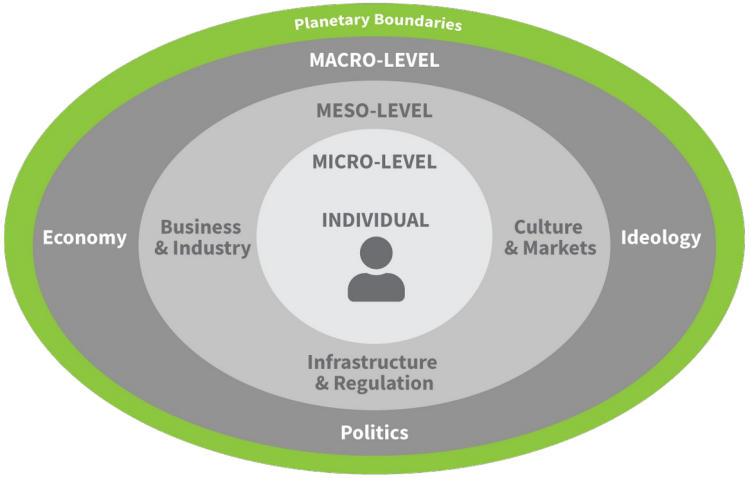
A Multilevel Systems Modeling Methodology: *Actor Influences on Product User's Experience of Sufficiency*



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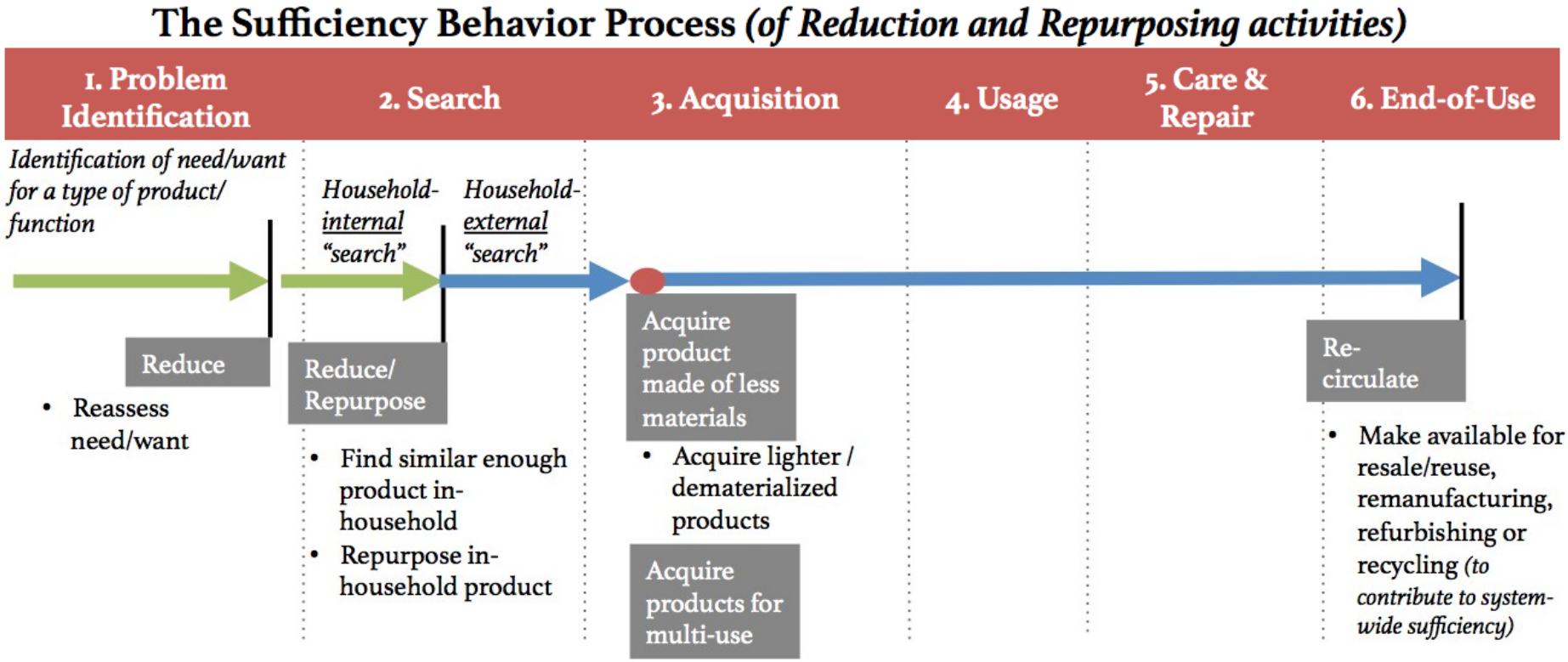
Defining Sufficiency Behaviors as activities in "Reduction" and "Repurpose"

