# time to arrive

# LA2B

## Improving Mobility + Life in Los Angeles County

Dan Sturges • October 12, 2019

DAN
MAN

www.danman.design

# PROCOLO.CO

the **future** is

# Mix-Modal

the angels

we humans have never been more technically advanced

*yet here we are*

restricted mobility

environment | climate

# QUIZ: What is the weight of a gallon burned?

**6 lb**

weight: gallon of gas

burn in gasoline car

?

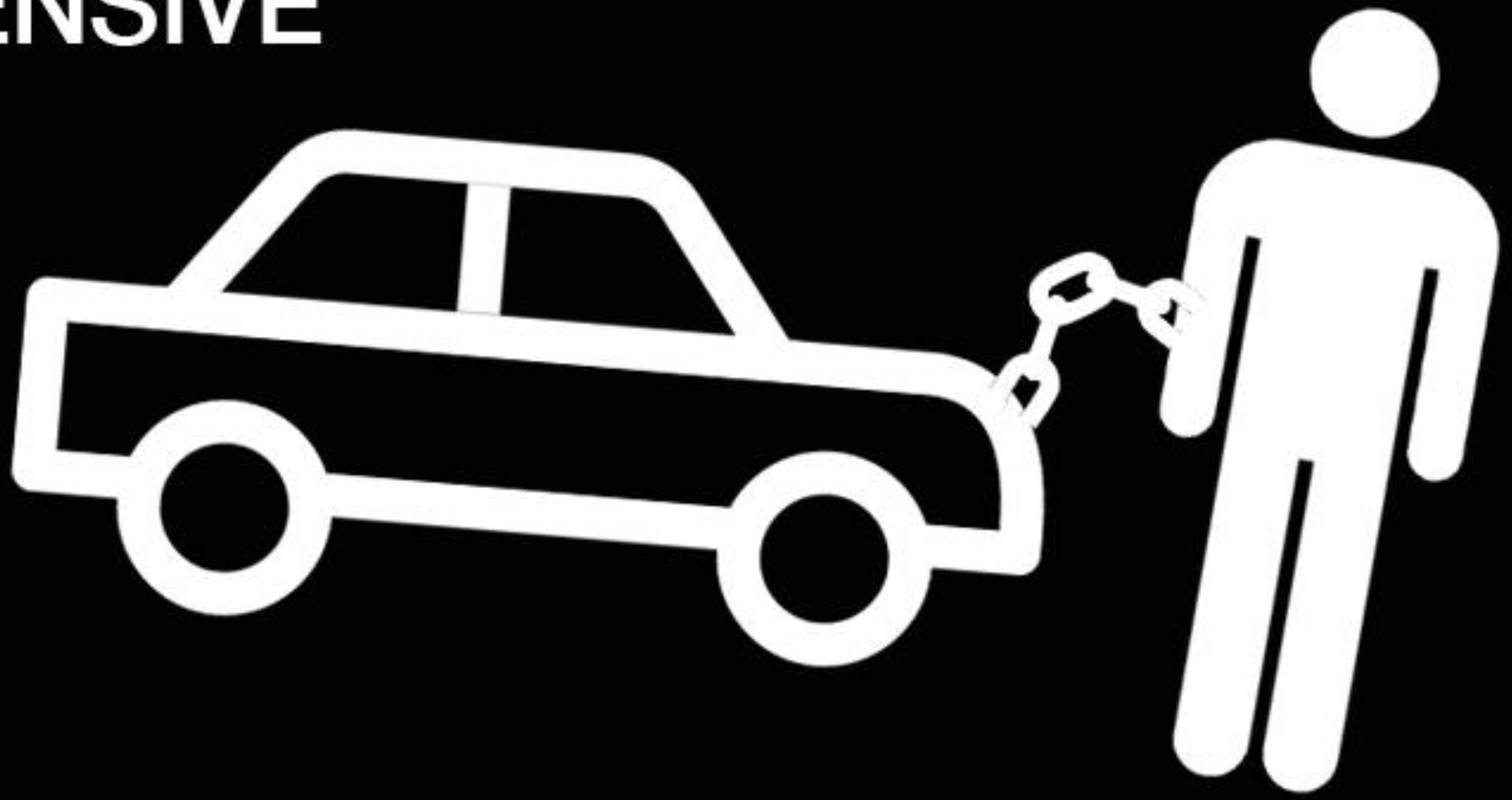
*what is weight of what comes out?*

20 lbs
$CO_2$
$CO_2$
$CO_2$

gasoline wars | over 400,000 dead in Iraq

driving
oppressive
regimes
forward

EXPENSIVE



# CAR-LOCKED

Cost of Vehicle Ownership
(AAA)

**$8,469**
annually

SCAR

# Nothing Can Fix LA Traffic, So Deal With It

LA ist

BY MEGAN MCCARTY CARINO - JULY 12 2018

*"Here's a dirty little secret that politicians, agencies and transportation innovators probably don't want you to know: there is almost nothing they can do to fix traffic in a thriving city like Los Angeles."*

40
40
YB 26 111
50%
MODE SHARE
COPENHAGEN

EVEN IN SNOW!

Venice Blvd
2%

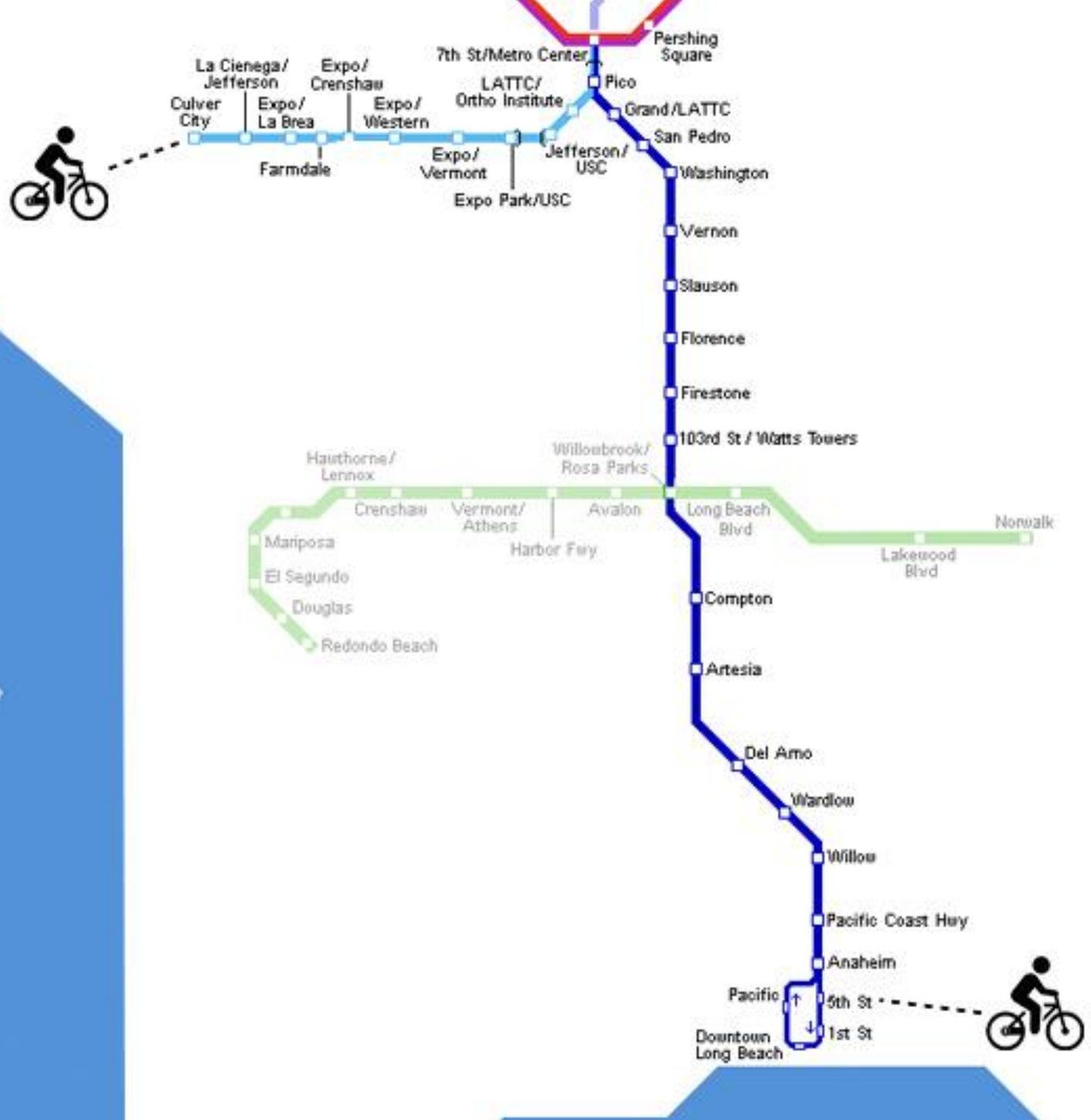
BLUE LINE
112
1368
2:37pm

Culver
CITYBUS
Culver CITYBUS
7138

761 PACOIMA
11

Santa Monica Mountains
WOODLAND HILLS
TARZANA
ENCINO
SHERMAN OAKS
STUDIO CITY
VALLEY VILLAGE
NORTH HOLLYWOOD
TOLUCA LAKE
UNIVERSAL CITY
GLENDALE
EAGLE ROCK
PASADENA
SIERRA MADRE
SOUTH PASADENA
SAN MARINO
ATWATER VILLAGE
LOS FELIZ
HOLLYWOOD
HOLLYWOOD HILLS
SILVER LAKE
WEST HOLLYWOOD
BEL AIR
UCLA
HANCOCK PARK
PACIFIC PALISADES
BRENTWOOD
WESTWOOD
CENTURY CITY
BEVERLY HILLS
PARK LA BREA
KOREATOWN
CHEVIOT HILLS
RANCHO PARK
WEST LA
PALMS
WEST ADAMS
USC
SANTA MONICA
MAR VISTA
BALDWIN HILLS
CULVER CITY
CRENSHAW
OCEAN PARK
VENICE
LADERA HEIGHTS
HYDE PARK
PLAYA VISTA
MARINA DEL REY
INGLEWOOD
WESTCHESTER
PLAYA DEL REY
Metro
University of California, Los Angeles
48 min
every 15 min
Beverly Hills
CENTURY CITY
43 min
every 15 min
Envoy - Car Sharing
Oct 12 6:30pm
Santa Monica College
MAR VISTA
48 min
every 15 min
Culver Transit
VENICE
Marina Del Rey

# SLO-GO




ONE WAY TOTAL TRIP TIME

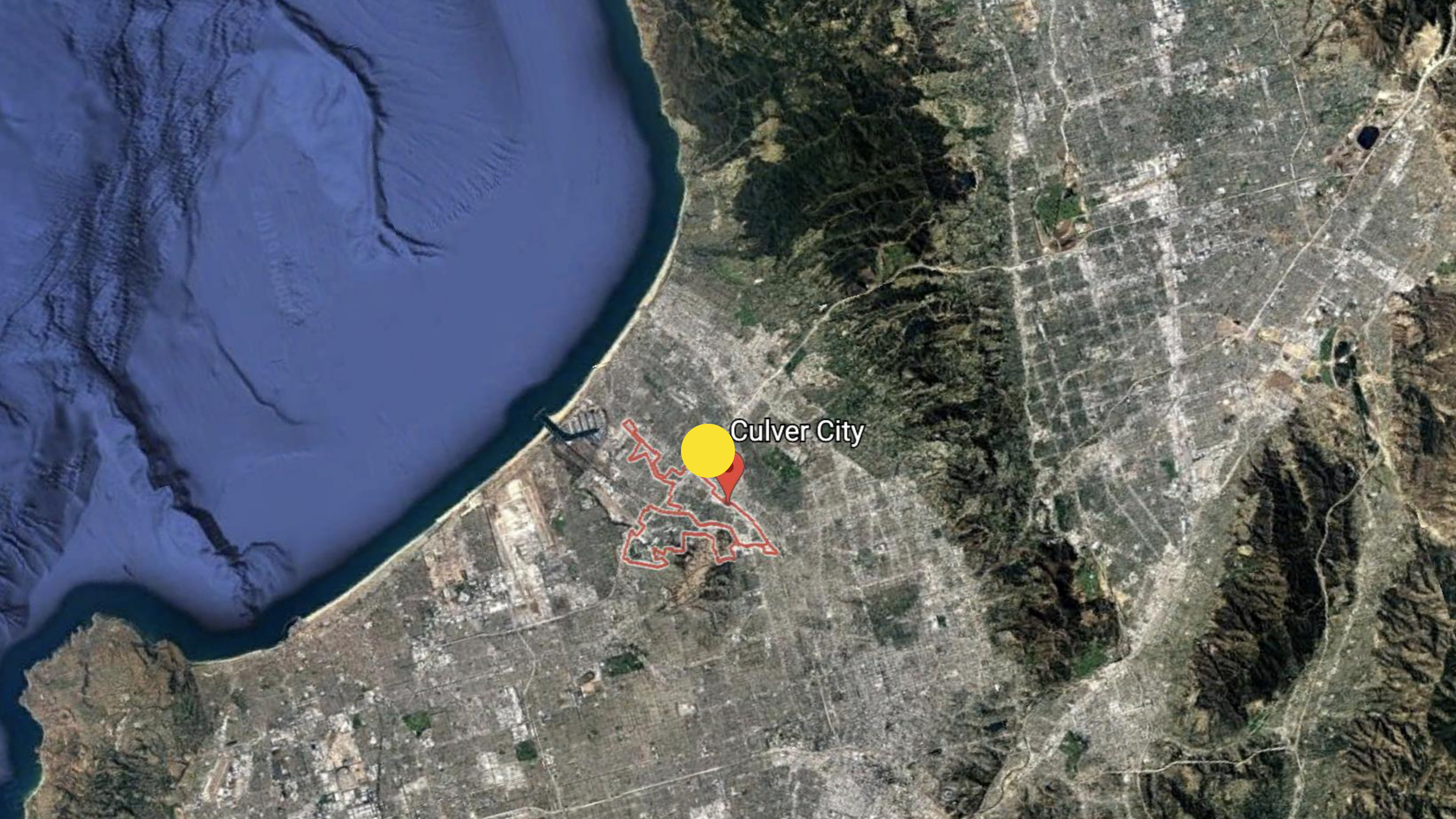
**2.5 hours**

INTERNET
AGE

# iTaxi

Uber

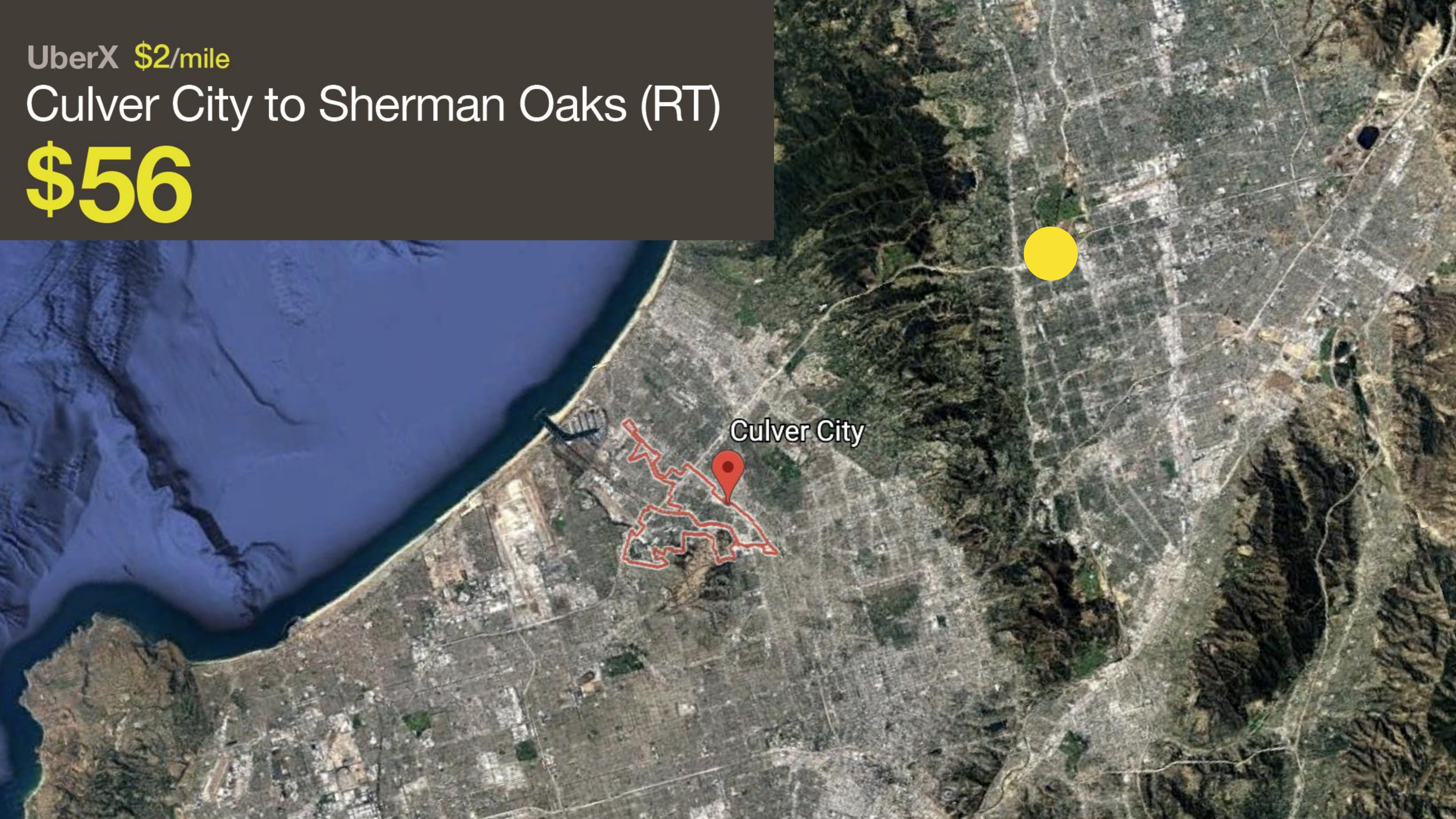
lyft


Culver City

UberX $2/mile

# Culver City to Sherman Oaks (RT)

# $56



# WE CAN NOW ACQUIRE A VEHICLE IN 1 MINUTE

# Carsharing

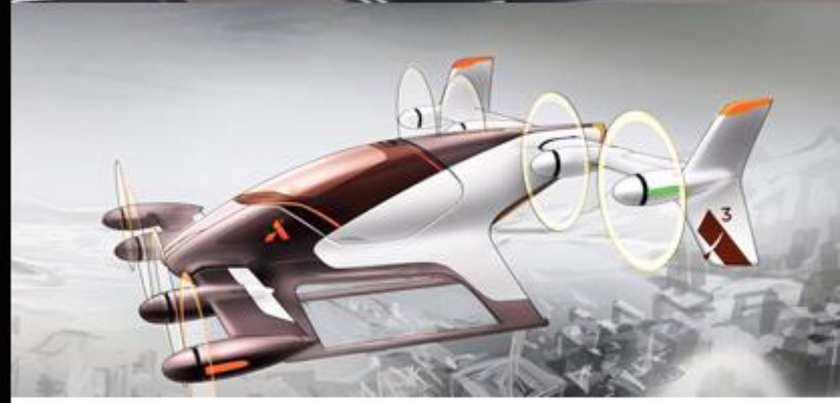
Bikeshare
To Azusa
Metro Bike
Metro Bike
Metro

