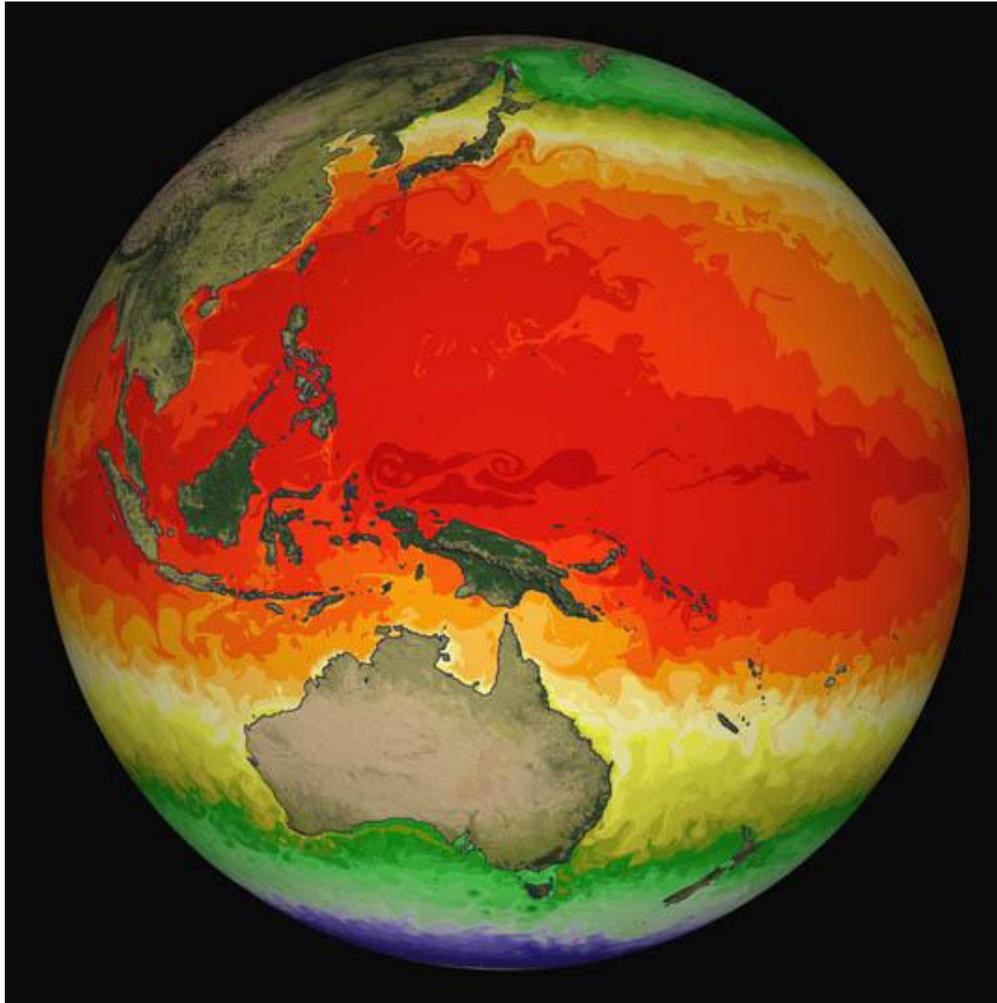




BRAVE NEW WORLD

Academic Supervisor: Caroline Sohie

Architecture Masters Thesis 2021-22
KULeuven, Belgium



Earth Simulator - JAMSTEC / Earth Simulator Center

BRAVE NEW WORLD

City of the future

Architecture Masters Thesis

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How do we share important ideas about the futures that we will be living in together ?

Can architecture provoke a new insight, can we design and prototype a range of possibilities, can we probe possible futures that might lie ahead of us ?

If we launch these speculative messages, with enough force that they might find traction, and connect global audiences; we can have shared conversations about the choices we need to make.

