



## Reflections on Bridging the Gaps at UCL

*Sarah Bell, Principal Investigator*

Air pollution, poverty alleviation, renewable energy, water resource management, traffic congestion, over population, public engagement, climate change, accessibility, materials recovery, energy efficiency...

... the list goes on. Problems in urban sustainability abound. Solutions are harder to find and even more difficult to implement. Many of these problems have grown out of the gaps between academic disciplines. Standing in our distinct disciplinary territories researchers have become skilled at breaking down problems to suit our particular tools of analysis, but our capacity to work together to find solutions has been spectacularly inadequate.

### Developing new skills

- “I have gained ... understanding outside my background”
- “I ... learned how to efficiently prepare for a large funding from my partner”

The need for interdisciplinary research and practice in urban sustainability has been recognised since the earliest years of the environmental movement. Research councils have made significant efforts to fund interdisciplinary projects and programmes in urban sustainability and other fields. Creating new knowledge that fundamentally addresses the nature of the problem rather than reflecting the names of university departments has proved more difficult than it seemed it should. Interdisciplinary work is much harder than simply bringing together scientists and scholars with complementary expertise.

The barriers to interdisciplinary work are philosophical, methodological, managerial and social. The EPSRC Bridging the Gaps programme is an important opportunity for universities to start to address some of these barriers, and at UCL has provided opportunities for 63 researchers to engage in truly novel research partnerships that address the problems of urban sustainability.

The research community at UCL possesses tremendous enthusiasm and commitment for building new ways of working to solve some of the greatest challenges of our time. Sustainable Cities is one of our Grand Challenges and has underpinned our work in Bridging the Gaps: Sustainable Urban Spaces.

### Key facts

- Bridging the gaps has awarded over **£245,000** in funding
- Applications were submitted from **26** departments or centres in **6** faculties
- Funding was given to **54** collaborations between departments
- Bridging the Gaps has given **63** academics the chance to test their ideas and new research partnerships

### Overcoming barriers

- “[The funding] allowed us to bring in ... staff from other departments [with] skills that we would have been unable to provide ourselves”
- “access to laboratory... to use specialist equipment”
- “The equipment in the two groups is shared and the researcher benefits from it”
- “Collaboration across disciplines and departments is most of the time very fruitful as it provides you with an opportunity to complement skills and knowledge.”

The diversity of projects funding by Bridging the Gaps has been astonishing. Personal energy monitoring, disabled children's access to cities in India, hydrogen fuel cells, statistical modelling of urban air pollution, nanotechnology for water treatment, mapping green spaces in marginalised communities in London, and the use of slime moulds as building monitoring sensors are but a few examples of the work Bridging the Gaps has supported at UCL over the past three years. Our programme has demonstrated the catalytic potential of providing relatively small amounts of money to highly motivated and capable researchers in a rich and supportive interdisciplinary environment.

Urban sustainability research can at times be a depressing enterprise. So many problems, so few solutions. All of the projects funded under Bridging the Gaps at UCL address an important problem of urban sustainability from a fundamentally interdisciplinary perspective. Managing the programme with James Paskins, Muki Haklay, Ben Croxford and Simon Julier has been a humbling and mind boggling experience. It has also been a lot of fun. The programme has helped many of our colleagues take those first timid steps along the long road to new and productive research territories, towards solutions to some of the greatest challenges of our time. I am hopeful that many of the partnerships started over the last three years will soon be leading research communities with knowledge about both the nature of solutions to urban sustainability and how to go about finding them.

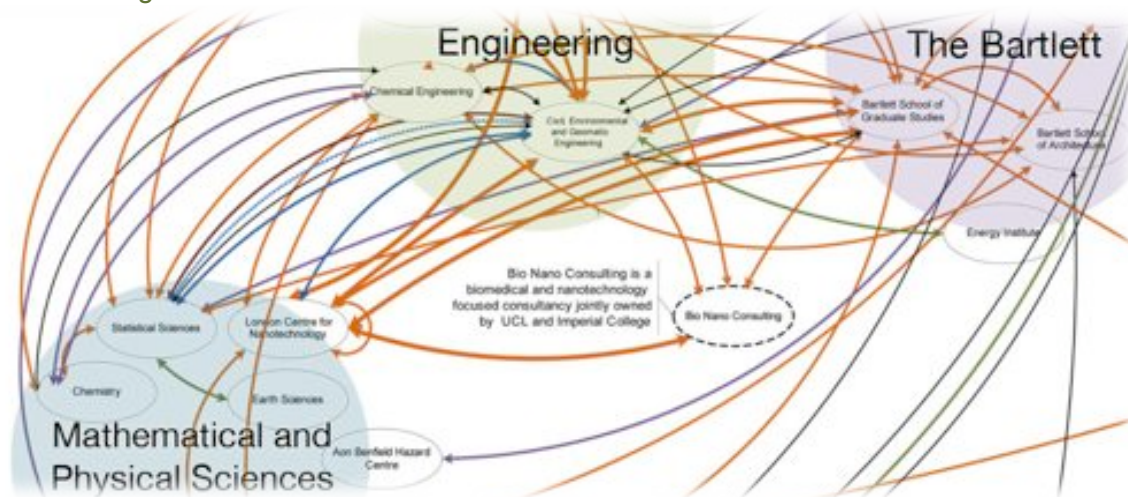
## Continuing collaboration

The impact of Bridging the Gaps will not end with the funding for the programme.

- “[We] now share a PhD student”
- “we will push this [collaboration] in the grant proposals”
- “I think EPSRC funding is the next logical step.”
- “We plan to apply for a larger fund such as FP-7 or EPSRC”
- “The ideas generated during this project has helped me to think about a further proposal

## Mapping the connections

The image below shows a section of a diagram that charts the links created by the different funding streams that were offered by Bridging the Gaps. You can see the full picture on our website at [www.ucl.ac.uk/btg/collaboration](http://www.ucl.ac.uk/btg/collaboration).



## Find out more

Feedback reports from the funded studies will be available on the project website at:

[www.ucl.ac.uk/btg](http://www.ucl.ac.uk/btg)

A final report is being prepared for the Bridging the Gaps programme, if you would like to be informed when it released you can register your interest with James Paskins ([j.paskins@ucl.ac.uk](mailto:j.paskins@ucl.ac.uk)).