



Some Thoughts about Transportation for Markham

TOOLE
DESIGN

Toole Design Group

- Engineers
- Planners
- Landscape Architects
- Authors





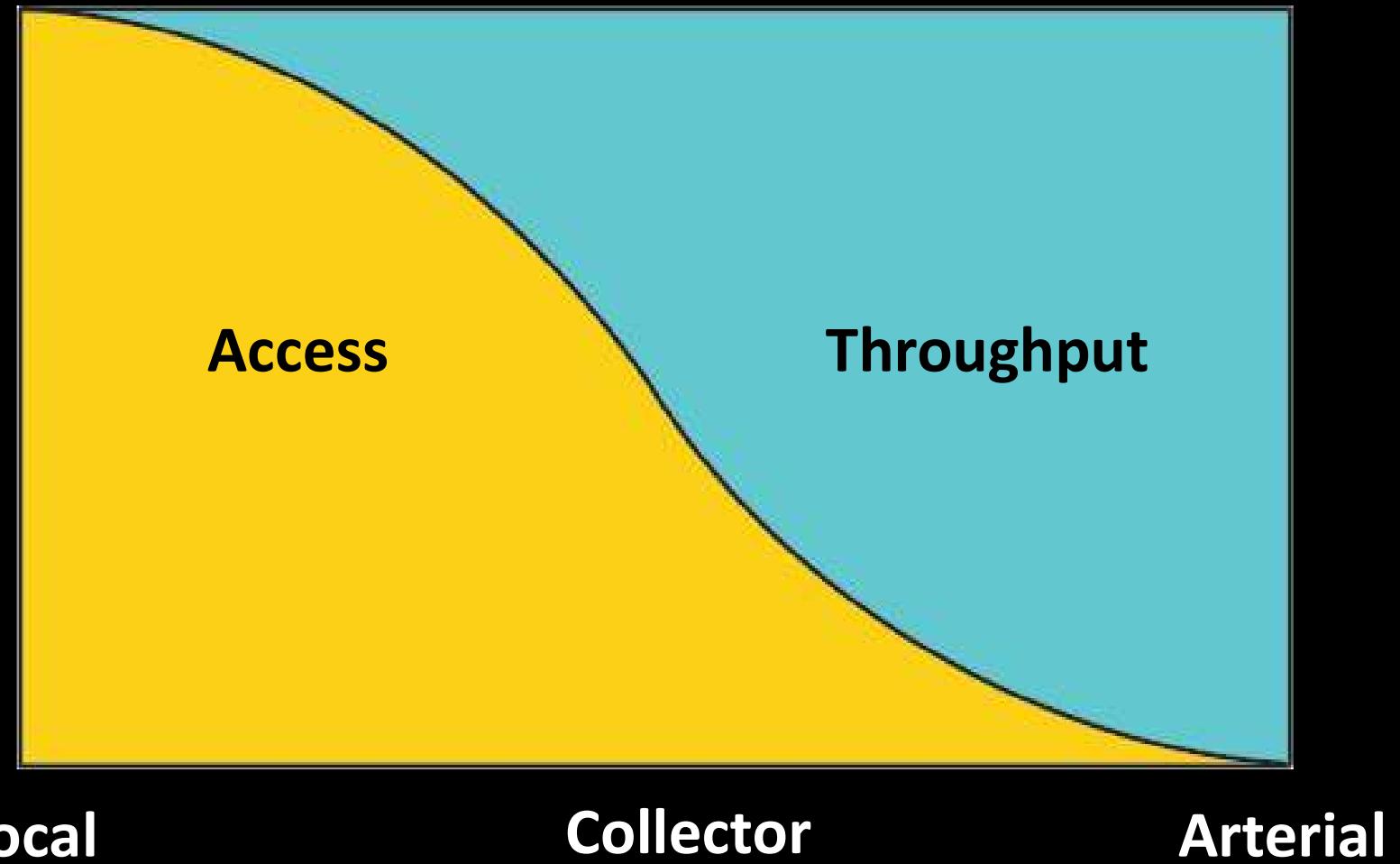


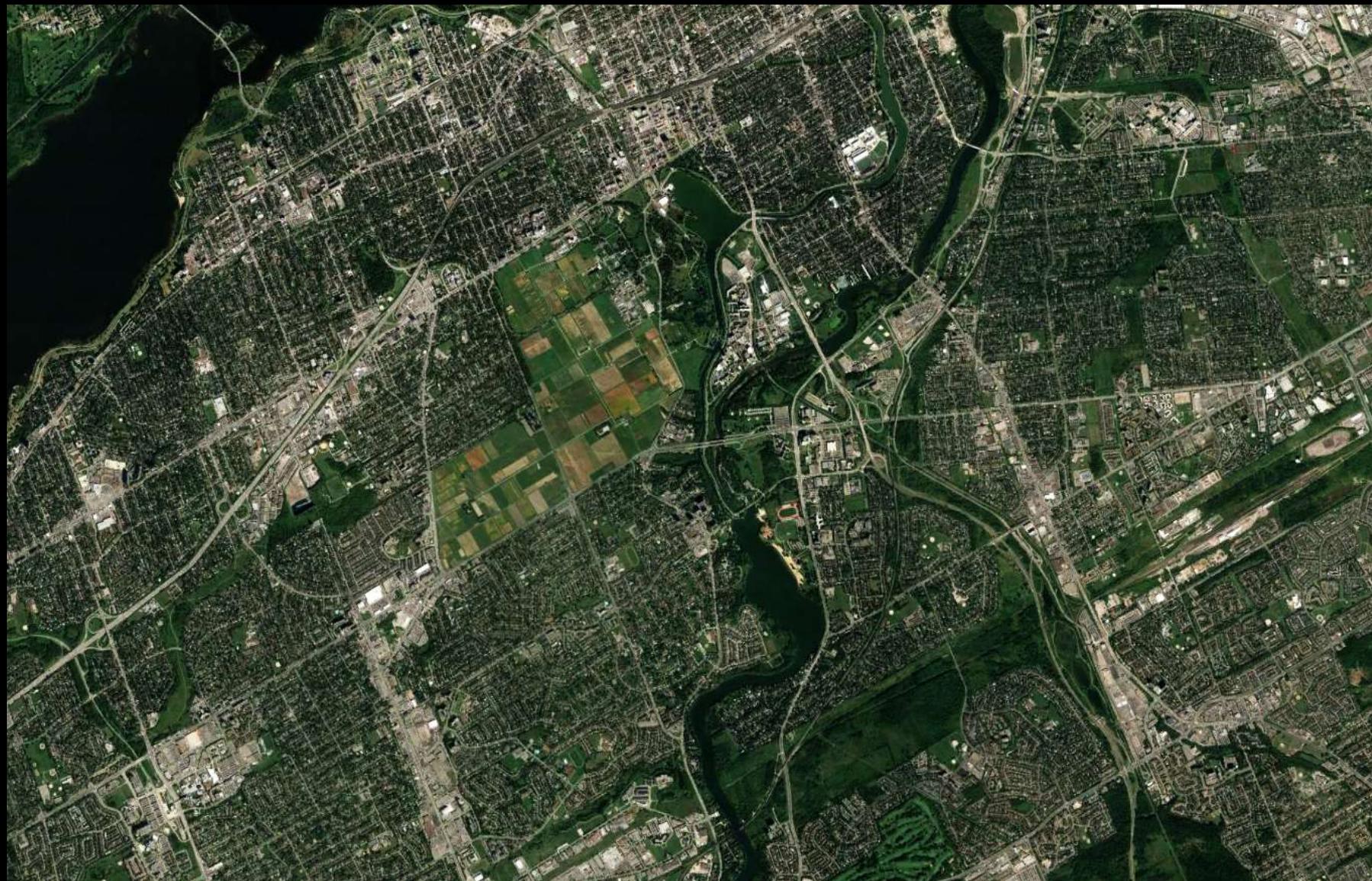






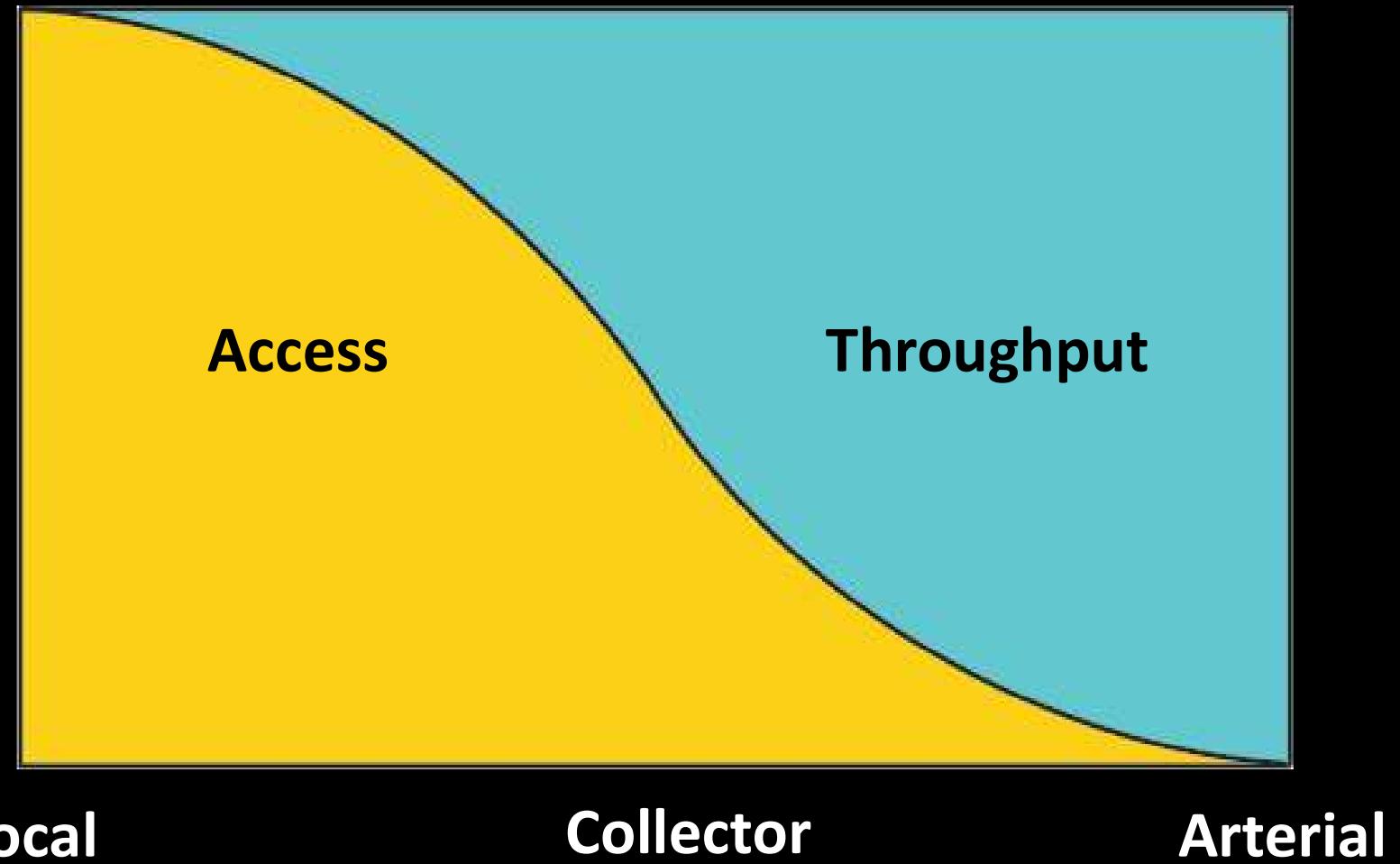
Modern Conception of the Purpose of Streets

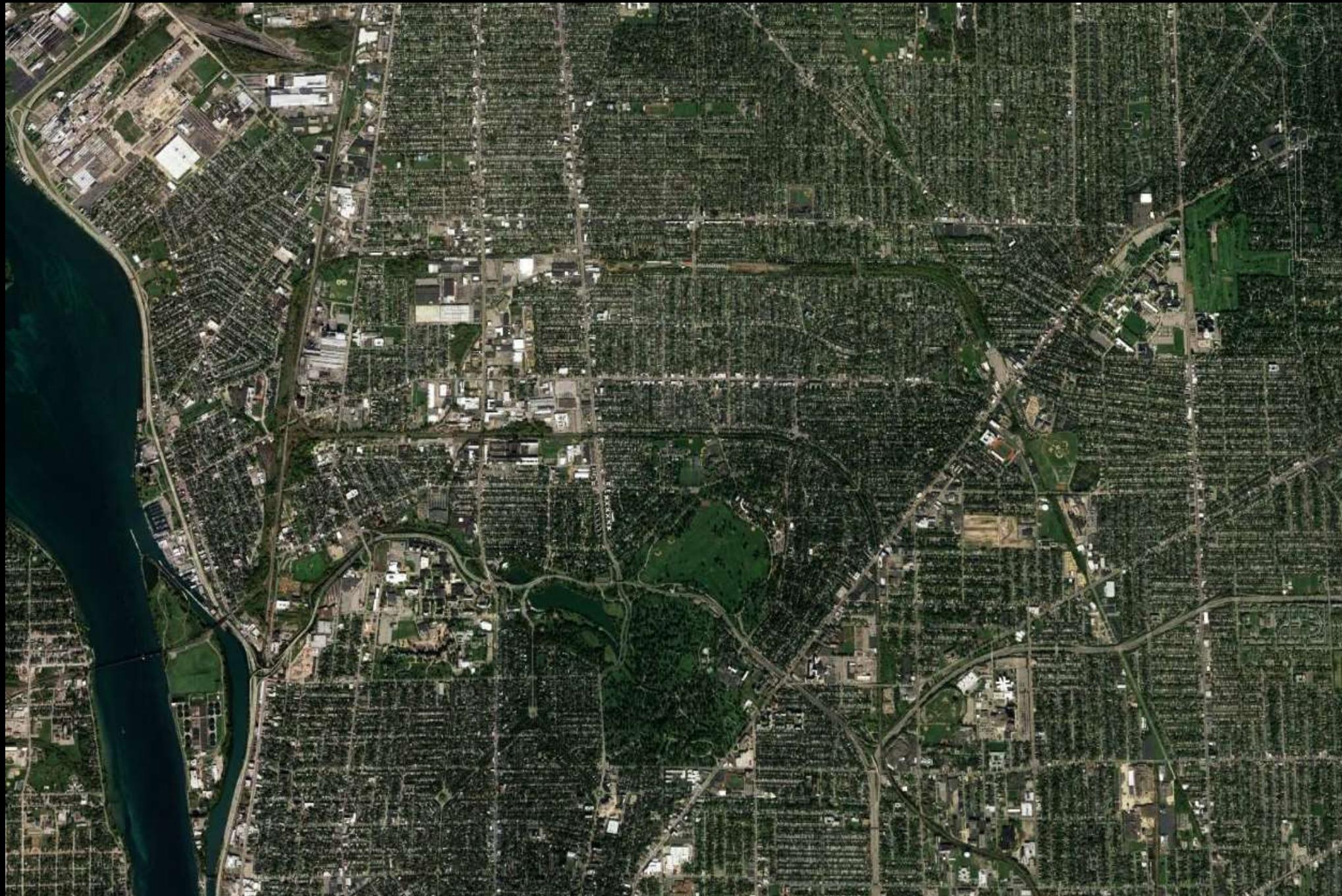




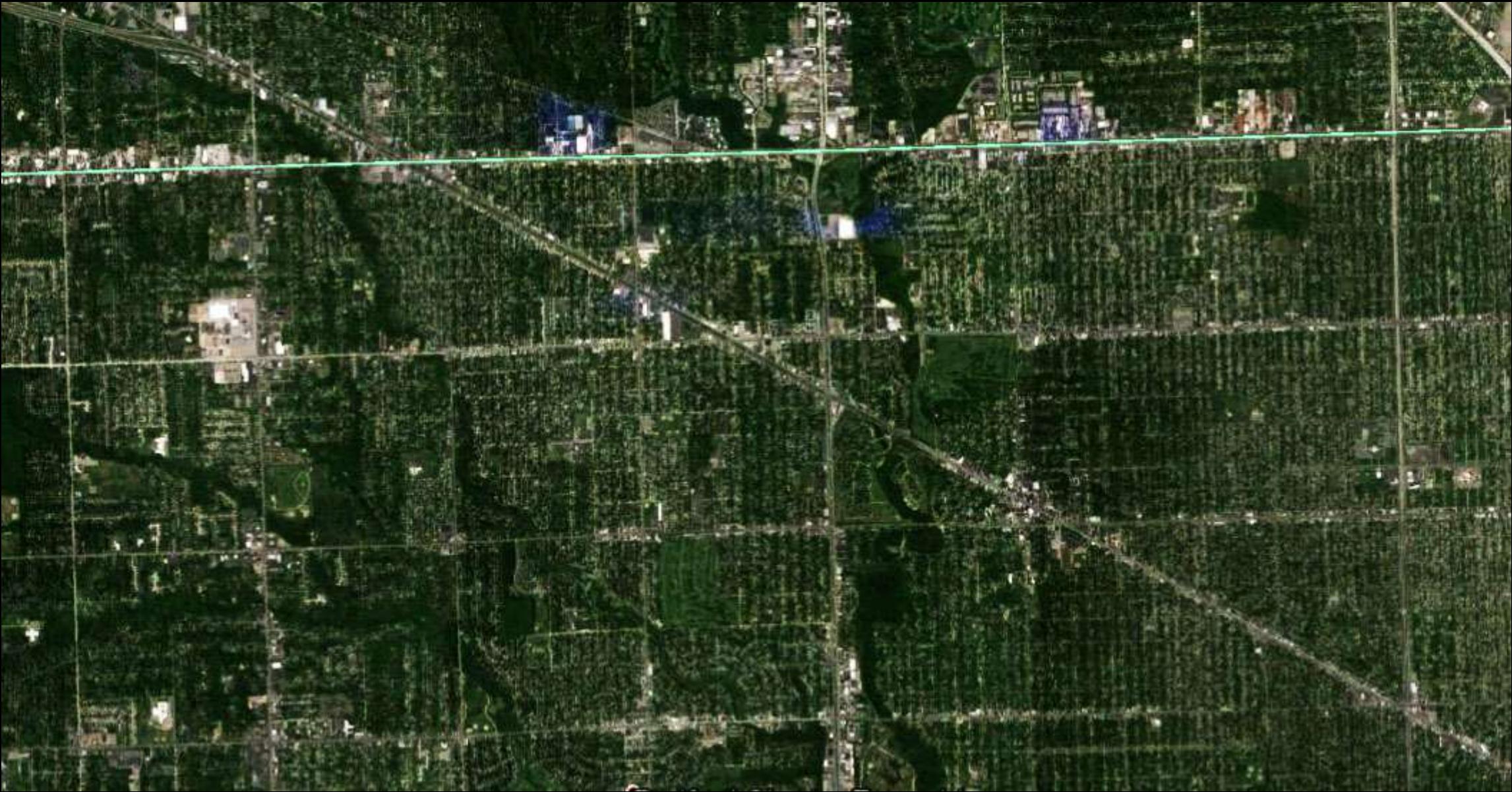
Ottawa

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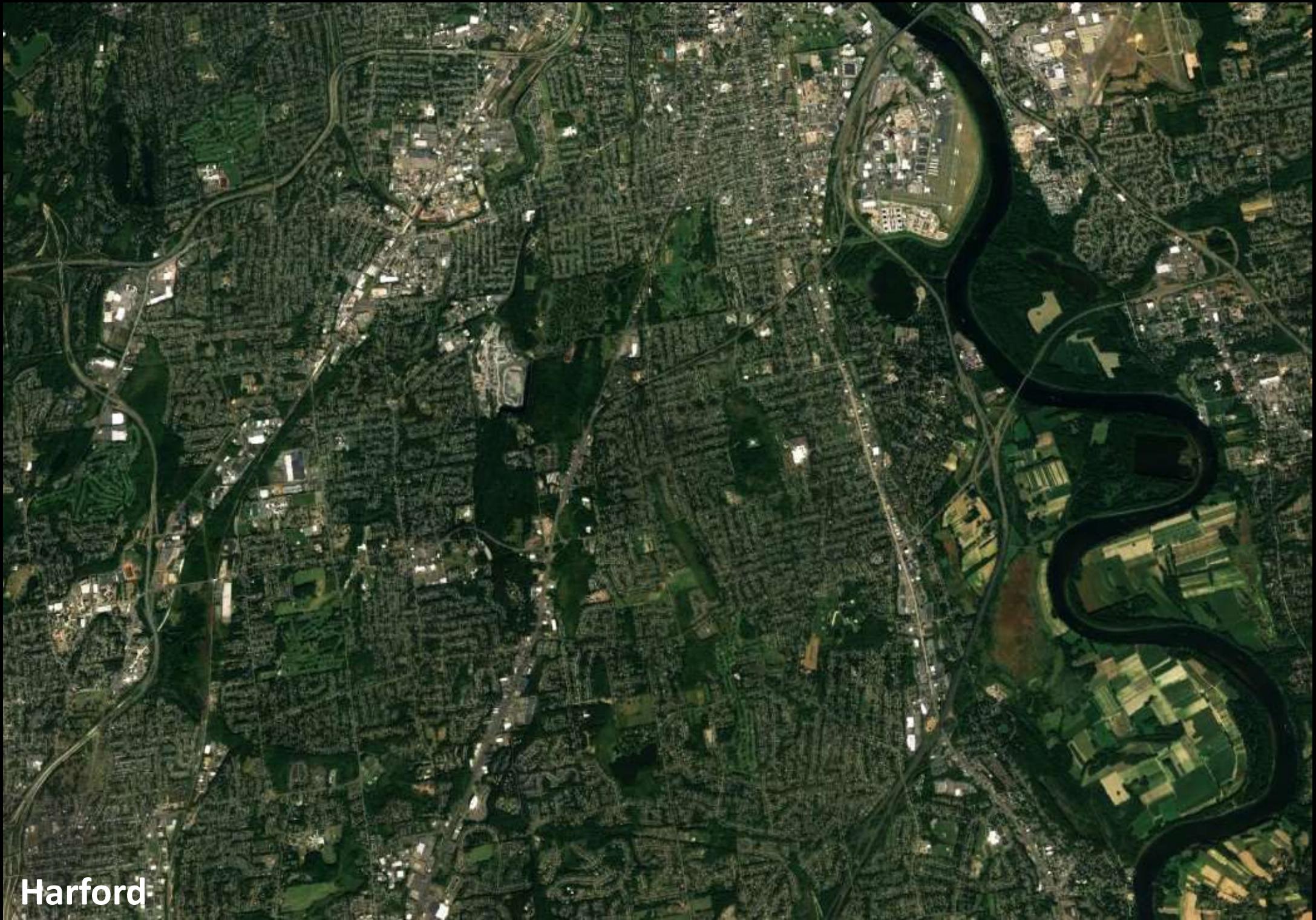




