

Sustainable transport

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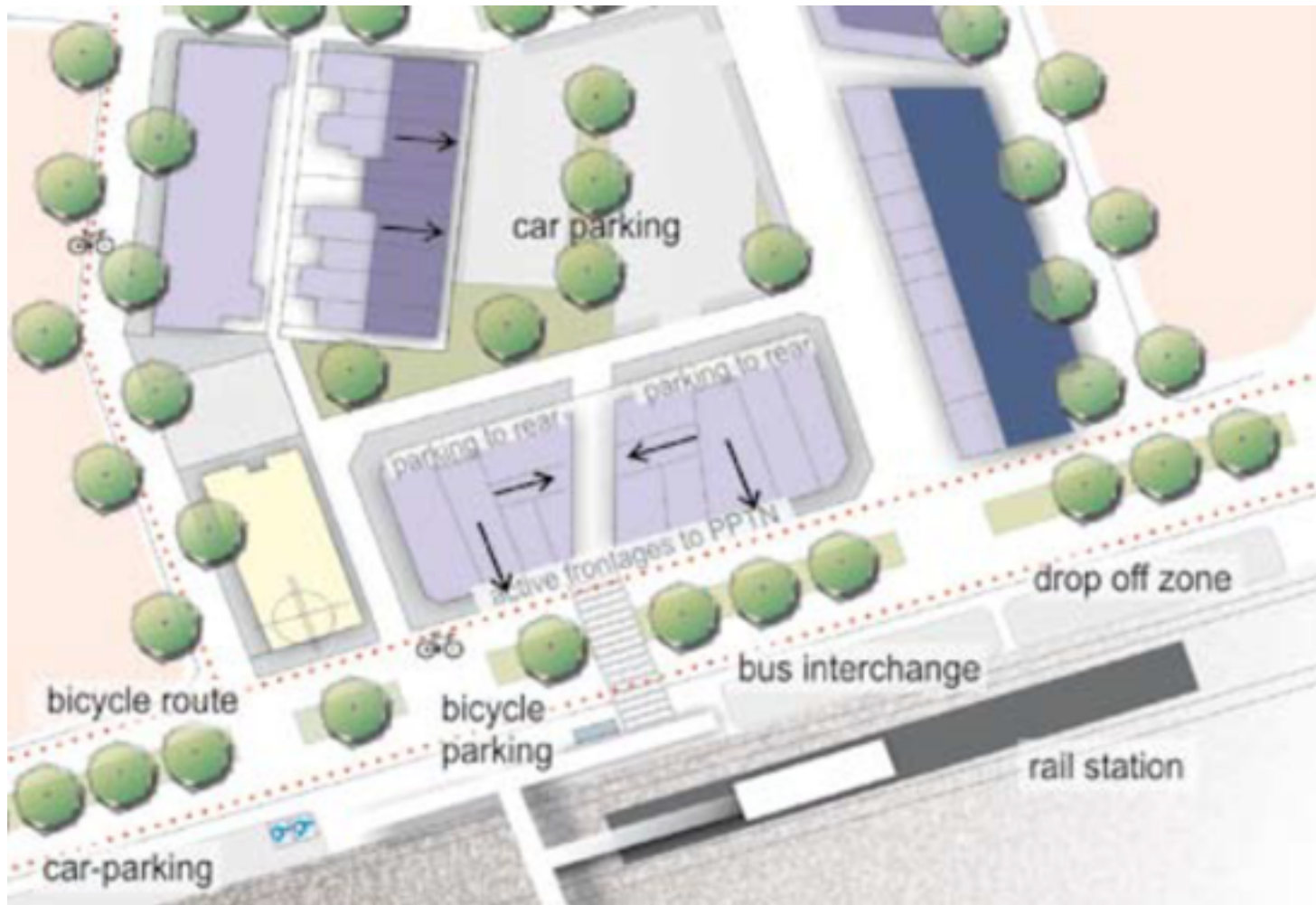
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Sustainable transport

- has integrated modes providing more choices
- makes better use of land and transport assets
- is resilient
- provides value for money infrastructure and services/resource efficient infrastructure practices

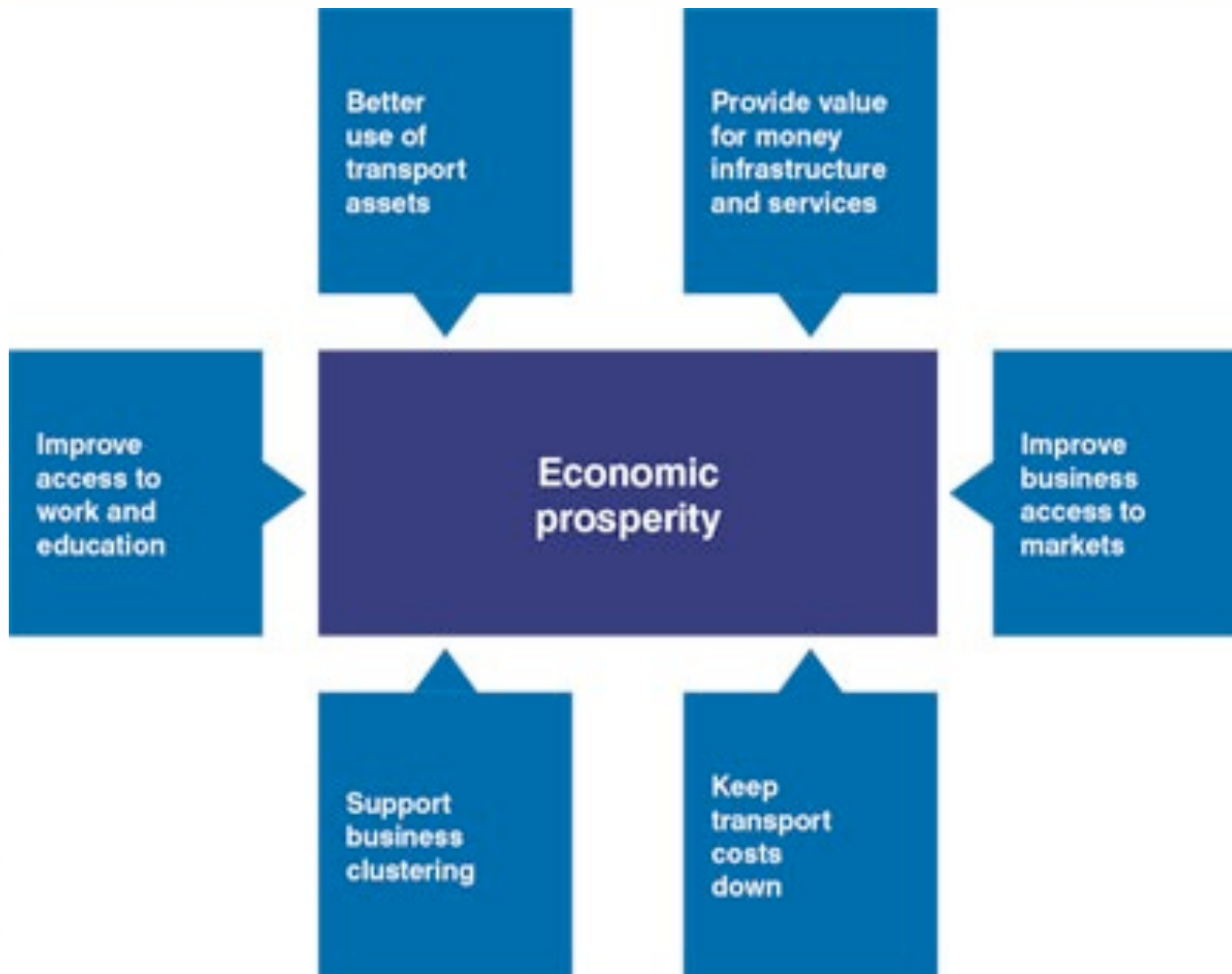
We have one transport system, which performs multiple tasks



