Centre for the Evaluation of Complexity Across the Nexus

Choosing appropriate evaluation methods: Learning from the DEFRA RDPE case study

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Evaluating rural development policy: new approaches for a complex world

- DEFRA RDPE case study
- Two year process: from specifying evaluation challenges to co-creating and facilitating programme of activity
- Methodological innovation
- Learning and knowledge exchange
- Embedding capacity in policy teams
- Assessing impacts: did CECAN make a difference?

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RDPE: Complexity & Evaluation Challenges; possible methodologies

Complexity

- Large and complicated programme
- 4 schemes, each with own sub-priorities
- Thousands of interacting variables
- Multiple stakeholders and beneficiaries
- Complex governance structure
- Dynamic and unpredictable policy environment

Evaluation

- Programme level versus scheme level evaluation,
- Attribution of impact at scheme and programme level: aggregating scheme level impacts
- Identification of adequate counterfactuals
- Mapping and measuring socio-economic and environmental interactions

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- Measuring impact against and broader range of market and non-market outcomes
- Added value of LEADER – community level development initiative: but small sample sizes
- Co-creation of DEFRA evaluation strategy for rural development post BREXIT

Methodologies

- QCA – Complex causality : configurations of causal conditions; equifinality
- Bayesian updating
- Social and Qualitative Valuation Approaches eg Social return on investment
- Frameworks to incorporate stakeholders into the Evaluation process
- Dependency models
- Agent based modelling
- Theory of change

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1. IMPROVING PRESENT EVALUATIONS

Complexity Innovation within the current Evaluation of RDPE: Applying an Evaluation Methods Toolkit to improve the complexity-appropriate informed evaluation of RDPE 2014-2020.

Goal: Introduce and use an Evaluation Methods Toolkit to address key complex evaluation questions

Stakeholders: Defra, Natural England, Rural Payments Agency, Forestry Commission and ADAS

Group Work

Evaluation Methods Toolkit

Apply Tool stages to complex evaluation question

Identify most methodologically appropriate approach(es) to assess complex evaluation question

Choosing an appropriate methodology

- Appropriateness & Quality
- How do humans choose?
- Design triangle, Choice triangle
- The three dimensions of appropriateness
- How the tool works

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Evaluation Quality: a multidimensional concept

1. **Framing** (Conceptual Framing)
2. **Transparency** (Replicability / Confirmability)
3. **Appropriateness** (Methodological Appropriateness)
4. **Validity** (Construct / Measurement Validity)
5. **Credibility** (Truth Value of Statements / Findings; Internal Validity)
6. **Transferability** (External Validity)
7. **Robustness** (Reliability / Dependability / Consistency / Stability)
8. **Structure** (Coherence, Limitations, etc.)

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Factors affecting human choice

- Preferences
- Opportunities
- Beliefs

- Possible tension, cognitive dissonance:
  - Wishful thinking, sour grapes

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Different methods have different strengths and weaknesses…

- It's a **mistake** to think in terms of a **generic "gold standard"**
  - One method or group of methods that is ALWAYS the best choice under all circumstances
- There's a tendency to say, let's do RCTs *whenever we can*
  - we only look at alternatives if we can't do RCTs
- Issues with RCTs are not just about **feasibility** but also **desirability**
- Human choice is governed by **opportunities**, **beliefs** and **preferences**
  - According to analytical sociologists
- We need to look at all three

