DESIGNING INTELLIGENCE INTO OUR CITIES

Back to Better?

19th and 24th June 2020

imdcsymposium@rca.ac.uk
@RCA_IMDC
#designingintelligence

Royal College of Art

Visions for an intelligent city
Word cloud from participants

CONTENT

1. Introduction

2. Background

3. Speakers

4. Session 1. Friday 19 June: 10 am – 1 pm. Talks, challenges and questions

5. Session 2. Friday 19 June: 3–5pm: Collaborative design challenge workshops

6. Session 3. Wednesday 24 June: 3–4pm. Symposium summary and participant insights

7. Guide for online tools

8. Planning committee and the Intelligent Mobility Design Centre

What does it mean to design intelligence into our cities? What do we mean by intelligence and how does this differ from the smartness that has often been used to describe future cities? What does intelligent design mean in a post-pandemic city? Which parts of our society are truly valued and valuable and how might we reimagine our places and mobility in the future? Do we want to get back to before or go forward to better?

1. INTRODUCTION

Design researchers at the RCA are hosting an online symposium to share visions of the future and to bring together an audience of designers, researchers and city-based organisations and communities.

In the first session we will listen to short talks and challenges from our guest speakers.

In the second session, we will flip the symposium and ask participants to share their thoughts and develop key design research questions.

In the third session, we will reflect on our learnings and discuss opportunities to take the research forward together.

I. INTRODUCTION

There are three themes for the event that span the different interests of speakers and researchers across the college.

We encourage participants to choose a theme and to contribute to the design research workshops by sharing your vision for the future and considering the partners and activities that you might need to make your vision happen.

WHAT IS THE FUTURE FOR INTELLIGENT NEIGHBOURHOODS – THEIR SHAPE, CONSTITUENT PARTS, NETWORKS, GOVERNANCE AND SIZE?

HOW MIGHT WE REIMAGINE MOBILITY HUBS AND NETWORKS AS CENTRES OF COMMUNITY RATHER THAN PURELY FUNCTIONAL TRANSPORT SYSTEMS?

HOW MIGHT DIGITAL TOOLS MERGE TECHNICAL DATA WITH SOCIAL KNOWLEDGE TO ENABLE BETTER PLANNING FOR SUSTAINABLE FUTURES?

2. BACKGROUND

At various points in history, researchers have proposed different definitions of intelligence. While these definitions vary considerably from one theorist to the next, current conceptualisations tend to suggest that intelligence involves our ability to learn, recognise problems and create solutions.

The ability to learn

The ability to recognize problems

The ability to solve problems

2. BACKGROUND

The theory of multiple intelligences differentiates human intelligence into specific 'modalities'. Howard Gardner proposed eight abilities* that he held to meet these criteria:
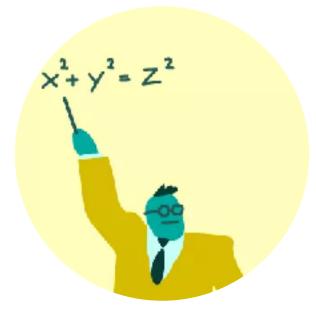
- musical-rhythmic
- visual-spatial
- verbal-linguistic
- logical-mathematical
- bodily-kinaesthetic
- interpersonal
- intra-personal
- naturalistic

VISUAL-SPATIAL

VERBAL-LINGUISTIC

INTERPERSONAL

MUSICAL-RHYTHMIC

LOGICAL-MATHEMATICAL

INTRA-PERSONAL

NATURALISTIC

BODILY-KINAESTHETIC

* In 2009, he suggested that existential and moral intelligences may also be worthy of inclusion. Gardner, Howard. Frames of mind: The theory of multiple intelligences. Hachette Uk, 2011.

2. BACKGROUND

In contrast to Gardner's multiple intelligences, the smart city is conceived as a place where sensors collect and use data to manage assets, resources and services efficiently to support:

• traffic and transportation
• power and utilities
• water and waste
• schools and libraries
• hospitals and other community services
• crime and urban risks

* McLaren, Duncan; Agyeman, Julian (2015). Sharing Cities: A Case for Truly Smart and Sustainable Cities. MIT Press. ISBN 9780262029728.

