

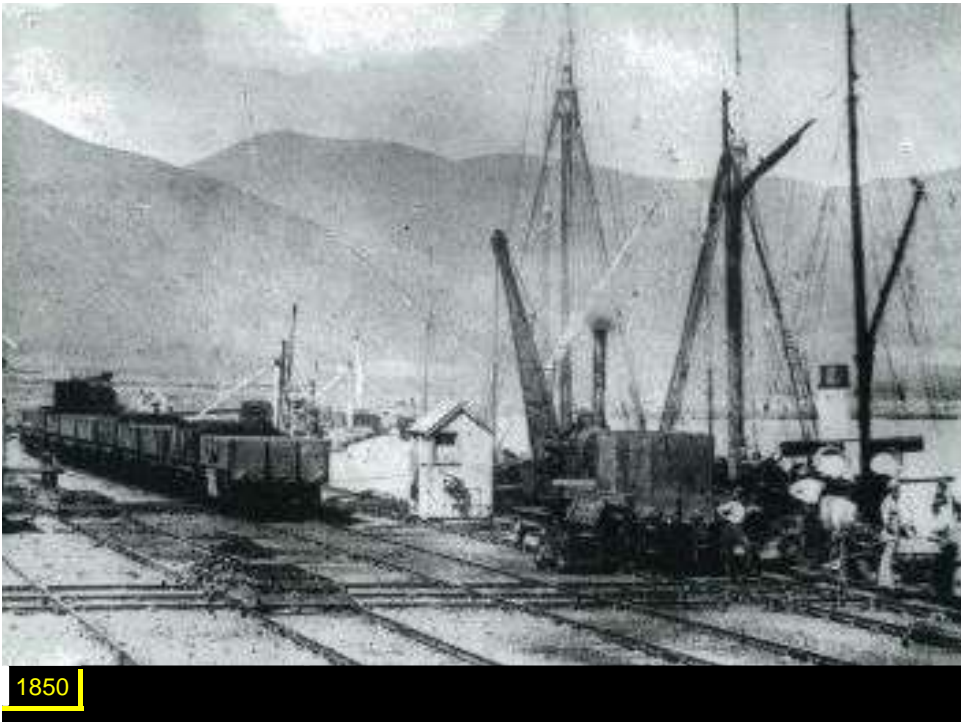
-
- > Initiate 'PUBLIC TRANSPORT EVOLUTION IN CHRISTCHURCH'
- > Loading
- > Load complete
- > Press enter to continue

PUBLIC TRANSPORT EVOLUTION IN CHRISTCHURCH

HAVE WE MISSED THE BUS?

