



# Revisiting Climate Stabilisation Wedges:

## A framework for decarbonising the economy by 2050

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# Engagement with climate change

*"Individuals are actors who contribute to climate change, need to deal with its impacts, and identify, develop, support, and implement climate solutions, **involving them is not an option but an imperative.**"*



Aware of causes

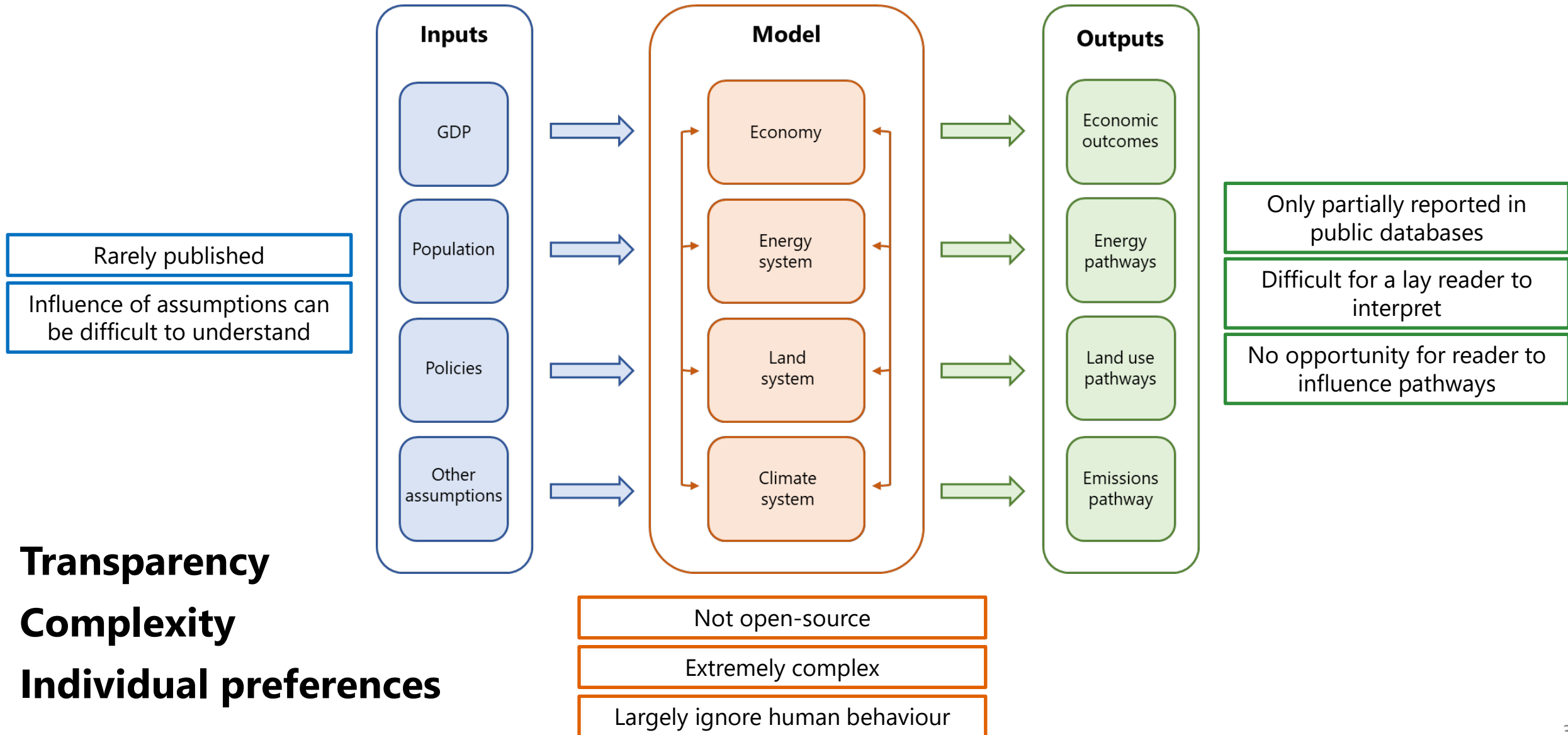


Aware of impacts

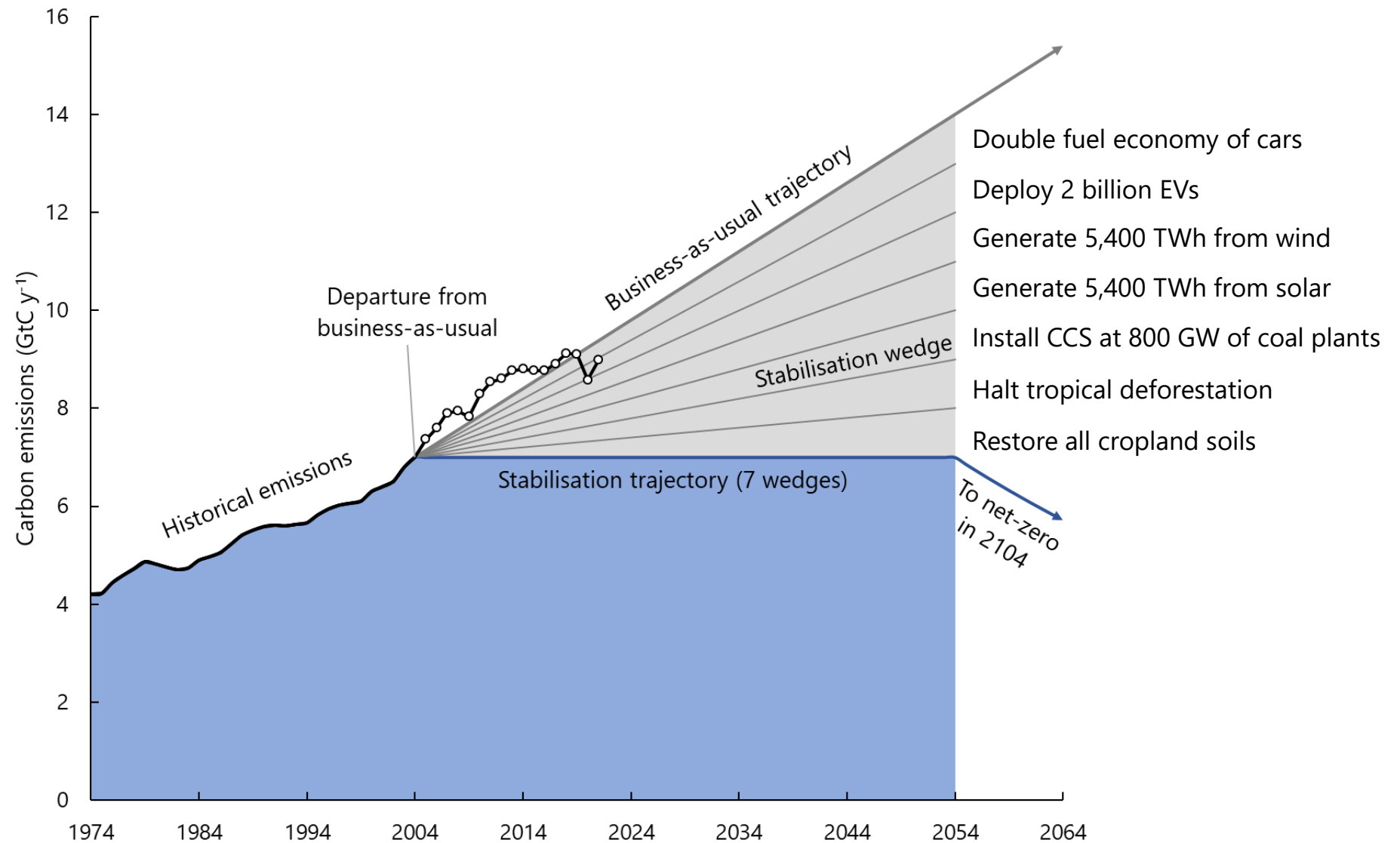


**Act to mitigate**

# Models and public engagement



# Simplifying with Stabilisation Wedges



# Aims and objectives

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The wedges are useful but outdated in terms of timeframe, ambition and scope.

