

Will we need so many roads?



GHD Transportation

Graham McCabe

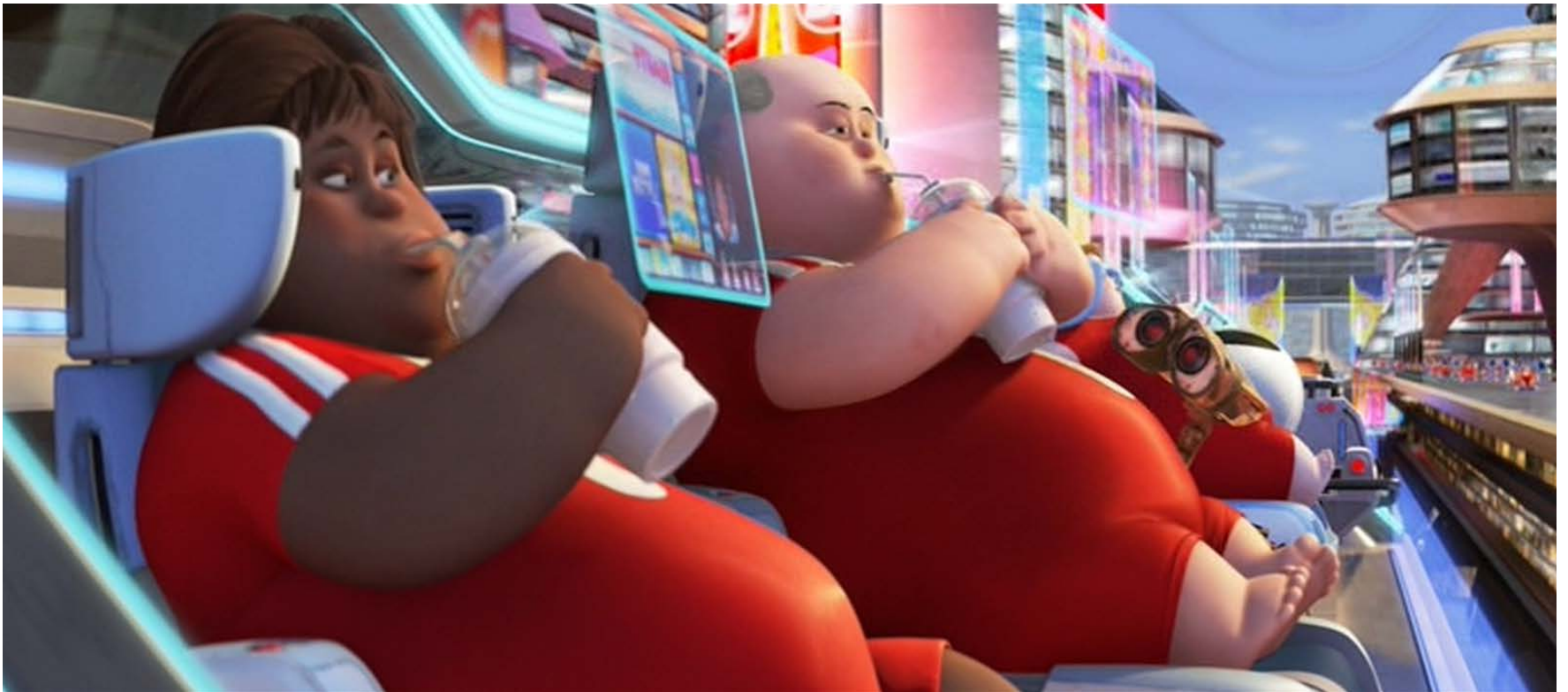
Service leader transport optimisation and
planning

Utopia



https://www.youtube.com/watch?v=EMD_0SjzTcA

A different utopia



<https://scifiinterfaces.files.wordpress.com/2014/01/walle-hoverchair05.jpg>

Autopia is not a Disneyland ride (well, it is. But...)



<http://disney-md.wikia.com/wiki/Autopia>

“Efficient, reliable, safe and well-planned transportation systems are fundamental to a community’s economic prosperity and quality of life.”

“The need to feel safe and enjoy the spaces we live in is fundamental to human nature.”

“Urban space should invite people to urban life”

“Cars do not belong in human spaces”

Are we there yet?



