# Balancing Needs and Resources
## Project CyberSym part II

**A Multi Agent Simulation Approach**

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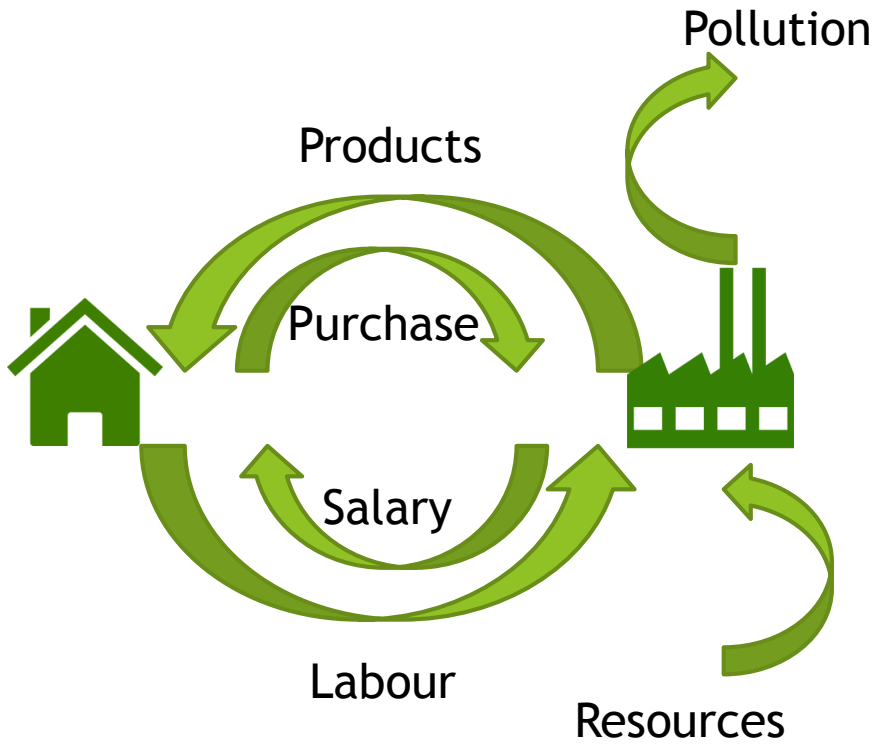
# Introduction



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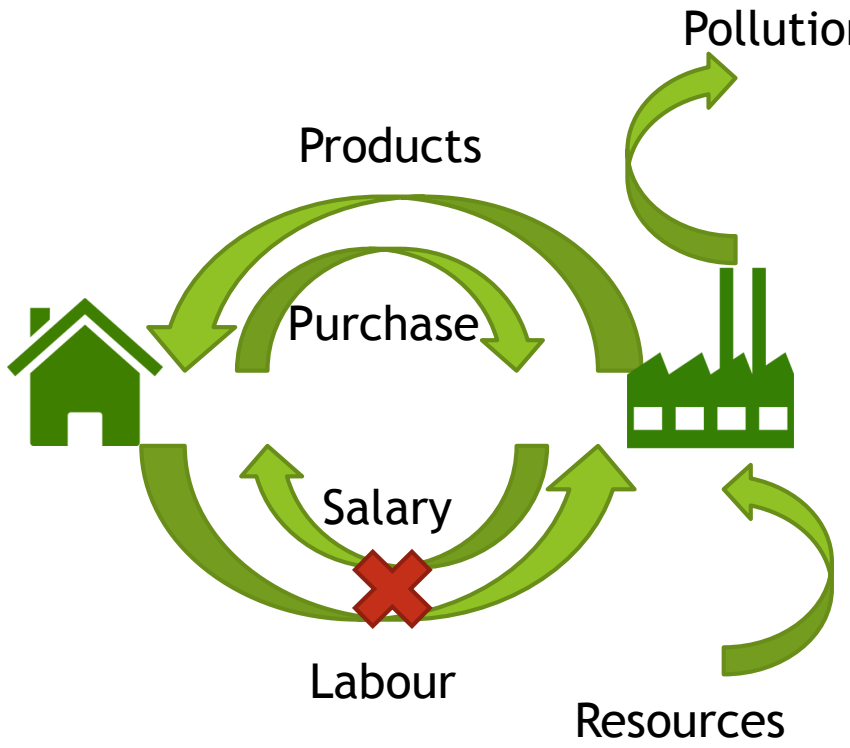


