the BMW Guggenheim Lab
Container Architecture	Create	99	105 Urban Trends: A Glossary of Ideas from the BMW Guggenheim Lab
Collective Memory	Relate	100	106 Urban Trends: A Glossary of Ideas from the BMW Guggenheim Lab
Confronting Comfort	Define	101	107 Urban Trends: A Glossary of Ideas from the BMW Guggenheim Lab
Intergenerational Interaction	Relate	102	108 Urban Trends: A Glossary of Ideas from the BMW Guggenheim Lab
Everyday Democracy	Define	103	109 Urban Trends: A Glossary of Ideas from the BMW Guggenheim Lab
Right to xxx	Define	104	Observation
Cities, regions and countries are creating strong brand images for themselves in order to compete on a global scale	Relate	105	Droog

3 Clusters of Future Synthesis

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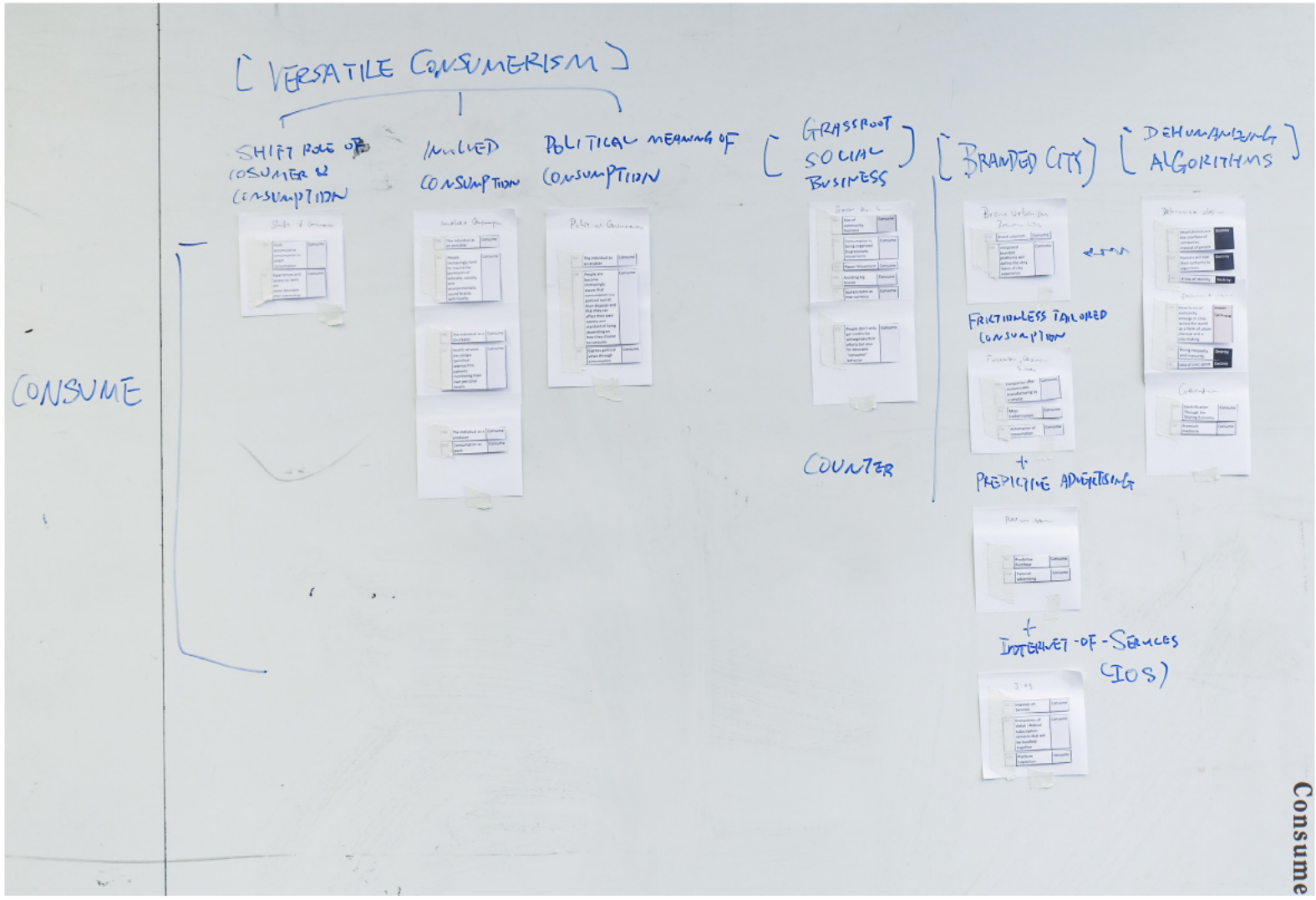
CO-LIFE WITH DIVERSE RELATIONSHIP
[CIVIC GOVERNANCE]
RETURN POWER OF INDIVIDUALS
[COMPANIES OVER GOVERNMENTS]
COUNTER
RELATE
[VIRTUAL SQUEEZING REAL]
JOB DECREASE
Relate


[CONNECTED EVERYDAY]
[SEAMLESSLY CITY]
[AMBIENT INTERFACE]
[CO-PERFORMANCE]
WALLED-GARDEN
CONNECT
SCRUTINY EVERYDAY
OPEN NETWORKS
MORE-VISUAL
HUMAN AS INTERFACE
[PLATFORMIZATION FOR COMMUNITY BUILDING]
VERSATILE
SHIFT ROLE OF CONSUMER & CONSUMPTION
Connect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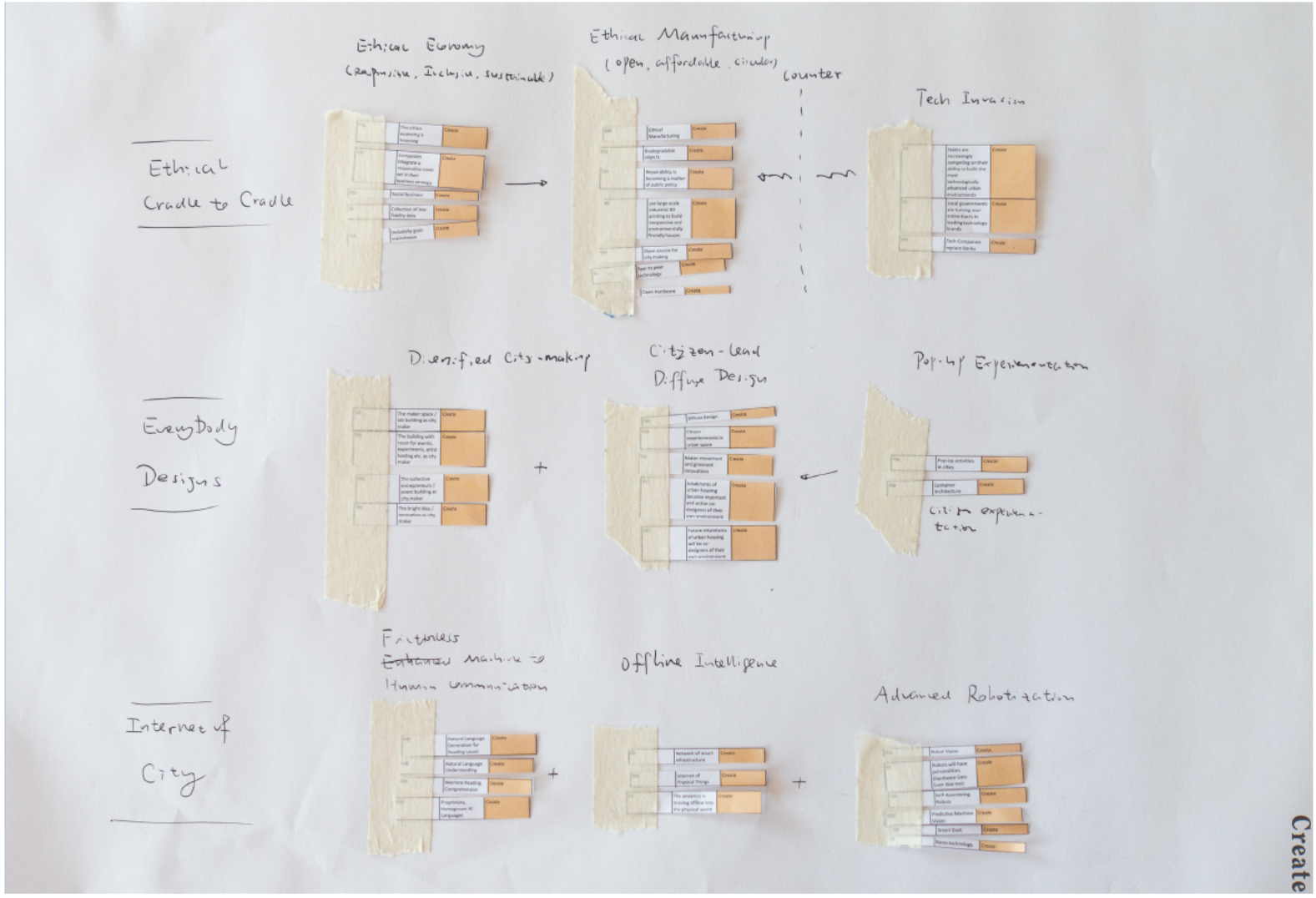
POLITICAL MEANING OF CONSUMPTION
[GRASSROOT SOCIAL BUSINESS]
[BRANDED CITY]
[DEHUMANIZING ALGORITHMS]
CONSUME
COUNTER
FRICTIONLESS TAILORED CONSUMPTION
+ PREDICTIVE ADVERTISING
+ INTERNET-OF-SERVICES (IOS)
Consume


Ethical Economy
(Responsive, Inclusive, Sustainable)
Ethical Manufacturing
(open, affordable, circular)
counter
Tech Invasion
Ethical
Cradle to Cradle
Diversified City-making
Citizen-Led
Diffuse Design
Pop-up Experimentation
EveryBody
Designs
Frictionless
Machine to
Human Communication
Offline Intelligence
Advanced Robotization
Internet of
City
Create

4 Future Hinting Workshop Toolkit

4.1 Manifesto

Workshop Manifesto #1

This is a manifesto which will guide the workshop. It is made based on three future smart city contexts from Sen's project. It is a starting point that describes one possible future. To help accelerate the workshop we will take these as givens and assume that they are true. It's your job to show how they come to life in the everyday experiences of mobility services.

Amsterdam 2030 is Bilateral Urbrandism

A city that forms a cautious collaboration with brands

The city no longer depends on a few large tech corporations for its livelihood. Citizens vote for companies to settle in and residents of a district can select branded applications. As consumers, people engage more in the creation part thanks to the maturing ICT technologies. Creative communities emerge and create social businesses. While the government is now in the people business, supporting citizens to negotiate the rules and criteria with corporations and fostering social entrepreneurship. It also makes sure to cautiously work together with big brands on meaningful urban projects. Under this pressure, profit-driven brands start to embrace more socially responsible business models.

Design Guide

City

- How can brands realize the true potential of our urban infrastructure without destroying civil liberties?
- Instead of brands conquering cities, how can we leverage their resources for social benefits?
- Can corporations adopt low-fidelity branding?
- What if brands can collaborate with social businesses and become their teachers?
- How data and technology could contribute to the freedom of citizens?