3. SPEAKERS

Professor Dale Harrow
Chair of the Intelligent Mobility Design Centre (IMDC) and Head of the Intelligent Mobility Design Programme. As a former Dean of the School of Design at the RCA , Dale introduced new Programmes in Service Design and International Programmes in innovation design and championed multi disciplinary design methods through new curriculum development.

Dr Jingru (Cyan) Cheng

Noel Hatch

Erica Belcher

Andy Martin

Dr Jiayu (Zoe) Wu

Rob Naybour

Marian Marsh

Richard Dilks

Stephen Barrett

Dan Phillips

Dr Timea Nochta

Associate Professor Yudai Honma

Dr Shera H. Park

Mike Saunders

SPEAKERS - THEME 1

Dr Jingru (Cyan) Cheng
Session Host. Cyan is Tutor in MA Architecture (ADS7) and Postdoctoral Research Associate in the School of Architecture at the Royal College of Art. Her research interests lie in the intersections between architecture, anthropology and sociology, with a focus on socio-spatial models in China.
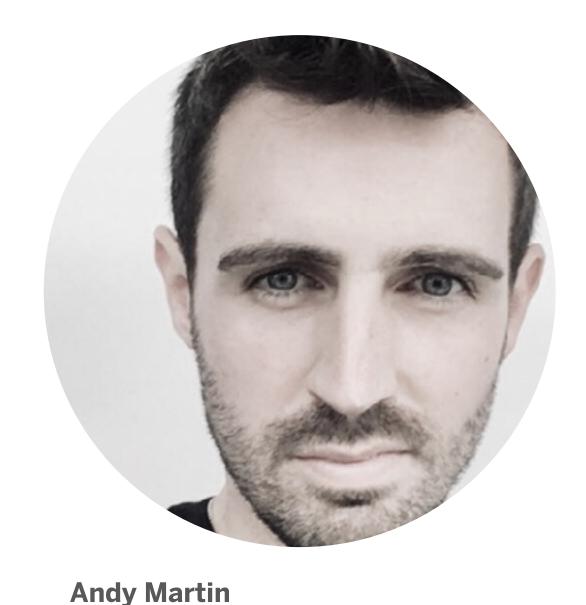
Noel Hatch
Head of Strategy, Camden Council. Noel is passionate about mobilising the collective power and creativity of people around local places. He helps senior leaders across different sectors to develop, accelerate & embed strategic change through leadership across partnerships in strategy, transformation, insight, service design and whole systems change.

Erica Belcher
Researcher, Centre for London. Erica is a Researcher at Centre for London and has co-authored reports on road user charging, city planning and health inequality. Erica's research interests chiefly include urban transport planning and demography. She has an MSc in Comparative Politics from the London School of Economics and an BA (Hons) in Political Culture from Maastricht University.

Andy Martin
Strategic Urban Design Advisor, TFL. Andy is a social scientists and urban planner with a passion for creating equitable cities. He joined TfL in 2016 and currently works within Investment Delivery Planning overseeing the delivery of transformational Healthy Streets schemes. Andy is an expert in urban masterplanning as well as the planning and delivery of walkable neighbourhoods within both strategic and localised contexts.

SPEAKERS - THEME 2

Dr Jiayu (Zoe) Wu. Senior Research Fellow, RCA. (Session Host and keynote speaker). Jiayu leads and works on collaborative innovation research projects at the Intelligent Mobility Design Centre (IMDC), bringing together academics, industrial partners and students to design and deliver research and knowledge transfer projects for emerging mobility experiences.

Rob Naybour. Founding Partner, WW+P. Rob works closely with a range of clients on the formative stages of urban infrastructure projects. He is responsible for the conceptual design and delivery of four Cross rail projects and was architectural project director on the Melbourne Metro. In 2015 Rob was awarded RIBA London Project Architect of the Year for his work at Paddington Station.

Marian Marsh and Richard Dilks CoMo UK. Richard is Chief Executive of the CoMo, the collective charity for shared transport which promotes the public benefit of shared transport. Marian is Senior Development Officer at CoMoUK. She has worked in Transport Planning in local authorities, including Reading's bike share scheme and EU Horizon 2020 projects.

