

Green Transition For Vulnerable Households?

Insights From Behavioral Science On What Works (And What Doesn't)

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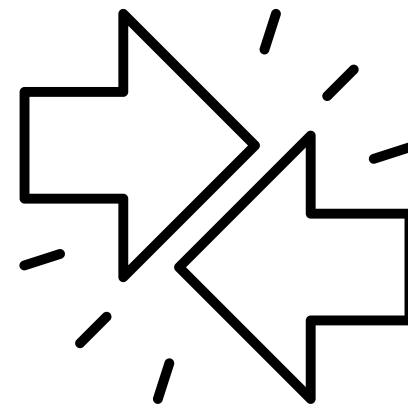
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Presentation by Dr Melina Moleskis (Dec 2024)

ENERGY POVERTY CHALLENGE

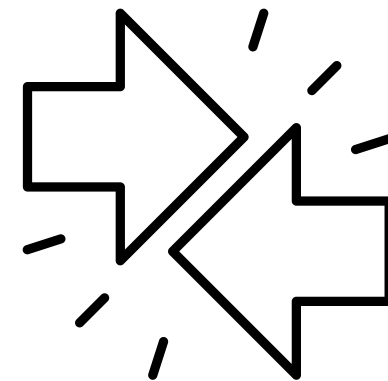
Low-income households and enterprises tend to have higher energy needs due to low energy performance of their dwellings.



At the same time, it's harder for them to prioritize energy saving among their more immediate concerns.

POLICY CHALLENGE

EU Social Climate Fund to be launched in 2026. Using ETS2 revenues to support households & micro-enterprises in energy/ transport poverty.



Policy-makers and academics attest to the difficulty of getting citizens to apply to social funding programs.

As a result, not many households in energy poverty are likely to apply for the available grants.

Bertrand, M., Mullainathan, S., & Shafir, E. (2006). Behavioral economics and marketing in aid of decision making among the poor. *Journal of Public Policy & Marketing*, 25(1), 8-23.

Currie, J. (2004). The Take Up of Social Benefits. National Bureau of Economic Research Working 982 Paper No. 10488, Cambridge, MA

Mullainathan, S., & Shafir, E. (2013). *Scarcity: Why having too little means so much*. Macmillan.