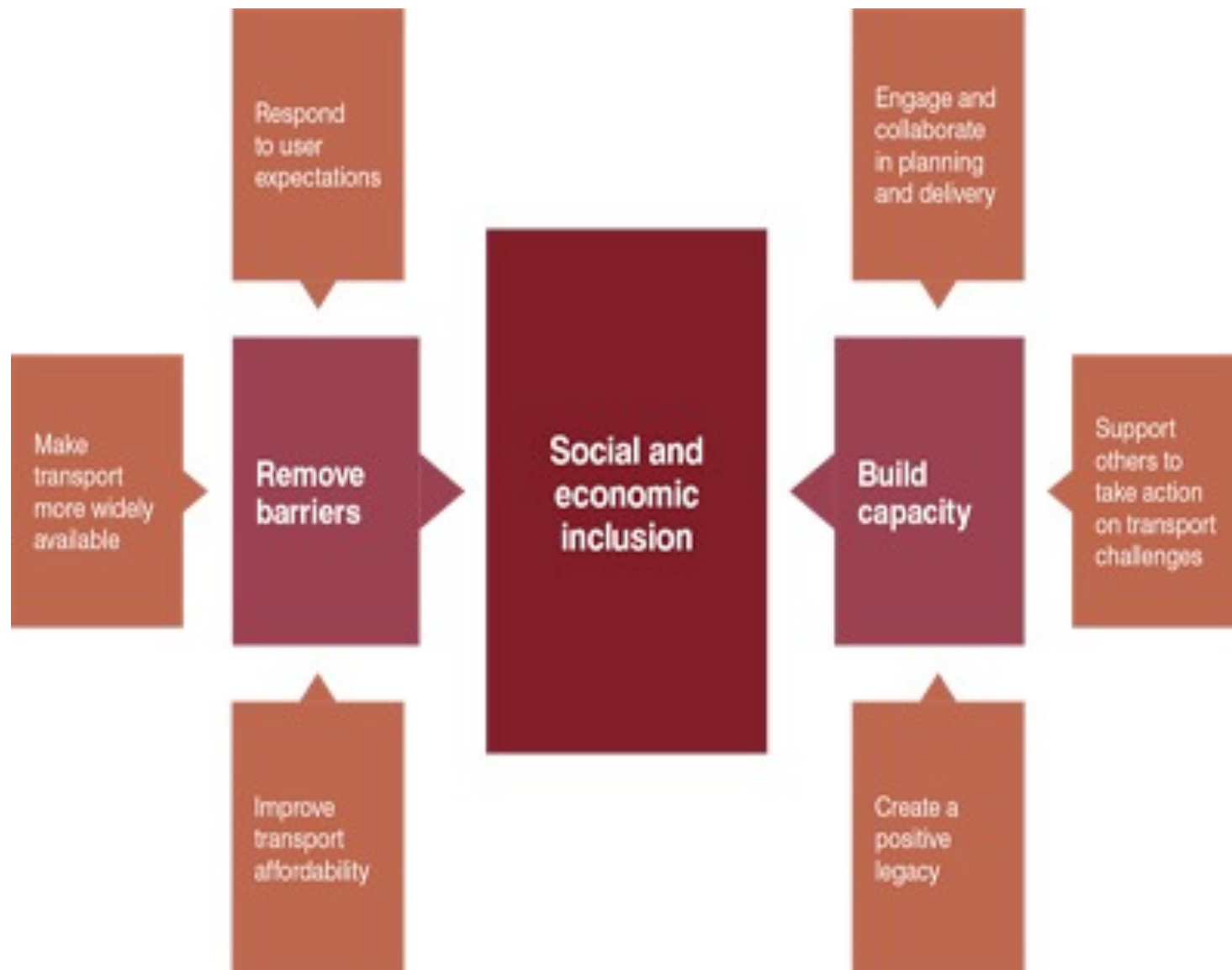
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Decisions about the transport system are required to take account of the triple bottom line





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Reduce
distances
travelled to
access people,
places
and goods

**Transport
resource
efficiency and
environmental
sustainability**

Use
environmentally
sustainable
transport more

Make transport
activity more
resource-
efficient and
reduce its
environmental
impacts

Make transport
infrastructure
more resource-
efficient and
reduce its
environmental
impacts

