



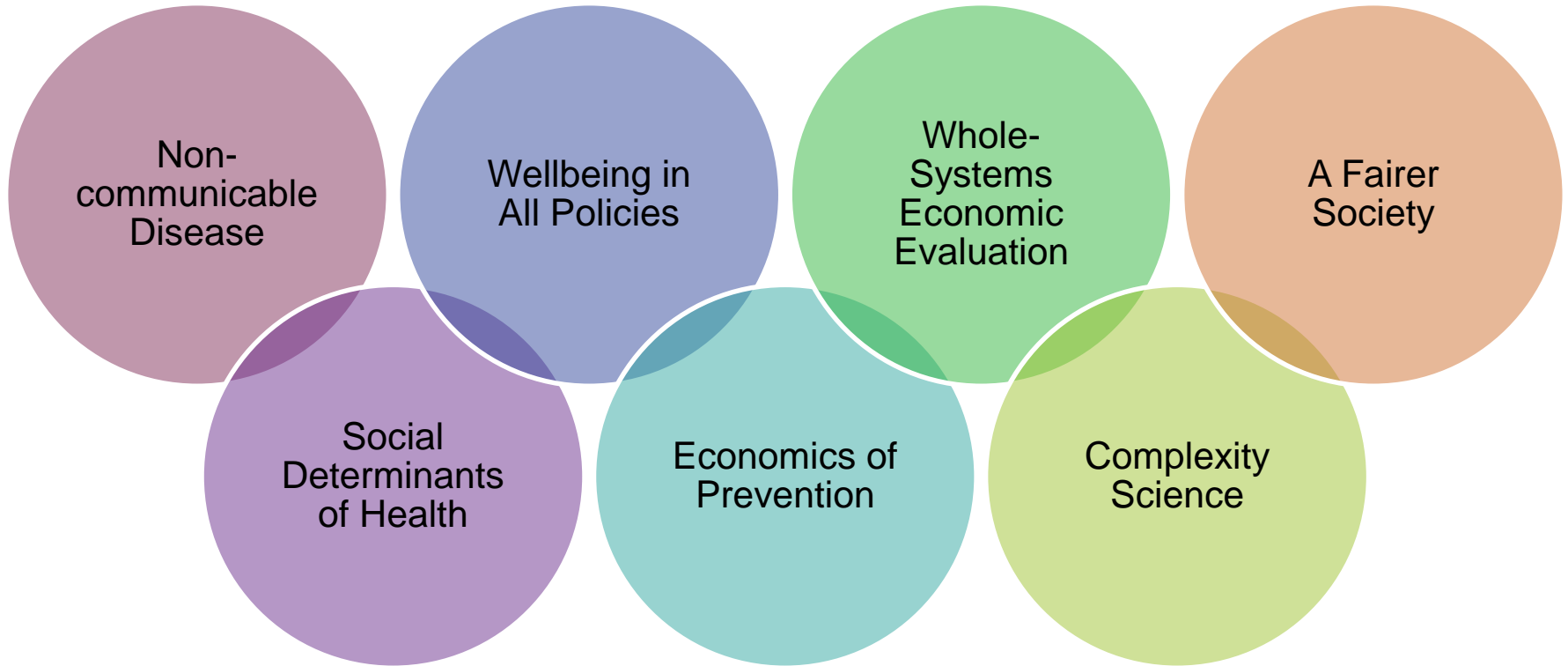
## **Systems Science In Public Health & Health Economic Research SIPHER Consortium**

**A research programme for Health & Wellbeing in All Policy**

**Prof Petra Meier, SIPHER Director  
University of Sheffield**



# What is SIPHER?



# Our vision

Evidence to enable a shift from “*public health*” policy  
to **healthy public policy**  
to improve wellbeing & tackle inequalities



# What is SIPHER?

SIPHER is a £5m, 5-year investment by the UK Prevention Research Partnership (UKPRP). It brings together

scientists in six universities

three government partners - local, regional & national

ten practice partner organisations



The University of Sheffield.

UNIVERSITY OF LEEDS



THE UNIVERSITY of EDINBURGH



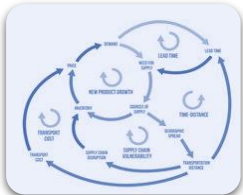
# Why do we need a systems science approach?



Health is determined by policies in sectors other than health  
*but health policy evidence often does not speak to these sectors.*



Social policies have wide-ranging consequences  
*but economic evaluations often have narrow sets of inputs and outputs*

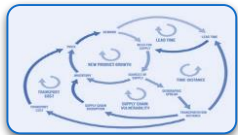


Complex causal pathways connect policy and effects  
*but focus is on short-term, direct policy outcomes, ignoring indirect, interdependent, long-range consequences.*

# What is SIPHER hoping to achieve?



A new systems-science approach to policy effectiveness and cost-effectiveness research



Novel insights into complex cause-and-effect systems, initially in 4 policy areas



Real-time policy appraisal and monitoring across sectors (e.g. cross-sector business cases, monitoring of effects as they emerge)



Lasting impact on partners' policy decision processes

# Who are the Policy Partners?

## Local

**Sheffield City Council** (population: 570,000): aims to become a “public health organisation”. Move to HiAP because “public health cannot buy back health lost in other sectors”.

