



**SUMMIT**

SOFIA UNIVERSITY  
MARKING MOMENTUM  
FOR INNOVATION AND  
TECHNOLOGICAL TRANSFER



Funded by  
the European Union  
NextGenerationEU

National Recovery and Resilience Plan



OF THE REPUBLIC OF BULGARIA

# **Sofia University - Marking Momentum for Innovation and Technological Transfer**



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National Recovery and Resilience Plan



OF THE REPUBLIC OF BULGARIA

# Research group

## NUDGE: Behavioural models and public policies for sustainable development

**Team Leader: Prof. Ivo Vlaev, PhD**

- Prof. Ivo Vlaev - Behavioural Science
- Prof. Sonya Karabeliova - Psychology
- Prof. Tanya Tomova - Public Administration
- Prof. Snezhana Ilieva - Psychology
- Assoc. Prof. Elena Kalfova - Public Administration
- Assoc. Prof. Kaloyan Haralampiev - Sociology
- Assoc. Prof. Boris Popivanov - Political Science
- Assoc. Prof. Simeon Petrov - Public Administration
- Assoc. Prof. Svetlina Koleva - Psychology
- Asst. Prof. Georgi Kirilov - Psychology
- Asst. Prof. Dimitar Ganev - Political Science
- Asst. Prof. Velina Hristova- Psychology
- Bilyana Buzovska, PhD -Psychology
- Lora Lyubenova, PhD student - Public Administration
- Yonko Bushnyashki - Management

# Scope

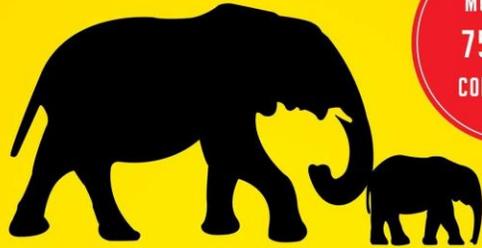
- An opportunity for applied researchers, policy makers and business practitioners
- Test a comprehensive theoretical framework for behavioural diagnosis and a systematic methodology for intervention design
- Developing and evaluating behaviour change interventions in various domains such as health, finances, education, work, and environment
- Helping policy makers to supplement traditional tools of government with policy that helps to encourage behaviour change

Why we collaborate

How we work

What we do

NEW YORK TIMES BESTSELLER



MORE THAN  
**750,000**  
COPIES SOLD

# *Nudge*

Improving Decisions About  
Health, Wealth, and Happiness

Richard H. Thaler and Cass R. Sunstein

*Revised and Expanded Edition*

"One of the few books I've read recently that fundamentally changes the way I think about the world." —Steven D. Levitt, coauthor of *Freakonomics*



**Richard Thaler**

Professor of Economics, University of Chicago  
Behavioural Insight Team, UK Cabinet Office



**Cass Sunstein**

Professor of Law, Harvard  
Regulatory Czar, Obama Administration



Personal Responsibility and Changing Behaviour: the state of knowledge and its implications for public policy

February 2004

David Halpern and Clive Bates, Geoff Mulgan and Stephen Aldridge with Greg Beales and Adam Heathfield

Note: This is an issue paper for discussion purposes and does not represent Government policy



GSR Behaviour Change Knowledge Review

Reference Report: An overview of behaviour change models and their uses

Andrew Darnton, Centre for Sustainable Development, University of Westminster

July 2008



Common Good

Communications and behaviour change



Influencing Public Behaviour to Improve Health and Wellbeing

An independent report

February 2010

Geoff Mulgan

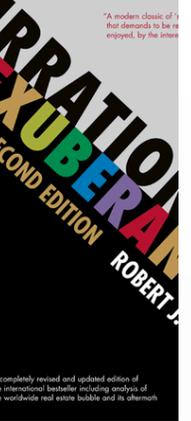
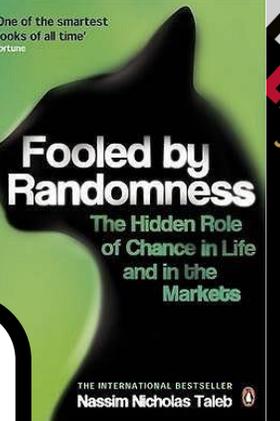
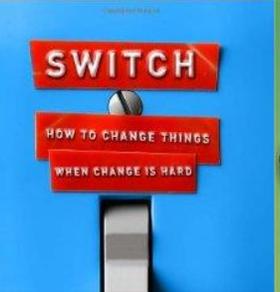
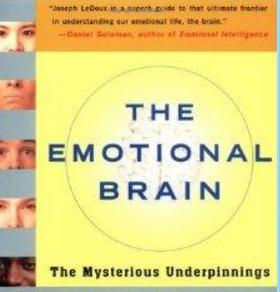
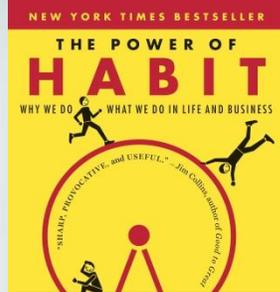
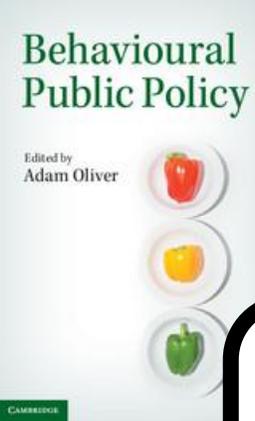
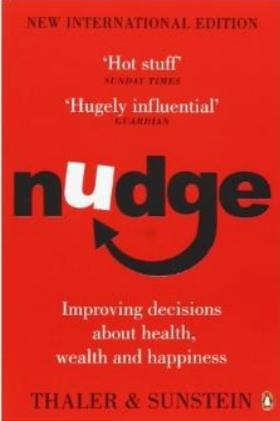
www.defra.gov.uk

