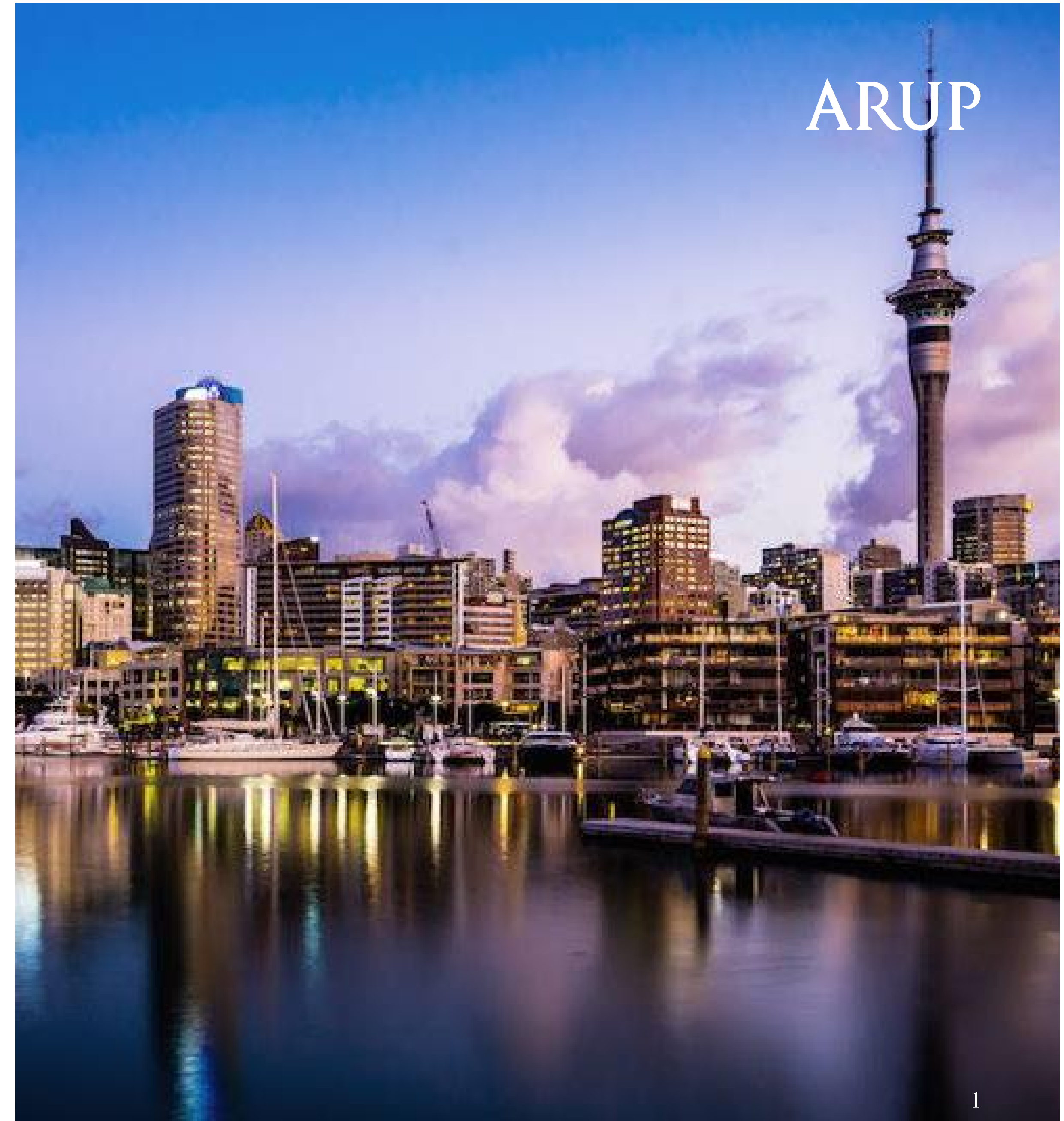


Tim Williams

*Head of Cities,
Arup Australasia*

All that's Solid Melts into the Air: trends
disrupting the usual business of planning
for +building places – and some things
we might do about this..
Maybe...

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Covered in this session

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- Global context for NZ
- Key international economic trends, policy responses (land use and transport) and ideologies shaping nations, cities, regions, towns, precincts, streets, homes: why do places look like they do has little to do with urban design or indeed master planning
- Stuff about walkability and access to mass transit: canaries in the mine of liveability: the return of Place
- Stuff about land use and transport integration: Movement and Place
- Stuff about what works: top down/bottom up initiatives, policies, governance
- National-regional-local collaboration: regions like cities collaborate to compete and may be better at it: innovations like City Deals/development corps or variations. A bit of future-spotting....and questions about what technology and new transport modes will do to city-and place-shaping
- Ends: some good initiatives: vision/outcomes led infrastructure; place-based thinking; co-production:bottom-up/top down: not ‘design, announce and defend’ but deliberate with evidence and co-deliver
- Regions: must have prizes: but some bigger: strengthen town centres and connect: superbia

Cheap advice from a pale, male but not stale poet

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I keep six honest serving men
(They taught me all I knew)
Their names are What and Why
and When and How and Where
and Who. (Kipling)

- Actually a complete guide to rationales, implementation and roles
- Keep this list in mind in this discussion: I will touch on a few of these
- Remember McKinsey would have charged you a lot for that

- I always start here: and its structure/way it worked: now?
- Here's economics and ideology as place-shapers
- Public sector homes fit for heroes in Garden city model, walkable to Jobs, schools and retail
- Not now....



Structure as ideology and economics:
great grid, too much green-belt for too
small a place?

City-shaping via transport and
ideology/politics: BCR less than 1;
after, 3:1. In London my first big city
project was this: Channel Tunnel Rail
Link via East London: No CTRL no
Stratford; No Olympics, No Kings
Cross: city shaper not just 'transport
project'.

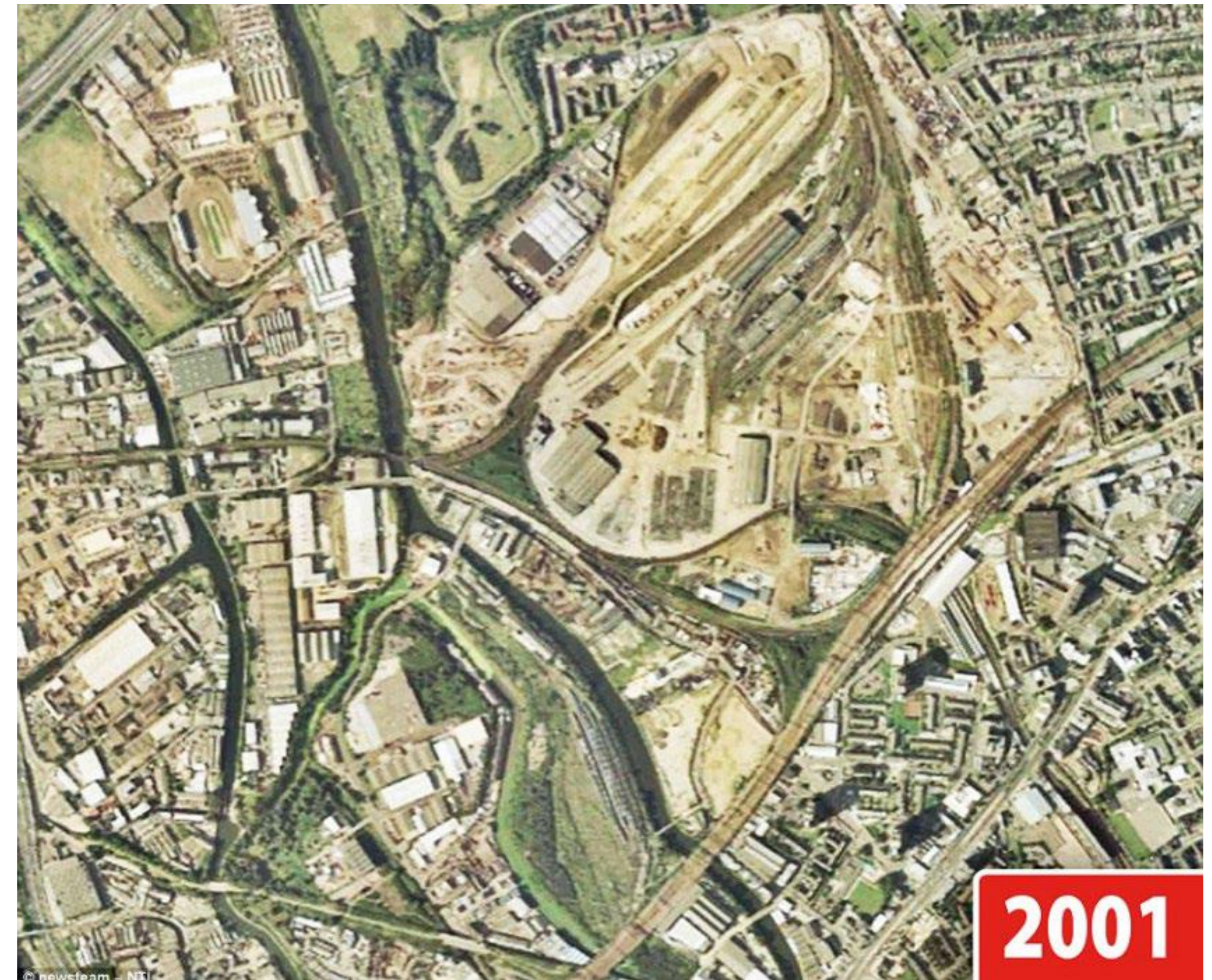
London today unimaginable without
this: Arup



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So this would not have become..



Understanding the world

Economics as a place-shaper

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NZ GDP grew by +25% since GFC: 3 times EU/US/UK rate...

Population and Wealth increase: particularly in big cities but even where less spectacular most NZ places/regions growing unlike EU/US heartland

600 cities in China bigger than Auckland by 2050



South is the North of the 21st Century

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I think a 200 year
cycle: maps as
place ideology too



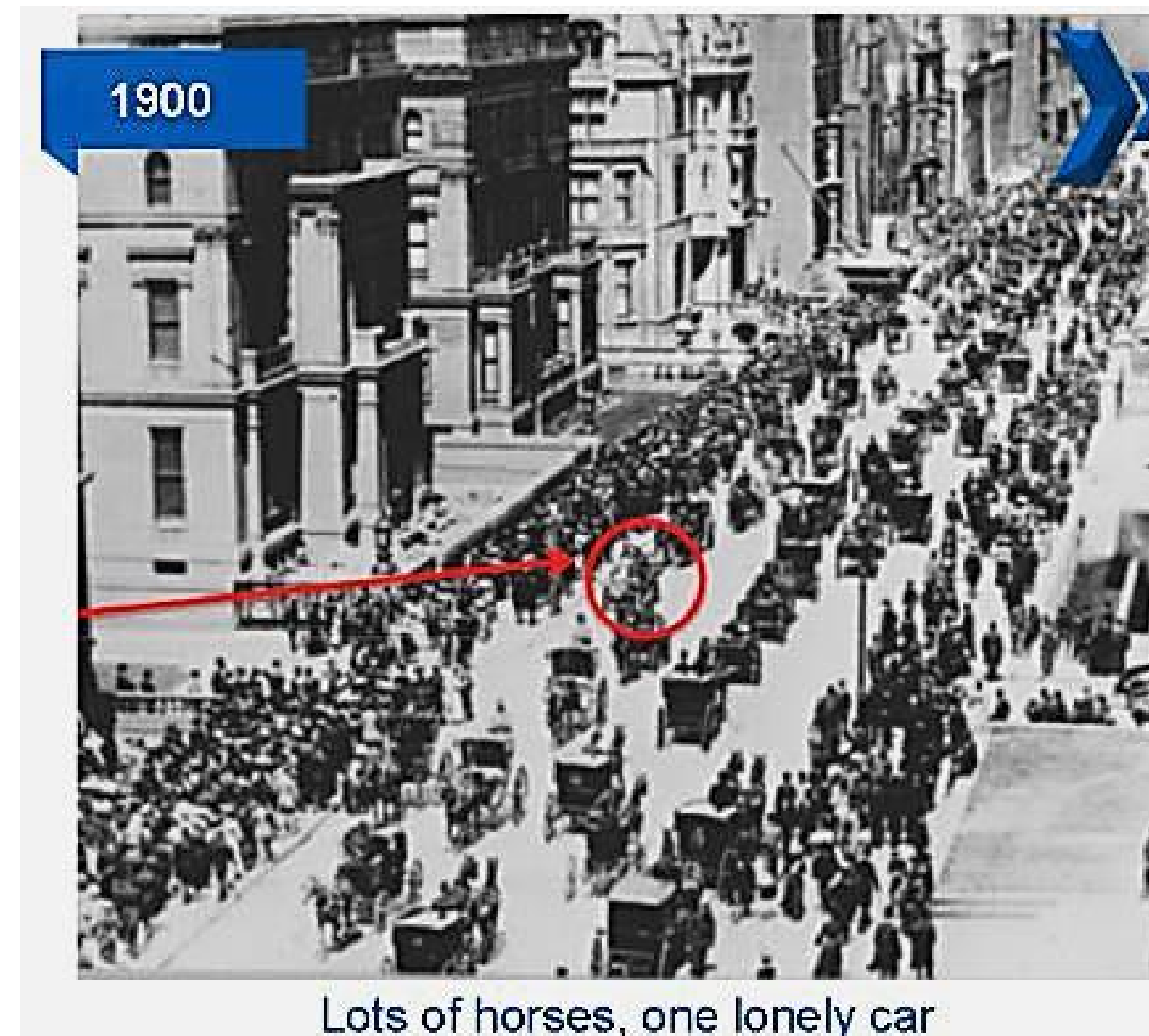
Making a transport system makes the city

Technology, economics, ideology

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Yes technology changes places but there's economics, ideology and politics in this too:

Rail era, road era, AV era create different city outcomes.
EVs will make driving cheaper/AV's can make sprawl work...

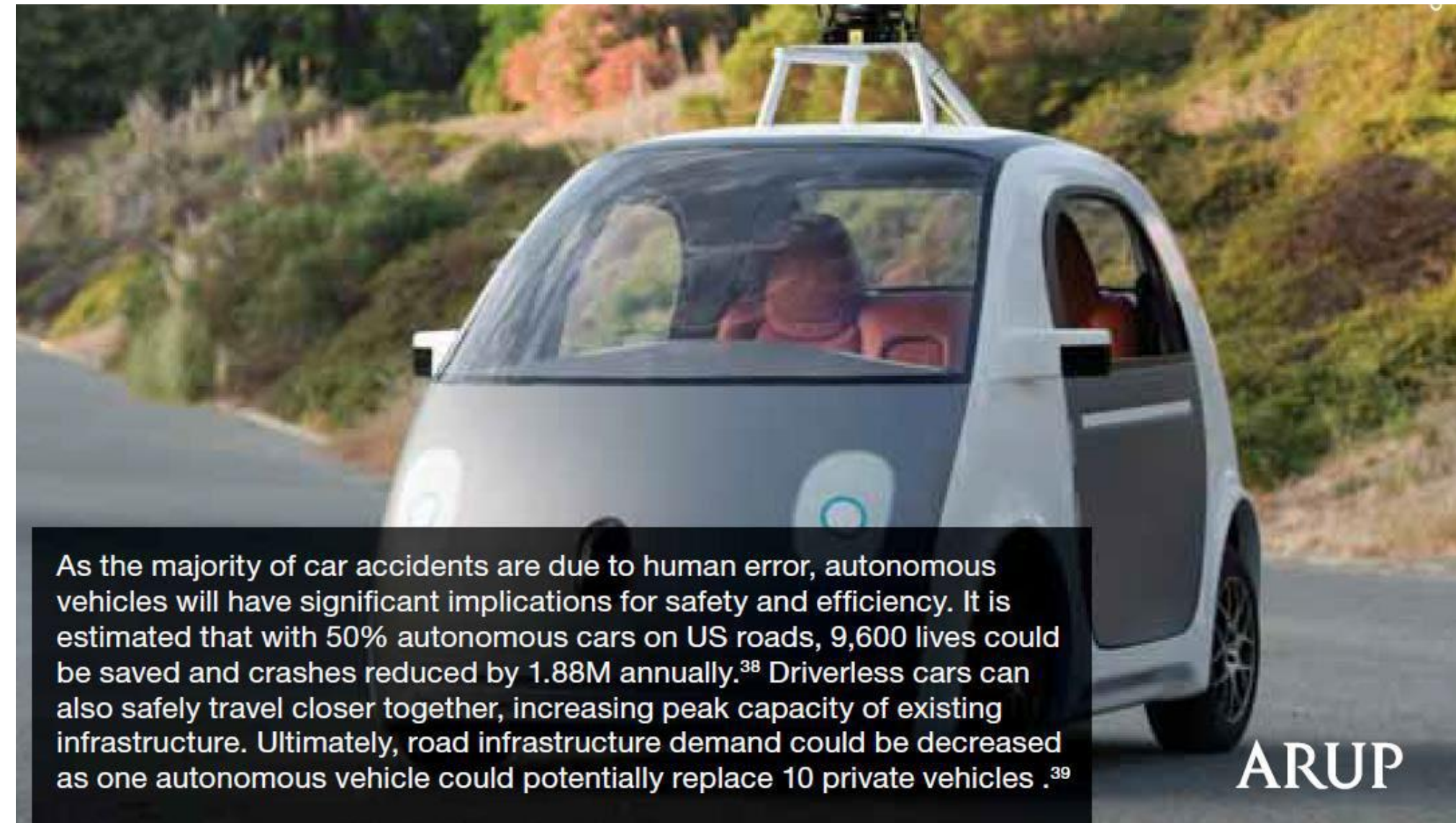


Identifying the problem

The wrong problem is: how do we make cars better?