1850 – Today - Future

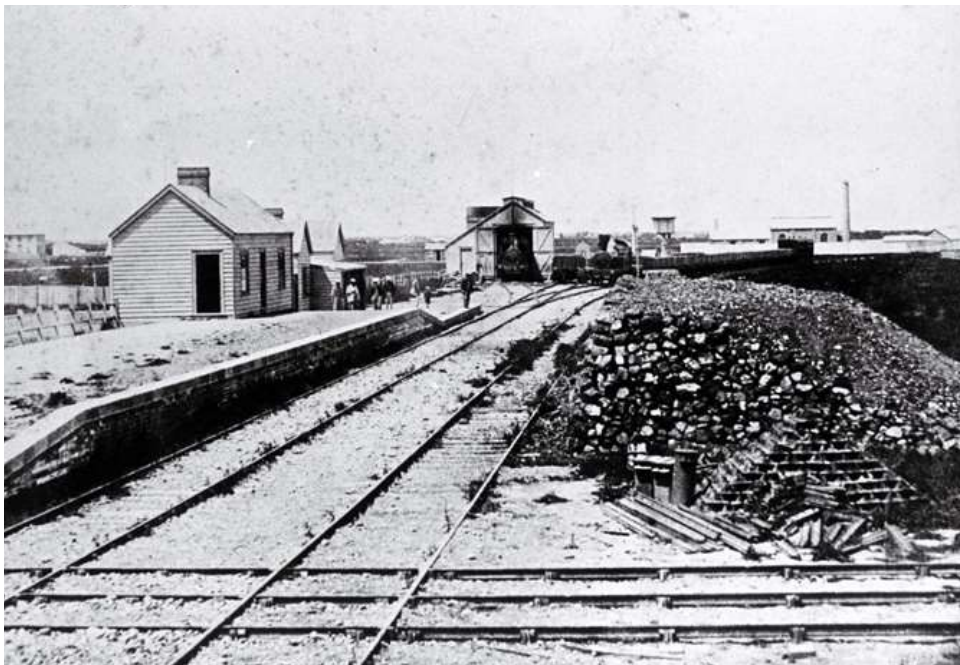




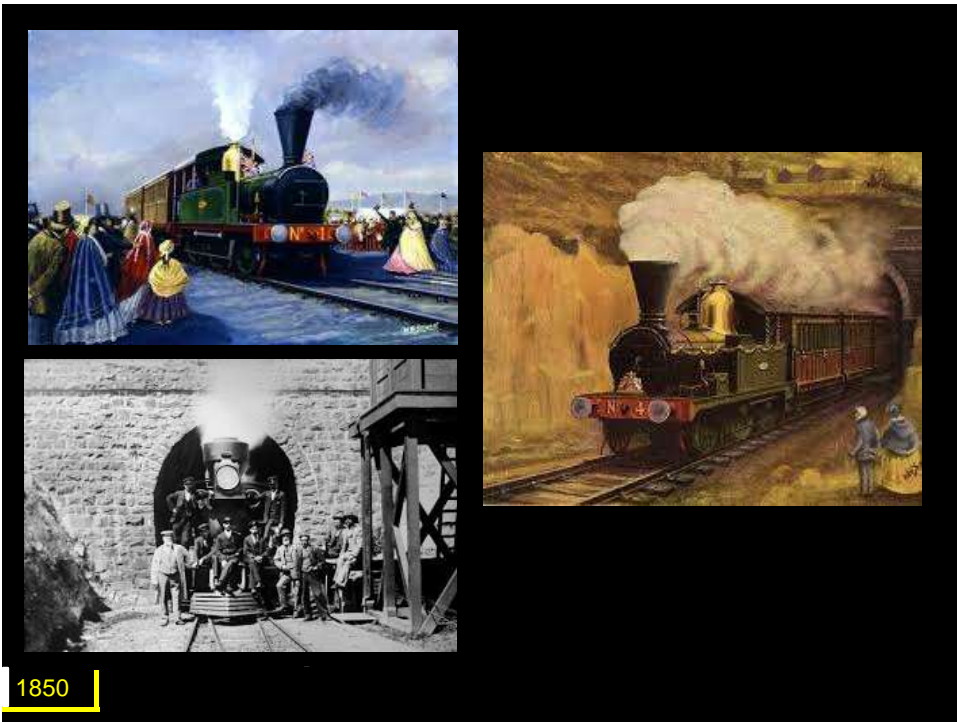
1850

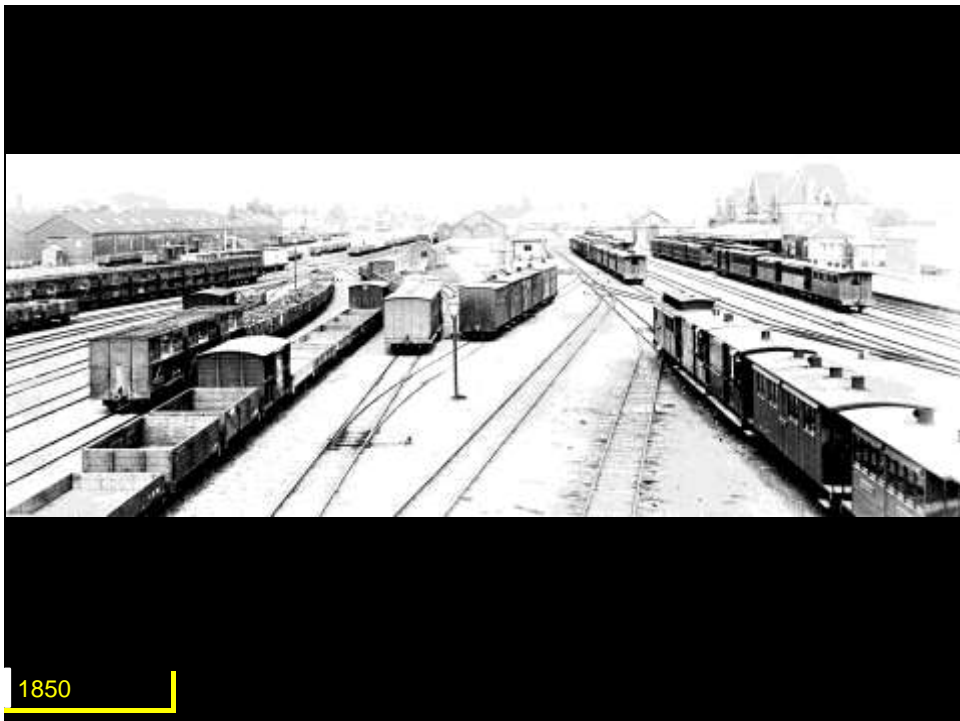


1850



1850

