



Developing realist economic evaluation methods (REEM) and guidance to evaluate the impact, costs, and consequences of complex interventions

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REEM team and IIAG

- We are supported by a much wider team, who we are very grateful to have alongside us.
- Building on the foundations of others in many evaluation fields
- This includes (but is not limited to) our REEm team (acknowledged on the opening slide)
- And our International Interdisciplinary Advisory Group (IIAG)





Presentation Overview

- Background: what is Economic Evaluation and what is Realist Evaluation?
- Rationale: why integrate Realist and Economic Evaluation methods?
- The Research: Developing Realist Economic Evaluation methods (The REEm Study)
- Findings from REEm: Phase 1. Key learning points
- Findings from REEm: Phase 2. Key learning points
- Next steps in REEm: Planned work in Phase 3 and dissemination and outputs.
- Questions

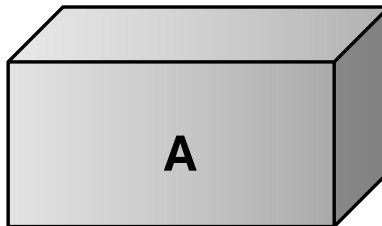
Background: what is Economic Evaluation?

INPUTS

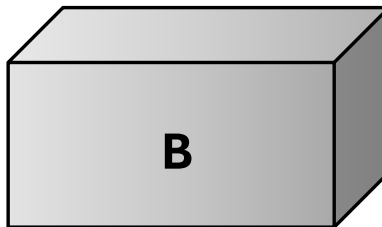
Staff
Time
Materials
Capital



INTERVENTION



VS.



OUTPUTS

Health outcomes
(QoL/wellbeing)
Productivity gains
Health service
resource use



Staff
Time
Materials
Capital



Health outcomes
(QoL/wellbeing)
Productivity gains
Health service
resource use

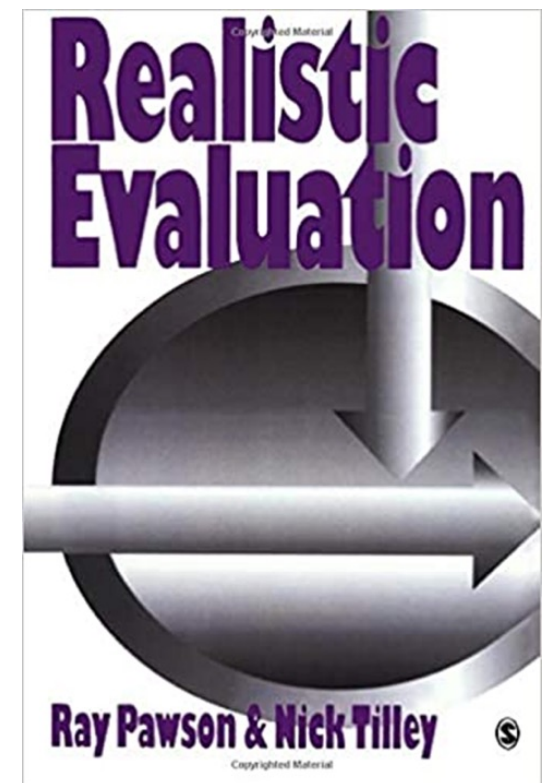
$$\Delta\text{Costs}/\Delta\text{Benefits} = \text{ICER}$$

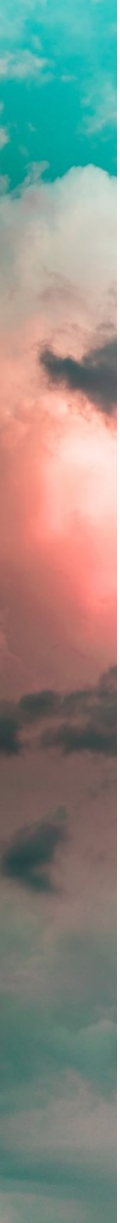
We implemented
the same program
in two locations.
For some reason,
we had very different
results.



Background: what is Realist Evaluation?