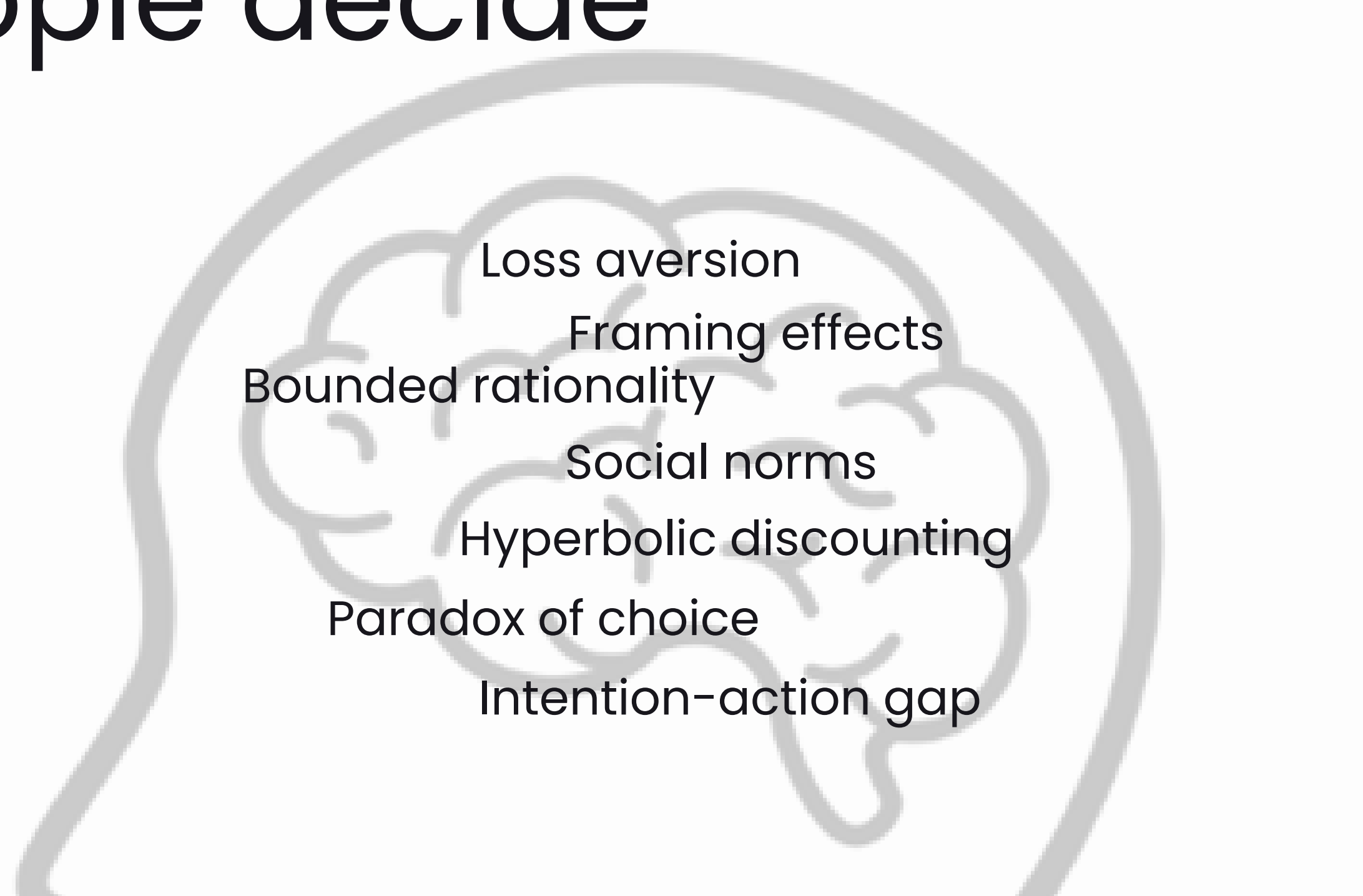
Santamouris, M., Kapsis, K., Korres, D., Livada, I., Pavlou, C., & Assimakopoulos, M. N. (2007). On the relation between the energy and social characteristics of the residential sector. *Energy and Buildings*, 39(8), 893-905

The purpose of this paper is to provide policy-makers with actionable insights on how to design and implement **grant schemes** funded by the **EU Social Climate Fund** that will start in 2026, with a focus on effectively reaching households vulnerable to **energy poverty**.

How can policy-makers ensure that, for once, this funding reaches the intended recipients in need?

Why is it harder for financially-constrained people and enterprises to make use of these schemes?

How people decide



Cialdini, R. B., & Trost, M. R. (1998). Social influence: Social norms, conformity and compliance. In *The Handbook of Social Psychology*, ed. DT Gilbert, ST Fiske, G Lindzey, 2:151-92. Boston: McGraw-Hill. 4th ed.

Simon, H. A. (1990). Bounded rationality. *Utility and probability*, 15-18.

Tversky, A., & Kahneman, D. (1974). Judgment under Uncertainty: Heuristics and Biases: Biases in judgments reveal some heuristics of thinking under uncertainty. *Science*, 185(4157), 1124-1131.

Tversky, A., & Kahneman, D. (2000). Choices, values, and frames. *Russell Sage Foundation* (pp. 209-223)

How 'vulnerable' people decide



1/ Scarcity impairs cognitive ability and accentuates short-term thinking

2/ Hassle factors and reward uncertainty significantly inhibit action

3/ Presentation affects ease of decision-making and likelihood of action

How 'vulnerable' people decide



1/ Scarcity impairs cognitive ability and accentuates short-term thinking

- Tunneling
- Cognitive overload
- Hyperbolic discounting

de Bruijn, E. J., & Antonides, G. (2022). Poverty and economic decision making: a review of scarcity theory. *Theory and Decision*, 92(1), 5–37.

