CONNECTED URBAN TWINS

Workshop
Modeling the FabCity

City Science Lab
A Cooperation with the
MIT Media Lab

HafenCity Universität Hamburg

Zippelhaus
26.06.2025

Partner cities:

Hamburg

Stadt Leipzig

Landeshauptstadt München

Funded by:

Bundesministerium für Wohnen, Stadtentwicklung und Bauwesen

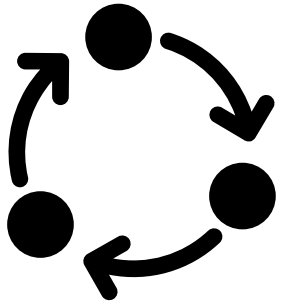
KFW

Outline

9:00	**Welcome**
9:15	**Intro to Modeling w/ Urban Model Builder**
9:45	**Identification and selection of specific experiments**
10:15	Break
10:30	**Extension of the model & experimentation**
11:30	**Feedback, Reflection and Next Steps**

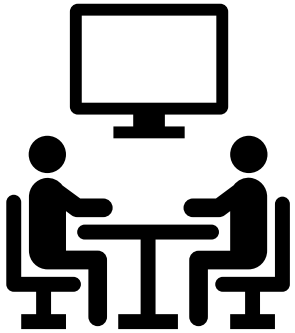
Welcome

Workshop Goals



Model the FabCity

Identify and select experiments to run for a circular economy

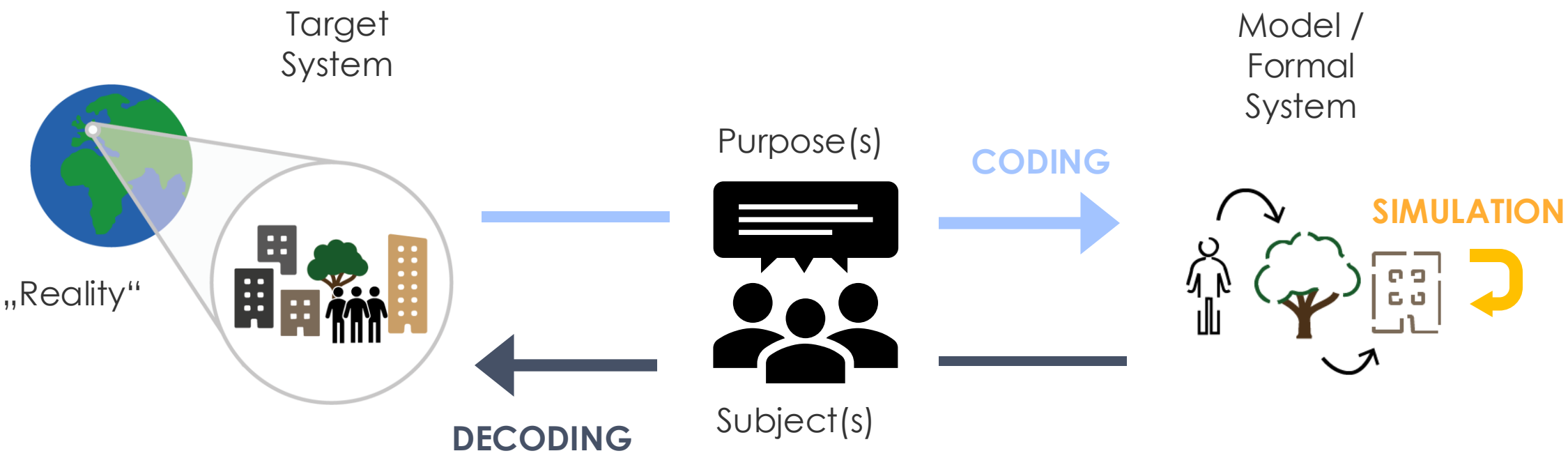


Investigate Co-Modeling Methods

User Testing the Urban Model Builder

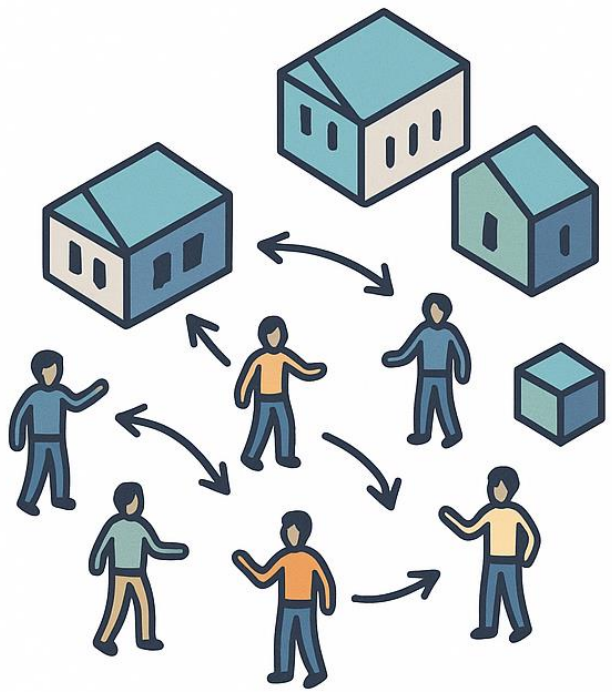
Intro to Modeling w/ Urban Model Builder