- Theory driven form of evaluation which focuses on understanding complex social interventions or initiatives (programmes).
- A realist approach recognises that programmes are not universally successful and work better in some circumstances than in others.
- The aim is to answer '*in what respects, for whom, in what circumstances and why a programme or policy works*' (RAMESES II Project, 2017)





Rationale: why integrate Realist and Economic Evaluation methods? **The evaluation-decision gap.**

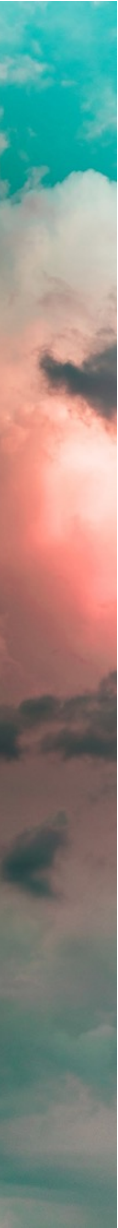
- Realist evaluation - establishes what works, for whom, in which circumstances and why, but does not examine the marginal costs and benefits.
- Economic evaluation – establishes clinical cost-effectiveness but does not examine for whom, in what circumstances, and why.
- Decision-makers are less concerned with the simple yes or no wholesale implementation of interventions but in how much, for who and where.
- Decision-makers need practical but contingent economic evaluations.
- Requires a range and combination of research perspective and methods.





The Research: Developing Realist Economic Evaluation methods (The REEm Study)

- **Phase 1:** To understand and develop REEm, principles, and applications
 - Q: What are the theoretical, methodological and practical similarities and differences between realist and economic evaluations?
 - How: Scoping reviews, expert stakeholder workshops
- **Phase 2:** To apply and evaluate REEm, and underlying principles in practice
 - Q: What lessons can we learn from using REEm in practice to improve it?
 - How: 3 pilot evaluations
- **Phase 3:** To refine REEm and principles, and develop guidance for wider application and further development
 - Q: How can we use empirical and expert knowledge to produce consensus REEm guidance?
 - How: Delphi and consensus development workshop

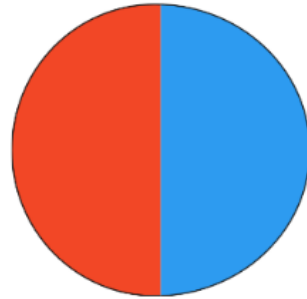


Findings from REEm: Phase 1. Key learning points.

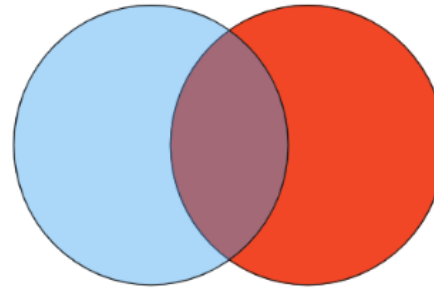
Realist Economic Evaluation:

- is situated within a realist philosophy of science
- takes a societal perspective
- needs a comparator
- requires clarification of terminology at the outset
- will include mixed methods study designs, employing a bricolage approach
- will utilise initial programme theories that are highly detailed to allow for 'accurate' measurement and valuation (i.e., testing)
- is iterative
- requires a multidisciplinary team
- is not simply the sequential application of a realist evaluation and an economic evaluation

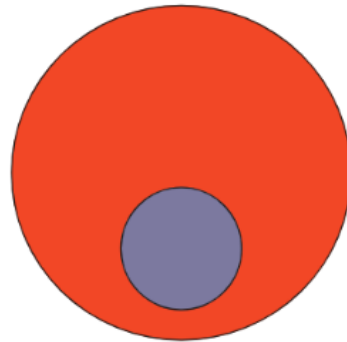
What is (and is not) a Realist Economic Evaluation?



