

# From Niches to Norms: The Promise of Social Tipping Interventions to Scale Climate Action

Points de Bascule et Prévisibilité



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# Beyond the Standard Model: Some Lessons from Economic Experiments

(Global) Public Good provision is **negatively** affected by:

- **Scientific uncertainty** about the objective (temperature target, investment)
- **Strategic uncertainty** about the choices of others
- **Inequality** in responsibility and ability to pay
- Hierarchical decision-making (**delegation**): delegates contribute less than self-representing individuals

# Beyond the Standard Model: Some Lessons from Economic Experiments

(Global) Public Good provision is **positively** affected by:

- **Communication** mechanisms (coordination)
- **Punishment** institutions (peer sanctions)
- **Coalitions** of the willing (leadership)
- Positive **coalition spillovers** catalyse cooperation by the fringe, but weaken the incentives to sign
- Minilateral bargaining and conditional cooperation (**conditional pledges**)
- ~~Early action~~
- ~~Equal burden sharing~~ (to tackle uncertainty and counter inequality)

# Implications for Negotiations

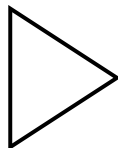
- Willingness of the rich to concede early advantage & willingness of the poor to trust them
- Actual negotiations are framed in a way that makes this concession difficult: future emission reductions wrt base year
- BAU emission growth paths unobservable => **comparability problem** (states ignore if pledges imply equal sacrifices)
- Negotiations should be reframed to bring **equity concerns** out in the open
- One has to be cautious about introducing costly punishment institutions: delegates contribute less and punish more than self-representing individuals

# Alternatives to the PGG framework

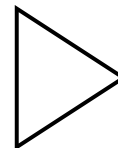
- Scaling up
- Coordination
- Social comparison
- Path dependency (inertia)
- Abrupt non-linear change in attitudes (norms shift)



August 2018: 1



March 2019: 1.4 MLN

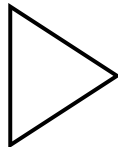


September 2019: 6 MLN

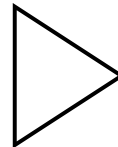




August 2018: 1



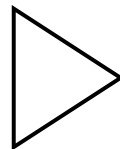
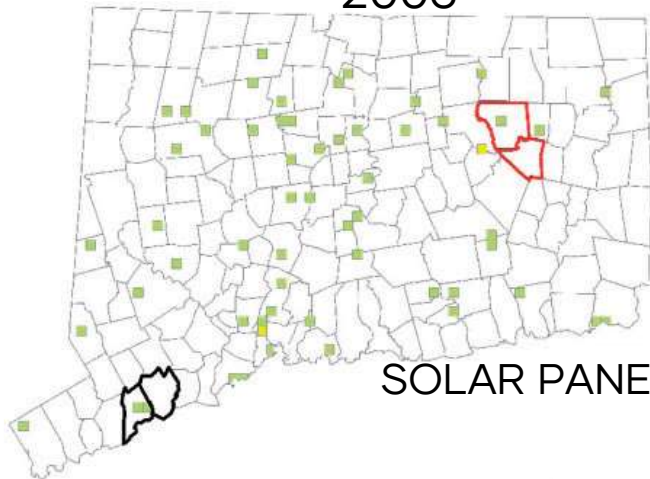
March 2019: 1.4MLN



