Beyond the results of models: additional purposes for modelling in the policy process
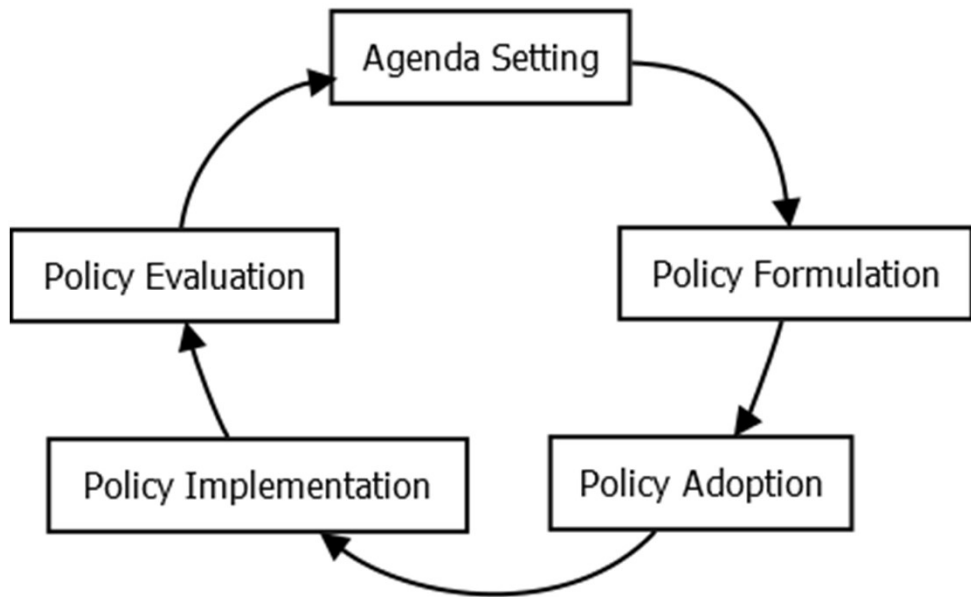
A. Melchior

12-11-2021

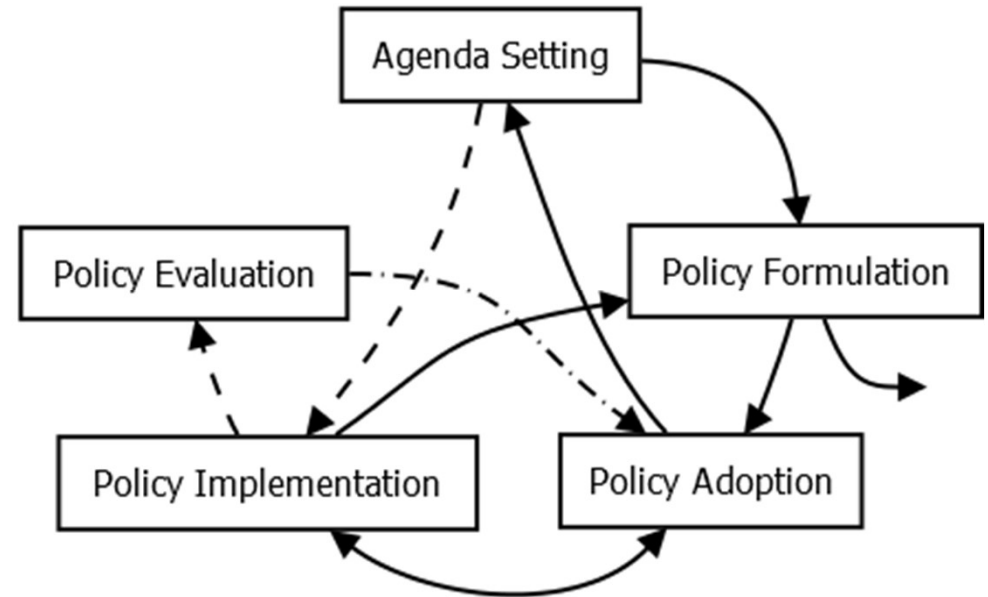**Key takeaways from this talk:**

Goal: use ABM to improve real policy processes

- The <u>process</u> to create an ABM can serve a valuable purpose in policy development.
- The **process to create** an ABM can be more important than the **outcome of** the ABM to the policy process.

