FIX THAT MIX

better accessibility and the politics of change

2024 Annual POLIS Conference
Karlsruhe, 27 November 2024

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London School of Economics and Political Science

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

LSE Cities

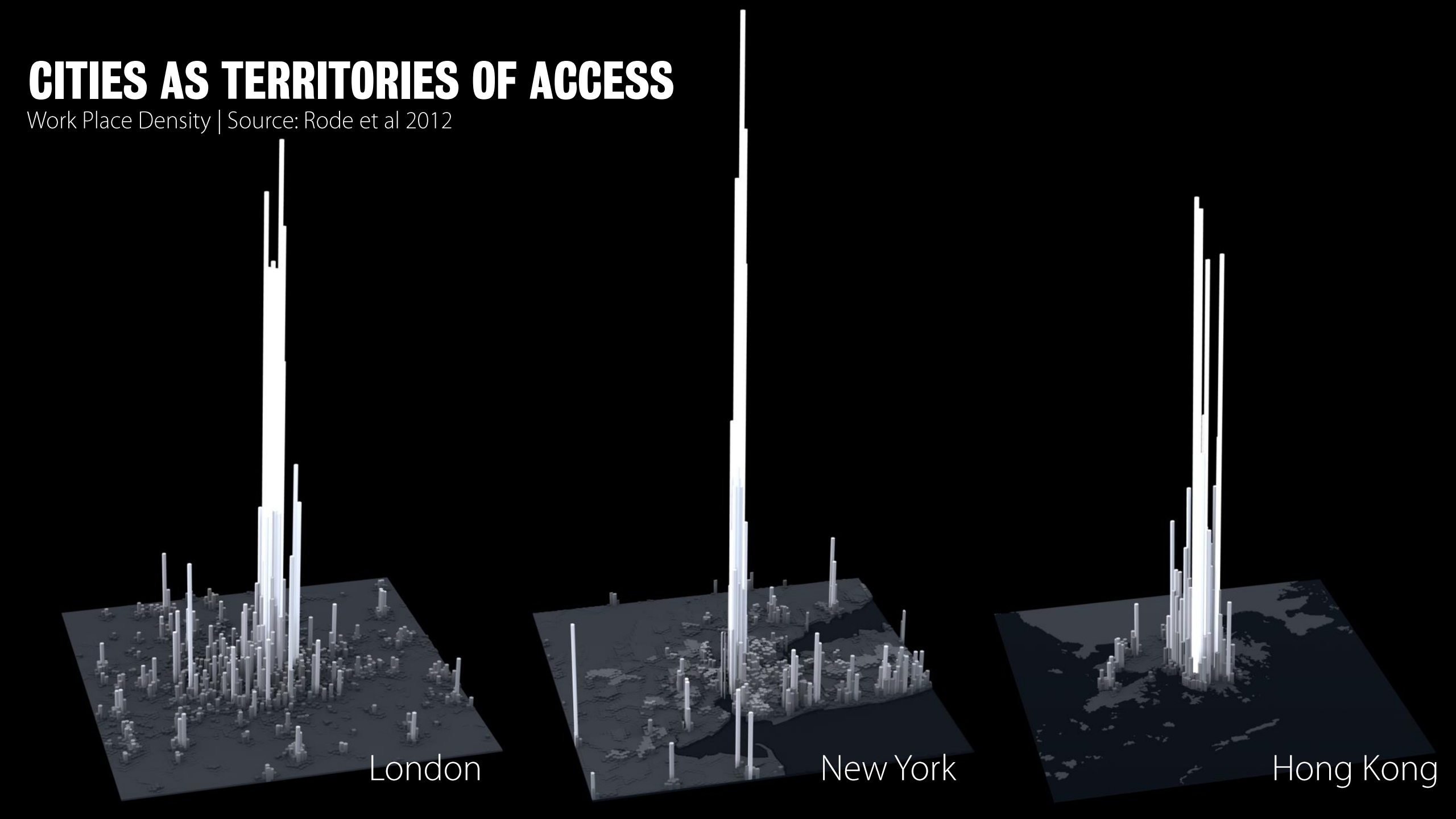
////////////////// Why / What / Where / How //////////////////

Why Mix?

fix that mix

CITIES AS TERRITORIES OF ACCESS

Work Place Density | Source: Rode et al 2012




CORRA PARA APROVEITAR ESSA CHANCE.
CORRA PARA APROVEITAR ESSA CHANCE.

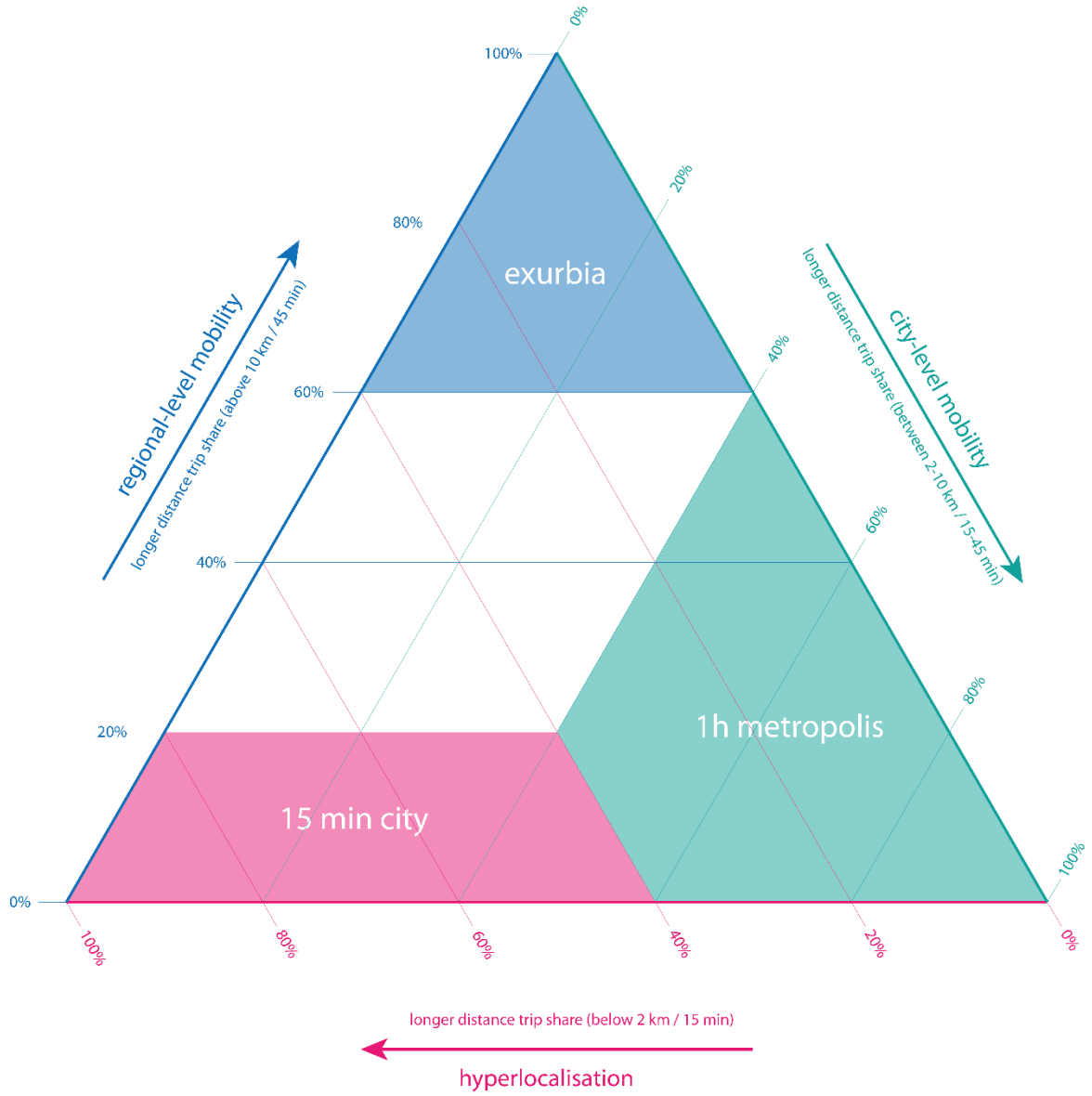
DIFFERENT MODAL CHOICE – INDIVIDUAL FACTORS

Source: von Rosenstiel 1982

1. Cost
2. Time
3. Reliability
4. Physical comfort/ convenience
5. Exploration/ curiosity
6. Physical desire for action
7. Technical desire for action
8. Willingness to take risk
9. Physical safety
10. Avoidance of pollution
11. Avoidance of noise
12. Visual Amenities
13. Social contact
14. Privacy
15. Independence
16. Power
17. Subordination
18. Aggression
19. Performance motivation
20. Prestige/status
21. Safety for other person
22. Granting others help/protection
23. Avoiding disturbance to others
24. Societal/environmental considerations

