The EC Competence Centre on Behavioural Insights

From Climate Awareness
To Climate Action

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Joint Research Centre

European Commission

The Joint Research Centre

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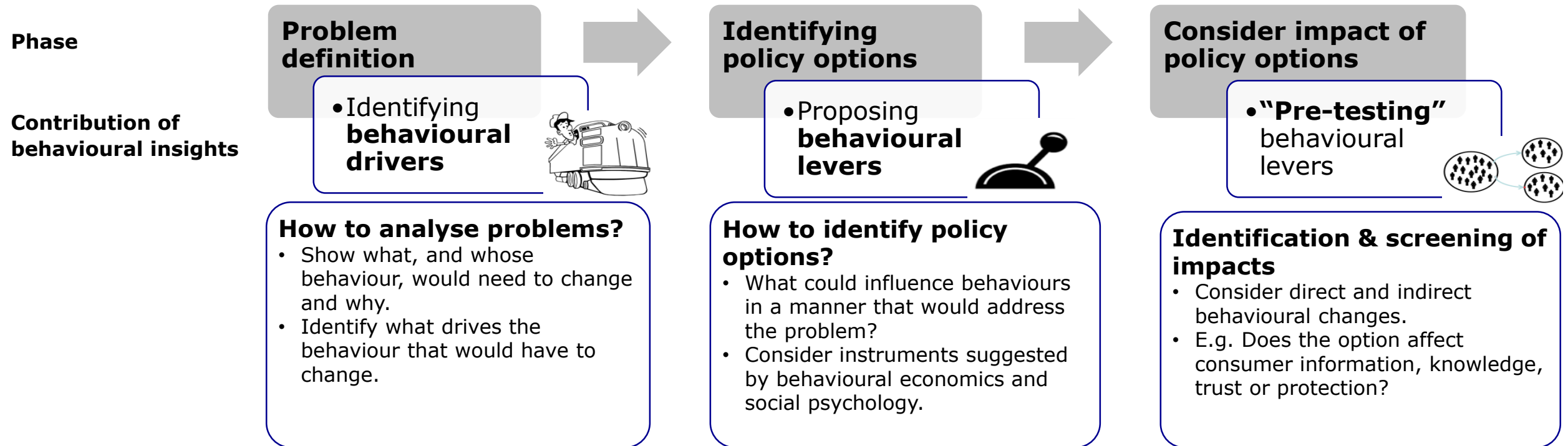
Our headquarters are in Brussels and we have research sites in five Member States: Geel (Belgium), Ispra (Italy), Karlsruhe (Germany), Petten (the Netherlands) and Seville (Spain).

Behavioural Insights?

Applying a more nuanced and evidence-based (i.e., more realistic) understanding of human behaviour to the policy-making process

Behavioural Insights!

Phase

Contribution of behavioural insights

Problem definition	Identifying policy options	Consider impact of policy options
• Identifying **behavioural drivers**	• Proposing **behavioural levers**	• **"Pre-testing"** behavioural levers

How to analyse problems?
- Show what, and whose behaviour, would need to change and why.
- Identify what drives the behaviour that would have to change.

How to identify policy options?
- What could influence behaviours in a manner that would address the problem?
- Consider instruments suggested by behavioural economics and social psychology.

Identification & screening of impacts
- Consider direct and indirect behavioural changes.
- E.g. Does the option affect consumer information, knowledge, trust or protection?

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Problem Definition

What do we say about climate change?

REMARKS

Statement by President Trump on the Paris Climate Accord

— ENERGY & ENVIRONMENT | Issued on: June 1, 2017

★ ★ ★

Thus, as of today, the United States will cease all implementation of the non-binding Paris Accord and the draconian financial and economic burdens the agreement imposes on our country. This includes ending the implementation of the nationally determined contribution and, very importantly, the Green Climate Fund which is costing the United States a vast fortune.