- Three proposed process purposes of models:
  1. Improve the understanding of complexity
  2. Improve alignment in world views of stakeholder
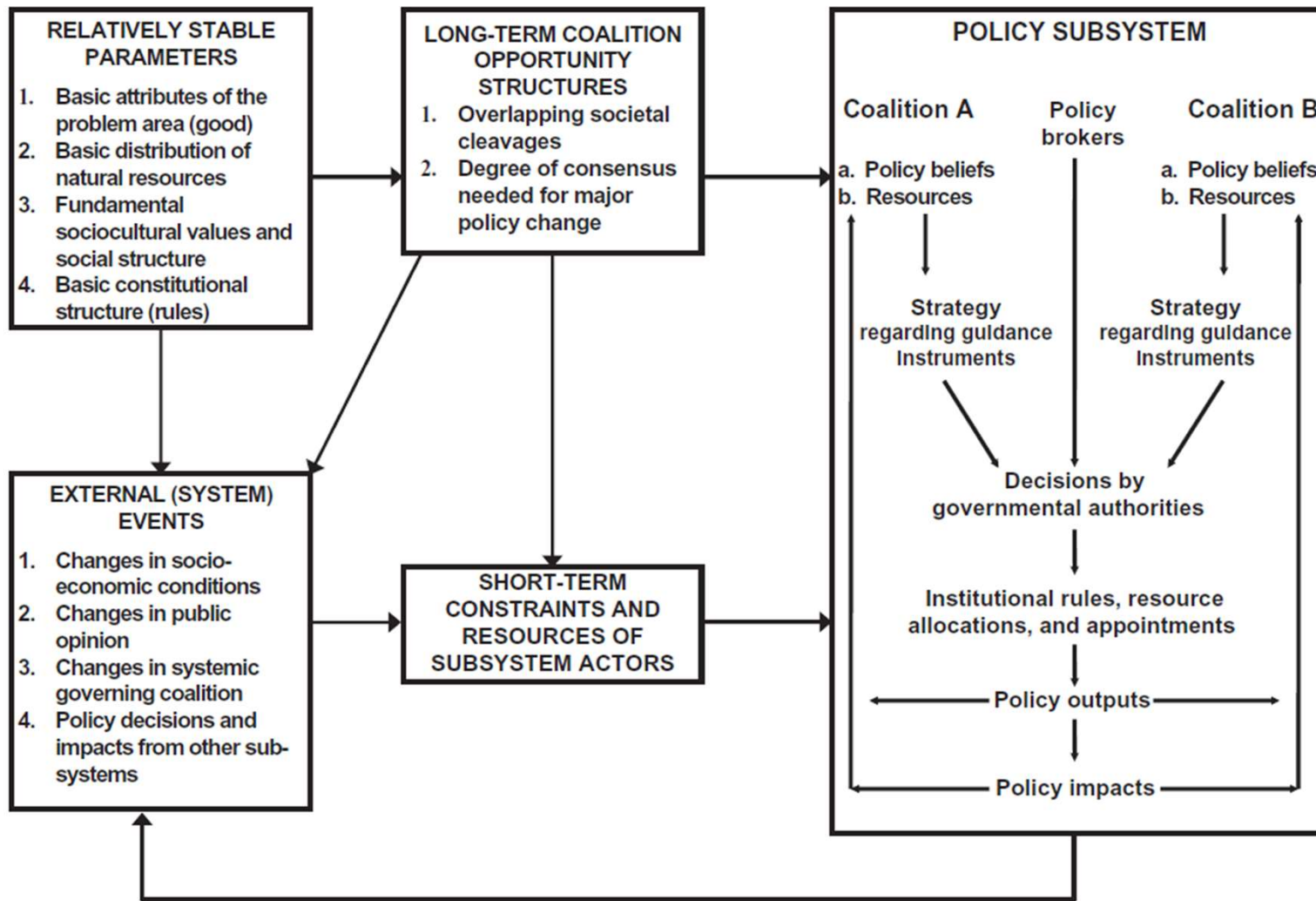 3. Guide the policy process with suggestions for next steps

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The policy process in theory

Agenda Setting → Policy Formulation → Policy Adoption → Policy Implementation → Policy Evaluation → Agenda Setting

A policy process in practice

The policy process is usually not a neatly structured process

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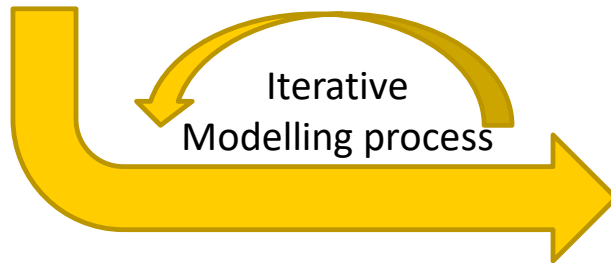# Advocacy Coalition Framework

