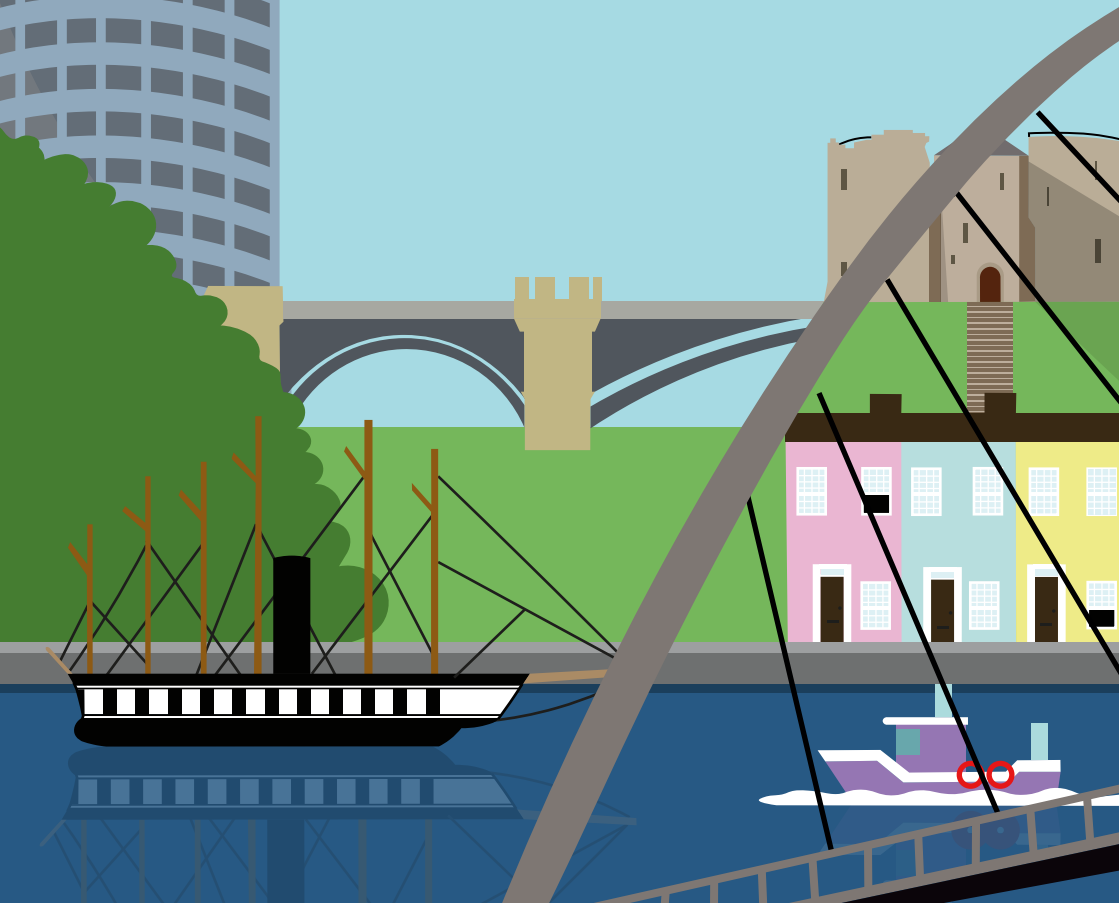


The Urban Living Partnership



older engagement
Production Neighbourhoods
making Urban Innovators
cities Collective
Digital creativity
Economic Transformation
Innovation Accessibility
Environment Sustainable
Health wellbeing
Planning Social justice
systems Carbon neutral

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The Urban Living Partnership

Today's cities face a raft of challenges so complex that they cannot be tackled in isolation or by any single organisation, sector, business or academic discipline. In the first UK programme of its kind, the Urban Living Partnership (ULP) piloted ambitious new multi-disciplinary co-creation approaches to solving 'wicked' urban problems and helping UK cities realise their visions for future urban living.

Let's work together

The ULP brought together a wide variety of people with a stake in city living, many for the first time, to take a collaborative, integrated, 'whole-city' approach to problem-solving and vision-creation. City dwellers and city leaders, academic researchers and partners from business, industry, the third, civil and voluntary sectors - all joined forces to test out different ways of tackling intractable urban problems and piloting innovative solutions.

A first for cross-council working

An entirely novel funding approach was required to support this joint working venture across sectors and across academic disciplines. So, in the first formal strategic collaborative initiative of its kind, the seven UK Research Councils and Innovate UK combined resources to harness the breadth and depth of UK research with innovation strength.

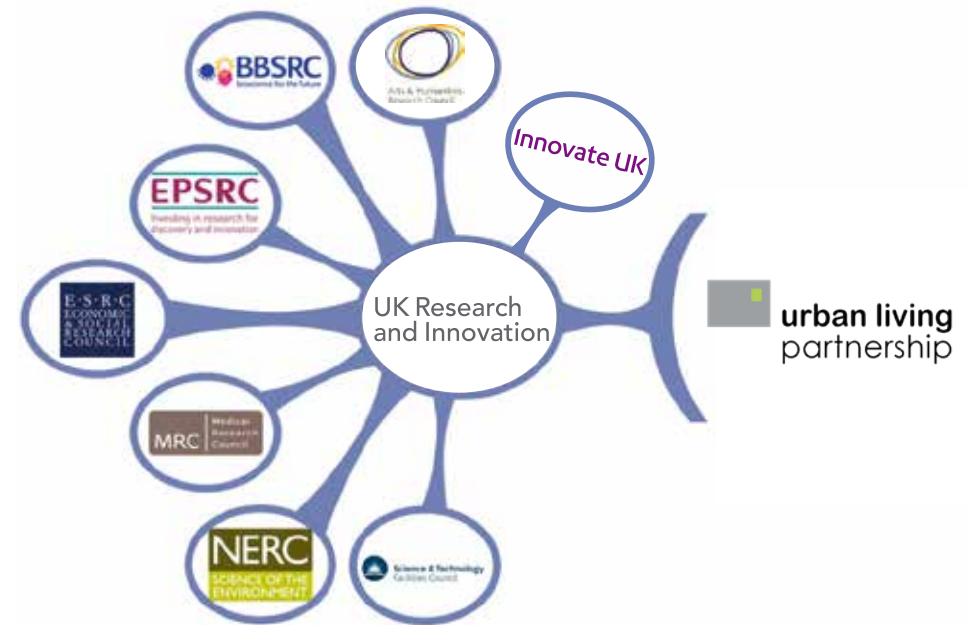
Breaking the silos

This pioneering Research Councils/ Innovate UK programme gave consortia of researchers, businesses, civic organisations and city leaders the freedom to work across and between traditional organisational boundaries and policy silos. In modern cities, engineered systems such as energy, water and transport integrate with human systems such as health and social care and culture as well as the digital world, environmental systems and heritages from the past. Within the ULP programme, researchers and innovators with expertise across all the systems critical to a functioning city had the rare opportunity to sit around a table together and explore how to make cities work better for all their citizens.