The Modeling Process

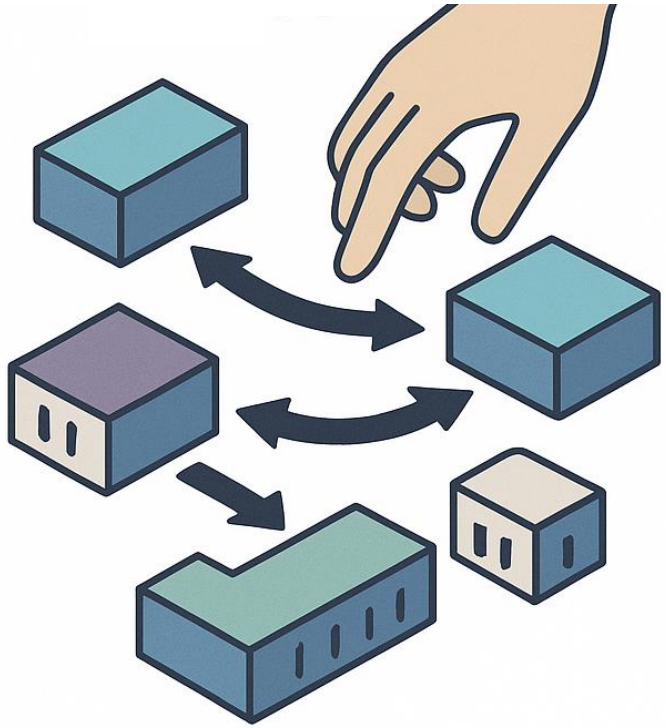


Modellierungsarten

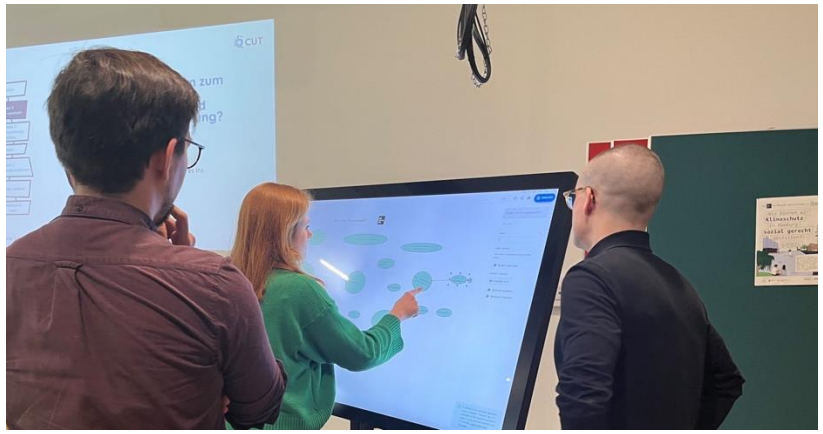
Agent Based Modeling

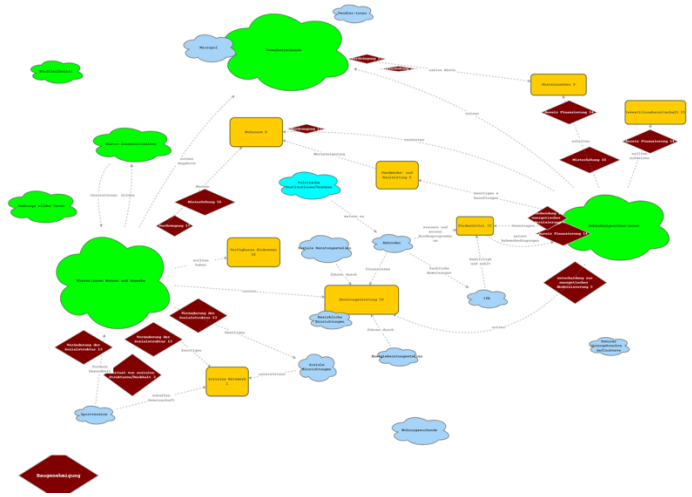


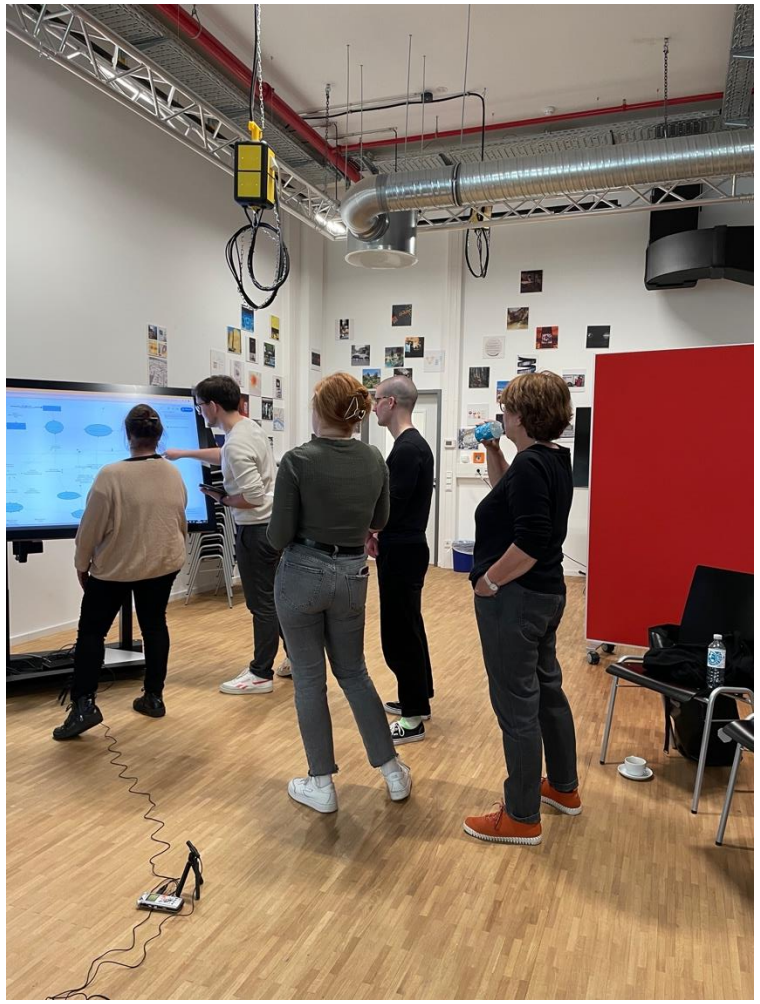
