Managing innovation and risk in a public sector context

TMF Risk Management Conference*:* NSW Government
Manage Risk – Drive Performance

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Dr Mark Matthews
Executive Director

mark.matthews@anu.edu.au

The HC Coombs Policy Forum receives Australian Government funding under the 'Enhancing Public Policy' Initiative

Overview

1. Offer a critical perspective on the way in which the 'public sector innovation' agenda has developed

2. Highlight key aspects of what a 'fit for purpose' approach should look like

3. Examine the articulation of an 'appetite for risk' in a public sector context (using the HC Coombs Policy Forum as an illustration)

    - potential to use structured hypothesis testing methods of the type used within the US national security community to improve public policy

4. Suggest a way forward

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What do governments actually mean when they speak of public sector innovation?

- Covers both policy formulation and service delivery
- Tends to involve breaking down silo problems via better partnership working – more "joined up"
- Significant ICT emphasis (data integration + "open govt.")
- Improved risk management (e.g. ANAO Better Practice Guide)
- "Venture capital"/risk funding model – e.g. UK Invest to Save Budget
- Aligned with evidence-based policy-making ethos
- Stronger engagement with external expertise
  - Business, academia and civil society
- Public sector innovation starting to play major role in overall innovation frameworks (especially in the UK and Australia)

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Critical perspectives

1. Would benefit from a stronger (traditional) focus on lifting public sector productivity – we have major challenges in even measuring public sector outputs and productivity
2. Less emphasis on being 'trendy' and exciting – emulating the private sector
3. More emphasis on 'public value' as a counter-balance to inward-facing output-outcome budgeting
4. More emphasis on governments' distinctive role as uncertainty and risk manager of last resort
    - the 'immune system' dimension
    - de-coupling uncertainty management from risk management
    - recognise the limitations of 'evidence based policy-making' in this context – more emphasis on the analytical methods used to make sense of *limited* and *changing* evidence

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Salient differences

Parameter	Private sector	Public sector
Appetite for risk	Unusually high profits made from operating in the outlier regions of the risk-reward relationship	Transparency and accountability limit outlier operation (unless a crisis response)
Treatment of risk	Quantified and managed explicitly in financial terms – "risk is good"	Avoided where possible and managed as such – "risk is bad"
Opportunity costs of not innovating	Upside dominated (make history and don't get left behind the competition)	Downside dominated (avoiding damage that is likely to happen)

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Using the expected value (EV) equation to think about the dynamics of the innovation process

$EV = P_S \times NPV_S - P_F \times NPV_F$

Where:

P_S = Probability of Success

P_F = Probability of Failure (1- P_S)

NPV_S = Net Present Value of Success

NPV_F = Net Present Value of Failure

- A useful means of easily factoring risk into investment decisions
- Demonstrates the impact of changes in P_S and the net cost of achieving this
- More complex methods exist that expand upon these principles

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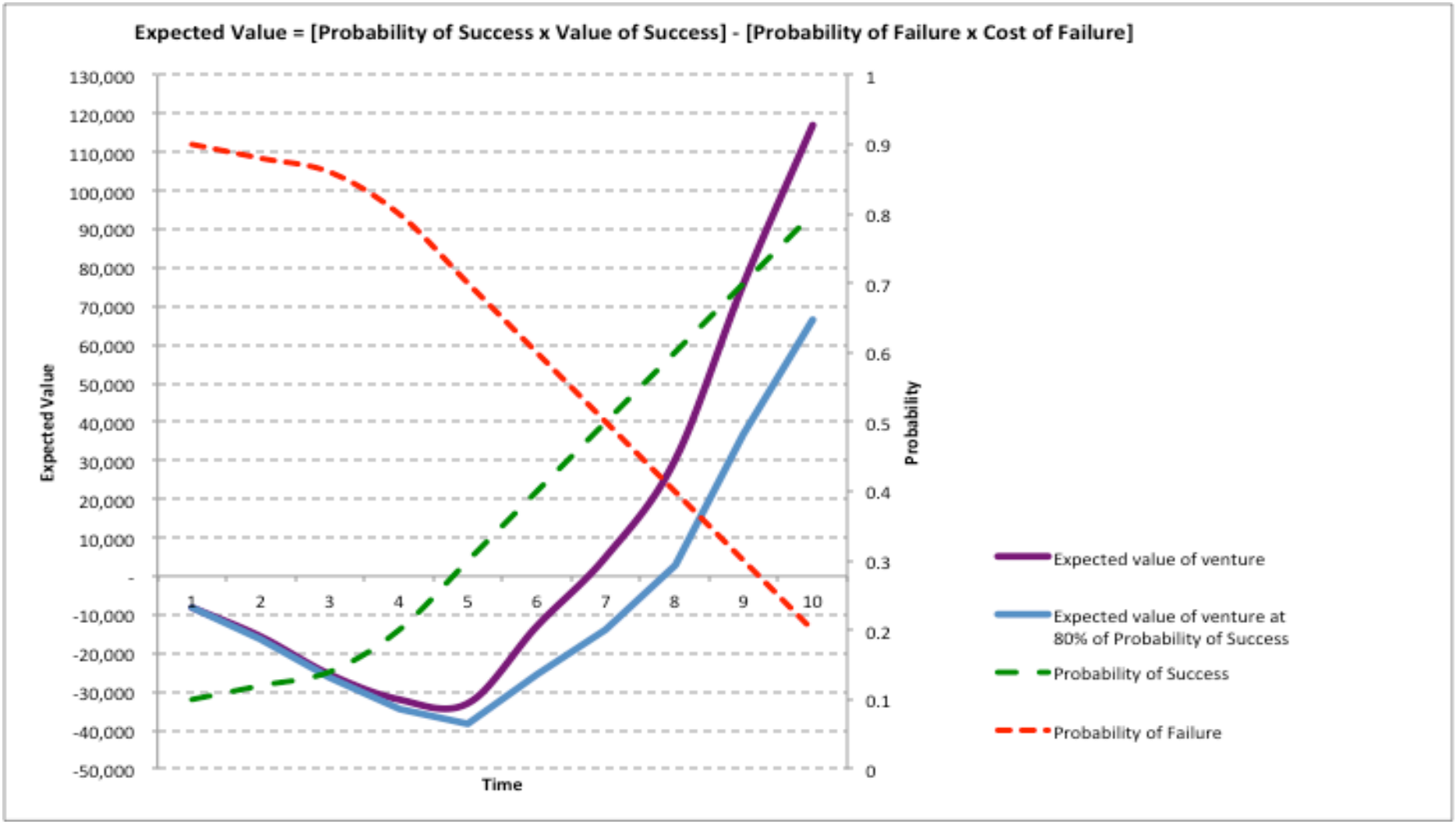
Driving down the probability of failure