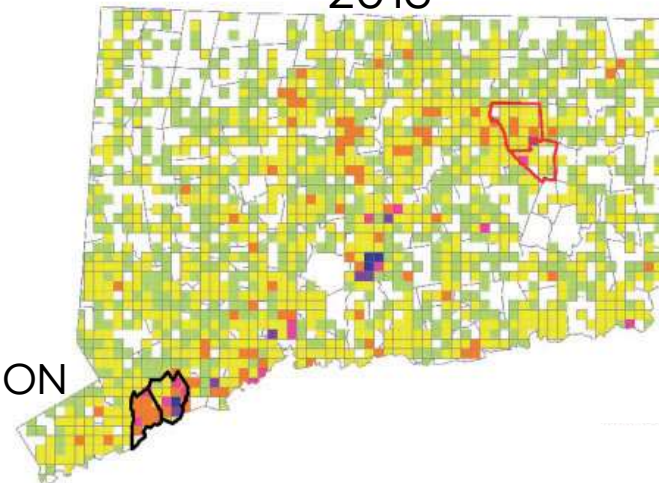
September 2019: 6M MLN



2005



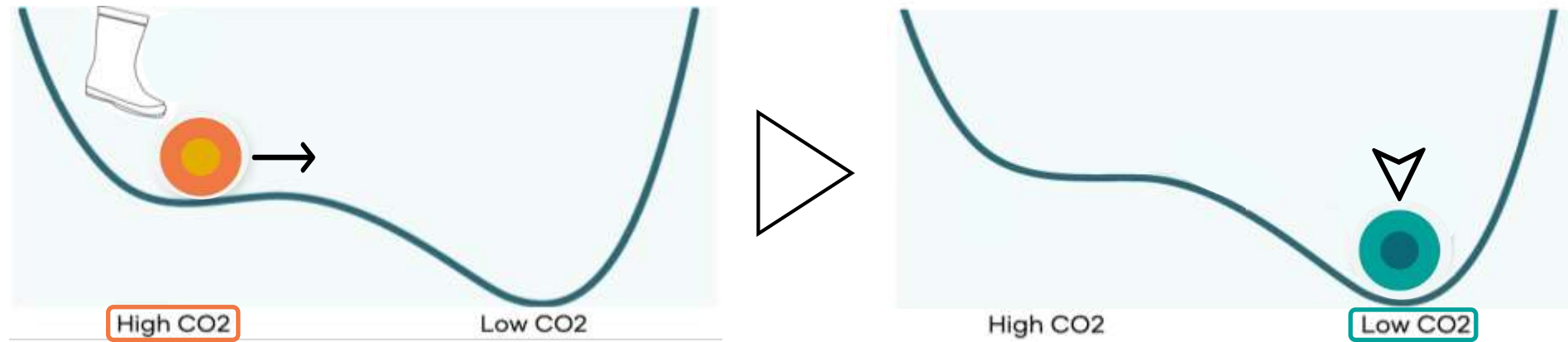
2013



SOLAR PANELS CONTAGION



# SOCIAL TIPPING INTERVENTION

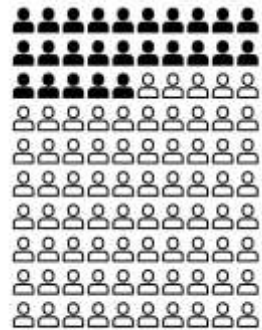
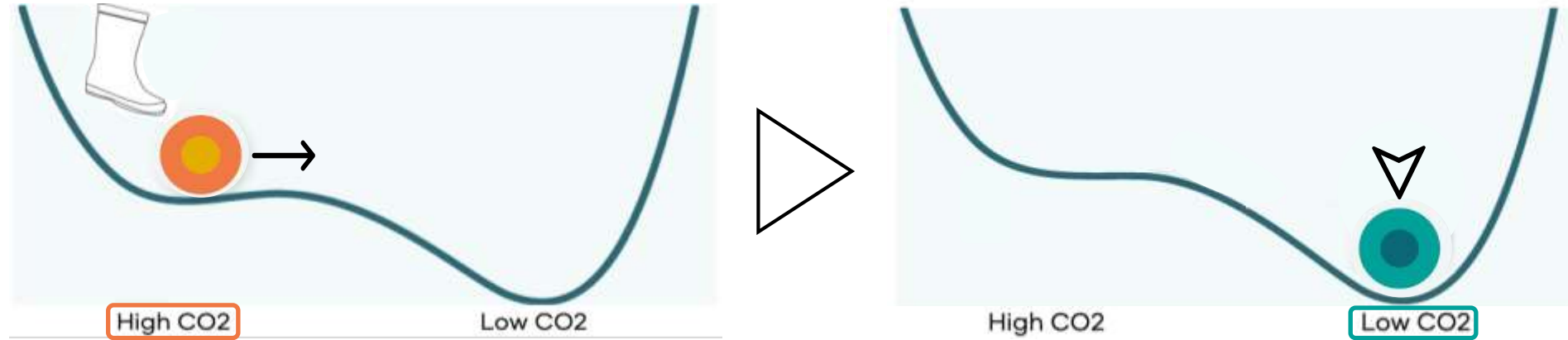


Small intervention ("kick") that drives the system into a new stable equilibrium

Leading to disproportionate and irreversible changes

This is critical, since the targets of the Paris Agreement are now beyond the reach of incrementalism

# SOCIAL TIPPING INTERVENTION



25%

Small intervention ("kick") that drives the system into a new stable equilibrium

Leading to disproportionate and irreversible changes

When the share of adopters of a new behavior reaches a threshold of 25% , followers will quickly join the initial minority, establishing a new norm

# Main Features

## **BOX 1 Characteristics of social tipping points for sustainability**

State change in the social components of linked social-environmental systems.

Nonlinearity (speed).

Positive feedback as change mechanism.

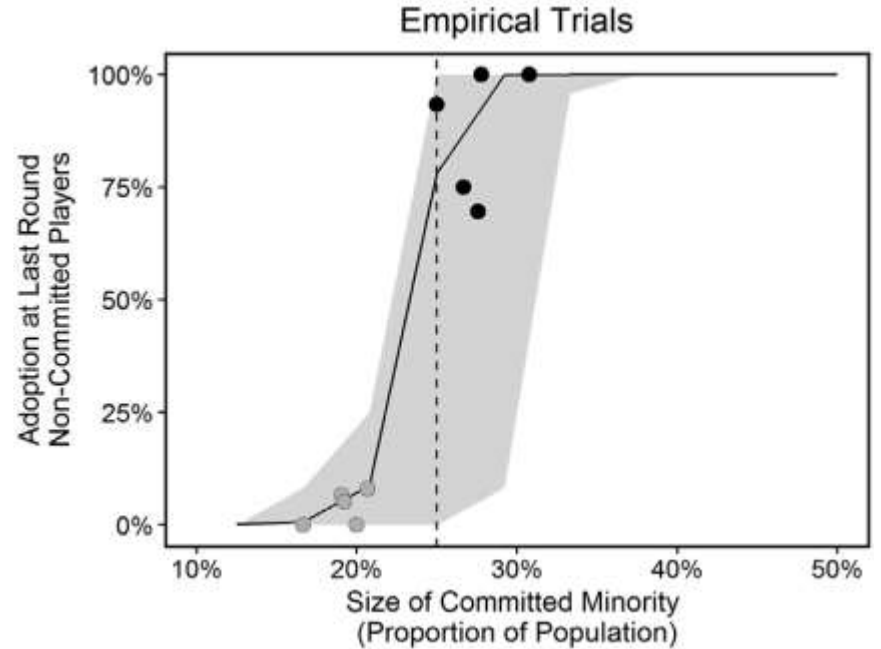
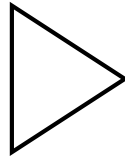
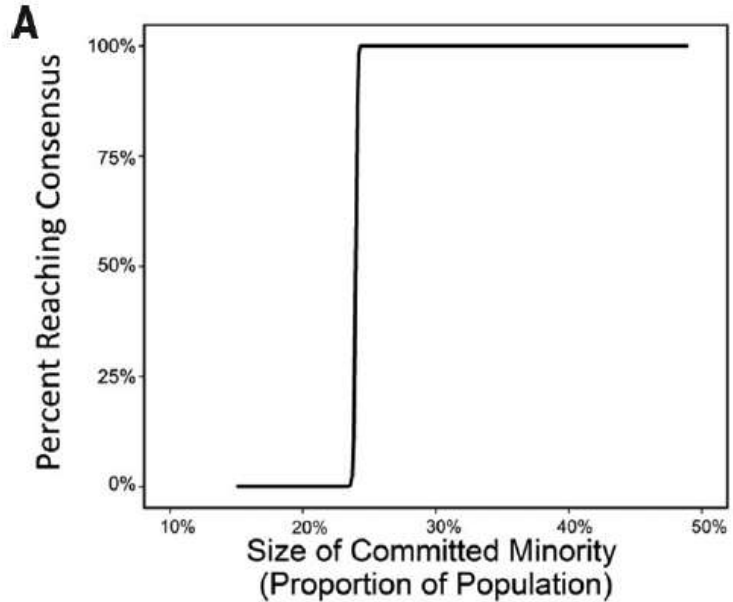
Limited reversibility.