System Dynamics Modeling

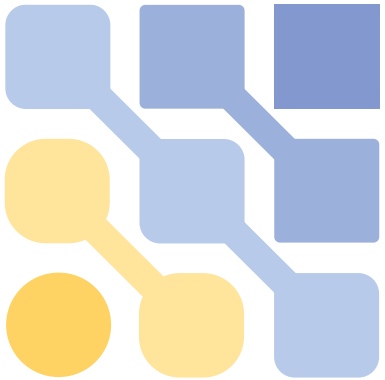


Collaborative Modeling









URBAN MODEL BUILDER

https://modelbuilder.comodeling.city

Features

Collaboration

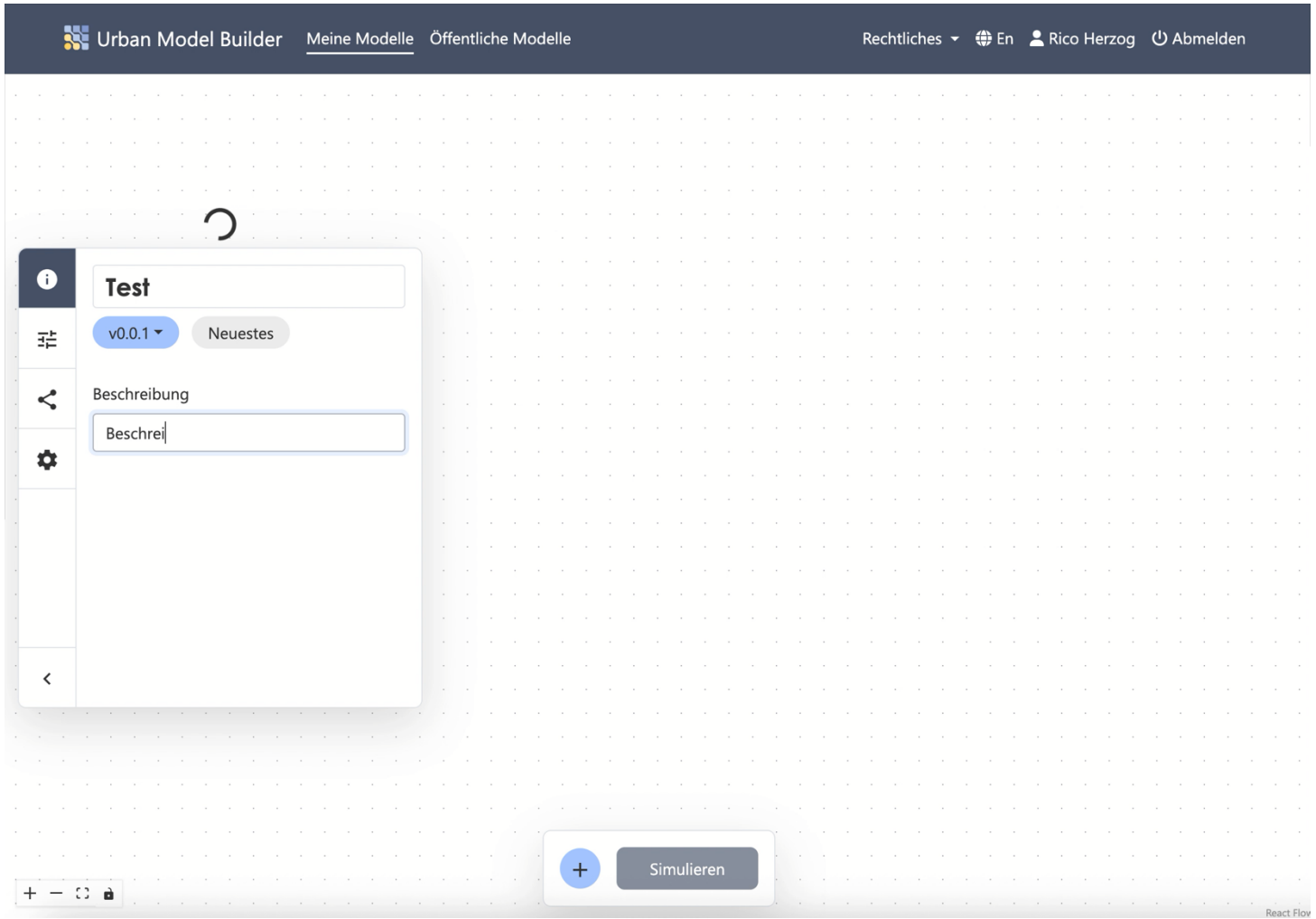
ABM, SD and mathematical modeling

Integration of (realtime) data

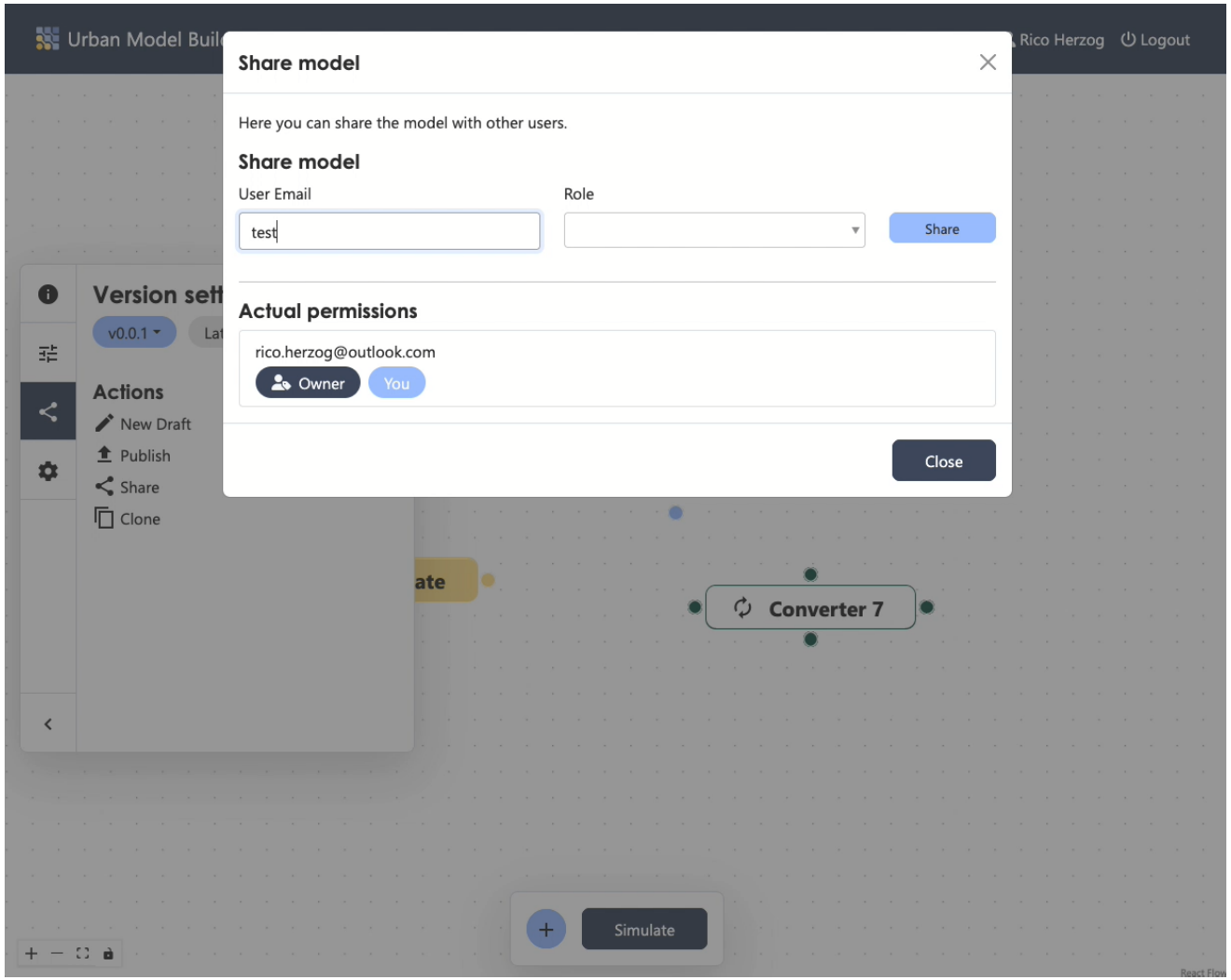
Publication of models

Low-Code Interface

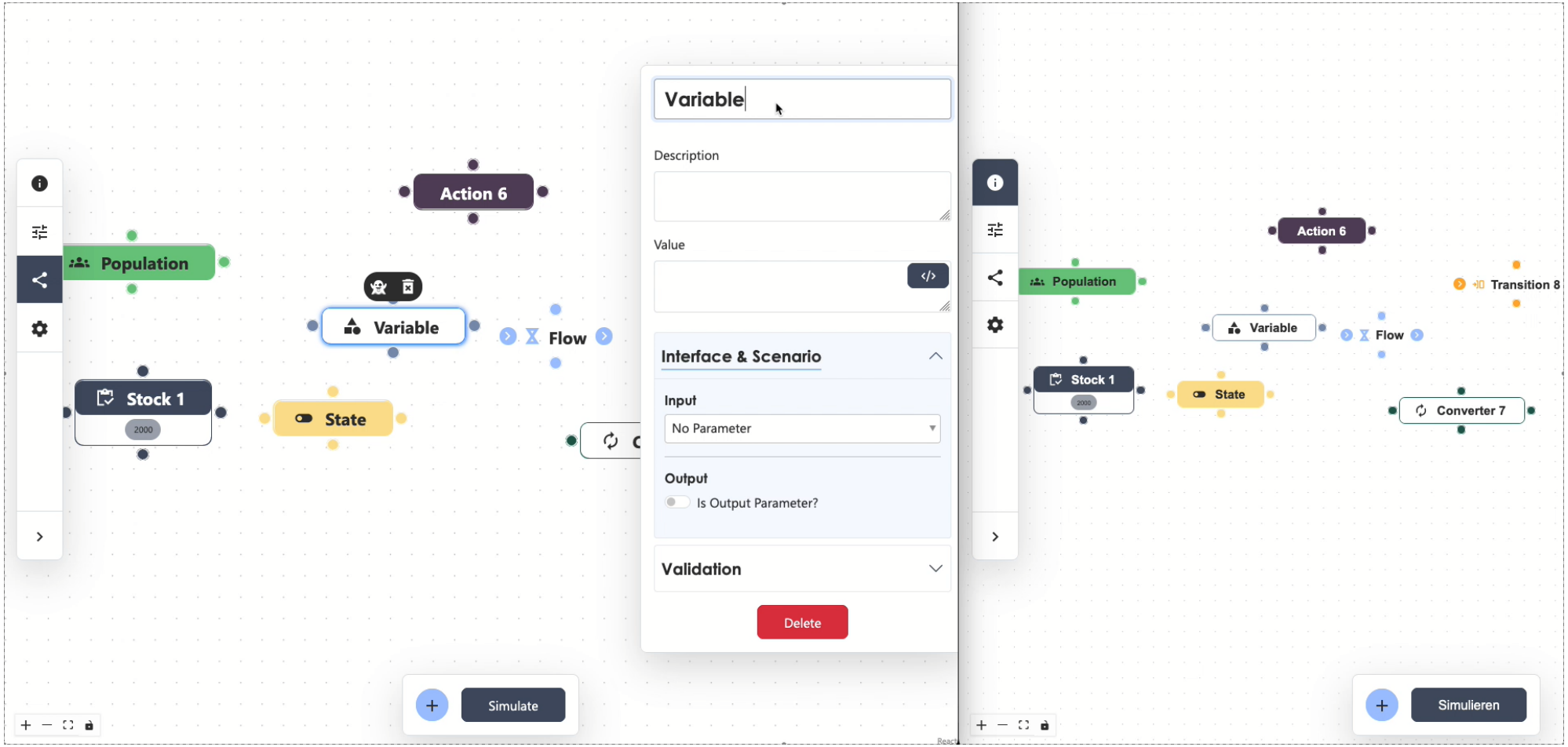