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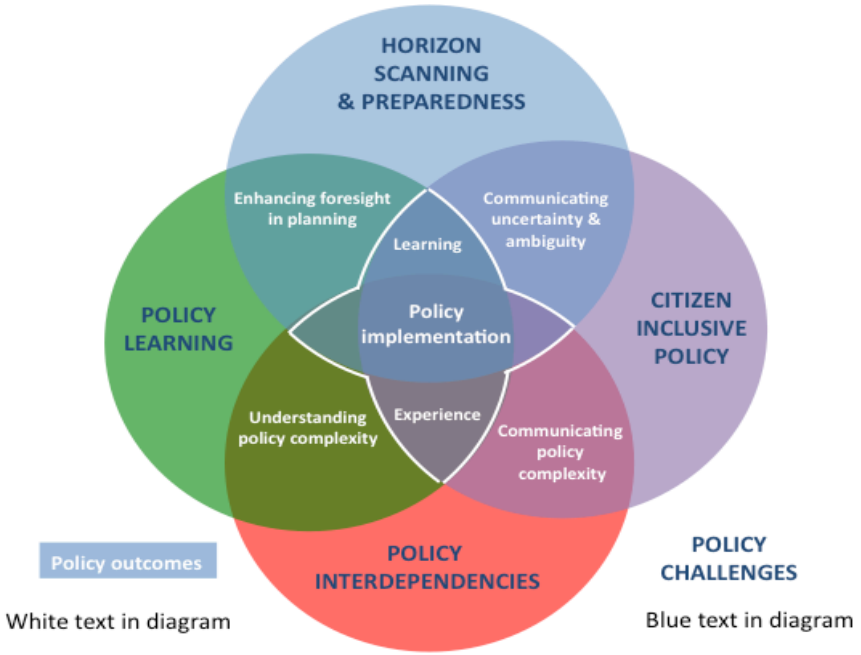
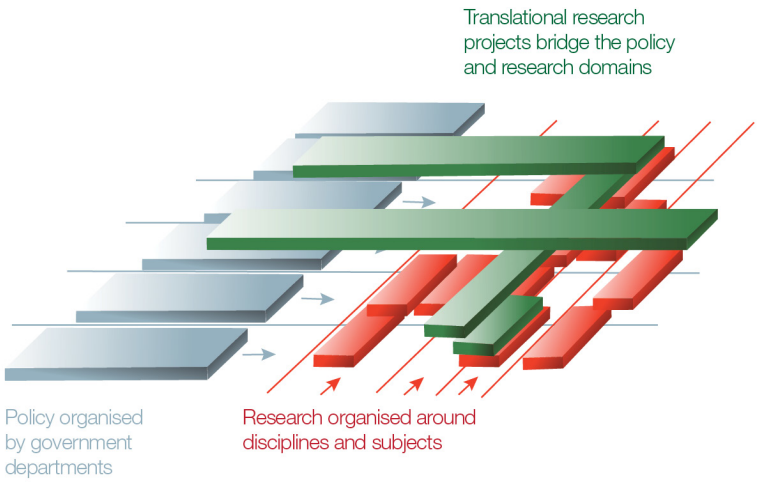
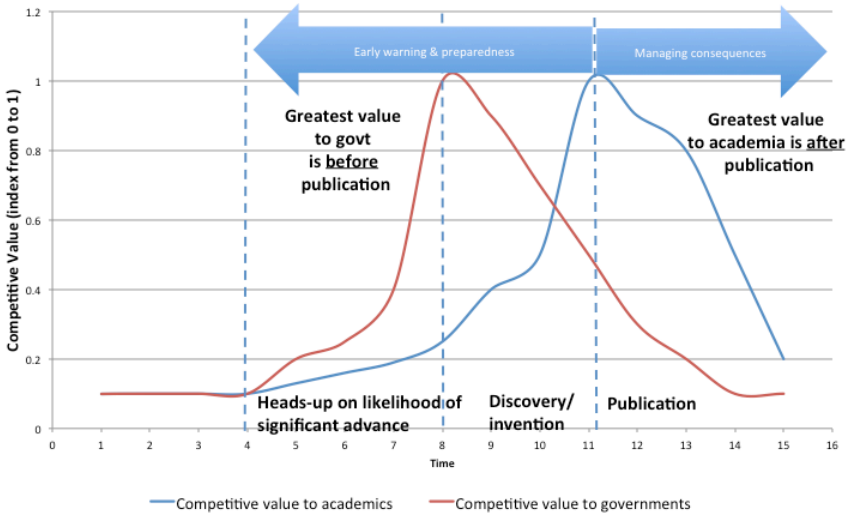
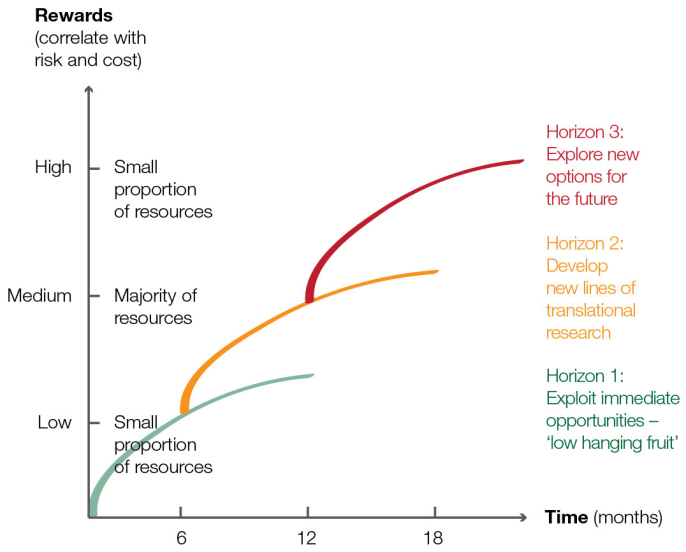


