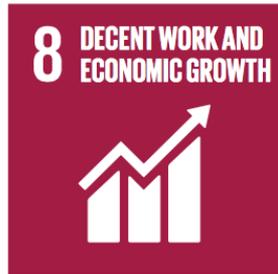


Local Agenda 2030: developing a participatory framework for achieving the SDGs from the bottom up

Brett A Bryan, Enayat A Moallemi, Shirin Malekpour



The Sustainable Development Goals (SDGs), adopted by all the world's governments at the UN in 2015, aim to guide global development until the year 2030.





How do we implement the global goals?

- High-level global goals are not always relevant to local communities
- Global agreements lack governance necessary to facilitate change on-ground, local governance is more effective
- Local communities often lack capacity to identify and implement pathways to more desirable futures under uncertainty



Aims: Localising the SDGs

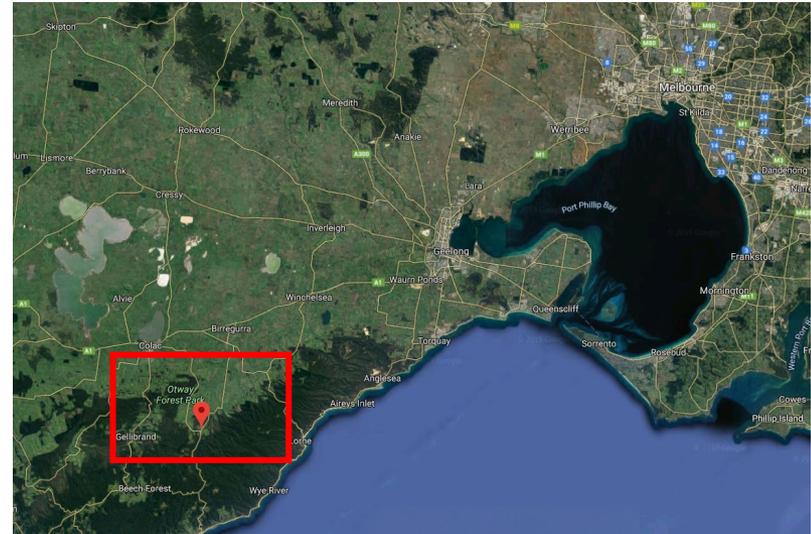
- To develop a framework for co-creating bottom-up plans aligned with the priorities of local communities
- To acknowledge the heterogeneity of local communities e.g. socio-economic and environmental drivers, strategic technical capacity, data availability etc.
- To develop a sense of shared ownership amongst local communities of the choice of pathways towards a more sustainable future



The Forrest community

A post-agricultural/forestry community in transition that recognises its vulnerability to environmental, social and economic change, with concern around:

- Increasing frequency and severity of bushfire and the risk to life and property (SDG3)
- Ensuring availability and sustainable management of water (SDG6)
- Promoting sustained, inclusive and sustainable economic growth (SDG8)
- Protecting and restoring sustainable use of terrestrial ecosystems, sustainably manage forests and tourism (SDG15)

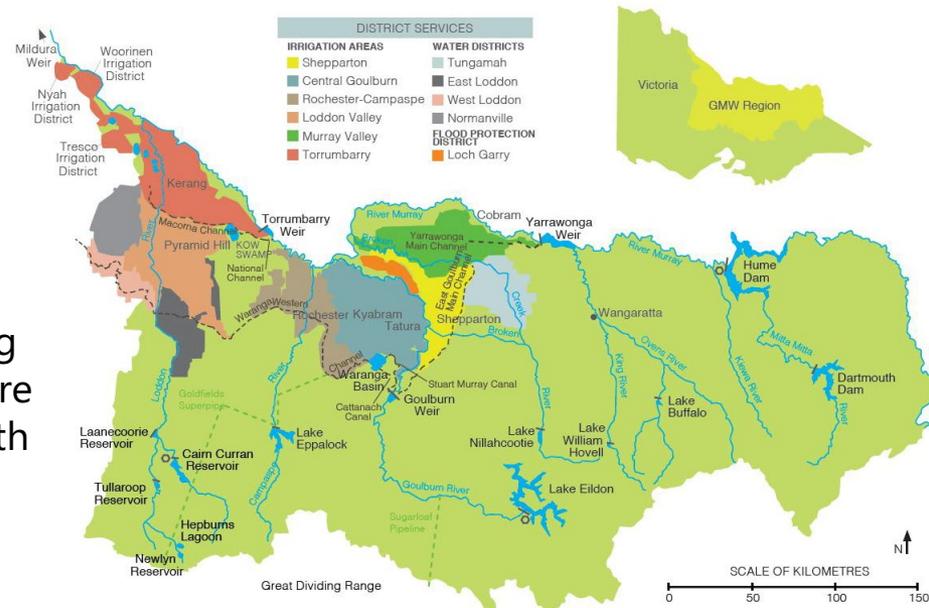


Mountain biking is one of the main recreational activities in Forrest

The Goulburn Murray region

A productive agricultural community that is adapting to less water availability and increasing extreme temperatures that is vulnerable to future environmental, social and economic change, with concern around:

- Avoiding land degradation (SDG15) and improving water quality (SDG6)
- Ecological health of the Murray River (SDG15)
- Sustainable economic growth and productive employment (SDG8)
- Sustainable consumption and production patterns (SDG12)
- Achieving improved nutrition and protecting sustainable agriculture (SDG2)



Credit: Enayat A. Moallemi



Robust decisions need to be made to achieve sustainable futures for local communities under deep uncertainty



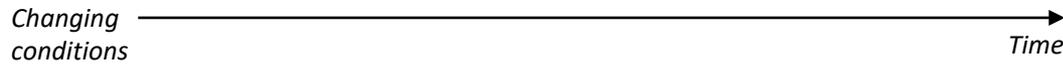
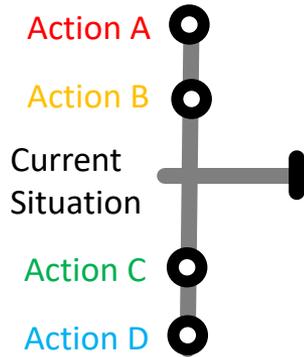
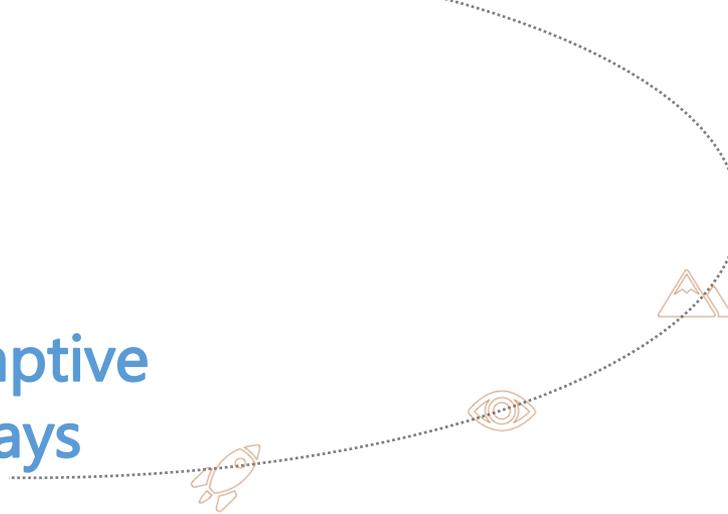
Credit: Flickr (Melvin A)