Mani, A., Mullainathan, S., Shafir, E., & Zhao, J. (2013). Poverty impedes cognitive function. *Science*, 341(6149), 976–980

Mullainathan, S., & Shafir, E. (2013). *Scarcity: Why having too little means so much*. Macmillan.

Shah, A. K., Mullainathan, S., & Shafir, E. (2012). Some consequences of having too little. *Science*, 338(6107), 682–685.

How 'vulnerable' people decide



2/ Hassle factors and reward uncertainty significantly inhibit action

- Procrastination
- Uncertainty

Bertrand, M., Mullainathan, S., & Shafir, E. (2004). A behavioral-economics view of poverty. *American Economic Review*, 94(2), 419-423.

Bertrand, M., Mullainathan, S., & Shafir, E. (2006). Behavioral economics and marketing in aid of decision making among the poor. *Journal of Public Policy & Marketing*, 25(1), 8-23.

van Dort, B. E., & Moos, R. H. (1976). Distance and the utilization of a student health center. *Journal 1125 of the American College Health Association*, 24(3), 159-162

How 'vulnerable' people decide



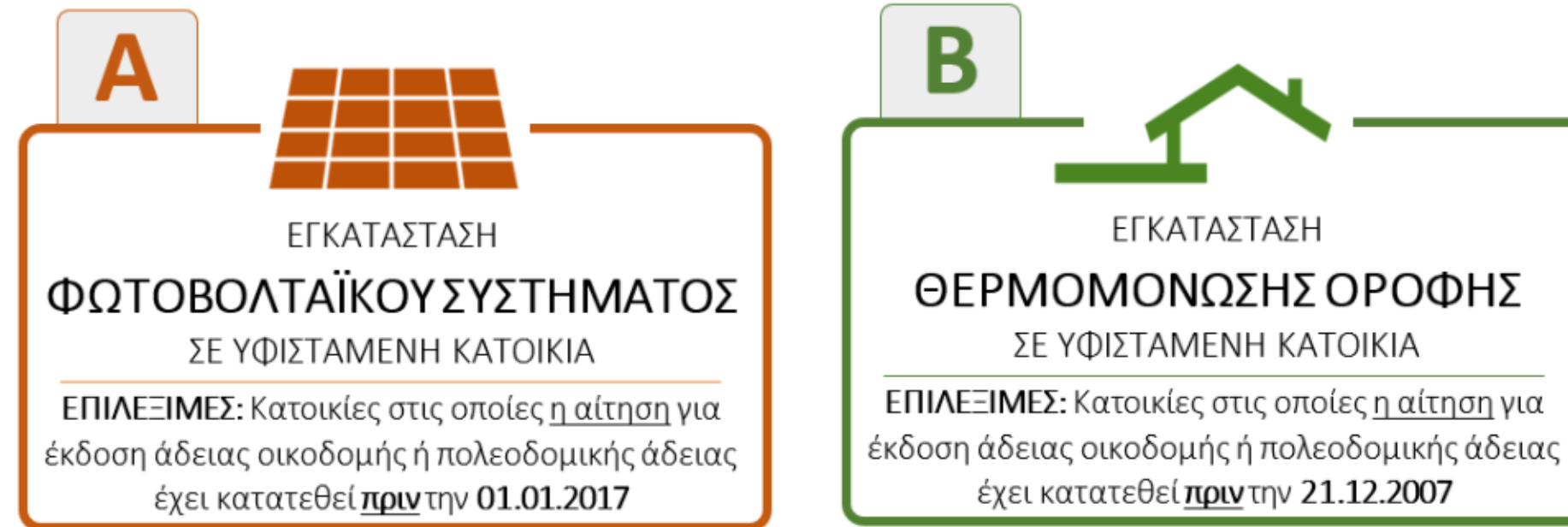
- Loss aversion
- Stigma
- Social norms
- Choice overload

3/ Presentation affects ease of decision-making and likelihood of action

Bertrand, M., Karlan, D., Mullainathan, S., Shafir, E., & Zinman, J. (2005). What's psychology worth? A field experiment in the consumer credit market. National Bureau of Economic Research Working paper No. 11892. Available at: <https://www.nber.org/papers/w11892> (Accessed May 7, 2024).

