

Valuing and financing the Infrastructure of Cities, Regions and Nations

26 – 27th April, 2017. Met Hotel, Leeds

Conference Aims and Objectives

The conference aims to be a catalyst for a step-change in the recognition and measurement of all forms of value arising from city, regional and national infrastructure, by connecting partners from academia, government, business and civil society operating at the local, national and international levels to debate, inform policy and shape plans for future research.

Interactive and panel sessions will be interspersed by presentation of the latest and most valuable findings in the area from three major research programmes: iBUILD, ICIF and ITRC-MISTRAL. The conference, hosted by the University of Leeds, develops an interdisciplinary ‘systems of systems’ approach to sustainable and resilient infrastructure. These ideas developed originally in engineering are now applied universally, exemplified in HM Treasury’s Valuing Infrastructure Spend. This approach recognises the importance of identifying and measuring all forms of value that can be realised from infrastructure at city, regional and national scales, in order to meet diverse challenges such as climate change, austerity, geo-political instability and financial fragility.

The conference will show how the ‘system of systems’ approach to infrastructure value is indispensable for:

- Local authorities, national government and regulators seeking to increase overall efficiency in face of austerity
- Financiers of infrastructure in assessing long term value of infrastructure investment
- Civil society organisations seeking high quality, inclusive infrastructure provision
- Academics undertaking high impact interdisciplinary infrastructure research.

During the conference we will be exploring some key questions such as:

- What are the main issues for local authority funding and finance of infrastructure provision?
- How can and do Universities work with local authorities and other stakeholders to address these?
- How can we better understand infrastructure needs, purpose and value?
- What new business models are emerging and what can we learn from this?

Day 1, 26th April 2017

Valuing and financing infrastructure at city and regional scales

All sessions apart from the parallel sessions will be held in the **Met Suite**, situations off the main foyer. For parallel sessions, please check the individual session for the room number.

8:30-9:00	Arrival and coffee
9:00-9:15	Welcome and introduction Prof Andy Gouldson, Dean for Interdisciplinary Research, University of Leeds
9:15-9:30	Keynote: The financial challenges facing local government, financial reform, and the funding of infrastructure by local authorities Bevis Ingram, Senior Adviser, Finance, Local Government Association Chair: Prof Andy Pike, Director of CURDS, Newcastle University
9:30-10:30	Panel Discussion: Valuing, financing and funding local infrastructure to meet the challenge of austerity Chair: Prof Andy Pike, Newcastle University <ul style="list-style-type: none"> – Bevis Ingram, Local Government Association – Prof Francesca Medda, University College London – Christian Spence, British Chamber of Commerce – John Wrathmell, Greater Manchester Combined Authority – Christian Wall, UK Municipal Bonds Agency
10:30-11:00	Break
11:00-12.30	<p>Specific topics regarding valuing and/or financing and funding infrastructure</p> <p>Parallel session 1</p> <p>Smart Infrastructure Chair: Alistair Norman, University of Leeds (Met Suite)</p> <ul style="list-style-type: none"> – <i>Valuing digital infrastructure: lessons from the emergency service' Airwave Network.</i> David Allen and Alistair Norman, University of Leeds – <i>Emergency Services Communications: the challenge of valuing new systems.</i> Mark Mulcahy, Home Office – <i>The challenge of modelling, measuring and valuing smart city infrastructures.</i> Kees Nieuwenhuis, Thales – <i>Self-healing cities: the impact of new infrastructure repair technologies in the city.</i> Rob Richardson, Phil Purnell, University of Leeds <p>Water, waste and circular economy Chair: Chris Zevenberger, UNESCO-IHE (Met 3)</p> <ul style="list-style-type: none"> – <i>Resource recovery from waste: moving beyond waste management towards a circular economy infrastructure.</i> Phil Purnell, Anne Velenturf, University of Leeds – <i>Flooding and finance.</i> Jonathan Moxon, Flood Risk Manager, Leeds City Council – <i>Towards Regional Industrial Symbiosis – Building Foundations for a Circular Economy.</i> Jackie Homan, Birmingham City Council, Chris Rogers, University of Birmingham – <i>Accounting for PFI and asset infrastructure risk: The case of the Greater Manchester Waste Authority.</i> Colin Haslam, Queen Mary University of London