A FRAMEWORK FOR PRO-ENVIRONMENTAL BEHAVIOURS

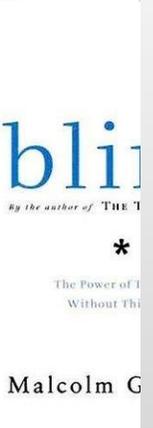
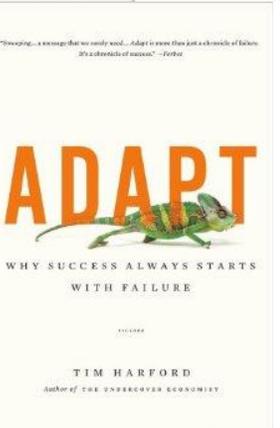
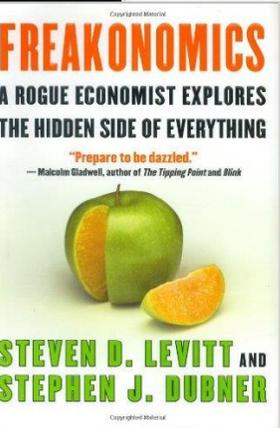
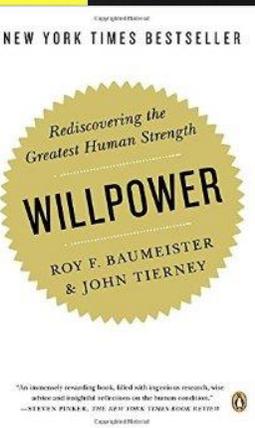
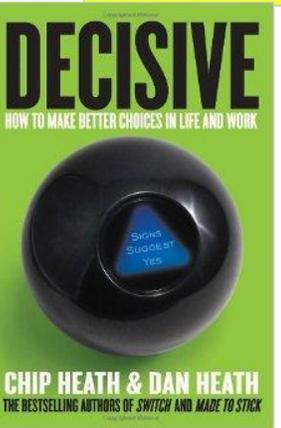
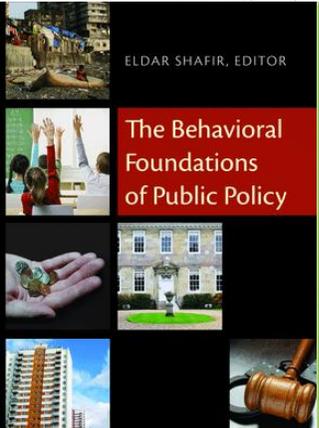
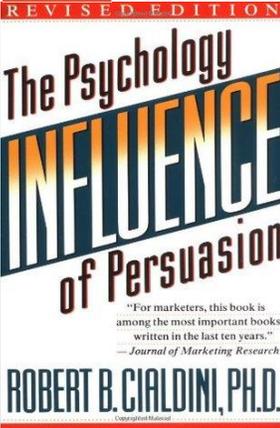
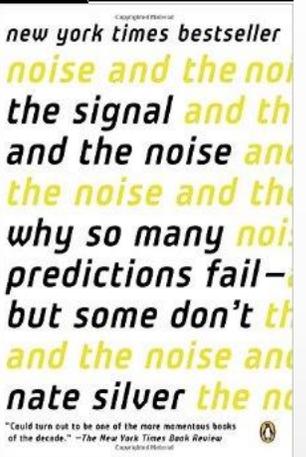
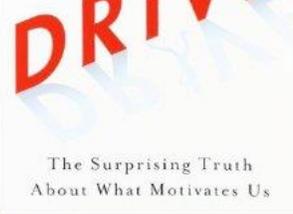
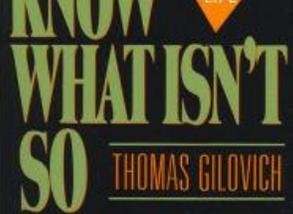
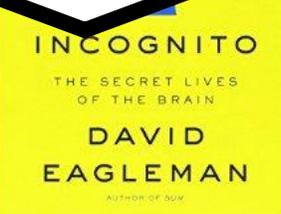
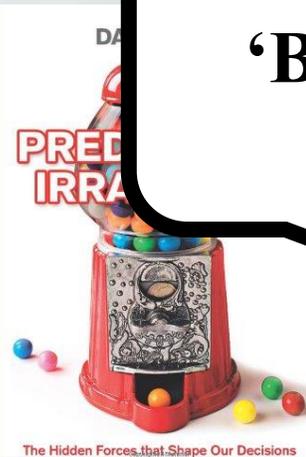
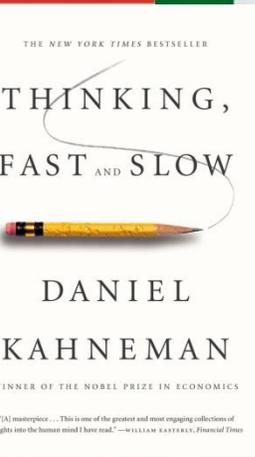
REPORT

