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# The User Dimension of Scientific Impact – conceptualising policy-making conditions for understanding the impact of research upon policy

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Impact of R&I Policy at the Crossroads of Policy Design,  
Implementation and Evaluation Conference  
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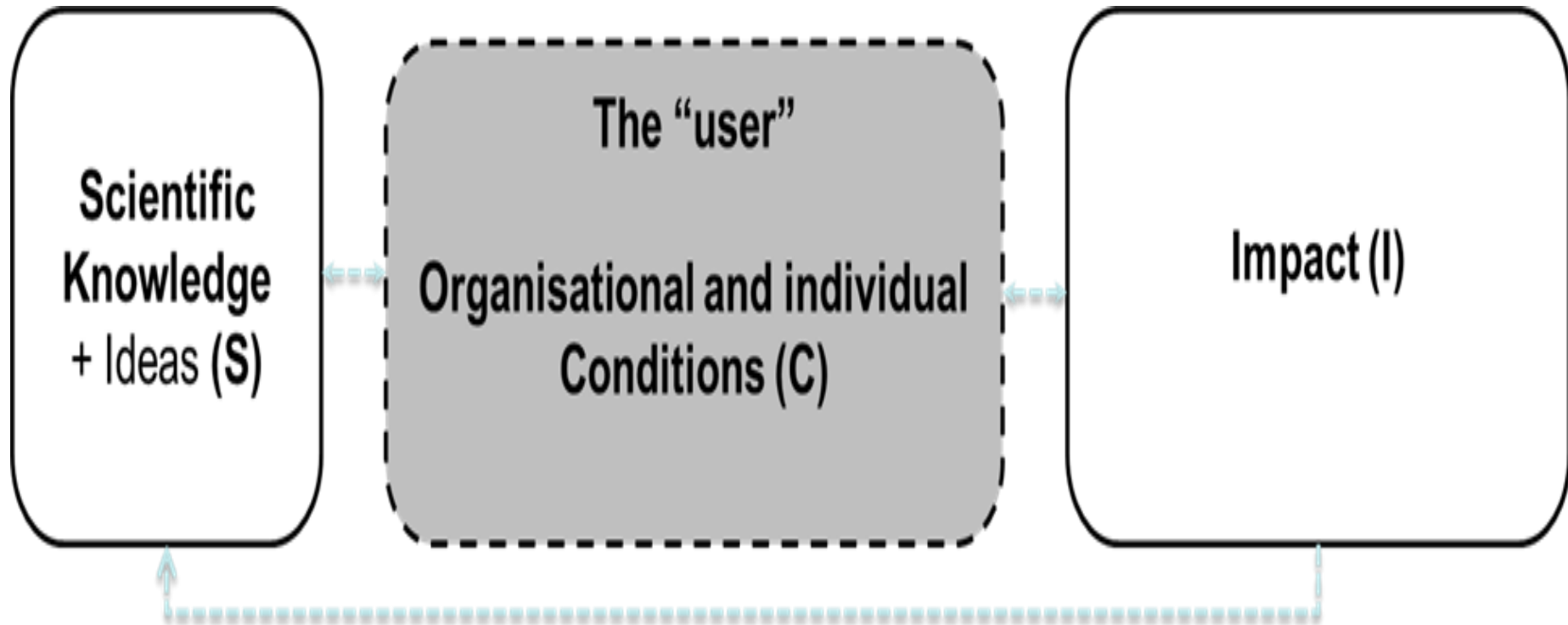
# Background: who is responsible for the impact of scientific research?

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- Publicly funded research is asked to have high impact on policy, economy and society as a whole
- Increasingly, **evidencing this impact** is important
- The onus is on researchers, universities, institutes to generate impact - when it does not happen, it is their responsibility?  
(collaborative research, adding on dissemination, “users” in advisory panels)

- Focus on **knowledge users** in public policy
  - **personal characteristics, institutional conditions**
- ...and their **interactions**
  - not a formalistic “dissemination” or heroic “co-generation”  
...while taking note of conditions, behaviour, interaction of  
scientists
- Fill a gap:
  - political science approach where scientific input or experts is one variable
  - science system, scientists and linkage mechanisms are kept (inter-organisational processes)
  - we fully adopt a process perspective on impact (SIAMPI, ASIRPA)