A pilot for collaboration

The ULP demanded new ways of working on all sides. It encouraged the partners involved in individual pilot projects to experiment with cross-sectoral, transdisciplinary approaches and embrace co-production. It was also a pilot for joint working between all seven Research Councils and Innovate UK who, by collaborating

formally across their own institutional boundaries, enabled academics, industry and cities to do the same. In essence, the ULP piloted a new holistic style of urban living research based on collaboration and co-production between individuals from very different organisations and organisational cultures.



Seven UK Research Councils and Innovate UK combined to tackle urban problems

How the ULP worked

What's so challenging about urban living?

Successful cities are critical to the future of us all.

- In the UK, 80% of us live in cities.
- By 2050, urban dwellers will make up 75% of the global population.

Cities are not only where most of us live, they also drive innovation, creativity and growth. Urban challenges, however, such as crime, inequality, housing shortages, congestion, anti-social behaviour, health and care provision, air pollution, flooding, environmental degradation and unemployment are growing, hugely complex and increasingly interrelated. We need to find integrated solutions to these challenges to make urban living sustainable, healthier and more prosperous. For the UK, developing these integrated solutions presents business opportunities estimated to be worth over £200 billion by 2030.

Setting the ULP agenda

Researchers have long highlighted the difficulty of tackling complex city challenges through the lens of any single discipline. For that reason, a research programme designed

specifically to test transdisciplinary and cross-sectoral approaches to solving city challenges prompted considerable interest from the UK research community backed by partners from government, industry and the third sector.

How it happened

- Over 100 stakeholders with an interest in improving urban living came together at two consultation events held by Research Councils UK (RCUK)/Innovate UK in July 2015 in London and Glasgow to develop the scope of a possible joint initiative.
- In September 2015 RCUK/Innovate UK launched its call for a £2 million initial diagnostic programme of work in up to five UK cities or urban areas. Consortia with cross-disciplinary and cross-sectoral experience and expertise were invited to diagnose the integrated challenges facing their city and work with local communities and stakeholders to identify new ways to address these challenges.

- A Town Hall Meeting held in Birmingham in October 2015 provided a networking opportunity for potential consortia as well as a showcase for research and innovation partners.
- After 67 expressions of interest, 41 full proposals covering 37 cities/urban areas across the UK and including 307 project partners were submitted. These proposals featured academics from more than 50 disciplines and 68 research organisations.
- In April 2016, five successful ULP pilot city consortia were selected following peer review and interview: Birmingham, Bristol, Leeds, Newcastle/Gateshead and York.
- On behalf of RCUK, Mr Gary Grubb (Arts and Humanities Research Council (AHRC)) and Dr Mike Pitts (Innovate UK) provided the ULP's overall strategic direction. An Advisory Group of 18 academic and non-academic members, chaired by Professor Rachel Cooper of Lancaster University, held its first meeting in May 2016 in its role to guide ULP strategy and its implementation.
- Individual Research Councils assumed different responsibilities in administering the ULP. The Biotechnology and Biological Sciences Research Council (BBSRC) provided project management support; Engineering and Physical Sciences Research Council (EPSRC) led on the expressions of interest and call process and provided a point of contact for pilot principal investigators; Economic and Social Research Council (ESRC) administered the Advisory Group. Collectively, all Research Councils and Innovate UK contributed to the £2 million common funding pot for the pilots, agreed the commissioning process, call documentation and time scales and provided input into the expert panel and Advisory Group, consultation events and the application sift process.

The five ULP pilot projects

1 Each pilot included partners from local government, civil society, business and the National Health Service (NHS), public health or social care sector. The total number of partners from across these sectors grew from 70 to over 200 over the 18-month pilot.

2 40 areas of thematic focus were identified ranging from social inclusion to urban governance.

3 Each pilot spanned the remits of at least three different Research Councils. The five pilots brought together investigators from 11 research organisations and over 20 different academic disciplines.

4 The lead academics from the five pilots spanned five different disciplines: environmental science, geography, management, town planning and built environment.

5 At the time of application the pilots had raised more than £1.9 million in project partner contributions. By the completion of the ULP, the pilots had leveraged more than £15 million in project funding and for follow-on research.

The ULP pilot projects

Five cities: five different approaches to city challenges

The pilot projects led by five successful consortia from Birmingham, Bristol, Leeds, Newcastle/Gateshead and York ran for approximately 18 months between 2016 and 2018.

Each pilot set out to tackle place-based challenges distinct to its city and shaped by its own unique historical, political and cultural circumstances. But the pilots also shared common goals such as empowering citizens to co-design their future cities and exploring ways to support collaboration between business and civic sectors to address grand challenges, leading to improved health, well-being and prosperity.

In just 18 months, the five pilots developed five different approaches to understanding the complexities of interconnected city systems and urban living. They experimented with a diverse set of tools, methodologies, frameworks and techniques designed to dig deep into their city challenges. They also built effective multi-sectoral partnerships, brokered new business ventures and opportunities, co-produced innovative projects in local authorities and community organisations, sparked international interest and brought significant new funding to their cities.

Birmingham

The Urban Living Birmingham (ULB) pilot set out to develop a new approach to diagnosing integrated city challenges and explore the potential for citizen-led innovation.

“It might be argued that the problems faced by any given city are well known. Birmingham’s local government certainly thought this: that it knew what the city’s challenges were and thought that the main problem it had was in effectively addressing those challenges. We revealed that this was not necessarily the case and that urban diagnostics can lead to reconceptualising a city’s challenges (in Birmingham’s case, as an interconnected system of critical challenges: a plexus), which can lead to more effective ways of developing and implementing policy and in identifying areas for further research.”

Professor John Bryson,
Principal investigator, Urban Living Birmingham

Key activities:

- The ULB partners developed and trialled a mixed methods approach to diagnosing urban challenges and the links between them. This innovative methodology drew on 248 datasets, 380 reports/papers and consultations with local authorities, planners, policymakers, urban design decision-makers, academics, businesses, financiers and communities. ULB urban diagnostics revealed that Birmingham faced an interconnected system (a plexus) of four critical challenges: health and wellbeing, energy, connectivity and the economy as well as an overarching governance challenge.

- The ULB’s framing of Birmingham’s challenges as an interconnected plexus has shaped Birmingham City Council (BCC) thinking. The BCC is currently developing an innovation challenges process in consultation with the ULB to ensure a more integrated approach to innovation. So, for example, the BCC is exploring how using nature (through improved green infrastructure) in combination with digital technology and a citizen-centric approach could improve the delivery of city services.