Desirability.

Intentionality.

In support of decarbonization/sustainability.

# Tipping in Online Communities (Centola et al., 2018)



# Tipping in the lab (Andreoni et al., 2021)

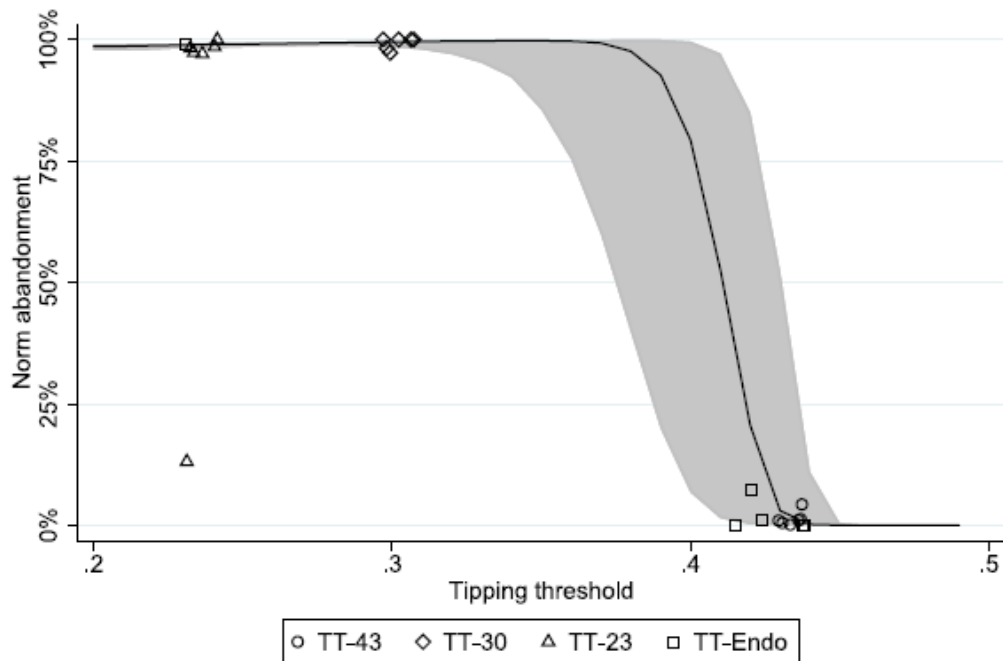
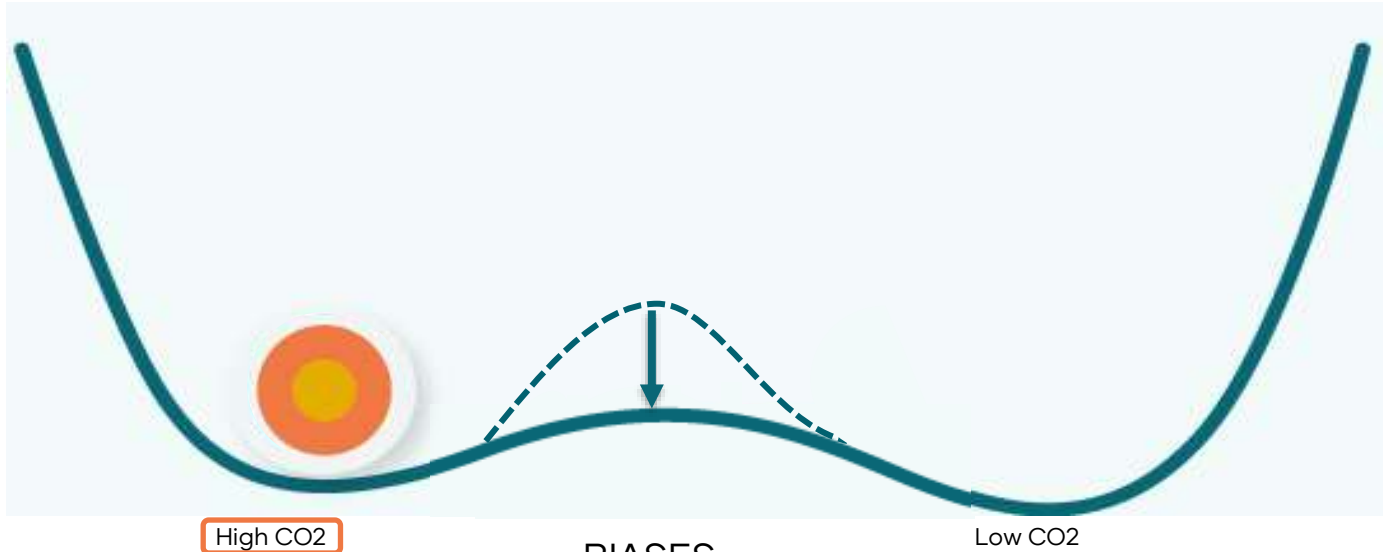


Fig. 4. Norm abandonment as a function of the tipping threshold. The tipping threshold is a critical determinant of the likelihood to observe change. Each marker represents the percentage of subjects in the last five periods that abandoned Blue in a given experimental society. Also shown is