Schematic of the translational research mission





Framing the appetite for risk into three domains



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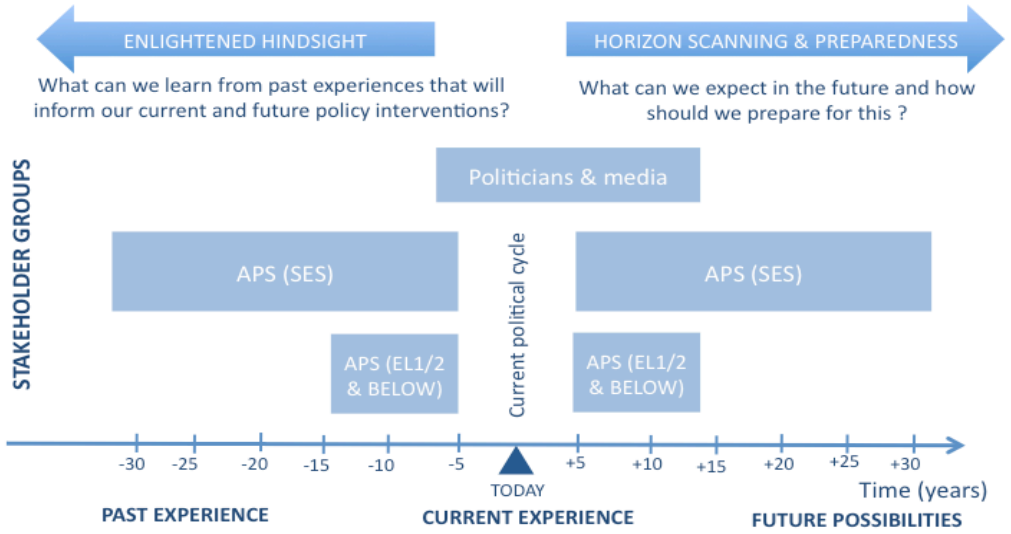
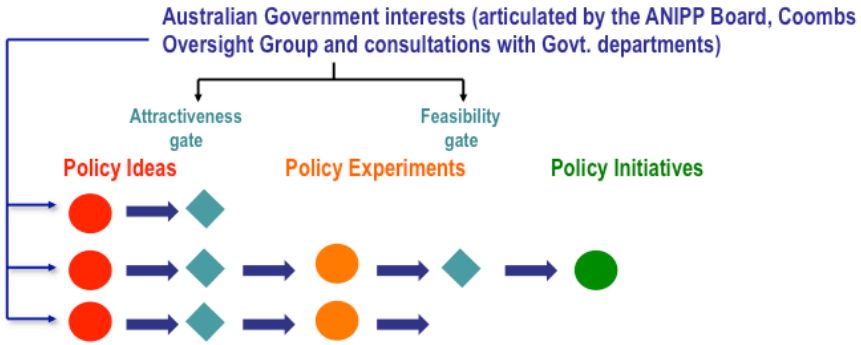


Using a risk-aware Stage-Gate project management approach



Using Stage-Gate methods allows for rapid response, flexibility and resource optimisation in a risk-aware manner

ABILITY TO PARK, RE-DIRECT AND FAST-TRACK IS CRITICAL

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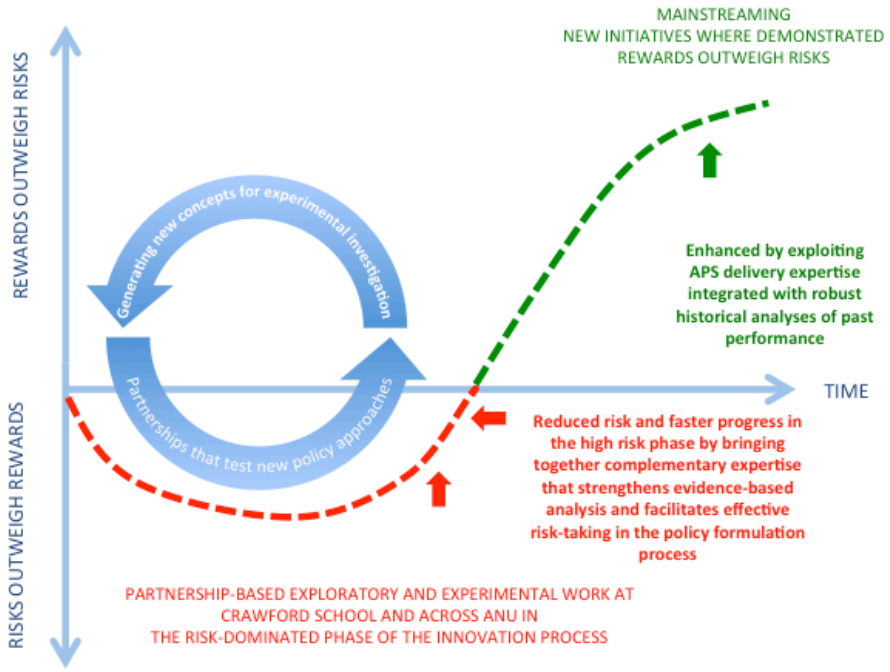