Urgent questions are central to the studio's mission in researching the City of the future;

What relationships will be forged when we have to deal heads on with climate change?
What lifestyle and cultural changes will be needed?
How do we reconcile nature with the man-made?

The studio outcome is a provocation for collective reflection on how extreme and incongruous the current ways we make cities really is. The project outcome is about a future, but at the same time a mirror through which we can see the absurdity and the catastrophic nature of business as usual.

'Future is a verb, not a noun.

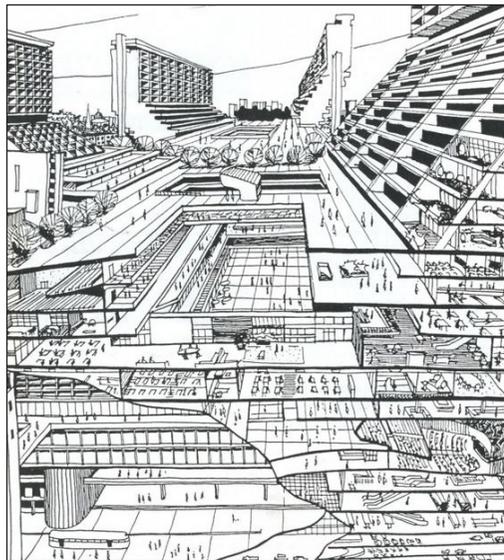
It is something that we all play a role in, actively shaping and defining. '

- Liam Young

The studio is not an endpoint but rather it is the beginning of a collective conversation.



Dome over Manhattan - Buckminster Fuller



The Asian City of Tomorrow - Rem Koolhaas

CONTEXT

We currently live in an era of extraordinary opportunity, where we can create exciting new possibilities in the way we envision, plan, design and build our places of living; providing radically new entry points to recast our world.

At the same time, two irresistible forces - change and complexity - have never been as pertinent as now. Until recently, the notion of change was an abstract phenomenon, removed from our day to day existence. Currently we keep adjusting our lives, in accordance with fundamental shifts impacting our world.

Societies worldwide are in flux, challenged by volatile pressures to redefine their built, ecological, economic and social environment, torn between wide-ranging demands, such as a rapidly urbanising environment, scarcity of resource, climate change and the consequences of rising inequity.

This shifting reality raises critical questions about how the practice of architecture can adapt towards more effective agency, in order to meet the greater, more universal challenges we face today. The Brave New World Studio takes on this challenge, by focusing on opening imaginative perspectives and initiating a creative space for exploration about alternative ways of being.

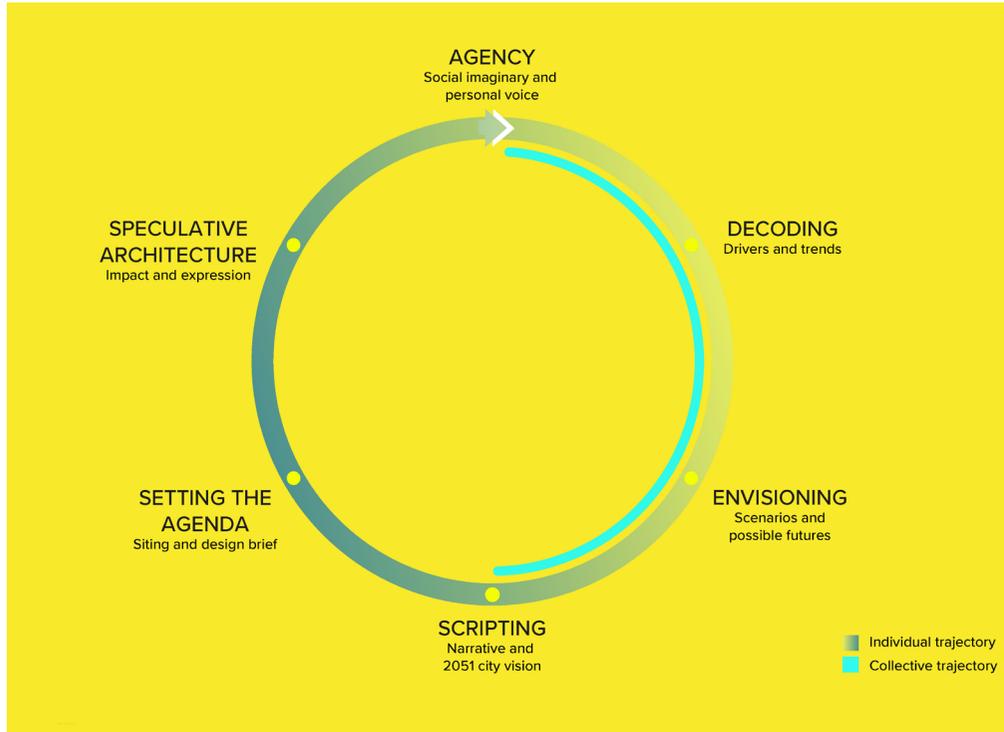
The research-by-design methodology is developed around the fields of; futures research and speculative design. If we are serious about sustainability, and are open to a more regenerative approach to city making, it is essential to develop a better understanding on how our choices in the present can influence future outcomes.

