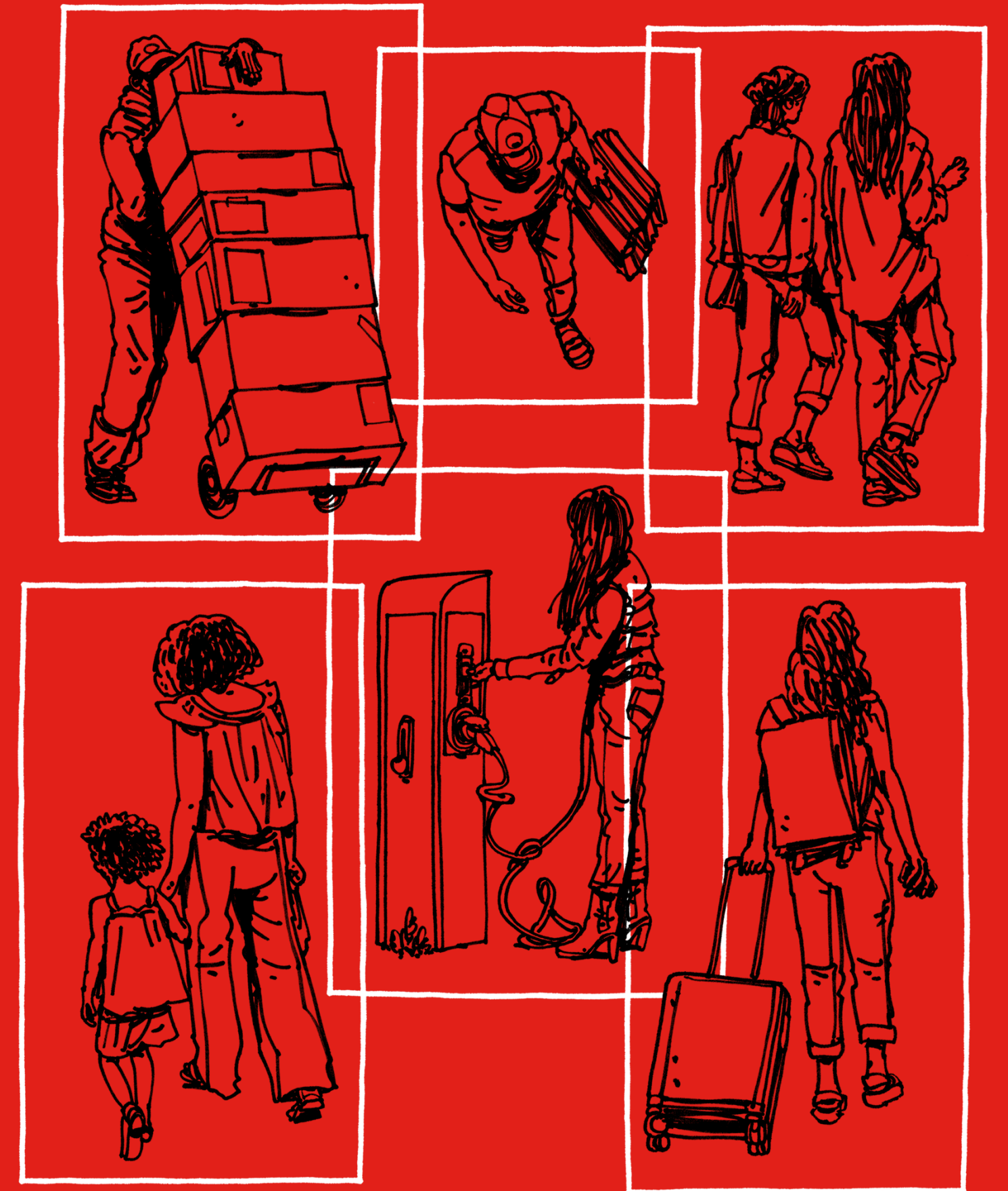


# Contestable AI

Building Democratic Control Over Public  
Artificial Intelligence

The Green Land  
Utrecht, The Netherlands  
19 February 2025

Kars Alfrink • TU Delft • [contestable.ai](https://contestable.ai)