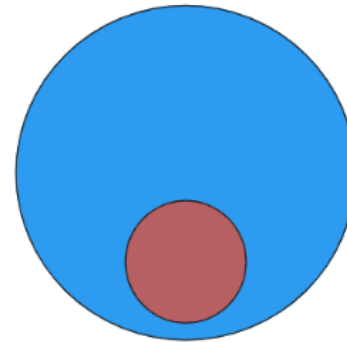
It's **not** a dichotomy



It **is** integrated

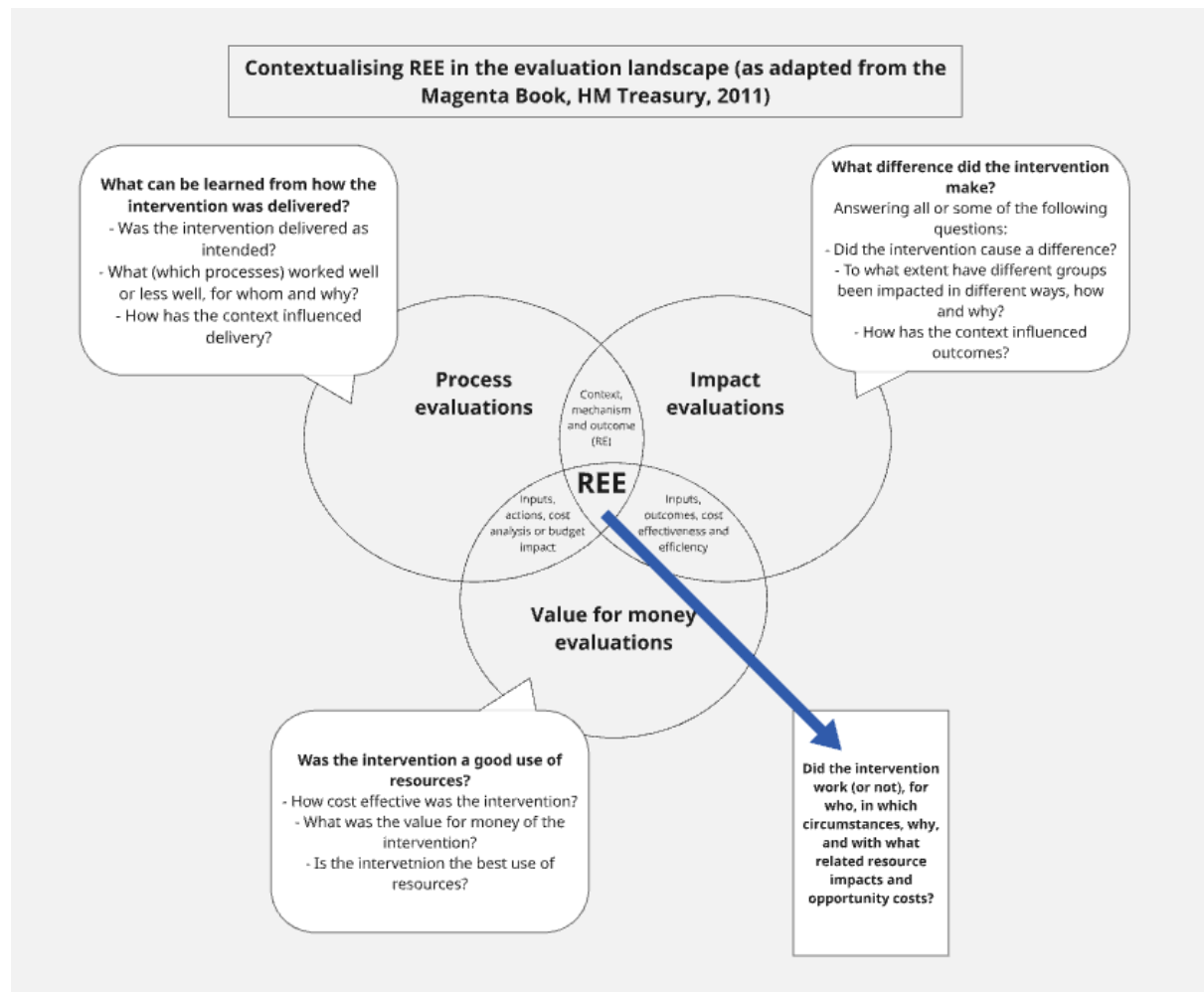


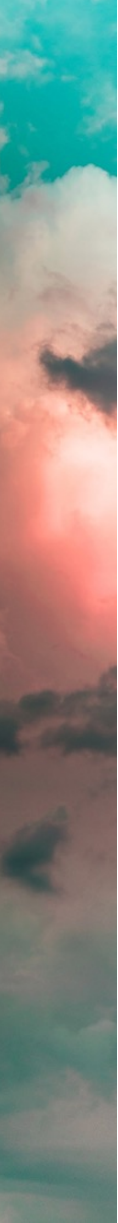
It **can be** a realist evaluation with embedded economic analysis



It **can be** an economic evaluation with embedded realist evaluation

What is REE?