What we are interested in, is how the theoretical lens of possible futures can be adopted as a tools to inform our design and decision making processes, enabling us to take a greater responsibility for our futures.

Historically architects have been at the forefront of projecting visionary futures; translating radical, visionary ideas into architectural form. These innovative insertions opened new imaginaries in line with evolving value systems emerging at the time.

The projects not only transformed the spaces of intervention but also brought about more fundamental shifts in the way societies behave, for example; Buckminster Fuller's geodesic structures initiated early reflections on closed-loop sustainable habitats, the Metabolists brought biomimicry to urban expansion, Archigram redefined architecture as a dynamic temporal presence.

The question arises how in current times a counter-narrative can be launched which has relevance and impact.



Research-by-design process - Brave New World Studio 2021-22

AT A GLANCE

Framework

A framework that positions architecture as a critical medium to articulate the unknown - and in some ways unknowable - futures.

Aim

To identify strategic design responses to tackle our 21st century global challenges.

Studio

An interdisciplinary urban futures think-tank environment, framed by the 'what if' question, opens up spaces of debate, research and imagination.

Method

Synergy of practice-based design, foresighting strategies and critical urban theory.

Process

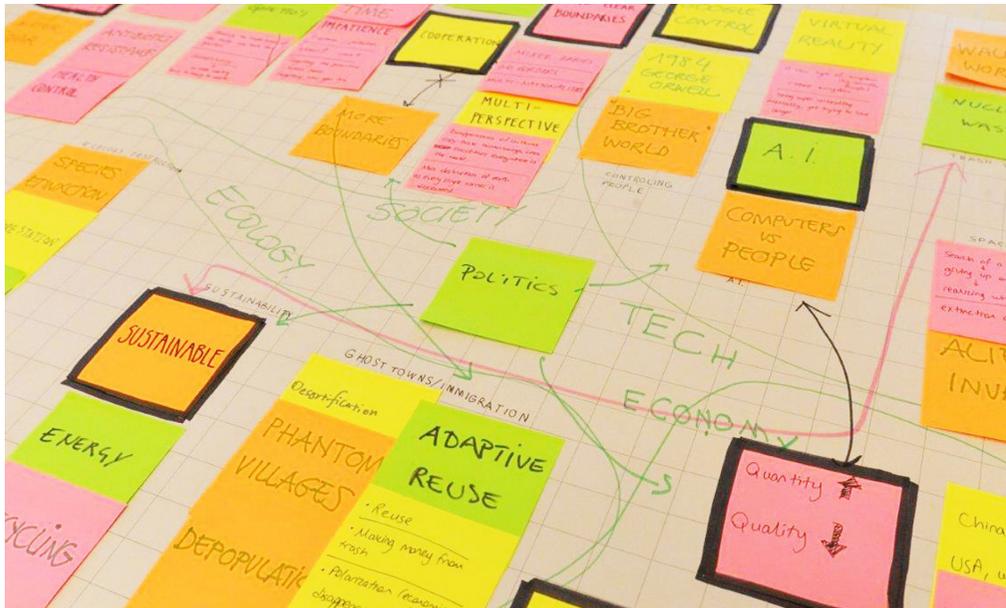
The process consists of six stages; 1. Agency, 2. De-coding, 3. Envisioning, 4. Scripting, 5. Setting the agenda, 6. Speculative architecture.