Make
transport
resilient to
climatic
extremes

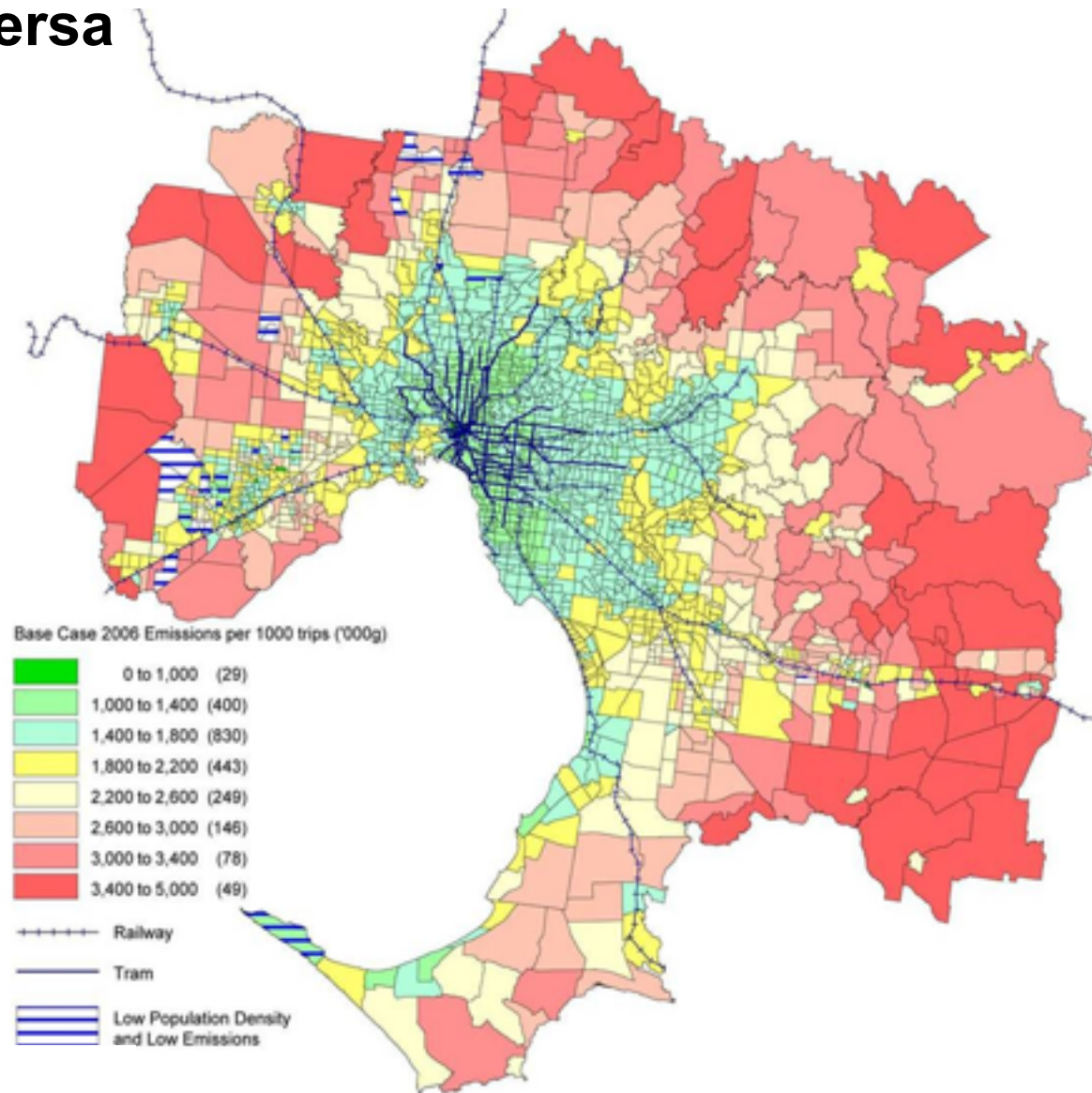
These outcomes are impacted by

Reducing distances is good for the

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The shape of the city affects transport performance and vice versa



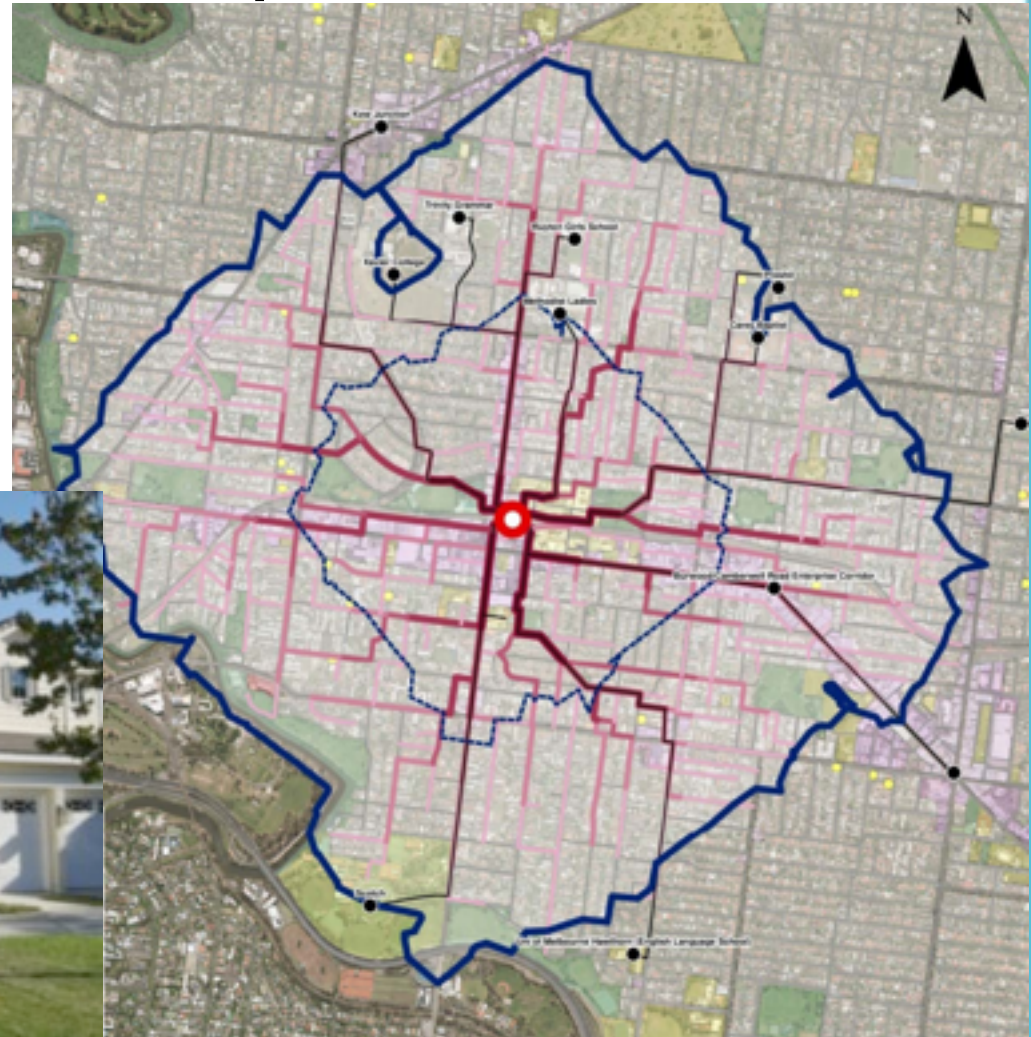
Clustering activity allows agglomeration

We need to think about density and proximity when we think about transport networks



Think local and make shorter trips

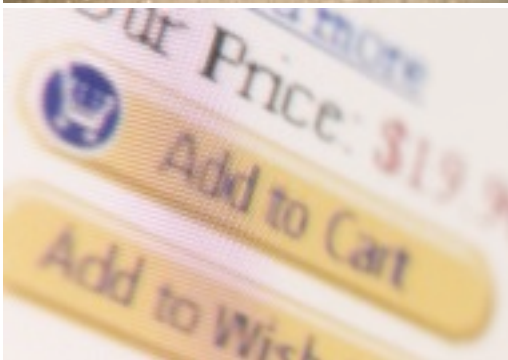
- move closer or
- go somewhere closer



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Replace transport trips with other forms of access



