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SEVENTH FRAMEWORK PROGRAMME

248128

Conceptual Models Supporting Formal Policy Modelling: Metamodel and Approach

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Overview

- OCOPOMO Project and Process
- Integrating collaborative scenario texts with formal policy models: Consistent Conceptual Description (CCD)
- CCD approach, metamodell and supporting ICT
- Conclusions

OCOPOMO

- Open Collaboration for Policy Modelling
- www.ocopomo.eu
- FP 7 Project
- Duration: 1/1/2010 – 31/12/2012
- Project Partners:
  - University of Koblenz-Landau, Germany
  - Suor Orsola Benincasa University of Naples, Italy
  - Technical University of Kosice, Slovakia
  - Manchester Metropolitan University, UK
  - Volterra Consulting, UK
  - University of Warsaw, Poland
  - Intersoft A.S., Slovakia
  - Scott Moss Associate, UK
  - Kosice Self-governing Region, Slovakia
  - Campania region, Italy

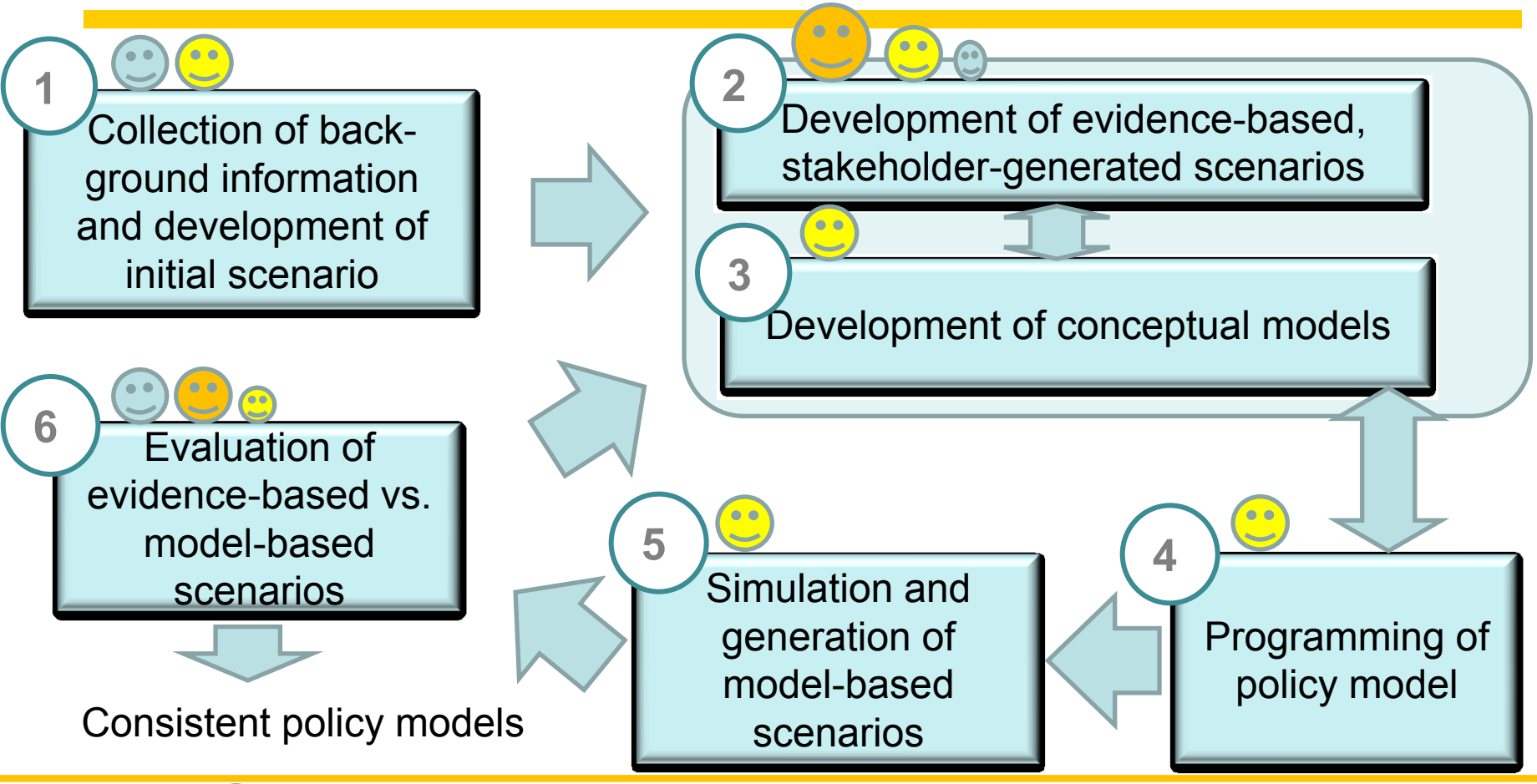
Aims of OCOPOMO Project

- Comprehensive IT solution to support the whole policy development process
  - policy analysis, modelling and simulation
  - collaboration among
    - policy analysts and policy operators , wider stakeholder groups and general public
- Scenarios as a crucial but simple means
  - for engaging stakeholders in policy development and
  - to enable transparency
- Formal Policy Models combining scenarios and background information to inform decision makers

