# From ENGAGEMENT To IMPACT

Through Knowledge Exchange and Co-Creation

Dr Saba Hinrichs-Krapels Visiting Fellow, King's College London Assistant Professor, Delft University of Technology



2011



Client-based research (Ministries, NGOs)

Studied pathways to impact (mainly biomedical research)



Supporting other researchers with creating impact (engagement activities, policy labs)

2014



The International School on Research Impact Assessment

2021







Health Systems
Design Research
and Practice
Book (2022)

Chapter 7 on **Engagement** 



# How does impact happen?

- 1. What the evidence says
- 2. What (some) researchers do
- What you could do to help

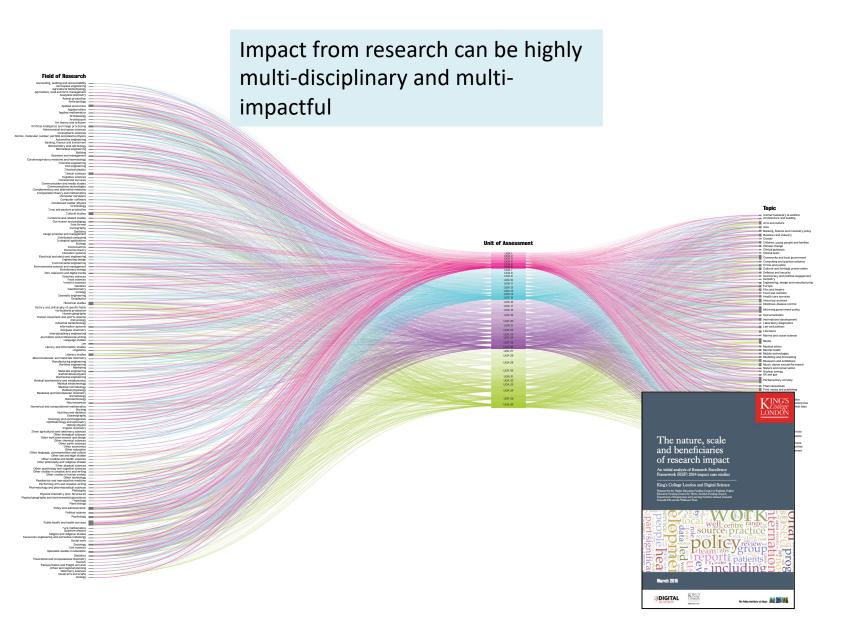




First, let's recap characteristics of impact:

- Varied: in disciplines and topics
- Can be direct and/or indirect
- Difficult to 'capture'
- Lags in time
- No global databases
- No standardised indicators for measuring it







King's College London and Digital Science. (2015). The nature, scale and beneficiaries of research impact. An initial analysis of Research Excellence Framework (REF) 2014 impact case studies. *HEFCE*.

Hanney et al. Health Research Policy and Systems https://doi.org/10.1186/s12961-020-00571-3 (2020) 18:61

Health Research Policy and Systems

COMMENTARY

**Open Access** 

# From COVID-19 research to vaccine application: why might it take 17 months not 17 years and what are the wider lessons?



Stephen R. Hanney<sup>1\*</sup>, Steven Wooding<sup>2</sup>, Jon Sussex<sup>3</sup> and Jonathan Grant<sup>4</sup>

#### Abstract

It is often said that it takes 17 years to move medical research from bench to bedside. In a coronavirus disease (COVID-19) world, such time-lags feel intolerable. In these extraordinary circumstances could years be made into months? If so, could those lessons be used to accelerate medical research when the crisis eases?

To measure time-lags in health and biomedical research as well as to identify ways of reducing them, we developed and published (in 2015) a matrix consisting of overlapping tracks (or stages/phases) in the translation from discovery research to developed products, policies and practice. The matrix aids analysis by highlighting the time and actions required to develop research (and its translation) both (1) along each track and (2) from one track to another, e.g. from the discovery track to the research-in-humans track. We noted four main approaches to reducing time-lags, namely increasing resources, working in parallel, starting or working at risk, and improving processes.

