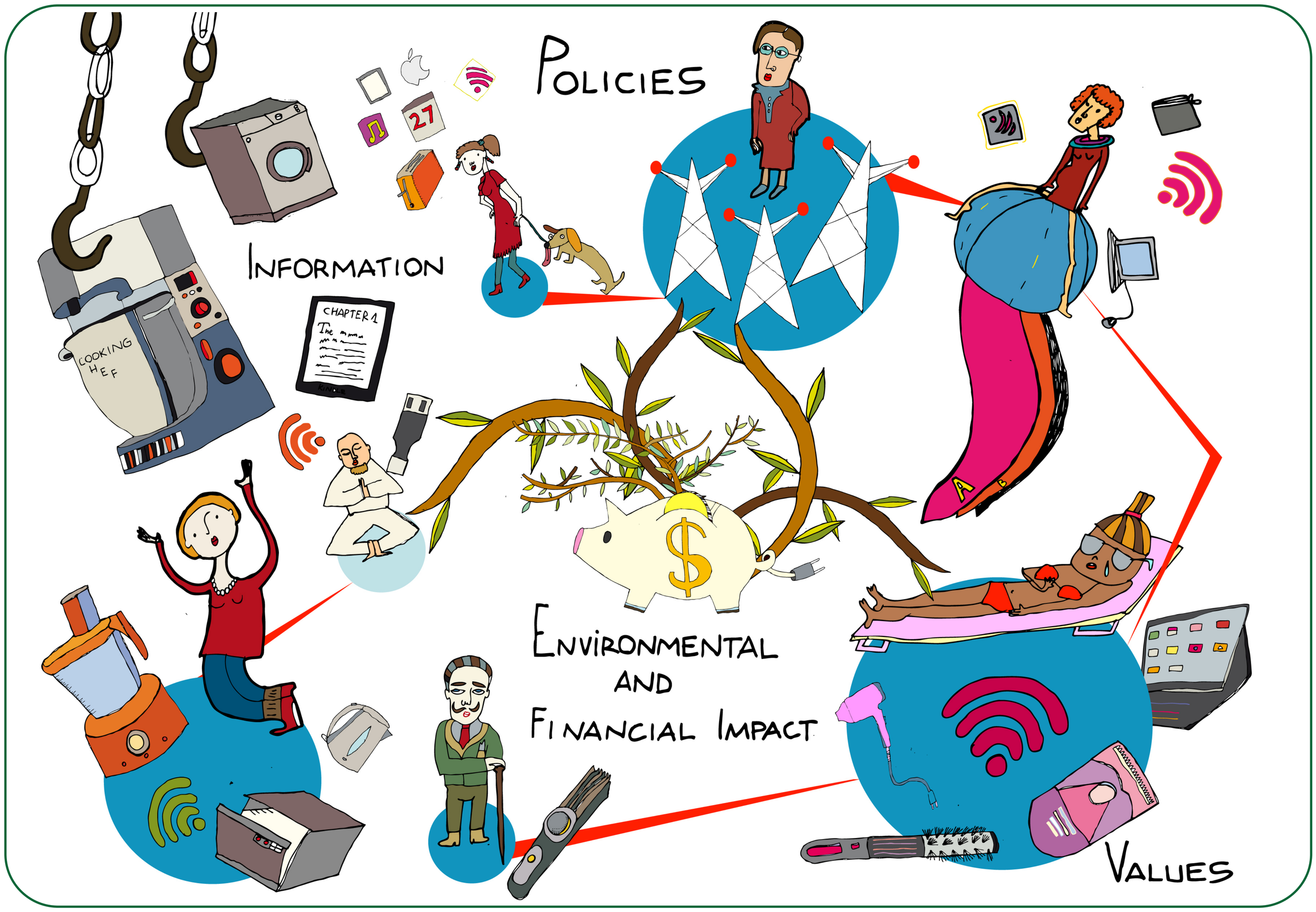
Psychological, social and financial barriers to energy efficiency

THE CHALLENGE

Energy efficiency is a key resource to reduce greenhouse gas emissions, achieve a more competitive, secure and sustainable energy system, and cut energy bills. To improve energy efficiency, regulatory approaches and information measures have been extensively applied, along with substantial public resources being invested in energy-efficient technologies. However, energy efficiency depends not only on the availability of cheap technologies or on policy interventions, but it is largely influenced by individual behavior.



OUR APPROACH

To understand consumer behavior and enhance the design of policies aiming at maximizing energy efficiency, the PENNY project will conduct field experiments through A/B testing in collaboration with energy utilities and retailers in different European countries. PENNY will assess the role played not only by extrinsic incentives, but also environmental self-identity, social values, bounded rationality, cognitive misperceptions as well as energy literacy in promoting energy efficient behavior. The knowledge generated by testing interventions on consumer behavior will allow improved model-based impact assessment of energy policies in the EU and globally. Moreover, the project will conduct a large sample survey to gather information on residential electricity and gas consumption, the underlying socio-economic drivers and factors influencing acceptability and effectiveness of energy policies and will ultimately allow a cross-country comparison of energy related aspects.

OUR OBJECTIVES

The PENNY project seeks to advance the understanding of consumer behavior in relation to both the use of energy and the adoption of energy-efficient technologies. The project brings together interdisciplinary research teams, with expertise in psychology, sociology, energy economics and policy, behavioral science and information technology with ultimate goal to i) assess the existing knowledge on behavioral factors for energy efficiency, ii) test various interventions aimed at influencing both energy use and purchasing decisions, iii) evaluate the importance of sociological aspects and institutional conditions for energy efficiency, iv) analyse the determinants of individual energy efficiency and of investments in energy efficiency for firms, v) evaluate the broader implications of energy efficiency policies for the EU as well as for major world economies, vi) increase engagement and promote more sustainable consumption habits using IT applications.

CONSORTIUM

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THE PENNY RESEARCH PROJECT
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