Integrating Scenario and Formal Model

- Stakeholder-generated scenarios inform formal policy model design
  - Goals, scope and social processes specified by participating stakeholders
- Formal policy models produce simulations, which result in model-based scenarios
- Participating stakeholders evaluate model generated scenarios
  - Surprises involve further investigation of model & scenarios
  - Iterations in developing formal policy models

OCOPOMO's Integrated Policy Process and Involved Actors



Legend:

Prodess phase

Transition to next phase

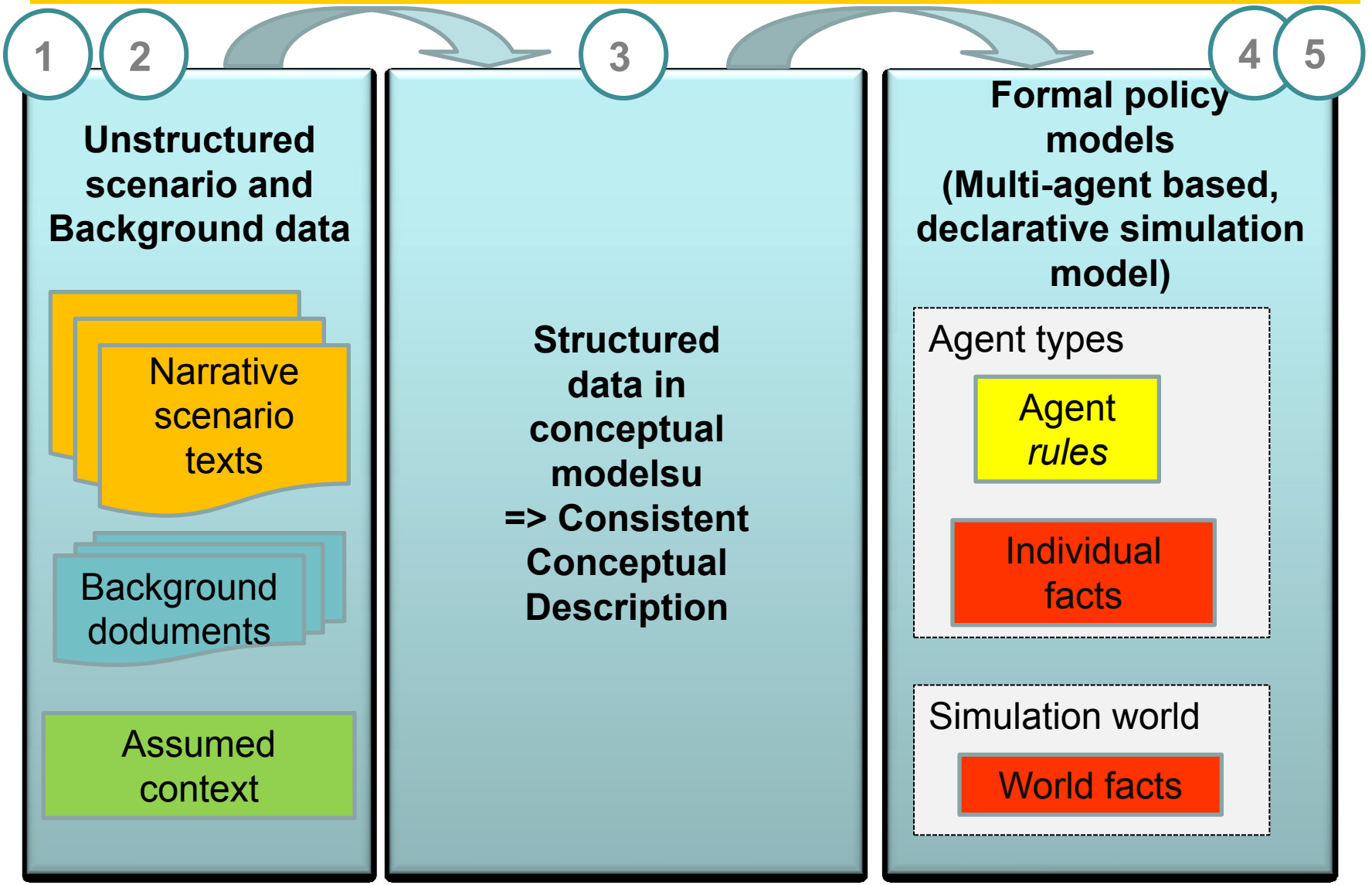
Actors:

Domain Experts (Policy Planner / Strategic Decision Maker)

Stakeholders involved

Experts for Policy Analysis / Policy Modelling

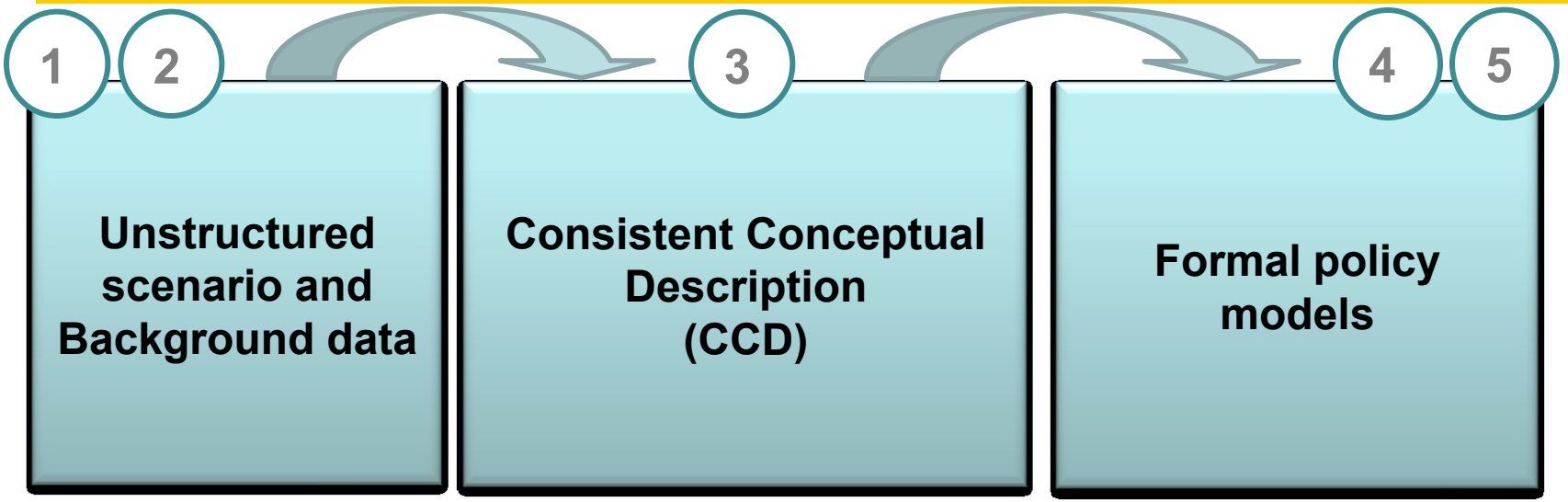
Transformation Needs



Consistent Conceptual Description

- Consistent
  - Make modelling decisions traceable for stakeholders.
  - Text phrases from source scenarios and background texts are linked with conceptual descriptions.
- Conceptual
  - Conceptualising actors, policies, believes, aims etc. and their relations
  - Conceptualisations are transferred into programming code
- Description
  - Description and visualisation of a policy case
  - Expertise of policy analysts may lead to particular knowledge constructs in the CCD.