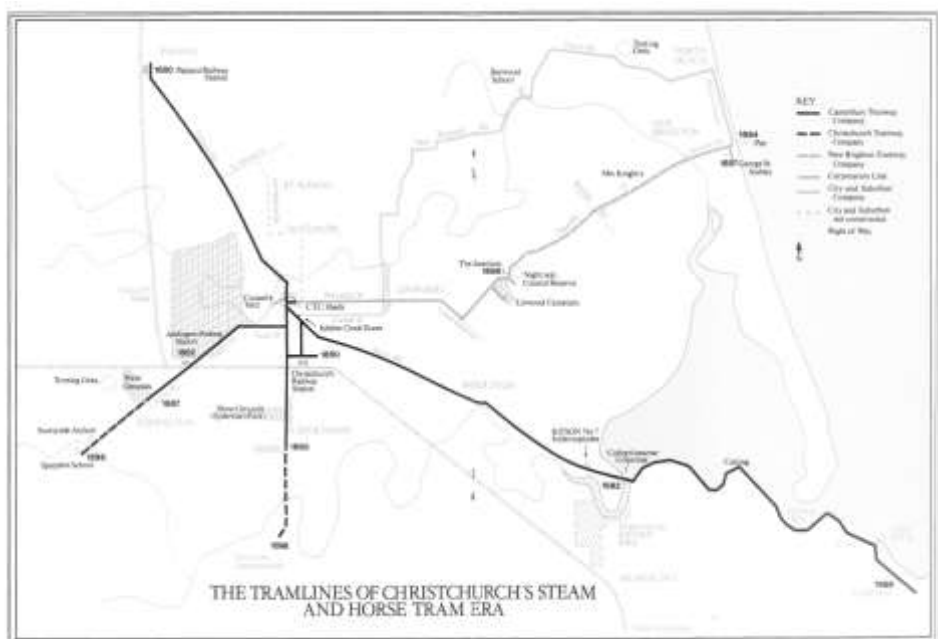




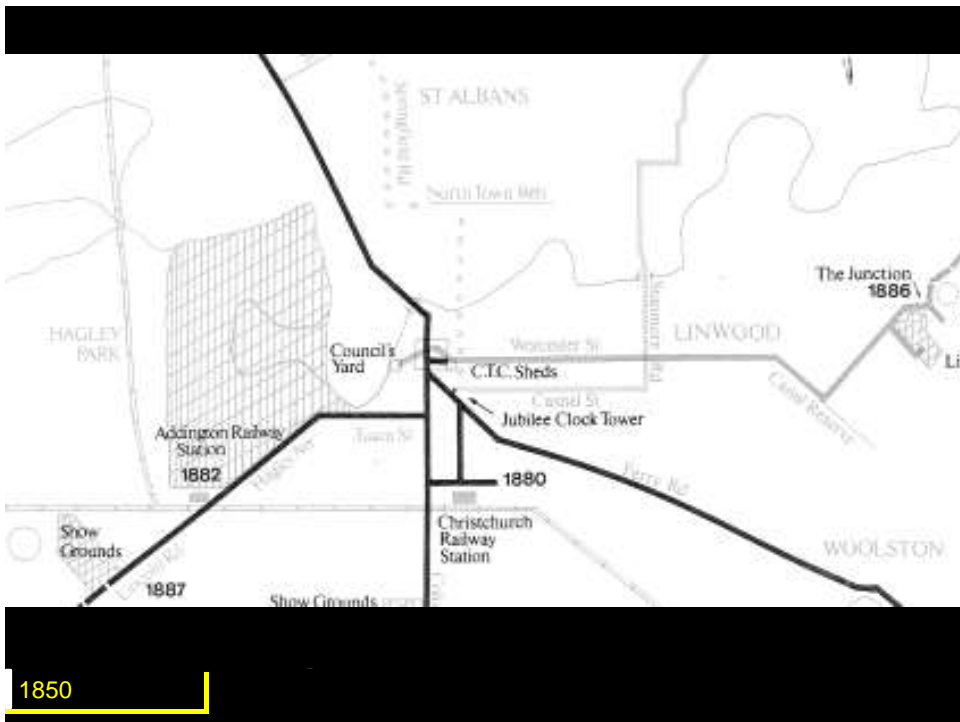
Steam and horse tram era 1880-1905

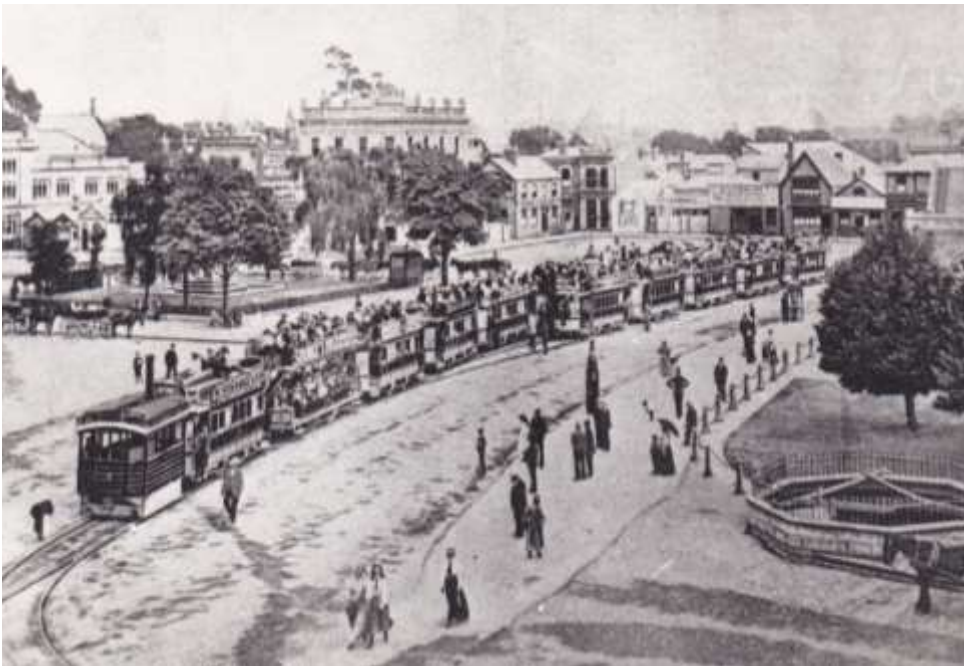


1850



1850





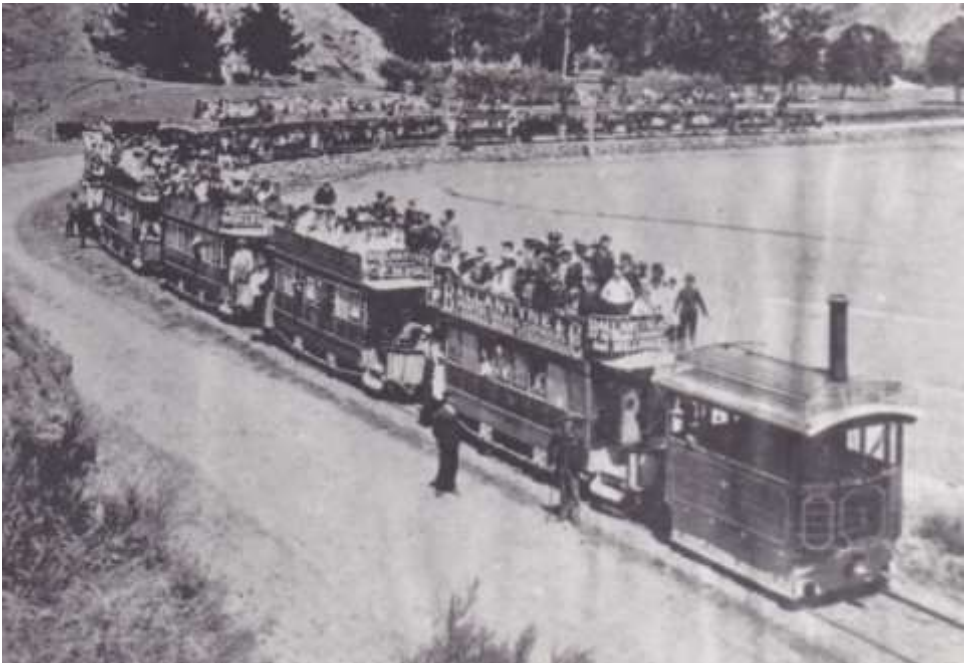
