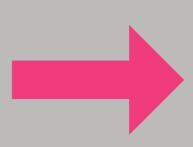
Simulation of human behavior in architectural practice. A model of pedestrian's movement: a case study

Author: Lucia Cyprianová Supervisor: Lukáš Kurilla

Human behavior in proposed space cannot be explored during the design process, but only after built.



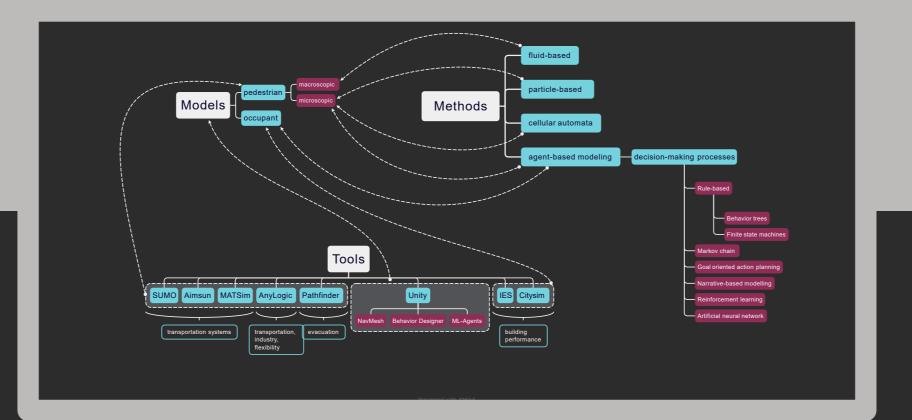
Existing tools for simulation of human behavior have not been adopted in standard studios



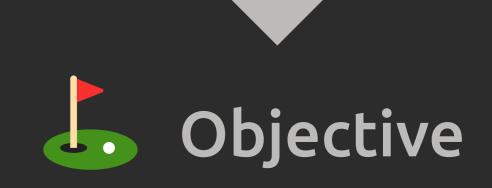
Appropriate simulation can help architects with decision-making during design process.











Lack of awareness

current capabilities and potential benefitshow to work with the available tools

No available appropriate tools

- integration with commonly used architectural software
- functionality focus on traffic, evacuation, building performance
- pricelearning path

Complex process of model development

- time & resources consuming

Investigate



Analysis of the current state within the architectural community in the Czech Republic concerning the utilization of human behavior simulation tools:

- Familiarity
- Current usage
- Motivation to further exploration
- Preferences & requirements for an ideal simulation tool

Methodology

1. Case Study

2. Tool Presentation

3. Comparative Analysis of Tools

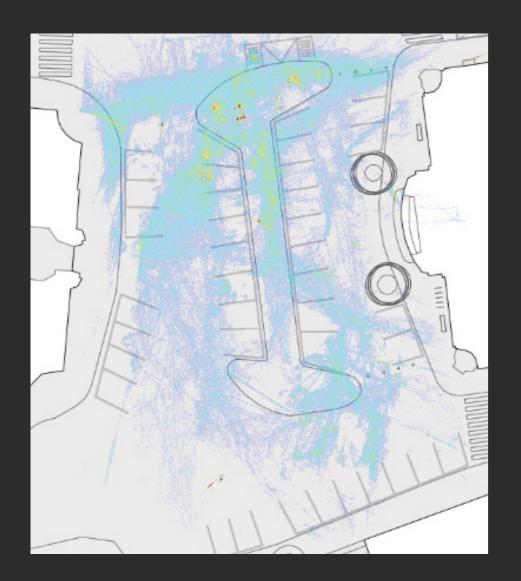
4. Questionnaire Development

5. Dissemination

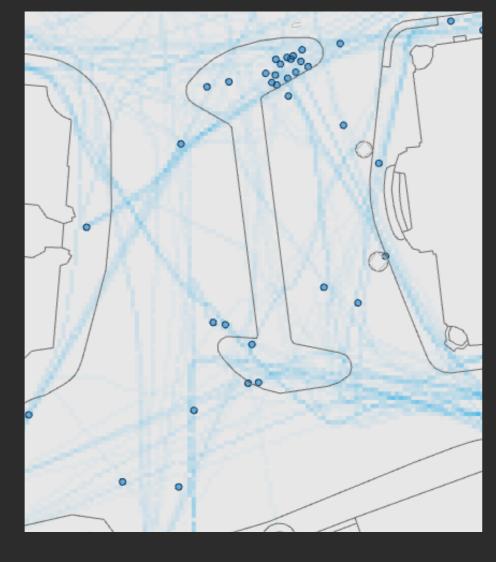
6. Gathering Feedback

7. Development Recommendations

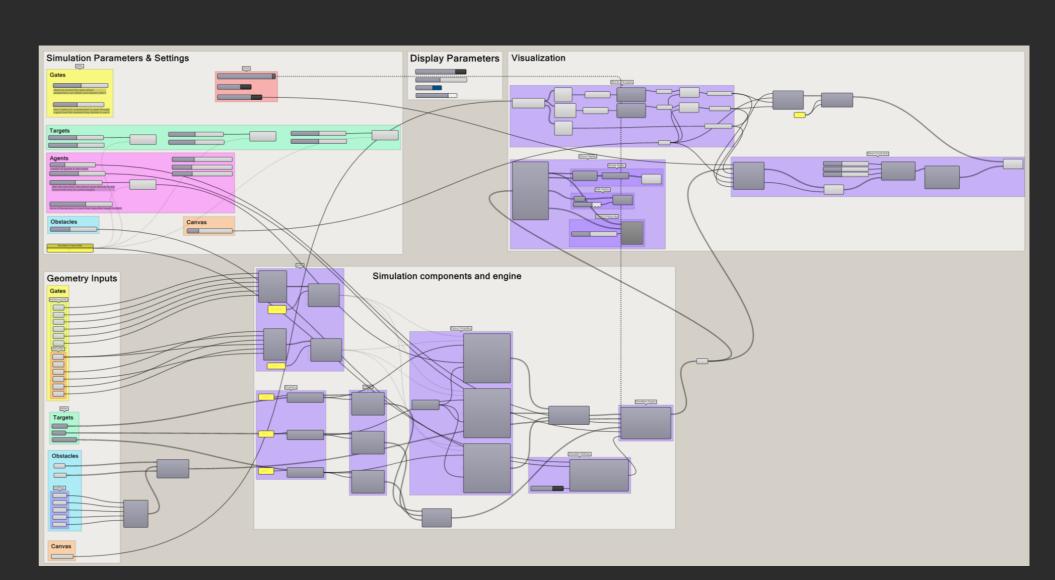
Case Study Example



Real world data outcome



Typical simulation outcome



Script Organization & Sections

What factors influence the integration of human behavior simulation tools in contemporary architectural practice in the Czech Republic?

References

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Cheliotis, K. (2020) 'An agent-based model of public space use', Computers, Environment and Urban Systems, 81, p. 101476. Available at: https://doi.org/10.1016/j.compenvurbsys.2020.101476. Jin Lee and Seung Wan Hong (2023) 'Developing the Reinforcement-Learning Child Agents for Measuring Play and Learning Performance in Kindergarten Design', Volume 1 [Preprint]. Available at: https:// doi.org/10.52842/conf.ecaade.2023.1.069.

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