

The Climate Conundrum

On the psychological challenges
of sustainable behaviour



Reint Jan Renes, **october 2023**

EARLIER



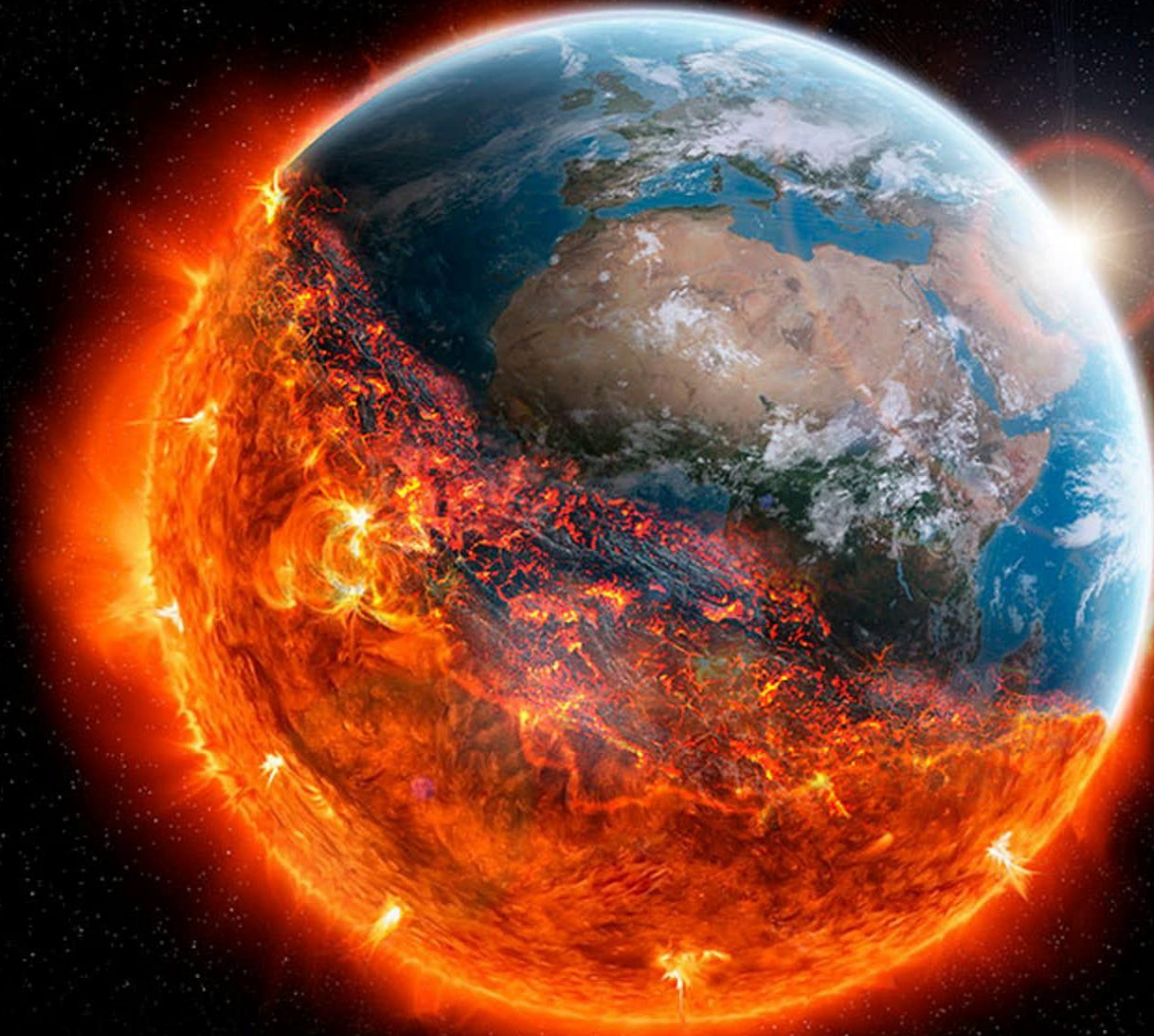
Brenda had decided to live a more environmentally conscious life

NOW



To be honest, this is no longer acceptable

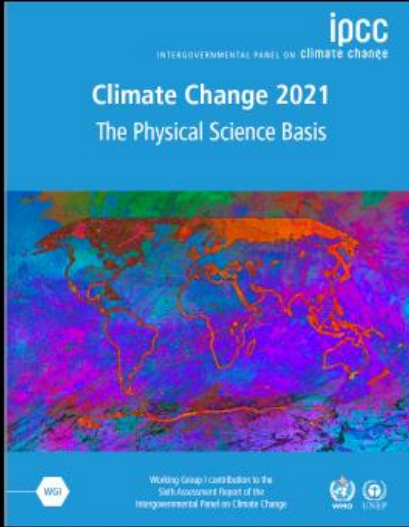
PROBLEM



WGI

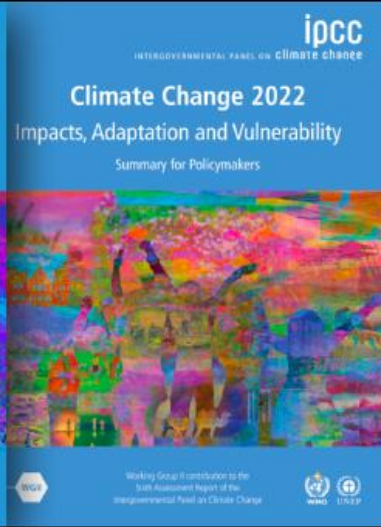
WGII

WGIII

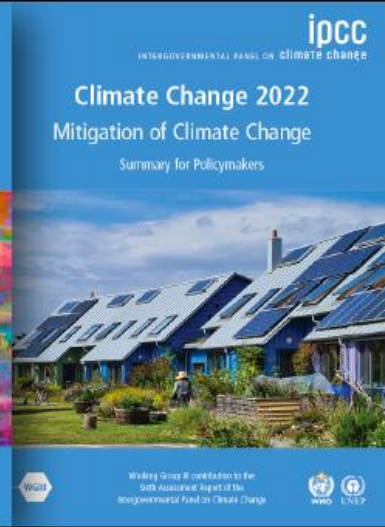


AR6 Climate Change 2021: The Physical Science Basis

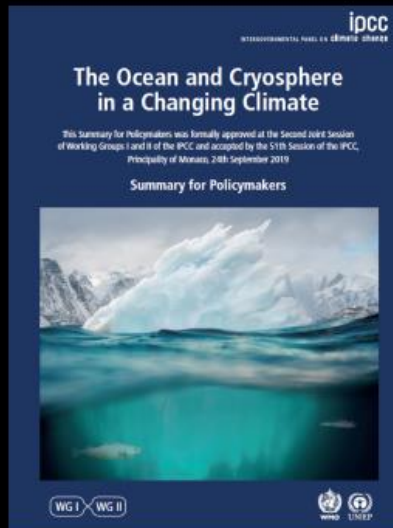
Special Report



Climate Change 2022: Impacts, Adaptation and Vulnerability



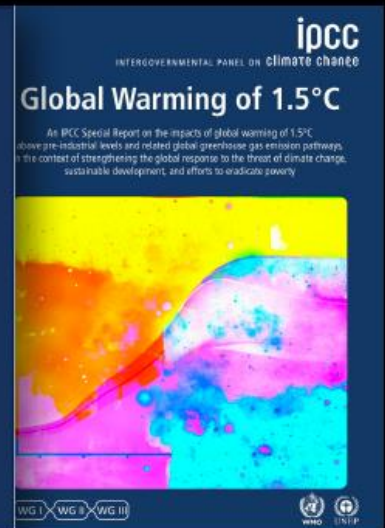
Climate Change 2022: Mitigation of Climate Change