Transformation Tools

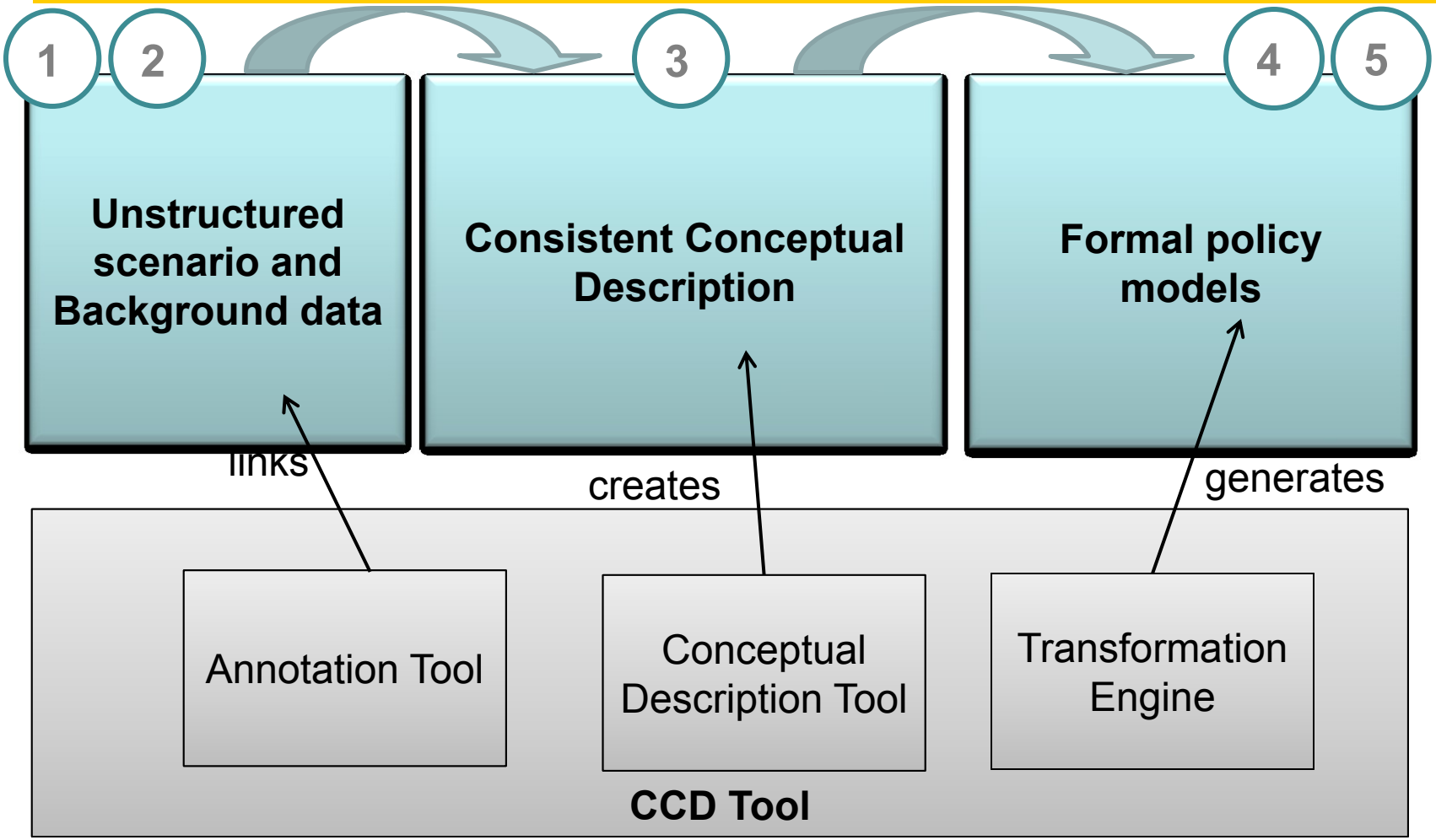


CMS
e.g. Alfresco

CCD Tool

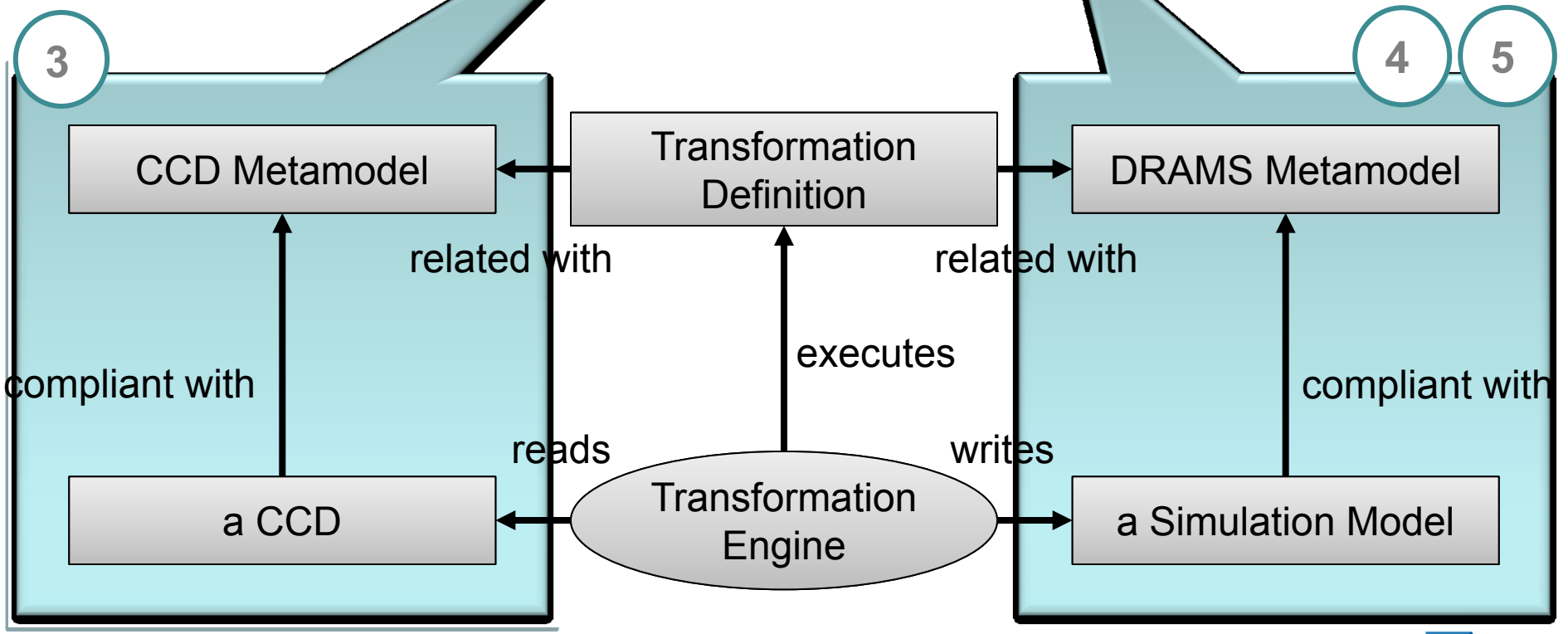
Simulation Engine
e.g. DRAMS (Declarative Rule Based Agend Modelling Systems)