Mobility

- What if people can decide and produce their own mobility?
- Different mobility services for different neighborhoods instead of a one-fits-all model?
- A grassroots / decentralized Uber?
- How can different brands help improve urban mobility? (Sports brands encourage walking)
- How will the human motivations behind mobility be different in this future?
- How will artificial intelligence impact on human mobility?

Workshop Manifesto #2

This is a manifesto which will guide the workshop. It is made based on three future smart city contexts from Sen's project. It is a starting point that describes one possible future. To help accelerate the workshop we will take these as givens and assume that they are true. It's your job to show how they come to life in the everyday experiences of mobility services.

Amsterdam 2030 is Versity

A city that can be explained only by telling a story

The city is a mixture of the poetic and the practical. Citizens are encouraged to get rid of their fixed and calm lives, but to dwell as poets who are inefficient and yet productive, delightful and engaging. Everyday life becomes 'adventures', urban spaces are built with smart infrastructures for creating new action of citizens and form a sense of community inadvertently. Information is inclusively generated by the play and exploration instead of forcing and nudging with governing or commercial intent.

Design Guide

City

- How to make society slow down instead of speeding up?
- How can we create meaningful inefficiency rather than meaningless efficiency?
- What if active citizenry over passive consumerism, human actors over human factors, culture over infrastructure and prosperity over efficiency?
- What if play becomes a norm in everyday life?

Mobility

- How will the human motivations behind mobility be different in this future?
- What is a wasted journey? An ideal journey?
- What is the value of the journey other than seamless efficiency?
- Mobility as a way to explore the city?
- What else are we doing while we travel?
- How can we change commuting habits by mixing digital and physical experiences?
- How will artificial intelligence impact on human mobility?

Workshop Manifesto #3

This is a manifesto which will guide the workshop. It is made based on three future smart city contexts from Sen's project. It is a starting point that describes one possible future. To help accelerate the workshop we will take these as givens and assume that they are true. It's your job to show how they come to life in the everyday experiences of mobility services.

Amsterdam 2030 is Un(lock)-commons

A city that braids its resourcefulness into a holistic human experiences

The city is horizontally organized as a communal resource where social communities are empowered to cooperate together for managing shared wealth sustainably. Everything is hackable and reconfigurable in some sense. And with peer to peer systems and informal networks, citizens take the roles as active producers of and contributors to the city. A spirit of generosity and reciprocity is encouraged. Institutions (park, library...) are no longer singular entities but city platforms for social practice. Space eventually becomes a form of networked relationships.

Design Guide

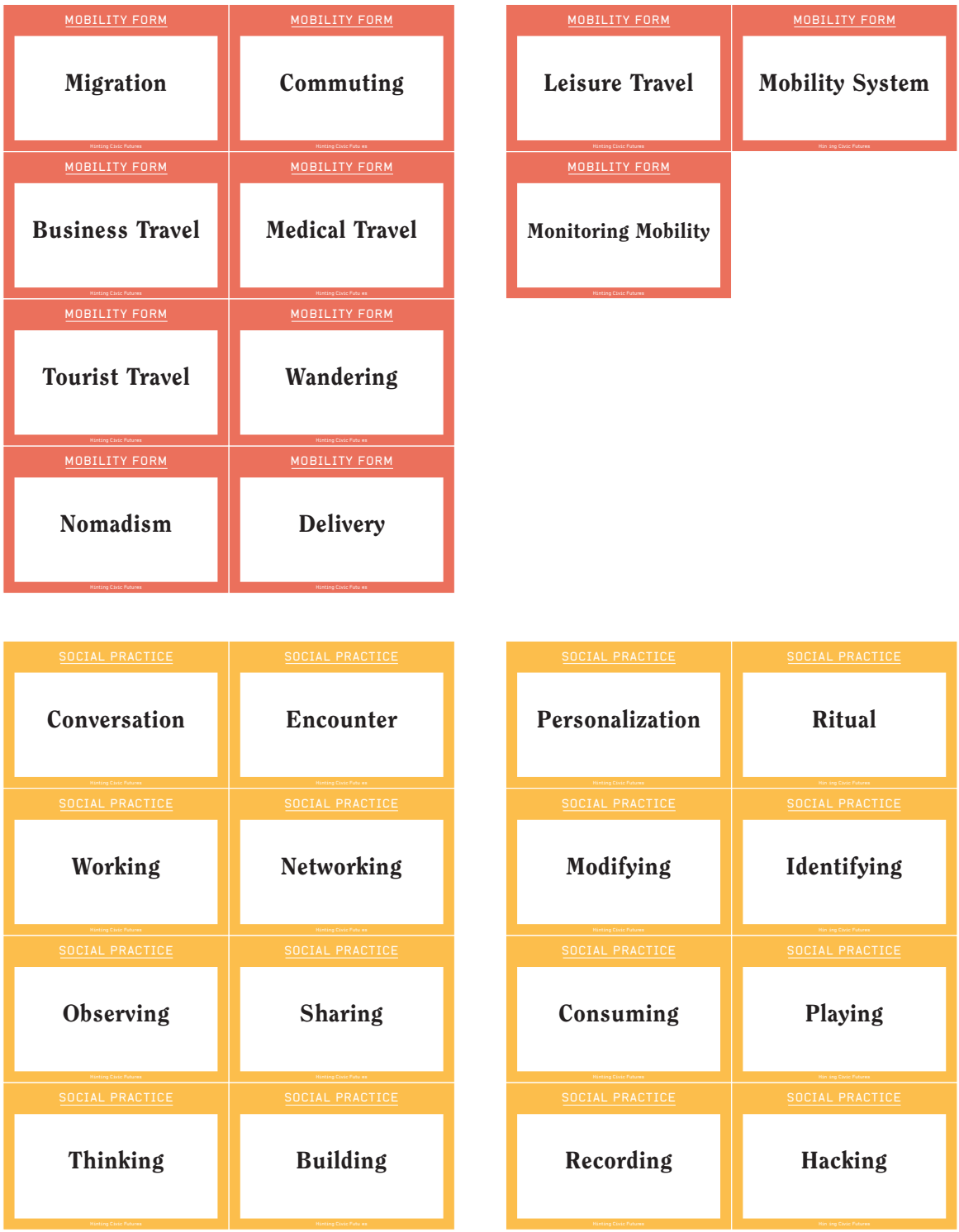
City

- From everyone – for everyone? Moving from creating physical capital to social capital
- How can citizens leverage networks of Commons?
- How to transform our shared civic assets to foster meaningful urban experience?
- How to make connections with communities and enhance social practice?

Mobility

- What if mobility becomes a common?
- What if we can decompose mobility facilities? (Vehicle, bus, station...)
- How about resourceful mobility offering different values for various groups?
- Think of the network patterns behind mobility, what can we learn and benefit from that relationships?
- How can mobility improve social connections?
- How will the human motivations behind mobility be different in this future?
- How will artificial intelligence impact on human mobility?

4.2 Ideation Cards




INFORMATION
Traffic Data
Hinting Civic Futures
INFORMATION
People Flows Data
Hinting Civic Futures
INFORMATION
Public Transport Data
Hinting Civic Futures
INFORMATION
Air Quality Data
Hinting Civic Futures
INFORMATION
Weather Data
Hinting Civic Futures
INFORMATION
User Data
(Identity, History)
INFORMATION
Surrounding Data
Hinting Civic Futures
INFORMATION
Location Data


INFORMATION
Route Data
Hinting Civic Futures
INFORMATION
Energy Data
Hinting Civic Futures


TECHNOLOGY
Deep Linking
everything becomes searchable
Hinting Civic Futures
TECHNOLOGY
Collaborative Robotics
co-perfom with non-human agents
TECHNOLOGY
Ambient Interface
any place can become an interface
TECHNOLOGY
Being Agentive
things can make decisions on behalf of you
TECHNOLOGY
Voiceprint
voice becomes identity and interface
TECHNOLOGY
Responsive Infrastructure
digital analytics goes offline
TECHNOLOGY
Blockchain
being decentralized and distributed
TECHNOLOGY
Peer-to-Peer Network
small and trustworthy community


TECHNOLOGY
Internet of Physical Things
network of objects / infrastructure
Hinting Civic Futures
TECHNOLOGY
Accessible 3D Printing
quick and affordable building
TECHNOLOGY
Emotion Detect
TECHNOLOGY
Language Processing
break the barriar of human-human and human-machine communication
TECHNOLOGY
Self-Assembling
TECHNOLOGY
Image Identification
sensing the world around

Mobility Service in
Bilateral Urbrandism

What form of mobility service do you want to design? For whom?

What is your design purpose?

What kind of social practice do you want to encourage?

What kind of data and technology does your concept require?

Title / Slogan

Sketch it out!

Draw your idea! Could be a service map, a scenario, a system diagram, just present it!

Mobility Service in
Versity (City as Verse)

What form of mobility service do you want to design? For whom?

What is your design purpose?

What kind of social practice do you want to encourage?

What kind of data and technology does your concept require?

Title / Slogan

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Mobility Service in
Un-Commons

What form of mobility service do you want to design? For whom?

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What kind of social practice do you want to encourage?

What kind of data and technology does your concept require?