<p>11:00-12.30</p>	<p style="text-align: center;">Parallel session I continued</p> <p>Financialisation Chair: Duncan Lindo, University of Leeds (Met 8)</p> <ul style="list-style-type: none"> – <i>Retrofit and revolving funds.</i> Joel Millward-Hopkins, Andy Gouldson, University of Leeds – <i>The Public Wealth of Cities and Regions.</i> Peter O'Brien, Andy Pike, Andy Brown, Duncan Lindo, Richard Whittle – <i>Realigning infrastructure funding with diverse forms of value creation.</i> Jenny McArthur, University College London – <i>Insights from the FESSUD project.</i> Malcolm Sawyer, University of Leeds <p>Urban living Chair: Dr Richard Dawson, Newcastle University (Met 9)</p> <ul style="list-style-type: none"> – <i>'Leeds' Urban Living Pilot and the wider N8 Urban Living Transformation agenda.</i> Nancy Madter, Paul Chatterton, University of Leeds – <i>Title (TBC).</i> Maggie Gjessing, Head of Housing Growth, Asset Management & Regeneration, Leeds City Council – <i>Natural Capital as the Essential Baseline for Growth in Cities.</i> Nick Grayson, Birmingham City Council, Jonathan Sadler, James Hale, Martin Locret-Collet, Chris Rogers – <i>The Gap between Global Aspiration and Current Market Conditions – to create a Zero Emission City in Smithfield Birmingham.</i> Nick Grayson, Birmingham City Council, Jonathan Sadler, James Hale, Martin Locret-Collet, Chris Rogers, Francesca Medda
<p>12:30-1:45</p>	<p>Lunch</p>
<p>1:45-3:00</p>	<p>Panel and Interactive Session: How Universities can aid local infrastructure funding, finance and value creation Chair: Prof Gary Dymiski, Director of CITIES Theme, University of Leeds</p> <ul style="list-style-type: none"> – <i>Leeds Climate Committee,</i> Tom Knowland, Leeds City Council, Andy Gouldson, University of Leeds – <i>Behavioural science of project management.</i> Andy Hollingsworth, Behavioural Insights Team North – <i>A Local Infrastructure Commission model?</i> Katy Roelich, University of Leeds. <p>Interactive Session.</p>
<p>3:00-3:30</p>	<p>Keynote: The Seen University: How iBUILD and related projects have built academic – governance – industry partnerships to understand the value of infrastructure Phil Purnell on behalf of iBUILD (Research team: Richard Dawson, Claire Walsh, Andy Pike, Stephanie Glendinning, John Bryson, Chris Rogers, Phil Purnell, Andrew Brown, Julia Steinberger) Chair: Andy Brown, UoL</p>
<p>3:30-4:00</p>	<p>Break</p>

<p>4:00-5:30</p>	<p>Specific topics regarding valuing and/or financing and funding infrastructure Parallel session II</p> <p>Transport Chair: Becky Loo, University of Hong Kong (Met Suite)</p> <ul style="list-style-type: none"> – <i>Land Value Uplift, Valuation of Streets and Multi-Sectoral Projects.</i> John Nellthorp, University of Leeds – <i>Incorporating public satisfaction and asset quality into benchmarking to drive better performance through identifying best practice.</i> Phill Wheat, University of Leeds – <i>Infrastructure Interdependencies: Transport sector economic dependency with other critical infrastructure sectors.</i> Nikolaos Kalyviotis, Chris Rogers and Miles Tight, University of Birmingham – <i>Mapping fuel price vulnerability in England.</i> Guilio Mattioli, University of Leeds <p>Energy Chair: Catherine Bale, University of Leeds (Met 3)</p> <ul style="list-style-type: none"> – <i>Business model innovation for urban energy systems.</i> Dr Stephen Hall, University of Leeds – <i>Valuing decentralised energy storage: business models for local authorities.</i> Andrew Burlinson, Loughborough University – <i>Influence of spatial setting and jurisdictional boundaries on diffusion of residential photovoltaic systems.</i> Maurizio Fiaschetti, SOAS, University of London – <i>Energy Path Networks, infrastructure planning for urban energy systems.</i> David Lee, Energy Systems Catapult <p>Industrial Strategy and Regeneration Chair: Richard Walker, Department for Transport (Met 8)</p> <ul style="list-style-type: none"> – <i>Universities as engines of regional growth: insights from Key Cities.</i> Richard Whittle, Manchester Metropolitan University, Andy Brown, Duncan Lindo, Halima Jibril, Maria Gomez, University of Leeds – <i>Follow the Money: Untangling the complexity of urban regeneration in the UK.</i> David Williams, University of West England – <i>Manchester transformed: why we need a reset of city region policy.</i> Karel Williams, University of Manchester – <i>Britain's Spatially Unbalanced Economy, the National Productivity Problem and the Predicament of Northern Cities.</i> Ron Martin, University of Cambridge <p>Systems of systems approaches to infrastructure value and finance Chair: Richard Ploszek, Infrastructure and Projects Authority (Met 9)</p> <ul style="list-style-type: none"> – <i>Local authority valuing and modelling of infrastructure assets.</i> John Bryson, University of Birmingham – <i>A Systems Thinking Approach to the Development of Alternative Infrastructure Business Models.</i> Christopher Bouch, Christopher Rogers, University of Birmingham – <i>Infrastructure Interdependencies Opportunities from Complexity.</i> Liz Varga and Simon Jude, University of Cranfield
<p>5:30-6:30</p>	<p>Networking and Drinks Welcome from Phil Purnell, Co-Director of CITIES, University of Leeds - Ideas on building academic collaboration</p>
<p>7:00</p>	<p>Dinner Met Hotel, Leeds</p>