Low-Code Interface



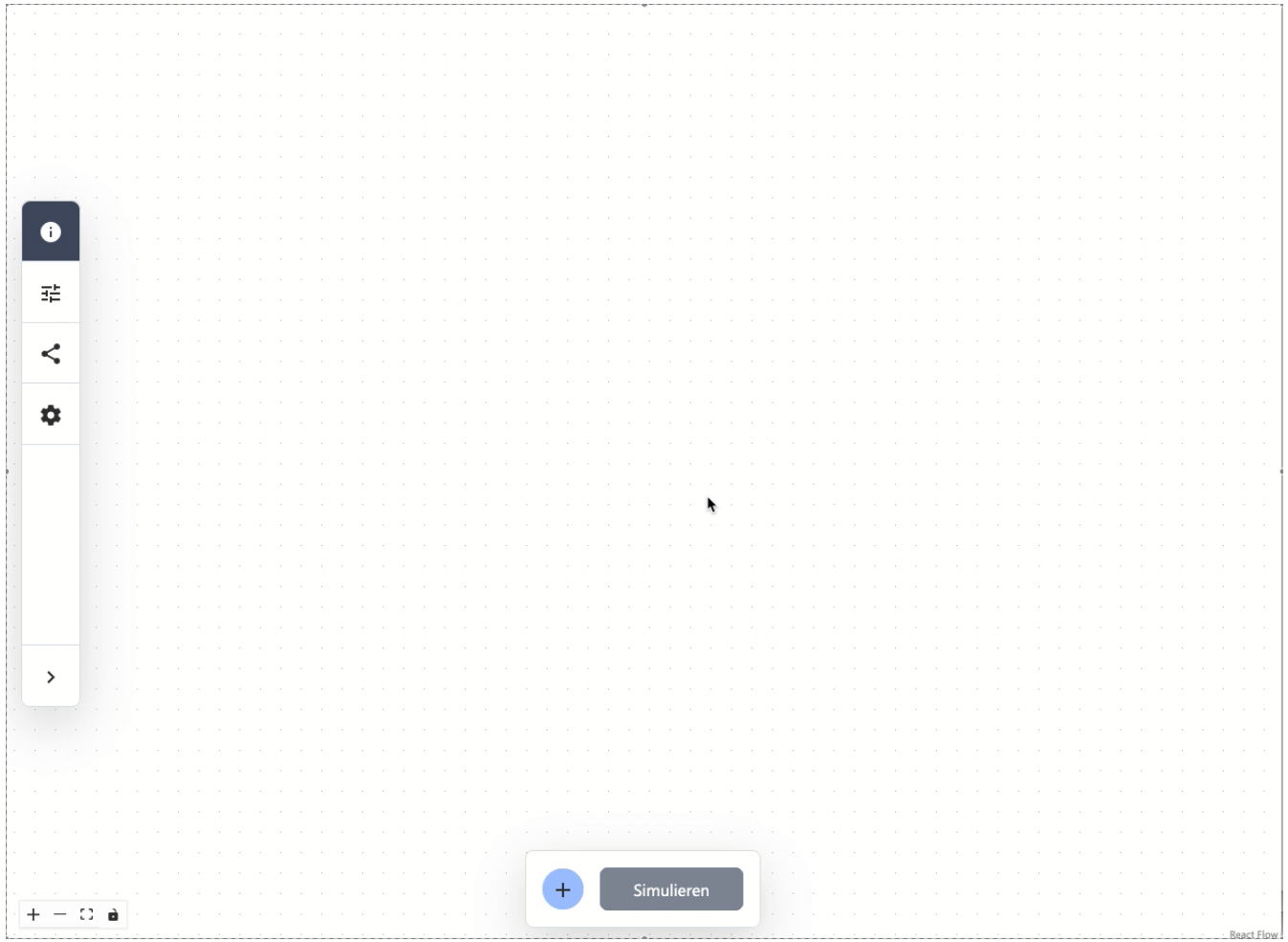
Collaboration

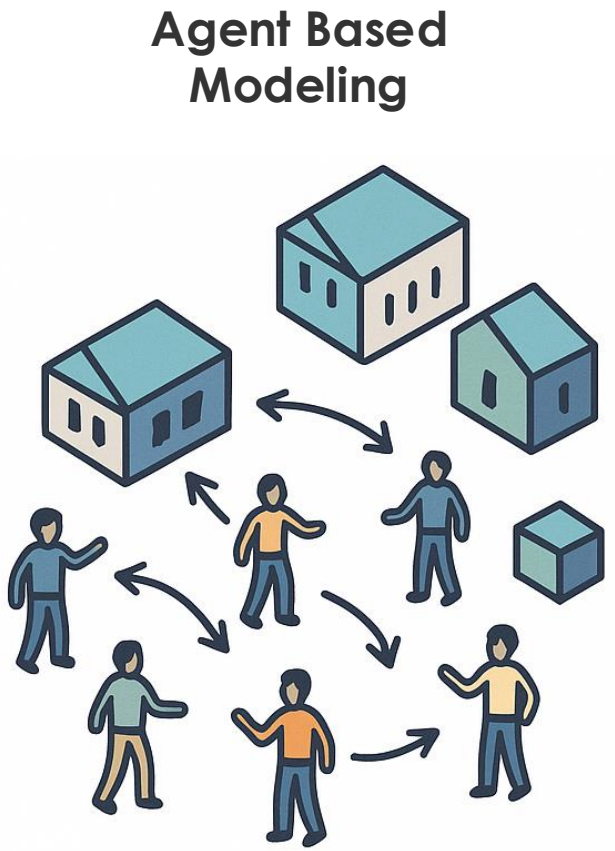


Collaboration

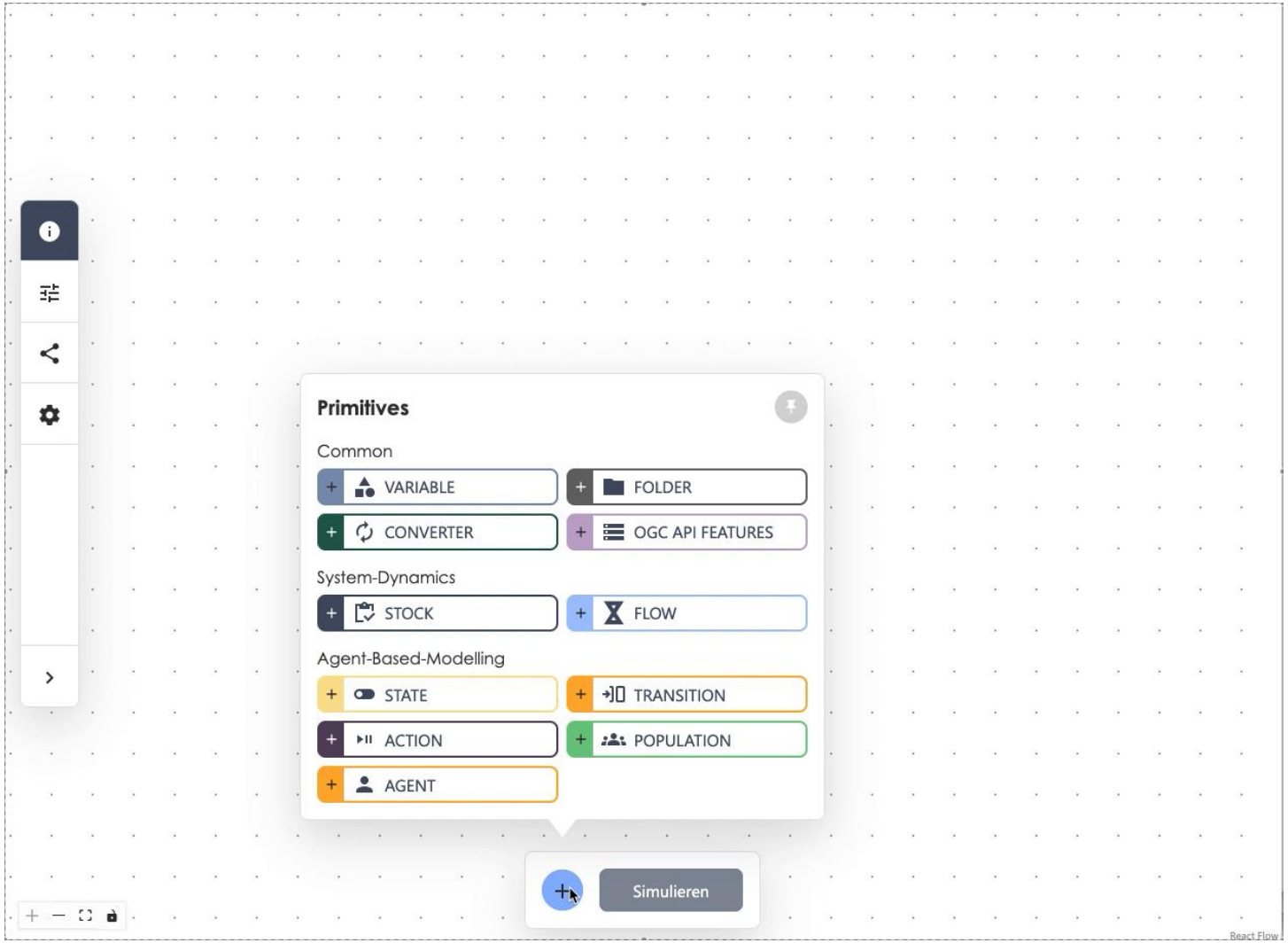


ABM, SD and mathematical modeling