Credit: Graham Jepson/FT



Dynamic Adaptive Policy Pathways



-  Transfer between actions
-  Adaptation tipping point
-  Action effective in all scenarios
-  Actions not effective in worst case scenarios

Source: Haasnoot *et al.* (2013)



Dynamic Adaptive Policy Pathways

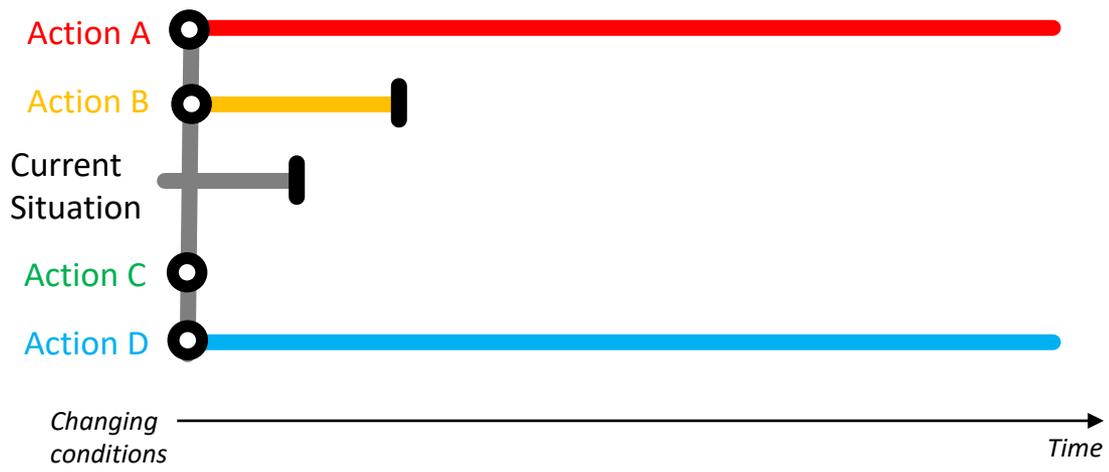


-  Transfer between actions
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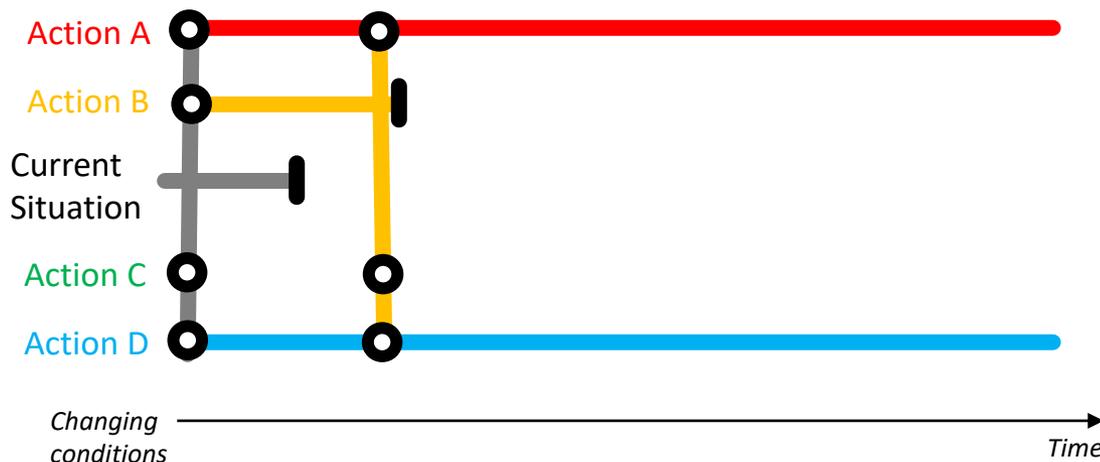
Dynamic Adaptive Policy Pathways



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Dynamic Adaptive Policy Pathways