Examining these approaches alongside the matrix helps interpret the enormous global effort to develop a vaccine for the 2019 novel coronavirus SARS-CoV-2, the causative agent of COVID-19. Rapid progress in the discovery/basic and human research tracks is being made through a combination of large-scale funding, work being conducted in parallel (between different teams globally and through working in overlapping tracks), working at greater (but proportionate) risk to safety than usual, and adopting various new processes. The overlapping work of some of the teams involves continuing animal research whilst entering vaccine candidates into Phase I trials alongside planning their Phase II trials. The additional funding available helps to reduce some of the usual financial risks in moving so quickly. Going forward through the increasingly large human trials for safety, dosage and efficacy, it will be vital to overlap work in parallel in the often challenging public policy and clinical tracks. Thus, regulatory and reimbursement bodies are beginning and preparing rapid action to pull vaccines proving to be safe and effective through to extraordinarily rapid application to the general population. Monitoring the development of a COVID-19 vaccine using the matrix (modified as necessary) could help identify which of the approaches speeding development and deployment could be usefully applied more widely in the future.

**Keywords:** COVID-19, Coronavirus disease, SARS-CoV-2, Vaccine, Time-lags, Research translation, Matrix, Pandemic, Trials, Timescales, World Health Organization

<sup>1</sup>Health Economics Research Group, Brunel University London, Kingston Lane, Uxbridge, UK

Full list of author information is available at the end of the article



© The Author(s). 2020 Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons Incence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, wish truly/creativecommons.org/licenses/by/40/. The Creative Commons Public Domain Dedication waiter (http://creativecommons.org/picublicdomain/zero/1.0/) applies to the data made available in this article, unless otherwise stated in a credit line to the data.

Hanney, S. R., Wooding, S., Sussex, J., & Grant, J. (2020). From COVID-19 research to vaccine application: why might it take 17 months not 17 years and what are the wider lessons?. Health research policy and systems, 18, 1-10.

Morris ZS, Wooding S, Grant J. The answer is 17 years, what is the question: understanding time lags in translational research. J R Soc Med. 2011;104(12):510–20.



<sup>\*</sup> Correspondence: stephen.hanney@brunel.ac.uk

King's College London and Digital Science. (2015). The nature, scale and beneficiaries of research impact. An initial analysis of Research Excellence Framework (REF) 2014 impact case studies. *HEFCE*.

Bornmann L. What is societal impact of research and how can it be assessed? A literature survey. J Am Soc Inf Sci Technol. 2013;64(2):217–33.

Penfield T, Baker MJ, Scoble R, Wykes MC. Assessment, evaluations, and definitions of research impact: a review. Research Evaluation. 2014;23(1):21–32.

Greenhalgh T, Fahy N. Research impact in the community-based health sciences: an analysis of 162 case studies from the 2014 UK research excellence framework. BMC Med. 2015;13(1):232.

Hinrichs-Krapels S, Grant J. Exploring the effectiveness, efficiency and equity (3e's) of research and research impact assessment. Palgrave Communications. 2016;2:16090.

Guthrie S, Kirtley A, Garrod B, et al. A 'DECISIVE' Approach to Research Funding: Lessons from Three Retrosight Studies. Rand Health Quarterly. 2016;6(1):6. https://europepmc.org/article/med/28083434.

Wooding S. Mental health Retrosight: understanding the returns from research:(lessons from schizophrenia): policy report. RAND Europe; 2013.



But, we have some evidence to suggest there are *mechanisms towards* creating societal impact.

Trusted relationships need to be built

Stakeholders engaged

Knowledge mobilisation

Embedded researcher

Co-production, co-design



Public health research has impact 'along the way' if you count the interactions and engagements they have with hospitals and local councils.