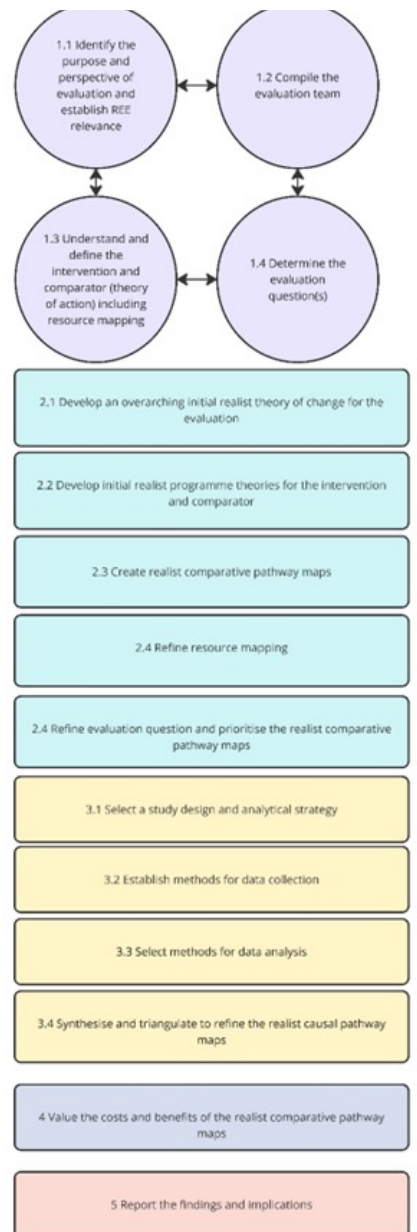


Findings from REEm: Phase 2. Key learning points.

- The research question is central and takes time to get right – it dictates the design
- Initial programme theories need input from both realist and economic evaluators perspectives to be ‘REE ready’
- IPTs need to be developed for both the intervention and comparator
- ‘Realist comparative maps’ that incorporate both the intervention and comparator can help understand a lot of moving parts when considering inputs, outputs, context, mechanism and outcomes.
- Analysis is at the level of the map
- Resource mapping (micro-level disaggregated costing) needs to be conducted and refined throughout
- REE is methods neutral
- REE requires synthesis and triangulation of many different data sources

How do you conduct a REE?

Iterative approach to be utilised throughout stages and steps



Stage 1: Scoping and set up

Deciphering the best way to investigate the decision problem, focusing on identifying and understanding the evaluative question and bringing together a team with appropriate expertise.

Refer to pg.8 in REE Guidance

Stage 2: Identify (Theory Gleaning)

Identify programme theories about how the intervention works (compared to the counterfactual), including theorising the context, outcomes and generative causal links (mechanisms), and resource inputs (costs) and outputs (benefits) aligned to these. Develop realist comparative pathway maps.

Refer to pg.11 in REE Guidance

Stage 3: Measure (Theory Testing)

Establish a study design, the methods of data collection and the analytical strategy that allow for the measurement and testing (i.e. support, refine, refute) of the realist comparative pathway maps; iteratively refining understanding and gathering further evidence as required.

Refer to pg.14 in REE Guidance

Stage 4: Value (Theory driven valuation)

Value and compare the costs and outcomes of the refined realist comparative pathway maps. Report and present the causal conditions.