<https://drivingtothefuture.wordpress.com/tag/prague-taxi/>



www.businessinsider.com.au

Not quite – but not far away?



www.technewstoday.com



Future trips

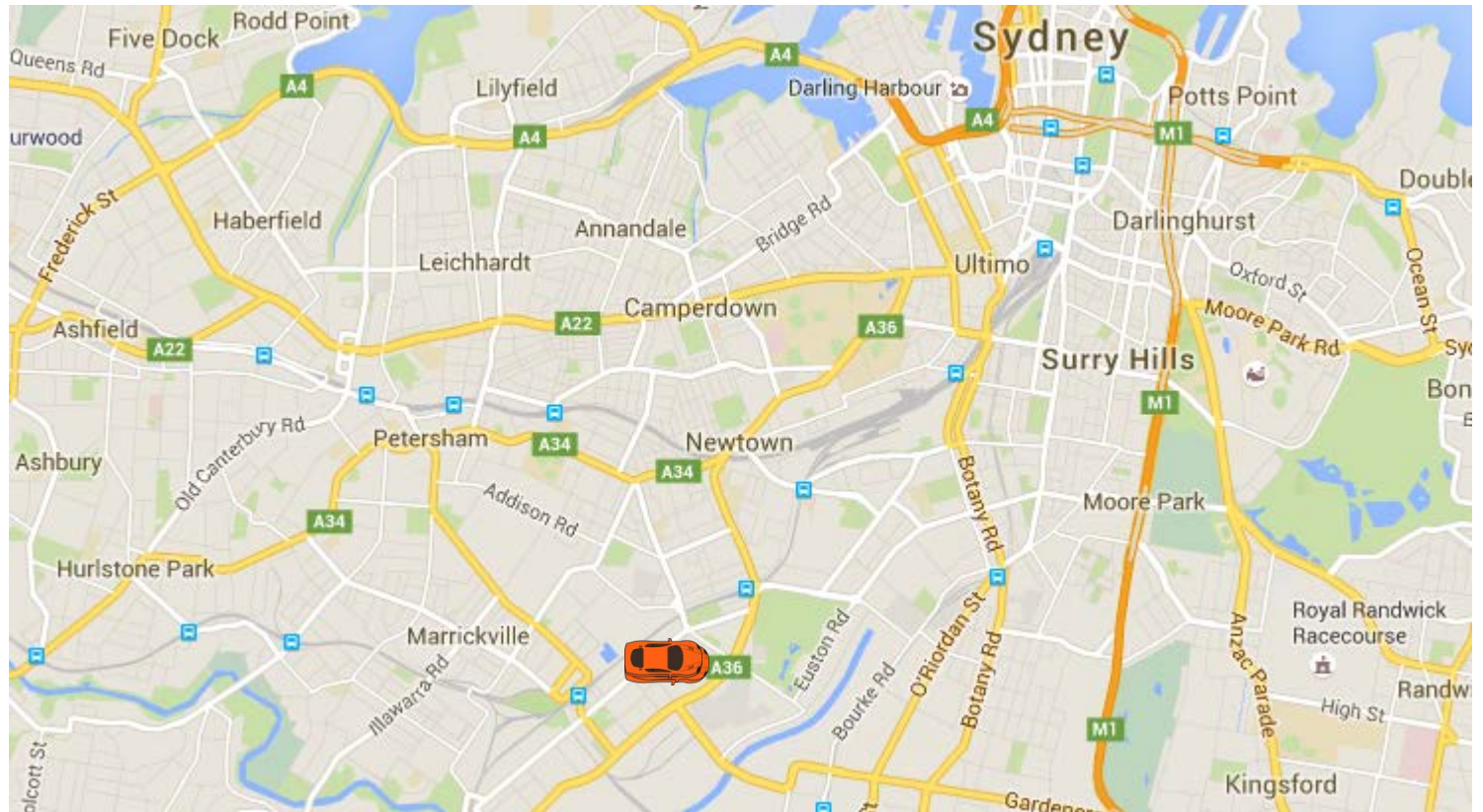
Option 1

1 car 1 owner
Multiple trips

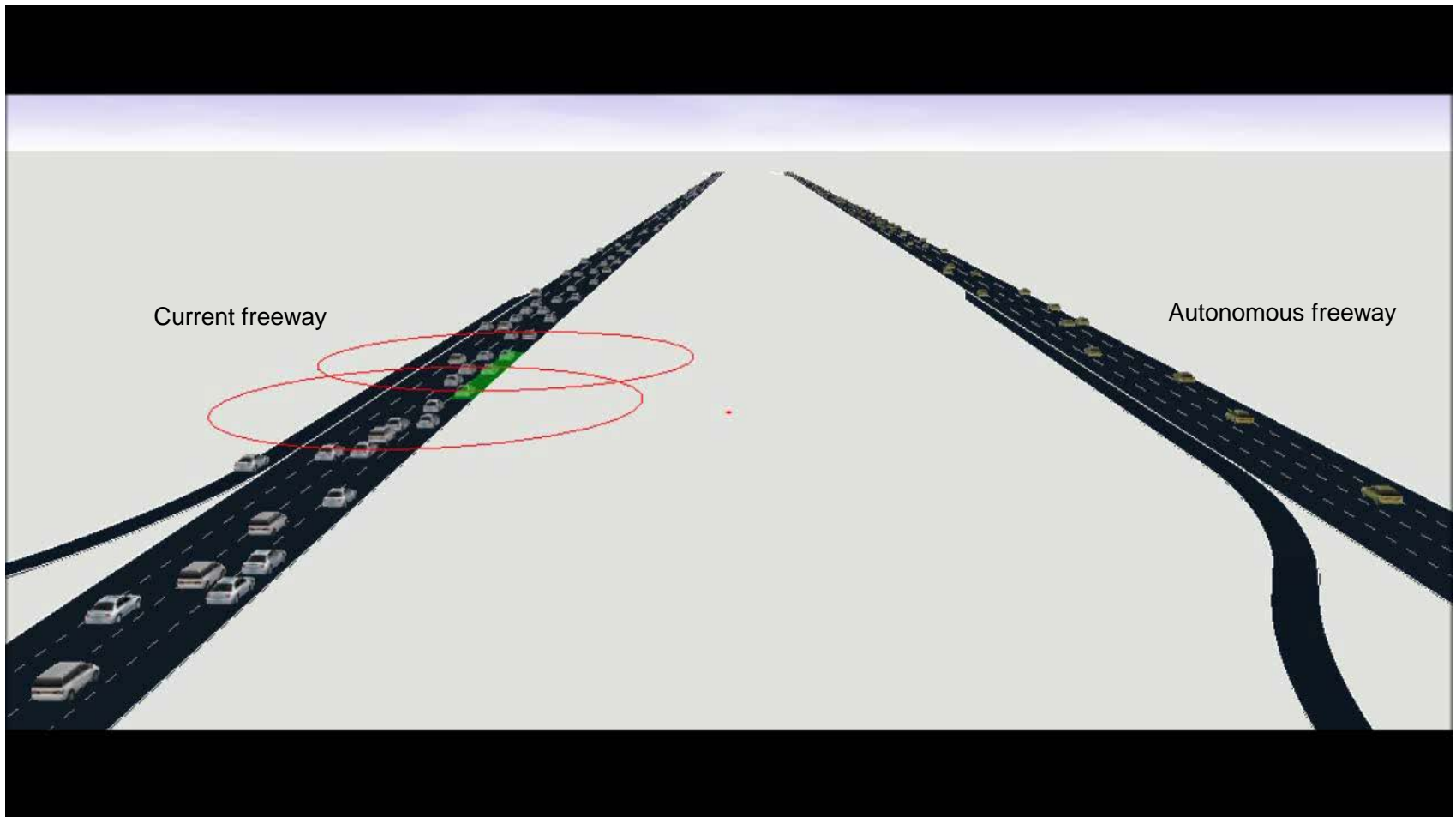