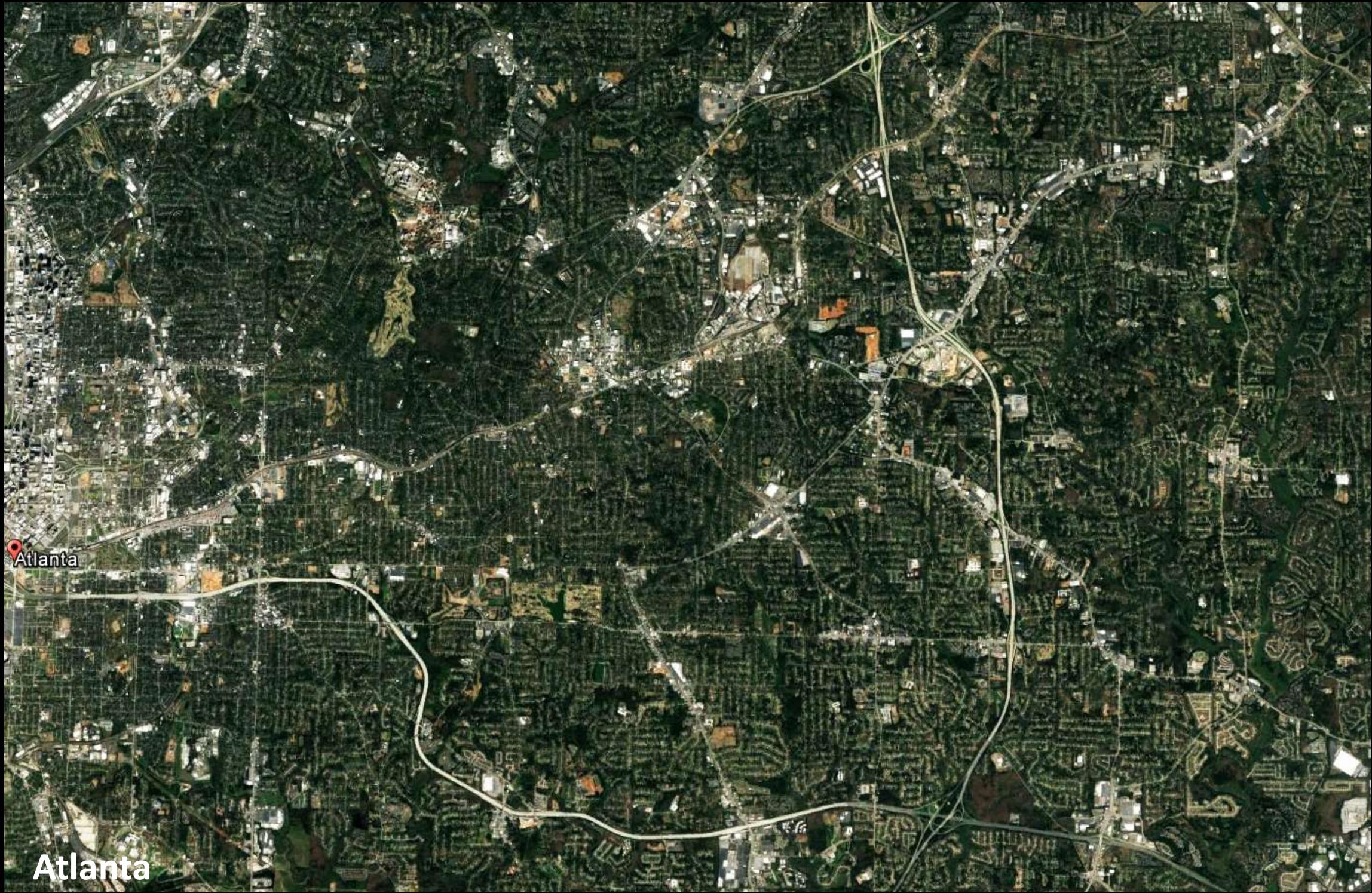
Buffalo



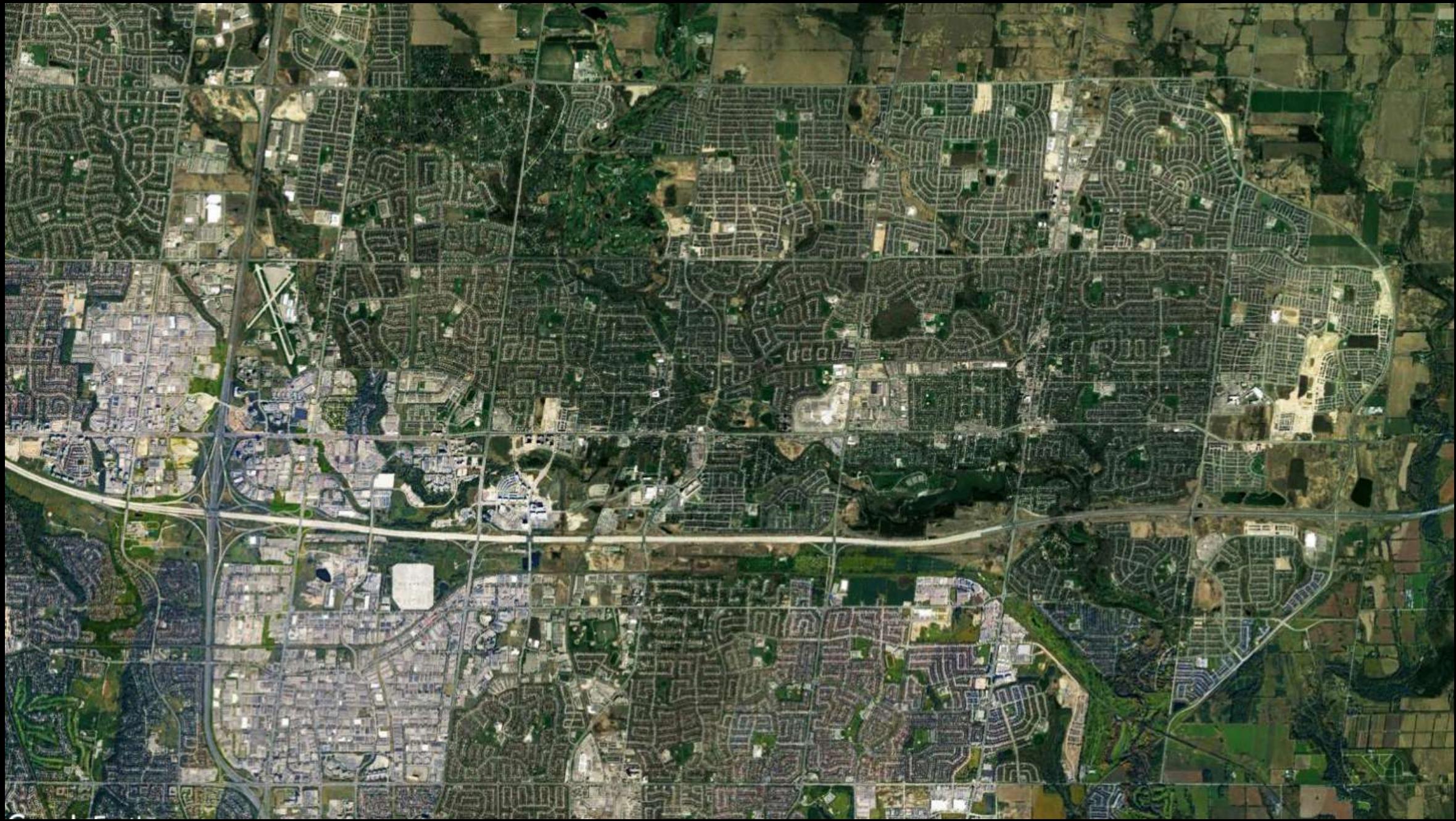
Detroit



Harford

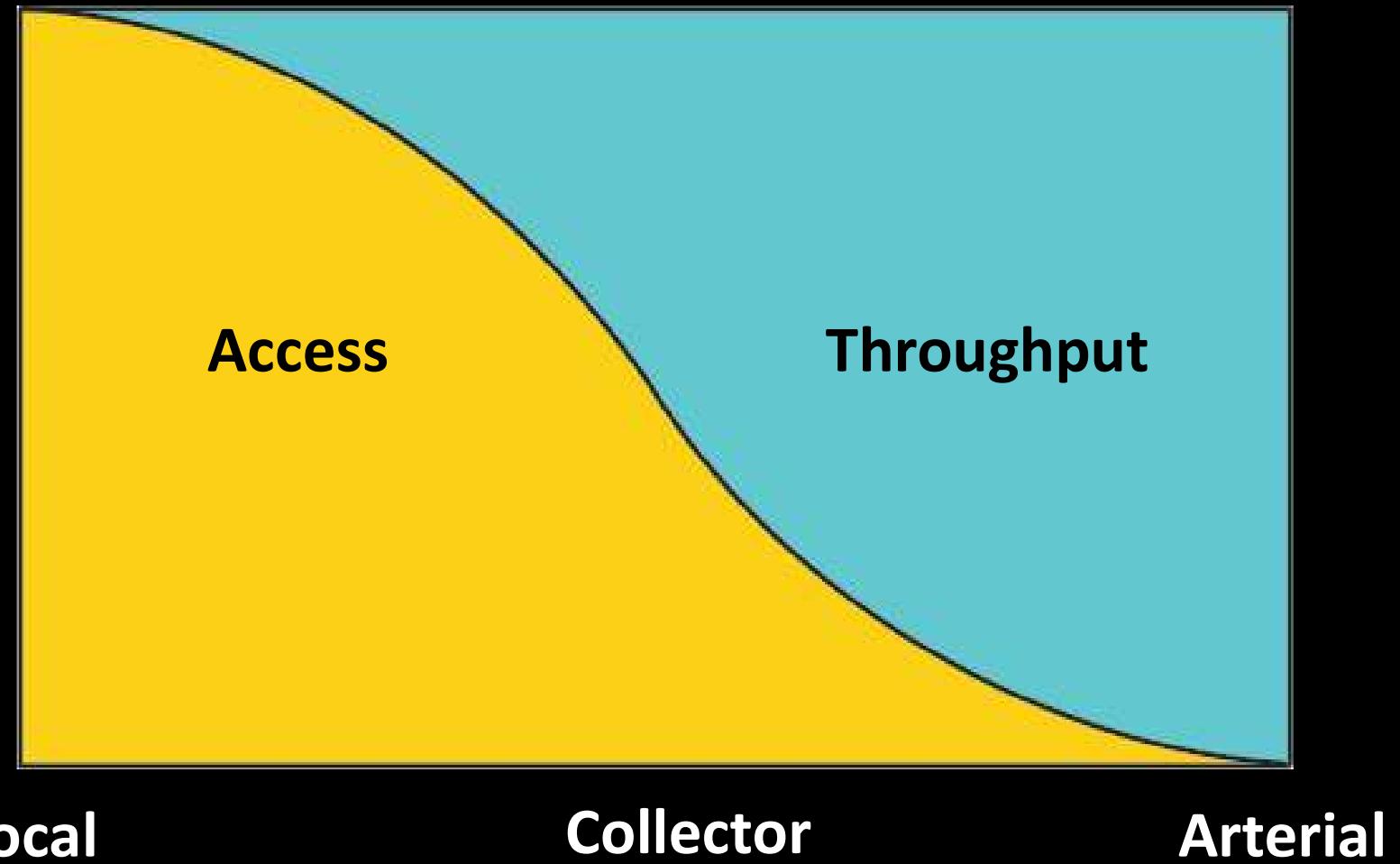


Atlanta



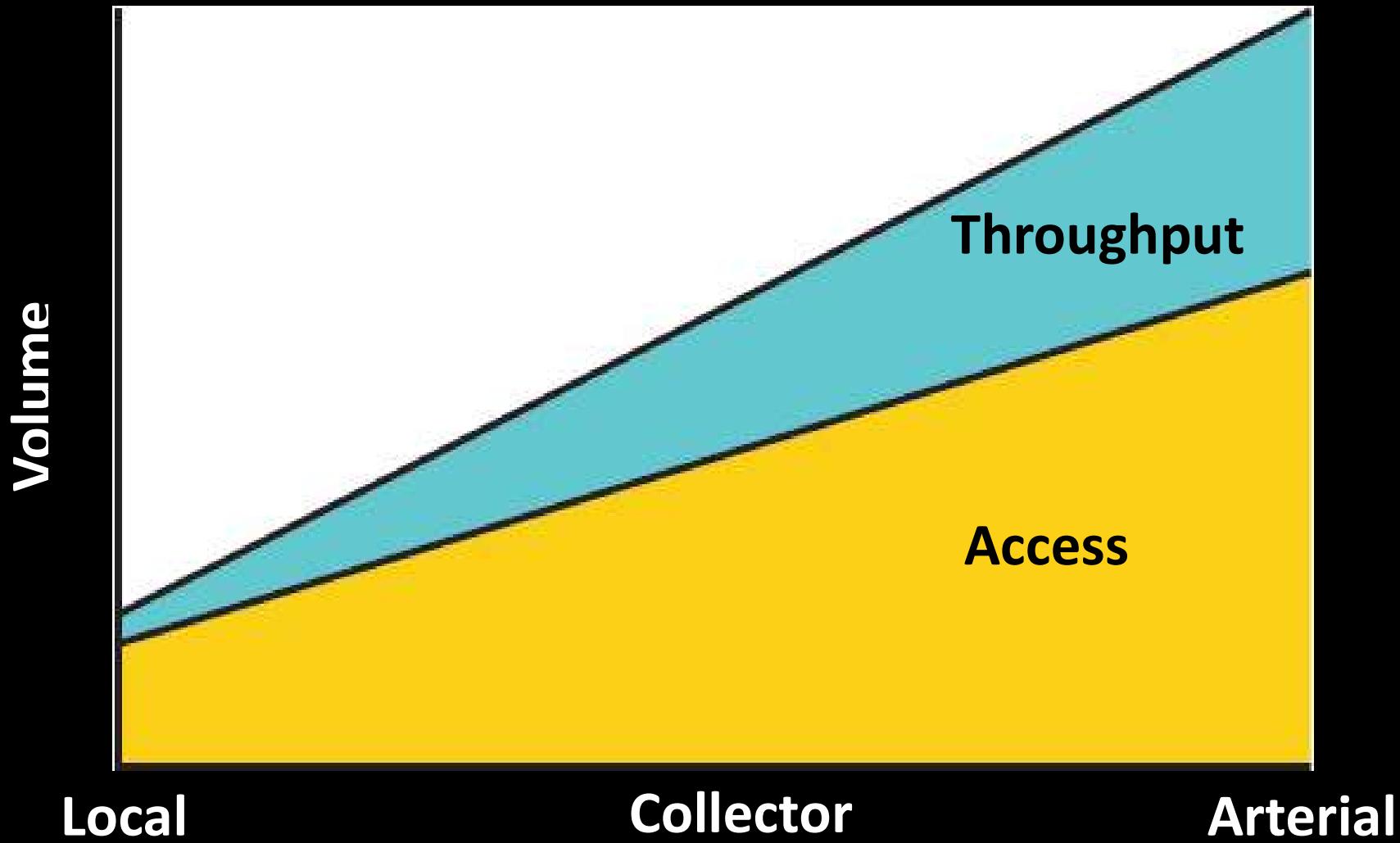
Markham

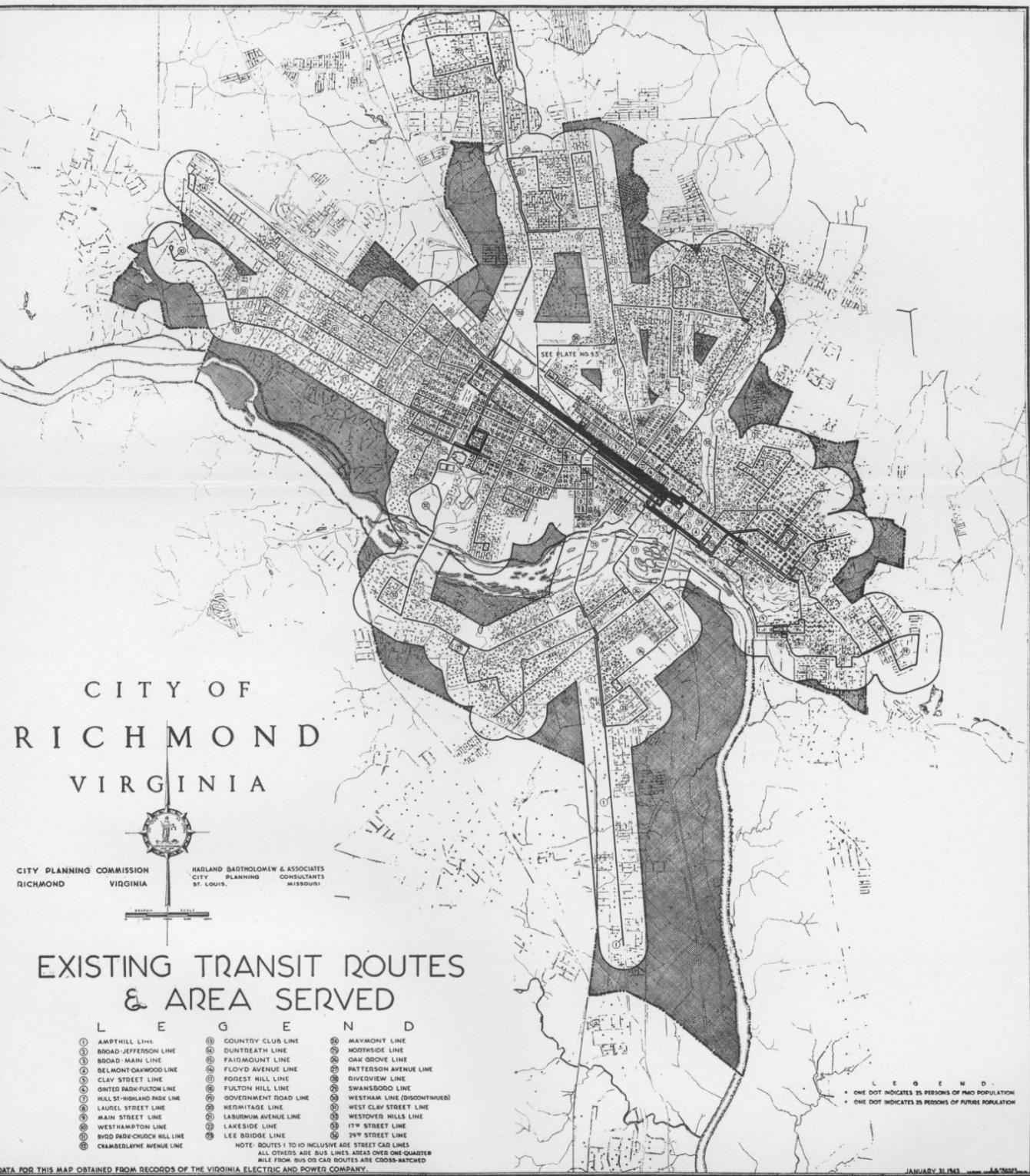
Modern Conception of the Purpose of Streets

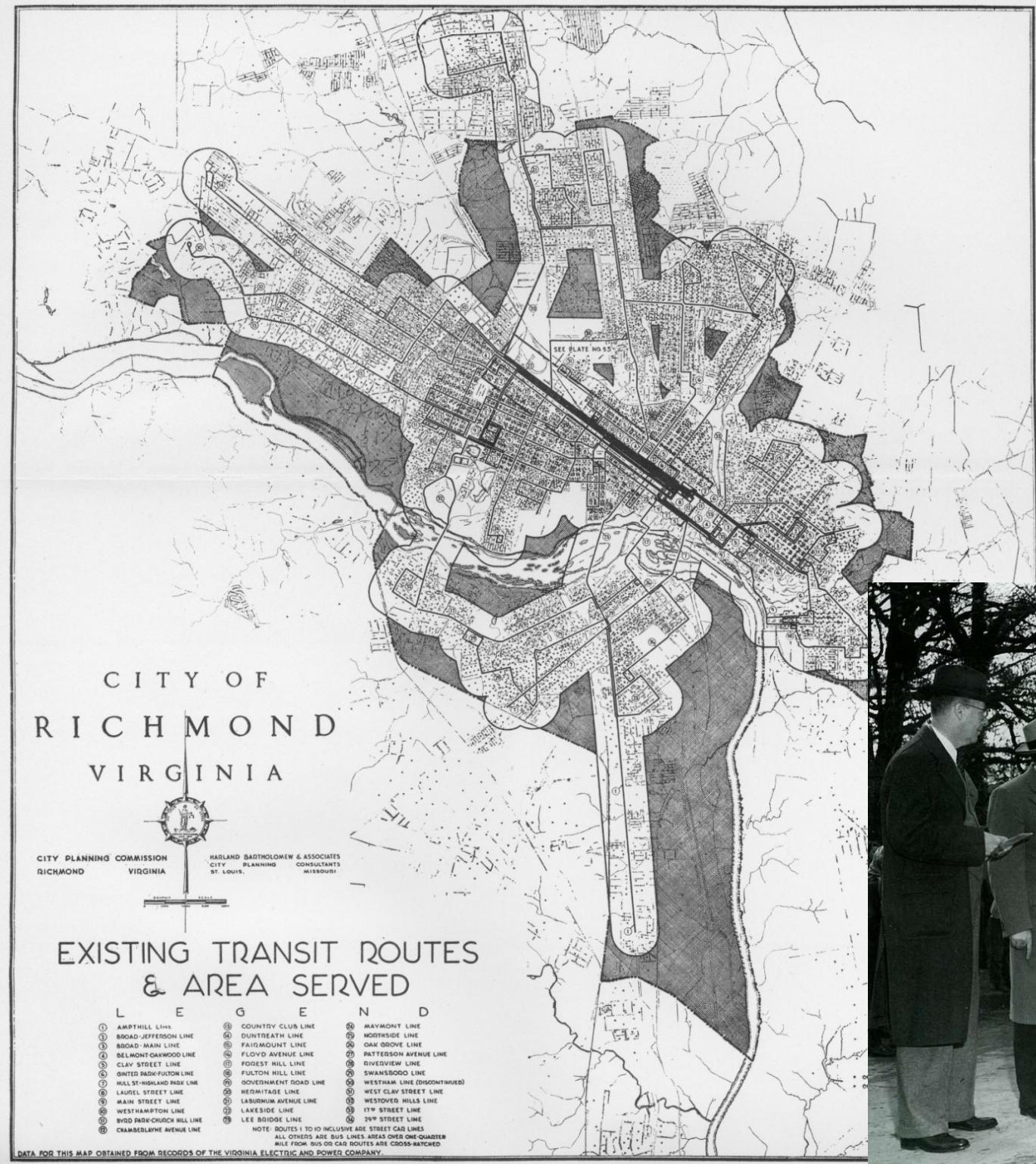




Traditional Conception of Access & Throughput







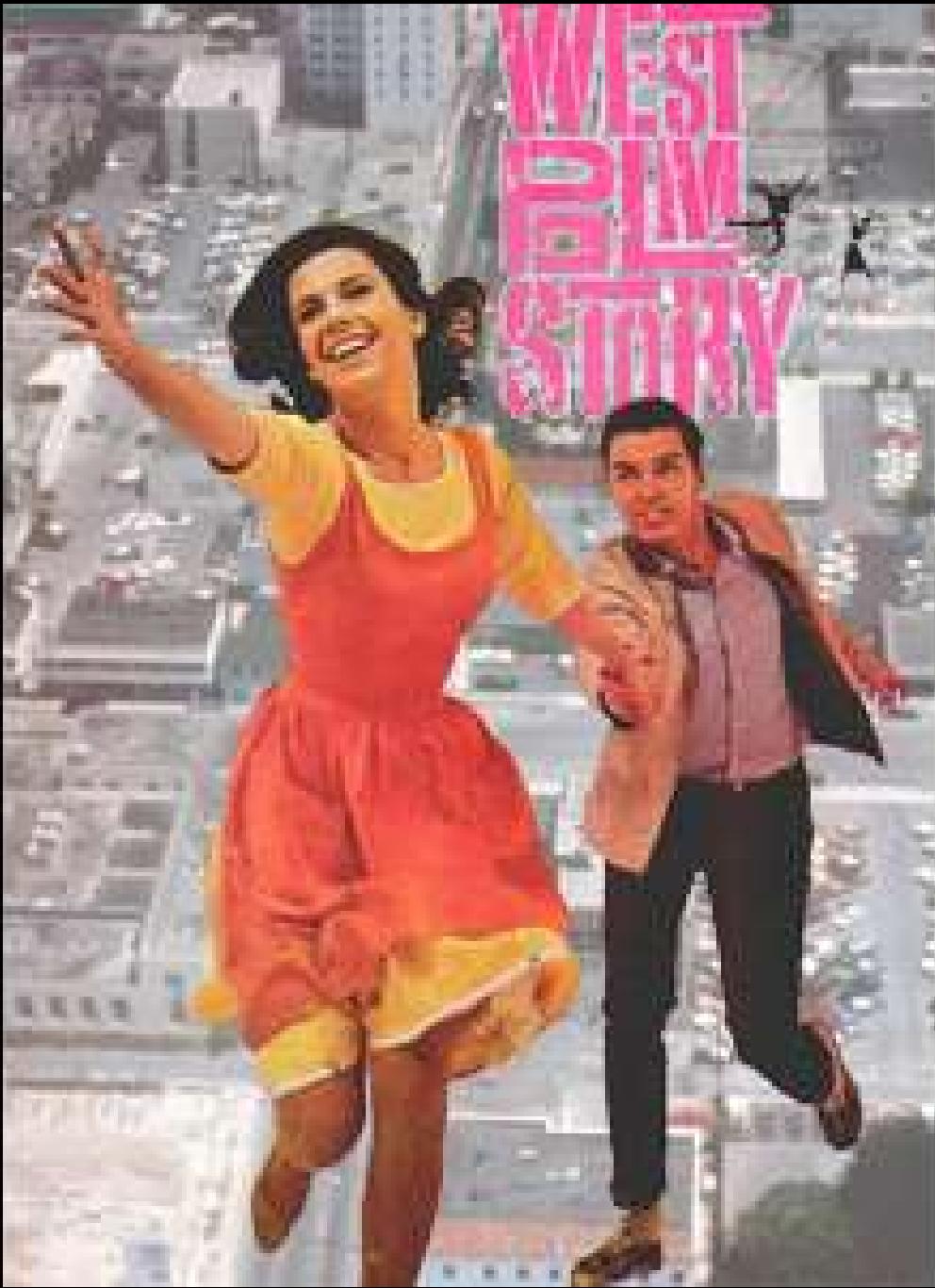




**Place, Exchange,
Multi-Modal Access,
Image**

**Motorist LOS, Speed,
Safety**











A 1989 Nominated
for Academy Award
for Best
Documentary
Feature



















SOLO CENTRE



Concurrency:

Development was only permitted if public infrastructure was provided concurrently (i.e., schools, water, sewer..., & transportation)

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Transportation = Level of Service

**Cities Adopted an:
“Acceptable Peak-Hour L.O.S.”**

Concurrency Exception Area:

**Transportation = access, walkability,
aesthetics, supporting land uses, ...**

and L.O.S. no longer took priority



Agreed, it would help businesses, civic identity, safety, pedestrians, cyclists, transit users ... but, objectively, THAT proves two more lanes are needed to provide an acceptable level-of-service for motorists during the weekday p.m. peak hour. We empathize but there is no choice.



The Mythical Role of Traffic
Demand Forecast Models































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1. Street design shapes land use.
2. Transportation planning should be based on community “vision.”
3. L.O.S. is not important for planning.
4. Traffic demand forecast models are only one version of the future.
5. You get what you buy.

Litmus Test:

Does the “change” reward the short trip or transit, bike, or walk trip?

Change:

*change in policy, street design,
land use, operations, transit
initiative, etc.*

FUNDAMENTALS

The purpose of cities: to advance
efficient & effective exchange.

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efficient & effective exchange.

