

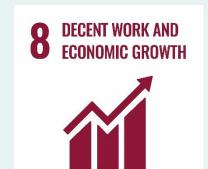


Exploring and shaping paths to a sustainable future

The project

We develop transformation paths for future visions to achieve the SDG goals:







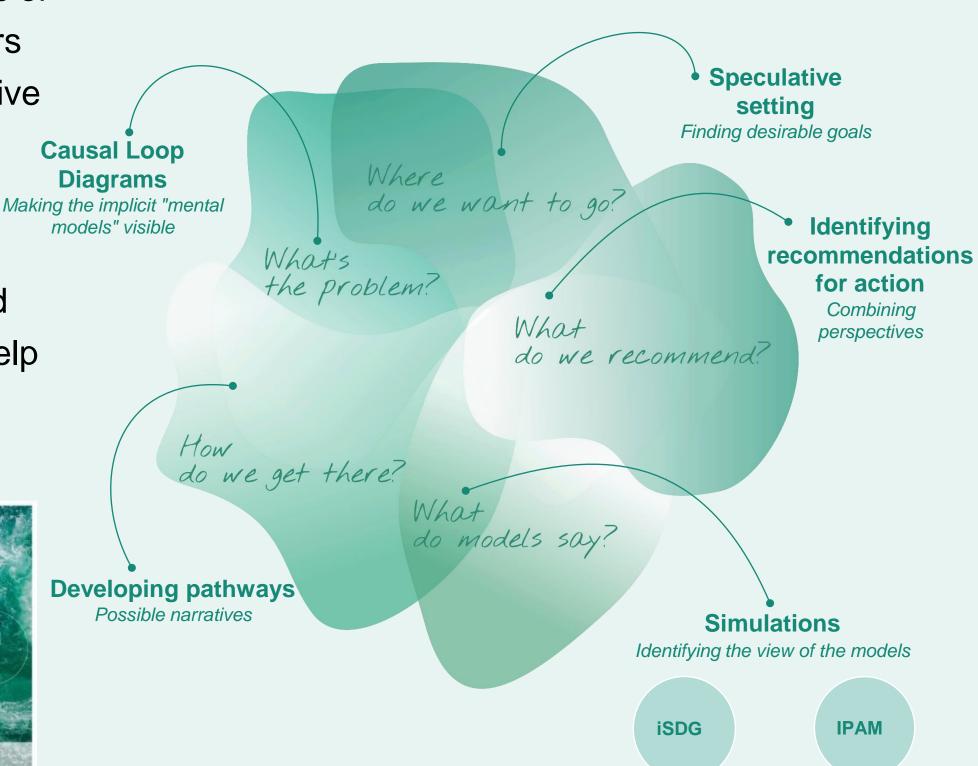
Methods: we apply different processes of knowledge integration with stakeholders and experts and link them with qualitative and quantitative modeling approaches (iSDG & IPAM)

Goal: identify transformation paths and recommendations for action with the help of systems thinking

Community of Practice:

process-accompanying cocreation: various exchange formats and handouts





Visions

Cimate neutrality

Quality of Life

Court of Audit

Growth

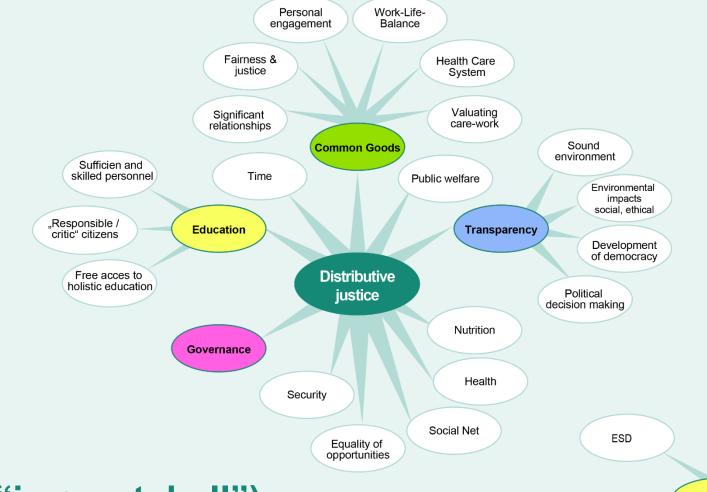
Workshop 2:

Where do we want to go? **Speculative setting**

Finding desirable goals

Speculative setting: with the help of gamification and fictitious "future panels", visions and goals for a desirable future were developed and formulated in the form of collages for newspaper articles.