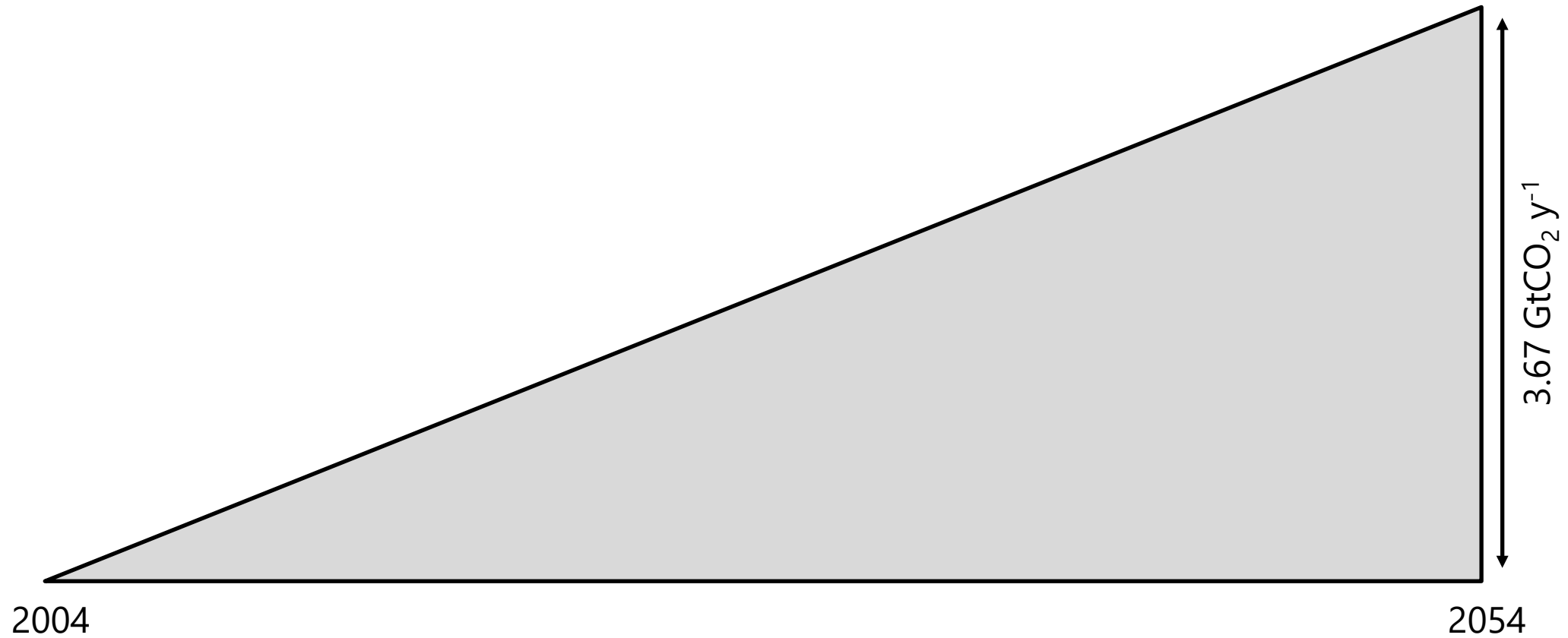
**Aim:** To make climate change discourse more accessible by updating the wedges with a new timeframe, more ambitious targets and more mitigation strategies.

## **Objectives:**

1. Redefine dimensions of a wedge
2. Determine relationship between wedges and temperature
3. Develop generic method for calculating wedges
4. Scope portfolio of mitigation strategies