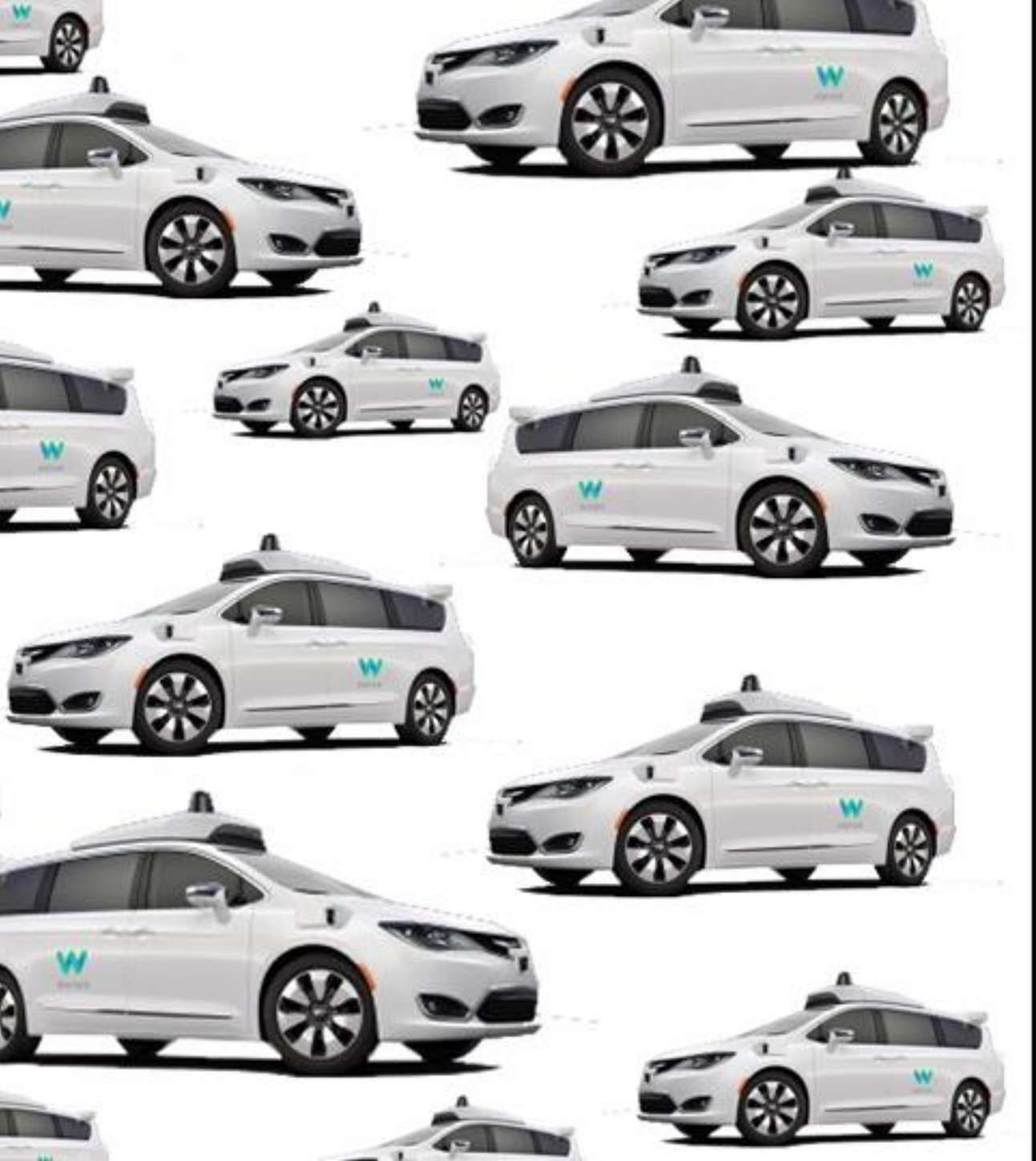
Scooter Share

# WORLD COMES 2U

# AV FUTURE

# AV
future





FILL IN BLANK

A new mobility paradigm is a _____ to create a new urban form

A new mobility paradigm is a **Design Tool** to create a new urban form

# QUIZ

*( What word goes here? )*

**Transportation**

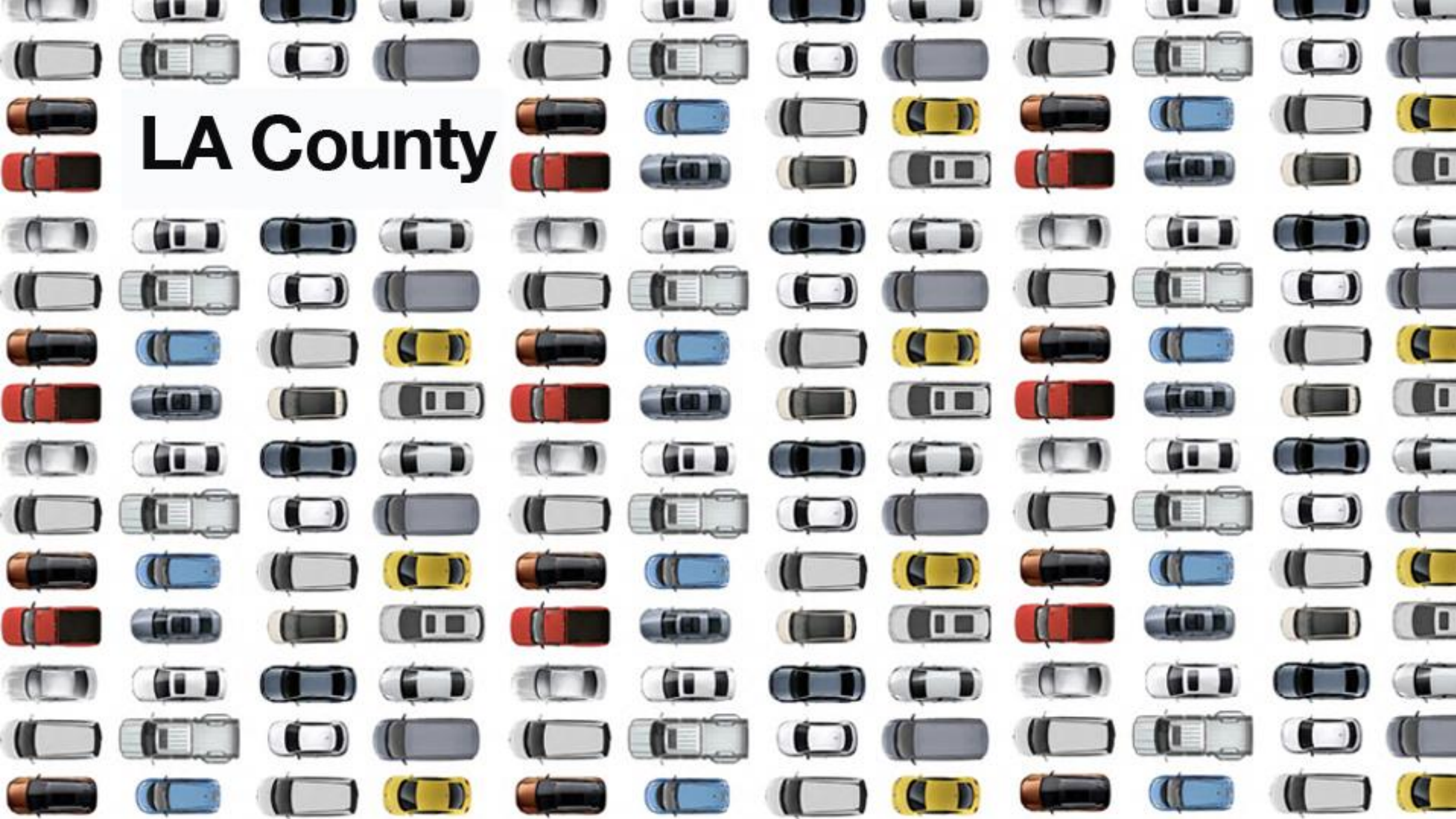
**Connectivity**

# Access

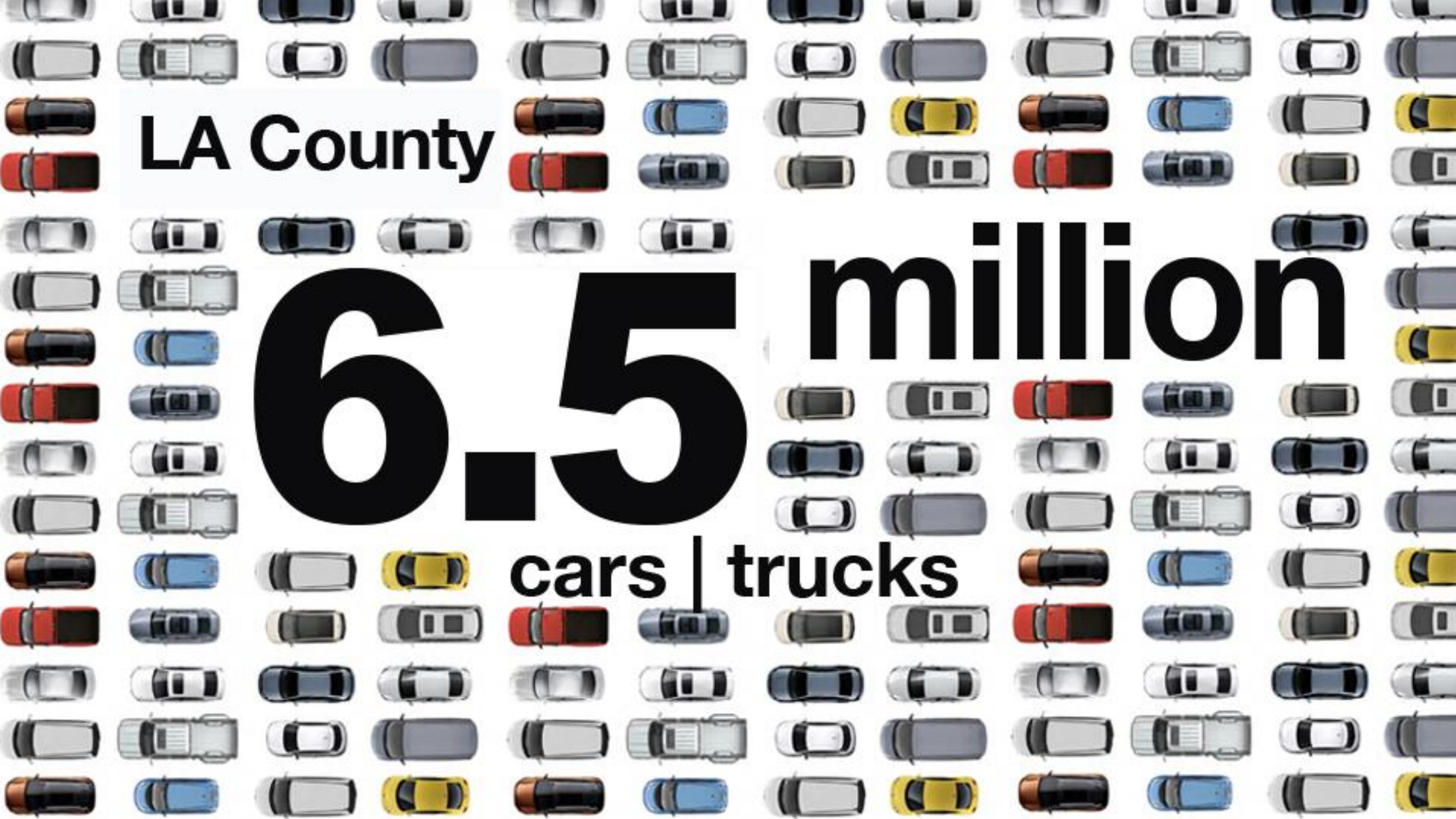
**Transportation**

**Proximity**

**Connectivity**

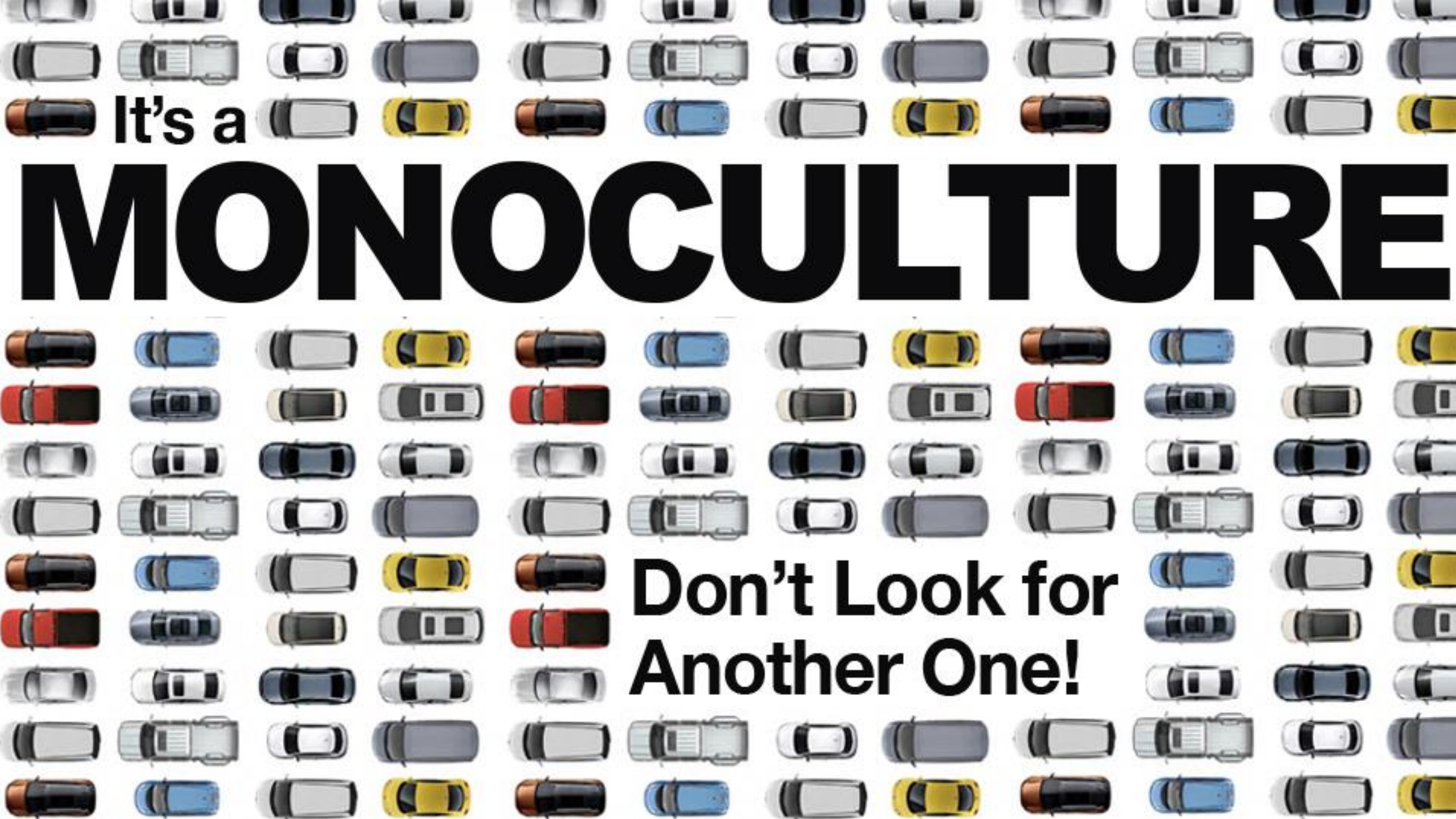


# LA County


LA County
6.5 million
cars | trucks

6.5 million
ROLLING
RECTANGLES

# It's a MONOCULTURE

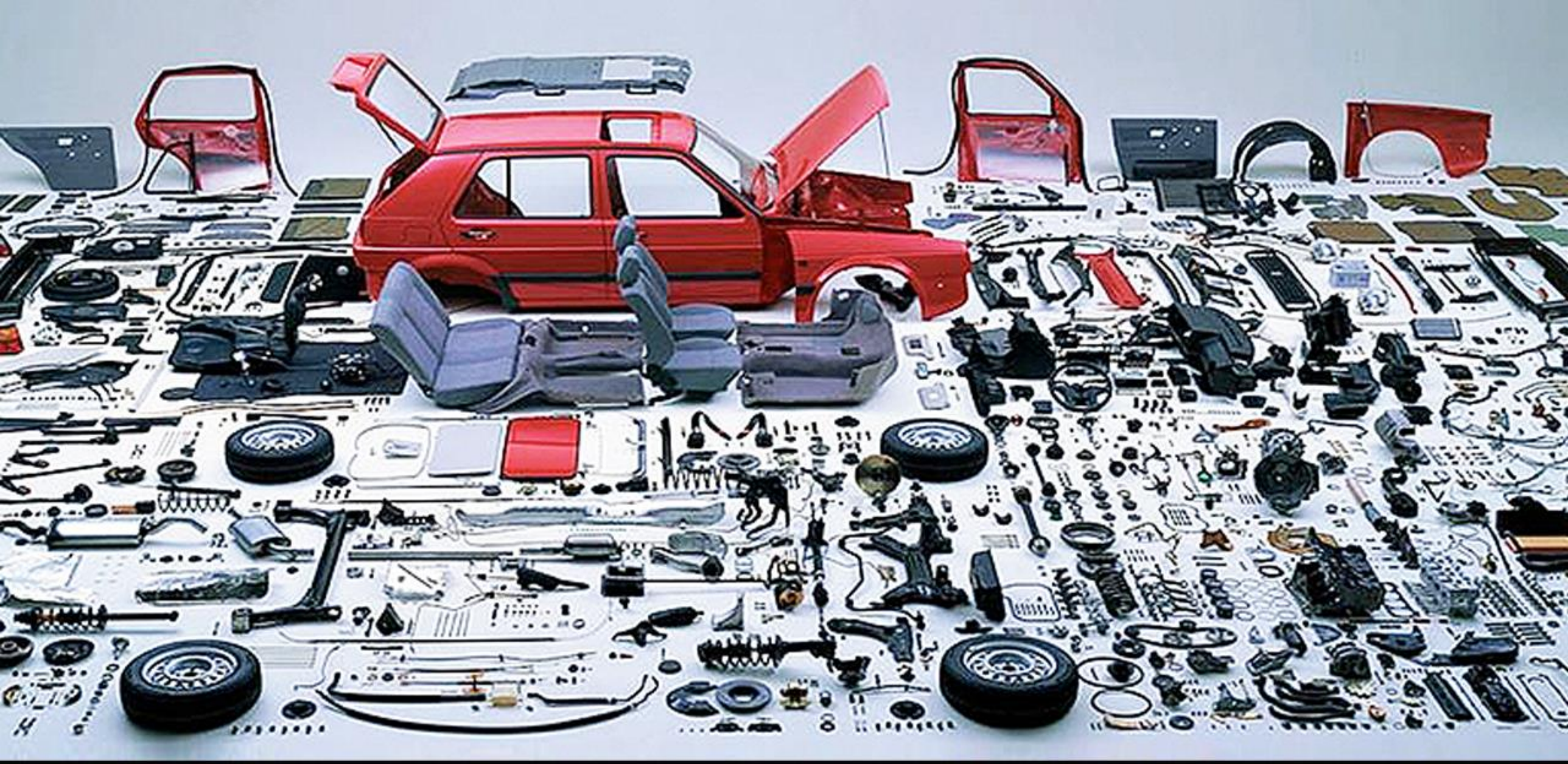

It's a
MONOCULTURE
Don't Look for
Another One!

