

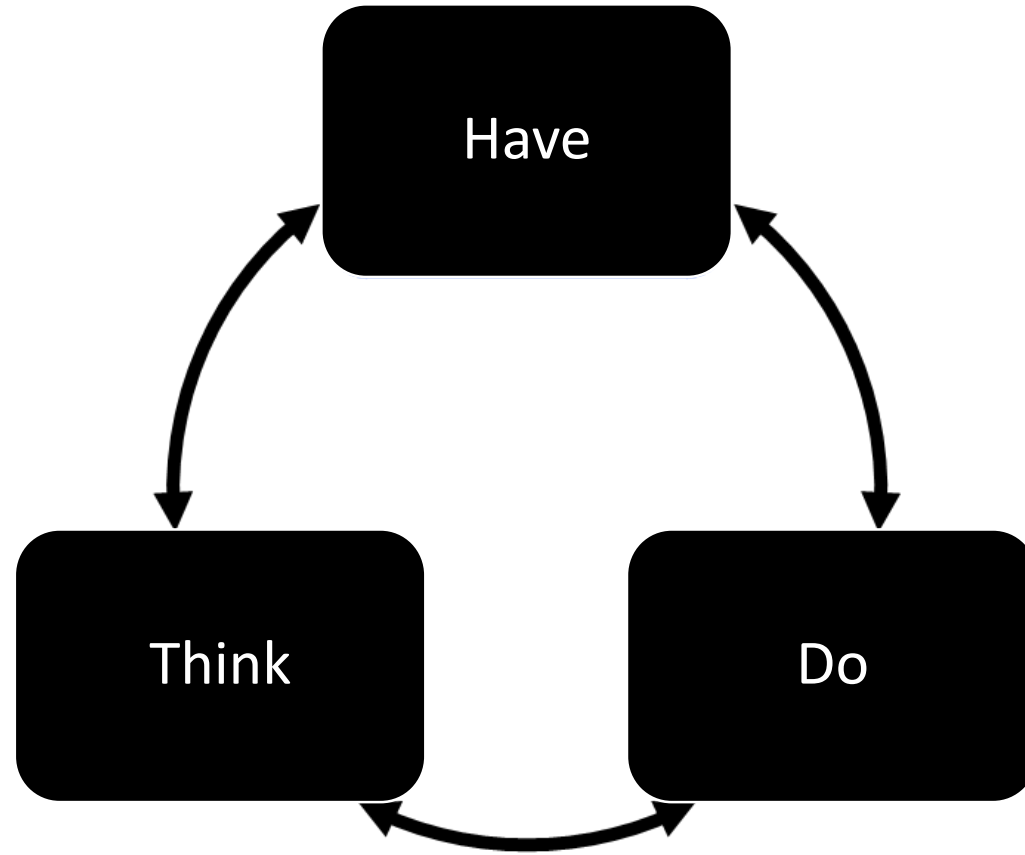
# **Research on energy hardship using the energy cultures framework**