Title / Slogan

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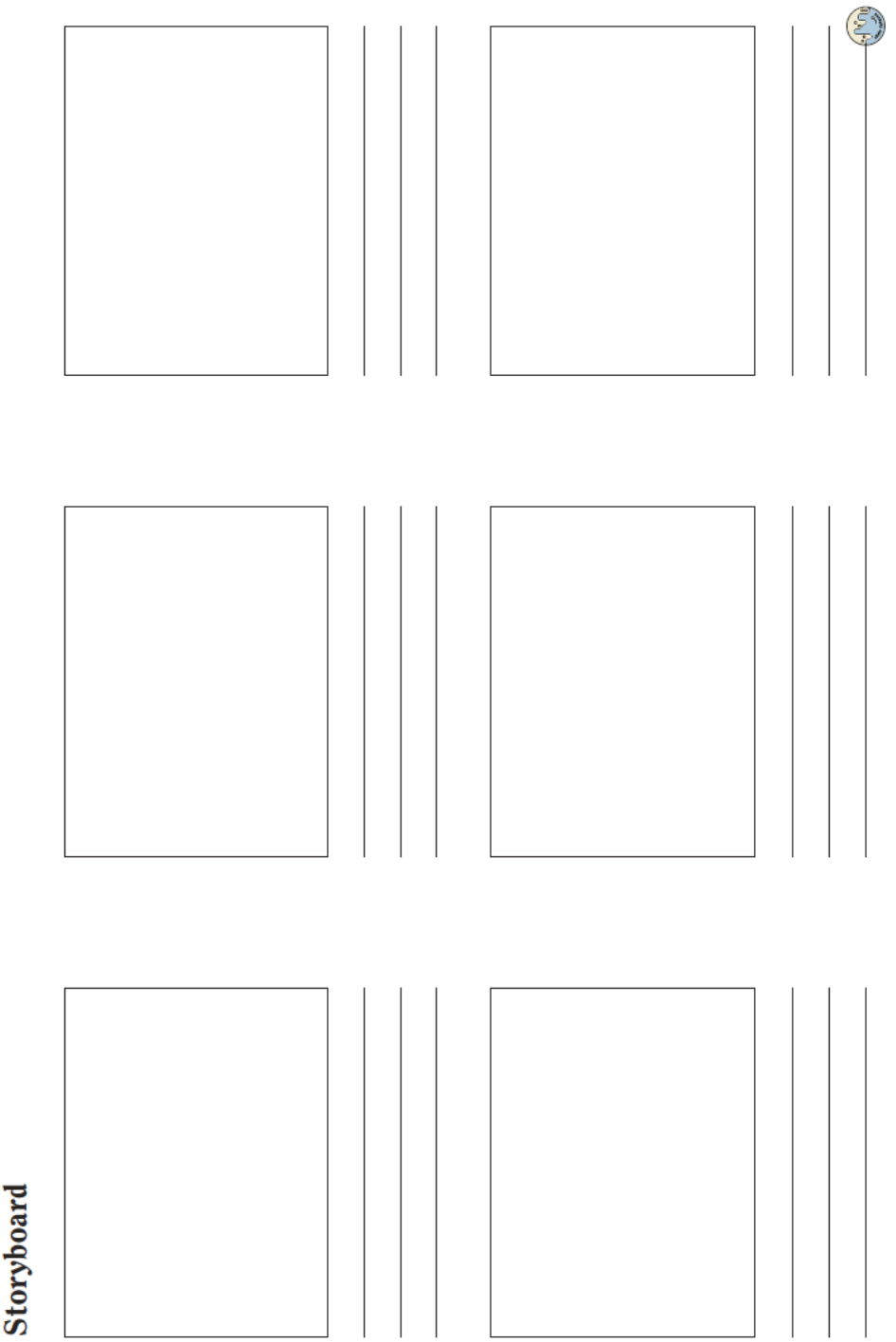
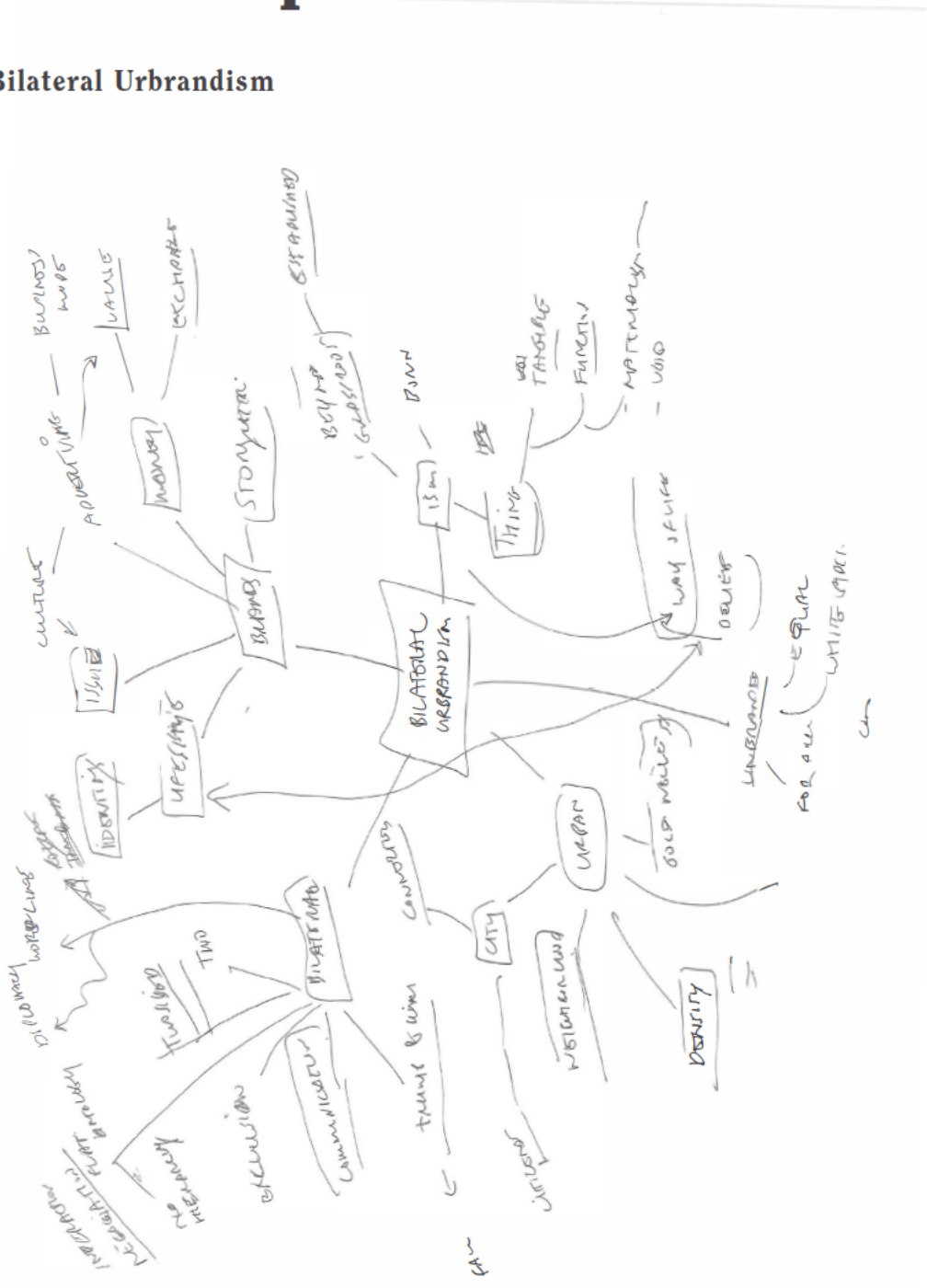
4.4 Storyboard



5 Future Hinting Workshop Results

5.1 Bilateral Urbrandism



Mobility Service in
Bilateral Urbrandism

What form of mobility service do you want to design? For whom?

MEDICAL SERVICES BASED ON SPECIFIC CULTURAL TRADITIONS

What is your design purpose?

BRIDGING DIFFERENCES OF CULTURES & CREATE EFFECTIVE AND MEANINGFUL ENLIGHTENMENT

What kind of social practice do you want to encourage?

RITUAL ENCOUNTERS CREATE HEALTHY BODIES

What kind of data and technology does your concept require?

CONDITION DATA BASE OF TRADITIONAL CAPTURE WISDOM OF THE WORLD

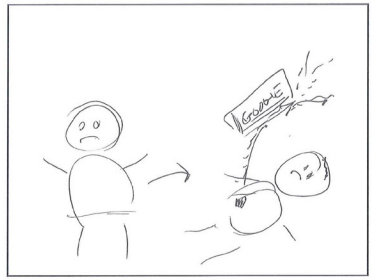
Title / Slogan

HEALTHY RITUAL HOUSE

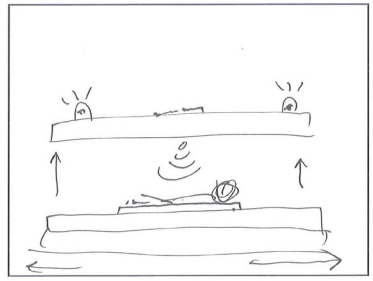
Sketch it out!

Draw your idea! Could be a service map, a scenario, a system diagram, just present it!

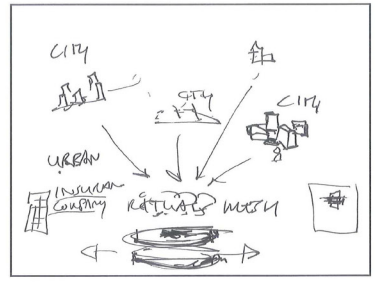
Storyboard

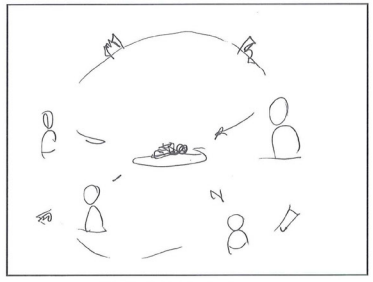


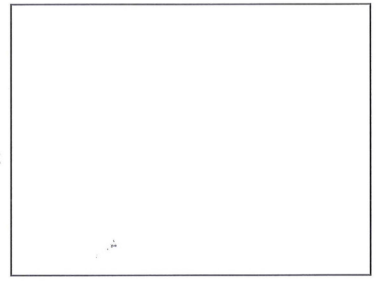
SOMEONE IS FEELING
REALLY SICK.
THE GOOGLE INSURANCE IS ACTIVATED



THE HEALTHY HOOVER
ARRIVES. PERSON IS
LYING DOWN & IS ANALYSED







Mobility Service in
Bilateral Urbrandism

What form of mobility service do you want to design? For whom?

Migration: Service for individuals + families seeking a life in the Bilateral Urbrandism City.

What is your design purpose?

Service for migrants moving to the city they feel suits their [brand. identity.]

What kind of social practice do you want to encourage?

THINKING (

Identifying / Personalisation
Working / Consuming

What kind of data and technology does your concept require?

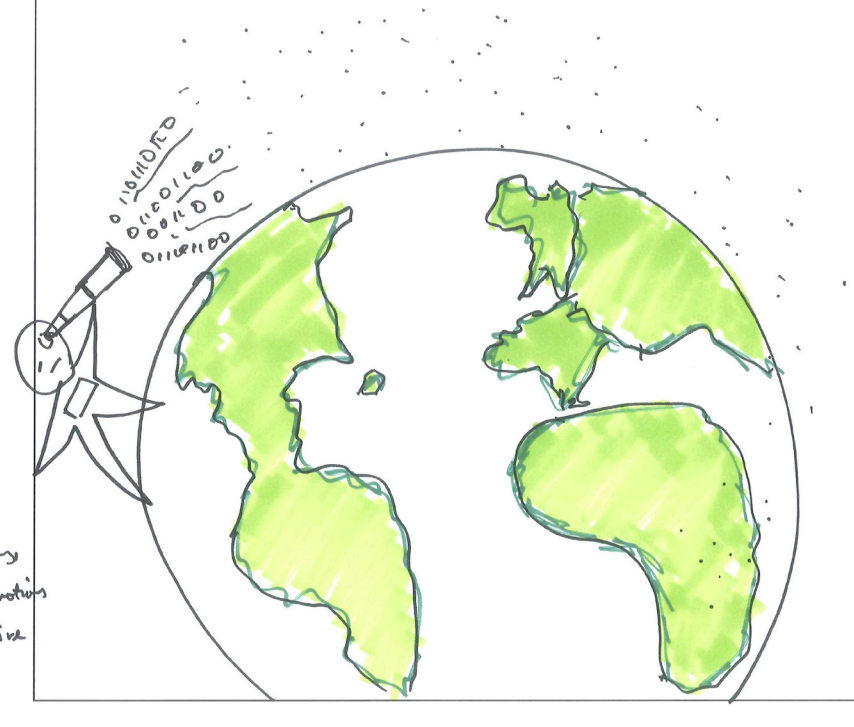
USER DATA
Information: analyse everything! all digital history, personality, lifestyle. Image Process is Emotion
Algorithm determine = Agutive

Title / Slogan

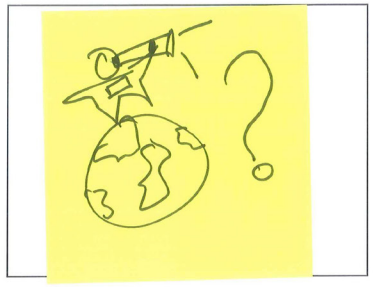
City Selecta 2000

Sketch it out!