# Remove 5% of cars – traffic moves 50% faster.

*the **crux** of the **problem***

# left alone syndrome

commuter **1.1/people/car average = 20% load factor**



# NEED 30,000 PARTS TO GO A MILE?

SOLUTION

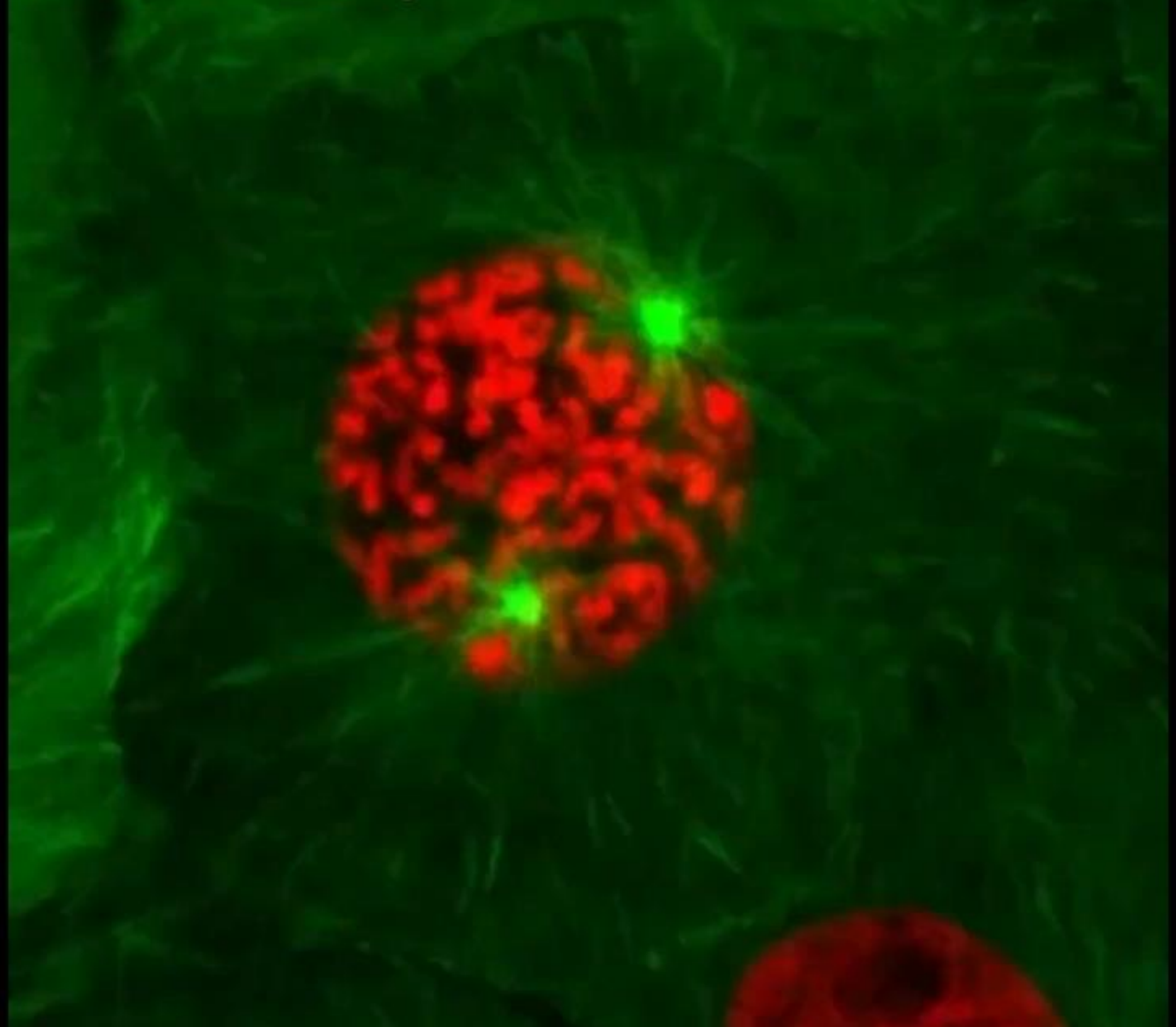
# SPLIT

mobility into 2 vehicle categories

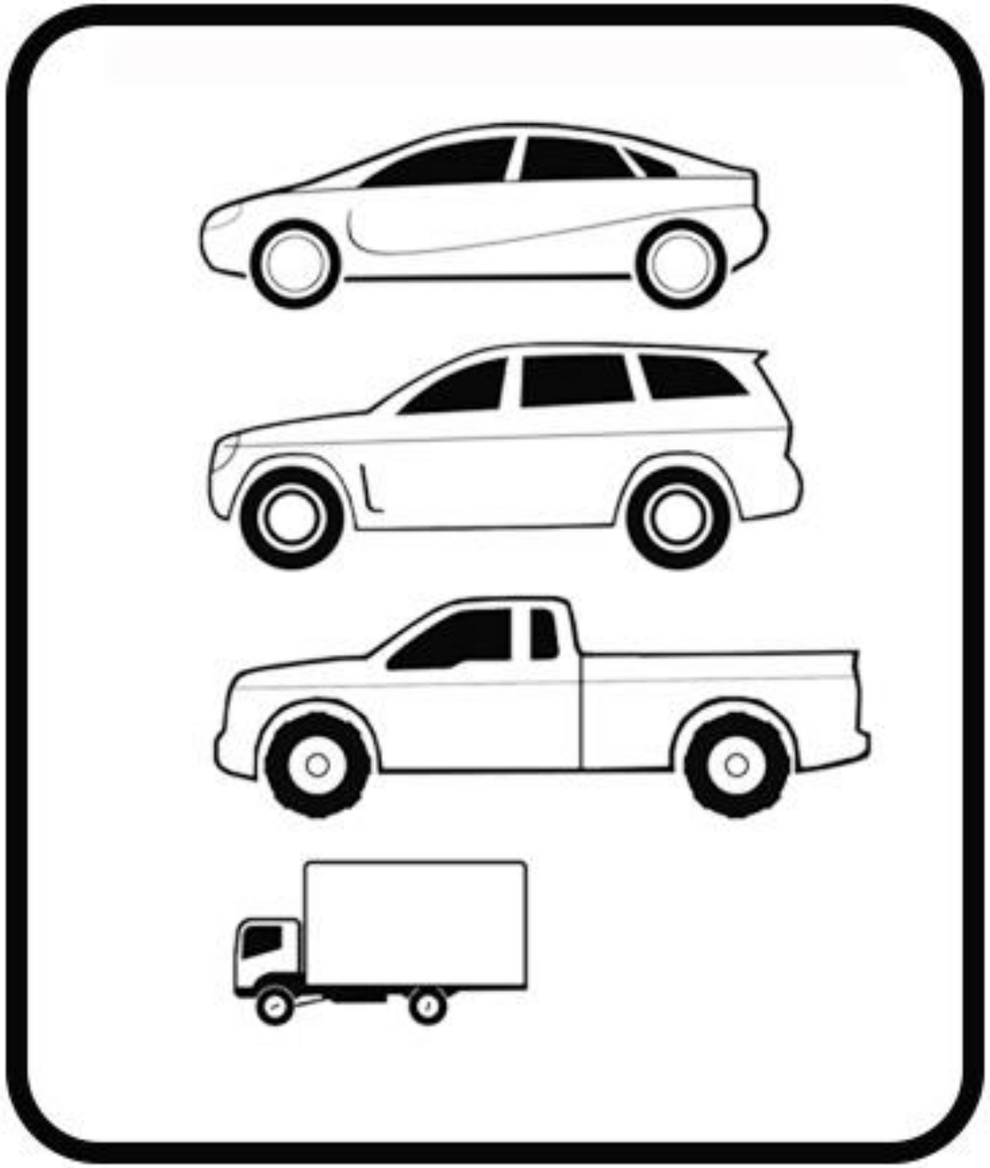
local

city-regional

+ new create new mobility network to eliminate need to own car



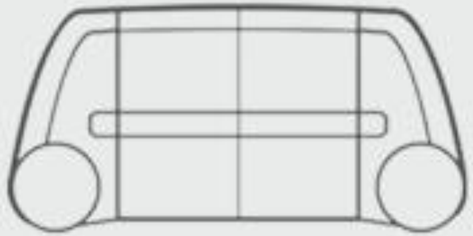
# Fast Heavy Vehicles



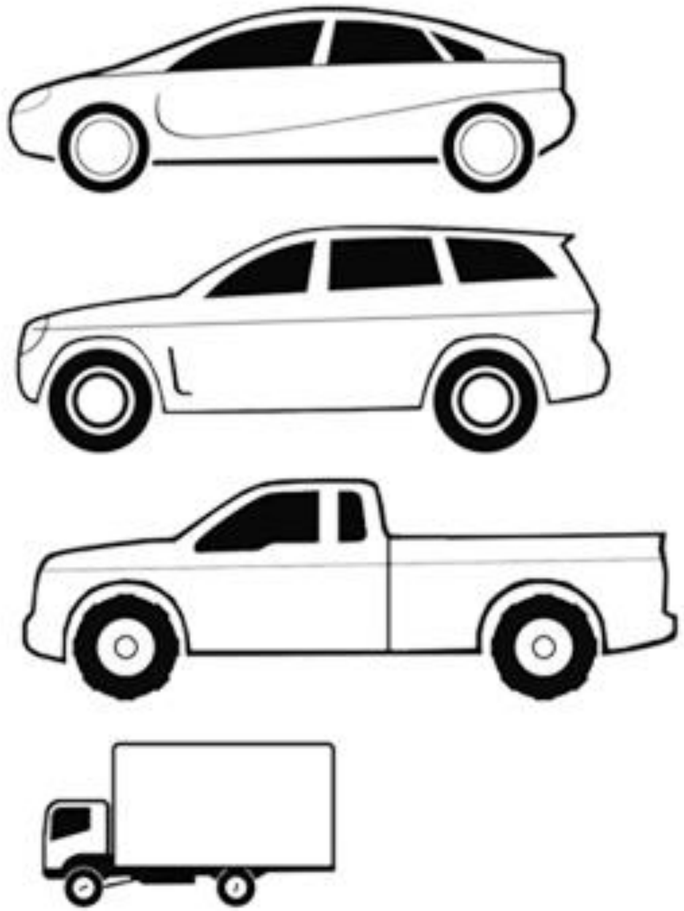
## Light Low-Speed Modes

personal

group



## Fast Heavy Vehicles



# LLM

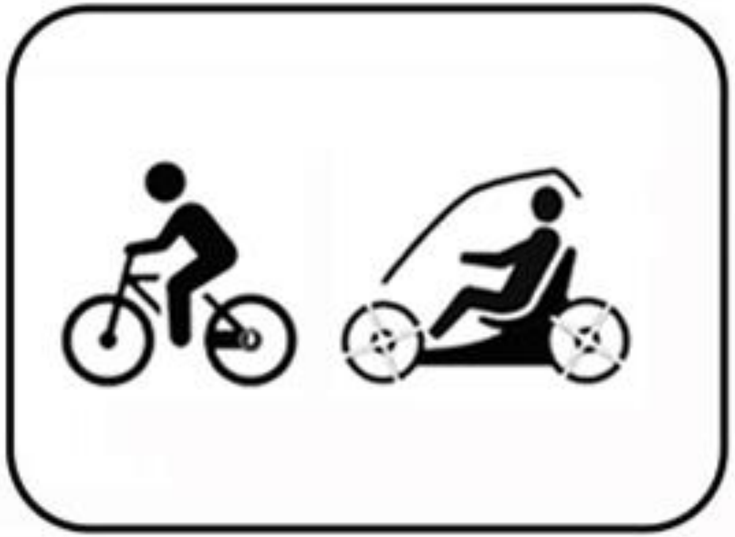
Light Low-Speed Modes

# FHV

Fast Heavy Vehicles

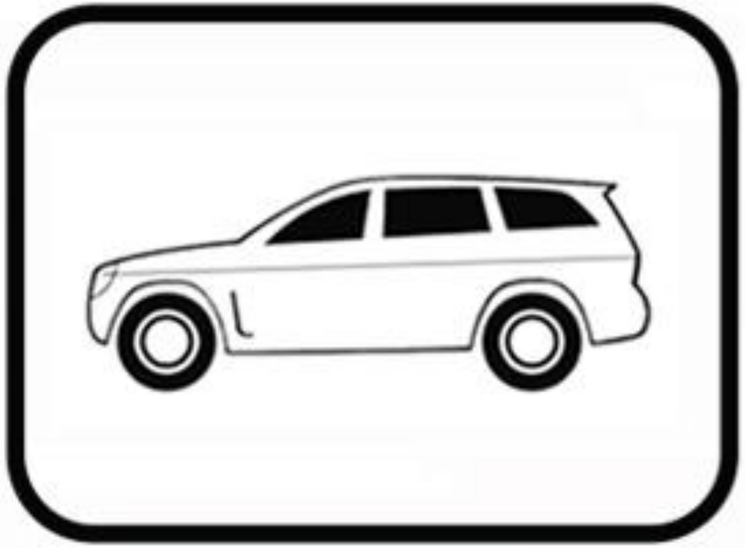
# TIERS

**T1**



**LOCAL**
35 mph (or less)

**T2**



**REGIONAL**
80 mph

**T3**

**NATIONAL-GLOBAL**
550 mph

# How to Get More People Using Very Small Vehicles

PEDAL

**Bike**

***EFFORT***

# How to Get More People Using Very Small Vehicles

PEDAL
**Bike**

**EFFORT**

ELECTRIC
POWERED

**Bike**
**Scooter**
**Near Car**
**Other**

**EZ**
**(easy)**

# Shared E-Bikes (2007)

intrago

# 38.5 MILLION SHARED E-SCOOTER TRIPS (2018)

# Light Low-Speed Modes

# BIKES ARE BEST!

# Light Low-Speed Modes

# Light Low-Speed Modes

much of LLM safety is based on travel environ-ments

POLARIS

5NHR046

GMC
6YND332

USA GASOLINE
bigblue bus
5NHR044

Biro

# NEV

**Neighborhood Electric Vehicle**

- **25-35 mph**
- **50 miles range**
- **Owned or Shared**
- **Park 4 in space for 1 car**
- **Could be 3D Printed - Designed Locally**

**GEM Polaris**
USA
**$9,000**

LSEV
China-Made
**$4000**

LSEV
China-Made
**$2000**

# What does $20k Buy?

10 China-made Near Cars **or** 1 Honda Civic

Side-by-side seat NEVs, and Near Cars will be difficult to make space for on LA streets

25

Who said this?

Elon
Segway
is
Ridiculous!

autonomous **local shuttle**

RIDE
SHARING 37
RIDE
SHARING
37
06:41
pm

# Needs for LLM Market

1

Safe Travel Corridors

2

Households Enabled to Own Fewer Vehicles

DREAM

1970

1970

# Gpoint

GO LIGHT | GO LOCAL

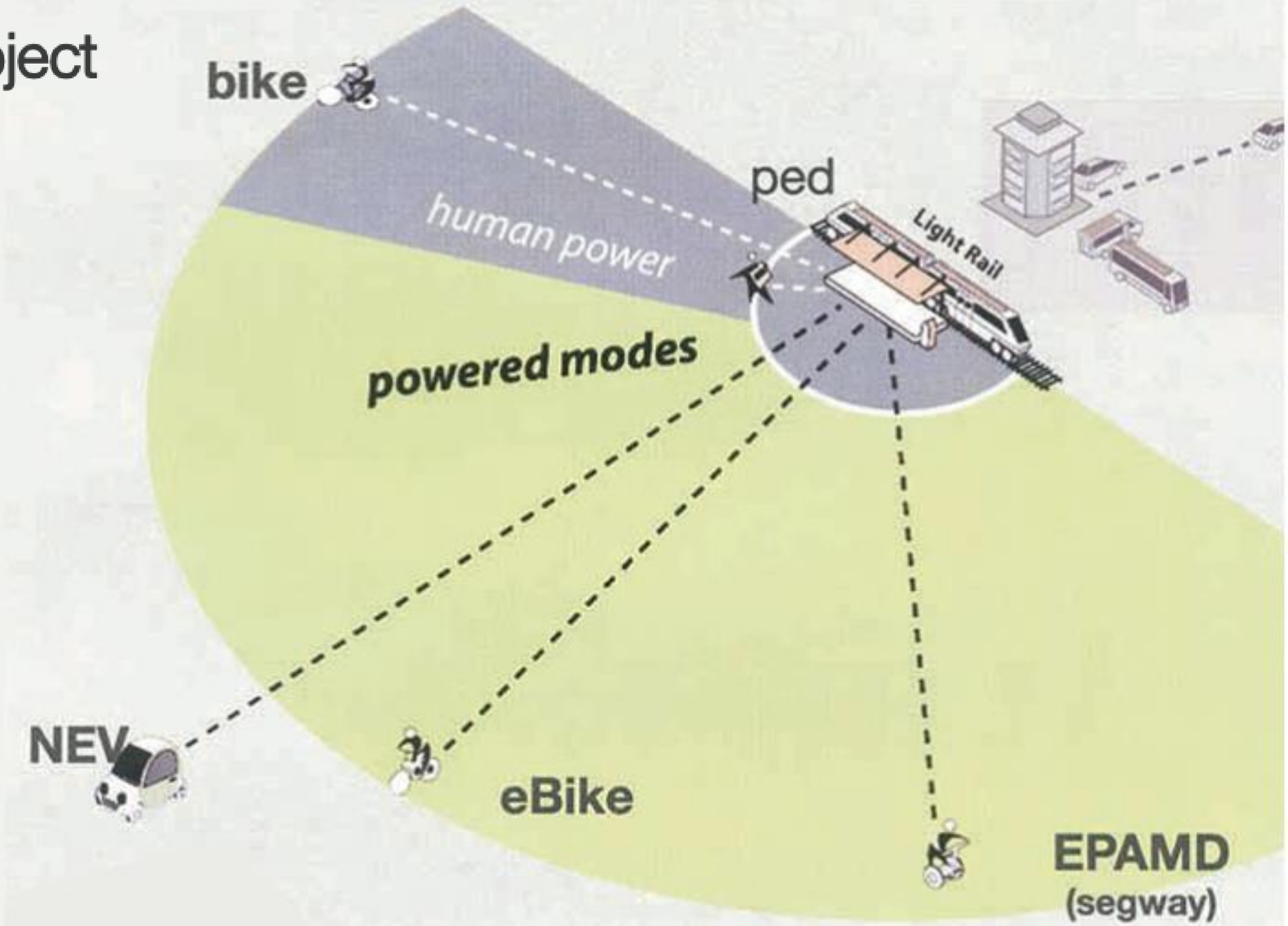
# 2 Types of Cities:

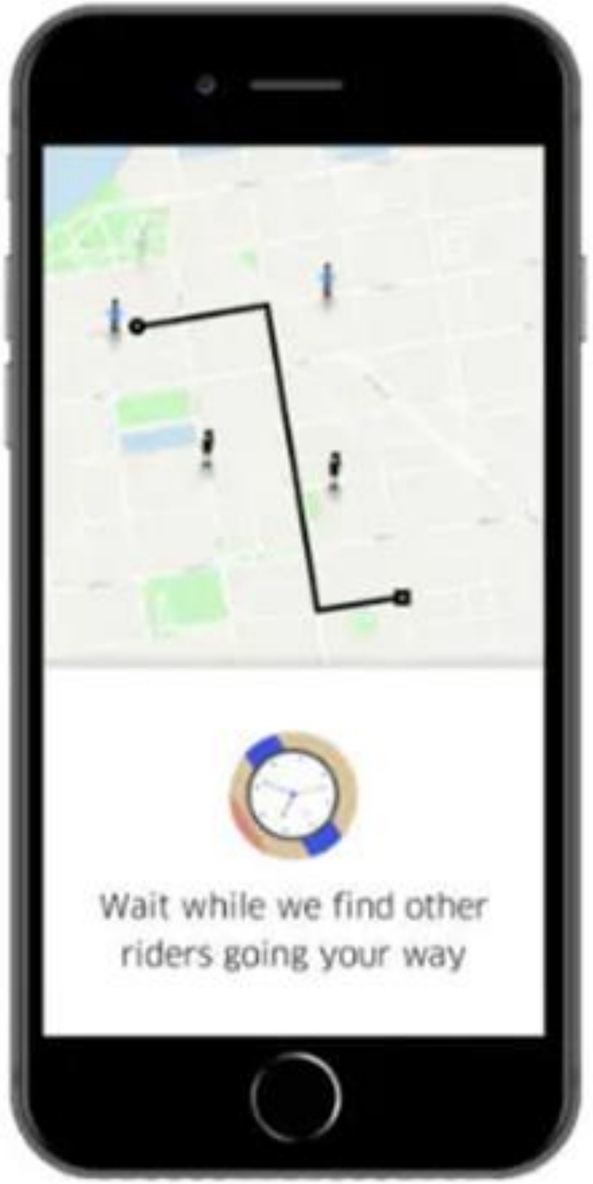
# **First Mile** Project

Calstart

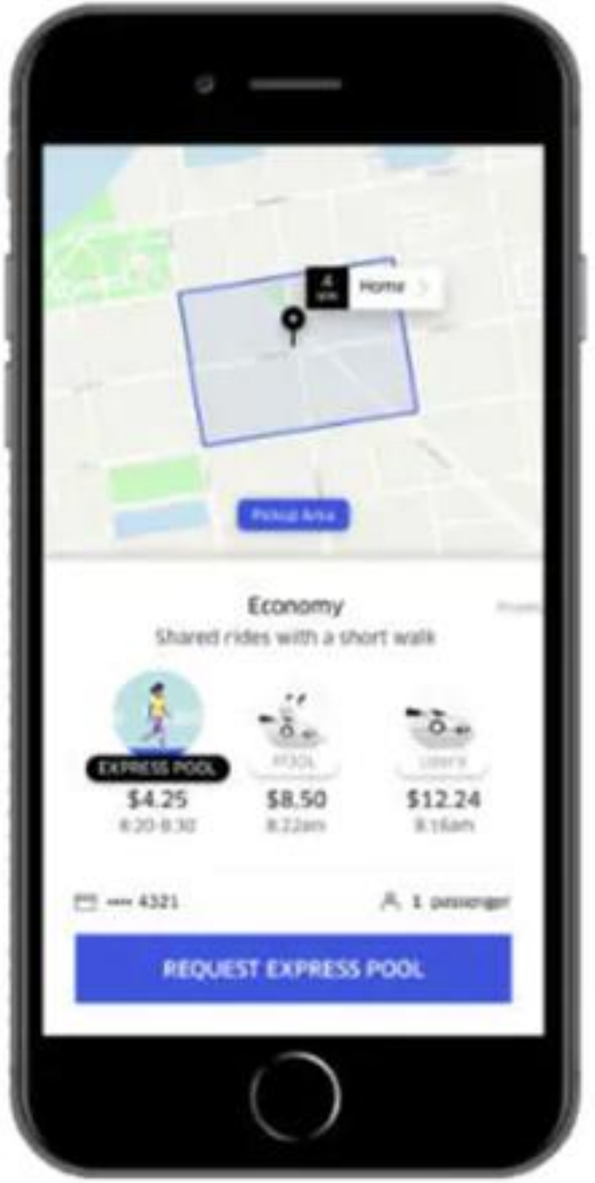
FTA

2004

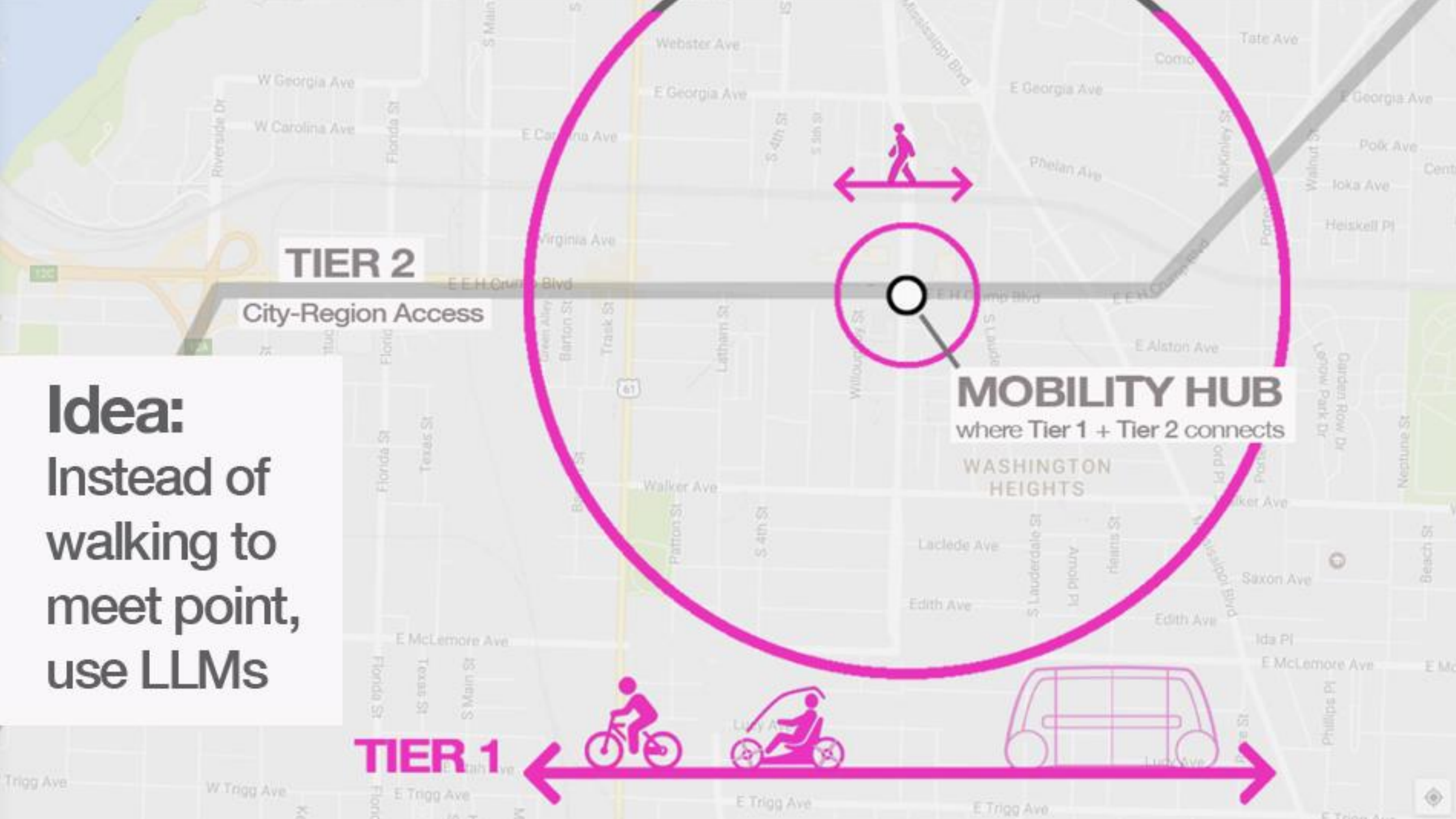



Wait while we find other riders going your way

Walk to your pickup spot to meet your ride


Home
Pickup Area
Economy
Shared rides with a short walk
EXPRESS POOL
$4.25
$8.50
$12.24
4321
1 passenger
REQUEST EXPRESS POOL