Stephen Barrett. Partner, Rogers Stirk Harbour + Partners. Stephen has over 25 years of experience with the practice. In 2008 he piloted a multi-disciplinary team in an international consultancy on the future of the 'Post-Kyoto Metropolis'. He has subsequently directed a number of large mixed-use masterplanning projects for key sites in Paris.

SPEAKERS - THEME 3

Dan Phillips
Session Host. Intelligent Mobility Design Centre. Dan Phillips is a designer and engineer with 30 years' experience in the development of innovative environments, products and services. He studied at Imperial College and the University of Cambridge. He is a studio leader in the IMDC and a design strategist at DesignScience.

Dr Timea Nochta
Centre for Smart Infrastructure and Construction, University of Cambridge. Timea is a Science and technology studies researcher with an interdisciplinary background in architecture and political science. Her research interests include urban and network governance, smart urbanism, and evidence-informed decision-making.

Associate Professor Yudai Honma
Institute of Industrial Science at the University of Tokyo. Yudai specialises in mathematical modelling, operations research, urban and architectural planning, transportation, alternative fuels, station and vehicles. He serves on the officer of the Section on Location Analysis in the Institute for Operations Research and the Management Sciences.

Dr Shera H. Park
PhD, Service Design, Royal College of Art. Shera's research develops the theoretical understanding that outlines the value co-creation system for digital mapping service and its implementation in light of service ecosystems. It underlines service design as providing meaningful tools with a human-centred approach and systemic orientation.

Mike Saunders
CEO and co-founder, Commonplace. Mike has been a digital pioneer and entrepreneur for over 20 years, developing innovative digital businesses across media, public and commercial sectors for organisations from Sony Playstation to Kew Gardens. He has built several start-ups as well as worked in central government.

4. FRIDAY 19 JUNE: 10 AM – 1 PM

TALKS, CHALLENGES AND QUESTIONS

GATEway Driverless Futures
Visualisation of future mobility

KEYNOTE INTRODUCTION - URBAN FLOW – INTELLIGENT MOBILITY FOR ALL

Professor Dale Harrow

The challenge and opportunity now is to change the way we develop and design our cities and transport environment. For too long we have developed our planning, architecture infrastructure and vehicles as separate domains in silos of activity. In many situations, this has created less than successful solutions unable to adapt to societal and technological change.

This is a time of radical change in vehicles, transport, and patterns and modes of mobility – in technologies, that work with design and also in the commercial, social and cultural models with which they interact. Where previous university and corporate research has tended to focus on mechanics, engineering solutions to perceived problems, and iterative developments leading to incremental market advantage, our track record in this area has demonstrated that the problem is much more subtle and complex, and requires human-centred approaches which are design-led. Previous research has tended to concentrate, in short, on the movement of objects, whereas the urgent need is to re-focus on the journey, the experience, the design of services and systems, and the complexity of the infrastructure and interactions that mobility in modern advanced societies entails.

With these changes and the broader societal and technological changes there is a need to rethink not just the product, environment and the associated services but also how design process and methodologies must change in this new age. Where previous evolution has been iterative, with developments within discrete elements of transportation - engineering, styling, materials, marketing, etc. - the opportunity now exists, through smart technology and design, to consider holistic and systemic approaches to the future of transportation that meets the needs of society, individuals, the economy, and countries' infrastructure strategies for the 21st century. "Intelligent Mobility" defines and describes this paradigm shift, and involves bringing together existing fields of expertise with a design-led approach. This will address both the physical and virtual aspects of the mobility challenge as an integrated whole.

