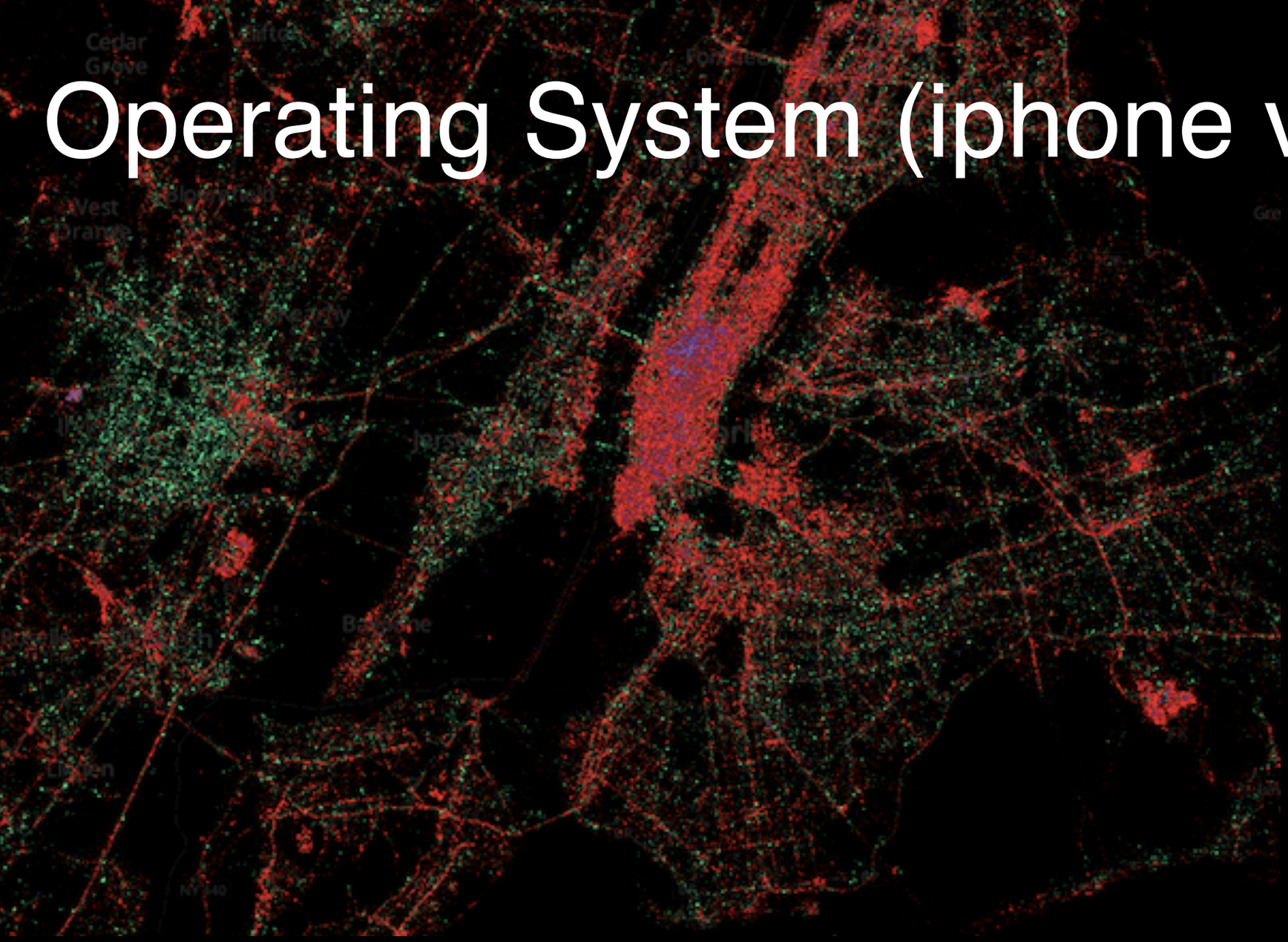
Zukunft Mobilität: kompliziert einfach

Investieren Sie in ein Luxushotel am Gürtel

Katja Schechtner, MIT Senseable City & OECD

Operating System (iphone vs Android)