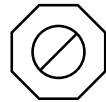
# OVERCOMING OBSTACLES TO CHANGE



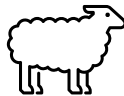
High CO2

Low CO2

## BIASES



Inertia



Conformism

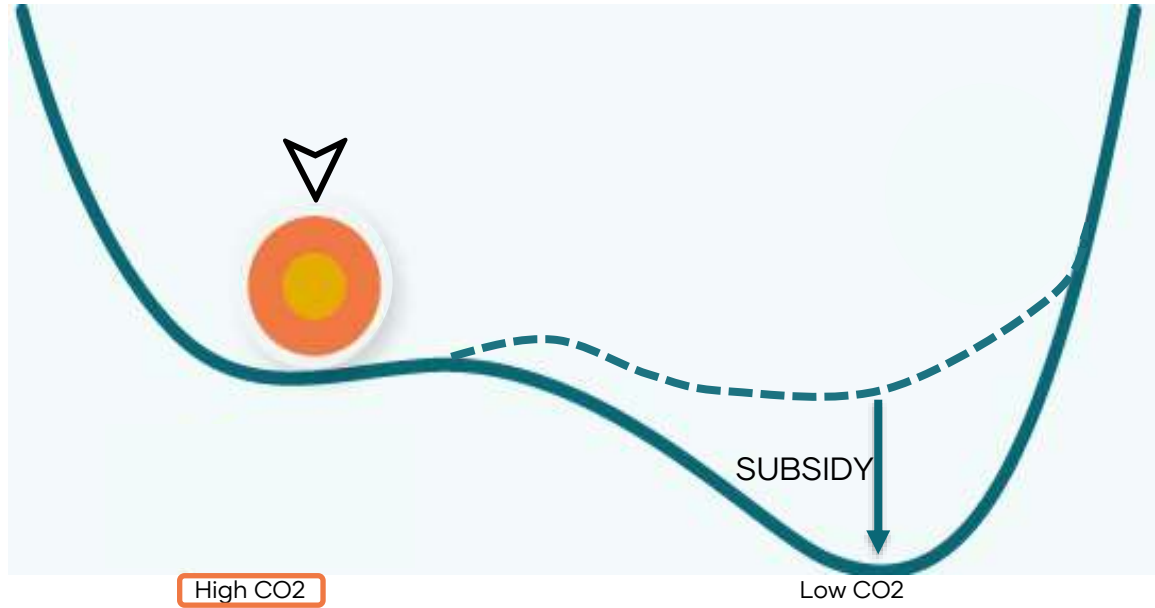


Misperceptions

**Conformism** has been shown to halve the effect of taxes and subsidies to promote water conservation



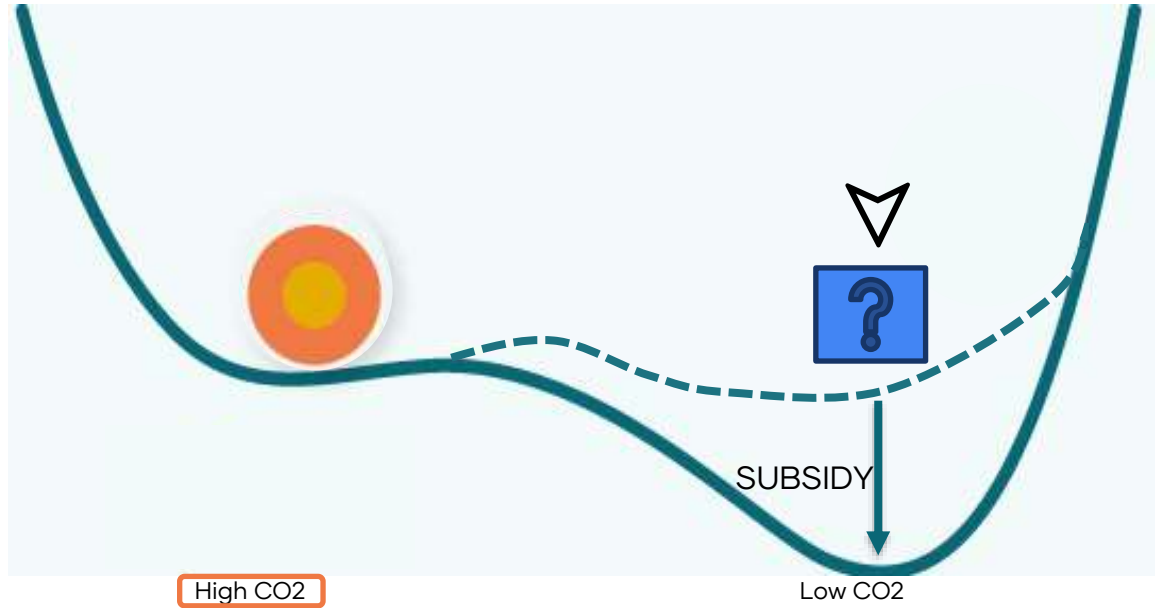
# SUPPLY-SIDE POLICY



Traditional supply-side policies are needed to nurture low-carbon alternatives

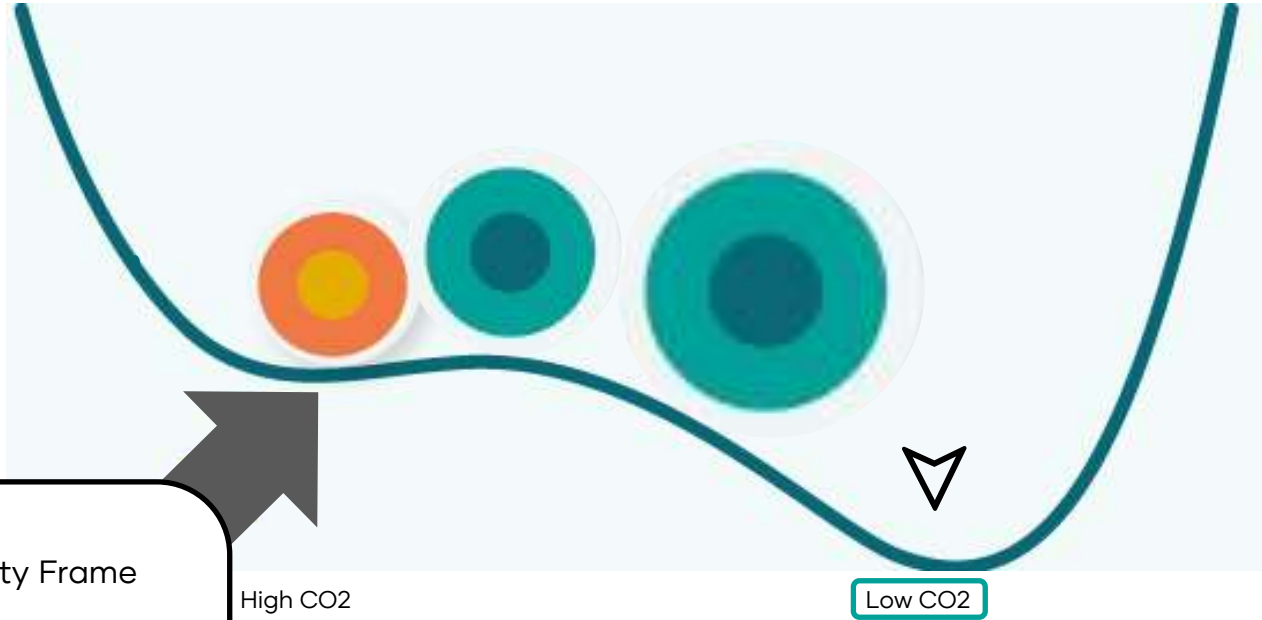
But adoption does not follow automatically: the ball might not roll down without targeted interventions!