Focus

The City of tomorrow; what will define the future of the city, or what will be the city of the future?

Keywords

Brave New World, Future City, Possible Futures, Embracing Change, Speculative Design, Worldbuilding, Urban Culture, Future Studies.



Critical design platform - Brave New World Workshop 2017 KULeuven

THE STUDIO

The studio operates as an incubation platform to provoke informed debate on the broader societal role of architectural practice and gain insight, through design and critique, in one's own engagement with a changing reality.

The space is created for students to develop personal interests, agency and urban agendas within the 'Future City' conceptual framework.

The studio encourages innovative ideas that challenge the status quo and bring an original, imaginative perspective towards building the world of tomorrow. Students are supported through mentorship to develop a unique voice and cohesive body of academic work, while developing strategic design thinking skills that will assist any field of professional practice after graduation.

The studio starts by immersion and runs through a series of collective activities in order to familiarise oneself with the studio's concept.

A City Futures workshop (Programme week 7) will encourage students to fully engage with urban futures' thinking and design tools, through a week-long programme of discussion, brainstorm sessions, readings, talks and design exercises. This will enable the development of a shared City Futures field guide; a guiding studio reference for further research and design development in the following stages. Students are encouraged to propose their project city selection during the workshop week, for initial discussion and evaluation.

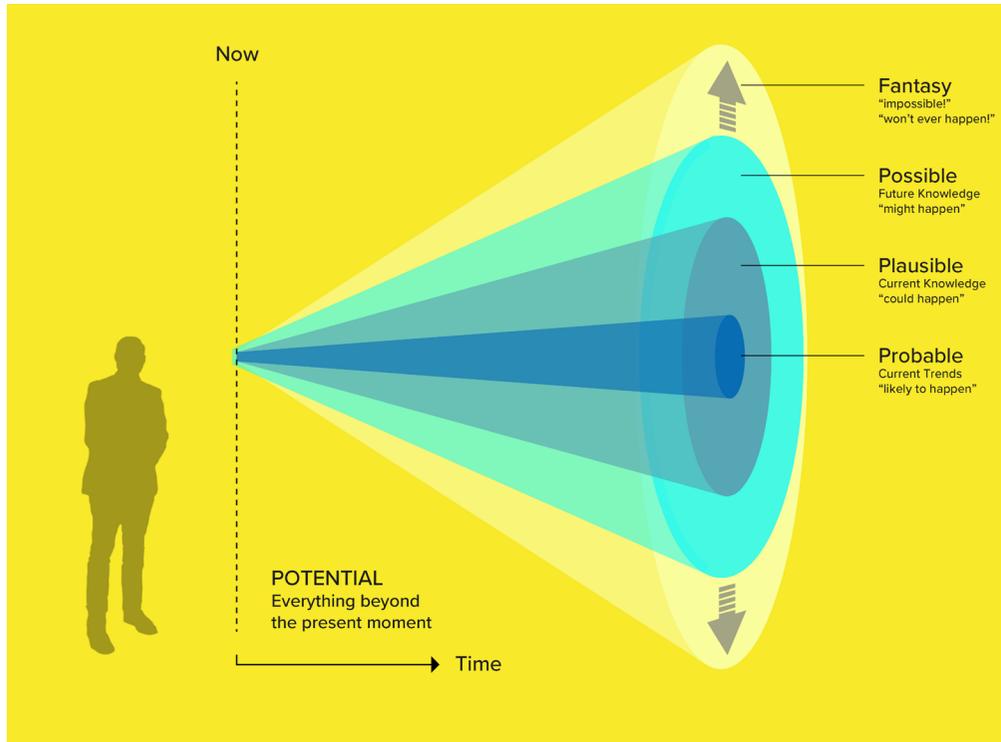
As the studio progresses, the collective trajectory will transition into a personal development trajectory. The programme activities are curated to enable the students to incrementally establish clarity about an urgent 'Future City' agenda they seek to develop into an individual thesis project.