The right problem is: how do we make cities better?

Meanwhile back on Planet Earth and a neighbourhood near us...



Technology is redesigning retail is reshaping cities:

Everyone—from ride-hailing cars to delivery trucks to bikes and scooters—wants a piece of the curb; how/where will goods be stored/delivered? What does this do to the mall and town centres?

And the private sector offers momentum as malls come to an end and retail reinvents itself in mixed use places: Lakewood become Belmar: the reinvention of a shopping mall as a mixed use place.

When Westfield redesign/exit their in town malls, what next? Reinvent town centres as mixed use?



What will housing look like?

As cities and regions will almost double by 2060: is this the future?

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Is this the alternative future of city-form and density?:
enabled by negative gearing, foreign investment, lax building standards and avoidance of densifying existing suburbs...

Is there an alternative?

How does transport impact the outcomes?

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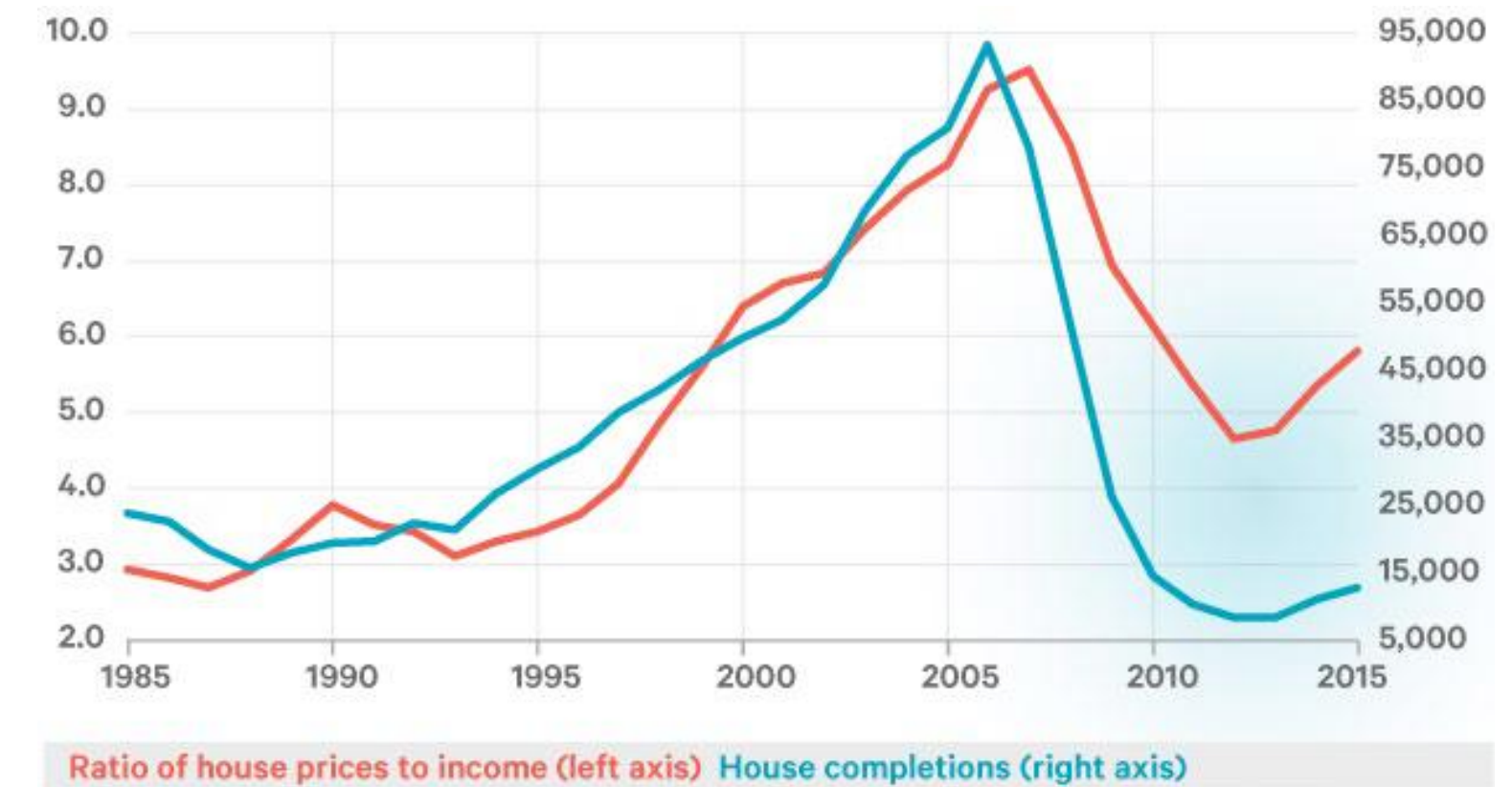
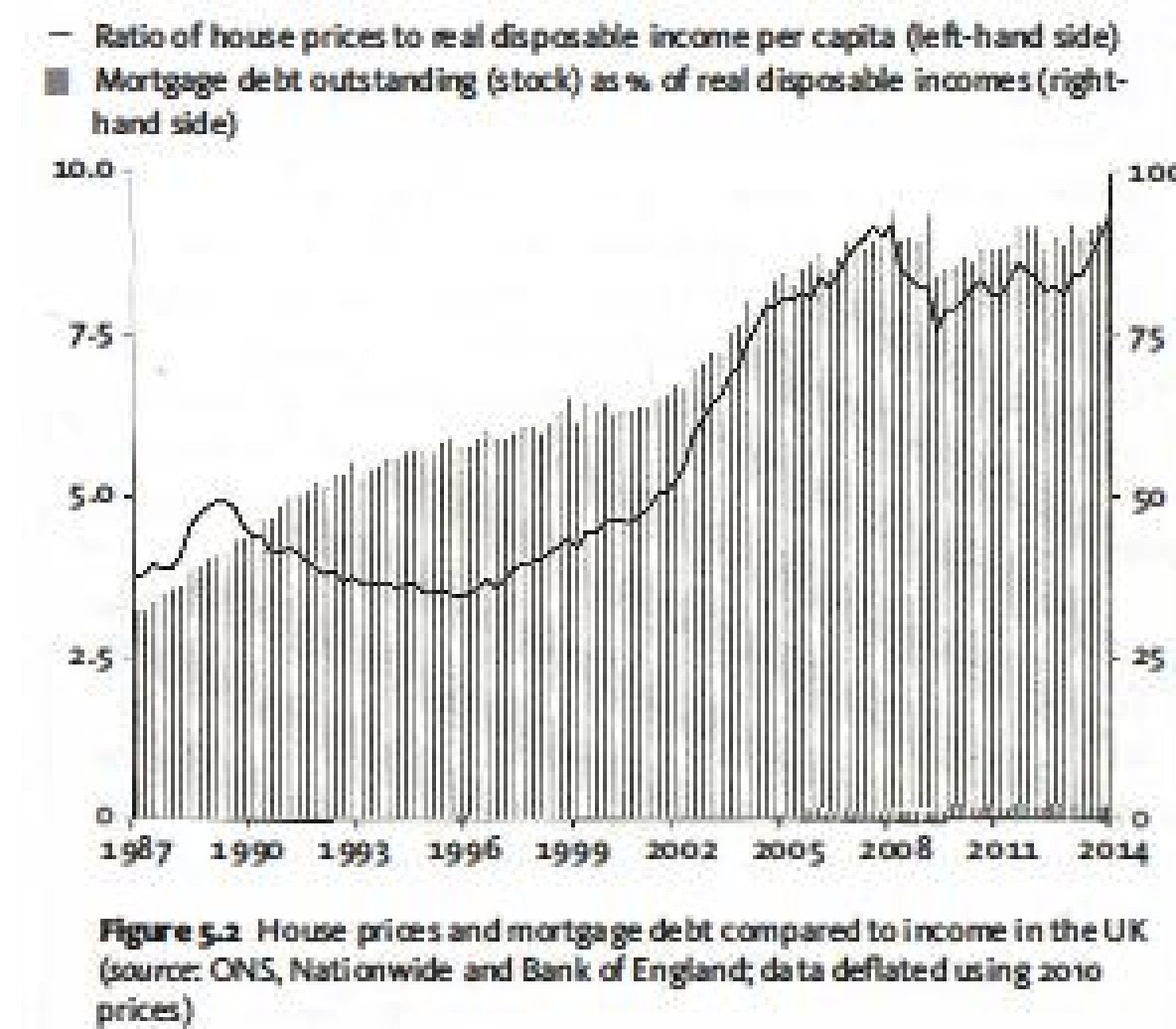
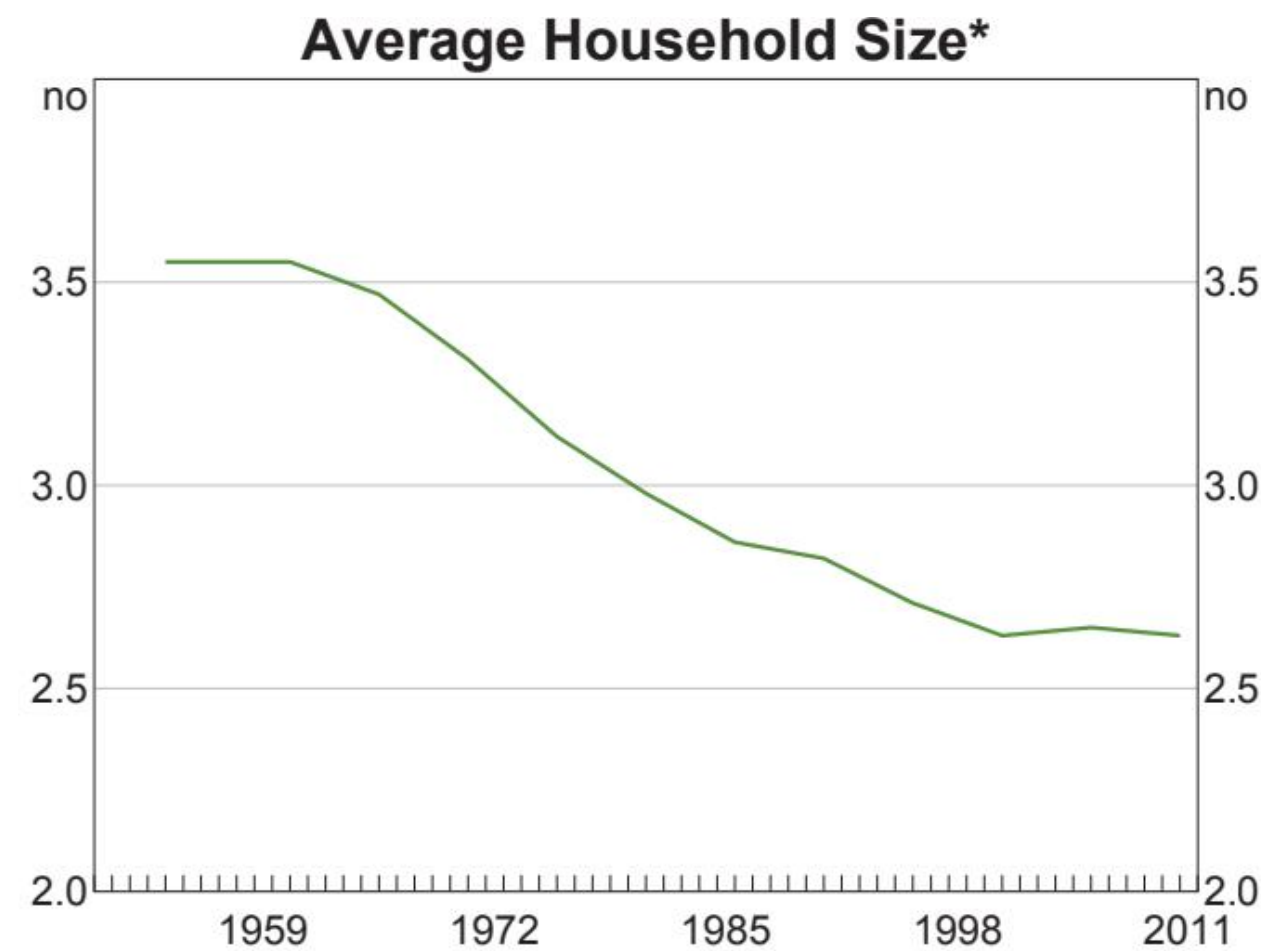
This is a great place prevented by
planning, transport thinking and
development models.

Transport shapes cities/how will
AVs/shared/MAS shape the next city?