Transfer between actions



Adaptation tipping point



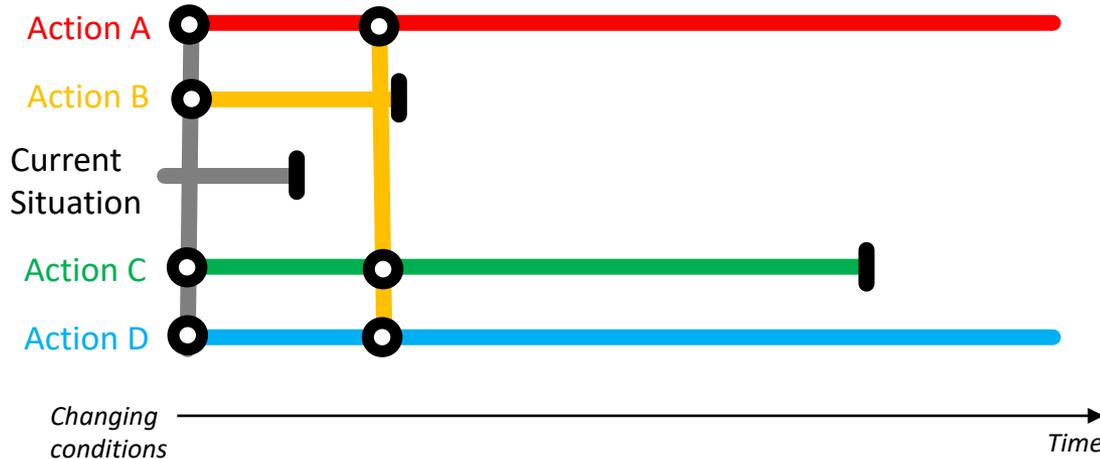
Action effective in all scenarios



Actions not effective in worst case scenarios



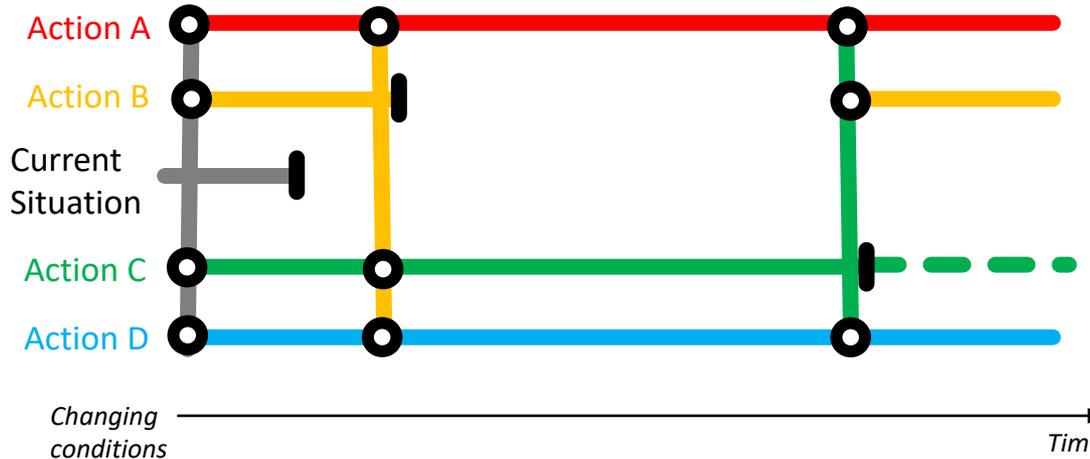
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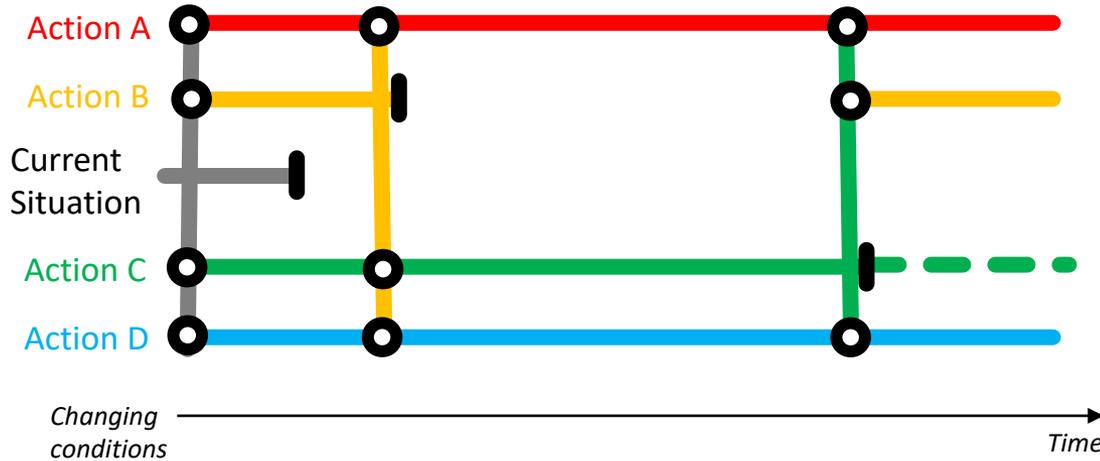


Dynamic Adaptive Policy Pathways



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Dynamic Adaptive Policy Pathways



- Transfer between actions
- Adaptation tipping point
- Action effective in all scenarios
- Actions not effective in worst case scenarios

Path actions	Relative Costs	Target effects	Side effects
1	+++	+	0
2	+++++	0	0
3	+++	0	0
4	+++	0	0
5	0	0	-
6	++++	0	-
7	+++	0	-
8	+	+	---
9	++	+	---



Dynamic Adaptive Policy Pathways

Contextual analysis



Visioning



Target setting



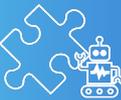
Scenario framing



Problem (gap) analysis



Pathways selection



Pathways assembly



Actions evaluation



Actions formulation



Monitoring system design



Contingency planning



Dynamic adaptive plan



Implementation & Monitoring

Review & reiteration



Contextual analysis

Generations of conditions
Visioning

Target setting

Scenario framing

Problem (gap) analysis

Actions

Dynamics
(social, economic,
ecological, etc.)