Technical tool to support the process

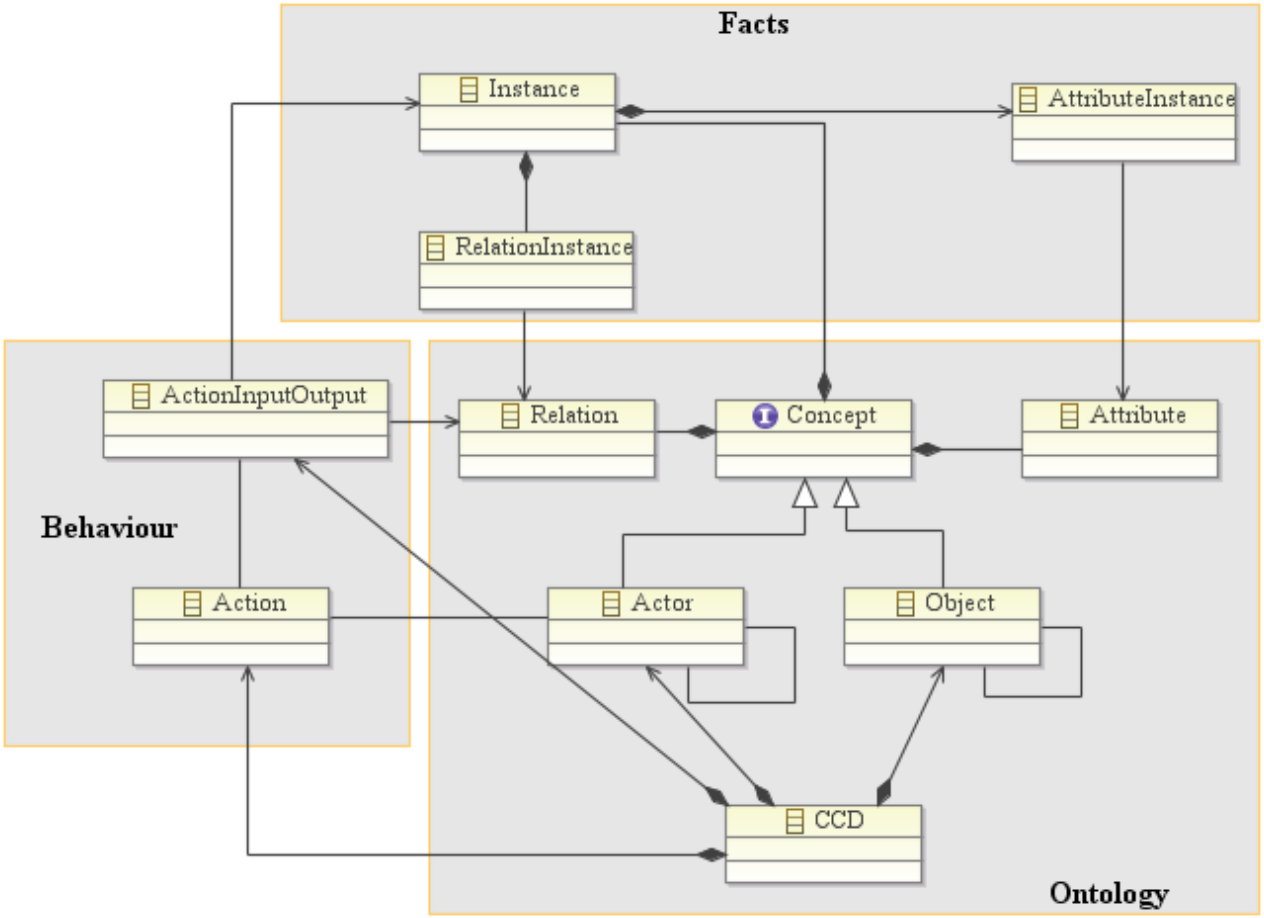


Model Driven Development of Simulation Models