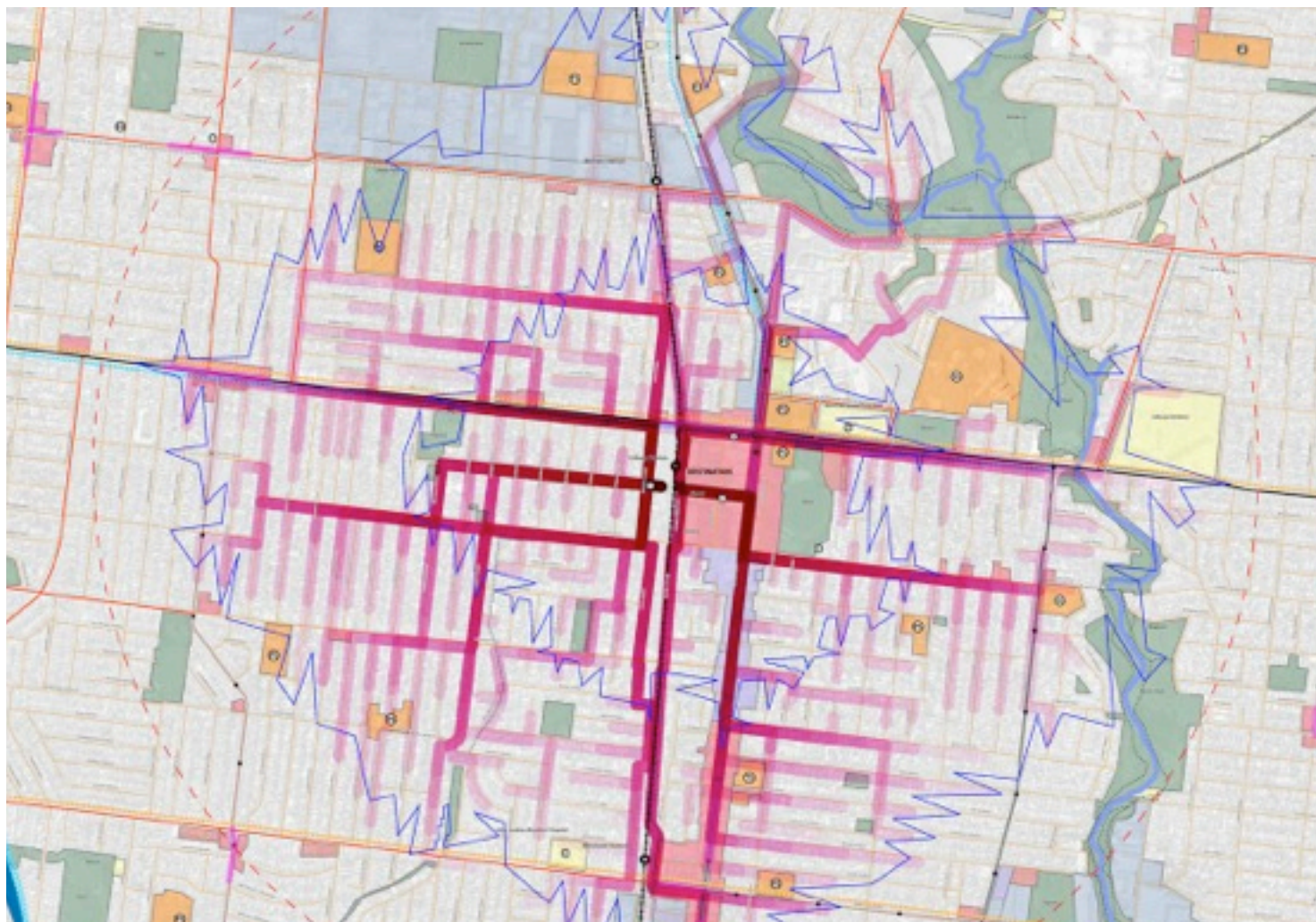
- Technology based access
 - Telework
 - Distance learning
 - Medical specialist using technology to provide services remotely
 - Using technology to locate services in places where trips can be combined eg auto tellers and eftpos facilities
- Work practices in organisations
- Mobile services
 - Bringing services to clients rather than clients to services
 - Shopping on-line

Using sustainable modes more has

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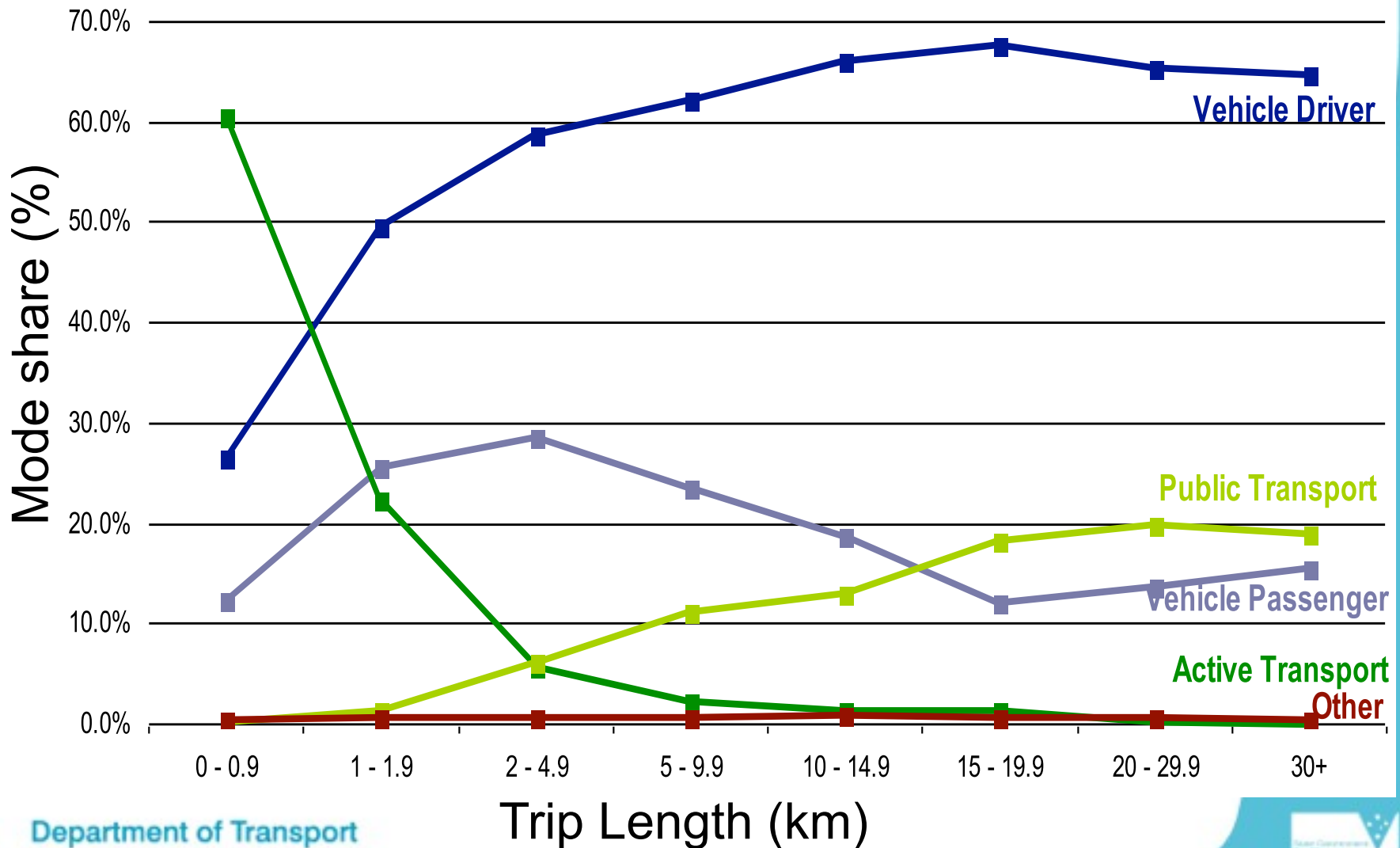