Some stats

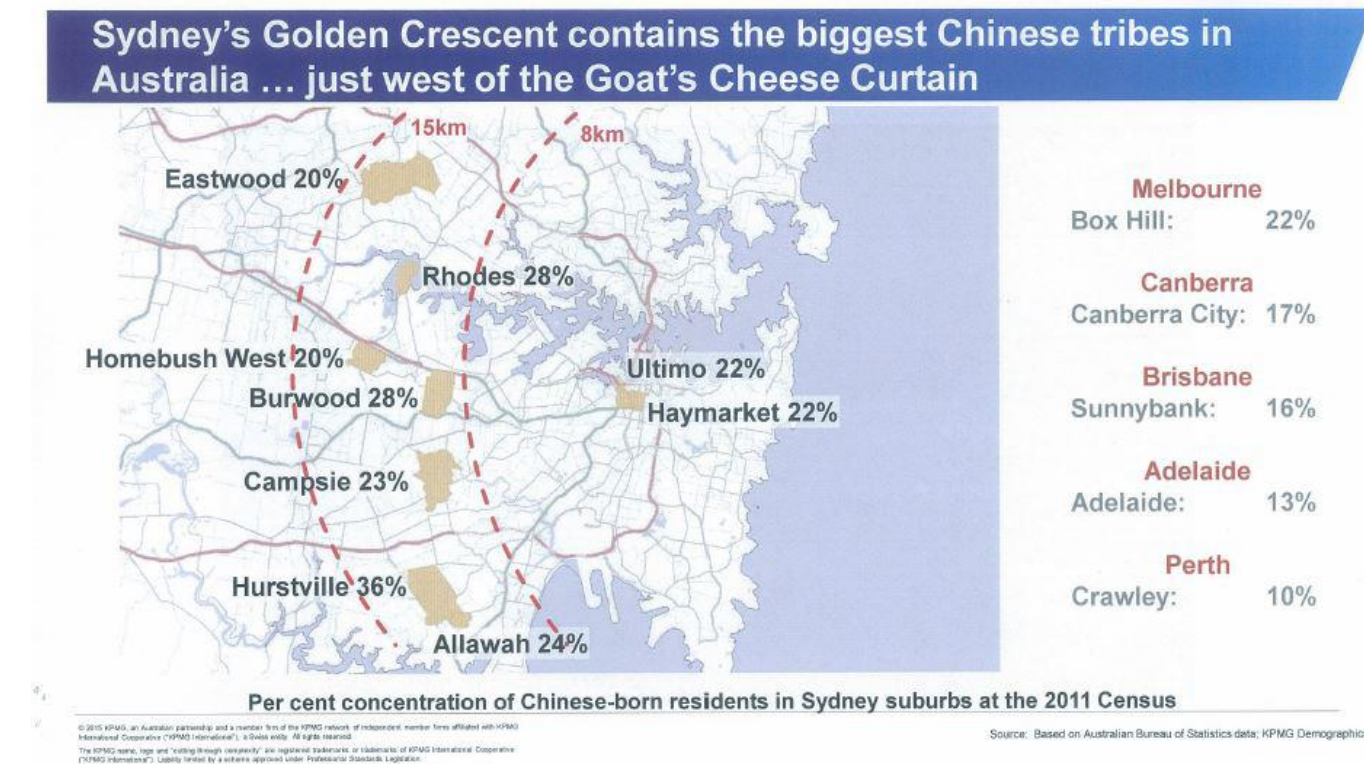
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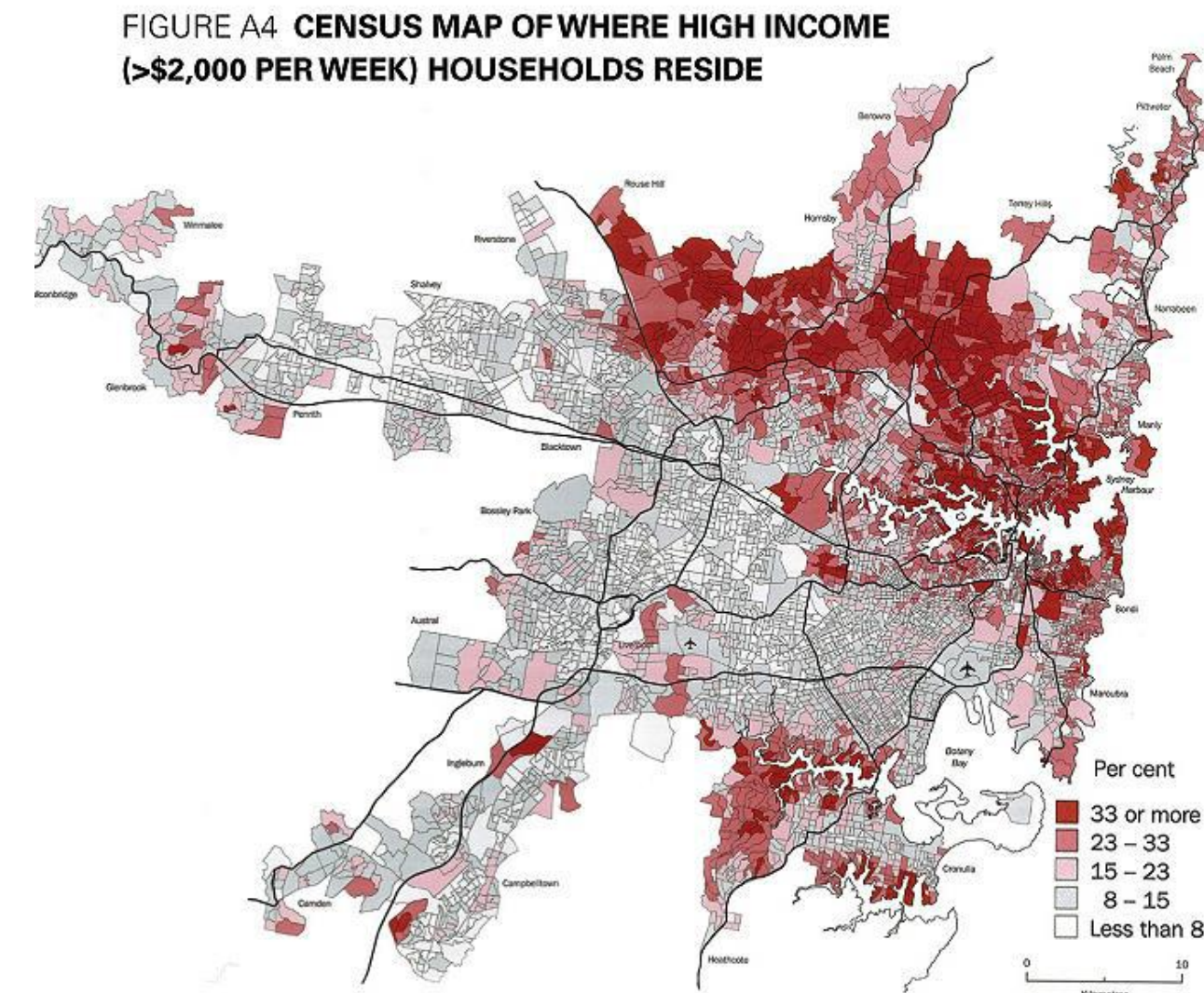
Though I worry we don't understand the present either... Housing? Prices track mortgage debt and thus access to cheap finance not supply: low interest rates and global capital = affordability crisis

One exemplar : Dublin: supply and affordability: prices went up with supply and down when money went away: the norm

Some stats



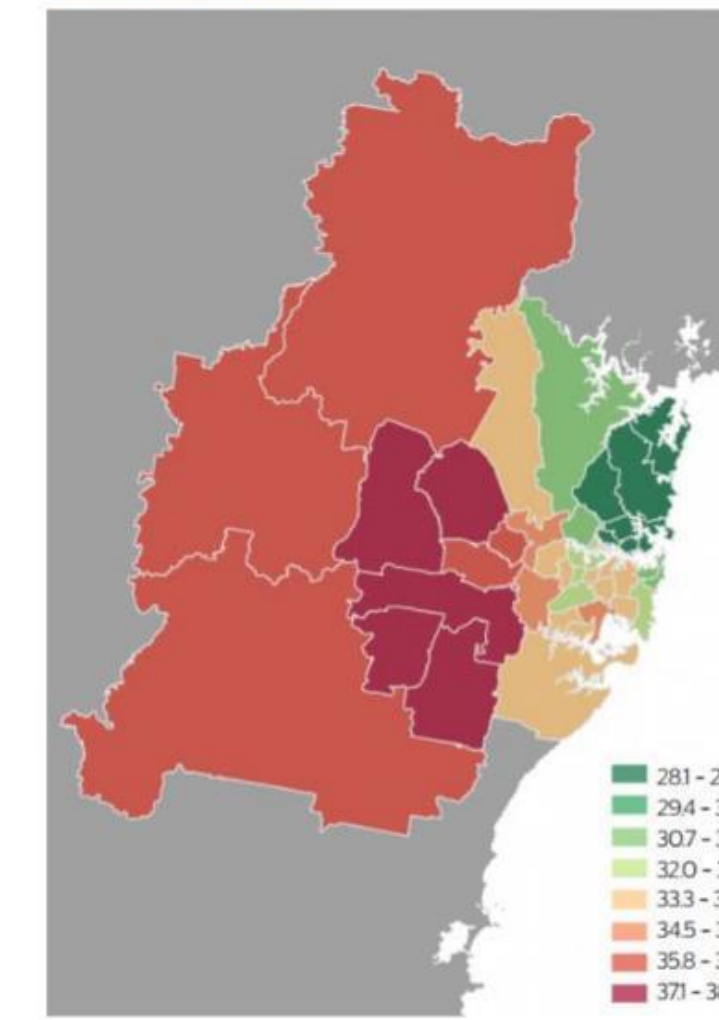
New populations: this trend can only intensify: what will it mean for urban preferences? Up/out?



Where people live next: better off/jobs/walkable is red, most housing now in white with least jobs, PT and walkability: Auckland?

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Figure 13. Occurrence of high body mass attributable deaths by Sydney LGA



Higher obesity rates match the map of lower density development, poor access to public transport and the relative physical inactivity of communities due to lack of walkable precincts

The structure of Sydney is not only dividing us, it is making some communities ill. Walkability and PT issue.

The West has low% of what Leinberger calls 'Walkable Urban' precincts and we see the results economically and in health: key policy must be to expand walkability of WS

And the result isn't just annoying or minor: obesogenic urban form is highly deadly/unliveable: the only density policy being met!

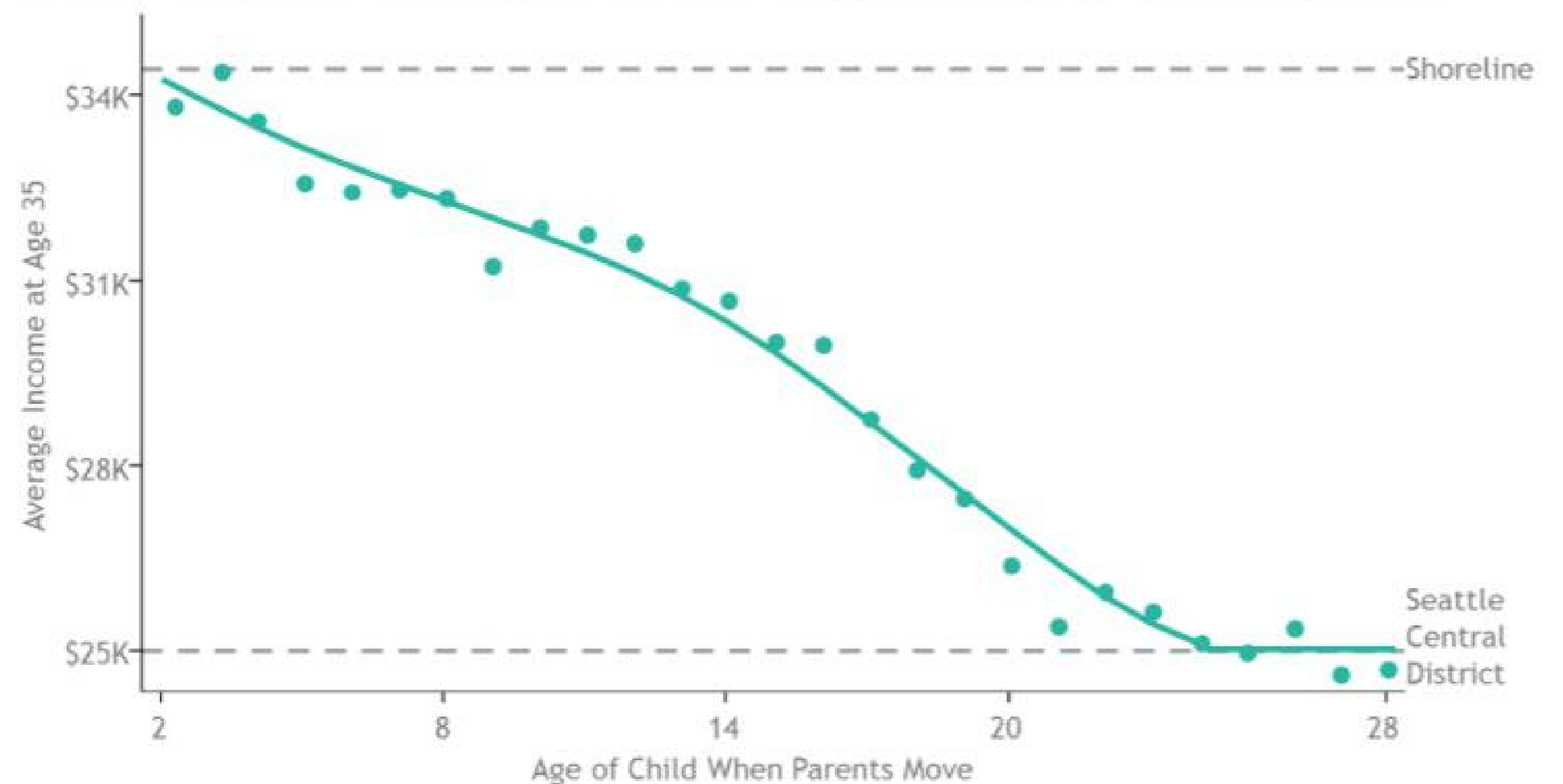
Public Policy

Having more public housing and where to put it

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The ‘opportunity bargain’ is when a move is to a neighbourhood which generates good outcomes for children but not high rents.