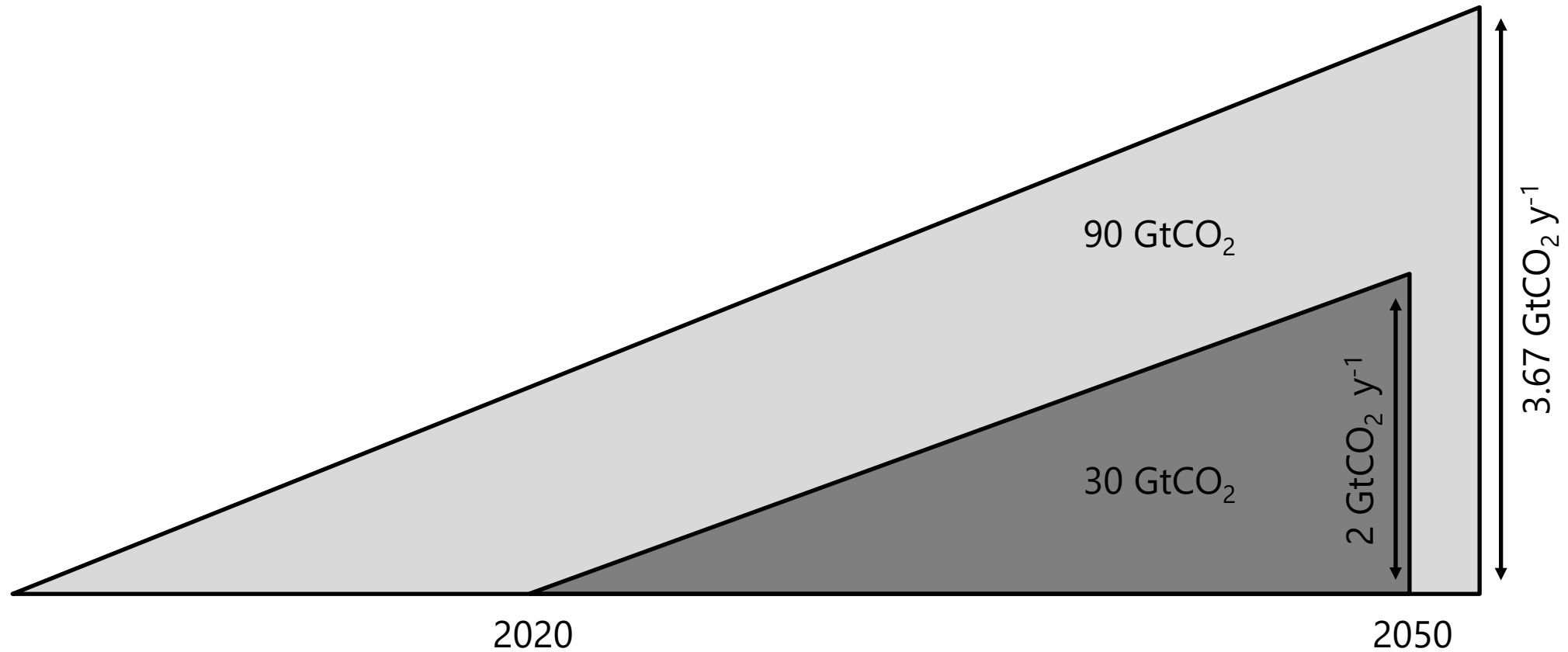
# 1. Redefining a wedge

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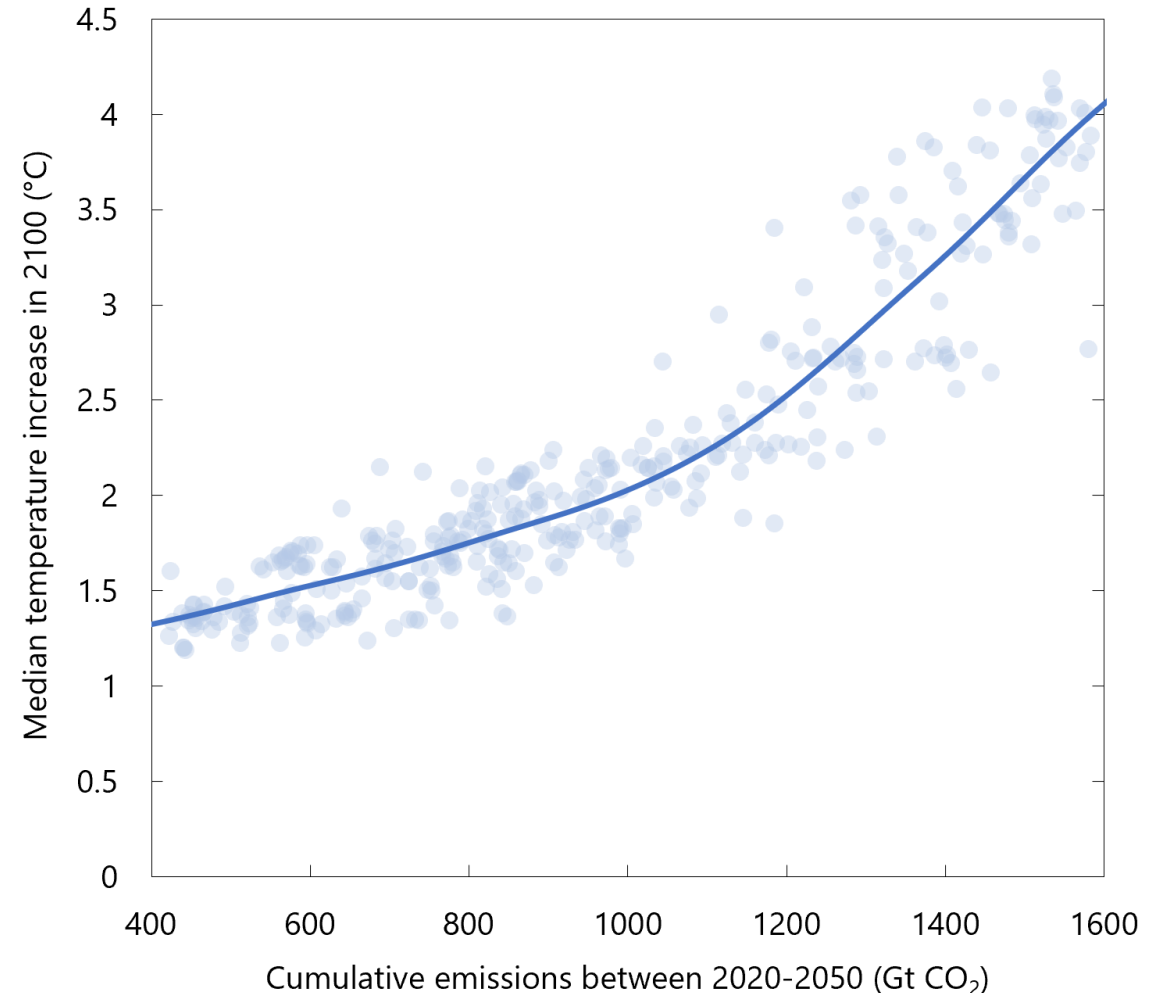
# 2. Relating wedges to temperature

## Transient climate response:

- 0.45°C (0.3–0.6°C) per 1,000 GtCO<sub>2</sub>
- A wedge is equal to 0.01 to 0.02°C