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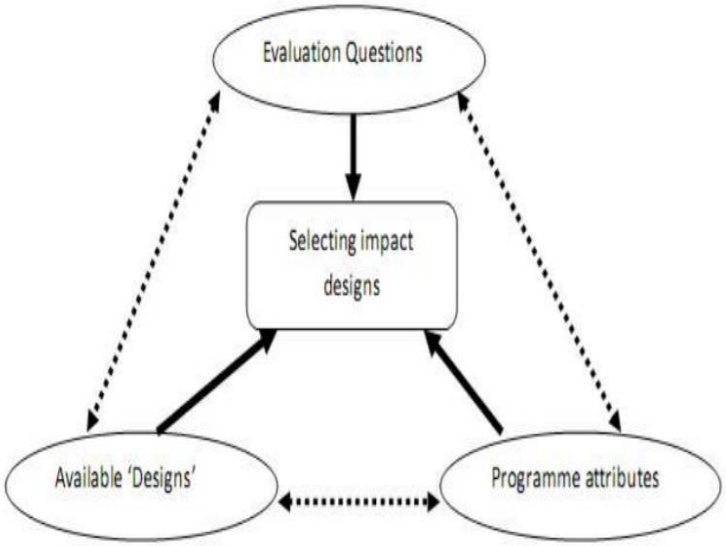
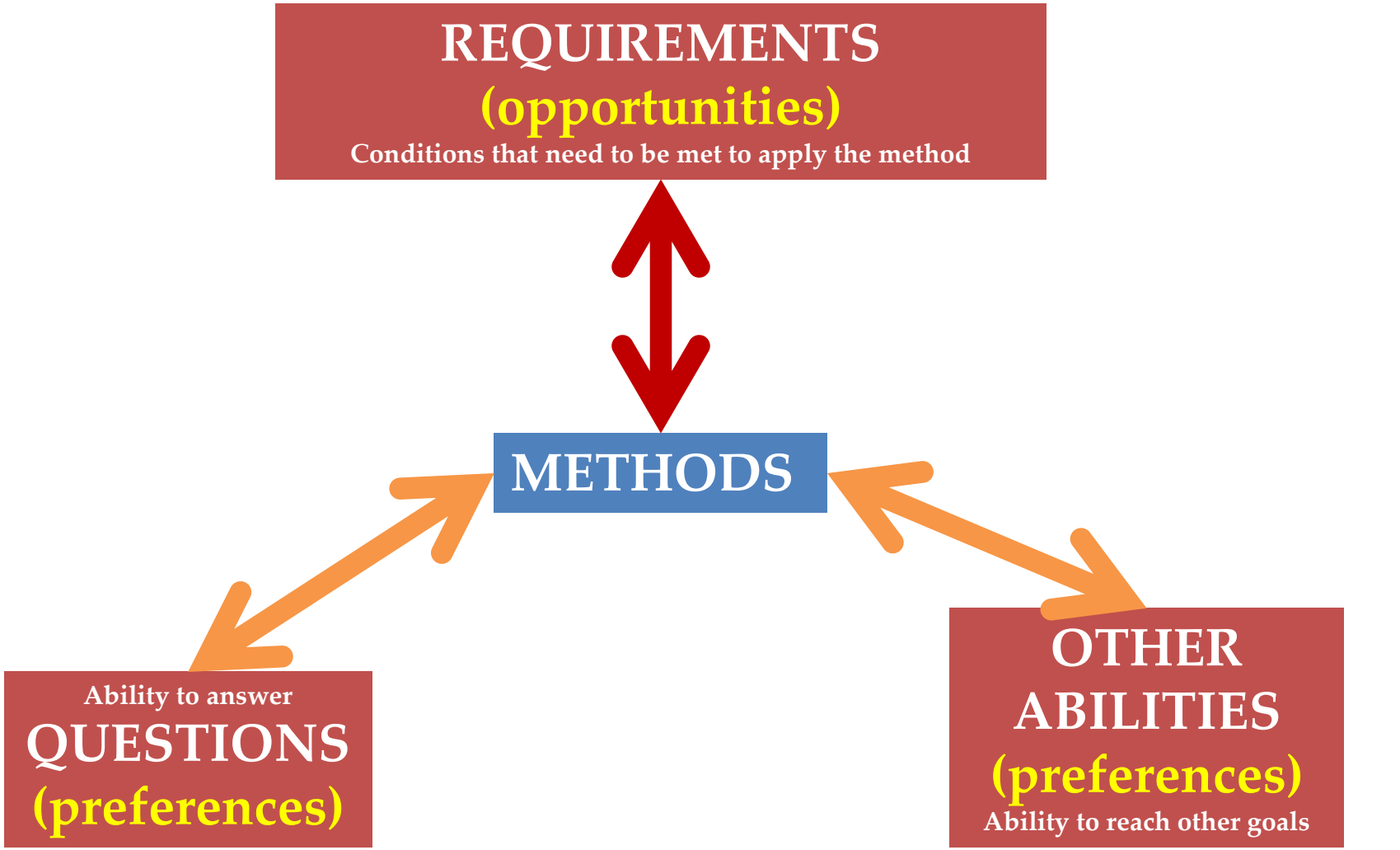
The design triangle



- **Available designs** = ***potential* opportunities**
- **Programme attributes** limit choice = feasible designs = ***actual* opportunities**
- **Evaluation Questions** = **Preferences**

The choice triangle



The three dimensions of appropriateness

- Choice should be governed by:
- PREFERENCES: **what can methods do for you?** What would you like methods to do for you?
  - Which evaluation questions would you like methods to answer?
  - What other evaluation goals would you like to achieve with your methods?
- OPPORTUNITIES (and constraints): **what can you do for your methods?** Are you able to provide what methods require (to be implemented correctly or to high quality standards?)