A sustainable future ("in a nutshell")...

- fulfills and considers the interactions of SDGs 1/10, 8 & 13
- provides an adequate "work life balance" for everyone
- ensures "gender equality"
- preserves "biodiversity"
- conserves "resources via a circular economy"
- ensures that institutional measures are provided to support the transition, e.g., education, transparency, governance



What do the models say? Simulation and analysis

Identifying the view of the models

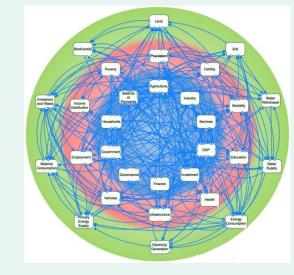
iSDG-AT – quantitative modelling

iSDG-AT is a quantitative simulation model for Austria based on **system dynamics**



It can simulate **political measures** and their impact on **SDG interactions**

Results can be presented in a stakeholder-friendly way using an interactive tool



IPAM – qualitative modelling

The Inequality and Poverty Assessment Model (IPAM) is used to evaluate implementation measures

Its purpose is to find socio-ecological solutions and potential for improvement to avoid conflicts - "Leaving No One Behind (LNOB)"

IPAM is based on the **SDGs** and their targets for achieving the necessary turnarounds

Workshop 1:

What's the problem? Causal Loop Diagrams (CLDs)

Making the implicit "mental models" of stakeholders and experts visible

Overall CLD Management's room Financial situation Real GDP per captia of company B B Pollution Energy demand Energy use Uncertainty Burning of fossil fuels Construction B Heat waves Priority of Labor productivity Air conditioners Legend for the overall CLD figure + Variable A and variable B change together in the same direction: if A becomes more, B becomes more or if A becomes less, B becomes less The change in variable A and variable B go in opposite directions:

Main conclusions

The CLDs reflect the experts' understanding of the system

Household income: links all individual CLDs together → decisive variable

Synergies: between real GDP/capita (SDG8), job satisfaction (SDG8) and reduction of the energy poverty rate (SDG1/10)

Trade-offs: between climate protection (SDG13) and all other SDGs

Possible tendency towards "Limits to Growth" in the system picture due to environmental pollution

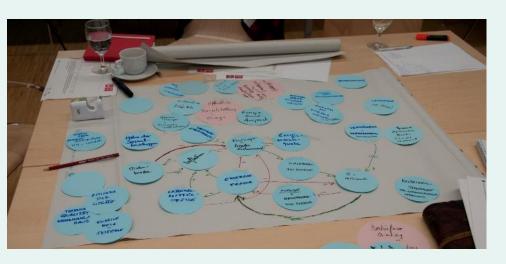


Figure above: CLD developed during the stakeholder workshop

Workshop 3:

How do we get there? **Developing pathways**

Color of the arrows symbolize impact chains from the individual SDGs:

Red: SDG1 (energy poverty) Blue: SDG13 (GHG buildings)

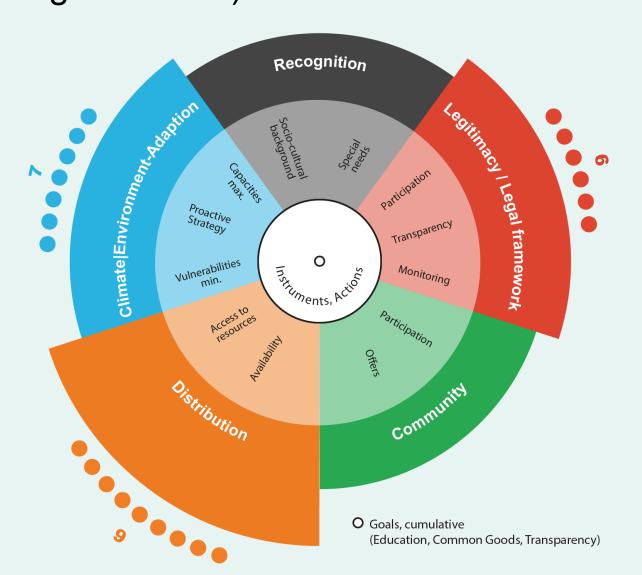
Possible narratives of transformation paths to achieve the vision