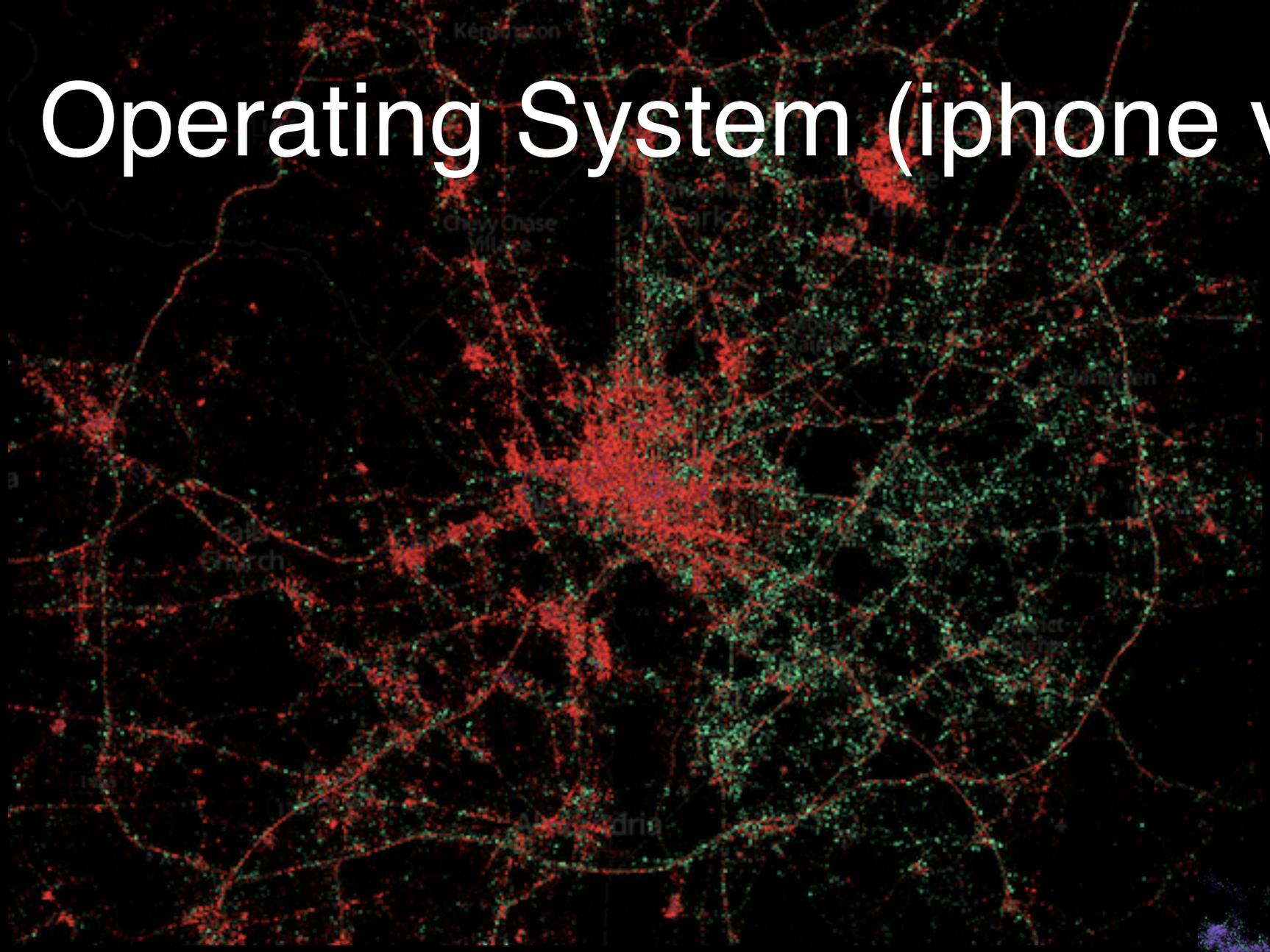


New York City

Red i-phone, Green Android, Purple Blackberry

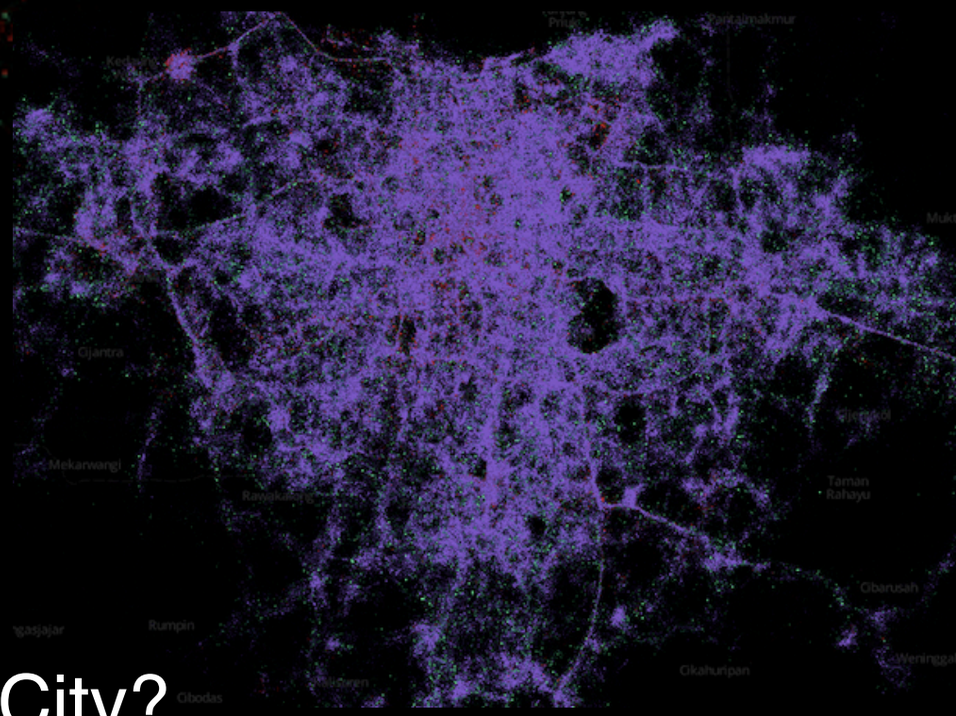
Eric Fisher, Mobile phone use associated with socio-economic status and spatial distribution, 2015

Operating System (iphone vs Android)



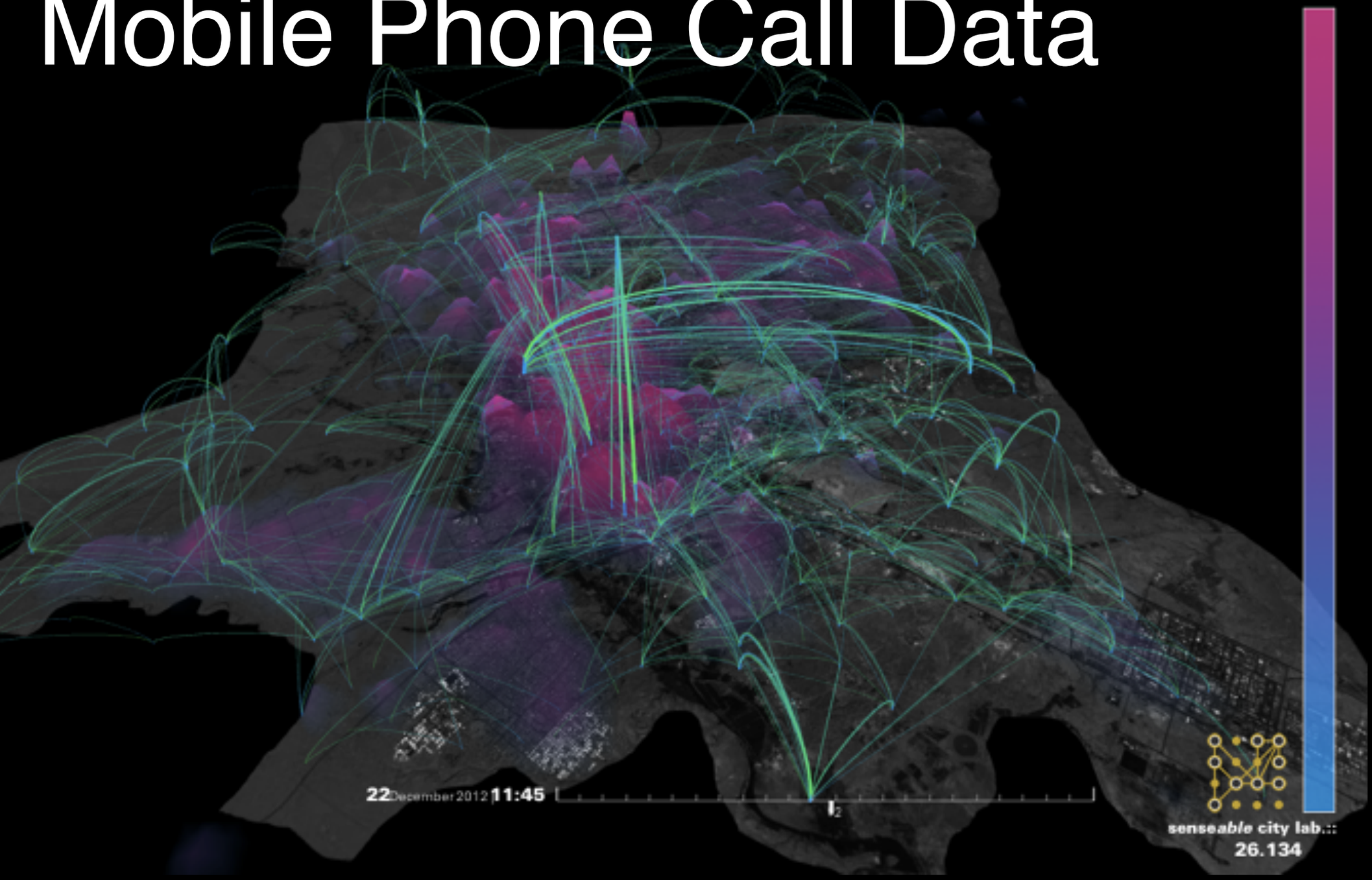
Washington

Eric Fisher, Mobile phone use associated with socio-economic status and spatial distribution, 2015



City?