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How the tool works

- Five questions, eleven methods, 15 additional goals, 19 methodological requirements
- Every method is assessed on:
  - Ability to answer questions, reach other goals, requirements needed
- User inputs preferences and ability to meet requirements
- Tool returns three rankings of methods

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Balancing desires and opportunities…

- Typical “Gold Standard”-influenced situation…

	A	B	C	D	E	F	G	H	I	J	K	L
1	**SUMMARY RESULTS - ALL STAGES**	RCT (Randomised Contol Trial)	Difference-in-Difference	Statistical Matching	Outcome Mapping	Most Significant Change	Soft Systems Modelling	Causal Loop Diagram	Realist Evaluation	QCA (Qualitative Comparative Analysis)	Process Tracing/ Bayesian Updating	Contribution Analysis
2	**Stage 1: Which Method is Best Suited to Answering My Key Evaluation Question(s)?**	5.0	4.0	3.0	1.0	2.0	1.0	1.0	1.0	2.0	1.0	1.0
3	**Stage 2: Which method is most able to address my other interests?**	76%	62%	62%	47%	52%	52%	52%	62%	57%	57%	62%
4	**Stage 3: Which Method has the fewest essential methodological requirements that cannot be met by my intervention? (Which method is most feasible to use?)**	4	4	4	0	0	0	0	0	0	0	0

- Change in preferences…

	A	B	C	D	E	F	G	H	I	J	K	L
1	**SUMMARY RESULTS - ALL STAGES**	RCT (Randomised Contol Trial)	Difference-in-Difference	Statistical Matching	Outcome Mapping	Most Significant Change	Soft Systems Modelling	Causal Loop Diagram	Realist Evaluation	QCA (Qualitative Comparative Analysis)	Process Tracing/ Bayesian Updating	Contribution Analysis
2	**Stage 1: Which Method is Best Suited to Answering My Key Evaluation Question(s)?**	2.0	2.0	2.0	4.0	3.0	4.0	5.0	5.0	3.0	5.0	5.0
3	**Stage 2: Which method is most able to address my other interests?**	57%	53%	53%	51%	56%	81%	75%	81%	73%	80%	68%
4	**Stage 3: Which Method has the fewest essential methodological requirements that cannot be met by my intervention? (Which method is most feasible to use?)**	6	5	6	0	0	0	0	0	0	1	1

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… Balancing desires and opportunities.

- I can do RCTs but I don't want to!

	A	B	C	D	E	F	G	H	I	J	K	L
1	**SUMMARY RESULTS - ALL STAGES**	RCT (Randomised Contol Trial)	Difference-in-Difference	Statistical Matching	Outcome Mapping	Most Significant Change	Soft Systems Modelling	Causal Loop Diagram	Realist Evaluation	QCA (Qualitative Comparative Analysis)	Process Tracing/ Bayesian Updating	Contribution Analysis
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4	**Stage 3: Which Method has the fewest essential methodological requirements that cannot be met by my intervention? (Which method is most feasible to use?)**	0	0	0	0	1	4	3	2	1	1	1

- There can be "**alignment**" or "**congruence**" which is what you want
- You want to avoid "**dissonance**" and "**discrepancy**" between preferences and opportunities…