- Reductions to the total amounts of materials in the system is necessary for sustainability
- Sustainable consumption and productions initiatives (e.g., repair and sharing) contributes to reductions only if they do not enable additional consumption ("rebound effects" and "spill-over"; see e.g., Sorrell et al., 2020)

→ **we focus on "reduction" and "repurposing" activities conducted by product users**



Goal: Ensure a Positive Product User's Experience of Sufficiency Behaviors

- Need buy-in from consumer/product users for the sufficiency transition
- The purpose of any economic system is to increase the well-being of its inhabitants (Stiglitz et al., 2009)

  → making **the Product User's quality (positive or negative) of the experience** of "reduction" and "repurposing" central

How to ensure a Positive Experience?

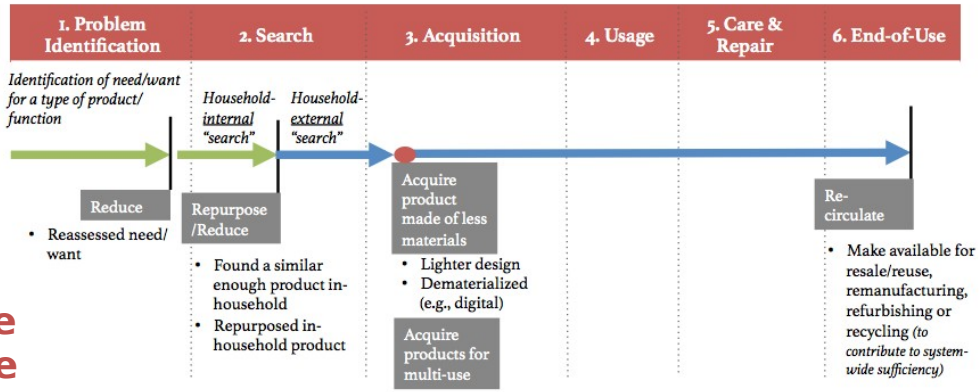
Reduce Friction

Increase Rewards

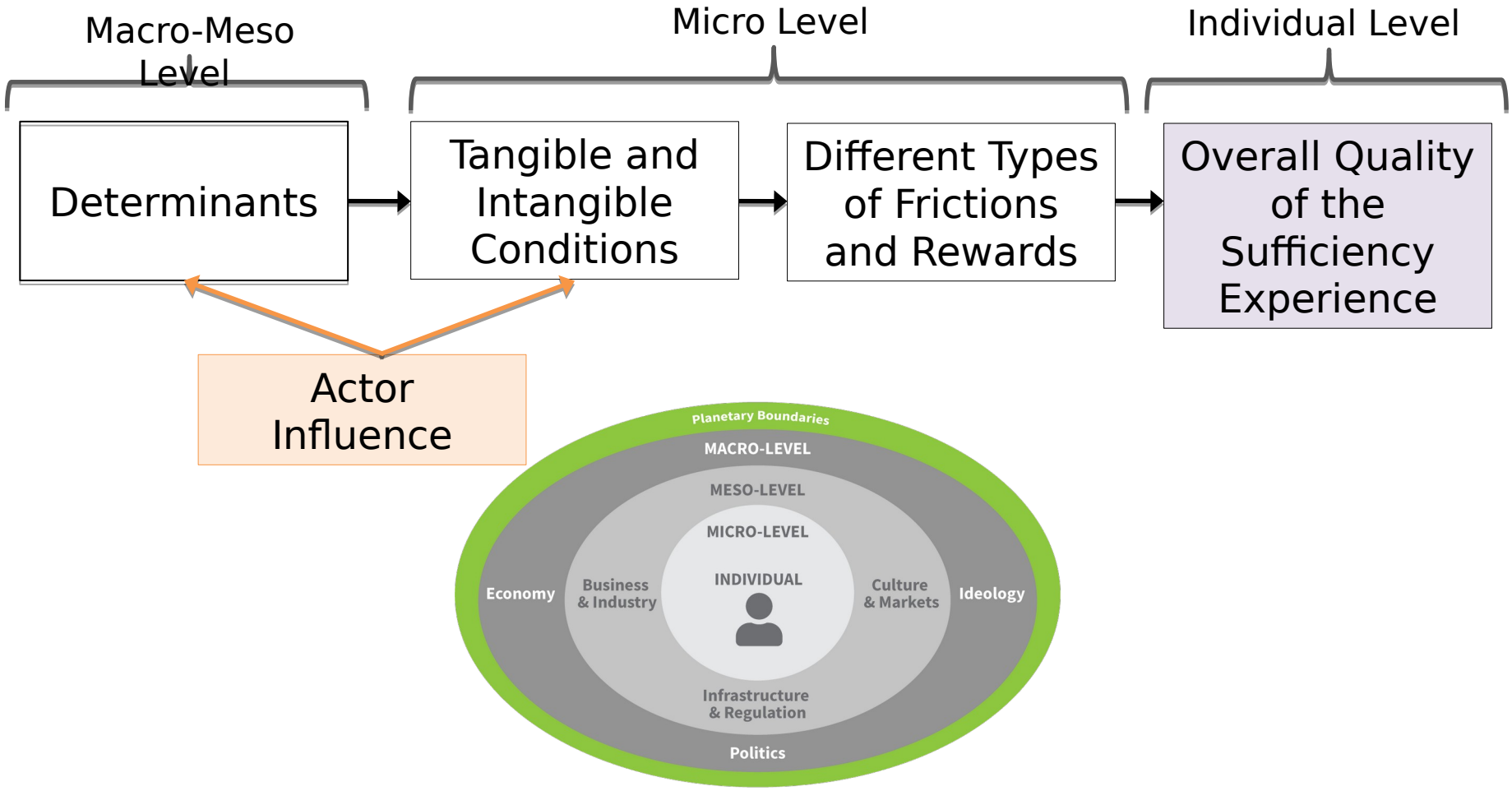
The Rewards exceed any Fri

- Frictions and Rewards are a produ
  the Sufficiency Behavior Process
  - Tangible Conditions (e.g., time requirement)
  - Intangible (e.g., norms)
- **Different actors in the system** (e.g., businesses and policymakers) influence frictions and rewards

→ RQ: **What are the opportunities for diverse system actors to influence and ensure a positive Product User Experience of Sufficiency Behaviors in a realized state of Sufficiency?**