# Uber Pool




# Idea:

Instead of walking to meet point, use LLMs

ONE WAY

# Culver City to Sherman Oaks

**UberX**

**$28**

**Uber Van**

**$3***

* 8 riders

GOPOINT.org

# No metro area resident would live more than 1 mile from a hub

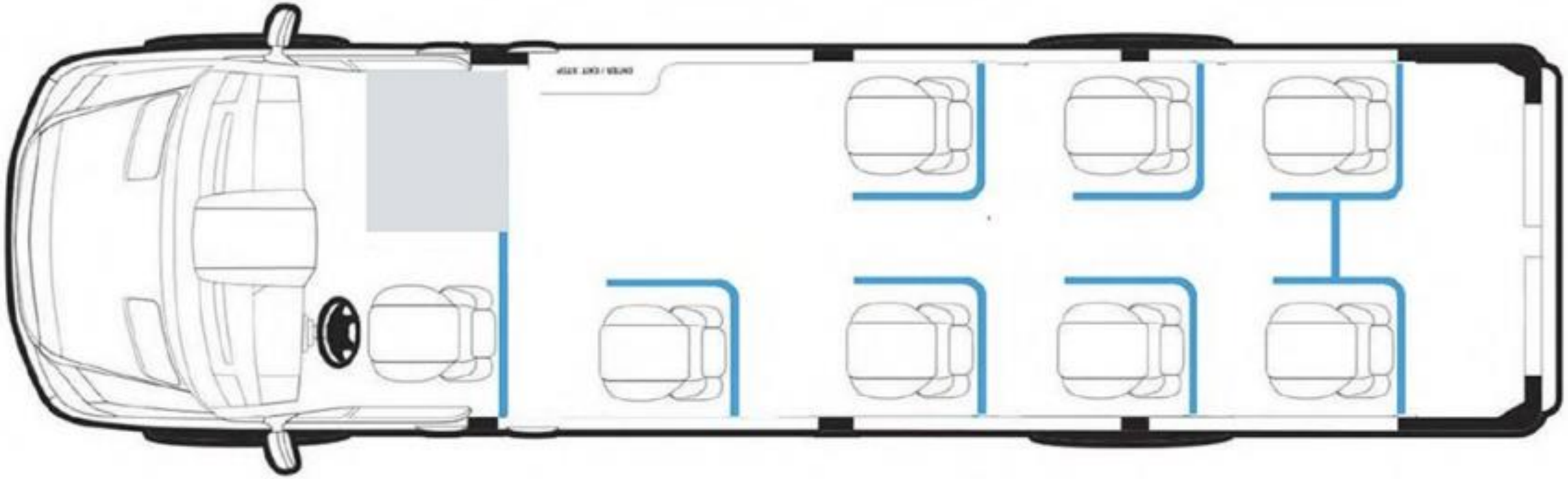
*future of*

# personalized transit

# Dreaming Pod Van

private “pod” seating

# future of digital interface



TAXI
U
H
car rental
mobility point
cycle center
bikesharing
e-carsharing
ridesharing

The early Lyft Points will be like “training wheels” as the regional cellular mobility network develops. The required land is minimal, but should be located at a location central to a neighborhood - either on commercial land or approved public (street parking space).

# LyftPoint has limited brick + mortar requirements

TIER 2

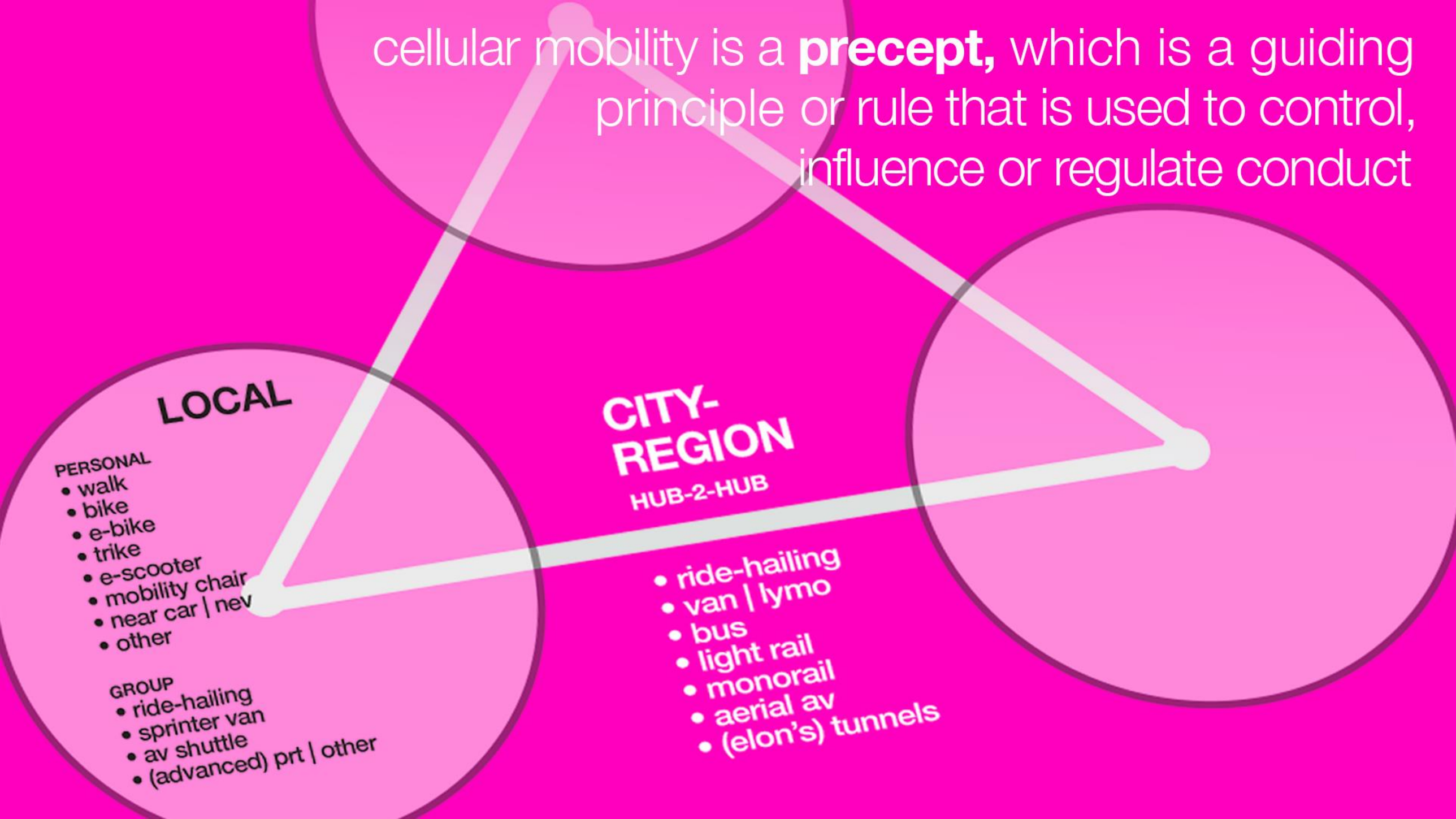
## Vans fit with concept

# HUB-2-HUB OPTIONS

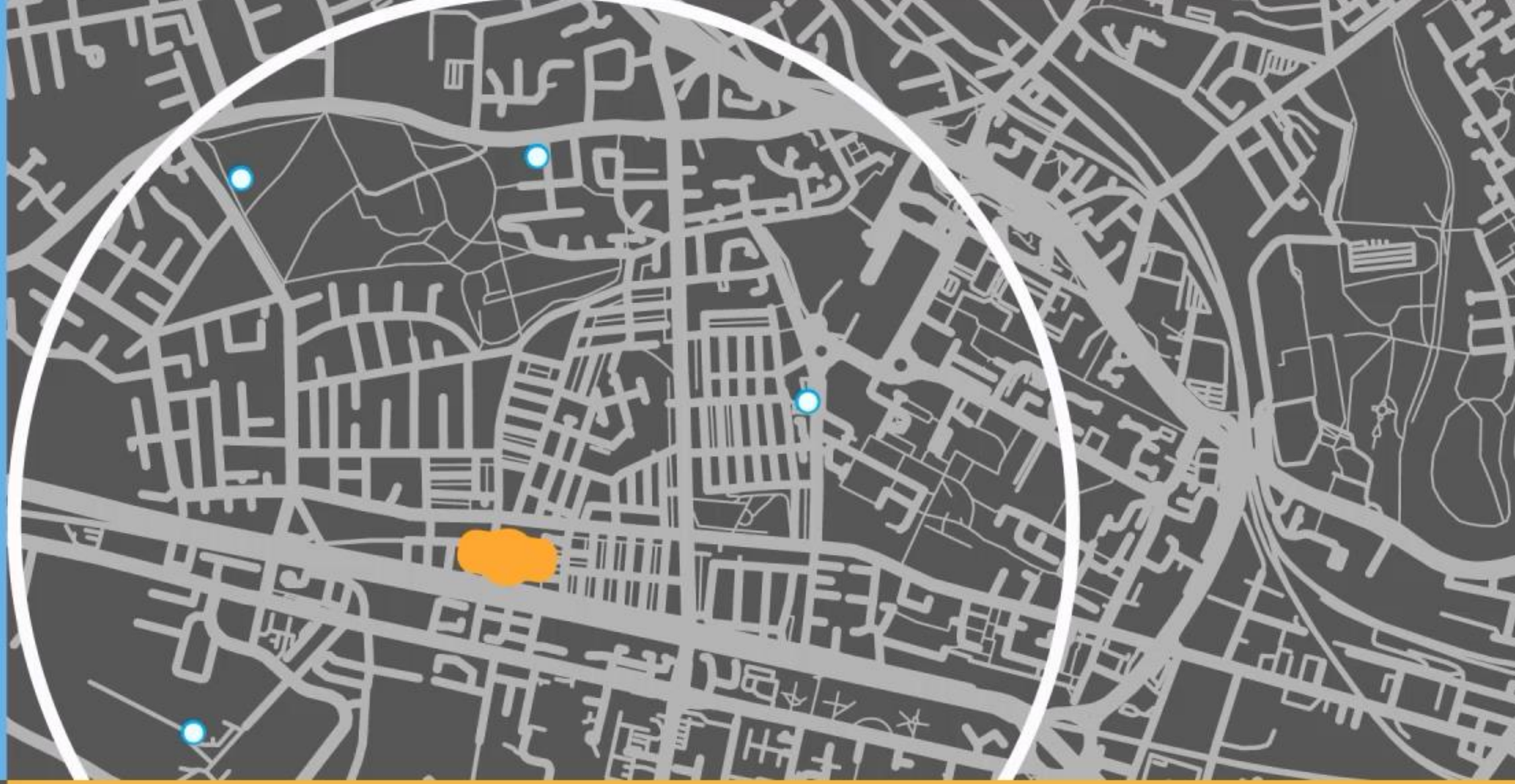
Long term: public transit integration

Ride-hailing drivers with 3 or more seats

cellular mobility is a **precept,** which is a guiding principle or rule that is used to control, influence or regulate conduct



**LOCAL**
SLOW
SMALL



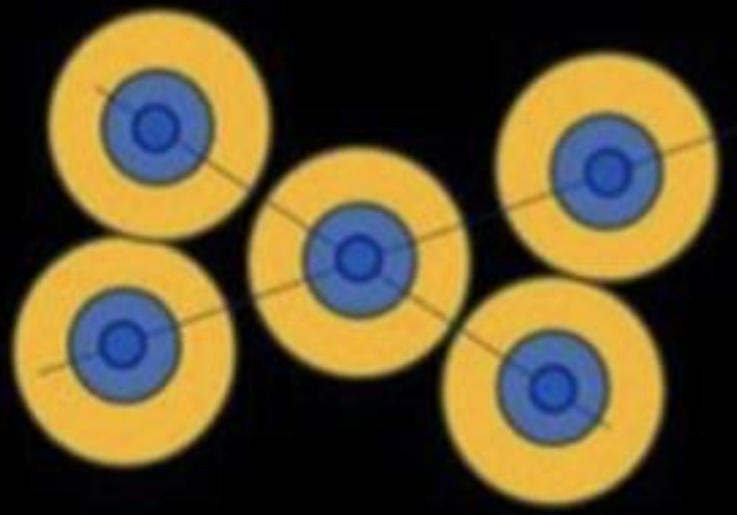
**REGION**
FAST
BIG

GOPOINT

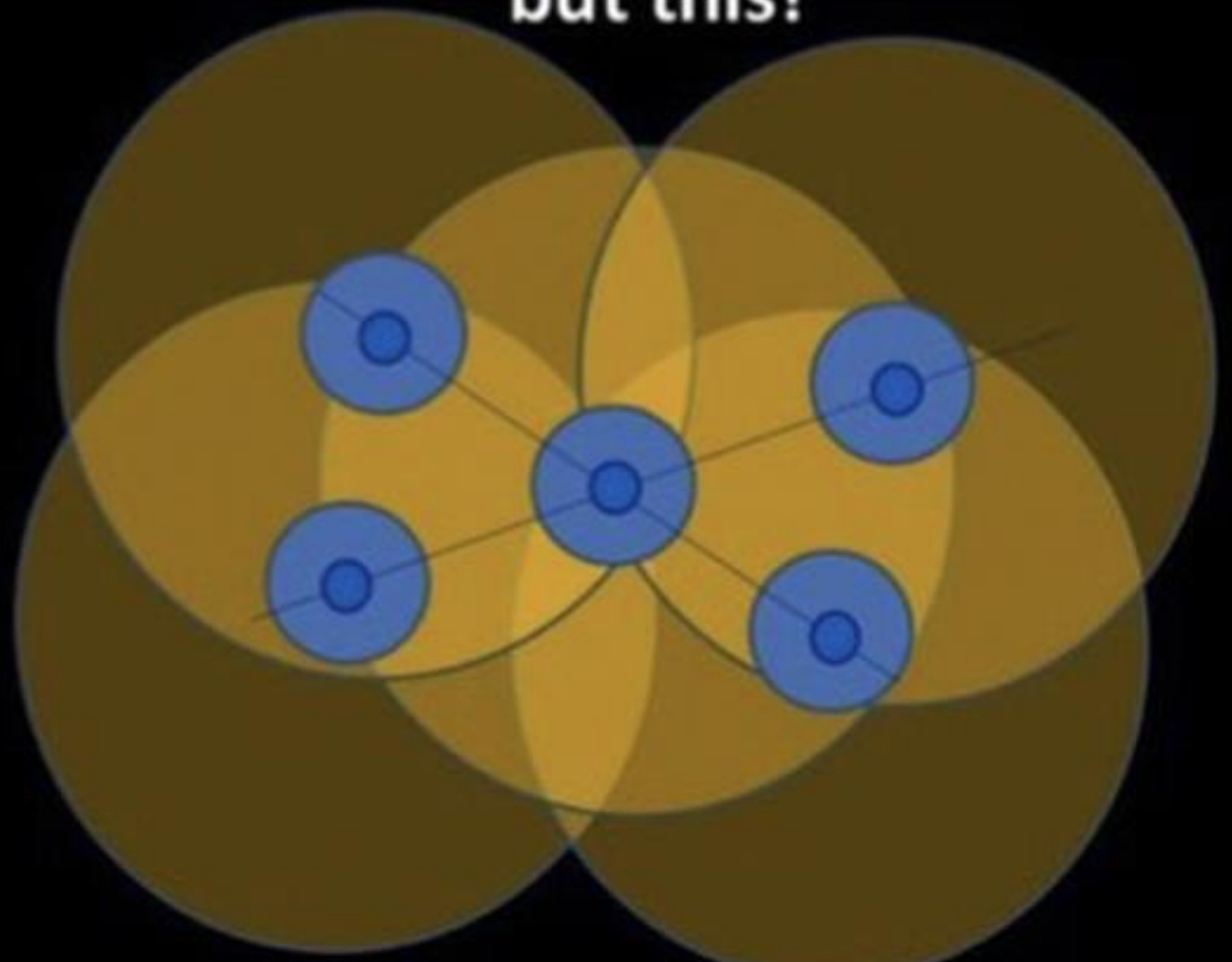
# Bike+Train

Urban Cycling Institute

not (only) this...



but this!