Increasing use of sustainable modes means we need to understand how and why people travel

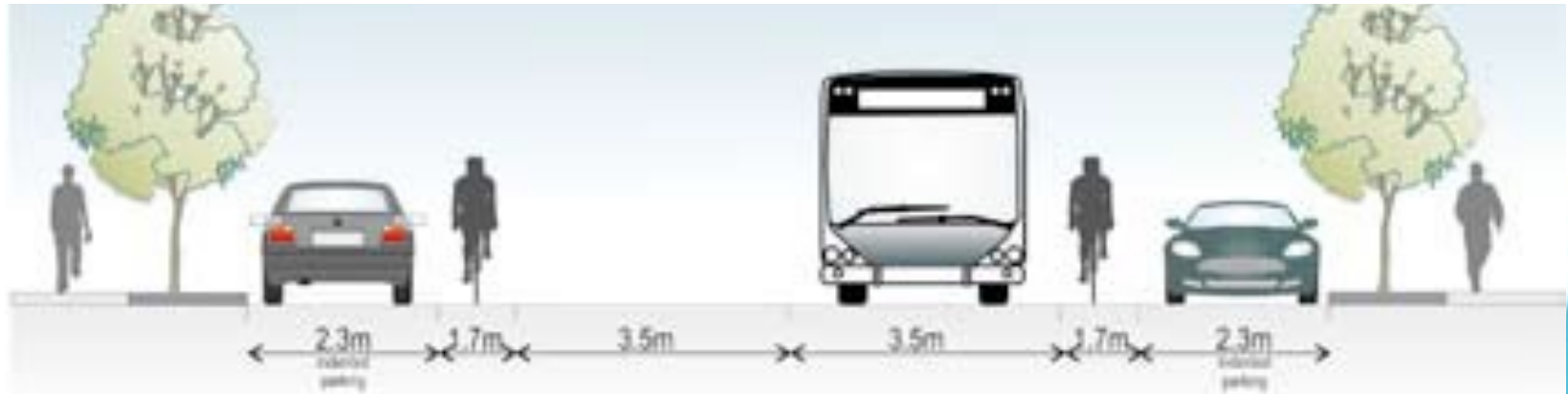


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Walking and cycling can be used for short trips and public transport for longer trips



There is a shared network - the key is how space is allocated



Undivided Connector Road - B

road with separate parking lane (where reservation width is insufficient for cross-section A)

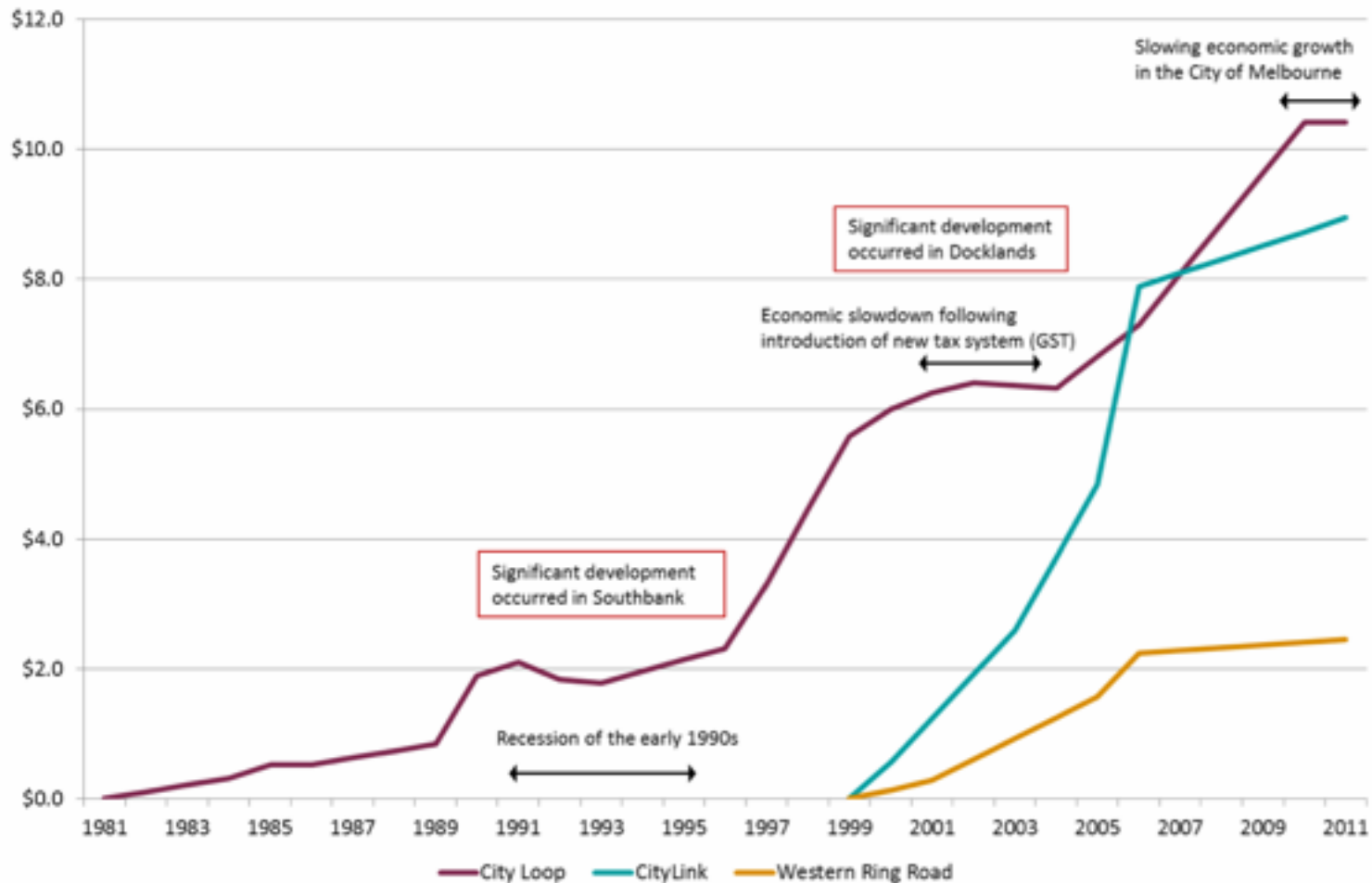


The past has much to teach us about the future



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The benefits of city-shaping infrastructure are usually underestimated



Building new infrastructure, relieving capacity constraints and induced demand are not evil