Mobile Phone Call Data

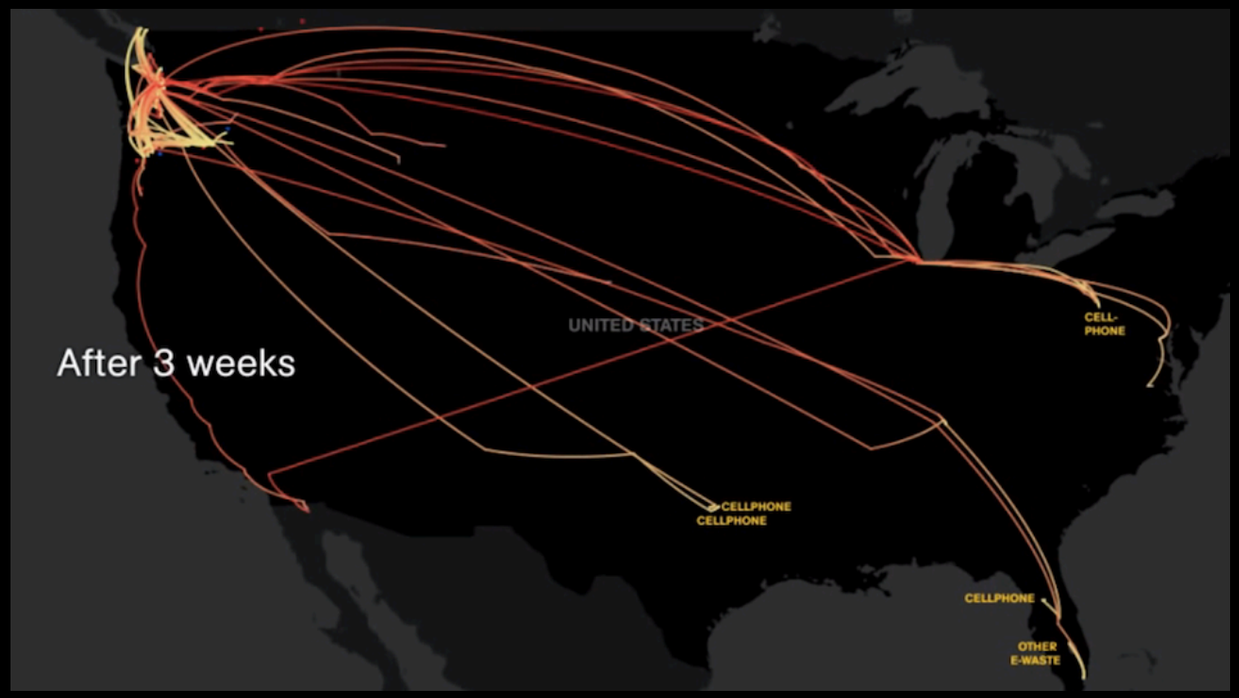


Kael Greco, OD Riyadh, Senseable City Lab & Center for Complex Engineering Systems at MIT, 2015