The “transportation purpose” of cities is
to minimize long-distance travel
(i.e., maximize short trips)

Traditional Values

Design for Short Trips

Transit-Oriented

Walkable

Proximity Important

Mixed Land Use

Connected Street

Network

Access is Key

Buildings Address

Streets

Slow Speeds



Le Corbusier
"Dawn of a new start"



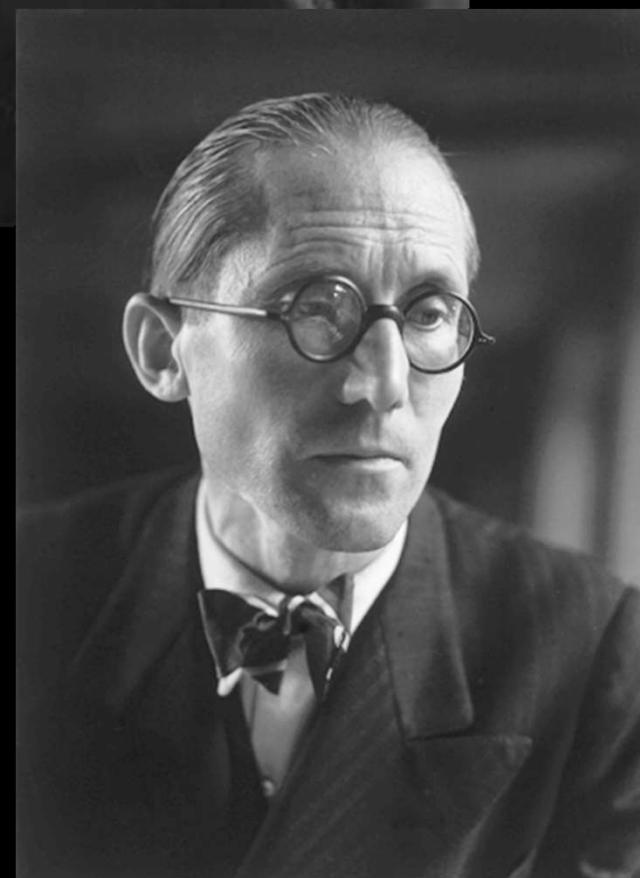
Modernism (Laid the Foundation for the
Conventional Transportation Paradigm)



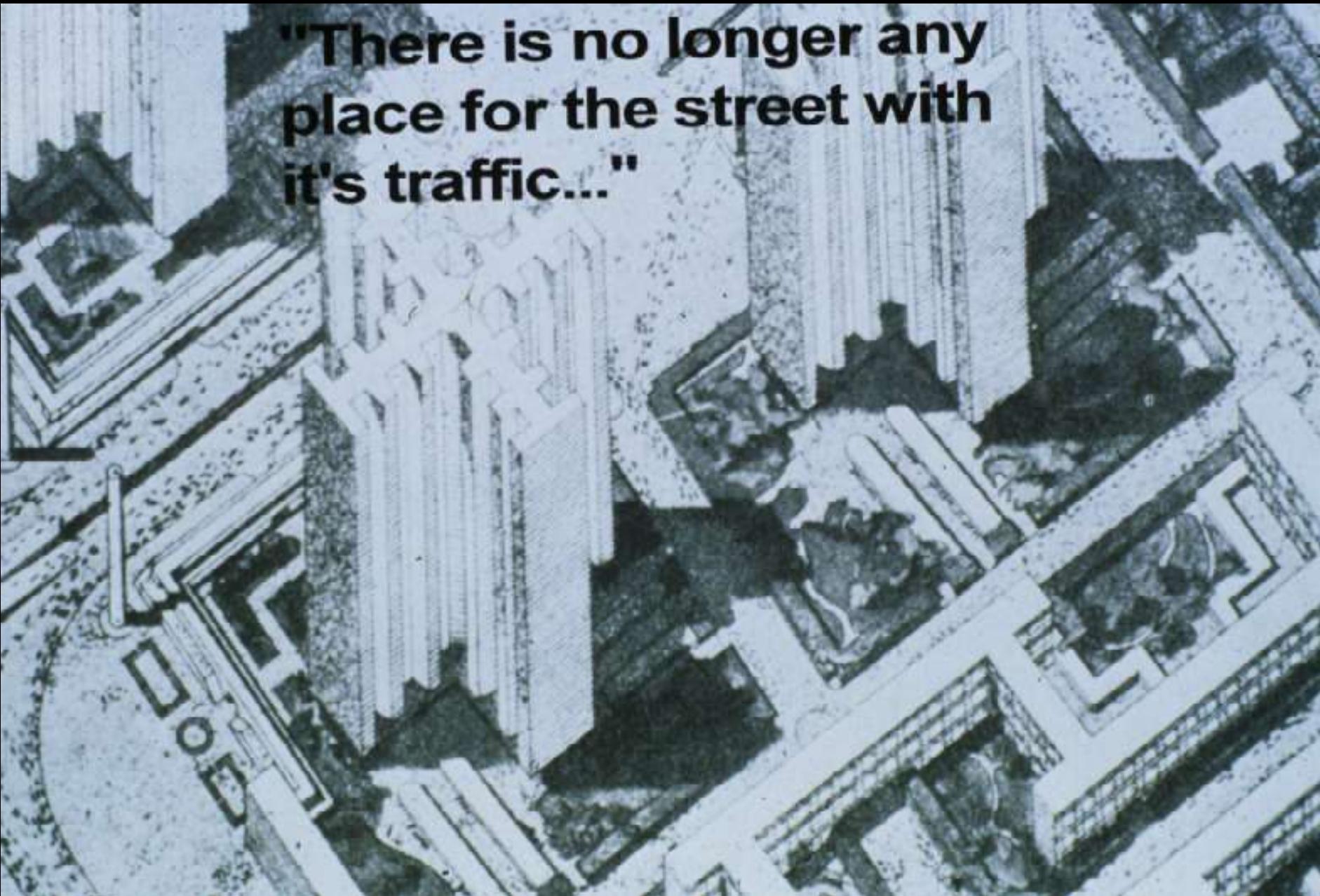


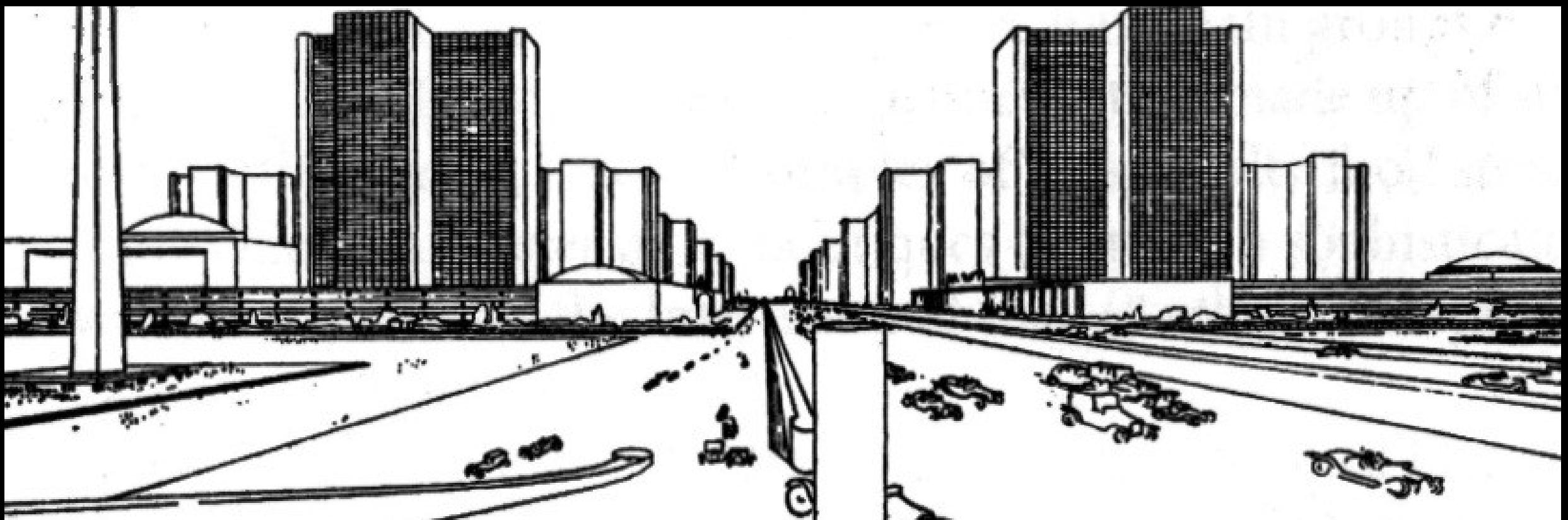
“Cars, cars, fast, fast!”

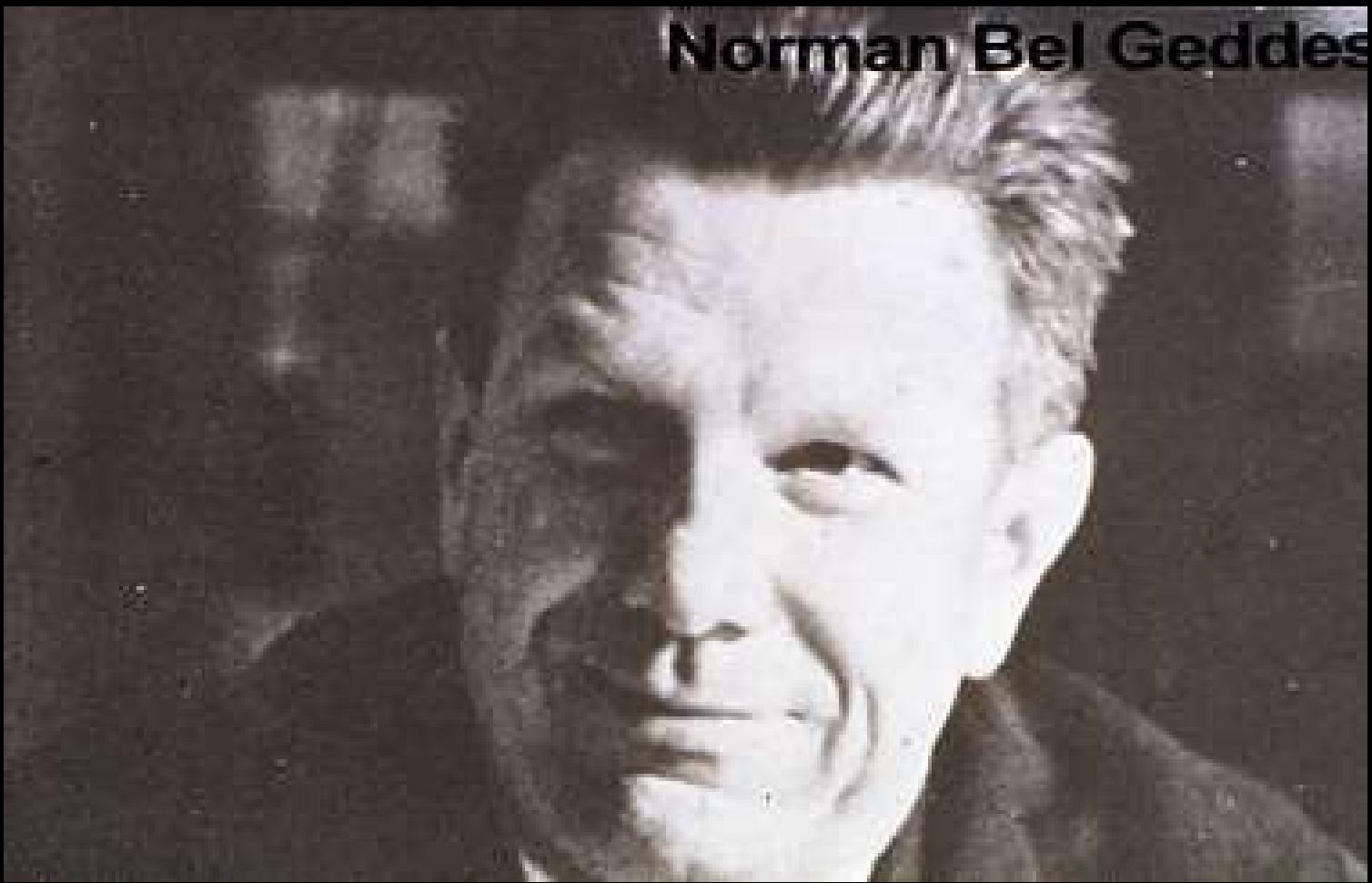
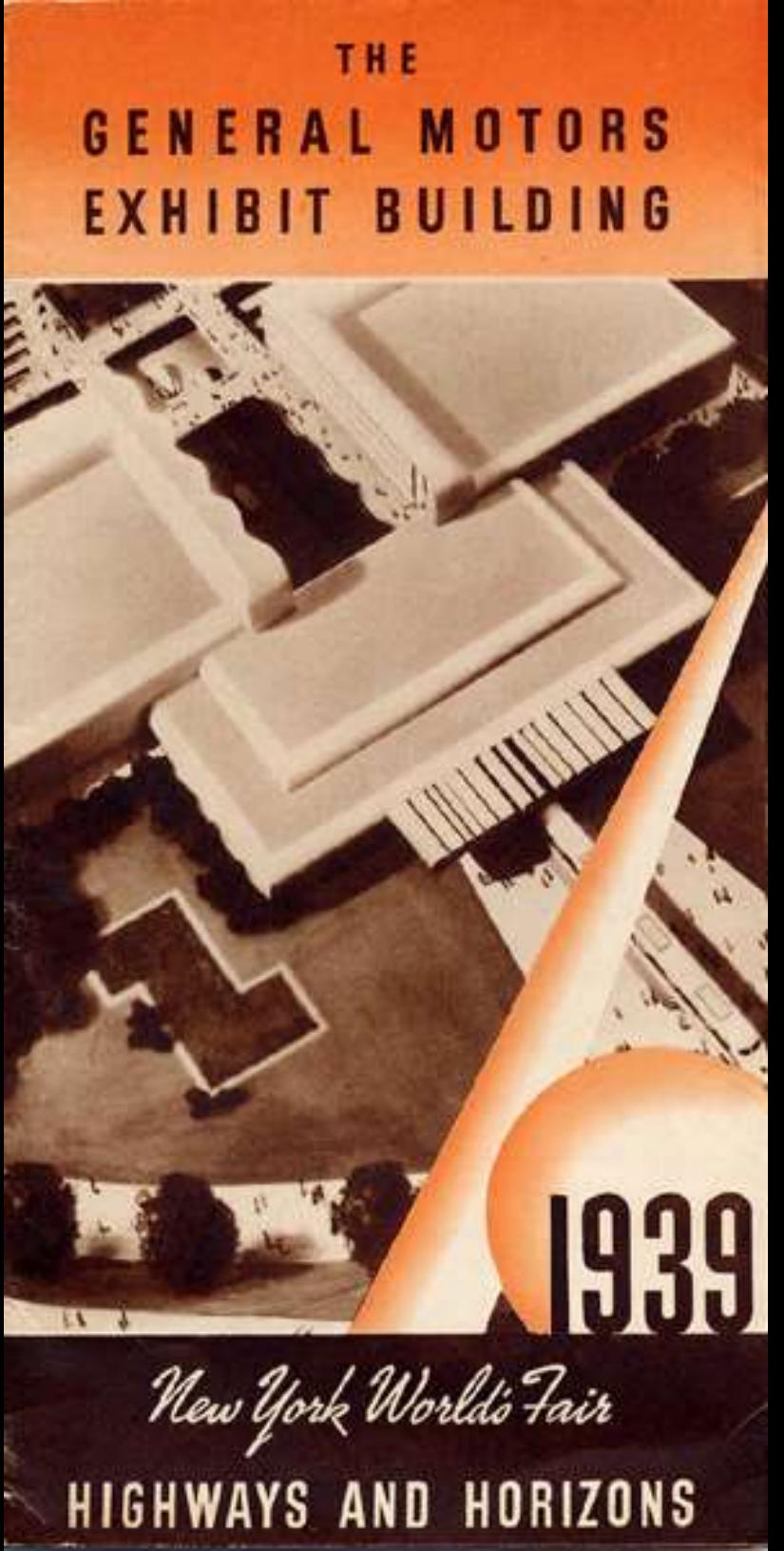
Le Corbusier, 1924

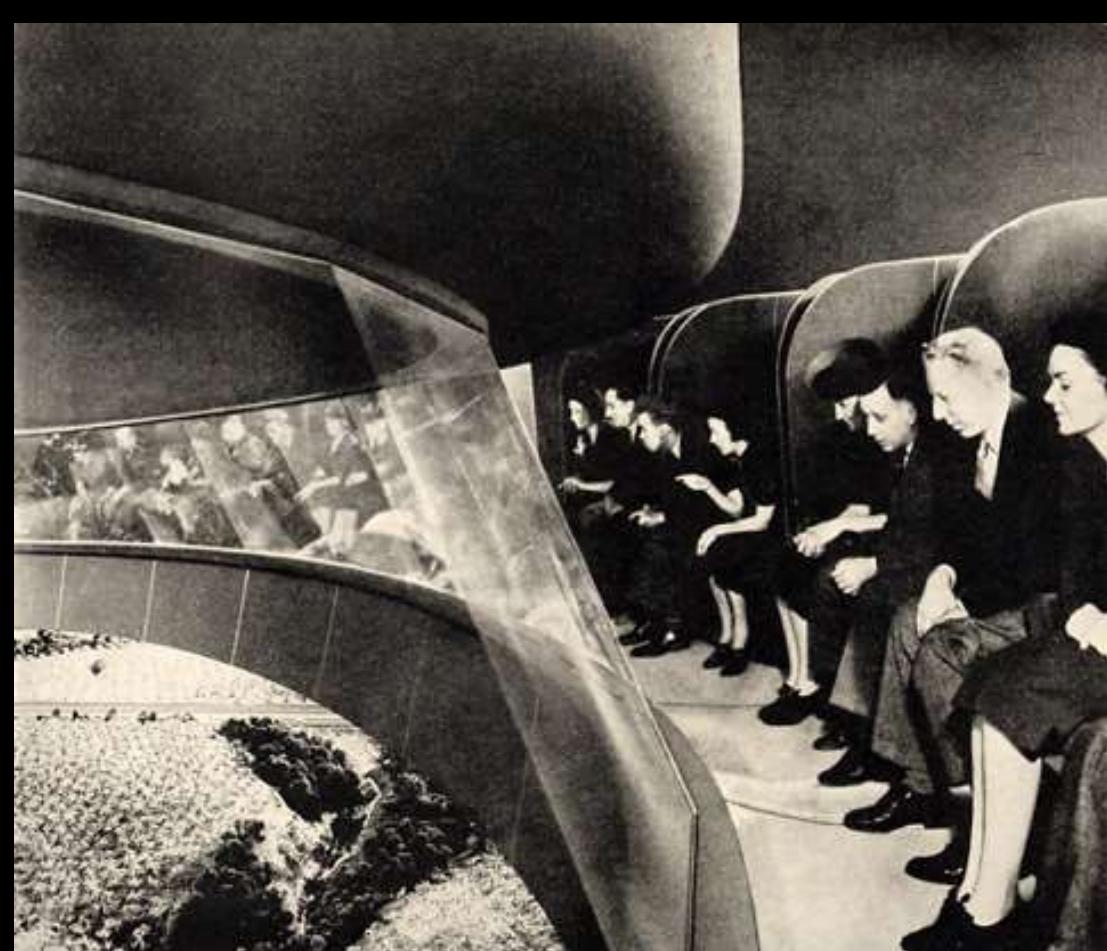


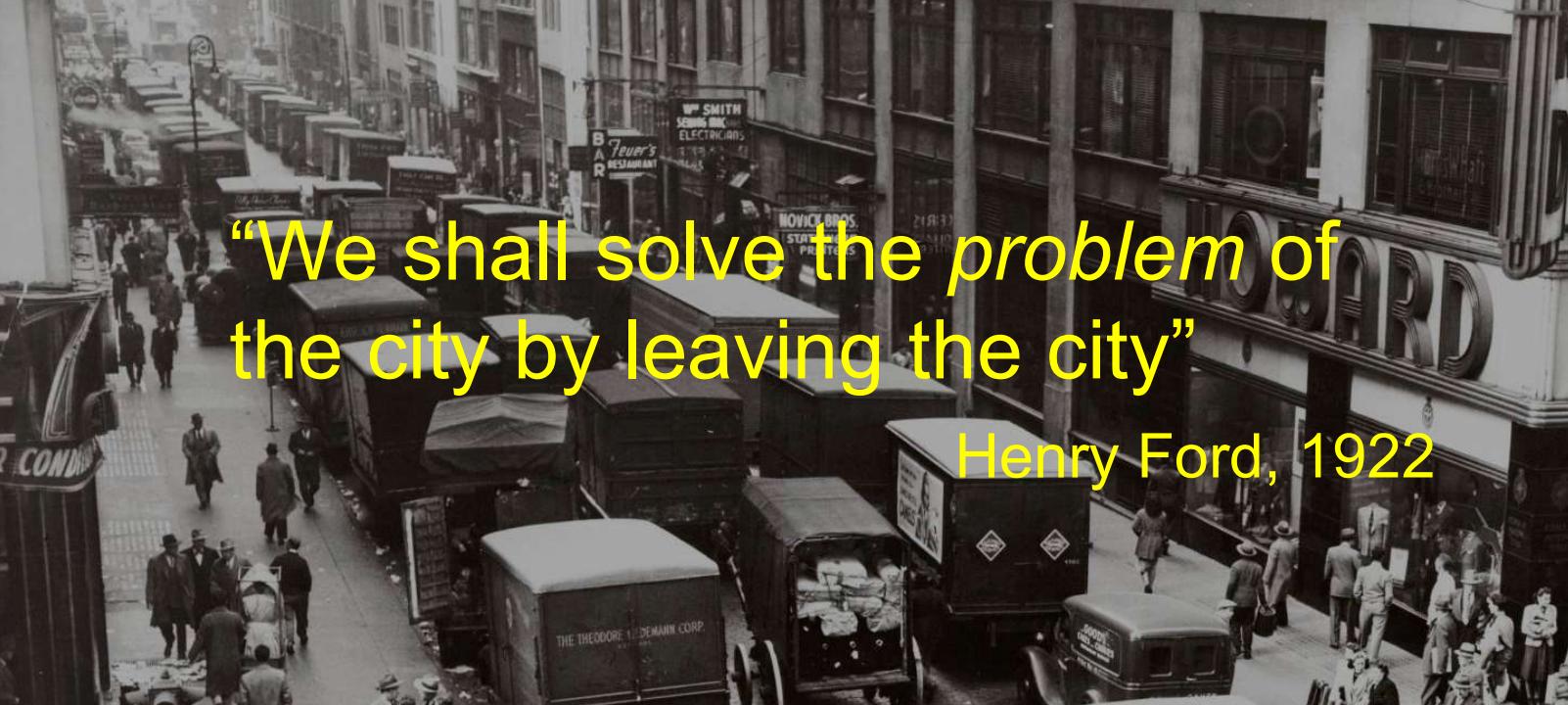
"There is no longer any place for the street with it's traffic..."