Option 2

Co-op /
commercial

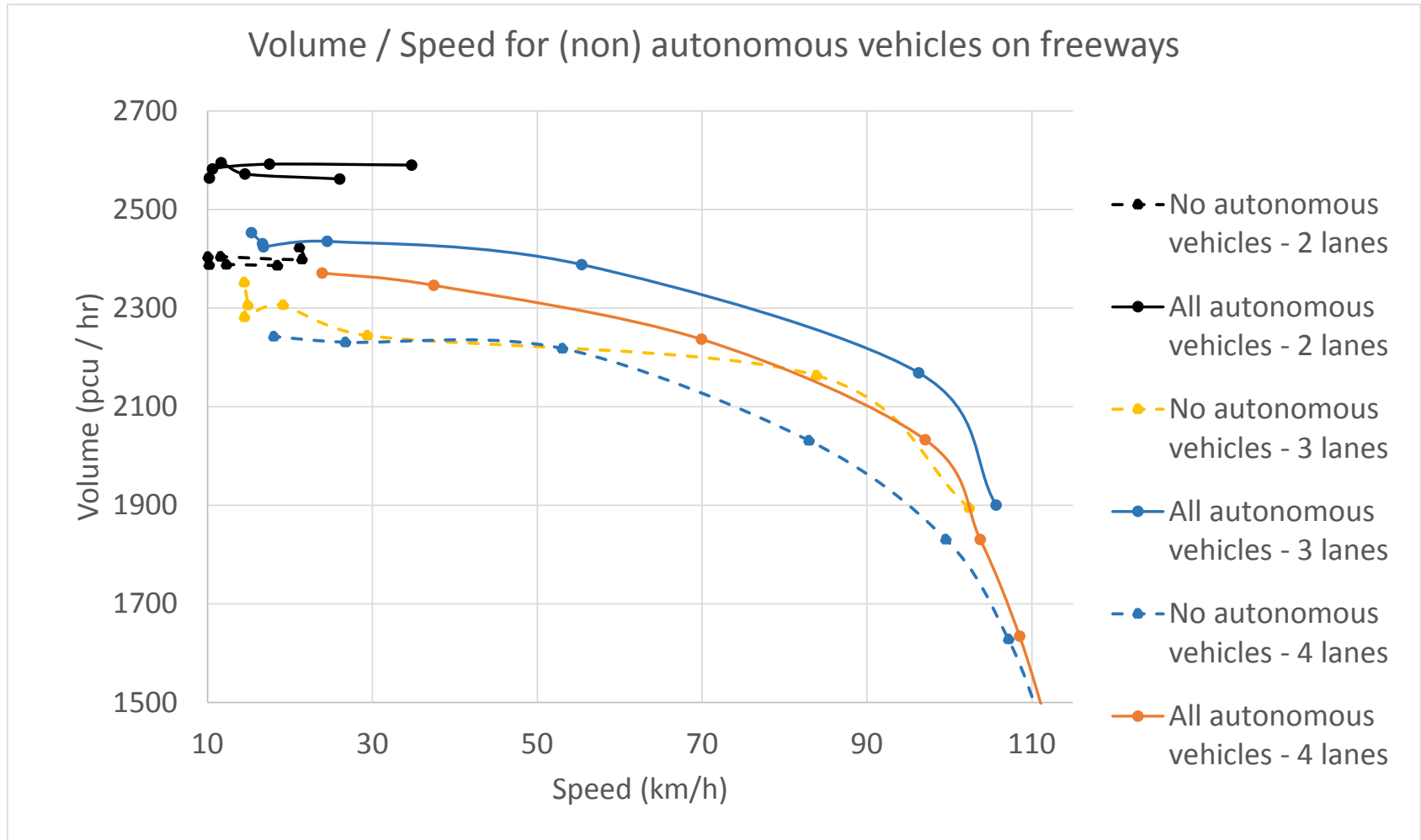
Multiple trips



Traffic capacity



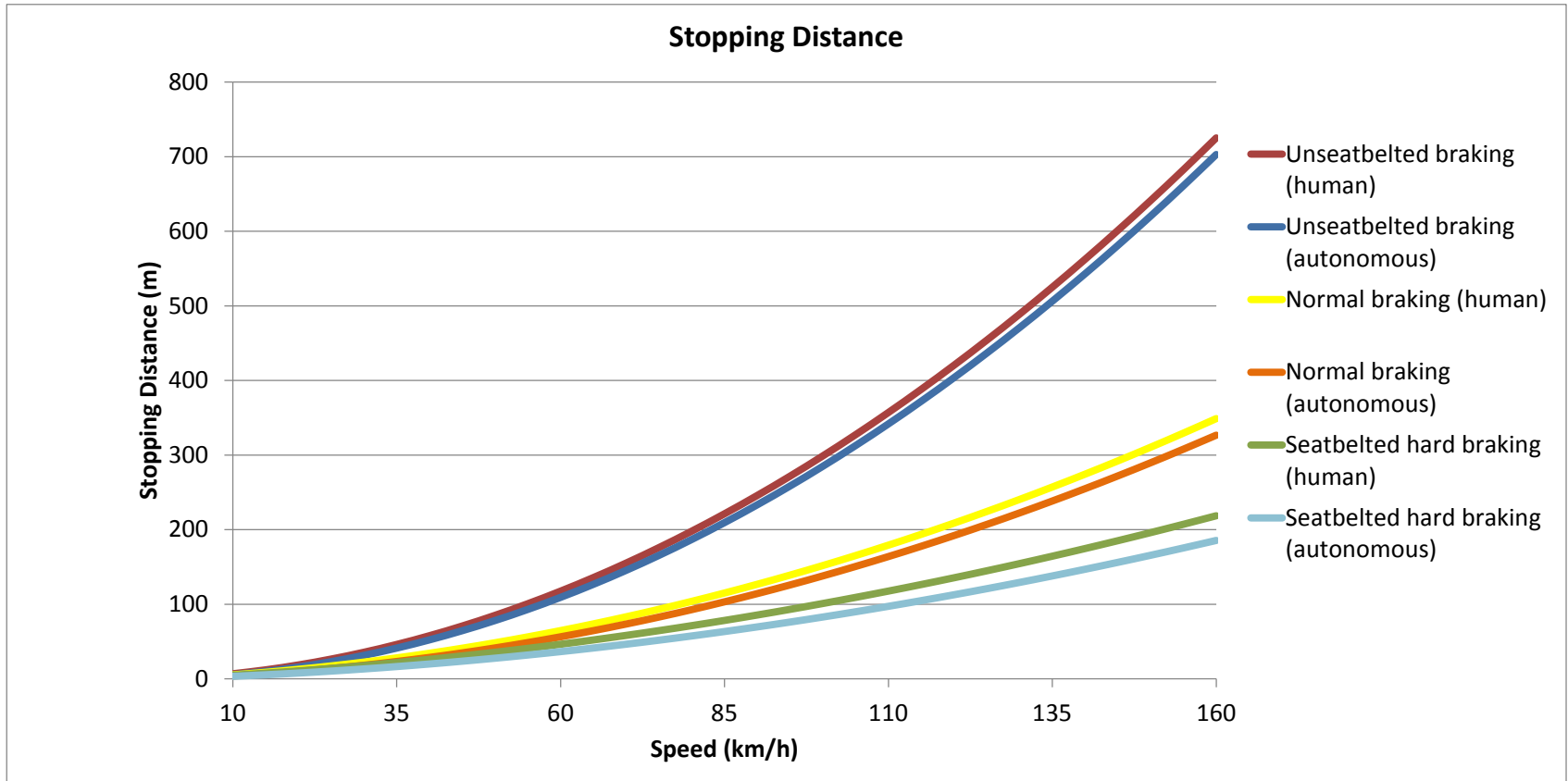
Traffic capacity



Traffic Safety



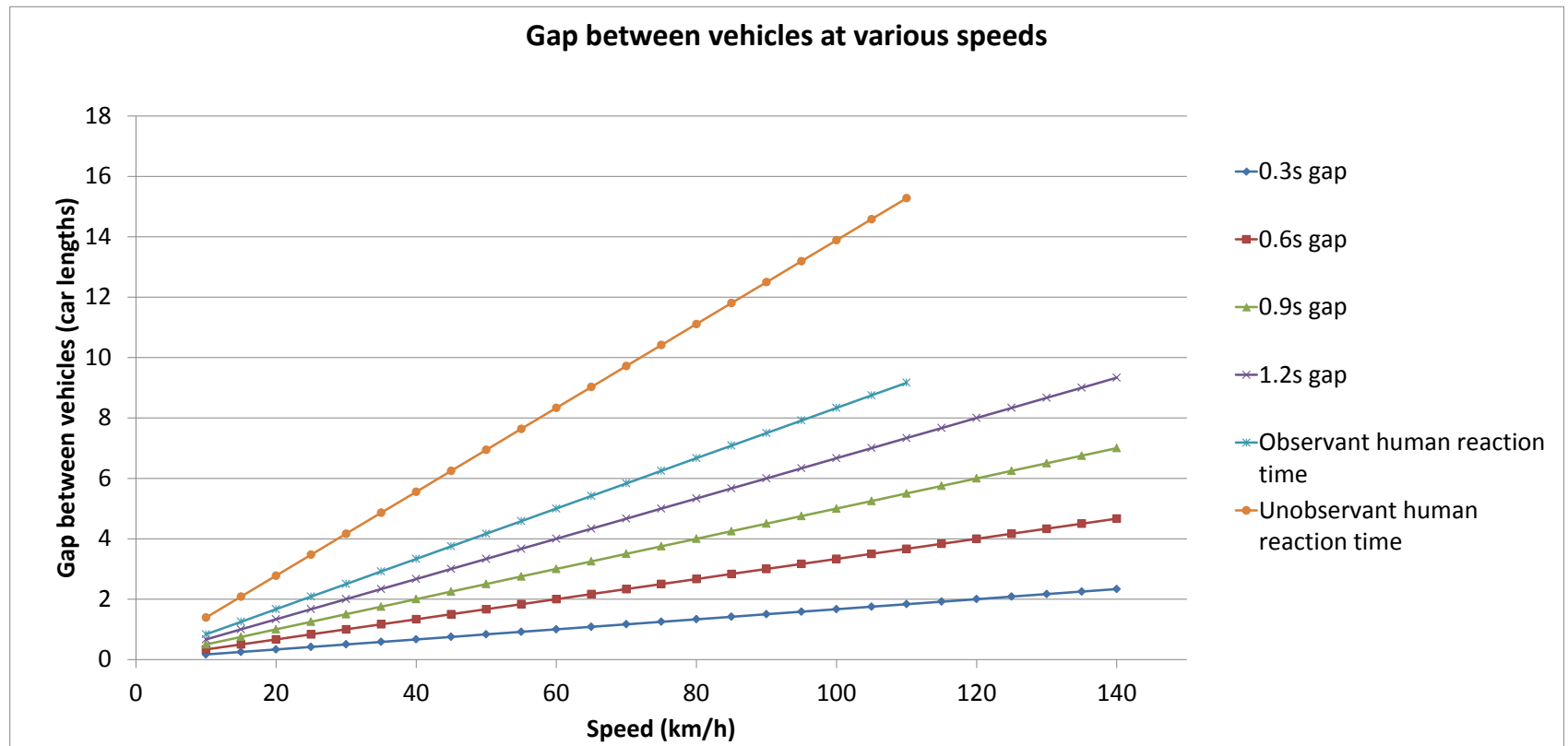
Traffic safety



Traffic safety