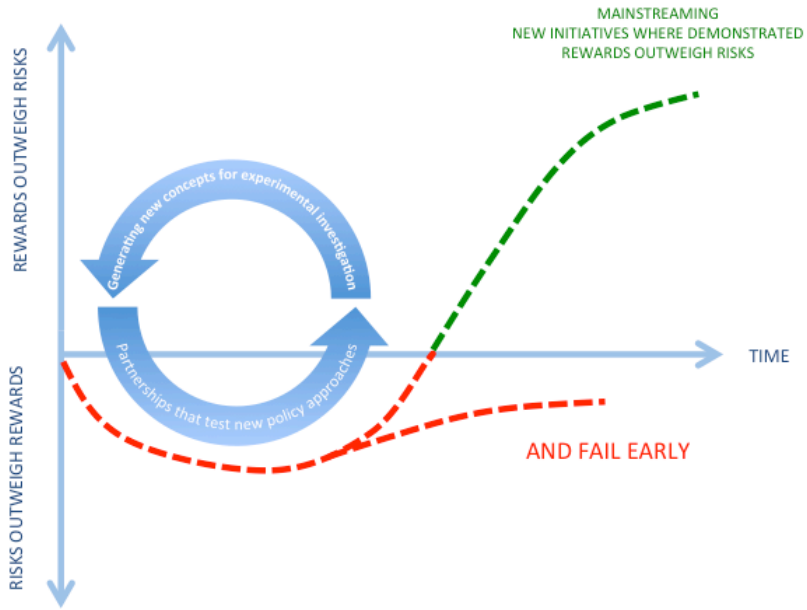

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The uncertainty & risk dimensions

- Government is the uncertainty and risk manager of last resort
  - coping with the uncertainties a and risks that the private sector cannot cope with …….or has generated in the first place
- Doing this well requires that uncertainty management is decoupled from risk management
  - due attention given to uncertainty management
  - stronger emphasis on how governments invest to translate uncertainty into risk
- The public sector innovation agenda (as currently defined) borrows too heavily from private sector innovation approaches
  - risks irrelevance by neglecting the uncertainty and risk manager of last resort dimension (innovation is a means to an end – not an end in itself)

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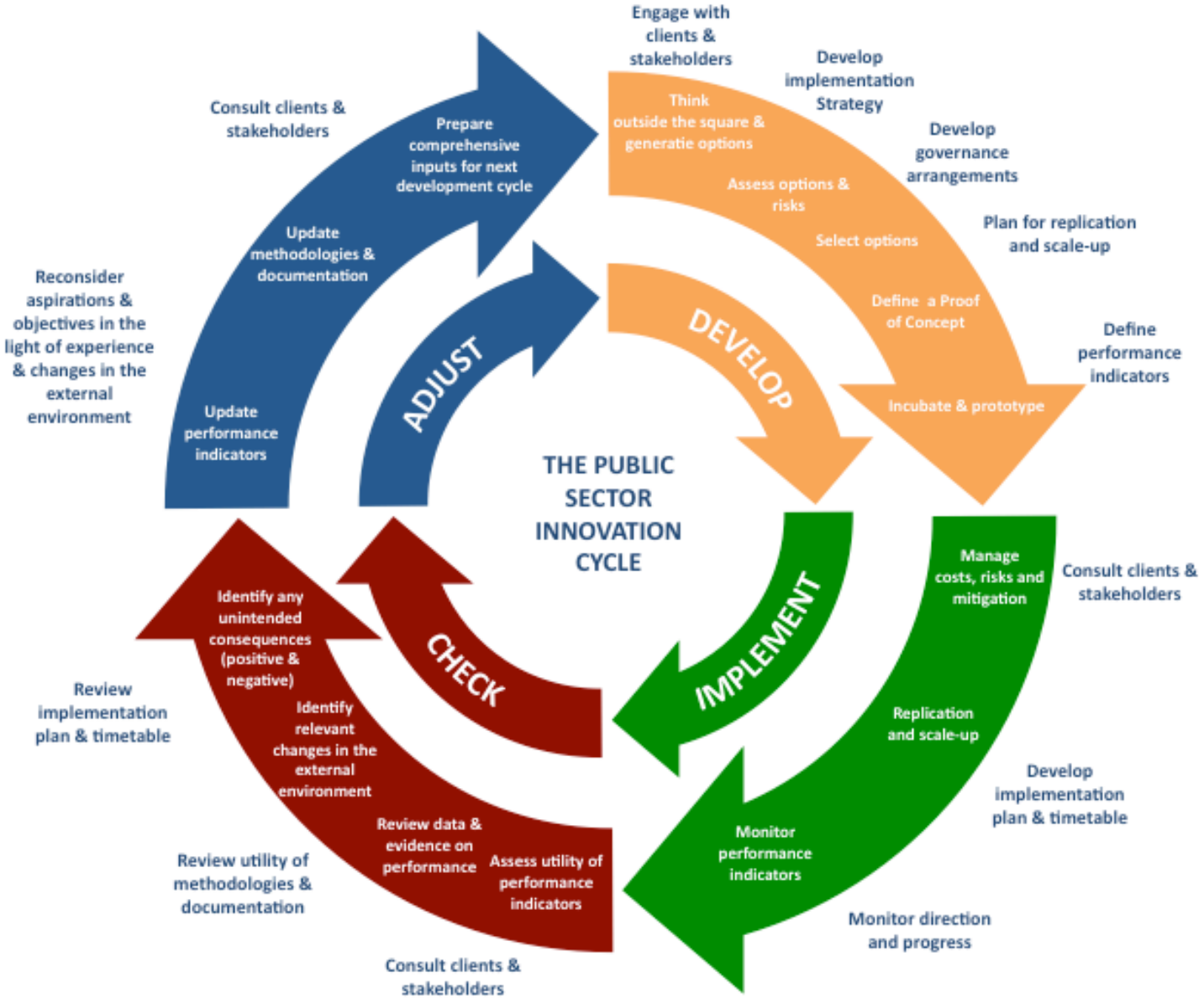