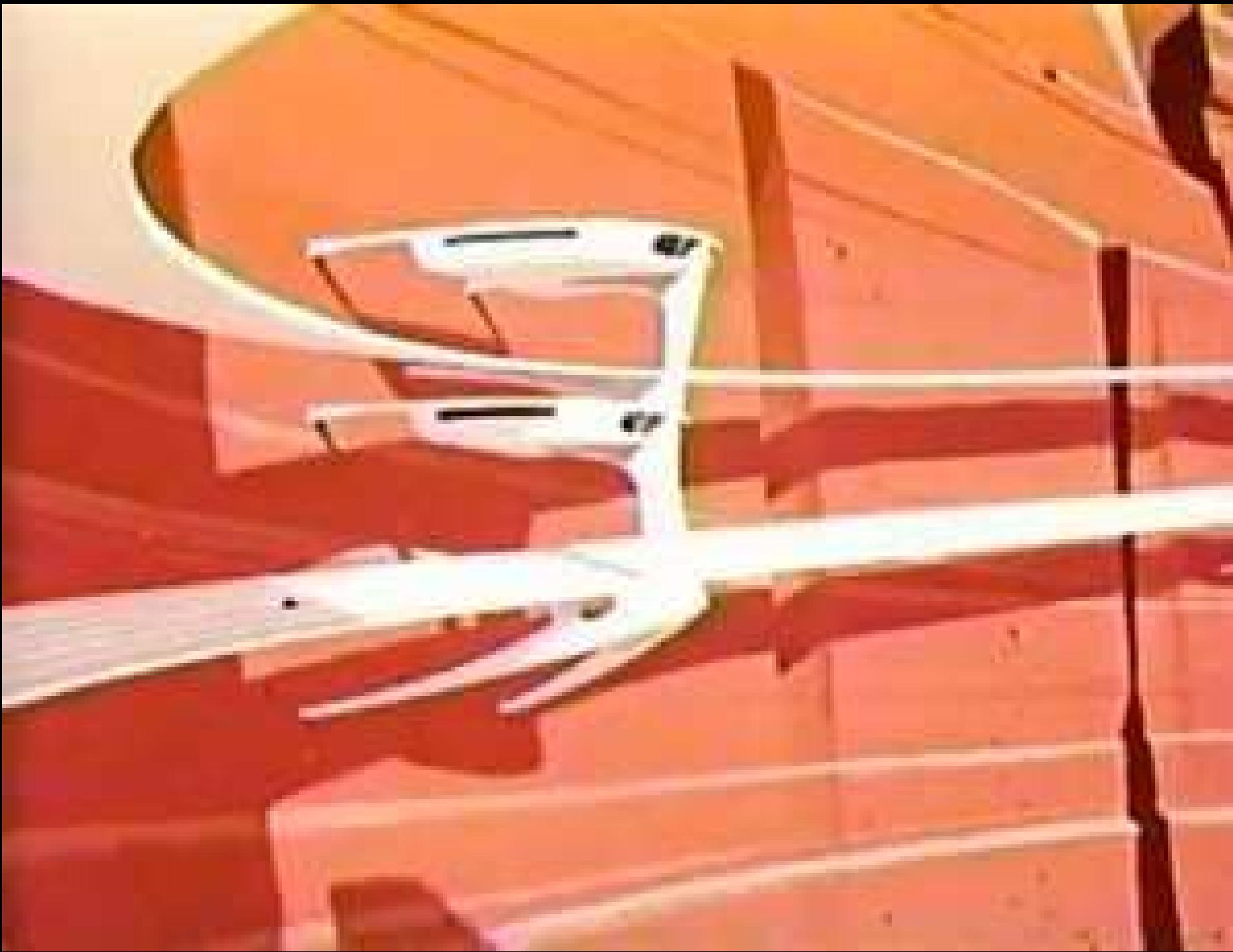


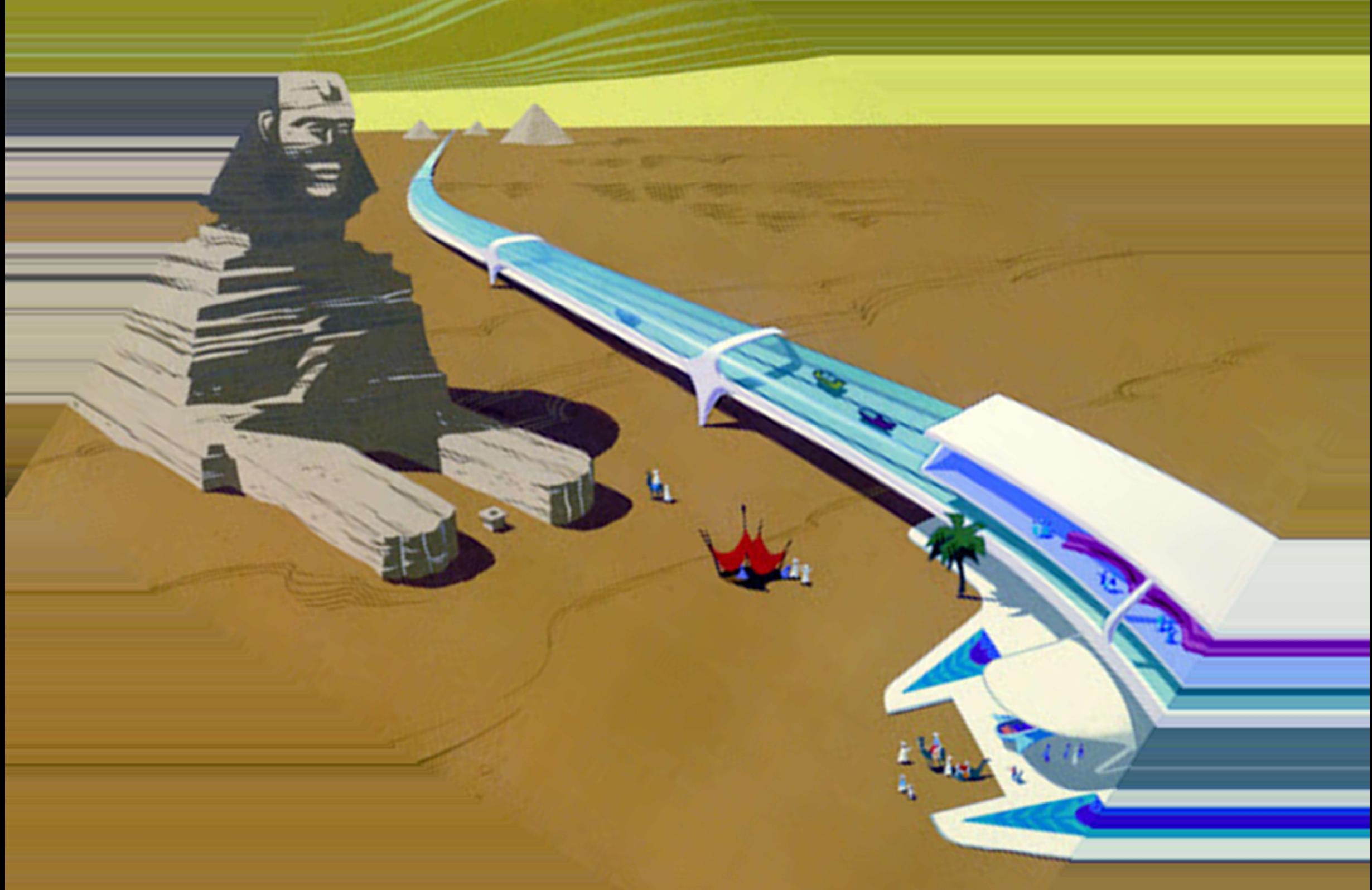
*"We shall solve the problem of
the city by leaving the city"*

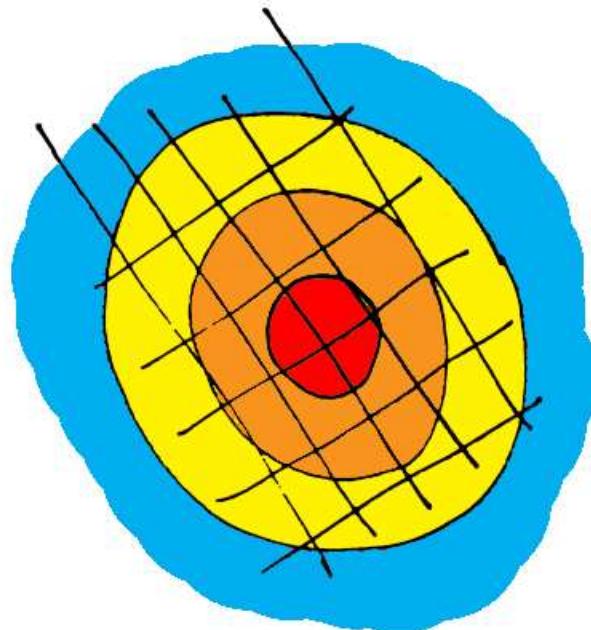
Henry Ford, 1922



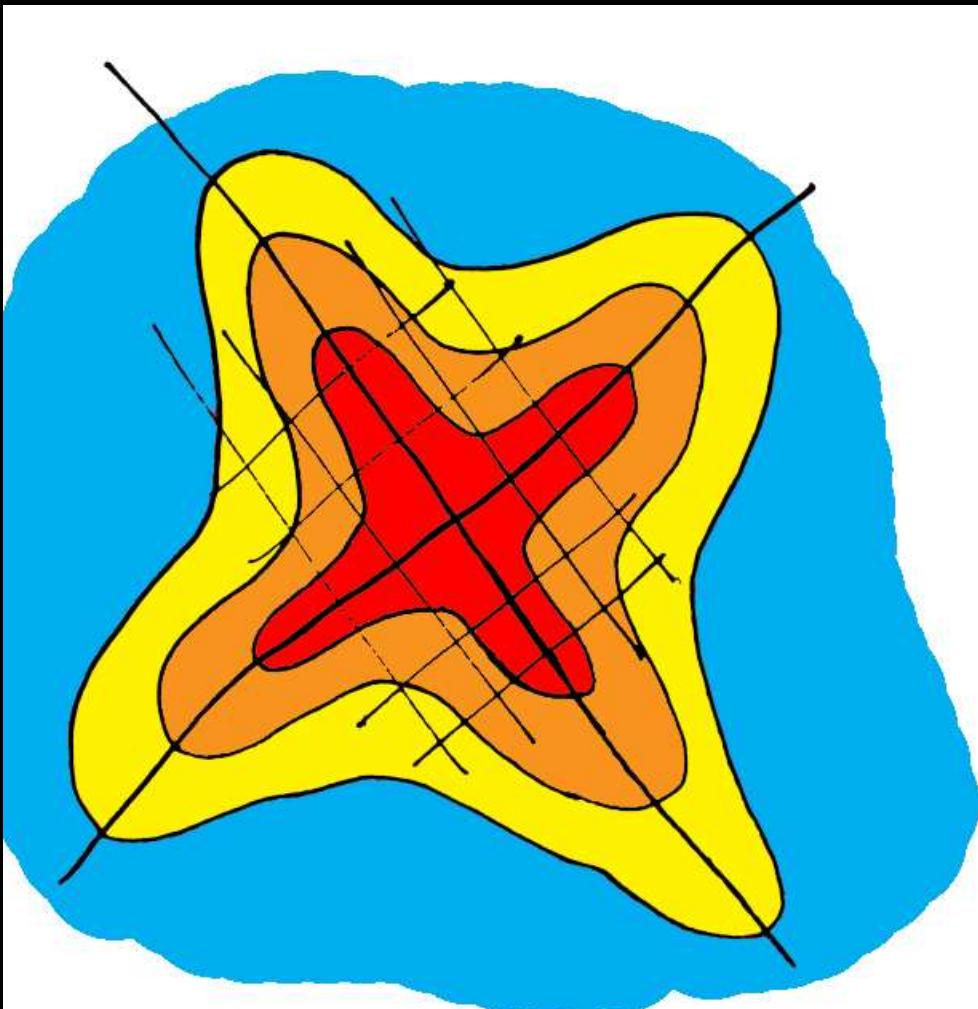




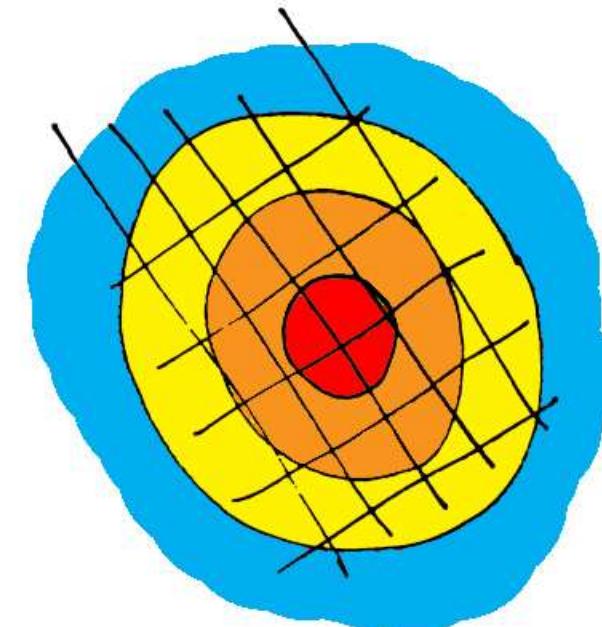




Traditional City
Value = f_n (proximity to center)



Conventional Theory
Value = f_n (travel time to center)



Traditional City
Value = f_n (proximity to center)

Conventional/Modernist Values

Reward Long Trips

Automobile Focus

Automobile LOS

Speed Important

Single Use Land Use

Dendritic Street Hierarchy

Congestion is Bad

Individually Appealing

Simple (get from A to B quickly)



Which is better; Fast or Slow?



Which is better; Fast or Slow?

FAST!

FAST!!



FAST!

FAST!

Which is better; Fast or Slow?

FAST!

FAST!

FAST!!

FAST!



It's not complicated:

Which is better; Fast or Slow?

FAST!

FAST!

FAST!!

FAST!



It's not complicated:

Faster is Better

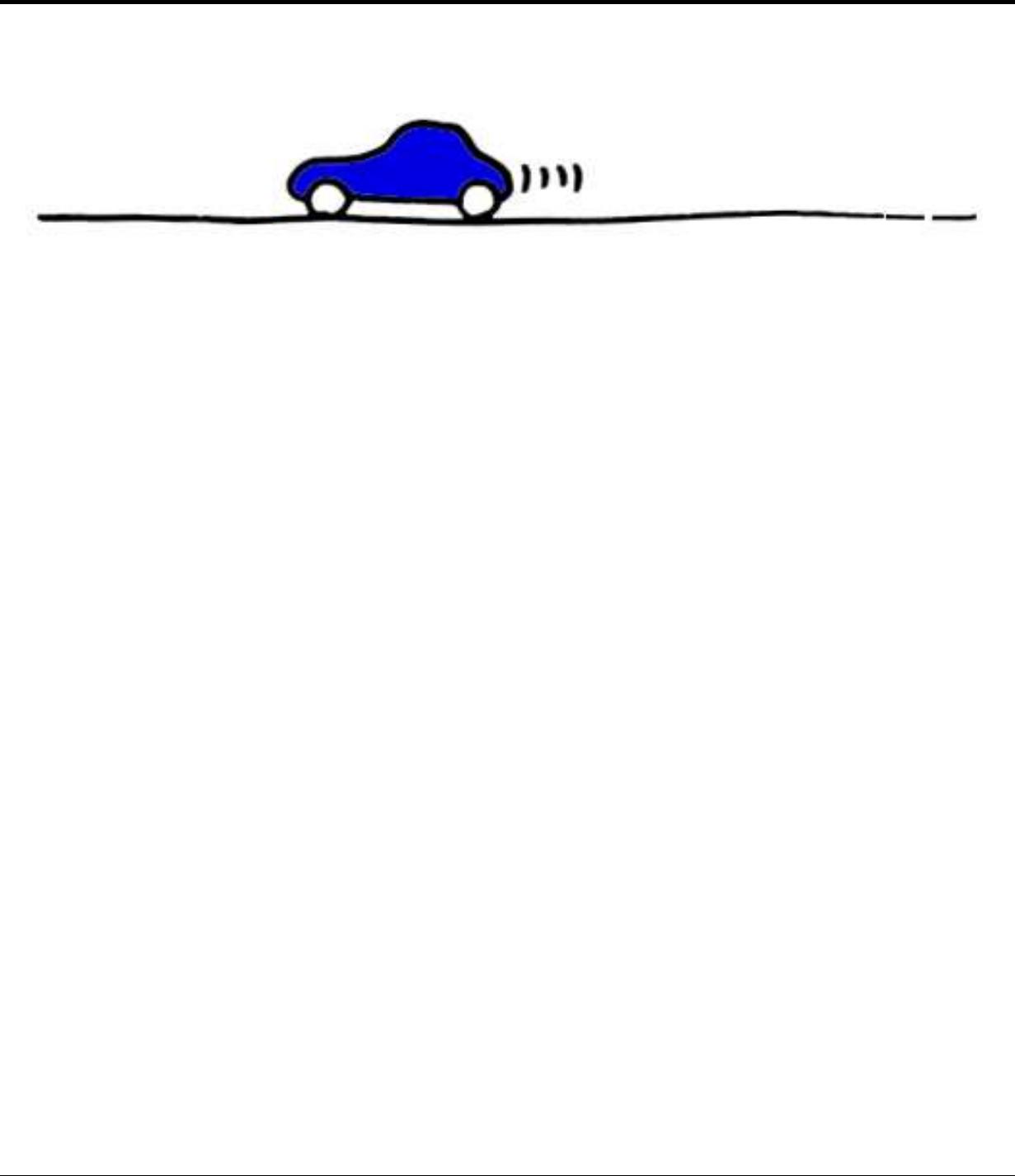
Tragedy of the Commons

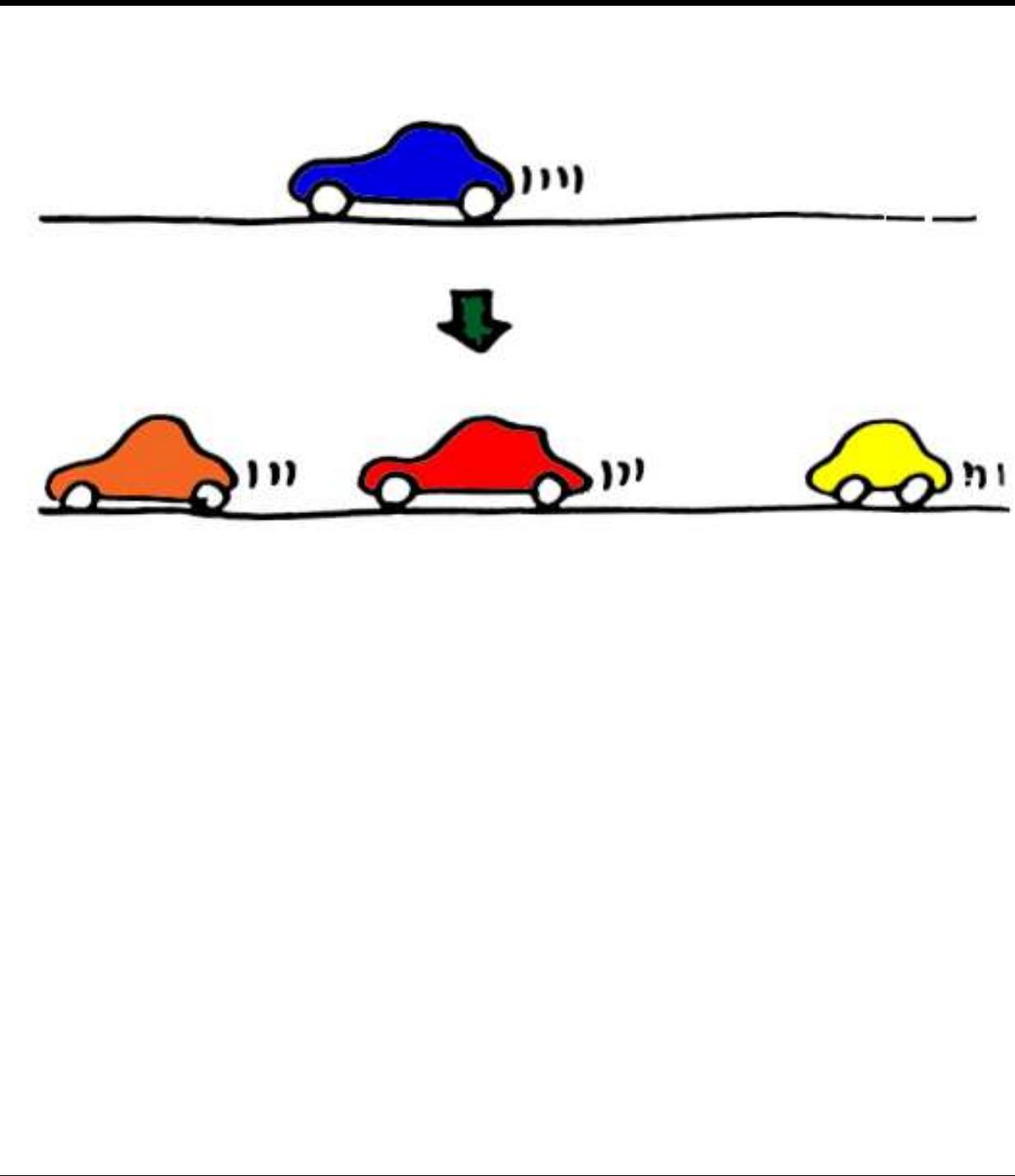


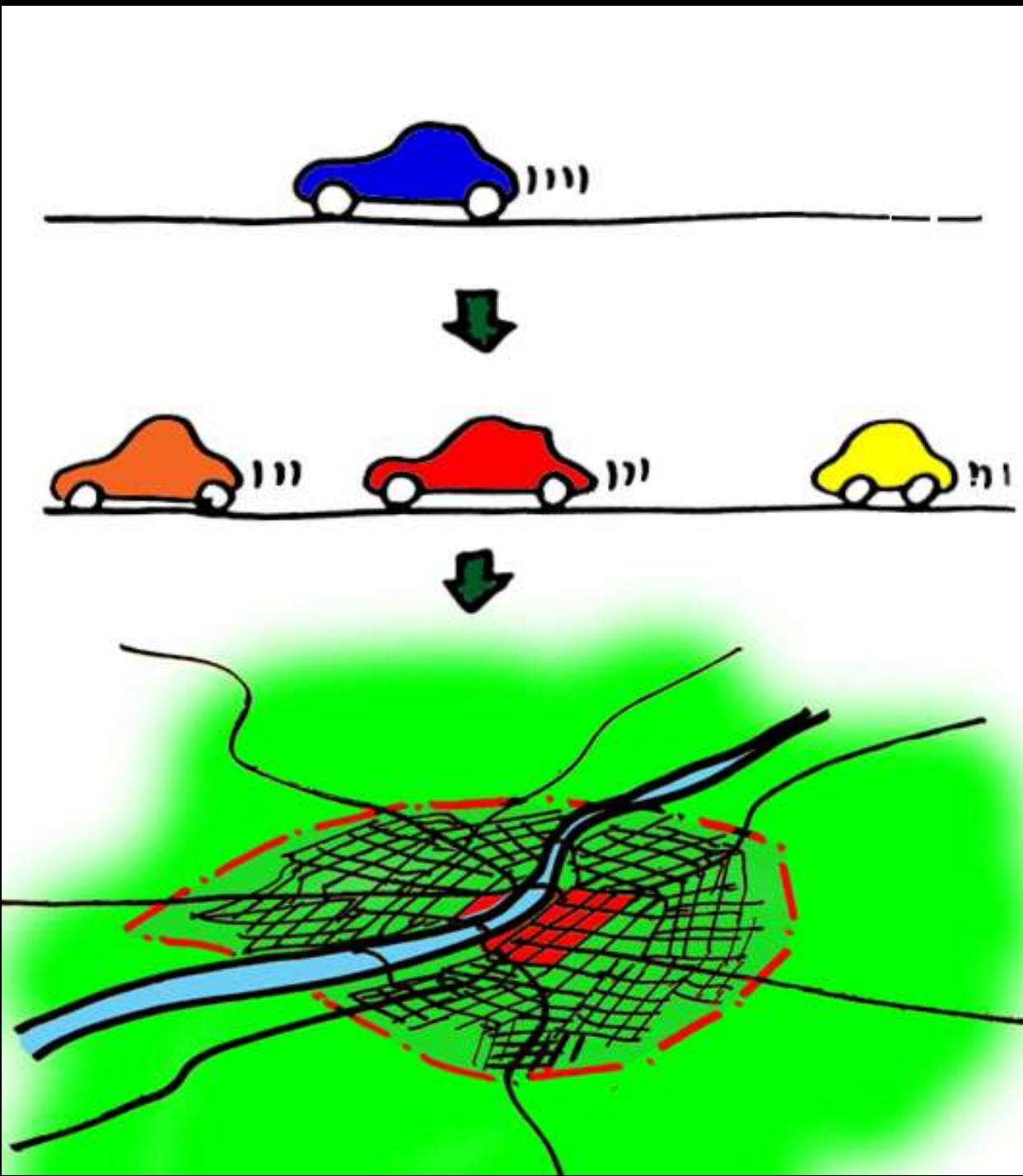


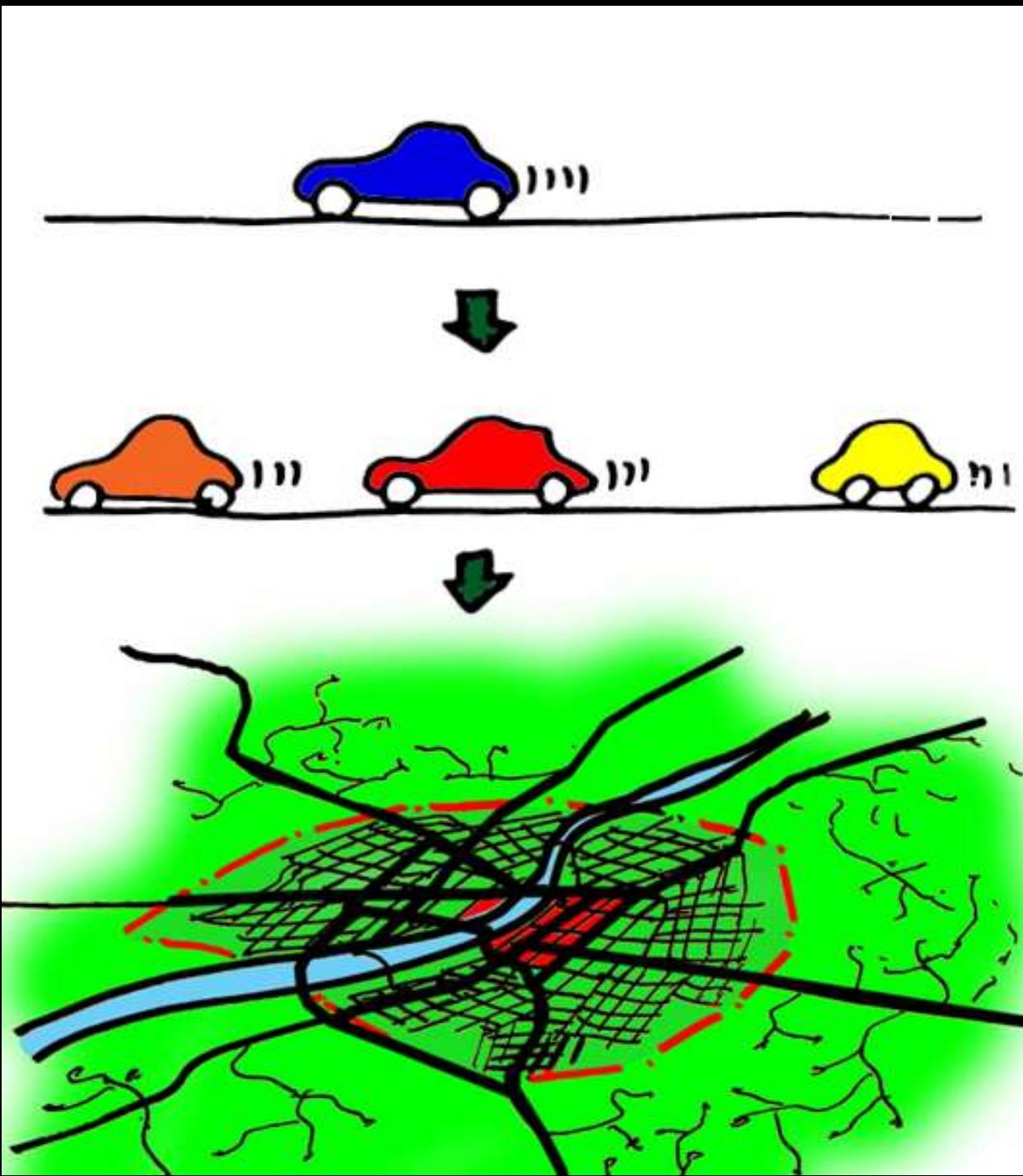
Tragedy of the Commons











Tragedy of the Commons

The image features a white rectangular area containing a stylized illustration. At the top, there's a thin black horizontal line with three small black marks on each side. Below this, a blue car is positioned above a green arrow pointing downwards. On the ground below, there are three other cars: an orange one on the left, a white one in the center, and a yellow one on the right. A green arrow points downwards from the center car. The bottom half of the image shows a green field with a black grid pattern, resembling a fence or a map. The entire graphic is overlaid with large, bold, red text that reads "Tragedy of the Commons".