Outcome indicators

Scenarios

Pathways selection



Pathways assembly



Actions evaluation



Actions formulation



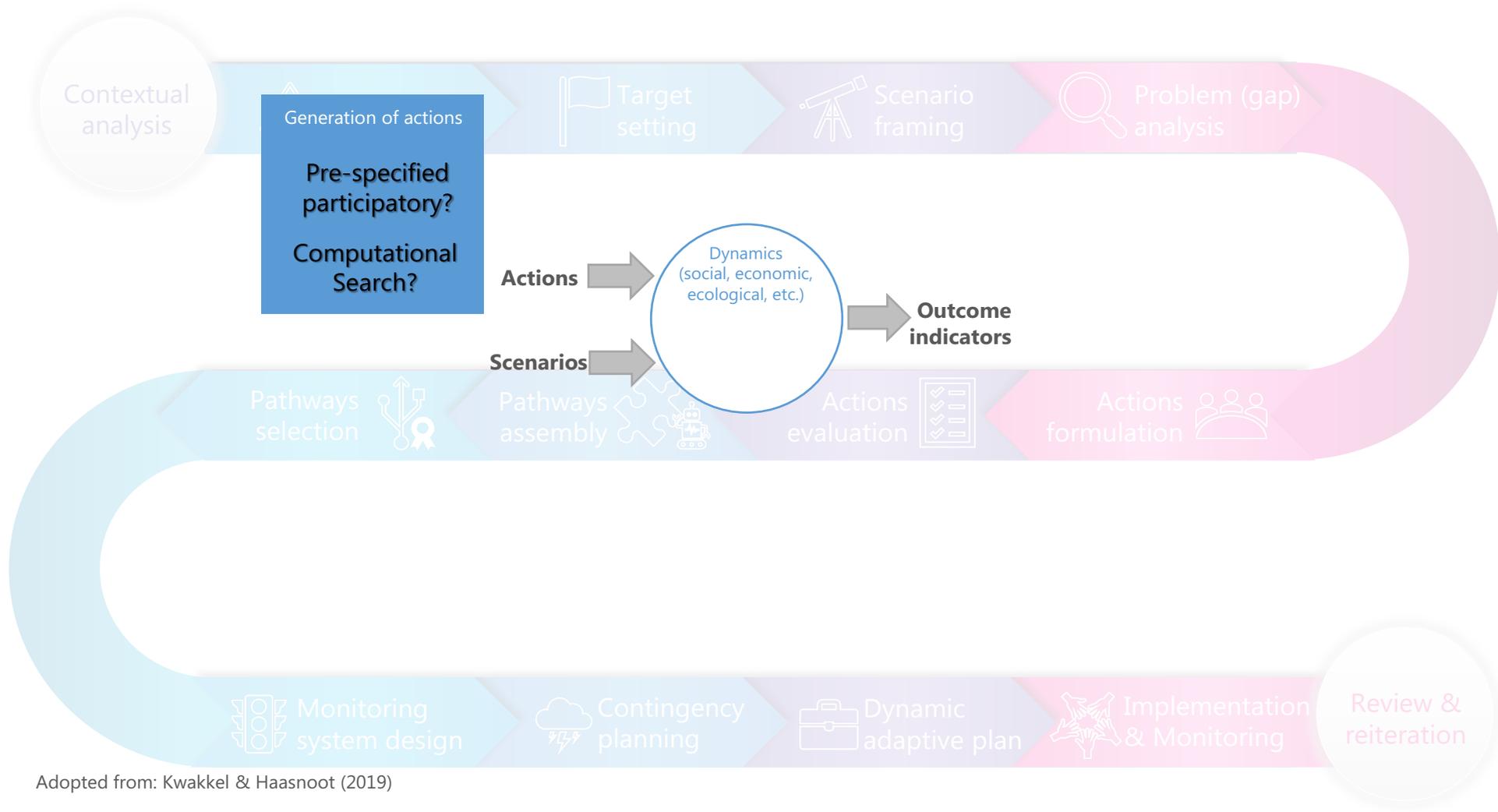
Monitoring system design

Contingency planning