Ocean and Cryosphere in a Changing Climate



Climate Change and Land



Global Warming of 1.5 °C

“The scientific evidence is unequivocal: climate change is a threat to human well-being and the health of the planet. Any further delay in concerted global action will miss the brief, **rapidly closing window to secure a liveable future.** This report offers solutions to the world.”



IPCC: Onmiddellijke versnelling mondiale klimaatactie nodig om doel 1,5 graden nog te kunnen halen

04-04-2022 | Nieuwsbericht

Het doel van het klimaatakkoord van Parijs - het streven om de opwarming van de aarde beperkt te houden tot 1,5 graden - raakt buiten zicht, tenzij landen gezamenlijk meer ambitie tonen en onmiddellijk in actie komen. Dat stellen de vijf Nederlandse klimaatexperts die aan het vandaag verschenen IPCC rapport hebben bijgedragen. Een dergelijke versnelling en versterking van beleidsmaatregelen is nog mogelijk - maar vereist een verregaande transformatie van de systemen die ten grondslag liggen aan onze economie, zoals energie, industrie, transport en landbouw. De komende jaren zijn daarbij doorslaggevend. Dit zijn enkele van de belangrijkste conclusies van het IPCC-rapport dat vandaag is gepubliceerd.





DUTCH PRIME MINISTER: NEED TO GO FROM 'BLAH BLAH' TO ACTION



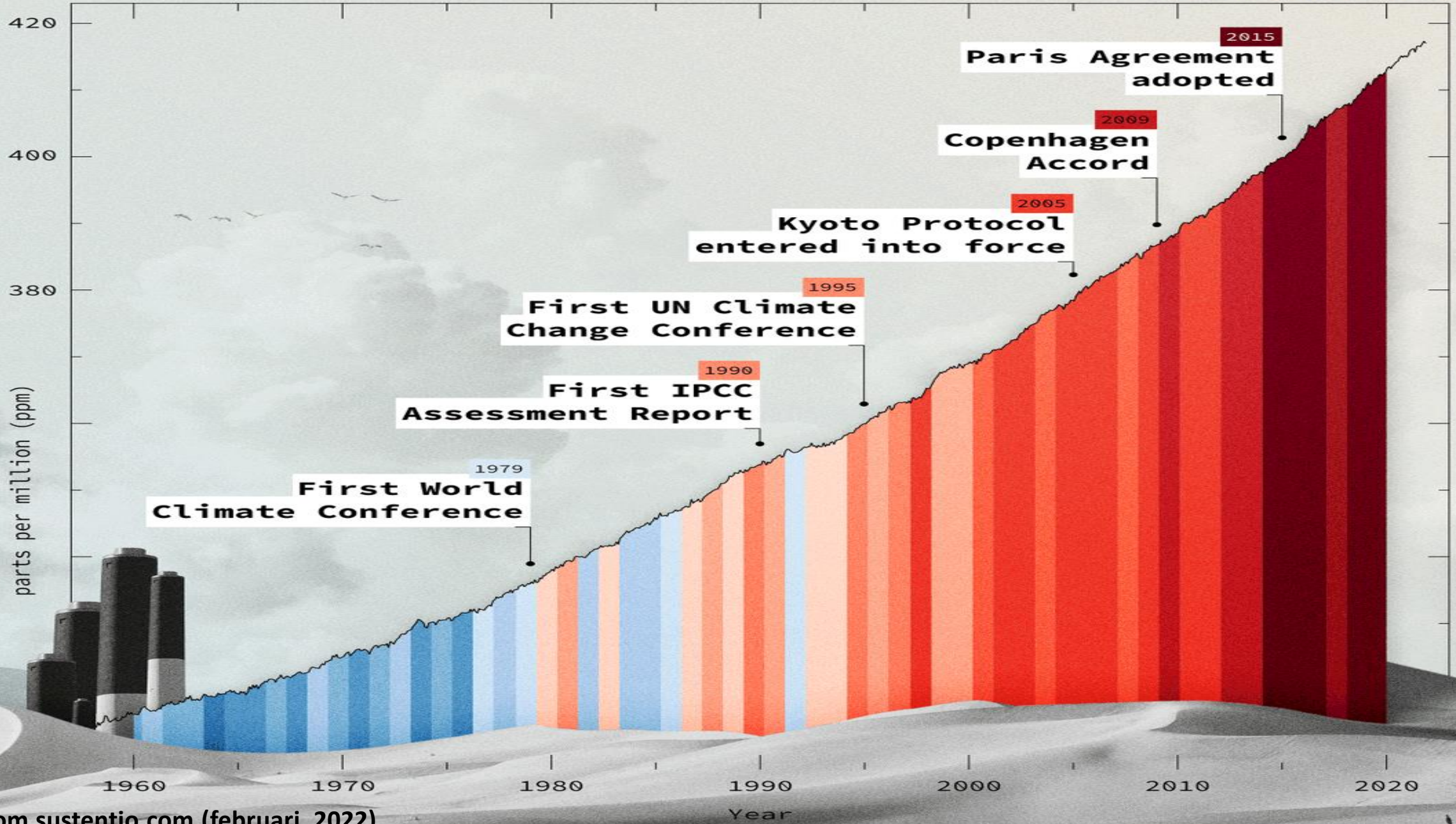
“We need to **step up**, and rapidly deliver on the **promises** we’ve made.”

Dutch PM Rutte, Climate Summit Egypt, 7 november, 2022



Trends in Atmospheric CO₂ vs Global Temperature Change

#climateINACTIONstripes



Composite Graph of: Atmospheric CO₂ at Mauna Loa Observatory, December 2021 - Scripps Institution of Oceanography & NOAA Global Monitoring Laboratory | #ShowYourStripes - Graphics & Lead scientist: Ed Hawkins, National Centre for Atmospheric Science, University of Reading; Data: UK Met Office | Design by: sustentio [PG] | Licence: CC-BY
@wuehler (a)ario @riebken (a)me @marcus (a)smitt @sustentio (a)fi

THE CLIMATE IS
CHANGING
WHY AREN'T WE?