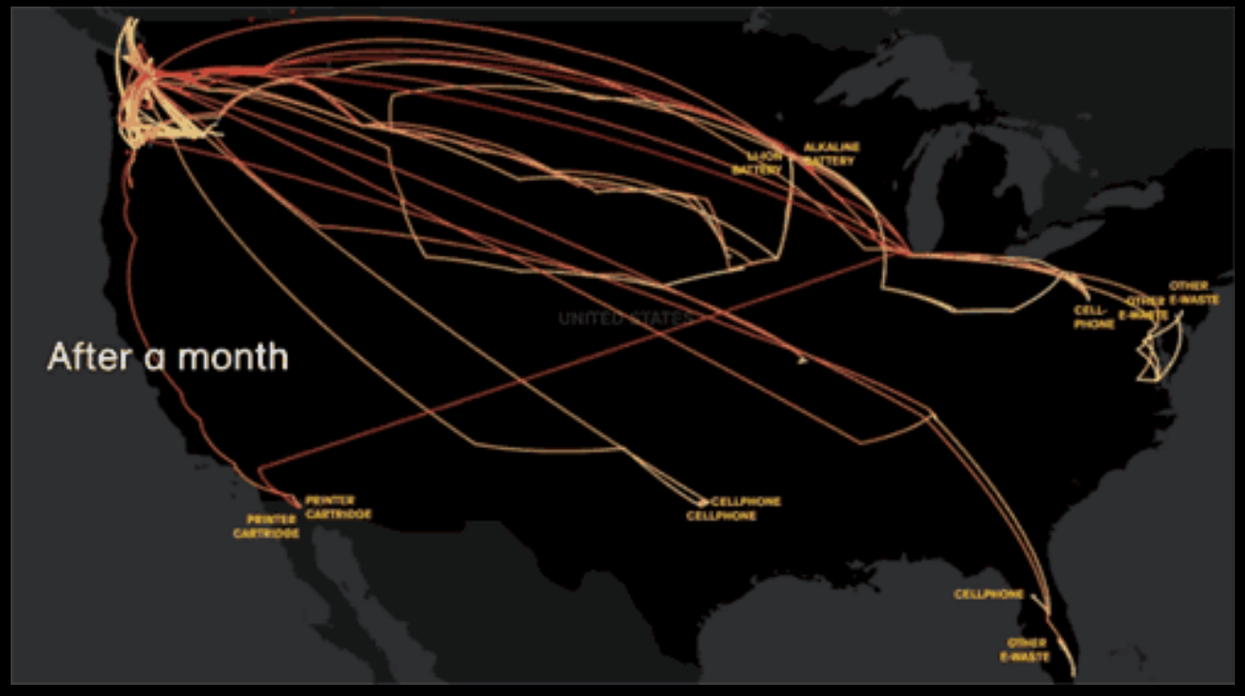
GPS Data
Vienna Taxis

24h

Mahir Yavuz, AIT, 2011

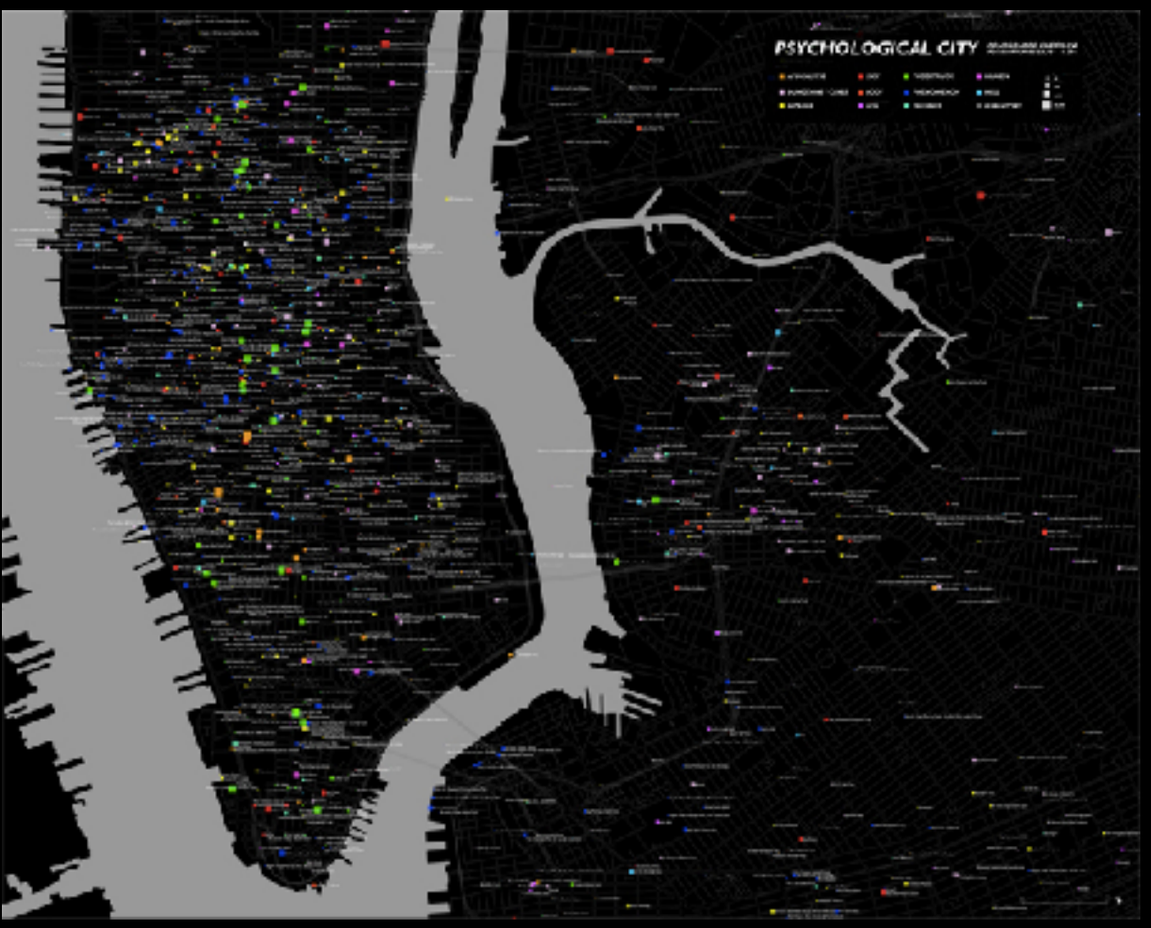


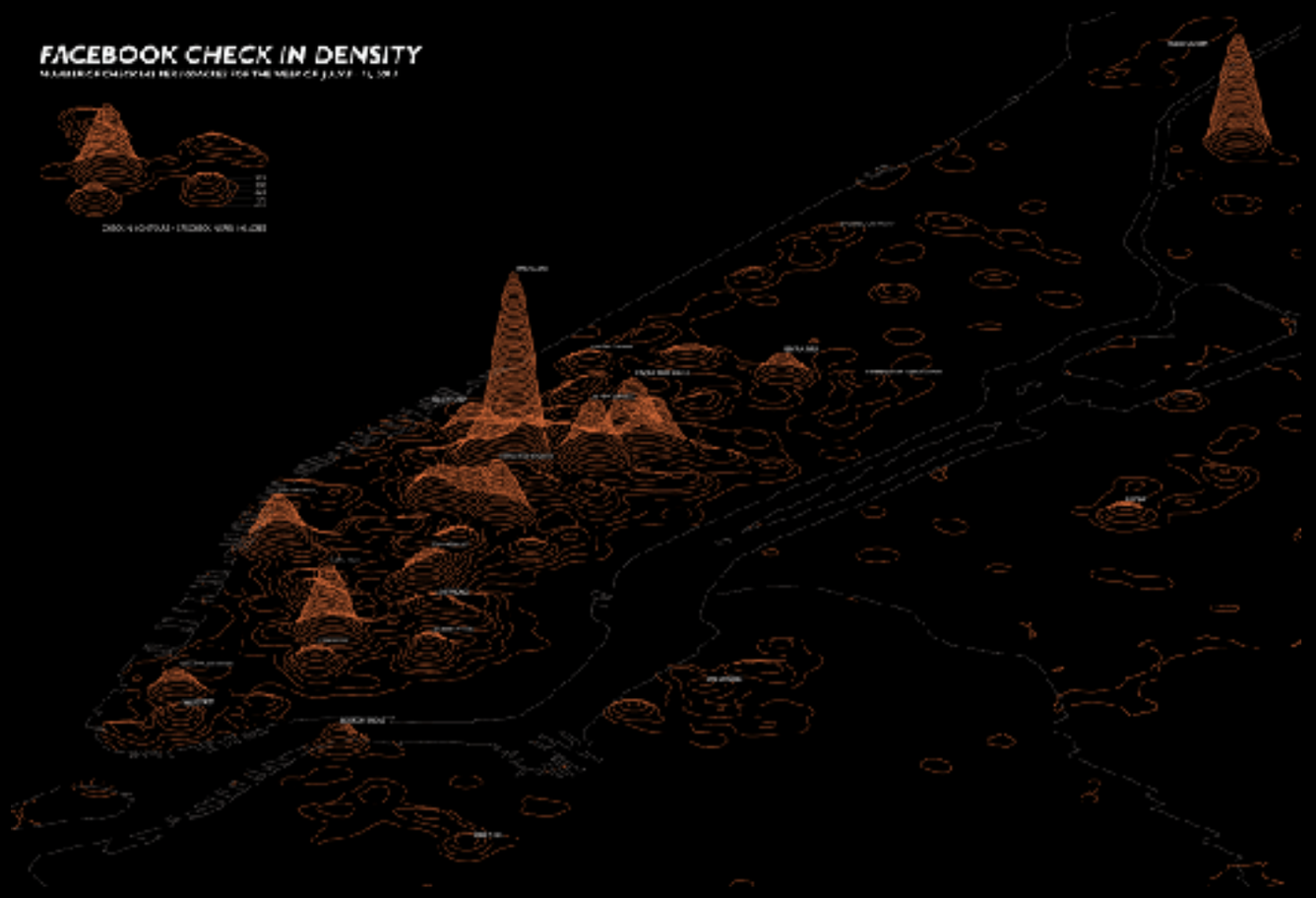
Trash Trips from Seattle



Trash Track, Dietmar Offenhuber, Senseable City Lab, 2011

Facebook and Foursquare Data

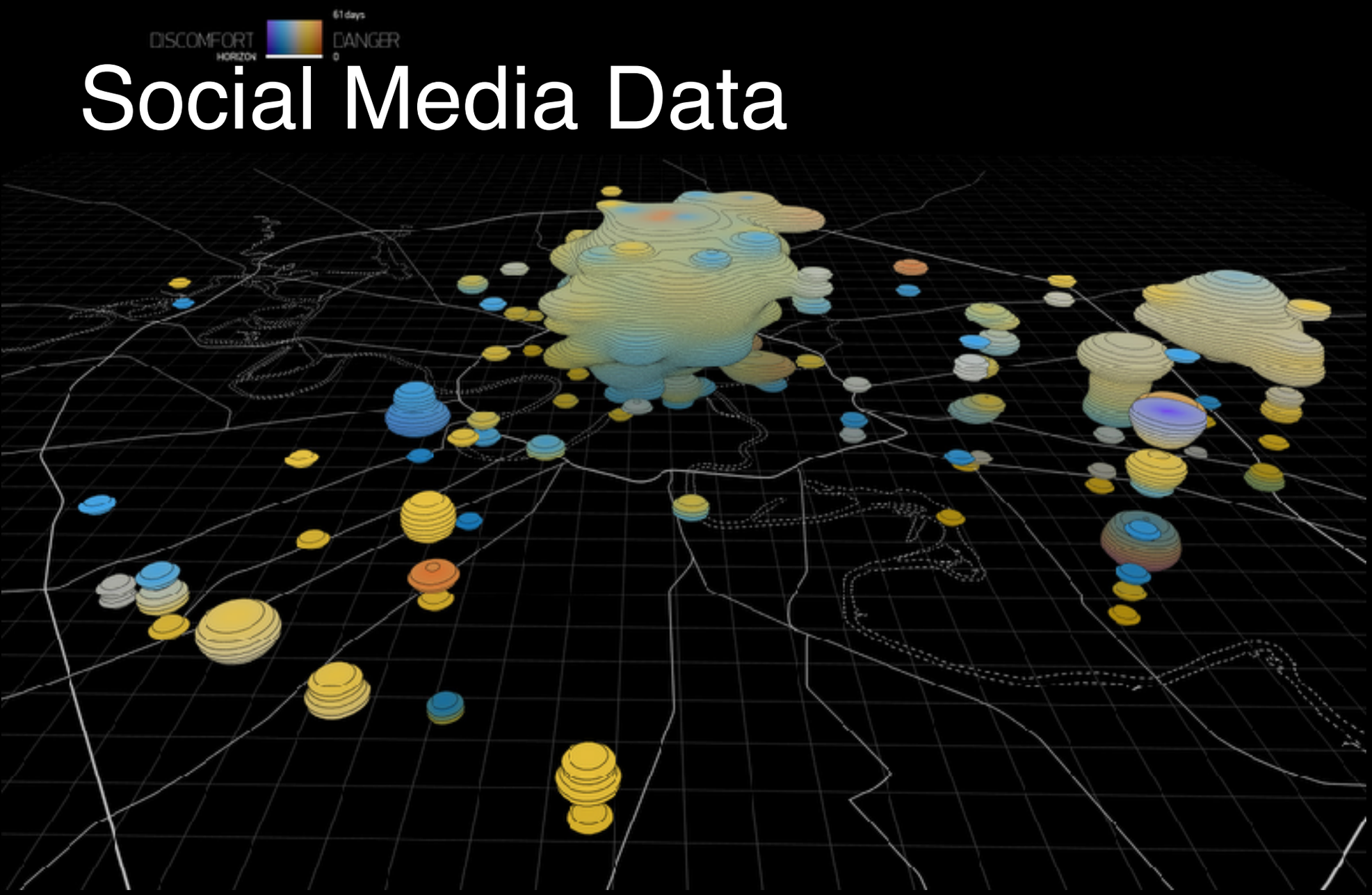




A psychological map of the city, because the data reveals, where social media users are going through an emotional crises, experiencing their own personal heaven or hell.