Boulding et al. BMC Medical Research Methodology https://doi.org/10.1186/s12874-020-0905-7 (2020) 20:34

BMC Medical Research Methodology

#### **RESEARCH ARTICLE**

**Open Access** 

Mechanisms and pathways to impact in public health research: a preliminary analysis of research funded by the National Institute for Health Research (NIHR)



Harriet Boulding 1, Adam Kamenetzky 1, Ioana Ghiga², Becky loppolo², Facundo Herrera², Sarah Parks², Catriona Manville², Susan Guthrie² and Saba Hinrichs-Krapels 1, Ioana Ghiga², Becky loppolo², Facundo Herrera², Sarah Parks², Catriona Manville², Susan Guthrie² and Saba Hinrichs-Krapels 1, Ioana Ghiga², Becky loppolo², Facundo Herrera², Sarah Parks², Catriona Manville², Susan Guthrie² and Saba Hinrichs-Krapels 1, Ioana Ghiga², Becky loppolo², Facundo Herrera², Sarah Parks², Catriona Manville², Susan Guthrie² and Saba Hinrichs-Krapels 1, Ioana Ghiga², Becky loppolo², Facundo Herrera², Sarah Parks², Catriona Manville², Susan Guthrie² and Saba Hinrichs-Krapels 1, Ioana Ghiga², Becky loppolo², Facundo Herrera², Sarah Parks², Catriona Manville², Susan Guthrie² and Saba Hinrichs-Krapels 1, Ioana Ghiga², Becky loppolo², Facundo Herrera², Sarah Parks², Catriona Manville², Susan Guthrie² and Saba Hinrichs-Krapels 1, Ioana Ghiga?

#### Abstract

Background: The mechanisms and pathways to impacts from public health research in the UK have not been widely studied. Through the lens of one funder (NIHR), our aims are to map the diversity of public health research, in terms of funding mechanisms, disciplinary contributions, and public health impacts, identify examples of impacts, and pathways to impact that existing reporting mechanisms may not otherwise have captured, and provide illustrations of how public health researchers perceive the generation of non-academic impact from their work.

**Methods:** A total of 1386 projects were identified as 'public health research' by the NIHR and listed in the NIHR Public Health Overview database (2000–2016). From these, a subset of 857 projects were matched as potentially having begun reporting impacts via an external data-gathering platform (Researchfish). Data on the 857 projects were analyzed quantitatively, and nine projects were selected to investigate further through semi-structured interviews with principal investigators. Two workshops took place to validate emerging and final findings and facilitate analysis.

Results: In addition to the NIHR School for Public Health Research and the NIHR Public Health Research Programme, 89% of projects contained in the NIHR Public Health Overview portfolio as 'public health research' are funded via other NIHR research programmes, suggesting significant diversity in disciplines contributing to public health research and outcomes. The pathways to impact observed in our in-depth case studies include contributing to debates on what constitutes appropriate evidence for national policy change, acknowledging local 'unintended' impacts, building trusted relationships with stakeholders across health and non-health sectors and actors, collaborating with local authorities, and using non-academic dissemination channels.

Conclusions: Public health as a discipline contributes substantially to impact beyond academia. To support the diversity of these impacts, we need to recognise localized smaller-scale impacts, and the difference in types of evidence required for community and local authority-based impacts. This will also require building capacity and resources to enable impact to take place from public health research. Finally, support is required for engagement with local authorities and working with non-health sectors that contribute to health outcomes.