The major

York Times

arry Fink:
Reshape Finance

chief executives, Mr. Fink
ments in companies that

nal

nate risk is compelling investors to reassess core assumptions about modern
Fink, the chief of BlackRock, wrote in his annual letter. Damon Winter/The New York
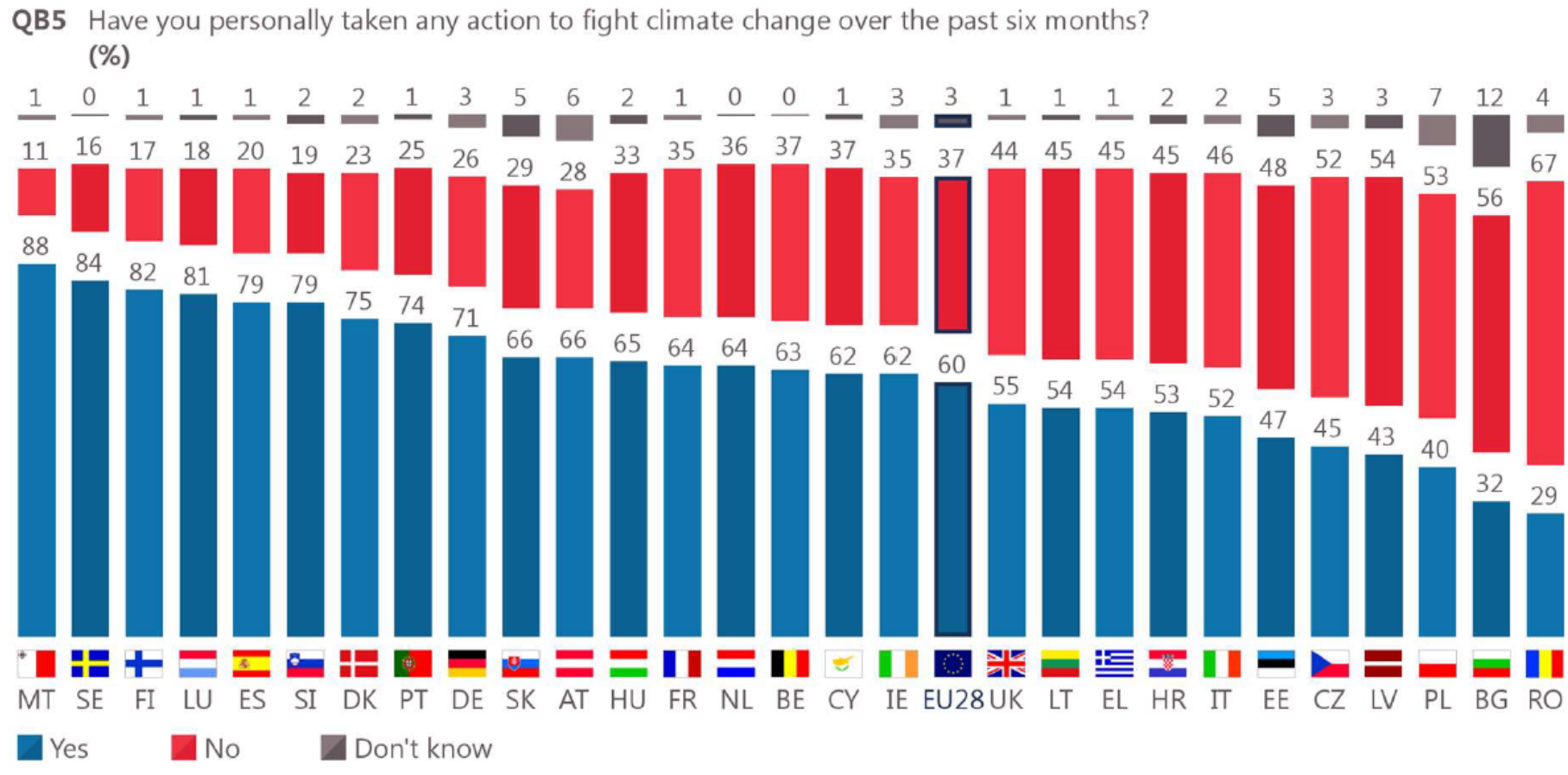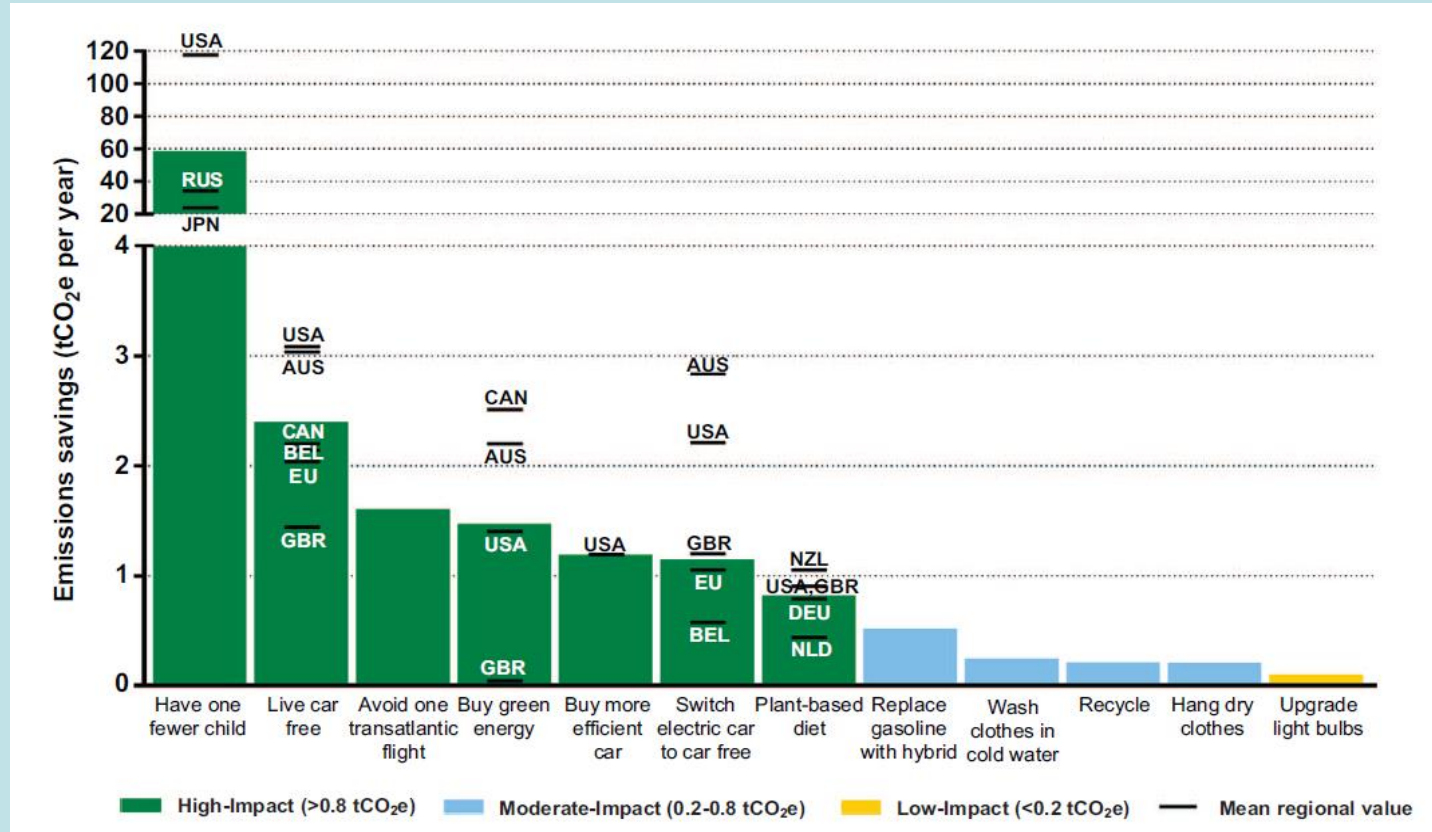Times

By Andrew Ross Sorkin

Source: Eurobarometer 2019 https://yougov.co.uk/topics/politics/articles-reports/2019/06/05/concern-environment-record-highs

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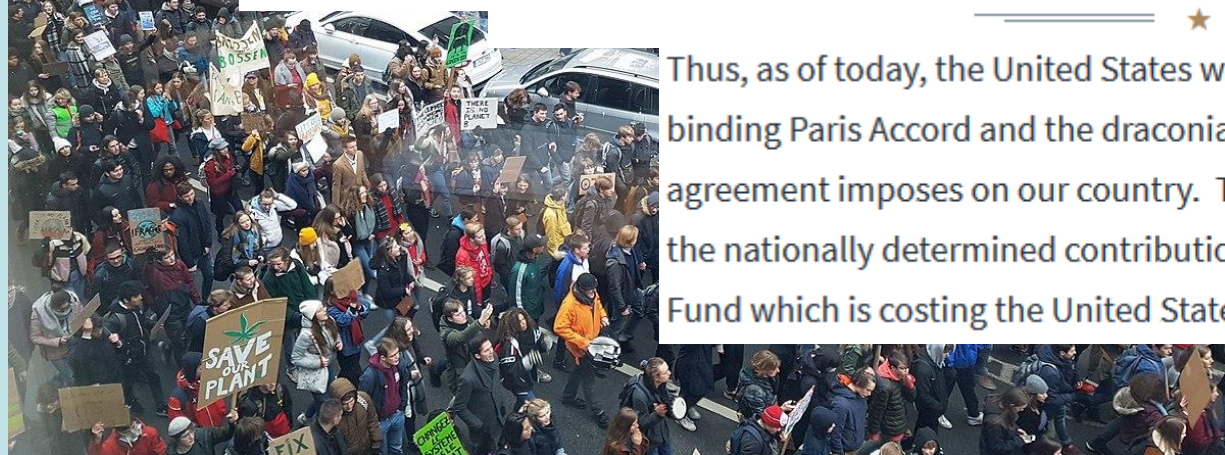
What we do about climate change?