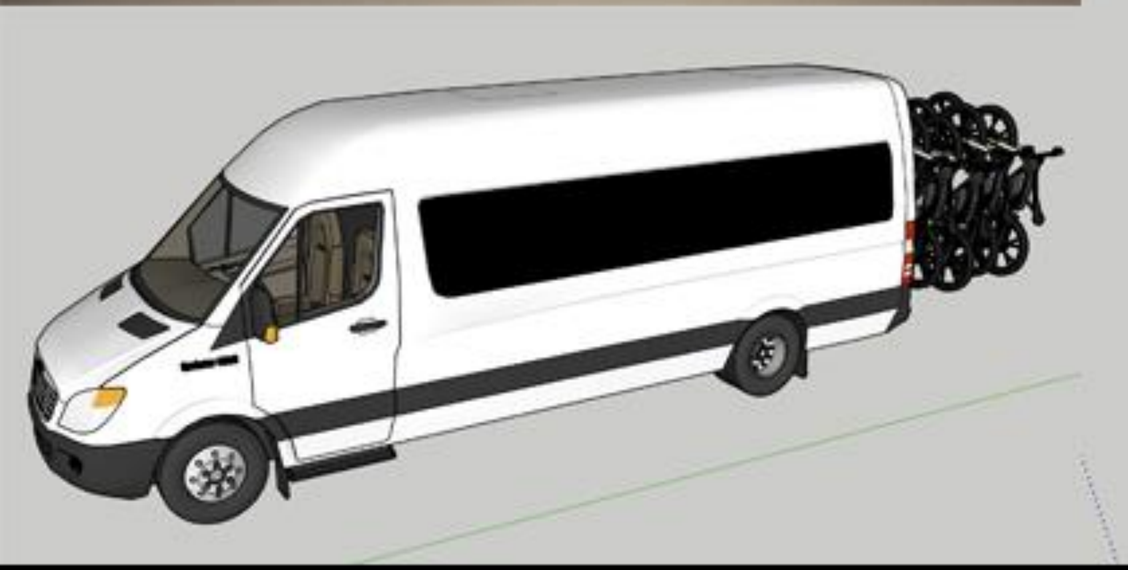
walking catchment of station

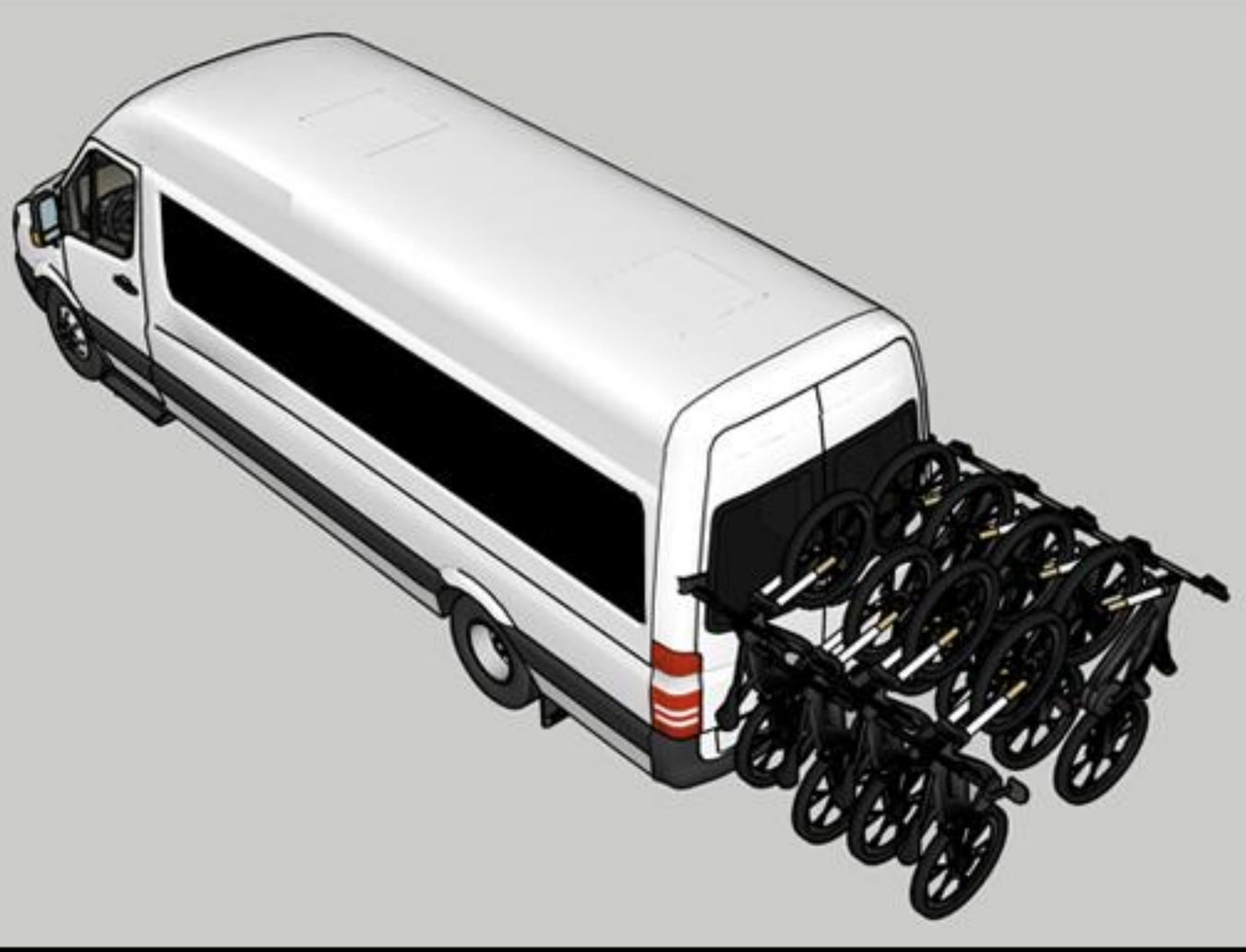
cycling catchment of station

Culver City

car ferry
NEW JERSEY
WELCOME ABOARD!