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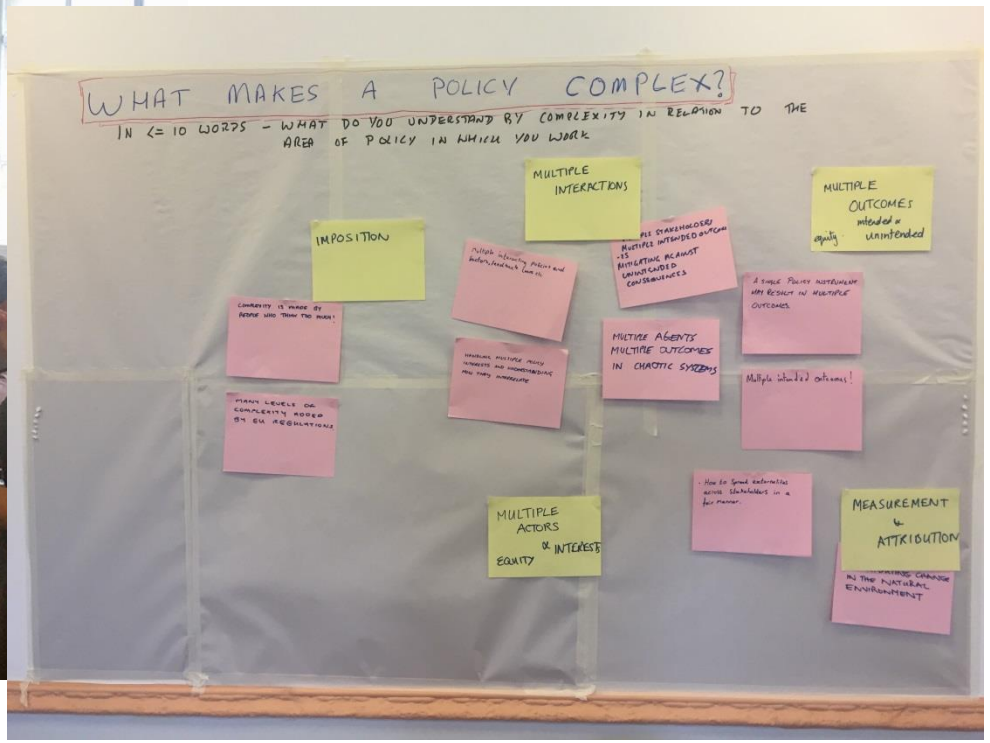
DEFRA workshop July 2017
Using the tool



Using the tool

- Three groups
- Revisiting the evaluation questions
- Inputting into the tool
- Making a choice: which methodology and why? Is it feasible to use it?
- Reflection: what did we learn?
- What next?

What did we do? Group C

How can we design an approach to better understanding the counterfactual for RDP schemes, at farm, landscape and national/rural scales?

Stage 1 Tool Summary Outcomes: Which evaluation method(s) are suited to answering your key evaluation questions?

Contribution Analysis	Process Tracing/ Bayesian Updating	QCA (Qualitative Comparative Analysis)	Realist Evaluation	Causal Loop Diagram	Soft Systems Modelling	Most Significant Change	Outcome Mapping	Statistical Matching	Difference-in-Difference	RCT (Randomised Control Trial)
2.5	2.0	3.5	2.5	2.5	2.5	2.5	2.5	3.5	4.0	4.5

Stage 2 Tool Summary Outcomes: Features of Interest to Evaluation Commissioners or Managers that can Affect Choice of Methods

Contribution Analysis	Process Tracing/ Bayesian Updating	QCA (Qualitative Comparative Analysis)	Realist Evaluation	Causal Loop Diagram	Soft Systems Modelling	Most Significant Change	Outcome Mapping	Statistical Matching	Difference-in-Difference	RCT (Randomised Control Trial)
59%	56%	67%	67%	62%	54%	38%	43%	57%	57%	67%

Stage 3 Tool Summary Outcomes: How feasible is it to use each method to evaluate your intervention, given the requirements of those methods?

Contribution Analysis	Process Tracing/ Bayesian Updating	QCA (Qualitative Comparative Analysis)	Realist Evaluation	Causal Loop Diagram	Soft Systems Modelling	Most Significant Change	Outcome Mapping	Statistical Matching	Difference-in-Difference	RCT (Randomised Control Trial)
75%	67%	40%	71%	64%	74%	100%	33%	44%	43%	64%

What did we learn?

Reflection Questions

Taking into account the fact this was your first time using the tool,

1. Did it generate a useful discussion about the EQ / RDPE?
2. Did the discussion lead you to modify the EQ (or how you interpreted it)? How?
3. Did the tool point to Eval methods you have not considered in the past? Why?
4. What did the tool results tell you? Did this 'fit' with your understanding of the EQ?
5. How could the tool be improved?