Birmingham's plexus of challenges

“At the strategic level, ULB provided an academic insight into the seemingly intractable problems of running a city like Birmingham - by illustrating the inter-connections and inter-dependencies between key strategic ambitions and presenting this as a diagrammatic ‘Plexus’ that was evidence-based; this provided a pragmatic baseline for the city in re-considering its future shape and functions. And, at the more tangible level, ULB provided a really interesting set of ‘governance vignettes’ - insights into past successes and failures - expanding on what worked, what didn’t, and why.”

Nick Grayson,
Climate Change and Sustainability Manager,
Birmingham City Council

- ULB urban diagnostics are currently being applied to tackling air pollution in Africa. A £1.2 million project funded by the East Africa Research Fund will apply and continue to develop the diagnostics approach as well as the interdisciplinary research framework developed in the ULB pilot to three rapidly growing East African cities – Addis Ababa, Kampala and Nairobi. A further £6 million of funding for projects and fellowships connected to ULB pilot work has been won.

- An innovative place-based characterisation of Birmingham developed by the ULB partners challenged existing perceptions and improved understanding of the city’s challenges. It showed, for example, that lack of transport rather than skills, housing or any other perceived issue, was the key problem facing the inner-city ward of Ladywood, an area of deprivation and high unemployment.
- The ULB showed that end-user innovation (in which users can modify existing products and services) has potential to help tackle city challenges. While the complexity of urban services makes it hard for individuals to bring about change, the pilot identified significant scope for end-user innovation led by groups and businesses e.g. at the Tyseley Energy Park clean technology hub initiative.

“Working with Urban Living Birmingham has helped us to identify ways to bring forward clean energy technologies and infrastructure on Tyseley Energy Park. The process that we have been through over the past two years has been invaluable and by working in collaboration with both the public and private sector as well as a world class academic institution like the University of Birmingham, Tyseley Energy Park will drive forward change and attract major investment into this region.”

David Horsfall,
Director, Tyseley Energy Park Ltd

- Two experimental approaches to engaging end users and creating conversations around complicated urban issues proved highly successful. Arts organisation No 11 Arts was commissioned by the pilot to explore creative and arts-based approaches with residents at three venues in Birmingham over a four-week period. Artists acting as facilitators worked in ‘hard-to-reach’ communities to gain residents’ understanding and insight into how the city is run and whether their aspirations were being met. In the second approach, the ULB team developed a board game, Participology, designed to stimulate discussion among city service providers around complicated and evolving city issues.

“In collaborating with the Urban Living Birmingham programme, No 11 Arts showed how creative consultation opens up spaces where researchers and participants are able to by-pass stereotypical thinking in order to generate fresh perspectives on familiar problems.”

Dr Tom Jones,
A Director, No 11 Arts

“The No 11 Arts work was a truly ‘grass-roots’ exercise. Everyone learnt so much - City and academics alike - demonstrating how art-based work can be such a good engagement tool and community empowering method; a way to hear people’s voices - but also for them to feedback their understanding of the research and the City’s democratic dilemma. All agreed this should become a standard practice in future.”

Nick Grayson,
Climate Change and Sustainability Manager,
Birmingham City Council



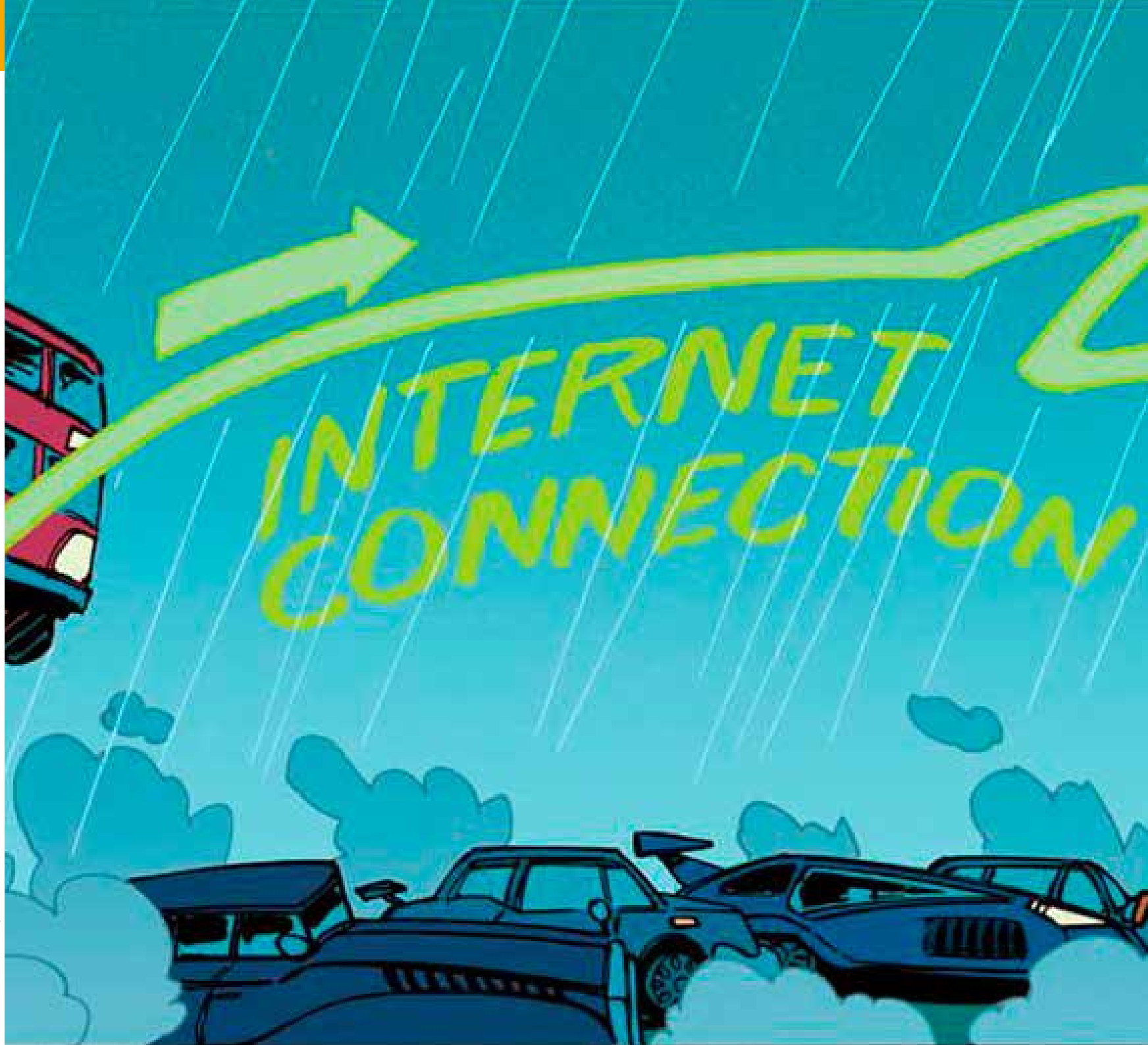
Eva Summerfield 2017

Grass-roots engagement through arts-based approaches

- The ULB forged strong new relationships between academics, local authorities, citizens and other stakeholders through the creation of its Touchstone Group of 'critical friends' which grew from 21 to more than 70 members, which co-created the original ULB bid, and provided invaluable feedback during the pilot and continuing support.
- ULB activities have contributed to a Research Excellence Framework (REF) impact case study, 18 journal papers, the 2018 Birmingham economy report for the Chambers of Commerce and a book, 'A Research Agenda for Regeneration Economies: Reading City-Regions', to be published in December, 2018.