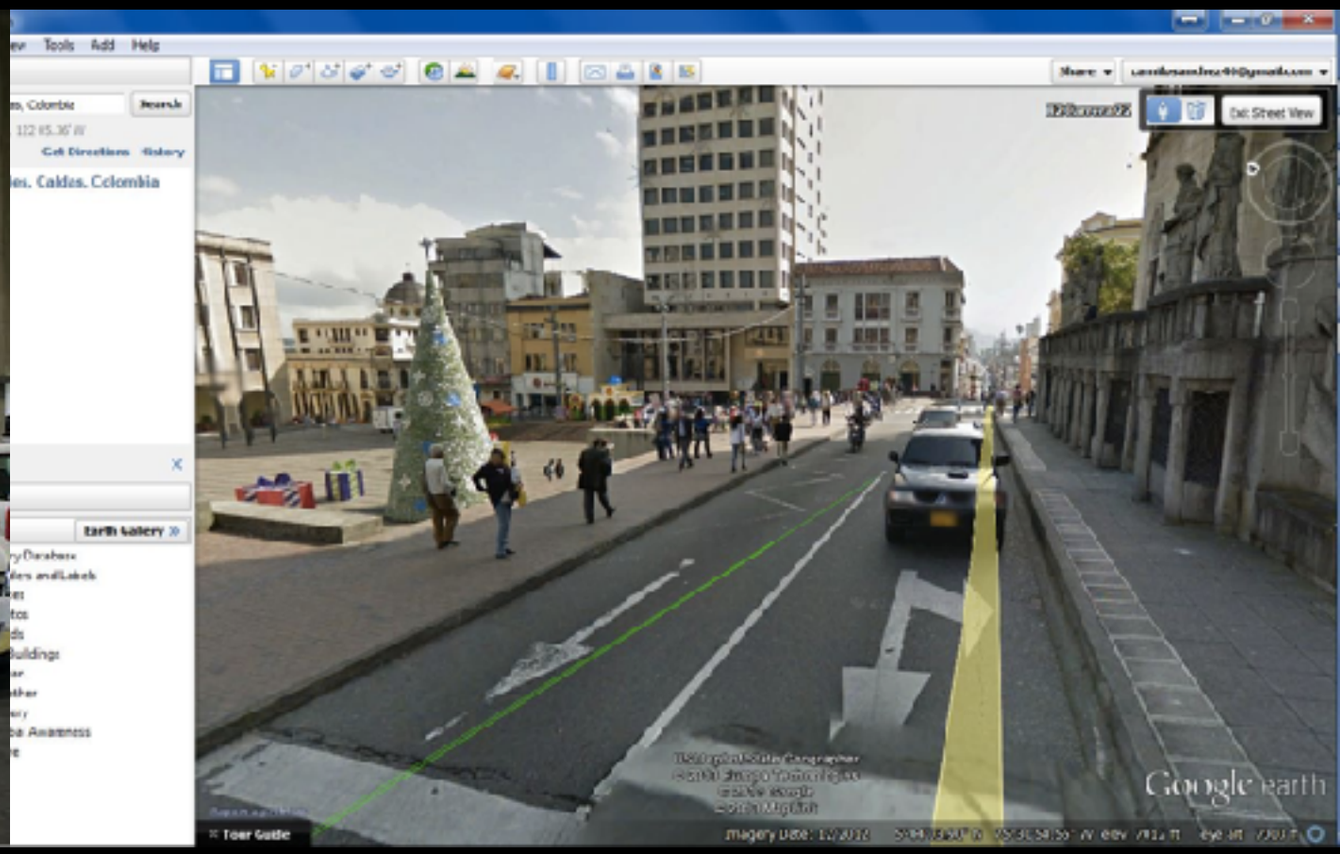
NYC, Psychologial City, Sarah Williams, 2012

Social Media Data



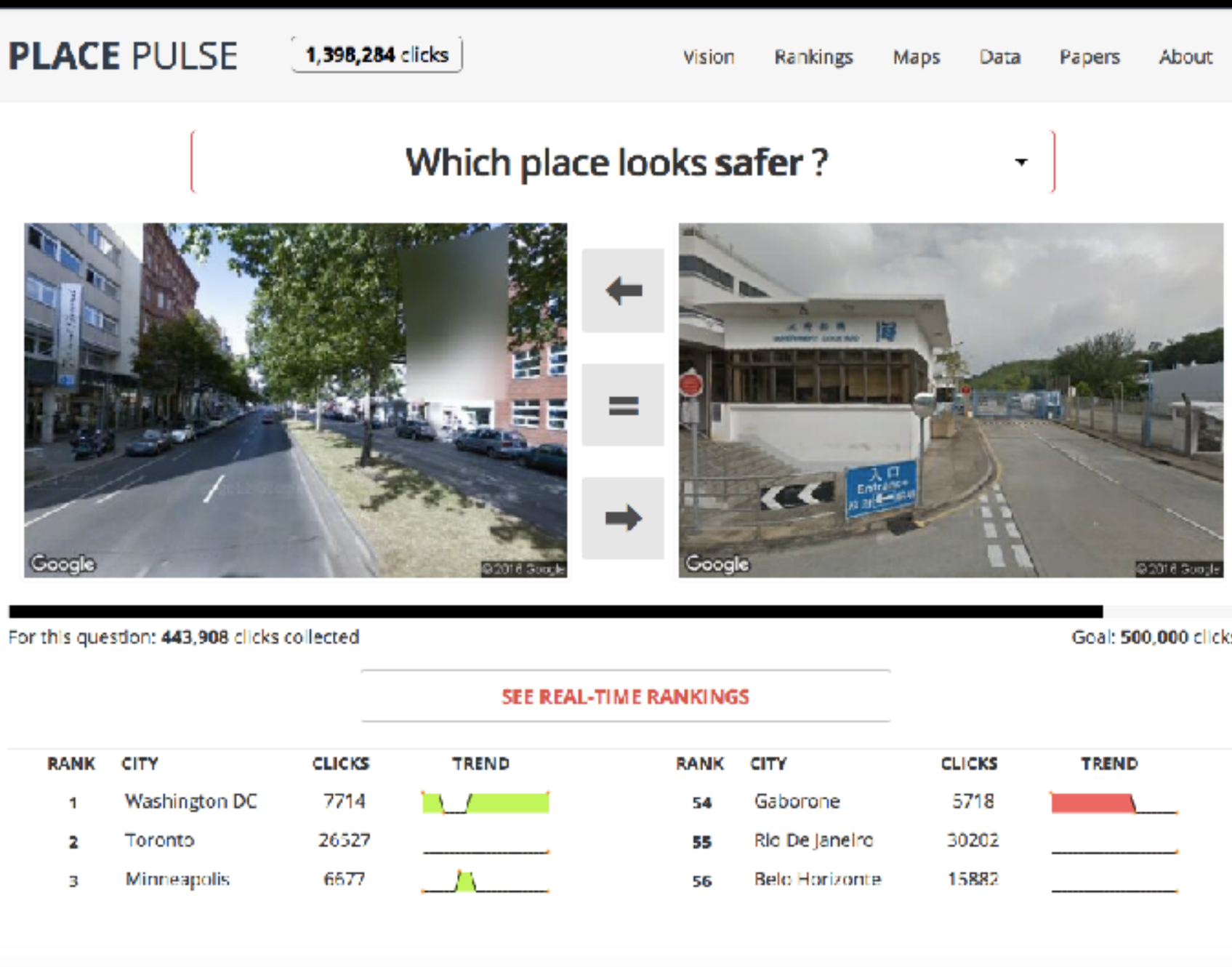
Habidatum, Moscow Mapping Security Perception by Analyzing place-related emotions based on Twitter Data, 2013

Google Street View Data - every picture!