The opportunity is now and the challenge is to break down the silo's and to create processes and ways of working that bring expertise and people together to create a better and sustainable future for our mobile future.
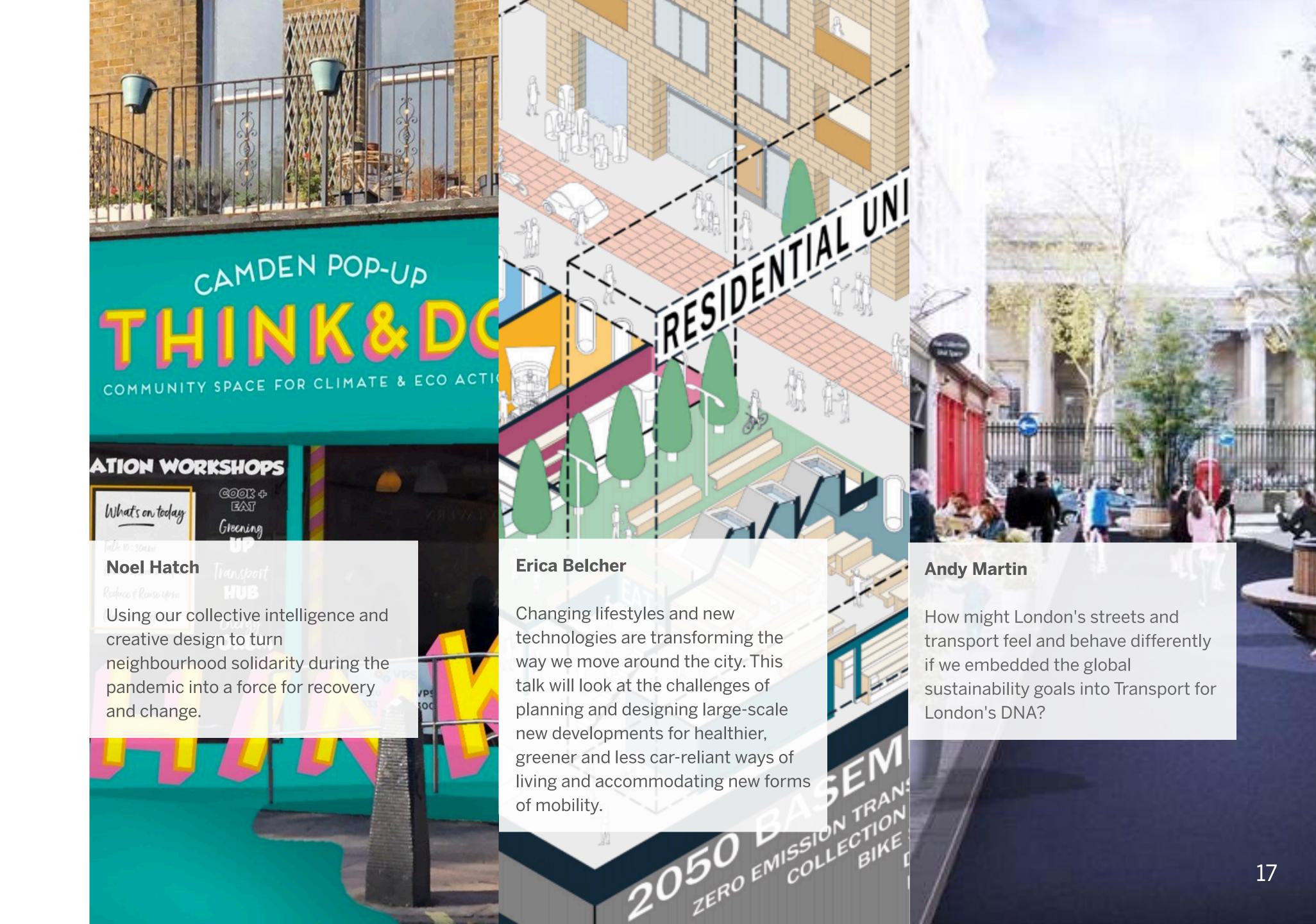
THEME 1: WHAT IS THE FUTURE FOR INTELLIGENT NEIGHBOURHOODS – THEIR SHAPE, CONSTITUENT PARTS, NETWORKS, GOVERNANCE AND SIZE?

THEME 1
CHALLENGES

Dr Jingru (Cyan) Cheng
Session Host

What is the future for intelligent neighbourhoods – their shape, constituent parts, networks, governance and size?

Noel Hatch

Using our collective intelligence and creative design to turn neighbourhood solidarity during the pandemic into a force for recovery and change.

Erica Belcher

Changing lifestyles and new technologies are transforming the way we move around the city. This talk will look at the challenges of planning and designing large-scale new developments for healthier, greener and less car-reliant ways of living and accommodating new forms of mobility.

Andy Martin

How might London's streets and transport feel and behave differently if we embedded the global sustainability goals into Transport for London's DNA?