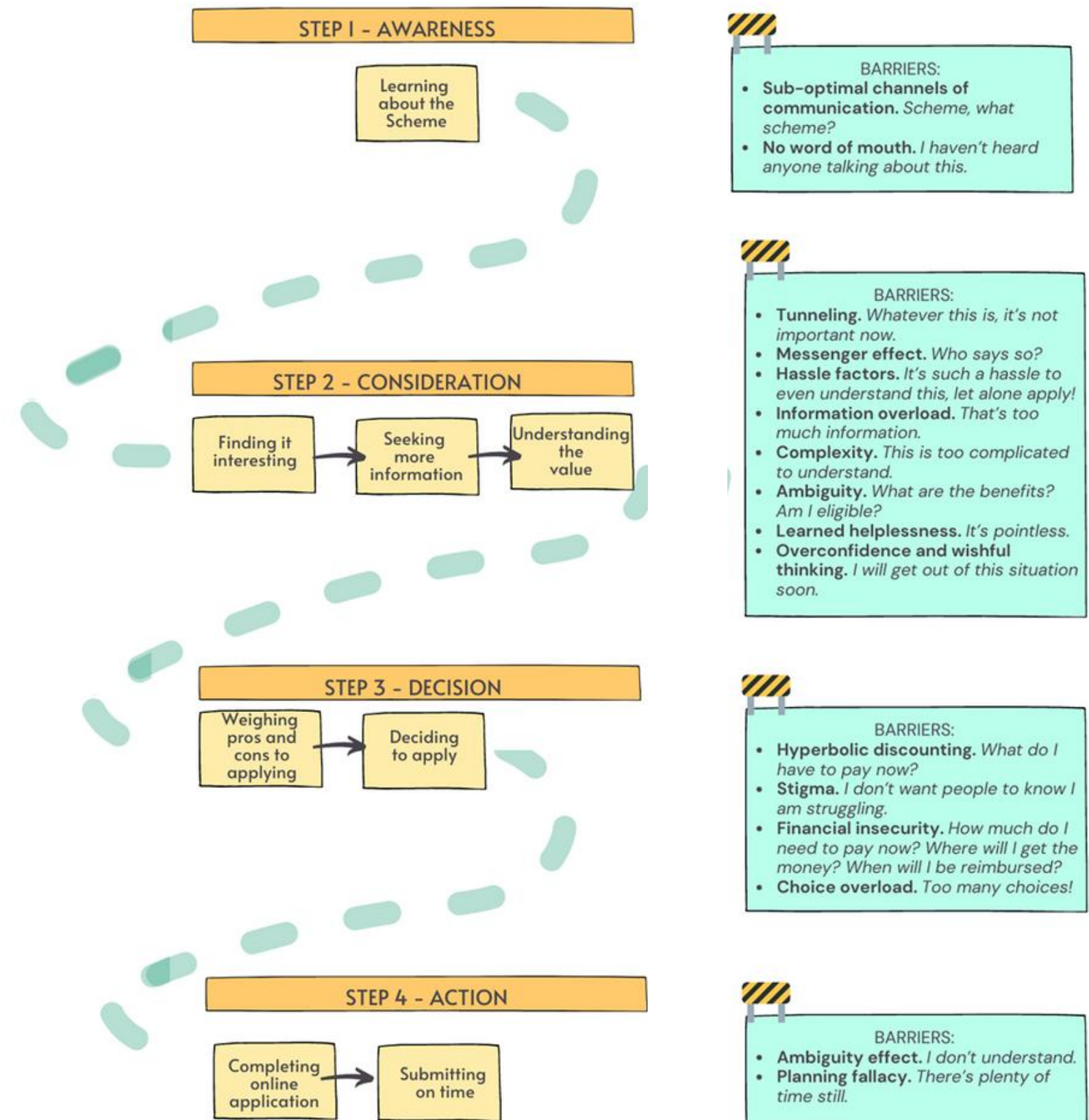
Botti, S., & Iyengar, S. S. (2006). The dark side of choice: When choice impairs social welfare. *Journal of Public Policy & Marketing*, 25(1), 24-38