Research Group Psychology for
Sustainable Cities

LECTORAAT PSYCHOLOGIE VOOR EEN DUURZAME STAD



▶ Reint Jan Renes



▶ Marije van Gent



▶ Loes Kreemers



▶ Carlijn Kappers



▶ Willemijn Vermeer



▶ Danique Bredenoort



▶ Eva Post



▶ Milan Tamis



▶ Helena Schmidt



▶ Krispijn Faddegon



▶ Melle Krikke



▶ Ellen Abbes



Hogeschool van Amsterdam



Sustainable Behaviour?

A photograph of an urban garden area. In the foreground, there is a gravel path with two parallel metal tracks. To the right, a fenced-in area contains several art displays, including a large white poster with the name 'CELINE BOUWER' and a blue and white abstract painting. The background features a multi-story building with a prominent gabled roof and a balcony. The scene is lush with greenery and plants.

Biodiversity in the city

**Being aware of
something and acting on
it are two different
things**



- ‘Action, action, action’
(PM Rutte Glasgow Climate Summit,
November 1, 2021)

FALSE **CONSENSUS**



'Solution **Aversion**'



Weather Extremes





Motivational Ambivalence

“Having simultaneously **positive** and **negative** evaluations - regarding changing behaviour towards a more **environmentally friendly** lifestyle.”



ck

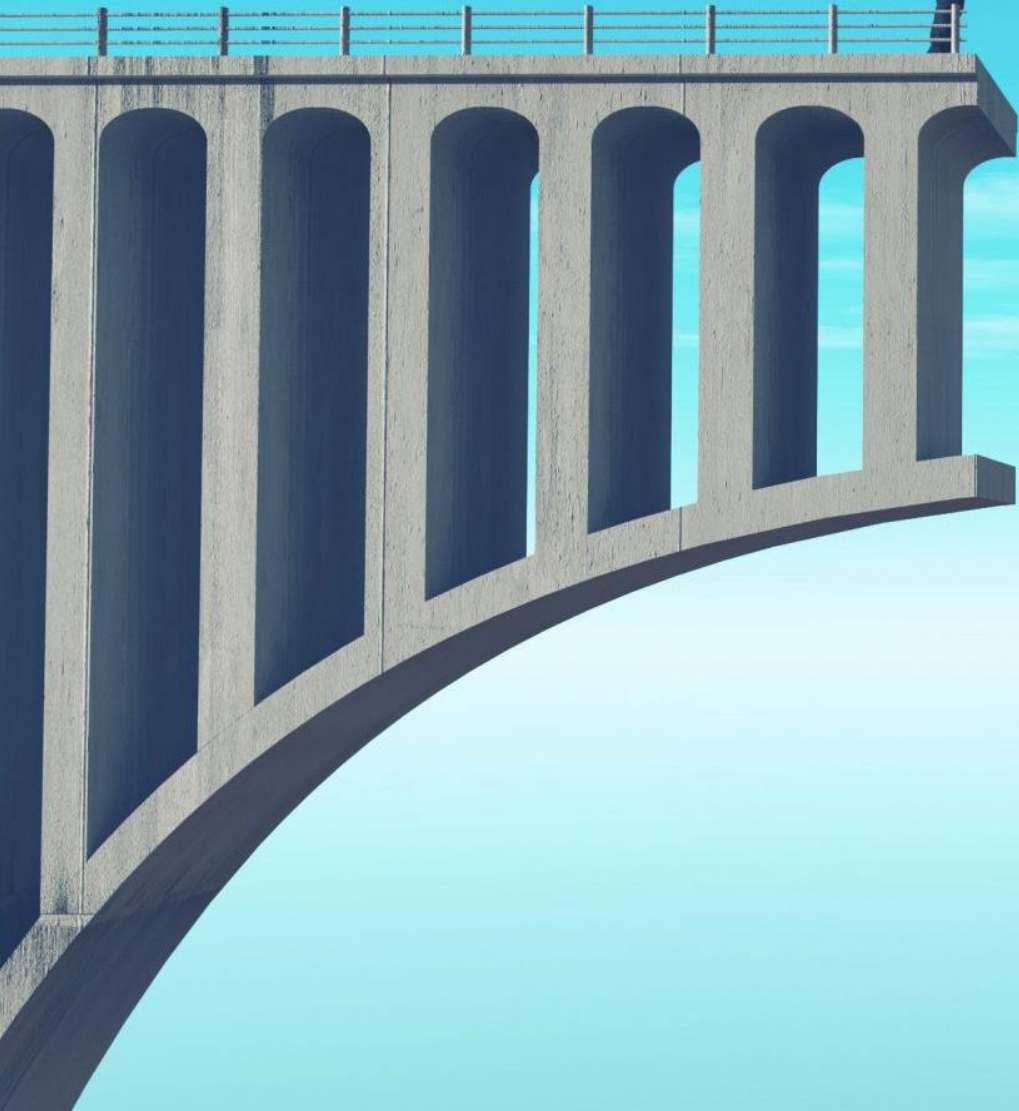
Buying Clothes? Flying?

Tiles in my garden? Eating meat?

Private car?



Sustainable lifestyle



Status quo bias



Threat of the status quo

- **Many sustainability measures threaten our established way of living and basic societal infrastructure.**
- **These measures have an impact on our “normal,” established way of living and basic societal infrastructure**
- **This may be experienced as a threat that will result in losing our freedom and/or comfort (“fear of falling”)**

'Solution **Aversion**'



Minister Harbers: 'Auto blijft belangrijk voor Nederland'

De auto is het populairste vervoermiddel in Nederland en zorgt er volgens minister Mark Harbers van IenW voor dat 'iedereen naar werk, familie of sport' kan. Hij vindt dus dat gemeenten door het hele land ruimte moeten blijven geven aan de vierwielers. 'Het beste tijdperk van de auto ligt nog voor ons.'

'Mensen willen en kunnen vaak niet zonder hun auto. Vanuit ons ministerie wordt geïnvesteerd in alle vormen van mobiliteit en dus zeker ook in autobereikbaarheid. Het wordt weer tijd dat de auto de prominente plek ook weer aan de gesprekstafels van de overheid krijgt, waarbij we kijken naar hoe de kracht van de auto kan worden ingezet om Nederland zo goed mogelijk bereikbaar te krijgen.'

'Beste tijdperk van auto ligt nog voor ons'

Mark Harbers, maart 2023





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Shutterstock / Great Pics Worldwide / Peter J. Wilson

Climate change: citizens wait for companies, companies wait for the government, government waits for citizens

Source: De Speld, August 17, 2022



optimism

Onrealistic

'Moral Disengagement'











2

Amsterdam
Centraal



**Lack of (individual)
ownership**

**Heel erg van
Antarctica,
maar ik koop
toch geen
ledlampen**

e
u-
CC
we
er-



**DO OUR
BEHAVIOURAL
CHOICES MATTER?**



Households are jointly responsible for almost **75%** of global CO2 emissions


(Druckman & Jackson, 2016)





An average person on Earth emits approximately **4.4 tons of CO₂** annually

Source: Klimaathelpdesk, 2020



How many tons of CO₂ does an average Dutch person emit on an annual basis?