THEME 2: HOW MIGHT WE REIMAGINE MOBILITY HUBS AND NETWORKS AS CENTRES OF COMMUNITY RATHER THAN PURELY FUNCTIONAL TRANSPORT SYSTEMS?

THEME 2
CHALLENGES

Dr Jiayu (Zoe) Wu
Session Host

How might we reimagine mobility hubs and networks as centres of community rather than purely functional transport systems?

Jiayu will also give a key note talk on Shared Mobility: Concepts and the Impact on Cities and Individual Travellers

Rob Naybour

Civic transit? Can moving around a city be an act of civic engagement? If so, how might we make this happen and what will it look and feel like?

Marian Marsh and Richard Dilks

Shared transport can transform our cities, helping to mitigate climate change, improve air quality and create quality of place. But why are mobility hubs hard to deliver and how might design help to overcome resistance to change?

Stephen Barrett

The 'SUN' (Shared Utility Network) poly-centric study, sits at the intersection of three great crises: An environmental emergency, a period of profound technological upheaval, and finally, a time of political polarisation and disquiet that reflects upon deepening inequalities.
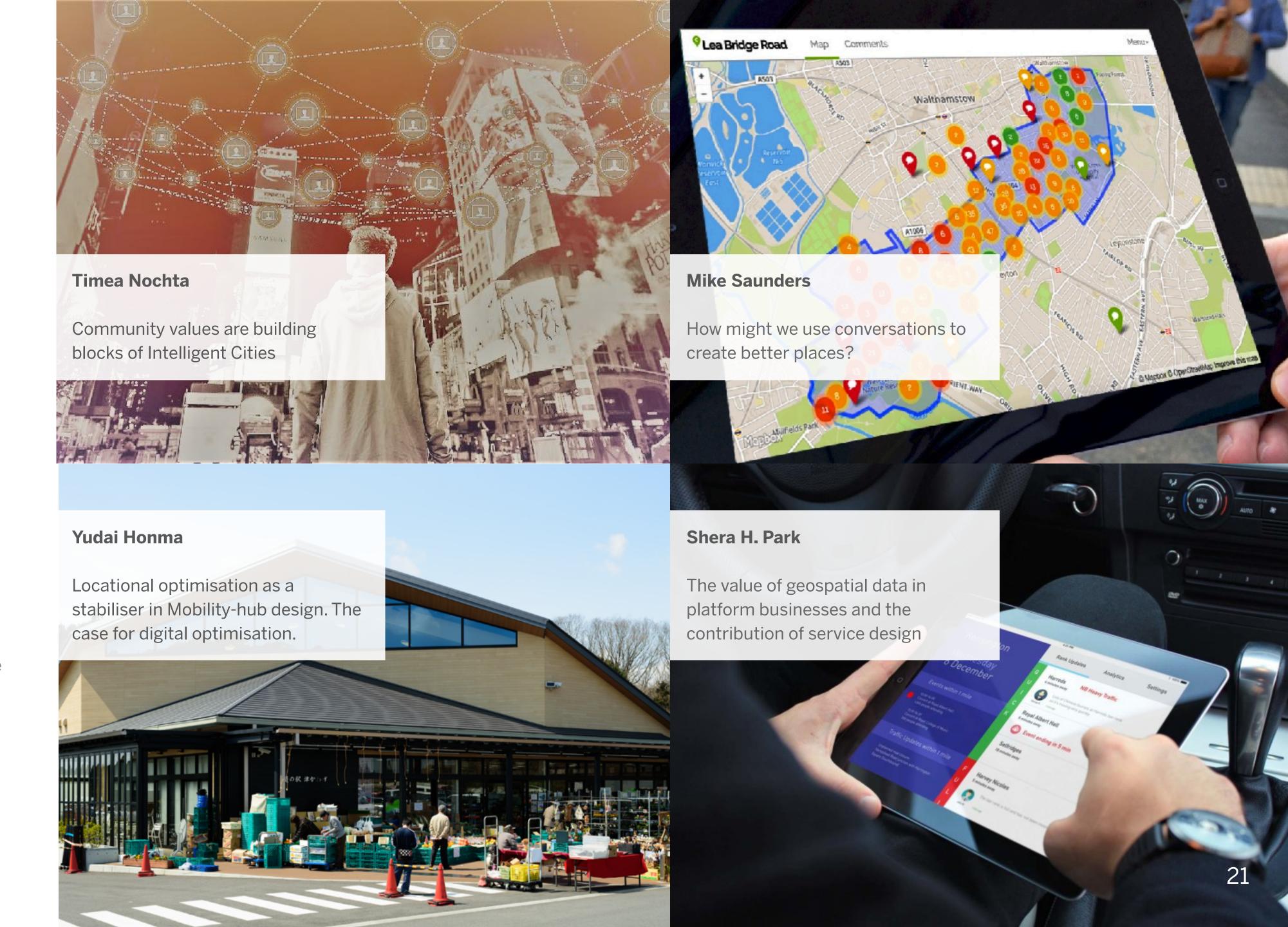
THEME 3: HOW MIGHT DIGITAL TOOLS MERGE TECHNICAL DATA WITH SOCIAL KNOWLEDGE TO ENABLE BETTER PLANNING FOR SUSTAINABLE FUTURES?