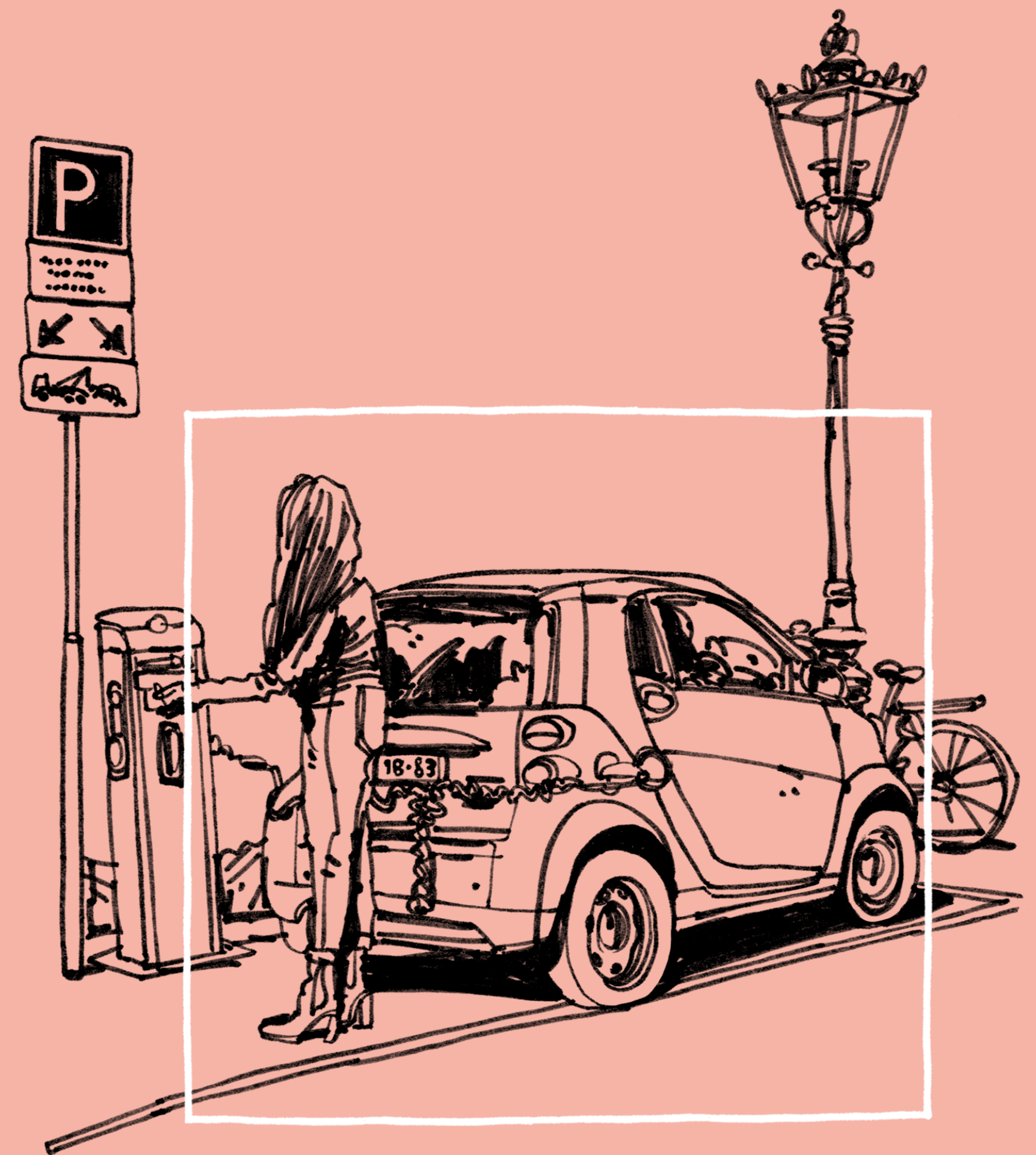
Art: Joost Stokhof

# Overview

1. **Defining** contestable AI
2. **Designing** contestable AI
3. **Beyond** contestable AI

# Part 1

## Defining Contestable AI



Defining Contestable AI • Designing Contestable AI • Beyond Contestable AI

Public AI

The use of feedback-adjusted **data analysis** and processing to augment, support, or automate **policy execution** in the **public sector**.



Vattenfall



AMS Institute



Robin Utrecht/ANP

Public AI systems impact  
people's **autonomy**.

# Discovering contestability

# The Transparent EV Charging Station

Gemeente Amsterdam

14:00

This smart charging station automatically determines the optimal use of green electricity.

base speed 8<sup>28</sup> kW

Green algorithm

- rule sharing green electricity  
Households demand **little** → 0<sup>00</sup> kW
- rule shared car benefit  
There is **1** shared car → -1<sup>10</sup> kW
- rule green bonus  
There is **lots** of extra sun and wind → 2<sup>76</sup> kW
- rule maximum power  
There is **no** plug available → 0<sup>00</sup> kW

You load a bit faster until 18:00  
Then the speed decreases.

9<sup>94</sup> kW



The Incredible Machine



Examples of local contestation in EV charging:

**Adjust charge speed up or down**  
(e.g., in case of emergency).

Example of global contestation in EV charging

**Dispute policy optimization targets** (e.g., sustainability, shared mobility).



From autonomy,  
through human control,  
to **contestability**.

**Contestation**

**Opposing an action**

**Competing for power**

**Contested versus contestable.**



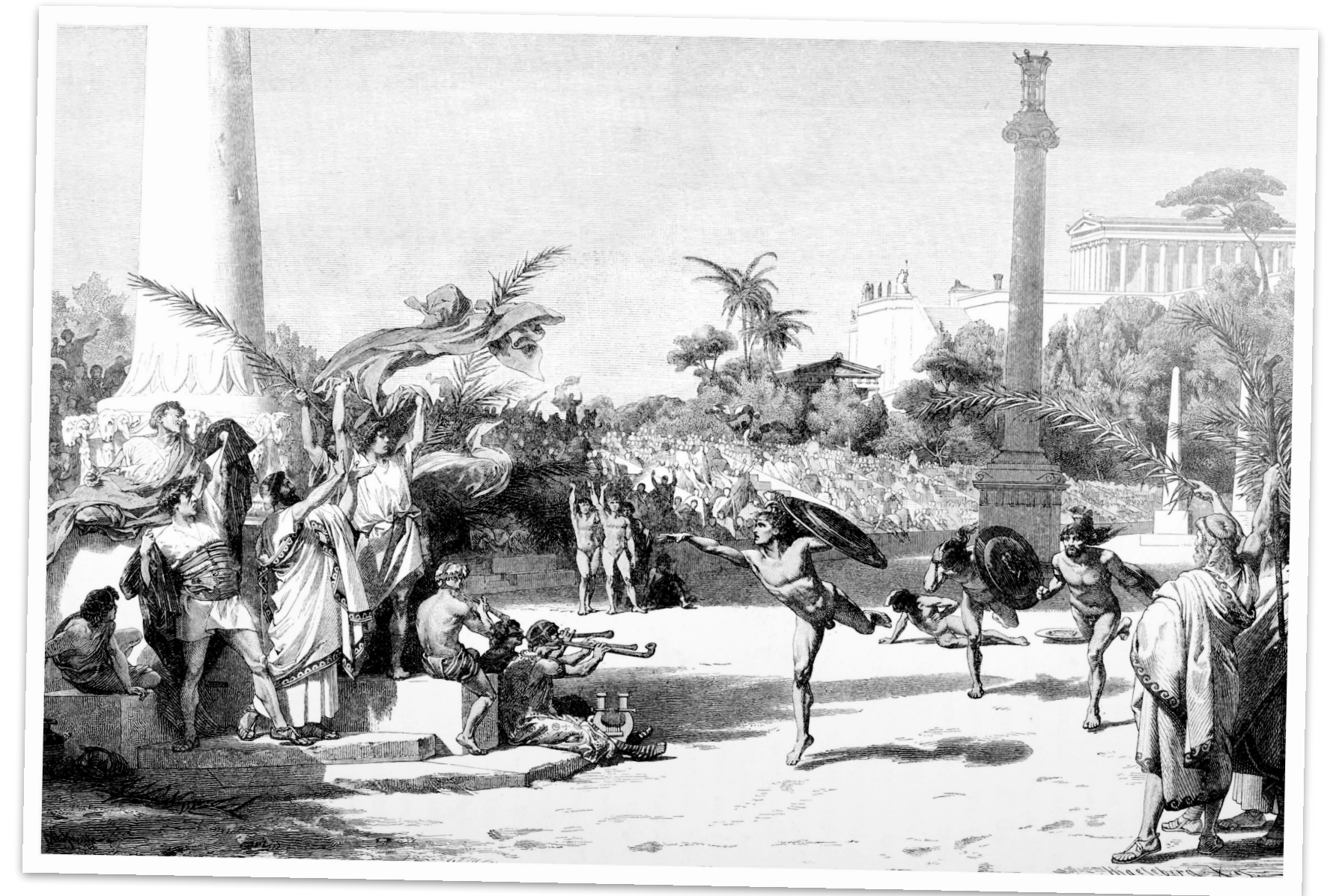
Chris Mcgrath/Getty Images



FriscoLive415

Contestable AI

AI that is **open and responsive to dispute, throughout the system lifecycle, establishing a dialogical relationship between decision subjects and system operators.**



# The Arena

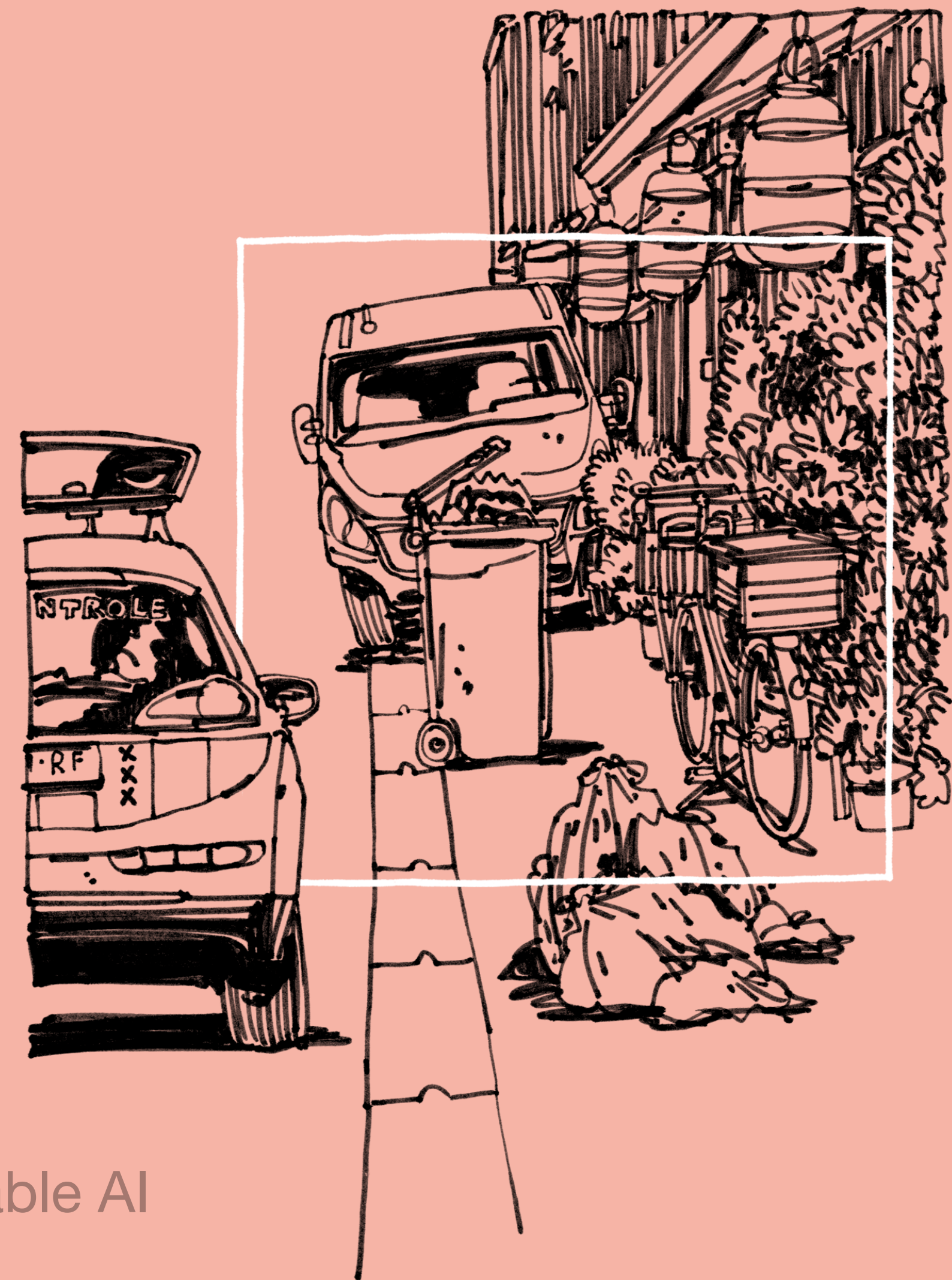


Defining contestable AI

**Contestability creates an arena  
for shaping better public AI.**

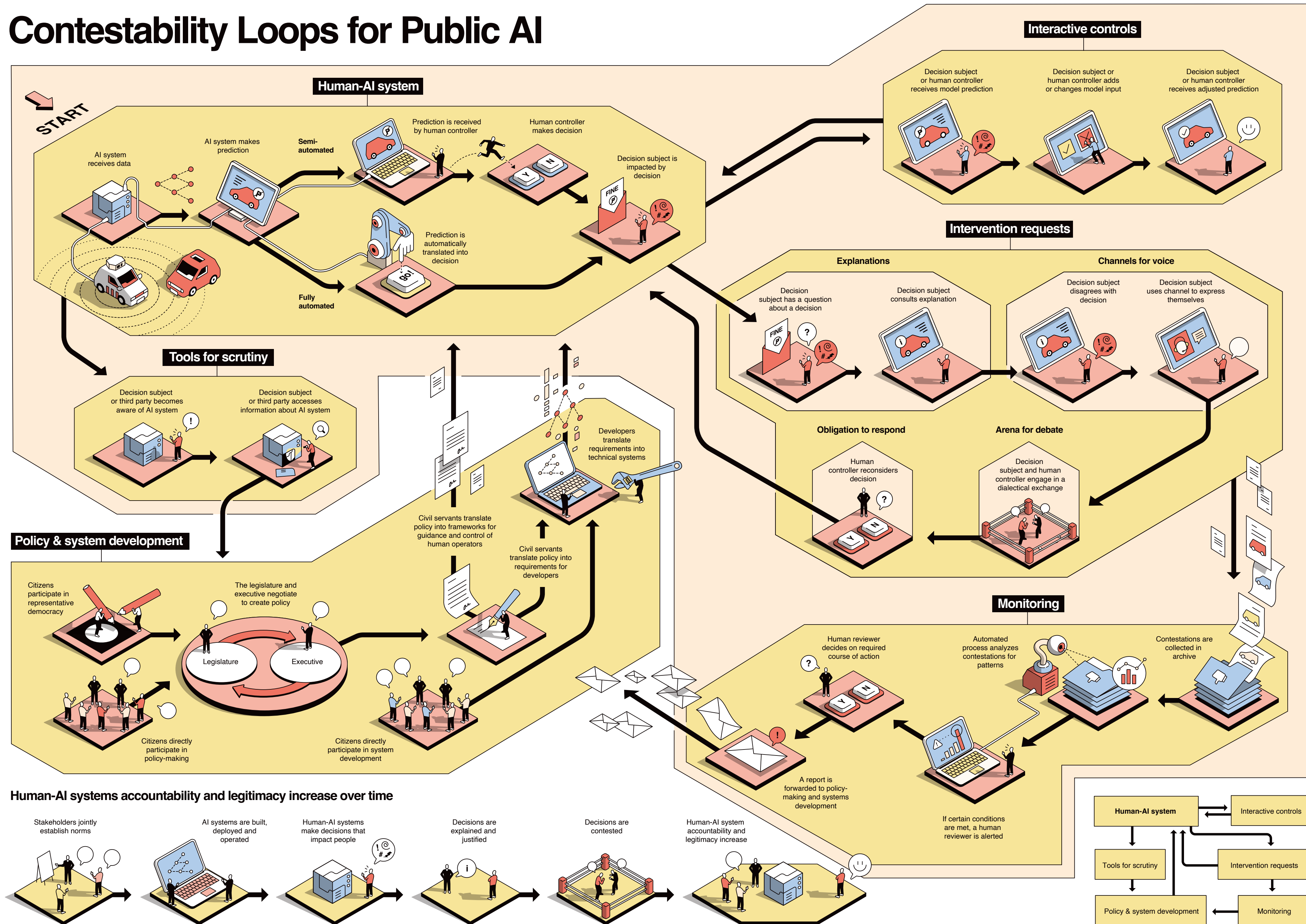
# Part 2

## Designing Contestable AI



Defining Contestable AI • Designing Contestable AI • Beyond Contestable AI

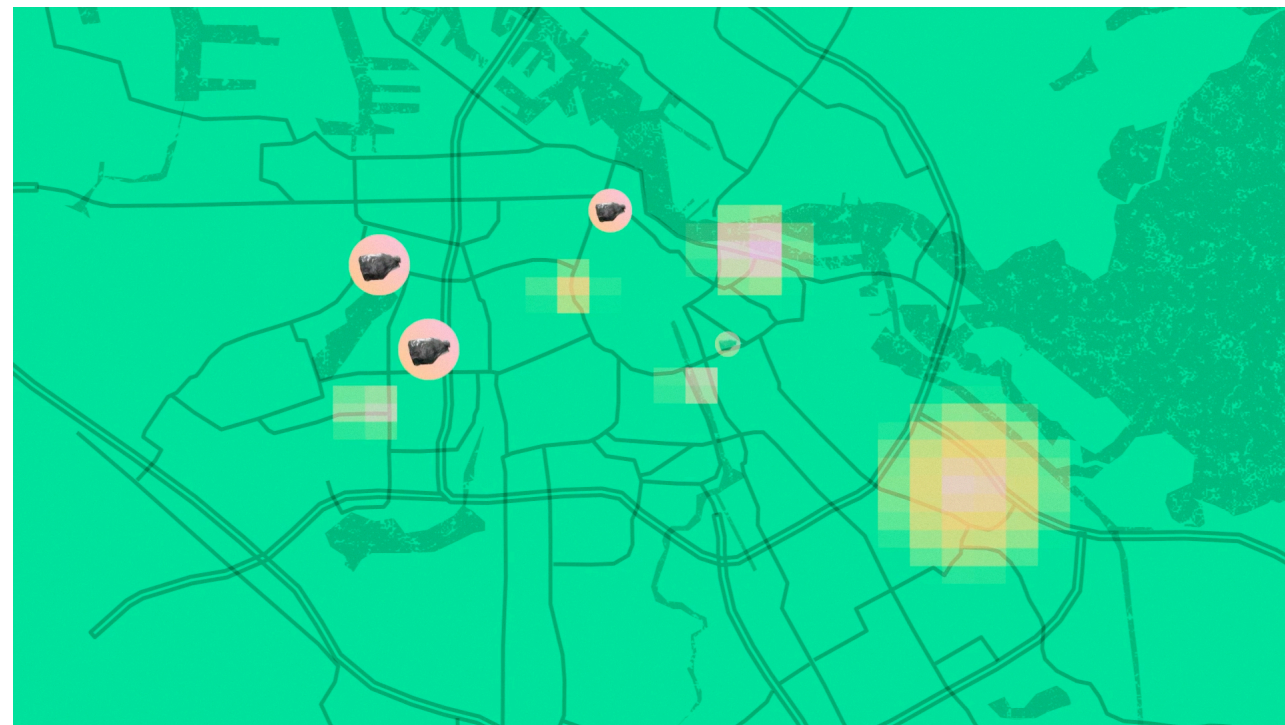
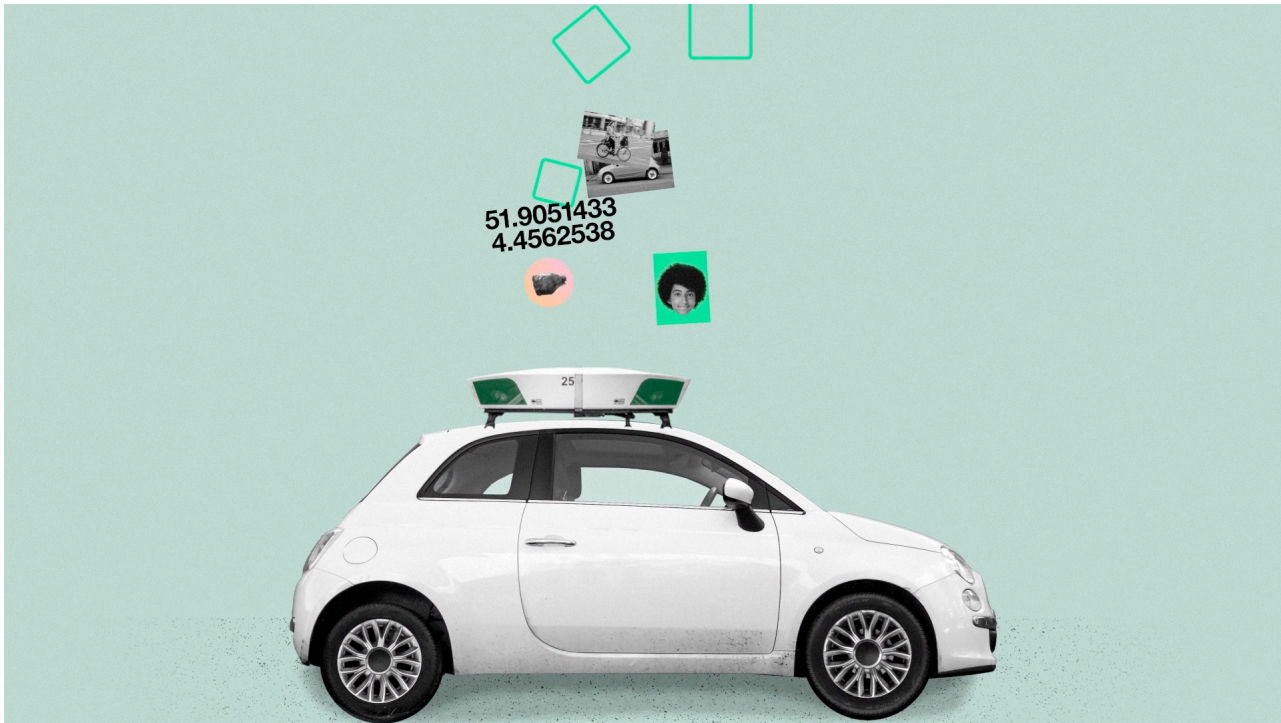
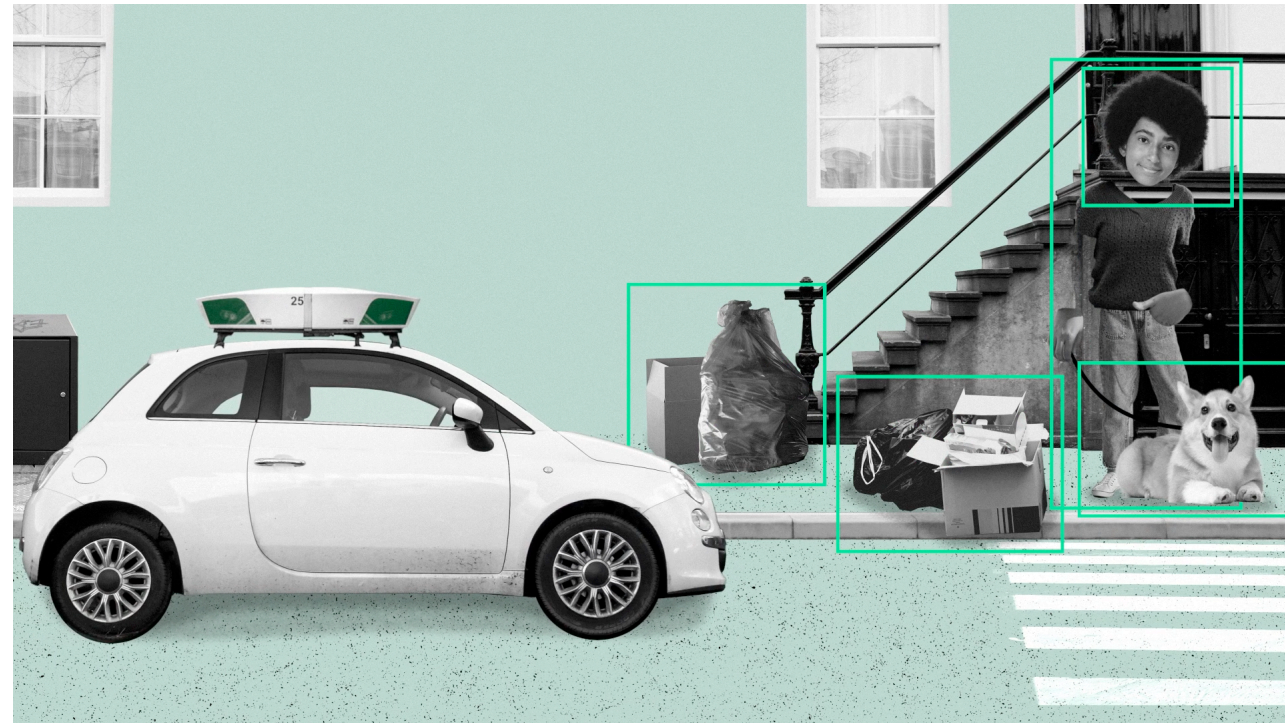
# Contestability Loops for Public AI



**contestable camera cars**

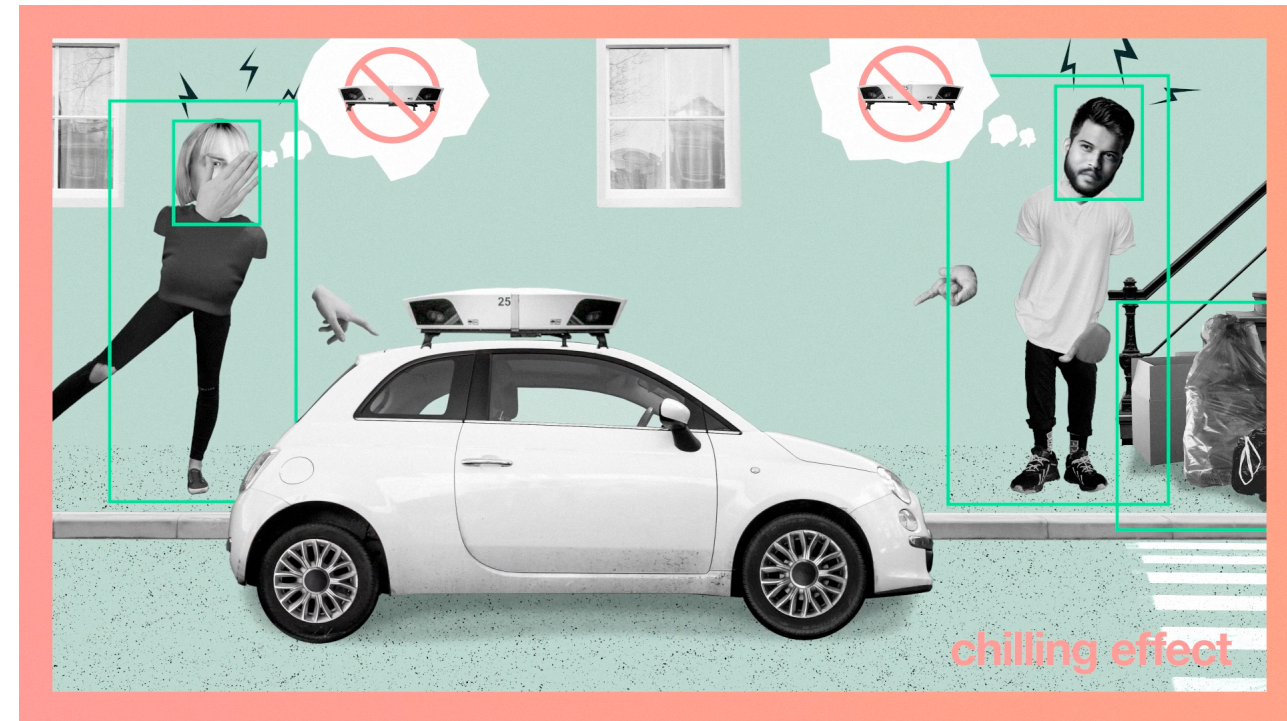
[edu.nl/g4bx8](https://www.education.nsw.gov.au/education/controllable-camera-cars)

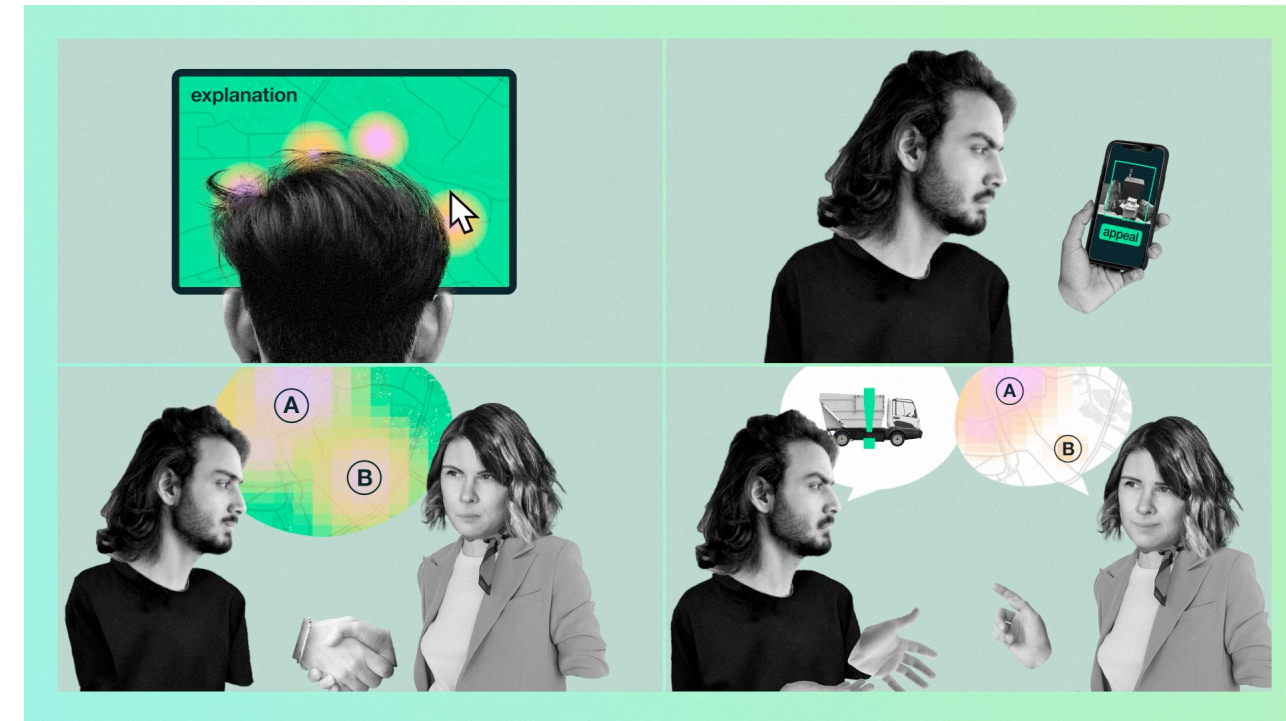


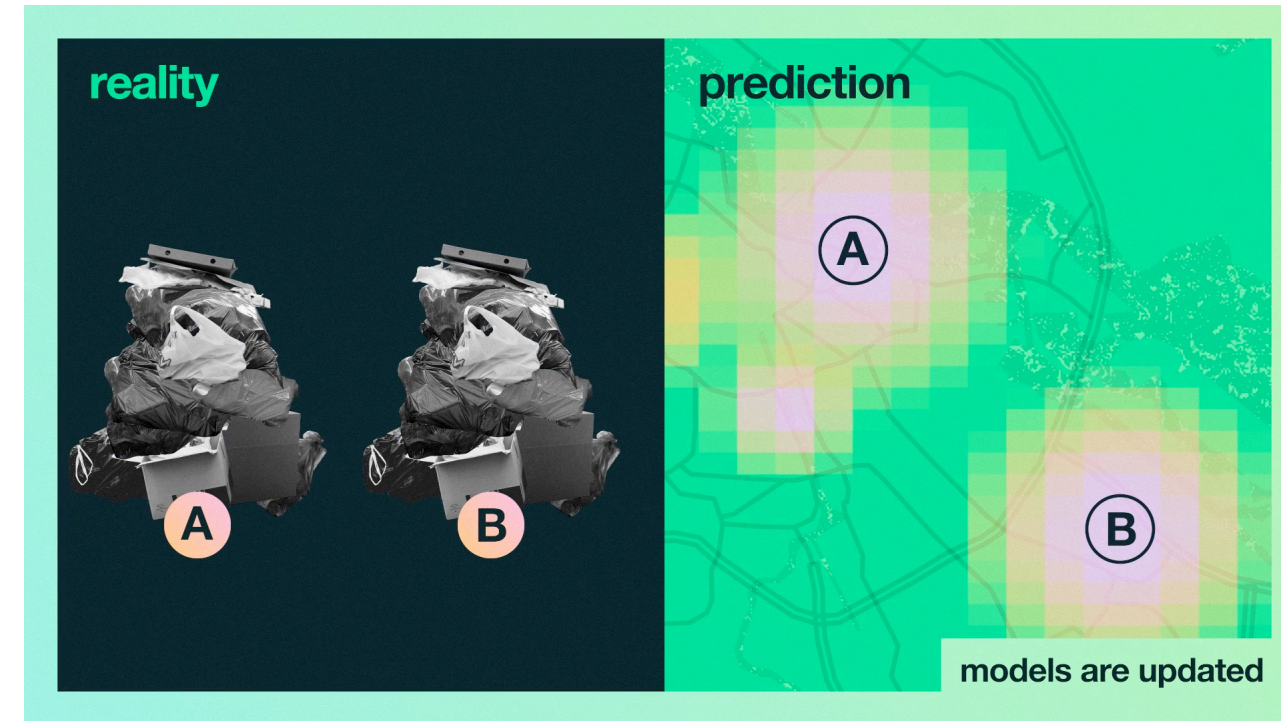
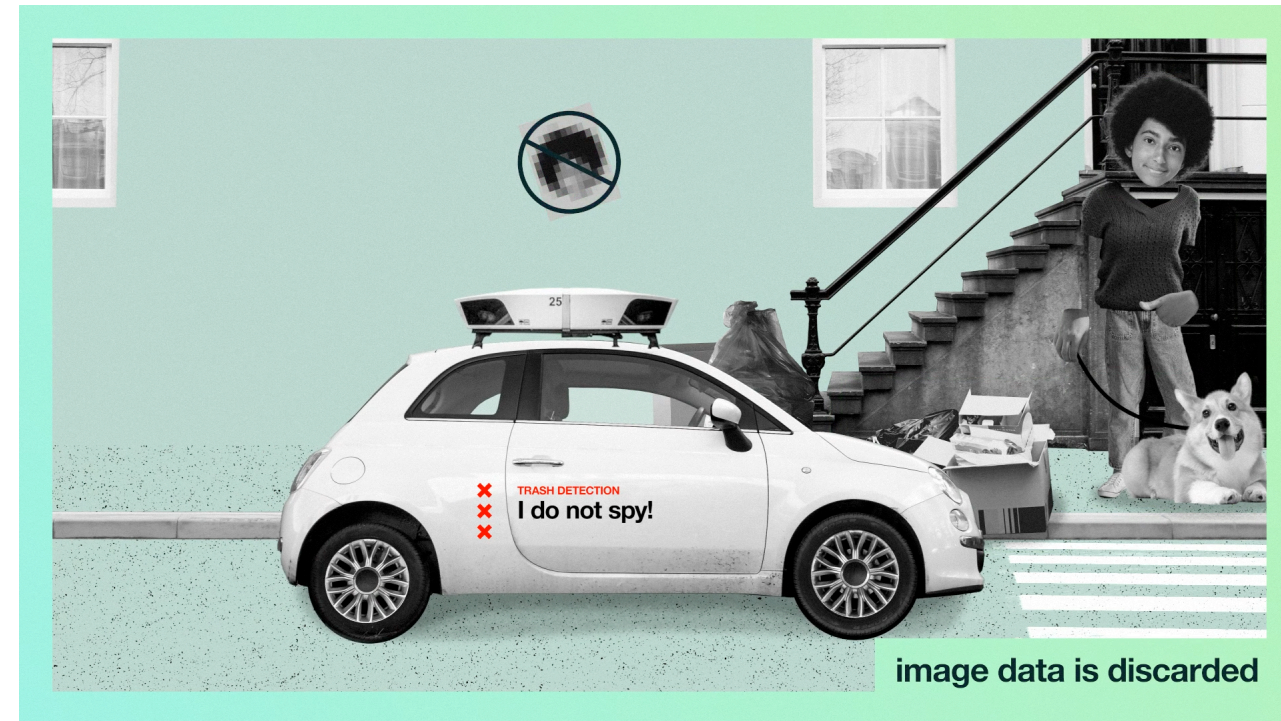


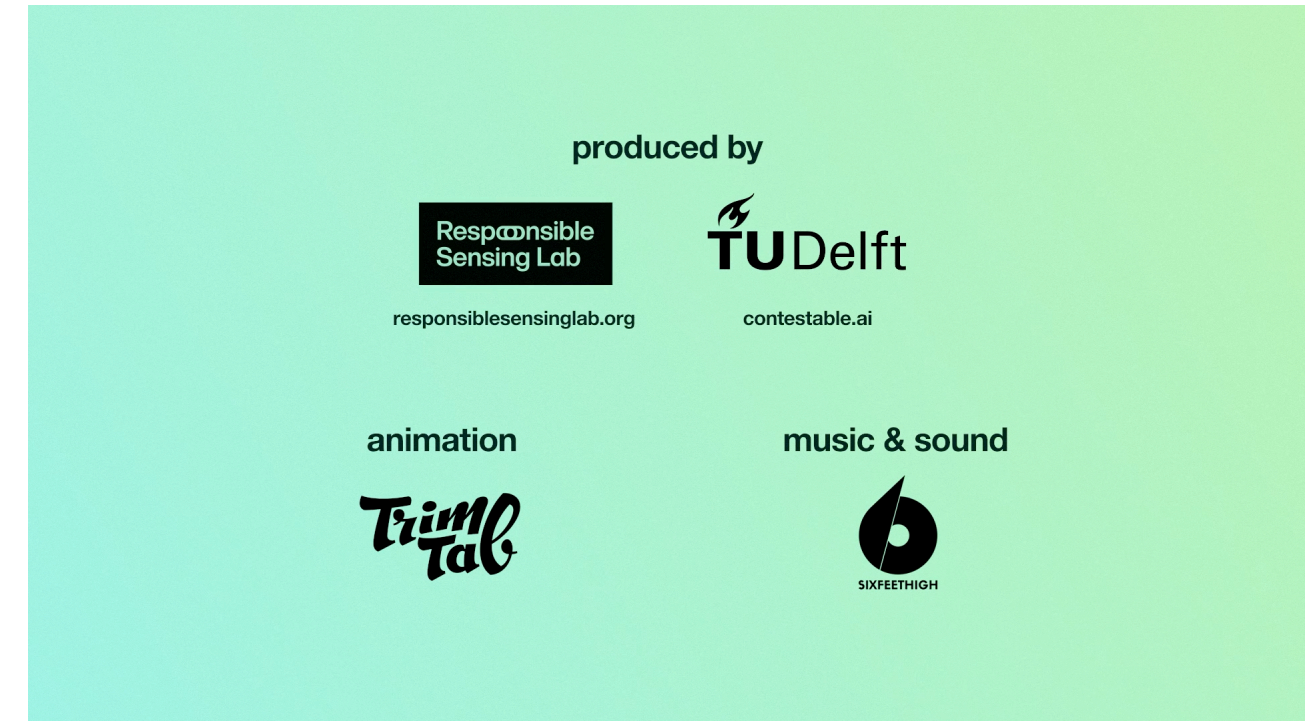
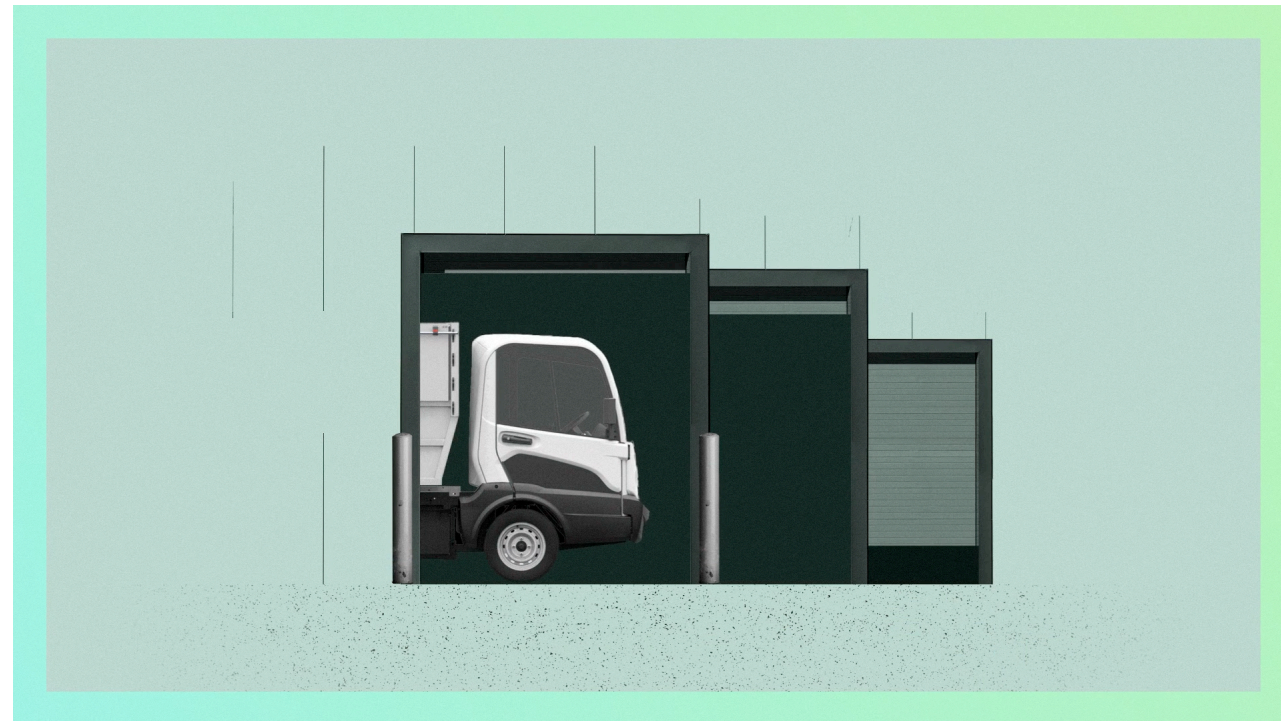
vehicle	destination
truck 03	→ location a
truck 12	→ location b
truck 17	...
truck 09	...
truck 02	...









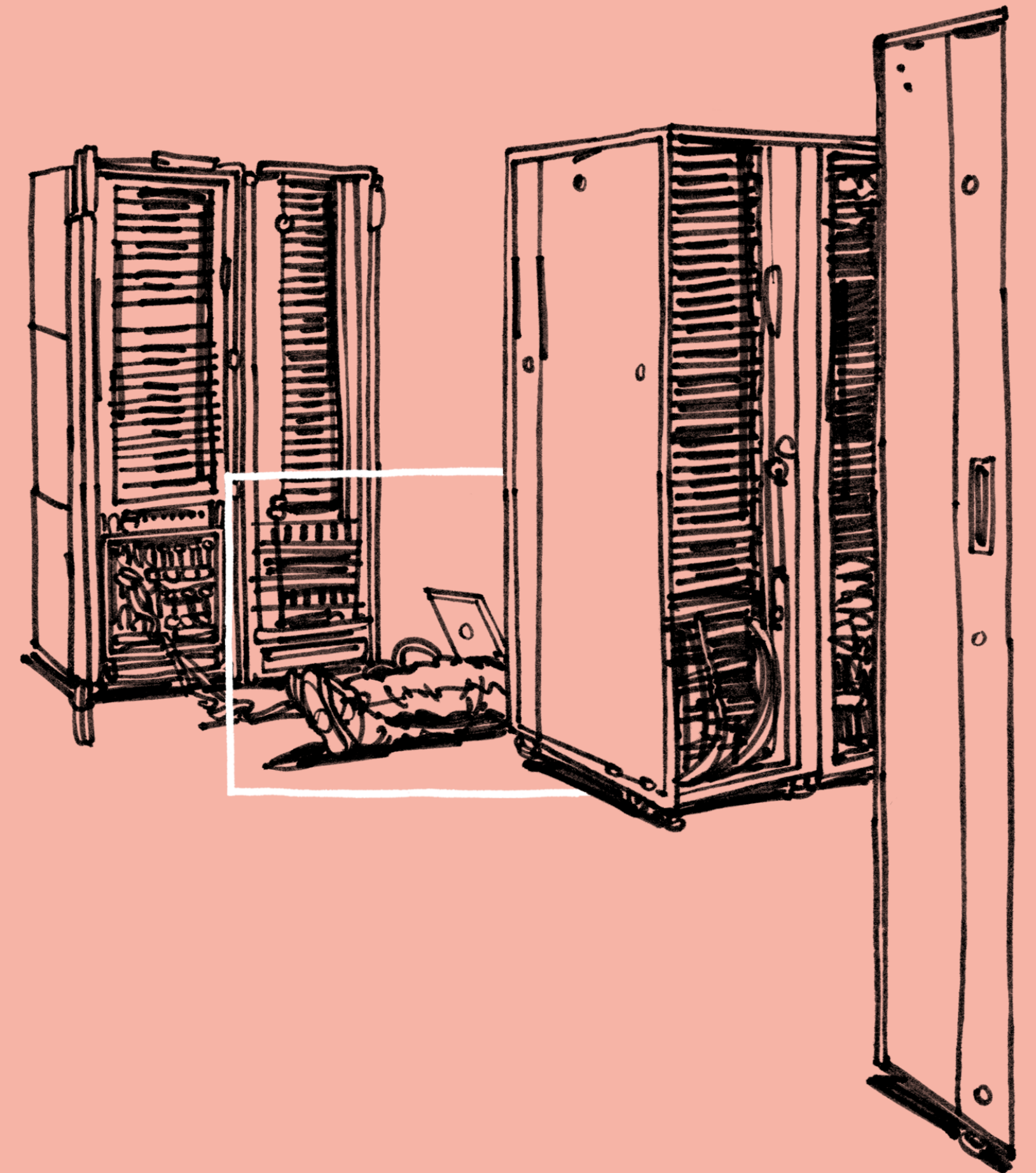


Designing contestable AI

**Contestability works through  
interconnected cycles of change.**

# Part 3

## Beyond Contestable AI



Defining Contestable AI • Designing Contestable AI • Beyond Contestable AI



# Contestability in the age of a global AI arms race—



# The political economy of contemporary AI

- 1. US-China market dominance**
- 2. Three-tier hierarchy**
- 3. Compute and talent trump data**
- 4. Global compute divide**
- 5. Cloud-based service model**
- 6. Network effects**

(Srnicek, 2022)

# Whose AI sovereignty?

AI sovereignty means **controlling AI's building blocks.**

**Three key choices** shape AI sovereignty debates:

1. **Who controls AI—nations or citizens?**
2. **Join the AI race or chart our own path?**
3. **Benefit Europe or serve the world?**

(Mügge, 2024)

# Alternative ways of “doing AI”

- Resource efficient
- Decentralized
- Transparent & accountable

**E.g.** Community-Driven Language Models, Hybrid Approaches, Local-First AI, & Task-Specific Solutions.

(Luitse & Denkena, 2021)

“Wij kunnen hier wel degelijk computeren, maar heel veel mensen hebben gekozen voor **de Amerikaanse manier van computeren.**”

— Bert Hubert



What design can do 1/3

## Framing, Making, Specifying.

- **Framing**: Envision AI as public infrastructure, not corporate property.
- **Making**: Show how democratic AI control could feel.
- **Specifying**: Plan community-owned compute systems.

(Löwgren & Stolterman, 2004)

What design can do 2/3

**Design systems that shift AI from individual consumer products to collectively governed public infrastructure.**

What design can do 3/3

**Build solidarity networks to  
develop collective power  
for change.**

Beyond contestable AI

**We must design alternatives to  
big tech's AI monopoly.**



To conclude...

1. Defining contestable AI:

**Arena for shaping public AI.**

2. Designing contestable AI:

**Interconnected cycles of change.**

3. Beyond contestable AI:

**Alternative ways of doing AI.**

To conclude...

**Democratic control** of AI  
requires both contestability  
and community power.

# Thank you!

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