Income Gain from Moving to a Better Neighborhood, by Child's Age at Move



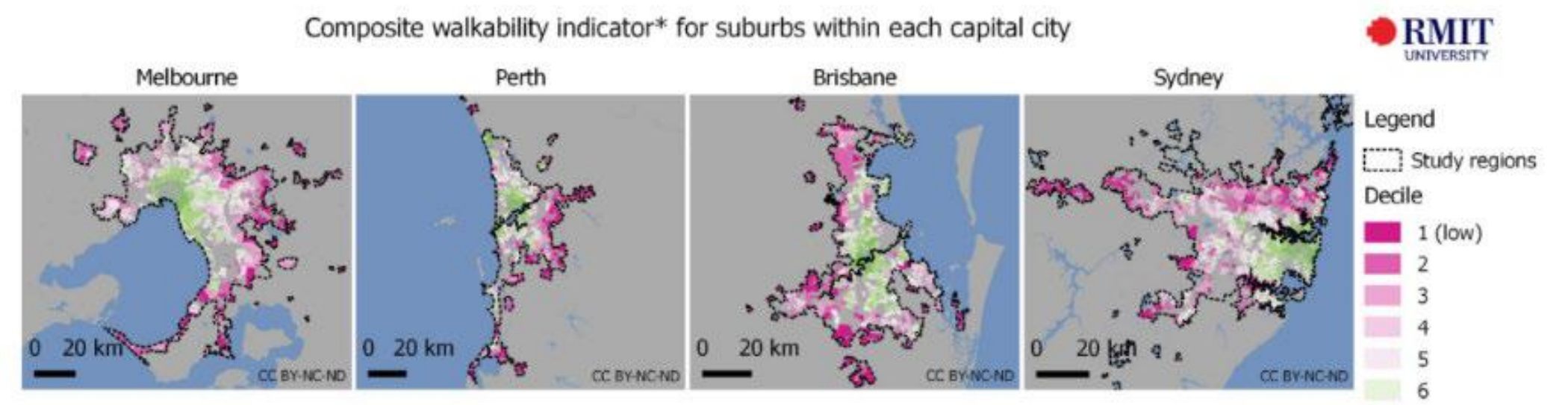
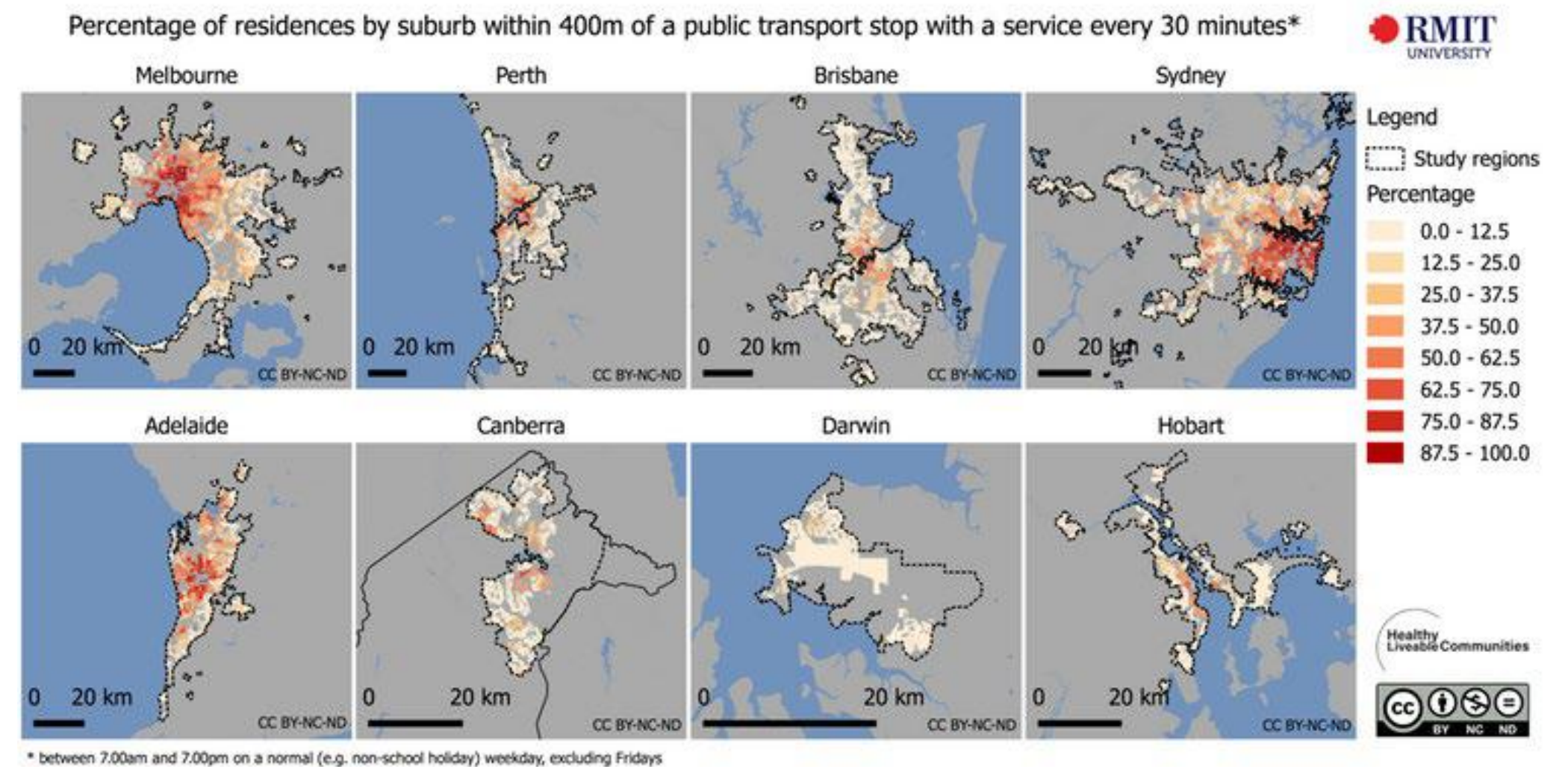
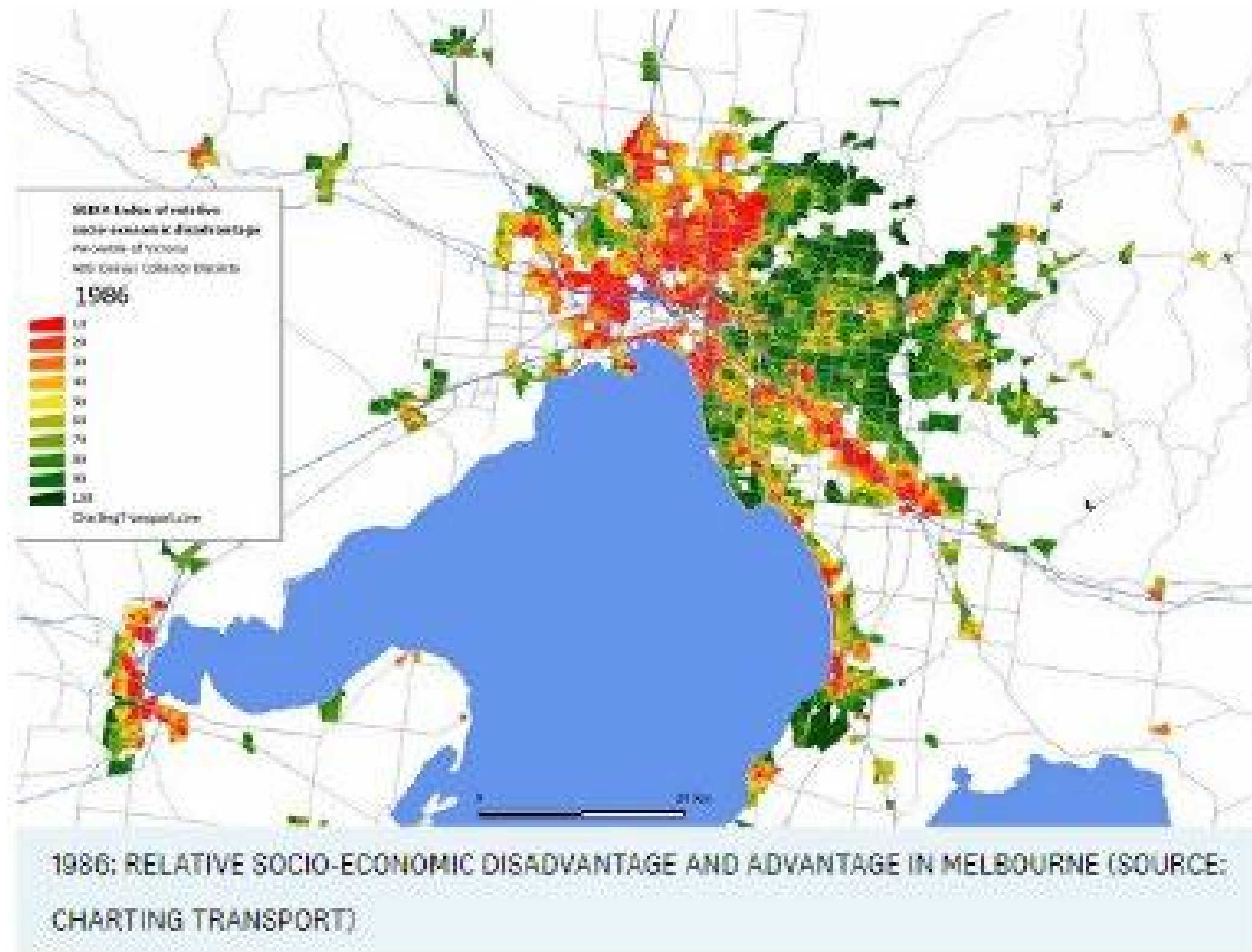
Predicted Earnings at Age 35 for Children Raised in Low-Income Families who Move from Central District to Shoreline in Seattle, by Child's Age at Move



Liveability

Are these awards really regarding inner city areas?

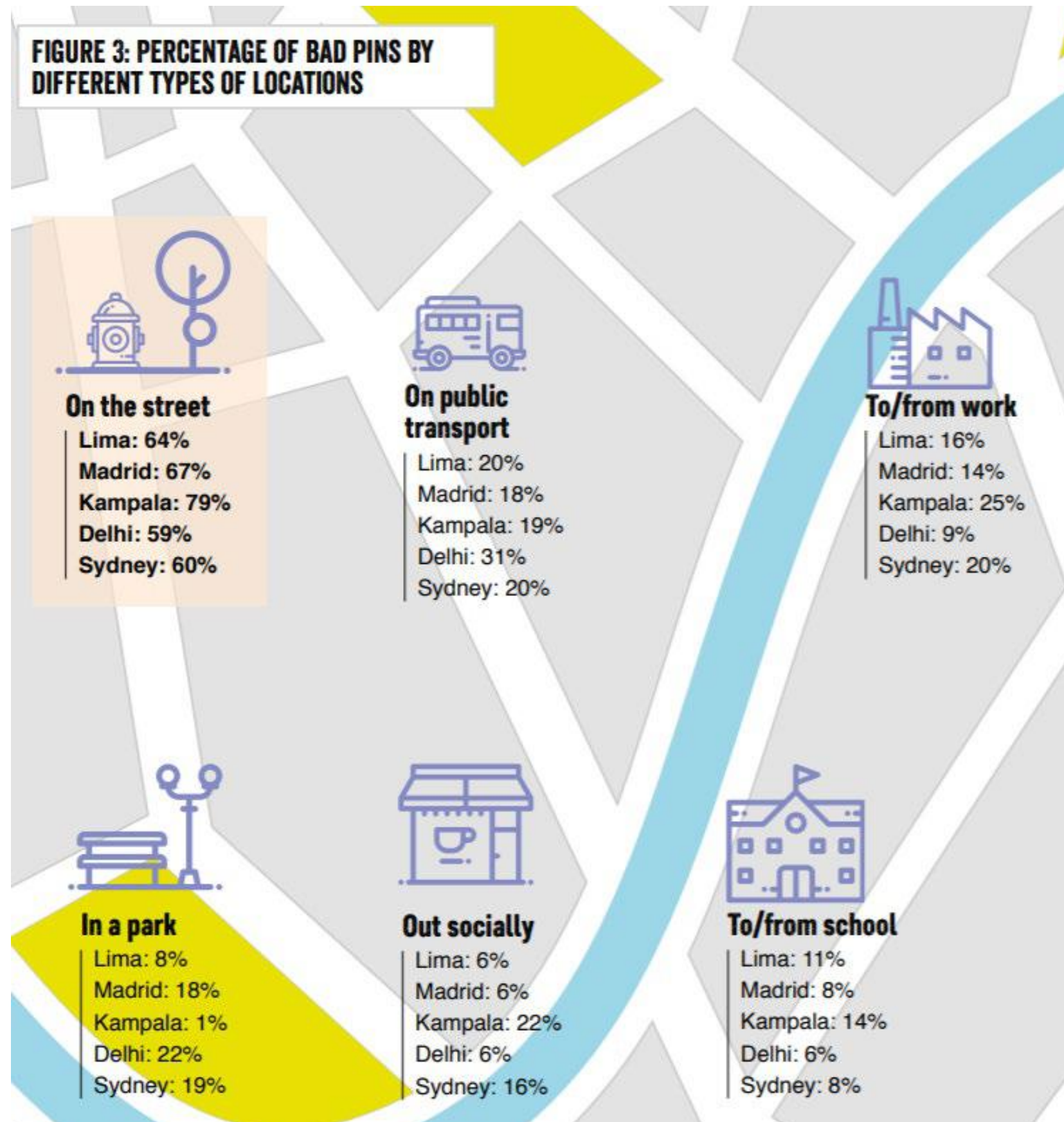
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Liveable for whom?

Free to Be research

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Walking it off Restore grid!

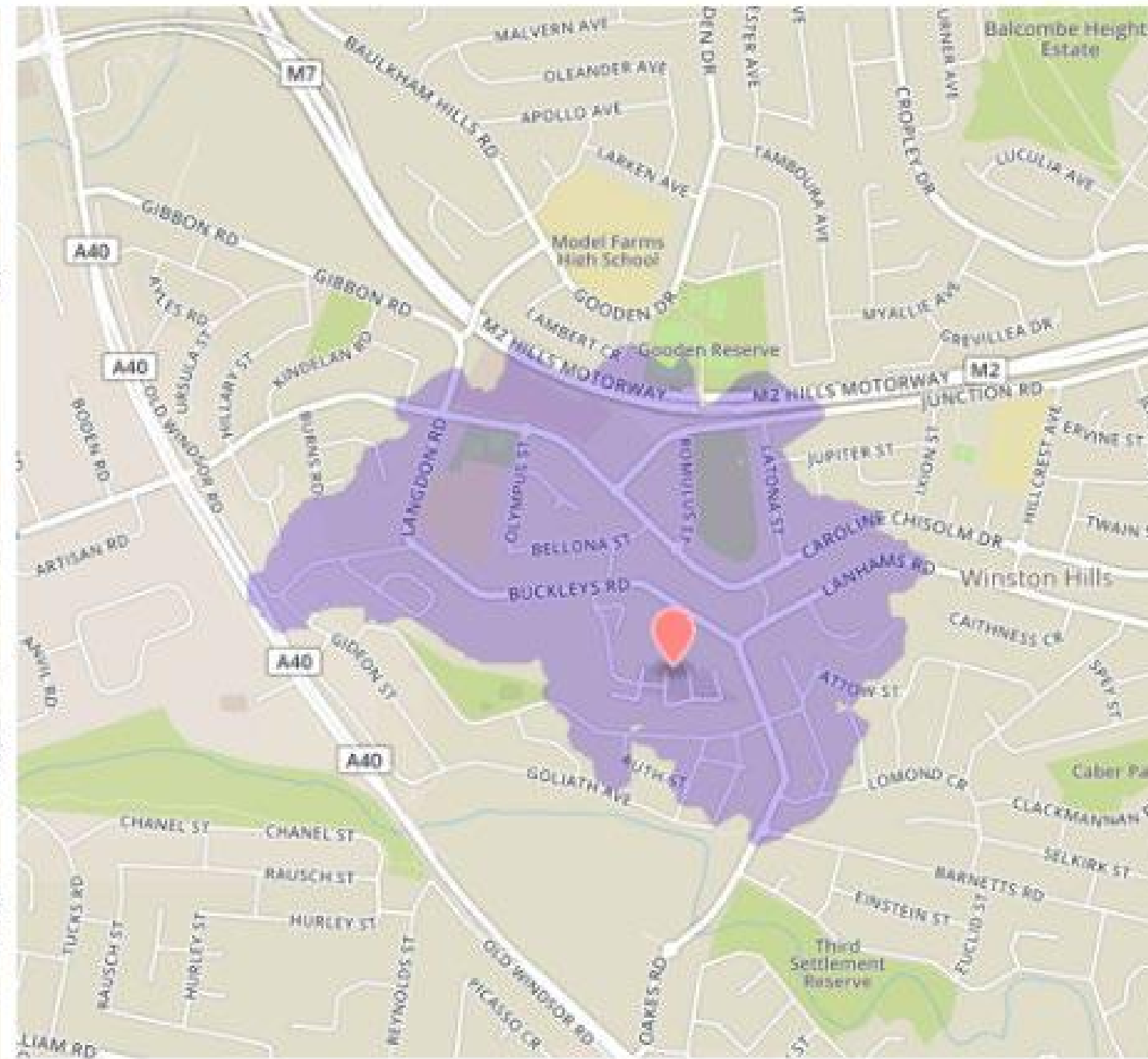
Retrofit suburbia: make greenfields walkable