The second part of the programme focuses on personal mentoring, combined with collective touch moments, to support the student's individual research-by-design work, culminating in the final Master Thesis submission.

FORESIGHT AND POSSIBLE FUTURES

'For us futures are not a destination or something to be strived for but a medium to aid imaginative thought—to speculate with. Not just about the future but about today as well, and this is where they become critique, especially when they highlight limitations that can be removed and loosen, even just a bit, reality's grip on our imagination.'

- Dunne & Raby



Futures Taxonomy - Adapted from Hancock & Bezold 1994

At the heart of the Brave New World studio exists a future-oriented research methodology that we will use to stimulate strategic thinking and speculative design capabilities.

Foresight or Futures Studies is a research-driven practice of exploring expected or alternative futures to inform strategy and in the studio's case, design strategy. The studio will adopt the Future Taxonomy of Hancock and Bezold (1994) and apply the lens of "Possible futures" to analyse and envision alternative 'Future City' trajectories.

The formulation of a Future City foresight framework, will include;

- Identification of global and local drivers that cause profound change
- Scanning patterns of change, leading to the understanding of macro- and microtrends
- Development of possible Future City 2051 Scenarios
- Envisioning future city states
- Tracking of divergencies and potentialities that may lead to alternative futures

The framework will form the foundation to move into testing design responses; to identify what strategic agenda can positively impact the city's trajectory and influence the current conditions governing tomorrow.

The objective is to interrogate how architectural and urban design practices can stimulate and shape a changing reality. This process can provide us as designers with unique insights about key decisions we need to make, to enable the shift from an extractive to a regenerative approach to our built and natural environment.



House and Universe - Mary Mattingly

STUDIO EXPECTATIONS

This studio is ideally suited to students who see the importance of broadening the role of architecture, to fundamentally contribute to society and the design of a better future.

The programme is broadly framed around the research of urgent global agendas and sharing of design strategies and tactics that can empower designers to strategically intervene in complex contexts, whilst maximising impact leading to positive change.

The studio acts as an incubator where collective engagement and experimentation will fast-track learning and development. This is offset by a personal trajectory, providing the student the opportunity to develop personal agency and a unique design voice, within the context of an individual thesis project.

It is expected that the student demonstrates a high level of autonomy in developing a theoretical framework, contextual analysis and design. Research and enquiry form an integral part of the thesis project. The intellectual decision-making process as well as the investigative design development will be on-going throughout the programme.

The Brave New World studio invites students to be bold, dare to experiment and pioneer new design grounds. The studio demands a commitment from each participant to challenge their own established working methods and to embrace often unfamiliar ways of working. Engagement with cross-disciplinary fields of expertise and testing alternative conceptual frameworks form the basis for reflection and unexplored inroads to design.

INTENT

To develop a personal position and critical discourse about the role of architectural practice, as cultural production within a changing global and local context.

To identify strategic agendas, develop visionary strategies and create high-impact architecture that can catalyse positive change.



Planet City - Liam young

CITY OF THE FUTURE

The metabolism of cities demand resource flows, logistics, energy, development, natural and social systems, to be co-ordinated through human endeavour.

These demands, notwithstanding the emerging smartness of cities, are placing unprecedented strain on the ability to co-ordinate and navigate the increasing frictions between competitive demands; exacerbating the clashes of capital structures and the diminishing resources inherent to the environmental wellbeing of cities.