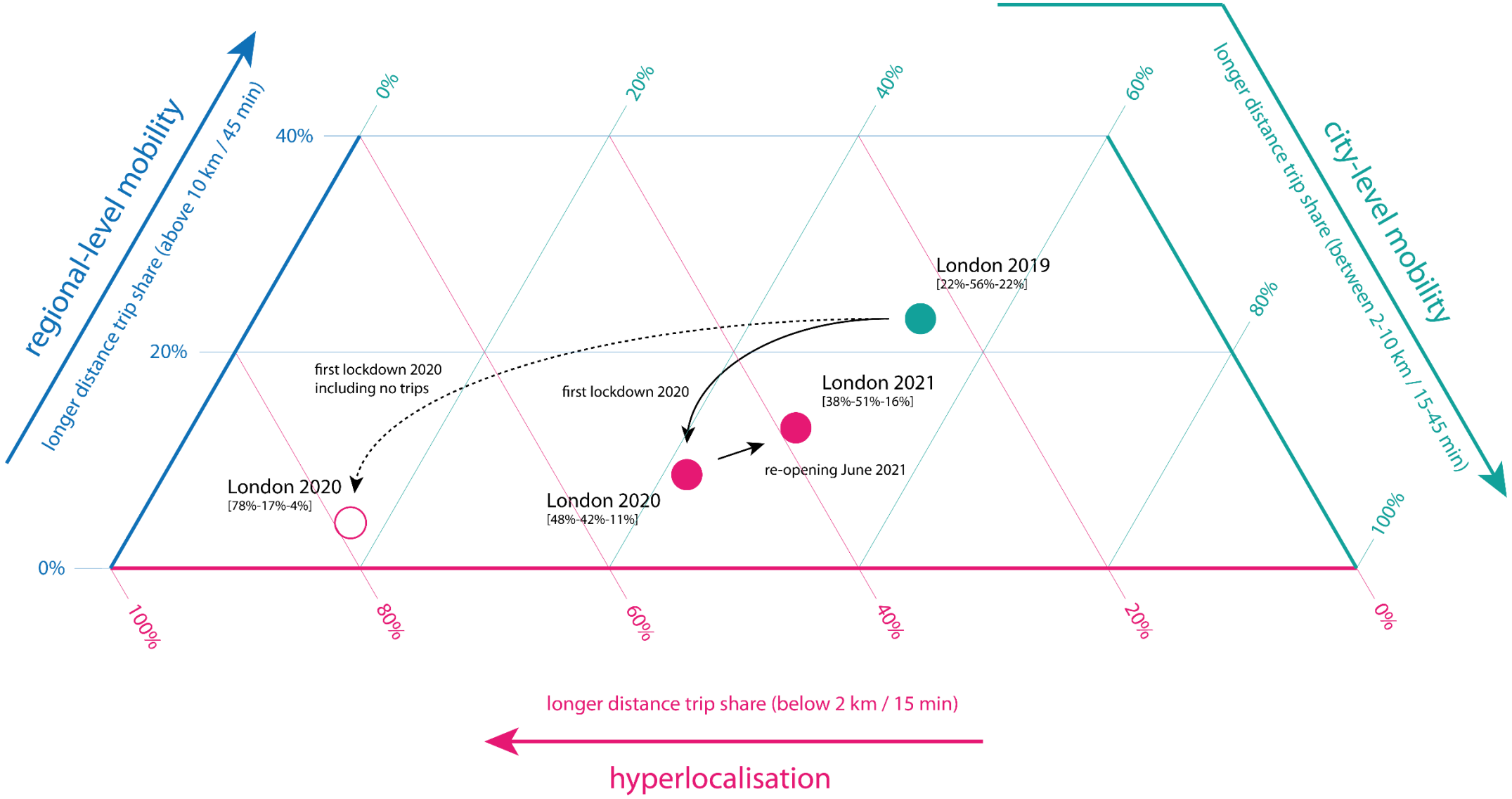
DIFFERENT TRIP LENGTHS

Source: Rode 2021



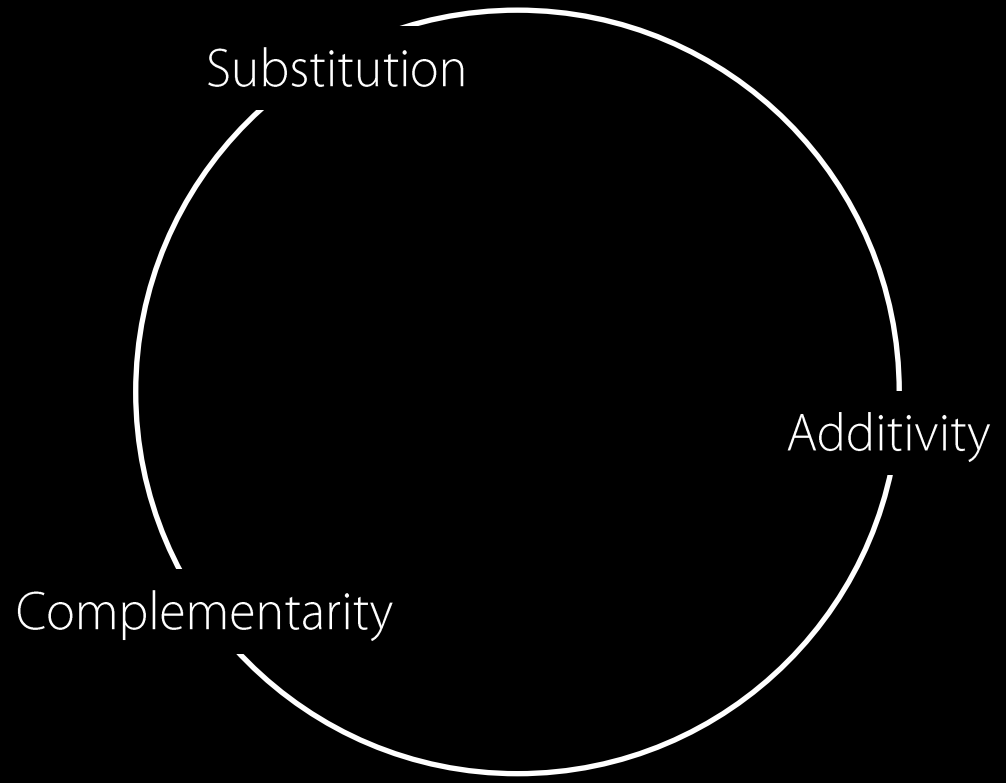
LONDON CHANGE OF TRIP LENGTHS | 2019–2021

Source: Rode 2021 based on data by Teralytics



NEW TRANSPORT TECHNOLOGIES

Source: based on Kellermann 2014




COPENHAGEN
CYCLING


MEDELLIN
METROCABLE


PARIS
VELIB


BOGOTA
TRANSMILENIO


LONDON
CONGESTION CHARGE
Congestion charging
Central ZONE
Mon - Fri
7 am - 6 pm


HONG KONG
RAIL PROPERTY POLICY


SAO PAULO
BUSES


BERLIN
E-MOBILITY


ZURICH
TRAMS


GUANGZHOU
BRT


NYC CYCLING

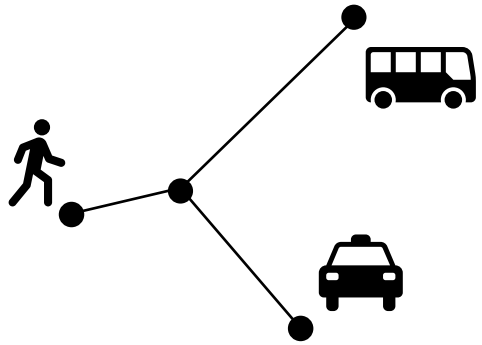
CITIES CONCETRATE
DIVERSITY.
MIXING TRANSPORT MODES
REFLECTS DIVERSITY.

What Mix?

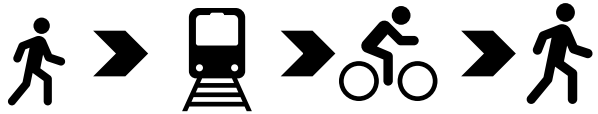
fix that mix

WHAT MIX ARE WE TALKING ABOUT?