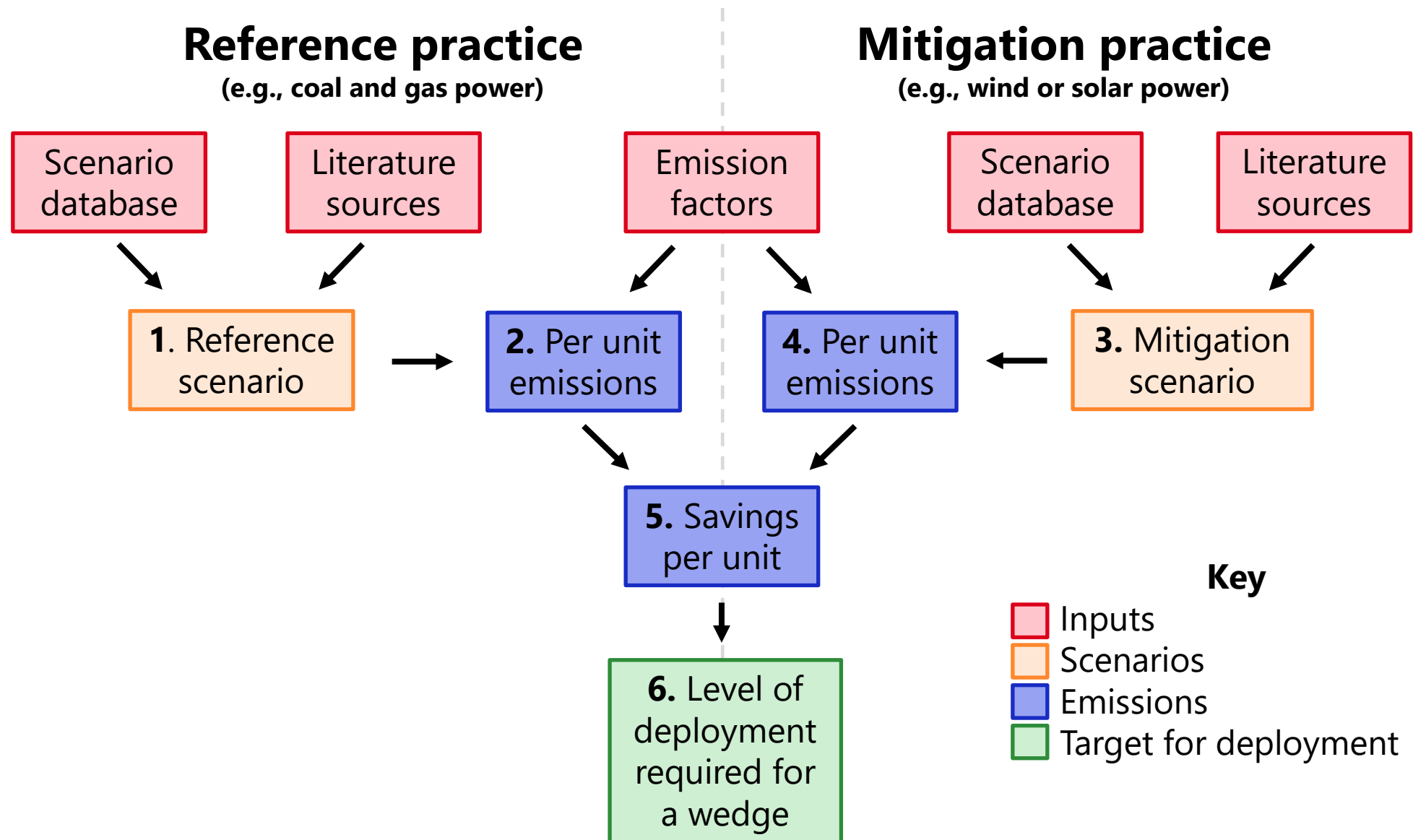
## Our approach:

- Warming usually estimated in 2100 and wedges only run to 2050...
- Relationship between cumulative emissions in 2020-2050 and warming in 2100 from IAM scenarios