A new battleground has emerged, in cities being at the tipping point to re-invent responses which provide sustainable resilience for the future.

Currently, more than half of the world's population lives in urban areas. The UN (2018) predicts that by 2050, two-thirds of world population will live in cities. In 1990 there were just 10 megacities, classed as places with populations of 10 million or more. There are now 33 megacities and by 2030, 43 megacities are projected, mostly in developing countries. Cities consume 75% of the world's natural resources and account for 80% of global gas emission (UN 2015).

The growing concentration of urban populations increases the critical importance of the urban agenda, the need for fundamental systemic change and innovation at scale; this will be the conceptual leitmotiv guiding our enquiry and visions for the City of the future.

Each student proposes a city that is of interest and of sufficient complexity for further interrogation and intervention; a context one feels curious about and captivated by, to use as the locus for in-depth research and ultimately as the setting for a personal speculative design project. It is envisaged that, as the student's city research develops, also the design agenda will be articulated and lead to the selection of a relevant site for the architectural proposal.

FINAL OUTPUT

- A series of well-crafted documents/ artefacts produced throughout the studio programme, amplifying the creative process of exploration and experimentation.
- A speculative design intervention set within a future City context.
- An individual reflection paper; including architectural discourse, process and articulation of the intervention.

For further guidelines, please consult the Master Dissertation Guidelines.



Building on Borrowed Land, Helsinki 2051 - Roope Piiponen, Brave New World Thesis 2020-21

PROCESS

Six stages define the studio's speculative design process;

Stage 1 - Agency;

What drives an alternative social imaginary?

Throughout history, visionaries, thinkers, architects have developed visions of the future and formulated radical ideas, provoking the status quo and leveraging change in line with alternative value systems they believed in. The studio follows in these footsteps and explores the notion of agency set against a future horizon.

The studio will interrogate historic visions of the future and benchmark architectural reference projects that demonstrate embedded agency and take on a radical position in relation to the City of tomorrow.

The same line of enquiry is adopted, in the research of today's cutting edge thinking and wider theoretical questions about urban futures, engaging with new ideas emerging in the realm of designers, artists, scientists to science fiction writers and filmmakers.

Against this background, the changing role of the architectural profession will be debated and students are encouraged to reflect on how architectural practice can engage with the notion of change and give rise to alternative perspectives on contentious issues of our times.

