PEAKUrban

IMPACT CASE STUDY

JUNE 2022

Developing new ways of working

Developing new skills, capacities, and approaches with PEAK Urban researchers

'PEAK Urban recruited an extremely able group of researchers. I'm delighted to have seen them develop during the programme, with most publishing papers in good journals and many moving on to greater things – to work in city hall or jump early to academic posts. Above all, it is wonderful to see them working in the interdisciplinary and engaged way that will help change urban futures.' Michael Keith, Principal Investigator, PEAK Urban

The goal of the PEAK Urban programme is to generate a step change in the capacity of cities to achieve sustainable development. One of the key pathways identified to this goal is **'new ways of working'**, recognising that established ways of viewing the city, and development planning, will not be adequate to tackle the challenges of the future.

PEAK's Theory of Change (ToC) underpinning our efforts to reach this goal, identifies the intended 'outcome' that 'researchers and stakeholders work effectively together across silos'. A key contribution to this is **'developing a cohort of researchers to work on urban issues with increased ability and networks... across disciplines'** (output 3.1).

Over the last three years, PEAK's early career researchers (ECRs) have been working on 38 urban projects across our eight participating research centres in five countries. Supporting them to develop capacity to 'think like a city', to frame problems in new ways, and to work with all the tools and actors available to address urban challenges, has been an essential part of our endeavour.

This case-study documents how PEAK has worked to enable researchers to develop new ways of working across disciplines and to engage with external stakeholders, and the extent to which this has been successful. Crucially, it also reports on what researchers themselves feel they have gained and achieved through the programme.

PEAK Urban Theory of Change. Pathway to impact - New ways of working. Output: Cohort of PEAK researchers has increased ability and networks to work across disciplines on key urban themes. Outcome: Researchers and key stakeholders work effectively together, overcoming functional and disciplinary silos.







Outputs / activities

PEAK used a number of outputs to help develop the capacities of researchers, including the PEAK framework and other capacity strengthening activities.

1. The Peak Urban framework

The PEAK framework encouraged researchers to think differently about urban issues from the start of the programme. Principal Investigator, Michael Keith, was inspired to develop the framework with collaborators after leadership roles in local government and academia, where he was struck by the gulf between urban specialisms (such as engineering and economics) and the inability of planners to access crucial insights from across the disciplines. Michael worked with Sue Parnell and Aromar Revi, who both had similar experiences in Africa and India, to shape the original ideas into a funding proposal. **Prediction:** What does modelling, institutional analysis and ethnography say about prediction and projection in the city?

Emergence: How have socio-material systems generated new forms and structures to create an emergent urbanism?

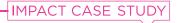
Adoption: How have different research disciplines and the city adopted ideas and technologies from different knowledge traditions?

Knowledge Exchange: How do we maximise knowledge exchange to build capacity in research institutions, cities, nations and at a global level?



Jairo Alejandro Gómez Escobar

'My experience with PEAK deepened my understanding of cities as complex, non-linear, multivariate, and highly interconnected systems. It also helped me to close the gap between research, policy, and practice, learning about the importance of bringing in policymakers and stakeholders to every stage of the research process from planning to sharing findings. At the same time, I realised the importance of translating technical research for other audiences – including policy makers and communities. It's not enough to develop new knowledge – you have to get it to the sharp end, to the people who can use it!'





The framework has been the touchstone of the programme and unpinned a culture in which multidisciplinary working and external engagement were expected, encouraged, supported, and celebrated at all stages of the research process. The framework, and its Theory of Change (ToC), enabled all researchers to think about the potential impact of their work, ensuring it is not only academically robust but 'makes a difference' on the ground, particularly to those on low incomes.

Most researchers found the framework helpful. One commented that they try to adhere to it as much as possible; another that the 'framework enables practical research to address urban challenges'. Some researchers felt more comfortable with certain elements of the framework than others: one reported that they best understood the 'A' and 'K' and did not really engage with P and E, which they saw as 'more data driven'.

'The framework was introduced to researchers from the outset,' explains Michael Keith. 'We saw it as a disposition rather than a set of rules, and hoped it would be an enabling, rather than restricting, tool. Some researchers and institutions are closer to one end of it than the other; but all have challenged themselves to explore the elements they are less comfortable with. The framework has helped create a vibrant research and engagement portfolio, which I believe will contribute to a new way of working on urban issues.'