Keywords: Research impact, Public health, Impact pathways, Research impact assessment

\* Correspondence: saba.hinrichs@kcl.ac.uk

<sup>1</sup>The Policy Institute, King's College London, 22 Kingsway, London WC2B 6LE,

Full list of author information is available at the end of the article



© The Author(s). 2020 Open Access This article is distributed under the terms of the Creative Commons Attribution 4.0 international License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons Fublic Domain Dedication waiver (http://creativecommons.org/public/domain/zero/10/) applies to the data made available in this article, unless otherwise stated



Table 1 Key enablers to bring evidence closer to policymaking from literature.	
Enablers as described in literature	Related theme/principle
Collaboration (Oliver et al., 2014)	Trust
Relationship with policymakers (Oliver et al., 2014)	Trust
Building relationships with policymakers (Oliver and Cairney, 2019)	
Relationship with researchers/info staff (Oliver et al., 2014)	Trust
(Academics who) understand policy process (Oliver and Cairney, 2019)	Trust
(Academics who) engage routinely, flexibly and humbly (Oliver and Cairney, 2019)	Timing; Trust
Availability and access to research/improved dissemination (Oliver et al., 2014)	Timing; Translation
Clarity/relevance/reliability of research findings (Oliver et al., 2014)	Translation; Trust
High-quality research (Oliver and Cairney, 2019)	
Research relevant and readable (Oliver and Cairney, 2019)	



Oliver, K., Innvar, S., Lorenc, T., Woodman, J., & Thomas, J. (2014). A systematic review of barriers to and facilitators of the use of evidence by policymakers. *BMC health services research*, *14*(1), 1-12.

Greenhalgh, T., & Fahy, N. (2015). Research impact in the community-based health sciences: an analysis of 162 case studies from the 2014 UK Research Excellence Framework. *BMC medicine*, *13*(1), 1-12.

Boulding, H., Kamenetzky, A., Ghiga, I., Ioppolo, B., Herrera, F., Parks, S., ... & Hinrichs-Krapels, S. (2020). Mechanisms and pathways to impact in public health research: a preliminary analysis of research funded by the National Institute for Health Research (NIHR). *BMC medical research methodology*, 20(1), 1-20.

Ward V. Why, whose, what and how? A framework for knowledge mobilisers. Evidence Policy. 2017;13(3):477–97.

Vindrola-Padros C, Pape T, Utley M, Fulop NJ. The role of embedded research in quality improvement: a narrative review. BMJ Qual Saf. 2017;26(1):70–80.

Heaton J, Day J, Britten N. Collaborative research and the co-production of knowledge for practice: an illustrative case study. Implement Sci. 2015;11(1):20.

Seward, N., Araya, R., Hanlon, C., Harding, R., Hinrichs-Krapels, S., Lund, C., ... & Sevdalis, N. (2020). Protocol for participatory, theory-informed design of an implementation research programme for health system strengthening to improve the delivery of maternal, surgical and primary care in sub-Saharan Africa (ASSET). Implementation science, 15(SUPPL 4).

Redman S, Greenhalgh T, Adedokun L, Staniszewska S, Denegri S, et al. Co-production of knowledge: the future *BMJ* 2021; 372 :n434 doi:10.1136/bmj.n434

Oliver, K., Innvar, S., Lorenc, T., Woodman, J., & Thomas, J. (2014). A systematic review of barriers to and facilitators of the use of evidence by policymakers. *BMC health services research*, *14*(1), 1-12.



# 2 What (some) researchers do



# 2 What (some) researchers do

#### Co-creation/co-production:

"Despite the burgeoning literature, few studies have evaluated whether coproduction achieves its promise and the conditions which optimise its value."

#### Key learning:

- Context dependent
- Requires trust, genuine power sharing, and respect

#### Check for updates

- Sax Institute, Sydney, Australia
- University of Oxford, Oxford, Ur
- Doris Duke Charitable Foundation New York, USA
- Warwick Research in Nursing, Warwick Medical School, Univer of Warwick, Warwick UK
- 5 Academy of Medical Sciences, London, UK Correspondence to: S Redman Cite this as: BM/2021;372:n434 http://dx.doi.org/10.1136/bmin.43 bt/blished: 16 February 2021