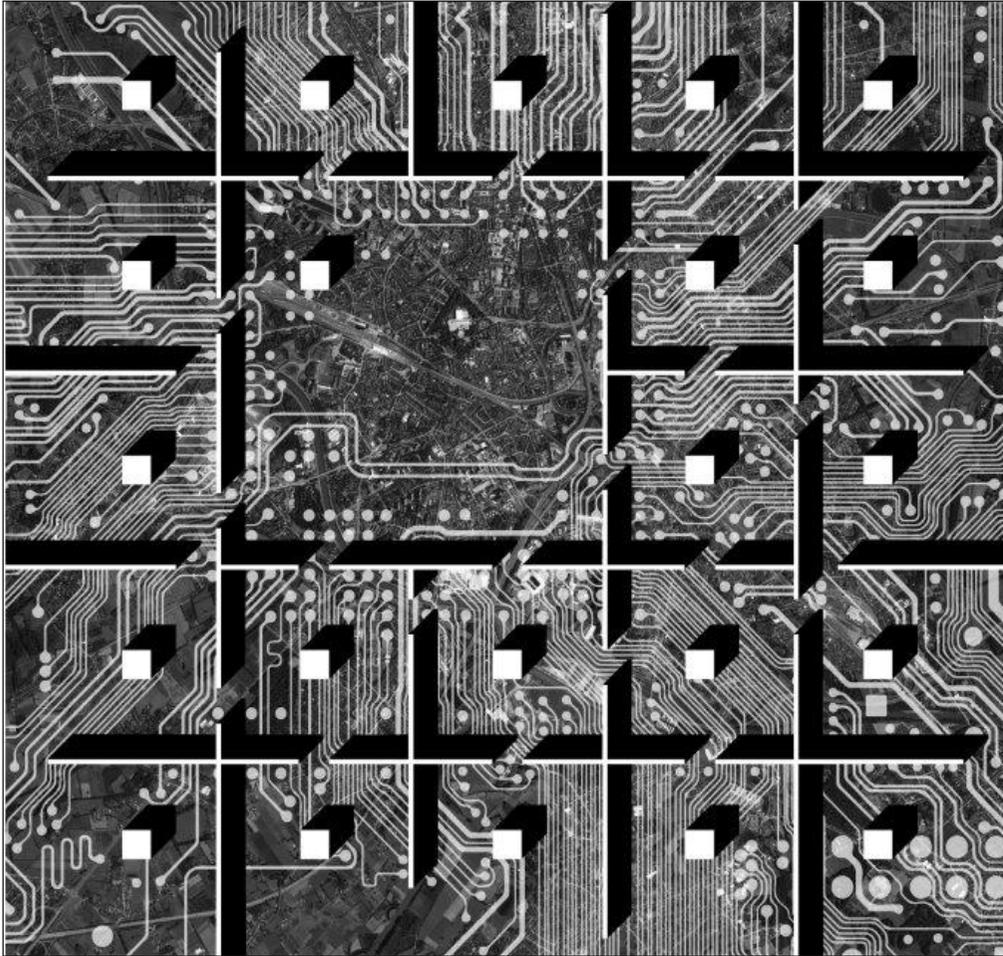
Stage 2 - De-coding;

How can design embrace a complex world of uncertainty?

Inscribed within our cultured spaces are social, technological, economic, ecological and political structures that reflect the tangible and hidden forces that create and sustain them. Through analysis, debate and coached brainstorming sessions, the studio intends to expose these drivers of change that impact and shape our built environment.

We search for weak signals, analyse behaviours and norms within the present that suggest emerging patterns of change impacting at a local and global scale. To aid the process, systems thinking is introduced to support our creative thinking processes and de-code the possible relations and interdependencies.

This strategic scan of societal parameters informs our critical understanding of the City. Examining undercurrents and trends, the studio will identify triggers that shift the way societies behave and how they could shape our habitat in the future.



Nomadic settlements 2050 - Brave New World Workshop 2018
Alberto Bovo, Eduardo Dugaich, Endri Berberi, Orçun Yazici, Giulia Malley

Stage 3 – Envisioning;

What are possible futures...?

At this stage we will move from the analysis of our current world, into the field of futures research. The studio will examine how speculation about potential futures or 'foresighting' can intensify our design process, by countering bias and conventional thinking patterns, and open up fresh perspectives on the challenges of our complex world.

- We will test how the different ways we choose to look at the future, inform our design perspective and lead to other outcomes.
- We will discover how a foresight process works and how it can be integrated within architectural practice.
- We adopt foresighting techniques to explore the attributes of the City of tomorrow.

With the knowledge gained in stage 2, we will apply our acquired foresighting techniques to generate a range of possible Future City scenarios. The process of testing, comparing and evaluating the scenarios, will enable each student to deepen their knowledge and adopt a critical position about the conditions and change agents that will have a possible impact on the human condition, in the short or long term future.

Stage 4 – Scripting;

Can we visualise the City of the Future ?

The emerging Future City scenarios will be shared and critiqued, leading to preferred scenarios which will form the base to develop a selection of Future City visions for a 2051 horizon.

Combining data and contextual analysis, the studio will progress the selected scenarios to a level of depth, that will enable us to establish a critical vision of the 2051 forward view. As we unpack and profile the stakeholder groupings that will inhabit the Future City, the vision will gain in granularity and will become more robust in its formation.