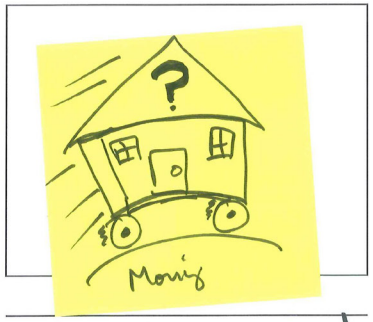
Draw your idea! Could be a service map, a scenario, a system diagram, just present it!



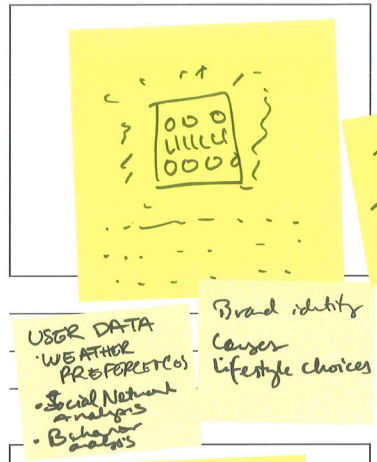
Storyboard

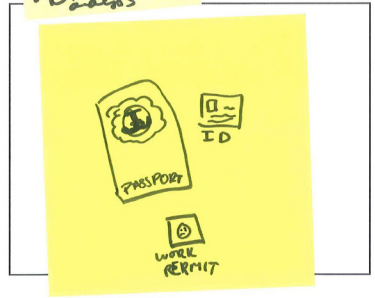


Looking for something better. Greener Grass, but where?



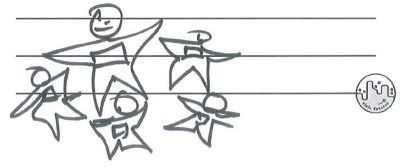
~~All items~~ Moving is determined





Documents are surveyed and applied for based on access to entire history.

How to get there. How to move.



5.2 Versity

Versity
playful
(wealthy)
relax
less diseases
humane (life) combine tech & reality
creative
positive
socially interactive
fun
cost of living due to less efficiency.
services will not be that efficient.

Mobility Service in
Versity (City as Verse)

What form of mobility service do you want to design? For whom?

Language Processing
Wandering

What is your design purpose?

What kind of social practice do you want to encourage?

Conversation, Observing

What kind of data and technology does your concept require?

Language Processing, Location data.

Title / Slogan

The Global Bro!

Sketch it out!

Draw your idea! Could be a service map, a scenario, a system diagram, just present it!

its easy for global bro to travel to the most remotest parts of the globe because he understands all the languages!

Mobility Service in
Versity (City as Verse)

What form of mobility service do you want to design? For whom?

social networking/communicating system for commuting people by train.

What is your design purpose?

What kind of social practice do you want to encourage?

networking, conversation socialize.

What kind of data and technology does your concept require?

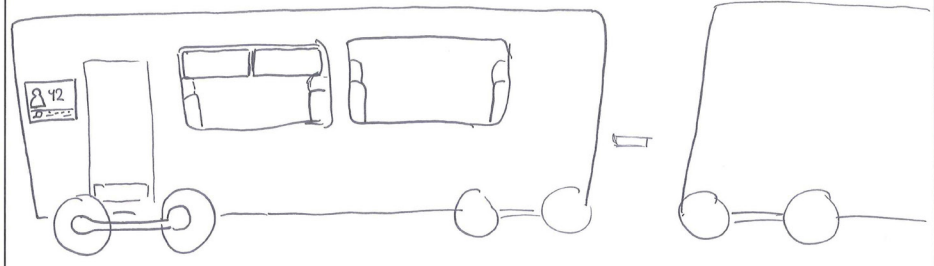
Emotion detect
peer-to-peer network.
people flows data, public transport data, user data.

Title / Slogan

Look up, let's talk! (if you want :)).

Sketch it out!

Draw your idea! Could be a service map, a scenario, a system diagram, just present it!

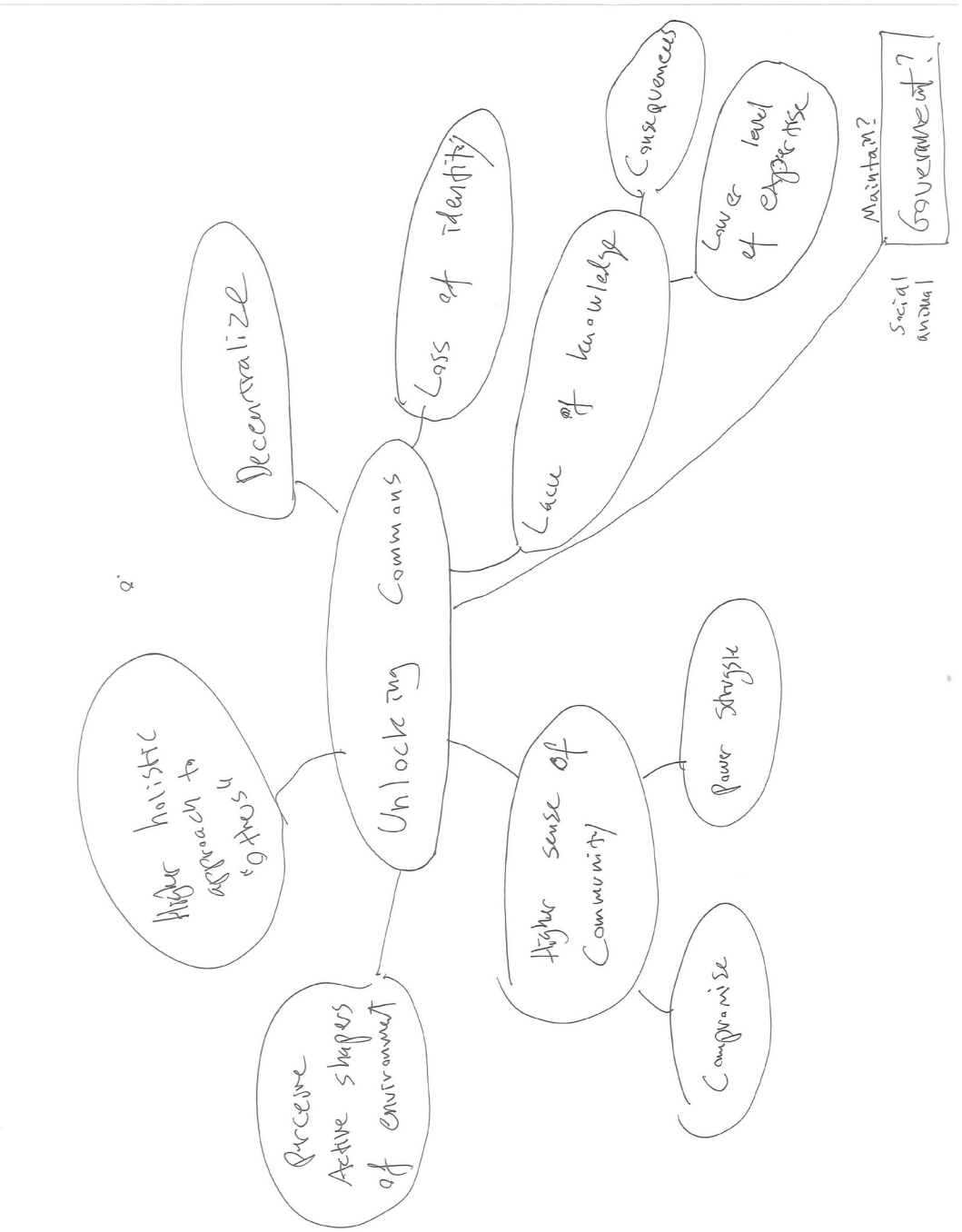


commuting? no time for joining network events next to other responsibilities. commuting can take a lot of time: you could spend it by scrolling through social media or actually be social & talk or network with other commuters. Creating small Peer-to-Peer networks in the different train wagons based on shared interests, or Every wagon shows the purpose or topic/ shared interest. It can show you how much time is left by using traffic data ... and ....

if you don't really feel like it or you having a bad day?

No worries! The emotion detector will notice, and you will not be shown as a participator (or sit at the silent wagon). Or, to keep the user autonomous... turn it off manually!

5.3 Un-Commons



Mobility Service in Un-Commons

What form of mobility service do you want to design? For whom?

User experience, efficiency, optimisation

Everyone

What is your design purpose?

personalisation, higher level of accessibility — Handicapped, Assistant, Disability. Google maps(+)

What kind of social practice do you want to encourage?

Aesthetical and assisted (Mappoi) of the city.

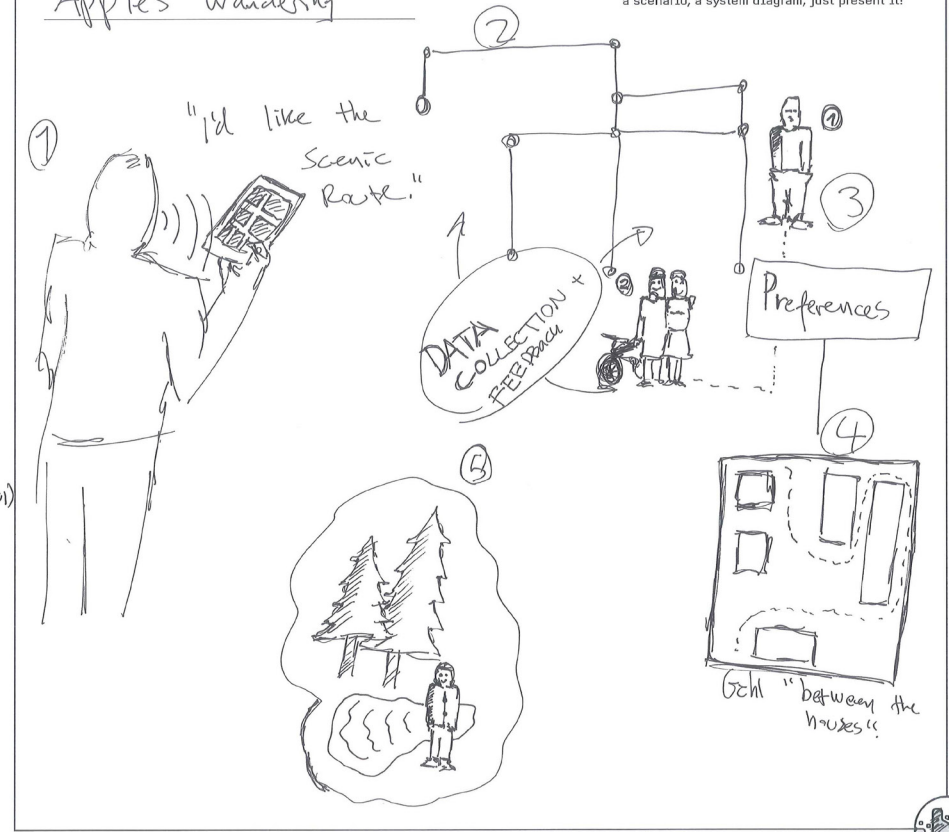
What kind of data and technology does your concept require?