Case study: Cyprus

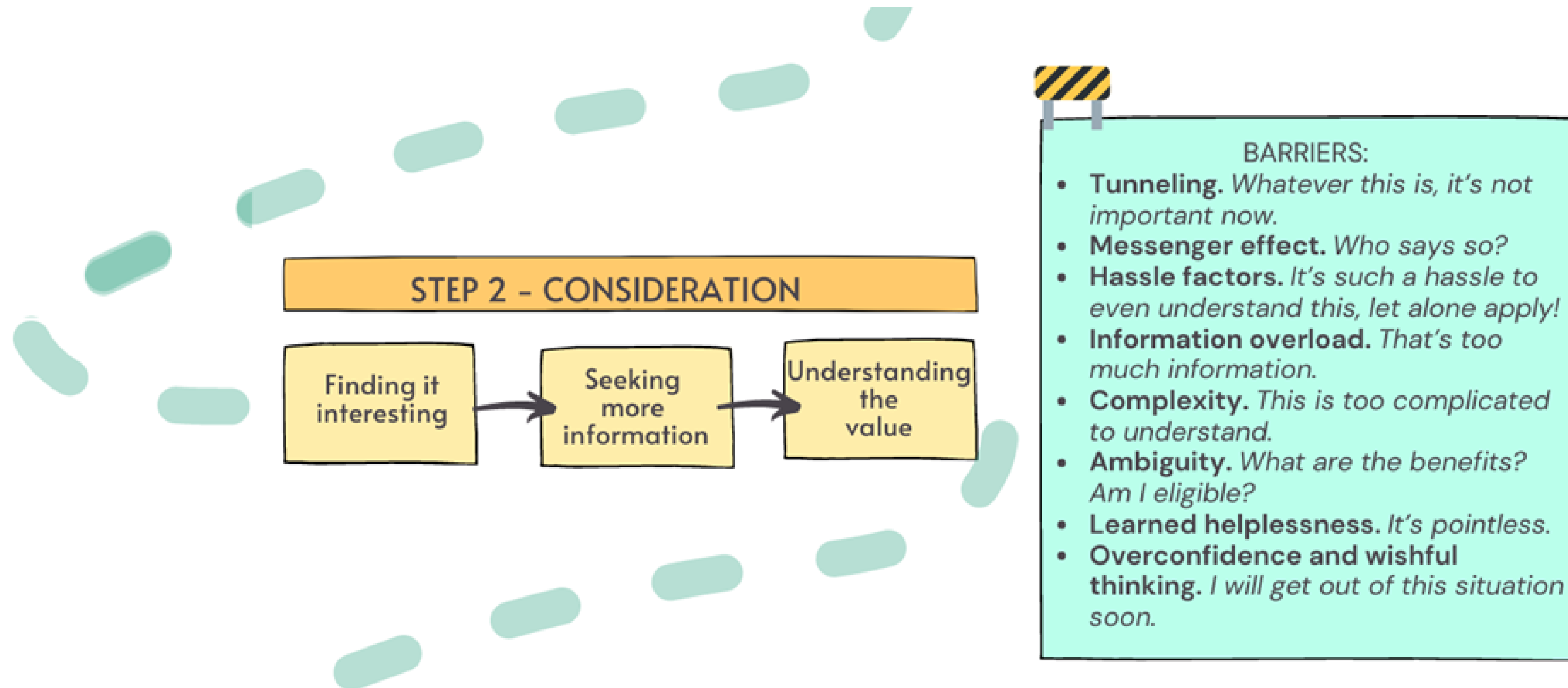


- Grant scheme: "Encouraging the Use of Renewable Energy Sources and Energy Saving in Residential Buildings 2024-2025"
- January 2024 - December 2025
- Total budget €90m
- Utilization of renewable energy sources (photovoltaic panels) and energy saving measures (roof insulation) in existing residential buildings owned by natural persons.