Similar to the development of a screenplay, we will proceed with a process of scripting the narrative of our imagined future worlds. We will experiment with storytelling techniques such as datavisualisation, cartographic design and collaging, to develop a visual narrative. This will open up ways to discuss and debate alternative ways of being and to inspire, enabling each student to reflect on one's own critical position and design agenda, set within a future time horizon.



Force Majeure: Futura – Jeanne Schultz, Danielle Eke

Stage 5 – Setting the agenda

Hacking the future ?

The focus of this stage will be to set an agenda and define the location and architectural design brief within a 2051 Future City context.

The ambition is to hack the future; through a well considered architectural programme and strategically chosen site we intend to alter the development patterns of the city, leading to a meaningful and transformational outcome.

In order to achieve this we will plot out the speculative evolution between the now and the future and identify how we can influence points of inflection ; events that result in a significant change of the city's trajectory.

Examples of an urban agenda could be; How could a regenerative type of urbanism renew the city's broken relationship with nature? How would an infrastructure of health transition our ecosystem? What could be a new typology for digital data centres and how will they redefine our city centres? How would we live together in a radical sharing economy?

The strategic act of reimagining, destabilising and reconfiguring the status quo is powerful as it has the propensity to influence the conditions governing tomorrow.

Stage 6 – Speculative architecture

Designing for the future or designing the future ?

The speculative design process ultimately transcends into a 2051 spatial proposal; the medium of architecture is used in all its capacity to materialise the set City agenda and translate it into a compelling expression.

Its mere existence is radical as it raises critical debate about urgent themes, exposes opportunities and shortcomings in our current approach to cities and can encourage people's imaginations to flow freely, leading to new social imaginaries.

Urban design strategies will be tested to maximise the project's leverage to impact on the hard- and software of the City. In parallel, a spatial language will be evolved which expands on the architectural palette to reinforce the project's ambition; including the study of morphology, poetics of space, programming, performance, structure and materiality.

An ecosystemic approach is promoted, whereby the dynamic exchange between architecture and context leads to co-generating value and can catalyse change at the scale of the spatial intervention, the scale of the City and the macro level of society.

The studio's exploratory journey culminates in a grounded design vision and architectural proposition which reflects the student's personal voice and position towards the City of the Future.

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ACADEMIC SUPERVISOR

Caroline Sohie

Caroline Sohie is an architect, curator and lecturer based in London. Her practice transcends the conventional boundaries of architecture as she believes innovation lies in the cross-fertilisation of ideas, stemming from many parallel disciplines.

Caroline is recognised for her design leadership of large public architectural and infrastructure environments around the world, with her design skills expanding from architecture into the realm of urban strategy and city regeneration with specialist knowledge in development opportunities around transport nodes and infrastructure networks. Her completed projects demonstrate a holistic and creative approach towards city making processes as a foundation for transformative and sustainable development visions.

After leading a wide-ranging international design portfolio for the global design and engineering company Ove Arup & Partners (www.arup.com) in London - from rail, aviation to projects in culture and education - she co-founded in 2017 the international design practice INSTINCT (www.instinct.london). Moving between speculative design research, strategy, architecture and master planning, the practice is engaged with the potentialities of a dynamic world and offers an alternative methodology for approaching complex design challenges that synthesises instinct and intuition, with intelligent investigation.

Caroline's practice further encompasses the curation and design of interactive experiences questioning contemporary urban realities, ranging from ephemeral installations, exhibitions and academic studio events, such as CITYDESIRED (2014) and #FREESPACE (2019).

Caroline is a regular keynote speaker at international conferences. Her international teaching and reviewing has included; the Architectural Association London, The Berlage Institute Amsterdam, University of the Witwatersrand Johannesburg, University of Cape Town and TU Delft. Since 2016 she has been tutoring the Climate Design Studio and since 2017 she is a Masters Studio lead at the Faculty of Architecture, KULeuven University in Belgium.

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