AI automates labour…

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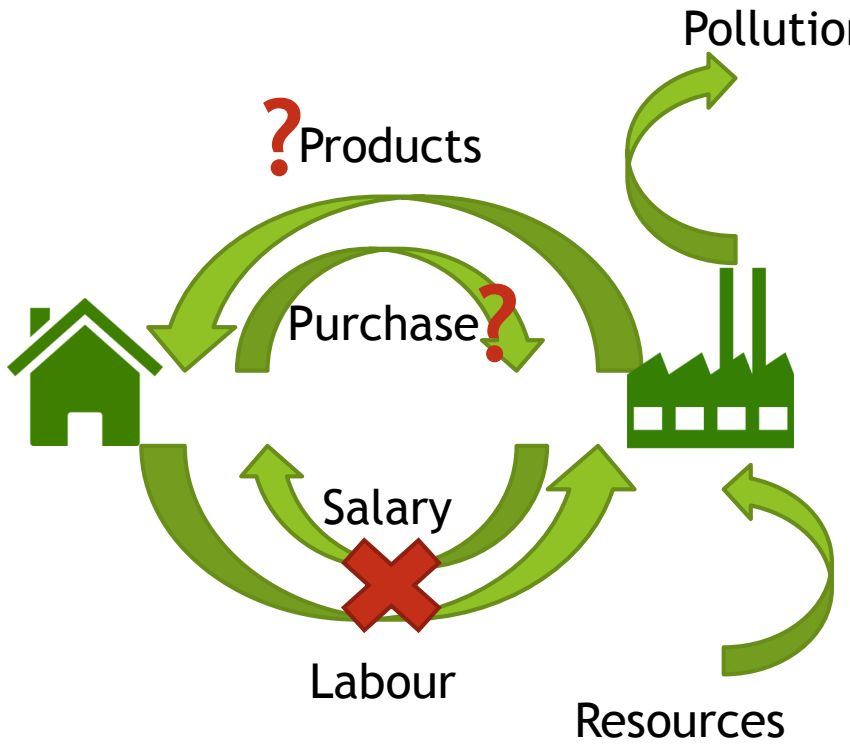


AI automates labour…

How can we keep getting the products we need?

Can AI help resolve the problems it creates?

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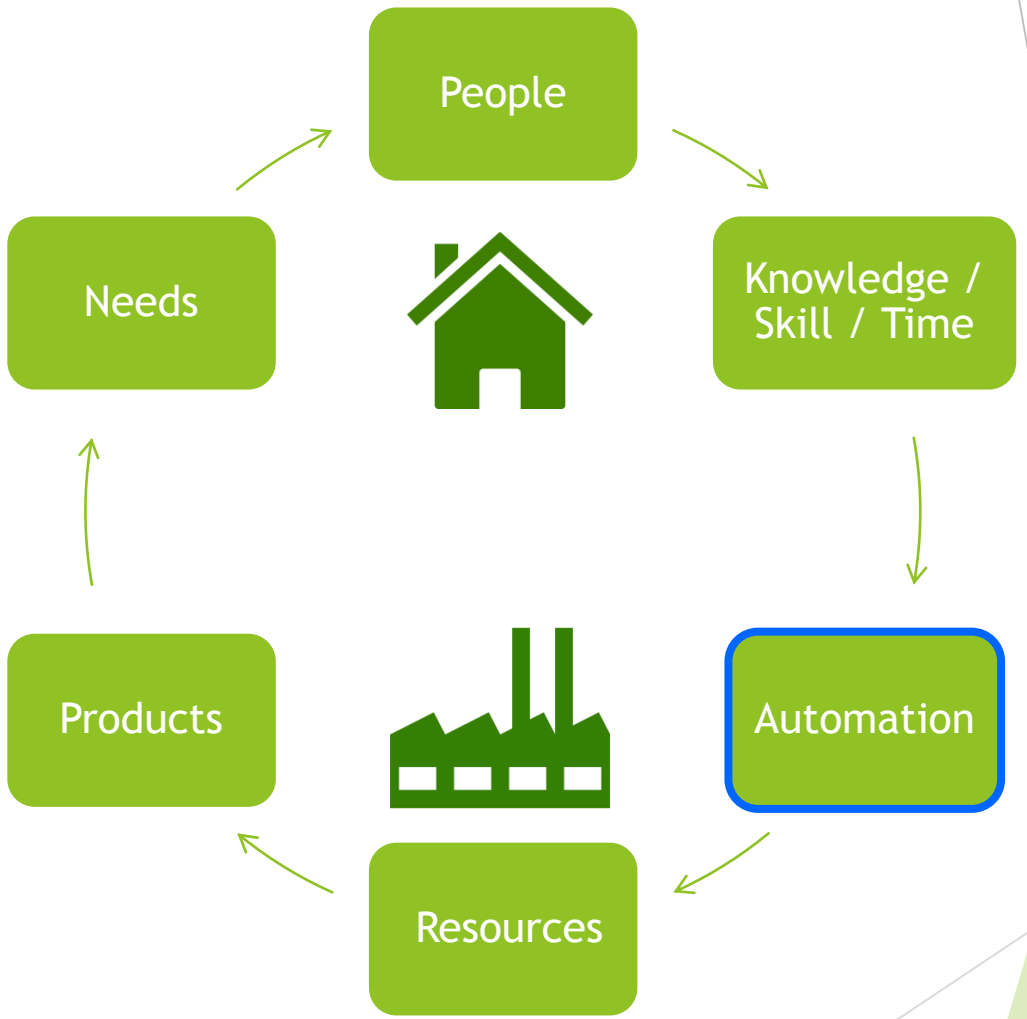
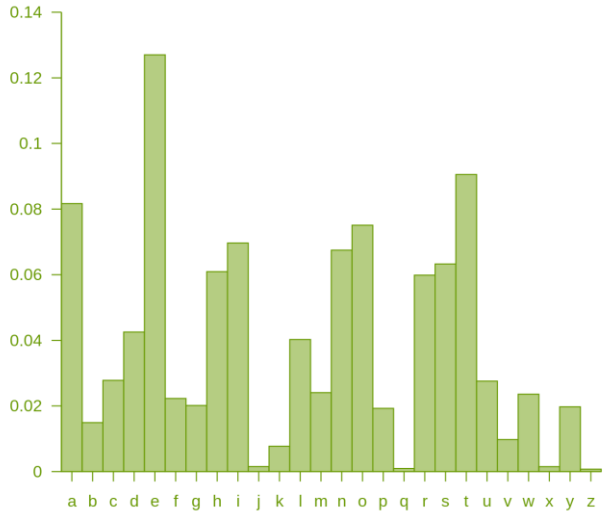