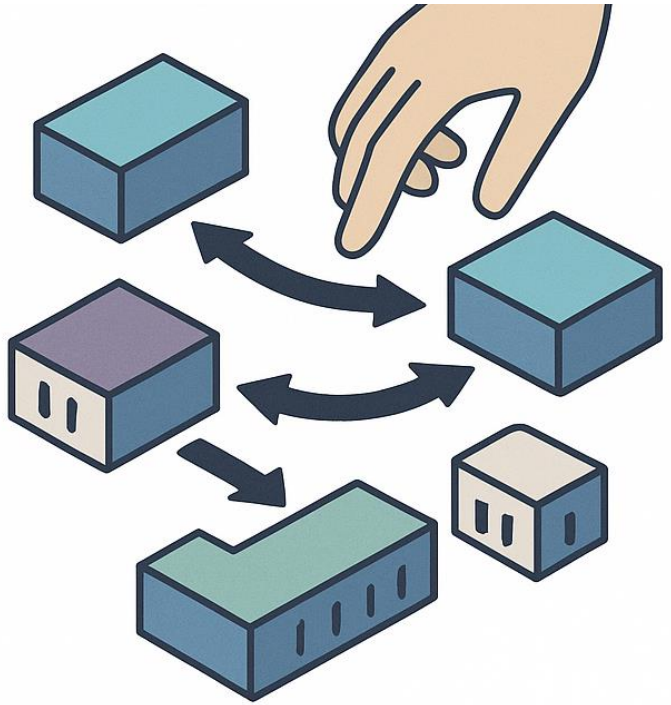




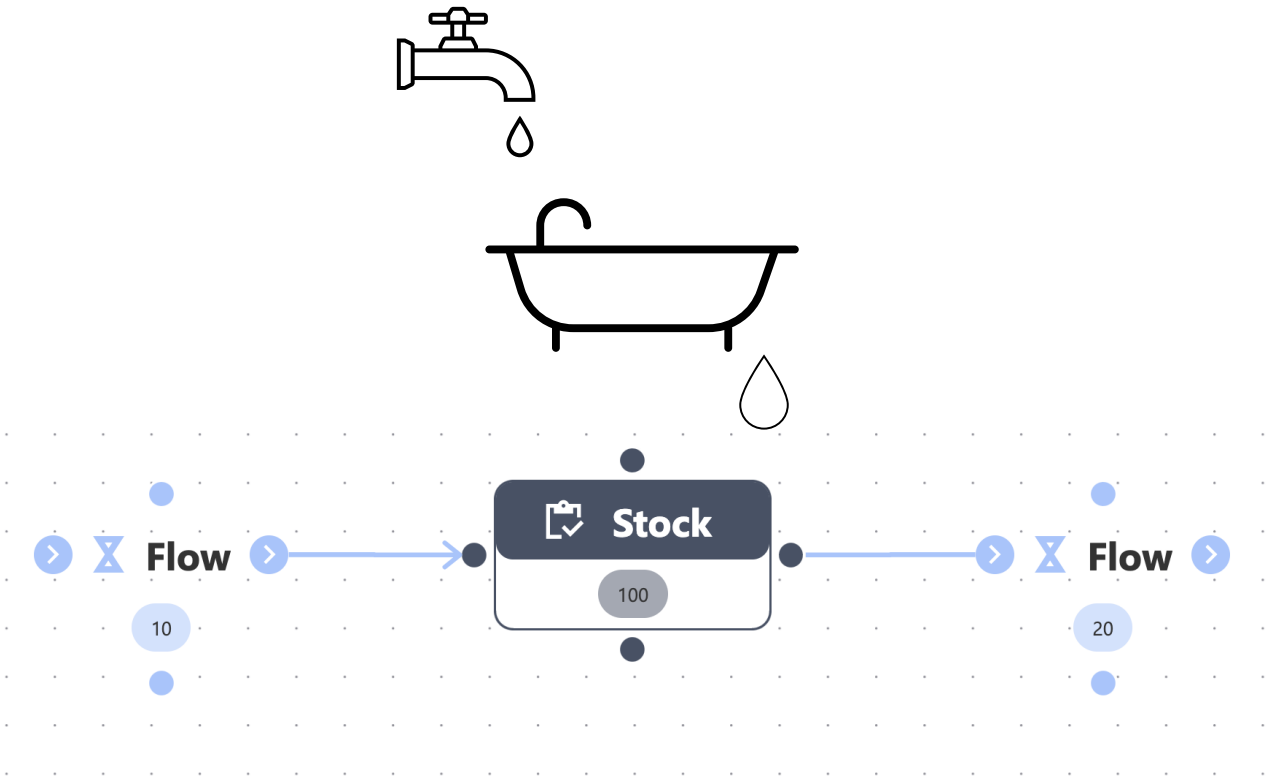
ABM, SD and mathematical modeling

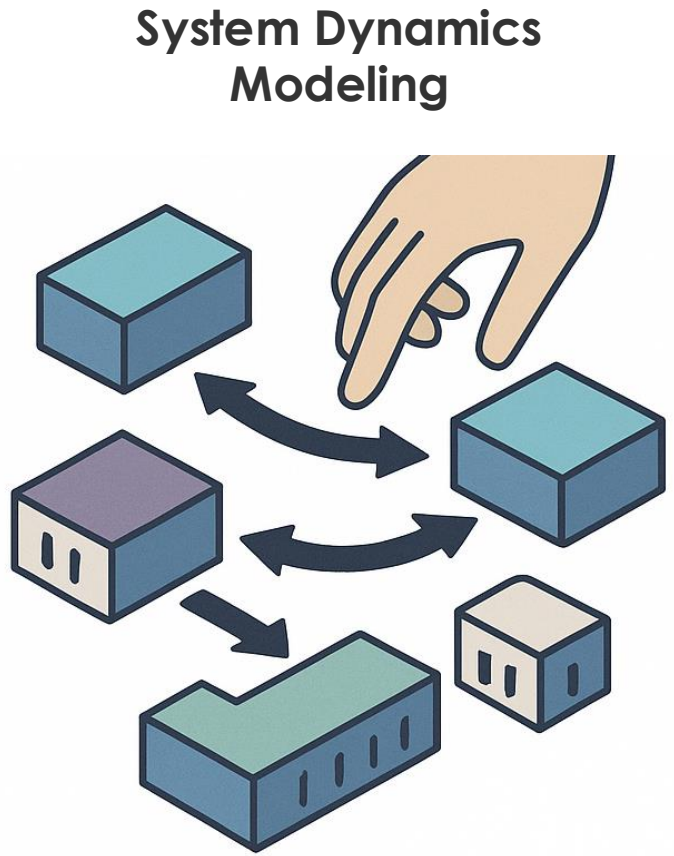


System Dynamics Modeling