# SUPPLY-SIDE ENABLERS



A rapid transition requires complimentary interventions that leverage our tendency to be influenced by social interactions

# DEMAND-SIDE ENABLERS



## INTERVENTIONS



Responsibility Frame



Image Concerns



Agency



Conditional Cooperation

High CO2

Low CO2

Building on the enabling mechanisms listed here, demand-side interventions hold promise for snowballing

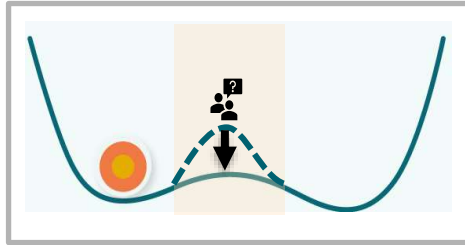
# GREEN TIPPING

ERC Consolidator Project



# OVERVIEW

1 POSIT



Theory



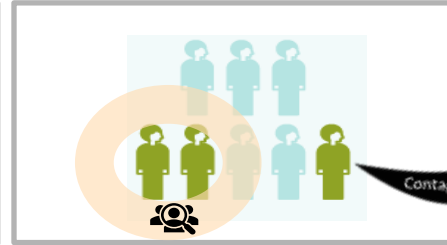
2 TEST



Online surveys



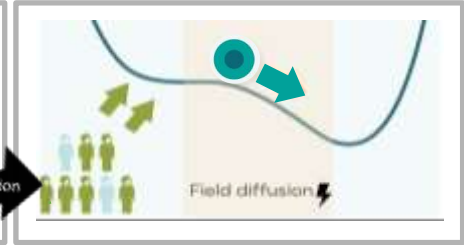
3 REFINE



Data & lab

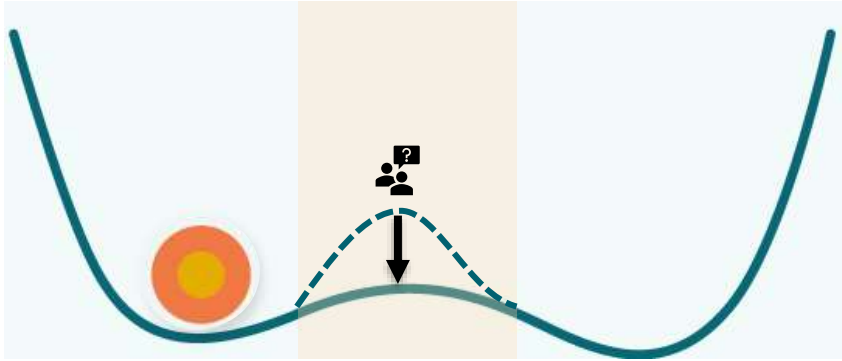


4 VALIDATE



Field experiment

# 1 POSIT



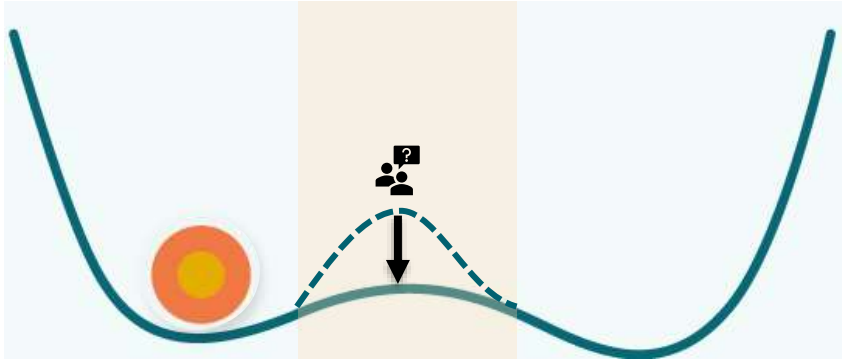
POTENTIAL TO OVERCOME RESISTANCE

When can we expect change?

What is the role of biases on propagation speed?