THEME 3 CHALLENGES

Dan Phillips
Session Host

How might digital tools merge technical data with social knowledge to enable better planning for sustainable futures?

Timea Nochta

Community values are building blocks of Intelligent Cities

Mike Saunders

How might we use conversations to create better places?

Yudai Honma

Locational optimisation as a stabiliser in Mobility-hub design. The case for digital optimisation.

Shera H. Park

The value of geospatial data in platform businesses and the contribution of service design

5. FRIDAY 19 JUNE: 3–5PM

COLLABORATIVE DESIGN CHALLENGE WORKSHOPS

A meeting of the La Borda cooperative at Can Batlló, Barcelona, Cristina Gamboa/La Borda
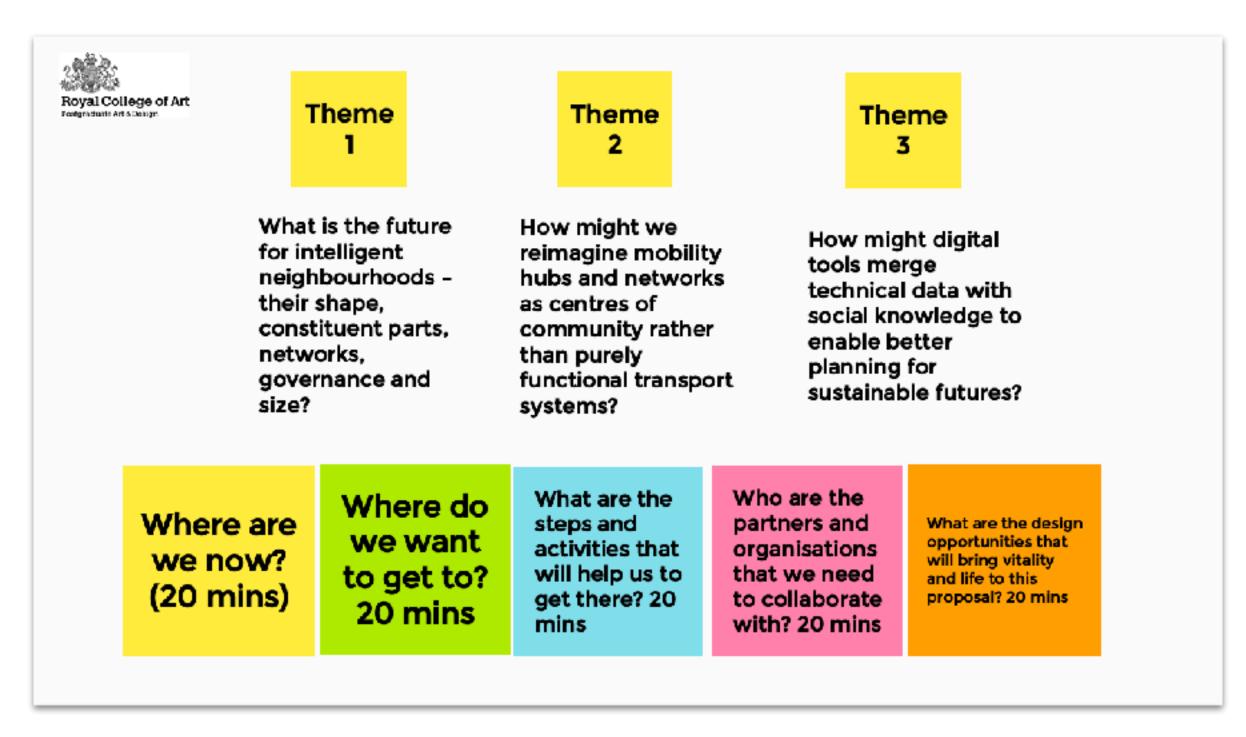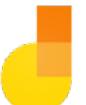
5. COLLABORATIVE DESIGN CHALLENGE WORKSHOPS