Mix 01 - Overall
Modal Share



Mix 02 – Individuals
Different Trips,
Different Modes



Mix 03 – Individual Trips
Same Trips,
Different Modes

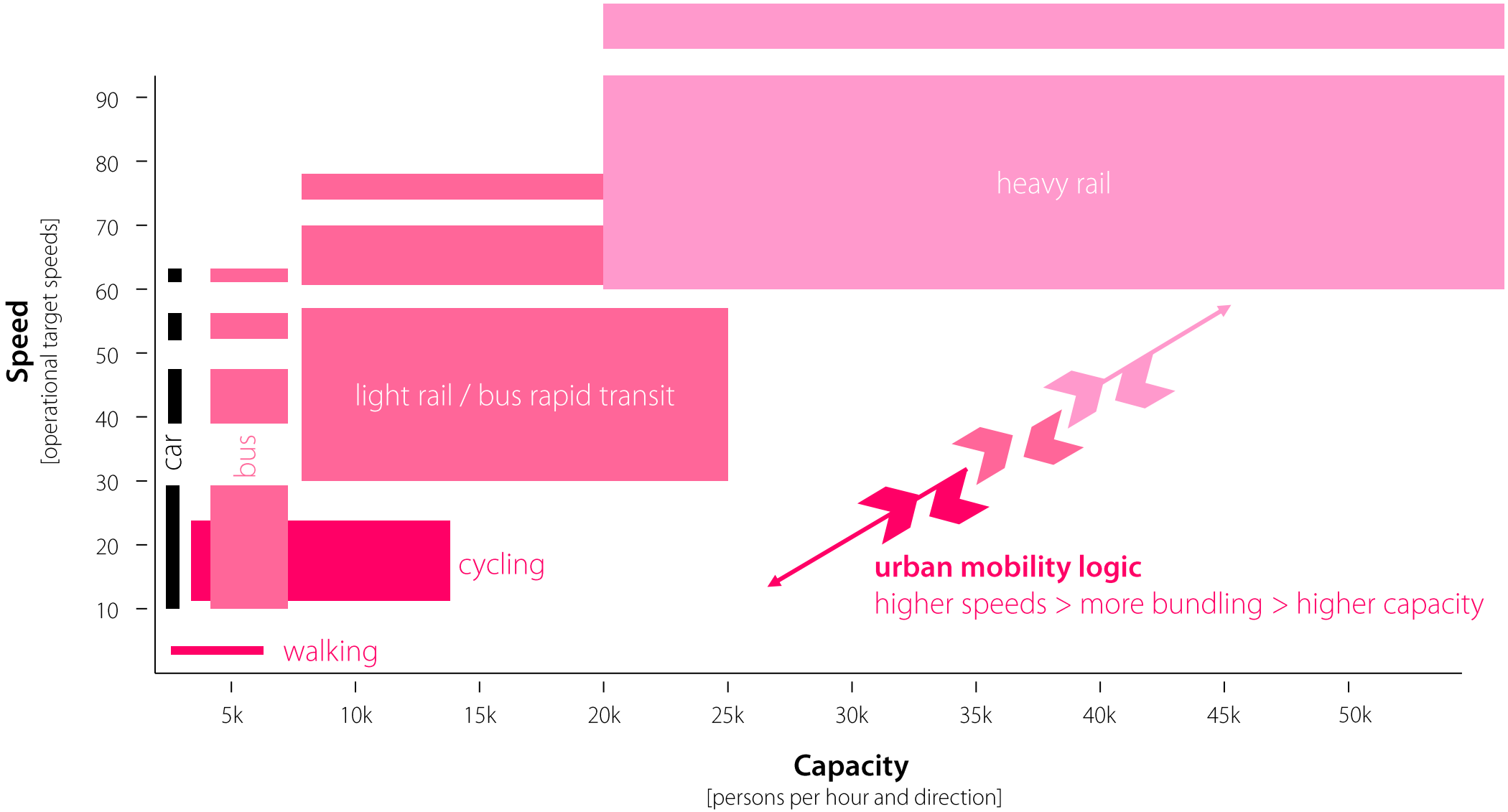
MIX OF COLLECTIVE AND INDIVIDUAL | SMALL AND LARGE

Collective

Individual

Bildquellen: Inmotion, Bergamont, Stellantis (Opel/Fiat), Volkswagen, Renault, Ford.

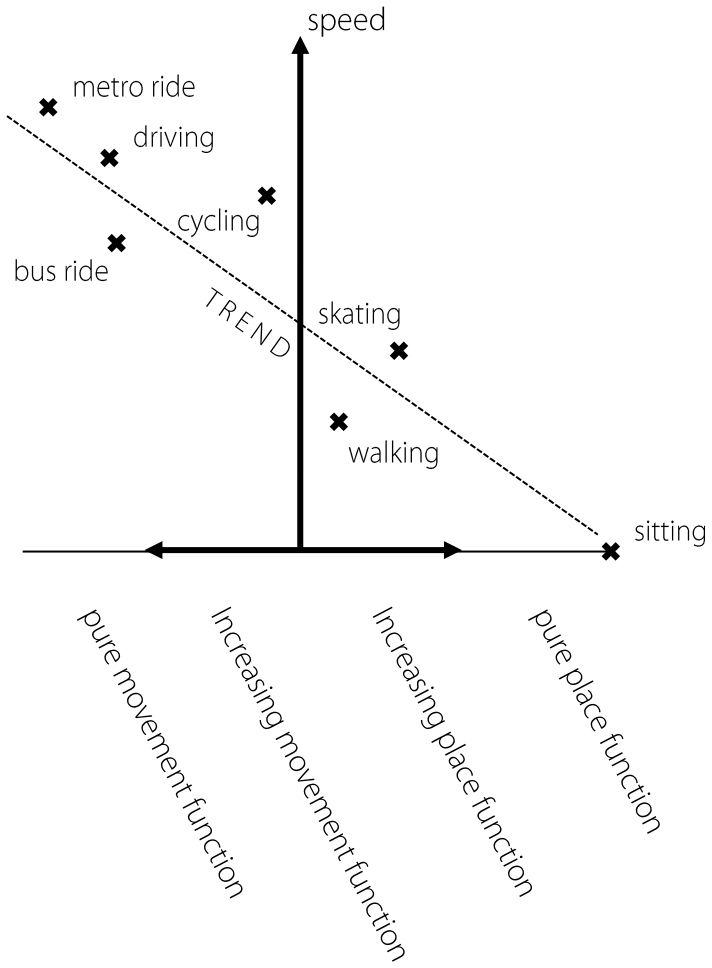
MIX OF SPEED AND CAPACITY



MIX OF PRIVATE AND PUBLIC

MIX OF MOVEMENT/PLACE FUNCTION

Source: Rode and Gipp 2001



MOVEMENT FUNCTION

extrinsic tendency

1. fast

moving

Car
Taxi
Train
Bus
Motorcyle
Motorscooter
Bicycle

stationary

Car
Motorcyle
Motorscooter
Bicycle

2. slow

Blades
Kickboard
Skateboard
Walking
Wheelchair

PLACE FUNCTION

intrinsic tendency

1. dynamic

walking

Strolling
Shopping
Sightseeing

playing

Skating
Kickboarding
Skateboarding
Cycling
Local Playing

excercising

Skating
Jogging
Kickboarding
Skateboarding
Cycling

event participation

Parade
Demonstration
Dance

2. static

standing

leaning
free

sitting on

Bench
Chair
Café
Curb
Ledge
Beam
Floor

laying on

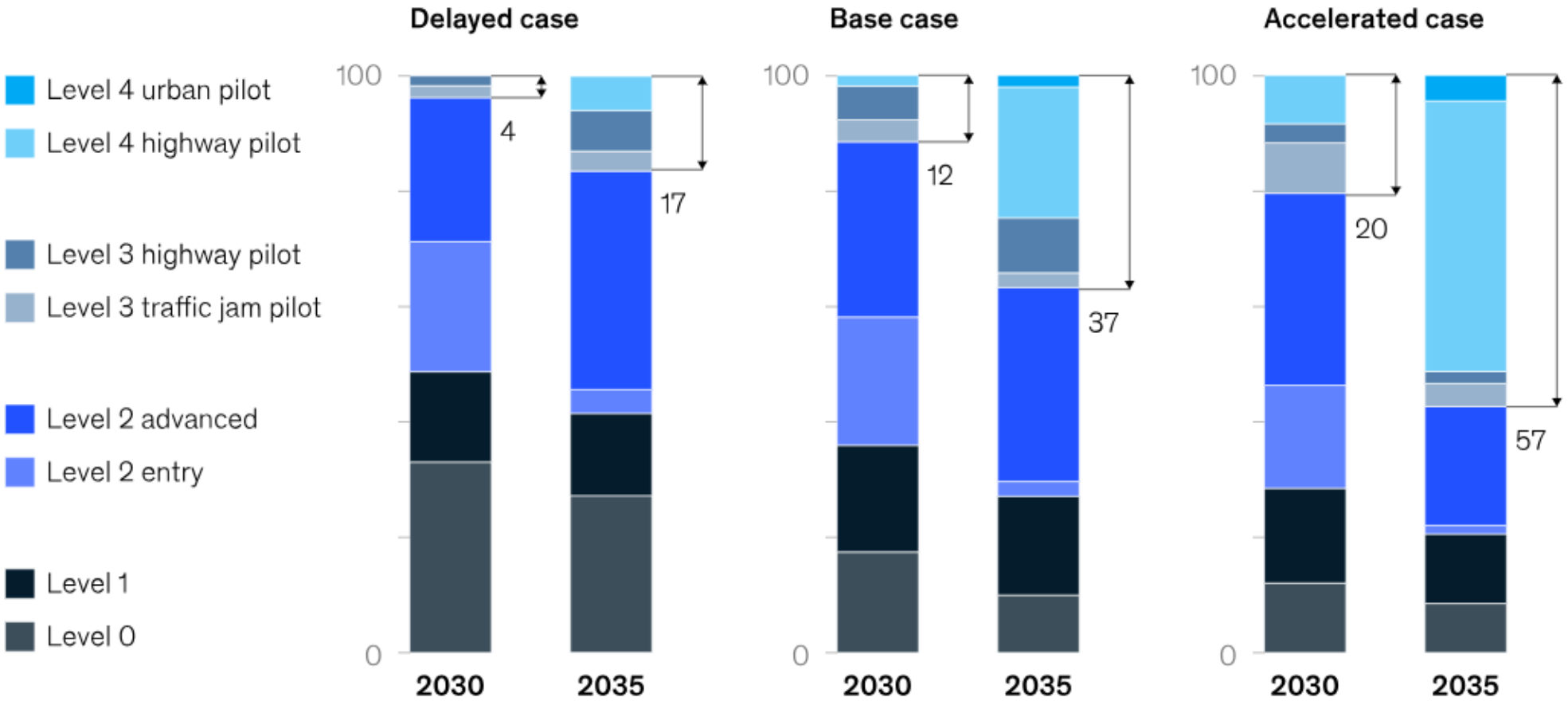
Floor
Bench
Lawn

displays in front of

Shops
Restaurants

MIX OF MANUAL AND AUTONOMOUS DRIVING

Scenarios for autonomous passenger car sales in 2030 and 2035, Source: McKinsey 2023