Freeway management



Freeways



<https://www.youtube.com/watch?v=lxKdUIEECN8>

Freeways and heavy vehicles

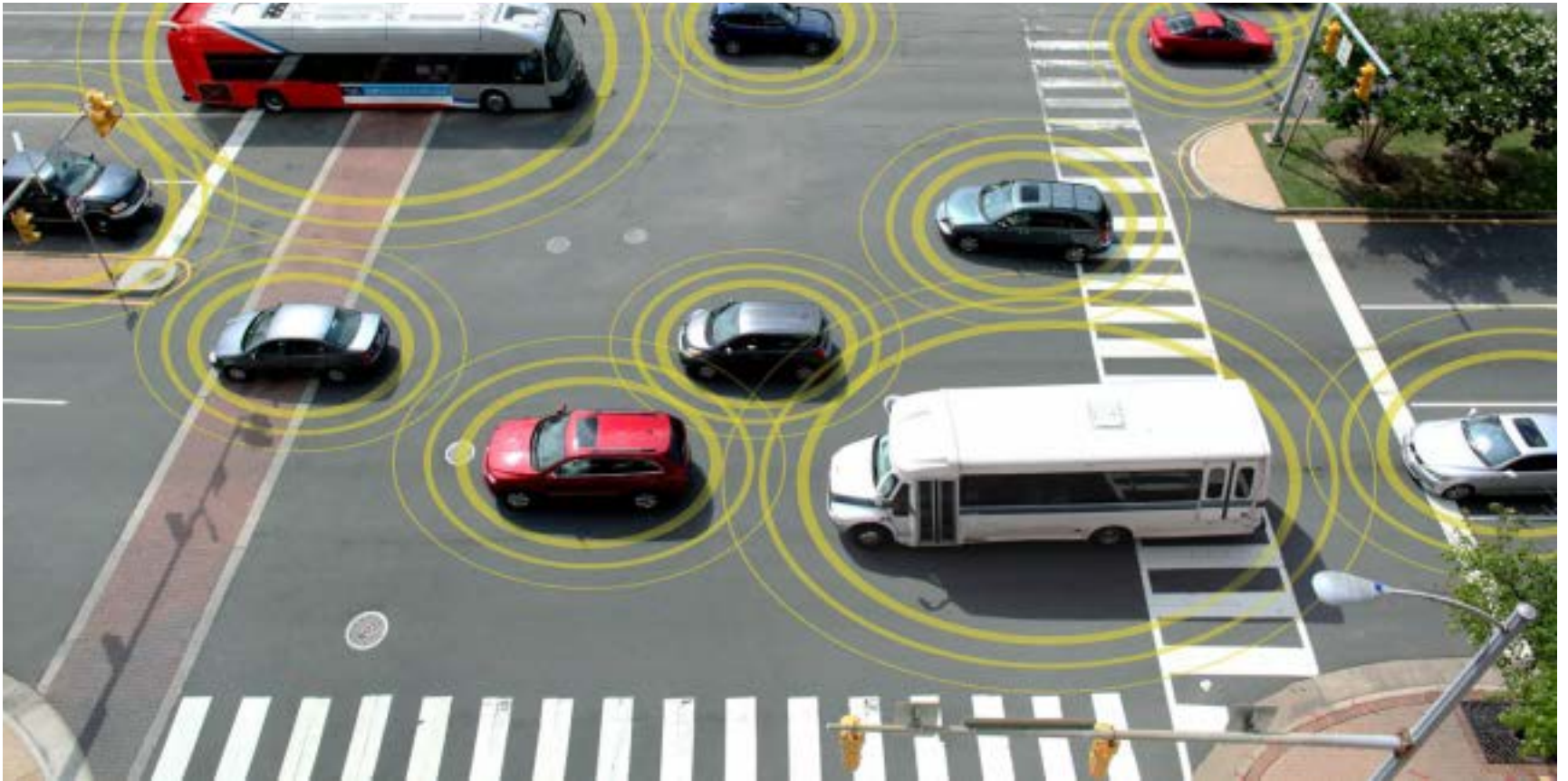


<https://www.youtube.com/watch?v=auPyP2qfudk>

Freeway road design



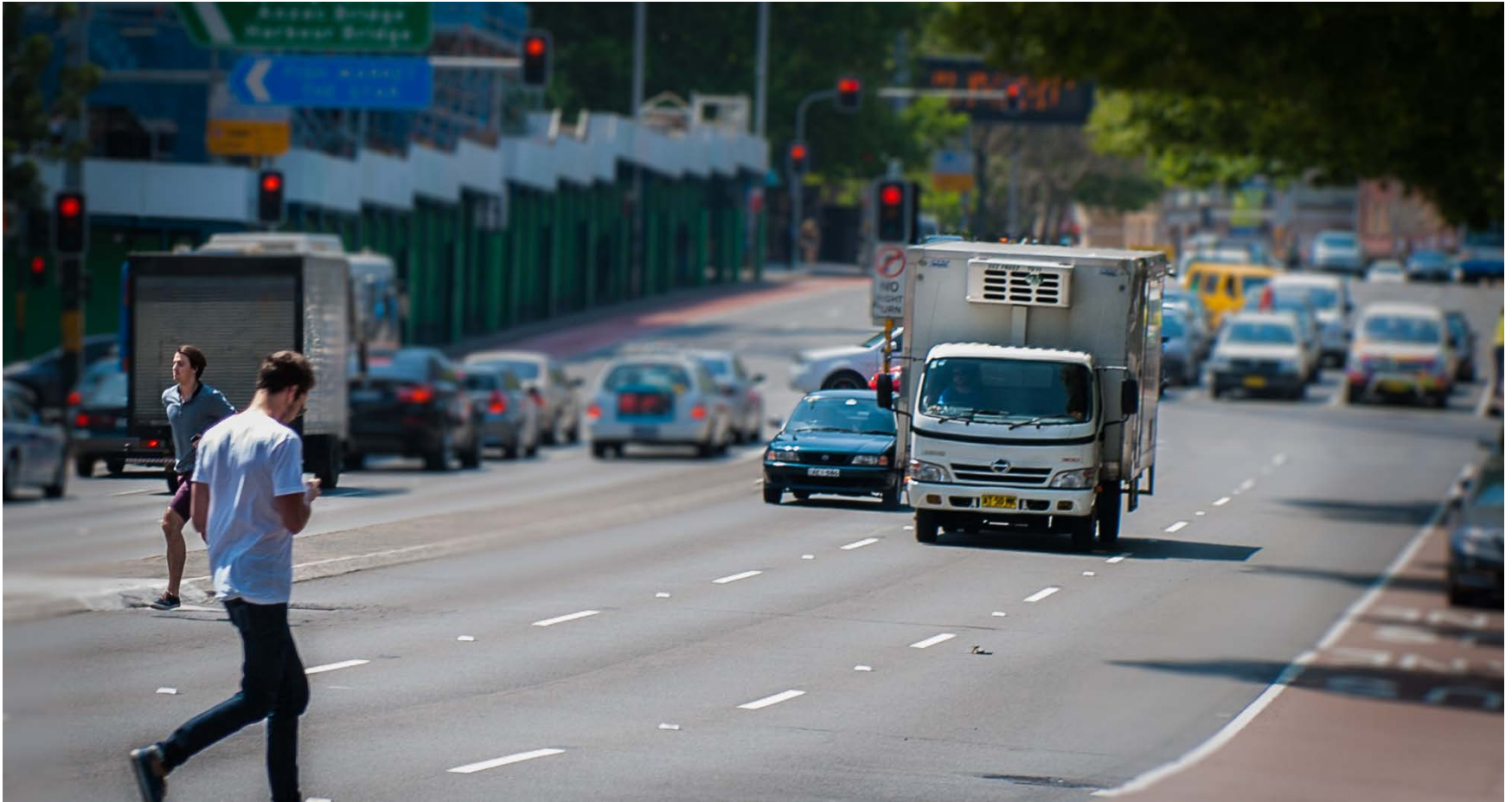
Traffic management