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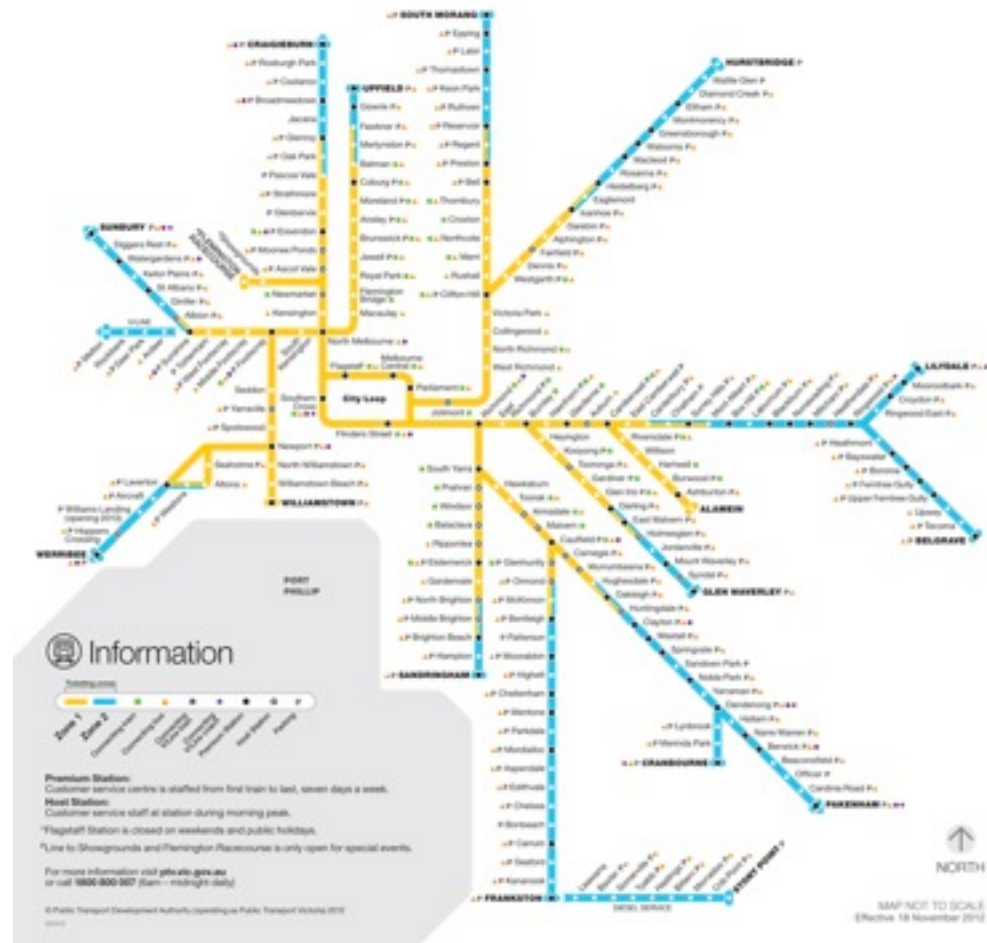
Energy efficiency is a key factor for

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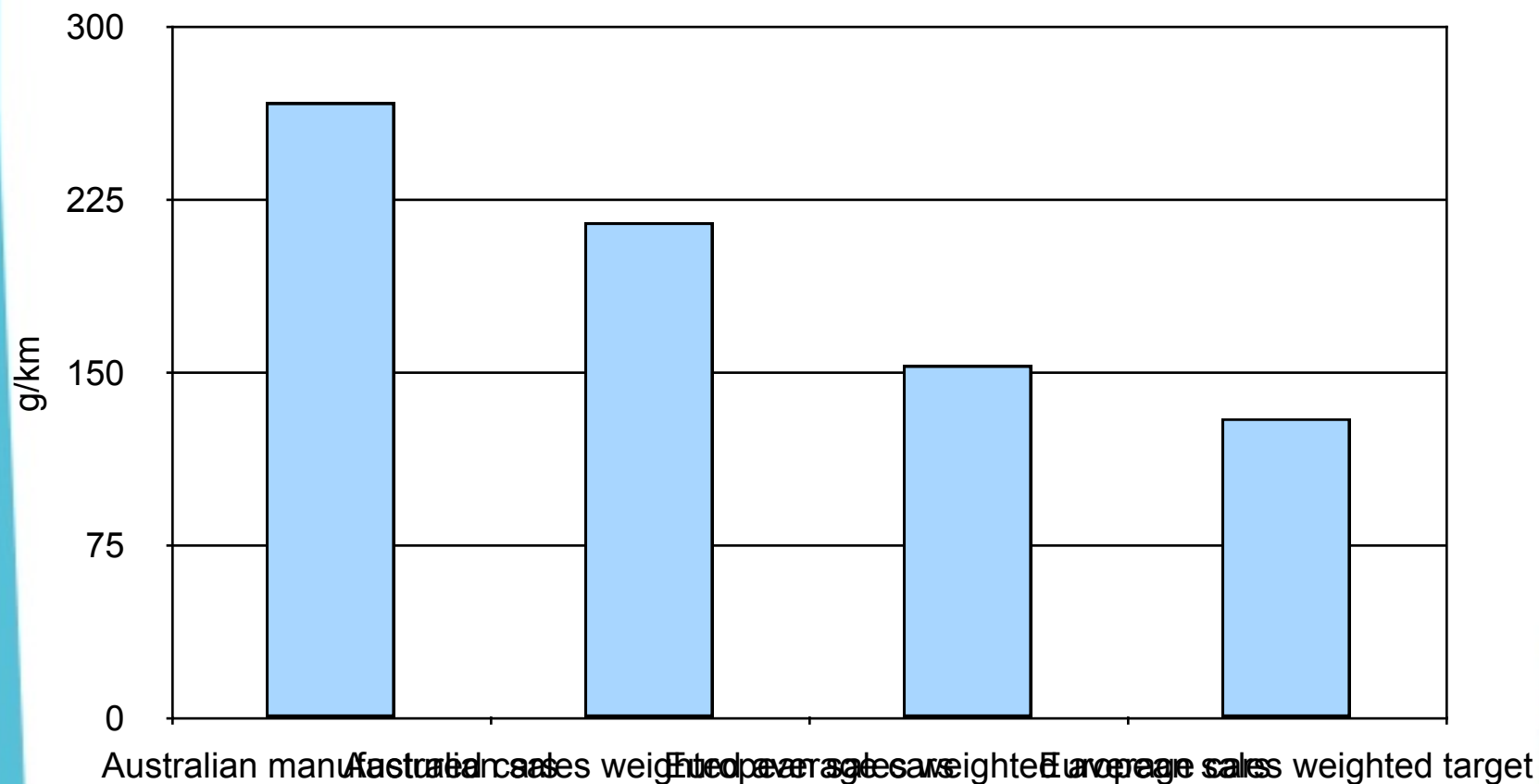
More than 90% of the infrastructure we will have in 2050 already exists.

The question is: how can we use it better?