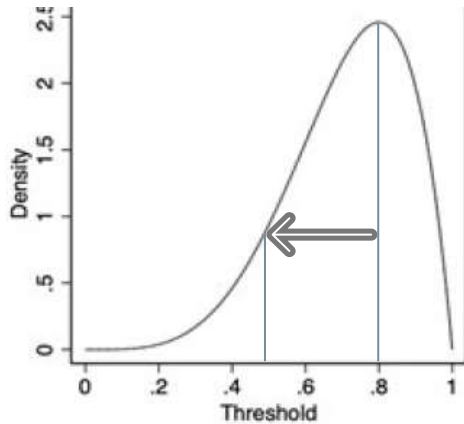
# 1 POSIT



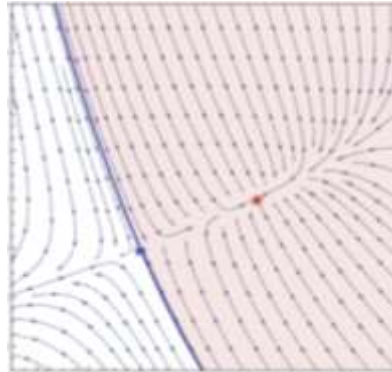
## Theory

- Threshold Models
- Evolutionary Game Theory

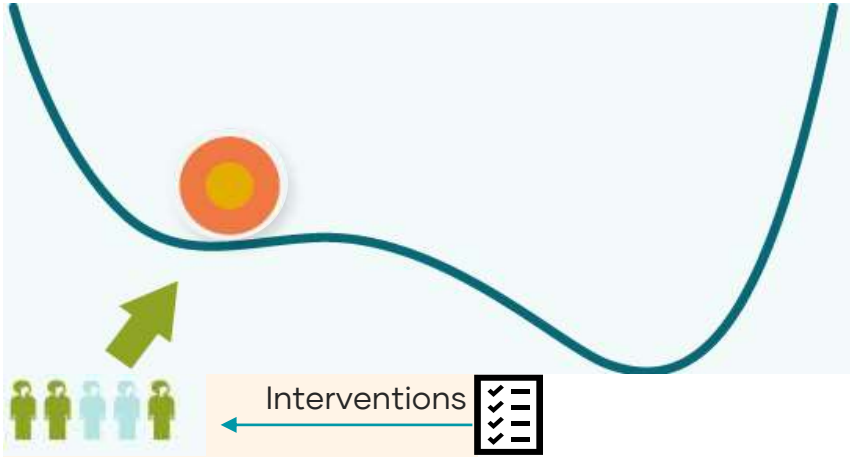
### Adoption thresholds



### Imitation dynamics



## 2 TEST

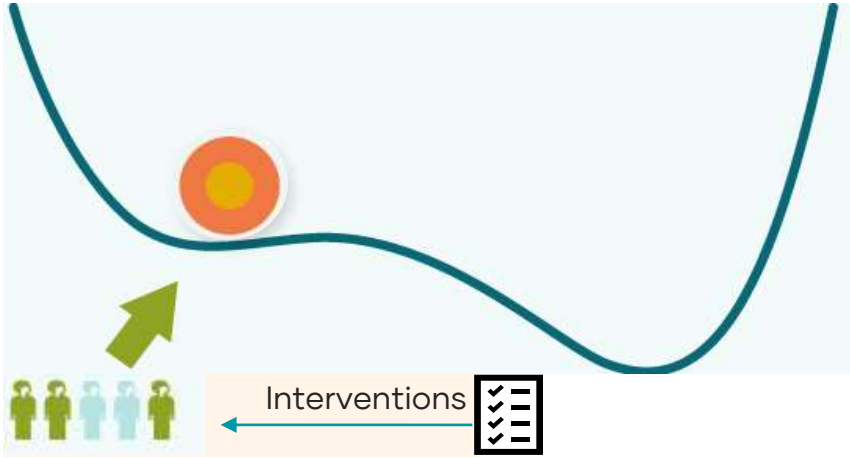


TIPPING ON 15K CITIZENS

What are the most effective interventions?


Can we replicate successful interventions?

## 2 TEST



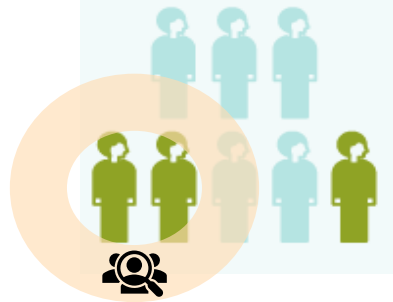
Survey elicitations

- Representative online experiments

Donations pre-intervention  

Donations post-intervention   

### 3 REFINE

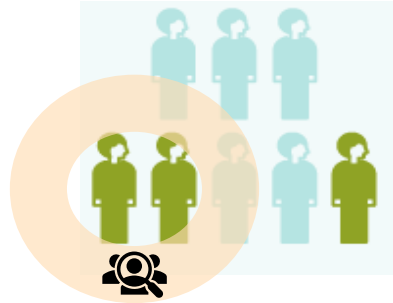


DETECTING TARGETS

Who are the instigators of change?

Under which conditions will coordinate with the others?