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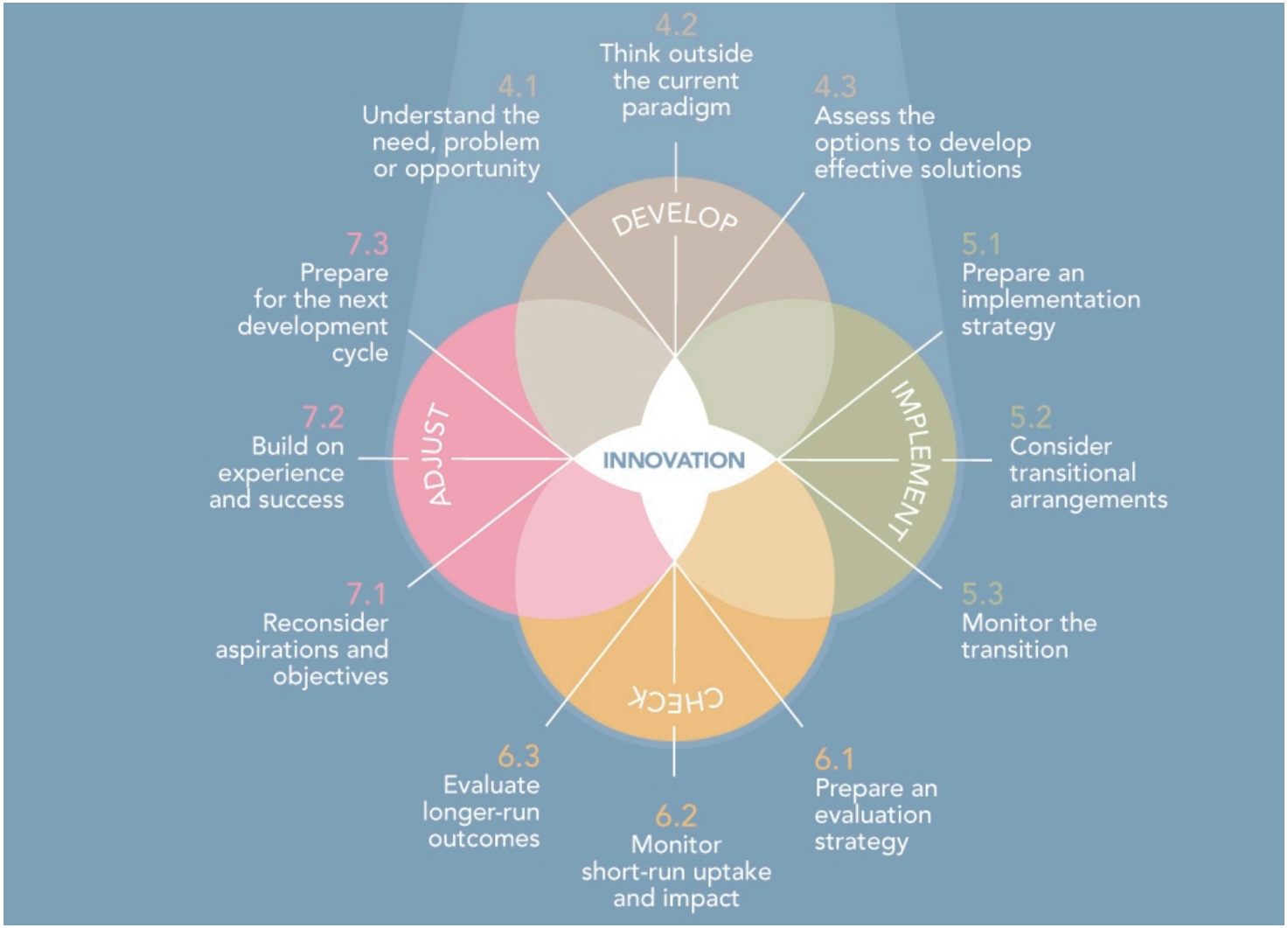
Final version of the decision-making framework developed for the ANAO



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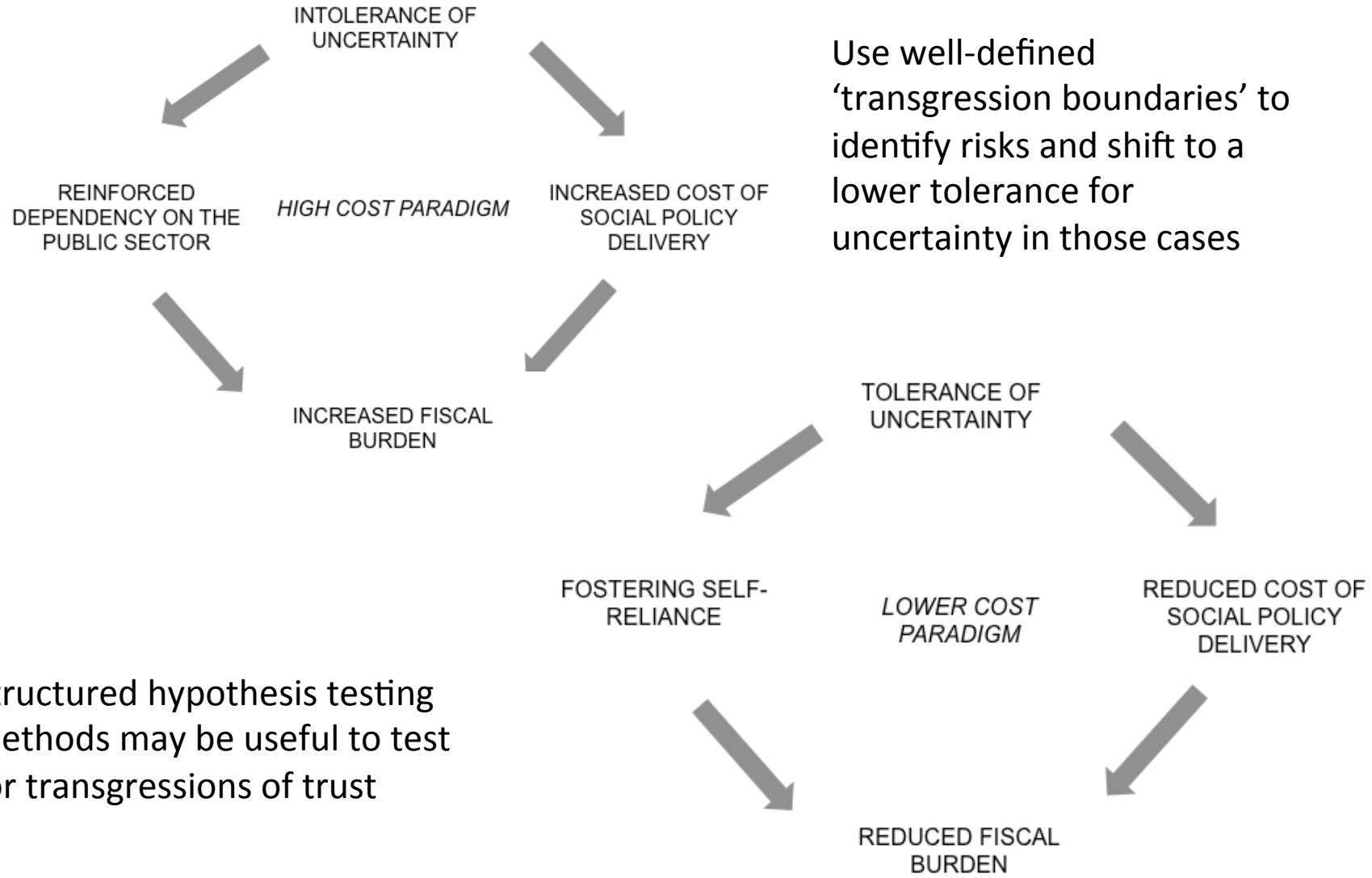
How a tolerance for uncertainty can lift productivity in social policy