➤ 15,8 ton CO₂ (more than 3x as much)

Source: CBS, 2019

The **richest 1%** income group
emits approximately **50 tons**
of CO₂ per year worldwide.

Source: Oxfam, 2020

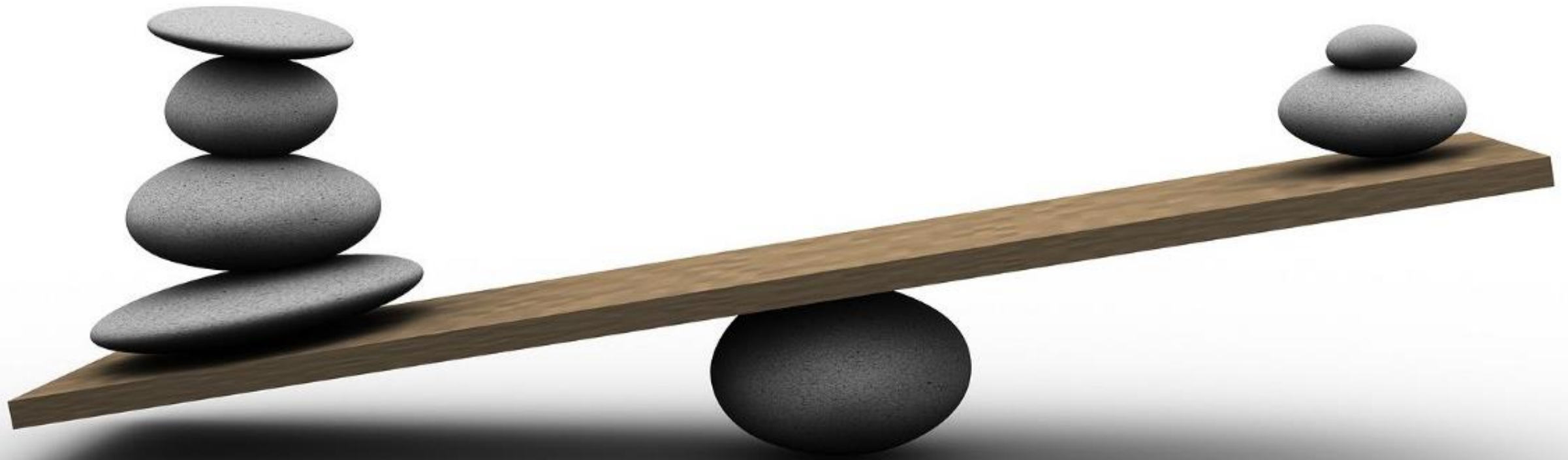
The **lowest 50%** income group
emits approximately **1 ton** of
CO₂ per year worldwide.

Bron: Oxfam, 2020

The **top 10%** of incomes ('high SEP') are responsible for **40 to 60%** of global CO₂ emissions.

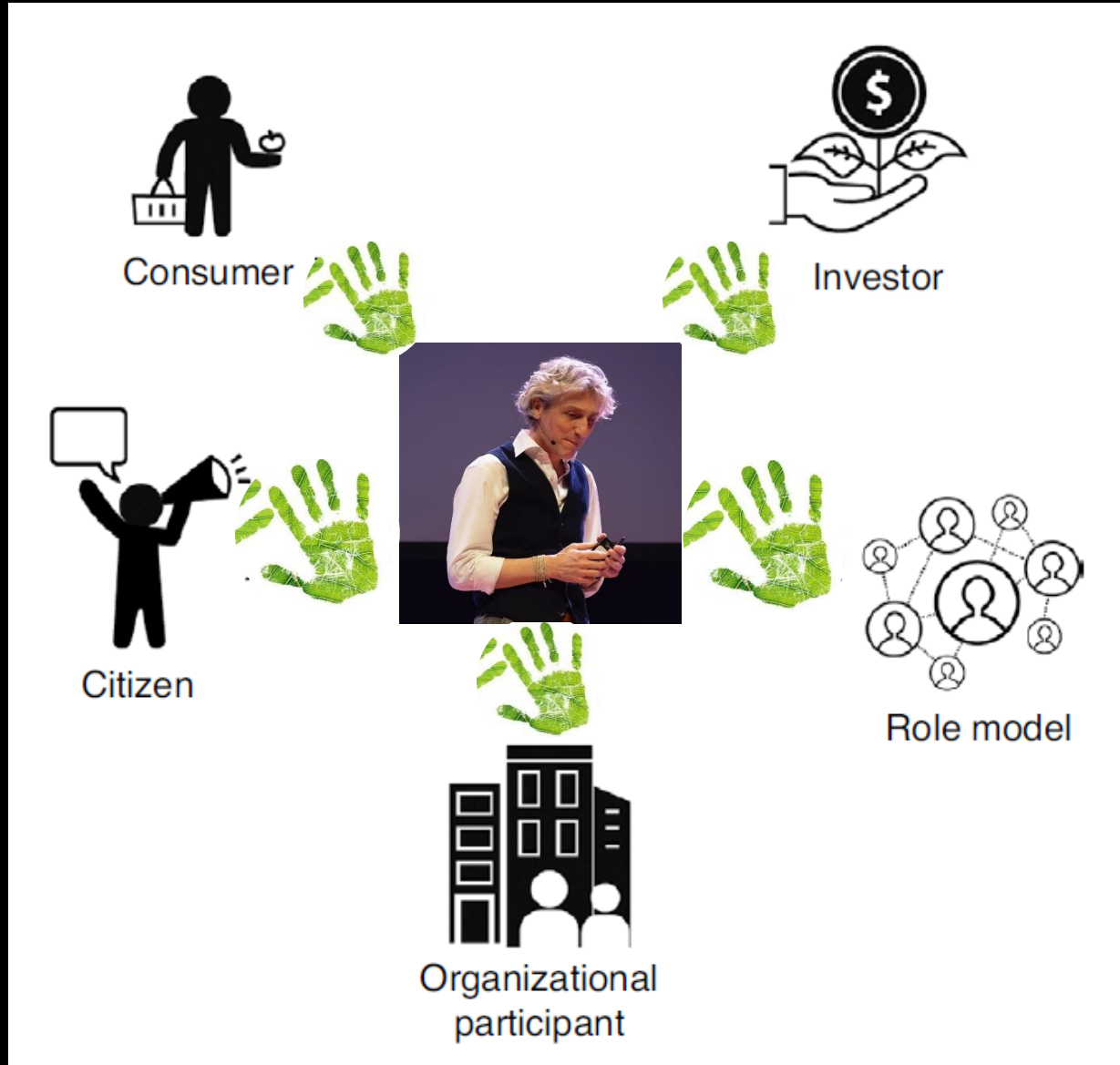
(Nielsen, et al., 2021)





'High-income group' is the largest driver of climate change worldwide





(Nielsen, et al., 2021)



Impact?





change private opinions.
change norm perceptions.
social support for others.