January 2008

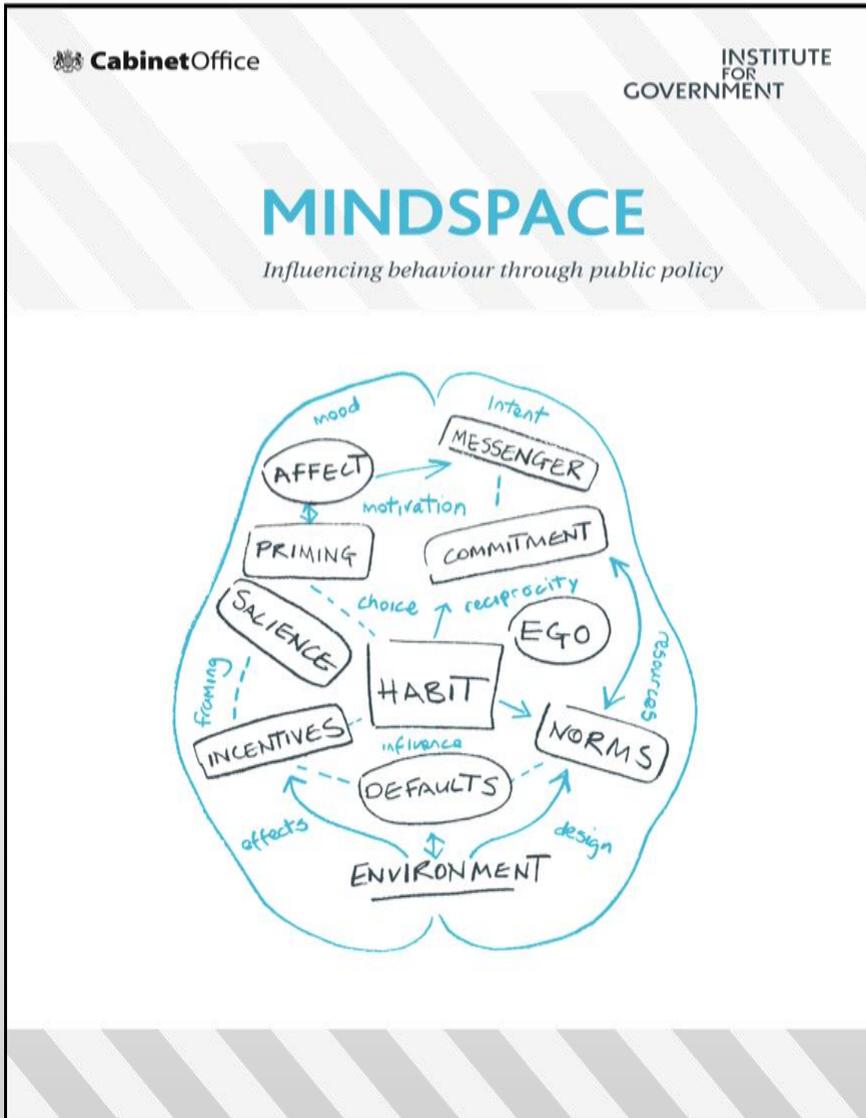




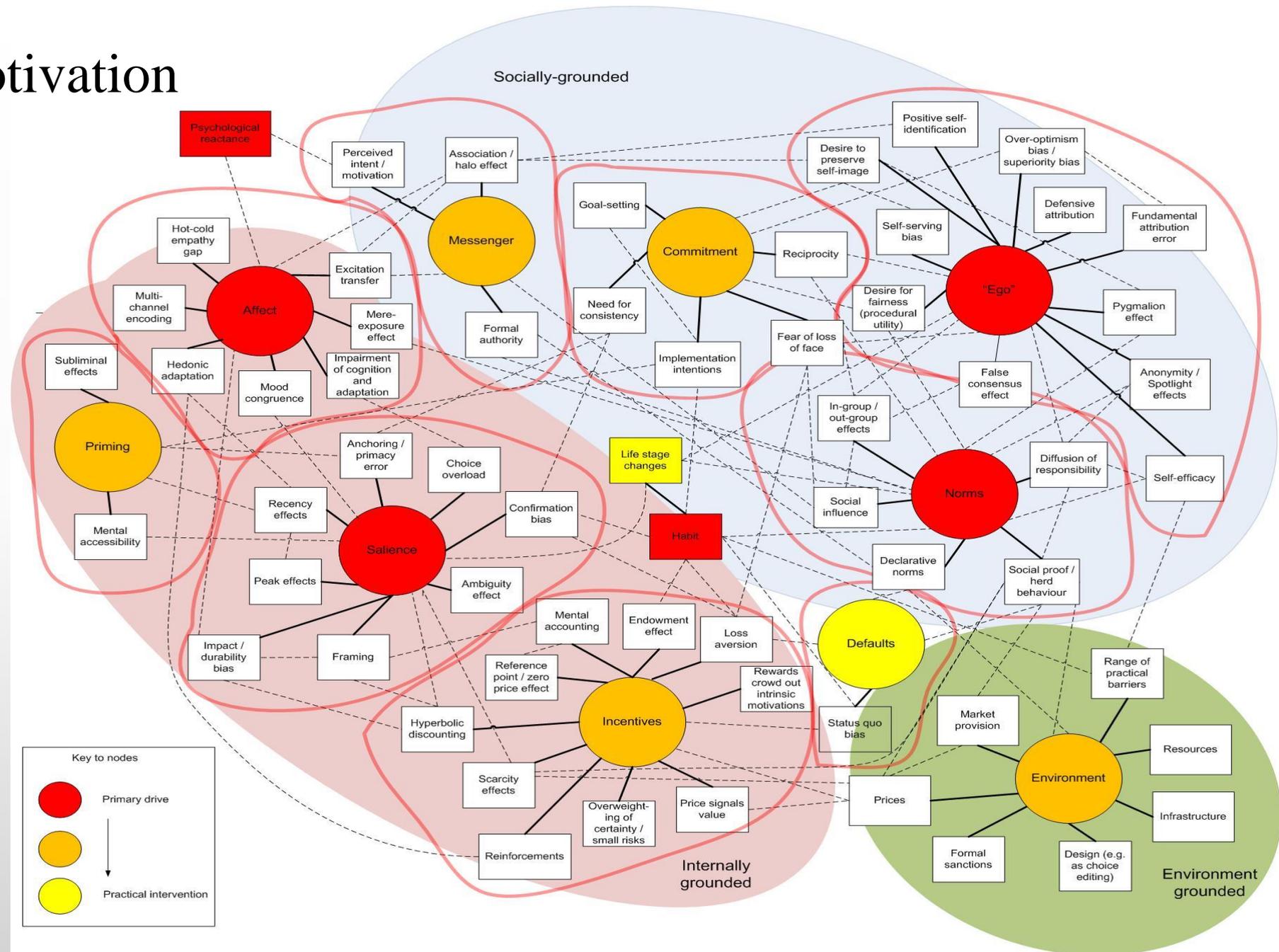
# 'Behavioural Insights'