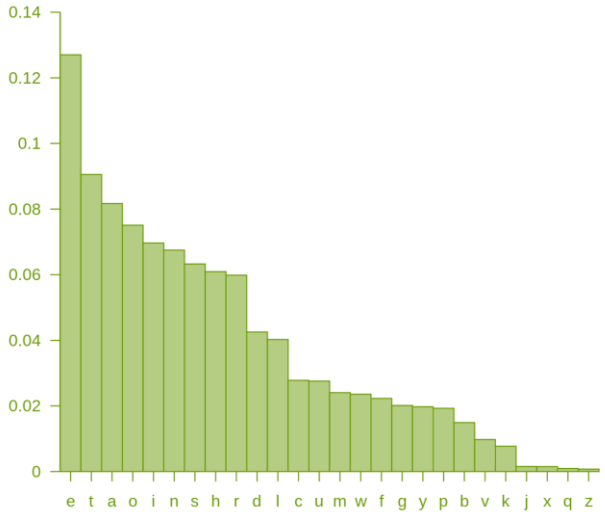
# Research question

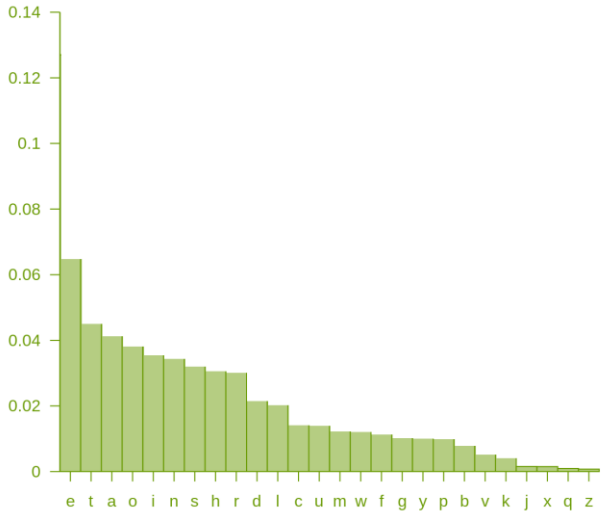
What are the minimal assumptions needed to create a simulated economical system which allocates available resources to fulfill the needs of agents directly?