Janet Stephenson

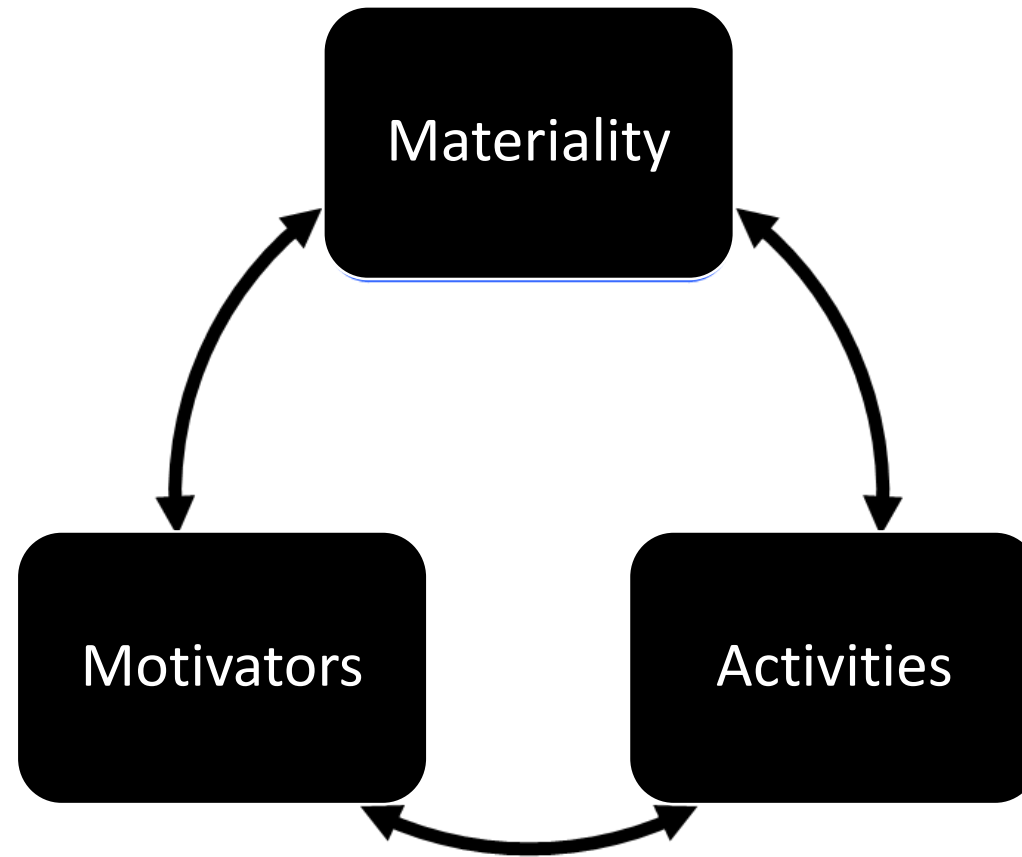
Centre for Sustainability

University of Otago

Presentation to OERC symposium, 28 November 2022



# Elements of culture



Buildings, appliances, infrastructure,  
technologies, clothing etc

**Materiality**

**Motivators**

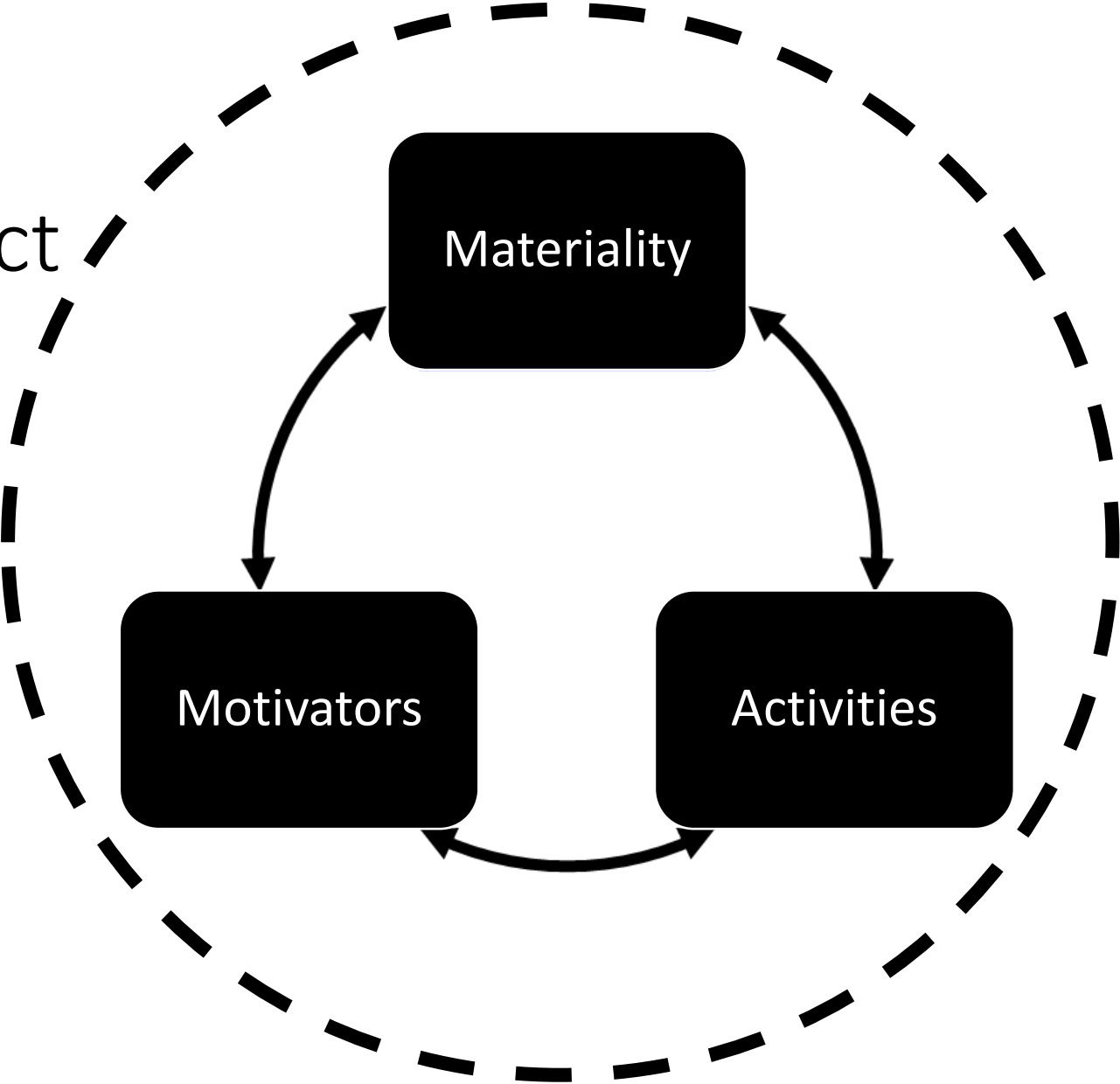
Aspirations, expectations  
Norms, traditions  
Values, beliefs  
Knowledge, understandings  
Symbolism, meanings

**Activities**

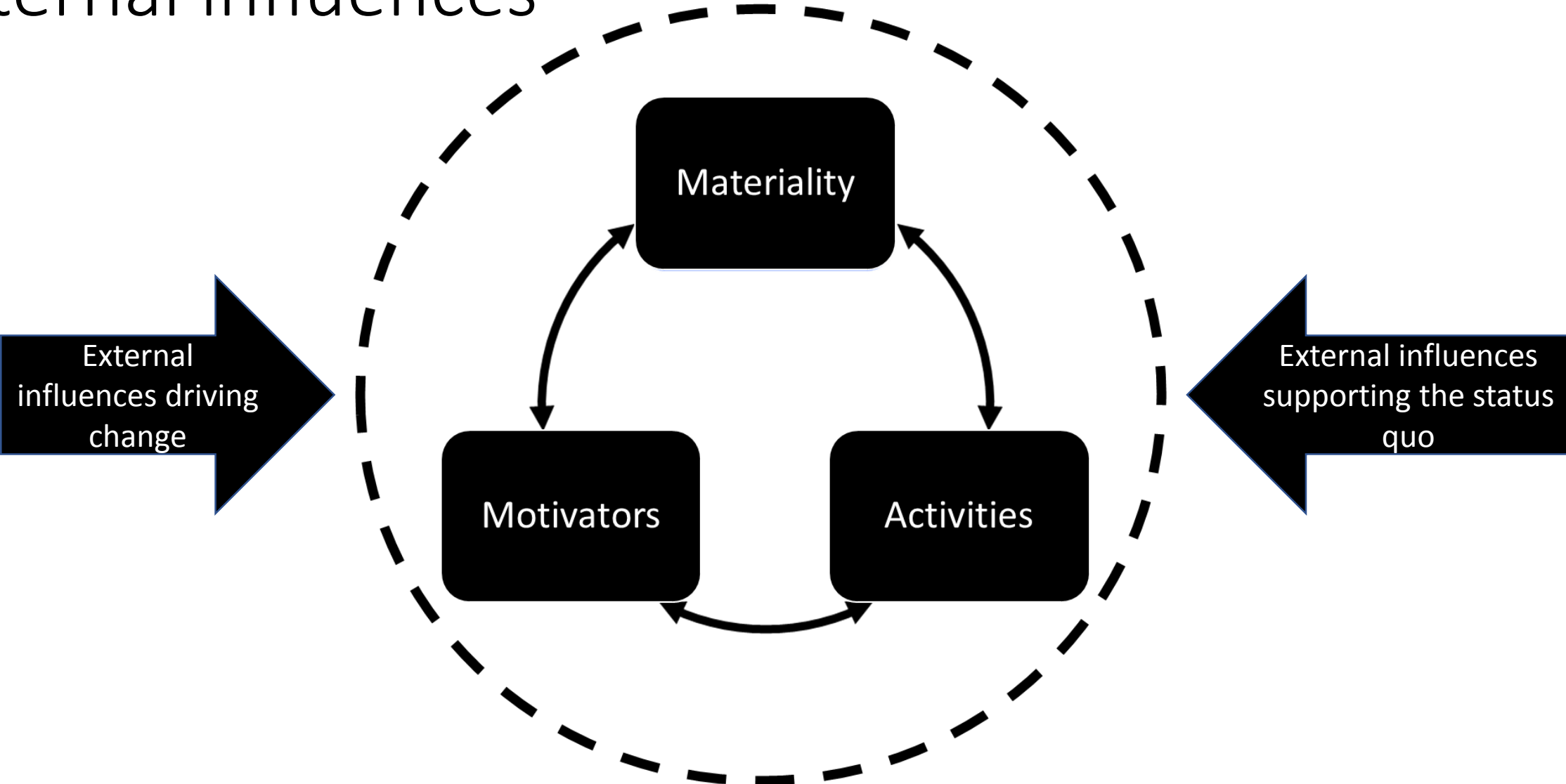
Routines, habits, practices  
Actions, making, fixing, acquiring