'High-income group'
potentially the **biggest driver**
of change.



Copingstrategies -1

Optimism Bias 'Oh well, we can solve it with smart techniques'.

Social validation 'All my colleagues around me still use the car for commuting'

Copingstrategies -2

Advantage Comparison

“Do you know how much we are already doing compared to other Applied Universities?”

Source derogation

“Those scientists come up with something new every year”

Copingstrategieën -3

Selective exposure

“I recently read that all cars will soon run on hydrogen”

Moral Licensing

“We already do waste separation”

The Challenge

How do we integrate psychological insights about behaviour into the climate transition?





Sustainable feints



**Symbolic solutions,
rebound effects and
negative spillovers**



Hoi, wij
zijn eHUB.



Wil jij ook een eHUB in jouw buurt?

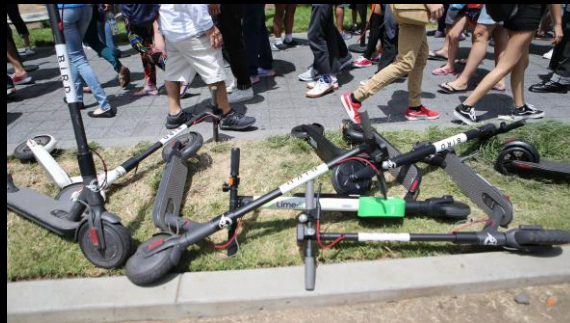
leefloosnehub.nl

What will it **replace** – or who will **use** it?

Car use



Active rides



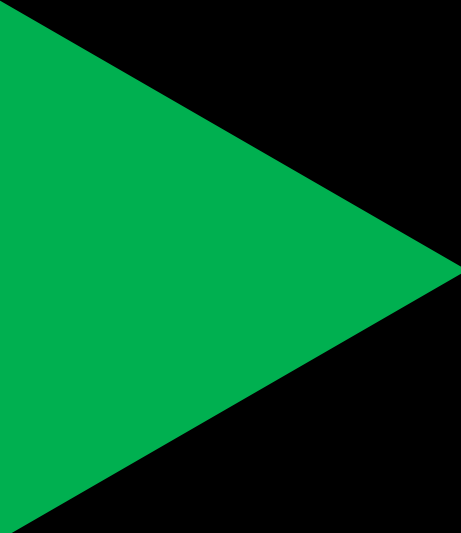
Public
transport



Shared transport in Zurich emits **more**
CO₂ than the alternatives they replace.

Reck, Martin and Axhausen (2021)



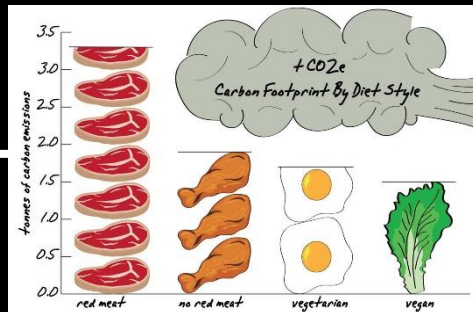


**Explanations (and
solutions) have multiple
layers of depth**

Dare to **choose**
and solve puzzles
in a **targeted**
manner



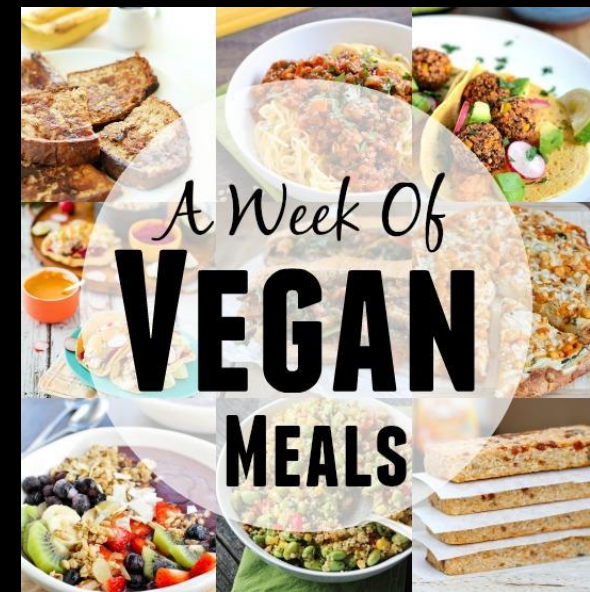
PROBLEM



TARGET BEHAVIOURS



MEASURES

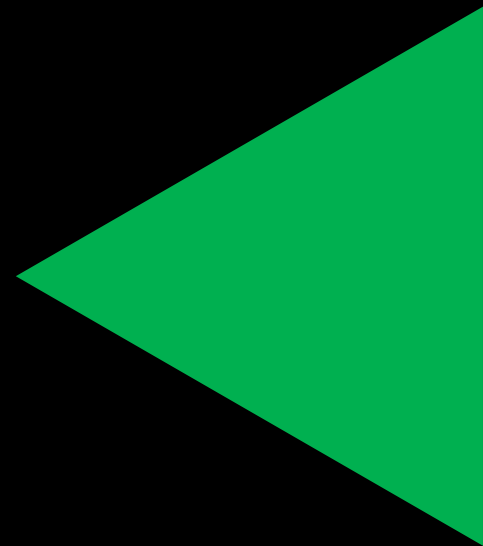
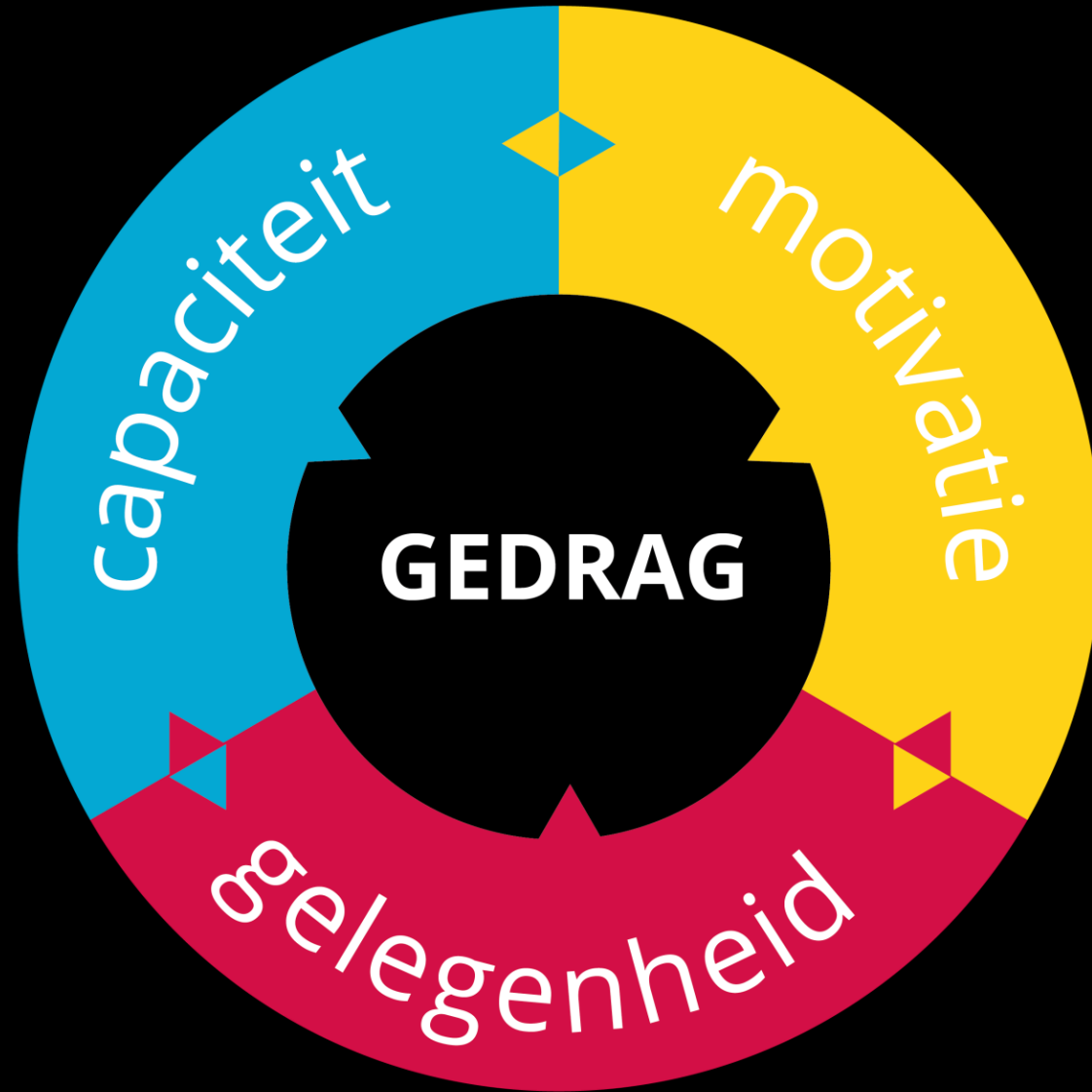