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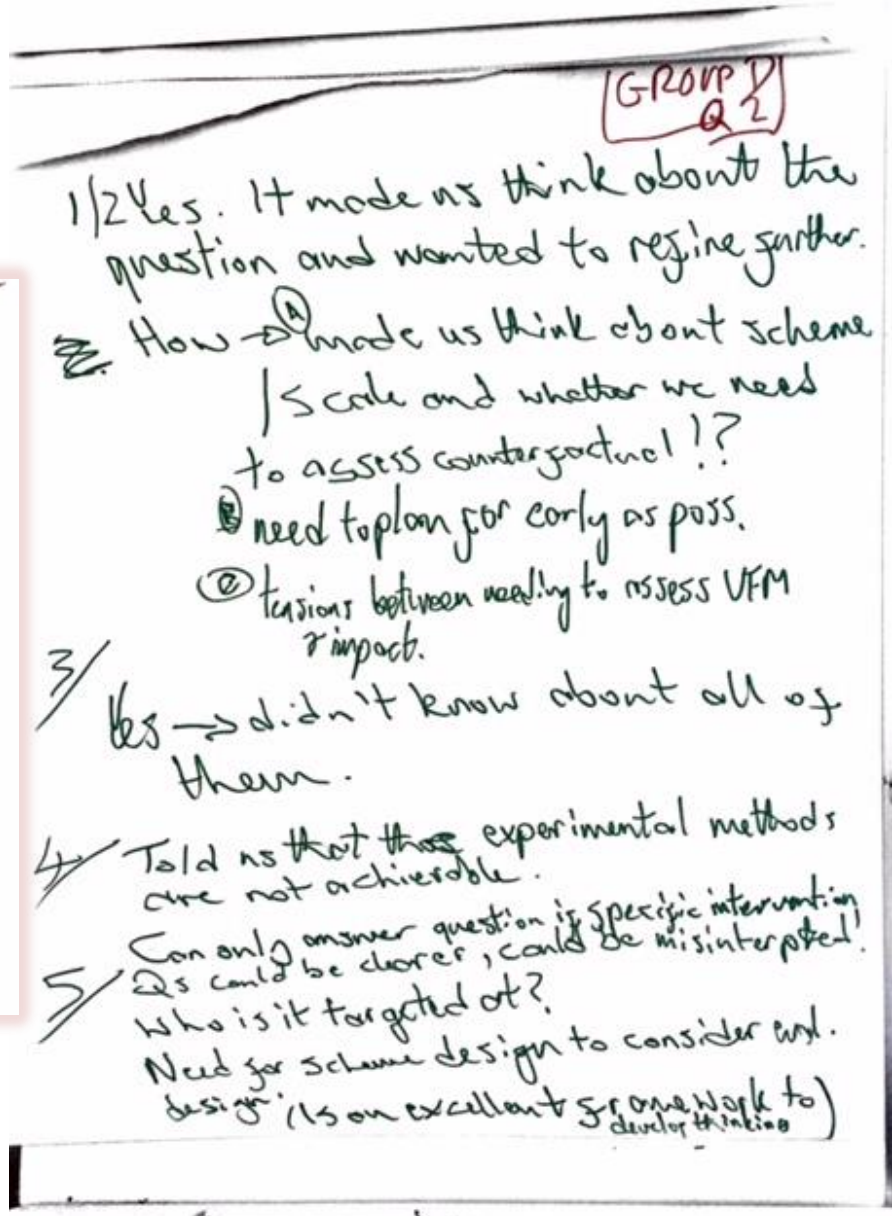

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Findings so far

- Enhanced understanding of complexity
- The value of bringing together different knowledges recognised by stakeholders
- Helped to build evaluation capacity within DEFRA
- The Evaluation Methods Tool emerged as valuable heuristic for critical appraisal of evaluation questions
- The tool demonstrated optimum methodological approach for complexity appropriate evaluation: no 'gold standard' but concept of best local option
- Time and capacity for innovation remain barriers

What next?

- 2019 and ex post evaluation: DEFRA exploring different approaches to evaluation that reflect complexity
- Taking a fresh look at data: possible commissioning of research to fill gaps
- Systems mapping work in progress: potential to inform new policy for Future Farming and Rural

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Q and A

- Group discussion
- Potential input into helping develop version 2 of the Tool?

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