Title / Slogan

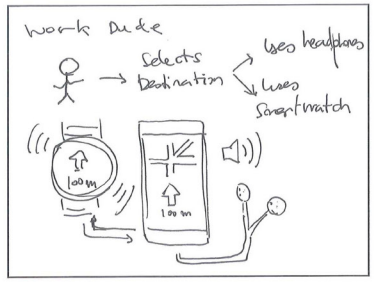
Apples wandering

Sketch it out!

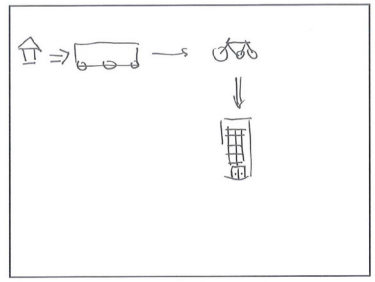
Draw your idea! Could be a service map, a scenario, a system diagram, just present it!



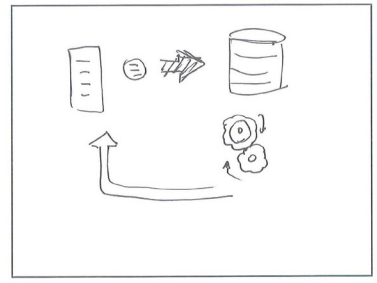
Storyboard



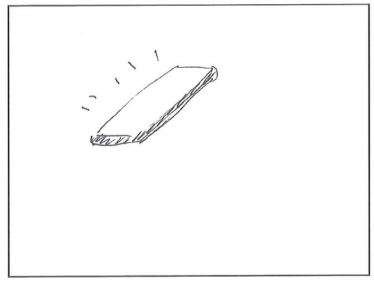
Start of the journey



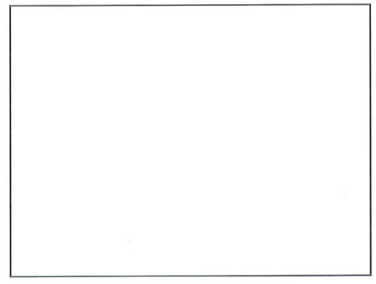
Follows the path without needing too much attention

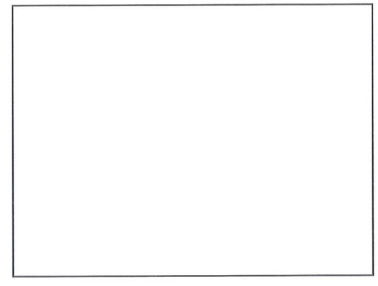


Sends poteded data and calculates consumption and savings



User sees the daten gaits encouraged by messages or points or data





Mobility Service in Un-Commons

What form of mobility service do you want to design? For whom?

Personal – midle class

What is your design purpose?

Personal Software for transportation concienciance

What kind of social practice do you want to encourage?

Public – efficient – ecologic transportation

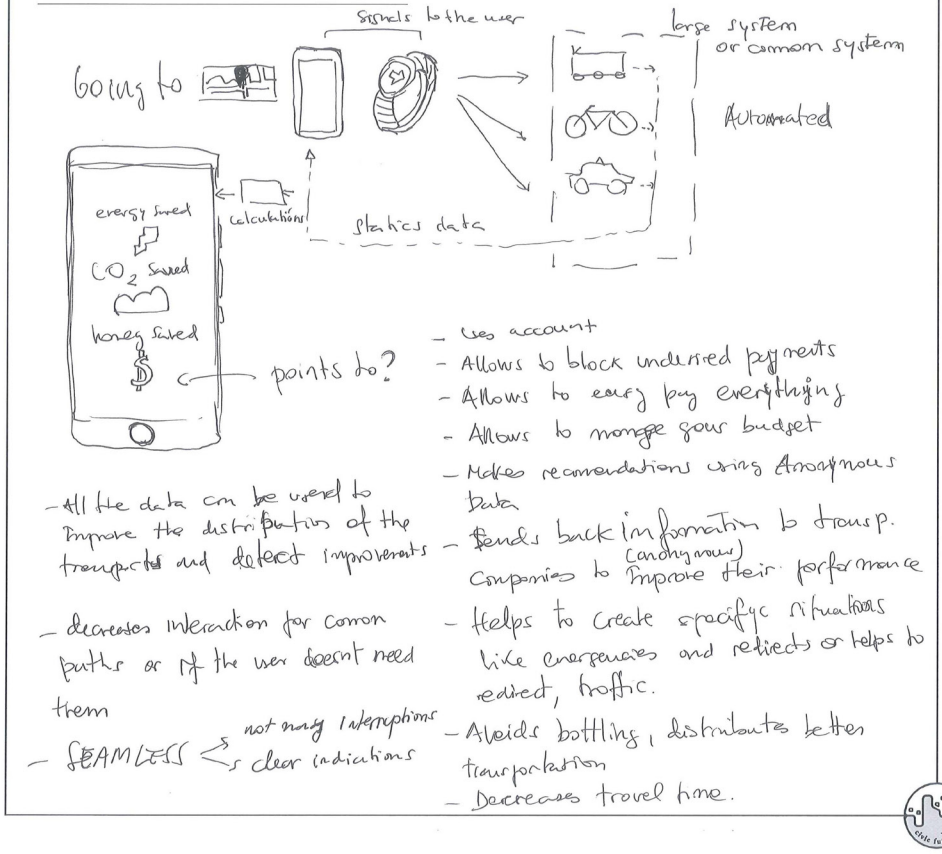
What kind of data and technology does your concept require?

- transport efficiency and consumption
- User usage of platforms (transports)
- Personal device thats is easy to use and interact with

Title / Slogan

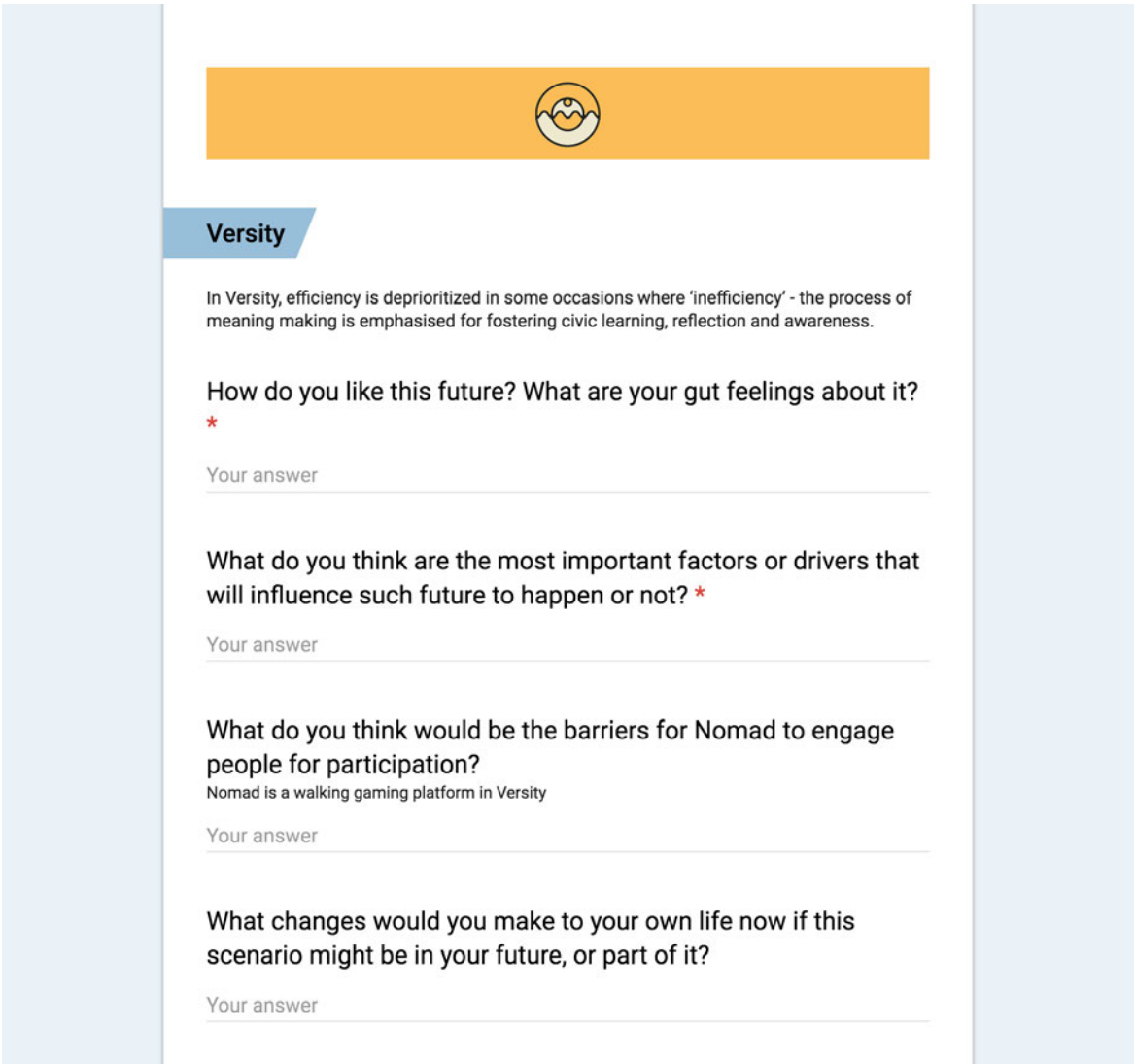
Sketch it out!

Draw your idea! Could be a service map, a scenario, a system diagram, just present it!



6 Evaluation

6.1 Evaluation Form



Versity

In Versity, efficiency is deprioritized in some occasions where 'inefficiency' - the process of meaning making is emphasised for fostering civic learning, reflection and awareness.

How do you like this future? What are your gut feelings about it? *

Your answer

What do you think are the most important factors or drivers that will influence such future to happen or not? *

Your answer

What do you think would be the barriers for Nomad to engage people for participation?
Nomad is a walking gaming platform in Versity

Your answer

What changes would you make to your own life now if this scenario might be in your future, or part of it?

Your answer

Bilateral Urbrandism

In Bilateral Urbrandism, public sectors collaborate cautiously with private corporations for social good and citizens have the ability to influence and input into the process.

How do you like this future? What are your gut feelings about it? *

Your answer

What do you think are the most important factors or drivers that will influence such future to happen or not? *

Your answer

What changes would you make to your own life now if this scenario might be in your future, or part of it?

Your answer

Do you believe we can make a real productive marriage between public & private sectors? How?

So this future is a wish or an imagination, but in the current state, public sectors and private companies have diametrically opposed goals, like private companies always want to gain profit and retain ownership.

Your answer

Un-Commons

Un-Commons is a socially inclusive city embedded with open technologies. The city is organised as a communal resource shared and managed by people for city making.

How do you like this future? What are your gut feelings about it? *

Your answer

What do you think are the most important factors or drivers that will influence such future to happen or not? *

Your answer

What problems do you think may occur in Wehicle 2.0 when mobility becomes a commons managed by everyone?