Rewriting traffic rules

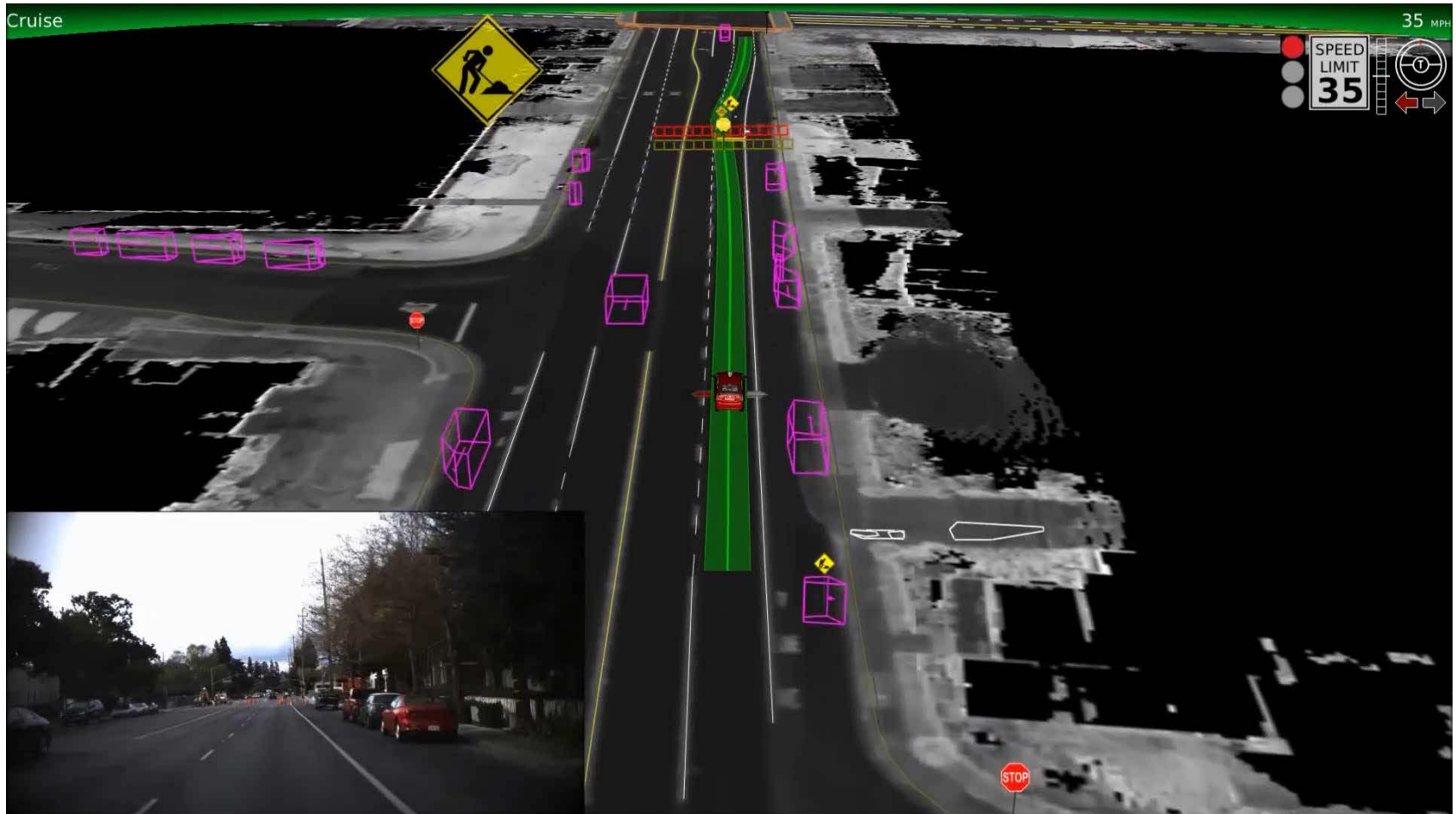


Rewriting traffic rules



<http://newsroom.macleay.net/wp-content/uploads/2012/10/J-Walkers-by-Natasha-Chadwick-2012102561.jpeg>

Rewriting traffic rules



<https://www.youtube.com/watch?v=lxKdUIEECN8>

Urban road design



<http://sydneycycleways.net.au>

Existing road hierarchy

Location	Function	Priority
Local Street / CBD	Access	Pedestrians / bicycles
Collector / Distributor Road	Access / Transition / Traffic	Public transport / Freight distribution
Sub Arterial	Transition /Traffic	Intra city movement
Arterial	Traffic	Intra city movement / high volume
Motorways	Traffic	Inter City movement / high volume / high speed

Autonomous Road hierarchy

Location	Function	Priority
CBD streets	Human scale movement	Pedestrians and bicycle priority
Lower activity urban streets	Access / Transition	Pedestrians / bicycles / lower speed autonomous vehicles (30 km/h)
Automated Roads	Traffic	Intra city movement / high volume
Motorways	Traffic	Inter City movement / high volume / high speed

Urban Development



Future development





www.ghd.com