Young people put forward the idea of free WiFi on buses during a No 11 Arts engagement project.

John McArae 2017



The illustration depicts a stylized cityscape of Bristol. In the foreground, a boat with a black and white striped hull is on the water. Behind it, a suspension bridge spans across the scene. In the background, there are colorful buildings, trees, and three hot air balloons: one with red and blue stripes, one with green and yellow stripes, and a smaller red one. The word 'Bristol' is written in white on a dark blue rectangular background.

Bristol

Bristol Urban-ID (Integrated Diagnostics) aimed to work co-productively with citizens through case study projects to identify and tackle the barriers to Bristol's goals of greater wellbeing and sustainability.

“We started with the belief that we needed to look at things from a citizen-centric point of view - looking at citizens' actual experience and how they could achieve good outcomes for themselves. We ended up with new ways of collectively understanding urban living challenges, why they are worth addressing and how to address them collaboratively. This different perspective is attracting wider interest, with new diagnosis partnerships forming around South West economic infrastructure, the resilience of airports viewed as communities, and the cultural transformation of the major Hunter Water public utility in Australia. Urban-ID has established an attractive conceptual and methodological platform to drive forward exciting, innovative, transdisciplinary research.”

Professor Colin Taylor,
Principal investigator, Urban-ID

Key activities:

- In consultation with project partners and city dwellers the Urban-ID team identified four overarching challenges facing the city: mobility and accessibility, health and happiness, carbon neutrality, and equality and inclusion. Working with citizens they explored the challenges presented by these themes through a number of co-produced case studies. Within these collaborations, the Urban-ID partners experimented with different diagnostic tools, such as systems thinking and structured 'triple loop' learning techniques.

Urban-ID case studies included:

We Can Make: This innovative house-building project explored how to develop small, micro-plots of land (such as between homes and on street corners) to create affordable housing which meets local needs and uses local assets and skills. Spearheaded by Knowle West Media Centre (KWMC), the project brought together Knowle West residents, artists, academics, designers, architects and policymakers. Working with KWMC, Urban-ID co-produced with local citizens a diagnosis of potential problems around infill housing development (e.g. loss of environmental amenities), and ways to address these.

Interdisciplinary working was a key factor in the successful project co-design process as different expertise and knowledge (legal, spatial planning, financial modelling, architecture, systems thinking) combined in order to unblock barriers to change.

“Being part of Urban-ID and its collaboration brought benefits to KWMC in terms of a wider range of expertise, access to new ways of thinking and theoretical perspectives and a multi-disciplinarity that is not usually available to community-based organisations. Subsequently, we have written a collaborative paper. This combination of ‘on the ground activity’ and academic analysis is extremely useful as it supports the next steps in a project seeking to achieve positive change in communities. Our joint paper highlights both the disruptive processes and value of understanding the learning at play in this Urban-ID case study.”

Carolyn Hassan,
Director, Knowle West Media Centre

- **Metrobus:** Despite a major planning and consultation exercise during its design, an existing Metrobus eco-friendly transport infrastructure project had attracted high profile criticism. Through Urban-ID’s co-produced workshops, participants changed ideas of what Metrobus would mean for them and how they could use it.

- **Bristol–Bath railway path:** A collaboration between Urban-ID, community organisation Up Our Street and other stakeholders looked at barriers to improving this shared railway path resource and how to overcome them. This led to a new stewardship group for the path and demarcation of different zones of use.

“Urban-ID’s Bristol railway path case study showed how vital it is for the local authority to work with local community organisations to catalyse diverse and inclusive conversations about place-based issues. Urban-ID provided useful insight into how the council needs to move away from top-down service delivery towards a listening and enabling role which empowers a broad range of citizens to get involved in a more participatory decision-making process.”

Sarah Toy,
Strategic Resilience Officer, Bristol City Council

- **Staple Hill:** This project looked at factors affecting the health and happiness of older residents in the Staple Hill area of South Gloucestershire. Local residents took guided walks with researchers around their neighbourhoods pointing out what features of their surroundings influenced their happiness. In addition to providing some specific policy recommendations, the approach also built substantial

goodwill between participants and researchers, increasing the potential for further research.

- **Bristol Green Capital Partnership (BGCP):** Founded in 2007, the BGCP brings together over 800 member organisations from Bristol’s public, private and third sectors to address environmental sustainability challenges. Urban-ID explored BGCP’s resources, processes and structures and highlighted the need for sustainable funding mechanisms to support partnership organisations.

“I joined Bristol Green Capital Partnership - the city’s environmental sustainability network - just as the Bristol ULP project was setting up. It provided a great forum to quickly build connections with key contacts in the two local authorities, both universities, the city’s health partnership and others, and gain insights into systems thinking and co-production that helped to shape the BGCP’s approach. ULP enabled us to diagnose the issues - but the vital next step is to actually address the sustainability challenges our city faces, and organisational and conceptual innovation like this is part of the solution.”

Ian Townsend,
CEO – Bristol Green Capital Partnership CIC

- Tools and methodologies developed by Urban-ID are currently supporting the development of Bristol City Council’s One City Plan - an ambitious initiative to draw on existing partnerships, strategies and expertise to form a collaborative and place-based approach to resolve city challenges and create a more equal, inclusive and sustainable city. Urban-ID partners have also contributed to local spatial and transport plan discussions with the newly established West of England Combined Authority.
- The newly formed South West Infrastructure Panel (SWIP) of the Institution of Civil Engineers is looking to apply the Urban-ID diagnostics framework to its fragmented infrastructure challenges across the region.
- Hunter Water, in Australia, is taking up Urban-ID’s ideas as part of its drive to transform the culture of this major public water utility to focus on citizen outcomes and benefits.
- Urban-ID is working with a national resilience partnership in exploring how the methodology might be applied to airports when viewed as communities.

- Urban-ID identified a lack of collective, up-to-date understanding of Bristol as a city and how it works. The city's fragmented and incomplete knowledge of itself indicates the need for better technology-driven methods of information collection.
- The pilot clearly demonstrated the value of formal and informal community partnerships in diagnosing and developing solutions for improved urban living outcomes. The involvement of Bristol Green Capital Partnership and Knowle West Media Centre was crucial as they were able to foster co-production with residents in ways that researchers on their own cannot.



