Facilitating Multidisciplinary Agent-Based Social Simulation Modelling: A (More) Formal Approach

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When aiming to develop Agent-Based Social Simulation (ABSS) models one faces the question of how to build them and where to start. This can be challenging not only for novices in the field but also for multidisciplinary teams where it is often difficult to engage everyone in the modelling process. In this case co-creation is an important aspect. Team members need to be open minded about the use of new tools and methods and about the collaboration with researchers from other domains and business partners. Over the years we have developed a quite sophisticated "plan of attack" in form of a framework that guides the model development and can be used by either individuals or teams.



The framework supports model reproducibility through rigorous documentation of the conceptual ideas, underlying assumptions and the actual model content. It provides a step-by-step guide to conceptualising and designing ABSS models with the support of Software Engineering tools and techniques. While this framework will not work perfectly for all possible cases, it provides at least some form of systematic approach. The user should be prepared to adapt it to fit individual needs.

Our poster explains each step in this framework and exemplifies its application. To demonstrate the use of this framework we provide an illustrative example: studying the impact of normative comparison amongst colleagues with regards to their energy consumption in an office environment.