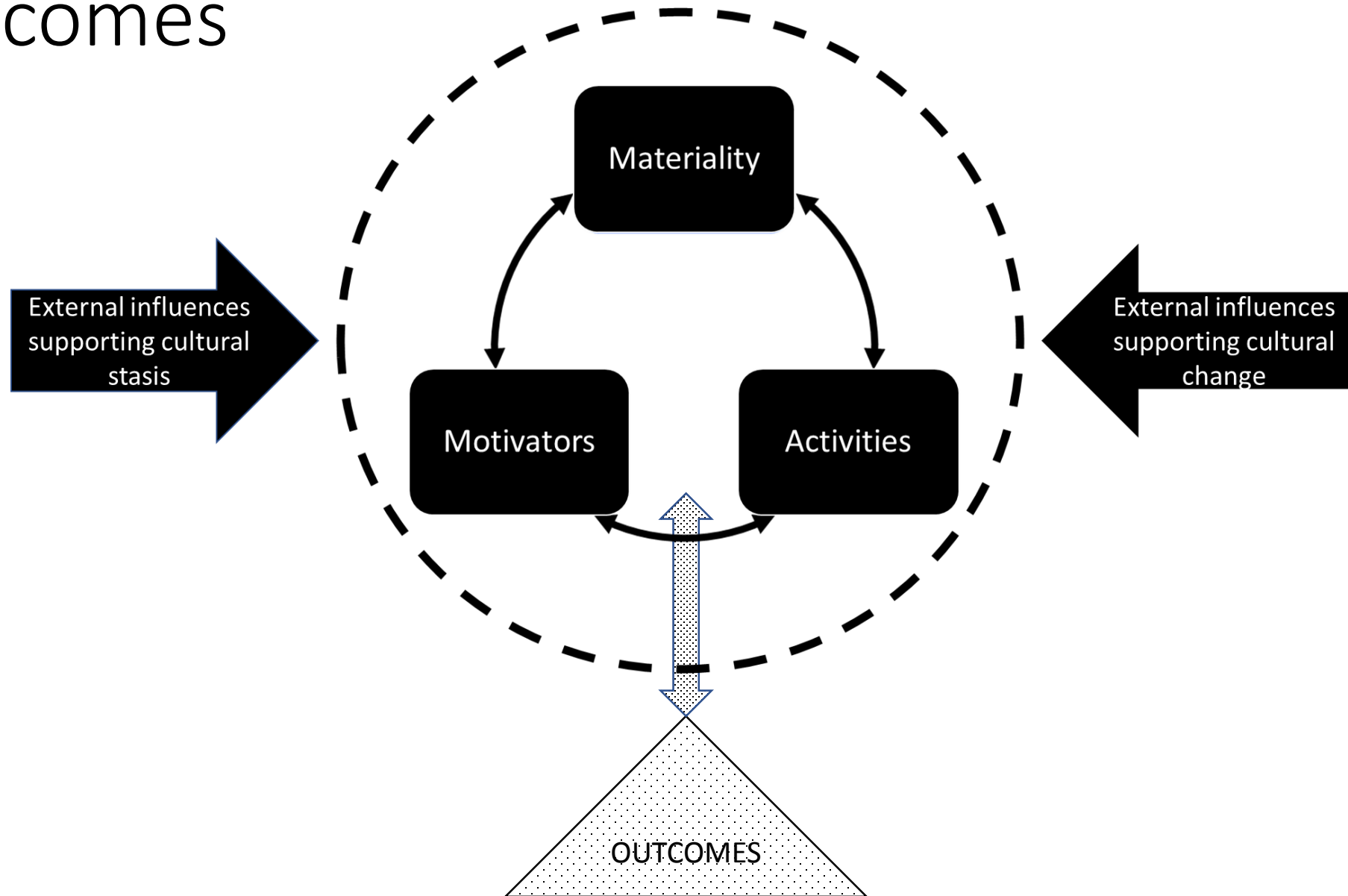
Agency:  
having choice;  
the ability to act