MIX OF PHYSICAL AND VIRTUAL CONNECTIVITY

Source: Rode and Bhargava 2024

ASYNCHRONOUS HYBRIDITY | TYPES A

A1
Low Frequency

The combination of related physical and virtual activities over a period of years

A2
Lower Frequency

The combination of related physical and virtual activities over a period of months

A3
Higher Frequency

The combination of related physical and virtual activities over a period of days

A4
High Frequency

The combination of related physical and virtual activities over a period of minutes

SIMULTANEOUS HYBRIDITY | TYPES S

S1
Hybrid Connection of People

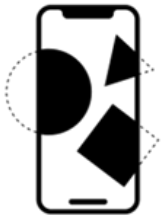
People are physically and virtually connected at the same time

S2
Hybrid Activity of People

Individual people are active in physical and virtual space at the same time

S3
Autonomous Systems in Physical Space

Autonomous systems operate in physical space shared with people



S4
Augmented Space

Physical and virtual environments are combined through digital devices

S5
Virtual Space

Virtual environments with limited connection to physical space

PUBLIC TRANSPORT AND WALKING IS THE BACKBONE OF CITIES, URBAN TRANSPORT AND MOBILITY AS A SERVICE.

Where Mix?

fix that mix

FROM INNER CITIES TO URBANES LAND

ACCOMMODATING FLOWING MIX

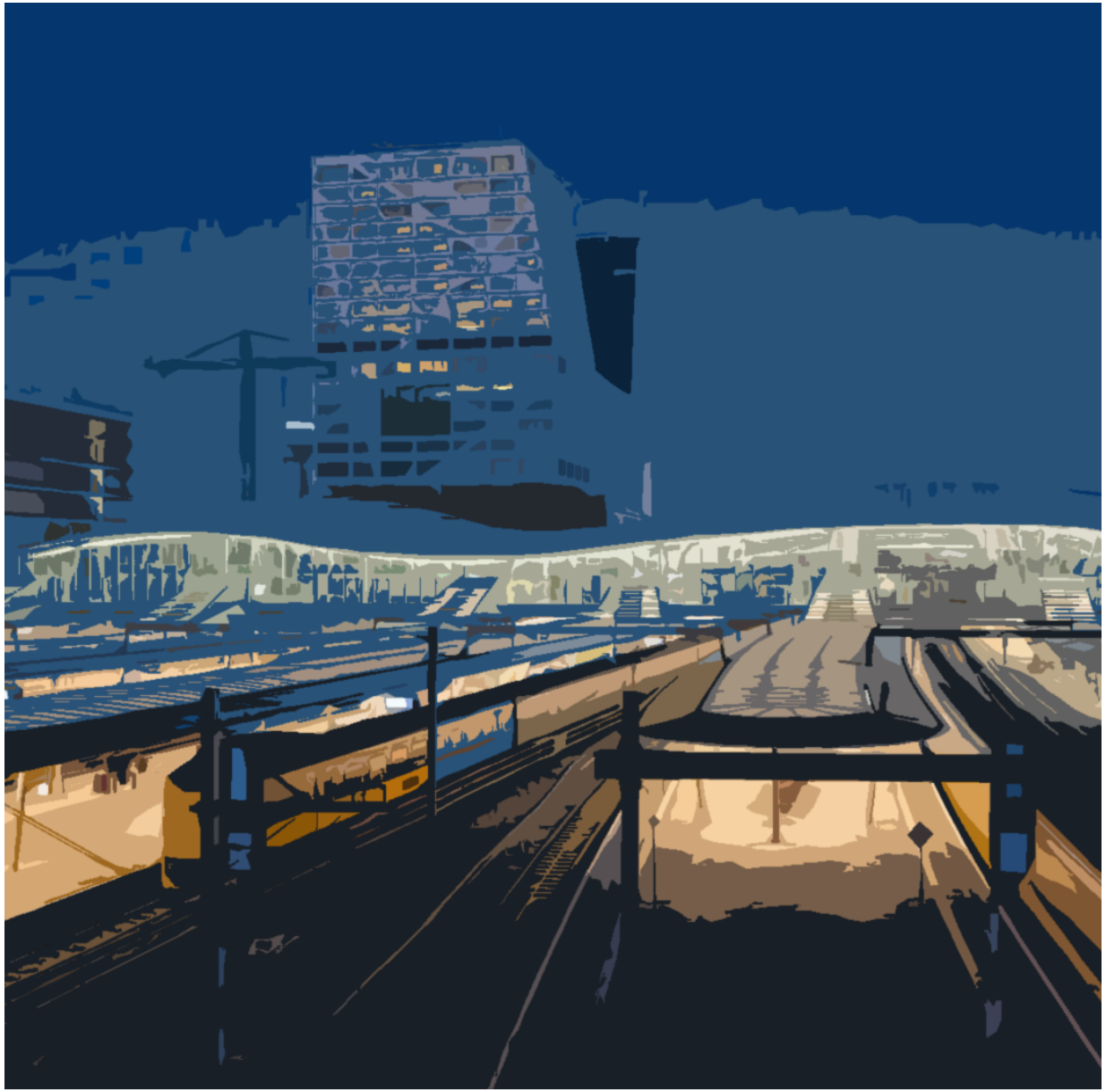
Harvey Wiley Corbett's 'City of the Future' 1913

Segregation

Mixity

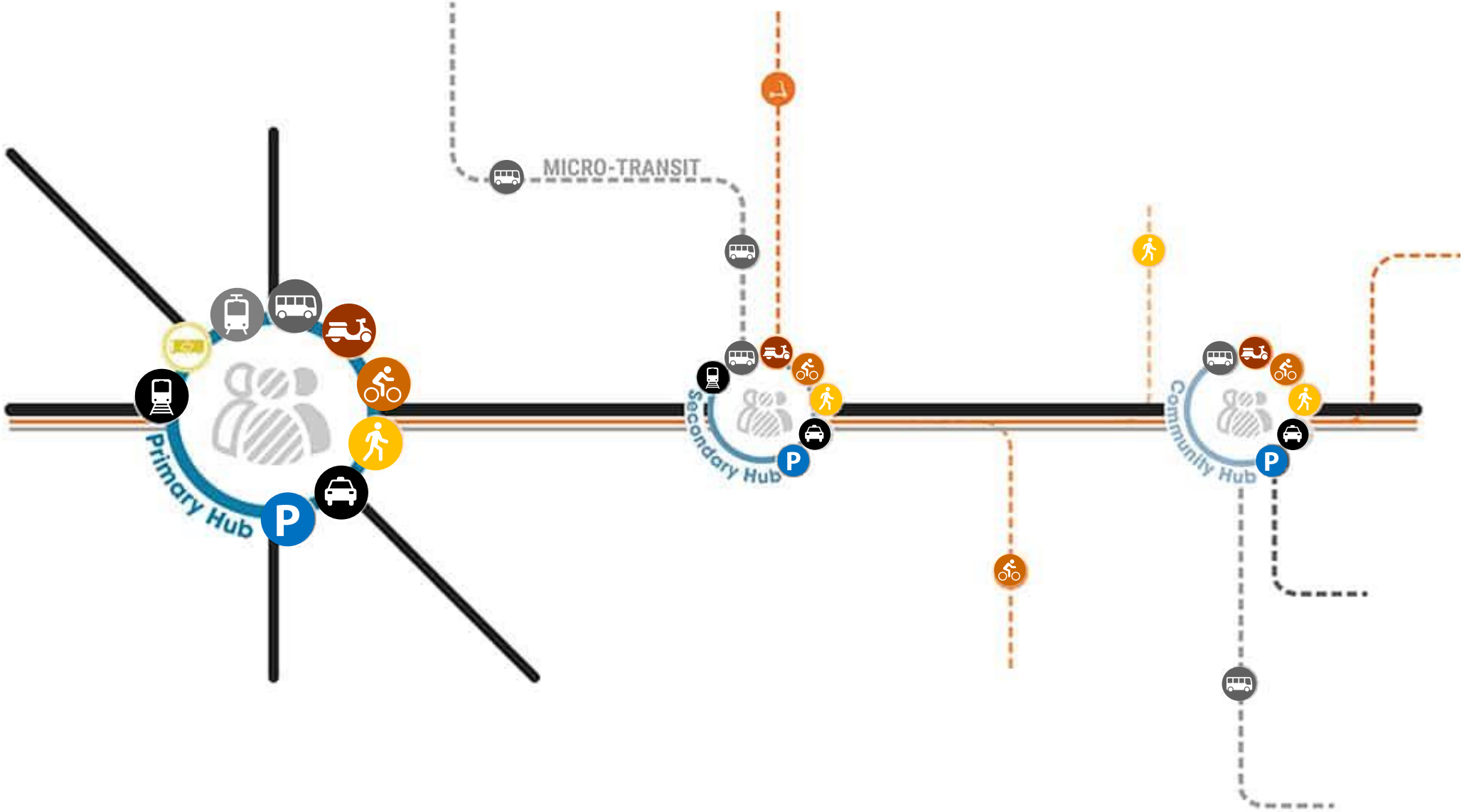
Strasburg 2020s

ACCOMMODATING MODE CHANGE



HIERARCHY OF MOBILITY HUBS

Source: International Parking and Mobility Magazine 2023




THE METROPOLITAN INTERCHANGE

How Mix?

