



# ICCAN health programme

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# Aims of this session

Recap of health programme

Recap of work delivered so far

Present approach to prioritising health research

Next steps and questions



# Recap of health programme

The first Corporate Strategy objectives on health said that we would:

- update existing reviews of the available evidence on the links between noise and health
- consider making recommendations for further study.

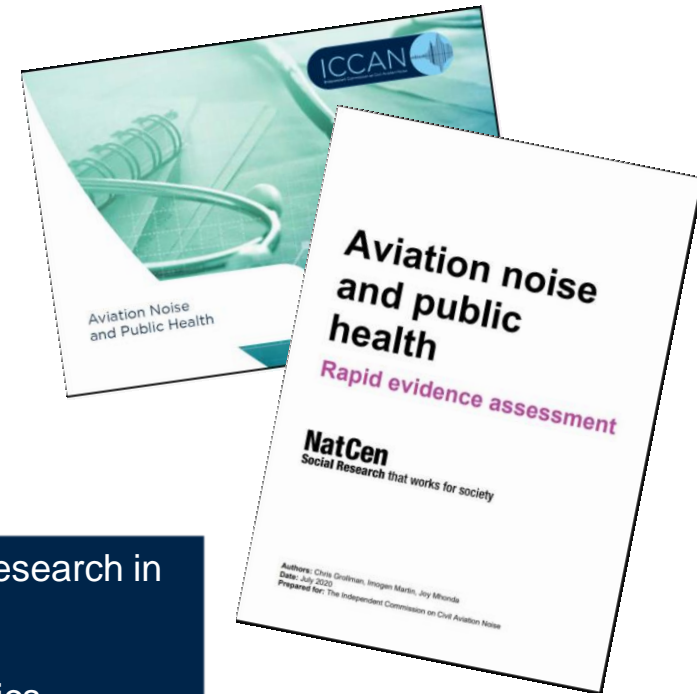
The emerging view objectives on health for the second Corporate Strategy include:

- putting people's health and wellbeing at the heart of aviation noise policy
- leading research into the health and wellbeing impacts of aviation noise.

# Recap of work delivered so far

We have commissioned and published NatCen’s review of the evidence on the health effects of noise which highlighted gaps in the health evidence.

This found that there is no single clearly defined evidence gap in the health research, but recommended strategies for how to prioritise further studies.



Following on from this we will develop a strategy for delivering research in the short- and long-term by:

- identifying priority health outcomes and selecting noise metrics
- investigating a range of study designs with varying strengths, weaknesses and resource implications.



# Objectives of the health programme

## **Use a robust methodology to identify priority areas for research on the impact of aviation noise on health by:**

- bringing together all parties interested in health impacts of aircraft noise
- eliciting their priorities for further health research
- establishing what is possible (scientific feasibility, practicability, funding)
- making recommendations for short- and long-term research that will underpin evidence-based policy and decision making.

## **Establish the role could ICCAN have in the noise-health arena by:**

- acting as an advocate for health research to publicise effects and obtain funding
- considering options for a longer-term role in the noise-health field.