Refer to pg.17 in REE Guidance

Stage 5: Report the findings and implications

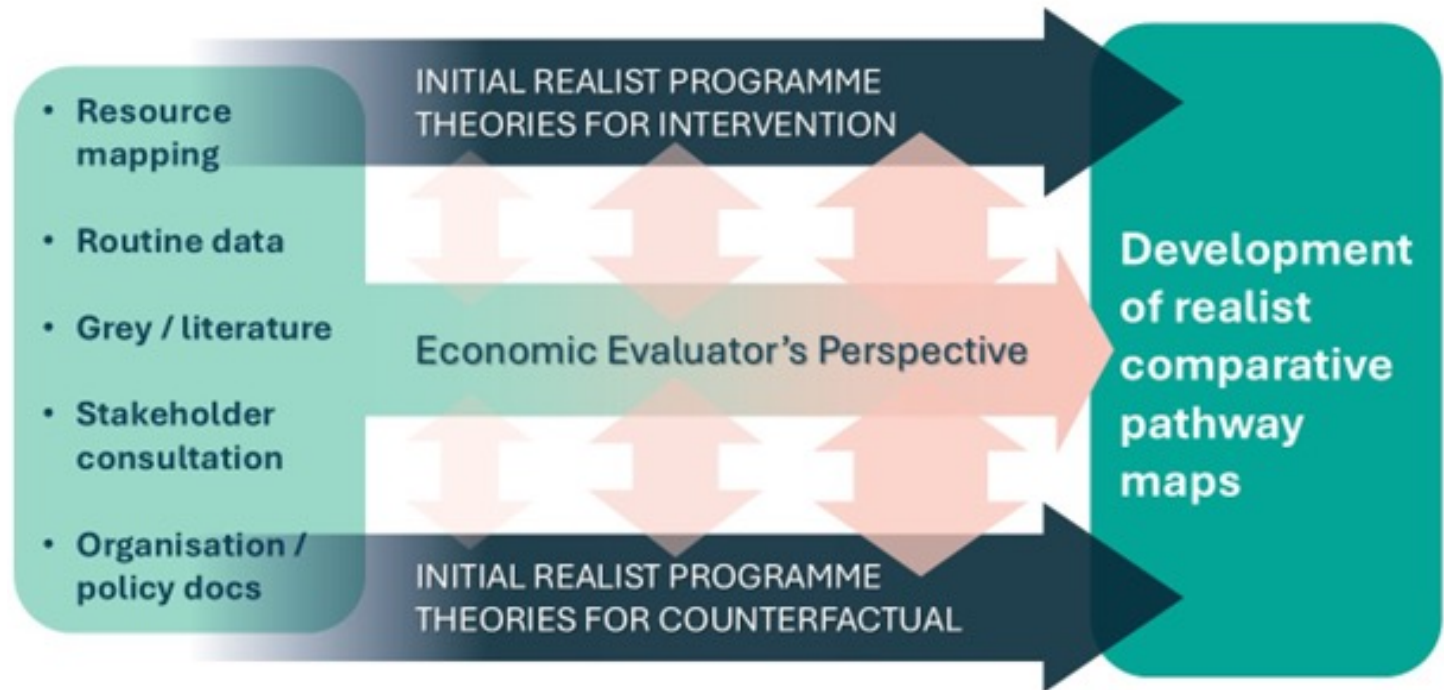
Refer to pg.17 in REE Guidance

Table 1. Establishing the decision-maker perspective, suggested comparators and study design, and REE evaluative question

Decision-maker policy-practice perspective and question (adapted from Anderson and Hardwick 2016)	What is the comparator and study design (as a minimum)	What is the Realist Evaluators perspective?	What is the Economic Evaluators perspective?	What is the REE evaluative question?
Tailoring resources <ul style="list-style-type: none"> Evaluating whether existing resources can be better targeted to those contexts that will benefit most? In which circumstances should the intervention be delivered and to whom? 	Single intervention Single Case <ul style="list-style-type: none"> Intra-comparison. Within programme evaluation comparing the different contexts (e.g. social and cultural norms, economic conditions, existing public policy etc.) receiving the same intervention and the associated mechanisms, costs and outcomes aligned to these. Comparator: within-subject before/after 	Which contexts impact on how and why the intervention produces the same or different outcomes and for who?	Do the costs (inputs) and benefits (outputs) of an intervention vary between different people or places (i.e. subgroups or regions?) and which?	What are the comparative contexts , and what mechanisms are triggered when the same intervention is delivered and what are the associated differences in the costs and outcomes ?
Shifting resources <ul style="list-style-type: none"> Evaluating whether the same resources can be used in different ways to generate the same or more outputs. How can an intervention be delivered in a different way for the same or fewer resources to achieve the same or better outcomes? 	Similar Interventions Two or more cases/sites <ul style="list-style-type: none"> Inter-comparison. Cross case/site evaluation comparing the mechanisms triggered by the different ways an intervention is delivered or implemented and the circumstances, costs and outcomes associated with these Comparator: cross-case comparison. 	How and why do different ways of delivering the same intervention impact on outcomes, for whom and in which circumstances?	How do the different ways of delivering an intervention minimise costs (inputs) and/or maximise benefits (outputs)?	What are the comparative mechanisms that are triggered by the different ways of delivering the intervention , and what are the associated differences in costs and outcomes , in what contexts ?
Substituting resources <ul style="list-style-type: none"> Evaluating whether new or different resources can be used to generate the same or more outputs Can a new or alternative intervention achieve the same or better outcomes for the same or fewer resources? 	Different interventions Two or more cases/sites <ul style="list-style-type: none"> Inter-comparison. Quasi-experimental multi-site/cohort evaluation comparing the outcomes from two or more different interventions and the associated contexts, mechanisms and costs associated with these. Comparator: Counterfactual or reference case, standard care, next best alternative. 	What are the differences in outcomes produced by the intervention, in which circumstances, how, for whom and why?	What are the incremental differences between the costs (inputs) and benefits (outputs) of a new intervention and an existing intervention?	What are the comparative outcomes and costs of the intervention , compared to an alternative (another intervention, standard care, the next best alternative or no intervention) and what are the associated mechanisms and contexts that drive these and for whom?

IPTs in REE

- IPTs in REE look similar to the development of IPTs in Realist evaluation
- They may be more detailed though, than in a traditional Realist evaluation
- They must include the economic evaluators perspective
- They must be developed for the intervention and the counterfactual/comparator
- These are the basis for development of 'realist comparative pathway maps'



Next steps in REEm: Planned work in Phase 3.

- Consensus Development Conference using a modified Delphi to finalise guidance.
- PPIE and stakeholder consultation on guidance and development of plain English summary and check-list.
- Funder and policy dissemination event.



Dissemination and Outputs.



Consensus development conference



Delphi Panel



Finalised Guidance



Glossary



Checklist



Patient and Public guide



Thank you and Questions



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