2. Capacity building and support

Often research is conducted within traditional disciplinary silos. Factors perpetuating this approach include a homogeneity in the expertise of academic mentors, the difficulty of meeting and working with international researchers from other disciplines, and the lack of an explicit focus on impact on policy and practice. PEAK consciously recruited a high number of postdocs for a programme of its size and actively supported capacity sharing and strengthening, with the objective of overcoming these barriers and developing multi-disciplinary approaches to urban issues. 'My mentor did an excellent job, supporting my career and allowing me to develop publications post PhD.' Aditya Ramesh

'My research supervisor has been particularly helpful in pushing me to think about policy.' Sam Heroy

Academic mentors: All researchers were paired with mentors, senior academics who were able to give one-to-one support on research design, development, and implementation, as well as brokering external relationships and collaboration opportunities and offering career development support.

Many researchers praised the support they received from their mentors, particularly in encouraging them to publish papers and in enabling new opportunities. One commented that 'working with a senior scholar opened many doors,' and the sentiment was echoed by several others. A junior researcher commented that she particularly appreciated the mentorship of senior researchers at her career stage; another said that they had learnt 'so much' from the programme and praised the leadership for putting together such a diverse and able team.

Beyond academic mentors, researchers were offered peer-to-peer learning opportunities and formal and informal mentoring by senior academics from outside their own institutions at the annual retreats. Sue Parnell highlighted the value of this. 'Post-docs often work only with one supervisor in a lab or research setting. The particular value of PEAK was that it enabled postdocs to engage with a range of senior academics from different contexts'.

'Meeting and generating debates, questions, ideas, and opportunities for collaborations with teammates from such diverse backgrounds, proved significantly formative and empowering.' Carlos Cadena-Gaitán



Shriya Anand

'PEAK has provided an amazing opportunity to be part of a global research programme where the research questions are not pre-determined by Northern scholars, but rather have emerged ground-up, from the partner institutions and from our own work. In my mind, this has been one of the most significant contributions of the way PEAK was structured and allowed us to build grounded knowledge about our cities. It will go a long way in developing context-sensitive research and will also feed into policy and impact.'



Annual retreats: The Oxford team and senior deputy principal investigator Sue Parnell lead the organisation of three annual retreats, in collaboration with host institutions. The first was held in Bangalore in January 2019 and the second in Medellin in February 2020. The third, planned for Beijing in March 2021, was held virtually because of the COVID 19 pandemic.

The retreats aimed to build research collaborations across partner institutions and disciplines and explore the city through field-based learning. They also included sessions on getting published in academic journals, communications, policy engagement, and peer mentoring.

The retreats were highly praised by researchers. Meeting other researchers face-to-face was seminal to broadening participants ideas of urban research beyond their own experience, contexts, and disciplines. One researcher commented that 'for me, the retreat... was perhaps the most formative' activity. One academic lead observed that contributing to the working groups planning the retreats was an important development opportunity for some researchers.

Researchers and academic leads did, however, comment that the 2021 virtual retreat missed some of the value of the earlier meetings and limited the possibility to build on previous work and relationships. It also meant that the PKU team were unable to host in their city – which would have enhanced understanding of the Chinese context and international cooperation between researchers.

Working groups: The idea of thematic working groups, spearheaded by researcher and co-investigator, Neave O'Clery, emerged out of the first annual retreat as a way of continuing conversations and collaborations between researchers with shared interests, based at different international institutions. 'This helped overcome the fact that most researchers developed proposals before meeting others from the cohort. They were essentially a vehicle for collaboration,' Neave commented.

After a call for proposals, working groups were established on a range of topics from Greenspace and Wellbeing to Decentralisation and Governance. Groups convened roughly once a month from 2019-20 and activities included discussions and presentations at conferences or PEAK meetings, and collaboration on publications. PEAK researchers who participated in working groups said they found them useful and enriching. **Work in progress seminars:** Work in Progress meetings also allowed the opportunity for researchers to present emerging research to peers and senior academics and gain interdisciplinary insights. One researcher commented that the meetings encouraged cross-disciplinary thinking and dialogue. Another that they benefited from being prompted to explain the importance of the research to those who were not familiar with it.