QB5 Have you personally taken any action to fight climate change over the past six months? (%)

What we should do about climate change?

Source: Wynes & Nicholas, 2017

What's the problem?

What's the problem?

Principles

Social

Habit

Desire

Intention

Structural Barriers

Psychological Barriers
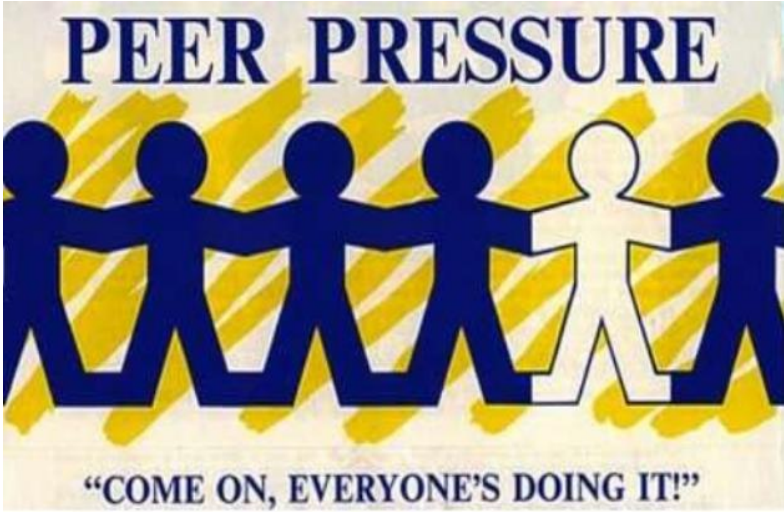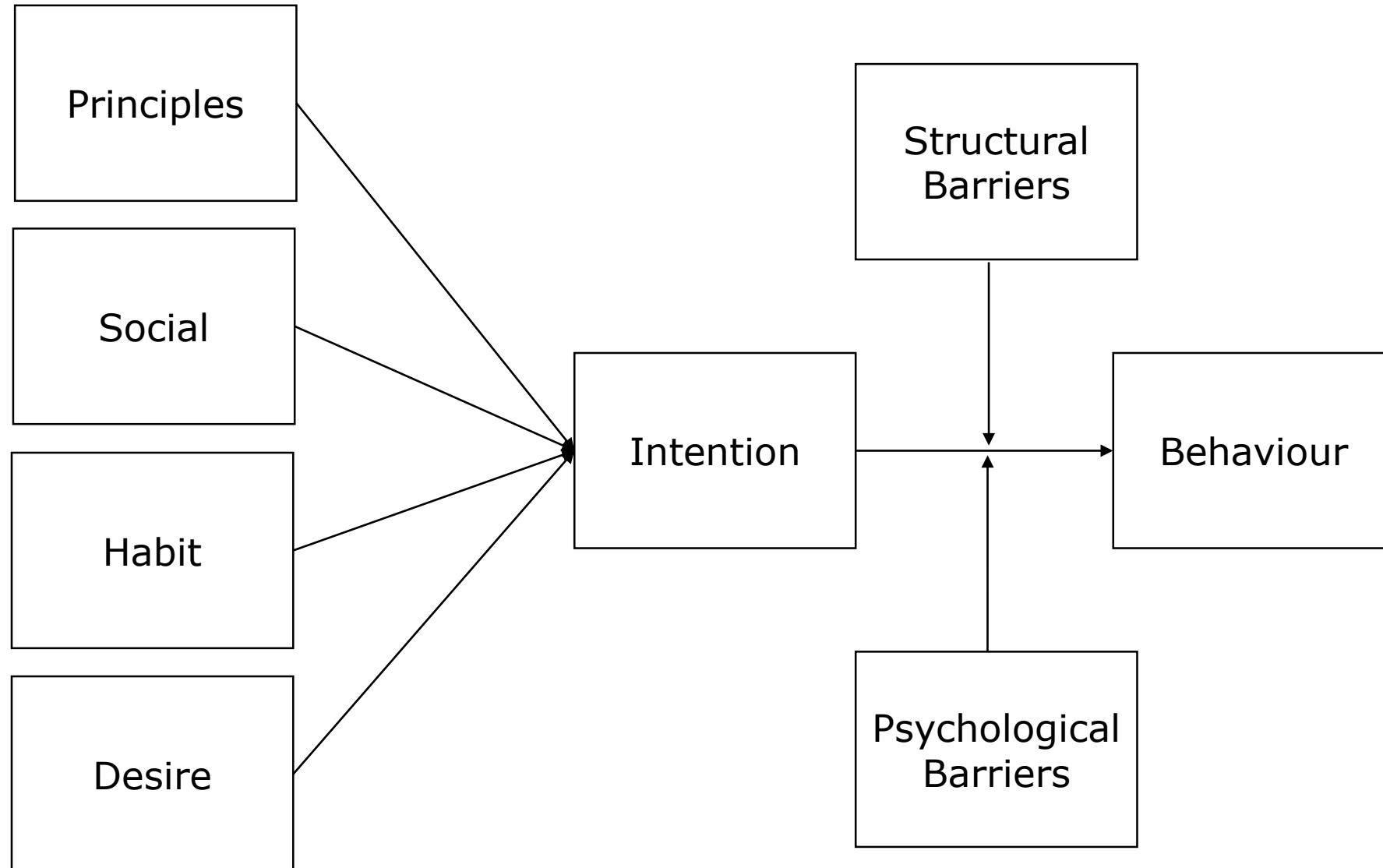
Behaviour