fix that mix

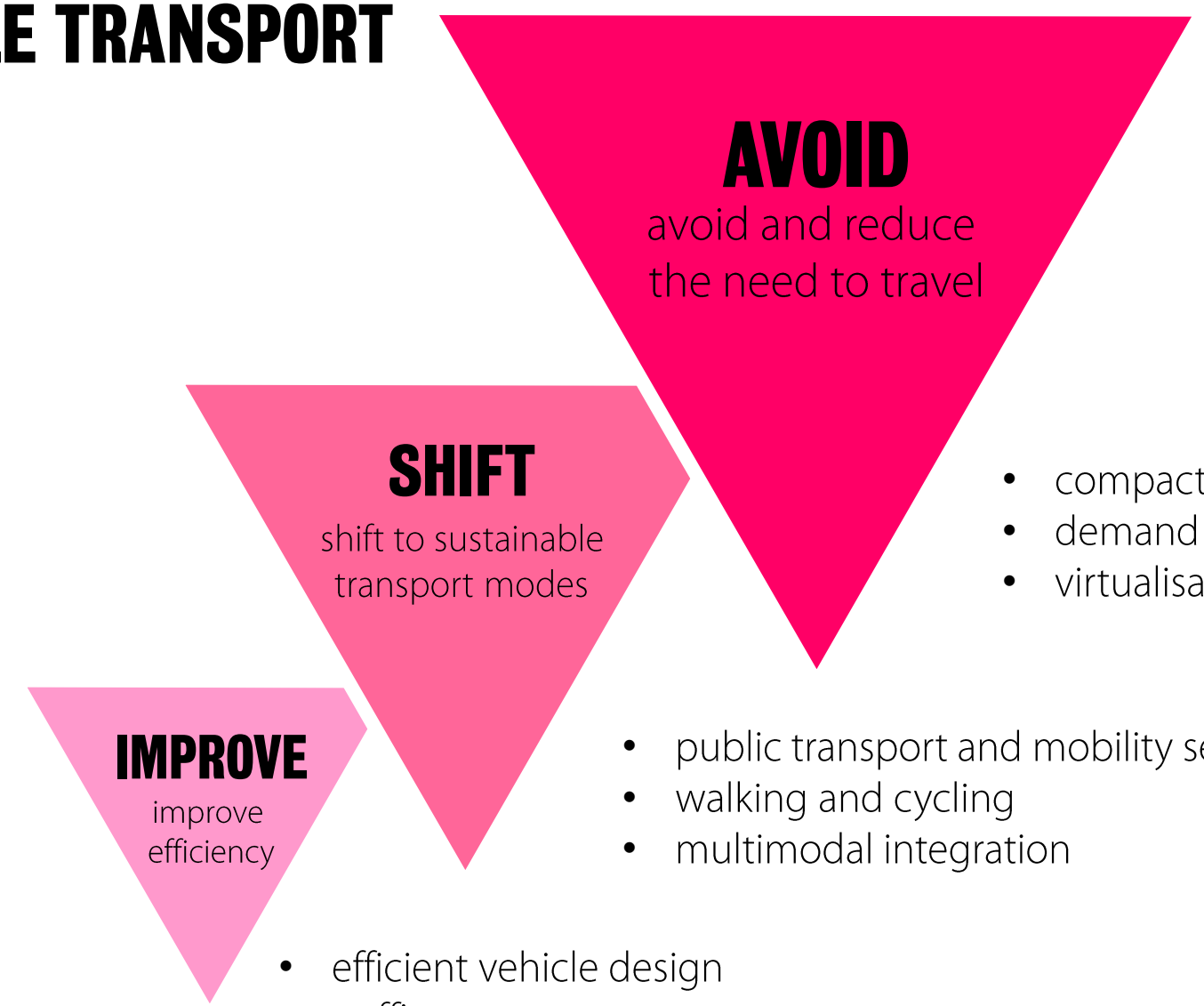
THE EXCEPTIONAL CASE OF CAR USE

- **Beyond transport utility**: status, culture, convenience, freedom, identity, etc.
- Significant **negative externalities**, particularly in cities
- **Space consumption** most difficult to address through technological adjustments without shift from ownership to sharing
- Increasing **competition for street space**: more people, more public space, more play, more green, etc.
- Risk of **polarisation**: told by others what to do, something being taking away, loss aversion, moralising, 'cargo bike trigger'

Capturing static space consumption of different transport modes. Hendrik van Viandenstraat, Amersfoort
Source: Arne Haytsma / Fietsersbond (1978)

SUSTAINABLE TRANSPORT

Sustainability



- compact city development
- demand management
- virtualisation

- public transport and mobility services
- walking and cycling
- multimodal integration

- efficient vehicle design
- traffic management
- better propulsion and fuels

Complexity and opposing interests

The New York Times

He Wanted to Unclog Cities. Now He's 'Public Enemy No. 1.'

Researchers like Carlos Moreno, the professor behind a popular urban planning concept, are struggling with conspiracy theories and death threats.

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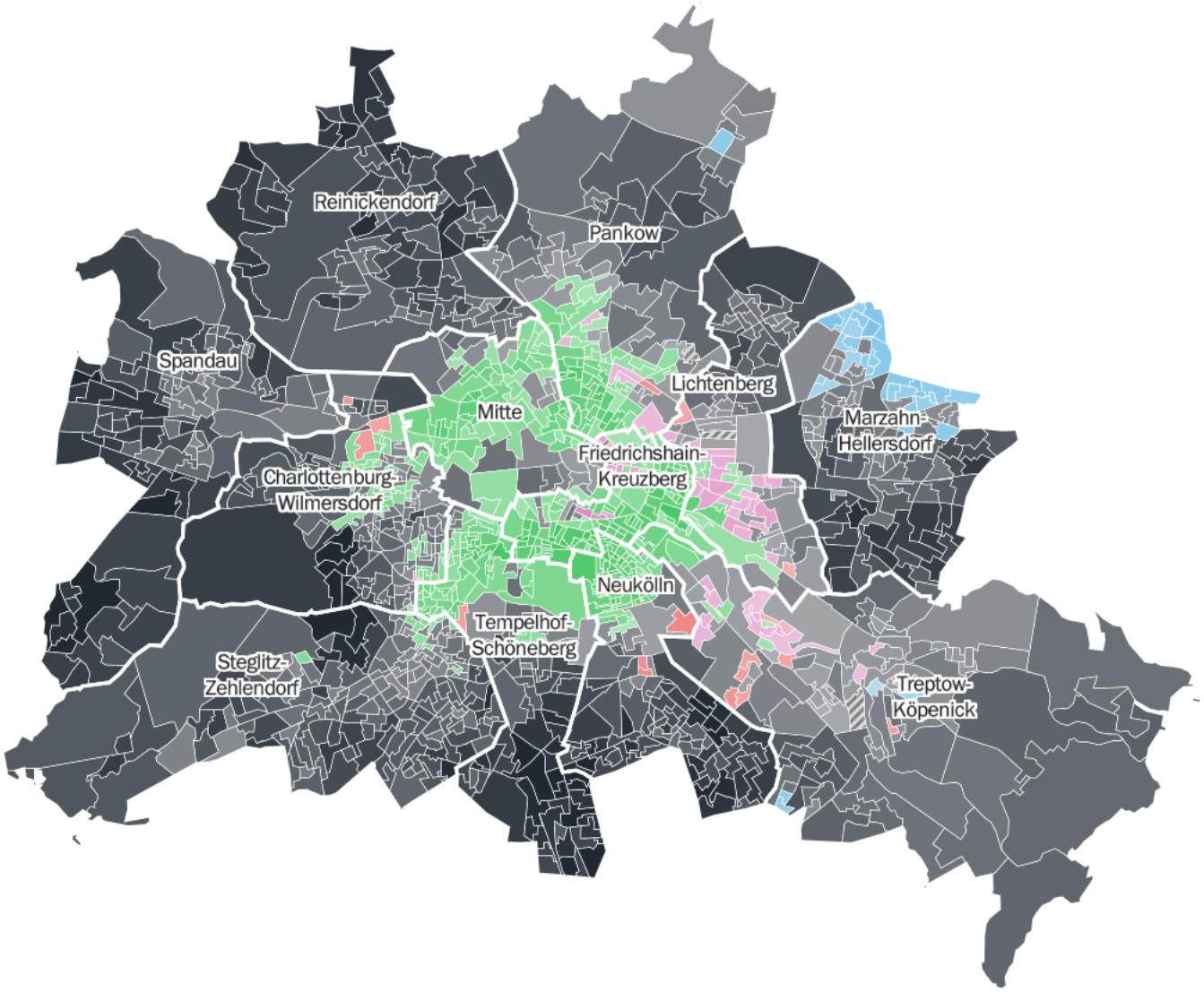
15 minute cities: How they got caught in conspiracy theories