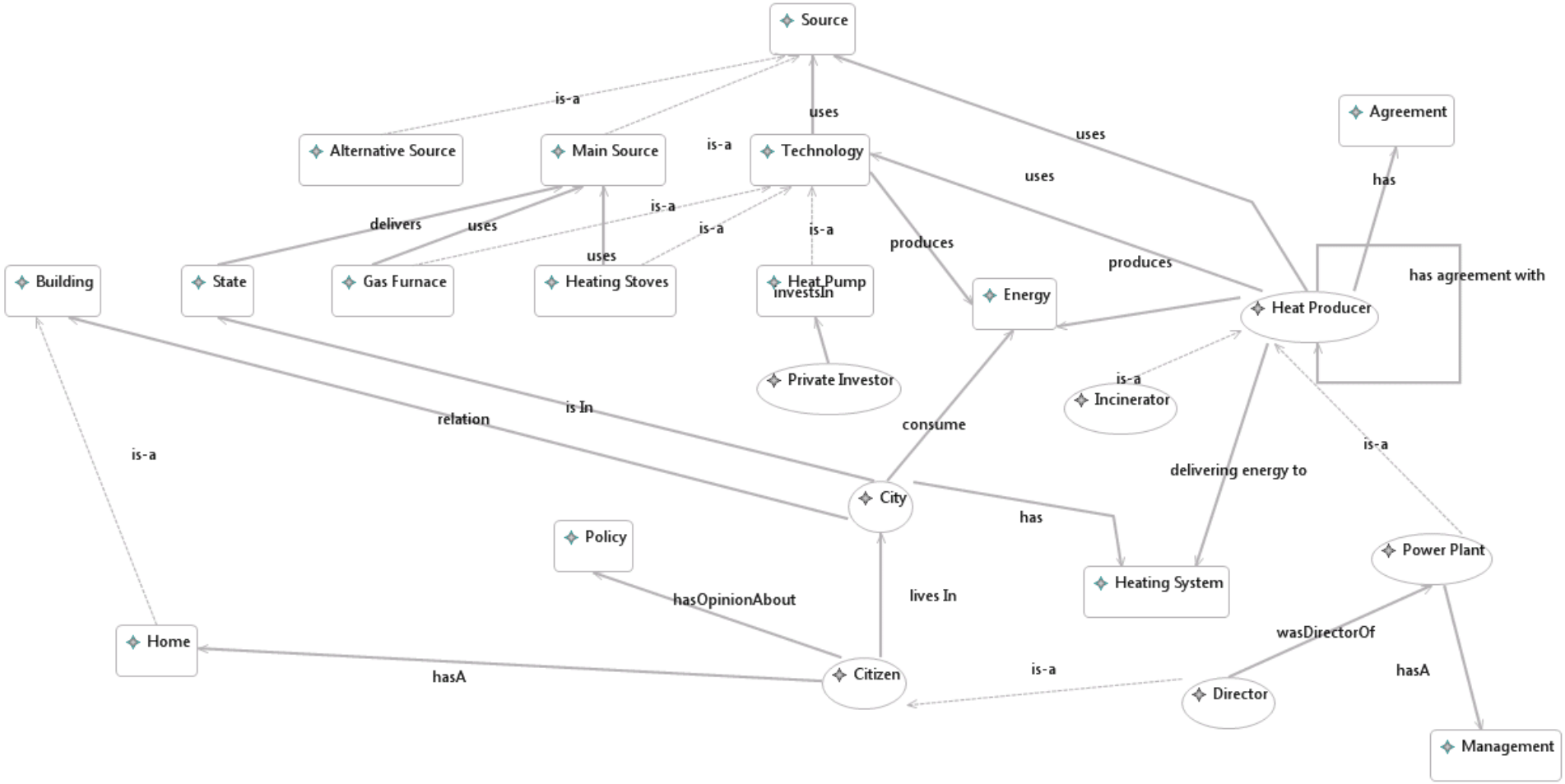
Transformation from the conceptual policy model (a ccd) into a formal agent based simulation model (a simulation)