Place Pulse, Phil Salesses, Cesar Hidalgo, Katja Schechtner 2014

Google Street - View Crowd Sourced Perception



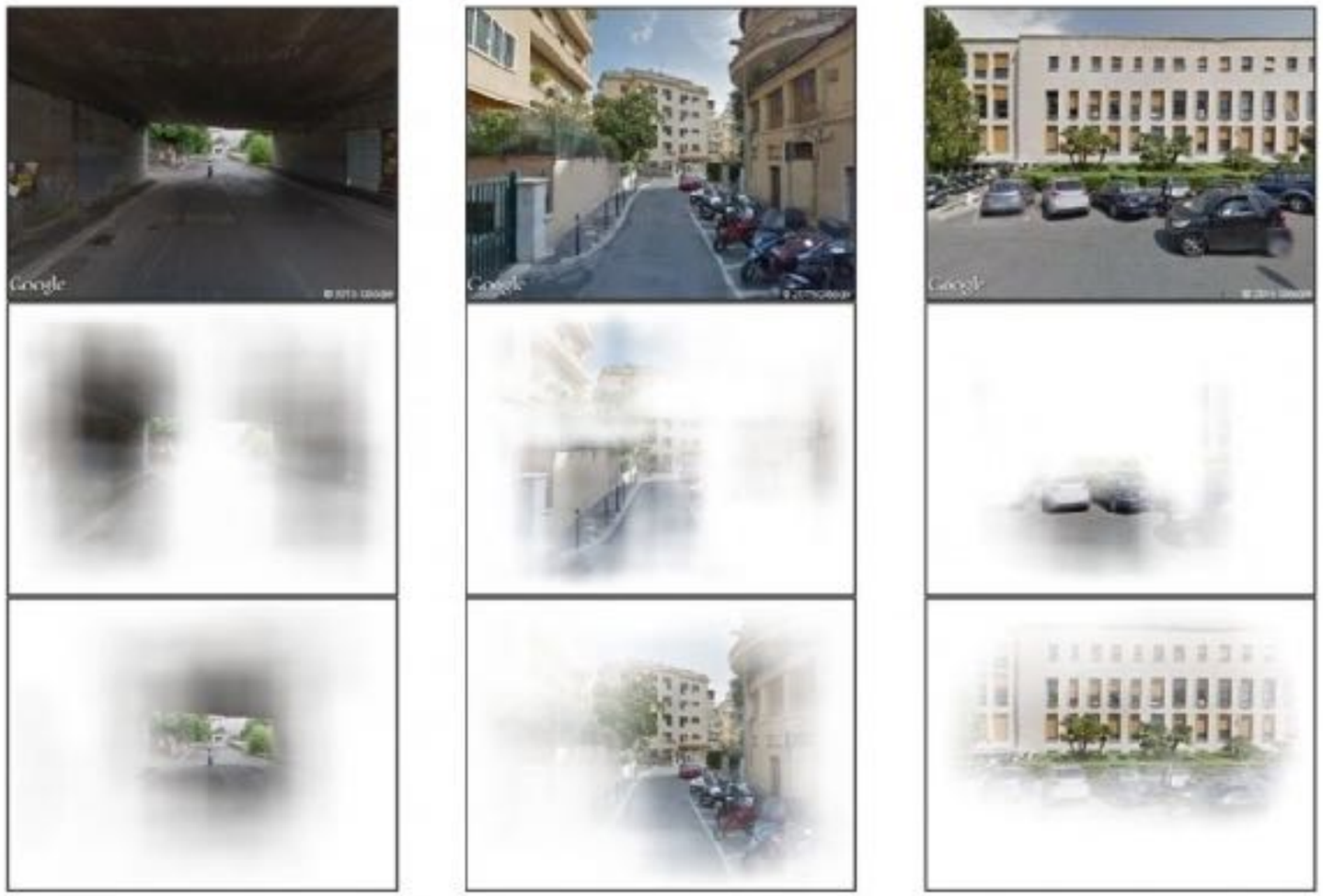
Place Pulse, Phil Salesses, Cesar Hidalgo, Katja Schechtner 2014

Humans voted. We analyzed the voting data, and mapped it.

And then we compared it to crime data & sexually transmitted diseases - and it matched.

So humans can read the aesthetics of a city and perceive it as safer than other areas, just based on looking at an image.

But of course, even though our algorithm is clever, we can not let the humans vote on every image.



So we trained a computer to understand what humans vote as safe vs. unsafe. (e.g. amount of green vs. grey pixels (trees vs. roads) in the pic. Amount of buildings shapes vs car shapes vs human shapes).
And then we let the computer rate all the pics on Streetview and map it.

Now the computer can replicate what humans feel about the aesthetics of a city.

Place Pulse and ff, Nikil Naik and Phil Salesses, Cesar Hidalgo, Katja Schechtner 2014 ff