Michigan Theater

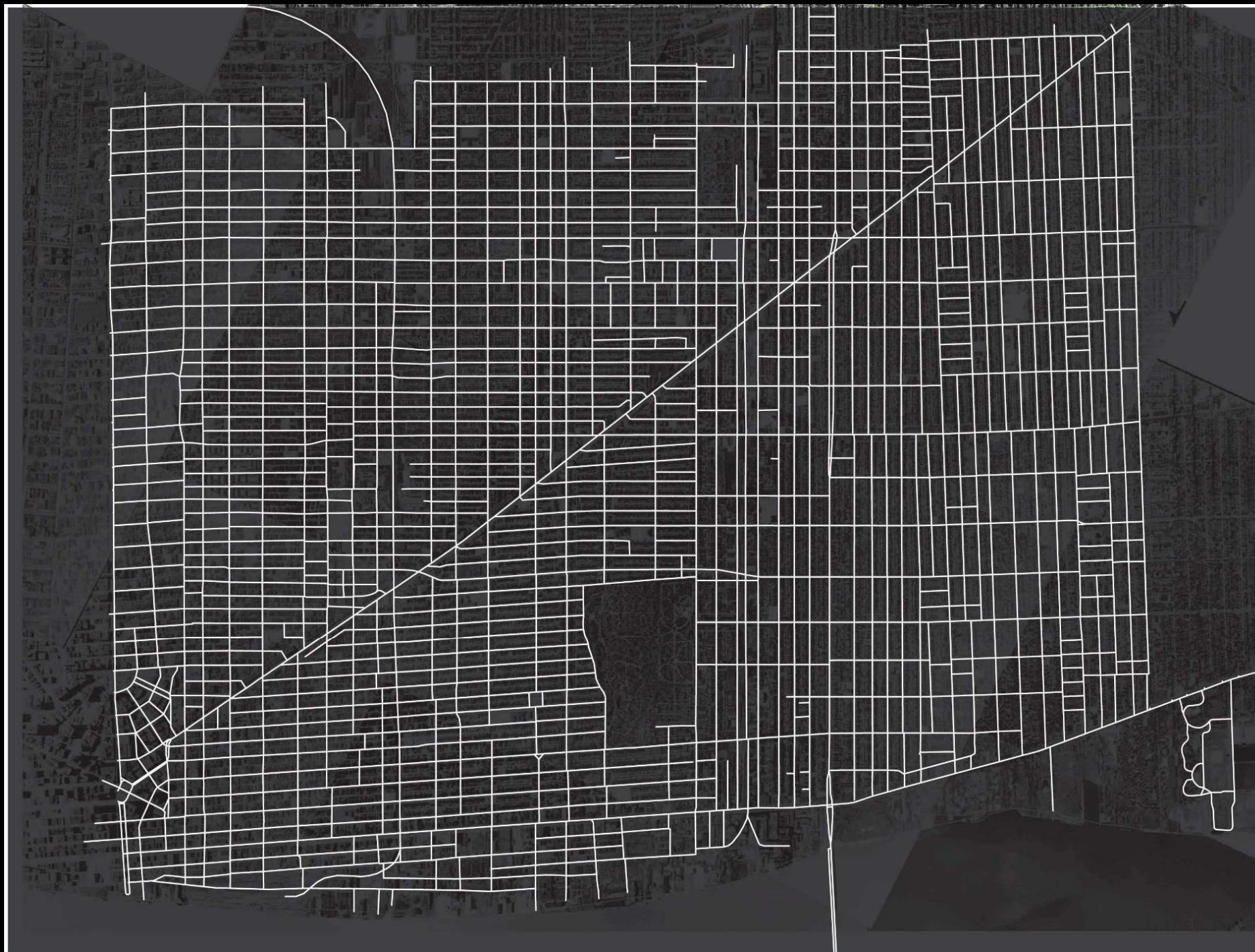
Detroit, MI



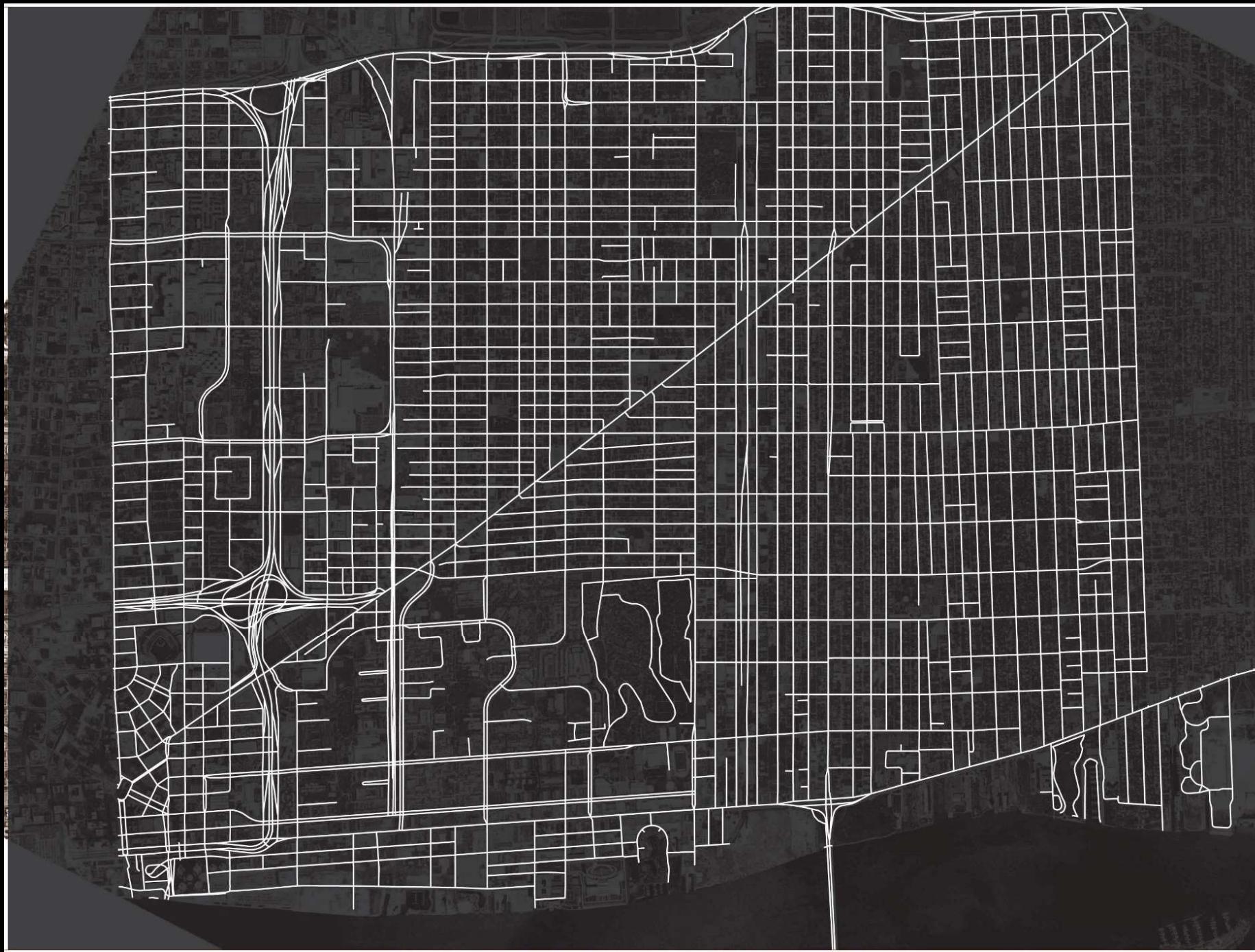




1949 Street Network



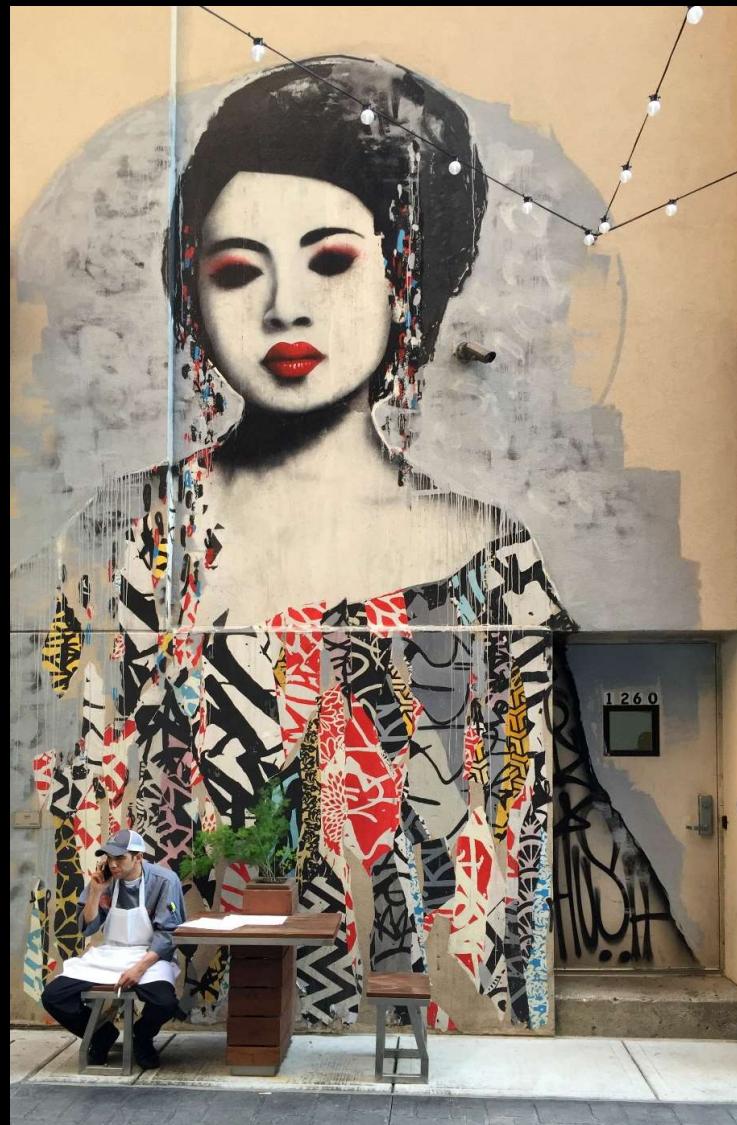
Existing Street Network













CORPORATE TRENDS

Making the Case for Transportation Language Reform: Removing Bias

BY IAN LOCKWOOD, P.E.

Samuel Beckett (1906–1989), the Irish novelist and playwright, wrote “Words are the clothes that thoughts wear.” Throughout history and in many fields, the use of language has influenced how ideas have been received by adorning thoughts with words that carry subjective meaning. Strategically assigning words to ideas can challenge or perpetuate biases, attitudes, and public opinion, and ultimately influence policies and culture.

Examples of language that contain and reinforce biases abound. In the 1970s, common terms in workplaces included, “policeman, fireman, manpower, chairman, and man hours.” The language was gender-biased and excluded women. Over time, societal values evolved to the point where the language was updated. Many people worked hard to reform the language to be gender-neutral, while opponents called the reform “being politically correct” and unnecessary. Today, gender-neutral language is common and accepted; examples include, “police officer, firefighter, human resources, chair, and person hours.” This language reform supports gender equality, helping to change attitudes, policies, and culture. Gender-neutral language is not pro-woman; it is inclusive and objective.

www.ite.org | January 2017 | 41

Words

Improvement



Words

Improvement

Capacity



Improvement
Capacity
Upgrade/Enhance

UPGRADES? SURE IT'S GOT
PLENTY. EVEN THE STREET
GOT **UPGRADED** TO AN ARTERIAL
JUST THE OTHER DAY.



Words

Improvement

Capacity

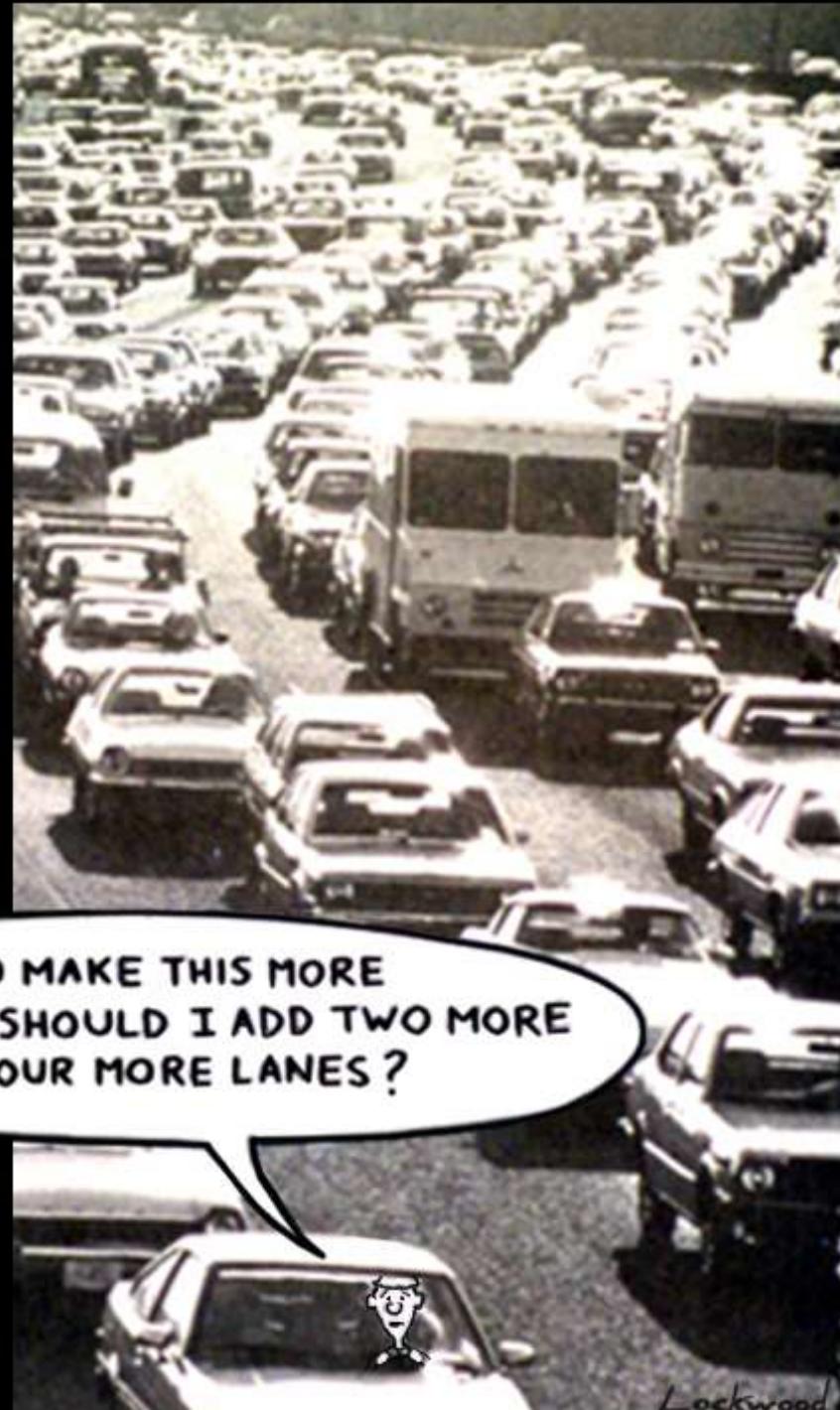
Upgrade/Enhance

Efficient



Words

Improvement
Capacity
Upgrade/Enhance
Efficient
Traffic Demand
Accidents
Level of Service
Delay
A, B, C, D, E, and F
Reliability
Functional Classification
Right-of-Way Preservation
Mass Transit
Freeway
Capacity Deficiencies
Conflict Points
Access Management
Regional Travel...



Hey City! I chose to exercise my freedom & reside out in the suburbs. Now, I want to drive fast through here without delay. So, I demand that public taxes be spent to widen your roads & lower your safety, health & quality-of-life. Fair deal? Want to shake on it, pal?



Regional Travel: a post-WWII euphemism for long & unsustainable car trips

Words

Context-Sensitive Design

Context-Sensitive
Solutions

Traditional Neighborhood
Design

Smart Growth

Road Diets

Safe Routes to School

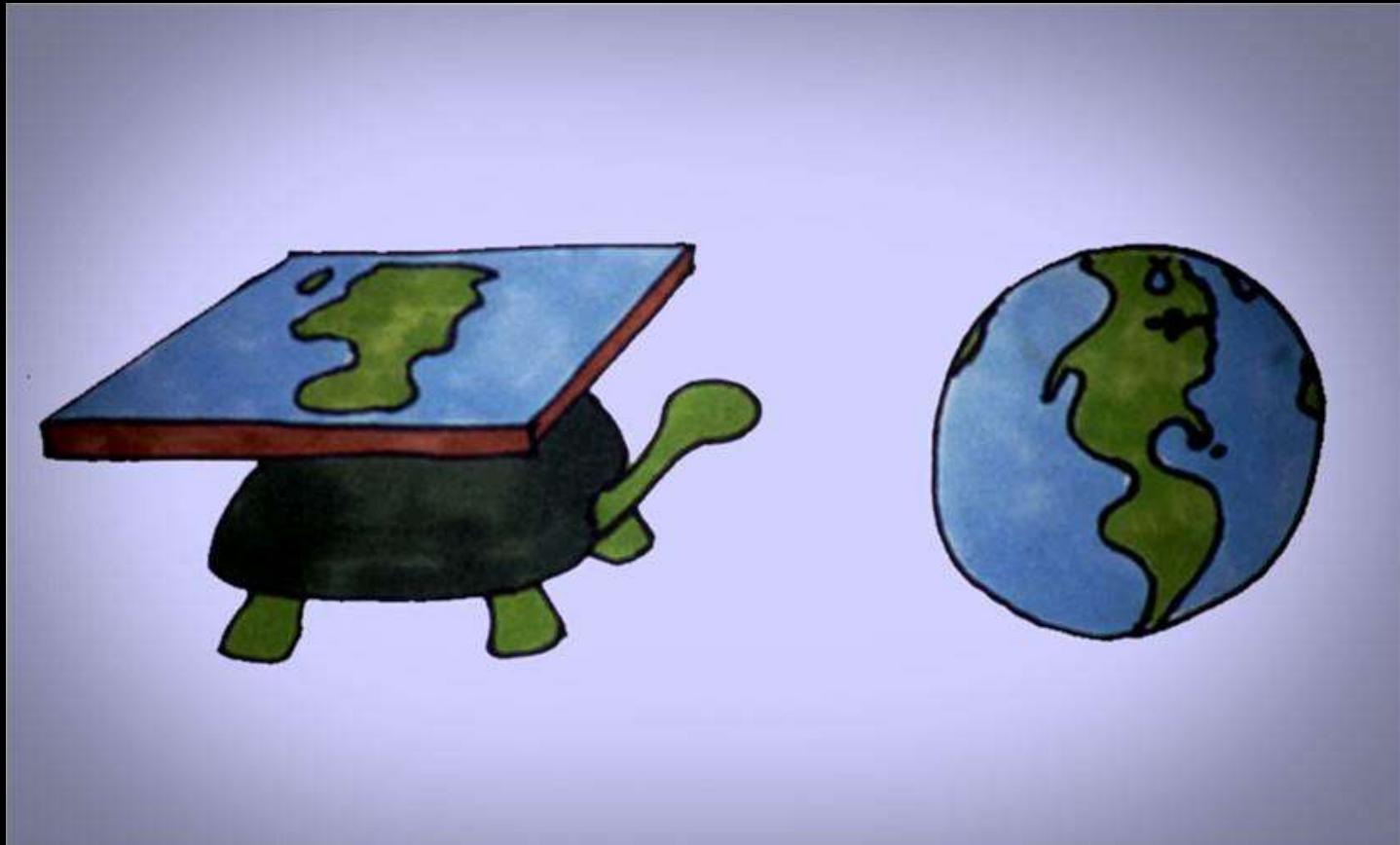
Shared Spaces

Vision Zero

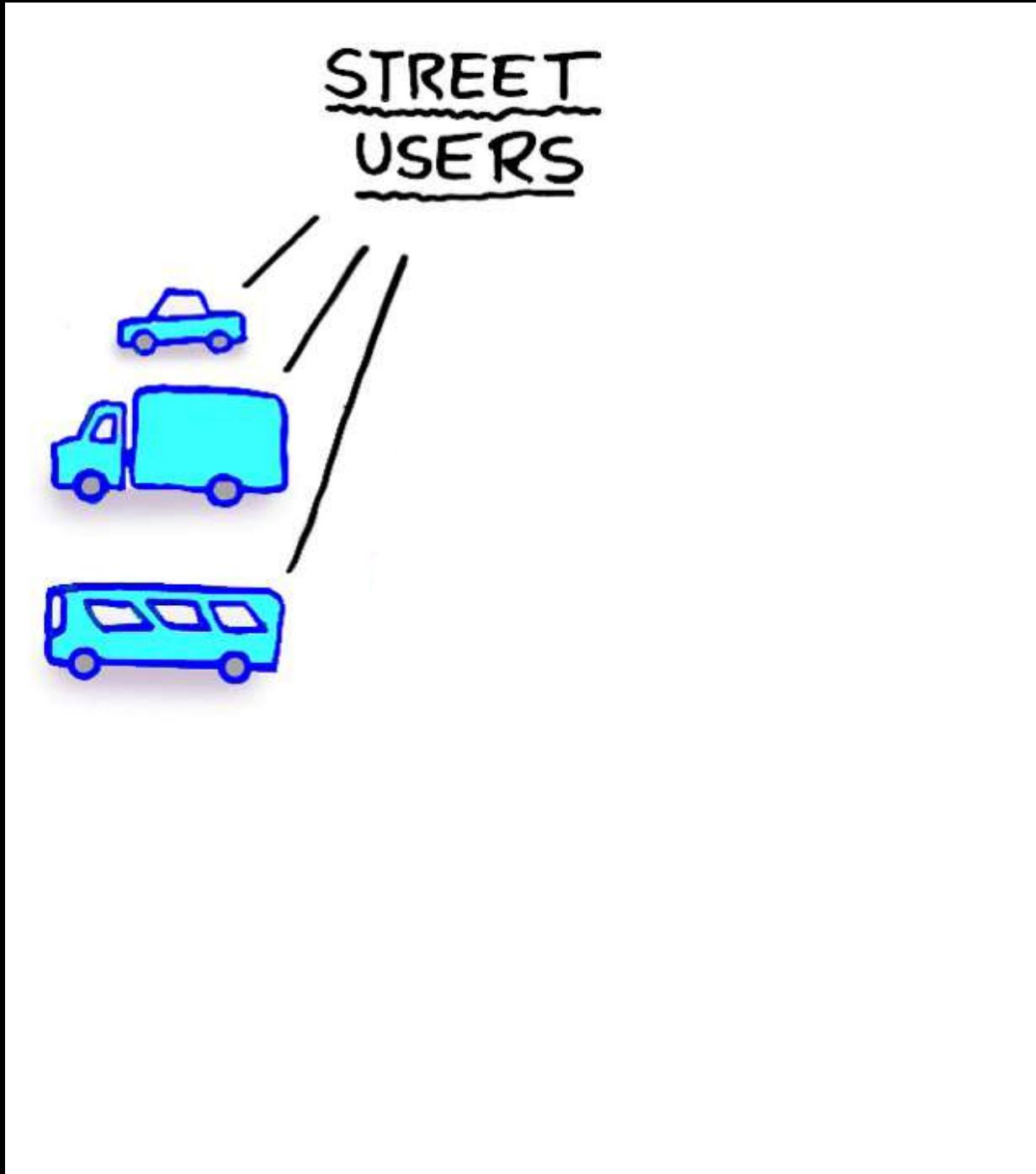
Path as Place

Traffic Calming

Complete Streets



Complete Street:



COMPLETING
OUR STREETS

The Transition to
Safe and Inclusive
Transportation
Networks

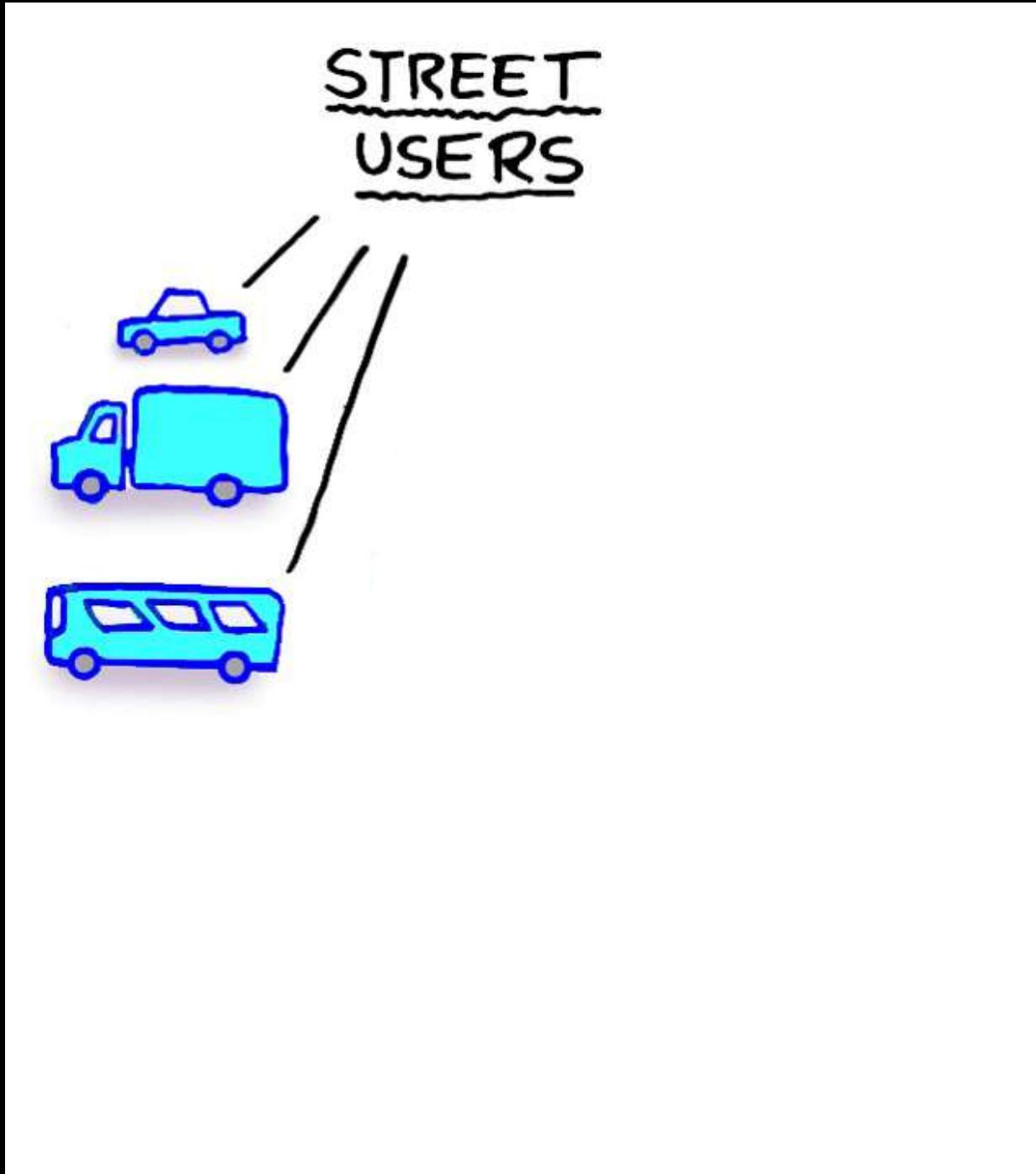
A photograph of a wide, shaded sidewalk with trees and people walking or cycling. The sidewalk is paved and has a green border. There are people walking, a person on a bicycle, and a person on a scooter. The area is shaded by tall trees.