CCD Metamodel (Vocabulary)

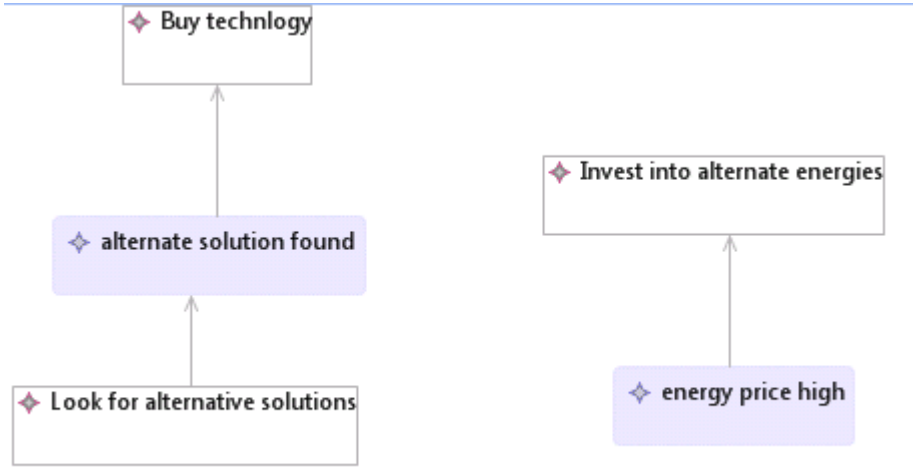


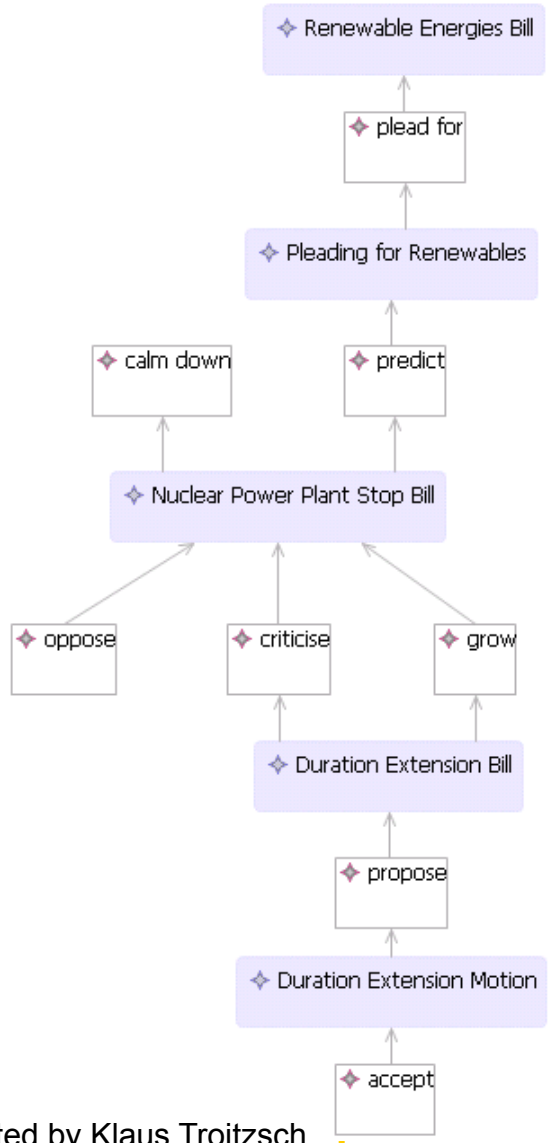
CCD Tool – Visualisation of Actor Network Diagram