We will be using the zoom chat and an optional online whiteboard to help speakers and participants co-create design research questions through a series of shared activities. Each theme will have a researcher from the RCA as a facilitator to support the activity and to help participants to collate and develop their ideas.

The session starts by sharing our understanding of 'where we are now' and the goal for each session is to develop a set of design opportunities towards a shared future vision.

• Describe where we are now - issues that you think are important
• What are the steps and activities needed to deliver a future vision?
• Who do we need to partner with to make this happen?
• What are the design opportunities that we can contribute to this research?
• How might we improve the future vision to take into our multiple intelligences as well as bringing vitality and life to this proposal?
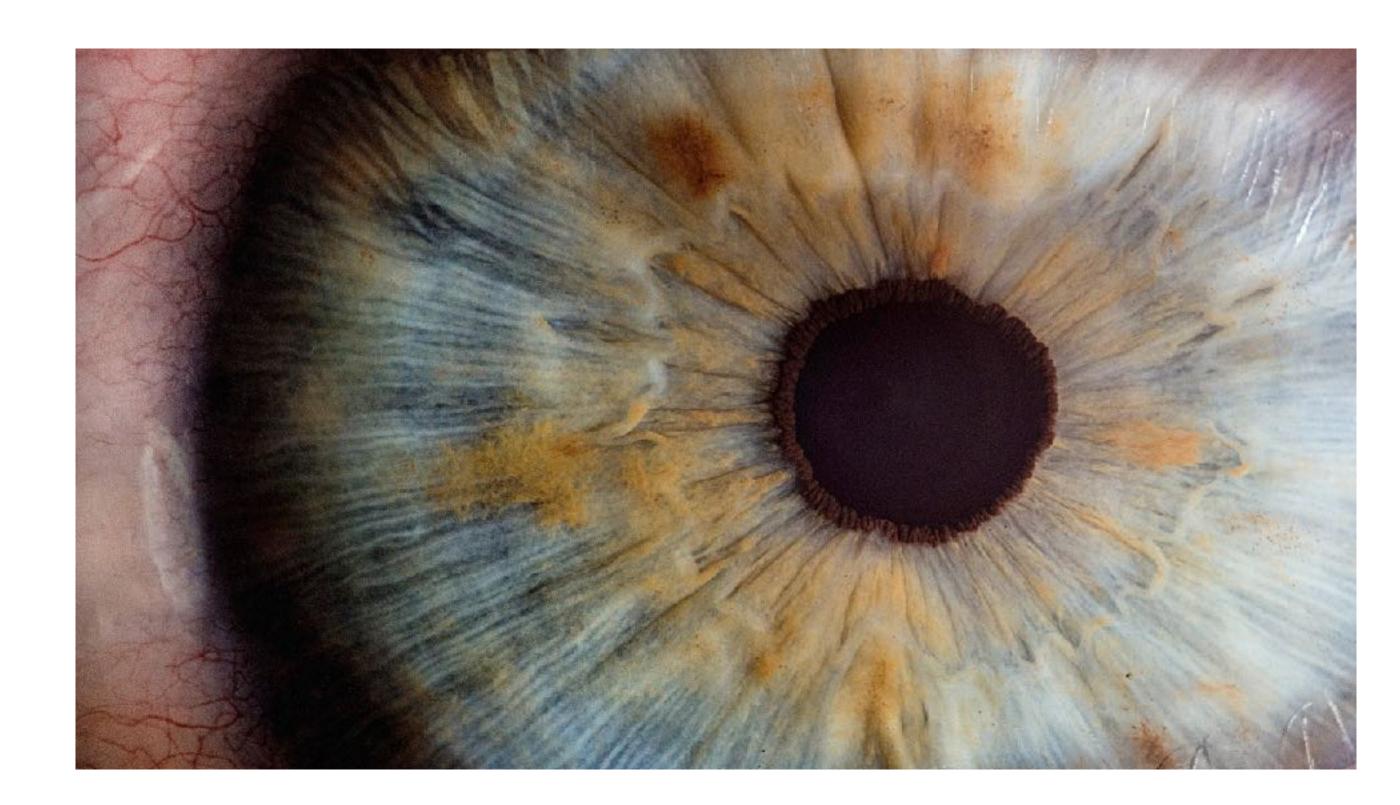