acceleration

convergence

mobility in the city

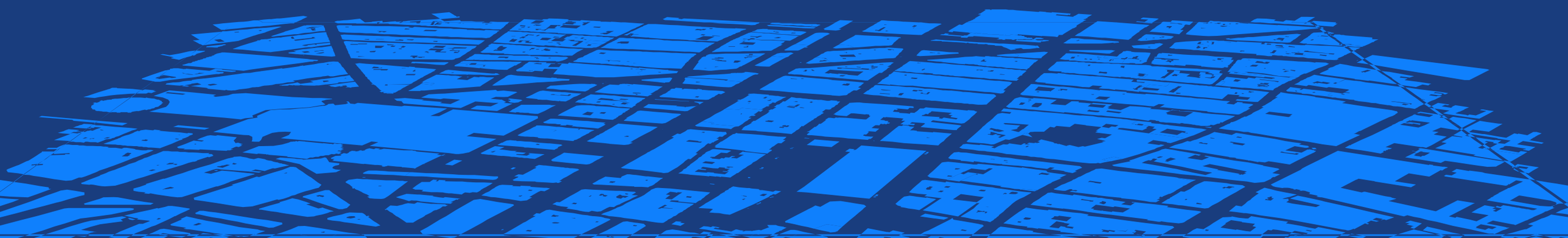
walk

public transport

car

cycle

mobility in the city



walk

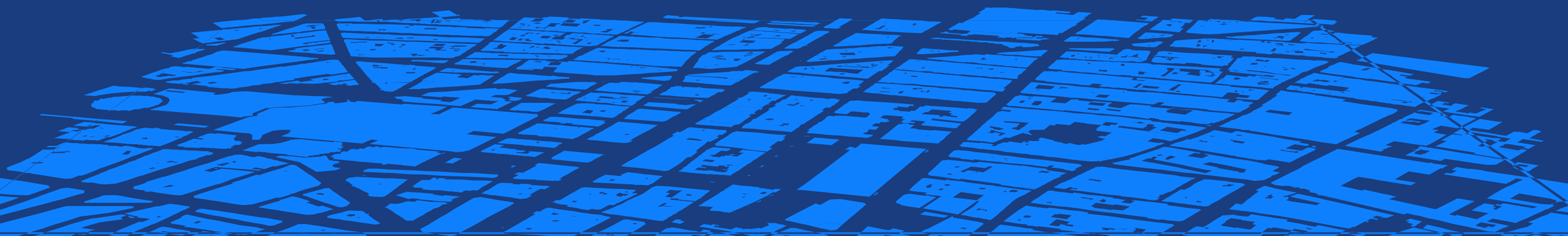
public

car

transport

cycle

digitalisation



ride-sourcing

walk

public transport

car

transport

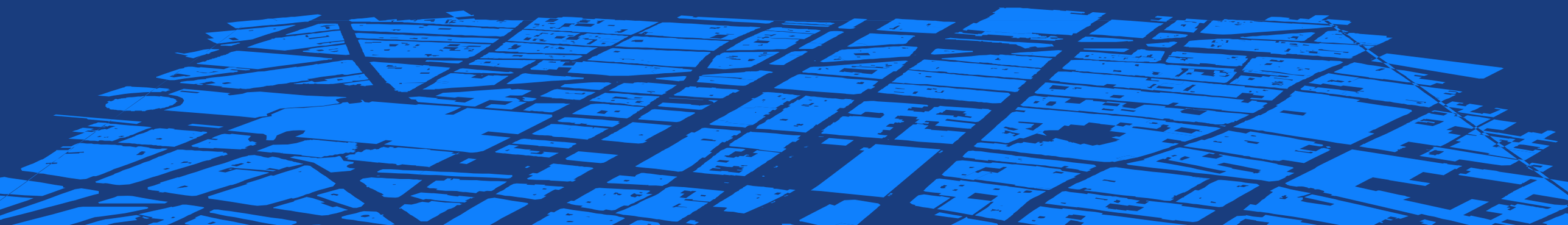
car share

cycle

on-demand public transport

bike share

“new modes”



ride-sourcing

electric

hybrid

combustion

walk

public transport

car

fuel cell

bike share

cycle

car share

on-demand public transport

“new engines”

electric

ride-sourcing

hybrid

walk

public transport

car

combustion

fuel cell

cycle

car share

bike share

on-demand transit

automation

electric

ride-sourcing

hybrid

walk

public

car

combustion

transport

fuel cell

cycle

car share

on-demand

bike share

transit

personalisation

convergence

Lissabon?

30mn access to jobs

Walk, metro, shared vehicles –
NO individual cars

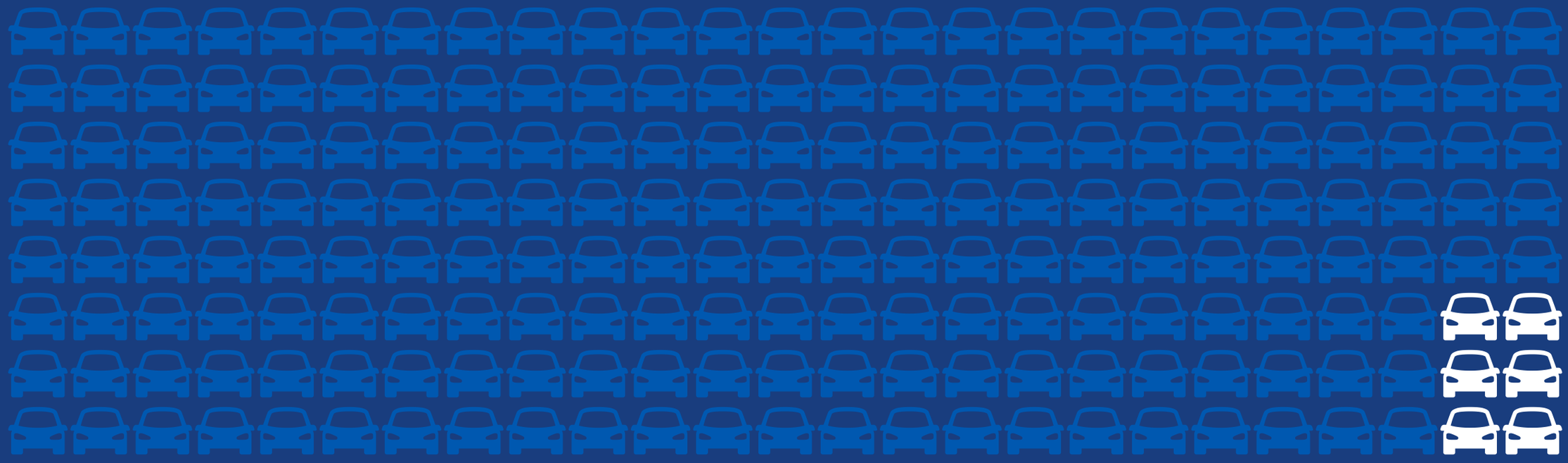
Lisbon

% of all jobs accessible in 30 minutes

- 0-25%
- 25-50%
- 50-75%
- 75-100%
- Metro

shared mobility

What we found



Scenario: 24 hours

number of vehicles required to provide the same trips as before:

3%

-23% to -37%

24 hr. Peak hr.