skis on bus



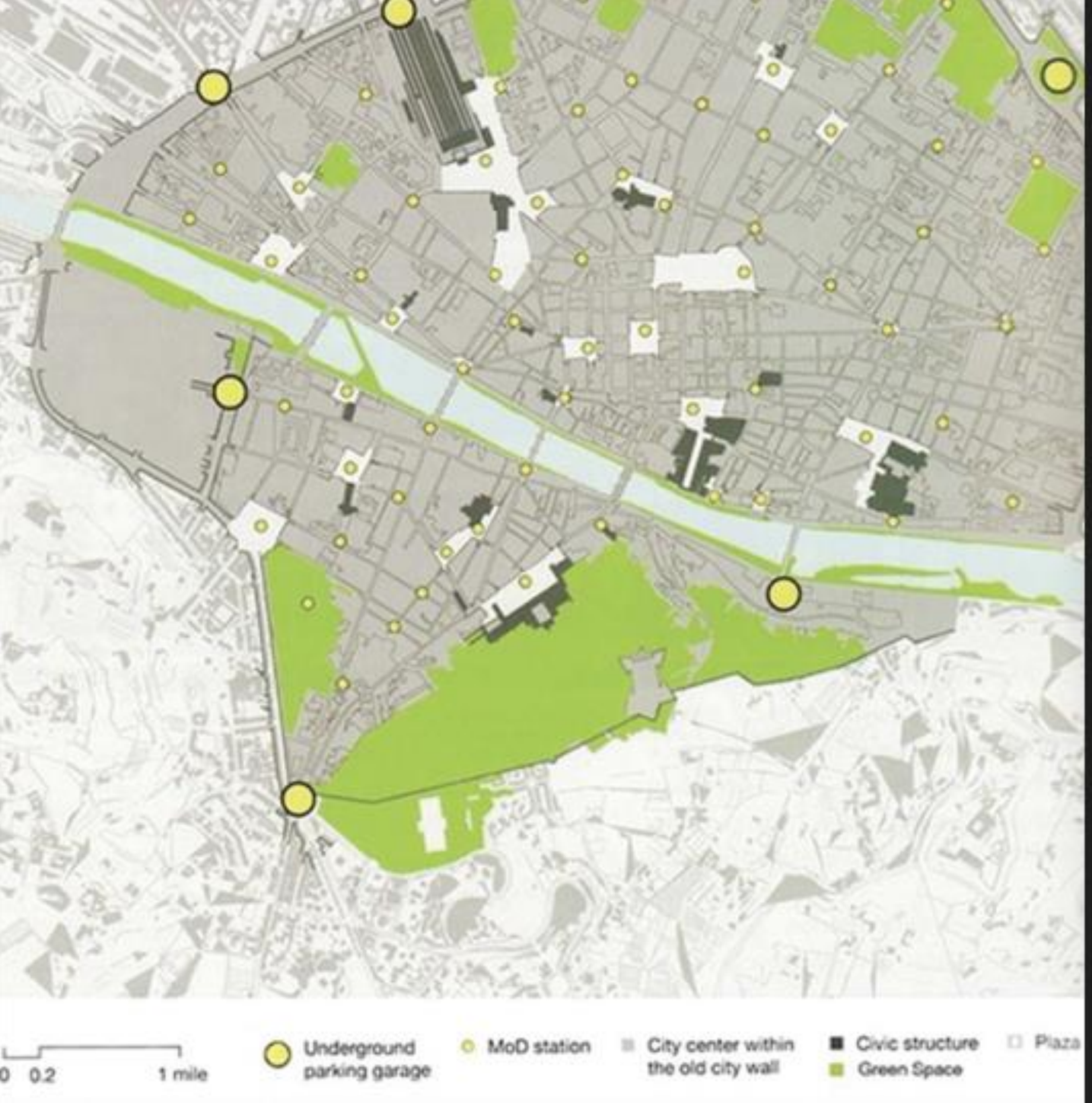


# micromobility ferry

# Gpoint

GO LIGHT | GO LOCAL

# Break

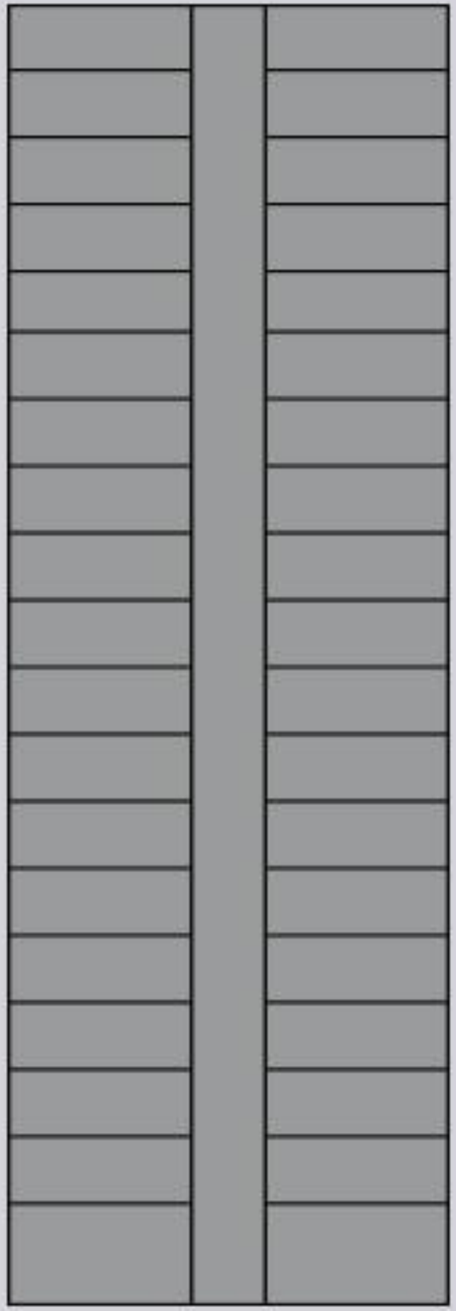


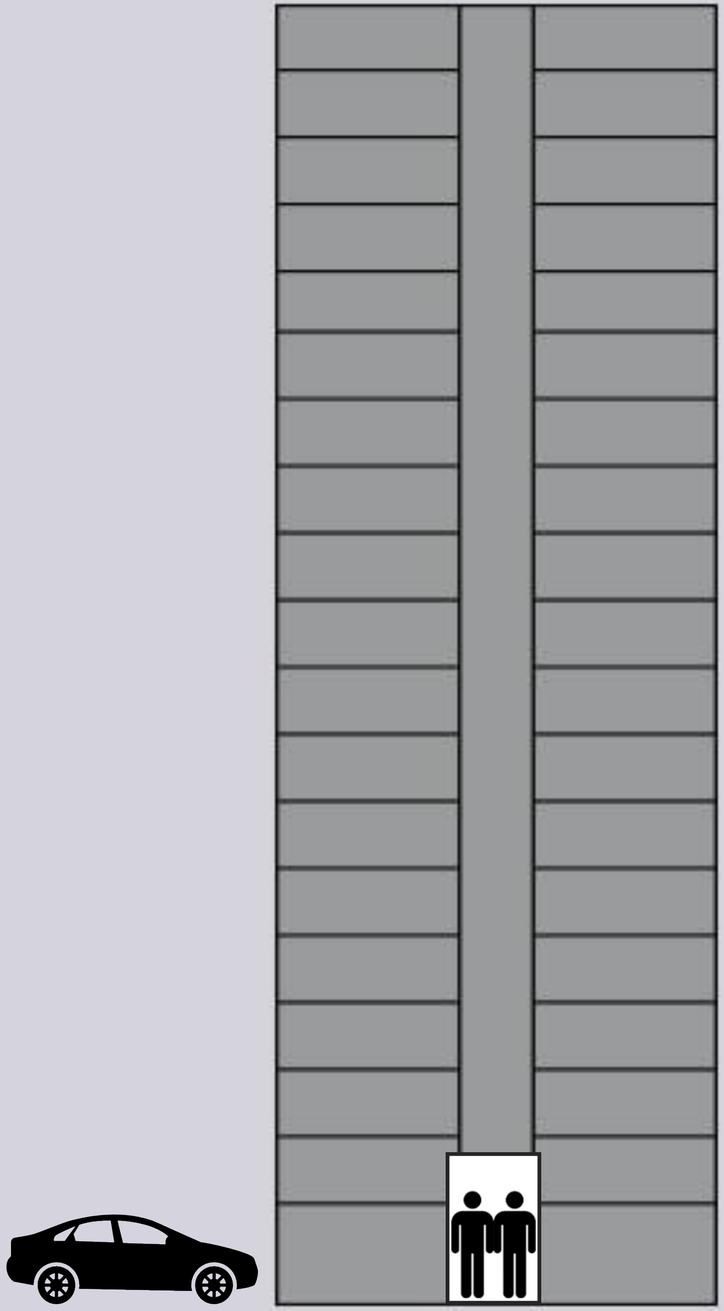

C-ZONE

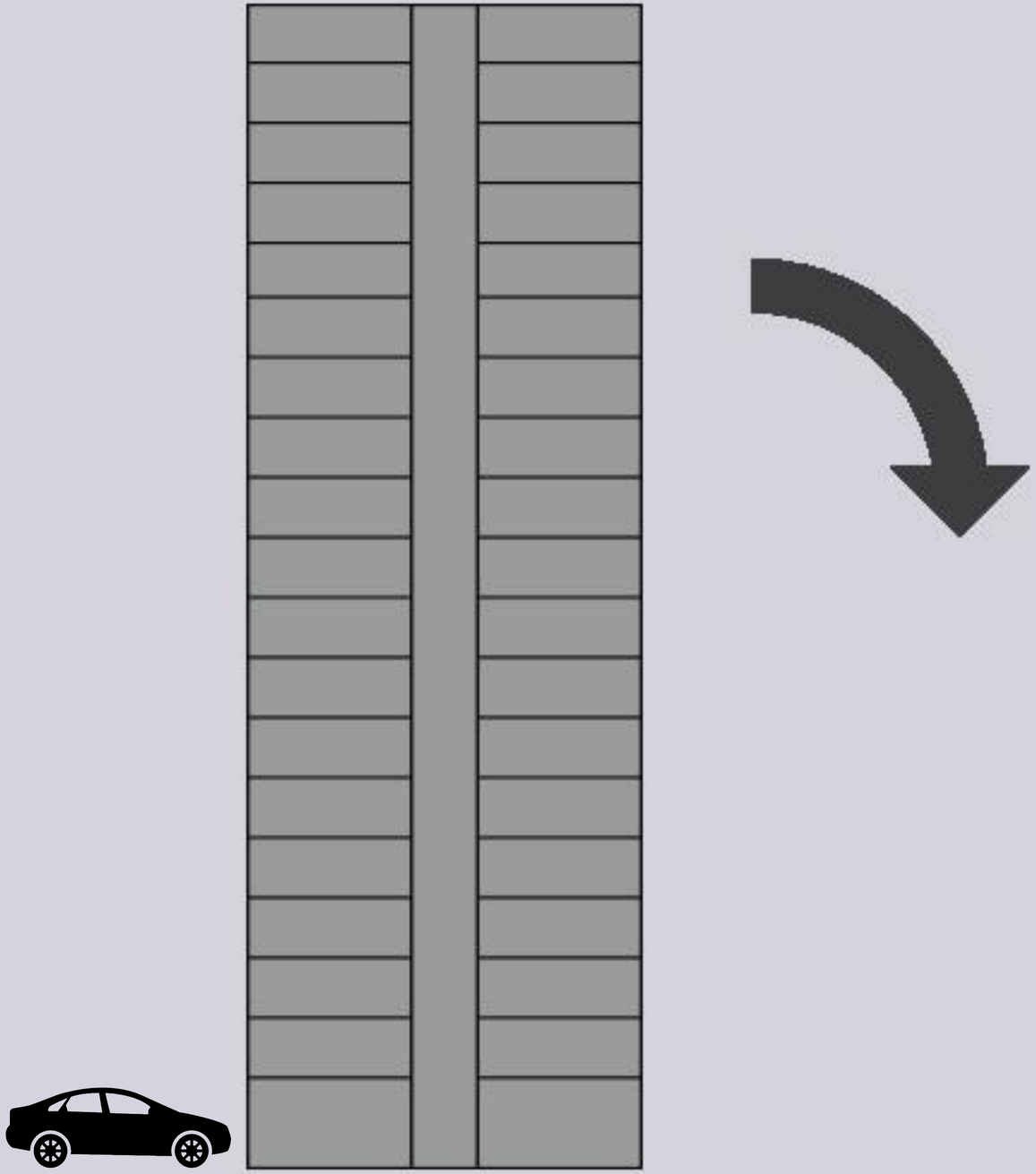
# CAPILLARY ZONE

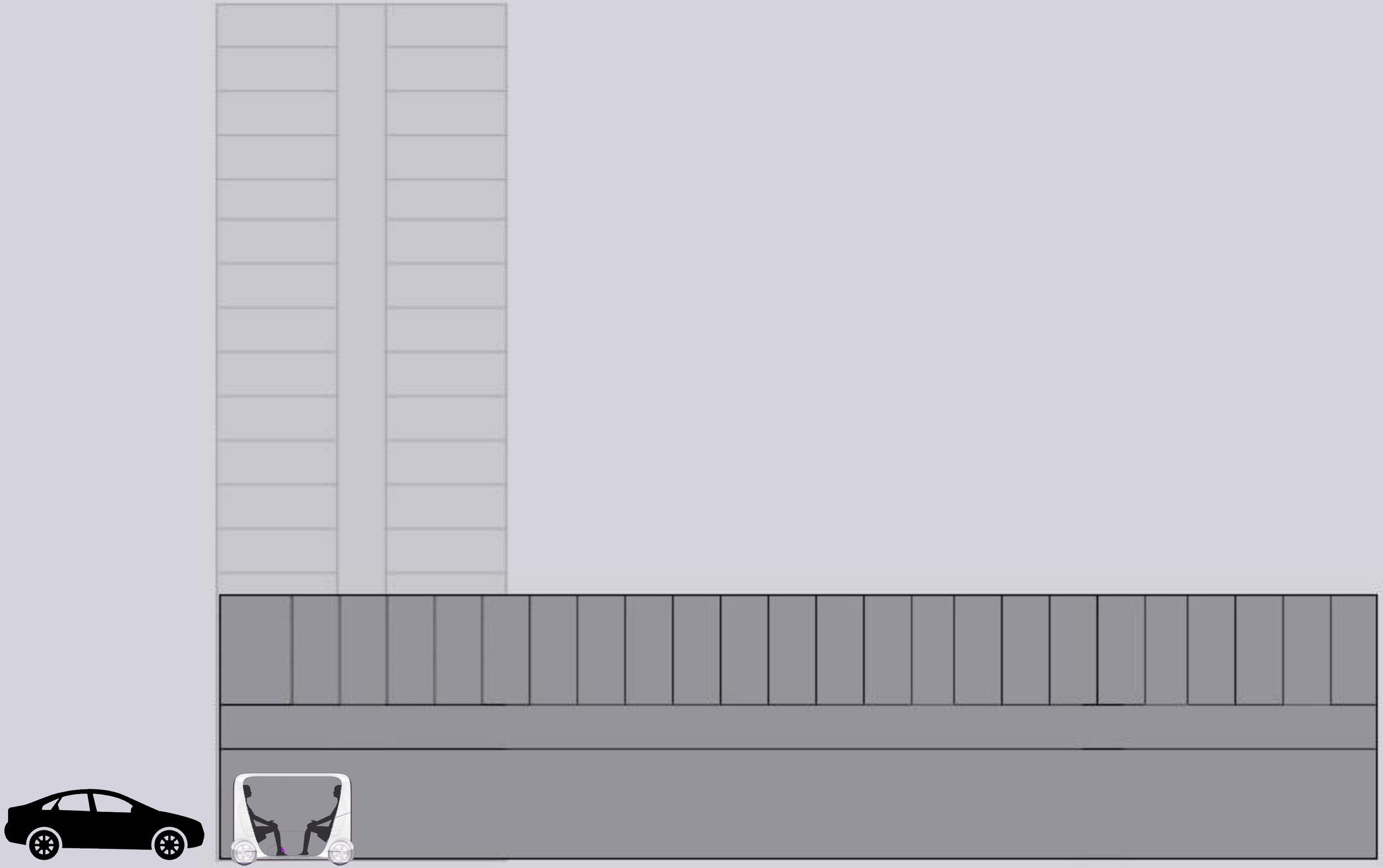
SMALLER MODES ON THE INSIDE

SOURCE: MIT

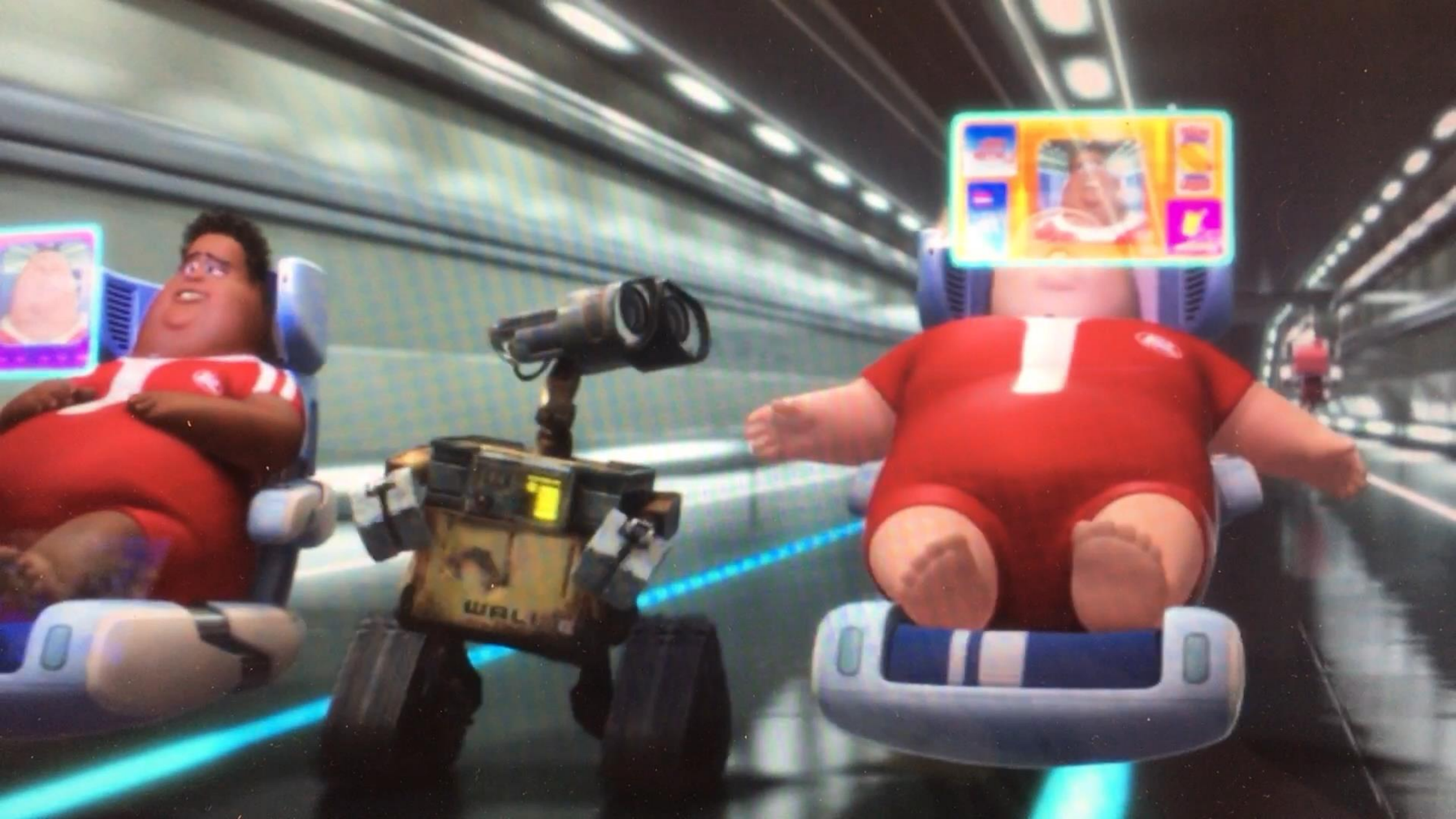






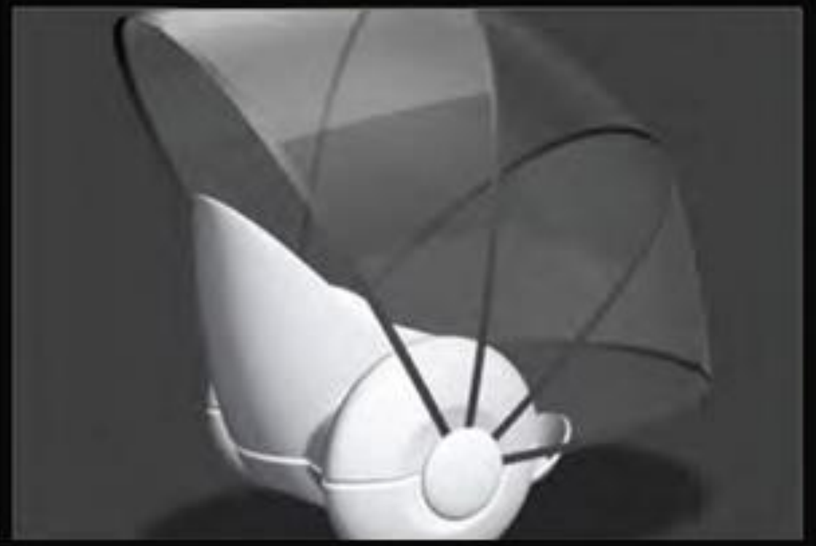


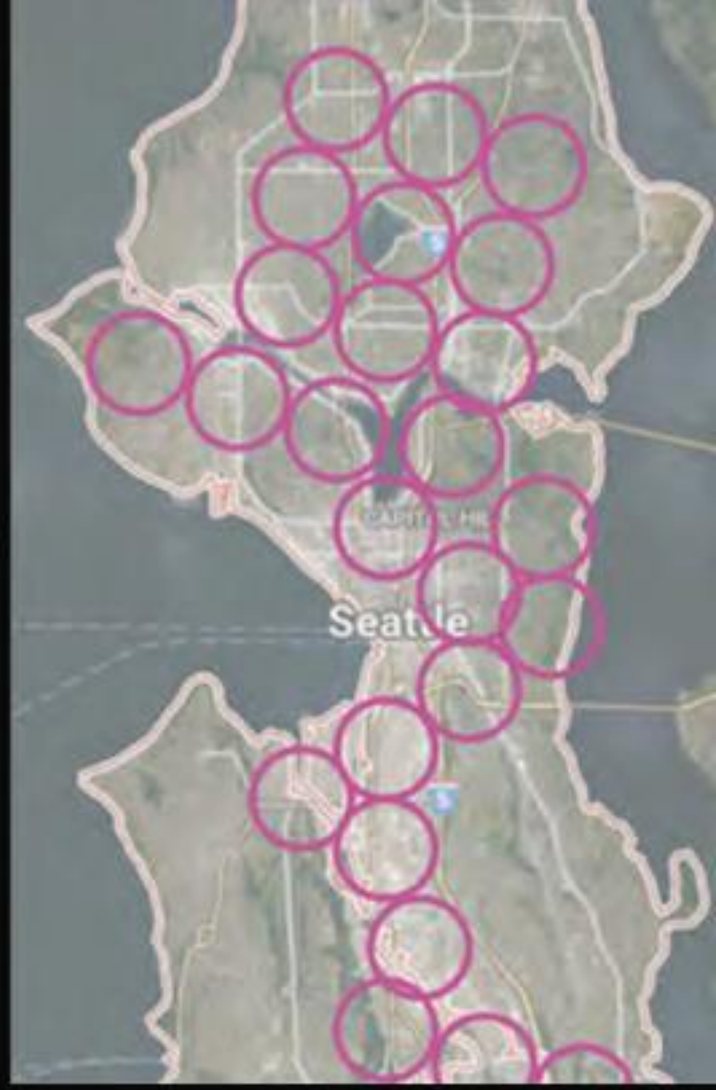
OH BOY OH BOY
ERICA
You are watching Good M


WALL-E

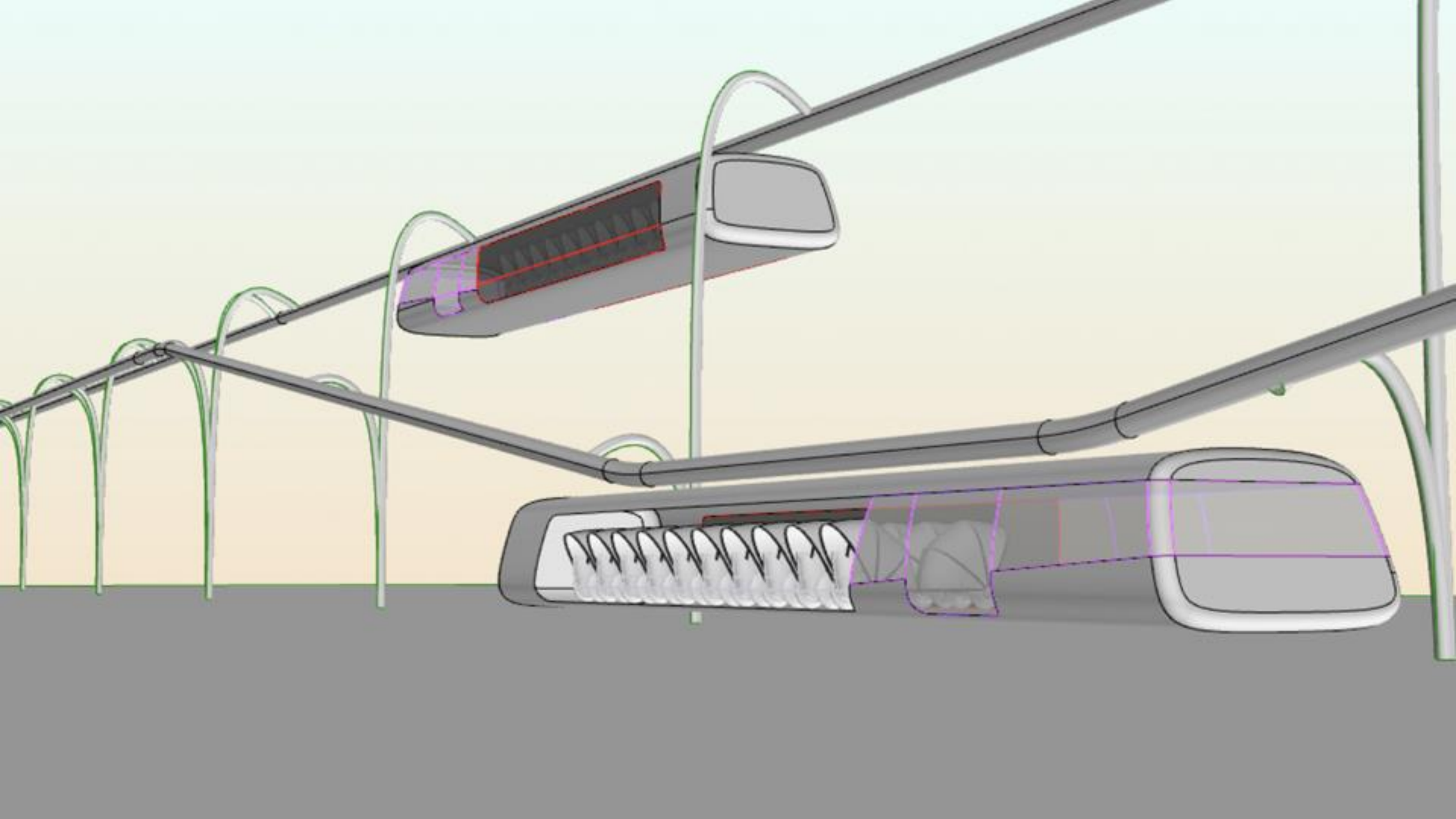
MOVIES
MOVIES

What's the
main problem?