Royal College of Art
Postgraduate Art & Design

Theme 1
What is the future for intelligent neighbourhoods – their shape, constituent parts, networks, governance and size?

Theme 2
How might we reimagine mobility hubs and networks as centres of community rather than purely functional transport systems?

Theme 3
How might digital tools merge technical data with social knowledge to enable better planning for sustainable futures?

Where are we now? (20 mins)

Where do we want to get to? 20 mins

What are the steps and activities that will help us to get there? 20 mins

Who are the partners and organisations that we need to collaborate with? 20 mins

What are the design opportunities that will bring vitality and life to this proposal? 20 mins

Optional Online whiteboards using Google's Jamboard.

Please Note: Jamboard is only fully supported by Google Chrome as a web browser.

6. WEDNESDAY 24 JUNE: 3–4PM

SYMPOSIUM SUMMARY AND PARTICIPANT INSIGHTS

Hannah Rozenberg's "Building Without Bias: An Architectural Language for the Post-Binary"

6. SYMPOSIUM SUMMARY AND PARTICIPANT INSIGHTS

The third session will be used as an opportunity for hosts and participants to summarise learnings and opportunities from the symposium and to discuss next steps including potential partnerships and interdisciplinary teams.

7. TECHNICAL SUPPORT

The sessions will run online using Zoom video conferencing technology and optional Google Jam-boards.

Please make sure you are able to use these technologies and do try them out before you join the symposium so that you can get the most from the sessions.

Each session will have technical and admin support so reach out via the chat function if you have questions.

As we have a large number of participants please follow these simple tips to help everyone get the most from the sessions.

MUTE YOUR MIC IF YOU'RE NOT SPEAKING

KEEP COMMENTS SHORT AND THOUGHTFUL

USE THE CHAT FUNCTION TO ASK QUESTIONS

USE THE RAISE HAND TOOL TO REQUEST TO SPEAK

VIDEO CONFERENCING TIPS

DEFER JUDGEMENT

BUILD ON EACH OTHER'S IDEAS

STAY ON TOPIC

ENCOURAGE CREATIVE IDEAS

WORKSHOP TIPS

8. PLANNING COMMITTEE AND THE INTELLIGENT MOBILITY DESIGN CENTRE

The planning committee for the symposium included:
• Professor Dale Harrow
• Dr Ali Asadipour
• Dr Cyriel Diels
• Dr Jiayu Wu
• Dr Jingru (Cyan) Cheng
• Dr Qian Sun
• Dr Sam Jacoby
• Dr Sheila Clark
• Dan Phillips
• Indira Knight
• Selin Zileli
Administration support:
• Jane Savory
• Lulu Ishaq
• Vicky Man
• Patricia Hilbert

The Royal College of Art's Intelligent Mobility Design Centre (IMDC) leads research at the intersection of people, mobility and technology within a complex and changing urban and global environment.

Established as a world leader in the field of vehicle design and research, and with Professor Dale Harrow as Centre Director and inaugural Chair of the Hyundai Kia Laboratory, the IMDC is a multidisciplinary research centre with a design-led, human-centred approach at its core. The Centre focuses on new ways of designing, influencing new behaviours and developing new methodologies and mobility typologies that address societal issues.

THANKS FOR JOINING

Let's get back to better together

imdcsymposium@rca.ac.uk
@RCA_IMDC
#designingintelligence

Royal College of Art