## Regional

**Greater Manchester Combined Authority:** new city-region (population: 2.7 million) with devolved powers. Large economy, with an ambitious lifecourse and place-based strategy.

## National

**Scottish Government** (population: 5.3 million): strategic priorities around societal fairness and wellbeing creation, with multi-sectoral strategies to tackle social, economic and health inequalities

# How will we ensure the integration between research & policy?

## Co-production in SIPHER



Policy partners  
are SIPHER  
co-  
investigators



4 researchers  
employed by  
partner  
organisations



Co-investment  
by academic &  
policy partners



Focus on  
policy  
partners'  
priorities



Jointly  
responsible for  
wellbeing  
gains





## SIPHER's initial policy areas



Inclusive Economic Growth (all)



Housing (GMCA)



Mental Wellbeing (Scottish Gov)

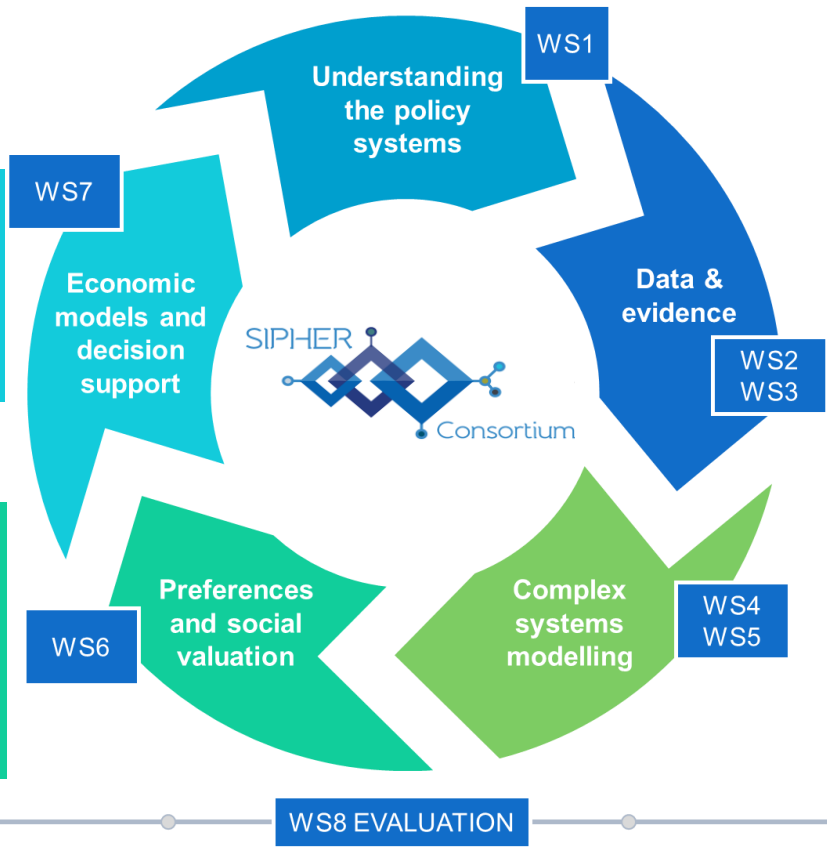


Adverse Childhood Experiences  
(Sheffield CC)

# What does the research involve?

- ✓ Costs & benefits of (dis)investment decisions
- ✓ Visualisations of outcome profiles over time

- ✓ Public and stakeholder valuation of outcomes, e.g. more income vs more health vs more equitable wealth distribution



- ✓ Qualitative research on cross-sector policy processes & the role of evidence

- ✓ Evidence reviews
- ✓ Data infrastructure for system monitoring
- ✓ Simulated (synthetic) populations for 3 areas

- ✓ System dynamics model
- ✓ Dynamic policy microsimulation

- ✓ A systems science framework for public health and economic evaluation research

## **First year priorities: Understanding the Inclusive Economic Growth policy system in the three partner organisations**

- Who are the stakeholders?
- What is the political context? (policy ambitions, narratives, strategies, barriers)
  - What influences what in the IG system? (causal mapping workshops, public involvement work)
    - What is known? (review of the IG literature)
      - Model requirements for microsimulation and macro-level modelling
- What models are available/can be repurposed? (review of existing models & tools)
  - What data is required, what is available? (data strategy, audit & acquisition)
  - What IG outcomes matter most to the public? (valuation of different outcome domains)

# How will we know if it has worked?

## Initial 5-year investment

New methods and tools in routine use by consortium partners

Evidence informs policy, early effects on social determinants of health

New partnerships (academia & policy)

## Next 5-years

METHODS used by researchers in UK & internationally

TOOLS used for budget decisions beyond partners

EVIDENCE drives policy action beyond partners

Systems MONITORING reduces costs and human suffering from failed policies

## Long-term vision for UKPRP Impact

Cost-effective prevention solutions delivered at scale

↓ disease burden & health inequalities  
↑ inclusive growth

# Who will help us get there?



Also – Health Foundation, CPP...



Please come & talk to SIPHER team members

or email us, follow us on twitter etc

[www.sipher.ac.uk](http://www.sipher.ac.uk)  
[sipher@sheffield.ac.uk](mailto:sipher@sheffield.ac.uk)  
[@SipherC](https://twitter.com/SipherC)

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