#### CO-PRODUCTION OF KNOWLEDGE

#### Co-production of knowledge: the future

A new collection highlights the role of co-production in strengthening health systems

S Redman, <sup>1</sup> T Greenhalgh, <sup>2</sup> L Adedokun, <sup>3</sup> S Staniszewska, <sup>4</sup> S Denegri, <sup>5</sup> on behalf of the Co-production of Knowledge Collection Steering Committee

Co-production is a collaborative model of research that includes stakeholders such as patients, the public, donors, clinicians, service providers, and policy makers. It is a sharing of power, with stakeholders and researchers working together to develop the agenda, design and implement the research, and interpret, disseminate, and implement the findings.

Co-production has been embraced because of its potential to improve the quality and relevance of research and its effect on policy and practice. <sup>13</sup> This is nicely captured in the Thai concept of the "triangle that moves the mountain," whereby researchess, citizens, and policy makers work together to achieve change. <sup>4</sup>

However, co-production is not straightforward; it requires additional resources and takes much longer than traditional resources and takes much longer than traditional conflict, although surfacing and working through stakeholder conflicts may be highly productive in the longer term. Despite the burgeoning literature, few studies have evaluated whether co-production achieves its promise and the conditions which optimise its value. Nonetheless, our experience and the articles in this BM/ collection (www.bmj.com/co-producing-knowledge) suggest the following considerations will be important.

Firstly, co-production is highly context dependent.6 What works well in one situation and at one time may be impossible in another. Whether and how co-production can occur will be determined by systemic issues, including the culture and development of the health and policy system, resourcing and leadership, the wider culture, and the evolution and drivers of the research sector.7-9 There is much to learn from examining how co-production works in diverse settings, including low and middle income countries, where local ownership of solutions is vital. However, most research has so far been in highly developed settings, with less than 2% of co-production literature examining low and middle income countries. 10 This collection is beginning to address this imbalance.

Secondly, co-production requires trust, genuine power sharing, and respect for the different expertise brough thy stakeholders. Trust also relies on effective communication and honest discussions about what can and cannot be done; it can be assisted by upfront agreement about basic principles such as mutual respect, openness, and reciprocity." Knowledge brokers can help improve communication and develop shared expectations. <sup>12</sup> Critically, trust is built by working together over time—sharing views and tackling challenges as a team.

Trust is particularly important in working with less powerful stakeholders. 8,733,41 In low and middle income countries funders and donors may need to reorient their views to place more trust in local knowledge. 9%, new kinds of funding from USAID and other donors have supported initiatives to build trust and facilitate co-production. 9 In Australia, research involving Aboriginal people has often been perceived as exploitative. Despite this history, long term partnerships, leadership by Aboriginal communities, commitment to capacity building, and upfront agreement about who determines priorities and owns the information can enable trust and effective co-production. 9

Thirdly, there is now substantial interest in the practical requirements for co-production, including skills, systems, and incentives. For example, it has proved possible to build skills and systems to increase the use of research by policy agencies<sup>18</sup> and to strengthen researchers' skills and confidence in their ability to build relationships and communicate their research findings. <sup>19</sup> Universities could encourage co-production by placing greater value on impact. However, this will depend on the capacity to measure research impact in more sophisticated ways that canture the value to end users. <sup>17,120</sup>

Finally, a different approach to research funding will be needed to support the complex partnerships necessary for co-production. Historically, research funding was mainly provided for short term projects and did not effectively support the development of long term partnerships or collaborative infrastructure Beran and colleagues describe the need to fund "partnerships rather than projects." More recently, many agencies have established funding opportunities that support long term relationships and co-production (such as the Doris Duke Charitable Foundation's African Health Initiative, 15 Australia's National Health and Medical Research Council partnership centres, the UK's collaborations for leadership in applied health research and care, and Canada's knowledge to action grants). These are to be encouraged as critical to co-production.