3 October 2023

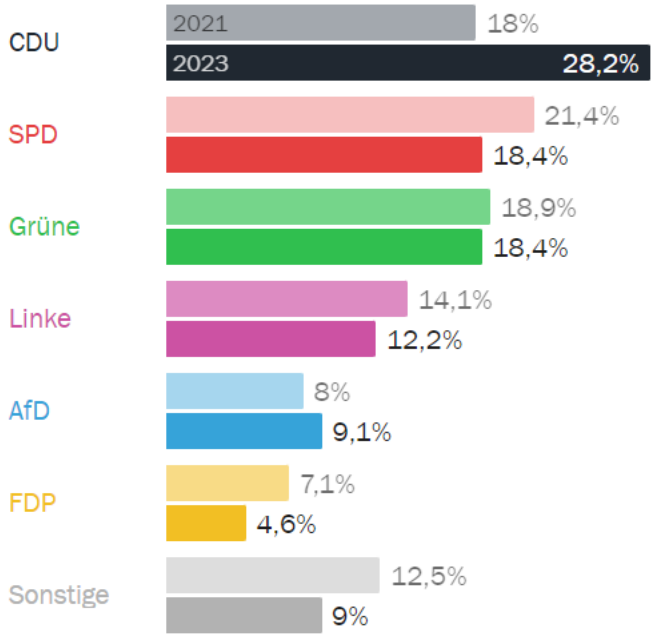
BBC Verify

BERLIN ELECTIONS 2023



Mit Briefwahlstimmen

Wahlberechtigte: 2.431.776, Wahlbeteiligung: 62,9%

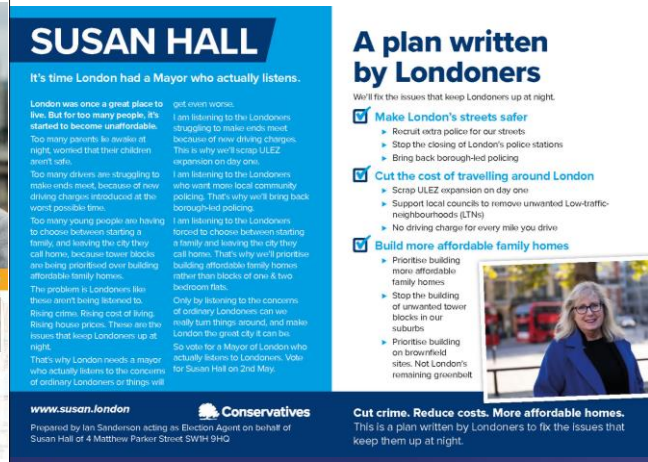


Mehr Parteien anzeigen

Wiederholungswahl 2023: CDU vorne, SPD mit deutlichen Verlusten Mit 28,2 Prozent stand der Wahlsieger eindeutig fest: Die CDU

MAYOR OF LONDON CANDIDATES

2 May 2024 Election



FROM STRATEGY TO TACTICS

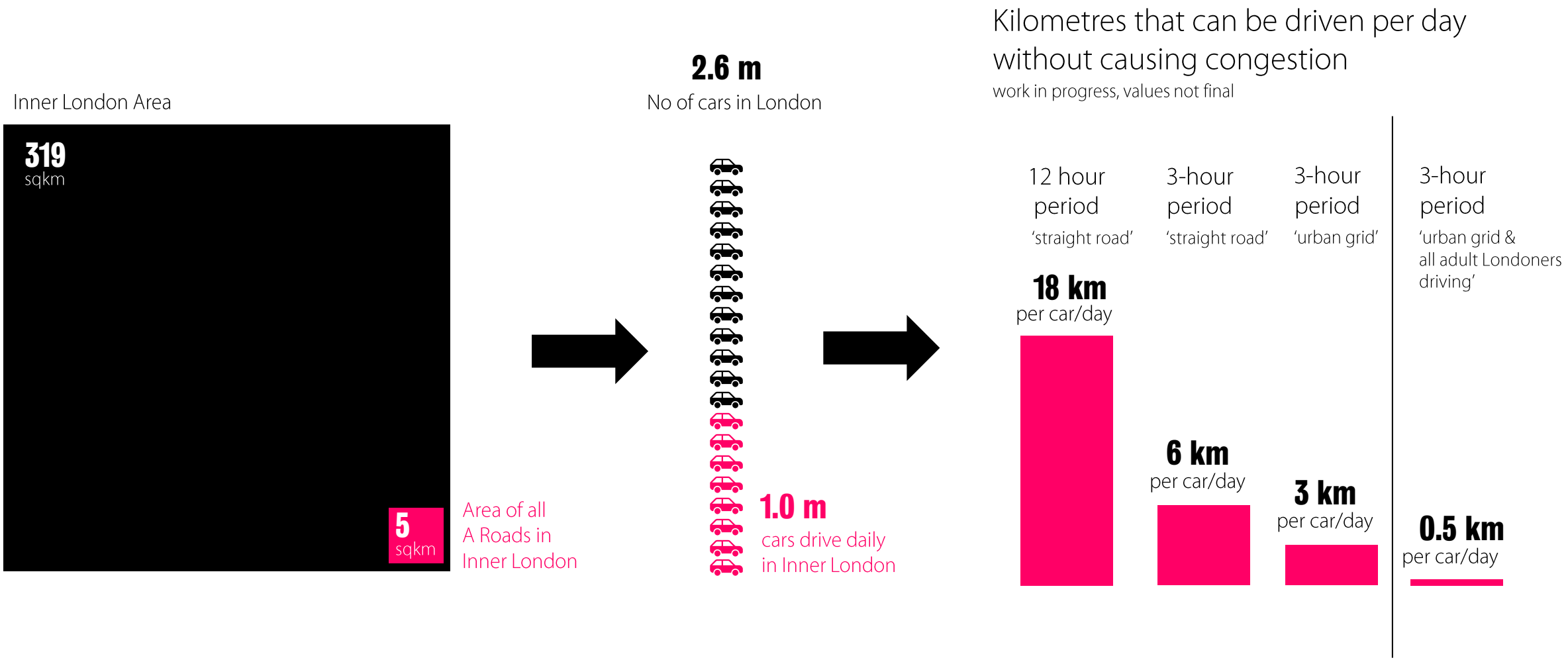
Source: based on Davis et al 2018

Six Bridges

1. Know and activate stakeholders
2. Address barriers proactively
3. Communicate effectively
4. Get the timing right
5. Integrate technical expertise
6. Show what change looks like

CAR USE BUDGETING | ROAD SPACE AVAILABILITY IN INNER LONDON

Source: Rode et al 2024 / MyFairShare Project



CITIZEN JURY | AGREEMENT ON FAIR SHARE OF CAR USE REDUCTION

Source: Rode et al 2024 / MyFairShare Project

Group of Londoners		Fair reduction of driving by day (from an average of 18 km)
1	Disabled people, care workers	No change required
2	Key workers, elderly, low-income people	Small reduction of less than 1km (< 5% reduction)
3	Trade workers/people	Lower reduction of 3 to 4 km (16-22% reduction)
4	Taxi drivers/passengers	Medium reduction of ca 5 km (30% reduction)
5	Young people, school-run drivers, affluent key workers	Higher reduction of 5 to 7 km (30-40% reduction)
6	Wealthy residents, people with excellent public transport links for their journeys	Highest reduction above 8km (> 45% reduction)

01 – REALIGNING POLICY & BUDGETS

- Remove incentives and subsidies of carbon and space-intense mobility in cities
- Provide credible mobility alternatives, including denser, inter-connected and safe public transport networks