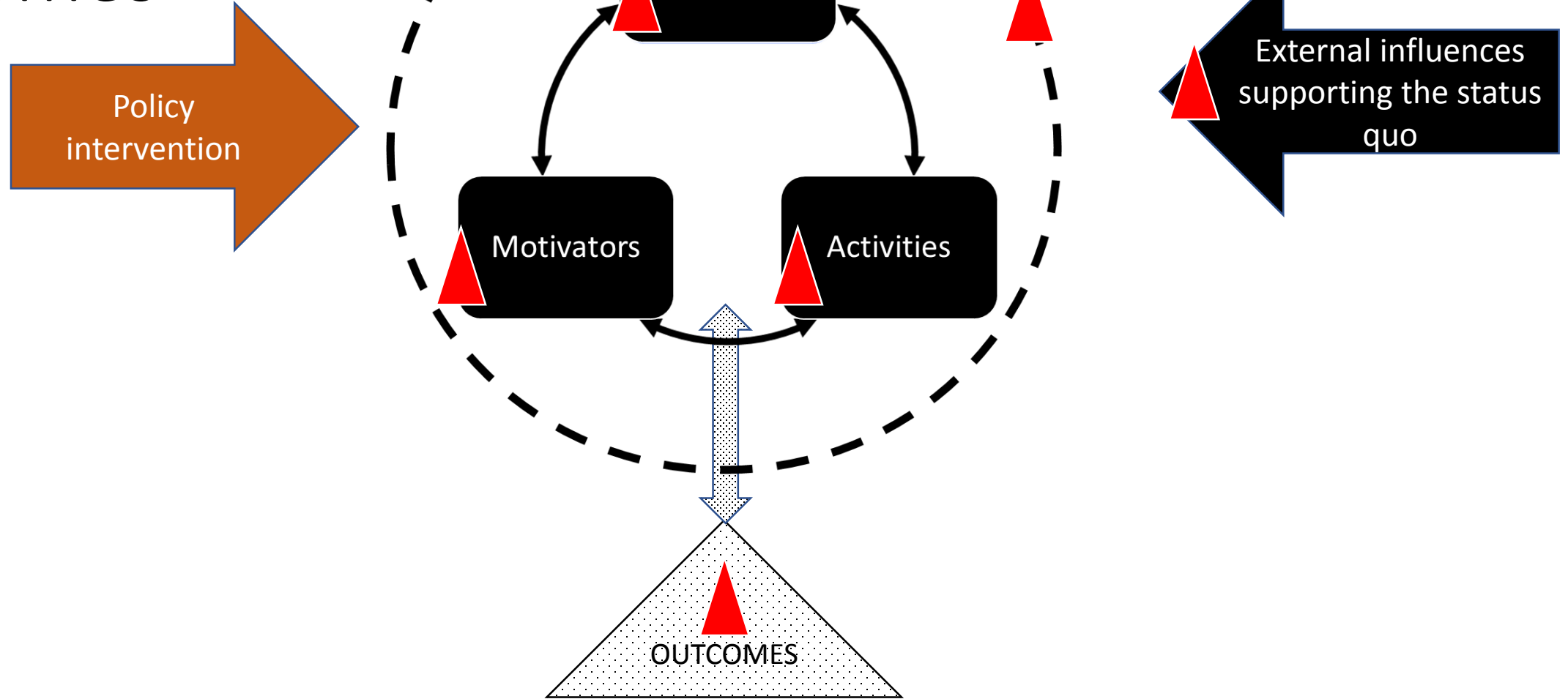
# External influences



# Outcomes



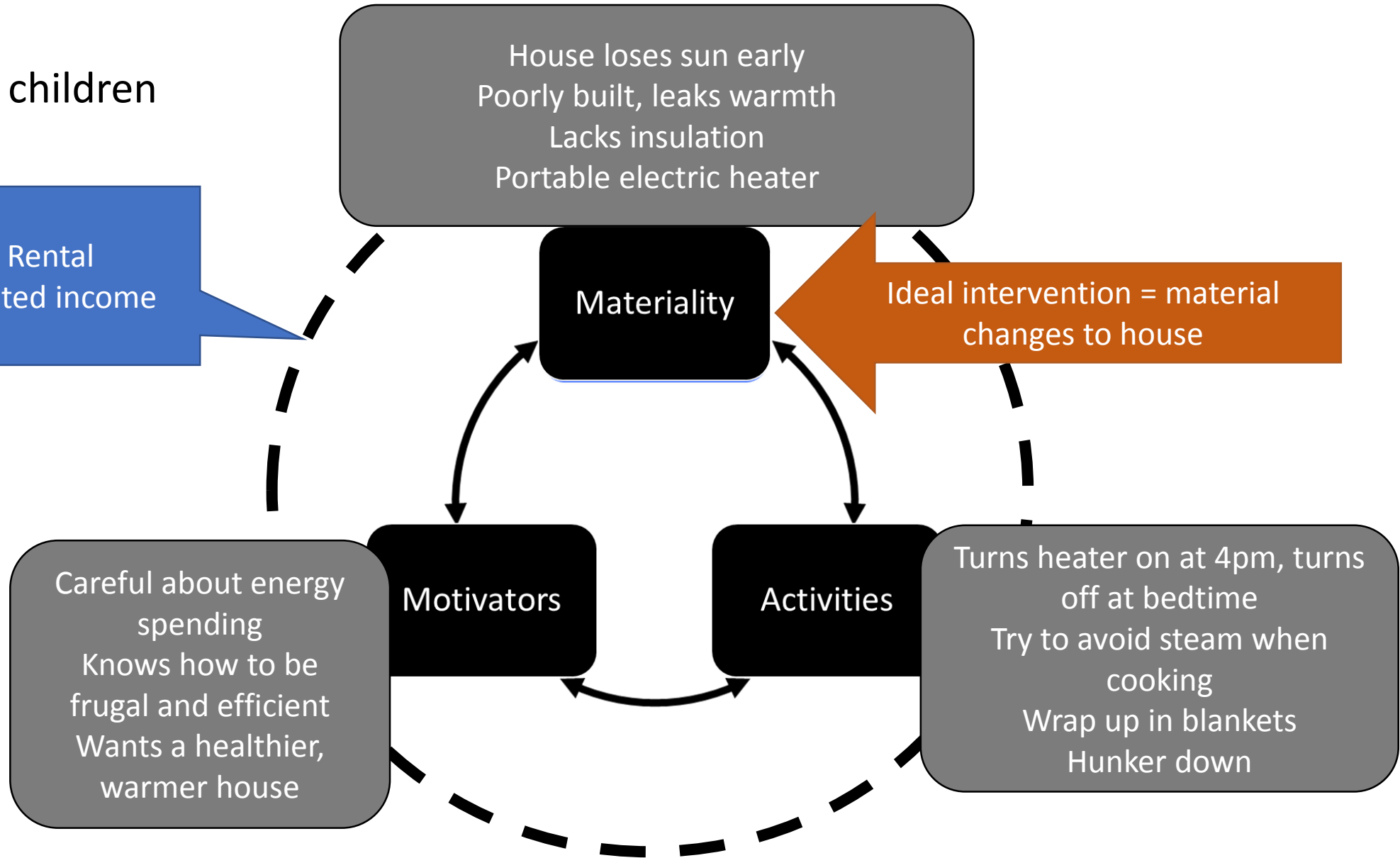
# Policy to change outcomes



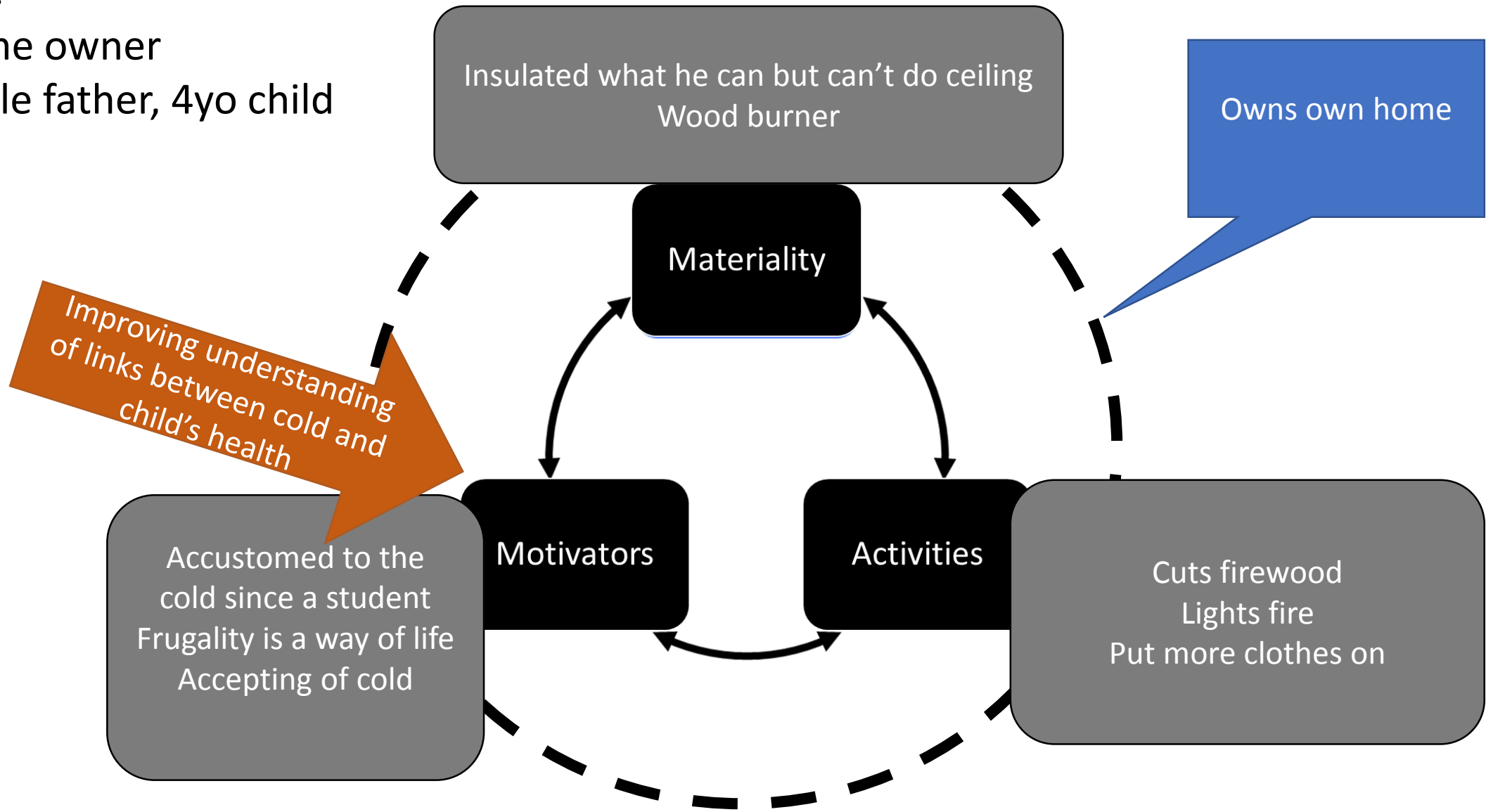


'Norma'  
Partner, 2 children

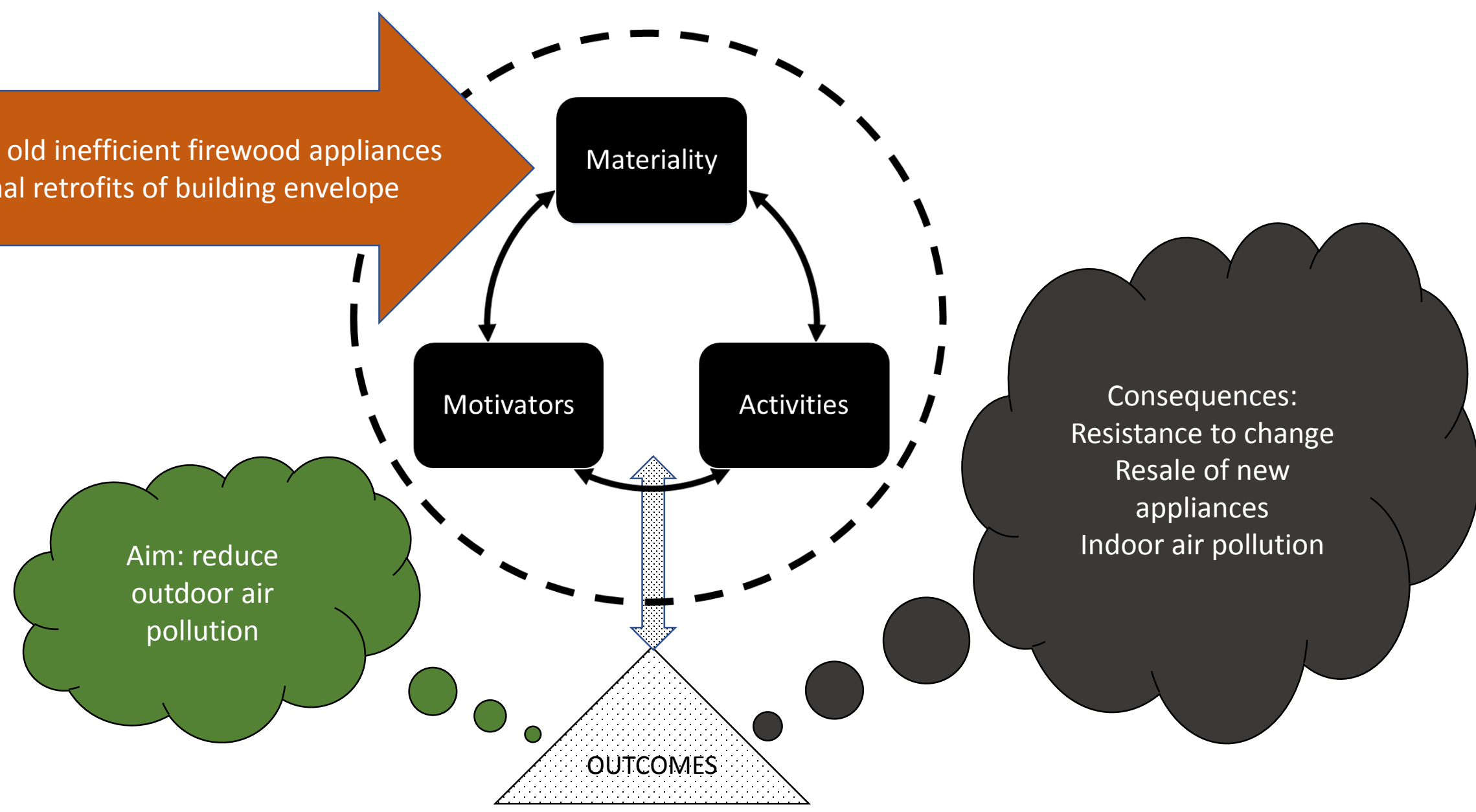
Rental  
Limited income



'Eric'  