1850



1850



1850



1850

Electric Tramway Era 1905-54



1850



1850



1850

1



1850

19



1850

19



1850

190





1850

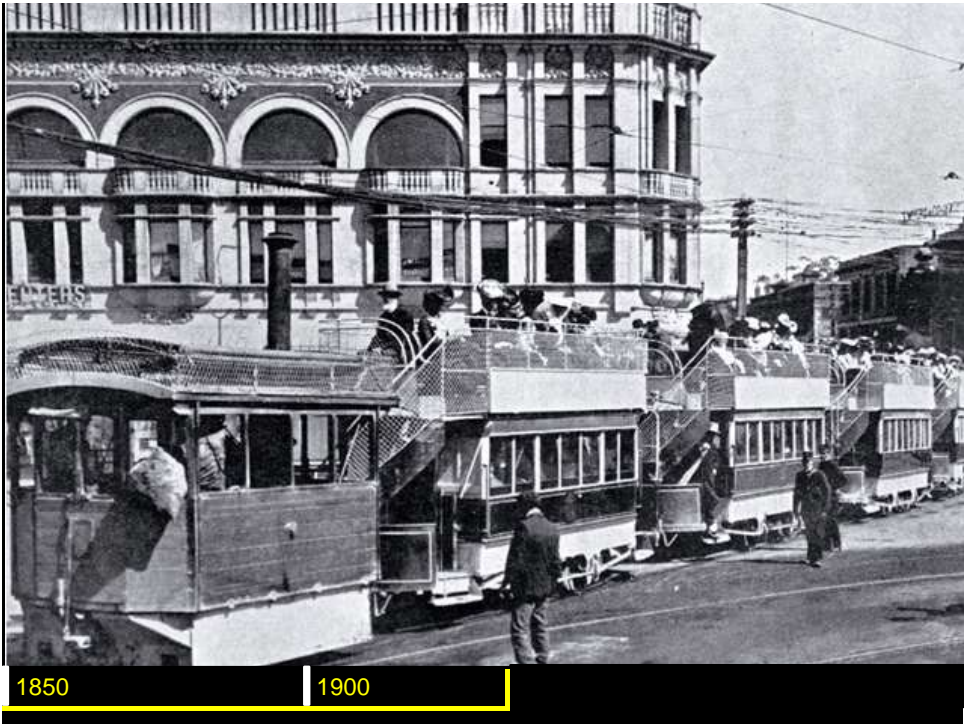
1900



1850

1900







1850

1900



1850

1900



BIG LANDSLIP AT CHRISTCHURCH: WORKERS CLEARING THE DEBRIS OFF THE SUMNER TRAMLINE TO ENABLE THE TRAIN TO PASS. MARCH 11, 1905. L. Hoops, Photo.