Source: Gifford et al., 2018

Identifying Policy Options: Nudges

Any aspect of the choice environment that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives.
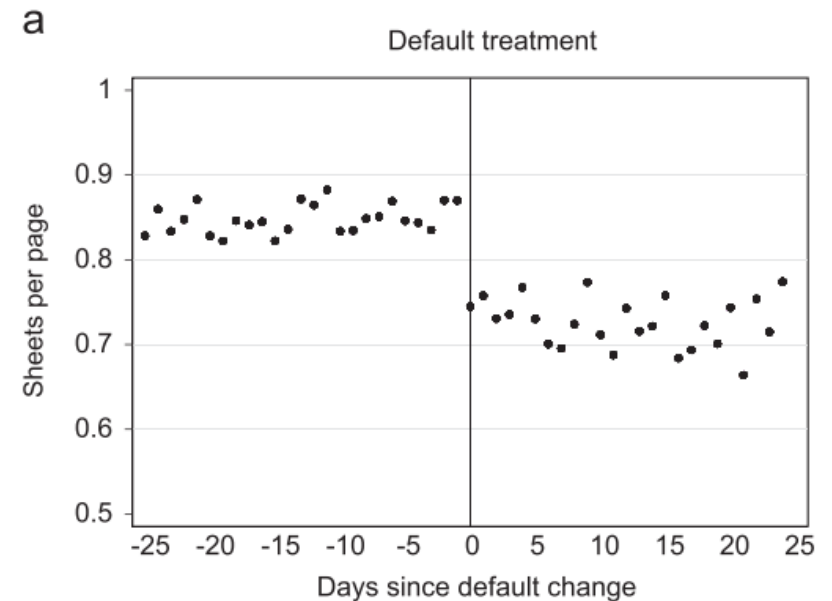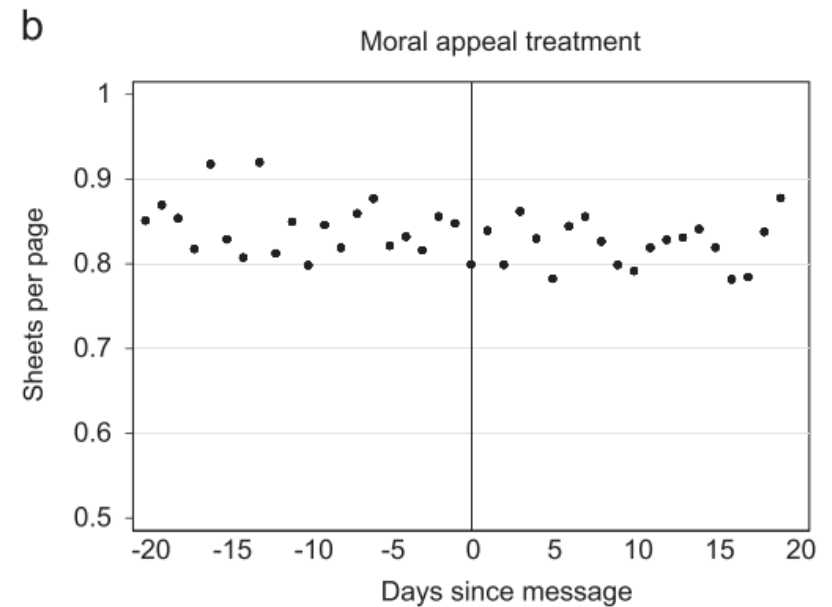
Thaler & Sunstein (2008)

Defaults

- Changing the default from one-sided to two-sided printing

→ ~15% reduction of paper use

Source: Egebark & Ekström, 2016

Defaults

- Changing the default from gray to green electricity

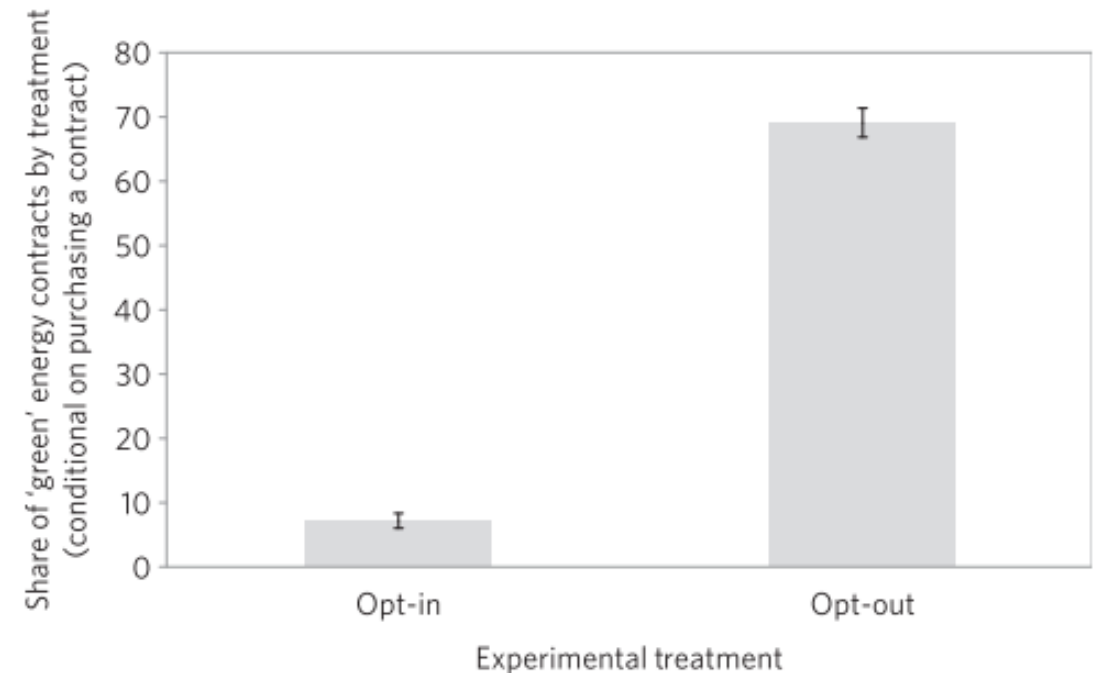→ ~10-fold increase of fraction choosing green contract

Figure 2 | The impact of the default nudge on purchases of 'green' energy. The purchase rate shows the share of 'green' energy contracts sold in each treatment as a share of the total contracts sold. Error bars indicate 95% confidence intervals.

Source: Ebeling & Lotz, 2015

Forced Decision

- Costly default change not possible (Judgment C-112/11)

- Forcing active decision on carbon offsets

→ ~50% increase of fraction buying carbon offset

Source: Kesternich et al., 2019

Social Norms

- Compare energy usage to relevant neighbours
- Targeted tips
- Emoticons

→ 2% reduction of energy use

Last Month Neighborhood Comparison | Last month you used **15% LESS** electricity than your efficient neighbors.

YOU — 504 kWh*

EFFICIENT NEIGHBORS — 596

ALL NEIGHBORS — 1,092

* kW ... ilowatt-hour.
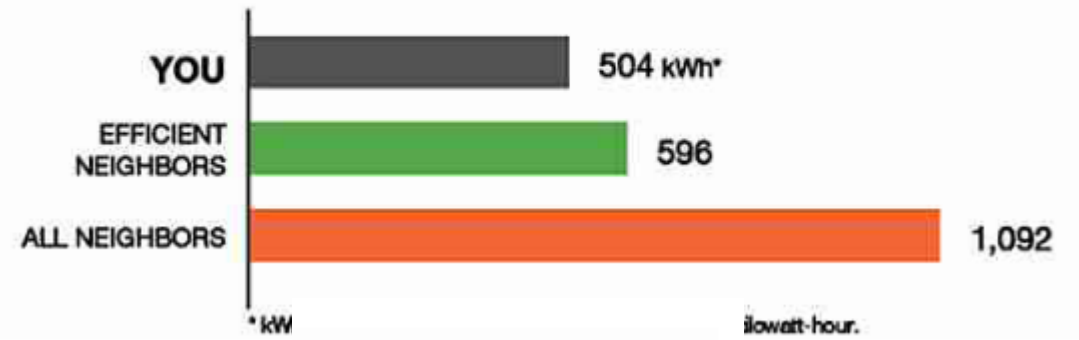
YOUR EFFICIENCY STANDING:

▶ **GREAT** ☺☺

GOOD ☺

BELOW AVERAGE

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Visual Nudging

- Smaller plates at buffets

→ Reduces food waste by ~20%

Source: Kallbekken & Sælen, 2013

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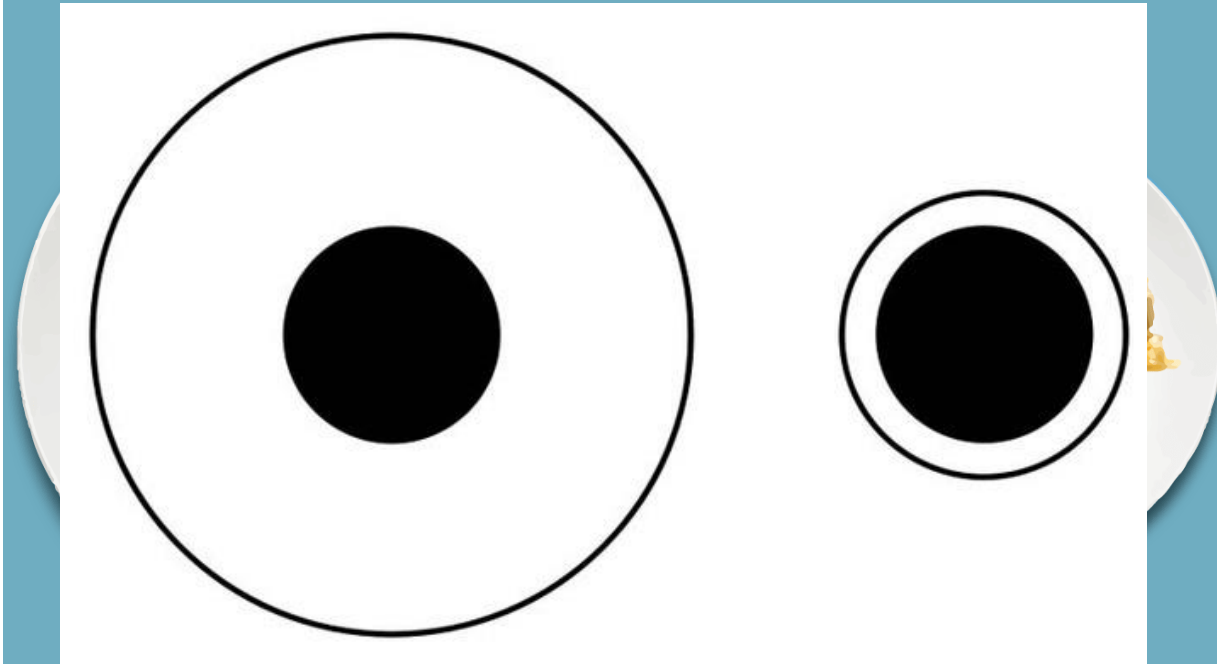
Framing and Simplification

- Alphabetic scales better than numeric scales

- A-G scale better than A+++ - D scale

- Label design most important when energy-efficiency not of key importance

Figure 2 – Evolution of the EU energy label for refrigerators

1994 2010 2019

Source: ECA.

Source: ENER/C3/2013-428 FINAL REPORT

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How to?

Literature

Behavioural Insights

- Evidence

- Experiment

- Context

Breakout Groups

Phase	**Problem definition**	→	**Identifying policy options**	→	**Consider impact of policy options**
Contribution of behavioural insights	• Identifying **behavioural drivers**		• Proposing **behavioural levers**		• **"Pre-testing"** behavioural levers