Policy engagement and influencing: PEAK's expectation that policy engagement is an essential part of research, and the ongoing discussions and support

of research, and the ongoing discussions and support given to it, were important in raising researchers' ambition and capacity in this area.

Policy engagement workshops run by academic leads helped researchers understand the difference between research dissemination and impact, how to identify potential policy contacts, and how to make research engagement appealing to them. Impact Planning templates, adapted from the ODI's Research Excellence Framework Impact Toolkit, encouraged researchers to think through the ToC and intended impact of their projects. One researcher commented that PEAK was helpful in creating the imperative to engage more with non-academic stakeholders, particularly global institutions, and that this had increased his interest and confidence in working in this area.

'PEAK staff were enormously helpful throughout, providing bespoke, tailored support on how to best frame our projects for translation to media and policy makers.' Nicholas Simcik Arese





Nicholas Simcik Arese

Peak Urban helped me completely rethink the relationship between research, policy, and practice, and to start to work with a range of stakeholders on interdisciplinary issues. This was largely due to the encouragement to build external relationships, and the programme's flexible approach. I am now working with several organisations to progress projects on a range of urban issues. I really think this would not have happened without the experience of working on PEAK, which also helped me establish my career at the University of Cambridge.





Communication for uptake training:

Working with policy makers requires researchers to shape key messages, write in accessible language, and use new formats and channels to share their research. Communications training was offered at Annual Retreats, including video for research, data visualisation and infographics, writing for non-academic audiences, presentation skills, and engagement and influencing. Researchers were also offered training on writing for blogs and other media with urban communications expert John Surico.

All training was highly praised by researchers with many reporting that they had built on it in developing their own research dissemination outputs.

Researchers also greatly appreciated ongoing support from PEAK's professional staff. This feedback was reinforced by Sue Parnell who highlighted the 'unexpected benefit' gained from researchers' close engagement with communications and policy staff throughout the programme.

Learning on capacity building

Several academic staff, however, noted that support for capacity building added to an already heavy workload and suggested that future programmes might build in funding to cover time spent on such activities. Equally, language barriers sometimes made meetings and collaboration difficult between researchers whose first language was not English. Additional funding for translation (at meetings and of outputs) might help in future programmes.

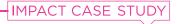
'I had a fairly unique experience in that, in a sense, I was both a co-investigator and a Senior Research Fellow at Oxford in starting out. PEAK gave me a chance to be in at the management end – writing proposals, recruiting, running a team – and developing my own research within the scope of the programme. It was a tremendous development opportunity.' Neave O'Clery





Jacob Doherty

Part of the research process involved engaging with local activists and organisations in the transport sector. I am sure that I engaged with these actors in a more collaborative way than I might have done otherwise because of PEAK. In my discipline, and in my previous work, we tend to approach urban processes from the ground up, focusing on everyday practices, experiences, and the micro-politics of urban life. Without abandoning this perspective, PEAK has challenged and encouraged me to see the city through a variety of other lenses.'







Outcomes/results

'PEAK created opportunities for me to explore an open canvas of research that has been important in shaping the ideas that have fed into policy, advisory and other work.' Shriya Anand

1. Researchers can work across disciplinary silos

PEAK researchers worked across disciplinary silos at all stages of the programme, from designing research proposals and collaborating across disciplines and institutions to publishing in academic and non-academic outlets and engaging with external stakeholders.

Research design: All research projects were expected to be designed to be interdisciplinary, challenge-led and impact focused – and to articulate how they related to one or more dimensions of the PEAK Framework. Proposals then went through an interdisciplinary peer review process, led by academics from different institutions, to assess them against the criteria. This allowed both early career researchers and academic leaders to learn from new perspectives.

Michael Keith comments: 'We were very impressed by the range and creativity of the proposals, and the efforts to adopt a multi-disciplinary approach and engage external stakeholders from the outset'. Amy Weimann responded to the challenge of research design by using a 'transdisciplinary research approach' that sought to include government policymakers in the design of the study. Sam Heroy commented that the process of writing his research proposal to meet rigorous criteria was important in shaping his ideas.