BARBARA McCANN



Complete Street:

a street that is designed to comfortably accommodate those who use the street.



COMPLETING
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The Transition to
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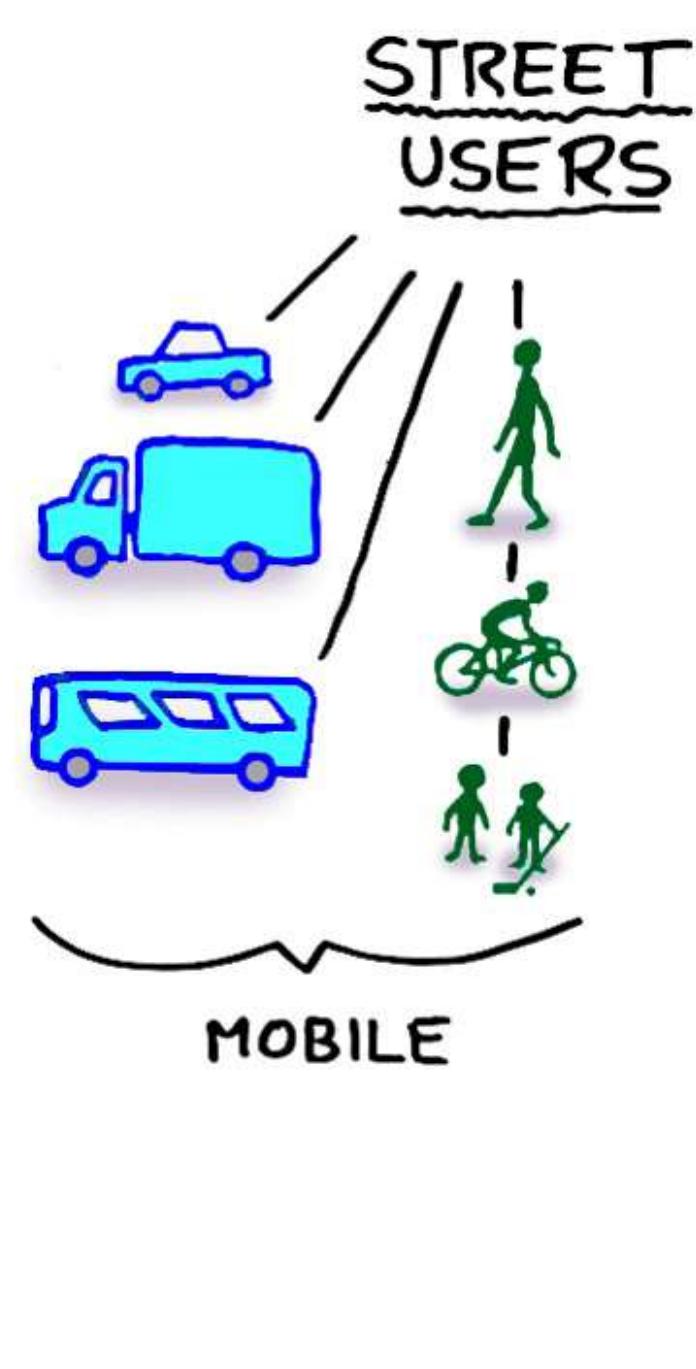


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*The Transition to
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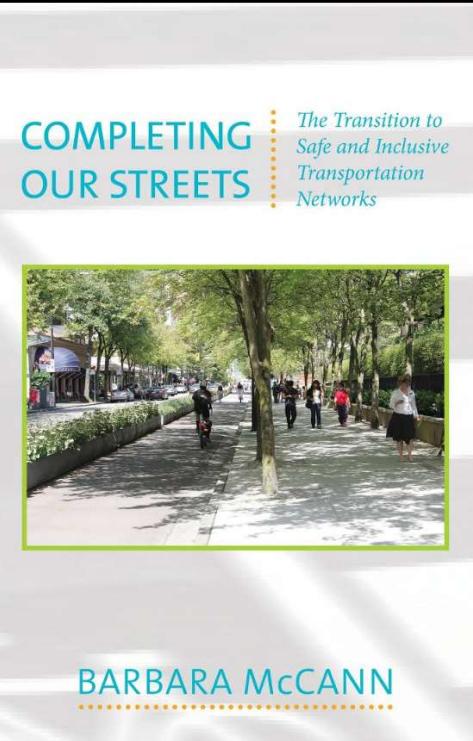
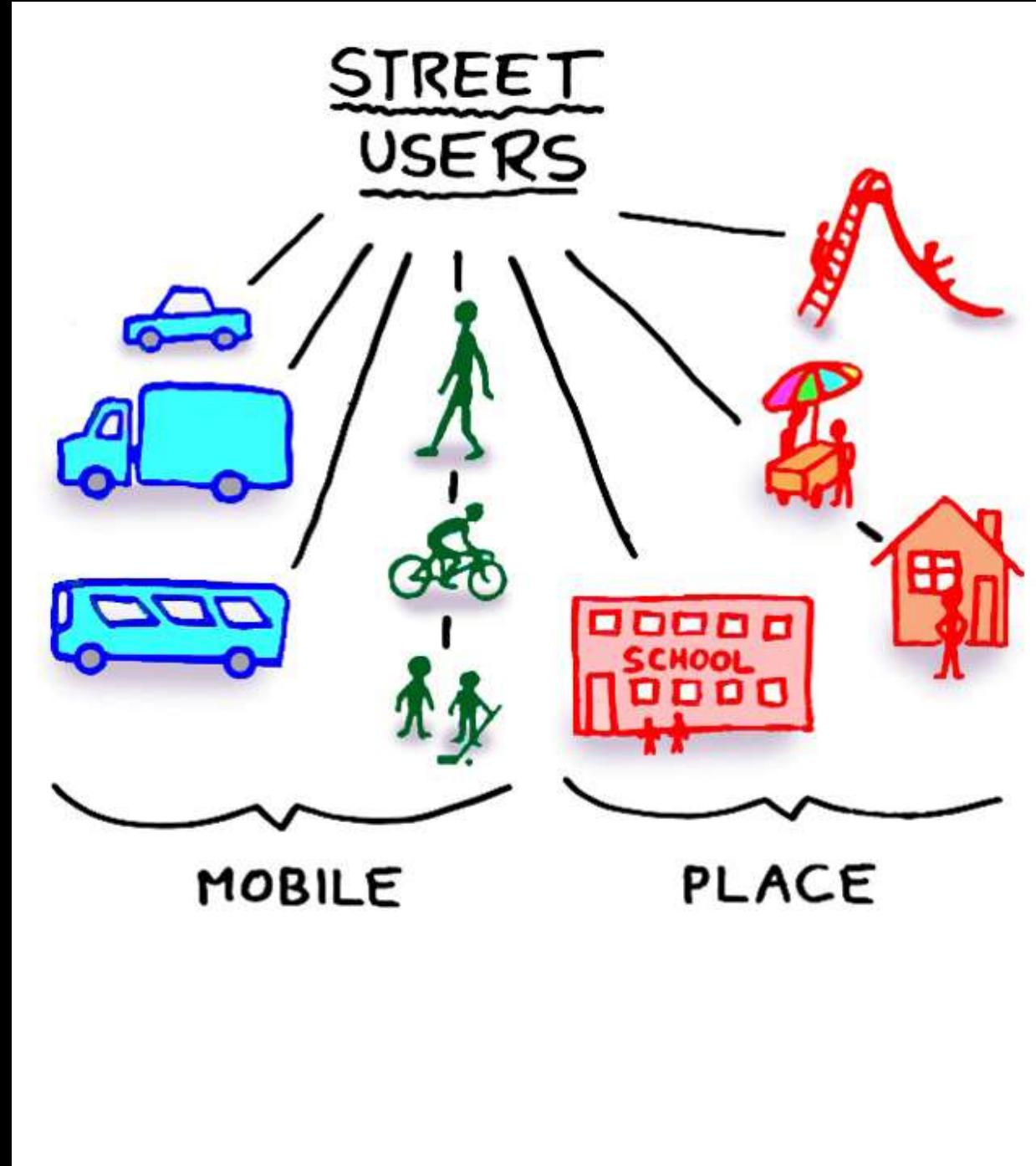


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I-635, DALLAS

The difference between
“volume, & trips”



CHAMPS ELYSEES,
PARIS

Mobility (in the past)

the movement of people & goods

assumption: faster, farther, and in greater numbers means progress for society

Mobility (now and in the future)

The populations' capabilities and strategies to move in order to access what they need to live within the city.

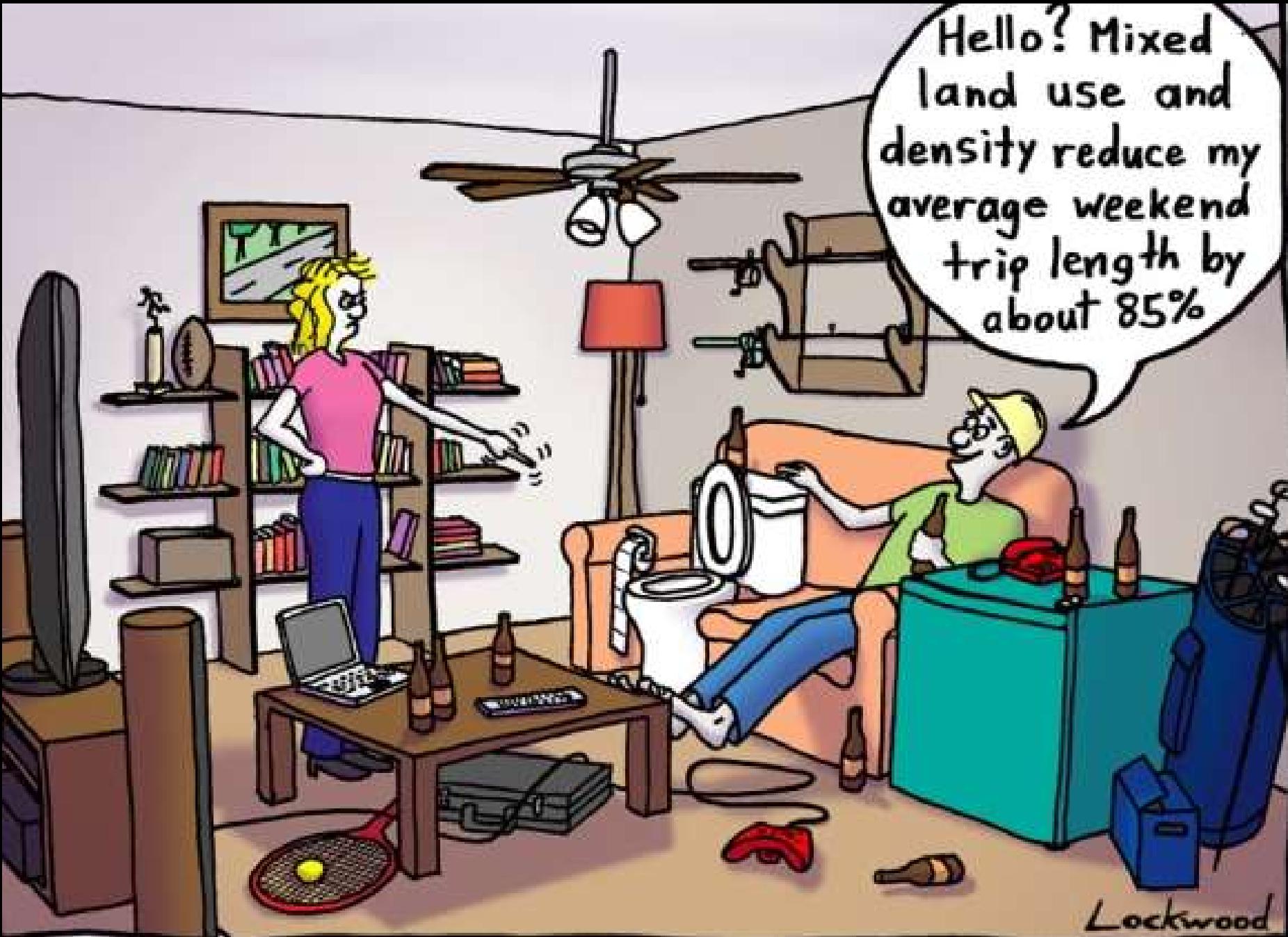
Many Populations: people who have disabilities, have different income levels, and/or are young, elderly, millennials, pedestrians, cyclists, transit users, students...

Mobility (now and in the future)

The populations' capabilities and strategies to move in order to access what they need to live within the city.

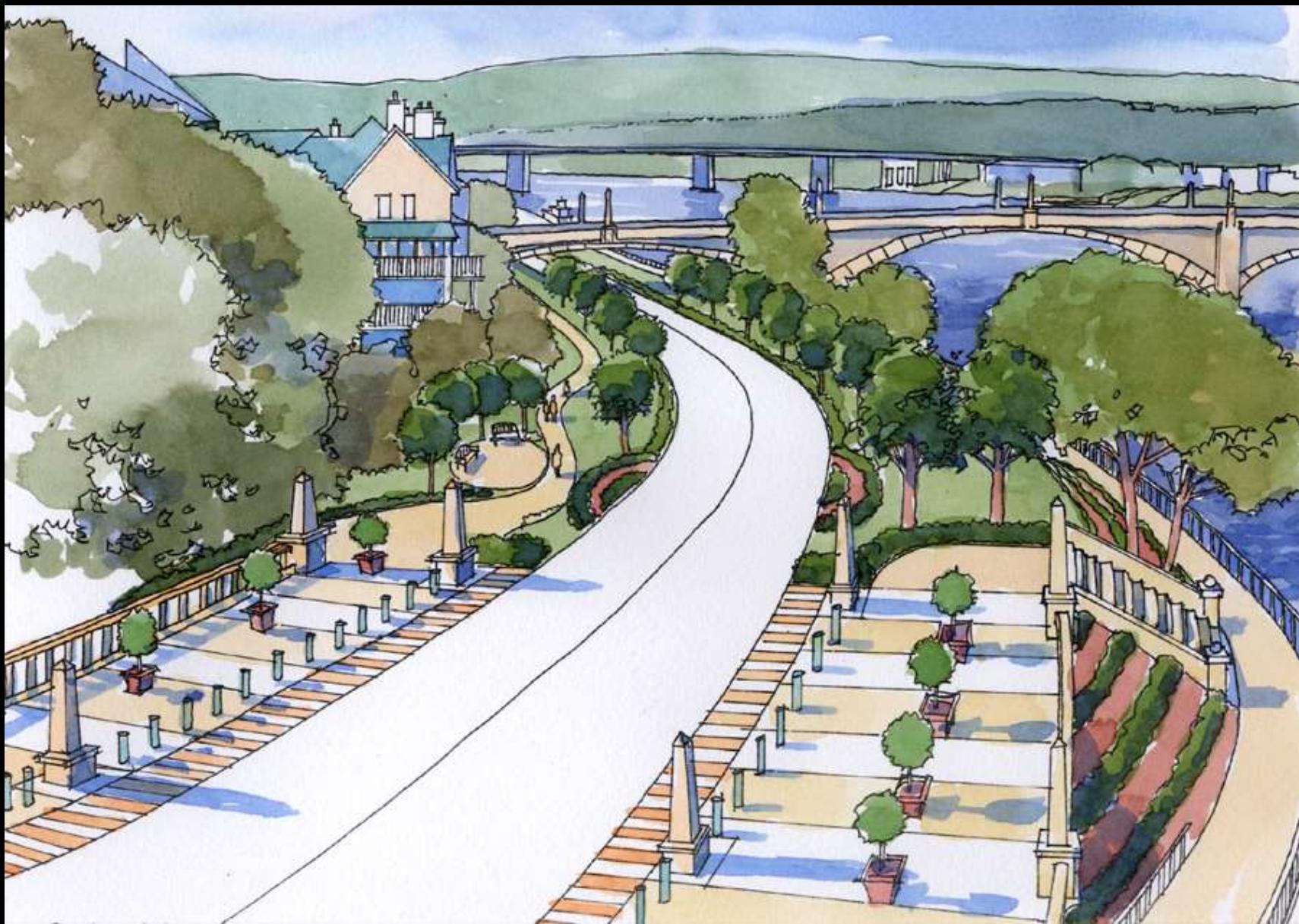
the movement is purposeful:

<u>Trip Type</u>	<u>%</u>
work	18.0
work-related	2.6
shopping	20.2
doctor/dentist	1.5
family/personal	24.2
church/school	8.8
social/recreational	24.5
other	0.2



Lockwood





With 2020 hindsight, you decide the truth:

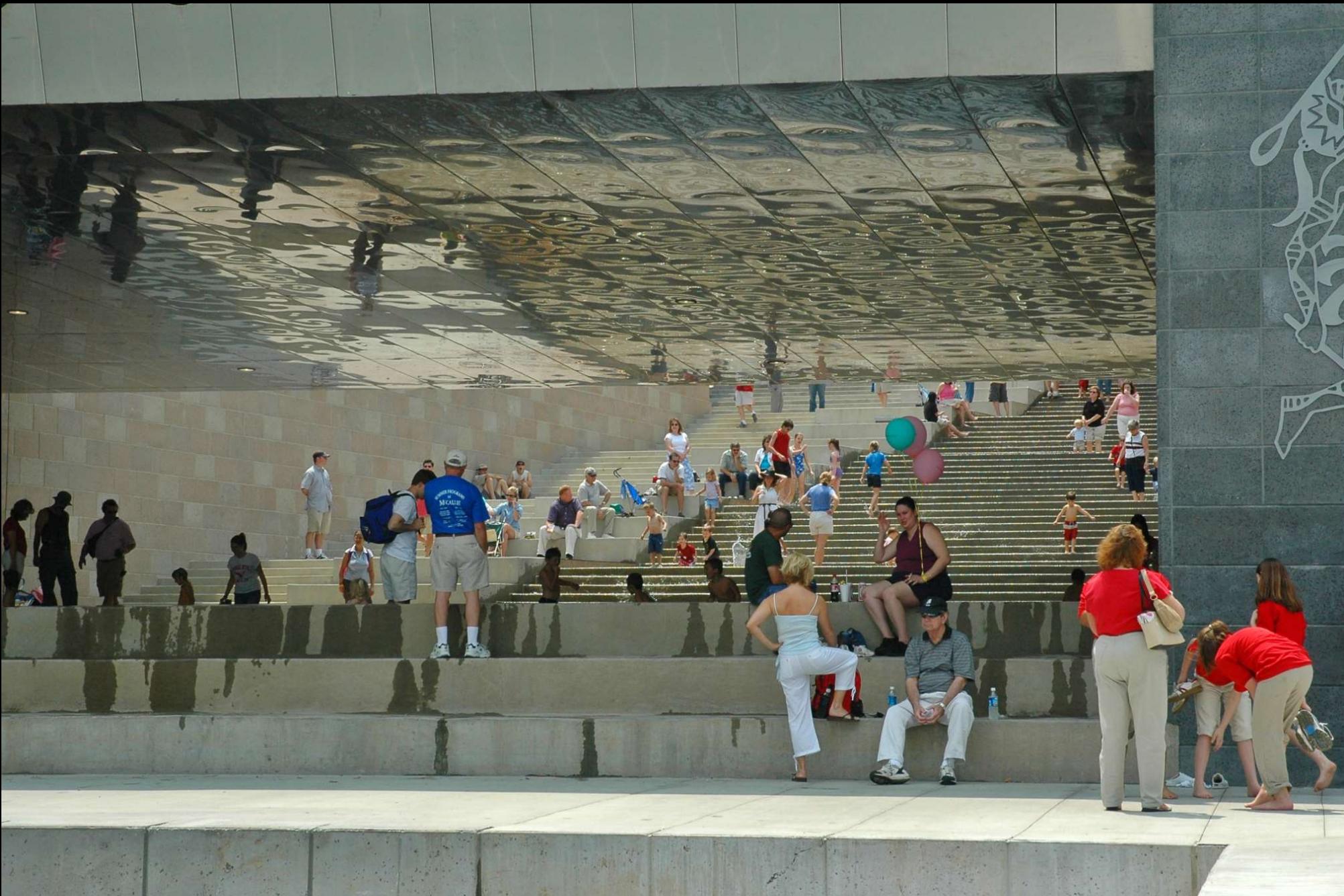
Option A: “*The City’s lifeblood is the highway. The mobility it provides is vital for economic health and the convenience of the motoring public. If anything, the highway should be expanded to fight congestion. Removing it is simply anti-progress.*”

Option B: “*Walkability and access to the waterfront, parks, trails, and other places in the downtown is key to the economic and social health of the City. The highway has contributed to the woes of the City and needs to be replaced with something that contributes to an urban context.*”















AEROPLANE VIEW OF BUSINESS DISTRICT, SOUTH BEND, IND.