Home owner  
Single father, 4yo child



\*Replacing old inefficient firewood appliances  
\*Thermal retrofits of building envelope



Aim: reduce outdoor air pollution

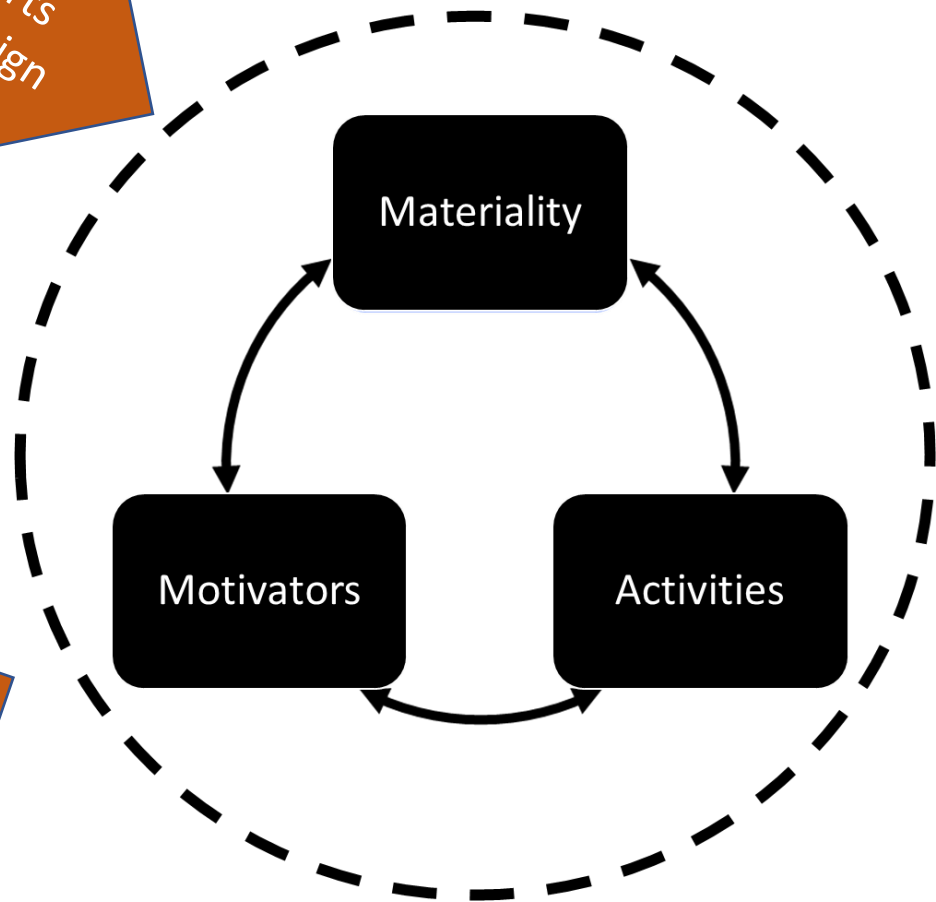
Consequences:  
Resistance to change  
Resale of new appliances  
Indoor air pollution