Hywel George

We Can Make: a co-produced house-building project

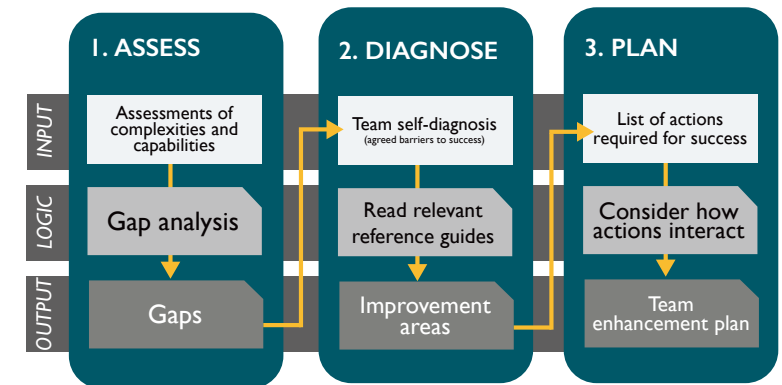


Iboya Feher

Leeds



Leeds' TRUE (transformational routemapping for urban environments) pilot aimed to develop a methodology and computer-based tool to assist local authorities in the UK and beyond manage complex transdisciplinary partnership projects.



The TRUE approach

“Through the TRUE approach, we are rethinking how local authorities deliver integrated city-wide solutions, aligning complexity with the capabilities required to manage complex environments and increasing the likelihood of successful outcomes.”

Professor Paul Chatterton,
Principal investigator, TRUE

Key activities:

- Partners in the Leeds pilot developed TRUE to improve local authorities' capacity to deliver integrated solutions to city challenges. In partnership with Leeds City Council (LCC), the TRUE pilot radically adapted a project review methodology, previously employed to deliver engineering infrastructure projects such as Crossrail, for use on social projects.

They developed the TRUE routemap tool by applying it to three of LCC's eight Breakthrough priority projects. The three chosen projects tackled some of Leeds' most entrenched challenges: reducing health inequalities, developing more integrated neighbourhoods and cohesive communities, and creating a more vibrant and inviting city centre space.

- The TRUE routemap reviews consisted of quantitative surveys and qualitative interviews with core Breakthrough team members and follow up workshops to collectively diagnose barriers and identify improvement areas for action. After gathering views and categorising them collaboratively with team members, the review prioritised the two or three key factors concerning capability and capacity most likely to influence LCC project outcomes.

“The TRUE routemap reviews were a really fundamental piece of work and I’m absolutely clear that the work we did has helped Leeds City Council focus on the city’s 16 most deprived areas. There have been significant benefits to LCC in terms of the journey we have been on so far;”

Shaïd Mahmood,
Chief Officer Communities, Leeds City Council.

- In developing the TRUE tool, the views of 35 community practitioners on project planning and complexity were analysed by social innovation think tank, The Young Foundation.



TRUE: the prototype diagnostic tool could be developed into a client facing service

“We heard from community practitioners their views on best practice and methods for tackling decision-making for urban planning, and particularly insightful evidence on the experience of a change process. This insight into best and evolving practice is helpful both when considering why change doesn’t happen in the way urban planners intend, and also how those planning large or complex projects which impact a range of stakeholders within city communities can best work with them.”

Dr Mary Hodgson,
Principal Investigator Bright Futures Project,
The Young Foundation

- A prototype online TRUE diagnostic tool was developed based on learning from the LCC Breakthrough projects, ethnographic studies and a survey of 20 TRUE partners. This transferable tool helps teams understand the complexities of their project, the capabilities of the team and any gap between the two. Led by project partner Open Data Institute (ODI) Leeds, the prototype was completed in February 2018. In the longer term and with further resources, this research based prototype could be developed into a workable client facing service.

“The TRUE tool is suitable for a range of projects where team members frequently have conflicting expectations. Examples of this with which we are familiar include co-production of digital solutions for communities and the health service where technologists, healthcare professionals, and local residents often struggle to understand each other’s concerns, capabilities, and constraints.”

Tom Forth,
Head of Data, Open Data Institute Leeds

- A selection of papers for peer reviewed publications are nearing completion on the themes of managing complexity, enhancing capability, transdisciplinary partnership working and a detailed summary of the process of developing the TRUE prototype tool.

Newcastle and Gateshead



Newcastle City Futures (NCF) linked academic research expertise to partners in the public, private and voluntary sectors with the aim of co-designing and implementing innovative and practical solutions to urban challenges across Newcastle, Gateshead and the wider Tyneside region.

“Our aim was to develop an approach which leads to what I have referred to as ‘holy grail outcomes’ meaning can we develop innovative ideas and projects for the North East that simultaneously deliver business growth opportunities; a public purse cost saving; a research excellent opportunity; and inclusive space for citizens and communities to help shape and design their future? The answer is yes, as our 60 projects demonstrate, but only with an intermediate organisation such as Newcastle City Futures undertaking the brokerage and opportunistic role.

Professor Mark Tewdwr-Jones,
Principal investigator, NCF

Key activities:

- NCF developed a ‘Newcastle City Futures model’ based on a quadruple helix approach to open innovation that brings in partners from government, industry, academia and civil society to diagnose urban challenges, build cross-sectoral demonstrator projects and co-design and implement initiatives and solutions.

- NCF harnessed the creative thinking and expertise of diverse groups of people by first creating the opportunities for place-based conversations about the city’s future. One of the most successful of these engagement events was the ‘mash-up’. In these, participants from a range of sectors were invited to half-day ‘mash up workshops’, where groups of six participants sat together using simple, non-technical aids such as Post-it notes and Lego to co-design solutions to city challenges and opportunities.

“Working with Mark Tewdwr-Jones at NCF enabled us to broaden and ratify our thoughts and ideas, as well as increasing our understanding of Newcastle in a safe, managed, non-threatening way with the city itself becoming the heart and soul of the project.”

Richard Snell,
Territory Ecosystem Representative, IBM Commercial

“It’s impossible to take part in an event like the mash-up and not see the strengths of cross-sector collaborations.”

Dr Guy Pilkington,
GP and Clinical Chair of NHS Newcastle Gateshead Clinical Commissioning Group

Since May 2016, NCF partnerships grew from 20 to nearly 170 and, to date, NCF has either incubated or accelerated 60 project ideas. Most projects are ‘smart and socially inclusive’, address urban needs of communities, apply academic expertise in digital and technology, and are multi-sectoral, co-produced and multi-disciplinary.

For example:

- **Future Homes:** Based on the NCF ‘quadruple helix’, partners from the local authority, academia, industry and civil society have co-designed housing which is ‘fit for the future’. This new model of housing combines modular building ideas, low energy systems, digital technology and flexible design to provide homes suitable for people at any stage of their lives. Community health professionals, older people, and mothers with toddlers were among those involved in the co-creation process. The first test-bed homes will be built around Newcastle Helix, the innovation park in the city centre, starting in 2018. A second phase of the project will focus on a larger housing scheme at another site. International interest has been sparked in this project, with enquiries about the model from China, Japan and the United States.