Use well-defined 'transgression boundaries' to identify risks and shift to a lower tolerance for uncertainty in those cases

Structured hypothesis testing methods may be useful to test for transgressions of trust

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Experiments in the use of structured hypothesis testing methods stemmed from efforts to reduce evaluation costs & lead times

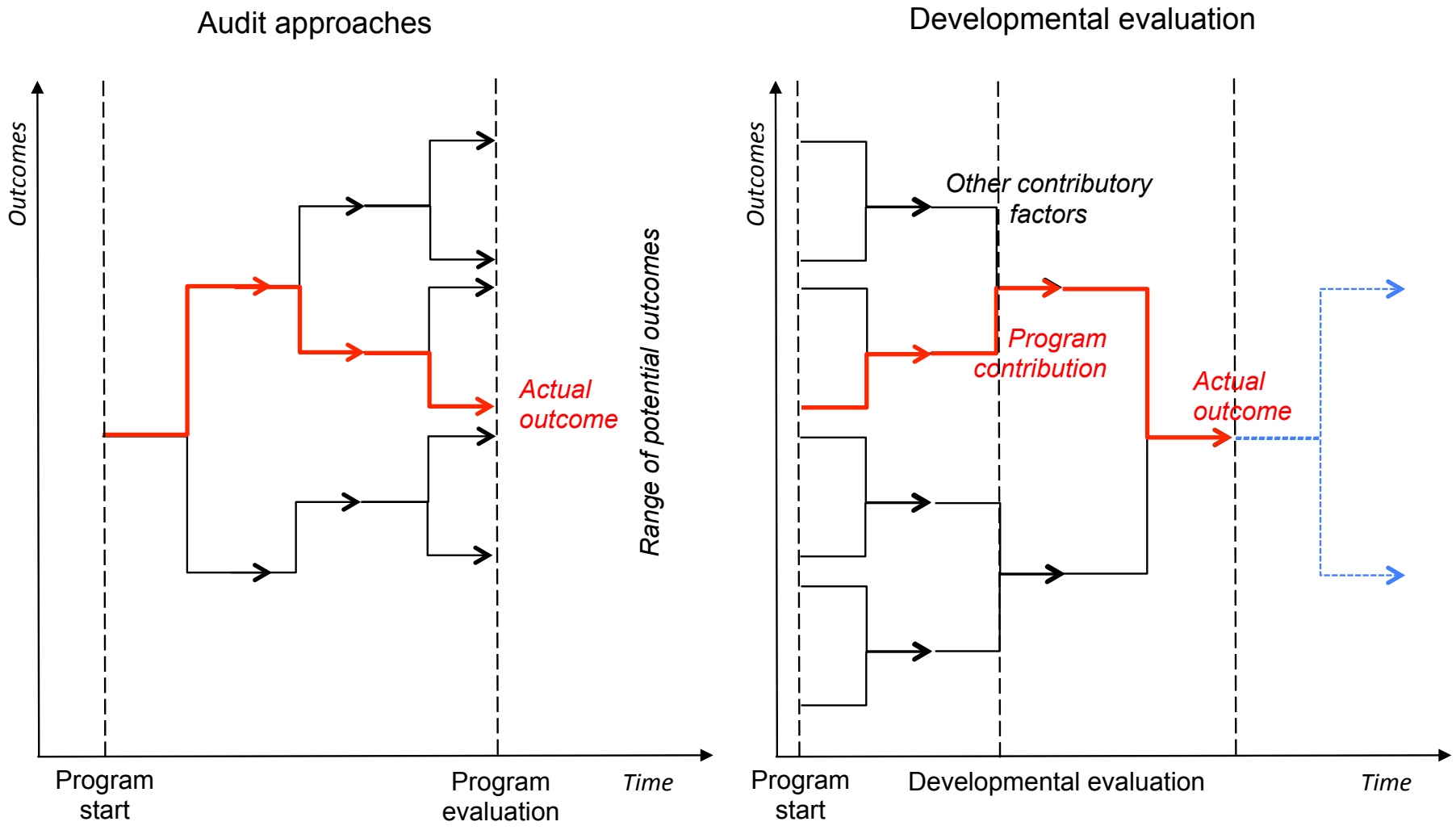

Diagram above thanks to Geoff White (Geoff White Inc. UK)