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Auburn

5 kilometres SE of Parramatta
Grid street layout
234 hectares can be reached

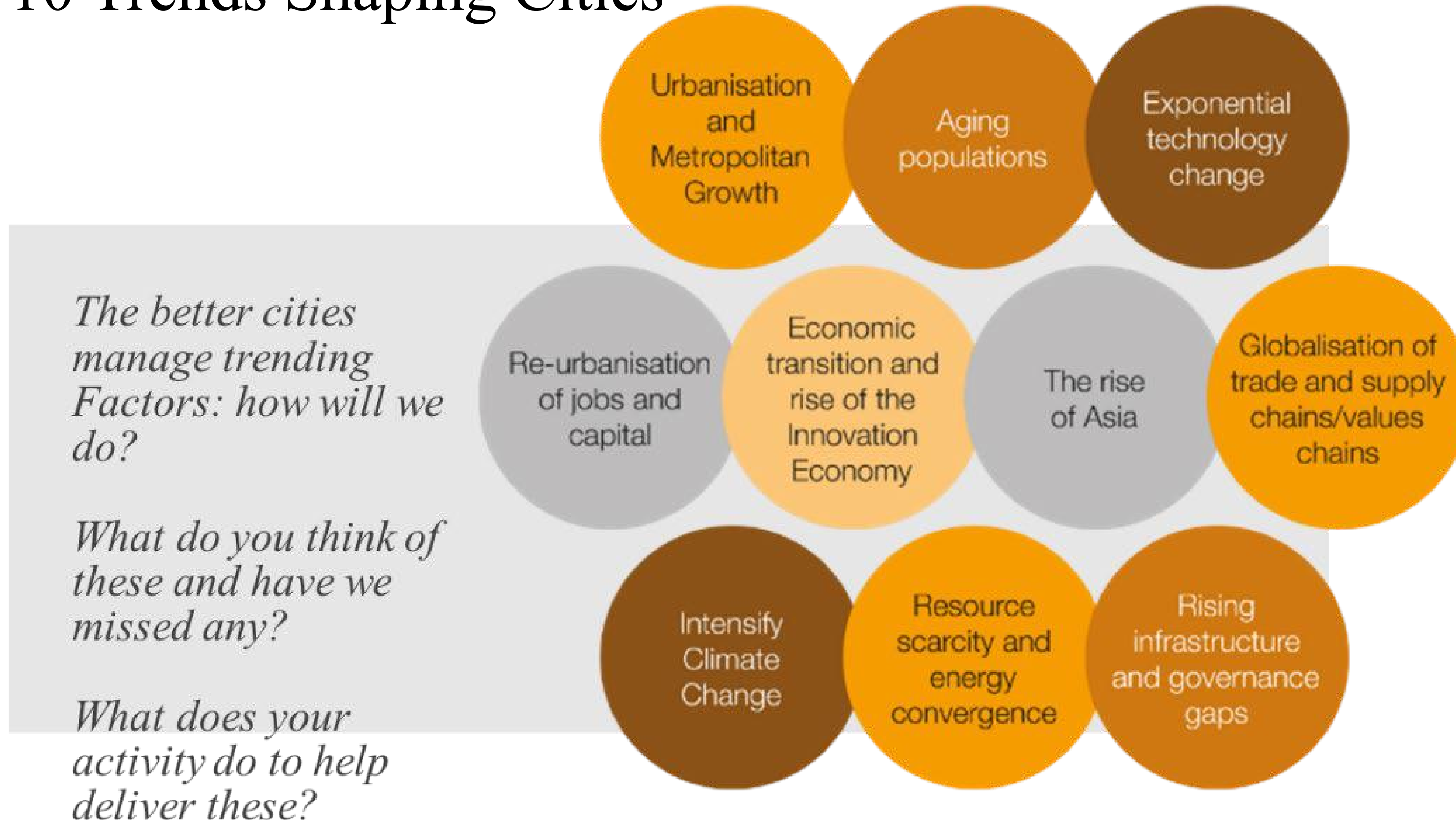


Winston Hills

5 kilometres NW of Parramatta
Circuit and cul-de-sac street layout
82 hectares can be reached

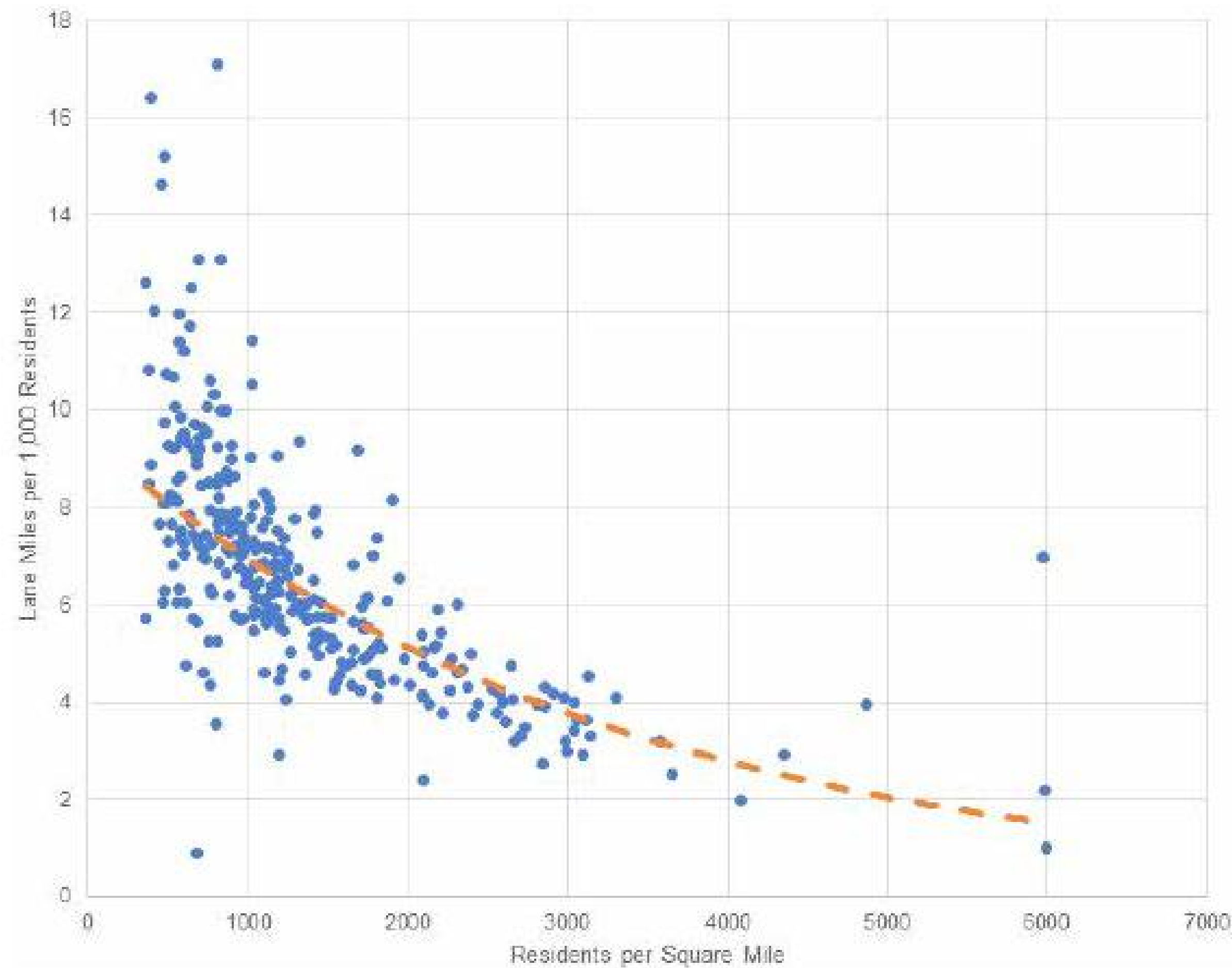
10 Trends Shaping Cities

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Transport choices mis-shape cities

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Source: US Federal Highway Administration⁴⁰

Until recently we have like Topsy been happy to grow our cities out without much strategy: which costs government more + leads to social immobility: would this be our model if we had metro governance not silo'd government?

(#Designperth) For every 1000 dwellings developed in infill sites, it costs the government 3x as much to provide infrastructure for greenfield sites

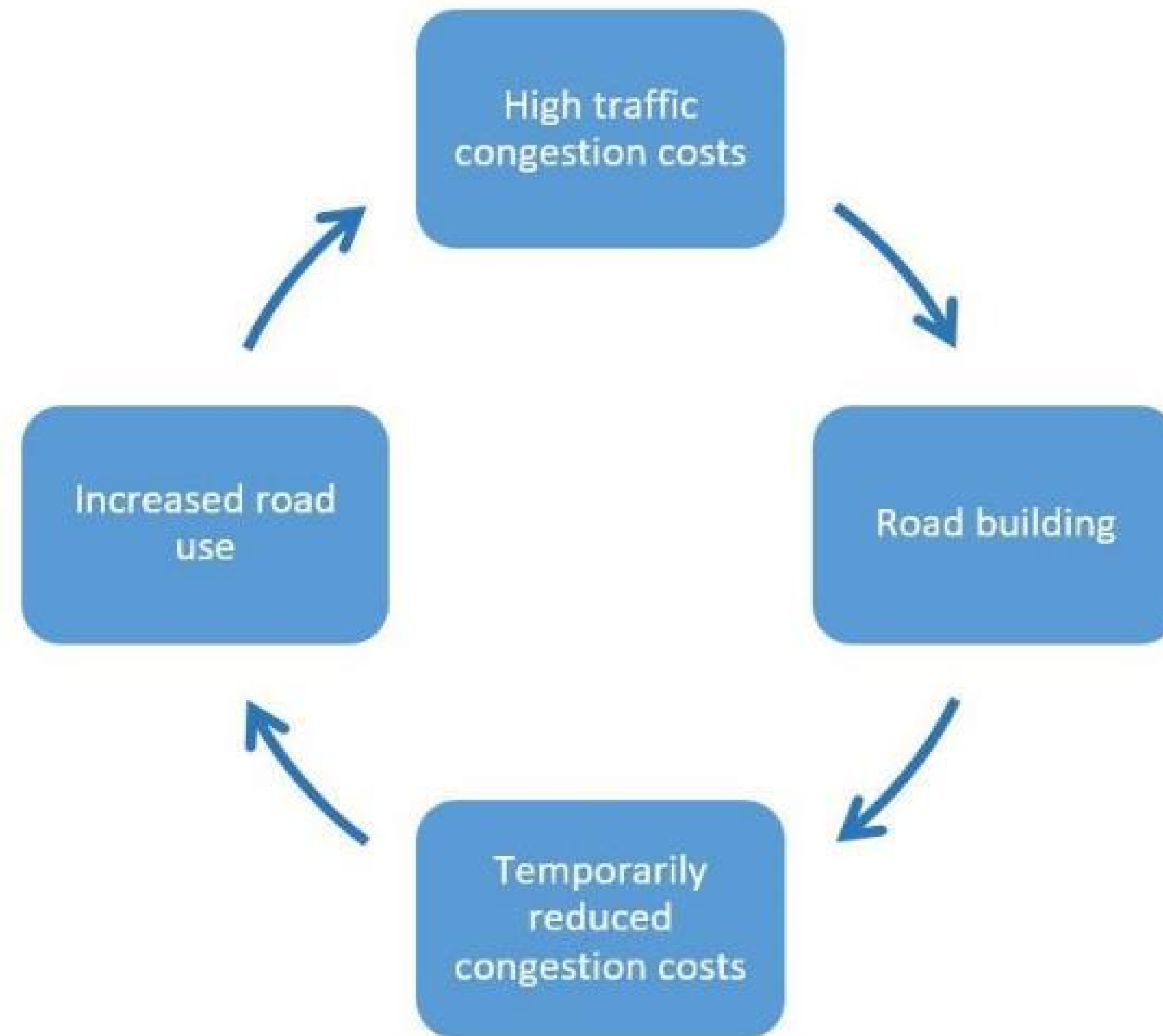
TABLE 1:	INFILL	GREENFIELD	COMPARISON
	cost per lot	cost per lot	cost per lot
Government Infrastructure Costs (upfront costs)			
Roads	\$5,623	\$33,583	\$27,960
Water and Sewerage	\$16,303	\$24,738	\$8,435
Telecommunications	\$2,847	\$4,103	\$1,256
Electricity	\$4,512	\$10,719	\$6,207
Gas	\$0	\$4,080	\$4,080
Fire and Ambulance	\$0	\$334	\$334
Police	\$0	\$429	\$429
Education	\$4,306	\$36,644	\$32,338
Health (Hospitals, etc)	\$22,237	\$35,759	\$13,522
TOTAL COST PER LOT	\$55,828	\$150,389	\$94,561

Source: Trubka, Newman and Bilsborough (2010); Future Perth (2001)

Roads don't decongest

Induced Demand Cycle: road pricing works

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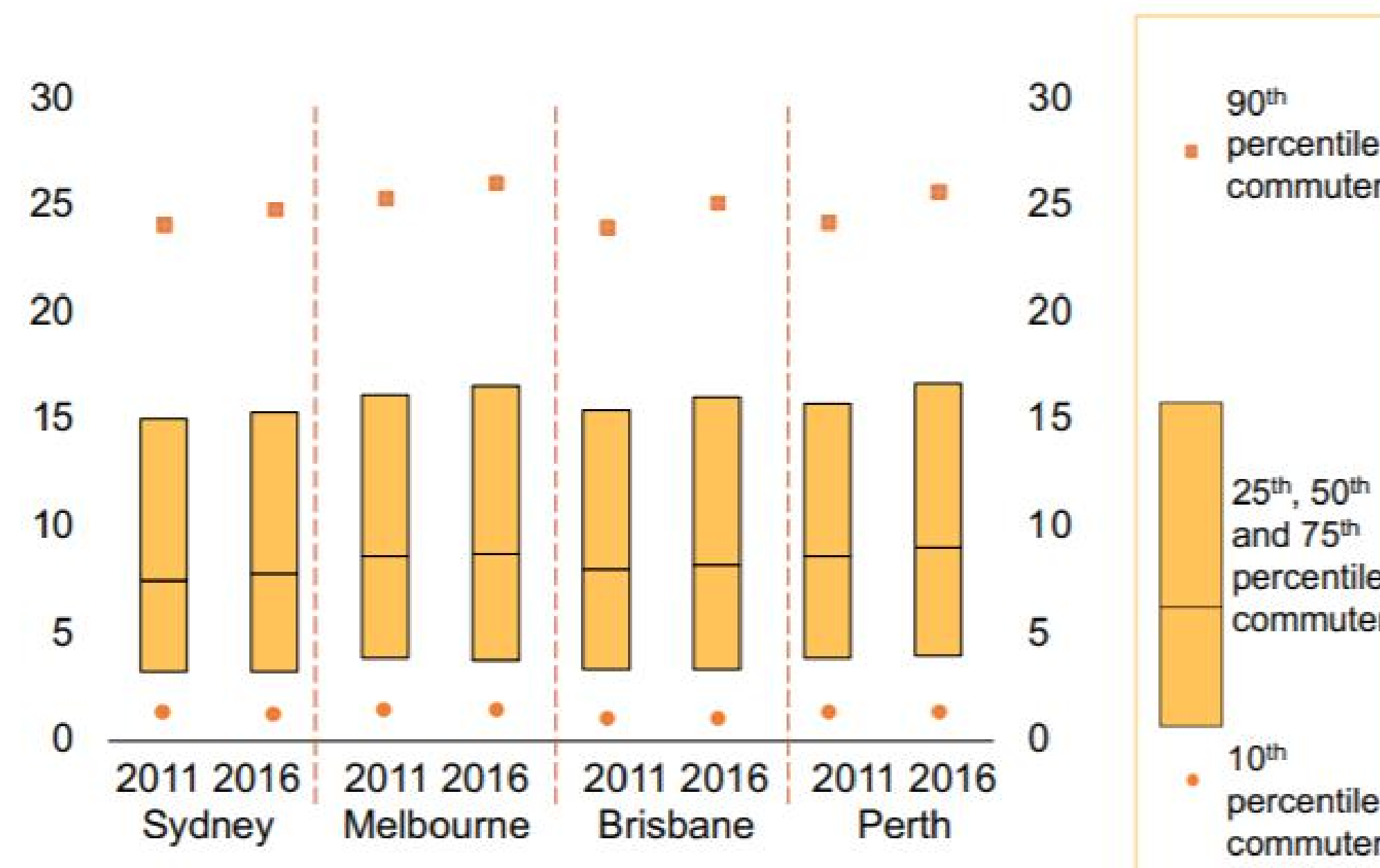


Urban Travel Myths

Things have neither got worse nor better! People move when it gets too long/arduous?