How to analyse problems?
- Show what, and whose behaviour, would need to change and why.
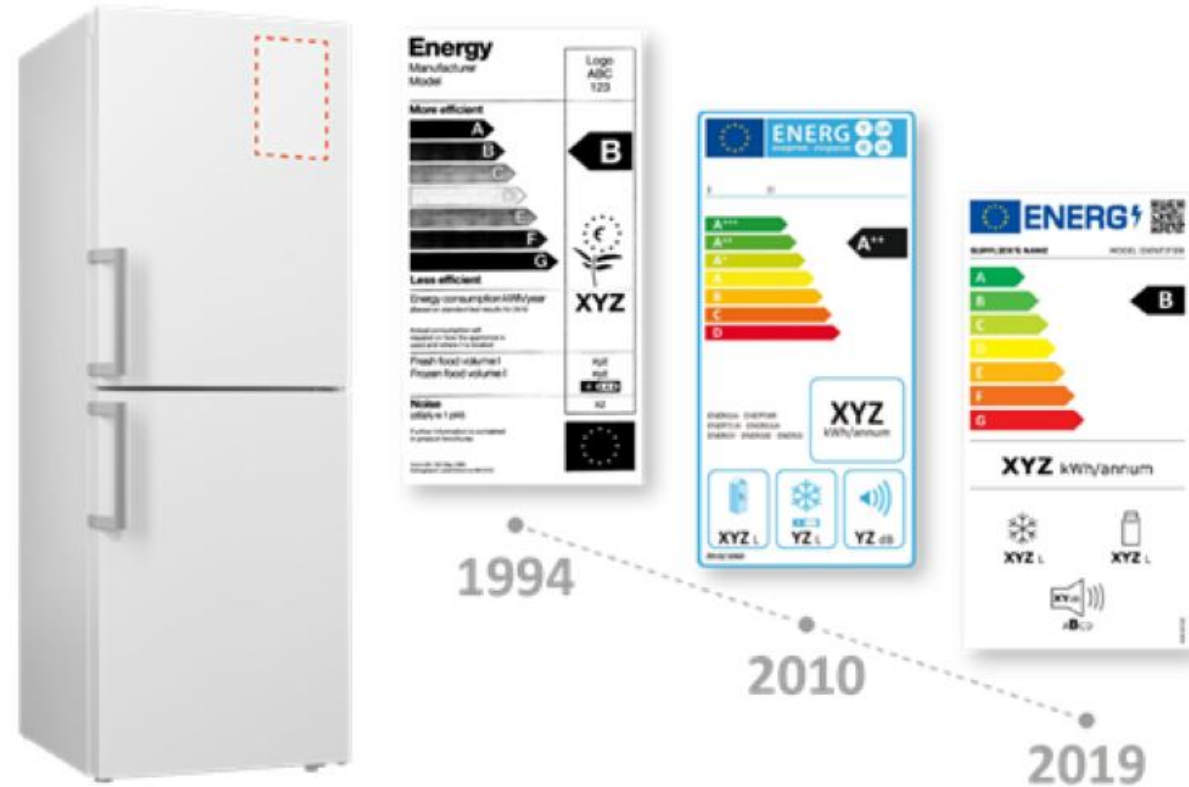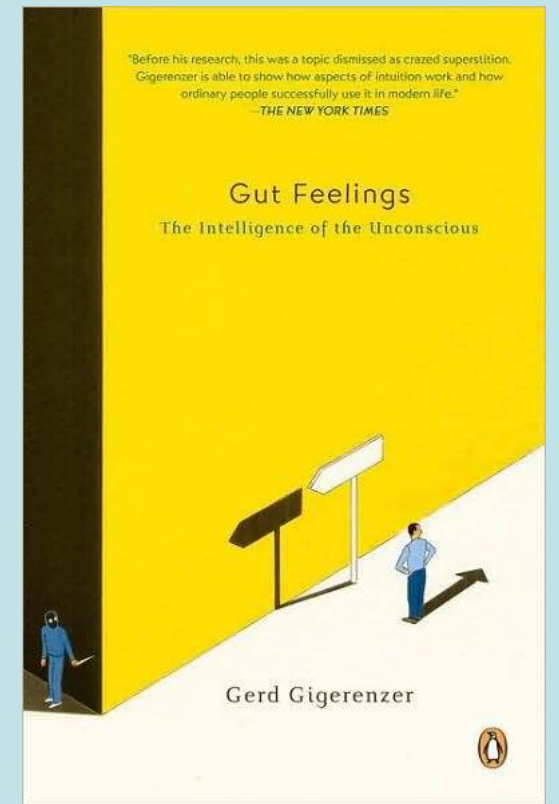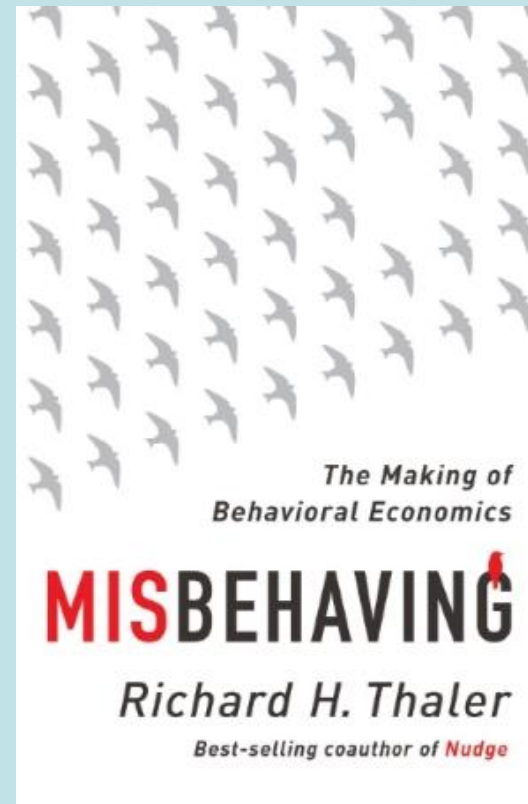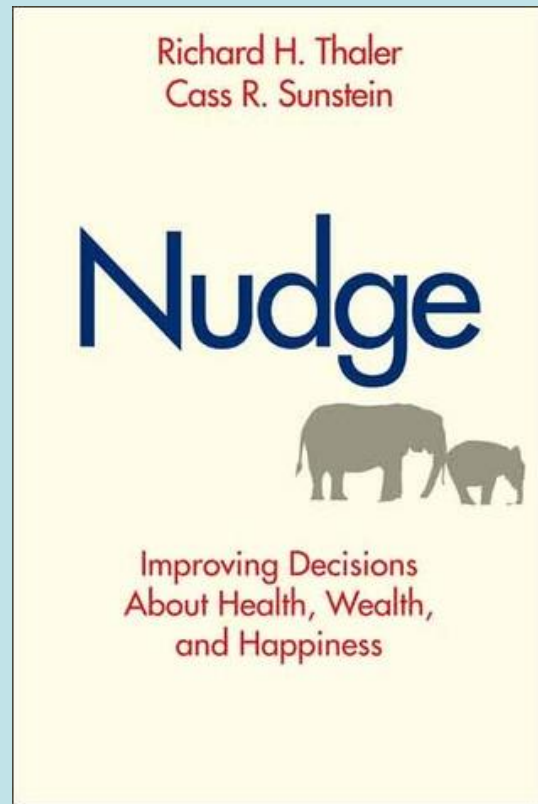- Identify what drives the behaviour that would have to change.

How to identify policy options?
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Identification & screening of impacts
- Consider direct and indirect behavioural changes
- E.g. Does the option affect consumer information, knowledge, trust or protection?

| **Example** | • Consumption behaviour of young people in Country X causes high CO_2 emissions.
• People do not take future costs into account (present-bias). | • Financial intervention taking into account that people have limited attention and cognitive willpower.
• Information provision, or commitment device. | • People change their attitude towards financial intervention and do not try to avoid it.
• People feel manipulated because intervention is not transparent. |

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Thank you

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Literature

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Backup Slides

The **Italian** public administration is currently testing a **nudge** intervention in the saving-energy field by changing the **framing** of the information in the bill that consumers receive at the end of each month. The University of San Raffaele was entrusted to run the RCT and outcomes were expected by 2015. No further information is available.

In 2013 in **Spain**, the Department of Planning and Sustainability of the Government of Catalonia funded a project by ENT Environment and Management (in collaboration with the Catalan Association of Municipalities for Door-to-Door Separate Collection). The project aimed at promoting door-to-door separate waste collection and reduction of waste. Municipalities with door-to-door collection schemes provide higher collection frequencies for recyclables than for non-recyclables. This is an example of **nudging** citizens to separate garbage by changing the **choice architecture** (i.e. collection scheme frequency). ENT has conducted a series of feasibility studies for the implementation of these collection schemes in several municipalities. [59]

In **France**, the *bonus-malus* scheme for cars (a.k.a. ecological bonus) – an environmental tax applied as a *malus* in French Registration Documents – incorporates the idea of **fairness**. Specifically, the higher revenue brought about by the most polluting cars serves to subsidise the least polluting ones. [60]

In **France**, the University of Toulouse is working with a large social housing scheme (Habitat Marseille Provence) that is interested in using **nudges** to promote acceptance and use of smart electricity meters. [49]

In May 2015, Demos Helsinki and the energy-efficiency company Granlund organized "**Finland**'s first Behaviour Change Hackathon." The hackathon brought together behavioural scientists, coders and energy experts to find simple, practical solutions to promote energy saving behaviour in office buildings. BIs were considered a valuable alternative to the implementation of smart solutions (such as sensors) in older building, as they offer efficient solutions for promoting sustainable behaviour, while avoiding costly investments. The event resulted in a novel set of solutions, such as an "Easy Reminder," which tracks screen usage and provides information on how far the user would have driven by car with the same energy and how the usage compares to his/her colleagues, thus making use of **framing** and **social norms**. [58]

In **Sweden**, a recent study carried out in the city of Gothenburg, investigated the performance of waste sorting infrastructure in two buildings (92 apartments). The study pointed to a mismatch between the available infrastructure (the sorting containers) and the users' needs and habits. Indeed, while the sorting containers differentiate between packaging and non-packaging waste, users tend to categorize waste by material. Although not meeting the requirements of a proper trial, the study aimed at taking the users' perspective into account, with the goal of increasing waste recovery targets.

In **France**, the National Institute for Agronomic Research is carrying out research exploring the extent to which **social norms** can be used as levers to influence farmers' behaviour related to the use of pesticides, and consumers' behaviour related to recycling and waste reduction.