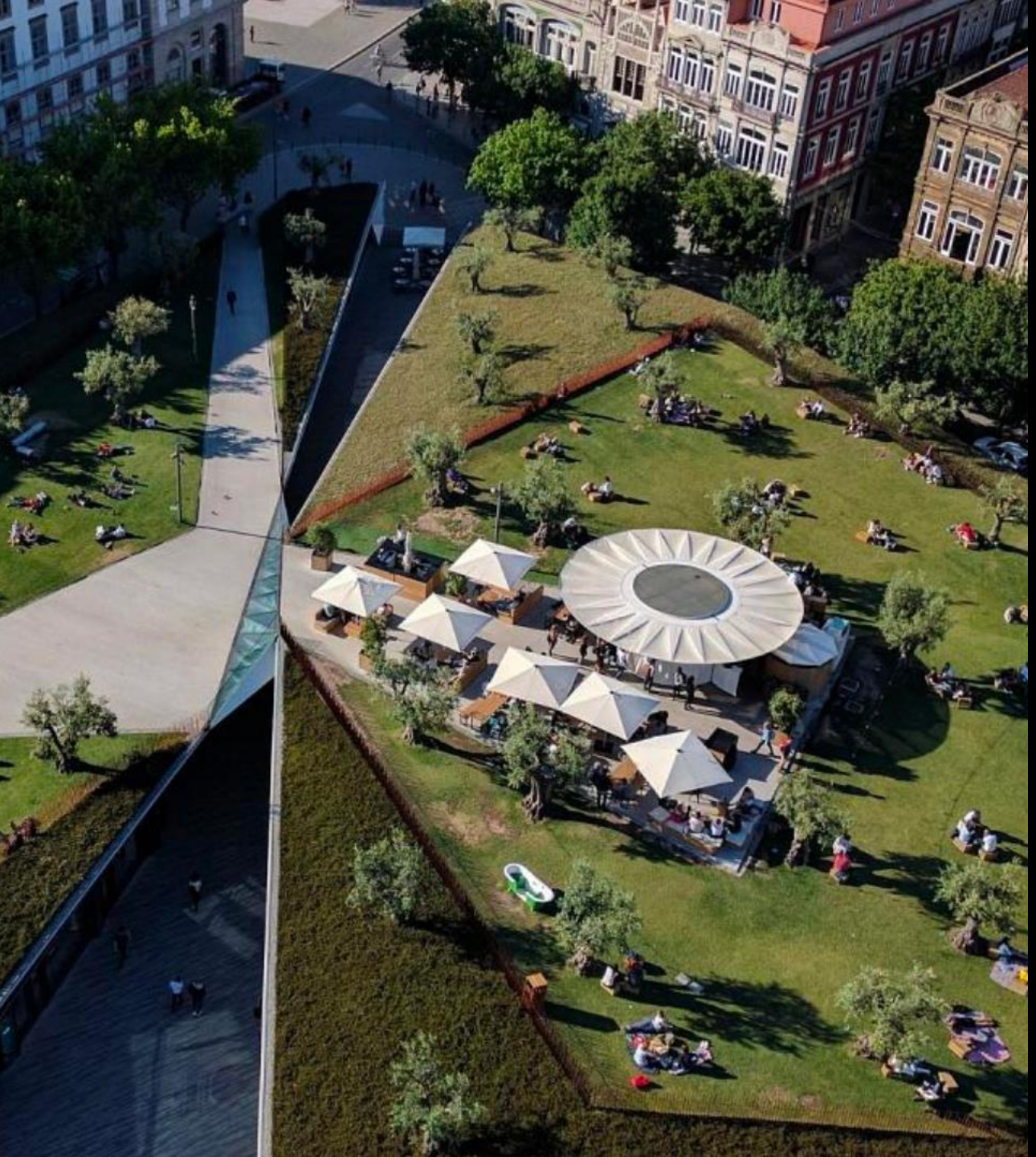
Policy priorities

- national transport budgets to enable shift to sustainable transport modes
- effective road pricing and parking fees considering size, weight and emission standards of vehicles
- land value capture to finance new transport infrastructure

Flagship policy interventions

Survey of 77 transport experts from 26 countries

Source: Rode, Heeckt, da Cruz 2019



02 – HYPER-LOCALISATION

- leveraging the potential of local loops and proximity, while mitigating the downsides in terms of spatial segregation and inequality
- (re)build cities around 15 min neighbourhoods with local amenities and basic services, rather than relying on excessive mobility

Policy priorities

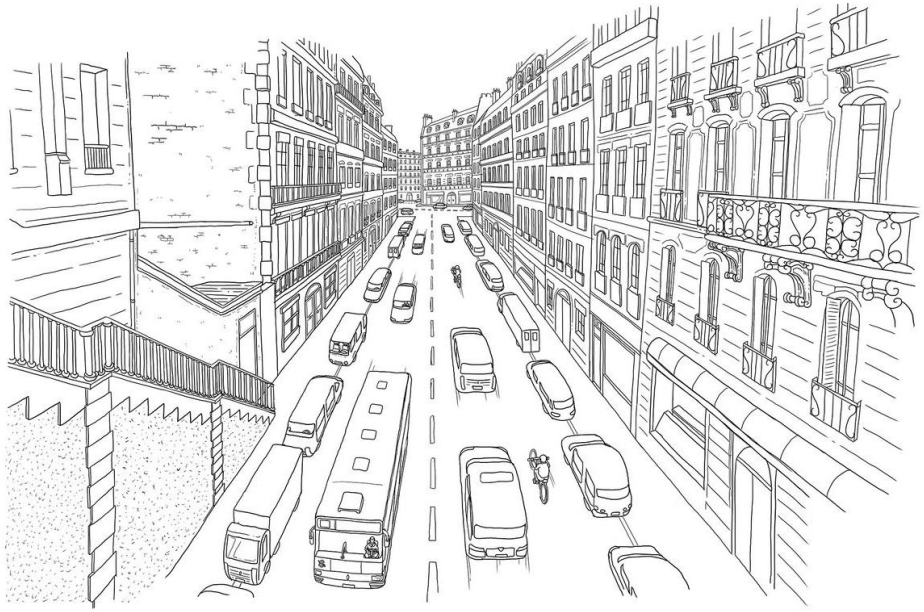
- inclusive zoning policies that promote affordable infill housing, mixed-use development and enable the flexible use of individual buildings
- accessibility metrics for urban development replacing traditional ‘predict and provide’ transport metrics

03 – NEW URBAN MOBILITY

- micro mobility, particularly shared e-bikes and e-scooters, enabling first and last mile connectivity
- sharing and hailing of other vehicles, with app-based shared mobility services that provide on-demand, point-to-point mobility in cities

Policy priorities

- multi-modal mobility apps enabling access new mobility and public transport services
- invest in the development of shared micro mobility
- setting-up metropolitan transport authorities that can facilitate integration of all urban modes



Source: City of Pairs 2021

04 – REALLOCATE STREET SPACE

- Enable slow, safe and shared transport alongside the place functions of streets as high quality public realm and green infrastructure
- Recognise key window of opportunity to make recent physical and behavioural changes permanent

<u>Policy priorities</u>

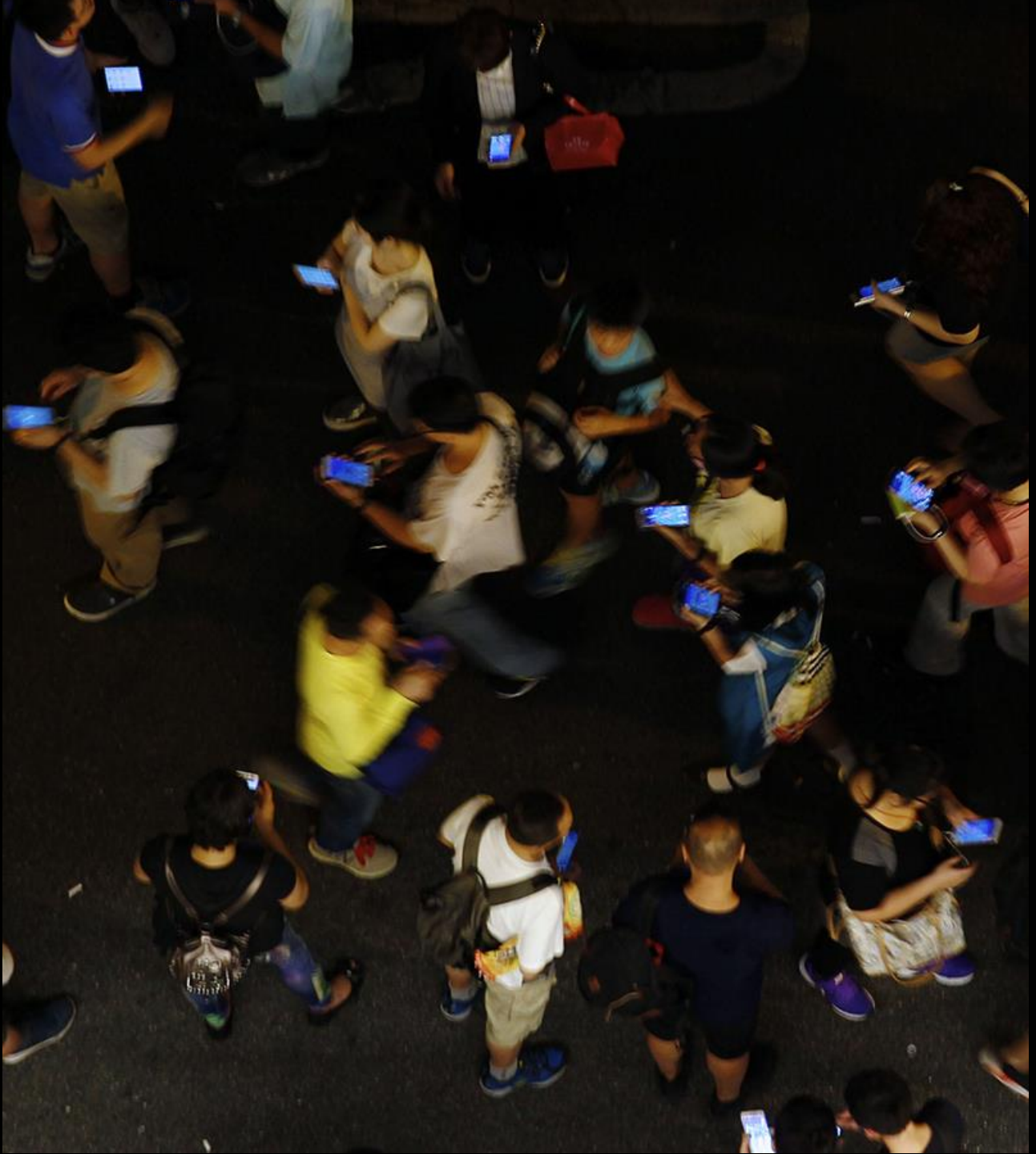
- granting local governments the power to enforce low-traffic streets
- updating highway codes to ensure hierarchy of road users that prioritises most vulnerable and non-motorised modes
- remove car parking requirements to allow conversion to other uses such as wider sidewalks, parklets or additional outdoor seating