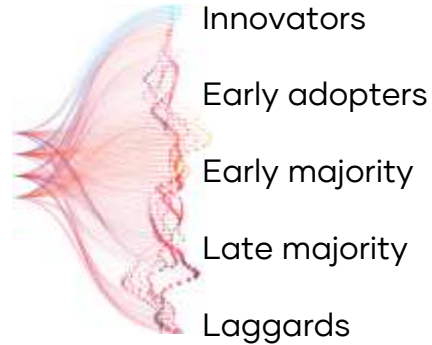
### 3 REFINE



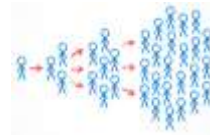
#### Data & Lab experiments

- Data-driven algorithms
- Controlled experiments

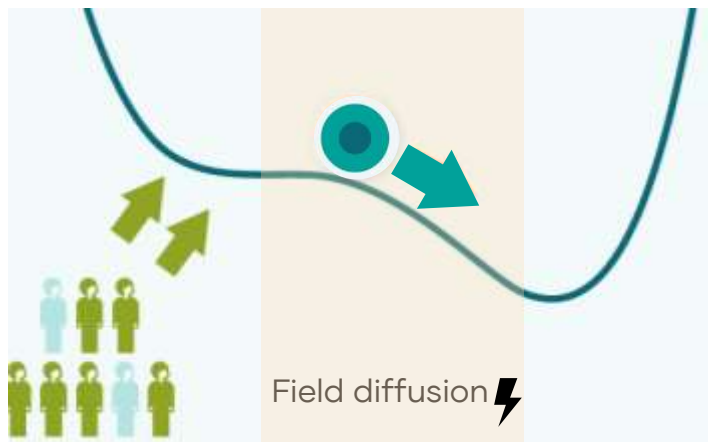
Behavioral profiling



Norm coordination



## 4 VALIDATE



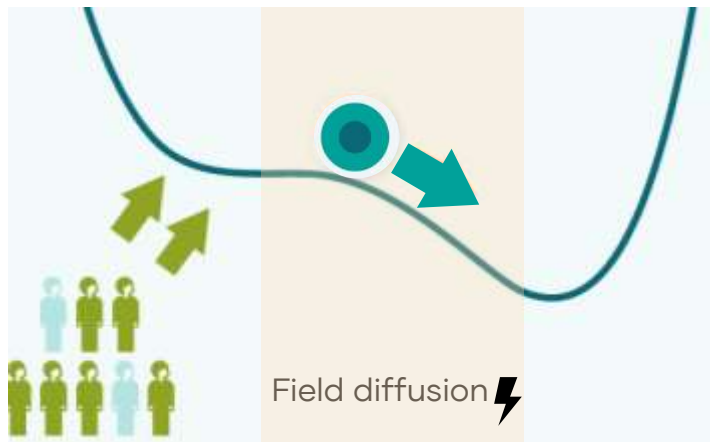
POWERING UP GREEN ENERGY USE

Do the findings hold in field and for another behavior?

Does contagion spread to the untreated?



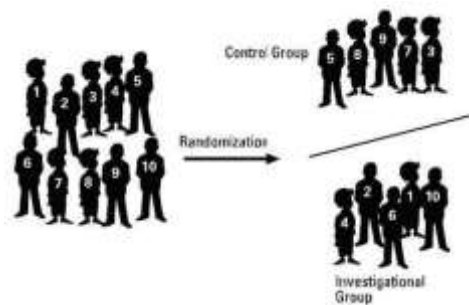
## 4 VALIDATE



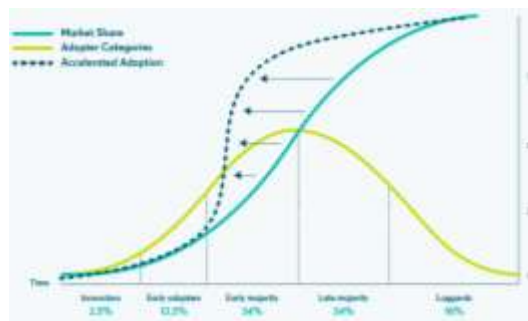
### Field experiments

- Randomized controlled trials

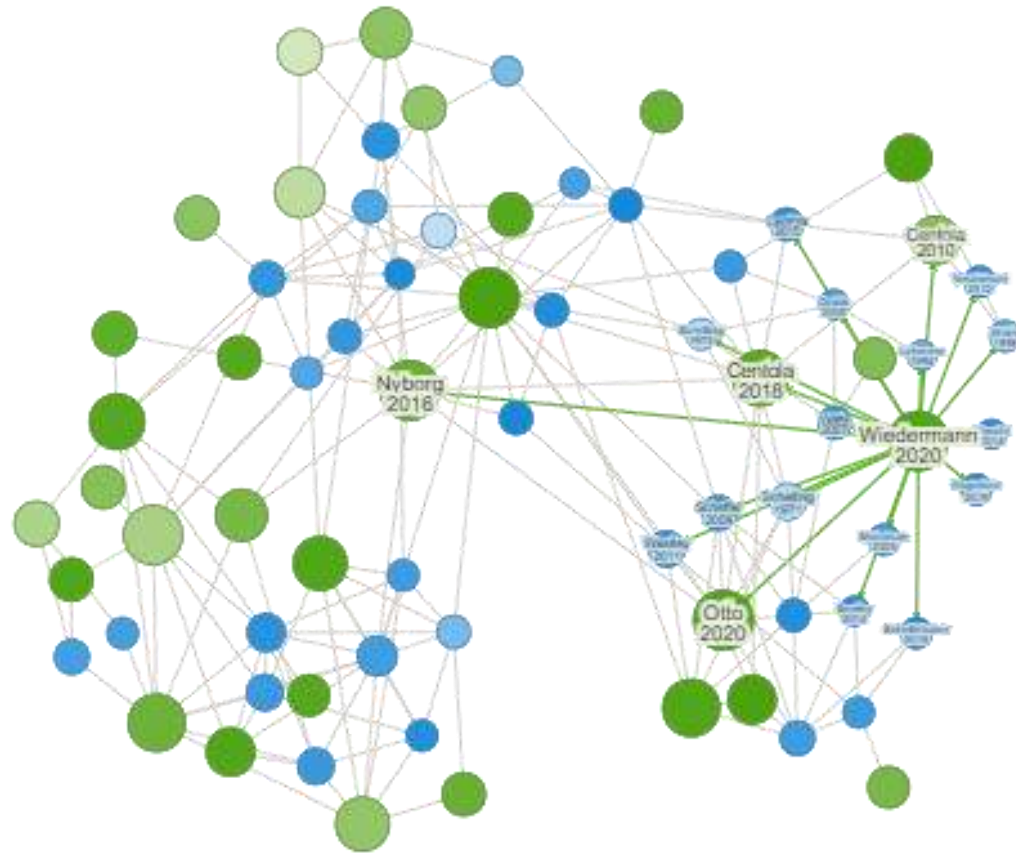
### ☐ Targeted interventions



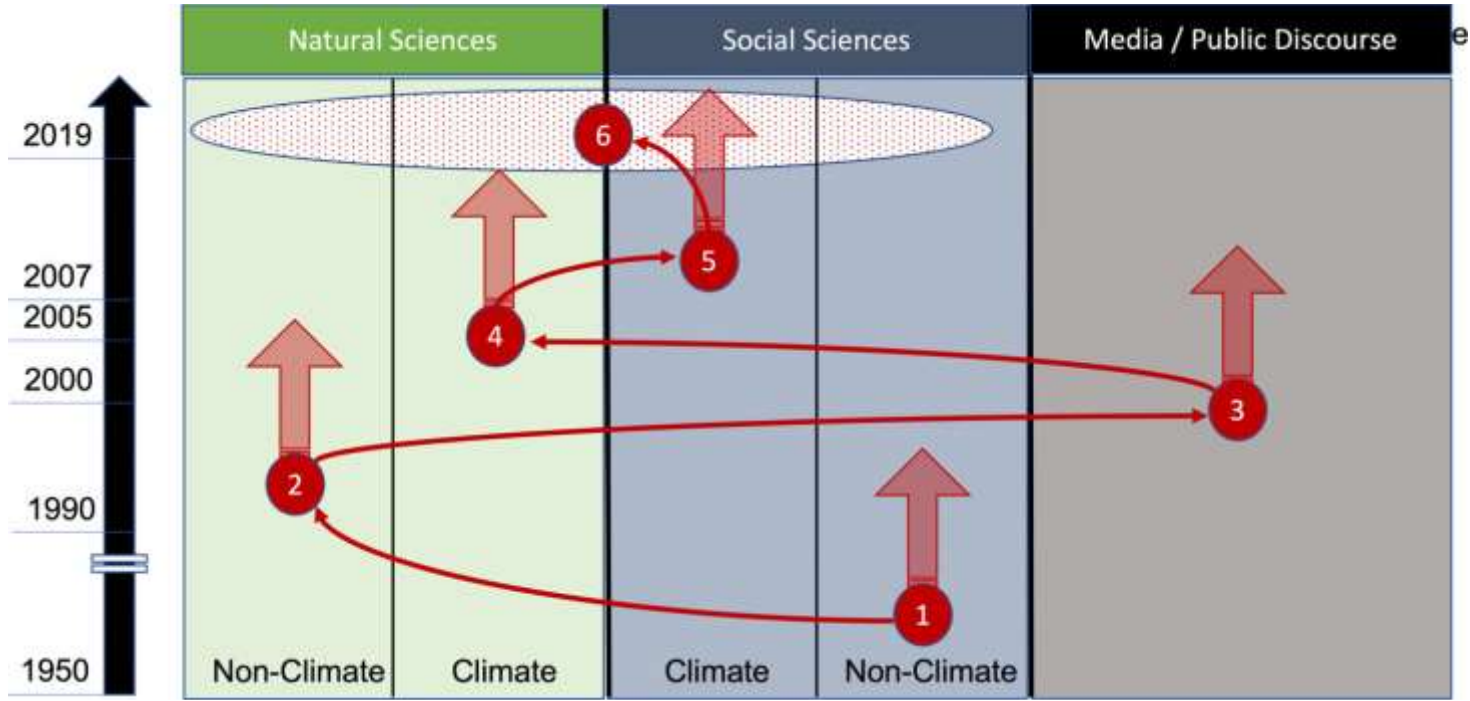
### ☐ Diffusion from 10K to followers



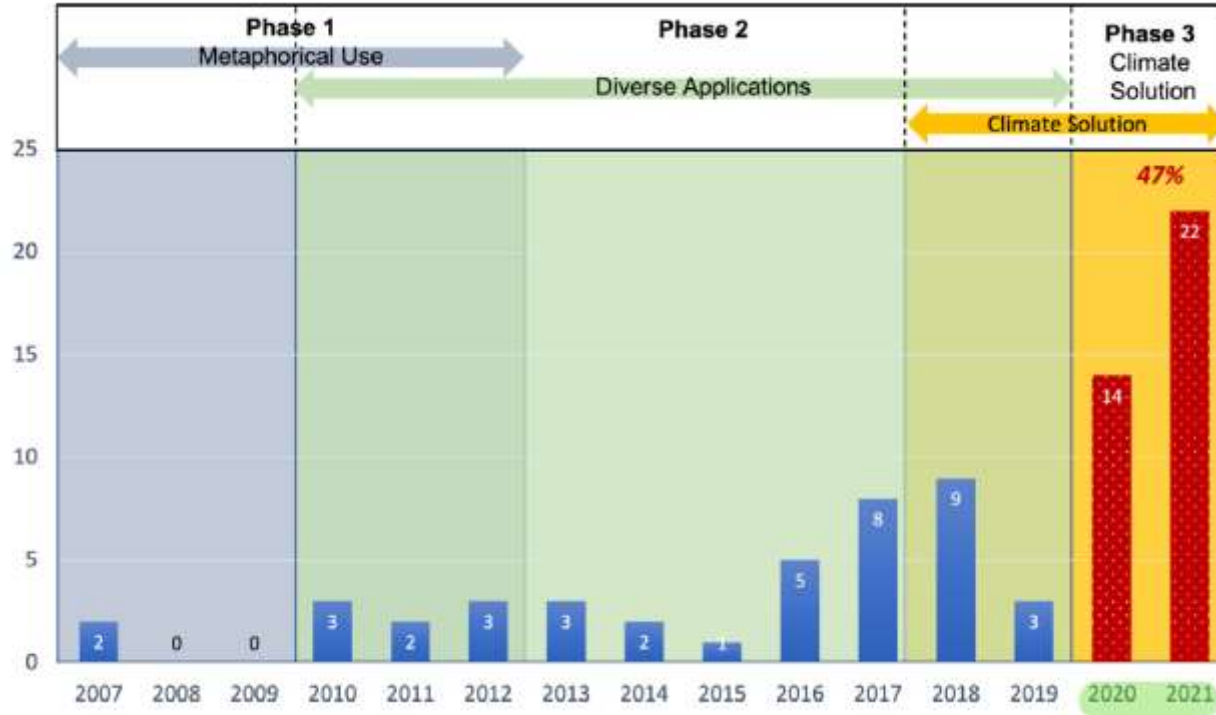
# Tipping in the Academic Network



# History of Tipping Point (Milkoreit, 2022)



# History of Tipping Point (Milkoreit, 2022)



# Criticism of Social Tipping Use (Milkoreit, 2022)

1. Premature labeling
2. Not defining system boundaries and scales of analysis
3. Not providing evidence for tipping criteria
4. (Not) using social theory

# Some References

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# Thank you!

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