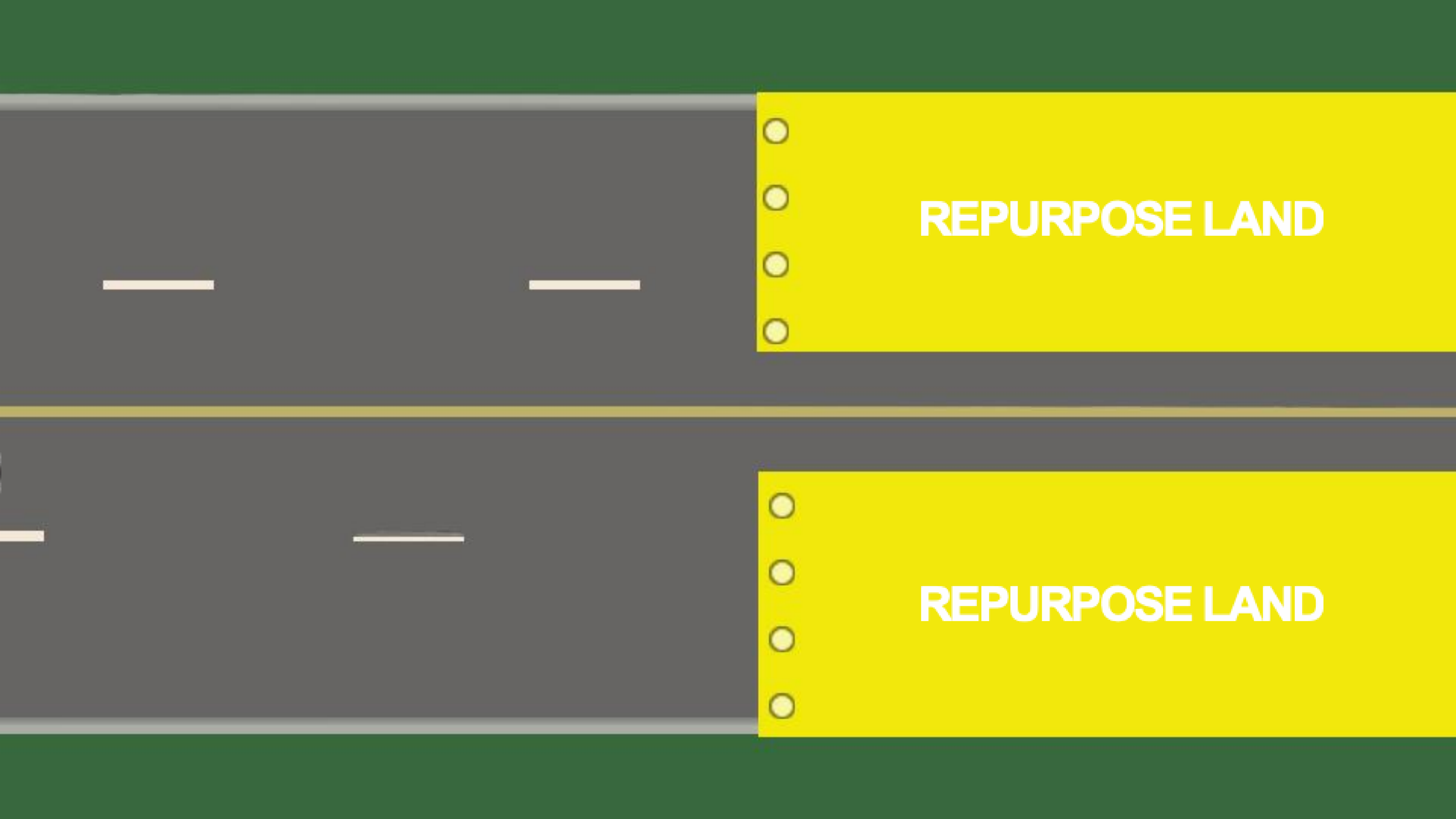


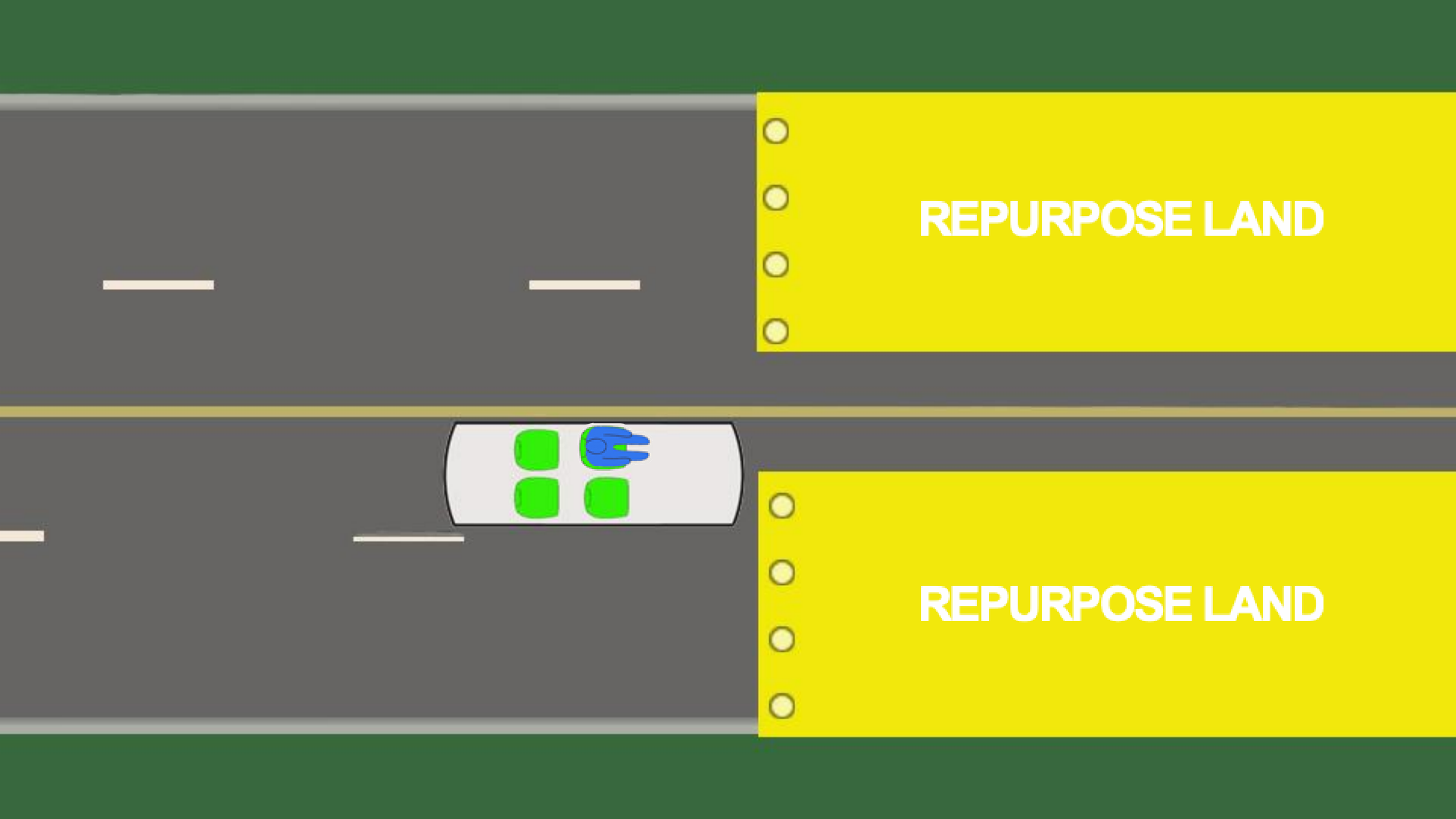


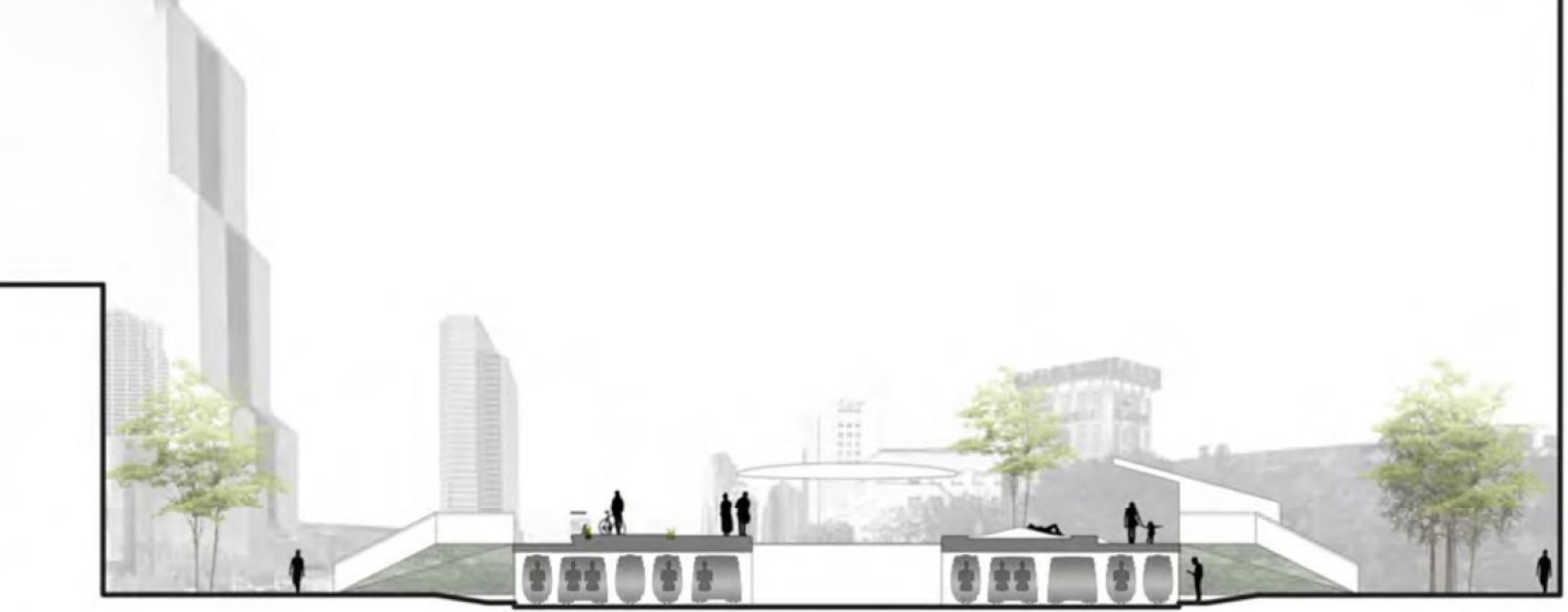

# FIRST-LAST MILE • INSIDE • TRANSIT SEAT



COFFEE

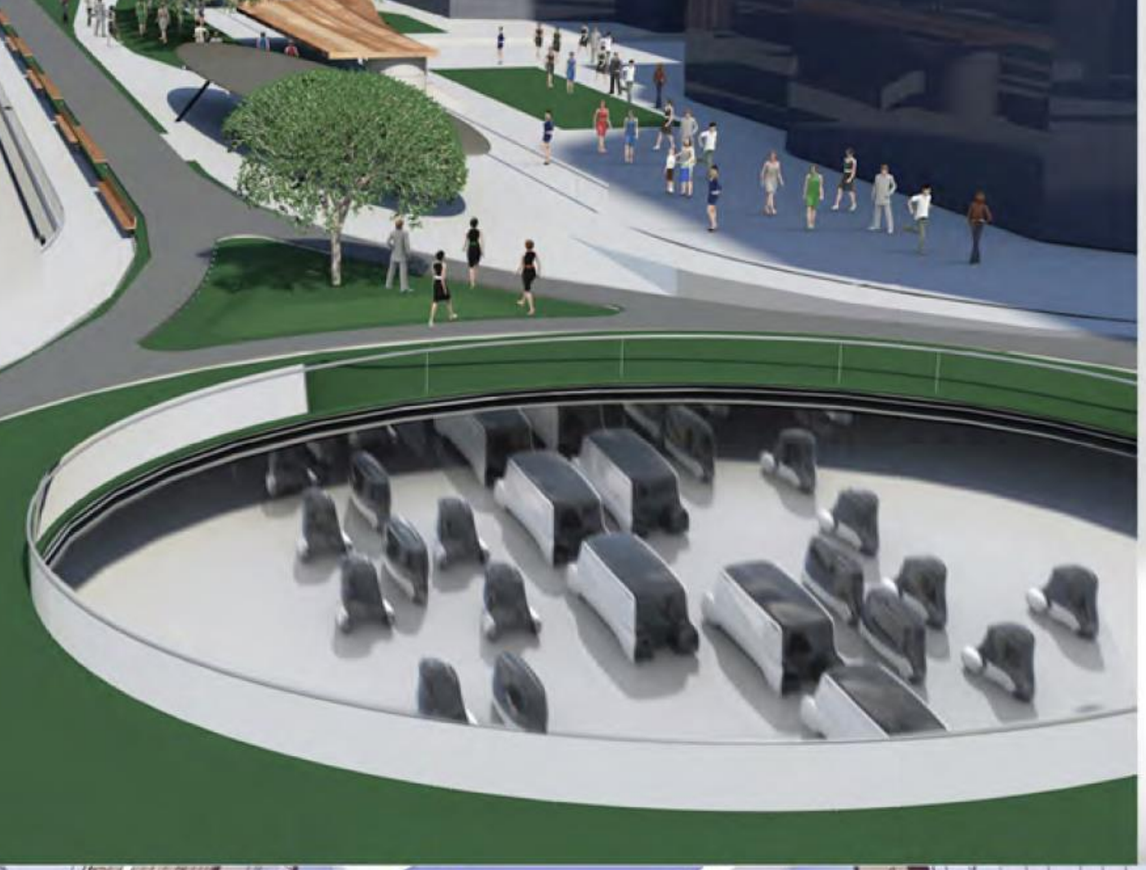

REPURPOSE LAND
REPURPOSE LAND


REPURPOSE LAND
REPURPOSE LAND



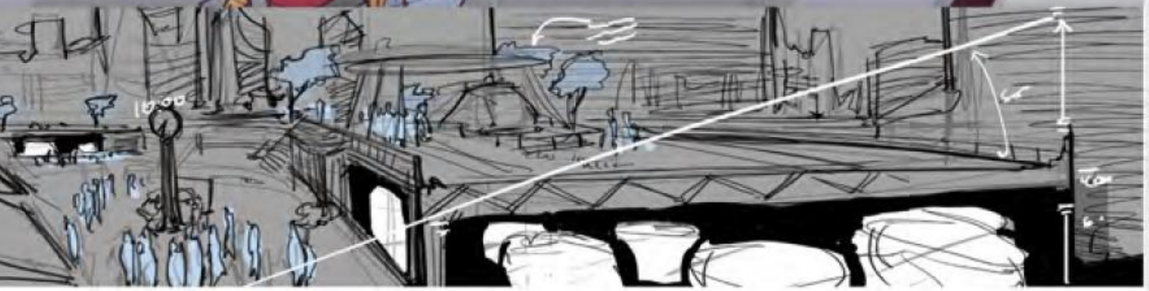
PROJECT 2

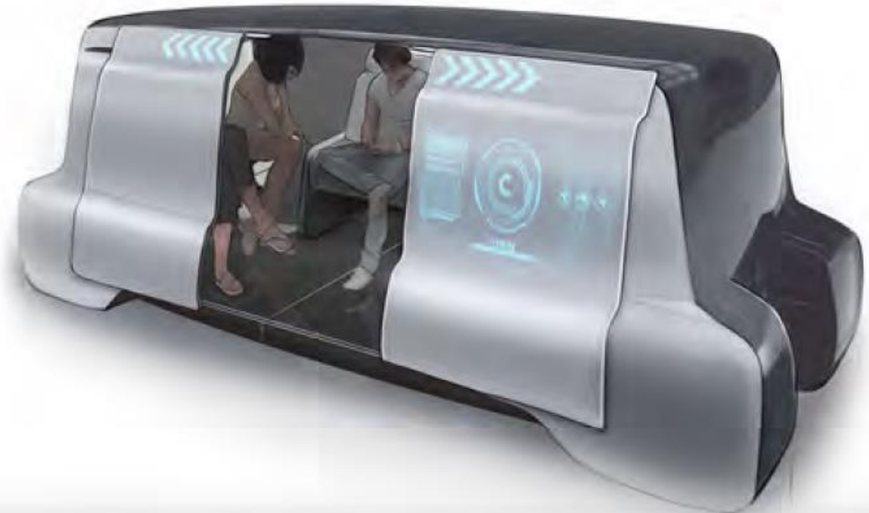
# DOUBLE STREET



환영합니다

공원
버스





# Downsizing Vehicles for Near Term

bonjour

# LEGAL

## Kawasaki Ninja H2R

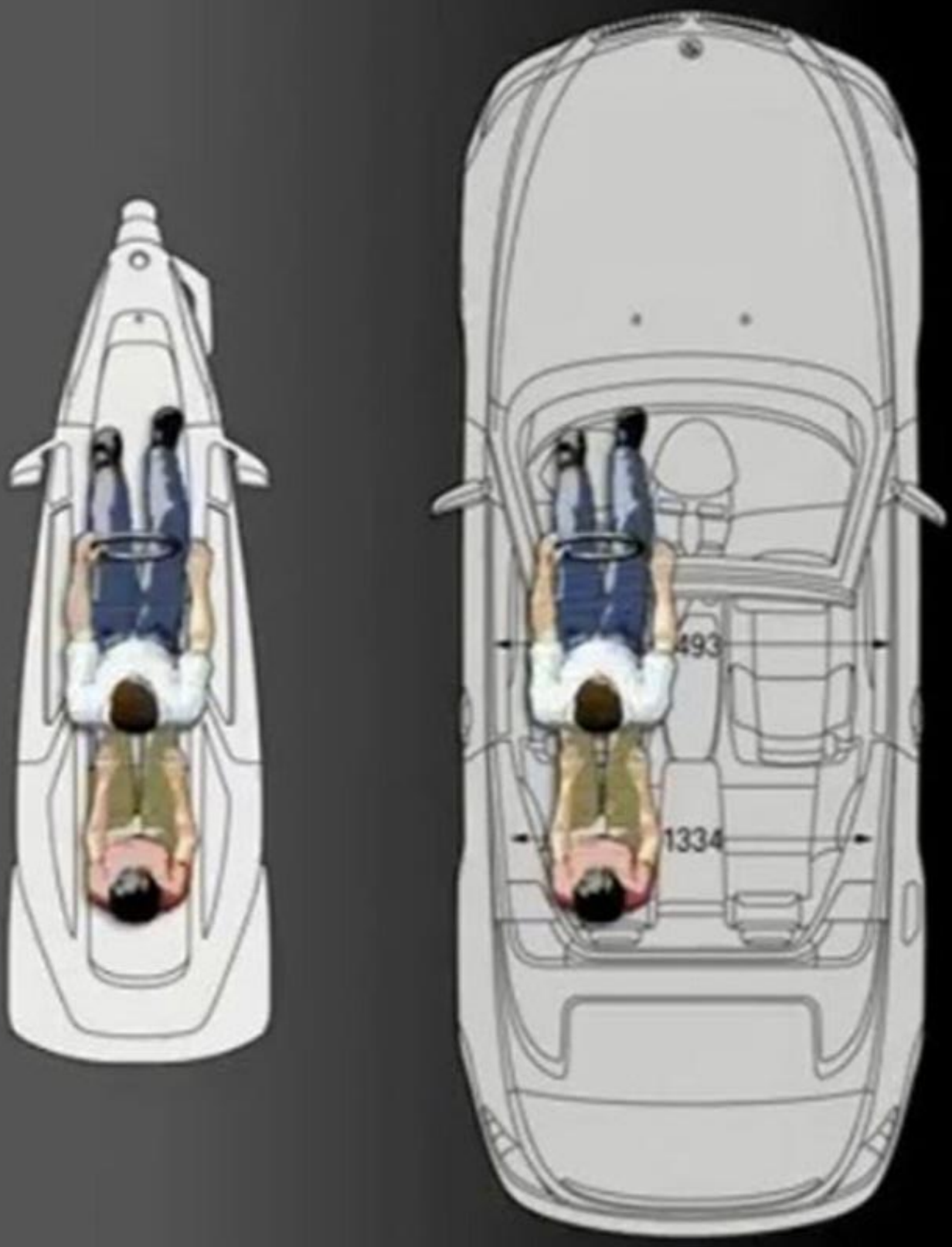
## Renault Twizy

**TOP SPEED**

**249 mph**

**49 mph**

25 mph - okay

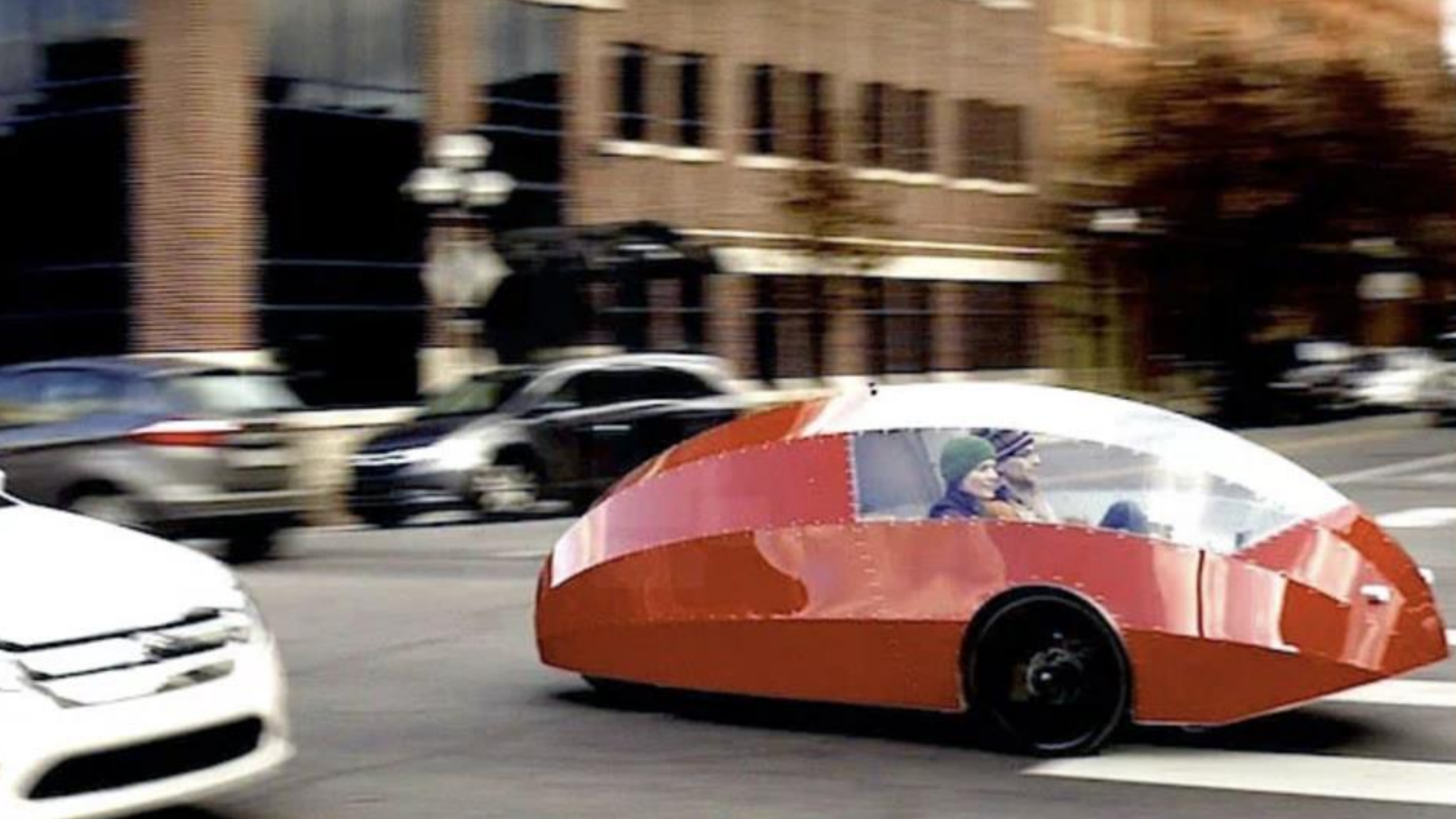

493
1334

NISSAN

NISSAN

# LLMs Are Easier to Create

# Homebuilt LLM



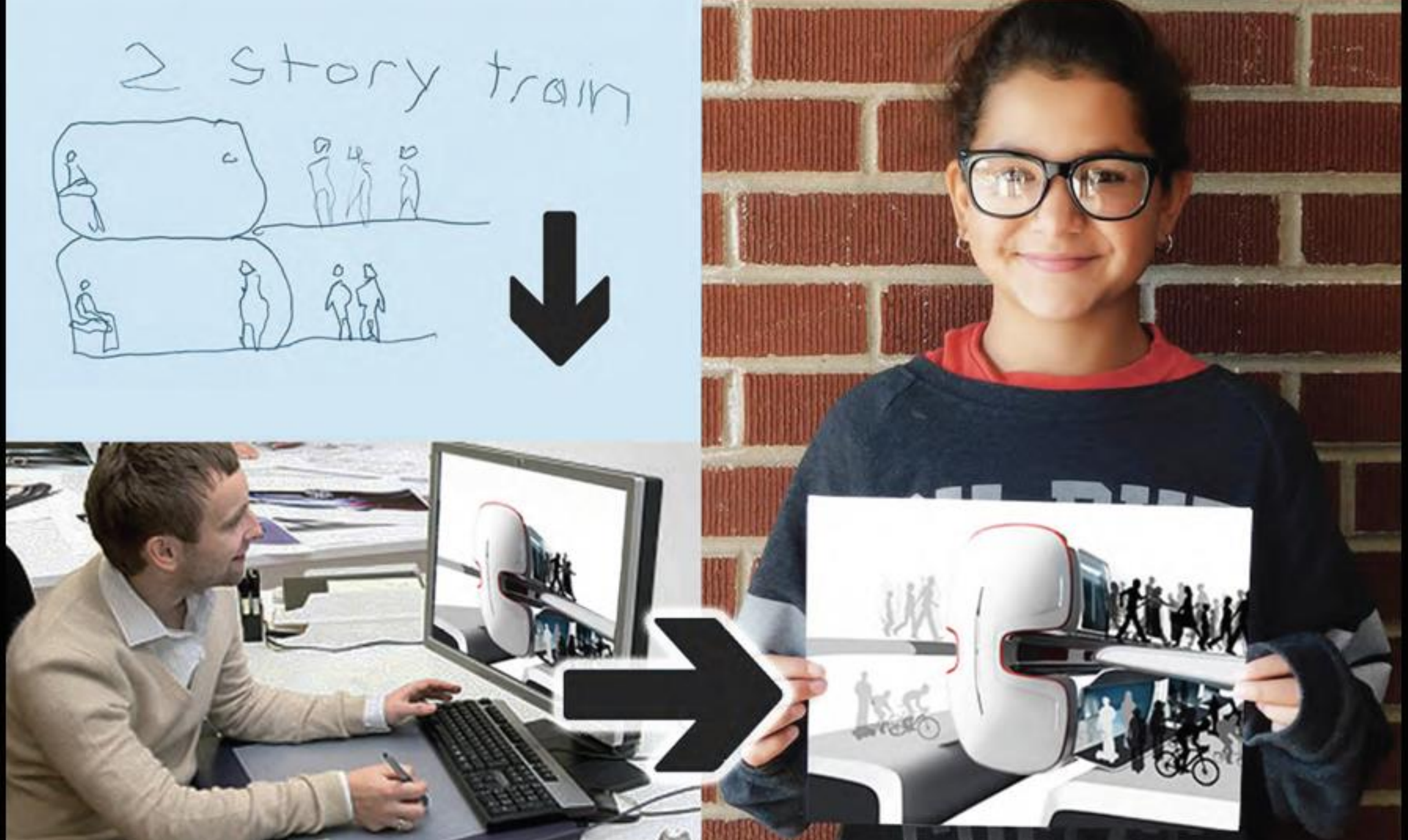
# Co-Created

| | | |
|---|---|---|
| Year | 1983 | 2019 |
| Tuition | **$1,600** / semester | **$23,000** / semester |

People on planet
over **7.5 billion**

New students each semester
about **40**

# DEMOCRATIZE DESIGN ED


2 story train

Culver City News
October 2021

# Local High School Students Design + Start Production of Their Local Vehicle

3D Print

# *Who Is Going to Teach the World to "COOK"*

702233 NO

# HOW TO START

# SMART

# MOBILITY

# SMART ACCESS + MOBILITY

# SAM

LAB

# Gpoint

GO LIGHT | GO LOCAL

# CULVER ISLAND

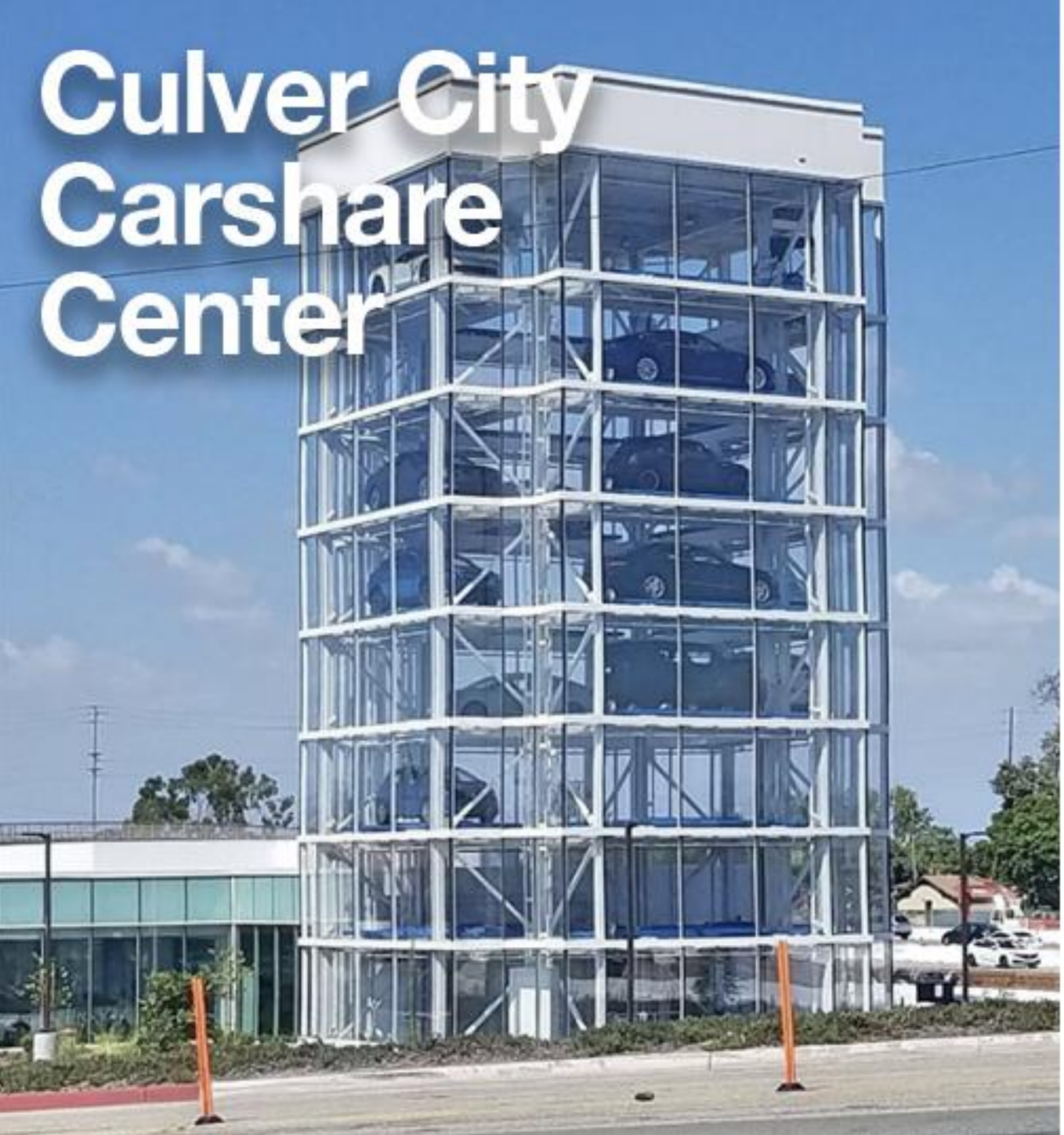
# The fax machine started with a micro-network of two (2)