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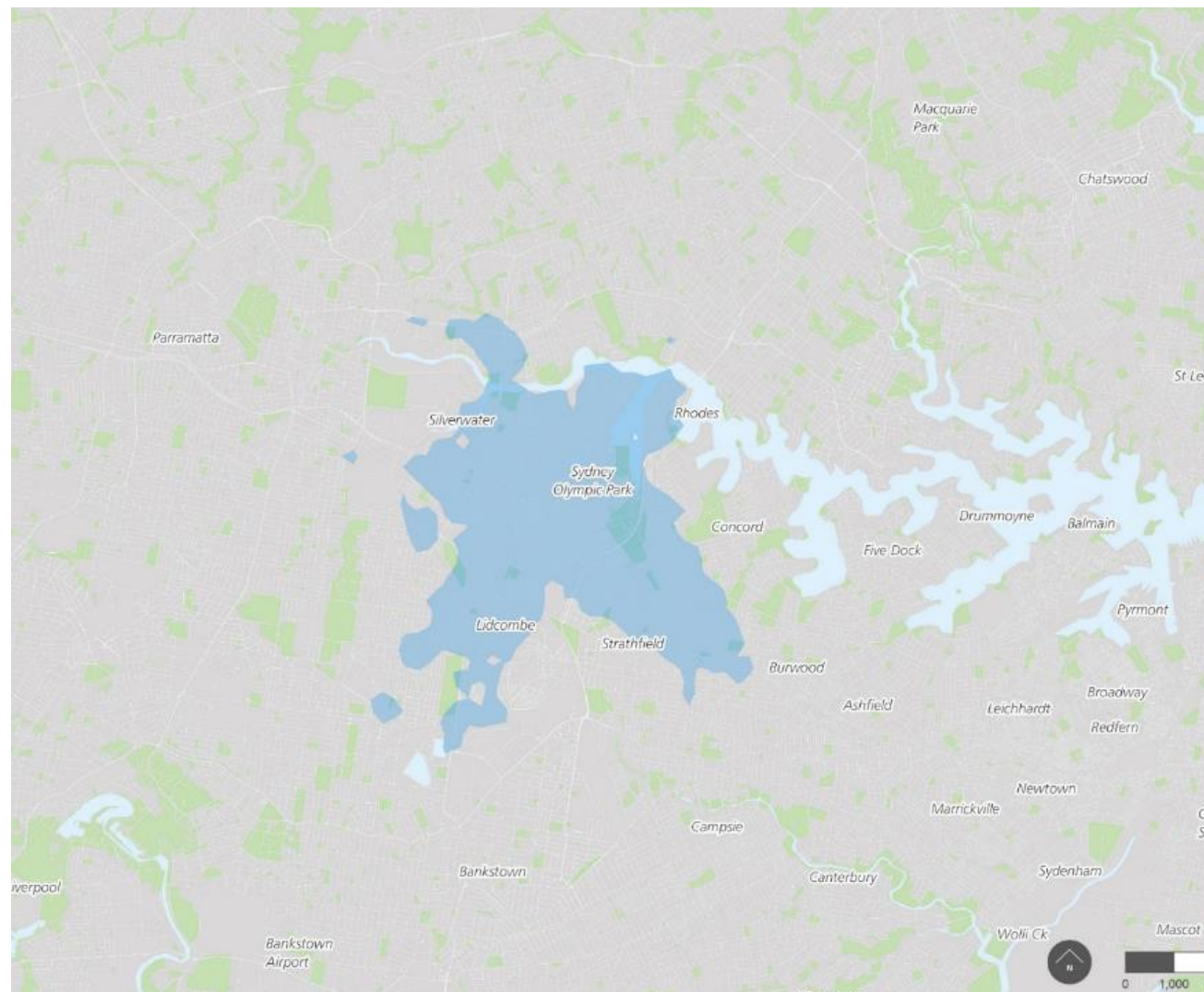
Figure 1.6: Commuting distances have barely changed in Australia's biggest cities
Beeline distance to work (kilometres)



Sydney example

Shaping transport project (one we've worked on)

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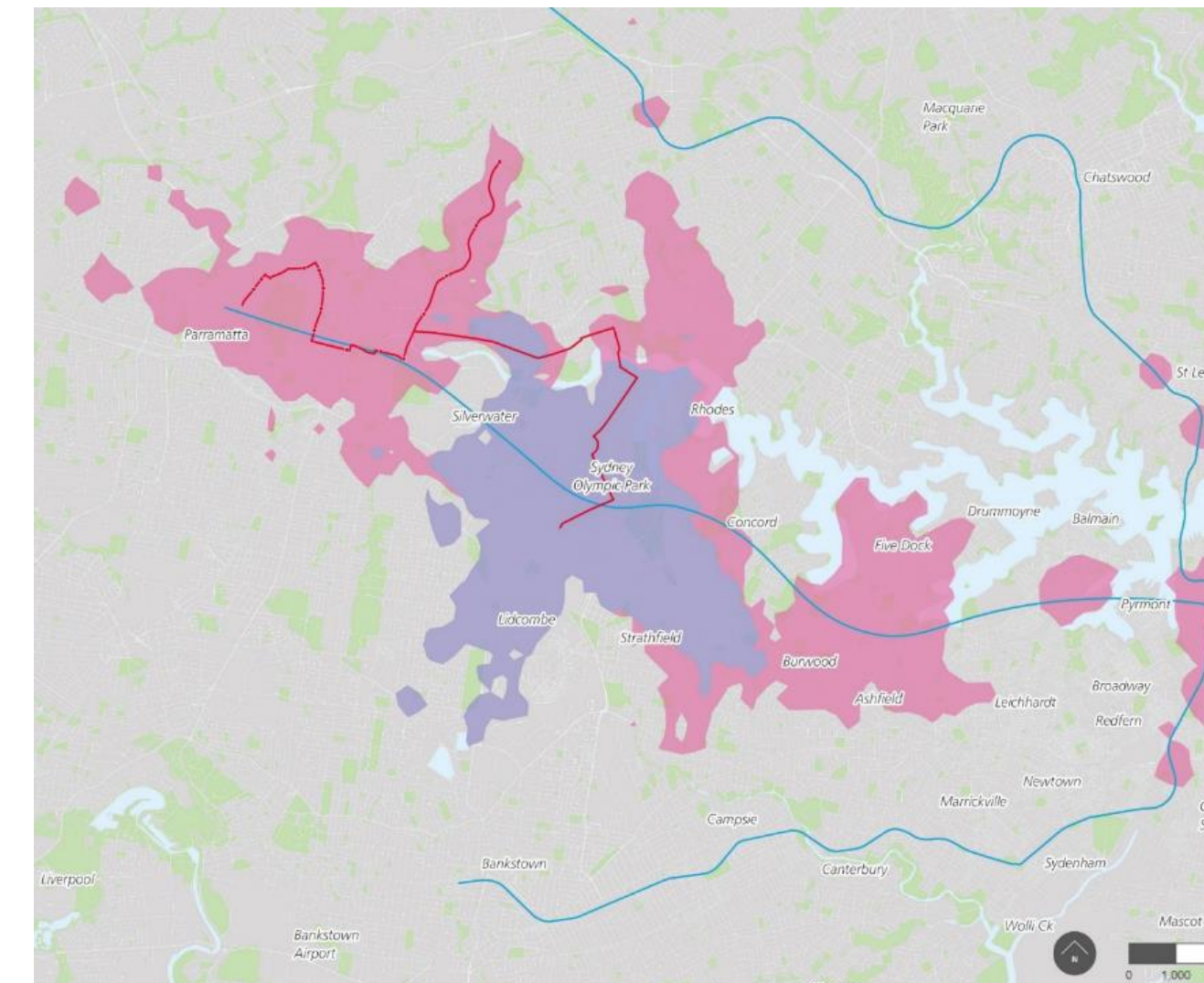


Current 30 minutes catchment

Sydney Olympic Park (today)

Jobs within 30 minutes travel time by public transport of SOP: 76,000

Residents within 30 minutes travel time by public transport of SOP: 107,000



*Purple: Current 30 minutes catchment
Pink: 30 minute catchment in 2026 with Metro and Light Rail*

To 700,000 jobs. We need more of this don't we? Or does AV/EV kill this?

Knowledge jobs to places with amenity, walkable, PT

Comparing traditional innovation spaces and innovation districts

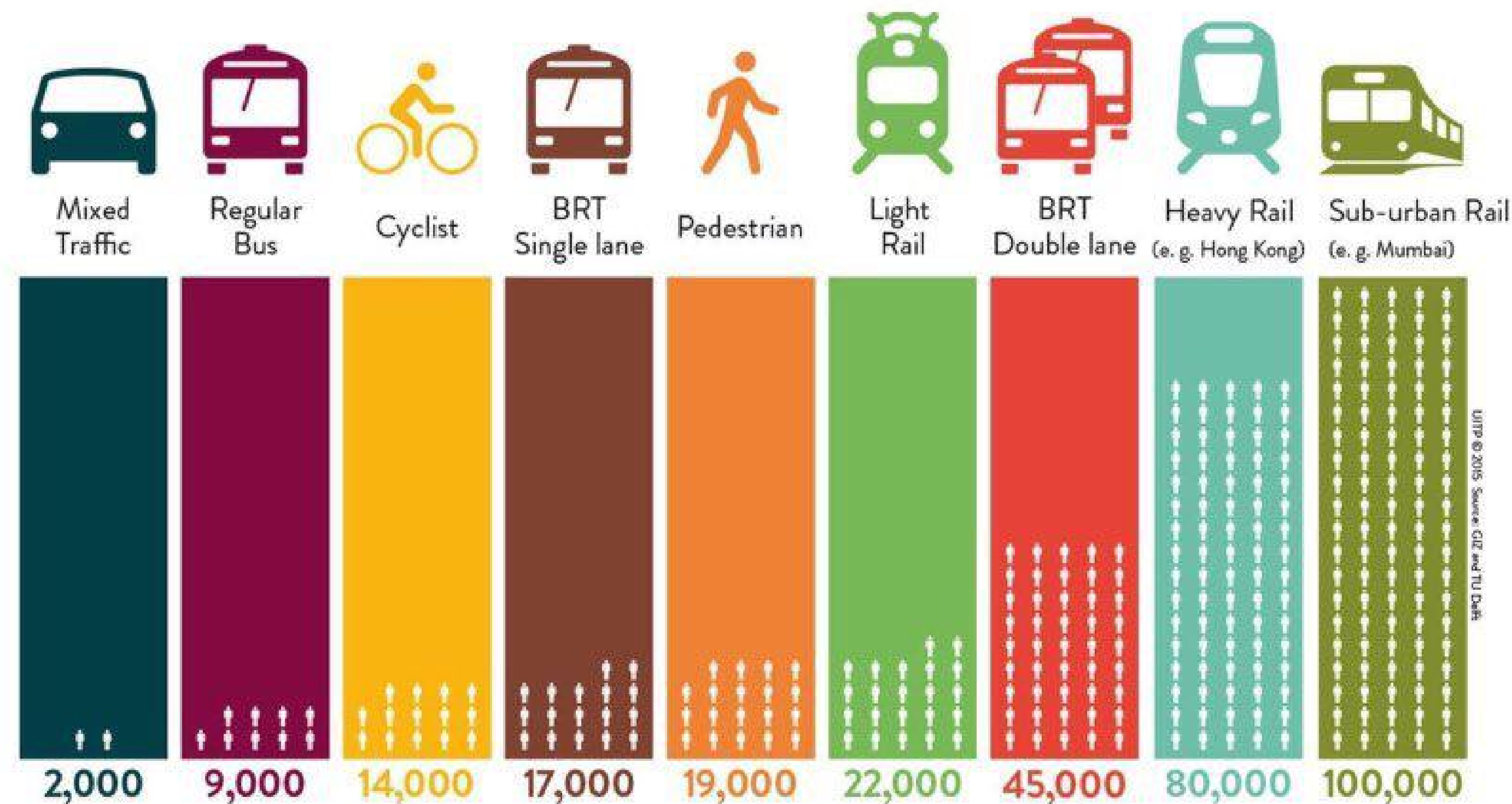
TRADITIONAL INNOVATION SPACES	INNOVATION DISTRICTS
Accessible by car	Accessible by public transport, and walkable
Spatially Isolated	Located in downtown, mid-town or ex-industrial urban areas*
Sprawling corridor or Campus Layout	Physically compact
Predominantly research or commercial space	Mixed use
Often built on green field sites	Built on brownfield sites

*Katz and Wagner's report also include the 'reimagined science park' – districts in suburban or exurban areas where have been densified and redesigned to include more urban-style mixed use.

PT supports economic agglomeration and functioning of cities in knowledge / agglomeration economy

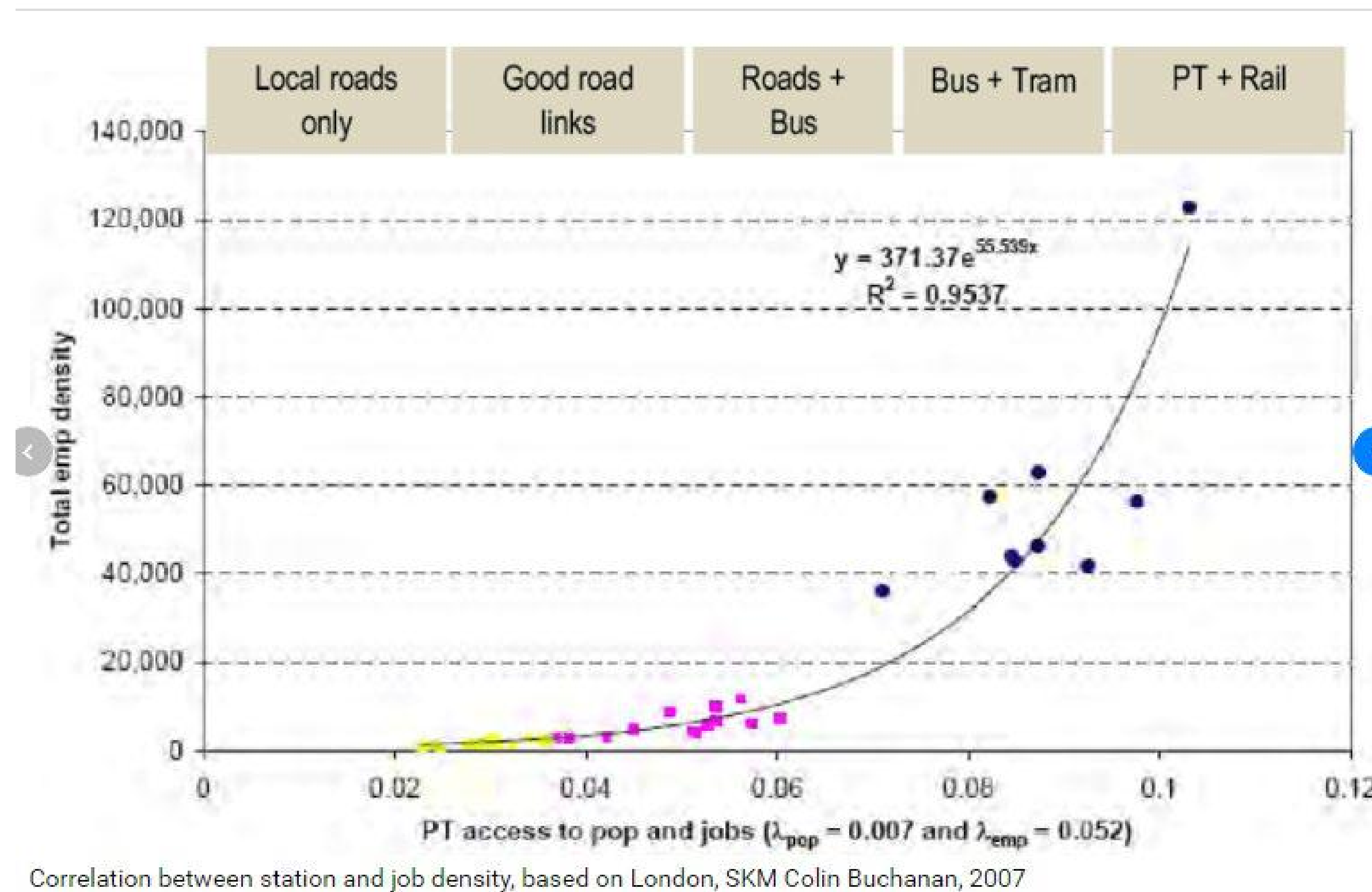
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Corridor Maximum capacity of urban transport modes, in persons per hour in both directions