# Method/Approach

- Multi Agent simulation
- Optimisation: available resources -> fulfil highest demand
- Priority Feature: Demand does not explode
- Start with a simple model
- Experiment



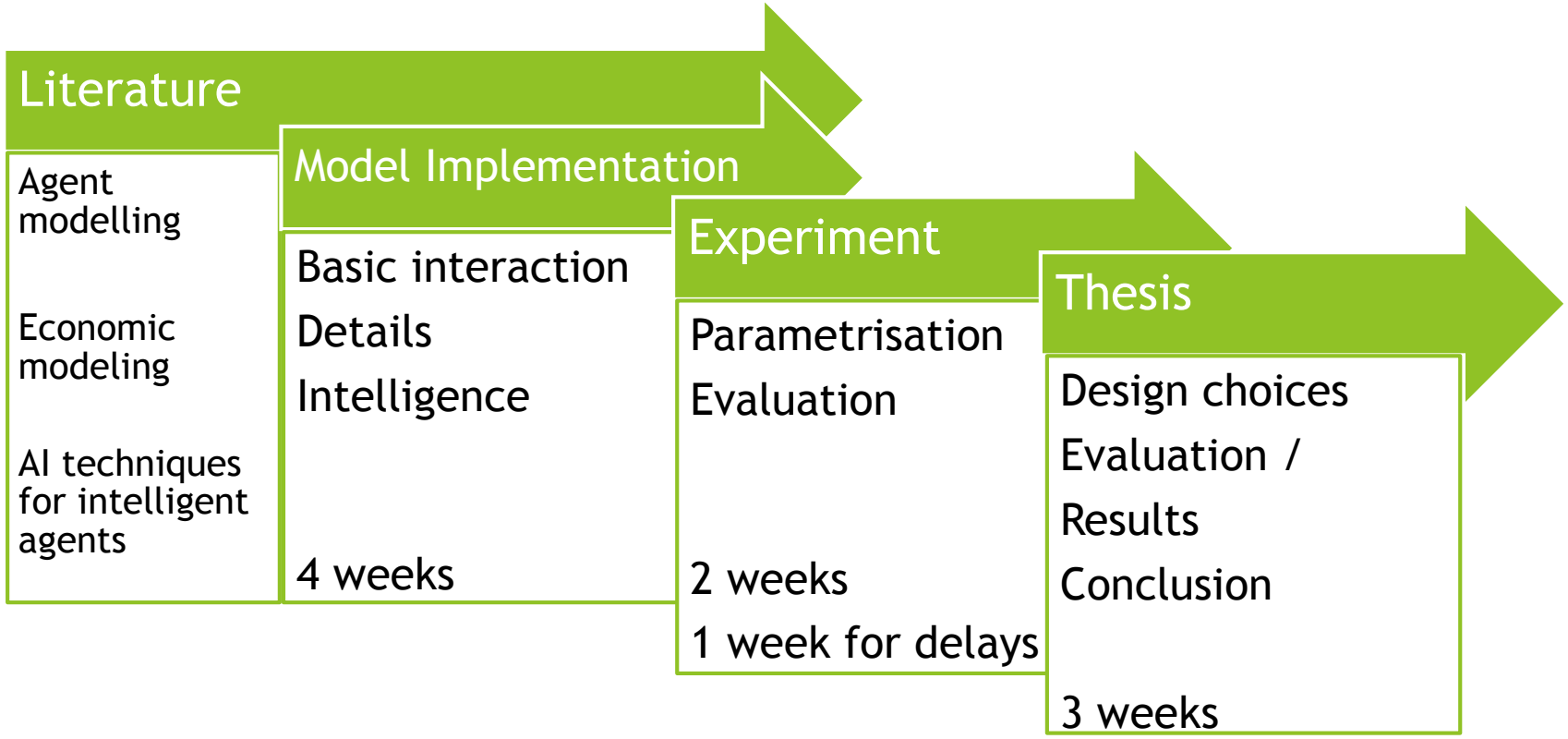



# Evaluation

- Minimise average waiting time to get a demand fulfilled
- Maximise number of demands fulfilled

# Plan


Literature
Agent modelling
Economic modeling
AI techniques for intelligent agents
Model Implementation
Basic interaction
Details
Intelligence
4 weeks
Experiment
Parametrisation
Evaluation
2 weeks
1 week for delays
Thesis
Design choices
Evaluation / Results
Conclusion
3 weeks

# Questions?