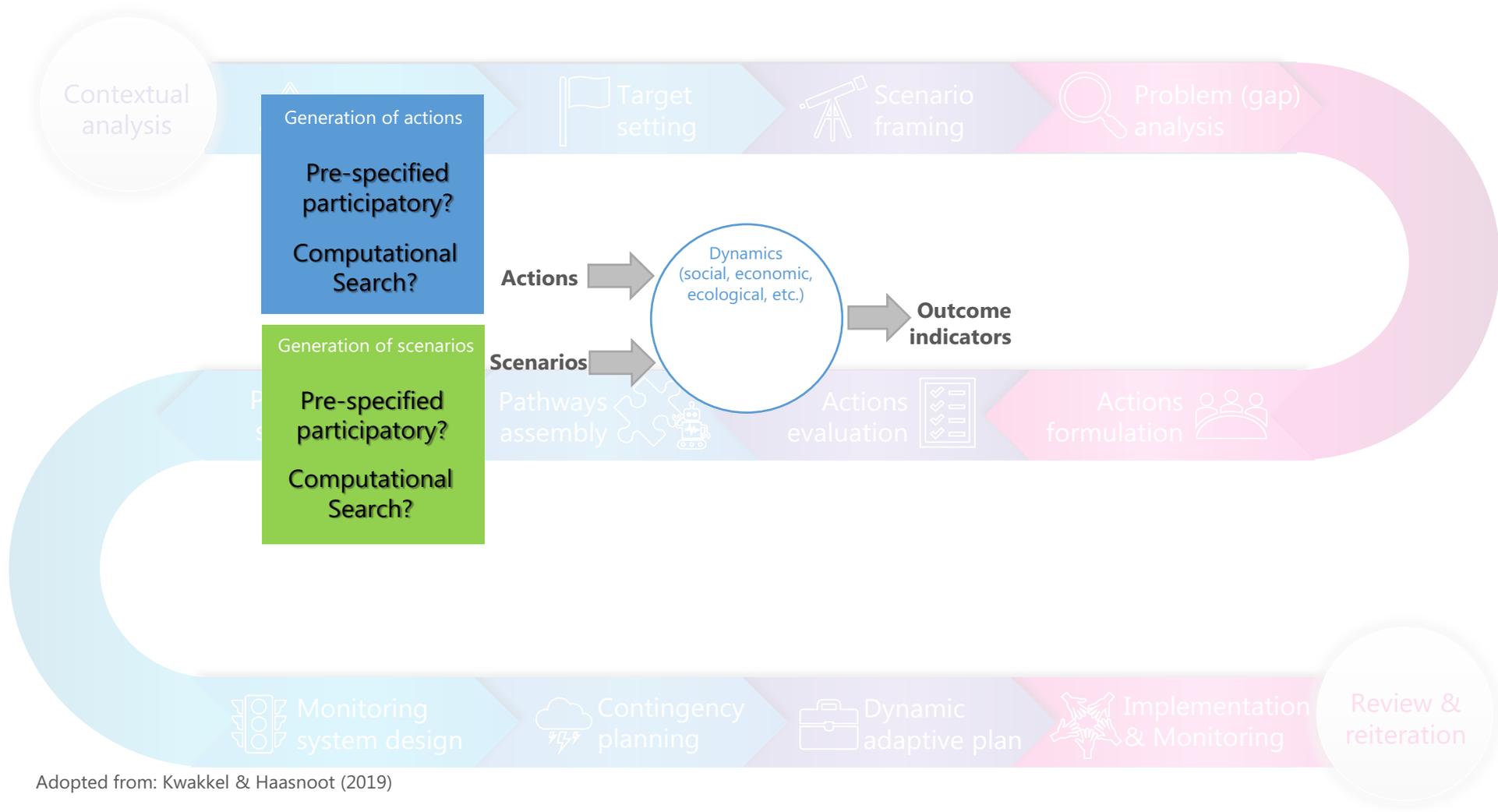
Dynamic adaptive plan

Implementation & Monitoring

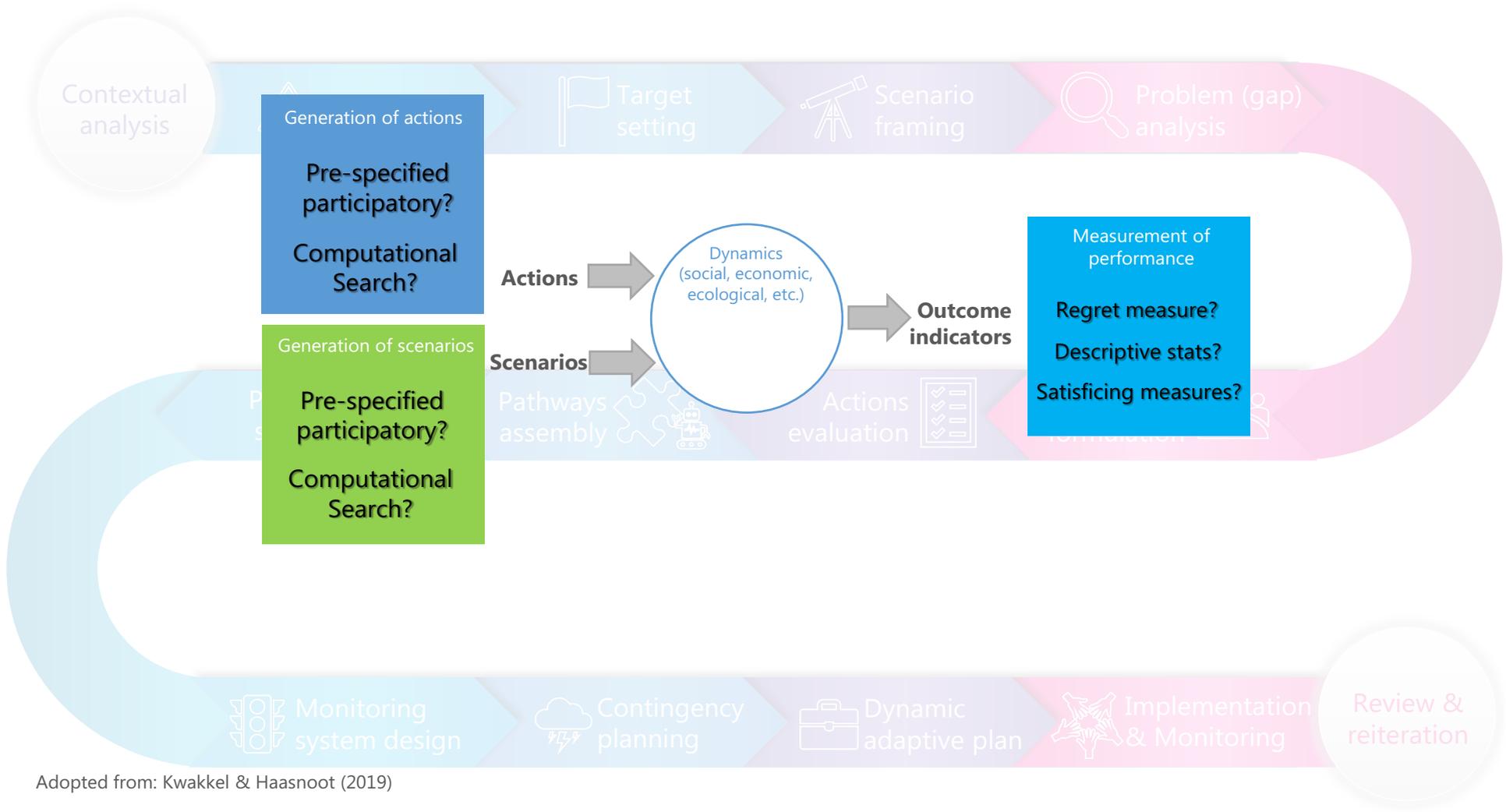
Review & reiteration



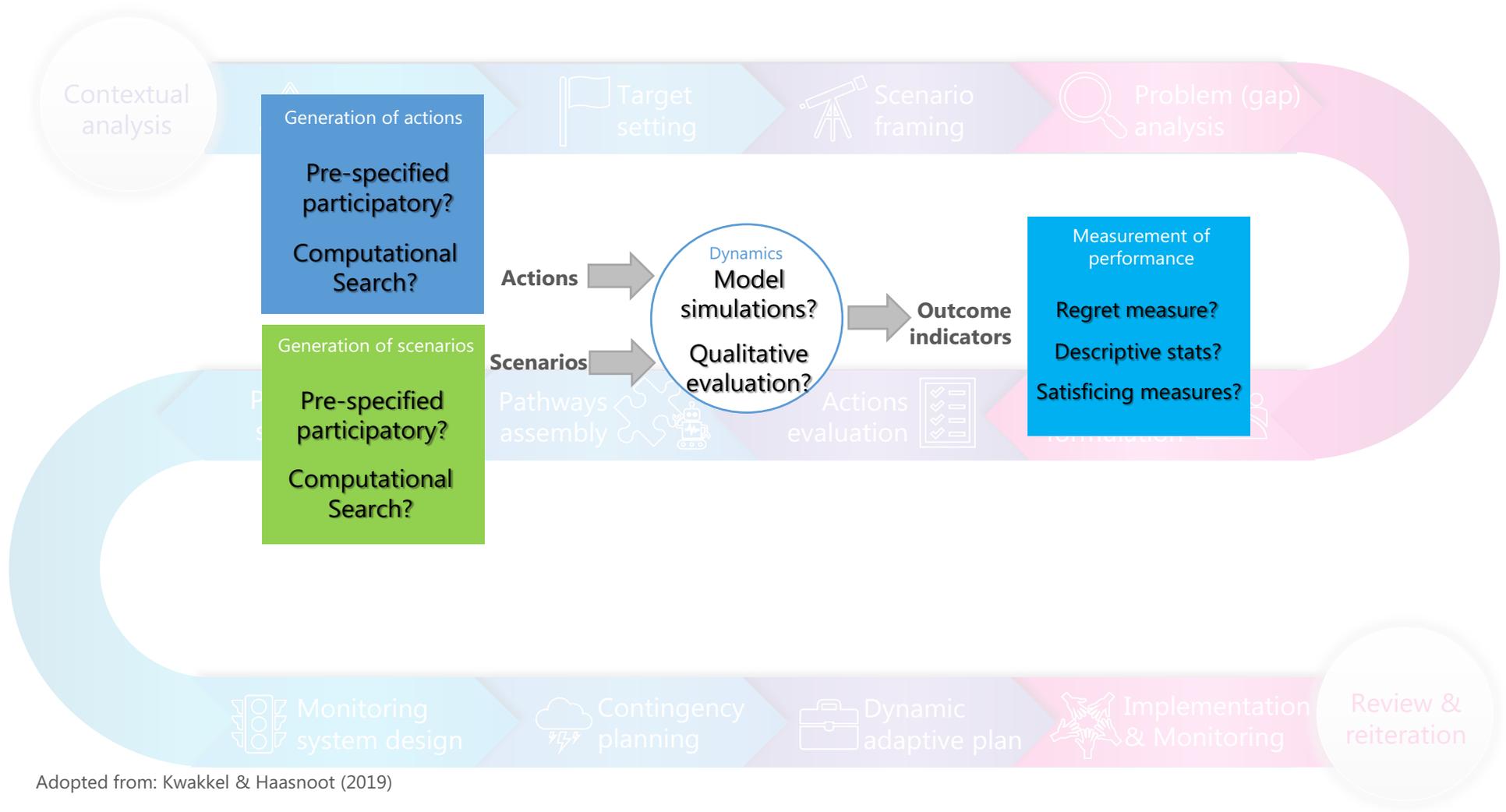
Adopted from: Kwakkel & Haasnoot (2019)



