

**EXCALIBUR
10**

EXAMPLER: TAKING AGENT-BASED SOCIAL SIMULATION TO THE NEXT LEVEL WITH EXASCALE COMPUTING

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London*

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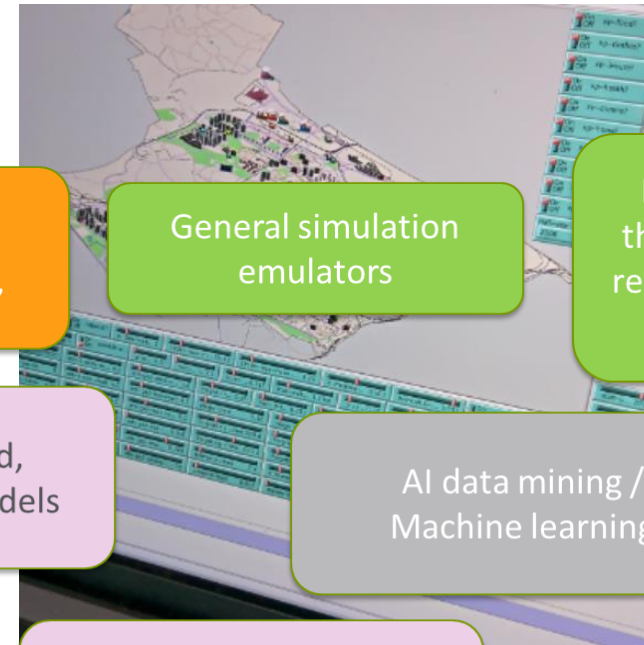
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Project Status

- 18 month project started June 2023
- Bringing the social sciences into the conversation about exascale computing
- Building a feasible roadmap for achieving desired novel use cases for Agent-Based Simulation (ABSS) using exascale computing
- Gap analysis approach
 1. Literature review on demand levels
 2. Social simulation expert workshops (2023)
 - Identifying novel use cases and capacities required & threats ... ethical issues
 3. Technical roadmap expert workshops (2024)
 - how to get to the next level and with what tools
 4. Knowledge exchange, awareness raising and training



ABSS – simulation of individual

Running ABSS at a more realistic scale (fine granularity, large extent)

General simulation emulators

Rapid identification of the best formalization of required qualitative social theory

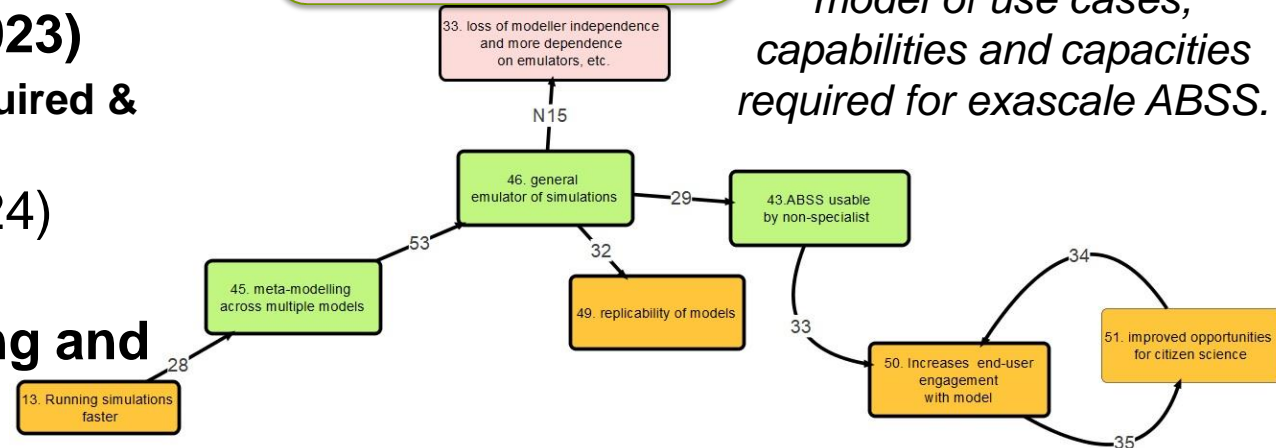
Over-complicated, hard-to-explain models

AI data mining / Machine learning

political environments, e.g. urban planning, crisis management.

Inequitable access to exascale resources

Excerpt of workshop group model of use cases, capabilities and capacities required for exascale ABSS.



Current interests

- Making contact with the ExCALIBUR projects and learning from them
- Getting to know the KE Coordinators
 - Alison Heppenstall (Glasgow University) is ours
- Finding out if any ExCALIBUR project or researcher has an interest in exascale agent-based social simulation and its potential uses
 - Next workshop – November 2023 in London
- Find out about tools developed by ExCALIBUR that could be useful for supporting access to exascale computing use cases by social simulation community



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Hutton
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