Postcard
City View





ANADA

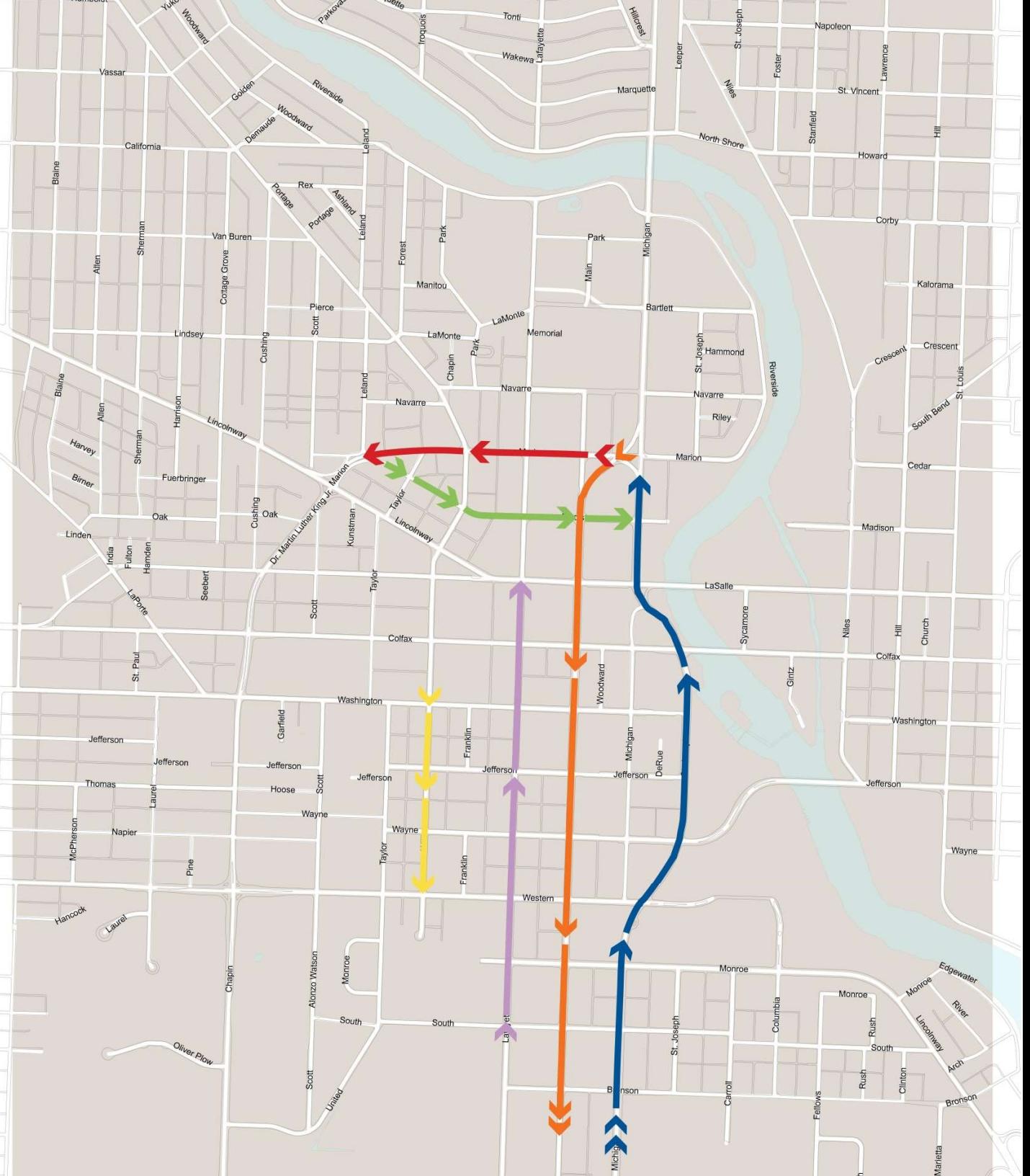
A FILM BY
WORLD PREMIERE
KNUTE ROCKNE - ALL AMERICAN

I AMERICAN



Developer Coordination Stakeholders Competing Priorities







Ave
200 W

LaSalle
Ave
200 W

20
EAST
JMS
BUILDING

IVY TECH
COLLEGE

933
SOUTH
31
SOUTH

COLLEGE

South Bend Water Works

Holiday
Inn











“...the possible benefits of required seat belts would not justify the costs to the manufacturers and the public.”



“...the possible benefits of required seat belts would not justify the costs to the manufacturers and the public.”

National Highway Traffic Safety Administration, 1970

Environmental Assessments

Air quality

Water

Noise

Land use

...

Traffic → L.O.S.

Environmental Assessments

Air quality

Water

Noise

Land use

...

Traffic → L.O.S.

L.O.S.

- **Last-in problem**
- **Infill vs green-field**
- **Obstacle to transit & active transport**
- **Induced car travel, longer trips...**
- **Resources (land, energy, money...)**

Environmental Assessments

Air quality

Water

Noise

Land use

...

Traffic → L.O.S. → V.M.T.

L.O.S.

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Environmental Assessments

Air quality

Water

Noise

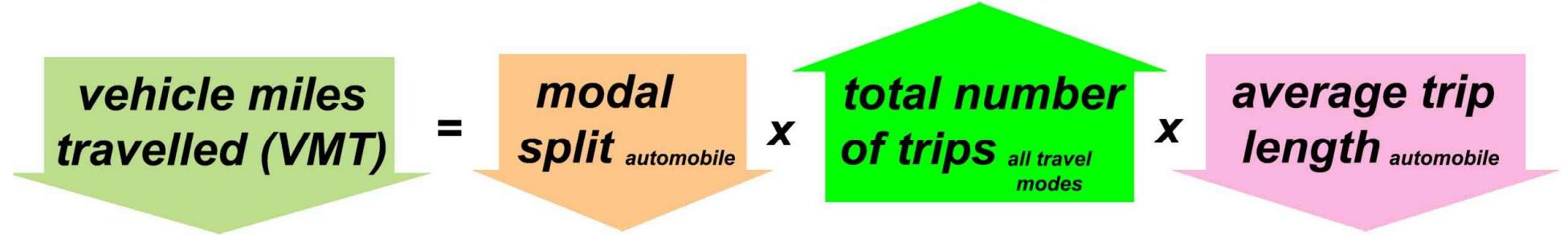
Land use

...

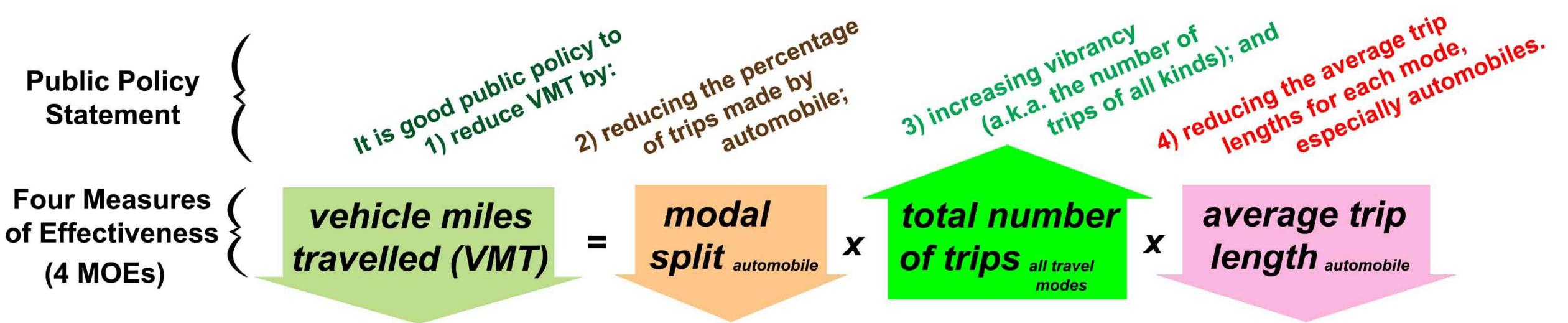
Traffic → L.O.s. → V.M.T.

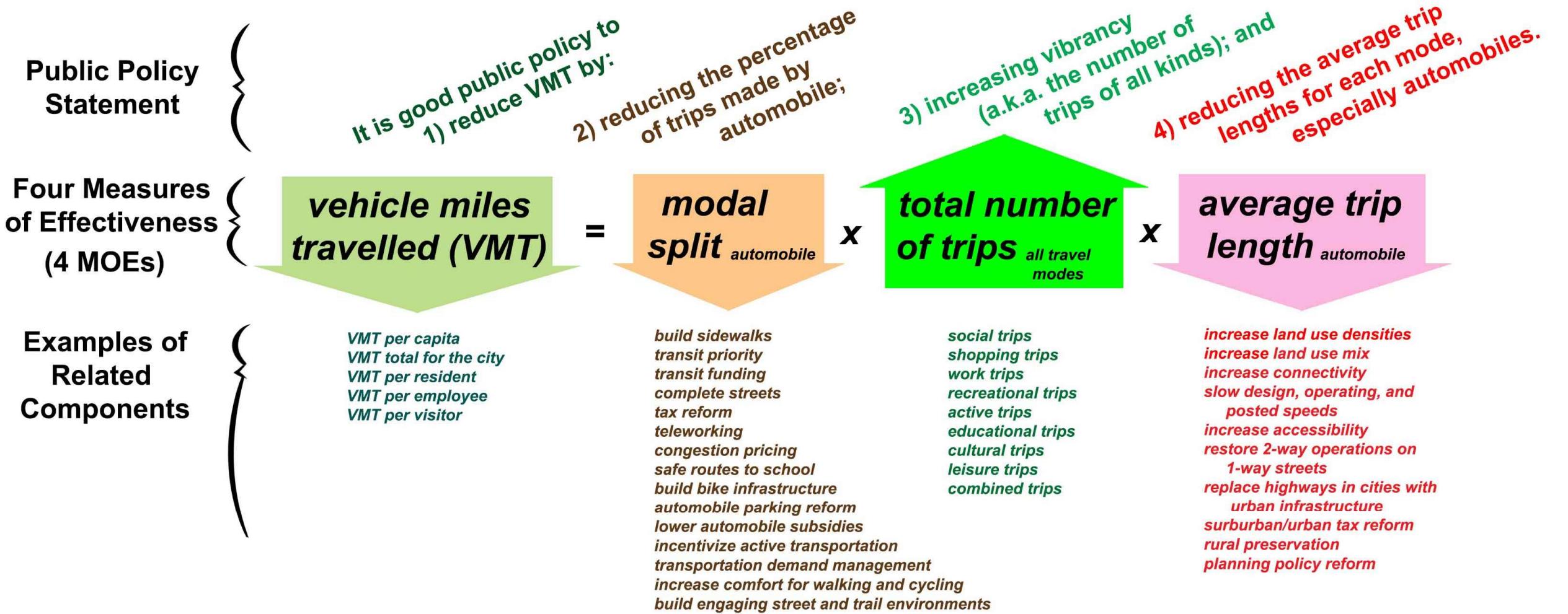
V.M.T.

- VMT total
- VMT/capita
- VMT/resident
- VMT/employee
- Resources (land, energy, money...)









The New York Times



Grand Makeover Is Set for Maryland Strip City

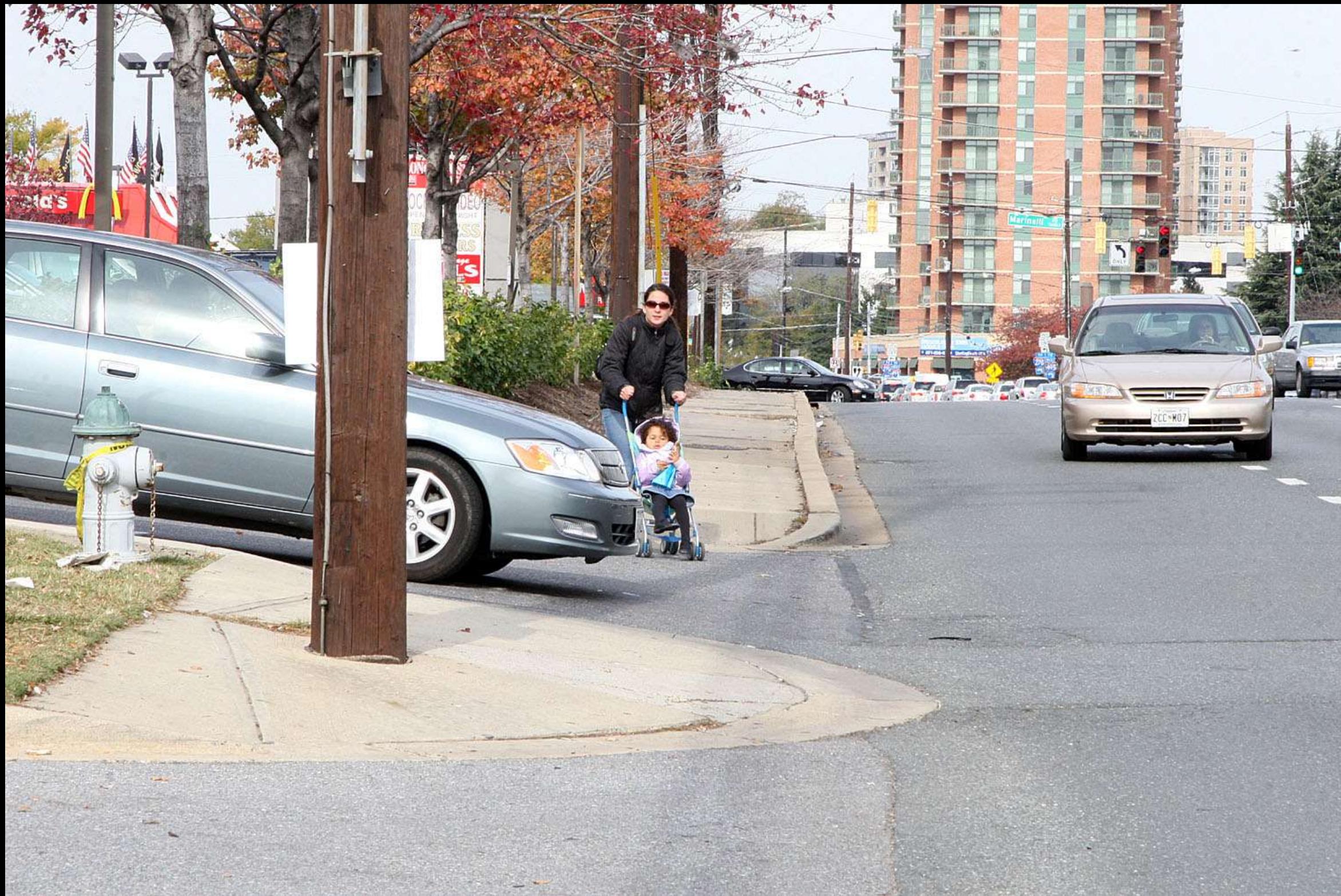
by EUGENE L. MEYER

Rockville Pike, heading north.



Above, a rendering of the White Flint plan, which seeks to create a walkable community.