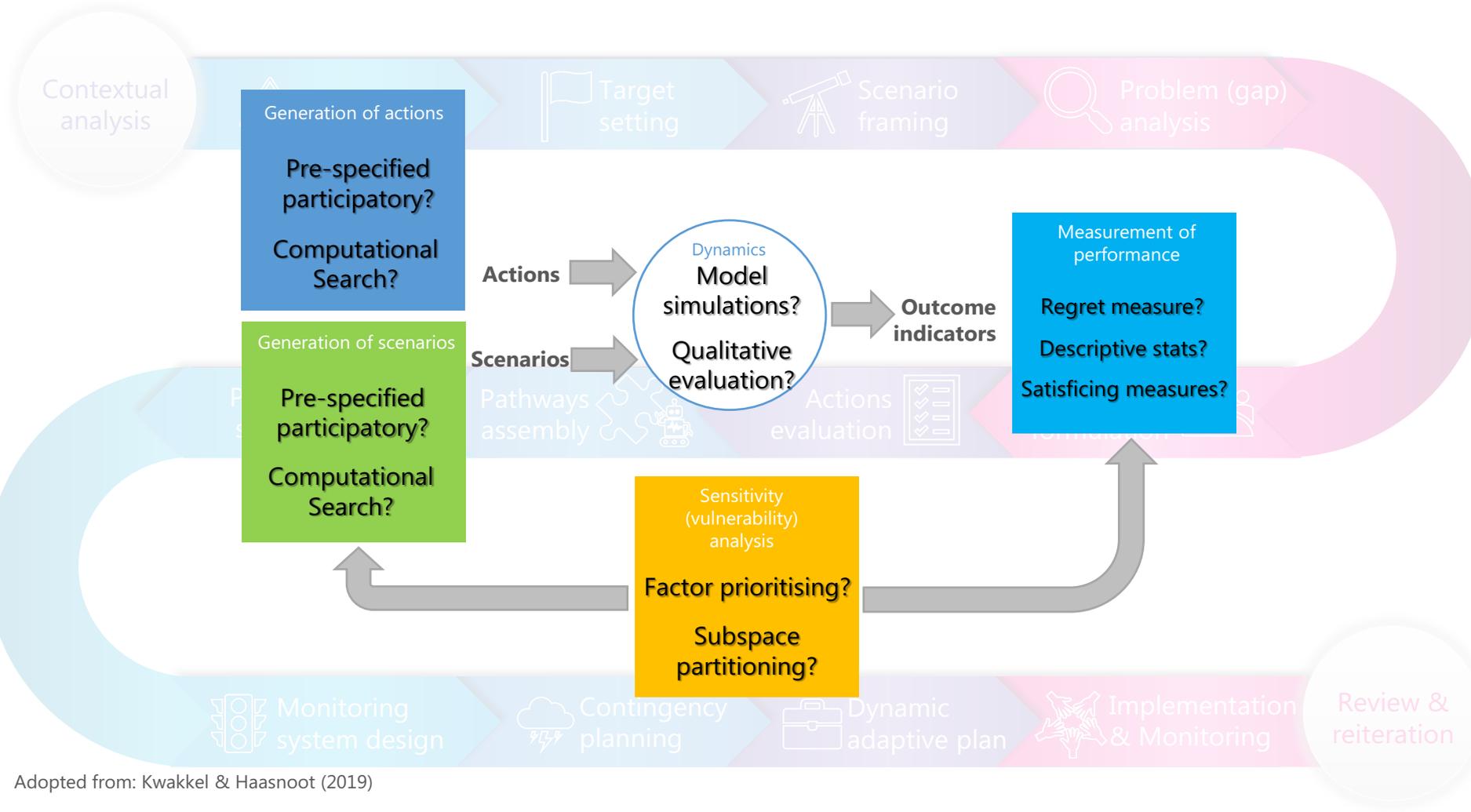
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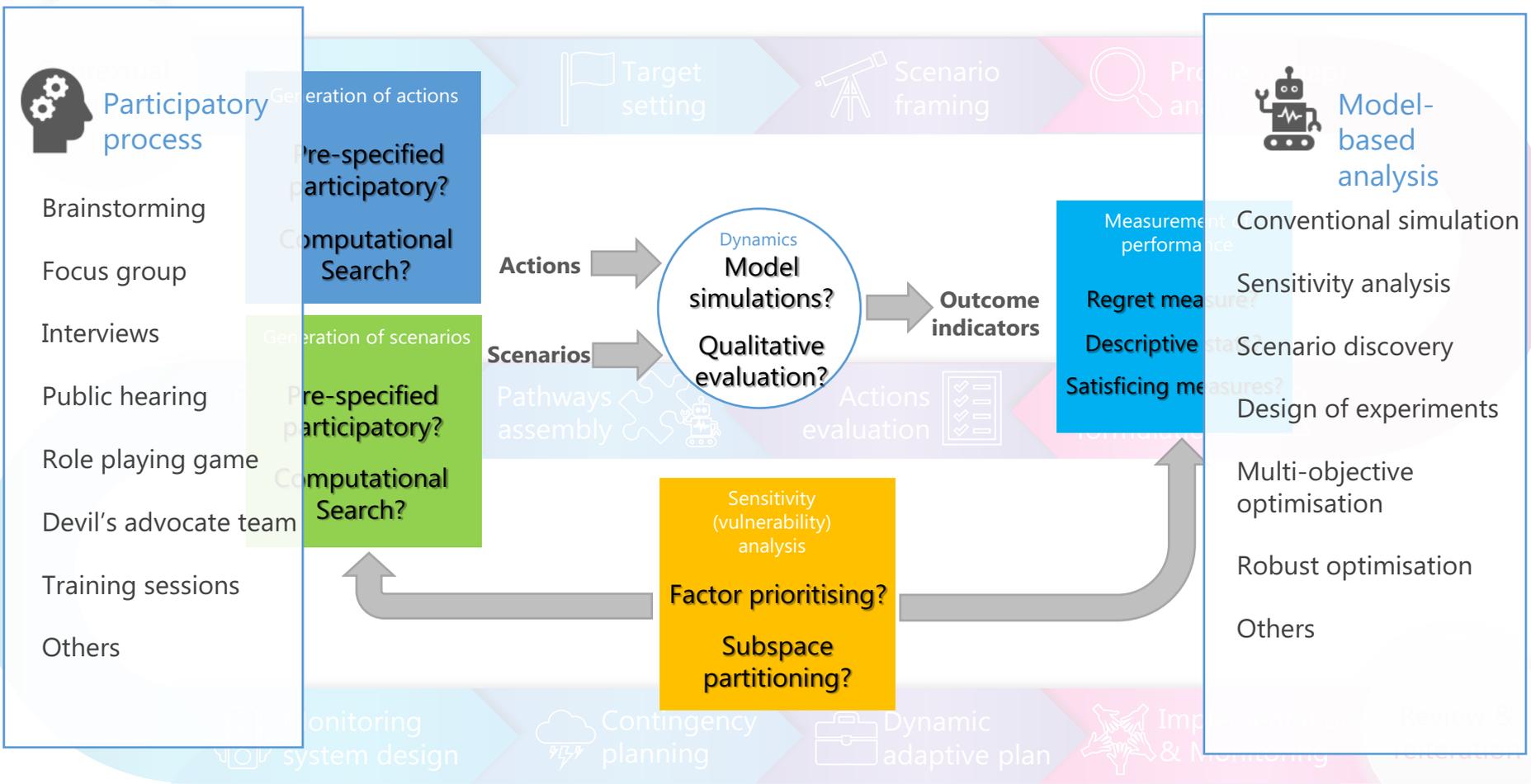
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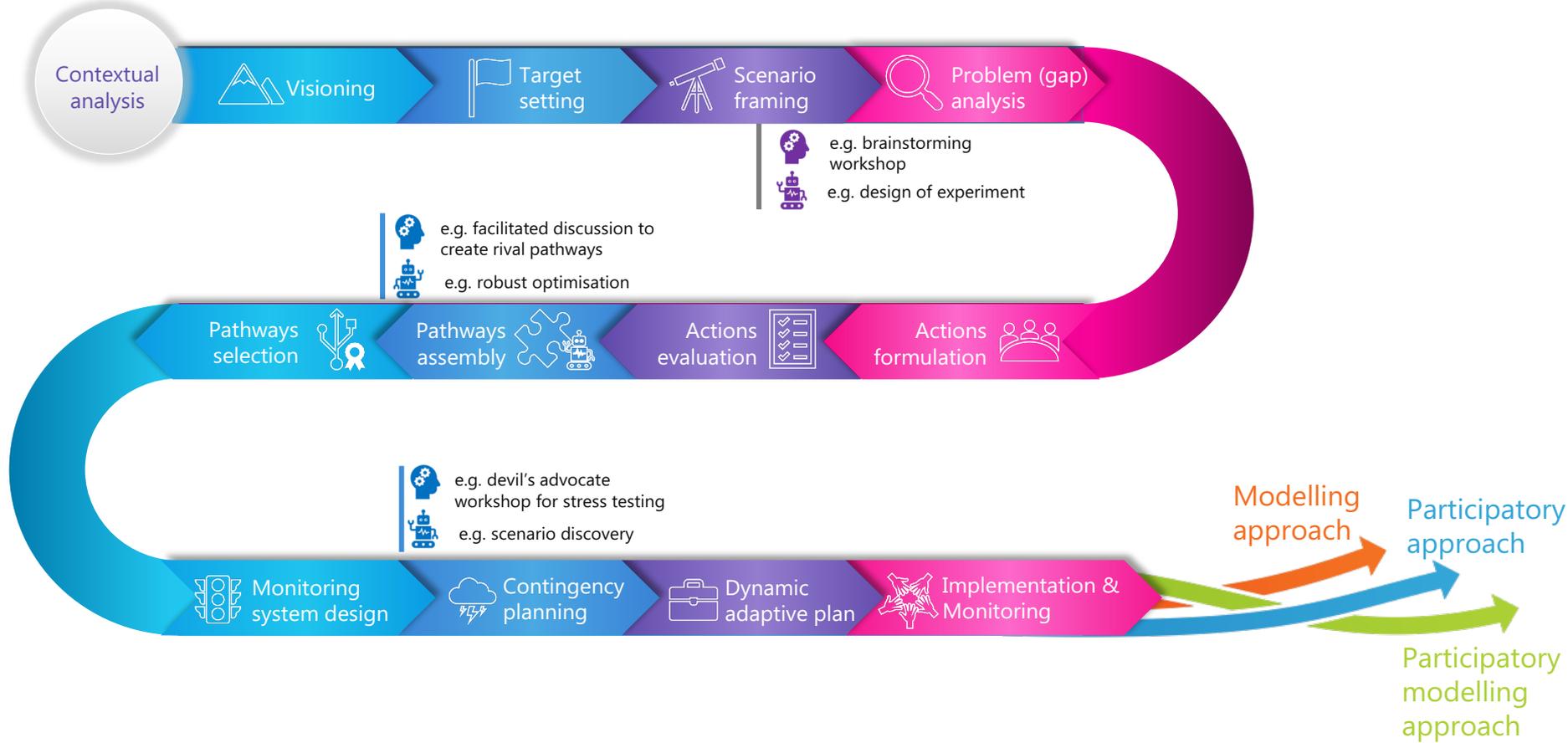