Actor Influence over Conditions that Impact Frictions and Rewards



…require a Multilevel Perspective

Proposing a Multilevel System Modeling Methodology

Modeling Steps	Foundational Model Layer	Dependents Model Layer
1. Scope & Define		
	Modeling of Lower System Level( )	
2. Initiate *(Develop Conceptual Foundation)*	Product User Sufficiency Behaviors *(Reduce and Repurpose)*	The Product User Suffiency Behaviour Experience Model
3. Review *(data mining)*		
4. Analyze (coding & synthesis)		
5. Integrate (if needed)		
6. Model		
	Modeling of Higher System Level(s)	Determinants Model Layer
7. Define, Review & Analyze		
8. Integrate (if needed)		
9. Model		
*10. Verify Externally****		
*11. Utilize Model****		
12. Present Final Model		

RQ: What are the opportunities for diverse system actors to influence and ensure a positive Product User Experience of Sufficiency Behaviors in a realized state of Sufficiency?

1. What sufficiency behaviors entail for product users and the system actors *(Foundational Layer Model)*
2. The experience of sufficiency behavior and what determines its quality *(Dependents Layer Model)*
3. The type of actor influence over this outcome *(Determinants Layer Model)*

Next Ste
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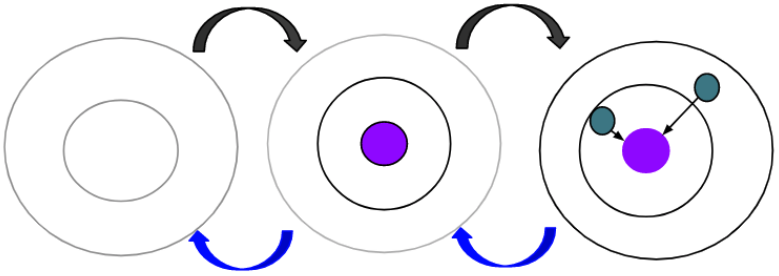

Adapted from *Svensson-Hoglund et al., (2023)*

Thank you!

Any Questions and feedback?

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