'Through PEAK I have made an effort to learn and understand from other disciplines, and to find ways to collaborate with researchers that use very different approaches to analyse the city.' Jorge Patiño

Multi-disciplinary research collaboration

and publication. The number of papers co-authored across disciplines and institutions during the programme, attests to the strength of multidisciplinary working. 146 articles were published in interdisciplinary journals; 152 publications were co-authored by researchers from two or more disciplines; 86 publications were co-authored by researchers from two or more PEAK partners; and 32 projects secured additional joint funding.

Feedback from researchers indicates that they enjoyed working in what one called 'a truly multi-disciplinary environment' and that it helped to develop their skills and enrich their research. Many referred to the importance of retreats, work in progress meetings, and working groups in fostering such a multi-disciplinary culture.



Nobukhosi Ngwenya

'Our work is interdisciplinary in nature and entails extensive engagement with stakeholders and institutions beyond academia, so PEAK gave us the opportunity to continue working in this manner and to extend this to academic institutions that I had not previously worked with (EAFIT, PKU, IIHS). PEAK's value for me was the opportunity to interact with colleagues in different disciplines at different institutions as usually we interact with colleagues in the same discipline, even if they are from different institutions.'



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Co-investigator, Neave O'Clery, observed that researchers from more closely aligned disciplines often found it easier and more comfortable to work together, a view echoed by several researchers. Several researchers also commented that they had limited opportunity to conduct multi-disciplinary research during the programme but still appreciated the opportunity to learn from disciplines distant from their own.

'I still remember our visit to the Bangalore flower market... Today, I walk around other cities in Colombia, Mexico, or the UK, and perceive the granularity of the distinct functions of roads, markets, stations etc.' Rafael Prieto Curiel

Understanding the city differently. PEAK

researchers report that their experience of the programme has enabled them to see the city differently than through their normal discipline or context.

One researcher commented that previously their focus had been on transport-related issues but that PEAK had exposed them to other dimensions of urban policy. Another felt that they had developed alternative understandings of how to assess the value of specific policies to different urban actors.

Other examples of new understanding reported by researchers include: how the fiscal and regulatory systems of cities can be used to promote positive urban transformation; the role of data in urban management and development; the need to view cities as complex overlapping systems; and an appreciation of the importance of looking at longitudinal change.

2. Researchers work with stakeholders and institutions beyond academia

PEAK's framework, capacity sharing activities, and multi-disciplinary approach have all underpinned and encouraged researchers' engagement with external stakeholders and work on 'real world' policy and practice issues at all levels. Some researchers, however, felt that their external engagement was facilitated by their host institution's networks and ongoing practice, rather than as a direct result of participation in PEAK, attesting to the commitment to 'translational' research across all PEAK partners.

Researchers have built relationships and collaborations with local and national governments, global and national organisations, the private sector, grassroots movements, and civil society organisations. This has involved working with stakeholders on research design, dialogue on research development, sharing analysis and findings, and follow up with stakeholders to embed research recommendations.

Some of these engagements have influenced the agendas or opinions of policy makers and been reflected in policy deliberations and even outcomes; in some cases, engagement has created opportunities for urban dwellers, particularly marginalised groups, to share their views and experience with decision makers.

'I am now more capable of interacting across the border between research, policy and practice.' Carlos Cadena-Gaitán



Skills and understanding. Many researchers reported that policy and practice engagement was new to them, and some felt they remained 'on the research side' during their time with the programme. Nevertheless, researchers say they had developed their understanding of the policy process, and how and when to engage from a research perspective, which meant that they were in a good position to do this in future.



Amy Weimann

'The workshops on networking and writing for non-academic audiences were incredibly valuable. I have also appreciated the opportunity to gain experience in video presenting and in blog writing and have applied the knowledge to some of my outputs. I found the retreat field trips invaluable, providing tangible insight into new urban environments and spaces'.



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The flexible and open approach of PEAK to policy engagement was also crucial to encouraging researchers to build external relationships. According to one researcher, 'PEAK provided countless opportunities to build constituencies and partnerships, as well as the freedom to include any partnerships into the fold of the programme'.