Several municipal electric utilities companies from various cities in **Switzerland** (e.g. Zurich, St. Gallen, Rorschach) have changed the **default** electricity mix to a greener tariff. This was based on behavioural evidence showing that although most people support green electricity (and would also be willing to contribute financially to a greener development of the electricity mix), they often stay with the default electricity product offered by their provider. Rorschach for instance, changed the default electricity tariff – called BASISSTROM – to a 100% renewable energy tariff (mainly electricity sourced from hydropower). People can change to a cheaper tariff containing electricity sourced from nuclear power (product called KERNSTROM), or can change to a more expensive tariff containing more green electricity from new renewable energy sources such as photovoltaic and wind power (product called ÖKOSTROM). Experience from St. Gallen and Zürich shows that most people stay with the default tariff which has been offered to them.

Behavioural research shows that disclosing lifetime energy operating cost information proves to be most effective in guiding consumers towards a more energy-efficient shopping behaviour, as it addresses **present bias**. In **Switzerland**, the platform TopTen.ch provides such kind of lifetime energy operating cost information for different product categories, such as washing machines. [51] Major supermarket chains, such as Coop and Migros use the TopTen Label to inform consumers about the most energy efficient appliances in their stock. [52] [53]

In **Ireland**, the widely-disseminated "Calling Time on Waste" booklet by the Environmental Protection Agency provides a guide on resource efficiency in the bar/restaurant trade. The document breaks down various waste streams specific to bar/restaurant settings, explains their impact, provides practical tips for their reduction and prevention, and offers a succinct waste management checklist. The brochure also **framed** waste prevention in economic terms, offering examples such as "By re-tendering for waste collection, implementing a source segregation scheme and reducing food waste a pub saved €15,000 per annum on waste charges." The initiative leverages effective and **salient** information provision to increase waste collection. [56]

In **Estonia**, consumers receive simplified information on energy consumption, have online access to their detailed metering results and can adjust their usage accordingly, thus tapping on behavioural levers such as **simplification**, decrease of **information overload** and **reduction of the effort** needed to change behaviour. [50]
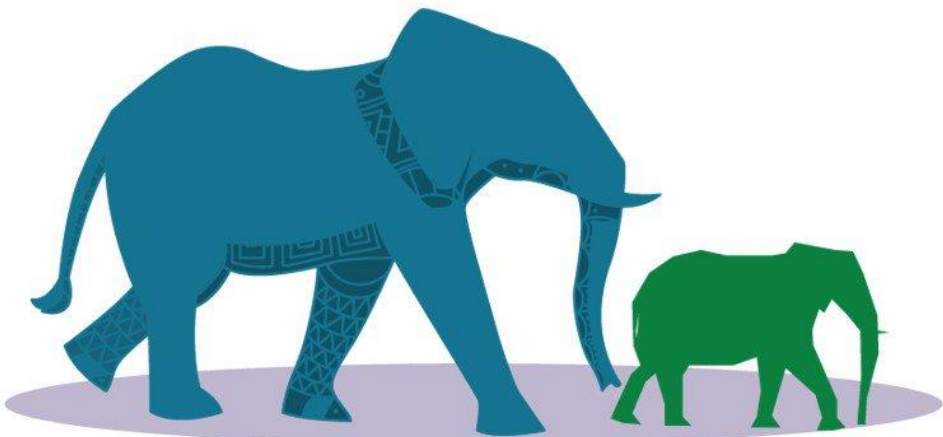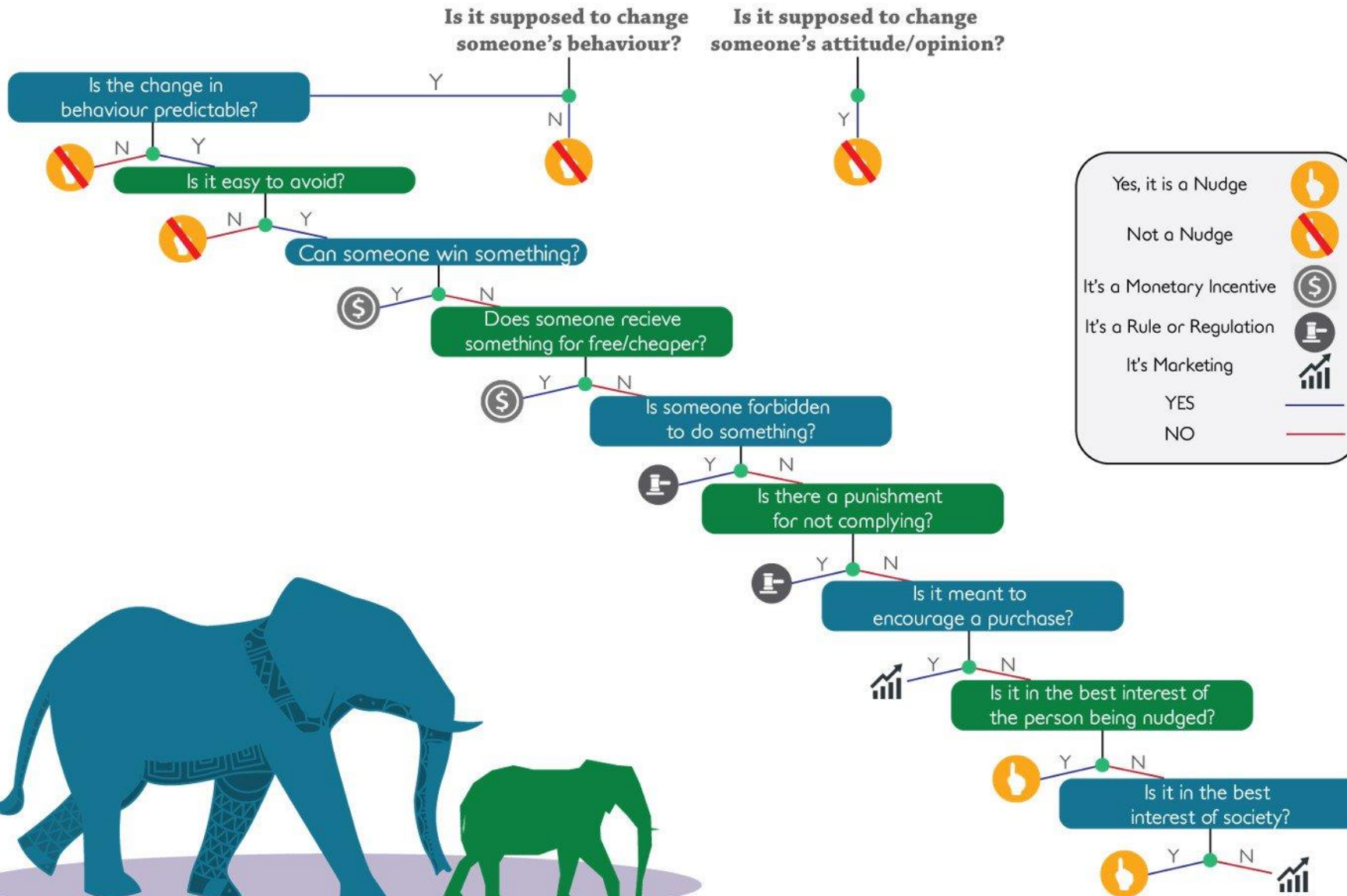
Source:
Lourenco et al., 2016