Job density and public transport correlation: this graph persuaded UK Parl to back Crossrail+levy

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HIGHER SPENDS

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Source: Raje and Saffrey, 2016



Over a month, people who walk to the high street spend up to

40% more



than people who drive to the high street

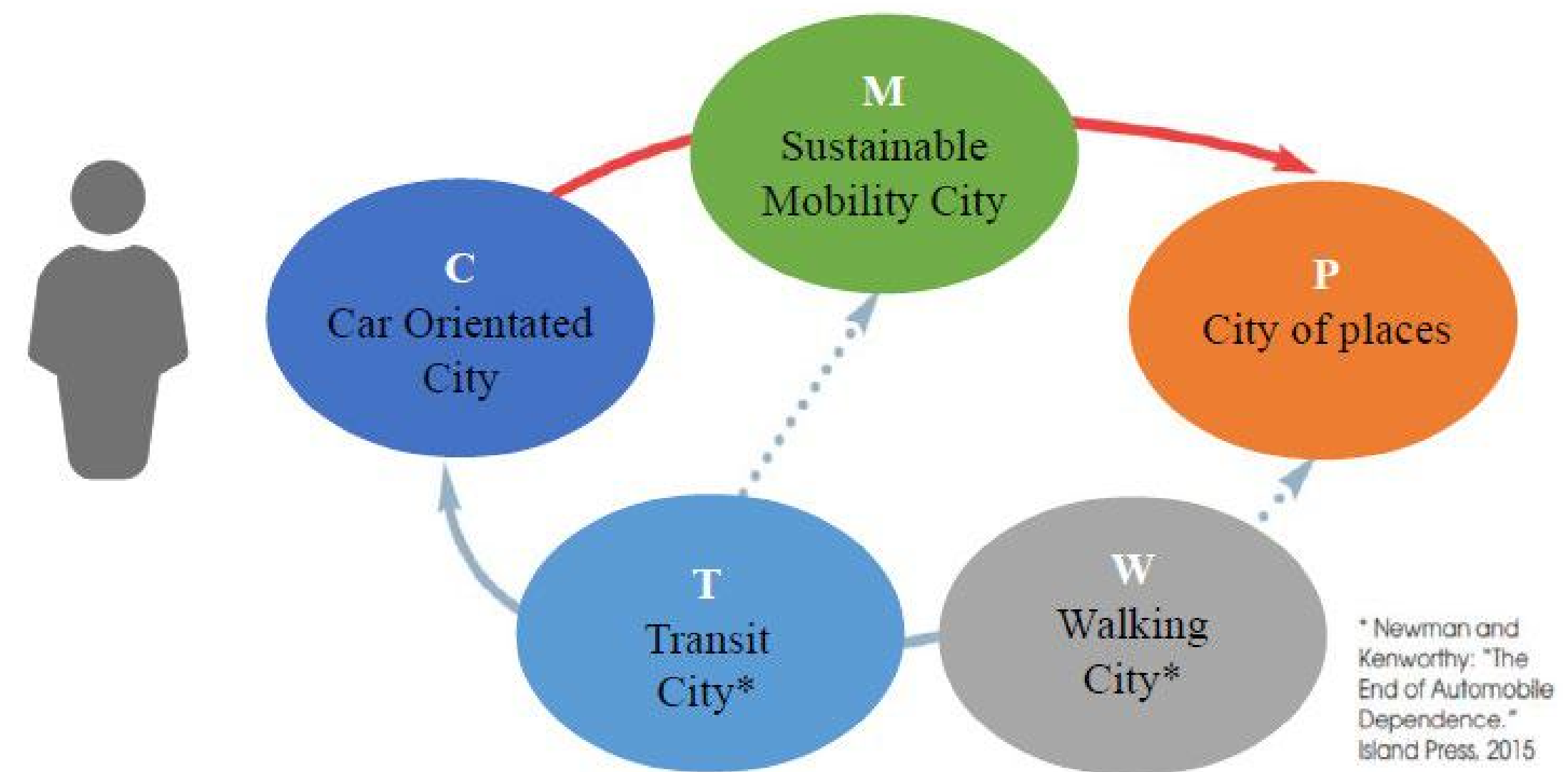
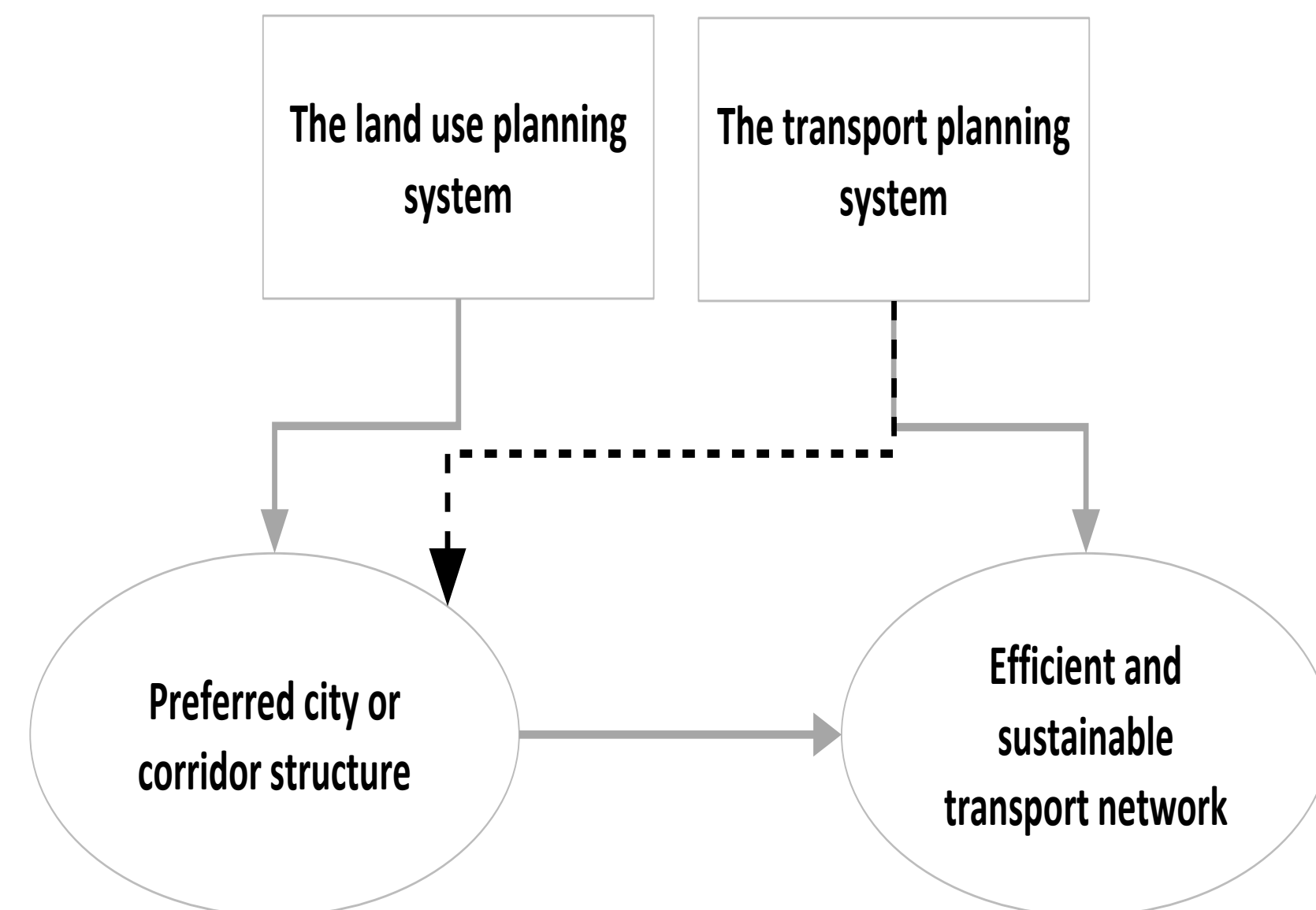
Source: TfL, 2013

Better land use and transport integration

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They know need to better align land use planning and transport planning and value land use changes in transport appraisal.

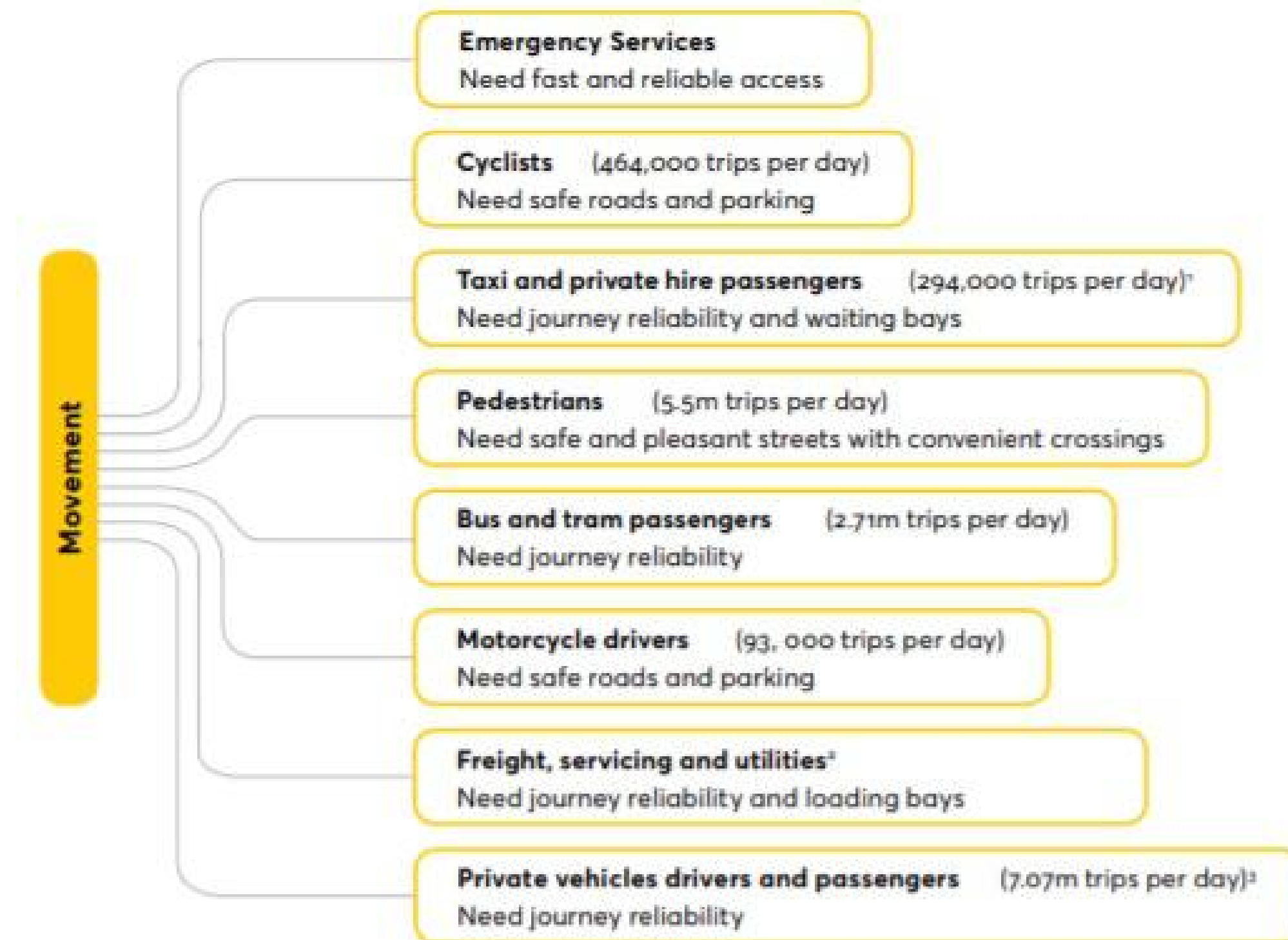
Transport is the most significant factor shaping the built environment. Place is becoming more important.



Movement and Place

And Movement vs Place

ARUP



Approach

Traffic Oriented Planning

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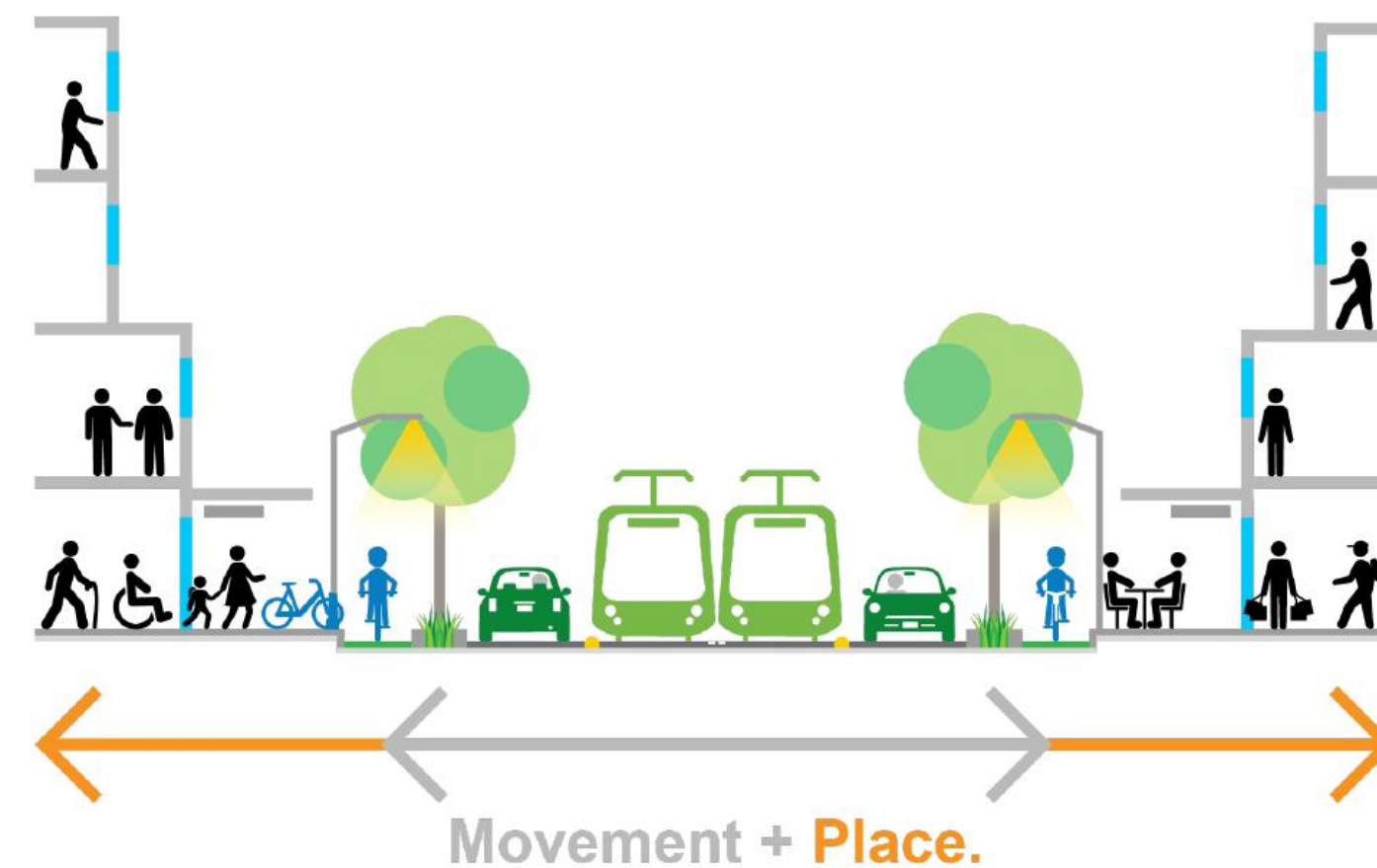
TRADITIONAL

A focus on vehicle speed, movement efficiency and road capacity for traffic.