OUTCOMES

Building code supports inefficient building design

Building code does not require heating system

State promotes home ownership so responsibility is on families



Firewood cheaper than pellets or kerosene

Solving multiple needs through traditional wood stoves

Materiality

Motivators

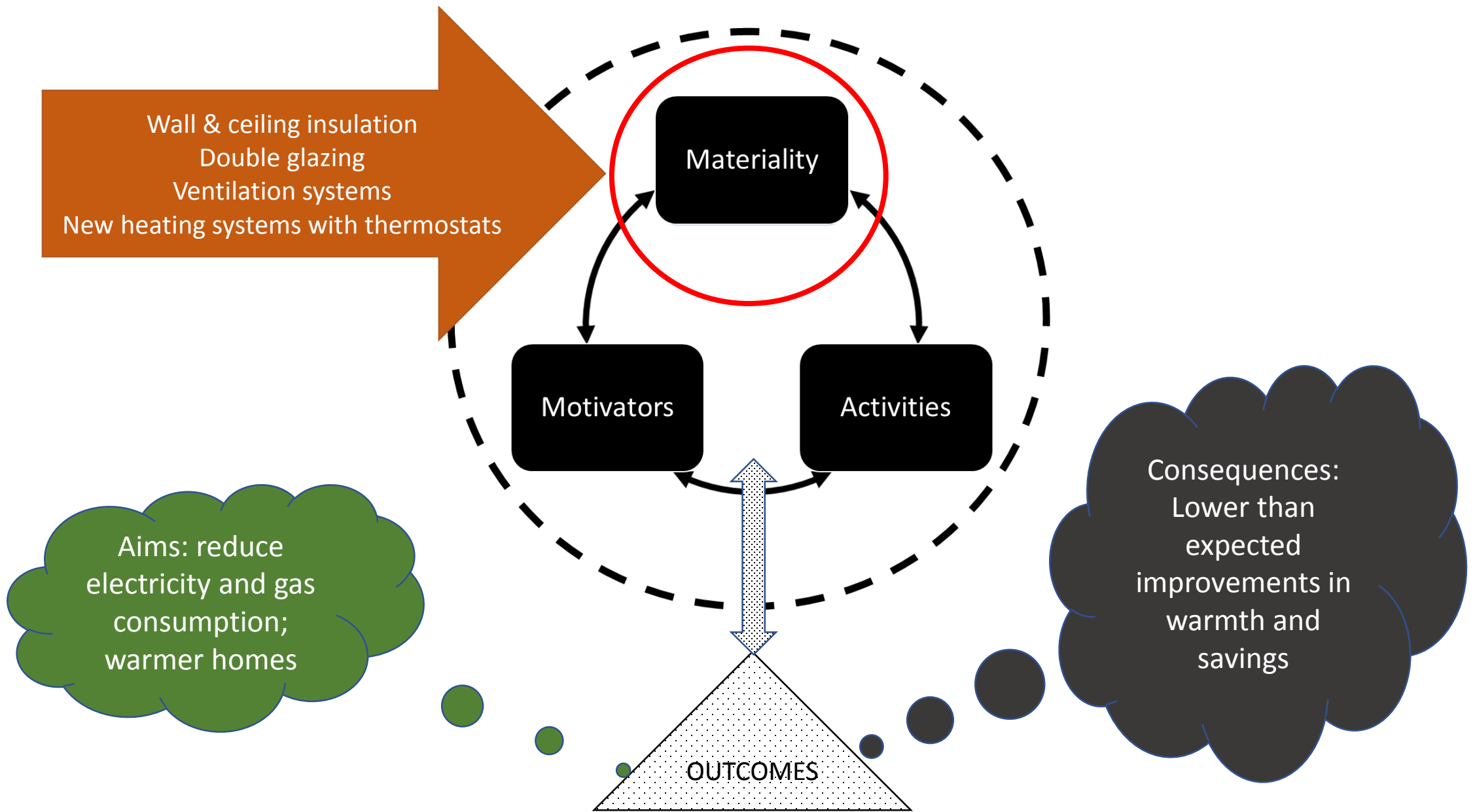
Activities

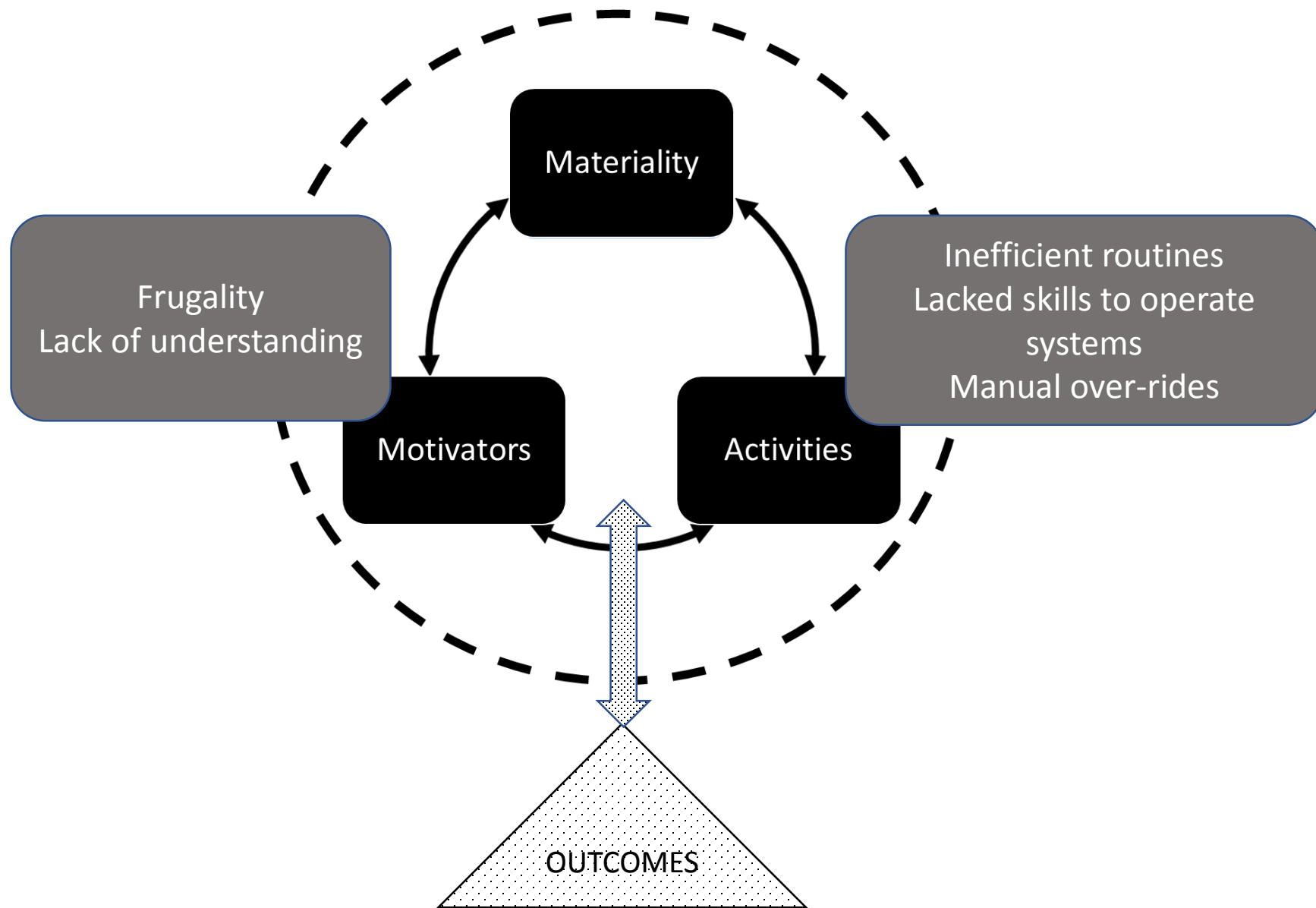
Part of tradition  
Social attachments: family, memories  
Comfort and togetherness: 'calor de hogar'

Stoves fulfil multiple energy needs – heating, baking bread, boiling water, drying clothes, drying the dwelling  
  