# Designing environments for better behaviours using MINDSPACE: 36 effects on behaviour grouped into 9 principles



# Anatomy of motivation



# Behavioural Insights and Public Policy: Institutions applying BI to public policy around the world

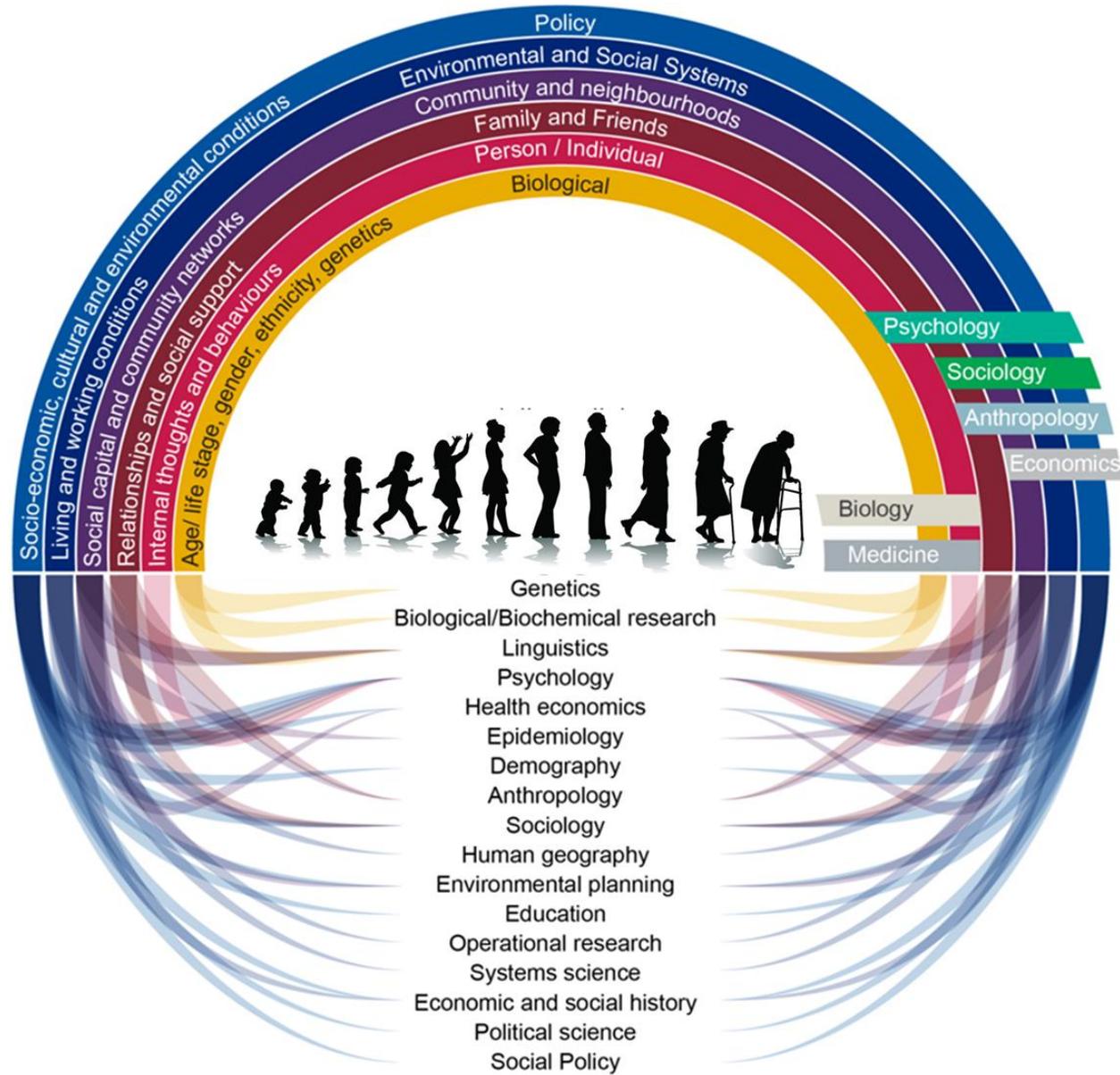


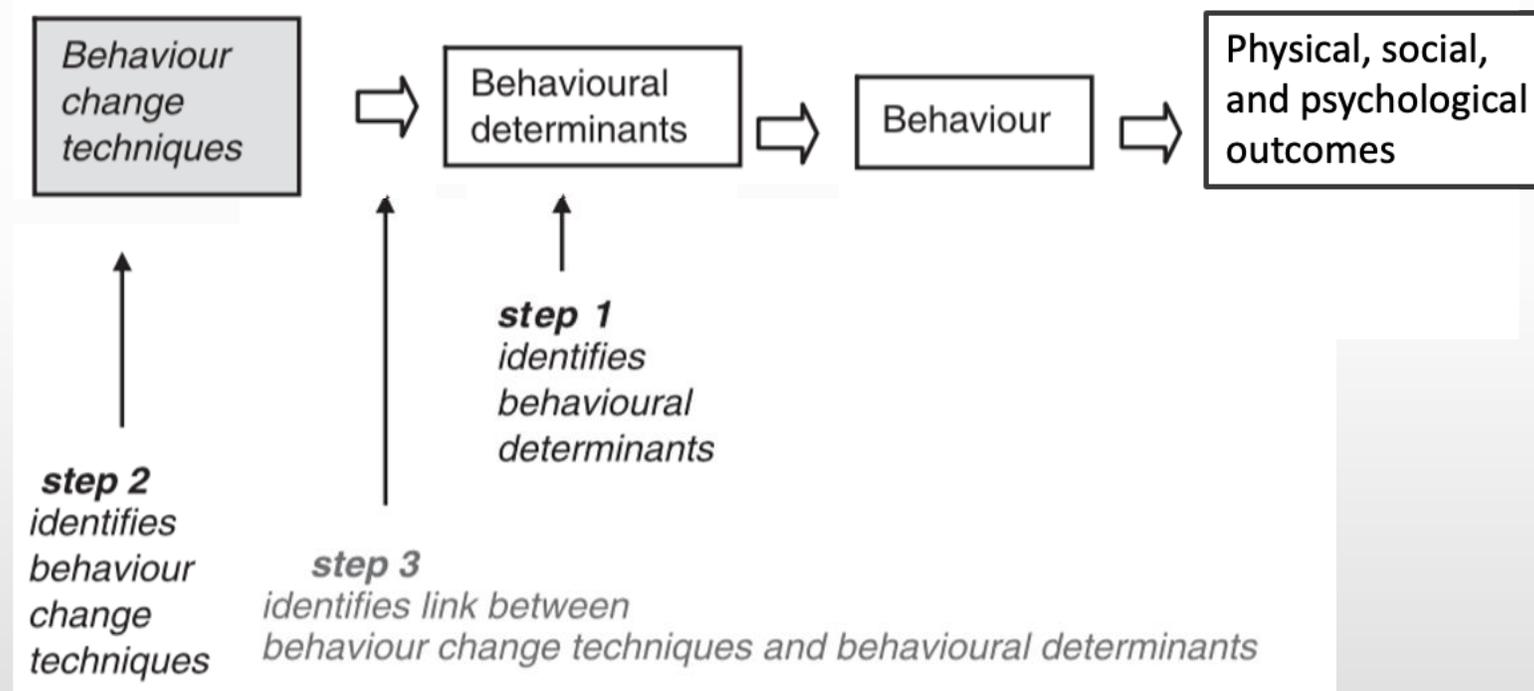
Why we collaborate

**How we work**

What we do







# Behaviour Change Techniques

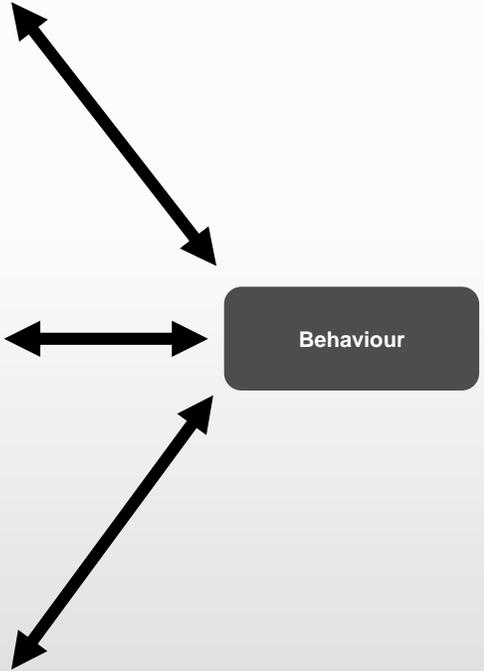
# Determinants

- Shaping Knowledge
- Natural Consequences
- Feedback and monitoring
- Repetition and substitution
- Goals and Planning
- Covert learning
- Comparison of Outcomes
- Self-belief
- Scheduled consequences
- Reward and Threat
- Regulation
- Social Support
- Identity
- Comparison of behaviour
- Associations
- Antecedents