Journey mapping



Journey mapping: Step 2 - Consideration



The obstacles we identify are either

- **structural** (they exist because of how the grant scheme is designed and implemented, like hassle factors and ambiguity), or
- **behavioral** (how decision-makers of vulnerable households decide, like tunneling and hyperbolic discounting).

Both categories of obstacles share two things in common.

1. They are often **missed or ignored** by policy-makers, globally, as with the Cyprus Grant Scheme.
2. Overcoming these obstacles can involve **small, structural changes** (as opposed to behavioral change) which are often very cost-effective.

Case study: Cyprus

Actionable recommendations for increasing Consideration of scheme

- Re-think **channels of communication**: social norms formation, trust
 - e.g., discussions vs lectures, trusted messengers
- Re-think **content of communication**: positive social norms, in-group identity
 - e.g., *"More and more of your fellow citizens in the municipality of Strovolos are applying"*
- Re-think **framing of communication**: loss aversion
 - e.g., *'If you live in a 100 sq.m. residence, every month you go without solar panels costs you X money'*.

Bertrand, M., Karlan, D., Mullainathan, S., Shafir, E., & Zinman, J. (2005). What's psychology worth? A field experiment in the consumer credit market. National Bureau of Economic Research Working paper No. 11892.

Cialdini, Robert B. (2001). Influence: Science and Practice, 4th ed. Needham Heights, MA: Allyn & Bacon.

Neumann, O., Gonin, A., Pfalzgraf, M., & Patt, A. (2023). Governments can nudge household solar energy adoption: Evidence from a field experiment in Switzerland. Energy Research & Social Science, 105(103293), 1-12.

Case study: Cyprus

Actionable recommendations for increasing Consideration of scheme

- Re-think **content of the Scheme**: simplicity, mitigating uncertainty
 - *e.g., separate scheme, avoid facts that are irrelevant from the applicants' point of view (such as EU regulations and national goals), eliminate complex terms, present information in the order that makes sense to the target audience, short case studies and tangible estimates of the benefits, list of companies-contractors that are willing to accept being repaid directly by the government funding.*

Case study: Cyprus

Actionable recommendations for increasing Consideration of scheme

- Re-think **identity evoked**: identity
 - e.g. “head of family”, “working provider” or “energy-efficiency ready”
- Re-think **friction points**: hassle, complexity, ambiguity
 - e.g. “passport page” that provides an executive summary, website links to specific documents, clear labeling, language, personalized help by manning the phonelines.
- Re-think **additional help**
 - e.g. assisting with initial steps of the application process by pre-filling or pre-populating some information, financial intermediaries, timely reminders.

Behavioural Insights Team (2023). How to build a Net Zero society: Using behavioural insights to decarbonise home energy, transport, food, and material consumption.

Bertrand, M., Mullainathan, S., & Shafir, E. (2004). A behavioral-economics view of poverty. *American Economic Review*, 94(2), 419-423.

Bertrand, M., Karlan, D., Mullainathan, S., Shafir, E., & Zinman, J. (2005). What's psychology worth? A field experiment in the consumer credit market. National Bureau of Economic Research Working paper No. 11892.