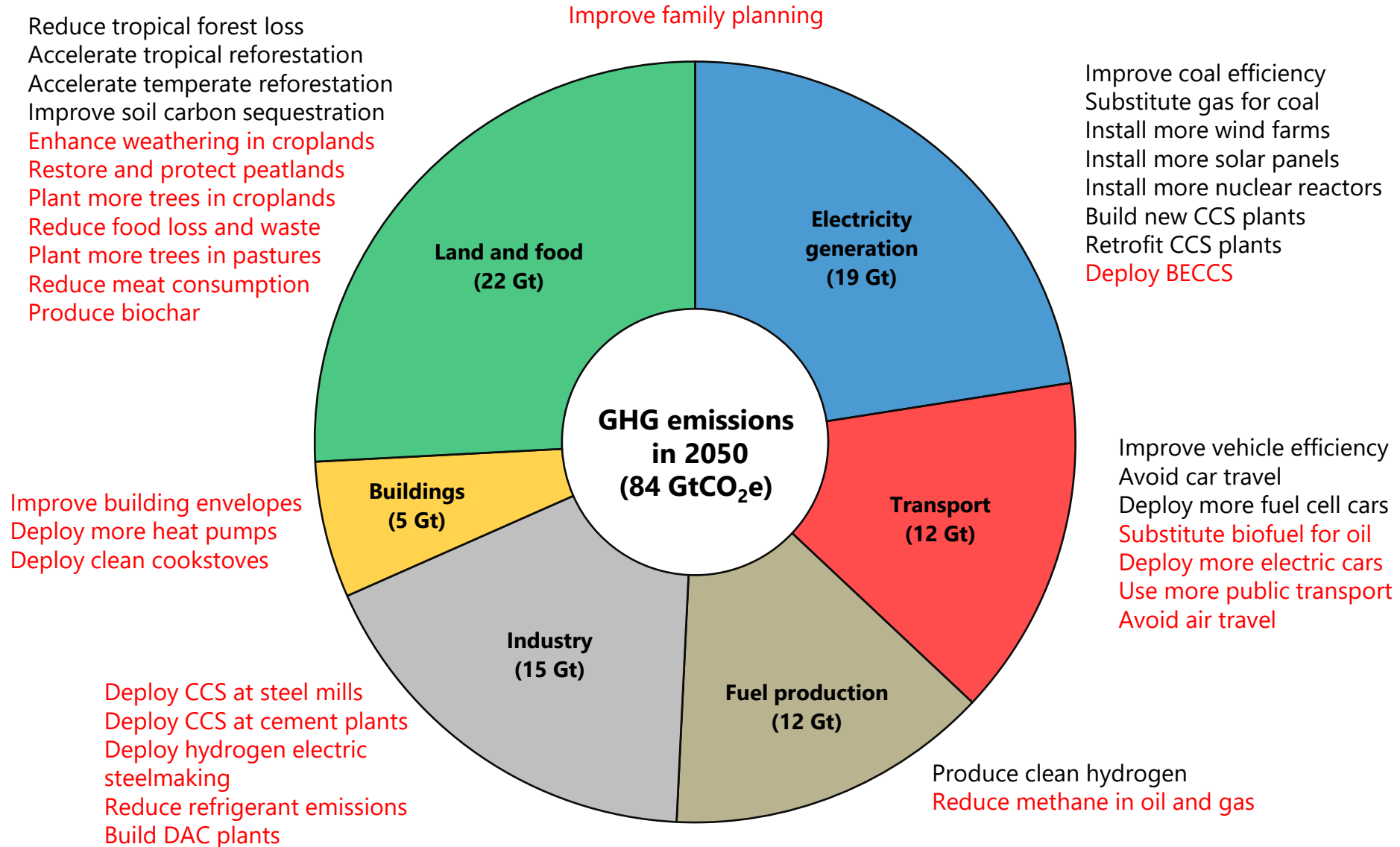




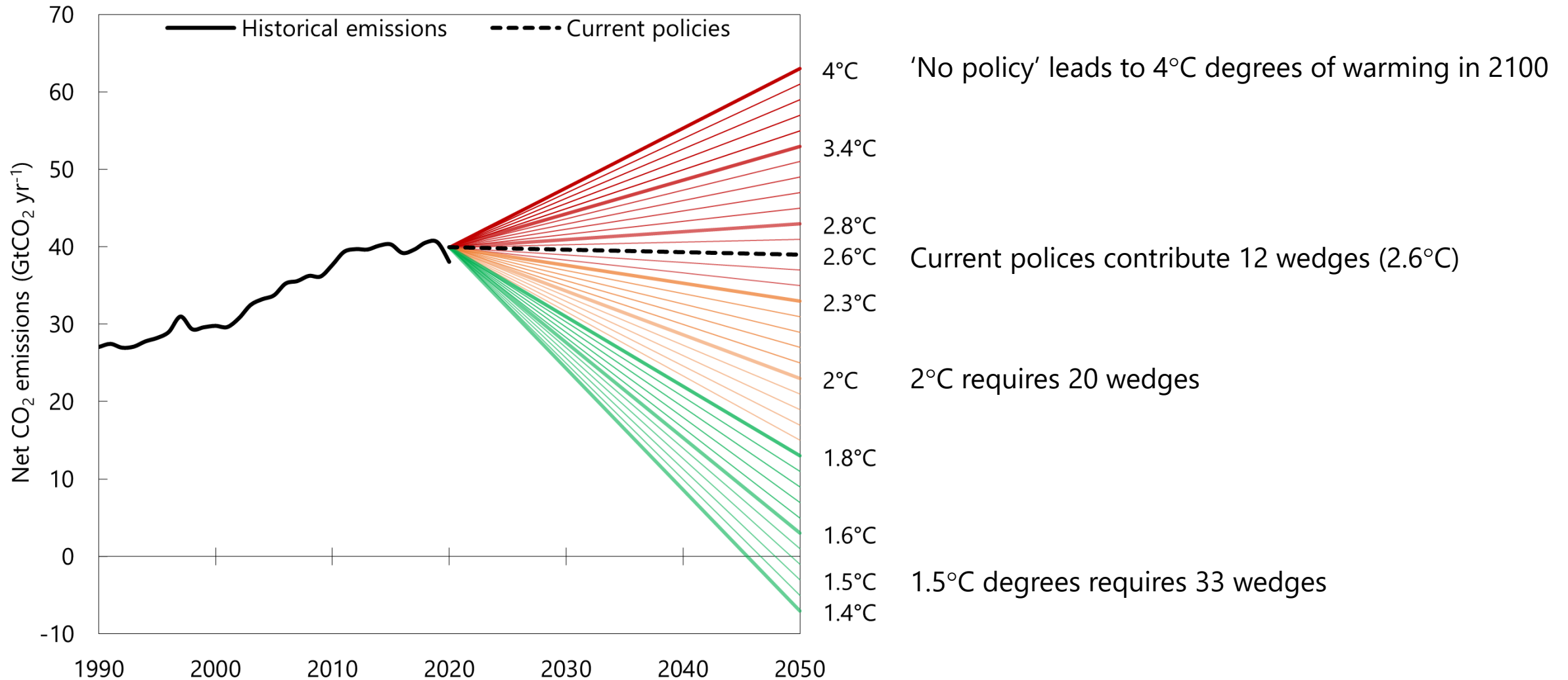
# 3. Developing generic method



# 4. Scoping strategies



# How many wedges are required?



# Technological strategies



**1.5 or 24 times**  
current installed  
on/offshore capacity



**3 times**  
current installed  
capacity



**900 million**  
electric vehicles  
with clean electricity



**10 times**  
current ethanol  
production



**2 times**  
current H<sub>2</sub> supply from  
clean sources



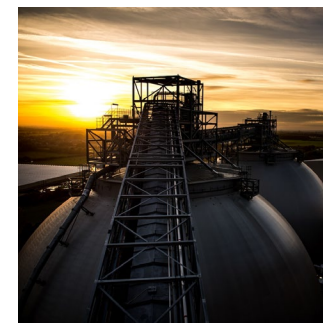
**3 times**  
current HP output  
with clean electricity



**Triple**  
projected insulation  
rates



**80%**  
of steel mills  
fitted with CCS



**40%**  
of current bioenergy  
supply to BECCS



**500,000**  
of the world's  
largest DAC plant

# Behavioural and natural strategies



**One-third**  
of car travel walked,  
cycled or avoided



**Two-thirds**  
of air travel  
avoided



**25% reduction**  
in meat intake for  