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Table 4: Using behavioural insights to reduce food waste

Actor/country	Description	Behavioural element	Impact
GreenNudge and Cicero (private companies in **Norway**)	Promote the use of nudges, especially on eating and environment-related habits. GreenNudge claims that, if **nudges** prove to be win–win options, at least revenue-neutral for the actors involved (including private restaurants), their call for adoption is much more likely to be successful.	GreenNudge's experiments assess the impact on consumers' choices of changing the **choice architecture** (e.g. making the healthy option more **prominent**) and using **social norms**.	In one of the studies, results showed that reducing plate size and providing social cues can reduce the amount of food waste in restaurants by roughly 20% (while keeping guest satisfaction constant and potentially increasing profits).
Auchan (supermarket chain in **Italy**) [65]	Food items near expiration date are offered at discounted prices.	This is not just a price intervention, but rather entails a change of the **choice architecture**: the food items at stake (mostly dairy products, cold cuts and fresh pasta) are often located in a specific place and clients can recognize them by special stamps or posters.	Price cuts up to 50% encourage clients to buy and consume such food items, therefore reducing food waste.
Hungarian Food Bank Association [66]	Initiative aimed at reducing household food waste. The initiative's website provides a series of tools, such as a recipe database where citizens receive recipe tips by entering the ingredients they have at home.	The recipe database makes it **easier** and **decreases the effort** needed by citizens to reduce their food waste. It is also interesting to note that the initiative makes uses of messages such as "Do you usually throw food away? 90% of respondents reply no, but in fact virtually every household produces food waste."	While the use of messages such as "Do you usually throw food away? 90% of respondents reply no, but in fact virtually every household produces food waste" is aimed at encouraging the appropriate behaviour, it represents an example of the **Cialdini's 'Big Mistake'** (i.e. communicating that the behaviour one is trying to discourage is the 'norm').
Ministry of Agriculture and Sea (**Portugal**) [67]	Trustmark awarded to entities that have implemented actions against food waste. An honourable mention was given to the project "Zero Waste" (Dariacordar Association), which collects spare or soon-to-expire food from participating restaurants, hotels and supermarkets. Such food is the delivered to distributing centres to cater for the needs of poorer families.	The "Zero Waste" project uses behavioural levers such as **framing** (e.g. slogan "Portugal cannot give itself to waste"[5]), **reciprocity** and **salience** (participating entities receive a "Zero Waste" label to help citizens identify them).	The project has so far distributed over 2,300,000 meals.

[5] This is a play of words, which uses the common Portuguese saying "Portugal cannot give itself to luxury" and replaces 'luxury' by the word 'waste.' In Portuguese this simply entails replacing one letter (i.e. *LIXO* instead or *LUXO*).

IS IT A NUDGE?
Not sure whether your intervention is a nudge?
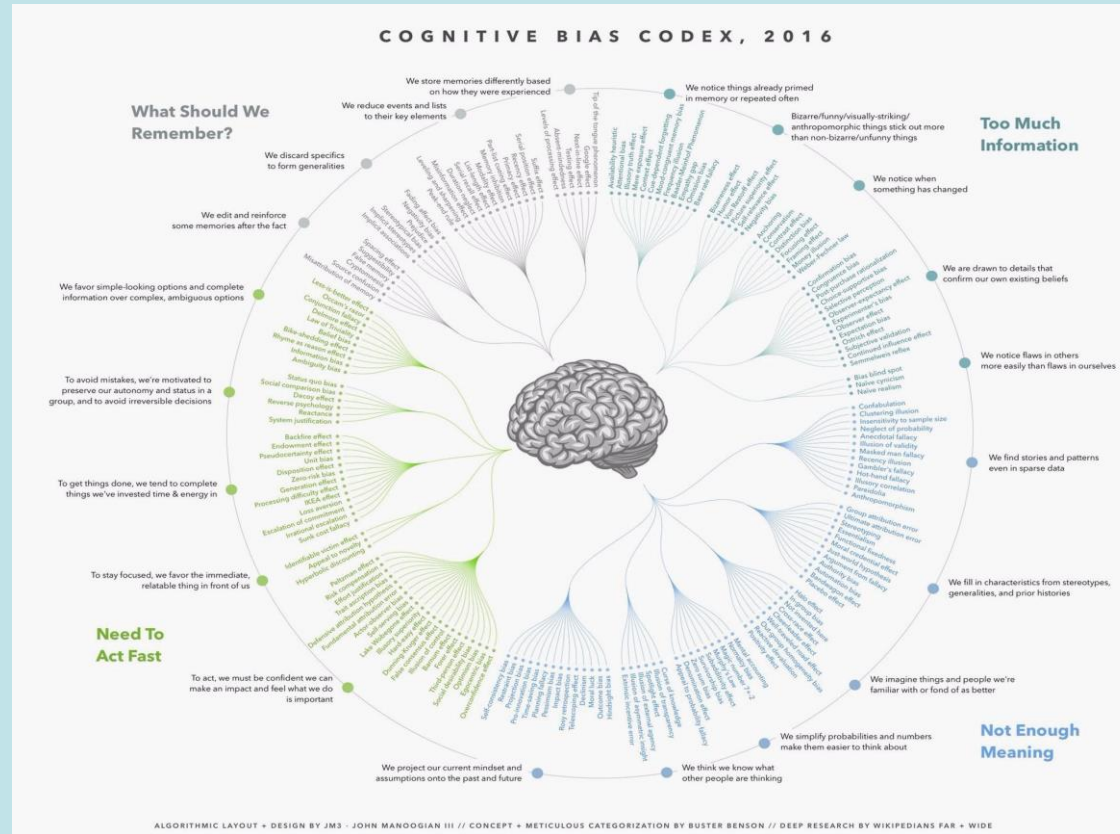This chart can help you out.

Is it supposed to change someone's behaviour?

Is it supposed to change someone's attitude/opinion?

Is the change in behaviour predictable?

Is it easy to avoid?

Can someone win something?

Does someone recieve something for free/cheaper?

Is someone forbidden to do something?

Is there a punishment for not complying?

Is it meant to encourage a purchase?

Is it in the best interest of the person being nudged?

Is it in the best interest of society?

Yes, it is a Nudge
Not a Nudge
It's a Monetary Incentive
It's a Rule or Regulation
It's Marketing
YES
NO

Christina Gravert 2017

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What's the problem?

e.g., misinformation effect

e.g., confirmation bias

e.g., present-bias

e.g., gambler's fallacy

COGNITIVE BIAS CODEX, 2016

Source: https://medium.com/better-humans/cognitive-bias-cheat-sheet-55a472476b18

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