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CONDITIONS FOR BEHAVIOUR

Michie et al., 2018



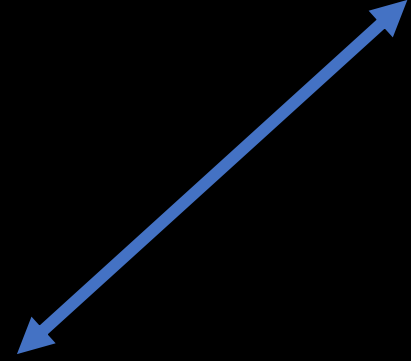
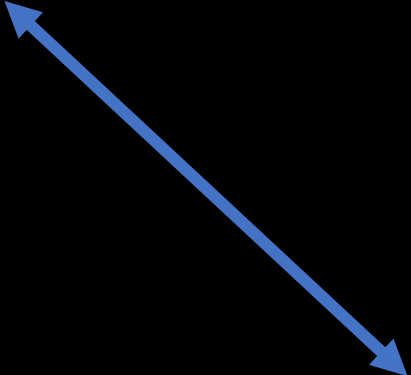
Able to

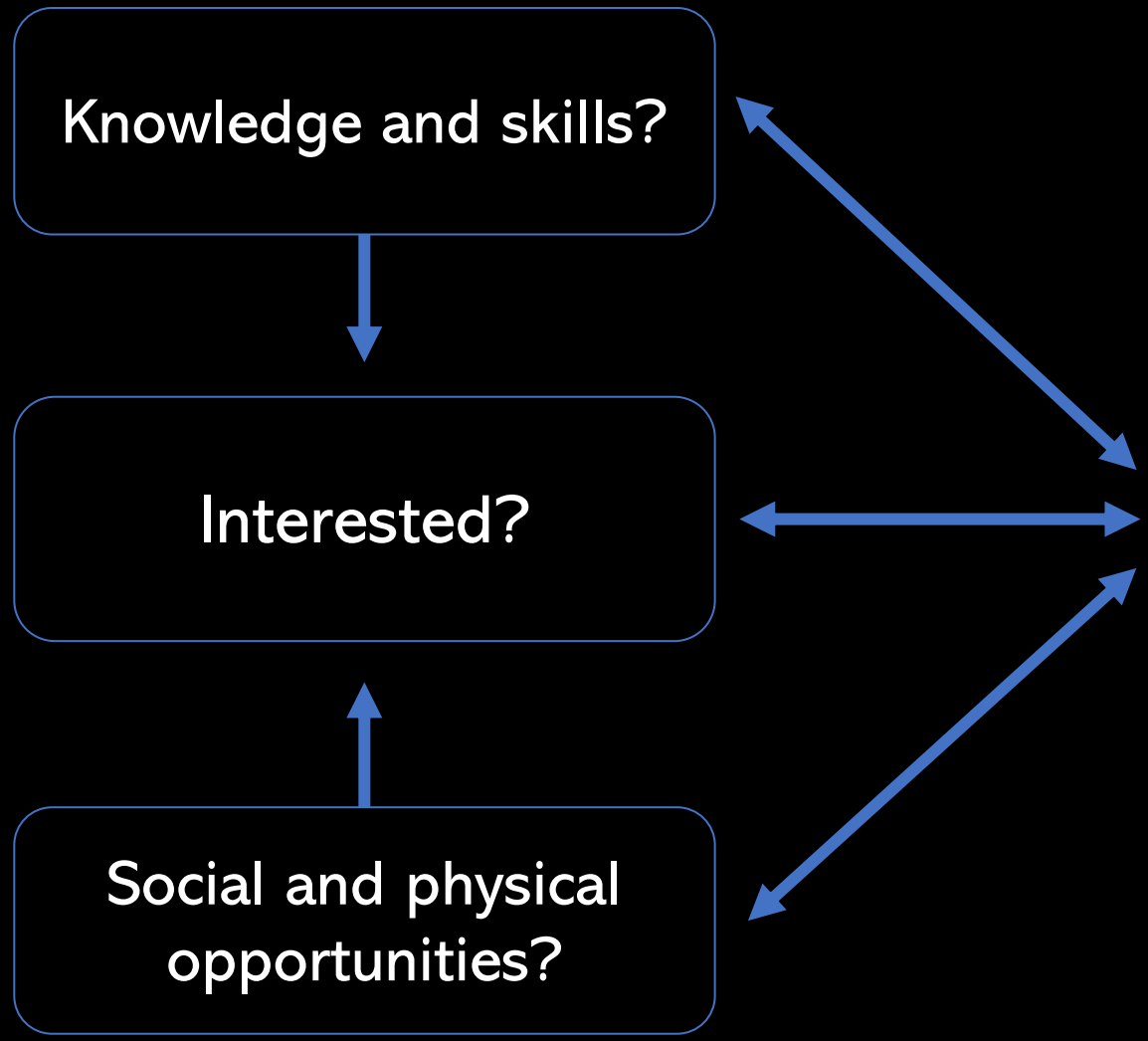


Feel like



Being near





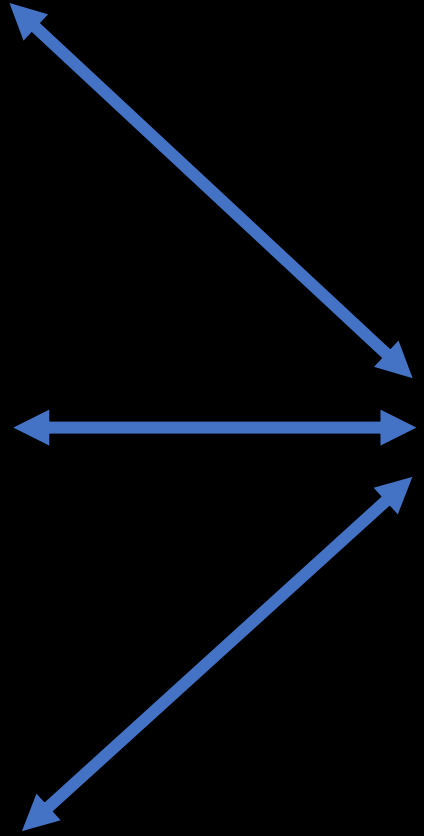
Capability



Motivation



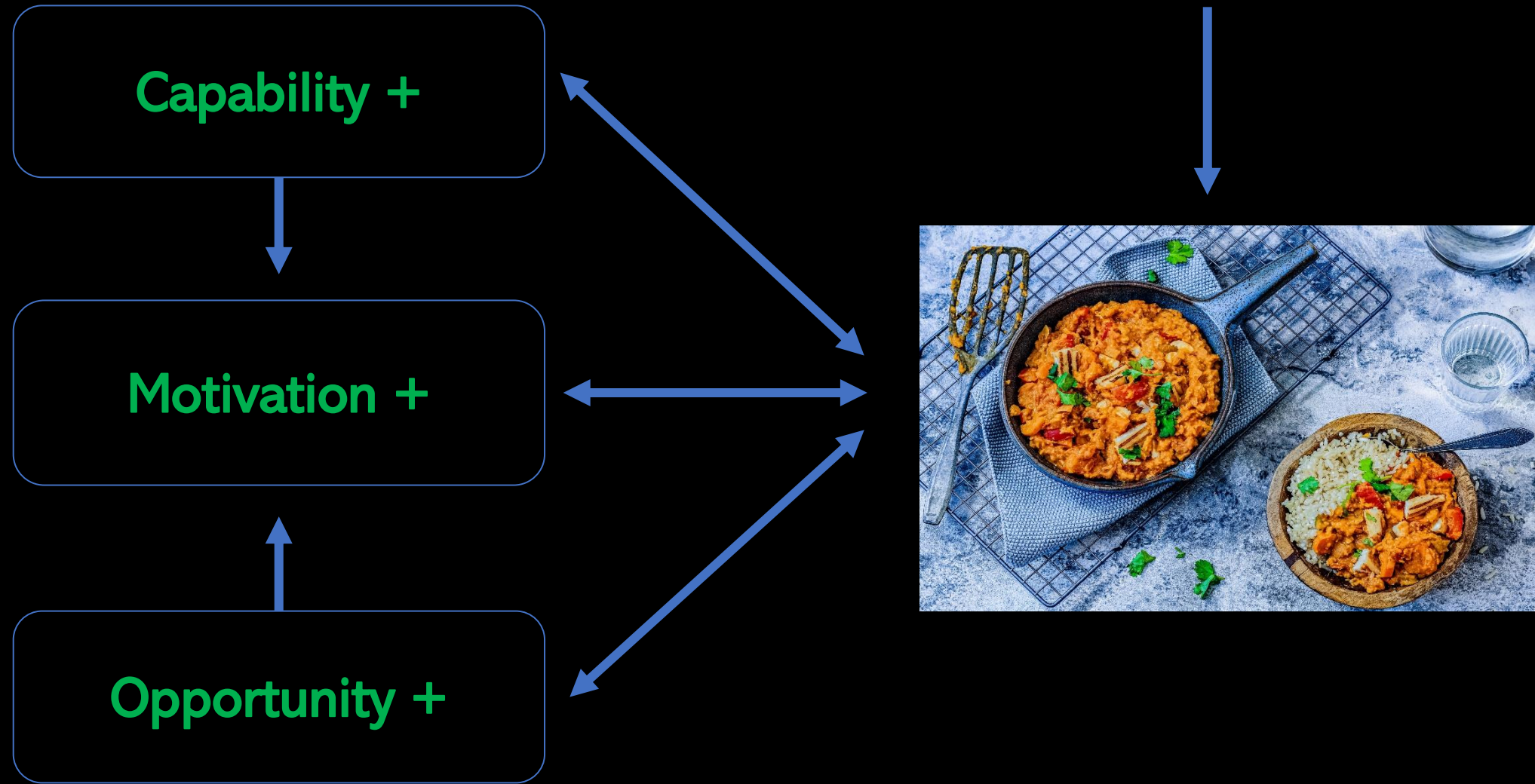