05 – FINANCING PUBLIC TRANSPORT

- Investing in and supporting public transport yields immense social, economic and environmental returns when part of integrated urban accessibility strategies

Policy priorities

- reallocating new transport infrastructure investments to maintaining/improving existing assets and services
- reinvesting the proceeds from fees, pricing and taxation related to car use into public transport
- establish dedicated bus lanes and other transit priority strategies and reform the fare systems to ensure greater modal integration and cost savings



06 – DIGITAL CONNECTIVITY

- government need to treat digital connectivity as an integrated component of urban accessibility policy
- positioning equitable virtualisation requirements and opportunities on par with physical transport infrastructure

Policy priorities

- incorporation of digital connectivity requirements as part of urban planning and building regulations
- incentives to bridge the digital divide across people, places and firms
- direct investments in and delivery of digital connectivity through the public sector and enabling new finance such as universal service funds

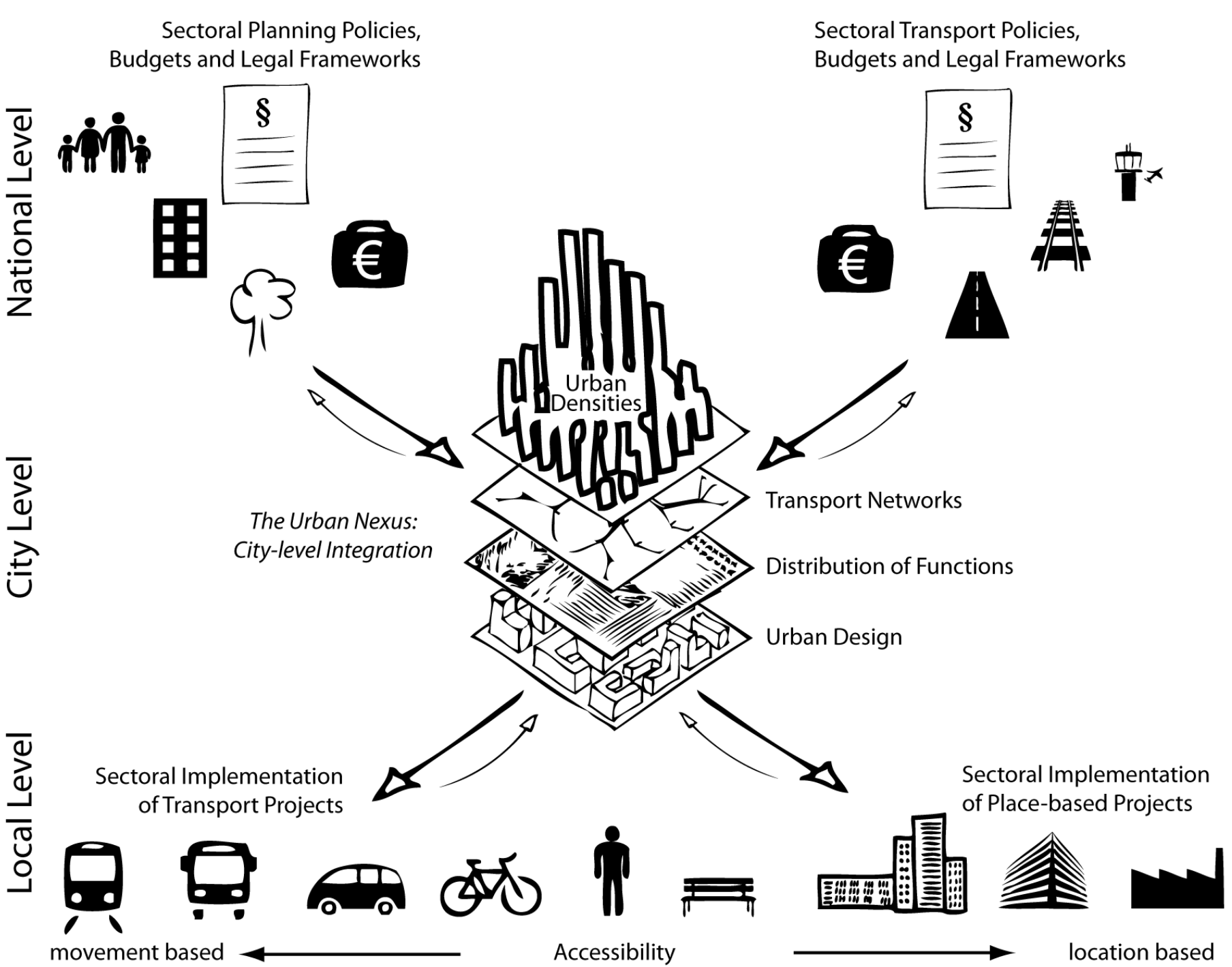
07 – URBAN LOGISTICS

- renewed approach to urban logistics to consolidate and integrate freight and deliveries with planning and land use
- last mile of goods delivery requires particular attention as it poses the greatest local challenges for the environment and liveability

Policy priorities

- investing in urban consolidation centres
- a model shift towards environmentally friendly modes
- designated freight delivery zones, parcel collection and drop-off points

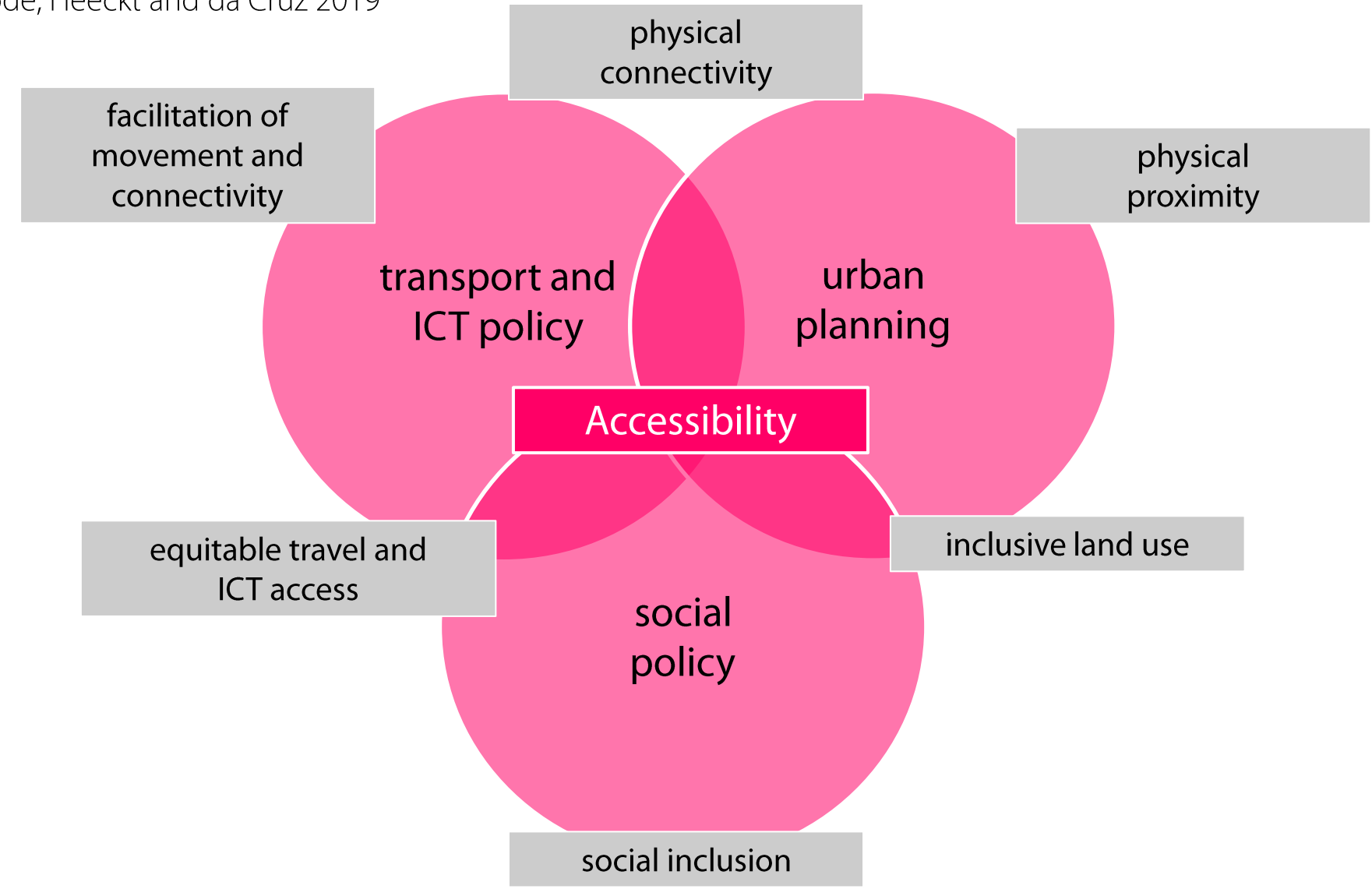
THE INTEGRATIVE POWER OF CITIES



Source: Rode 2018

THE URBAN ACCESSIBILITY NEXUS

Source: based on Rode, Heeckt and da Cruz 2019



/// MIXING IS URBAN
/// ACCESS IS PUBLIC GOOD
/// STRONG INSTITUTIONS


LEGEND CUT