# Our basic Idea S-C-I Framework



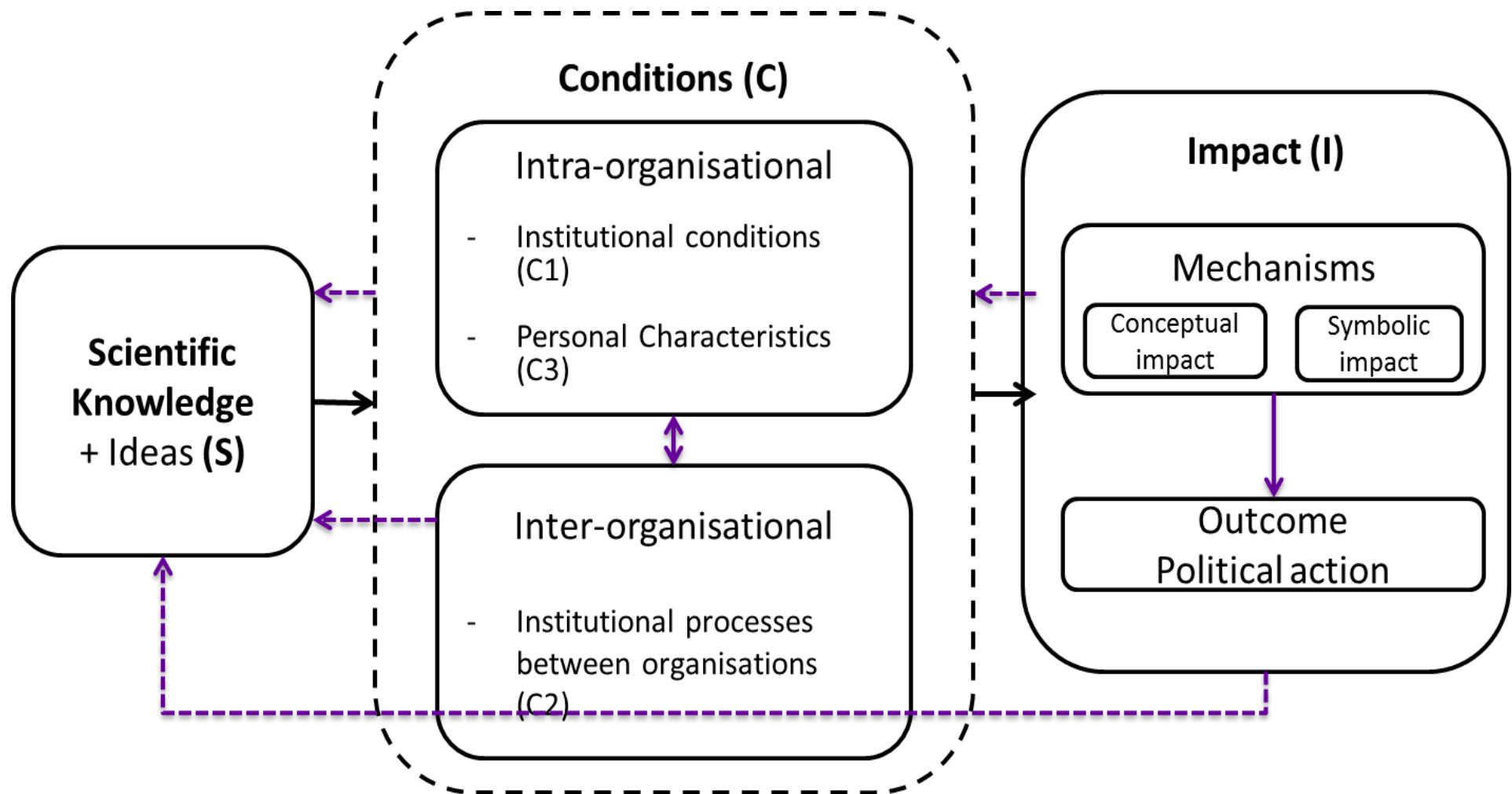
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- **Reflexive institutionalism** is an approach from political science that helps explain policy change as a change in cognition, ideas, frames of meaning (Schmidt, 2015; Edler, 2002)
  - **Institutional conditions shape identities, motivations, practices and strategies of “users”** (based on Scott 2013)
    - Socio-cognitive: (socially mediated) frames of interpretation, meaning
    - Normative: guiding values, norms, collective processes shaping expectations
    - Regulative: formal rules, incentive structures
  - **Conditions found within a ‘user’ policy organisation influence impact**
  - **Conditions shape interactions between organisations**