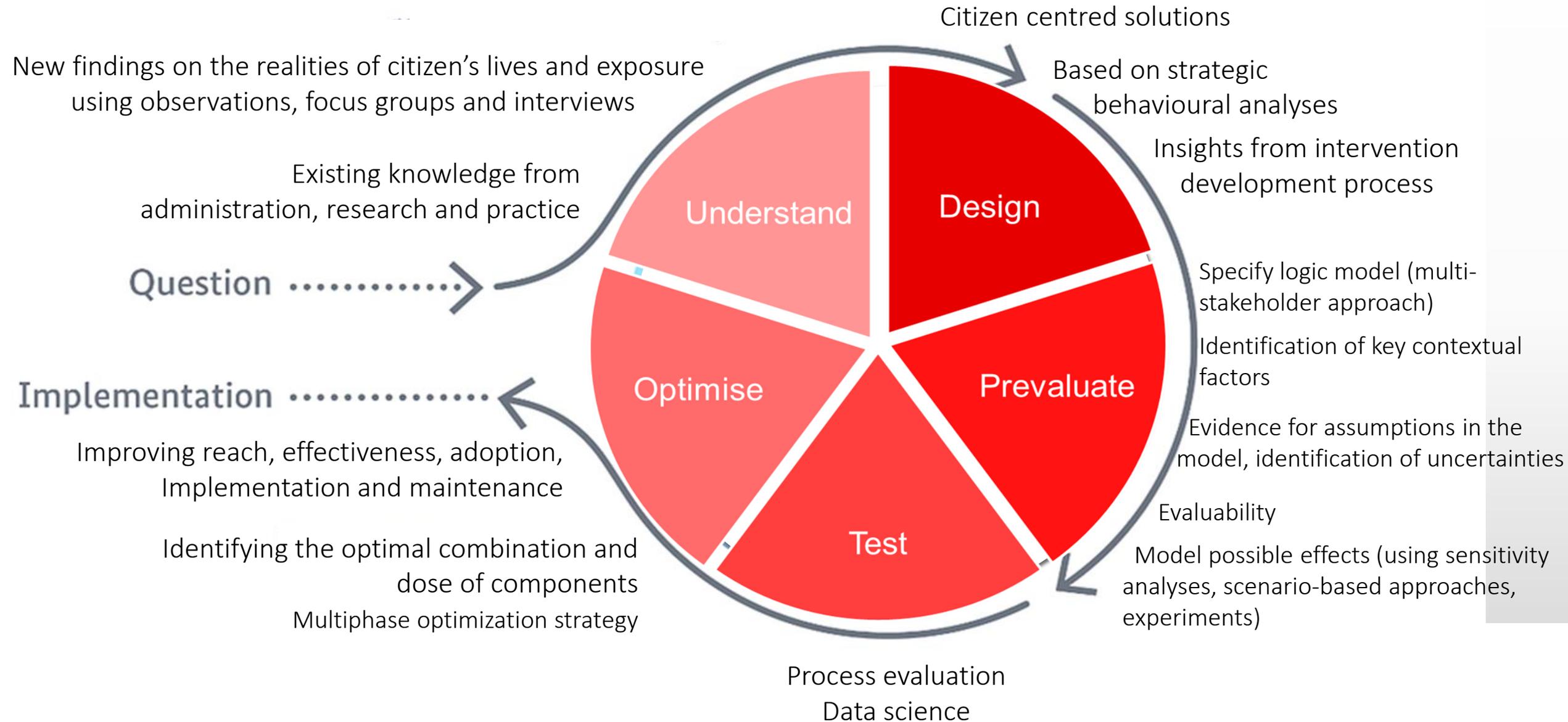
- Knowledge
- Behavioural Regulation
- Memory, Attention, and Decision Processes
- Skills
- Goals
- Intentions
- Beliefs about Consequences
- Beliefs about Capabilities
- Optimism
- Social/Professional Role and Identity
- Reinforcement
- Emotion
- Social Influences
- Environmental Context and Resources