Day 2, 27th April 2017
Valuing and financing infrastructure:
national and international perspectives

All sessions apart from the parallel sessions will be held in the Met Suite, situations off the main foyer. For parallel sessions, please check the individual session for the room number.

8:30-9:00	<i>Welcome and coffee</i>
9:00-9:45	<p><i>Keynotes: Valuing and financing national infrastructure: pressing needs, possible solutions.</i></p> <p>Brian Collins, University College London Ann Pettifor, Director of Policy Research in Macroeconomics (PRIME) Chair: Andy Brown, UoL</p>
9:45-10:45	<p><i>Panel Discussion: Valuing and financing national infrastructure: pressing needs, possible solutions</i> (Chair: Andy Brown, University of Leeds)</p> <ul style="list-style-type: none"> – David Hall, Director of the Public Services International Research Unit (PSIRU) – Henry Leveson-Gower, Department for Environment, Food & Rural Affairs (Defra) – David Bentley, The Chartered Institute of Public Finance and Accountancy (CIPFA) – Iain Clacher, Leeds University Business School – Julie Froud, University of Manchester, Foundational Economy – Mike Shimwell, KPMG
10:45-11:15	<i>Break</i>
11:15-12:15	<p style="text-align: center;"><i>Specific topics regarding valuing and/or financing and funding infrastructure</i> <i>Parallel session III</i></p> <p>Water, Waste and Circular Economy Chair: Prof David Hall, University of Greenwich (Met Suite)</p> <ul style="list-style-type: none"> – <i>Title (TBC).</i> Barbara Evans, University of Leeds – <i>Solid waste and resource management infrastructure: Global development finance and cost of inaction.</i> Costas Velis, University of Leeds – <i>What makes a (nuclear) decommissioning project successful?</i> Diletta C. Invernizzi <p>Financialisation, economics and systems of infrastructure provision Chair: Andy Brown (Met 3)</p> <ul style="list-style-type: none"> – <i>The Economics of Infrastructure: From Market Failure to Financialisation.</i> Andy Brown, Phil Purnell, Mary Robertson, David Spencer, University of Leeds – <i>How Economic Theory Shapes Infrastructure Investment.</i> Mike Goodfellow-Smith, Quest for Future Solutions – <i>Extractive financialization, debt financing of water dividends.</i> Adam Leaver, University of Manchester