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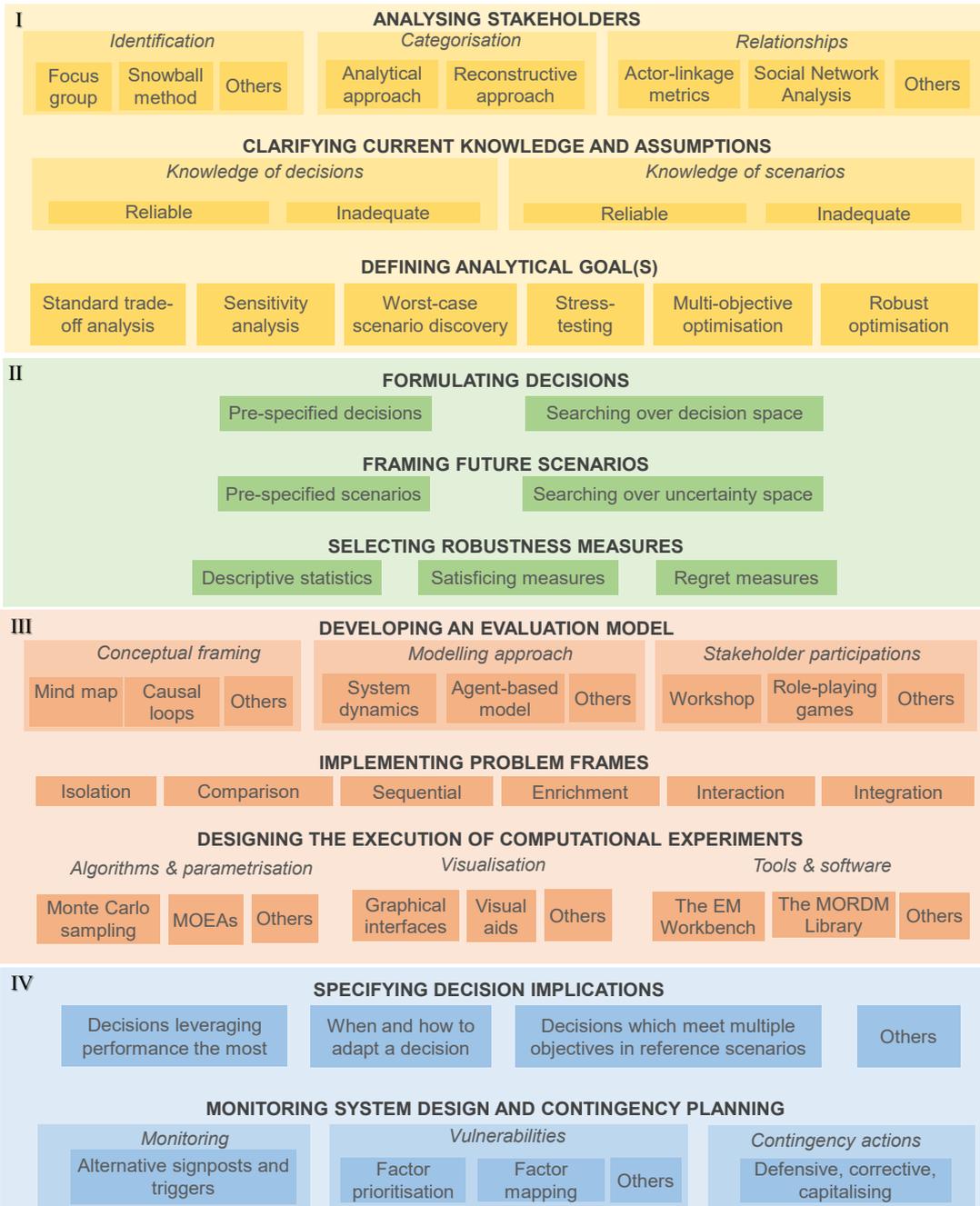