“NCF and particularly the concept of the quadruple helix model was critical in enabling the idea of Future Homes to be transformed into a real world project by promoting engagement with business and industry.”

Rose Gilroy,
Chair of the Future Homes steering Group and Future Homes Alliance CIC (Community Interest Company)



The Future Homes design concept based on adaptable living over the lifecycle.

- **Metro Futures:** After nearly 40 years of service, the Tyne and Wear Metro train fleet needed to be replaced. NCF worked with stakeholders across Tyne and Wear through Pop up labs and an interactive website to understand their needs and develop proposals for future Metrocars. Passengers submitted over 3,000 ideas which will be used as designs for new trains to be developed with suppliers in 2018/2019.
- **Future High Street:** NCF worked with Newcastle City Council and other partners to plan the transformation of Newcastle’s main shopping street into a world class retail and leisure destination using, for example, the creative arts, digital retailing and blue-green infrastructure. A £3 million phase one Masterplan was approved by the Council in November 2017.



Transforming Newcastle's High Street

“The involvement of Newcastle City Futures in planning our proposed improvements on Northumberland Street and in the retail core of the city centre has been extremely useful. They have assisted us to look at best practice from other cities and consider how we might bring innovative ideas to bear in Newcastle - particularly on transport and digital issues.”

Tom Warburton,
Director of Place, Newcastle City Council

- NCF prompted the establishment of a new governance process in Newcastle City Council - the 'City Futures Development Group' (CFDG). This special purpose local authority committee brings researchers and policymakers together to discuss the long-term needs of the City and emerging projects. This group has now been joined by representatives from both Gateshead Council and the North East Local Enterprise Partnership.

- NCF and its co-created project ideas have leveraged £9.2 million for projects since May 2016. The MetroFutures project was a factor in helping secure £337 million from the Department of Transport for upgrading rolling stock for the Tyne and Wear Metro.



MetroFutures: disseminating project results back to communities

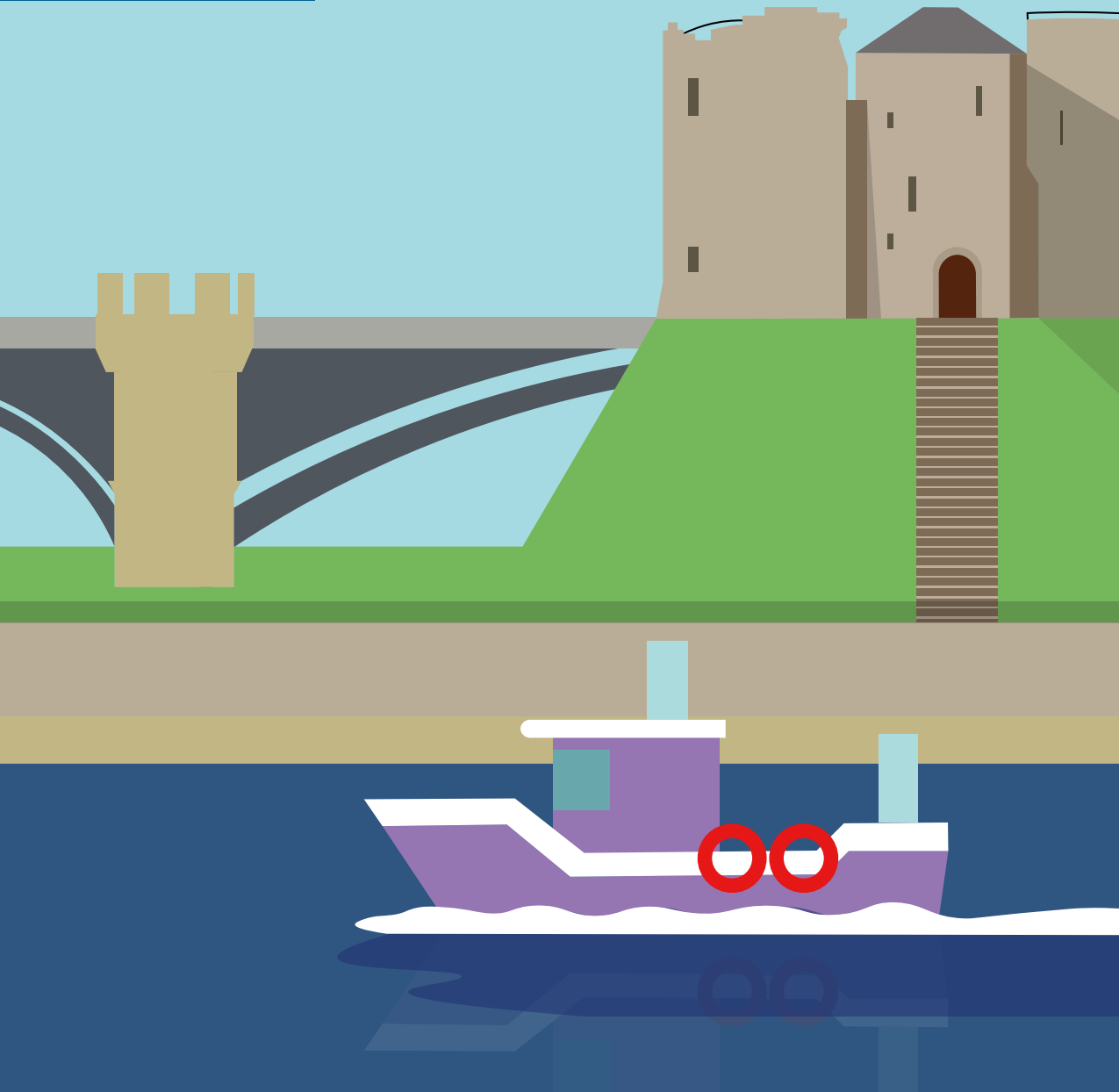
“Essentially, Newcastle City Futures is an ideas factory, generating unique partnerships to shape innovative solutions.”

Professor Tewdwr - Jones,
Principal investigator, NCF

- Newcastle University is supporting the continuation of NCF. Going forward, NCF is continuing to work with partners to deliver some of the remaining projects and support partner agency activities, including Newcastle's Connected Cities initiative, Gateshead's digital and planning initiative, and Newcastle University's work on data, digital, ageing and energy.
- The pilot is rolling out the first year of a 'Tyneside Crowd' crowdfunding platform to enable students, schools, NCF partners and others to suggest and support innovative projects across the region. The NCF is also funding a study for Newcastle City Council to develop a total city systems perspective of smart and innovative projects and a routemap enabling them to navigate projects around the Council. Further NCF funding is supporting the Newcastle University Urban Observatory to create data visualisation maps of Newcastle and Gateshead covering issues such as air pollution and Metro use.