5 billion people



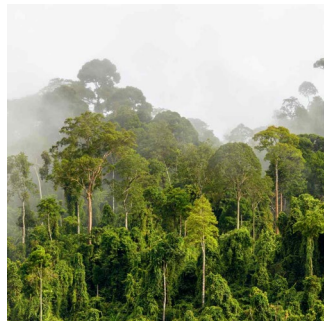
**Halve**  
global food  
loss and waste



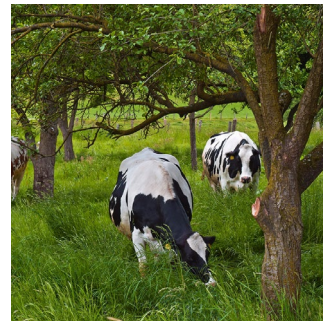
**One-fifth**  
of unintended births  
avoided



**Halve**  
historical tropical  
deforestation rates



**Double**  
historical tropical  
reforestation rate



**5%**  
of global pastures  
planted with trees



**Halt**  
drainage and rewet  
**90%** of drained area



**60%**  
of croplands under soil  
management practices

# Reflecting on the role of people

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- **People** sit at the very core of climate change
- **People** have very different views on climate solutions
- Typical models of mitigation have failed to reach **people**
- **People** must play a role in decision-making
- Wedges arm **people** with a simple language to discuss climate change

*"Simplicity is the ultimate sophistication"* – Leonardo da Vinci

**Thank you**