Your answer

How to incentivize people to contribute to the public good when they don't necessarily need to?

In Un-Commons, citizens who haven't contributed also profit from the commons made by others. For instance in Wehicle 2.0, a community can just use other vehicles for serving their own good.

Your answer

6.2 Evaluation Replies

Participant 1

Versity

How do you like this future? What are your gut feelings about it?
play is a central to urbanity (or cityness), so I would support this It, however, does not necessarily strike me as an antithesis to the efficiency-centered smart city paradigm Nomad follows a central idea and requires compliance of users, functioning infrastructure such as network connectivity Play also means not following instructions, not accepting assumptions, and using things differently than intended

What do you think are the most important factors or drivers that will influence such future to happen or not?
People being ready to appropriate existing technologies and platforms and give them new meaning

What do you think would be the barriers for Nomad to engage people for participation?
the competition with all the existing apps, initiatives, viral marketing campaigns...

What changes would you make to your own life now if this scenario might be in your future, or part of it?
I walk a lot and with open eyes, so I would enjoy such a scenario

Bilateral Urbrandism

How do you like this future? What are your gut feelings about it?
it addresses the ambivalence between useful/playful private sector projects and their usurpation of public space (e g app-driven shared electro-scooters) the caution: it is easy to claim something is for the social good, and all corporations do it But what that exactly is cannot be taken for granted

What do you think are the most important factors or drivers that will influence such future to happen or not?
e g whether the role of the citizen is strong enough to kill a harmful project that the corporate partners want to introduce also, ecological considerations need to be foregrounded

What changes would you make to your own life now if this scenario might be in your future, or part of it?
I would have to maintain a skeptical eye on what the city is up to

Do you believe we can make a real productive marriage between public & private sectors? How?
every city is in such a marriage, but its terms need to constantly re-negotiated

Un-Commons

How do you like this future? What are your gut feelings about it?
the commons is a central aspect or urbanity

What do you think are the most important factors or drivers that will influence such future to happen or not?
building a communal vehicle is perhaps not the most straight-forward example of urban commons - not everyone is technically literate enough, and the safety of the vehicle is also a question

What problems do you think may occur in Wehicle 2.0 when mobility becomes a commons managed by everyone?
I would see the challenges mostly on the governance of land dedicated to mobility - to make a functioning and sustainable mobility system unfortunately requires a focus on efficiency

How to incentivize people to contribute to the public good when they don't necessarily need to?
traditionally, less than 5 percent contribute actively to Wikipedia etc getting community-based governance right is important

Participant 2

I like the idea of cityness, with IoT everything becomes a relation. It also shows change and evolution as a good thing as cityness is always evolving.

The current business reality is ready for such a term because even the big brands and providers understand now that their smart city will only be there if there are services people are willing o pay for. As usual, they are interested in ‘people’ when they have trouble finding other sources of money, but that is a given and it itself not a problem. The timing is right. But in order for the term to really become productive and powerful, it needs to be broken down in properties that are quantifiable, detectable and can be compared by others.

Cities will then want to have the highest level of cityness and believe it or not rankings are still the way to get things going. You have made a beginning with your three cities and that makes sense. But that means going away from the current reality; you envisage zones where people can choose to live: IKEA land, a Commons and your un-commons version, a kind of China today. That is clever and if you scale that down you find that things like this exist in gated communities, one of the fastest rising forms of building globally. I like the idea of zones very much: a zone without taxes and then a lot of conflicts that we have to solve locally, and a zone with very high taxes but everything policed and paid for by Coca-Cola and zones in between.

So I think you are doing two things that you should take apart now.

One: define cityness so that it can be applied and can become a real standard. That is boring but if it works it will catch on and can become pretty big because of the all-encompassing citizen-focused angle now.

Two: with your definition, you can construct your three archetypes: no taxes/free flow — fully taxed and branded and a kind of pragmatic cybernetics like there is in China now and maybe find a builder for it on a gated community scale.

The key is to realize your own fallacy (we all have that) of keeping things constant where you assume other things are shifting

The government makes sure big brands work together to realize meaningful and sustainable urban projects

Why should ‘the government’ even still exist in this city?

Participant 3

Versity

How do you like this future? What are your gut feelings about it?

Perhaps the most provocative element of this proposal is that an urban game is used to generate sentiment data, rather than pure amusement such as with Pokemon Go. That this sentiment is broadcast back to the citizens of the city through bus adverts and similar is intriguing. The images show a contemporary city that has been augmented by Nomad, but what would that same city look like after 20 years of living with Nomad?

What do you think are the most important factors or drivers that will influence such future to happen or not?

Elements of this future are already here. The influence of Pokemon Go, for instance, is clear in Nomad. However the notion that you could engage people in large scale games to create a deeper connection to the history of a place (or to participate in deciding its future) it interesting. Can it go further? What if a city sponsored a "Nomad day" where all citizens were encouraged to play the street quiz? What happens when it's not just an individual interaction, but something available to masses?

What do you think would be the barriers for Nomad to engage people for participation?

The challenge for proposals like this is how you overcome day to day obligations. For instance, taking a path that is out of my way may be fun and whimsical, but if I'm struggling to pay the rent I am unlikely to give up the extra time on my way to/from work. The rewards of participation may need to be clarified and amplified.

Bilateral Urbrandism

How do you like this future? What are your gut feelings about it?

I encourage you to be skeptical of statements such as "100% safe system" when it comes to technology. If we accept that premise, I'd like to see more exploration of what it means to have "wehicles." Does the driving experience change? The site hints at new vehicle types or "platforms" but it focused on ancillary uses such as mobile parks. That's good, but I think you want to address the "core" mobility needs as well, so the reader can see the diversity of the platform you're proposing. This also means that Detroit's version of a 6-person shuttle should be different from Beirut's or Berlin's. How can you bring this diversity to life in the text and diagrams?

What do you think are the most important factors or drivers that will influence such future to happen or not?

Regulations and Manufacturing supply chains. As above, I would be skeptical that the technology is 100% safe, and even if it is, Wehicles will exist in a mixed world that also has old cars, so they will still need some safety factors. This will complicate the Wehicle vision, but I think in useful ways. Similarly with the supply chain, the Wehicle concept depends on the current global supply chains of vehicle production to be hyper localized. I believe this will happen, but it may be a slow and bumpy process to get there because of the level to which vehicles and associated economic activity represents a significant % of the economy.

Un-Commons

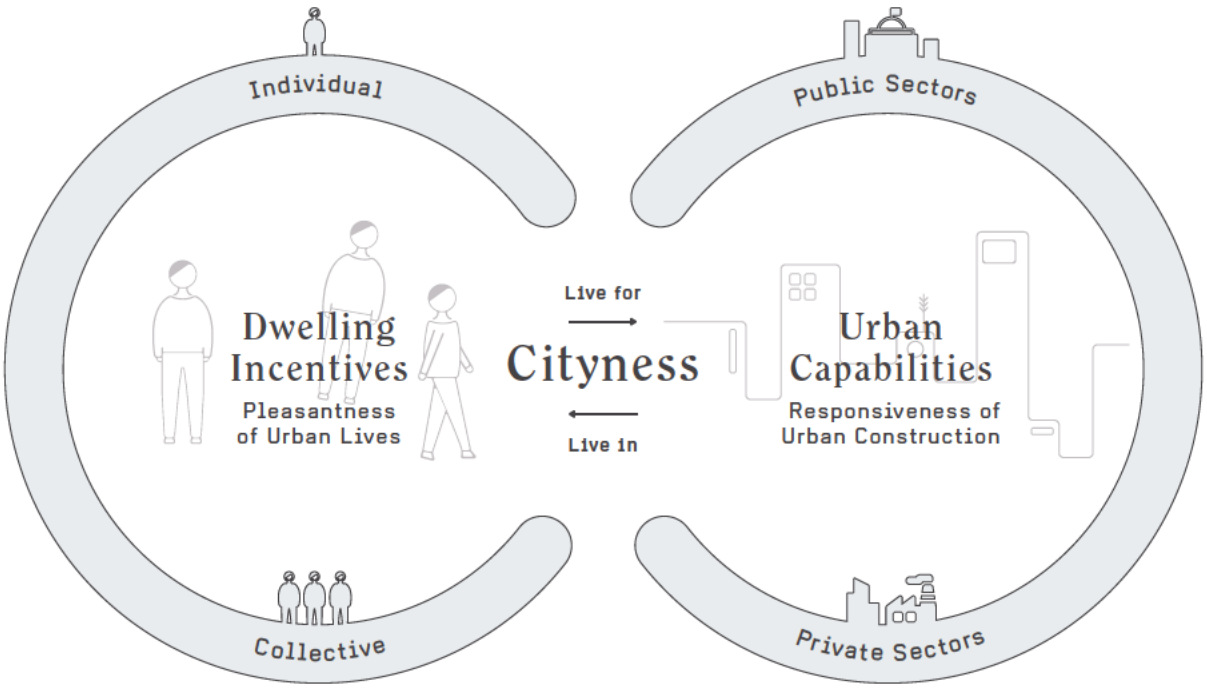
How do you like this future? What are your gut feelings about it?

I don't have any major comments on the scenario overall. It's far reaching and quite dramatic, much more so than the clean and polite representation lets on. Would be interested to see you explore the social impacts of such a city/society. When there is no private property, how does status work? Who are the heroes in this city? What are they celebrated for? Does a world where everything is collaboratively produced create challenges for outcasts or margin dwellers who have a radically different vision but lack the clout to have their visions realized? What incentives in today's status quo become irrelevant in your future city? Which new ones emerge?