Creation of narratives:

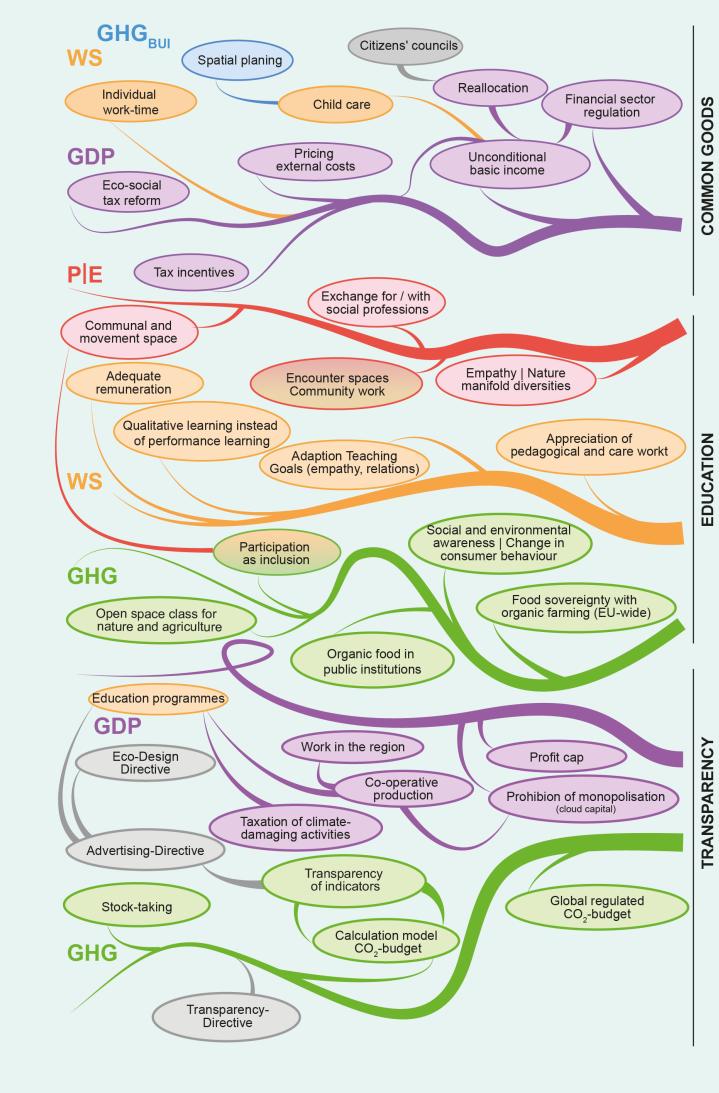
(1) **Creating** stories: Why were the goals not achieved?

(2) **Inverting** stories: How was the path achieved from a retrospective perspective?

(3) Identification of conflict and positive potentials with IPAM (see figure below)



(4) Creation of a timeline of measures along the visions and SDG indicators (see figure on the right)



Legend for timeline of measures figure: Red (P|E): SDG1 (energy poverty); Blue (GHG_{Bui}): SDG13 (GHG buildings); Green (GHG): SDG13 (GHG total); SDG8 (real GDP/capita); Orange (WS): SDG8 (work satisfaction)

Workshop 4:

What do we recommend? Identifying recommendations for action

Combining the perspectives of stakeholders, experts and models

In a final workshop, we will compare the measures recommended by the stakeholders and experts with those of the models (iSDG, IPAM):

- Where are they similar? Where are the biggest differences?
- Are there any blind spots that the models have overlooked or that they cannot capture?

We will work on this in an interactive setting:

- identify a consensus for recommendations for action and leverage points
- highlight where there is potential for conflict and improvement