* Model created by Suvad Markisic

CCD Tool – Visualisation of Actions Diagram

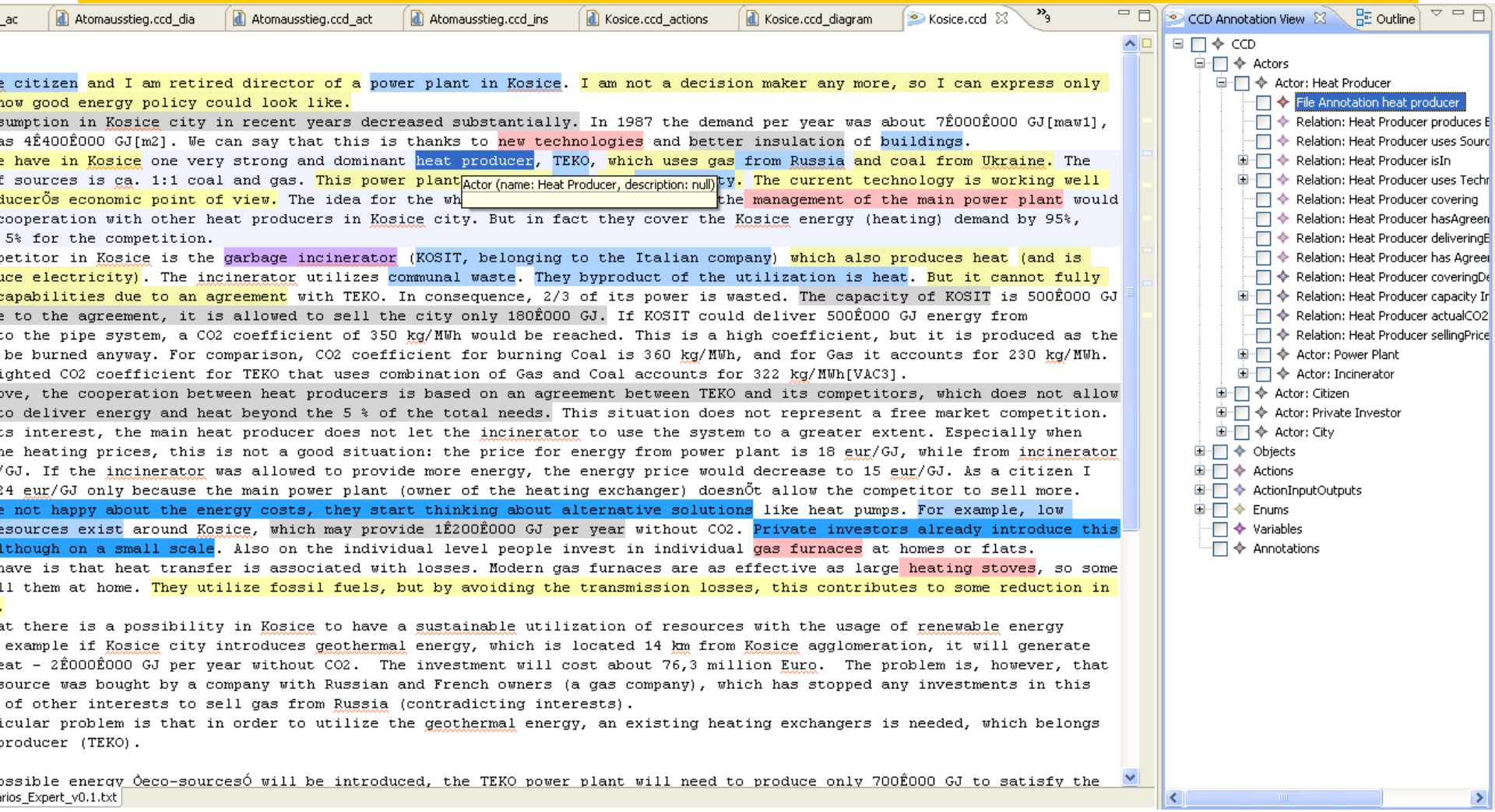




* Model created by Suvad Markisic

* Model created by Klaus Troitzsch

CCD Tool – Annotation of Scenarios



* Model created by Suvad Markisic

OCOPOMO Policy Development Approach

- Integrated approach from narrative scenarios to formal policy models
  - Iterative process of identifying the parameters and features informing formal policy models
- Consistent conceptual description (CCD): Incorporating traceability in the iterative policy development process
- Open collaboration in policy development through integrated web 2.0 based e-participation toolbox
  - Enabling policy analysts, policy operators and wider stakeholder groups to work together collaboratively

Conclusion

- Contribution to transform government and administration to an open, effective and efficient participative governance (good governance principles)
- Provide new opportunities for open discourse among stakeholders of the policy domain and the policy experts
  - in stakeholder-oriented scenario generation
  - in evaluation of formal policy models
- Improve transparency and traceability in strategic decision making by involving different stakeholders in the participative process via the open collaboration platform
- CCD Tool available as prototype, currently tested in three pilot cases

Thank you for your attention!

Any comments, suggestions?

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