- The NCF team is disseminating and shaping the international potential of NCF as a model for other cities and businesses globally. It is actively engaged with the Alan Turing Institute. Internationally, the NCF is involved in the Future of Cities International Research Network of Newcastle, Sydney, Hong Kong and Sweden.

York



The University of York and City of York Council established the York City Environment Observatory (YCEO) to explore how health, well-being and economic issues are linked to the quality of the environment.

“Our aim, and with the city of York as our proving ground, was to determine what kind of environmental questions need answering, what data we need in order to answer them, whether that data exists or needs gathering, how to build an appropriately robust analytical framework, and how to allow decision-makers - from members of the public through to national policymakers - to mine the data to find the evidence they need,”

Professor Alistair Boxall,
Principal investigator, YCEO

Key activities:

- Through a series of engagement activities with businesses, community groups, residents, experts and specialist organisations working in the heritage, health, culture and environmental sectors, YCEO identified seven key areas of concern about York’s environment and its impact on health and wellbeing. After further consultation, YCEO decided to focus on three themes: air pollution; heritage; and the built environment. A data audit by the YCEO team identified the types of environmental data needed to support effective decision-making and its availability.

“York requires a strong, wide-ranging evidence base for city planning, delivery of services, and the future shape and direction of the city’s makeup and assets. The initial phase of the YCEO has brought together city stakeholders and hundreds of new datasets to understand these challenges.”

Ian Cunningham,
Business Intelligence, City of York Council

- To improve data access and availability, the team worked with City of York Council to develop its pioneering Open Data Platform, including a new YCEO section. The site now contains almost 1,000 publicly-accessible datasets relating to the environment, health and wellbeing which improve the capacity for evidence-based decision-making. For example, in the planning of major projects such as the potential redevelopment of a 72 hectare site in central York.

“This pilot has strengthened the working relationship between the University of York and the City of York Council and this should lead on to future joint bids that encourage innovation and practical outcomes within a specific field, the city, and for residents. We have a number of already funded projects over the next couple of years and I hope that this relationship can be used to bring the relevant skills and expertise from the research and council sector together to meet these.”

Ian Cunningham,
Business Intelligence, City of York Council

- The YCEO team also developed a prototype of ‘YorDecision’ - a computer-based tool which will allow users to draw on disparate data sources to support their decision-making. For example, YCEO worked with the British Geological Survey to show how, using wind, rainfall and river level measurements and models, YorDecision could answer specific questions such as: ‘Are the river conditions safe for me to go rowing?’ With further development, this tool could help local authorities, government bodies, and companies as well as individuals make future health and wellbeing decisions based on the very best environmental data. A prototype of an app interface linked to the YorDecision tool is set to be released.

- The novel toolkit of creative co-design methods developed during the pilot, as well as principles and technologies for understanding the links between the total environment and health and wellbeing, could now be applied in other cities, towns or rural communities.
- A 10-page booklet outlining outputs from the pilot phase of the project and its future potential for project partners, future collaborators and funding bodies is available at www.yceo.org.uk

“Thanks to the work we have completed during our pilot phase, the YCEO is uniquely well positioned to answer the questions that local decision-makers want to address, and to address the related aims of grant-funding bodies.”

Professor Alistair Boxall,
principal investigator, YCEO

- City of York Council is using YCEO work on understanding city challenges as part of a £45m programme with the Environment Agency looking at the impacts of the 2015 Boxing Day floods. Methods, tools and technologies developed during the YCEO’s pilot phase helped win successful bids for funding from the Stockholm Environment Initiative, the EPSRC and the government’s National Productivity Investment Fund.



The YorDecision tool could answer questions on, for example, the safety of river conditions

Learning points

Challenges of cross-council working

The ULP required eight organisations (seven Research Councils and Innovate UK) each with their own processes, accountabilities, remits and structures to work jointly. The initial challenges this presented were overcome due to a high level of commitment and co-ordination from the RCUK/Innovate UK/ULP project team. This pilot of working across the eight organisations on a common strategic theme highlighted some of the issues to be considered in the harmonisation of very different organisational processes.

Advantages of funding flexibility

Flexible cross-council funding was crucial in ensuring that organisations such as small community groups and charities, often missing from research programmes due to lack of resources, were able to participate as full partners. Pilots also benefited from the freedom to reallocate funding to meet new priorities that arose during the 18 months.

An opportunity to escape disciplinary constraints

The ULP pilots' academic partners praised what they viewed as a rare opportunity to escape disciplinary silos and work across and between a wide range of disciplines. In some cases

this allowed university departments to contribute to urban research for the first time – providing the widest possible lens through which to view complex city problems.

Relationship building key to tackling 'wicked' city problems

All partners viewed the unique opportunities the ULP provided to build new or stronger relationships with city stakeholders as one of its chief successes. These relationships brought people together from many different sectors, creating a rare body of expertise and the opportunity to take a whole-city approach to problem-solving. All partners described benefits from closer collaboration such as:

- Providing researchers with insight into local authorities' difficulties in applying academic research (often too narrowly focused or theoretical) in practical ways to tackle city problems,
- Bringing the voices and concerns of community groups and citizens to local authority attention,
- Helping third sector groups take advantage of research expertise in the framing and execution of projects,

- Giving industry and commerce a better understanding of local authority priorities and potential business opportunities as well as insight into academic thinking,
- Challenging local authorities to think more innovatively, flexibly and over the longer term at a time when, due to austerity measures, their resources to develop new ideas are limited.

Safe spaces matter to successful co-production

The ULP pilots provided much needed 'safe, neutral and depoliticised spaces' in which partners could freely address complex and difficult problems, reflect, consider solutions, test out new ideas and be creative. In creating 'safe spaces', the importance of having sufficient time and continuity of funding to build trust, develop relationships, secure institutional buy-in and adapt to unanticipated project outcomes cannot be under-estimated, nor the need to commit to relationship building over the long term, particularly with third sector partners.

Capturing the learning

The five city pilots took five different approaches to answering a diverse combination of questions relating to urban challenges. Between them, they produced a variety of models, innovative engagement tools, and frameworks suited to each city's

particular cultural and historical circumstances. Although 'place-based', many of these - or aspects of them - have applicability to other cities and rural areas both nationally and internationally. Cities trust and learn from other cities. The ULP pilots created a 'tool bag' of approaches which, with appropriate mechanisms and platforms to capture and disseminate this learning, can benefit a wide audience.

Learning how to do co-production

While collaborative, inter-sectoral working is key to tackling thorny urban living problems, many ULP pilot partners had little experience of working in these new ways. As a pilot of co-production between very different organisations and organisational cultures, the ULP programme gave hundreds of academic, local authority, third sector, business and community partners the opportunity to work co-productively - some for the first time - highlighting valuable lessons for future such initiatives.