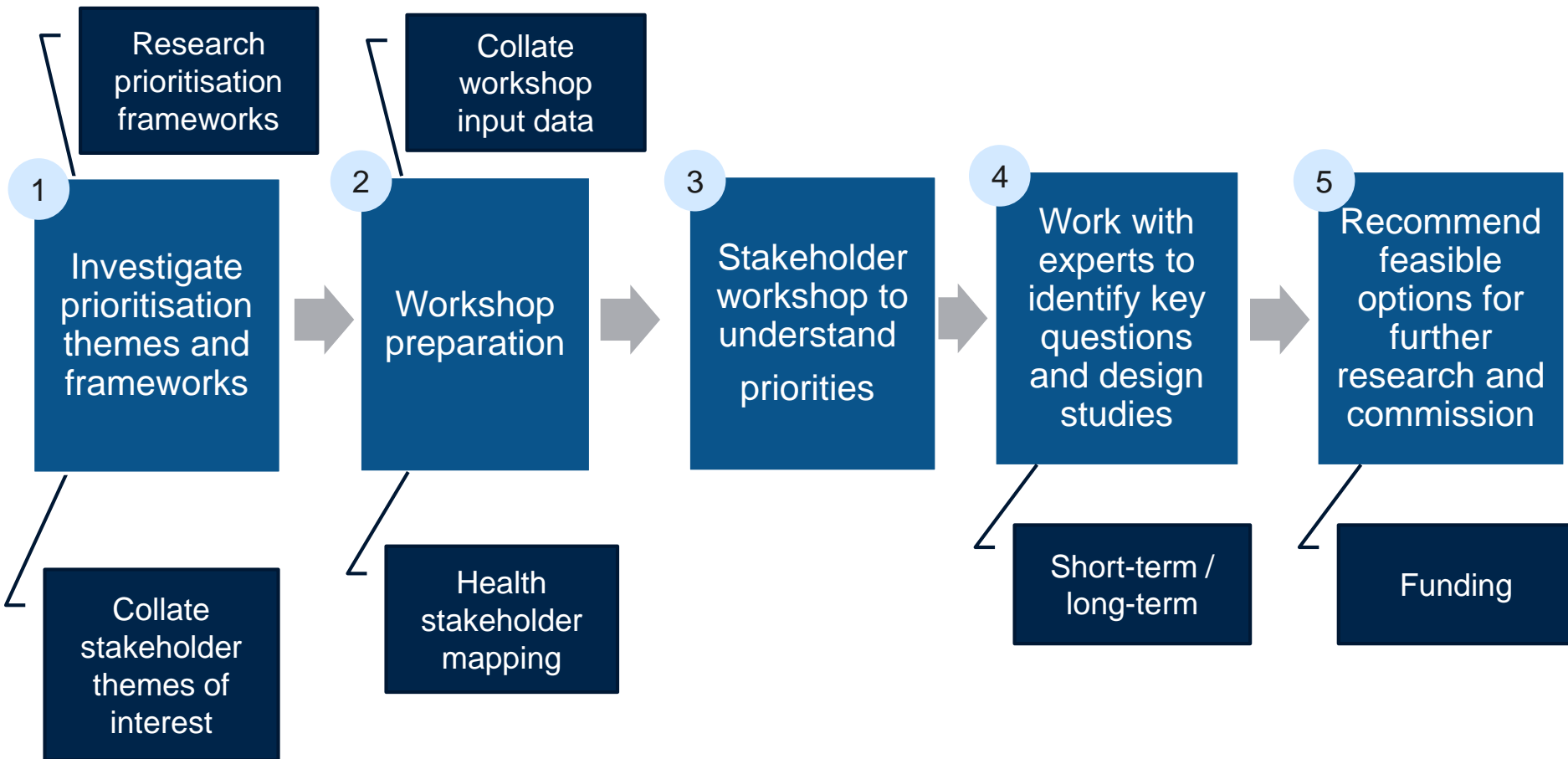
# The prioritisation project

Prioritisation is a complex process in which the following points should be remembered.

- There is no single answer as to which outcomes are “most important” and for which to seek higher quality evidence.
- There are several aspects to consider – the NatCen review produced health perspectives but there are wider societal, policy and commercial viewpoints.
- As an independent commission ICCAN should consult widely and be as transparent as possible in setting priorities in order to make credible, widely accepted recommendations for future studies.



# How we will approach the prioritisation work



## Stakeholder workshop to understand priorities

	Sleep, biomarkers	Disease	Cognition	Depression, wellbeing	Noise metrics
Review evidence under-researched weak evidence nearly policy grade pandemic effects	auto-immune hypertension sleep, waist circ	dementia, births diabetes, cancer stroke incidence	reading, memory	-	-
Health impact population burden	Hypertension	diabetes	-	-	-
Populations views	-	-	education	QoL	-