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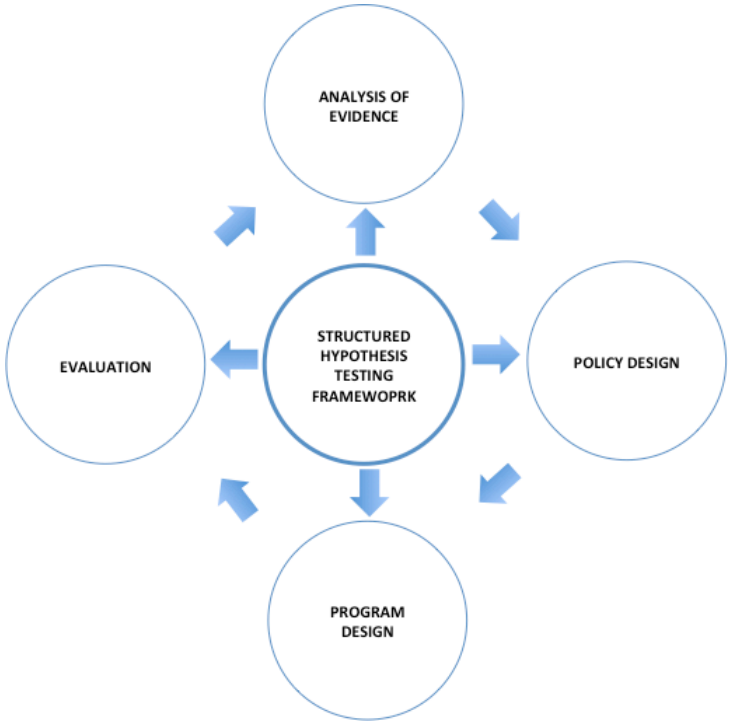