ABM, SD and mathematical modeling





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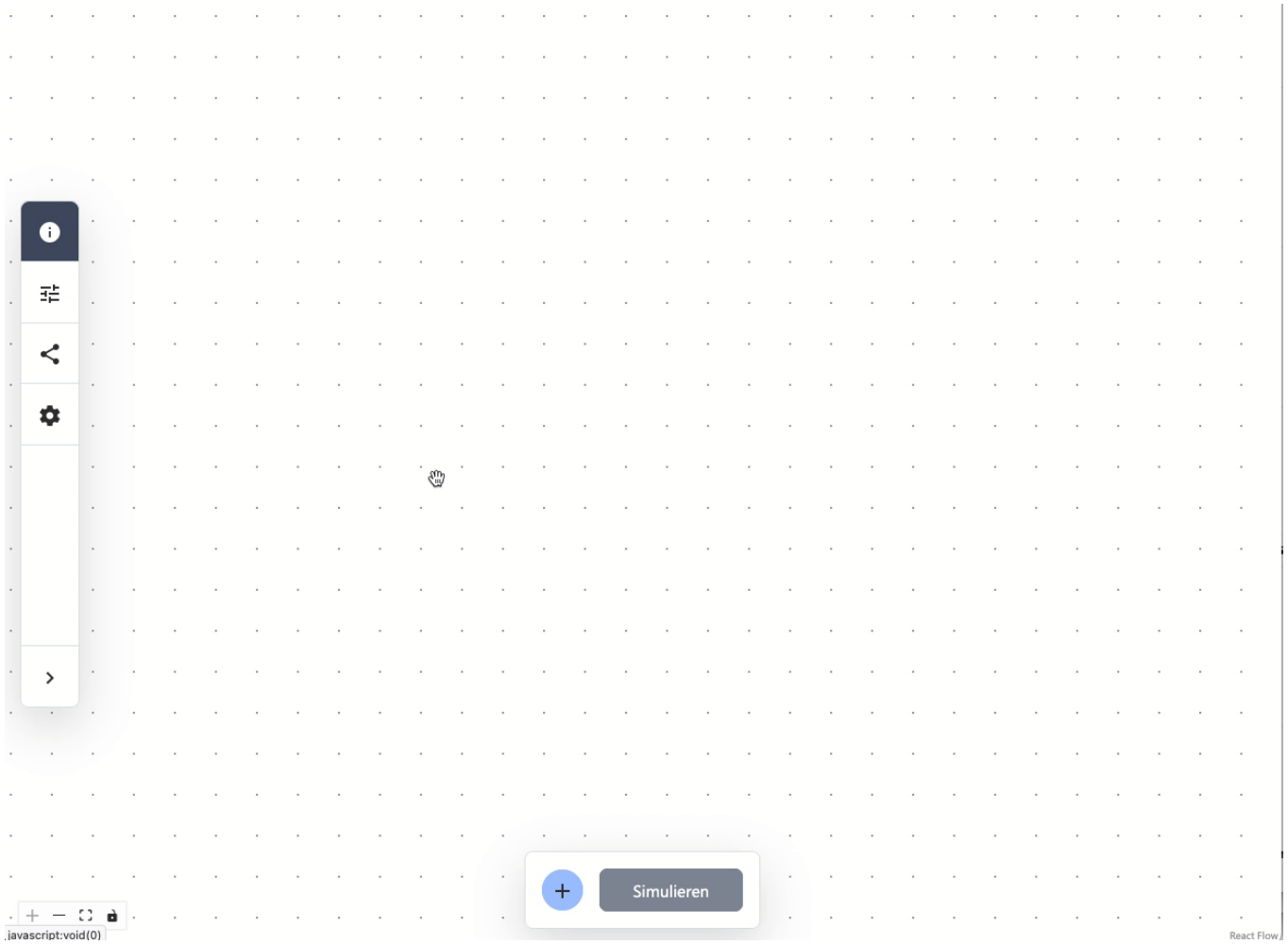
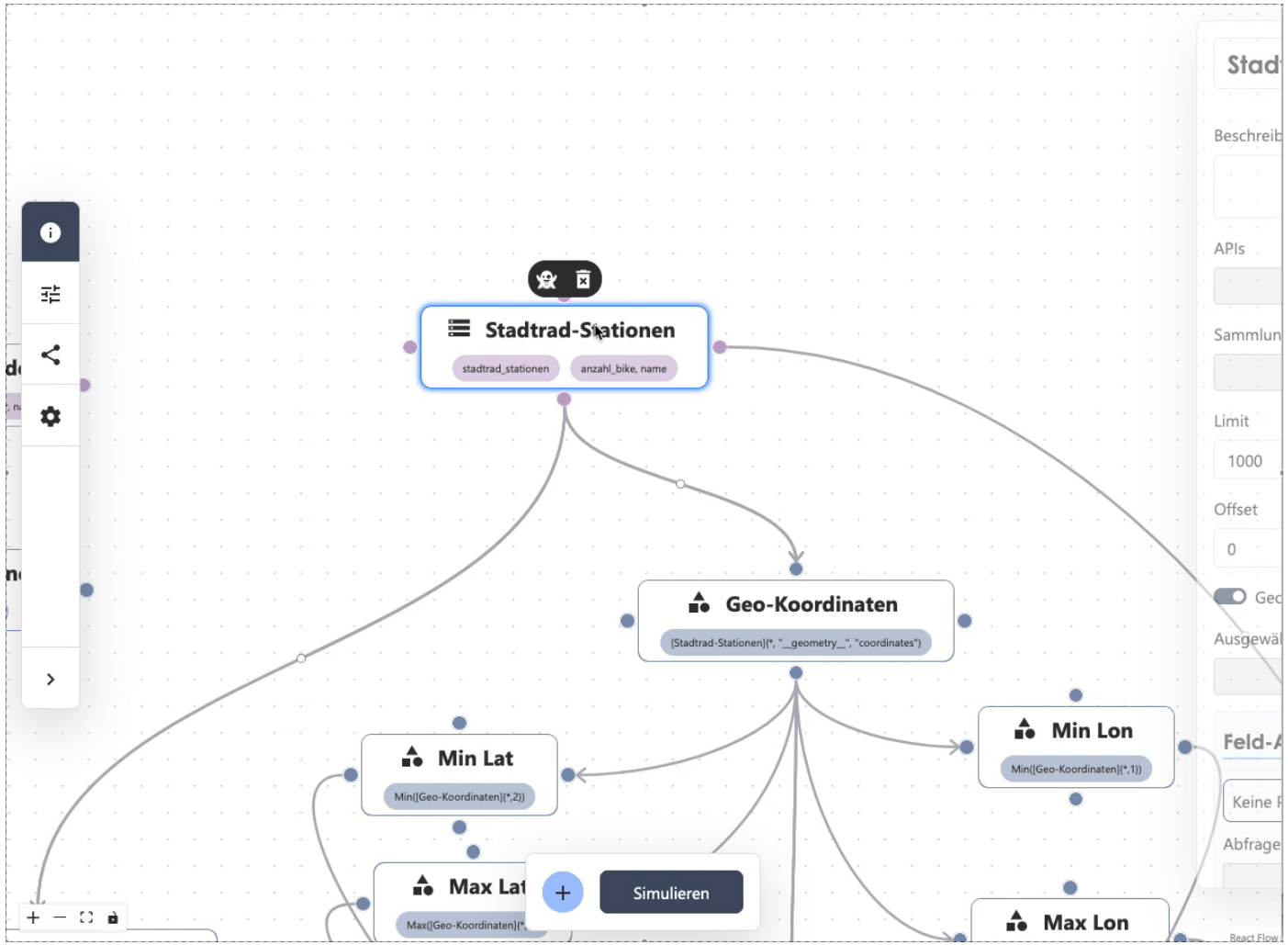
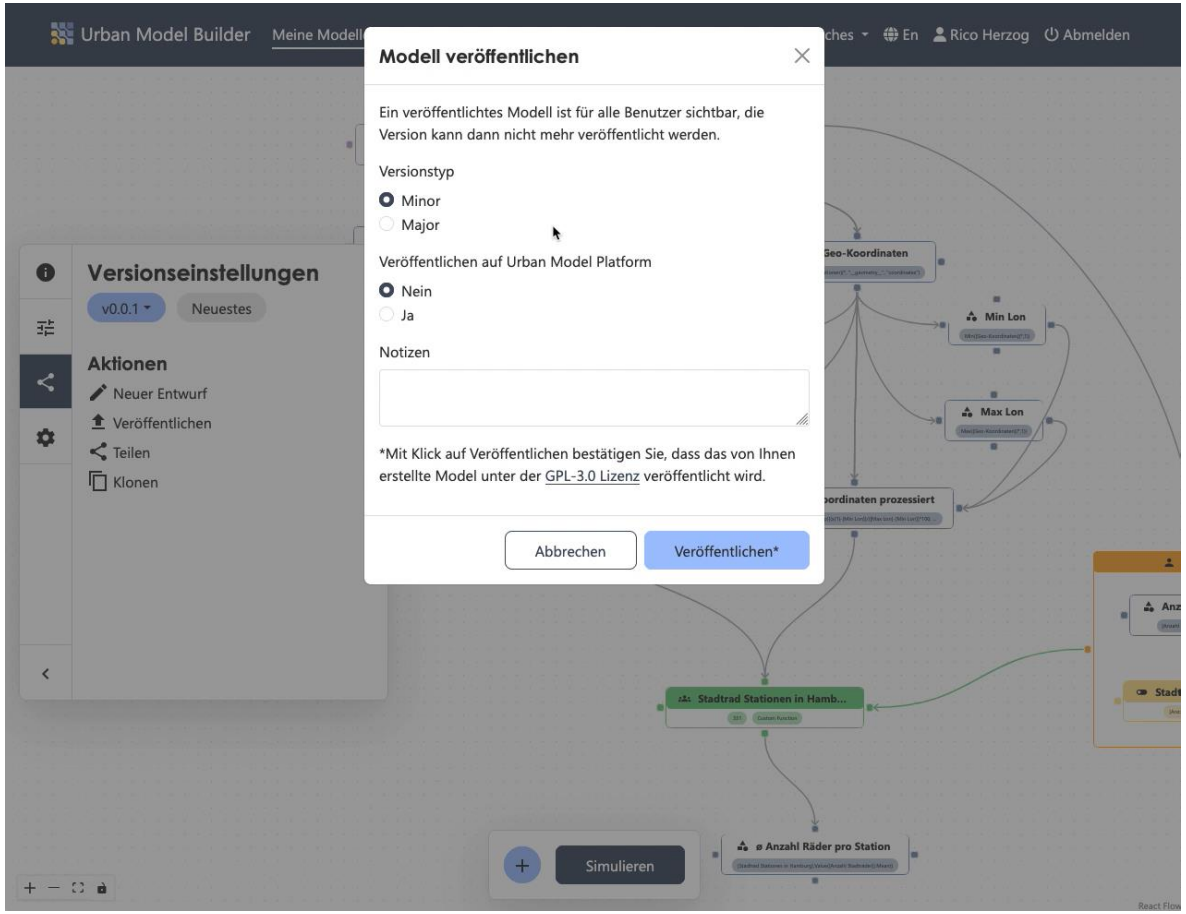