Policy engagement. Some PEAK researchers developed very strong relationships with external stakeholders and have achieved significant policy and practice impact. Examples include but are not limited to:

The Indian Institute of Human Settlement have shared their research with the XV Indian Finance Commission which will inform countrywide interventions. The research explored the potential of new greenfield towns and cities to assist in post-COVID economic recovery and suggested a package of strategic measures and priorities at national, state, and regional level to support urbanisation and development.

Sichuang Chen worked with the Chinese Land Surveying and Planning Institute to explore trends in China's population scale, structure, and distribution. The research report provides suggestions to optimise the supply and demand of national land.

Guangzhong Cao, Tao Liu and Rongxi Peng worked with the Mentougou District Development and Reform Commission in China, analysing the challenges and opportunities of local industry, providing industrial development suggestions for local government.

Nicholas Simcik Arese is collaborating with multiple groups in Colombia including an Architecture Cooperative, a group of community lawyers in Medellin, and a software platform for administering joint ownership of property. Jairo Alejandro Gómez Escobar and team worked with EPM, the second-largest utility company in Colombia, to adapt an urban growth forecast model to predict water use in Colombia. By accurately predicting future water use, the model has the potential to lower the environmental impact of service infrastructure and enable better, more cost-effective utility provision for urban residents.

James Duminy has engaged with policymakers and practitioners through his work with the Cities Support Programme (CSP) based in the National Treasury of South Africa.

Carlos Cadena-Gaitán moved from academia to the public sector in 2020, as Transport Secretary for the newly elected Mayor of Medellin, enabling him to forge meaningful connections between research, policy, and practice.

Jacob Doherty engaged with local activists and community organisations in the transport sector during his research, adopting some of the collaborative approaches with which he had become familiar with under the PEAK programme.

Sichuang Chen and Yanhua Zhang worked with Jin Cheng's Urban Planning Research Institute in China, analysing the driving force of urbanization, predicting the population scale and exploring the features of population spatial distribution.

Pengjun Zhao, Di Lu, Liangen Zeng and Cao Yushu worked with the National Development and Reform Commission, to make an in-depth analysis of the development trend of population change and transportation demand in various regions of China and propose comprehensive transportation system strategies.

Pengjun Zhao, Jia Luo and Haoyu Hu worked with Guizhou Provincial Institute of Urban and Rural Planning and Design, to implement the strategic requirements and binding indicators of upper planning, formulate urban development goals, divide land-use zones, and put forward strategic suggestions for rural development planning.

Amy Weimann worked with government stakeholders at provincial level in South Africa, involving them in research design and dissemination. She maintains a dialogue with policymakers to find innovative and practical ways to apply research findings to improve urban health.

Rafael Prieto Curiel and team shared research on temporal patterns of crime and traffic accidents in Mexico City with city police officers. The engagement provoked further research questions, and lead to greater awareness / understanding of crime and accidents in the city.



Jorge Patiño

Working with PEAK leaders I was exposed to different disciplines and frameworks, and now I have a broader understanding of how the city's built environment plays a role in public health. Since my enrolment with PEAK Urban, I've also gained experience in speaking at international meetings with researchers from different countries and disciplines and now feel more confident when I am invited to participate as a guest lecturer. And I always try to take the extra effort to communicate findings in a plain, easy-to-understand language, and to translate those findings to actionable advice.



Jorge Patiño worked with the Health Office in Medellin, Colombia, to identify research questions and collaborated with the Oxford Deep Medicine team and EAFIT University, Colombia, to explore urban health topics including links between green spaces and cardiovascular health.

Sam Heroy is working as a consultant for the World Bank's Global Facility for Disaster Reduction and Recovery programme, analysing mobile phone data to determine levels of service provision in different areas of key cities, and the different ways in which women and men are affected by displacement.

Guangzhong Cao, Tao Liu, Rongxi Peng and Yunxia Zhuo worked with the Beijing Development and Reform Commission to identify the main issues related to Beijing's population development and analyse the demographic and economic effects of Beijing's current policies. **Yingzhi Qiu and Muchen Sun** engaged with local governments from Qingdao and Weifang, China, putting forward policy recommendations in terms of infrastructure construction, joint environmental protection, and industrial collaboration to increase integration of the two cities.