Opportunity



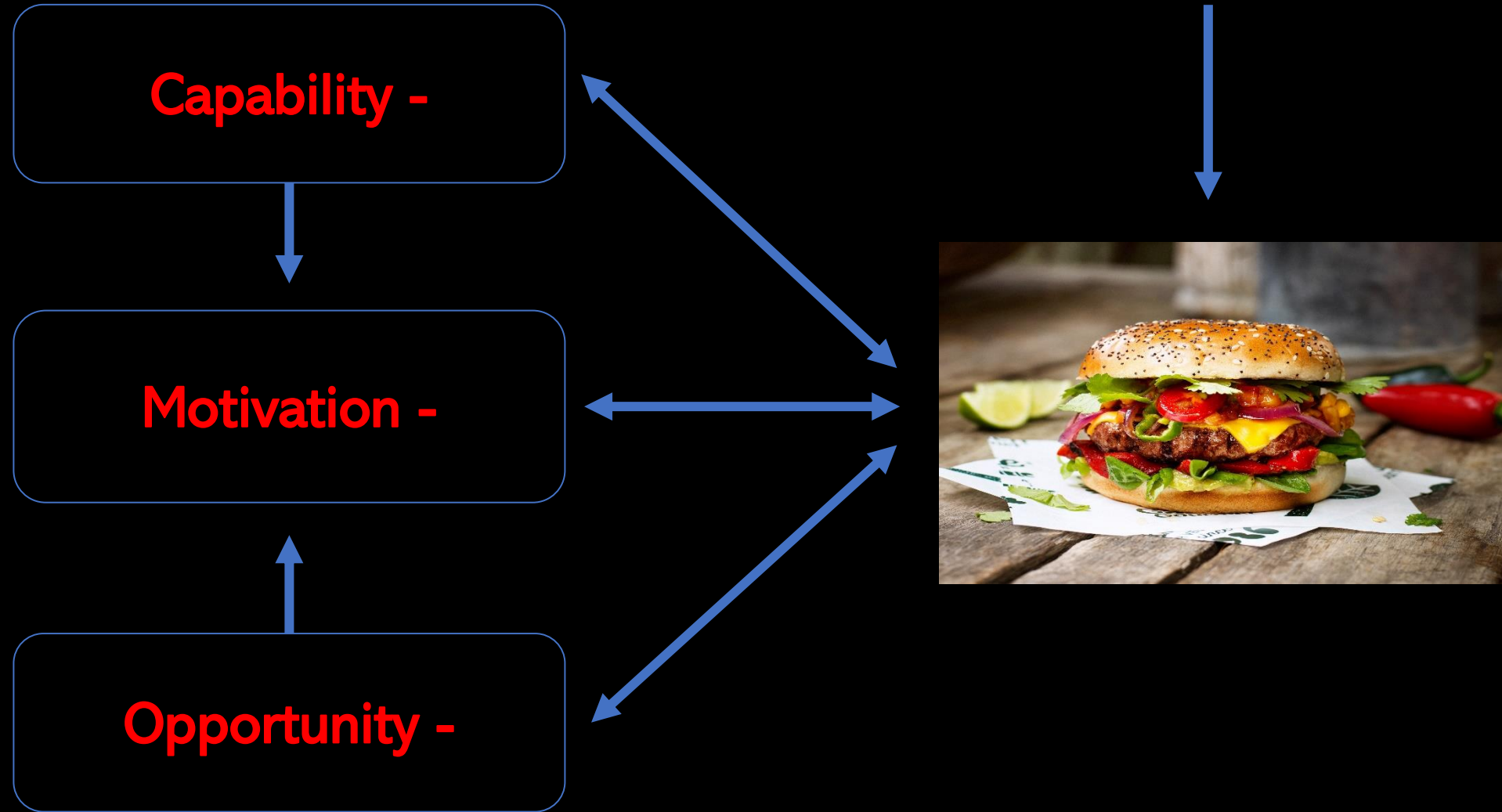
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Facilitating **new** behaviour



Inhibiting **existing** behaviour



Translate policy into effective measures

Fixers

Coaches

Education

Training

Sanctions

Enforcements

Regulations

Services

Pricing



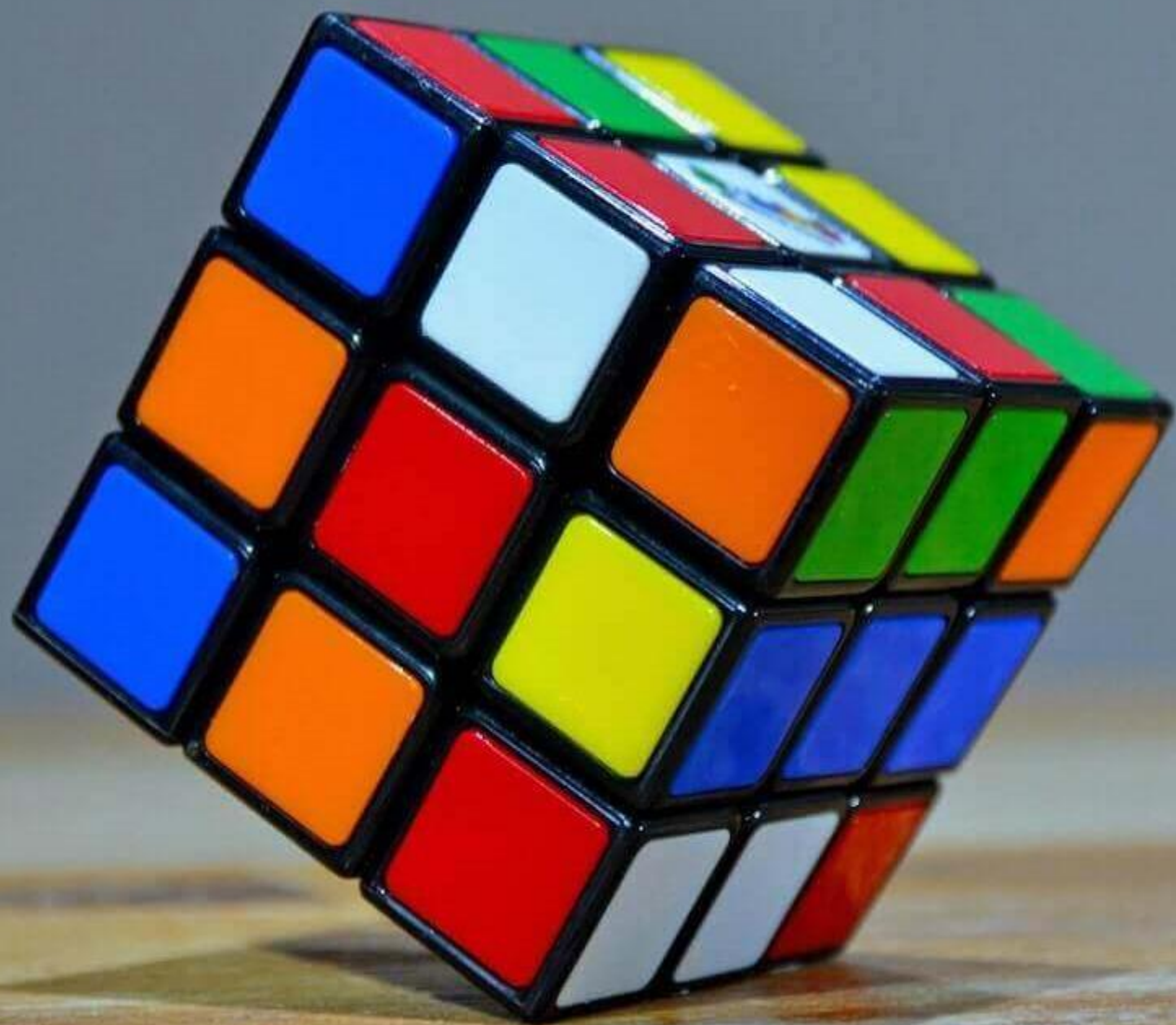
Communication

Ambassadors

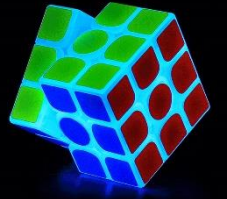
Social marketing

Grants

Sanctions



2x2x2



Unhealthy and
non-sustainable

(Un)Desirable

Healthy and
sustainable

Physical route

Social route

Physical route

Social route

1. Hassle

3. Unimportant

1. Easy

3. Important

2. Unattractive

4. Abnormal

2. Attractive

4. Normal

Out of the Climate Conundrum?