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Conclusion

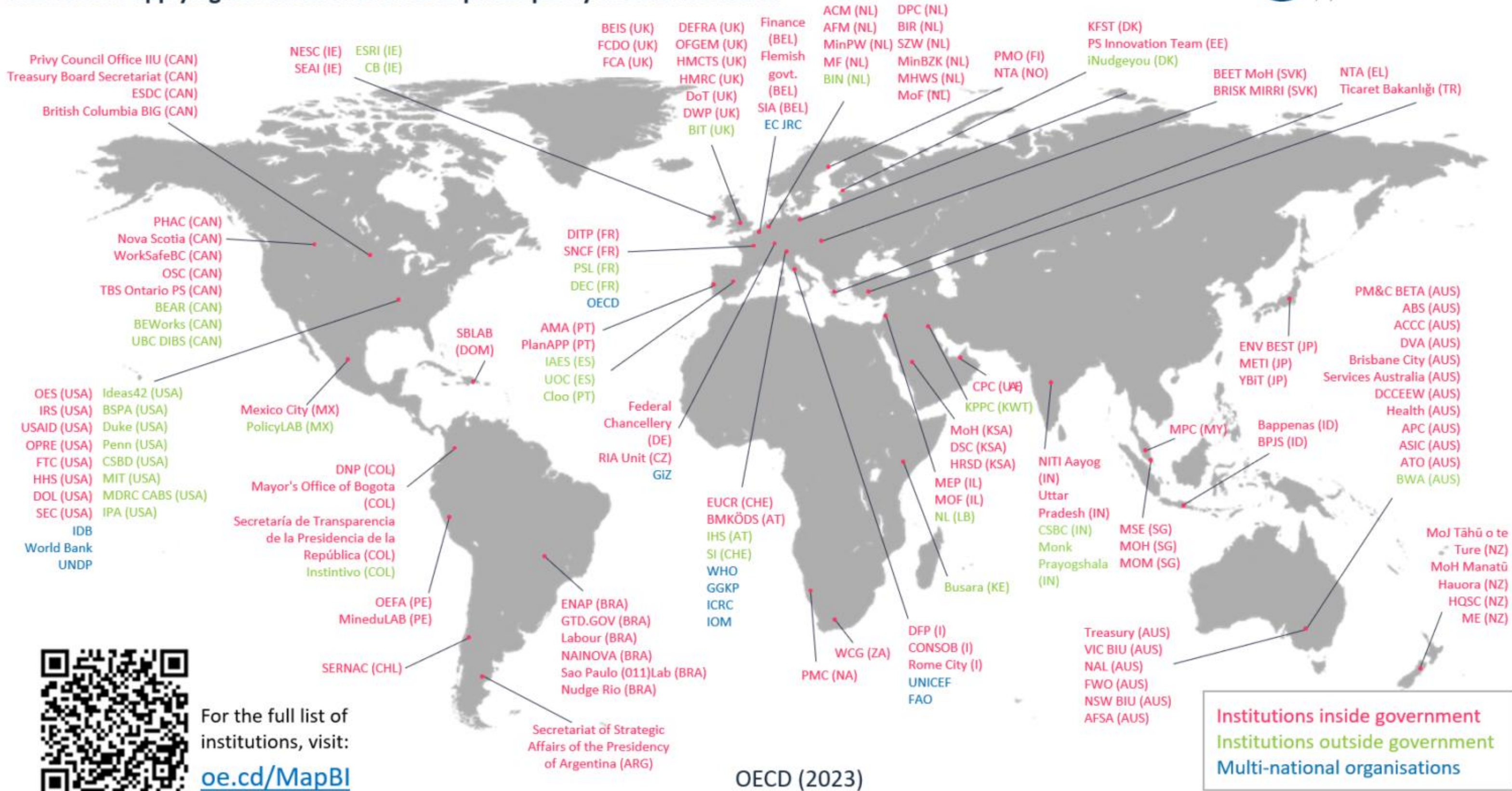
With a **behavioral analysis of the scheme** we can identify small, **cost-effective** structural changes that **go beyond** information provision (since information alone is rarely enough to lead to action because of the prevalence of the intention-action gap).

There's still some way to go:

- **Context matters**. What will work in Cyprus? Need to do RCTs.
- **Heterogeneity** within “vulnerable households”

Thank You

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