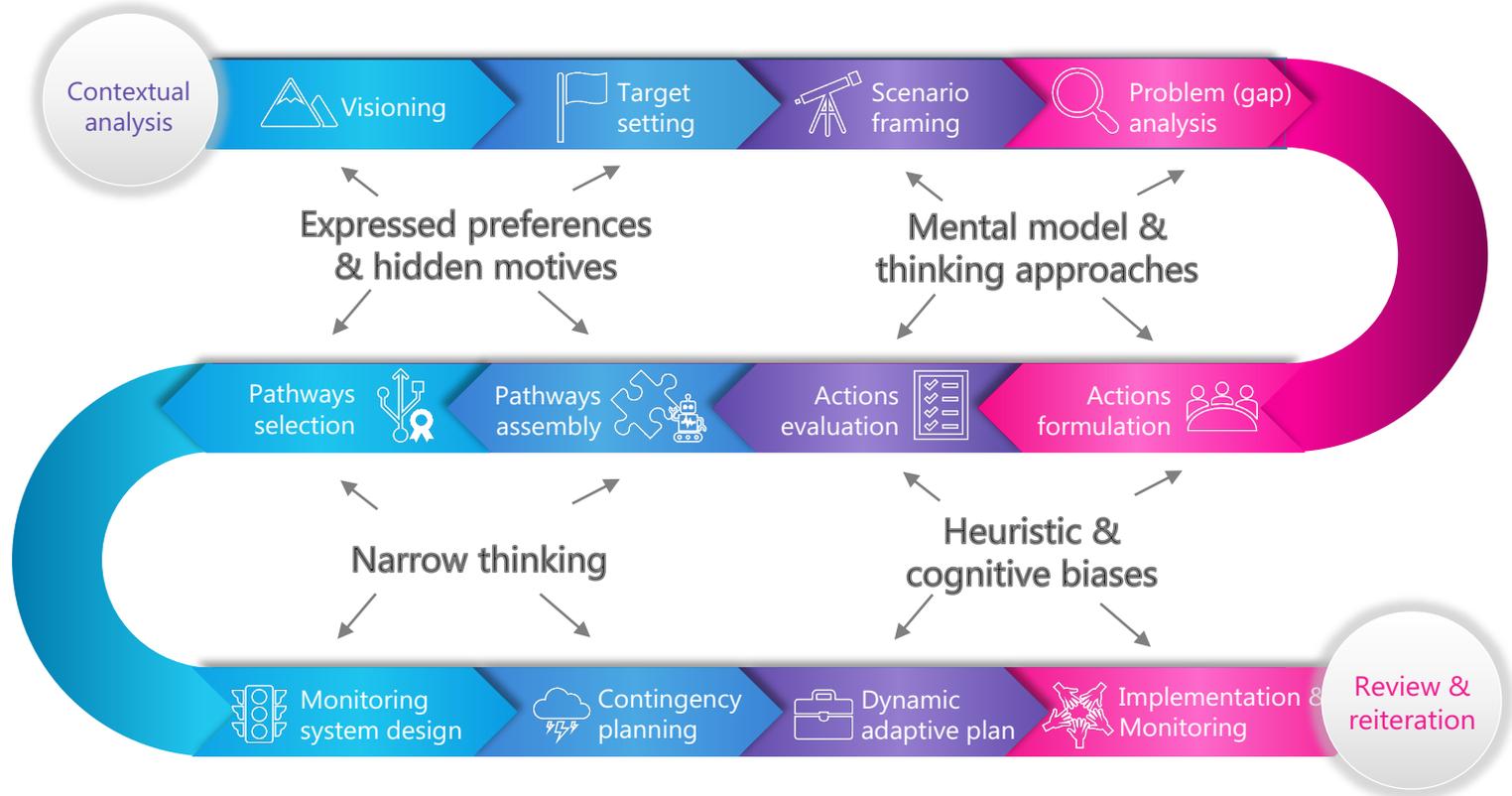
Rival methodological paths



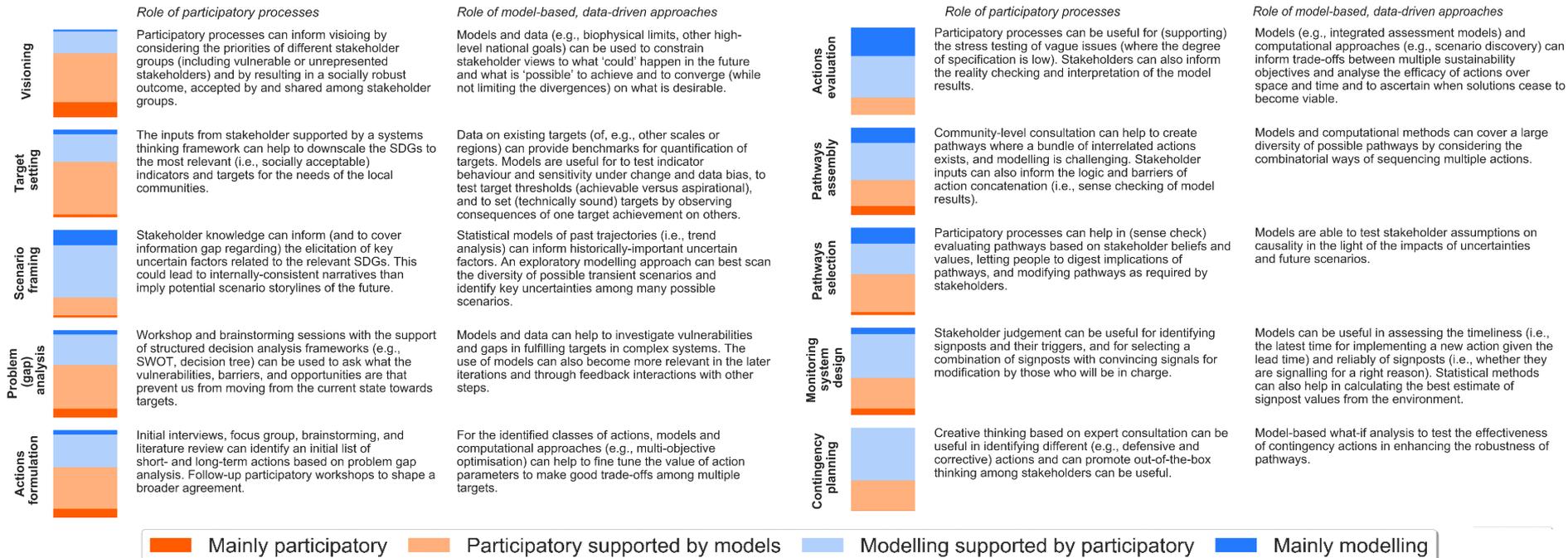
Rival method choices



Method selection under researcher biases can lead to 'poor' methodological paths



Potential roles of model-based and participatory methods in drawing pathways towards the SDGs

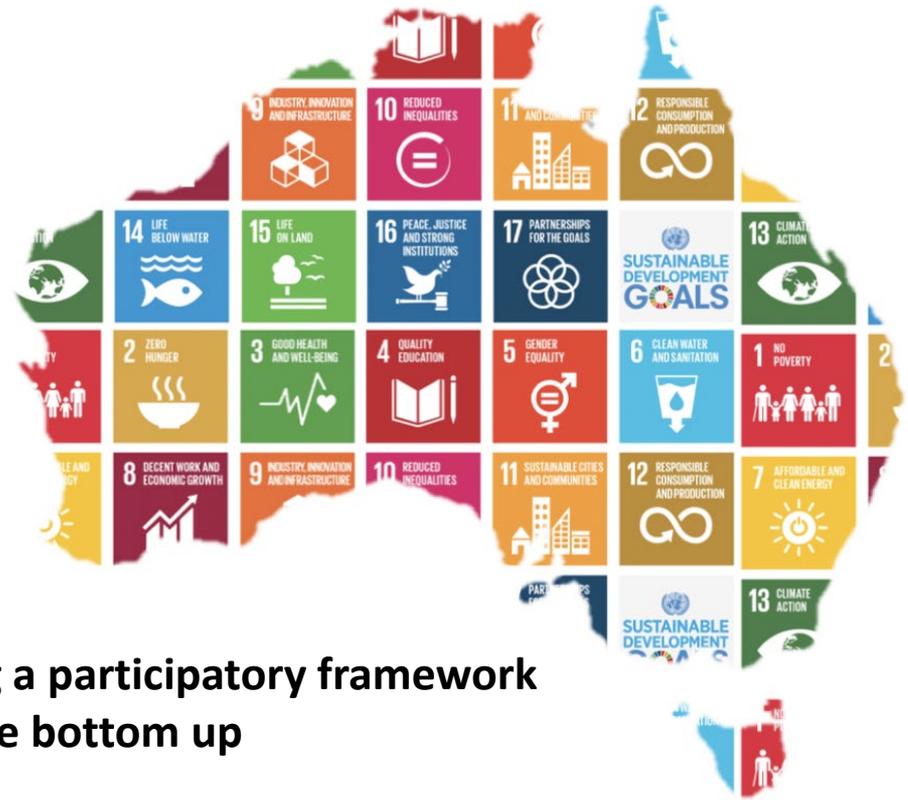


Recommendations and future socio-ecological practice research

The *implicit* knowledge and assumptions of the research team and stakeholders about the methods and the context need to be made *explicit* via a systematic process

Future research needs to focus on enhancing the sustainable development science-policy interface by harnessing the capabilities of *modelling* and *participatory* approaches to increase the credibility, salience, and legitimacy of decision recommendations

Our '*method selection framework*', implemented jointly with stakeholders, will enable transparent and systematic selection of method(s) at each step that best suit the problem at hand



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Thank You