Integration of realtime data



Publication of Models



OGC API Processes Endpunkt

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processes:
  0:
    id:                 "3ce7d1e3-8408-4a32-903c-ce4770d2bf5e"
    title:              "Stadtrad-ABM"
    description:        "Agent-based Model, das Fahrradfahrende simuliert, die vor
    jobControlOptions:
      0:                "async-execute"
    version:            "0.1.0"
    links:
      0:
        href:           "/ogcapi/processes/3ce7d1e3-8408-4a32-903c-ce4770d2bf5e"
        rel:            "self"
links:
  0:
    href:               "/ogcapi/processes"
```

FabCity Model

Identification of specific experiments

Identification of specific experiments

For the next 5 minutes, **individually** write down which **experiments** you are specifically interested in.

Then, we will **collect** and **cluster** them together.

Lastly, the aim is to select **1-2 experiments** and specify **inputs**, **outputs** and **uncertainties**.

Break

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Extension of Model & Experimentation

Extension of Model and Experimentation

Depending on the number of experiments selected, form groups which take on each one experiment.

Clone the model to your account and start implementing the feature.

Experiment with it and note down the results.

If you encounter anything challenging, please note it down!

Feedback, Reflection and Next Steps

Feedback, Reflection and Next Steps

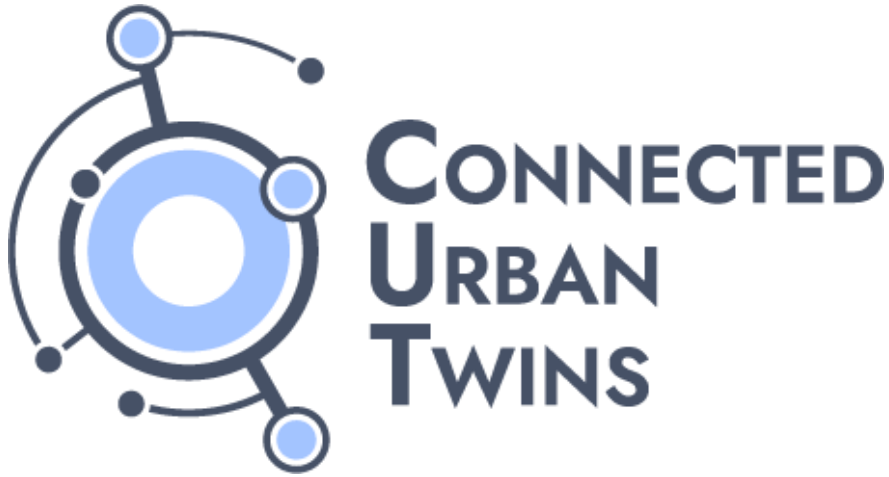
User test survey

Feedback, Reflection and Next Steps

Did the co-modeling process change your understanding of the topic?

Which opportunities and challenges do you see with this kind of collaboration?

CUT



Danke fürs Zuhören!

Rico Herzog
rico.herzog@hcu-hamburg.de
LinkedIn @rico-herzog

Partner cities:

Hamburg

Stadt Leipzig

Landeshauptstadt München

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