

# Value Inference in Sociotechnical Systems

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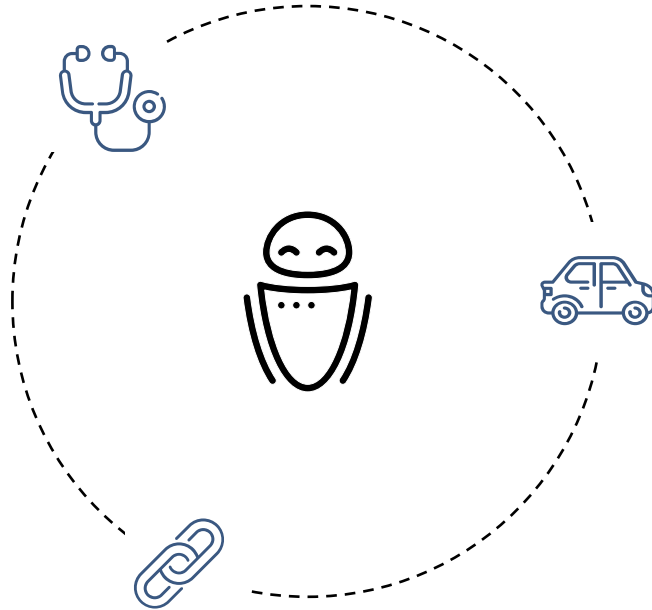
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# Values in Sociotechnical Systems



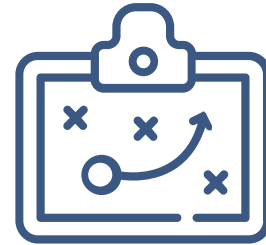
# Value Inference

Which values are **relevant** to the decision-making context?

How do different stakeholders **prioritize** values?

# Behavioural Data

Stakeholders' **actions** (e.g., how they choose among alternative options) and **justifications** (how they motivate their choices).



# Value Identification

Which values are **relevant** to the decision-making context?

A set of **context-specific** values grounded in stakeholders' observed behaviour.



# Value Estimation

How does each stakeholder **prioritize** the identified values?

Individual value preferences estimated through a combination of **behaviour analysis** and **NLP**.



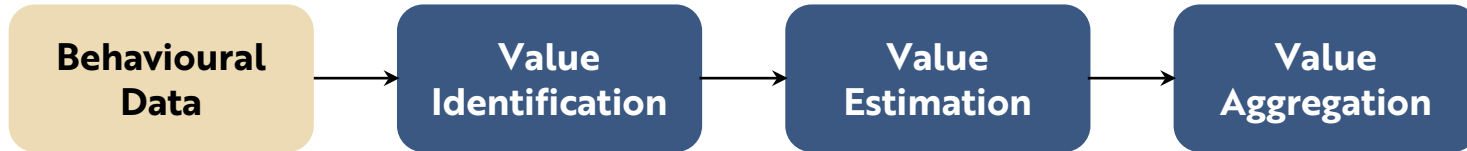
# Value Aggregation

What is the **societal consensus** from individual value preferences?

Aggregation of preferences with **computational social choice** techniques (including multiple clusters of consensuses).



# Value Inference



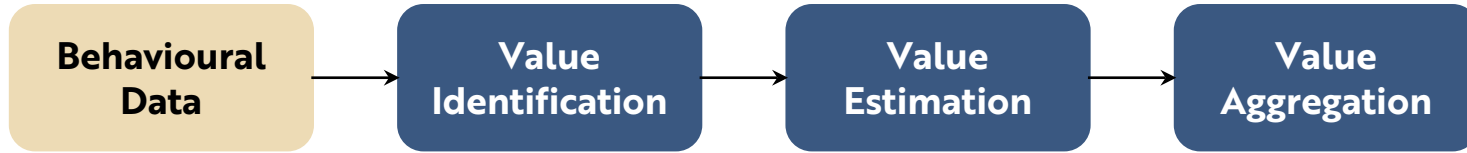


# Observing is not enough

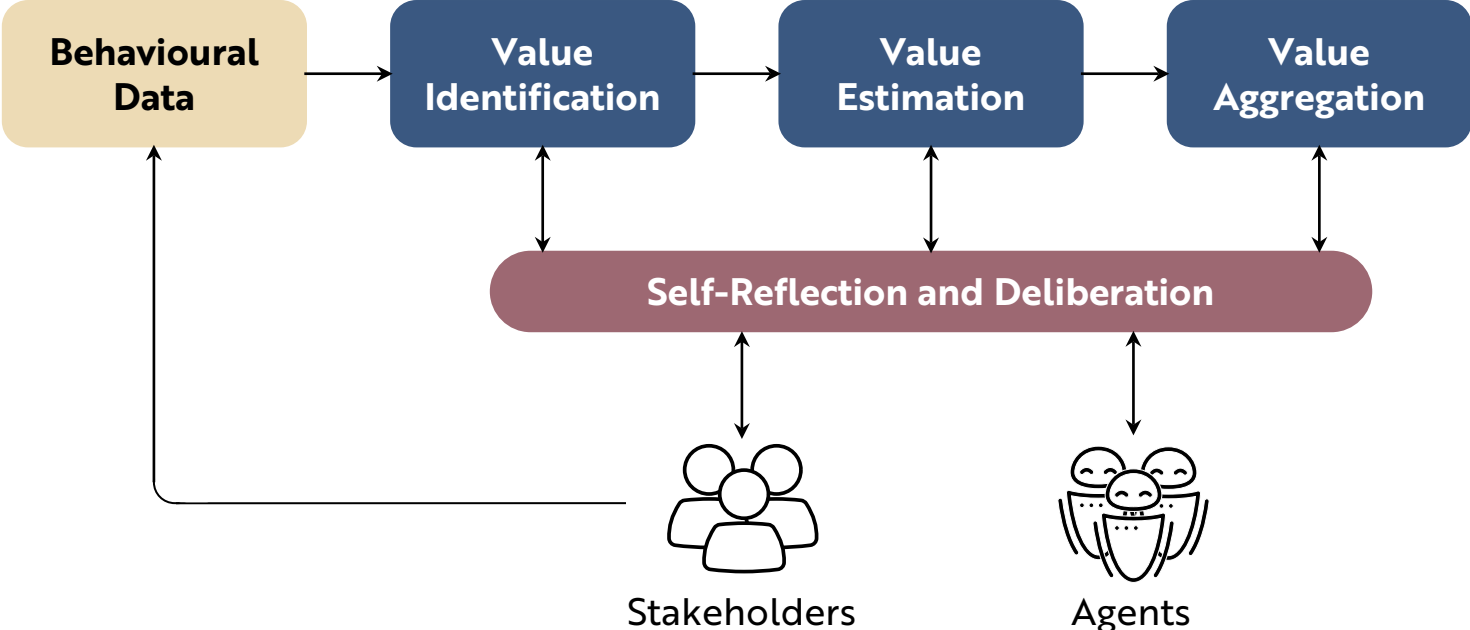
Value preferences are often **implicit** to ourselves, and thus not easily observable in behavioural data.



# Hybrid Value Inference



# Hybrid Value Inference



# Thanks!

Do you have any questions?

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