## ■ Impact: nature

- Classic definition: conceptual, instrumental and symbolic (Pelz, 1978; Weiss 1999)
- **We propose 2 levels of impact on policy:**
  - Impact on the '**outcome**' of policy process, evidenced in political action
  - Impact on thinking/valuing explaining the **mechanisms** through which the outcome is reached.
    - (i) conceptual
    - (ii) symbolic

- Policy change as result of scientific input
- Nature of normative and cognitive ideas in evidence and their (co-) production
- Nature of discourse and discursive interaction (“producer and user”)
- **Regulative, normative and cognitive** conditions and processes
  - **...within organisations** (search, use)
  - **...of interaction** (e.g. science-policy; or policy-intermediaries)
    - Exchanges and deliberations between science and policy organisations
    - Co-creation of meaning and expectations

*Broader, contextual institutional conditions, role of science in society*







A longitudinal case study in a policy organisation in Greater Manchester (negotiation)

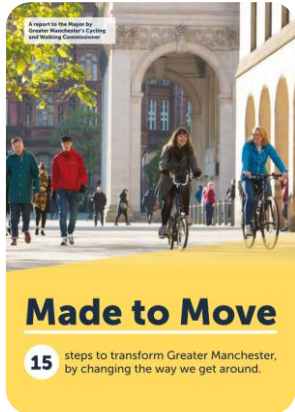
A case study on the use of research in UK Parliament



A comparative survey in the Norwegian and the UK Government

# Greater Manchester Transport Policy Landscape

December 2017

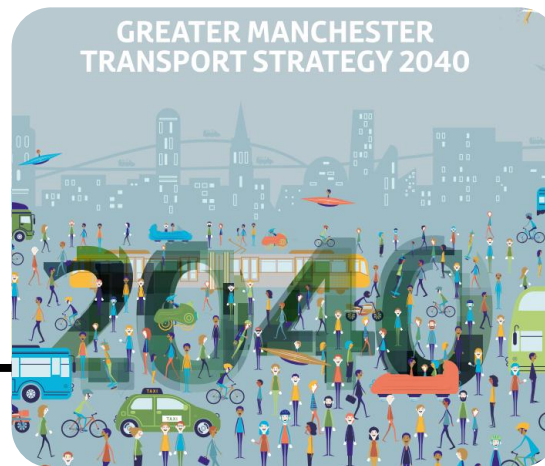


“An Integrated Approach”

March 2018



February 2017

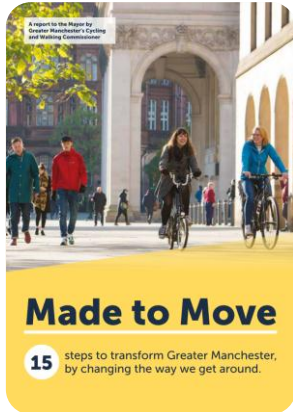


June 2018

+ 5-year implementation plans

# Greater Manchester Transport Policy Landscape

December 2017



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“An Integrated Approach”