Known technologies that can be fixed/maintained

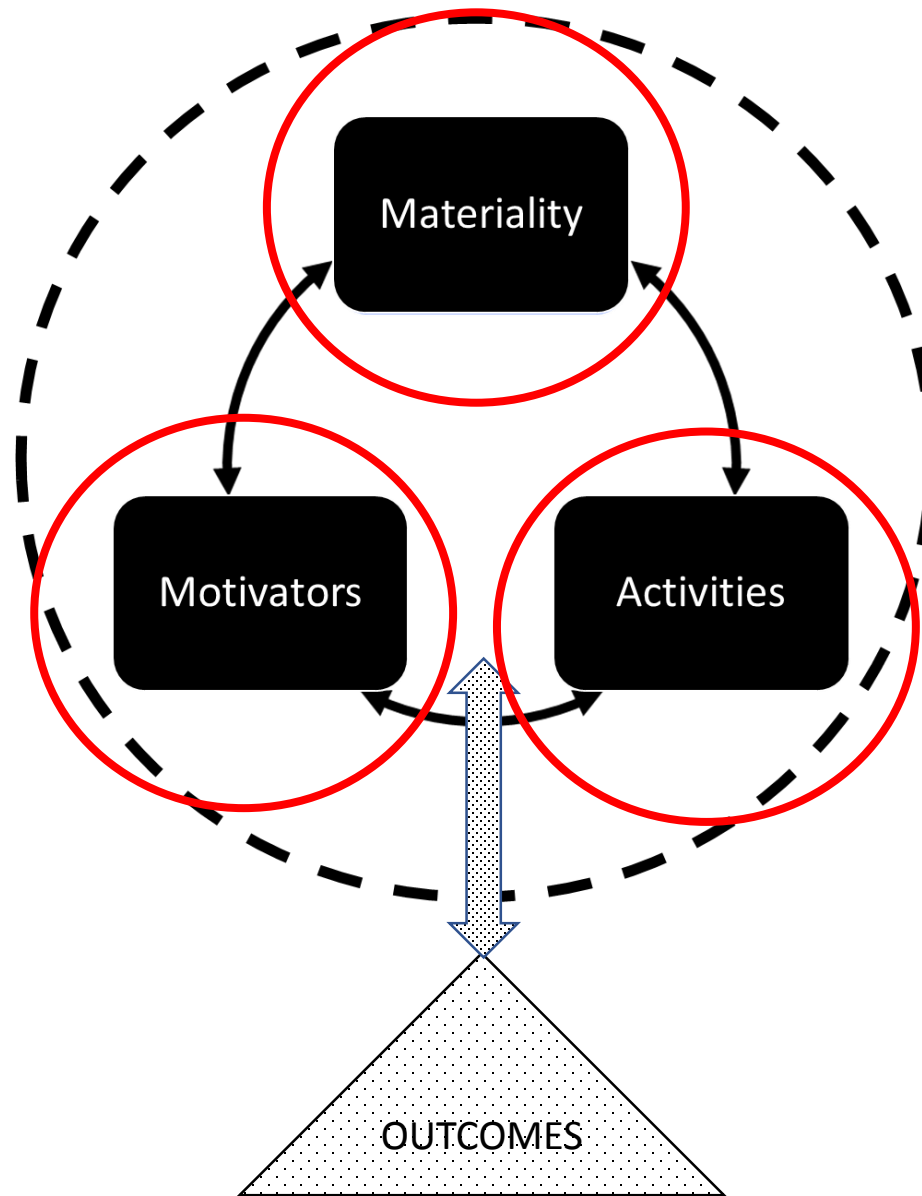


Traditional firewood cookstove in Coyhaique





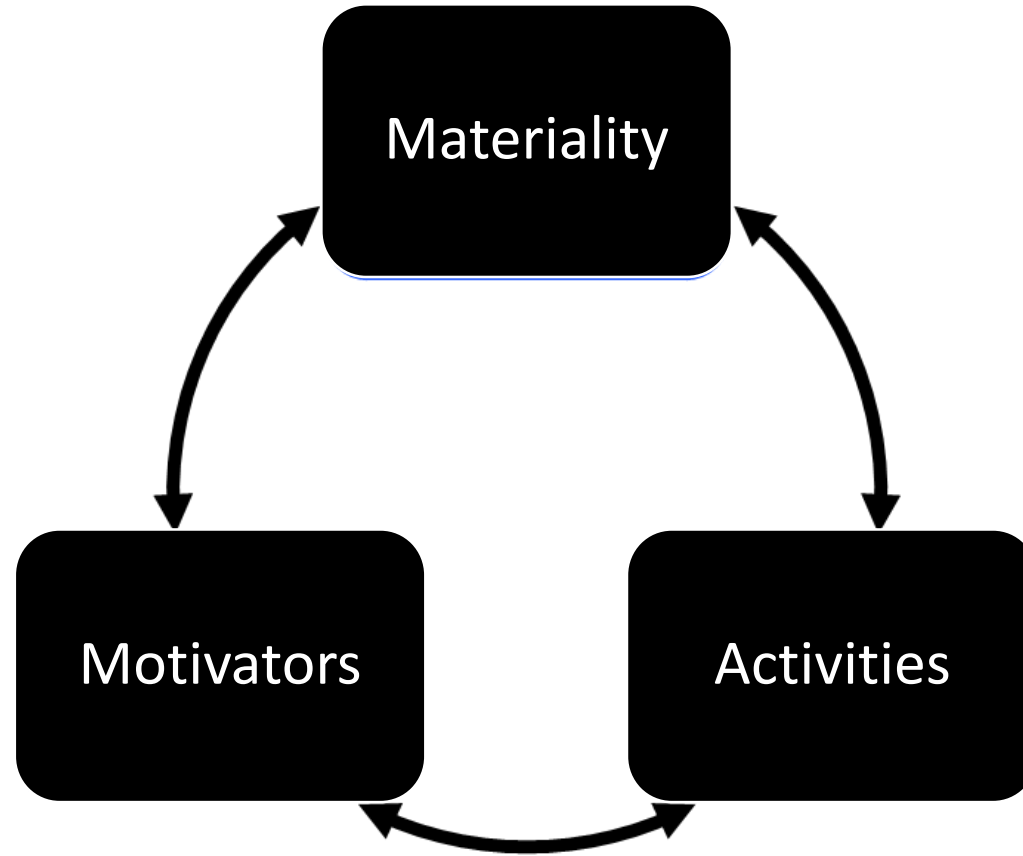
Rau, H., Moran, P., Manton, R., & Goggins, J. (2020). Changing energy cultures? Household energy use before and after a building energy efficiency retrofit. *Sustainable Cities and Society*, 54, 101983.