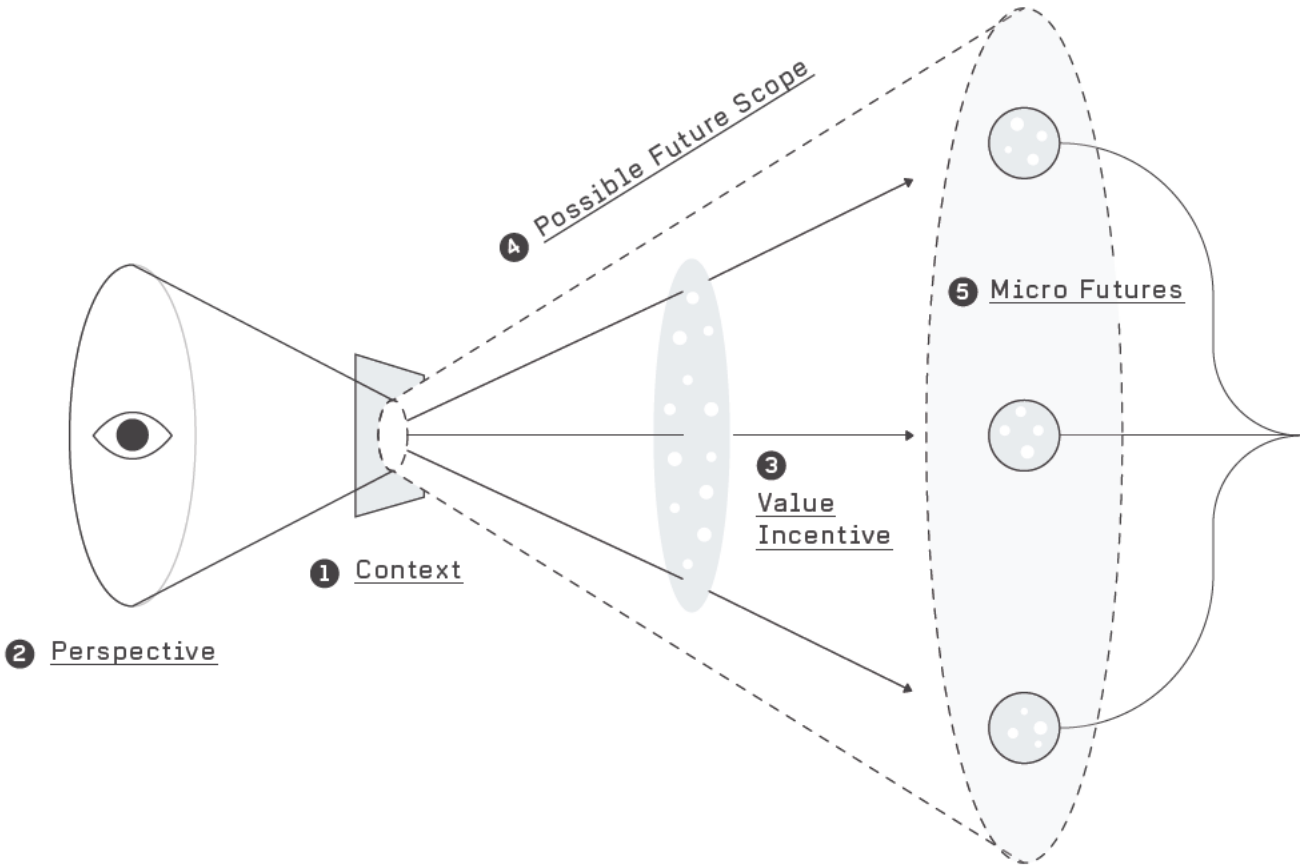
What do you think are the most important factors or drivers that will influence such future to happen or not?

The big question mark for me is how collaboration works in this city. It's one thing to collaborate on a piece of code, as in Github, where multiple people make contributions and they can be compiled/executed to determine if they work as intended. But how do we find the same level of efficiency when co-designing an education system? Or an urban plan? These are not such simple problems.... if you can develop the ideas further to show how those kinds of discussions/collaborations could be augmented in your scenario I think that would be a huge contribution. Put another way, what does politics look like in your future scenario?

7 The Cityness Model



8 Design Framework “Civic Futures”

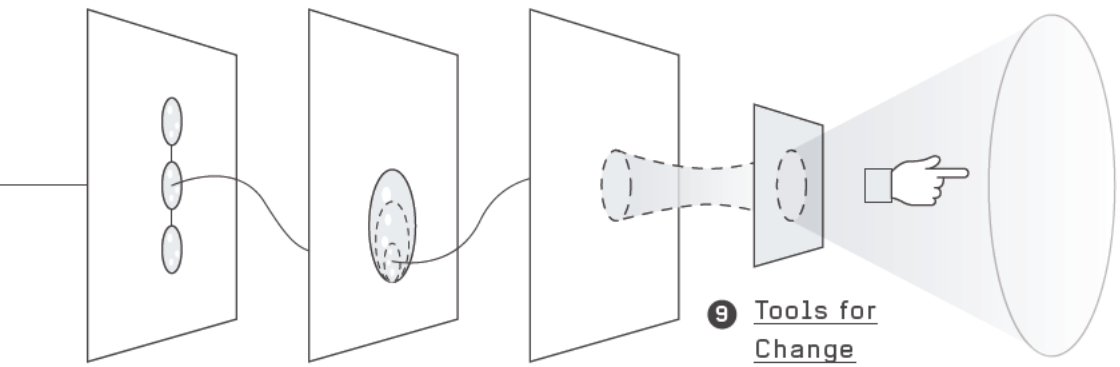


Future Scanning / Design in the Future / Present the Future / Backcasting

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❼ ❽ ❾

❻ Design with Lenses

❽ Evaluation



❾ Tools for Change

❼ Presentation

9 Graduation Project Proposal

IDE Graduation Assignment (version 2017.09.21) incl. the student's study progress (Appendix 3)

TU Delft Delft University of Technology

To be completed by the student
Please save your assignment as (format): IDE Graduation Assignment_family name, name_student number_dd mm yyyy
Place the proper document name on each page of your assignment in the headline, number the pages

[redacted]

Start at IDE ...2016... (year)	Start at TU Delft ...2016... (year)

Bachelor [1]	**Master** [1]	**Specialisation** [1]
☐ TUD Bachelor IO	☐ IPD	☐ Medisign
☐ TU/e or UT Bachelor IO	☐ DfI	
☐ TU Delft non-IO BSc	■ SPD	**Annotation** [1]
☐ Other Dutch University Bachelor	☐ ..... = 2nd non-IDE master	☐ Techn in Sustainable Design
☐ HBO Bachelor	☐ Individual programme, date of approval [2]	☐ Entrepreneurship
■ Foreign Bachelor	☐ Master Honours Programme	

Name Chair	...Elisa Giaccardi...

1. Check study progress

To be completed by the Shared Service Centre O&S after approval of the assignment by the chair The study progress will be checked for a 2nd time just before the green light meeting

Bachelor degree:	☐ Yes	☐ No	☐ N A

Missing 1st year Master courses		
	1	4 .....
	2	5 .....
	3	6 .....

Master electives, no of EC credits accumulated:	

Name:	Date: ... / ... / 20...	Signature:

2. Formal approval Graduation Assignment by the Board of Examiners

To be completed by the Board of Examiners

Approval of the content of the Grad Assignment:	☐ Approved	☐ Not Approved
Procedural approval:	☐ Approved	☐ Not Approved

Comments:	

Name:	Date: ... / ... / 20...	Signature:

[1] *Tick where appropriate*
[2] *Date of approval of your individual programme by the Board of Examiners*

IDE Graduation Assignment

GENERAL INFORMATION

Title Graduation Project [3]	Agentive Humanism: Designing Future Mobility Service with Agentive Things		
Chair of Supervisory Team [4]	Elisa Giaccardi		
Department / Section	Department Industrial Design, Section Human Information Communication Design		
Mentor of Supervisory Team [4]	Iskander Smit		
Department / Section	Visiting Professor, Connected Everyday Lab		
Project commissioned by [5]	■ Faculty	☐ Company	☐ Other, e g entrepreneurial
Project type [5]	■ Design	☐ Research [6]	☐ Other, e g entrepreneurial
Company name, if applicable			
City & Country			
Company Mentor			
Start date	**March 26th, 2018**		
End date	**August 28th, 2018**		

CONTENT

Ascertain that the text of your Graduation Assignment clearly meets and reflects the general and specific requirements for your specific IDE master [7]
Write your assignment in a neutral form
When inserting images or schedules in colour, make sure a print in black and white is still readable

Introduction

Give a sketch of the context of your assignment Historical developments if applicable relevant published scientific research results, new trends, status quo; materials, technologies, usage, etc

- *In case of a faculty project: describe how your assignment reflects the research portfolio of the IDE Faculty* [6]
- *In case of a company project: provide company information*
- *If other, e g entrepreneurial: describe the future enterprise and how your assignment will be of value to the enterprise*

Include an illustration or visual which depicts the context of your assignment
In case one or more extra parties are involved in your project, indicate which role they play

This graduation assignment contributes to the *Things as Citizens* research pro ect as a parallel branch to PACT The aim of Things as Citizens is "to develop novel methods and tools for understanding and demonstrating how intelligent things can act together with people and connect to existing data and cloud services" [19] With the rise of oT and Artificial ntelligence, intelligent things as new actors with high agency will be involved in the digital modernity of cities towards a future vision so called smart city However, current implementations are often limited to sensing only and urban innovation stops at collecting data, visualizing it on an app, and opening it for insights But how fast could the city adapt if things in the real world could respond to data? f they could not only sense but also act? **Among all the cutting edge technologies, Agentive Tech emerges as a type of technology that can bring fruitful possibilities. It's a new mode of interaction enabled by recent advances in narrow AI (artificial intelligence), in which 'agentive' means the technology does something on behalf of the user, persistently and in a hyper personalized way [1]. In short, like an agent.** This special characteristic stimulates new dialogue to occur such as co performance [2] and has lots of potential n pace with the technology booming, companies are busy developing new services powered by intelligent things n this case service continues to expand in novel and unforeseen ways, and will deeply permeated everyday life along the backbone of agentive tech, giving rise to a new digital humanism [3] agentive humanism For tackling this issue, a service design mindset which takes a comprehensive view of all the related actors, their interactions, supporting materials and infrastructures would be a suitable approach The holistic perspective can help shift the attention from G D to S D logic [16], arousing more insights and discussion into a wider social and action context

PACT (Pure Air for Cities of Things) is a research program settled by Elisa Giaccardi and Iskander Smit in collaboration with the Amsterdam Institute of Advanced Metropolitan Solutions. It is a direction under the research theme Things as Citizens of Connected Everyday Lab at IDE Faculty.

[3] *Keep the title compact and simple Do not use abbreviations*
[4] *Avoid team members from the same section In case a non IDE mentor is preferred over an IDE mentor, the Chair should request so for approval by the Board of Examiners (including a motivation letter and c v of the proposed non IDE mentor)*
[5] *Tick where appropriate See the IDE Graduation Manual, paragraph 2 5 If necessary, explain at Introduction*
[6] *See webpage http://www io tudelft nl/en/research/*
[7] *For general master specific requirements, consult article 4 of the Master Teaching and Examination Regulations, and the IDE Graduation Manual, especially paragraph 2 4 and 3 1 4*

Problem definition

Indicate clearly, what should/could be improved compared to the present situation When executing a research project: indicate the knowledge gap What opportunities exist, what contradicting demands should be addressed, etc

Companies often focus on the narrow goals of the users as it relates to the business that exists today or near probable future with a belief in Technological Utopianism [4] which may lead to a limited view of opportunities Speculative research has been conducted to push the boundaries of smart things against those bias and fixation However, the emphasis now is usually laid on the thing itself and its relationship with human from an HC perspective The ongoing digitalisation of cities and societies means that the previously separated parts are drawn together [5] A empowers things with agency and oT intertwines things with digital services As an extension of the product, service has the potential to bring about larger impact from everyday life to urban context [8] n the domain of mobility, agentive things like autonomous vehicles will trigger new services and changes that reshape the way we work, travel and live Further more it will also transform existing business models enabling new relationships between enterprise and customers At present lots of effort is put on developing ever more intelligent things while missing the essential element of knowing who will use it and why [9] Not much is known how service delivered by intelligent things like autonomous vehicle should be shaped What will be the possible vision(s) of future mobility? f the agents [6] within the service ecology are not human anymore, how would things deliver the promise from the service providers to achieve the vision? Current design process does not adequately address what's required to understand and build services of agentive technologies [1] This thesis therefore raises the main question "How to design the future mobility service with agentive things?"