Rongxi Peng worked with Jinan Planning Bureau in China, to identify the urbanisation development pattern and population dynamic characteristics, providing a development strategy to the city with rapid urbanisation.







Value for money

Developing the capacity of PEAK's early career researchers, and their ability to contribute to 'new ways of working' on urban issues, has been achieved economically and efficiently, and promoted equity within the researcher cohort and wider social context.

Economy

• Developing the capacities of early career researchers who will go on to hold significant positions in academic and public life is a cost-effective way to strengthen urban research and policy to manage future challenges.

 Interdisciplinary thinking provides more effective solutions to urban problems than siloed approaches. Answering 21st century challenges by traditional methods would be prohibitively expensive and less effective than using the innovative approaches developed by PEAK.

• Leveraging expertise across the programme for capacity building activities, particularly from senior academics and professional staff, ensured these were both effective and costeffective.

• PEAK Urban expertise has also helped leverage further resources through research collaborations that have generated further funding support.

Efficiency

• The PEAK model provided a clear framework for the programme, allowing early adoption of the multi-disciplinary approaches and commitment to stakeholder engagement. It also helped to raise the ambition and commitment of researchers to ensure their research is translational and will have an impact on the ground.

• Delivering the third annual retreat entirely online was a lowcost and innovative solution to the restrictions imposed by the COVID pandemic.

• Embedded support from communications experts and professional staff ensured effective programme management, and helped academics extend the reach of their research.

• The £1 million, three-year grant to run the Oxford Martin Programme on Informal Cities generated an additional opportunity to leverage synergies with PEAK. Research projects of both programmes benefited from access to existing management, decision making, dissemination and engagement structures.

Equity

• The programme made a significant contribution to developing the capacities and careers of early-career researchers, including from the global south. For 203 of papers, the lead author was not from the UK. 133 of papers and 10 of datasets are now available open access platforms. 41 of the PEAK cohort were women.

• Supported by senior staff, many early career researchers progressed from the PEAK Programme to academic and other roles. Building on strong records of publication and engagement others are also well placed to do so. The Programme provided many opportunities for urban dwellers, particularly women, poor and marginalised residents, to share their views and experience with policy makers. This should lead to more equitable urban policy and ultimately to better settlements, services, and livelihoods in future.

So what?

• Developing a cohort of ECRs with increased ability to work across disciplines and engage with external stakeholders is a significant contribution to ensuring researchers and urban actors work effectively together to create the resilient, sustainable cities of the future.

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• Case-study based on responses to a written questionnaire sent to a sample of post-docs, and four interviews by Zoom with academic leaders and post-docs. Written by Louie Fooks. Managing editor, Francisco Obando.

 This information was gathered and is up to date to January 2022. For further updates visit the PEAK Urban website or contact Francisco Obando at francisco.obando@compas.ox.ac. uk



About us

The PEAK Urban programme aims to aid decision-making on urban futures by:

1. Generating new research grounded in the logic of urban complexity;

2. Fostering the next generation of leaders that draw on different perspectives and backgrounds to address the greatest urban challenges of the 21st century;

3. Growing the capacity of cities to understand and plan their own futures.

In PEAK Urban, cities are recognised as complex, evolving systems that are characterised by their propensity for innovation and change. Big data and mathematical models will be combined with insights from the social sciences and humanities to analyse three key arenas of metropolitan intervention: city morphologies (built forms and infrastructures) and resilience; city flux (mobility and dynamics) and technological change; as well as health and wellbeing.

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Our framework



The PEAK Urban programme uses a framework with four inter-related components to guide its work.

First, the sciences of **Prediction** are employed to understand how cities evolve using data from often unconventional sources.

Second, **Emergence** captures the essence of the outcome from the confluence of dynamics, peoples, interests and tools that characterise cities, which lead to change.

Third, **Adoption** signals to the choices made by states, citizens and companies, given the specificities of their places, their resources and the interplay of urban dynamics, resulting in changing local power and influencing dynamics.

Finally, the **Knowledge** component accounts for the way in which knowledge is exchanged or shared and how it shapes the future of the city.

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PEAK Urban is a partnership between:



