

Trees of Knowledge: Designing with Artificial Intelligence in the Urban Landscape

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■ BACKGROUND

■ Project 01: TOPOS (speculative)

AI-embedded Urbanism

Designing AI Into Public Spaces

Prototype no.1: experiential +
spatial

Prototype no.2: visual + animated
AI and The “Right to the City”

■ Project 02: TRAINING THROUGH TENDING (applied)

■ BACKGROUND

■ Project 01: **TOPOS** (speculative)

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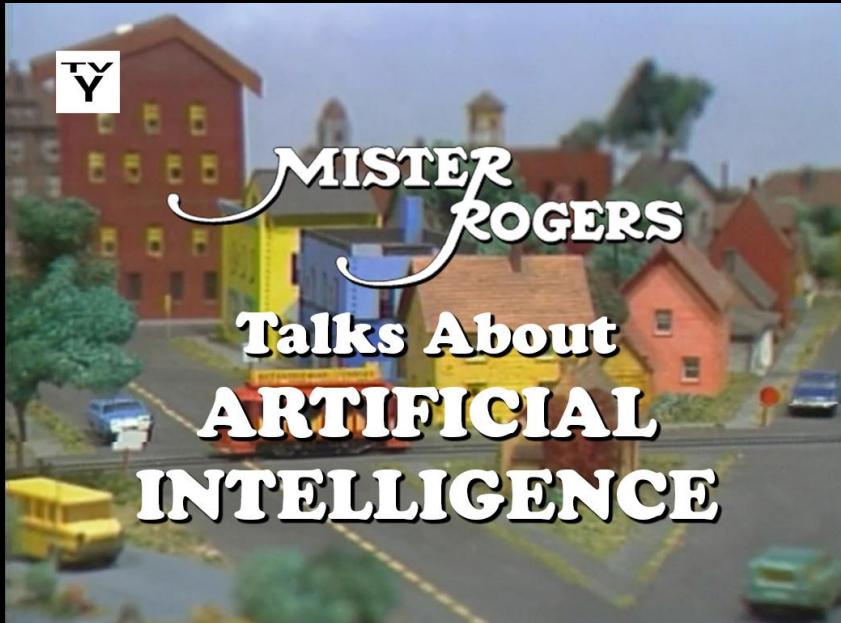
■ Project 02: TRAINING THROUGH TENDING (applied)

BACKGROUND

INTERACTING WITH THE URBAN AT HUMAN SCALE

[AI in “the neighborhood”]

What is interesting to us about
artificial intelligence?





SPECULATIVE DESIGN PROJECT

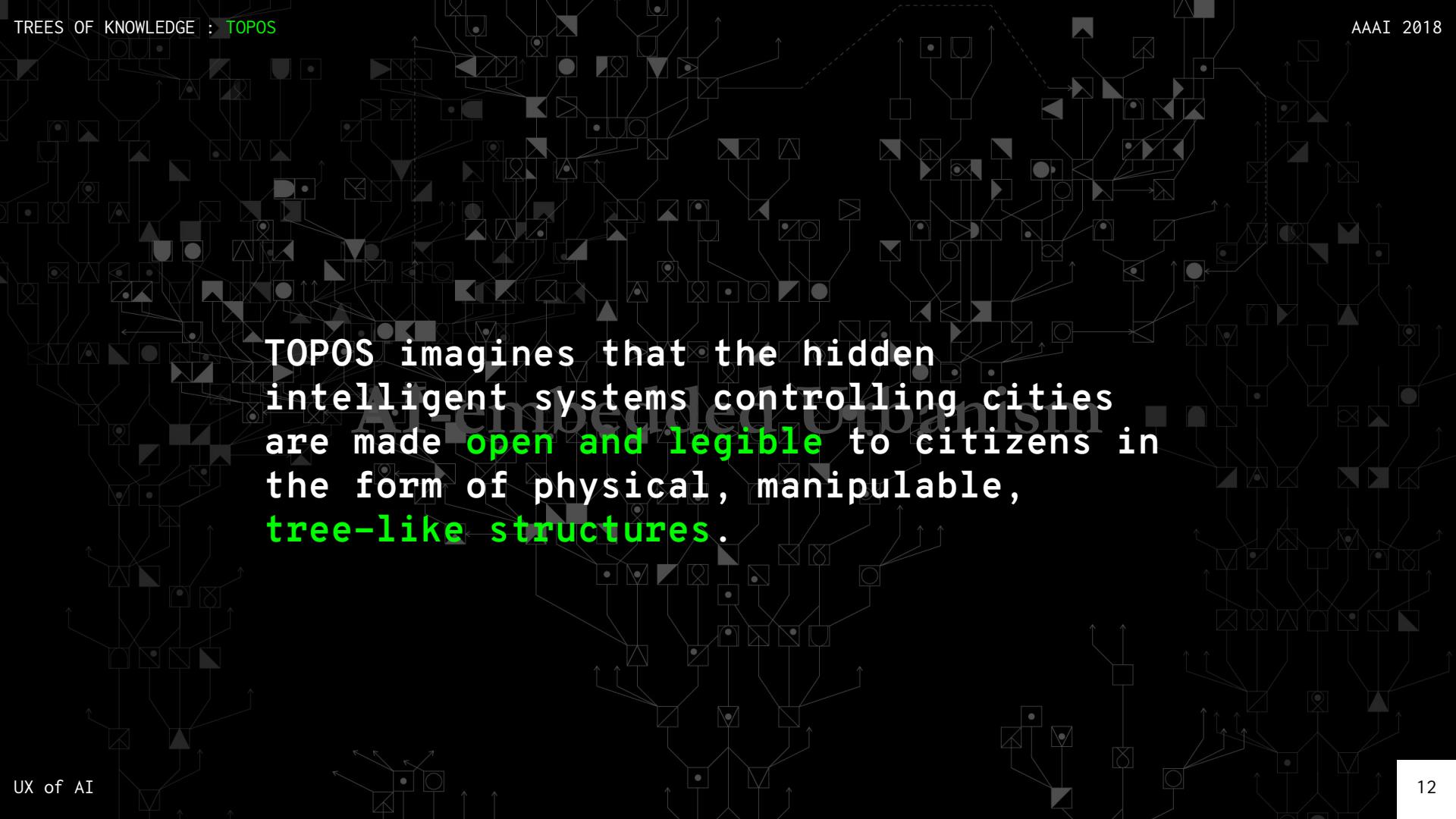
Project 01: TOPOS*

(*Greek*) literally, “place”

AI-embedded Urbanism

[Could the city know itself
better than you (the citizen)
could ever know it?]

The design of AI interfaces can
illuminate the algorithmic dimension of
the city for the people living in it.



TOPOS imagines that the hidden intelligent systems controlling cities are made open and legible to citizens in the form of physical, manipulable, tree-like structures.

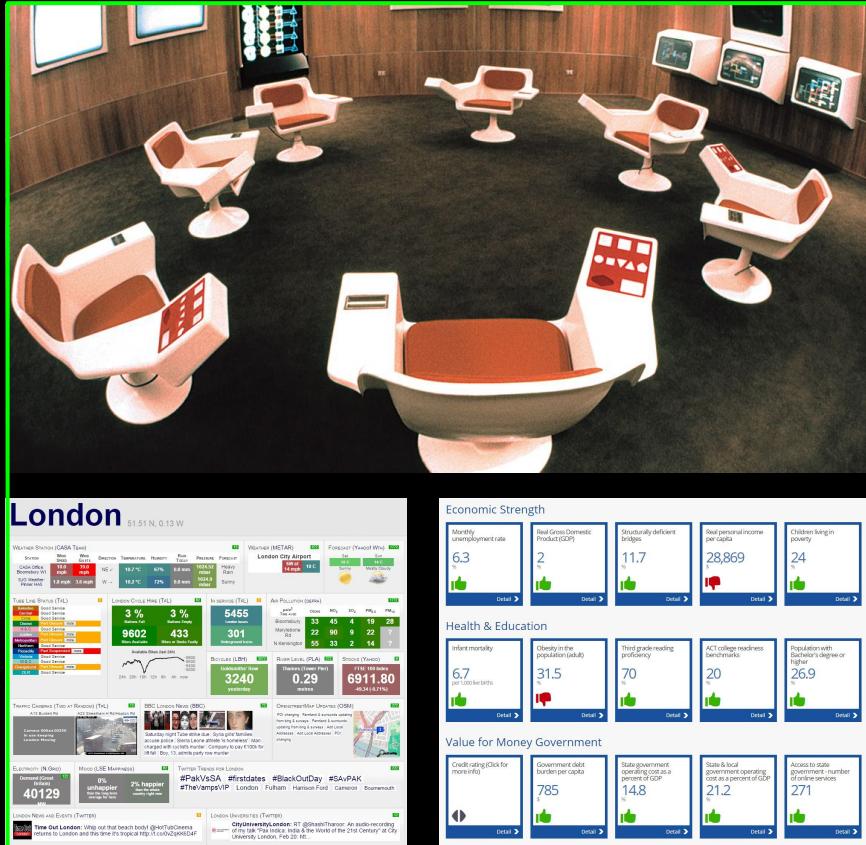
How might pruning and tending these civic interfaces—these trees of knowledge—literally and figuratively reshape the urban landscape?

AI-embedded Urbanism

*Les arbres sont en tailles de différentes figures posés sans égaleure, la grande arce voysne
qui descend au bas du jardin, il est à ce pieds de haut, il est tout court dessiné à propos nature.*

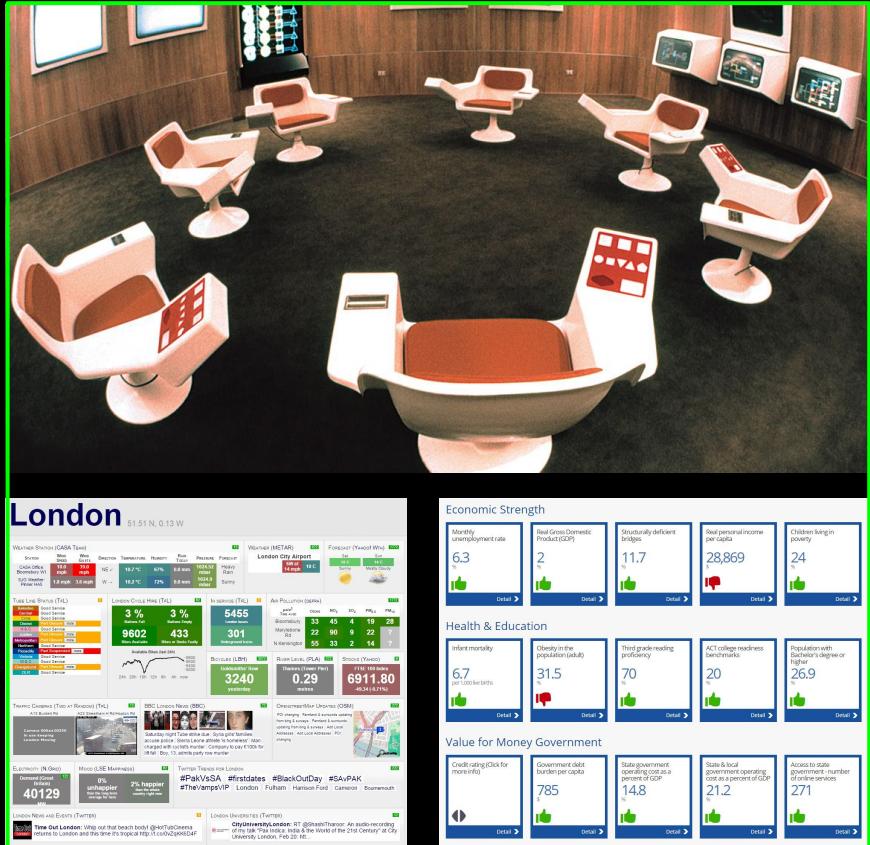
*Les arbres sont en tailles
qui descend au bas du jardin*

Designing AI into Public Spaces



to Public Spaces

Sources



sources



source

A NEW TYPOLOGY OF PUBLIC SPACE

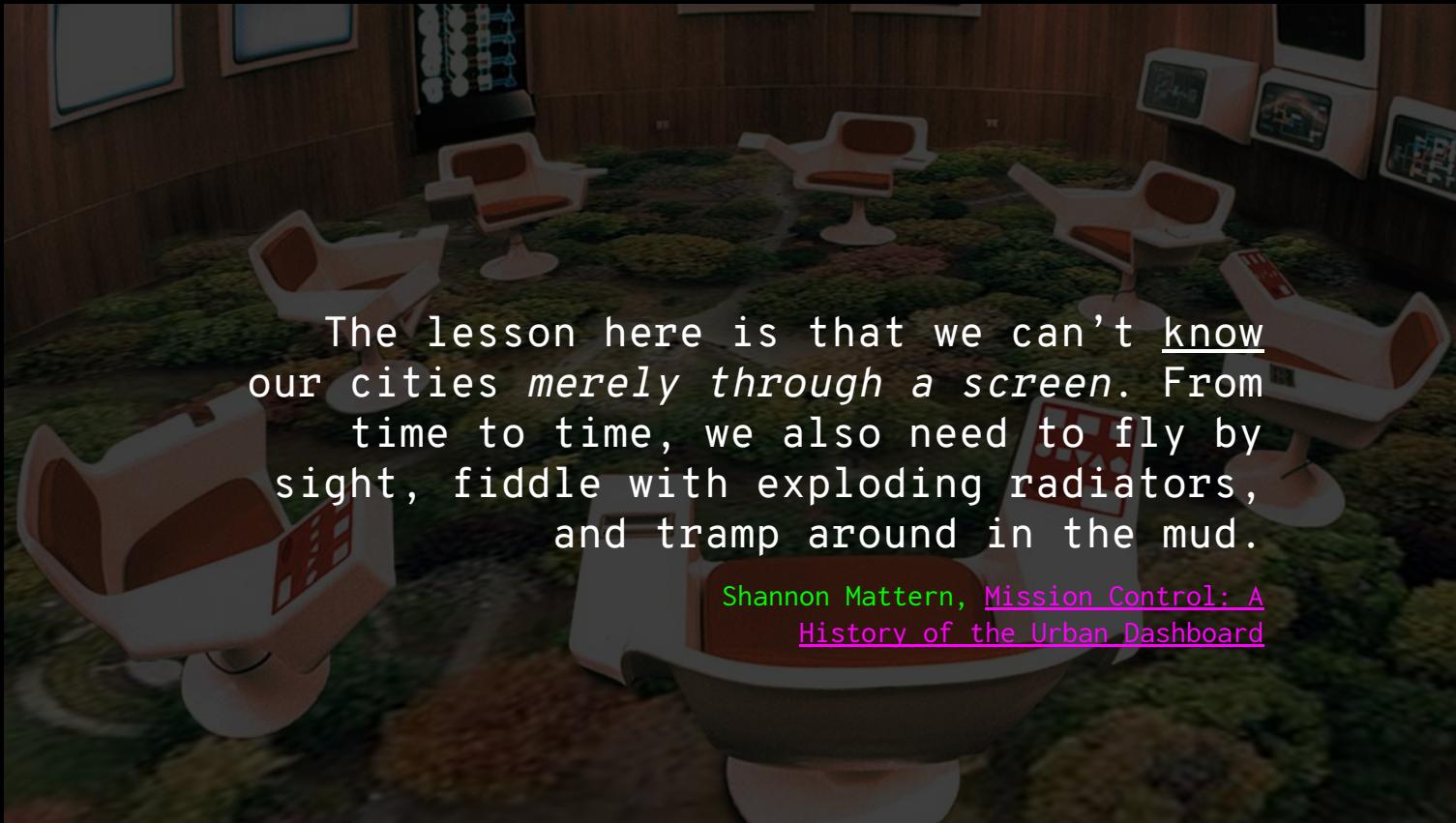
Designing AI into Public Spaces

AI-parks contain
trees of knowledge

Trees of knowledge are tangible user
interfaces (TUIs) that form a
relationship between AI systems + humans.



INITIAL CONCEPT COLLAGE : CYBERSYN MEETS PUBLIC PARK SPACE

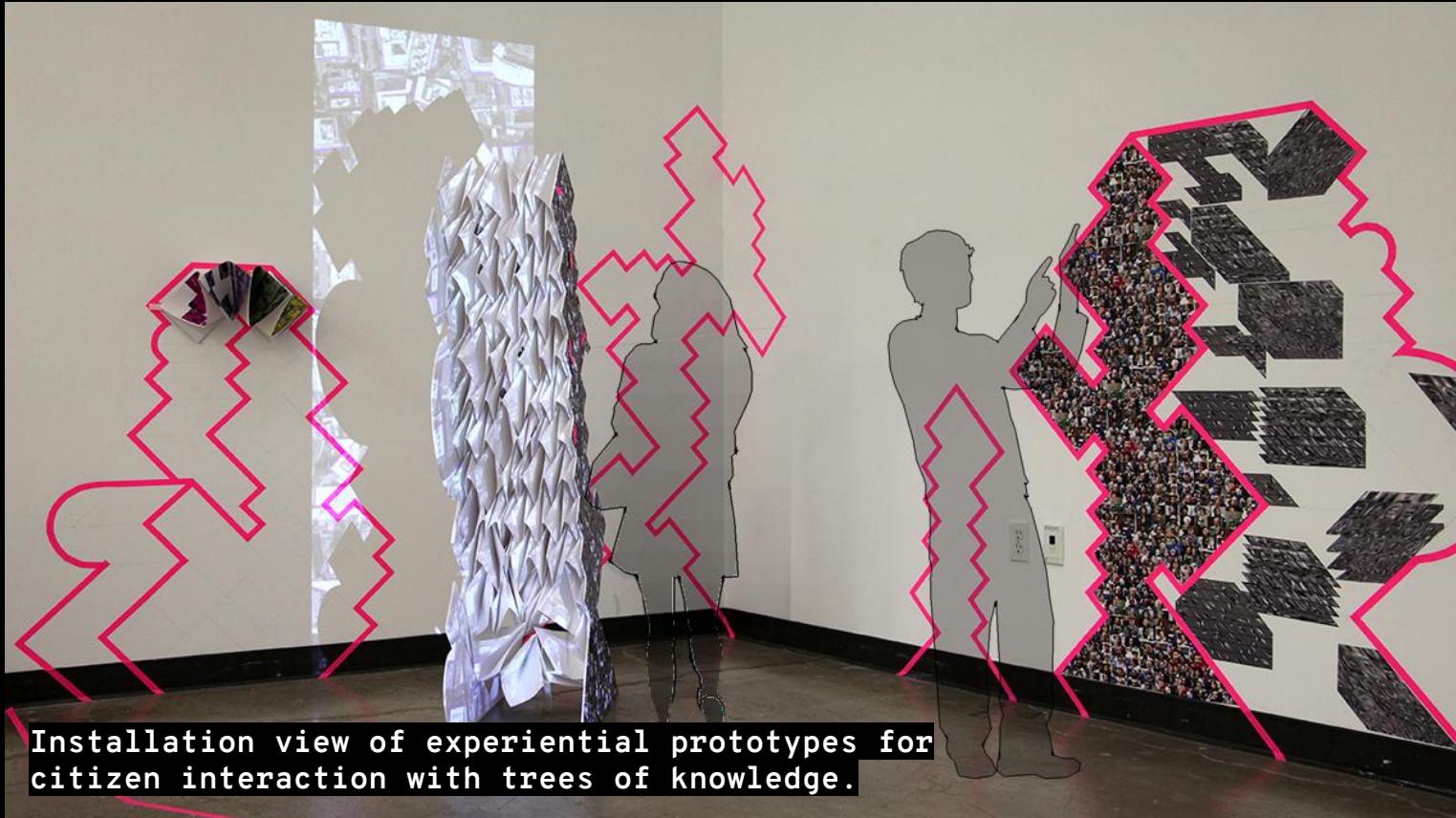


The lesson here is that we can't know our cities *merely through a screen*. From time to time, we also need to fly by sight, fiddle with exploding radiators, and tramp around in the mud.

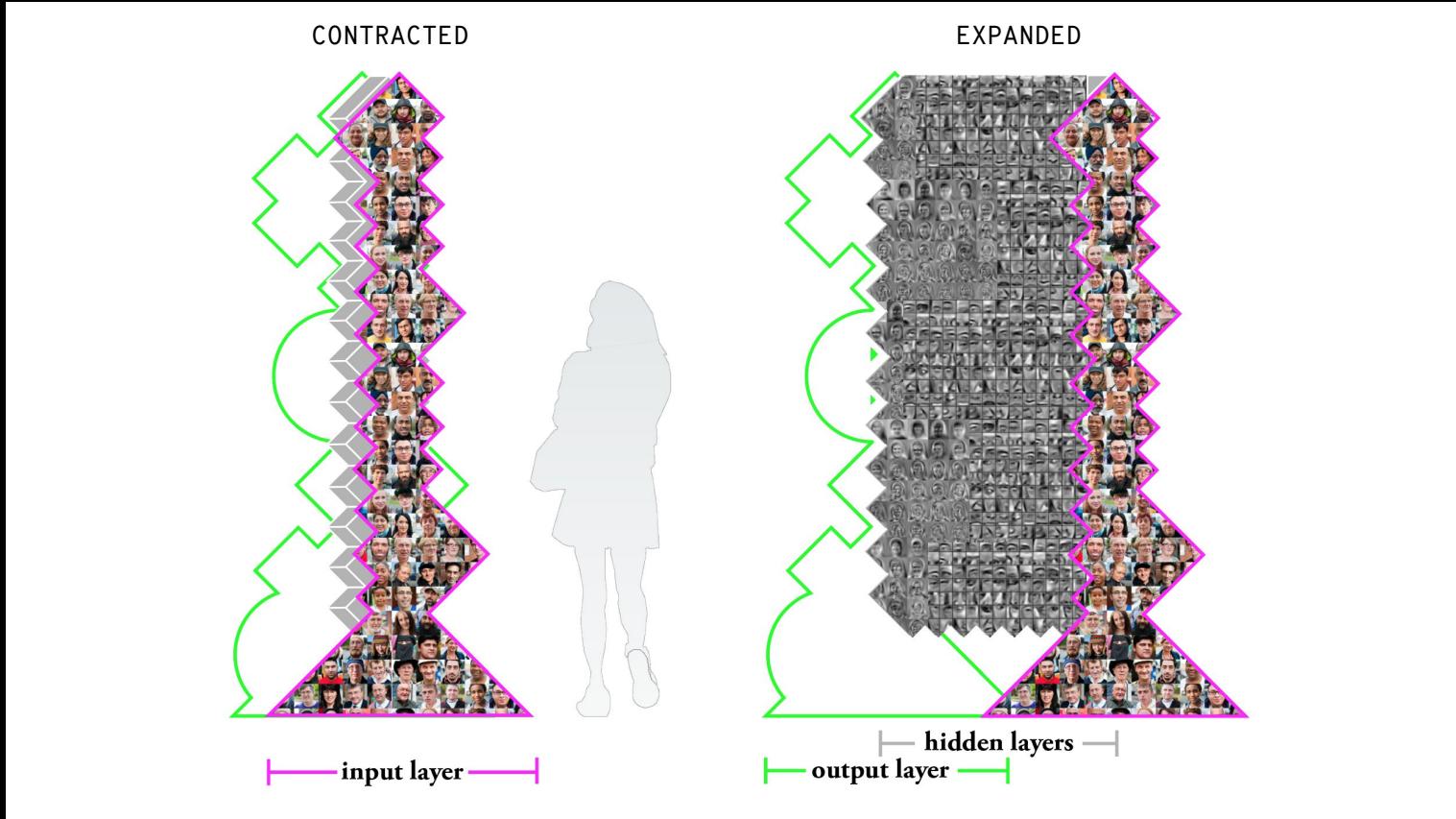
Shannon Mattern, [Mission Control: A History of the Urban Dashboard](#)

Prototype no.1

experiential + spatial



Installation view of experiential prototypes for citizen interaction with trees of knowledge.



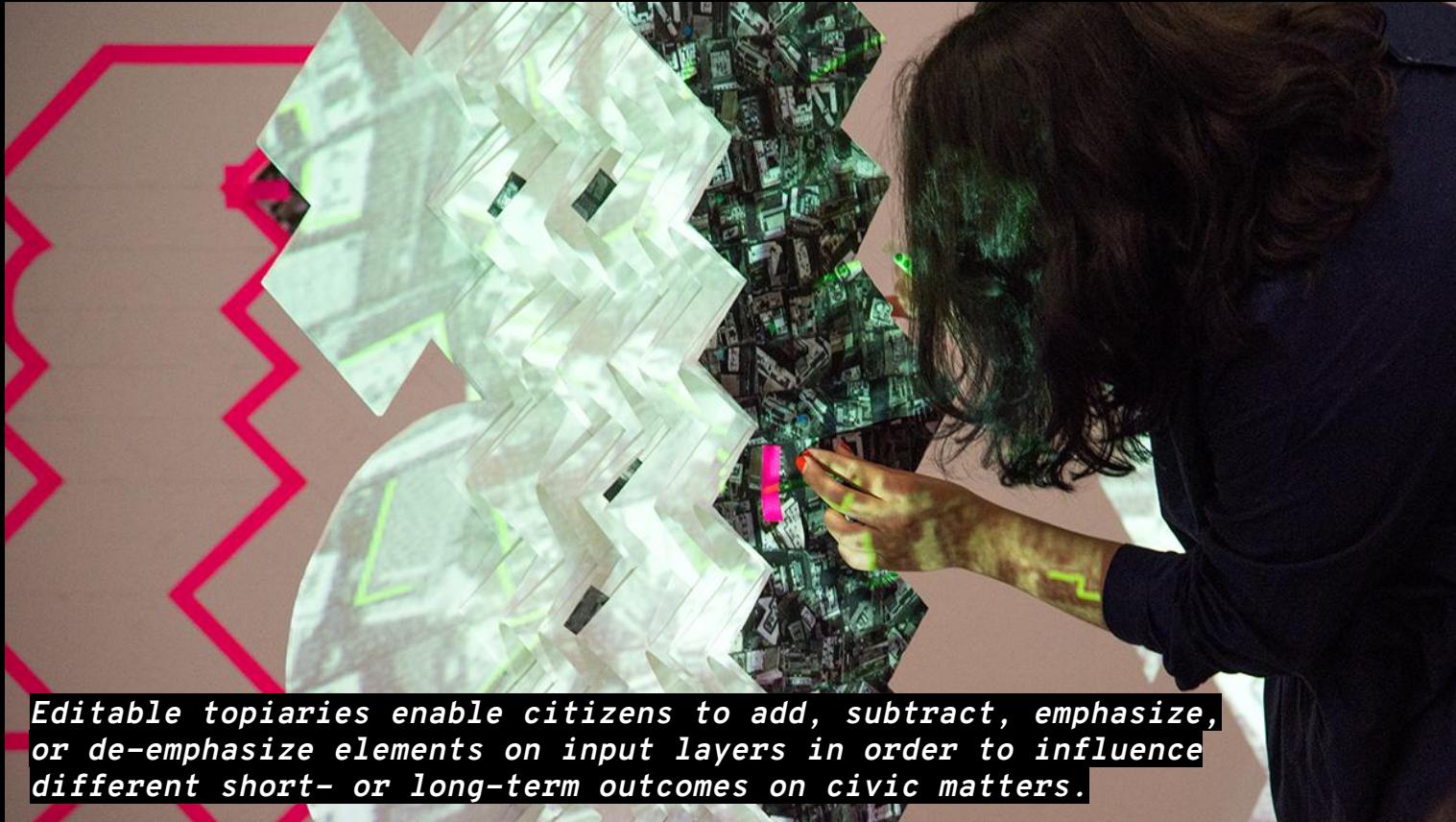
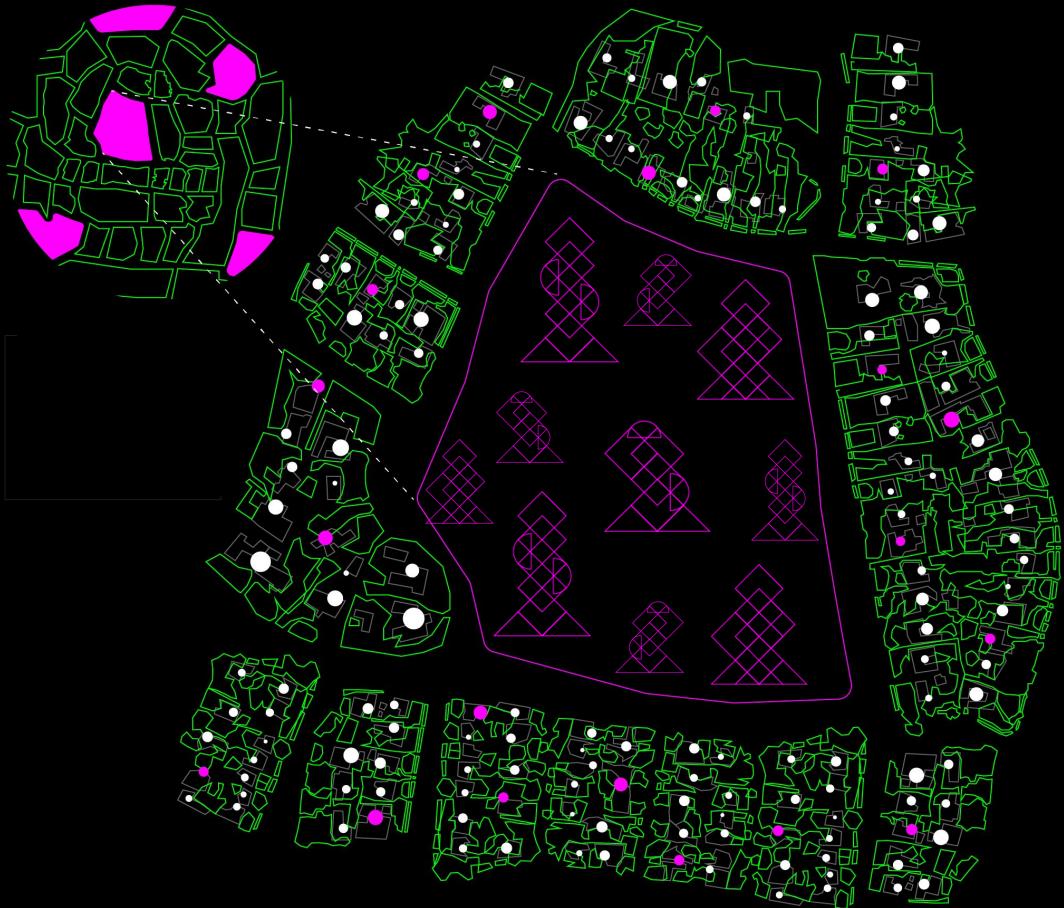
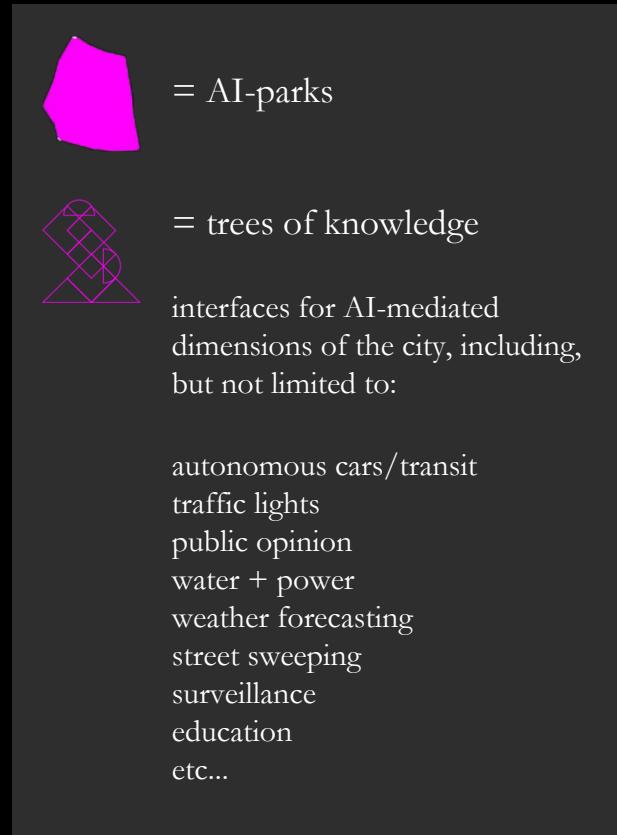
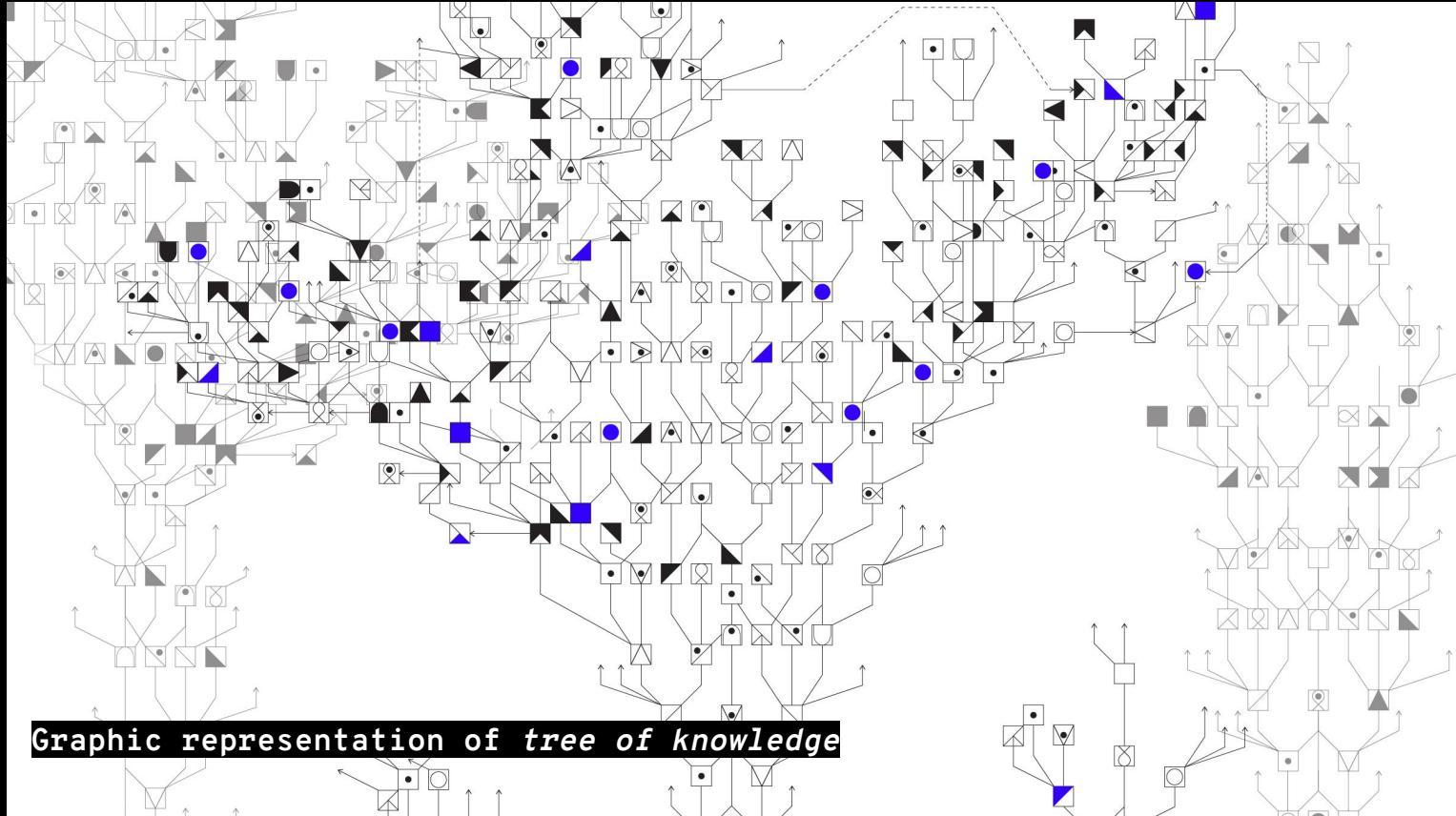


Photo Credit: Phil van Allen



Prototype no.2

visual + animated







AI and The “Right to the City”

– Henri Lefebvre

“Right to the City” AS A HUMAN RIGHT

[AI and The “Right to the City”,]

Leveraging the complexities and contradictions of human-to-city interaction

How do we ensure that all citizens are
still guaranteed the right to reshape
their cities in collaboration with AI
systems?

Taking TOPOS Into The Real World

Talking [TOPOS] Into The Real World [How to deal with “dirty (un-‘cleaned’) data”?]

Shannon Mattern, [Mission Control: A History of the Urban Dashboard](#)

[Training and learning as AI-embedded Urbanism a negotiation process]

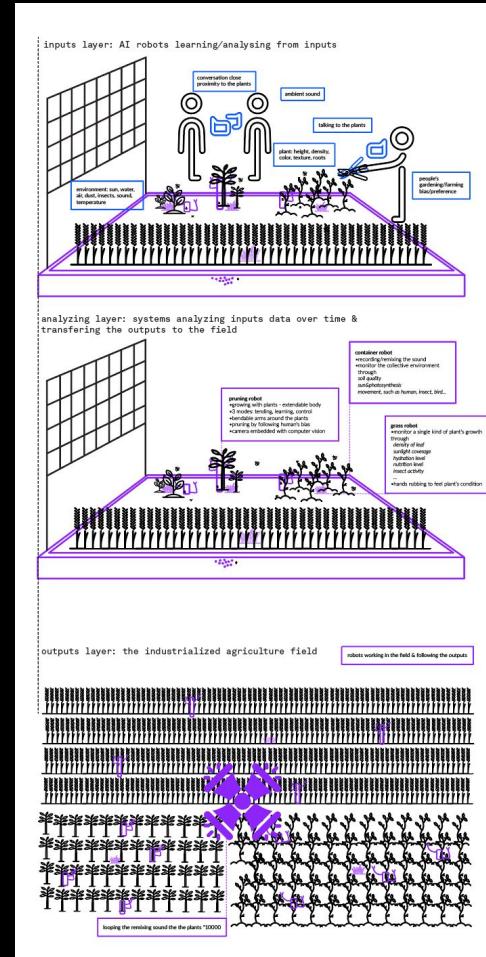
Project 02: TRAINING THROUGH TENDING*

tending: the action of care
both physically and emotionally

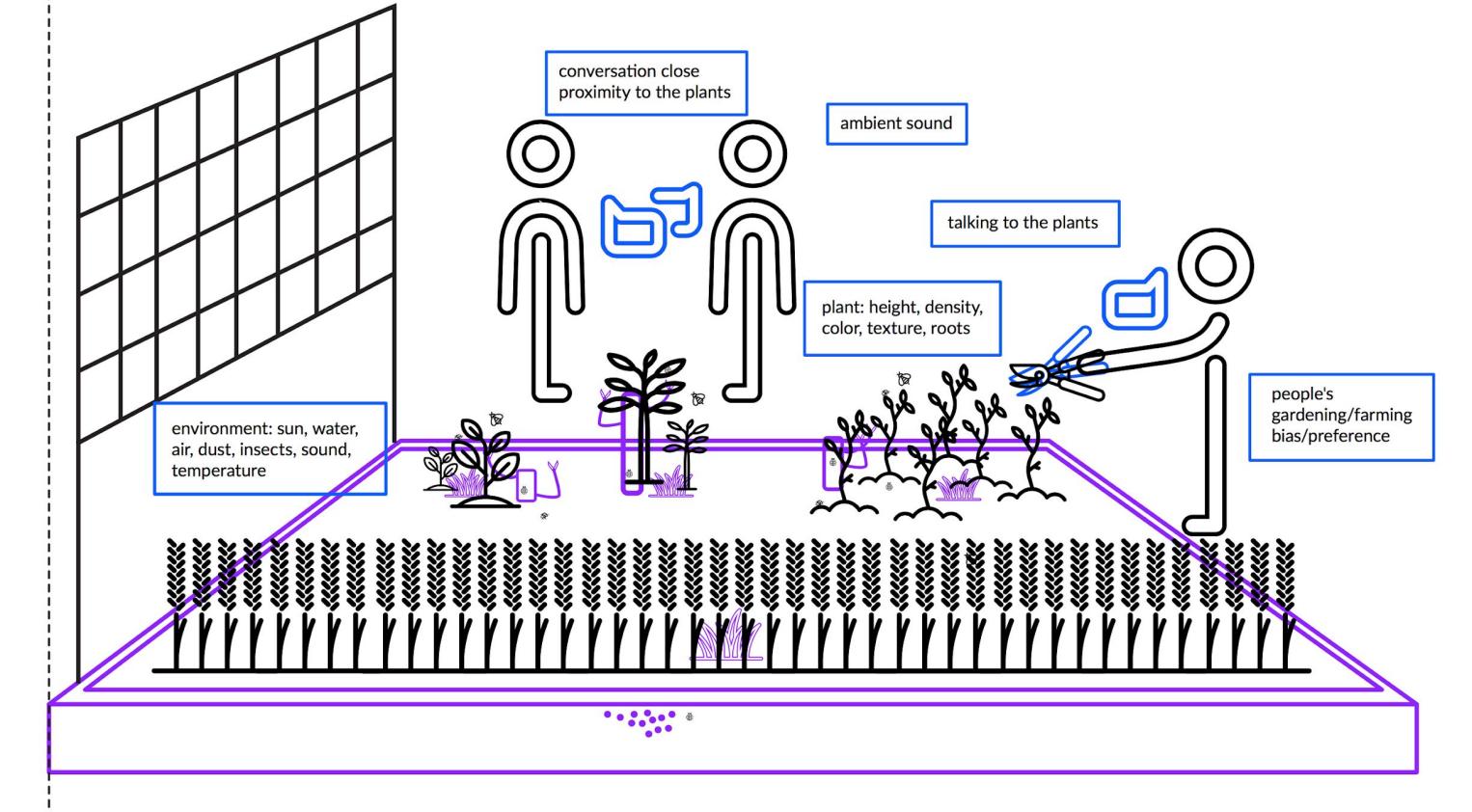
Training through Tending is a design research that exploring the process in which AI systems learn human bias through tending plants over time. The project challenges the form of the industrialized agriculture landscape by brings together the experience of personalized community gardening and industrialized mass agriculture.



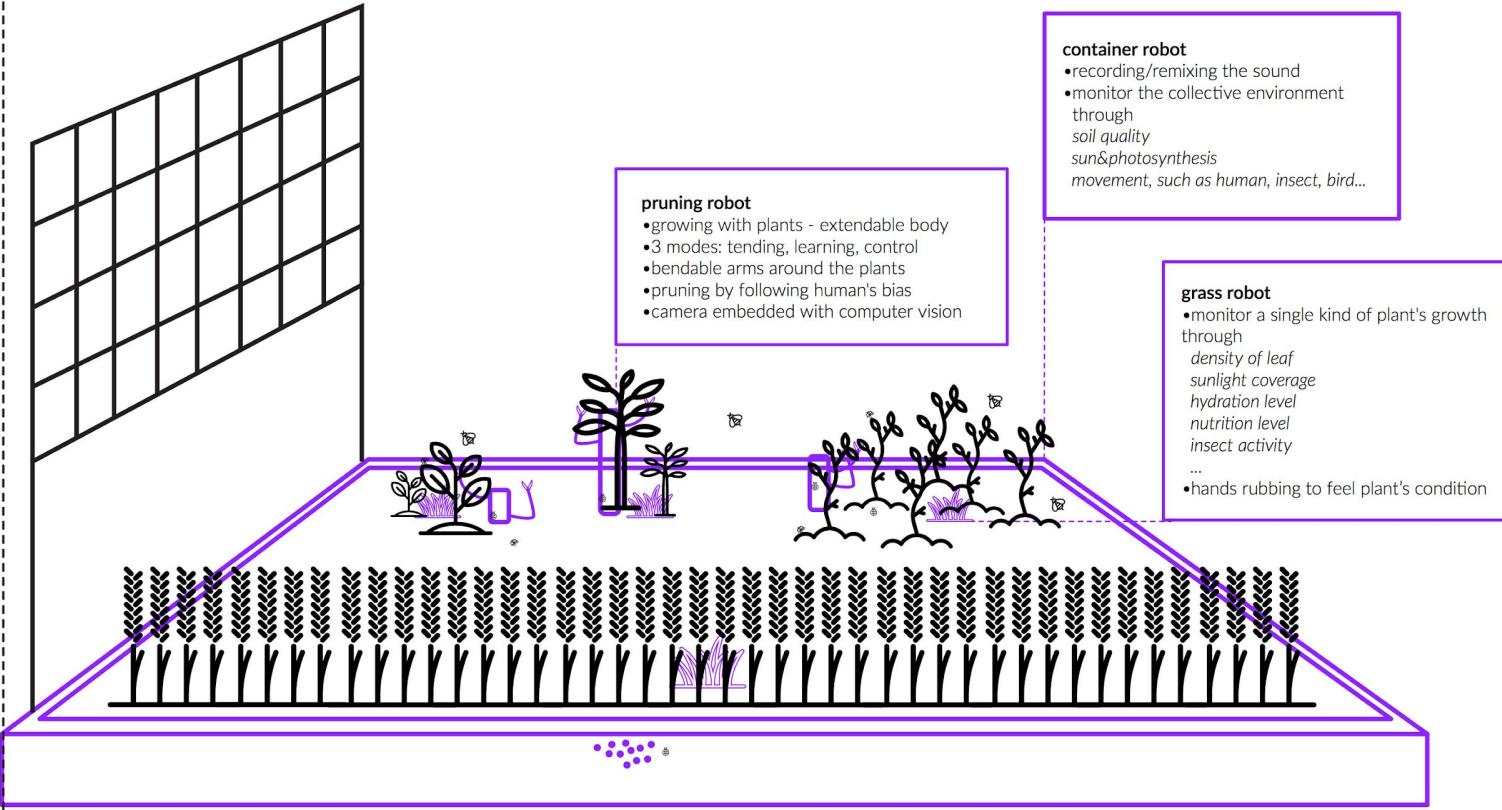
By collecting individual's tending bias in the community garden, the AI robots analyzing and transferring the decisions to industrialized agriculture field, where tending by thousands of AI robots. Those robots performing a similar method with the individual in the community garden.



inputs layer: AI robots learning/analysing from inputs

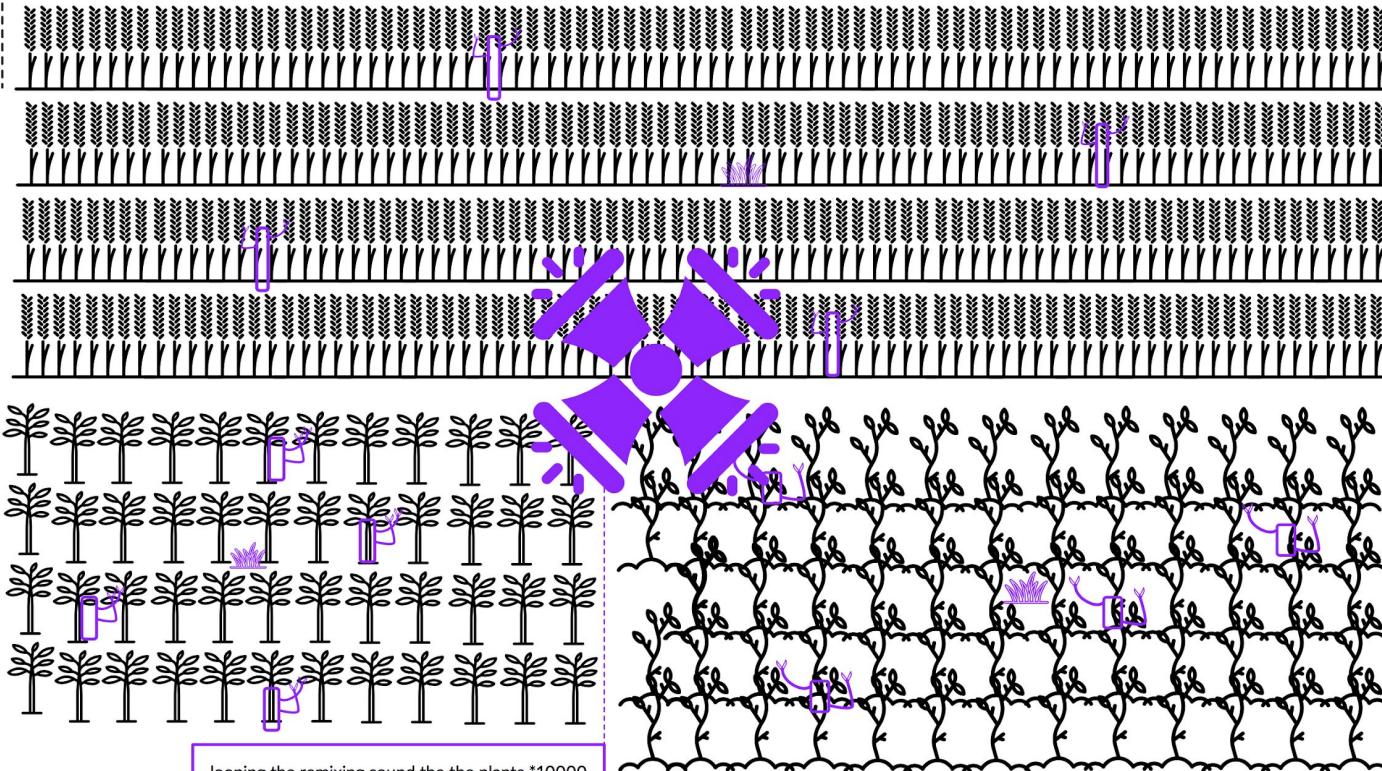


analyzing layer: systems analyzing inputs data over time & transferring the outputs to the field



outputs layer: the industrialized agriculture field

robots working in the field & following the outputs





THANK YOU!

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