# 1 Car Challenge

# ENABLE AMERICAN HOUSEHOLDS TO ELIMINATE ONE CAR*

*Unlikely the family primary vehicle

# Culver City Carshare Center



WOB XL 1

6
Cabriolet

lyft

COMMUTER

# BUNDLE

My e-bike | near car

LYMO

lyft

Far Car
carshare

shared
(e) bikes

lyft

potentially

**$200/mo**

Thomas
Woodstock
Brantford
Hamilton
Barrie
Ajax
Oshawa
Niagara Falls

LIVE in CC
Culver City

LIVE in CC
Culver City
WORK in CC

LLM
LLM
Culver Blvd

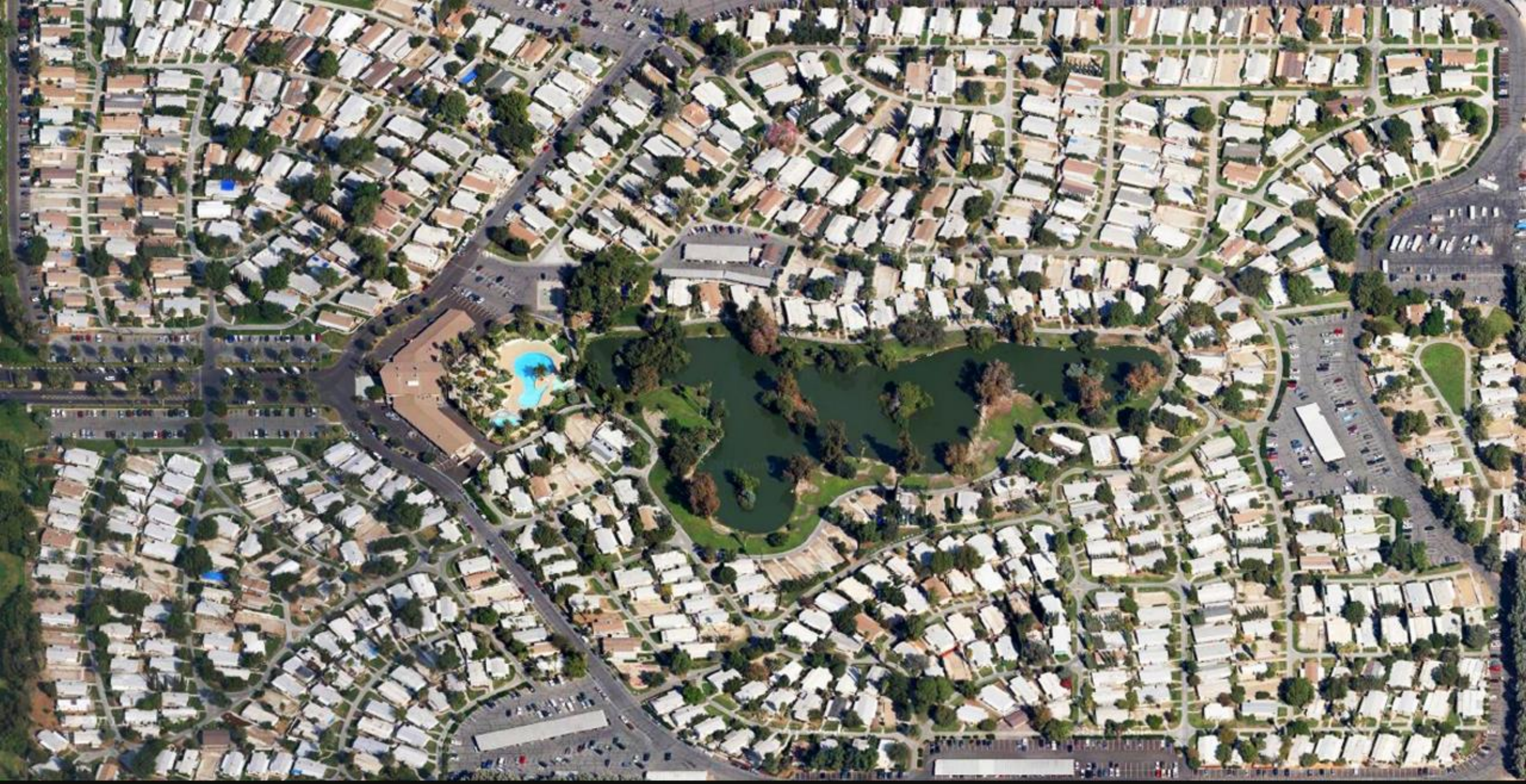
HOLD MONTHLY

# Light Mobility Expo

40/25

LLM

Avalon



**SWAN LAKE** Ontario CA

# neighborhood councils

- Arroyo Seco
- Atwater Village
- Bel Air-Beverly Crest
- Boyle Heights
- CANNDU
- Canoga Park
- Central Alameda
- Central Hollywood
- Central San Pedro
- Chatsworth
- Coastal San Pedro
- Del Rey
- Downtown Los Angeles
- Eagle Rock
- Echo Park
- Elysian Valley Riverside
- Empowerment Congress Central
- Empowerment Congress North
- Empowerment Congress Southeast
- Empowerment Congress Southwest
- Empowerment Congress West
- Encino
- Foothills Trails District
- Glassell Park
- Granada Hills North
- Granada Hills South
- Greater Cypress Park
- Greater Toluca Lake
- Greater Wilshire
- Harbor City
- Harbor Gateway North
- Harbor Gateway South
- Hermon
- Historic Cultural
- Historic Cultural North
- Historic Highland Park
- Hollywood Hills West
- Hollywood Studio District
- Hollywood United
- LA-32
- Lake Balboa
- Lincoln Heights
- North Westwood
- Northridge East
- Northridge South
- Northridge West
- Northwest San Pedro
- Olympic Park
- P.I.C.O.
- Mar Vista
- Mid City
- Mid-City West
- Mission Hills
- NoHo
- North Hills East
- Pacoima
- Palms
- Panorama City
- Park Mesa Heights
- Pico Union
- Porter Ranch
- Rampart Village
- Reseda
- Sherman Oaks
- Silver Lake
- South Central
- South Robertson
- Studio City
- Sun Valley Area
- United Neighborhoods
- Valley Village
- Van Nuys
- Venice
- Voices
- Watts
- West Adams
- Westchester/Playa
- West Hills
- West Los Angeles
- Westlake North
- Westlake South
- Westside
- Wilshire Center-Koreatown
- Winnetka
- Woodland Hills-Warner Cente
- Zapata-King

# Last Bit

# trans2

1988

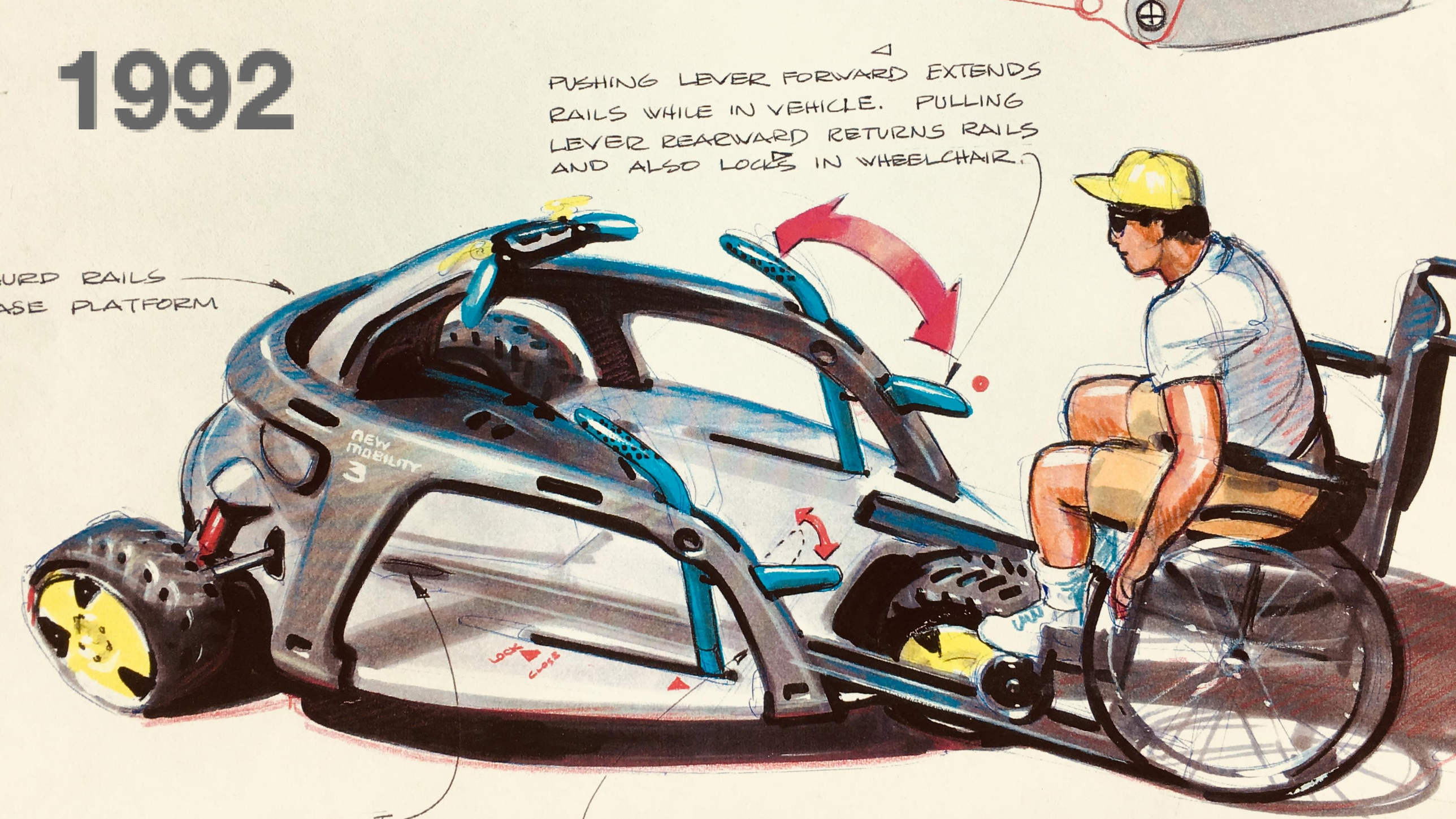
# Platform Vehicle 1989

# *Folding* Neighborhood Electric Vehicle 1992

*Driving Prototype - hard costs $20k*

# *Folding* NEV 1992

# 1992


PUSHING LEVER FORWARD EXTENDS RAILS WHILE IN VEHICLE. PULLING LEVER REARWARD RETURNS RAILS AND ALSO LOCKS IN WHEELCHAIR.
URD RAILS
ASE PLATFORM
NEW MOBILITY 3
LOCK
CLOSE

# *Pursue non-folding* NEV 1993

# 1993

# Driving Mule - 1993

# Clay Model - 1993

# Production Intent Prototype 1993

Palm Springs 1994

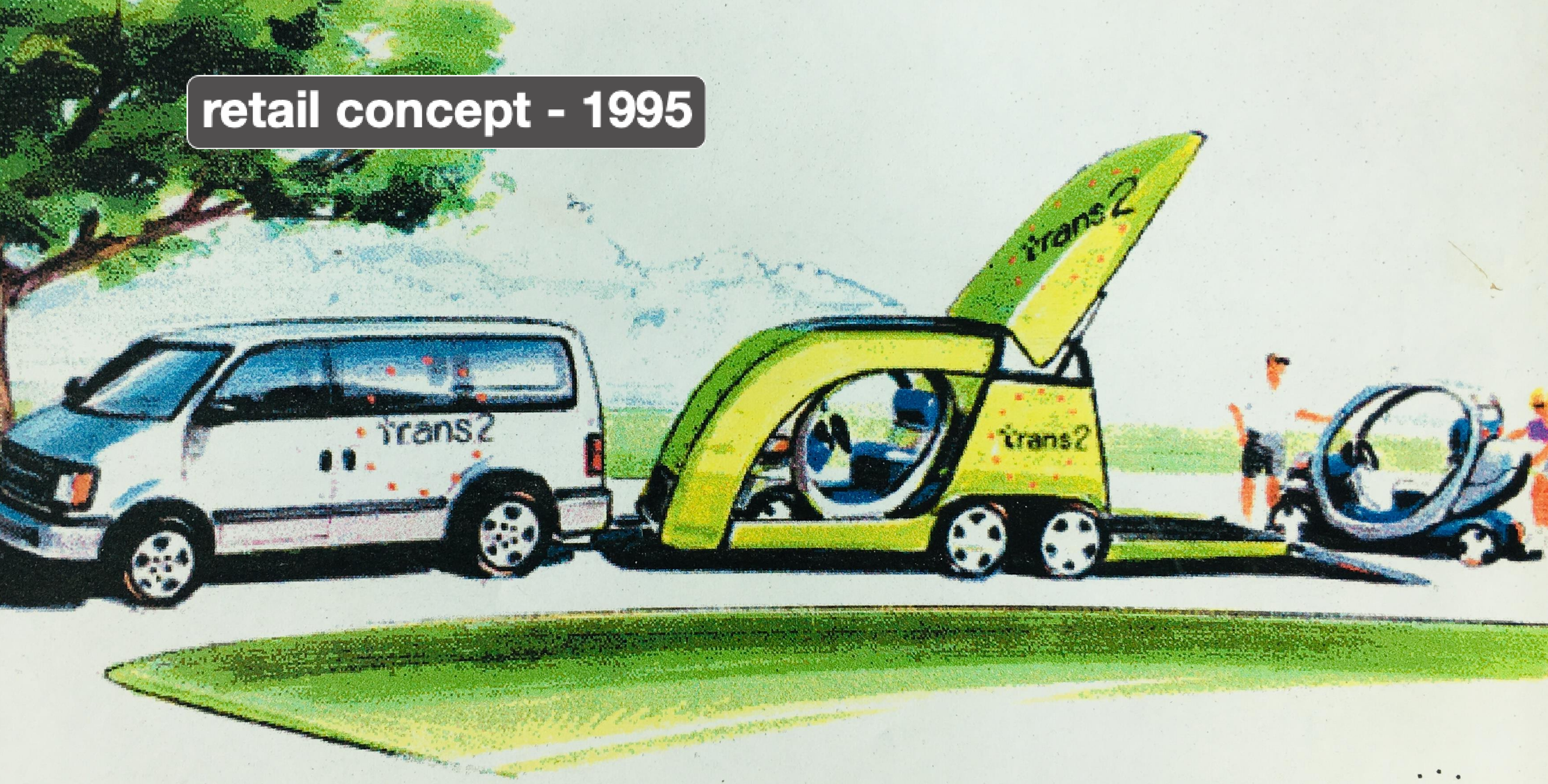
# Production Design 1995

trans2

# Celebration
# FL - 1995

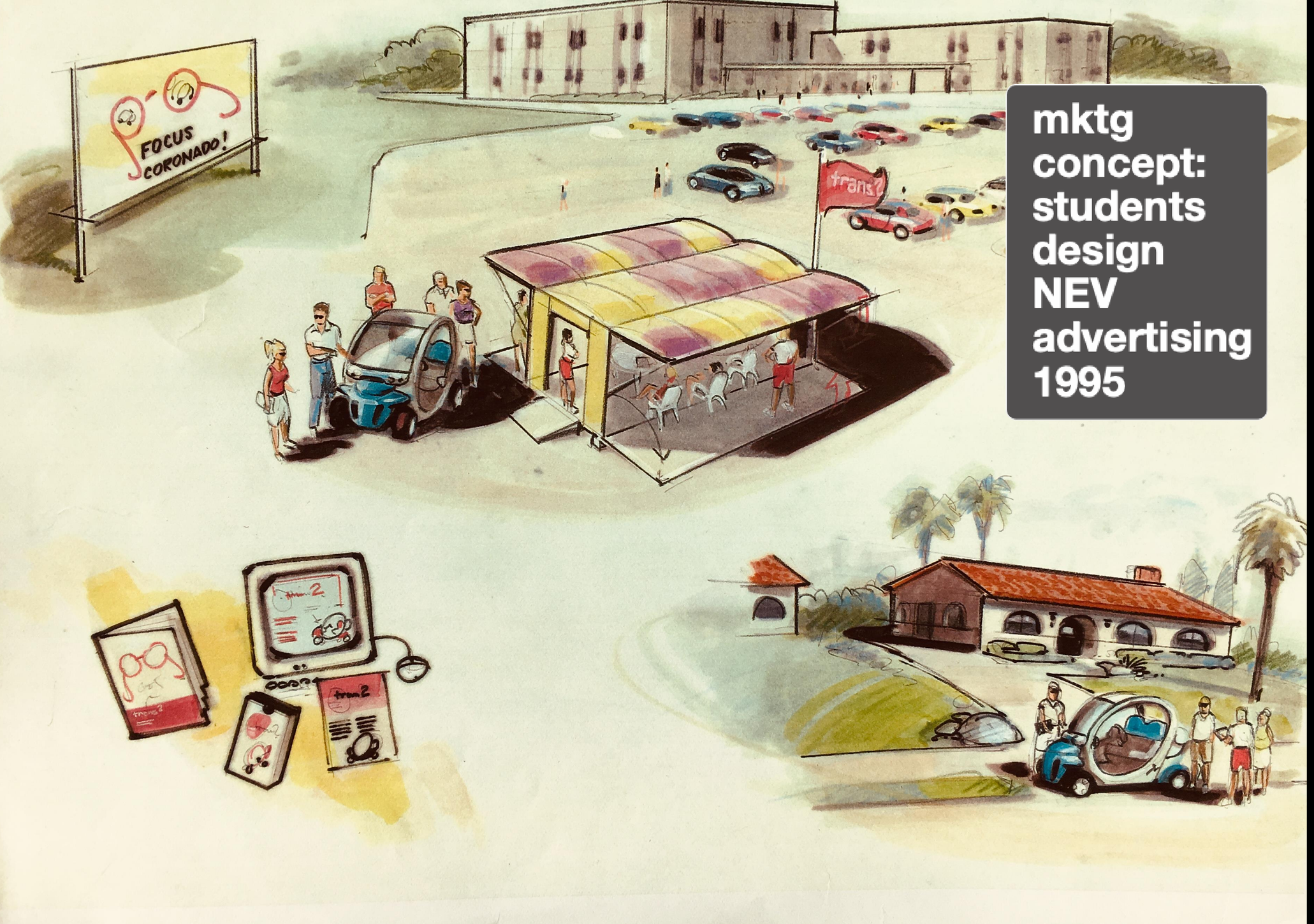
# trans2
# NEV
# 1996

factory - 1996




Standard Transportable Retail Kiosk (STORK)

trans2




mktg concept: students design NEV advertising 1995

POLARIS

# I had an idea.

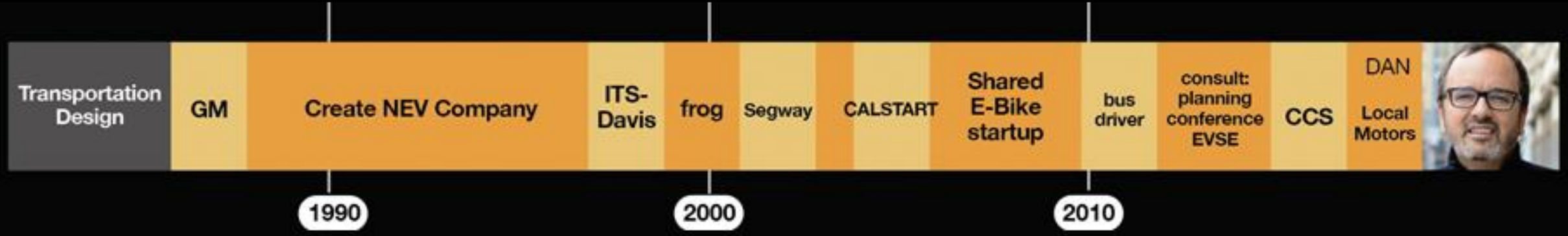
# We used to sing about a better world

**We used to sing about a better world, now we can just make it.**

GEM e4

ASPEN
811 GKZ

Disney


Transportation Design
GM
Create NEV Company
ITS-Davis
frog
Segway
CALSTART
Shared E-Bike startup
bus driver
consult: planning conference EVSE
CCS
DAN
Local Motors
1990
2000
2010

# EXPERIENCE

Transportation Design | GM | Create NEV Company | ITS-Davis | frog | Segway | CALSTART | Shared E-Bike startup | bus driver | consult: planning conference EVSE | CCS | DAN Local Motors

1990 | 2000 | 2010

Army | Bus + Rail Planning + Operations | PHIL LA METRO CEO

History | Public | Private Bike, Transit, Livable Streets | SELETA LA DOT GM

Business | Zimride (Start-up) | LOGAN LYFT CEO

Biotech Engineering | Finance | USA Networks | Expedia | UBER DARA CEO

bimodal

bipolar

# Today

- Some consulting
- Some speaking
- Monthly writing

# Today

- Some consulting
- Some speaking
- Monthly writing
- Part-time at Co-op

DAN
MAN

www.danman.design

# LA/2B HOW WE MOVE

Welcome to LA/2B, an invitation for Angelenos to reimagine our street use and how we get around in the city we call home. LA/2B is an opportunity to discuss what works and what doesn't, ask tough questions and propose creative, economically viable solutions. Take a look and consider where you fit into our mobility landscape. Visit ideas.LA2B.org to learn more and be part of LA's road ahead.

LA/2B

The road ahead.

WWW.LA2B.ORG