# Identify key questions and design studies

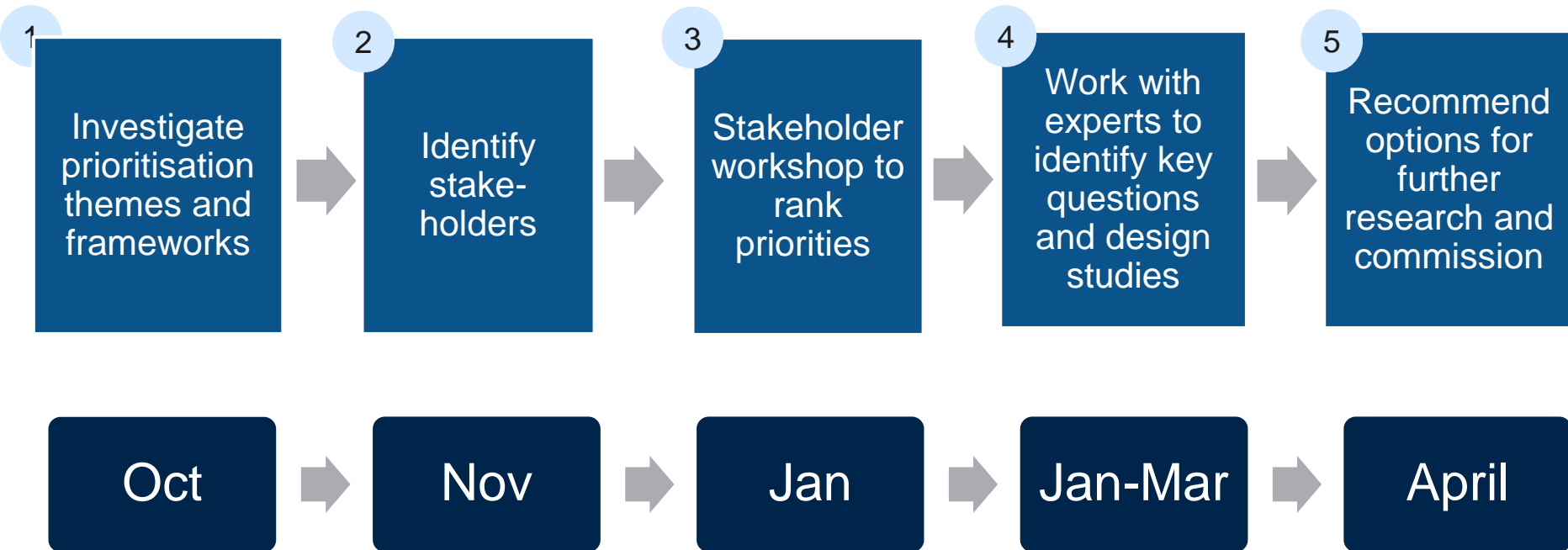
Study design	Description	Strengths	Limitations	Example
Cross sectional	Population is examined at a given point in time	<ul style="list-style-type: none"> <li>Relatively quick and low cost</li> </ul>	<ul style="list-style-type: none"> <li>Cannot assess causation</li> </ul>	HYENA
Ecological	Compare regional health and noise	<ul style="list-style-type: none"> <li>Population not individual level</li> </ul>	<ul style="list-style-type: none"> <li>Weaker evidence</li> </ul>	CVD admissions & mortality
Longitudinal	Participants followed up over time to assess disease	<ul style="list-style-type: none"> <li>Can show causation</li> <li>Less potential for recall bias</li> </ul>	<ul style="list-style-type: none"> <li>Relatively long</li> <li>High cost</li> <li>Differential attrition</li> </ul>	NORAH
Data-linkage	Linkage of health and noise data	<ul style="list-style-type: none"> <li>Exploits existing data</li> <li>Individual level analysis</li> </ul>	<ul style="list-style-type: none"> <li>Few relevant datasets</li> <li>Available outcomes</li> </ul>	ANCO, RISTANCO
Case-control	Compare a group of individuals with disease against a group without	<ul style="list-style-type: none"> <li>Efficient for rare outcomes</li> <li>Quick if retrospective</li> </ul>	<ul style="list-style-type: none"> <li>Defining suitable control sample can be difficult</li> </ul>	Hypertension in a health insurance database
Experimental	Apply exposure and measure outcomes	<ul style="list-style-type: none"> <li>Can measure dose-response</li> </ul>	<ul style="list-style-type: none"> <li>May not reflect real world</li> </ul>	Lab noise / sleep studies
Meta-analysis	Pooled effects of existing studies	<ul style="list-style-type: none"> <li>Quick</li> <li>Strengthens evidence</li> </ul>	<ul style="list-style-type: none"> <li>Dependent on comparable measures</li> </ul>	WHO 2018 review Current PHE review

# Proposed stakeholders

Area of interest	Institution or group
Academic health experts in noise-health	Leicester University
	University of Pennsylvania
	QMUL
	RIVM
	NORAH study
	Air Quality and Noise Unit, EC
	SINTEF (Norwegian Research Institute)
Policy at national and local level	Directors of Public Health in LAs
	Local authorities
	Defra, IGCB
	CAA
Community - campaign groups, other	Heathrow
	Scotland, northern, midlands, southern
Commercial - airports, consultants	Heathrow Airport
	AEF (Aviation Environment Federation)
	Sustainable Aviation
	Other non-Heathrow
Expert Panel	ARUP
	PHE
	Red Kite Acoustics Ltd



## Milestones in the prioritisation work



# Questions

[www.iccan.gov.uk](http://www.iccan.gov.uk)