Key issues to consider include:

- Communication - different sectors and disciplines have their own terminologies and understanding, working practices and approaches. Assumptions need to be challenged and common ground established at the start of the venture.

- Valuing diverse experience - in co-production, the expertise of community groups in local engagement is as valuable as academic research expertise and all partners need to feel equally valued.
- Time constraints - the time available for third sector, business and local authorities to invest in project activities are typically constrained by 'day job' demands which can make it more difficult to commit as much time to the partnering role as they would wish.
- Timescales - university and local authority decision-making can be far slower than in business and the third sector. Moreover, business, third sector and local authority focus on shorter term goals can conflict with research impetus towards longer term thinking.
- Clearly aligned objectives - a research drive towards 'disruptive innovation' can clash with more risk-averse approaches towards change in some urban institutions.
- Trust - business and third sector partners appear increasingly unlikely to commit to collaboration without reassurance of long-term partnership commitment. Effective cross-sectoral relationships can take years to build and projects which capitalise on existing relationships have a significant head start.
- Leadership - strong leadership while key to any successful project is imperative in mediating transdisciplinary and co-produced research involving partnerships between diverse organisational cultures.

Recommendations

Invest in transdisciplinarity

The Urban Living Pilots have shown that RCUK and Innovate UK correctly identified urban research as one of the most promising fields for developing transdisciplinary research approaches in the UK. The ULP pilots demonstrated the need for ambitious initiatives that bolster capability for crossdisciplinary research on cities and the requirement for significant future investment in transdisciplinary urban research co-production, experimentation and innovation that is more directly aligned to understand complex societal problems.

Support 'whole-city' understanding

Cities need a better integrated understanding of themselves and the challenges they face. Within its five city pilots, the ULP programme highlights that research organisations have a key role to play in helping cities to draw on leading edge research across disciplines, fully realise the opportunities provided by big data, new technologies and innovations, and learn from past initiatives.

Build sustainable long-term collaborations

Building trust and collaborative partnerships are key to initiatives such as the ULP which seek to grow capability for cross-disciplinary and inter-sectoral research and innovation. Building such collaborations is a long-term process. The ULP pilots have stimulated many successful partnerships and raised expectations about the potential for future urban research co-production. Now it is important to consider how these forms of partnership working can be sustained in the longer term so more of the potential of collaboration and co-production can be fully realised.

Set collaborative funding criteria

Strong commitment from research organisations to their civic/place-based role and partnership working is critical to securing the longer-term sustainability of collaborative partnerships. Making this commitment an important criterion for funding applications on similar urban projects in future should be considered.

Afterword

Professor Rachel Cooper OBE,
Chair, Advisory Group, Urban Living
Partnership

We are aware of the multiple and complex challenges facing cities and their citizens. They have been addressed from many angles and perspectives and, over the years, many disciplinary approaches to addressing them have been funded. It is now widely recognised that such complex issues must be addressed from a diversity of perspectives.

The RCUK and Innovate UK recognised this in 2016 with the call for Urban Living Partnership proposals. The focus from the onset was to bring together city stakeholders, public and private organisations and community, alongside academics from the local universities to work together on recognised city-wide issues.

It is clear this approach is not as straightforward as a traditional research project and the results are often broader and more diverse. Innovation often occurs at the boundaries and intersections of knowledge and activity. These pilot projects illustrate that, and as such, partnership-working at this level is very productive and important for cities.



Critically, we have also learnt that this approach to solving complex and intractable problems needs a different and higher order of collaboration and commitment. It needs responsive leadership on all sides, to bring people together around the vision for the work and to identify common benefits and objectives; it requires high-level support at university, city and industry levels; and it needs a clear, simple and proactive form of governance and management, with people on the ground doing the work together and communicating it widely. Finally, it demands commitment over the long term.

It is important therefore that in future these and other such city partnerships are formulated with clear long-term objectives and investment to build productive and stable relationships that will deliver healthy, resilient, and sustainable solutions for our cities and their citizens.

Director: Professor John R. Bryson,
University of Birmingham

Consortium: Urban Living Birmingham (ULB)

June 2016 – November 2017

www.birmingham.ac.uk/schools/business/research/research-projects/urban-living-birmingham-project.aspx

Partners: In addition to the Universities of Birmingham, Northumbria, Aston, Birmingham City and Warwick, the ULB pilot partners include Birmingham City Council, Amey plc, ART Business Loans, Birmingham Chamber of Commerce, Birmingham Education Partnership, Birmingham Science City, Centre for Sustainable Healthcare, Centro Public Transport, Energy Systems Catapult, Fraunhofer Institute, Futures Network West Midlands, Heart of England NHS Foundation Trust, Localise West Midlands, Midlands Environmental Business Company, Natural England, Networkfour, Redpill Group Ltd, Regional Economic Application Laboratory, Sustainability West Midlands and the West Midlands Combined Authority.

Director: Professor Colin Taylor,
University of Bristol

Consortium: Bristol Urban-ID (Integrated Diagnostics)

June 2016 – March 2018

www.urban-id.co.uk

Partners: In addition to the Universities of Bristol and the West of England, the Bristol Urban -ID pilot partners include: Bristol City Council, Bristol Green Capital Partnership, Bristol Health Partners, Future Cities Catapult, Knowle West Media Centre, South Gloucestershire Council and Watershed Media Centre.

Director: Professor Paul Chatterton,
University of Leeds

Consortium: TRUE
(Transformational Routemapping for Urban Environments)

August 2016 – February 2018

www.true.org.uk

Partners: Universities of Leeds and Leeds Beckett, The Young Foundation, Open Data Institute Leeds, Arup, Centre for Sustainable Healthcare, Together for Peace, Leeds Community Foundation, Voluntary Action Leeds and Leeds Chamber of Commerce.

Director: Professor Mark Tewdwr - Jones, University of Newcastle

Consortium: Newcastle City Futures (NCF)

July 2016 – July 2018

www.newcastlecityfutures.org

Partners: The Newcastle City Futures pilot has some 170 partners of which 52 per cent are businesses ranging from small businesses to major multinationals. The NCF pilot has 34 partners from the university and education sector, 32 third sector partners and 16 public sector partners including Gateshead, Newcastle and North Tyneside Councils.

Director: Professor Alistair Boxall,
University of York

Consortium: York City Environment Observatory (YCEO)

June 2016 – March 2018

www.yceo.org.uk

Partners: In addition to the University of York and City of York Council, the YCEO project team and consortium members include the Stockholm Environment Institute, SimOmics, British Geological Survey, Arup (UK), York Metrics, Rivers Trust, Centre for Sustainable Healthcare, Forest Research, PerkinElmer, Environment Agency, Public Health England, York Minster, Tang Hall Big Local, IBM, Natural England, Science City York, Siemens, York Business Improvement District, AECOM, Invisible Visible, Joseph Rowntree Foundation Make It York and The Woodland Trust.

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