As this collection shows, there is much interest and activity in co-production. No doubt our thinking will evolve over the next few years. Recently, for example, we have gained new insights about co-production from responses to covid-19, including the value of

the **bmj** | *BMJ* 2021;372:n434 | doi:10.1136/bmj.n434

**TU**Delft

# 2 What (some) researchers do

- Advisory panels for external engagement
- Social media presence: Twitter, Blog, LinkedIn
- Policy briefs, leaflets, website
- Create 'user committees' in their grants/projects
- "Formal" methods. e.g. Policy lab



#### palgrave communications HUMANITIES | SOCIAL SCIENCES | BUSINESS



#### **ARTICLE**

Check for updates

https://doi.org/10.1057/s41599-020-0453-0

#### Using Policy Labs as a process to bring evidence closer to public policymaking: a guide to one approach

Saba Hinrichs-Krapels 12, Jocelyn Bailey<sup>2</sup>, Harriet Boulding<sup>1</sup>, Bobby Duffy<sup>1</sup>, Rachel Hesketh<sup>1</sup>, Emma Kinloch<sup>1</sup>, Alexandra Pollitt<sup>1</sup>, Sarah Rawlings<sup>1</sup>, Armida van Rij<sup>1</sup>, Benedict Wilkinson<sup>1</sup>, Ross Pow<sup>3</sup> & Jonathan Grant<sup>1</sup>

**ABSTRACT** While robust evidence is one ingredient in the policymaking process, it is by no means the only one. Engaging with policymakers and the policymaking process requires collaborative working models, navigating through the experiences, values and perspectives of policymakers and other stakeholders, as well as communicating evidence in an accessible manner. As a response to these requirements, over recent years there has been proliferation of activities that engage producers of evidence (specifically, academics), policymakers, practitioners, and the public in policy formulation, implementation and evaluation. In this article, we describe one engagement approach for facilitating research evidence uptake into policy and practice—an activity called a 'Policy Lab'—as conducted by the team at The Policy Institute at King's College London on numerous policy challenges over the past four years. Drawing on our experience in running 15 Policy Labs between January 2015 and September 2019, we (a) provide a guide to how we have run Policy Labs, while sharing our learning on what has worked best in conducting them and (b) demonstrate how these labs can contribute to bringing evidence closer to policy making, by comparing their characteristics to enablers for doing so identified in the literature. While this approach to Policy Labs is not the only one of its kind, we suggest that these types of Labs manifest characteristics identified in previous studies for influencing the policymaking process; namely: providing a forum for open, honest conversations around a policy topic; creating new networks, collaborations and partnerships between academics and policymakers; synthesising available evidence on a policy topic in a robust and accessible format; and providing timely access to evidence relevant to a policy issue. We recognise the limitations of measuring and evaluating how these Labs change policy in the long-term and recommend viewing the Policy Lab as part of a process for engaging evidence and policymaking and not an isolated activity. This process serves to build a coalition through participation of diverse communities (thereby establishing 'trust'), work on the language and presentation of evidence (thereby enabling effective 'translation' of evidence) and engage policymakers early to respond when policy windows emerge (thereby taking into account 'timing' for creating policy action).

Hinrichs-Krapels, S., Bailey, J., Boulding, H., Duffy,

B., Hesketh, R., Kinloch, E., ... & Grant, J. (2020).

Using Policy Labs as a process to bring evidence

closer to public policymaking: a guide to one approach. Palgrave Communications, 6(1), 1-9.

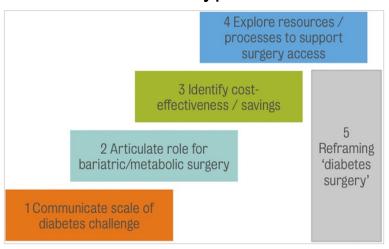
### Bariatric surgery for type 2 diabetes

Aim: Identify practical and conceptual barriers to the use, where appropriate, of bariatric surgery for the treatment of type 2 diabetes.