- Psychological
- Physical
- Reflective
- Automatic
- Social
- Physical

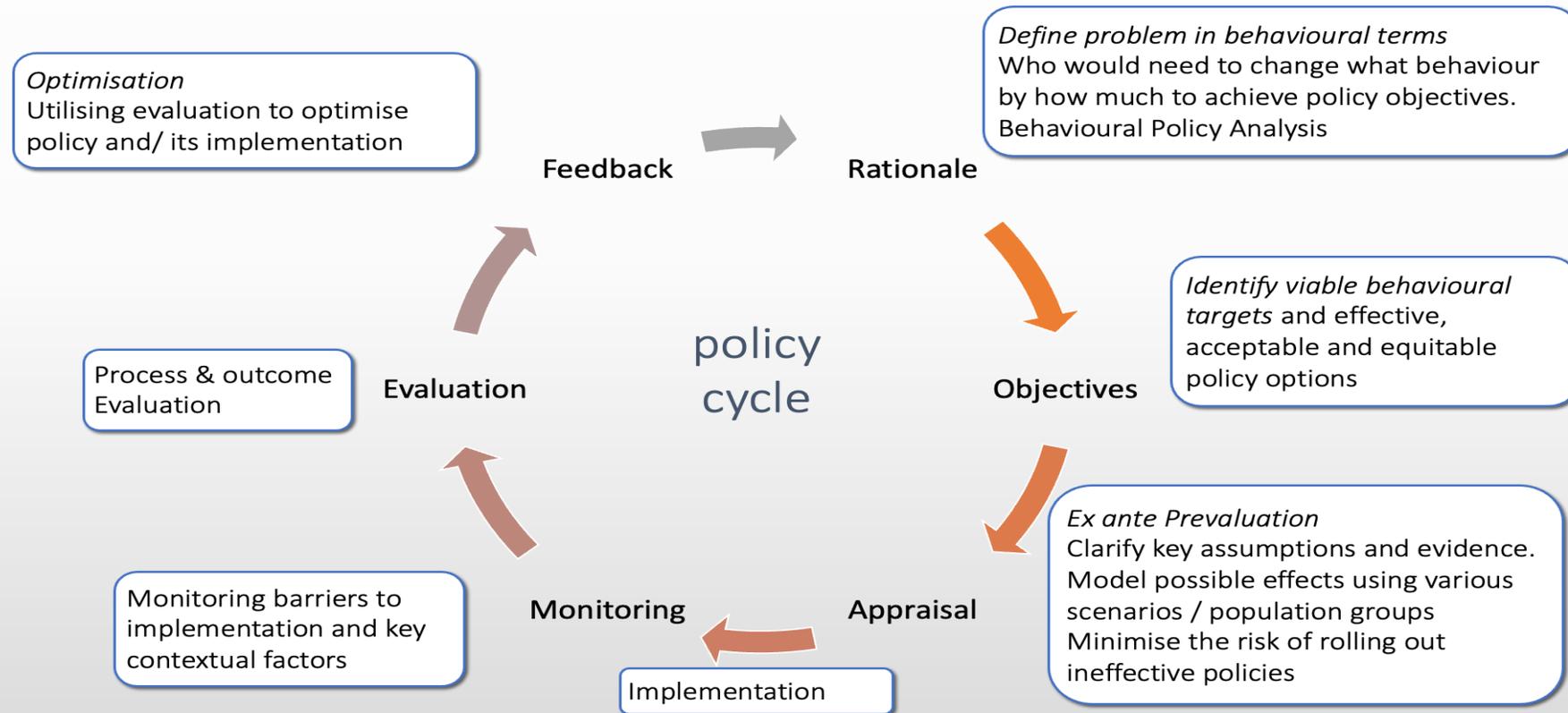
- Capability
- Motivation
- Opportunity



# Methodology for developing and testing interventions



# Using behavioural science in public policy across the whole policy cycle



HM Treasury (2018). THE GREEN BOOK CENTRAL GOVERNMENT GUIDANCE ON APPRAISAL AND EVALUATION.

Why we collaborate

How we work

**What we do**

# Papers Submitted for Publication Across Our 3 Key Themes

## Finances

1. Vlaev, I., Patel, K., Karabeliova, S., Eliot, A., Kalfova, E., Petrov, S., (2024). Money lives: Improving financial capability using behavioural science. *Journal of Educational Sciences & Psychology*.
2. Goelma, E., Kirilov, G., Boodoo, M. U., Makki, F., Baasiri, A., Kontar, J., Vlaev, I. (2024). Behaviour change techniques: an application to increase employees' willingness to accept a salary reduction. *Advances in Developing Human Resources*.
3. Grimani, A., Yemiscigil, A., Wang, Q., Kirilov, G., & Vlaev, I. (2022). How do emotions respond to uncertain outcome values and influence risky choice? *Psychological Research*.
4. Al Jaber, M., Haralampiev, K., Vlaev, I. (2024). Investigating the behavioural causes of occupational gender segregation in Qatar. *Working paper*.

## Environment

5. Kolodko, J., Schmidtke, K. A., Read, D., Hristova, V., & Vlaev, I. (2024). Help clean up Great Britain: A digital behaviour change intervention to engage users in protecting the environment. *Nature Scientific Reports*.

## Health

6. Vlaev, I., Guzmics, D., Kalfova, E., Petrov, S., Tomova, T. (2024). A behaviour change intervention to increase volunteer participation in health charity. *Voluntary Sector Review*.
7. Evsikov, E., Hristova, V., Karabeliova, S., Vlaev, I. (2024). Virtual Active Sports: Identifying main barriers and facilitators for casual fitness fans. *International Journal of Sports Marketing and Sponsorship*.
8. Han, W., Hristova, V., Vlaev, I. (2024). Covid-19 impact on Coventry Residents' mental wellbeing. *International Journal of Happiness and Development*.
9. Halabi, N., Hristova, V., Vlaev, I. (2024). Milking the Alternatives: The Interplay of Starbucks' Non-Dairy Pricing and Consumer Behavior Dynamics. *Journal of Consumer Behavior*.
10. Mills, F., Hristova, V., Vlaev, I. (2024). Identifying and Overcoming Barriers and Facilitators to Blood Donation in Young Adults: A Quantitative Study using the Theoretical Domains Frameworks and Behaviour Change Wheel. *Psychology & Health*.
11. Jiang, J., Haralampiev, K., Khanal, S., Elliott, A., Schmidtke, K. A., Vlaev, I. (2024). Behavioural fatigue: A cross-sectional survey conducted during the first COVID-19 lockdown in England. *Behavioral Sciences*.
12. Weisshardt, I., Haralampiev, K., Vlaev, I. (2024). Virtual reality intervention to motivate clinicians to engage in shared decision making in Myasthenia Gravis. *BMC Medical Education*
13. Hodson, N., Kirilov, G., Vlaev, I. (2024). Behavioral insights to improve adherence to psychiatric medications. *Current Opinion in Psychology*.
14. Grimani, A., Haralampiev, K., Ruwende, J., von Wagner, C., Vlaev, I. (2024). Evaluation of the impact of London-wide reminder text messaging on cervical screening uptake. *Working paper*.
15. Tay, E., Massaro, S., Vlaev, I. (2024). The Behavioral Factors that Influence Shared Decision Making: A Systematic Literature Review of the Last Decade. *Working paper*.
16. Makki, F., Kontar, J., Vlaev, I. (2024). Behavioral intervention to increase honest responses using pledges. *Nature Humanities and Social Sciences Communications*.

# Work Package 1: Finances



# Lab and Online Experiments



A laboratory allowing simultaneous testing



Tobii TX300 device (with a sampling rate of 300 Hz) for eye tracking and pupillometry



Shimmer3 GSR+ device (with a sampling rate of 128Hz) for electrodermal activity assessment

# Experiments

We are testing **messages that state specific enforcement actions** which we could not test through tax authority.

The objective is to examine **WHY** the effective treatments were salient to taxpayers.