1850

1900

1950



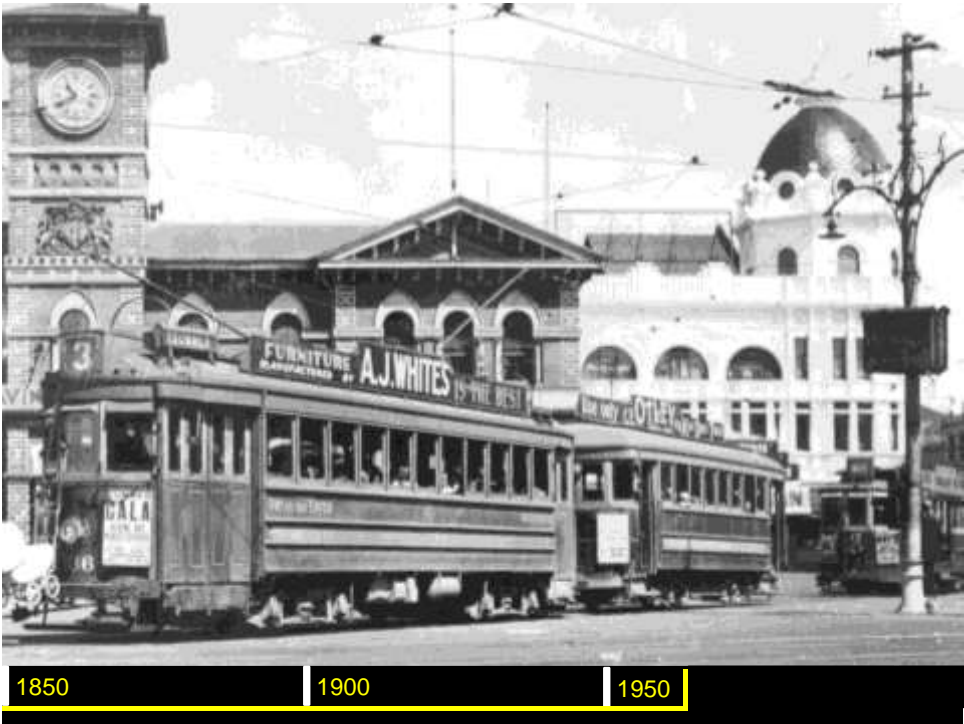
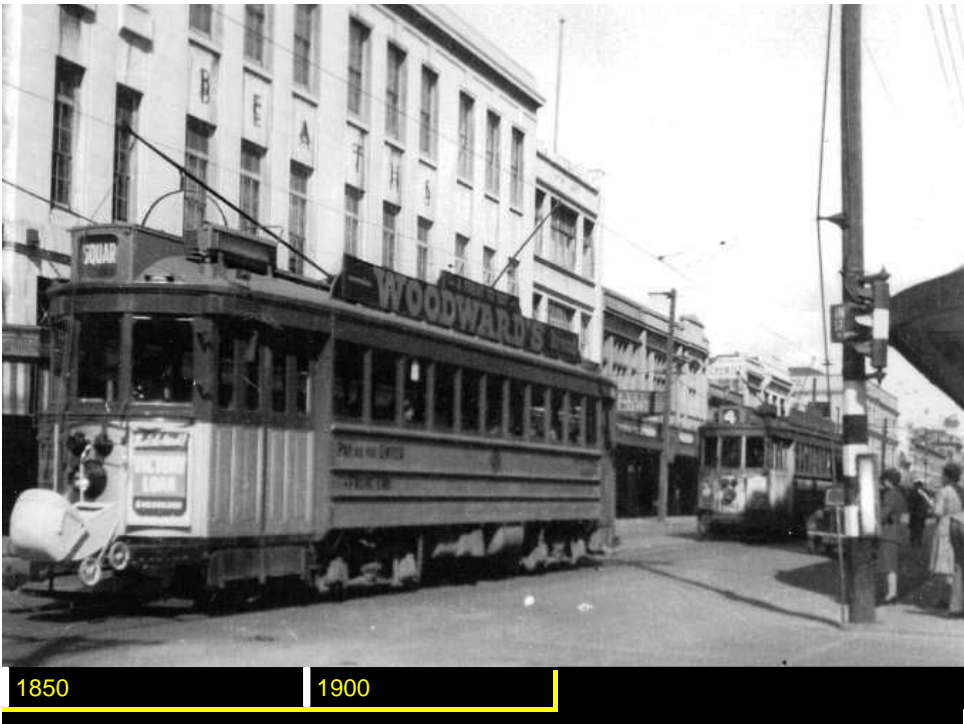
BIG LANDSLIP AT CHRISTCHURCH: REBUNDON TRAIN FOR SUMNER BEING HELD OVER THE TEMPORARY LINE OF RAILS. MARCH 11, 1905.
A heavy fall, consisting of between 200 and 300 tons of rock and earth, occurred on the Christchurch-Sumner Road on March 11, completely burying the road and tramway track for a couple of chains, to a depth of from 10 ft to 50 ft. The fall, which reached the lower water pump and carried away the overhead gear of the electric tramway, happened just ahead of an approaching train.
L. Hoops, Photo.