<p>11:15-12:15</p>	<p style="text-align: center;">Parallel session III continued</p> <p>Quantitative and mixed method approaches to infrastructure valuation Chair: Becky Loo, University of Hong Kong (Met 8)</p> <ul style="list-style-type: none"> – <i>Valuing Transport Infrastructure: A quantitative study of the factors defining the social value of transport infrastructure.</i> Nikolaos Kalyviotis, Chris Rogers and Miles Tight, University of Birmingham – <i>The value of climate information in transport resilience decisions.</i> David Dawson, University of Leeds – <i>New forms of multi-dimensional cost benefit analysis with stakeholder interaction.</i> Julien Harou, Evgenii Matrosov, Ivana Huskova, Robel Geressu, Anthony Hurford
<p>12:15-1:15</p>	<p>Lunch</p>
<p>1:15-2:45</p>	<p>Interactive Session – Open Space: Discussing infrastructure challenges Chair & facilitator: Tom Dolan, University College London (Met 1)</p>
<p>2:45-3:15</p>	<p>Break</p>
<p>3:15-4:15</p>	<p style="text-align: center;">Specific topics regarding valuing and/or financing and funding infrastructure Parallel session IV</p> <p>Sustainability, Cultural and Social Value Chair: Tom Theis, University of Illinois at Chicago (Met Suite)</p> <ul style="list-style-type: none"> – <i>Thinking sociologically about social and cultural value.</i> Katy Wright and Mark Davis, University of Leeds – <i>Seismic Cities.</i> Ekbal Hussain, John Elliot, Tim Wright, University of Leeds – <i>Living Well Within Limits (LiLi).</i> Julia Steinberger, University of Leeds – <i>Value creation and capture for low carbon infrastructure.</i> Tim Foxon, University of Sussex <p>Business Models for Infrastructure Chair: Paul Nightingale, University of Sussex (Met 3)</p> <ul style="list-style-type: none"> – <i>Title (TBC).</i> Paul Nightingale, University of Sussex – <i>Infrastructure Business Models.</i> John Bryson, University of Birmingham – <i>Value Integration Framework.</i> Stephanie Glendenning, Richard Dawson, Claire Walsh, University of Newcastle – <i>Demonstrating the Integration Framework with case studies.</i> Claire Walsh, Stephanie Glendenning, Richard Dawson, Newcastle University <p>Governance and infrastructure value Chair: Seema Alim, CH2M Hill (Met 8)</p> <ul style="list-style-type: none"> – <i>Governing Infrastructure values.</i> Tom Dolan on behalf of Ralitsa Hiteva, University of Sussex – <i>Governing and Planning the Funding and Financing of Infrastructure in Global cities - an institutional approach.</i> Graham Thrower, University of Newcastle – <i>A Critique of current infrastructure performance indicators: towards better practice.</i> Chris Bouch, Claire Walsh, Neil Carhart, Tom Dolan – <i>Effective design and delivery of Megaproject (energy infrastructure) through Special Purpose Entities/Special Purpose Vehicles (SPEs/SPVs).</i> Tristano Sainati, University of Leeds

<p>3:15-4:345</p>	<p style="text-align: center;">Parallel session IV continued</p> <p>Financialisation and Pension funds Chair: Mike Shimwell, KPMG (Met 9)</p> <ul style="list-style-type: none"> – <i>Understanding the Link between Patient Capital and Infrastructure Investment.</i> Iain Clacher, University of Leeds – <i>Infrastructure investments: the financial value of interdependency.</i> Hiral Dakshesh and Francesca Medda, University College London – <i>Private finance of public infrastructure</i> Henry Leveson-Gower, Defra – <i>Value at Risk Urbanism: Financialization and the Governance of Climate Risks in Florida Cities.</i> Zac Taylor, University of Leeds
<p>4:45-5:15</p>	<p><i>Feedback and synthesis: next steps for system of systems infrastructure valuation: towards a new infrastructure science?</i> Chair: Phil Purnell, University of Leeds</p> <ul style="list-style-type: none"> – Seema Alim, CH2M Hill – Becky Loo, University of Hong Kong – Tom Theis, University of Illinois at Chicago – Chris Zevenberger, UNESCO-IHE
<p>5:15</p>	<p><i>Close</i></p>

Conference Partner Information

iBUILD is a partnership between University of Leeds, Newcastle University and University of Birmingham. It is developing new business models to improve the delivery of infrastructure systems and the services they provide. These new business models will better exploit the technical and market opportunities that emerge from the increased interdependence of modern infrastructure systems. As cities, local authorities and local enterprise partnerships are given more powers for infrastructure delivery and to raise finances it is crucial to develop robust new business models to develop infrastructure related business and growth locally - to the benefit of the Nation. More information on iBUILD can be found here: <http://www.ibuild.ac.uk>

ICIF (The Infrastructure Centre for Infrastructure Futures) is an interdisciplinary, practice-orientated research centre conducting fundamental research on infrastructure. ICIF brings together leading academics and early career researchers from six UK universities: University College London, Cranfield University and the Universities of Bristol, Brighton, Sussex and Southampton. ICIF is funded by the Engineering and Physical Sciences Research Council and the Economic and Social Research Council. More information on ICIF can be found here: <http://www.icif.ac.uk/>

ITRC Mistral is a consortium of seven leading UK universities, investigating ways to improve the performance of infrastructure systems in the UK and around the world. Our research is helping businesses and policymakers to explore the risk of infrastructure failure and the long term benefits of investments and policies to improve infrastructure systems. More information on ITRC Mistral can be found here: <http://www.itrc.org.uk/>

CITIES: The University of Leeds has established an integrated multi-disciplinary research network, exploring and empowering transformations towards sustainable societies and resilient infrastructure systems within, and beyond, cities. Building on large, interdisciplinary research projects (funded by UK government and others) we undertake research with cities and other key stakeholders, both locally and internationally, that addresses these challenges and deliver better outcomes for all citizens. We proactively link together activities across seven faculties, bringing together world-leading researchers to tackle challenges. More information on CITIES can be found here: <https://www.leeds.ac.uk/cities>