vehicle kilometers travelled

-34%

CO_2 emissions

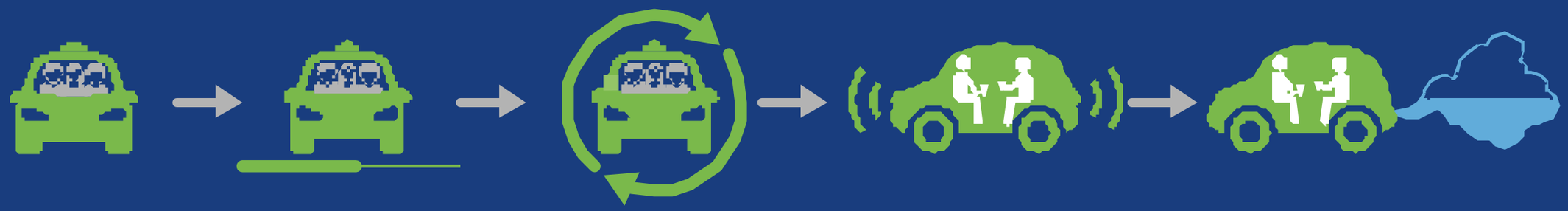
eliminate

all street parking

-80%

off-street parking

faster clean tech penetration



intense use

shorter life cycle

rapid fleet renewal

new technologies

less CO_2 emissions

International Transport Forum | CPB Corporate Partnership Board

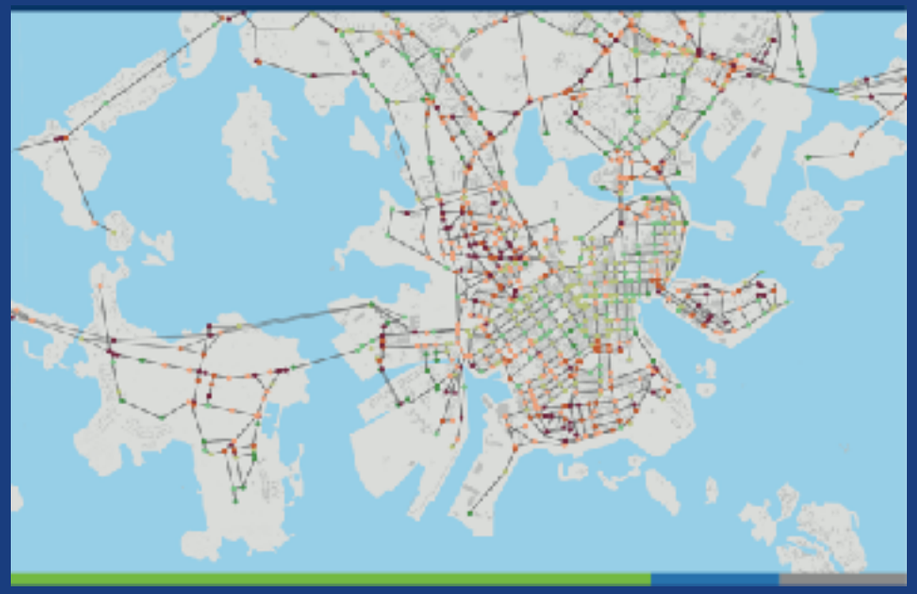
shared & electric & automated mobility

based on a foundation of mass transit & cycling and walking

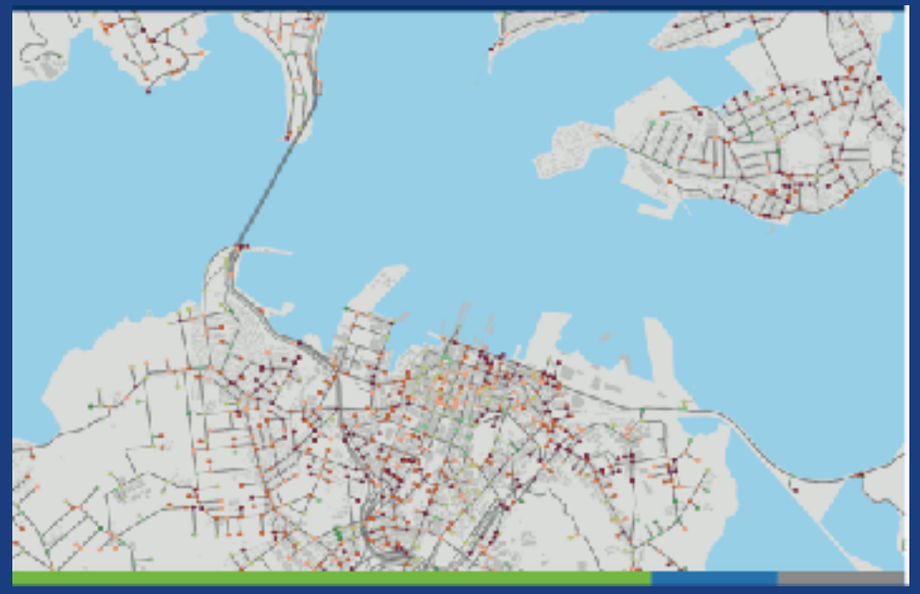
OECD

International Transport Forum | CPB Corporate Partnership Board

tailored to local socio-cultural practices



Helsinki



Auckland

Jari Kaupilla, Olga Petrik, Luis Martinez

OECD

Frische Luft - Leises Surren - Viel Grün - und neue Ideen?

Investieren Sie in ein Luxushotel am Gürtel

Einfach kompliziert.

Human-Computer Interaction
im Hintergrund.

Uncertain Skies:

Drones in the World of Tomorrow

electric

hybrid

combustion

fuel cell

walk

bike share

cycle

public transport

ride-sourcing

car

car share

drones

on-demand transit

“urban air traffic”

integration versus competition

air – ground interfaces

privacy

noise

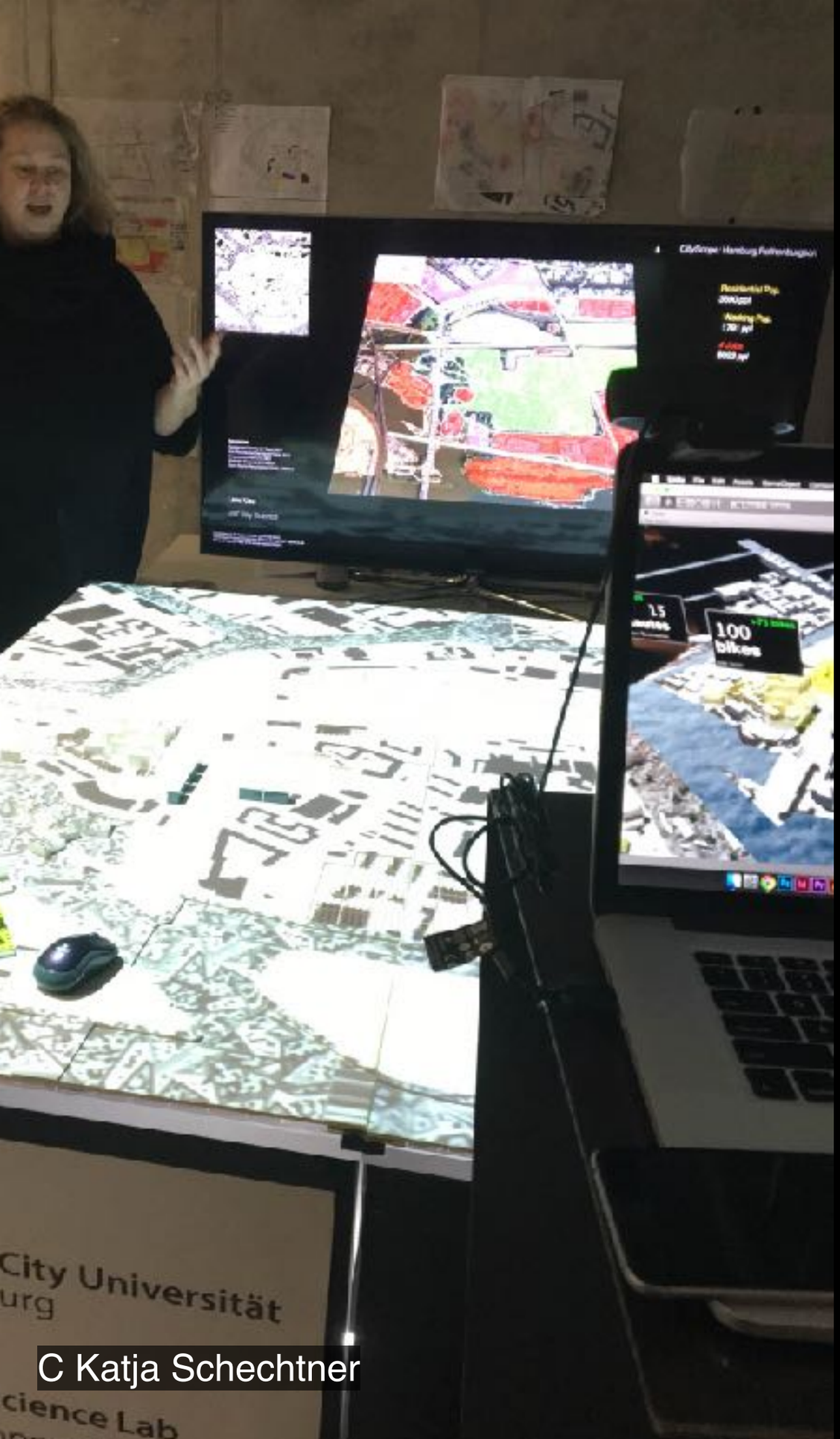
visual amenity

energy efficiency/ sustainability

beneficial use-cases

real-estate value

social equity



C Katja Schechtner

First we imagine
the future -
and then we make it so

Katja Schechtner OECD & MIT

MIT Media Lab, Germany, 2016