Imagine that **you own a cash constrained business**. You have previously declared the total amount of taxes you owe to the government. However, you have not yet fulfilled your tax obligation. Consequently, the government sent you a letter reminding you of the amount you owe. Because the government did not receive a response from you to this letter, it sends a follow up letter with the following statement:

*'We told you recently that you have an outstanding tax obligation with the government. If you pay this debt now, you can stop us taking any further action.'*



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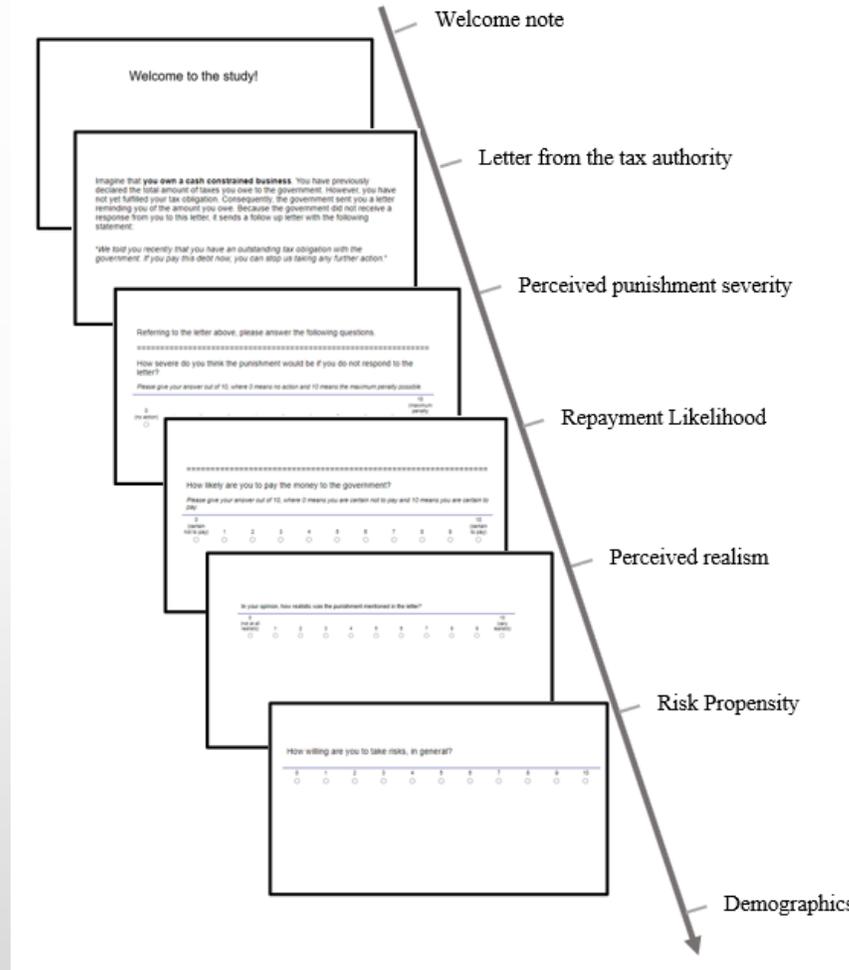
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# Experiments



# Work Package 2: Environment



# Psychological insights in ecological policy process

**Question:** To what extent changing attitudes & behaviour of certain societal groups can increase the degree of achievement of environmental policy objectives?

## Assumptions:

1. Formulation of objectives and the choice of instruments depends on the administration.
2. Achievement of the objectives depends on the behaviour of citizens as consumers & economic actors.
3. Achieving environmental objectives depends on change in attitudes which depends on education system.

**Thesis:** The attitudes of four main societal groups matter for the effectiveness of environmental policies: administration, managers in economic sectors, teachers in the secondary education, consumers.



# Psychological insights in ecological policy process: *Methodology*

Policy formulation  
(attitudes of administration)

Policy implementation  
(attitudes of 1. teachers; 2. managers)

Policy evaluation  
(attitudes of consumers)

## Psychological insights in ecological policy process

### Five studies in progress:

1. Representative study of the environmental behavior of Bulgarian citizens
2. Environmental behaviours of citizens in an 'environmental' municipality
3. Survey of secondary school teachers' attitudes
4. Survey of managers of enterprises with an environmental standard
5. Qualitative study of administration

# Work Package 3: Health



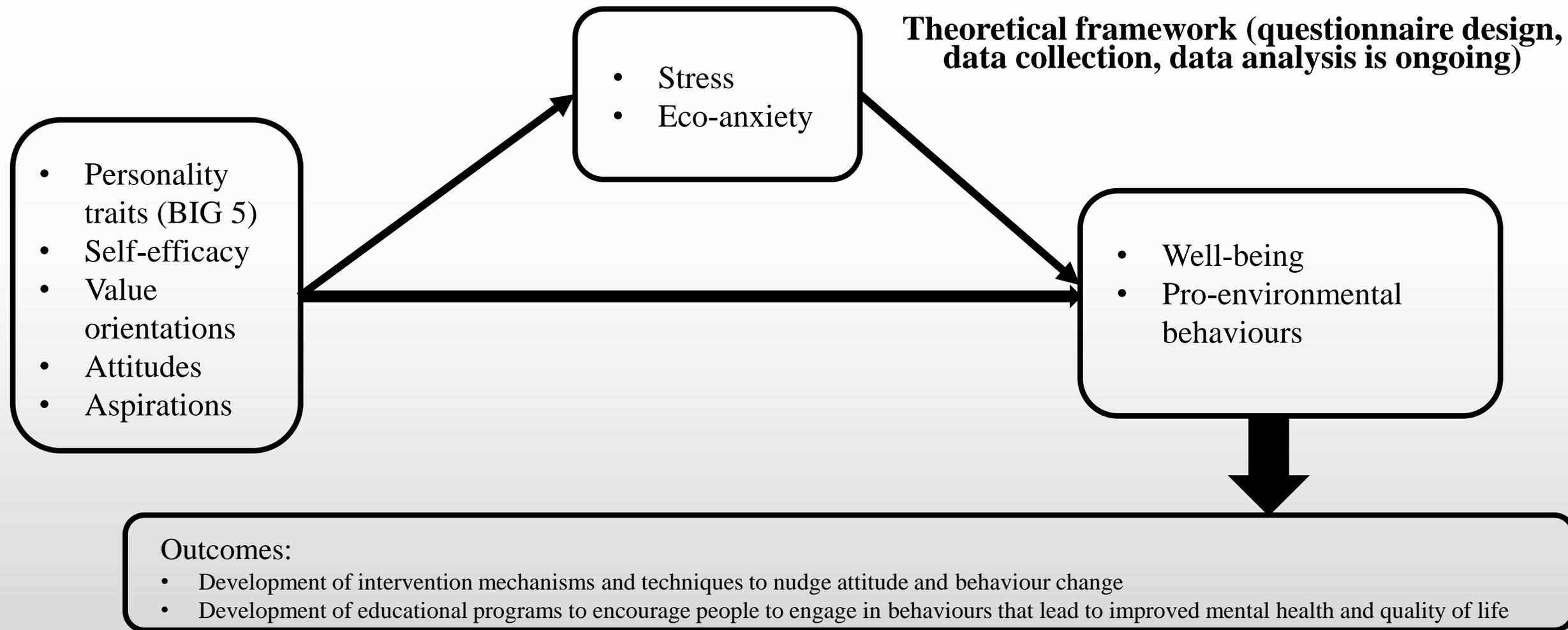
## Staying healthy in a rapidly changing society