2007 Advocacy Coalition Framework Flow Diagram

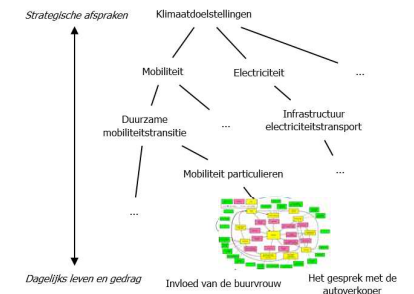# Case study: monitoring the EV-transition

Participatory modelling

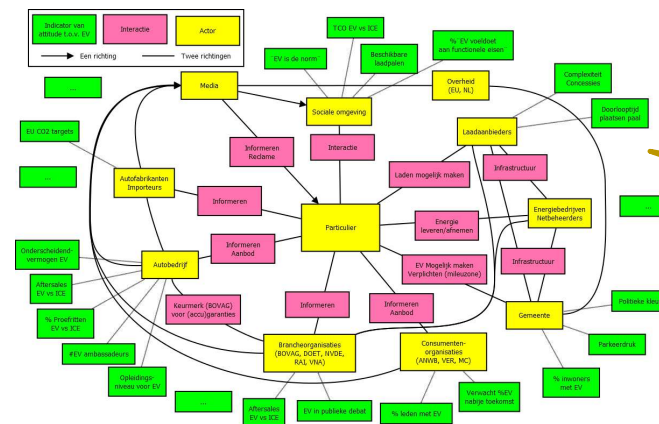Various stakeholders with different perspectives

Questions from policy developers w.r.t. non-fiscal indicators:
1. **Vague goal; help us understand and get "a grip on things"!**
2. **How do others understand it?**
3. **Tell us what to do!**

Iterative Modelling process

"I knew it is complex, but now I know why it is complex."

Six principles when using Agent Based Modelling to impact the policy process

1. Acceptance is **more** important than correctness or validity.
2. It is not about finding The Answer, it is about finding **valuable insights**.
3. Stakeholders are involved **during** development.
4. Create value **without** empirical evidence.
5. Communicate in an **understandable** way.
6. Explicitly state what the ABM does and **doesn't** do.

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Discussion
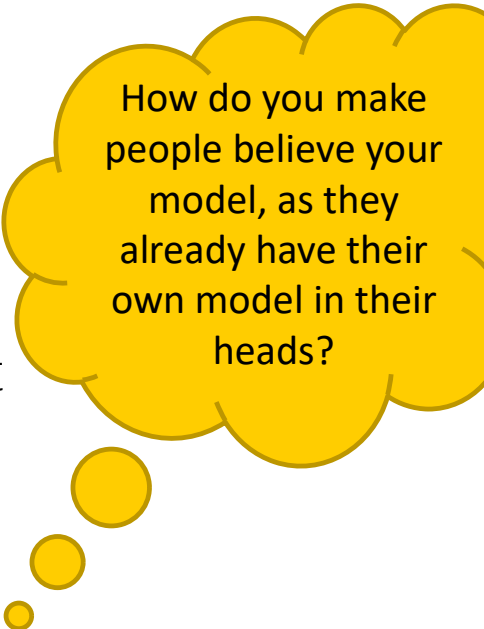
- Subjectivity! What about validation and objective science?
  - Goal to **improve** policy process, not to "solve" it.
  - Later policy process phases would require more validation.
- The proposed purposes are not always applicable.
  - Different purposes for different phases of policy process.
  - Challenge to be involved in earlier policy process phases.

Requires different way for policy developers and academics to collaborate.

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Key takeaways from this talk:

Goal: use ABM to improve real policy processes

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- The **process to create** an ABM can be more important than the **outcome of** the ABM to the policy process.

- Three proposed process purposes of models:
  1. Improve the understanding of complexity
  2. Improve alignment in world views of stakeholder
  3. Guide the policy process with suggestions for next steps

How do you make people believe your model, as they already have their own model in their heads?

To leave you with some questions...

- What are your thoughts on the difference and distinction between process purposes and output purposes for ABM's and our simulations?

- Do you know of additional process purposes?
- Suggestions for additional principles?
- Anything else you want to discuss? Let me know!

- Contact: a.t.melchior@uu.nl

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