The question will be followed by two parts how Agentive Tech could empower mobility service, and based on that what the mobility service in the future context would look like and why The first part explores the possibilities and opportunities enabled by Agentive Tech as an emerging technology in the domain of mobility service Here Agentive Tech acts as a catalyst to ignite excessive imaginings and audacious dreams for how life could be [7] Using a forecasting approach, the second part starts to conceive the alternative futures with the evidence collected and build mobility services upon that world To make the concepts concrete and accessible, the pro ect will use future commuters in Amsterdam as target users This helps narrow down the scope of mobility service and enable context based solutions While this part will also challenge the current approach of service design

Assignment

Briefly and to the point, describe what you are going to design, create or generate to solve (part of) the problem
In case of a Specialisation and/or Annotation, address specifically how this is/these are included in the assignment

n general, the assignment is to arrange the agentive empowerment of technology and different human values in the future mobility ecosystem and leverage it for better humanism within business world through service design

Service design here is not seen as a fixed practice for problem solving, but a mindset for investigating and communicating about emerging technologies from different layers in a social and discursive frame The target audience in this pro ect will ideally be citizens, designers and companies which successively represents service experience, service design and service positioning Considering service from these three perspectives helps build an embodied imagination for these 'stakeholders'

The following issues are expected to be addressed in the assignment

- Exploration of the openness and capabilities of Agentive Tech as a kind of mechanism
- Future probe of mobility development based on previous study
- Service ecosystem design of future mobility including ecology map, scenario building and experience prototype
- nsights and conclusions collected from evaluation of different audience (citizens, designers and company)

Approach

What will be the approach to deal with the complexity of the assignment? What has to be done to meet the challenges? Indicate the main methodologies to be used Indicate the same project phases as you distinguish in your planning If one or more extra parties are involved in your project indicate which role they play
In case of a Specialisation and/or Annotation address specifically how this is/these are dealt with

The graduation pro ect will flexibly apply a Design led Futures Technique (Me ia, Pasman, & Stappers, 2016) incorporating ideas from Transition Design (School of Design at Carnegie Mellon University, 2012) and Speculative Design (Dunn & Raby, 2013) The aim is to understand complexity, understand what agency is possible within the systems we are in, and speculate in an informed way about how things could be different by adopting a more nuanced and exploratory way to tackle the future [10]

The process can be divided into main four phases

1. Future Scanning (5 weeks)

The ob ective of this phase is to capture weak signals that are potentially important through a systematic examination (secondary resources) of potential threats and opportunities, with emphasis on new technology and its effects on the issue at hand Factors as behaviors, trends, outliers, social rules and norms will be collected through horizon scanning [13] and context research to perceive the possibilities outside the myopic view of mobility only

The research fragments will then be synthesized into specific topics under the frame of *Things as Citizens* [19] Here *Things as Citizens* works as a hypothetical metaphor of product agency in the future Based on that, side effects (immediate effects and longer term effects) and side shows (parallel but related developments) [11] will be explored around them to gain a more holistic view in the form of Futures Wheel [17] The outcome of this phase would be narratives and visions of at most three micro futures [15]

2. Design in the Future (6 weeks)

The ob ective of this phase is to speculate and ideate service solutions in the explored futures and further develop them through value constellations and service ecology from a socio technical perspective The main idea is to design multilevel context informed service solutions through different layers [18]

Value Creation in Ecosystem How company as a service provider could position itself in the ecosystem, and how agentive things should perform to fulfill the value that company wants to create and promise
Value Proposition in Service System How service designer could help make the value worth loop work while in ecting more humanism into the service system
Creating Worth from Proposed Value How citizens would react on these possible services (if they are willing to be the consumers) And relatively, how agentive things should provide good performance as experience to create worth

An ideation workshop is expected to be conducted in a co creating way at the beginning of this phase to gather novel ideas and insights

3. Present the Future (5 weeks)
The ob ective of this phase is to create a way for an audience to 'experience' the future, through bringing story or scenario to life in a form which can be presented such as diegetic prototypes [12] The concepts and scenarios will be evaluated by different audience to arouse discussion and get feedback in different layers The aim is to enable the audience to get a glimpse of this future and place themselves in the frame, while also to trigger some ambiguities and uncertainties in it Different criteria will be set based on the role of audience as 'stakeholder'

4. Backcasting (5 weeks)
The ob ective of this phase is to sort out the outcome of Phase C and make conclusion and recommendation for building preferable future mobility services, to see if present design solutions can be informed by long term visions

Graduation Project results

1 Describe the expected results or outcome of your Graduation Project For instance a product a product service combination a strategy illustrated through product or product service combination ideas
2 Indicate the expected scientific and/or societal and/or commercial significance of the outcome of your project
3 In case of a Specialisation and/or Annotation, address specifically the relevant results to be expected

The primary results will be several future mobility service solutions They are expected to indicate how mobility service could look like and what people prefer to have in the future The designing process including the methods used could meanwhile suggest new approach to design future services in a reflexive way, as a secondary outcome that contributes to *Things as Citizens* and the research of Thing Centered Design[2]

[2]Thing-Centered Design is a new way of researching and designing 'with' things that looks into these possibilities.

Deliverables

List the extra graduation deliverables, if any (apart from the mandatory deliverables being the thesis report, annexes if any, the poster and the representative pictures) For instance, a working prototype or a paper

The deliverables will include a final report, service prototypes, well documented research results and a presentation

Relation and relevance to the domain of Industrial Design Engineering, the chosen master direction and the IDE pillars

Explain the relation of your project with the domain of Industrial Design Engineering and your master direction IPD, DfI or SPD
1 Relation of you project to the master IPD, DfI or SPD
Furthermore describe the interface of your project with each of the IDE pillars:
2 Business
3 Human Interaction
4 Technology

Problems are often simplified and isolated to a scale and scope that we are comfortable with and can understand in business design, this pro ect however seeks to benefit from radical expansions of our purview A service design logic and a more holistic view can help create more sustainable results When speaking of technology, we tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run according to Amara's law The pro ect simply seeks to answer how we can create services supporting the human side of emerging technologies in the near future and what these services would look like The essence of Strategic Product Design is to do the right thing, while this pro ect aims at exploring the alternative definitions of being right By designing possible mobility services for the explored future contexts, this pro ect offers another path for strategic thinking as an activator to seek dynamic futures informed by various values, rather than ust a booster towards one size fits all business vision n general, the pro ect focuses on how to leverage technology for better humanism within business context Considering the interdependencies among people, technology and business, the outcome will provide relevant insights

Planning

Present your planning in a Gantt Chart, which can easily be made in Excel, see example underneath Make sure a print in black and white is still readable Mention the main phases of the project as described at Approach + number of weeks Indicate only main

activities, milestones, meetings Take notice: 33 EC = 22 full time weeks! Indicate periods of part time graduation project activity and/or periods of not spending time on your graduation project, if any, for instance because of holidays [8]

Calendar Week	13	14	15	16	17	18	19	20	21	22	23
Project Week	1 (26/3-1/4)	2 (2/4-8/4)	3 (9/4-15/4)	4 (16/4-22/4)	5 (23/4-29/4)	6 (30/4-6/5)	7 (7/5-13/5)	8 (14/5-20/5)	9 (21/5-27/5)	10 (28/5-3/6)	11 (4/6-10/6)
Tutorial Meetings								Midterm			
1. Future Scanning											
Literature Research	Secondary Resource Research on Agentive Tch, Mobility & Smart City										
Generative Session: Future Synthesis			Workshop with IDE Students								
New Drivers of Change Collection					Collecting Trends & Emerging Issues						
Expert Interview						Interview & Evaluation					
Synthesis & Micro-Futures Drafting							Making Visions & Narratives				
2. Design in Future				20-23 in Milan							
Workshop: Mobility Service in Future									Preparation & Workshop		
Service Conceptualisation											Ecology Map

Calendar Week	24	25	26	27	28	29	30	31	32	33	34
Project Week	12 (11/6-17/6)	13 (18/6-24/6)	14 (25/6-1/7)	15 (2/7-8/7)	16 (9/7-15/7)	16/7-22/7	17 (23/7-29/7)	18 (30/7-5/8)	19 (6/8-12/8)	20 (13/8-19/8)	21 (20/8-26/8)
Tutorial Meetings					Greenlight	Holiday					
Service Conceptualisation	Value Constellation										
Experience Design	Service System Experience										
3. Present the Future											
Scenario Making											
Service Prototyping		Experience Prototyping									
Evaluation Session											
4. Backcasting											
Feedback Analysis							Qualitative Coding				
Refinement & Conclusion								Conclusion & Reflection			
Finalization									Report		
Presentation										Final	

Presentation will be on the week of 27/08 to 31/08

Brief explanatory remarks on the planning, if any

Further comments and information

In case your Assignment needs further comments, please add any information you think is relevant

1 Christopher Noessel, Designing Agentive Technology A That Works for People, 2017
2 Lenneke Kui er & Elisa Giaccardi, Co performance Conceptualizing the Role of Artificial Agency in the Design of Everyday Life
3 Christy Pettey Embracing Digital Humanism (2015) https //www gartner com/smarterwithgartner/embracing digital humanism/
4 Howard P Segal, "The Technological Utopians", in Joseph J Corn (Ed), magining Tomorrow History, Technology and The American Future
5 Knutsen, Jørn, et al " nvestigating an "internet of hybrid products" Assembling products, interactions, services, and networks through design " Computers and Composition 28 3 (2011) 195 204
6 Polaine, Andy, Lavrans Løvlie, and Ben Reason "Service design " From nsight to mplementation (2013) 202
7 Dunne, Anthony, and Fiona Raby Speculative everything design, fiction, and social dreaming M T Press, 2013
8 Aspen, Jonny, Et Al "Challenges of the 'Urban Digital' Addressing nterdisciplinarity and Power in the Planning and Design of the Digital City "
9 Knut Landsverk, oT is about services and experiences (2015) https //www liveworkstudio com/monthly magazines/iot is about services and experiences/
10 Lockton, Dan "Transition Lenses Perspectives on futures, models and agency "
11 Ranner, V , et al "Plans and Speculated Actions " Workshop at DRS 2016
12 Kirby, David "The future is now Diegetic prototypes and the role of popular films in generating real world technological development " Social Studies of Science 40 1 (2010) 41 70
13 Cuhls, Kerstin, et al "Models of hirizon scanning How to integrate horizon scanning into European research and innovation policies " (2015)
14 National Academies of Sciences, Engineering, and Medicine Preparing for Future Products of Biotechnology National Academies Press, 2017
15 Lockton, Dan Play Lab Exploring Ambiguity (2016) https //medium com/@danlockton/play lab exploring ambiguity f70caaf296f7
16 Rittmeyer, Nicolas The differences between value propositions following GD and SD logic A multiple case study BS thesis University of Twente, 2016
17 Elliott P Montgomery & Chris Woebken Extrapolation Factory Operator's Manual, 2016
18 Ng, rene CL Creating new markets in the digital economy Cambridge University Press, 2014
19 Things as Citizens General Presentation, https //thingsascitizens org/

[8] *Only by approval of the Board of Examiners , a not yet passed course may be combined with the Graduation Project In such case, show the approval to your Chair and indicate the period of not spending time on your Graduation Project for this reason*

APPROVAL BY CHAIR

Date of approval	
Signature of Chair	