**Question:** What are the personal characteristics that determine engagement in pro-environmental behaviours and can in turn lead to improved well-being, mental health and quality of life?

**Aim:** Derive an integrative multidimensional model for maintaining good physical and mental health for optimal human functioning.

- *Objective 1:* explore the relationship of environmental attitudes with ecological consumer behaviours, human value orientation and self-efficacy (questionnaire).
- *Objective 2:* explore the direct and indirect effects of personality traits, value orientations, eco-anxiety and eco-identity on pro-environmental behaviours (questionnaire).
- *Objective 3:* determine whether individuals demonstrate ecological attitudes and beliefs and to what extent these influence their decisions to change lifestyle (interviews).

**Hypotheses:** Stress level and eco-anxiety will act as mediators in the relationship between personality traits, value orientations, and attitudes on pro-environmental behaviours, well-being, and mental health.





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## Other activities

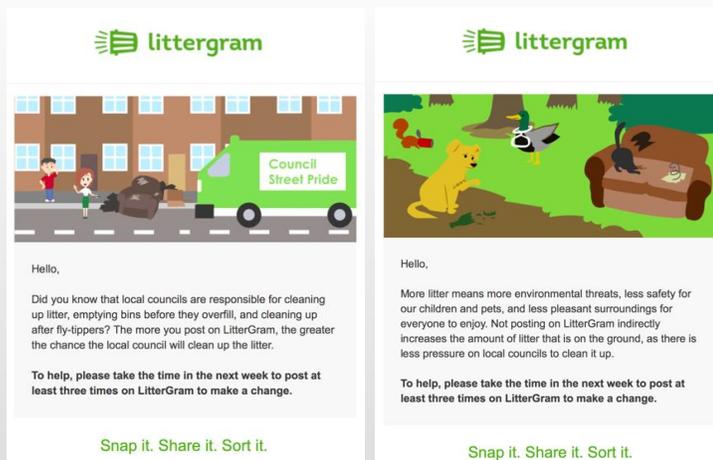
Knowledge-exchange network between researchers from various countries for cross-cultural comparisons



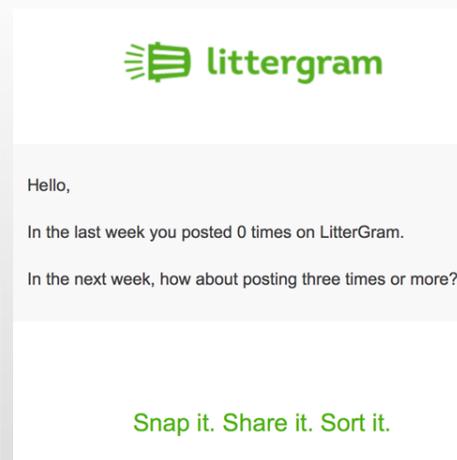
# Reducing littering: An email intervention to engage users in protecting the environment by posting on the Littergram app



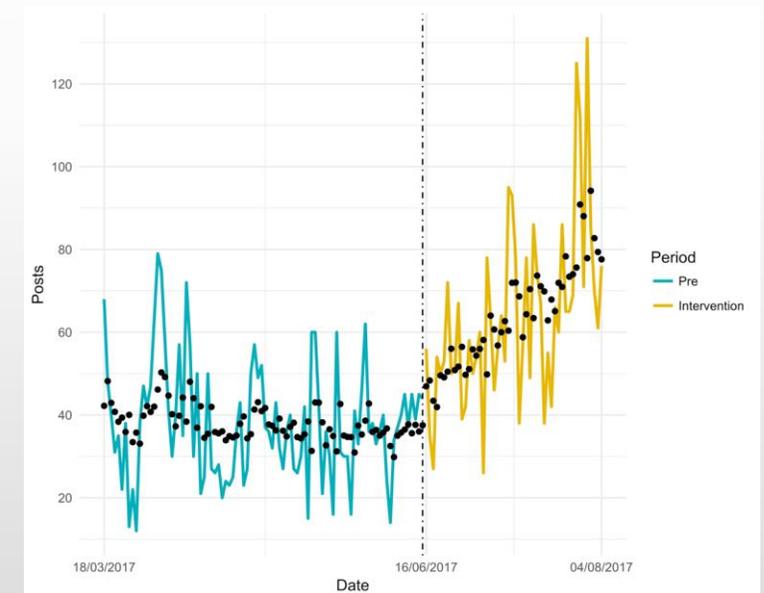
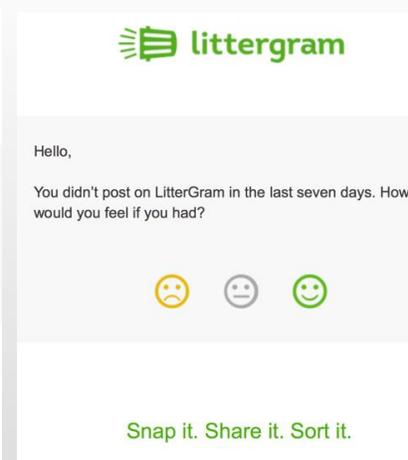
## Negative & Positive social and environmental consequences



## Self-monitoring of behaviour



## Monitoring of emotional consequences



# Virtual Active Sports: identifying barriers and facilitators for casual fitness fans



A survey of **200** casual fitness fans  
**Results**

- Beliefs about Consequences
- Beliefs about Capabilities
- Goal Conflict
- Coping Planning
- Environmental Context and Resources

**Recommendation:** A future intervention supported by 22 Behaviour Change Techniques to promote participation in Virtual Active Sports



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# NUDGE BG

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