Participants: Twenty-six including academics, clinicians, policymakers, industry leaders and patient representatives

Length: 4 h

Report: Journal article



#### Outcomes:

- Crystallise role of bariatric surgery in the treatment of type 2 diabetes for patients of higher BMI.
- Barriers to overcome' presented to attendees of the World Congress on Interventional Therapies for Type 2 Diabetes
- NICE diabetes guidelines were updated in 2018 to link inclusion of bariatric surgery as 'one option' for high BMI



# Taking a stand against bullying: addressing mental health problems from within

Aim: Is it valuable, feasible and acceptable to strengthen interventions focusing on victims and potential victims of bullying in order to reduce and prevent mental health problems?

Most research focusses on bullying behaviour – we examine a focus

on the victim and interventions for them

Participants: 20+ Report: Policy brief

#### **Outcomes:**

- Identified Valuable, feasible, acceptable intervented ego building resilience, teacher training
- Plan for government support (but not yet implemented)

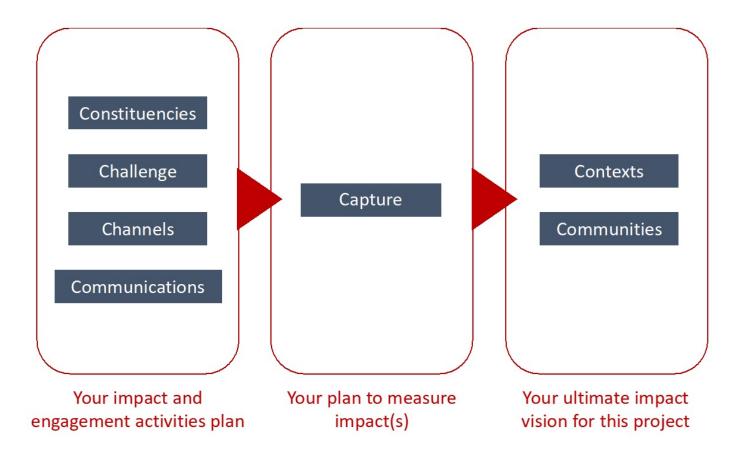




What are the wider environmental, political, social, technological, legal Contexts and/or economic contexts to which your research may be relevant? Communities Who are the communities and beneficiaries of your research? Constituencies Who has a (positive) interest in your project and can influence change? What is the situation, and challenge, you will solve through your Challenge research questions? Channels What approaches will you use to reach those constituencies? Communication What is the appropriate style, tone and structuring needed to get your main message across? Capture How will you demonstrate your impact?



Sreenan, N., Hinrichs-Krapels, S., Pollitt, A., Rawlings, S., Grant, J., Wilkinson, B., ... & Kinloch, E. (2019). Impact by design: Planning your research impact in 7Cs. *Emerald Open Research*, 1(18), 18.





Sreenan, N., Hinrichs-Krapels, S., Pollitt, A., Rawlings, S., Grant, J., Wilkinson, B., ... & Kinloch, E. (2019). Impact by design: Planning your research impact in 7Cs. *Emerald Open Research*, 1(18), 18.

- Encourage co-production
- Advise to do stakeholder mapping
- Teach/encourage non-academic communication: 'Turn your paper on its head', infographics, policy briefs, social media
- Have a pathways to impact support service

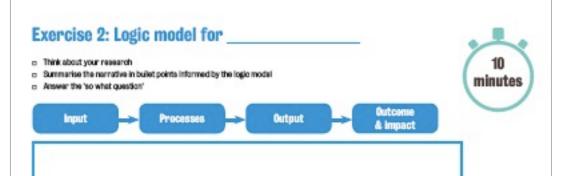




# Impact by design Course workbook

14 October 2015

Delivered by the Policy Institute at King's



**EXERCISE** What methods do you already use? What could you start realistically?

