

Assessing the Impact of Co-Creation in Urban Development

Matthias Papesch* Tobias R. Möller†

July 1, 2024

This talk showcases a proof-of-concept project to show dependencies, causes, and effects in a non-profit setting in urban development. *The Leipzig Charter: Basis for Integrated Urban Development* [1, 2] considers cities the driver for the sustainable transformation (or *sustainabilization*) and names “participation and co-creation” as one of five principles of good urban governance. Co-creation means collaboration between local politics, municipal administrations, non-profit and for-profit organizations, and especially ordinary citizens who to improve quality of life in their neighborhood. It can be organized top down by the local government with urban redevelopment centers or bottom up by local initiatives or non-profit organizations and could become the foundation for contemporary urban development policy in terms of environmental and social impacts as well as good governance throughout Europe.

The core of this presentation consists of reporting our experiences in learning about Systems Thinking and System Dynamics, learning to apply these methods, and convincing others that the approach is capable of yielding relevant and valuable insights. Certainly, many of our insights have been described before. Nevertheless, we gained first-hand experience that we find worth sharing; for instance, with fellow practitioners facing a similar situation for the first time.

Our specific use case centers around *Wir im Quartier* [3] – a local non-profit organization in Leipzig with the goal to initiate a movement that becomes self-sustaining – as a participating practitioner and as object of our modeling efforts. Two objectives of the project were to help these practitioners to transform from a linear understanding to recognizing circular dependencies in the *domain*, and to show that System Dynamics modeling as a *method* should be considered to inform policy making.

The problem statement for the model [4] is:

“How should co-creation be organized to have a lasting positive impact on the common good and social cohesion in the community? How can output, outcome, and impact be assessed and measured?”

One of our learnings is that people needed time to adjust. In the very beginning, there was no foundation to propose System Dynamics as an approach to understand the problem and to inform

*Berlin, Germany, mp@mpapesch.com

†Leipzig, Germany, trmoeller@posteo.de

policy making. Instead, quite some effort was needed to help developing a common understanding of the problem and its intrinsic dependencies. There were several group model building sessions with varying audiences to develop a Causal-Loop-Diagram accepted by everyone involved in its conception. This interactive process – albeit time-consuming – allowed participants to get used to a different way of thinking and grew confidence in the approach and finally became the door opener for the acceptance of a System Dynamics model.

There was another insightful takeaway. Creating a Causal-Loop-Diagram was a group effort where everyone was involved in identifying relationships and their effects. Creating the System Dynamics model was an iterative effort which consisted of dialog sessions with the entire team and modeling sessions in solitude. While Causal-Loop-Diagrams were “simple enough” for everyone to understand and work with – the System Dynamics Stock-and-Flow model was not. Thus, moving from Causal-Loop-Diagrams to Stock-and-Flow modeling introduced an additional need for skilled communication. Developing an interface for the model and having the client use it interactively was of great help. While the insights of the Causal-Loop-Diagram were easy to understand, they were hard to turn into specific actions. The System Dynamics Stock-and-Flow model was harder to grasp, but suggested concrete approaches for interventions.

Based on the experience with this project, we firmly believe that a System Dynamics model can provide a benefit for decision making in the domain of co-creation in urban development, especially with respect to resource allocation. However, this benefit comes at a high cost in terms of modeling effort. In order to be successful, we assume that framing is crucial for potential future projects. Especially in the non-profit sector, a problem needs to be big enough to justify the effort. In this case, while *Wir im Quartier* as a non-profit organization would clearly benefit from the insights of a System Dynamics model – this benefit would only be a fraction of its development cost. In order to be economically justifiable, a model needs to be either scalable to a larger context or re-usable across several contexts in order to spread development costs.

References

- [1] *The Leipzig Charter: Basis for Integrated Urban Development*. Bundesministerium für Wohnen, Stadtentwicklung und Bauwesen. 2020. URL: <https://www.nationale-stadtentwicklungspolitik.de/NSPWeb/EN/Initiative/Leipzig-Charter/leipzig-charter.html> (visited on 07/01/2024).
- [2] *Humanity on the move: Unlocking the transformative power of cities*. WBGU – German Advisory Council on Global Change. 2016. URL: <https://www.wbgu.de/en/publications/publication/humanity-on-the-move-unlocking-the-transformative-power-of-cities> (visited on 07/01/2024).
- [3] *Wir im Quartier (WiQ)*. Stiftung "Ecken wecken". 2020. URL: <https://stiftung-ecken-wecken.de/projekte/wir-im-quartier> (visited on 07/01/2024).
- [4] Papesch, M and Möller, TR. *Assessing the Impact of Co-Creation in Urban Development. Online Simulation*. 2024. URL: <https://exchange.iseesystems.com/public/mpapesch/coproduction-in-urban-development-poc> (visited on 07/01/2024).