The efficiency of each mode matters

Average passenger car emissions of GHG



Fill the car or truck



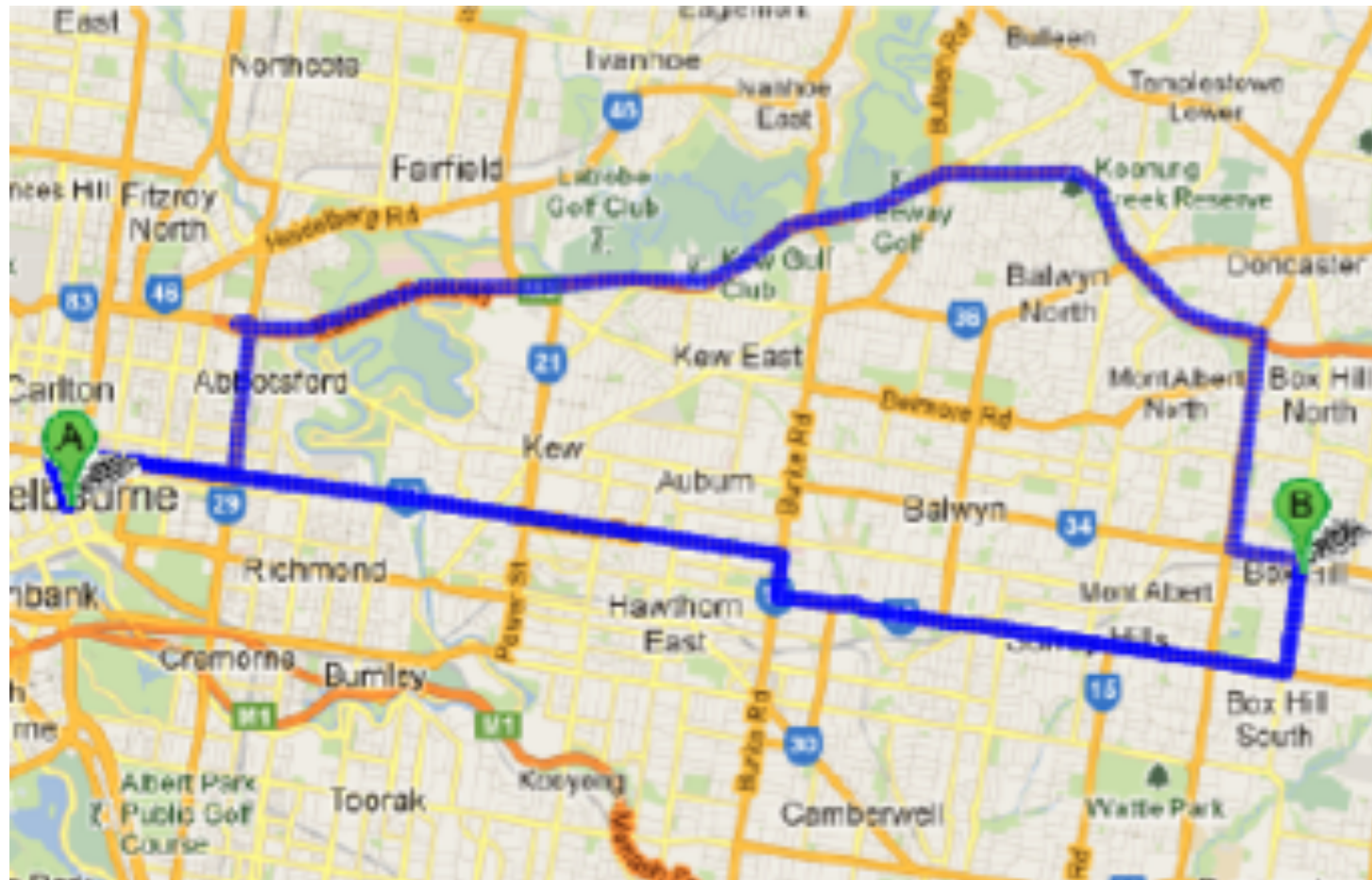
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**Go to less
congested
locations and
travel in less
congested
periods**



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Change route choice



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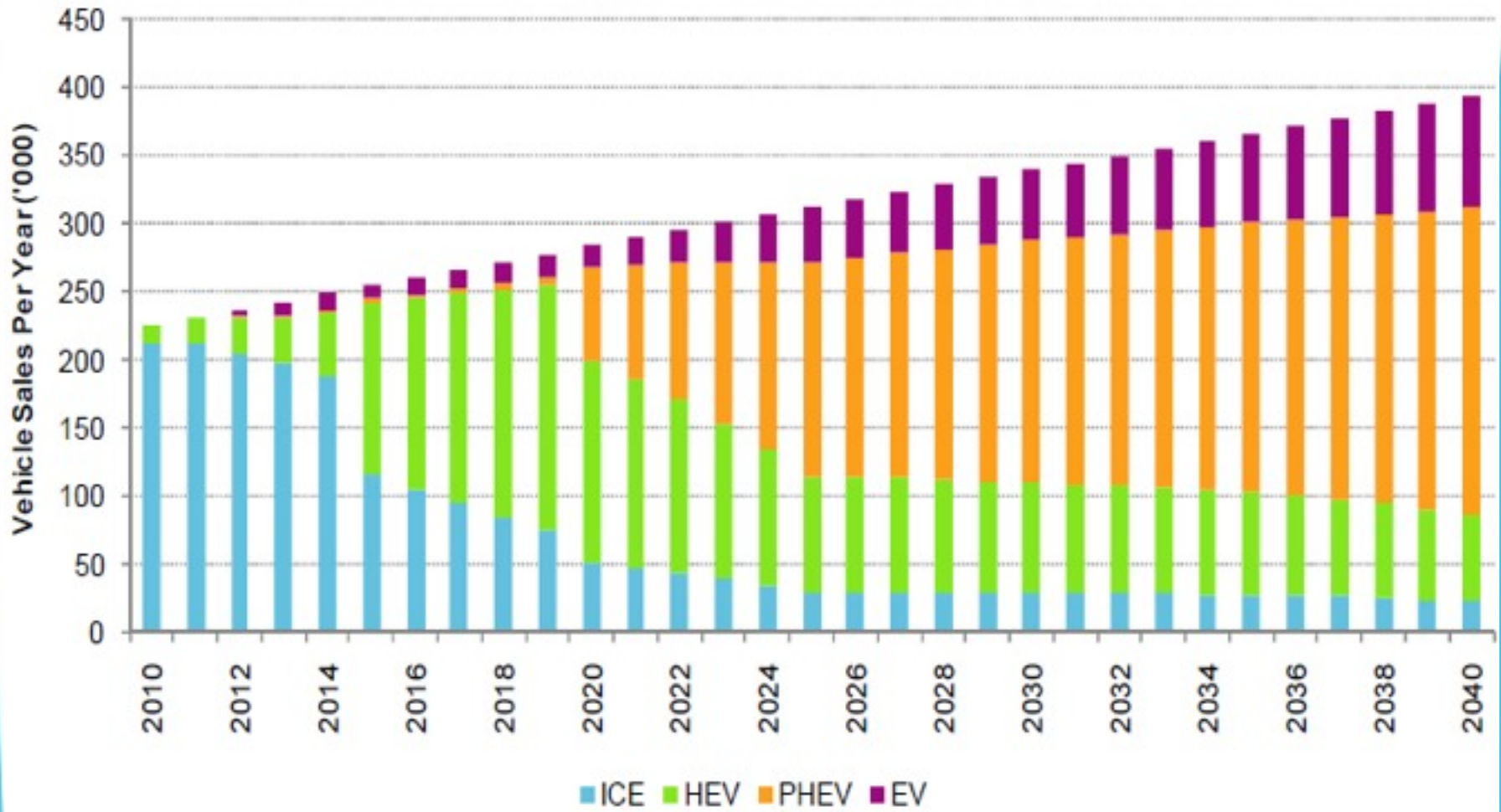
We have to improve car efficiency if we are serious about transport sustainability

Thinking about the future also changes what we need to plan for...