February 2017



March 2018



GREATER MANCHESTER  
AIR QUALITY ACTION PLAN  
2016-2021

2016



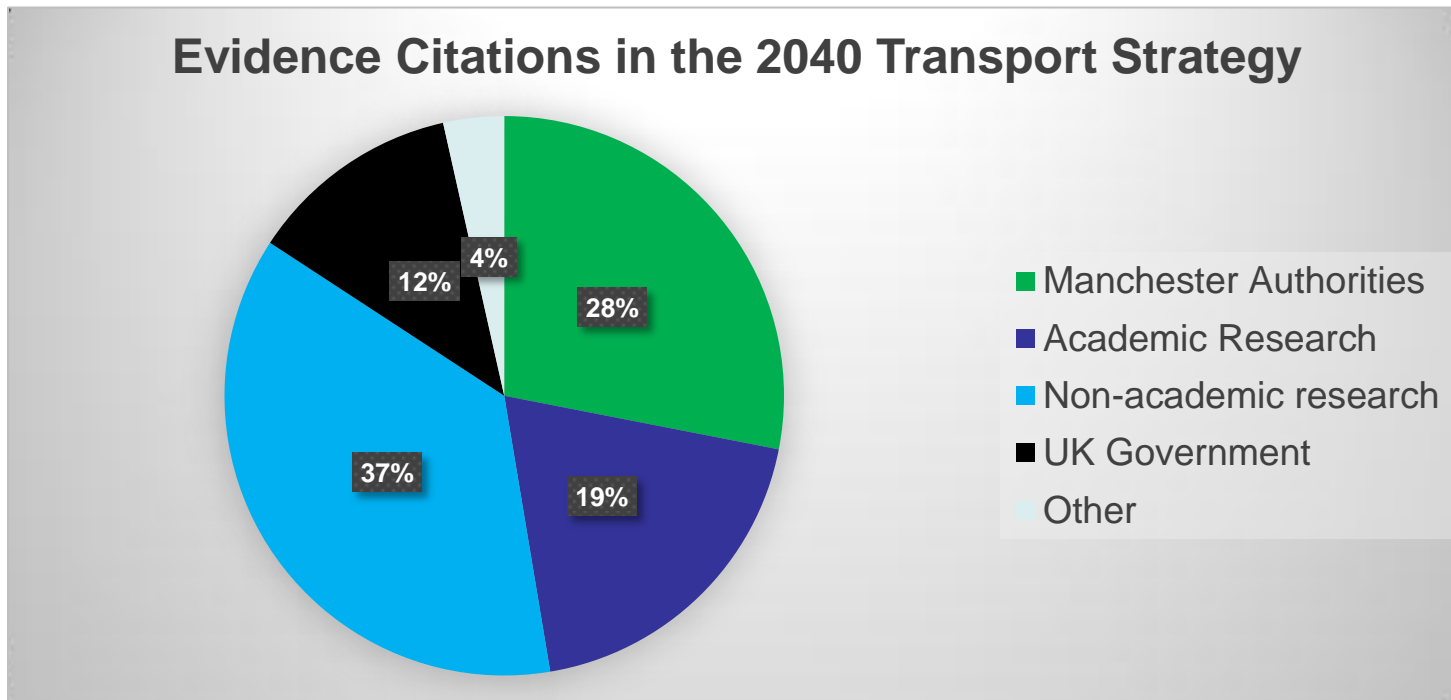
All developed by:



# 2040 Transport Strategy

## Evidence Base

- Extensive use of **data** (local and UK), including geospatial and statistical data
- Draws on a **wide range of sources**
- The role of evidence: mostly to supply data. On rare occasions, normative statements are made based on the evidence.
- Heavily draws on **research conducted or commissioned by the local Manchester authorities** (TfGM, GMCA, consultations and commissioned reports in equal measure)
- 114 total citations to evidence; 22 unique academic citations



# Scientific Research Influences high level thinking, but is used arbitrarily

**To state a cause-effect relationship or an association between phenomena – usually generic and large-scale, to introduce the topic**

- “Inequality is linked strongly with negative societal impacts”

**To provide evidence from outside the UK**

- Case study on the autonomous traffic management in Singapore; commuters in Norway; bike sharing in Poland

**To argue against a certain viewpoint, or for an unconventional explanation**

- “While organisations like INRIX have observed correlations between increasing congestion and economic growth, academics stress the need to effectively de-couple these two elements...”

**To explain future trends in technology and other innovations worth trying out (pre-selected)**

- “Intelligent and “swarm” robots can work simultaneously towards a single goal due to the utilisation of a “hive mind”, also known as an intelligently connected network.”

**Simply as data to quantify a phenomenon**

**Academic Citations are distributed unevenly in S2040**

Evidence Base Section	Academic Cites
Travel in GM	0%
Economy and Employment	0%
Society and Community	45%
Urban Development	0%
Environment and Resources	5%
Technology and Innovation	50%
Policy and Governance	0%

# What we add...

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- **We reverse the science biased focus**
- **Allow proper “demand side assessment”** (Sarewitz/Pielke 2007)
- We propose **reflexive institutionalism** taking
  - **content** and
  - **institutional conditions** seriously, at various levels
- We distinguish types of impact, **focus on neglected *conceptual* impact**
- ...and in doing so might better understand (lack of) **instrumental impact**

# Thank you!

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