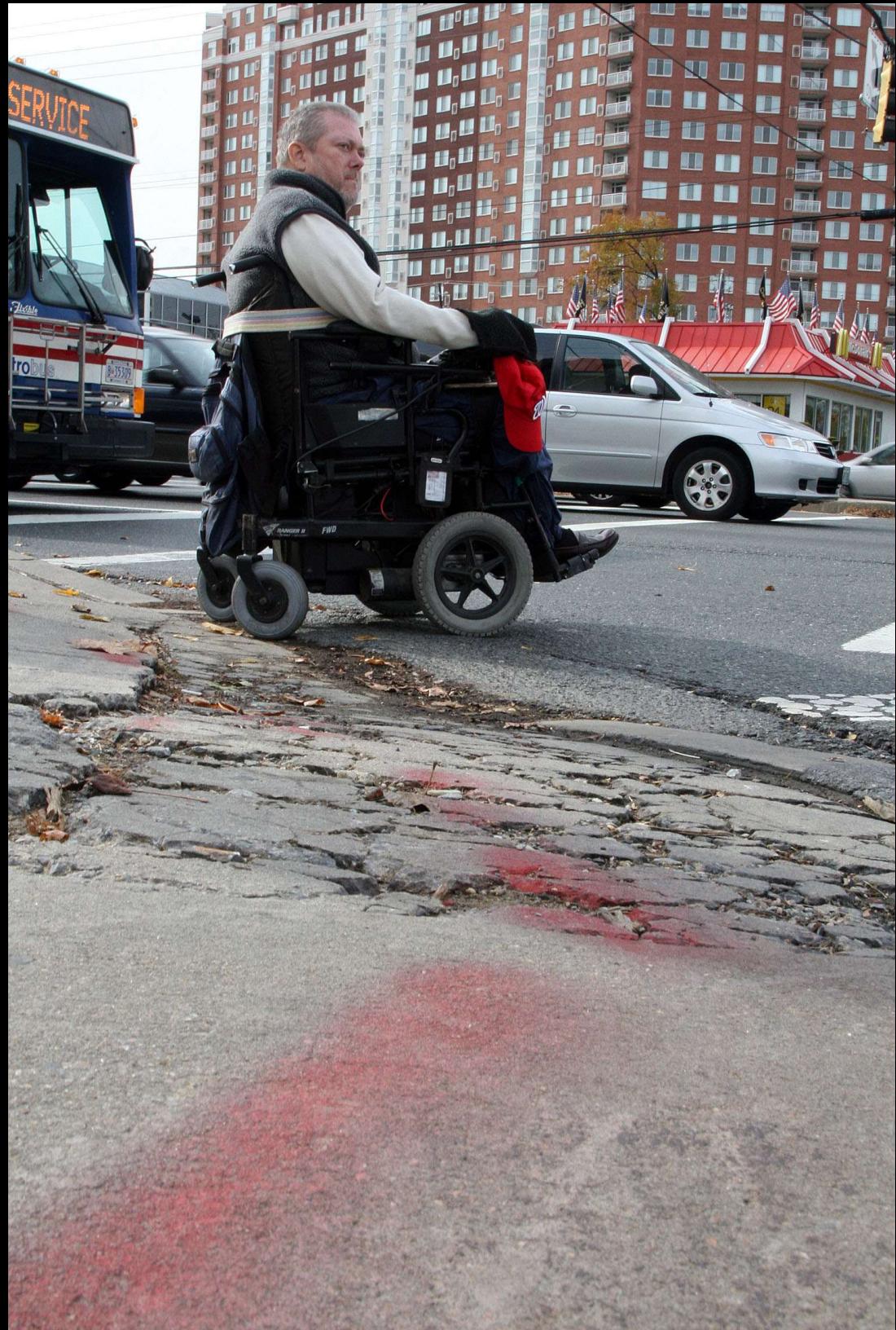


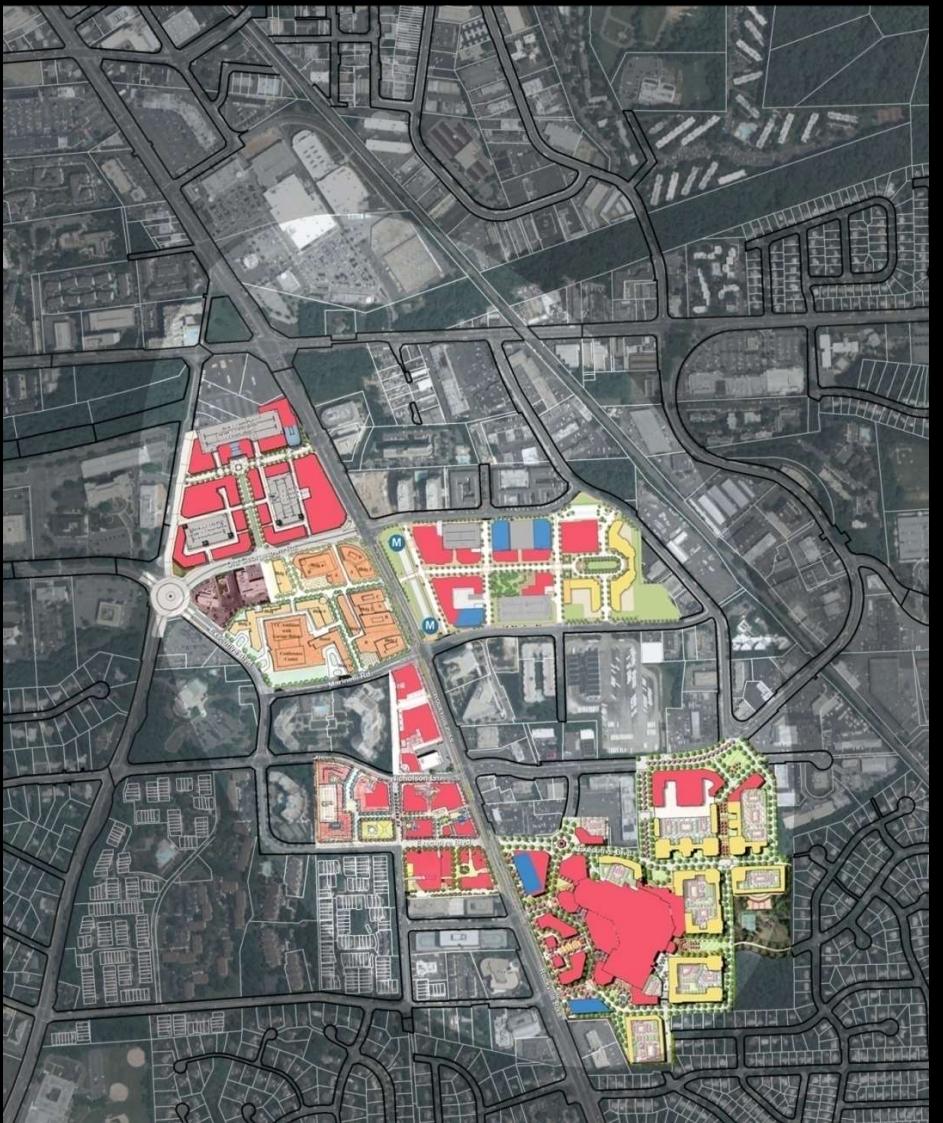


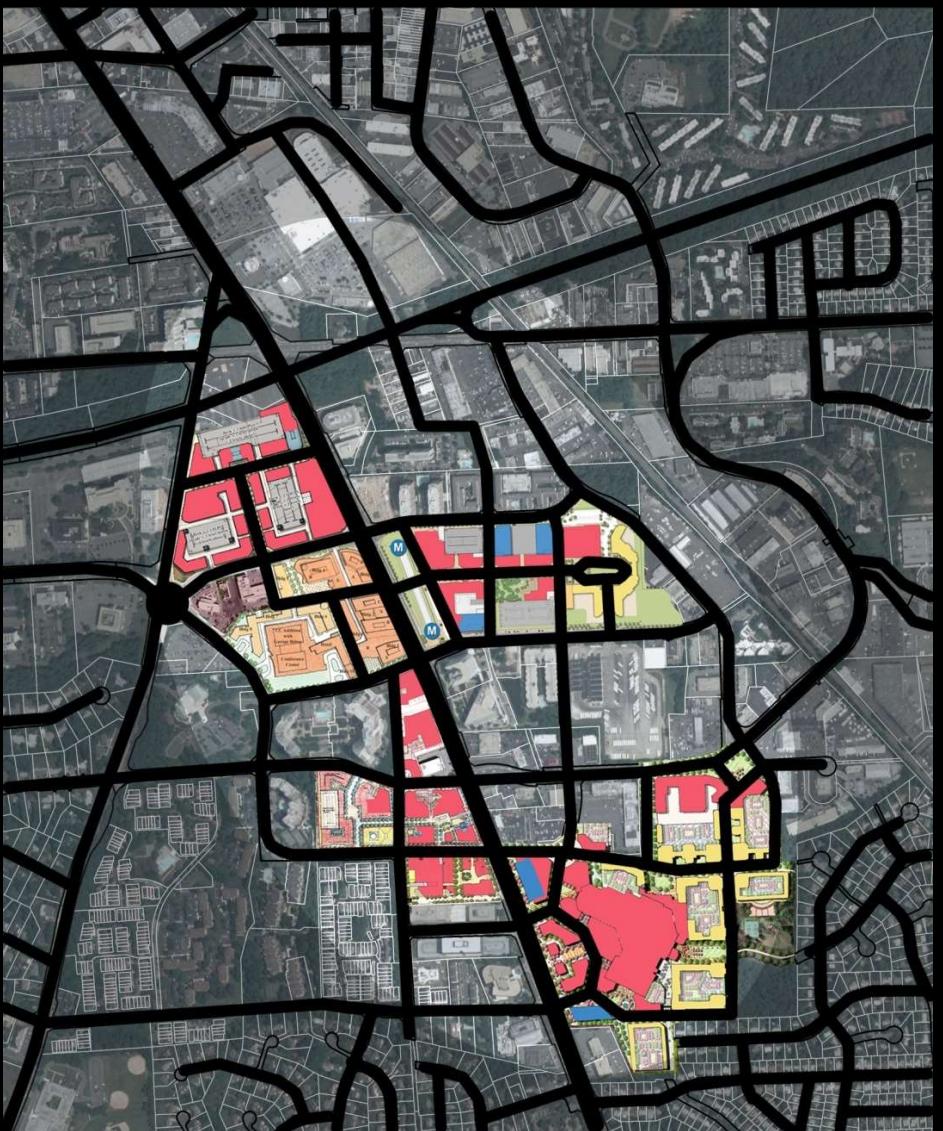


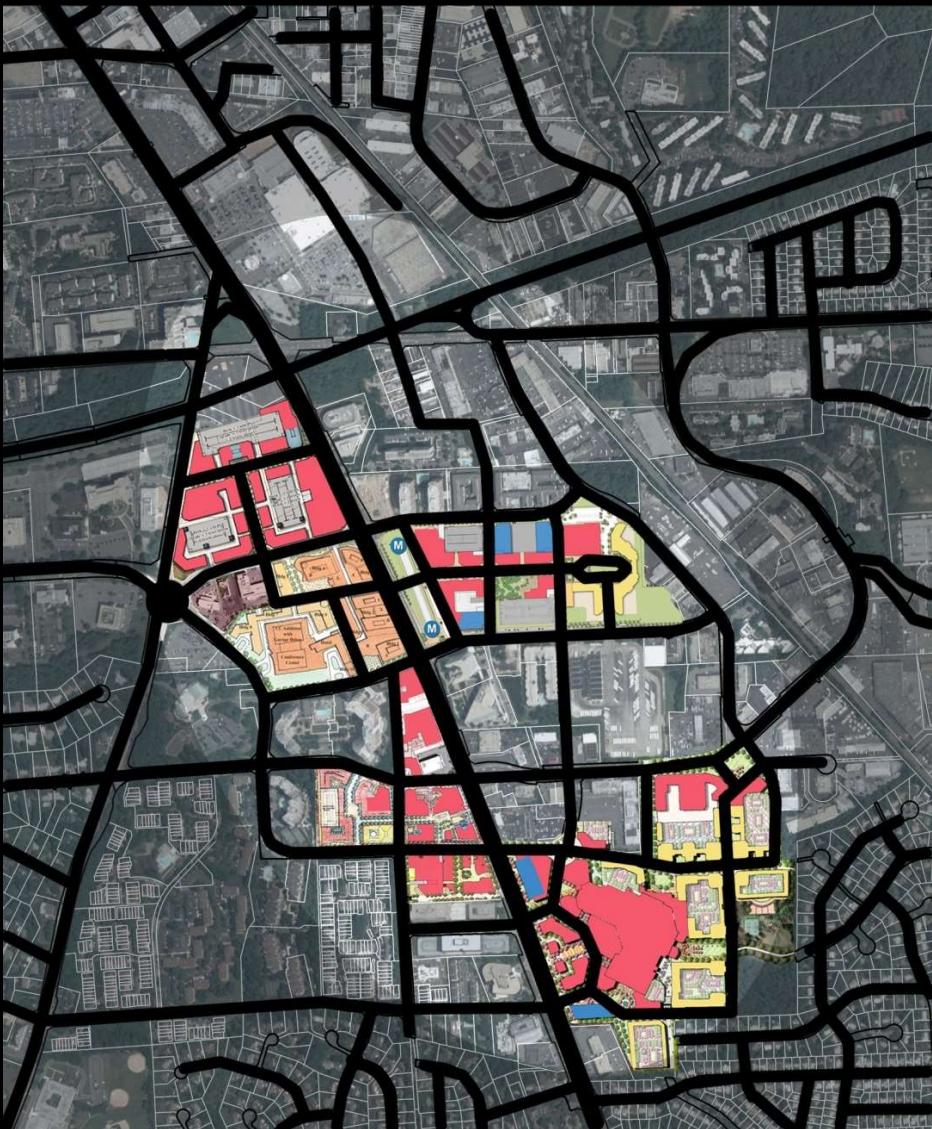
















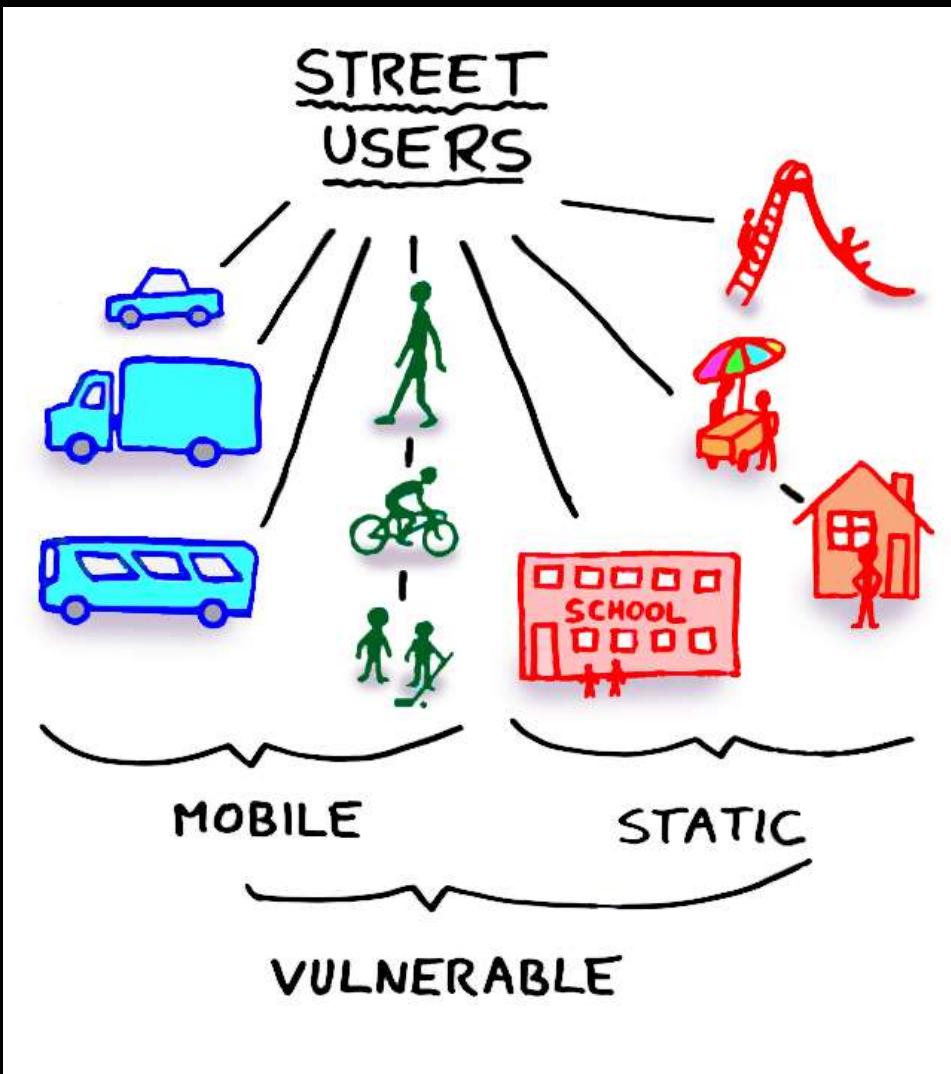






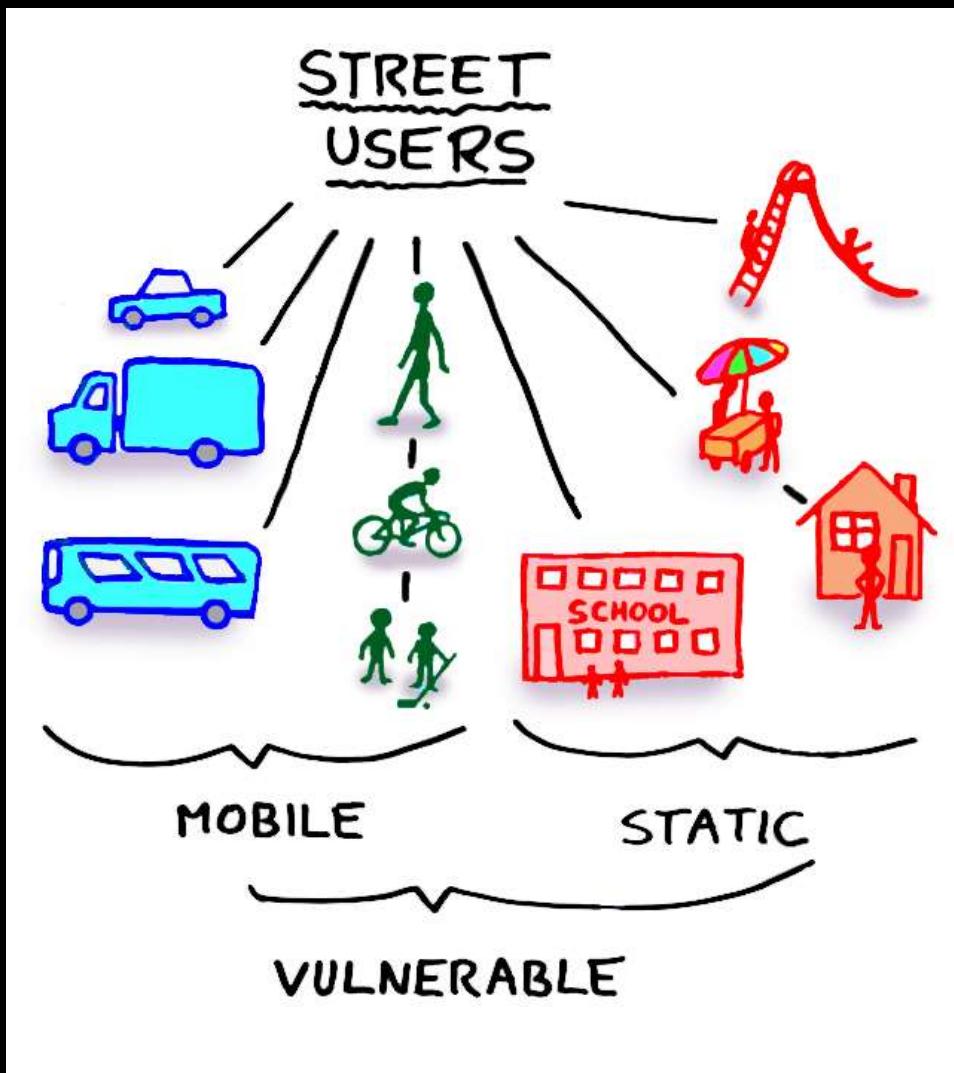






Suggestions:

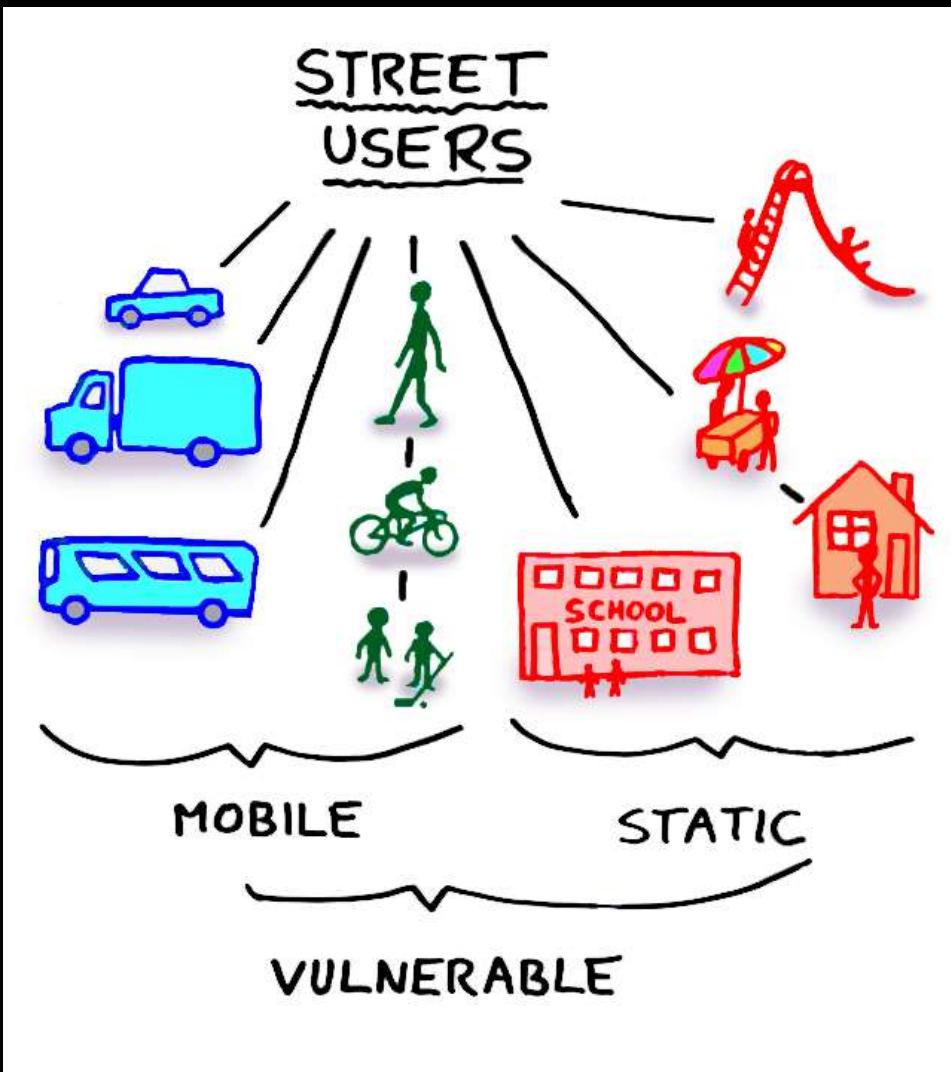
Be empathetic in your arterial designs.



Suggestions:

Be empathetic in your arterial designs.

Switch from LOS to VMT for planning purposes.

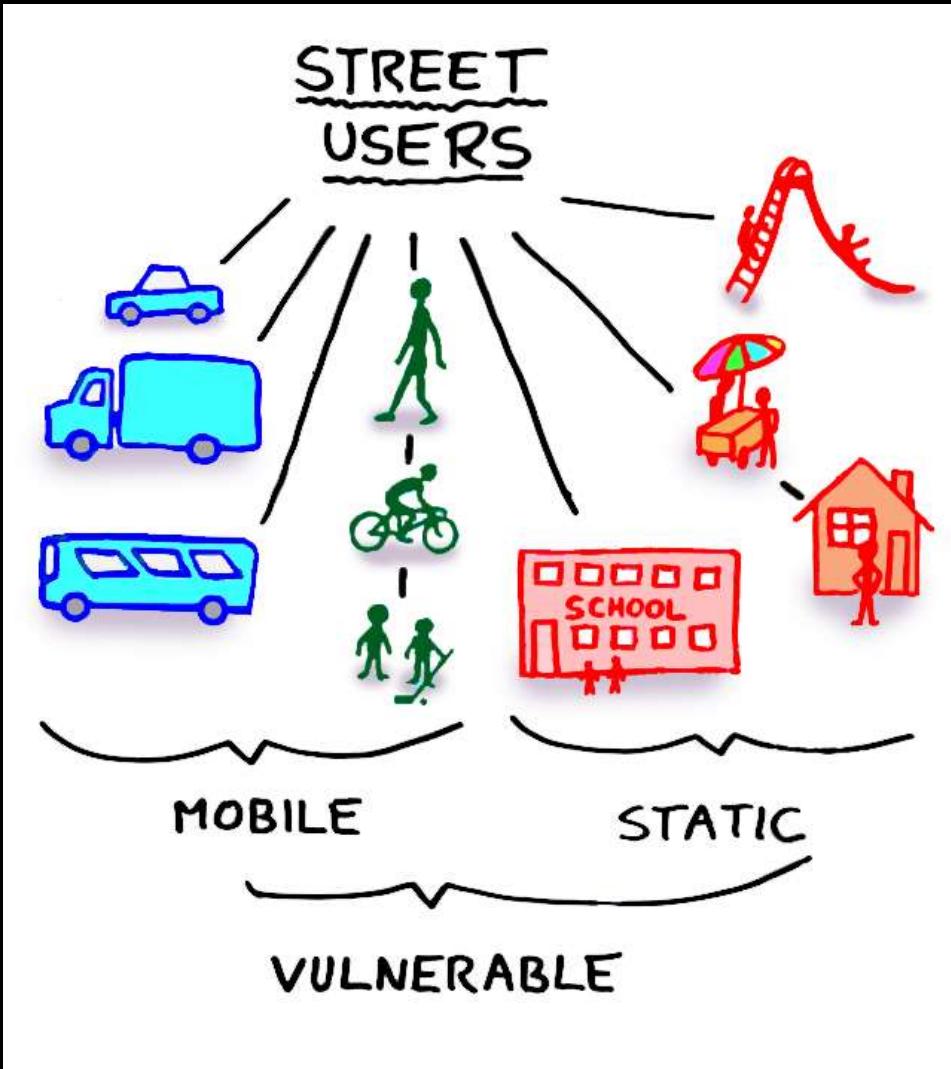


Suggestions:

Be empathetic in your arterial designs.

Switch from LOS to VMT for planning purposes.

Stop rewarding the problem.



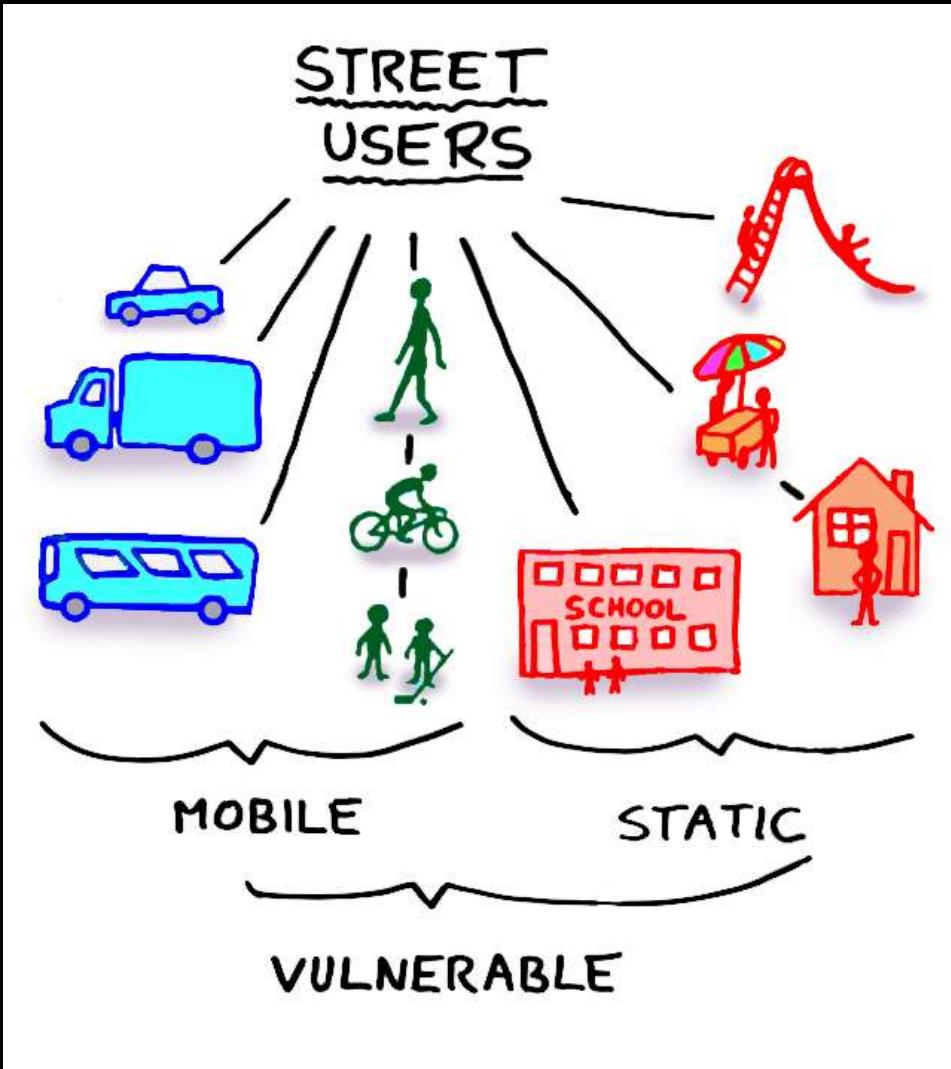
Suggestions:

Be empathetic in your arterial designs.

Switch from LOS to VMT for planning purposes.

Stop rewarding the problem.

Embrace traditional values and ween off of conventional values.



Suggestions:

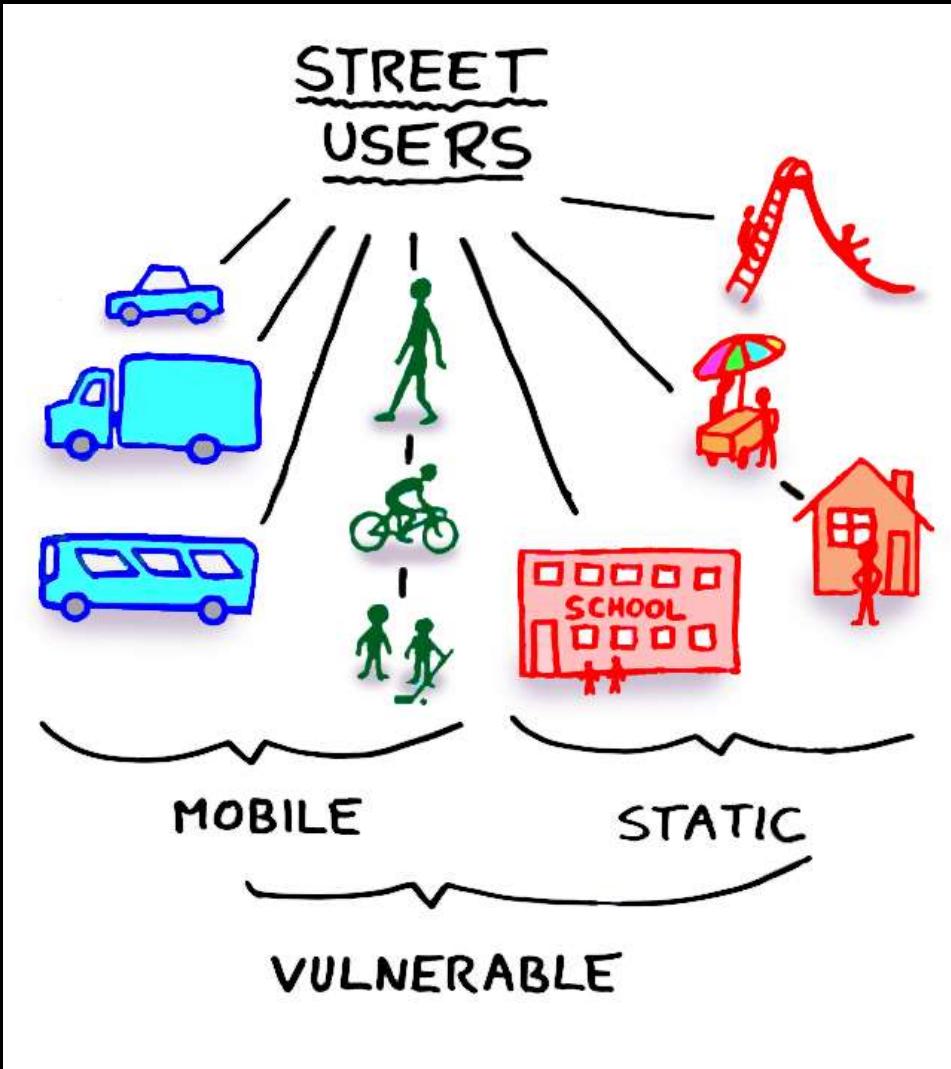
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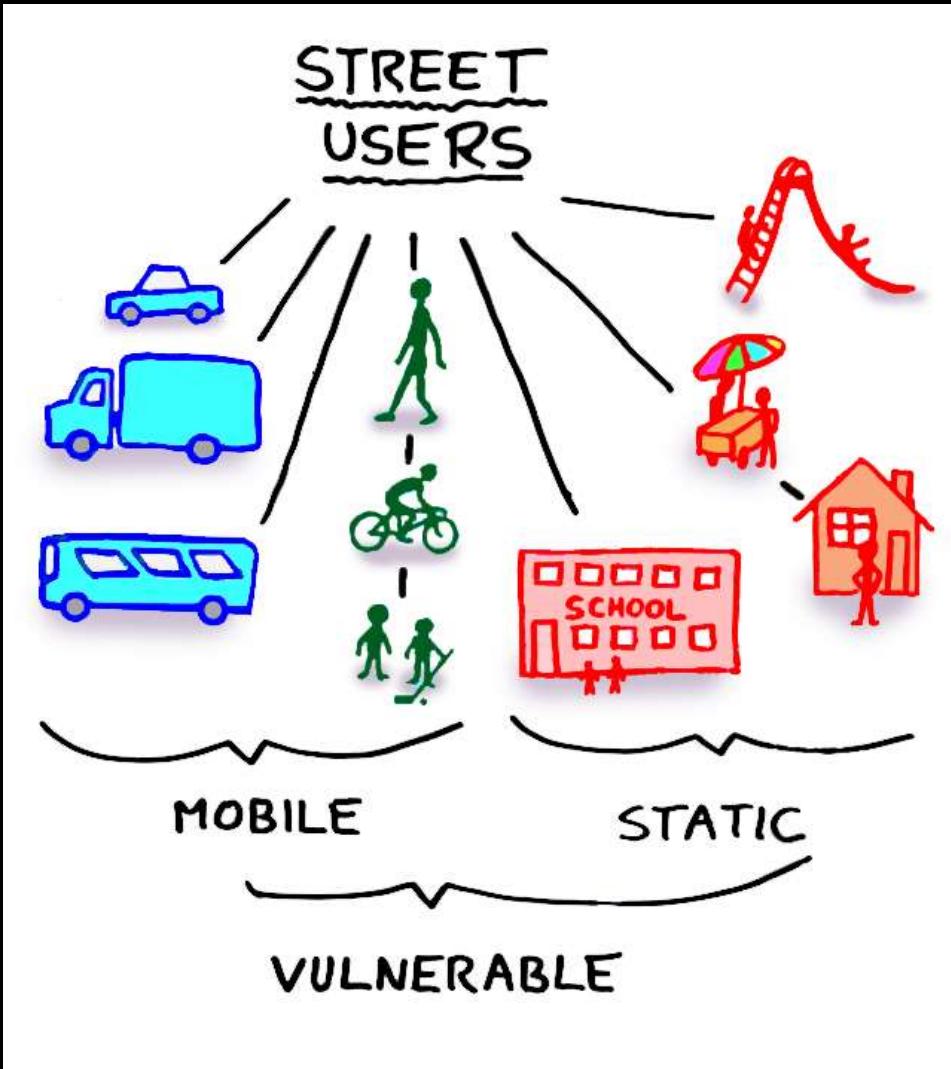
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Know that you are on the right side of history.



Thank You

TOOLE
DESIGN

 @IanLockwoodPE