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Victoria stands to gain from electric vehicles



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Ref: AECOM, May 2011.



Electric vehicles produce no pollutants

- minimal greenhouse gases if charged using renewable energy



Resource efficient practices and

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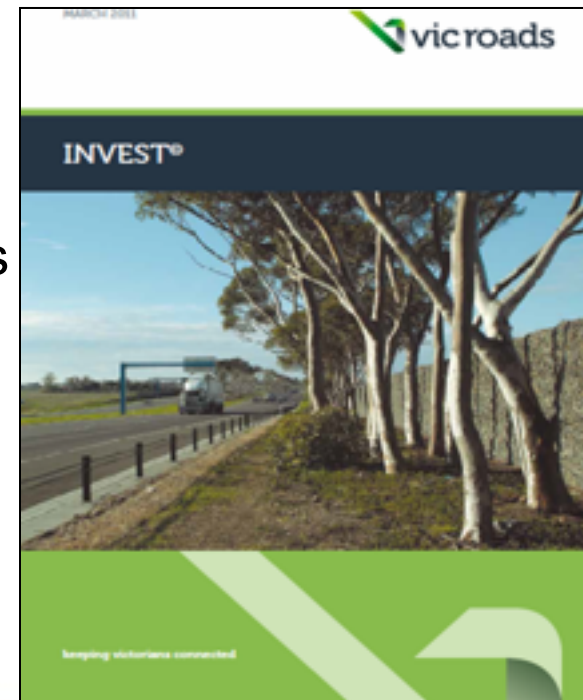
Make the right investments and make investments sustainable

- Sustainability rating tools
 - Rail infrastructure
 - VicRoads INVEST
- Energy and resource efficient
 - Energy use
 - Recycled materials
 - Minimising landfill
 - Water use
- Minimal impact on natural systems
 - Water run off
 - Air quality
 - Native habitat and ecosystems

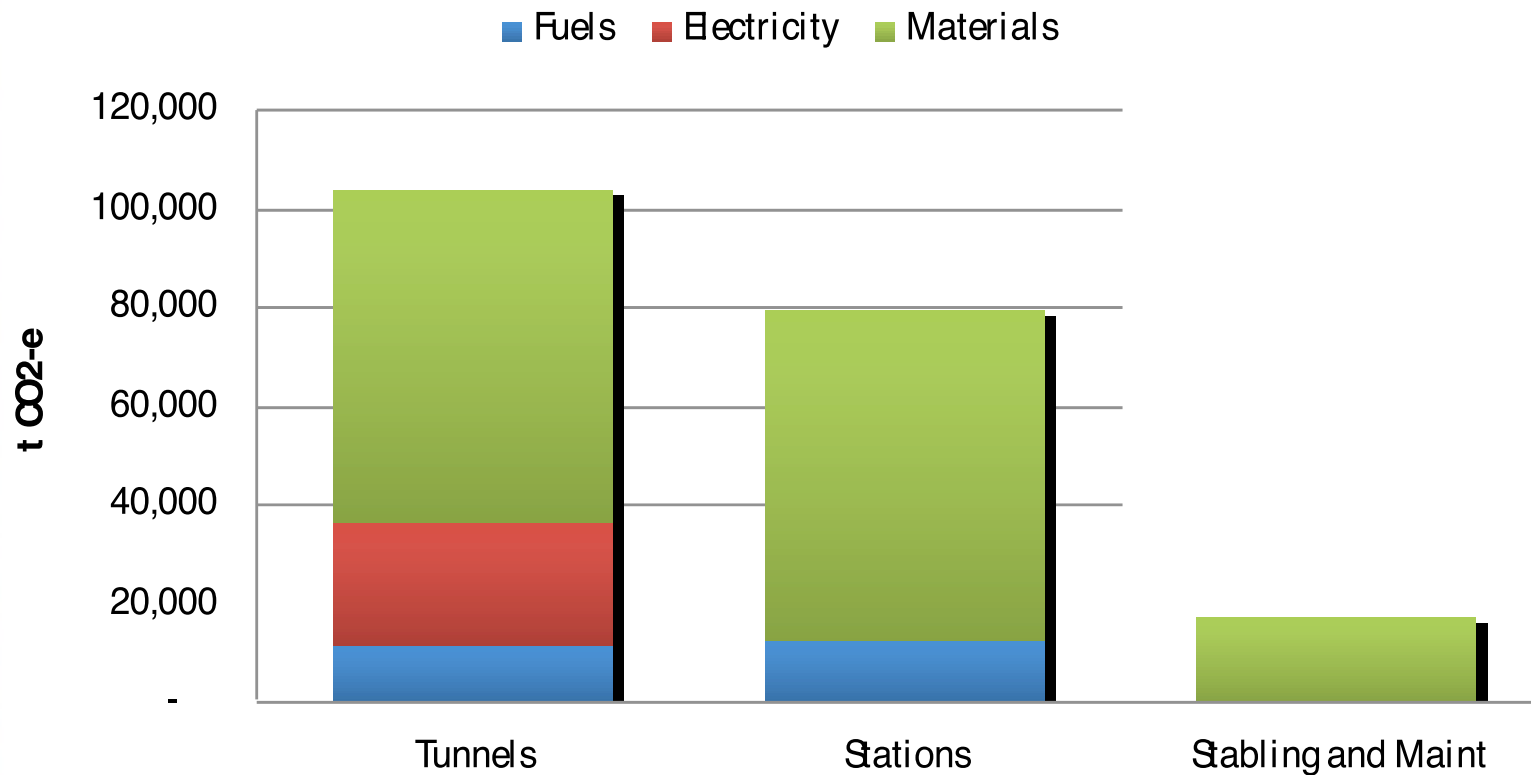
Building sustainability into our road network video



<http://www.vicroads.vic.gov.au/Home/Moreinfoandservices/Environment/>



For example, reducing emissions from construction...



Sustainable transport systems are

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Transport is resilient when disruptions have minimal impact on services



We need a new funding paradigm to

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We need to get programs to encourage better and smarter use of transport on the Commonwealth and business agendas



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There are grounds for optimism

- Investment in transport infrastructure
- Public transport patronage
- Variety in the housing market
- Young people's travel choices
- Technology and innovation
 - crowd sourced travel data
 - real time information services
 - active lane management

Thank you

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