Resource B Practical choices in 'counterfactual' impact evidence

Evaluation approach	What question are evaluators seeking to answer?	How is the counterfactual assessed?	Possible methods to use	Confidence and likely robustness (and relevance)
Randomised control trial (RCT)	*To what extent does the intervention cause the observed outcome(s)?*	End of evaluation measured outcome(s) are contrasted for an: • Intervention (treatment) group • Pre-determined and parallel 'control' group who do not receive the intervention. The sample is randomly selected from a common population, with each member selected by chance and with an equal chance of being selected. The 'trial' is carefully controlled to avoid any delivery or external distortions which might affect outcomes.	Fully-experimental with randomised selection through either: • Individually sampled participants (an I-RCT), or • Cluster group selections (C-RCT). RCTs use quantitative methods and statistical analyses and can be especially useful for pilots or trail interventions. Qualitative inputs can be added but only where very carefully designed to avoid any risk of bias to the trial.	Very high High *RCTs are well regarded for quality of evidence but hard to do well, costly and not usually suited to complex interventions such as for ham minimisation.*

Quasi-experimental (QE) design	*To what extent does the intervention have the expected outcome(s)?*	End of evaluation contrast of the intervention outcome(s) for a: • Defined group(s) of participants in the intervention, and • Comparative group which is concurrent, closely matched but not randomly selected. Data from the comparative group may be drawn from available sources (where up to date) or by additional research.	Partially experimental - the comparative group might typically come from: • Matched (geographical) area • Pre-participation group or area OR • Opt-out groups (opt-in are intervention group) • Interventions with groups of people out of scope but which are 'near fit' to use as comparisons with beneficiaries • Interventions with intermittent (on and off) application. QE methods also use quantitative methods and statistical analyses. Unlike RCTs, they can more easily be combined with qualitative inputs such as case studies to better understand how impacts come about.	Moderately high Moderate *QE can be next best to an RCT for credible evidence but need careful design to provide for suitable comparisons.*

Non-experimental	*To what extent does the intervention make a difference?*	Outcomes data to contrast against the intervention group is drawn from 'before' and 'after' data for participants or from outside the initiative altogether typically by using external statistical data sets or sources to provide a benchmark.	Non-experimental designs where the comparator evidence may come from: • External statistical benchmarks. Benchmark sources may include national survey sources, which can be manipulated to provide as close a comparison as possible to intervention participants • Before (at start of action) and after (at end) contrasts of participants • Participant 'trajectory' analysis using (pre-start) historic data. These are called 'constrained' designs – but non-experimental methods are well suited to combining both quantitative and qualitative methods, to estimate the level and nature of impacts and assess how these come about and why.	Moderate to low *Non-experimental methods are well suited to interventions where there is a lot of available data to use, and if an RCT or QE design is not possible. Combining more than one of the non-experimental methods helps boost robustness and credibility.*