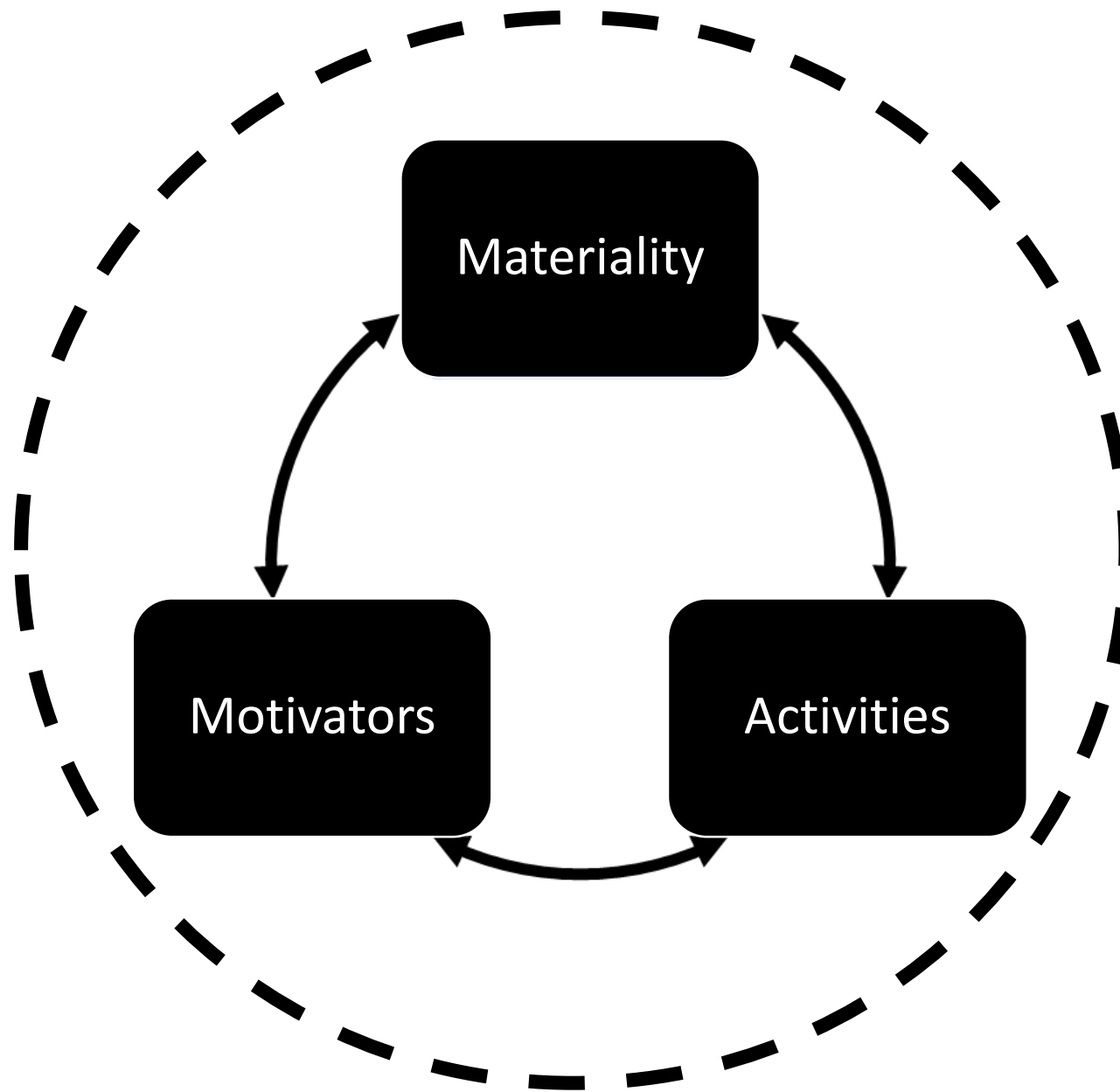


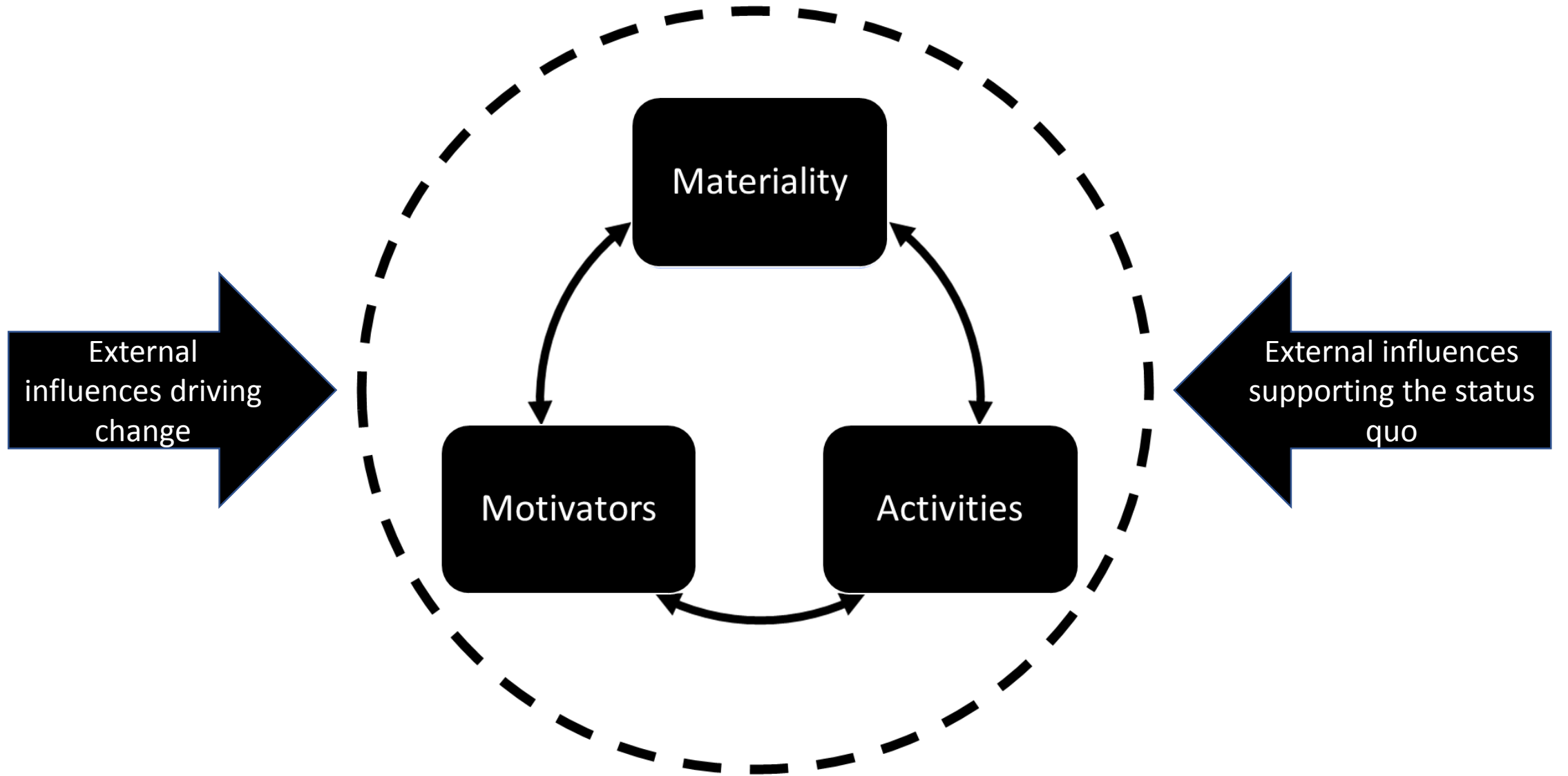
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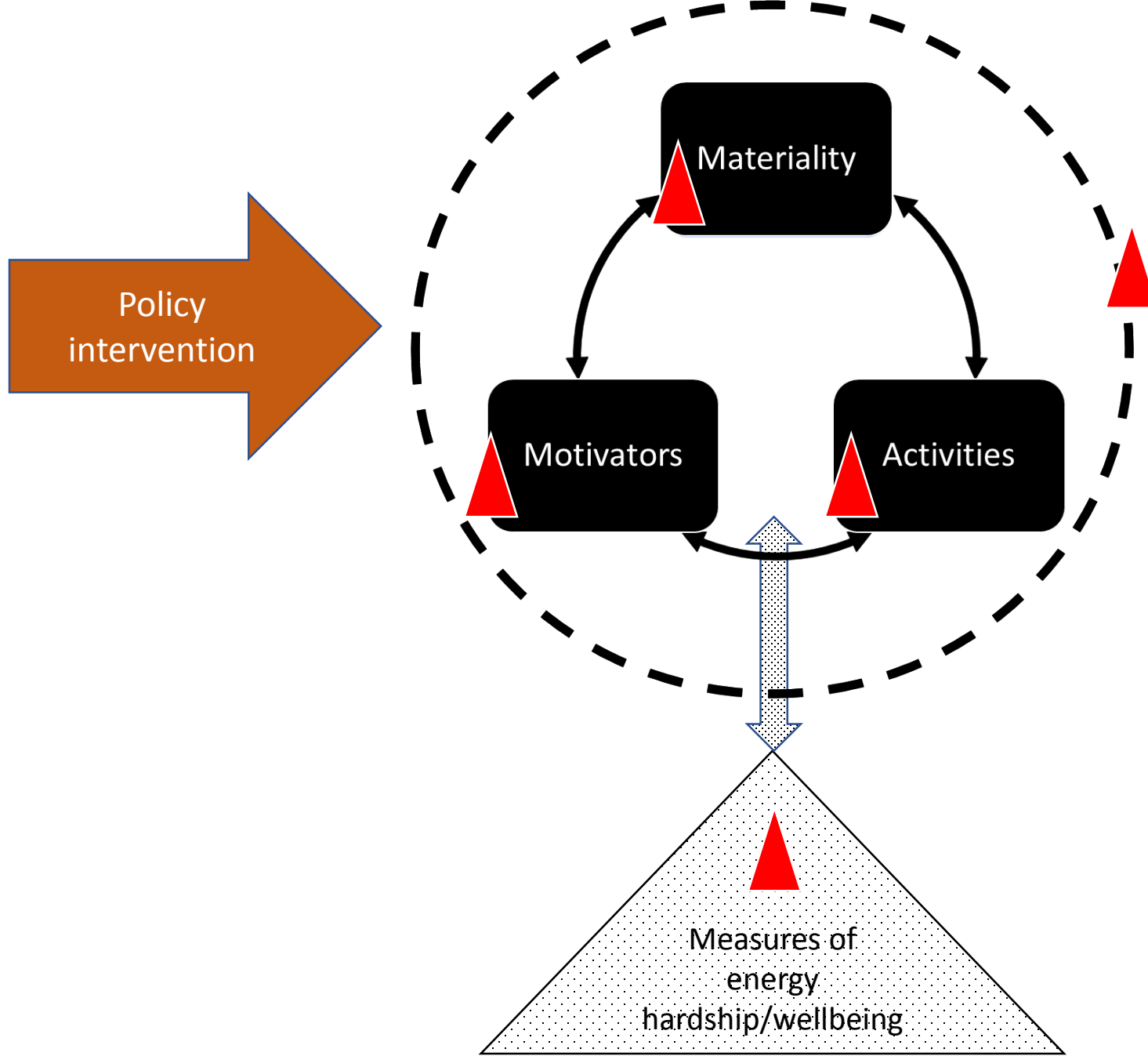












Any questions?