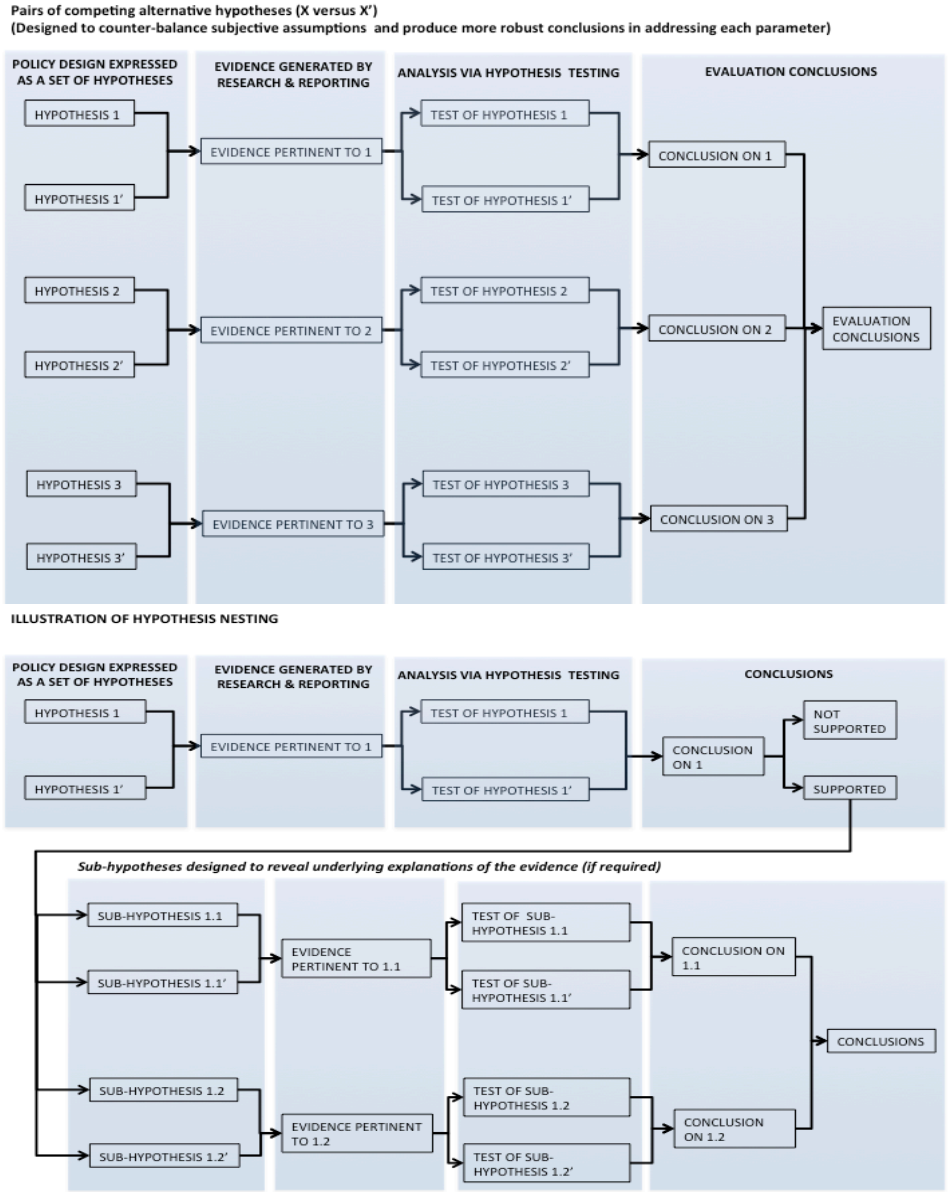

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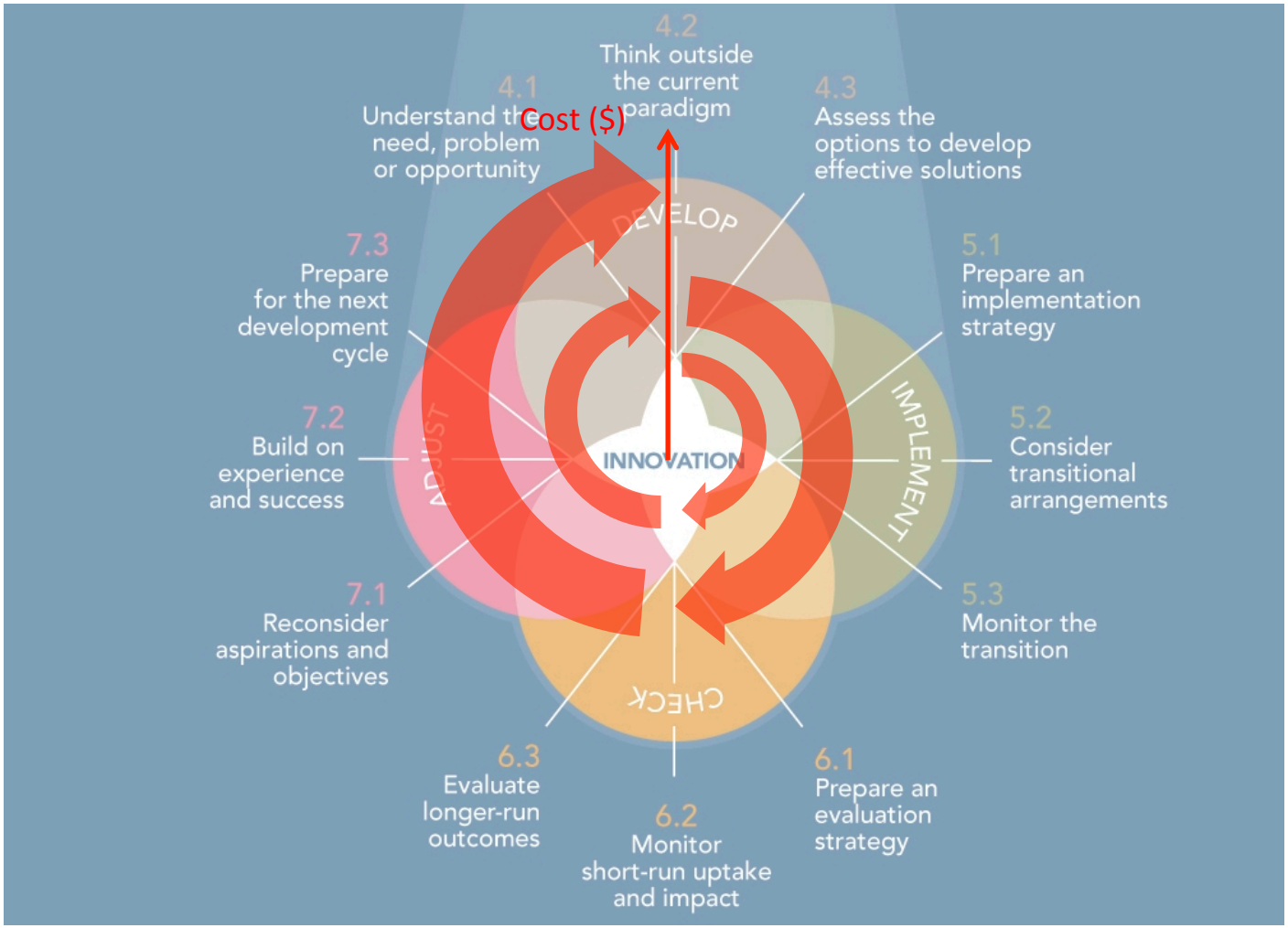
Invented illustration (real pilot findings are confidential)

	Propositions	Evidence	Conclusion (based on balance of probabilities)	Observations
1.	The Institute developed and demonstrated *world-class* research capacity in public policy	• The research impact (as reflected in global citations) is very high by world standards • The proportion of Institute publications with an author from the rest of the world increased to 56% from 23% over the observation period • More than half of Institute publications with an overseas author also involve authors from the USA and/or Europe – linking them to international networks	**Proposition supported**	No further evidence required
2.	The Institute attracted increased funding from Federal and State governments, the business sector and from overseas (demonstrating its increased global standing)	• The Institute attracted levels of Federal and State funding ($23M and $3M respectively) that compares well with benchmark institutes • The share of its income represented by competitive research grants had increased to over 63% by 2012 – a 12% above benchmark institutes • The levels of business funding – and as a proportion of total income – were higher than benchmark institutes	**Proposition supported** with regard to domestic sources of funding **but no evidence as yet on overseas funding**	No further evidence required with regard to domestic sources of funding. Clarification required on definition of business income for KPI purposes Evidence required on overseas funding
3.	The Institute reached full capacity and met its targets in terms of employment and PhDs	• The target level of employment was achieved 3 years early and it has continued to operate well above that level since then • The Institute produces more PhDs and honours students than benchmark institutes even when controlled for differences in institute incomes	**Proposition supported**	No further evidence required
4.	The PhD outputs from the Institute provided research and technical skills in public policy for Australia with associated long-term national benefits	• 78% of the PhDs in stayed in Australia and 19% went overseas • 63% gained employment in the public sector	**Proposition supported but no evidence yet on the associated long-term national benefits**	No further evidence required on PhD numbers and destinations Evidence required on associated long-term national benefits

The 'Rapid Spiral Development' approach



As applied in developing software, weapons systems, space vehicles

Evolve design through repeated cycles (develop, implement, check, adjust)

Incrementally increase budgets with each evolutionary cycle

Appraisal and evaluation become more closely coupled

Not just one pilot then roll-out – use successive policy design vintages

Easier to manage uncertainty and risk

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Roadmap for transformation: principles

1. Stage-Gate methods to foster diversity, robust selection between competing concepts and 'failing fast/early'
2. A quantified appetite for risk aligned with the distinctive role of government
3. Recognition of learning curve benefits
4. Stronger recognition of learning how to manage investment risks in PSI in program evaluation and review
   - derived from quantified appetites for risk (ex ante – ex post comparisons)
5. Use these formal methods to allow for transparency and accountability as demonstrably 'calculated risk taking'
6. Use the formal characteristics of the above to draw Finance and Treasury more strongly into the PSI arena
7. Use of structured hypothesis-testing methods to lift productivity by integrating analysis, policy/program design and evaluation? – particularly useful for handling uncertainty and risk

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