OUTCOME LED DESIGN AND DECISIONS

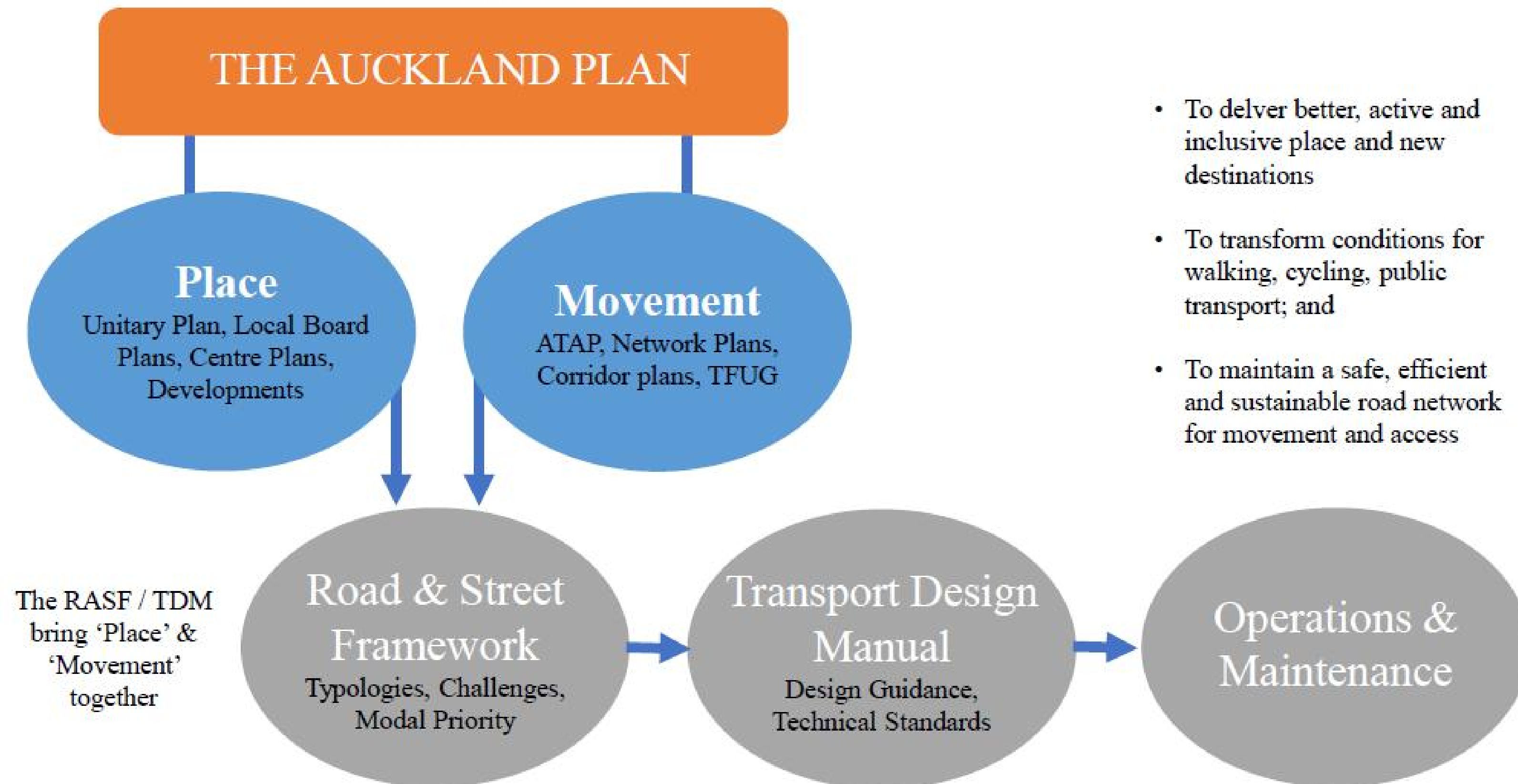
Movement and Place.



Strategic Context

The Auckland Plan

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Strategic Context

Not all city-shaping requires big capital!

..not all city-shaping requires big capital
on transport projects : as NYC local
initiative here shows...



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Small change – big impact

Palmers Green Play Quater

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Neighbourhood street network closed off
a few hours each day: community
politics...



Scale doesn't need to be big

Targeted / dedicated team

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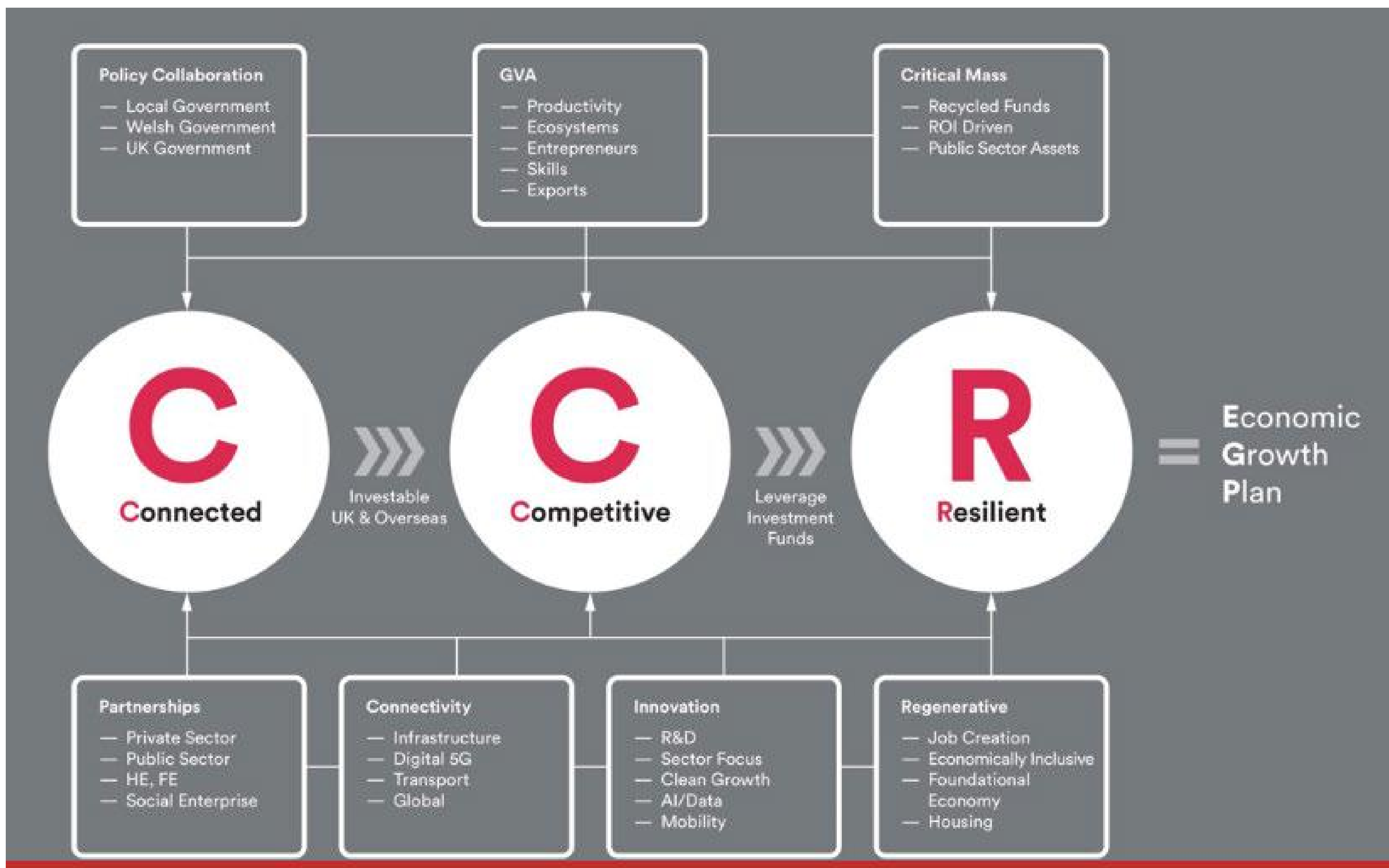
NEWCASTLE RENEWAL – FORMERLY VACANT
STOREFRONTS ARE NOW COMMUNITY DESTINATIONS



NOT ALL CITY SHAPING INFRASTRUCTURE IS
TRANSPORT WE ALL NEED MORE FIBRE!

Chattanooga reinvented its economy around it:
leverage the hell out of any infrastructure

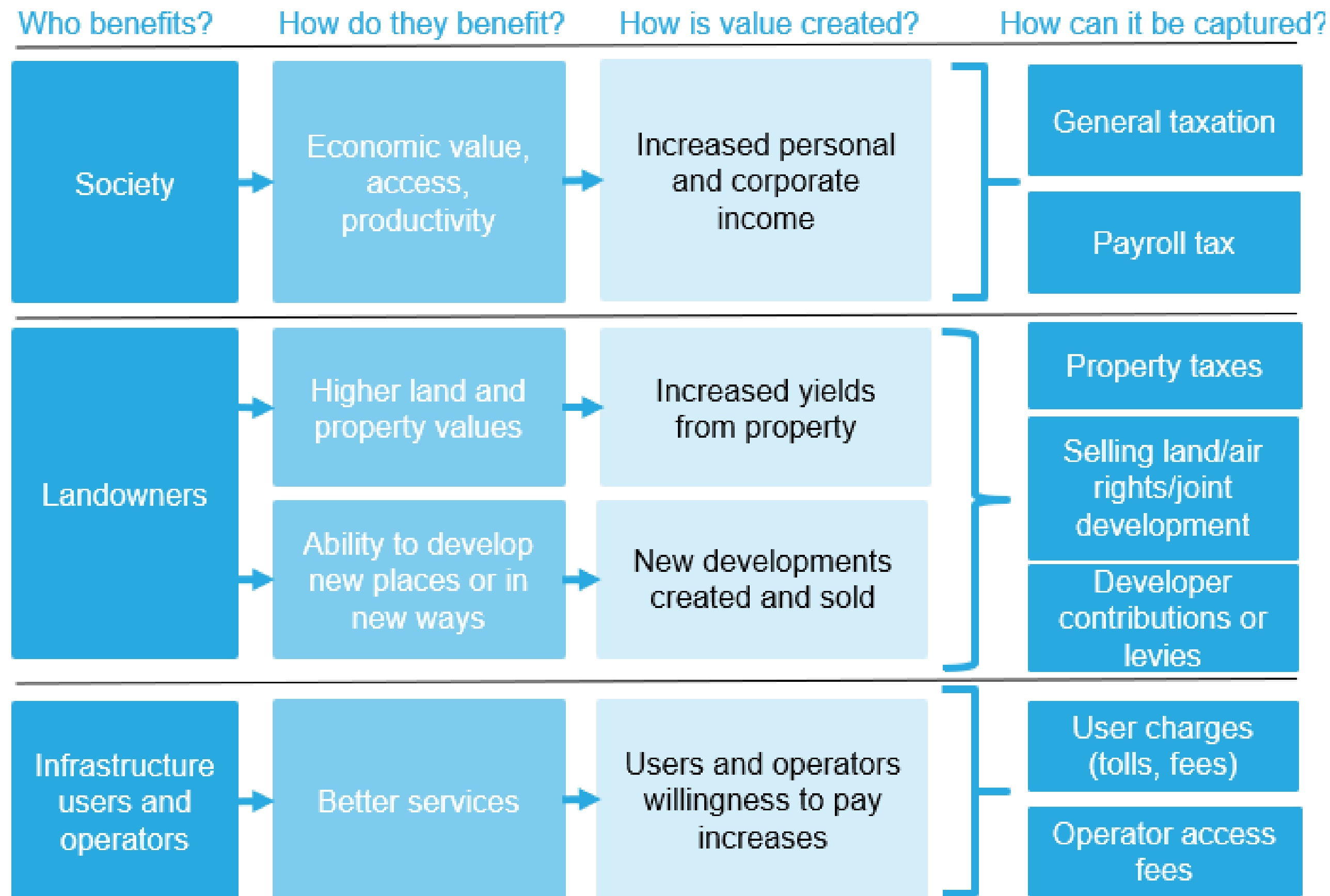




Leveraging income streams

How can it be captured?

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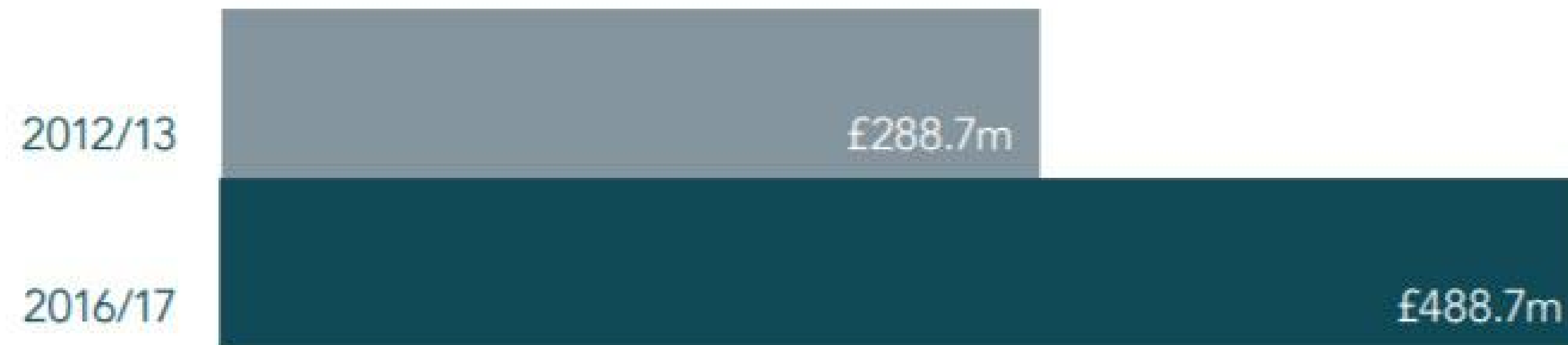
Local procurement

By anchor institutions: CLES initiative in preston

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LANCES: BUILDING 'COMMUNITY WEALTH'

2. Procurement spend retained within Lancashire



Local context

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Rotorua service providers learn about Housing First approach to homelessness

17 Jul, 2018 5:43pm

🕒 5 minutes to read



Be vision led

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t's 2040 and Bridgeport flourishes again as centre of a new green economy

This coastal city is alive with entrepreneurial activity. At the Lake Success eco-business park, innovative urban agriculture is producing food for school cafeterias and downtown restaurants. A resident of the South End who lives in an affordable home has a job with a living wage at the University of Bridgeport. A doctor from a nearby town travels by train to the new Barnum Station to work at Bridgeport Hospital. Residents enjoy clean air and abundant parks and paths which connects the city to transit, nature, and neighbouring towns. Young families have access to quality childcare and schools, and older residents are connected to services that let them age in place.

It's 2040

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and central Nassau County has become a model suburb with affordable housing, good schools, and a strong sense of community

New rail connections + Improved transportation and streetscapes enliven the new mixed-use downtowns along the route, while residential neighborhoods are quieter and safer for walkers and bikers. This new connectivity and economic development supports what is now a true centre for Nassau County, including a major office, research, entertainment and government hub. More people use shared, on-demand and autonomous vehicles, as well as shared parking and bikes, and the streets are safer and more pedestrian friendly.

Urban Renewal success factors

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for delivery agencies: be inventive based on global practice: could take national-regional-council form

- A shared vision
- Clear and strong leadership: driving force
- A clear implementation plan:
- A network of partners eager to deliver: private and public: procurement critical to former
- Marshalling of the resources needed
- Central support for partners
- Monitoring of progress and assessment of impact.

Strategies for revitalisation

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- Build civic capacity and talent
- Encourage a shared public- and private-sector vision.
- Build on an authentic sense of place
- Focus regional efforts on rebuilding a strong downtown
- Engage in community and strategic planning
- Strategically leverage National/govt policies

We shape a better world