1850

1900

1950













1850

1900

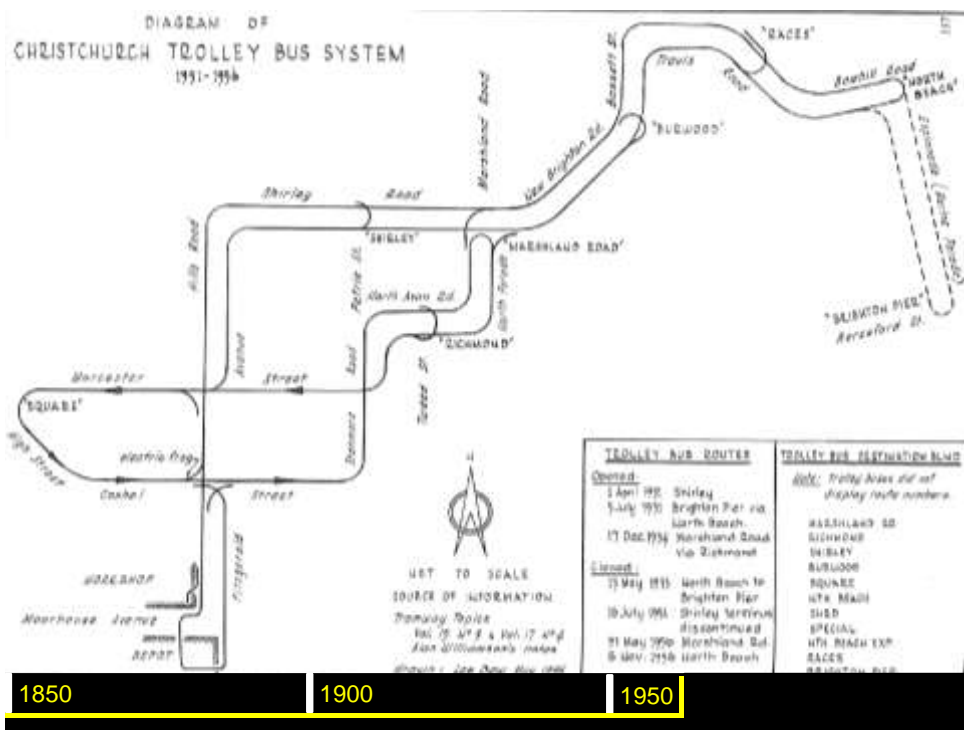


1850

1900



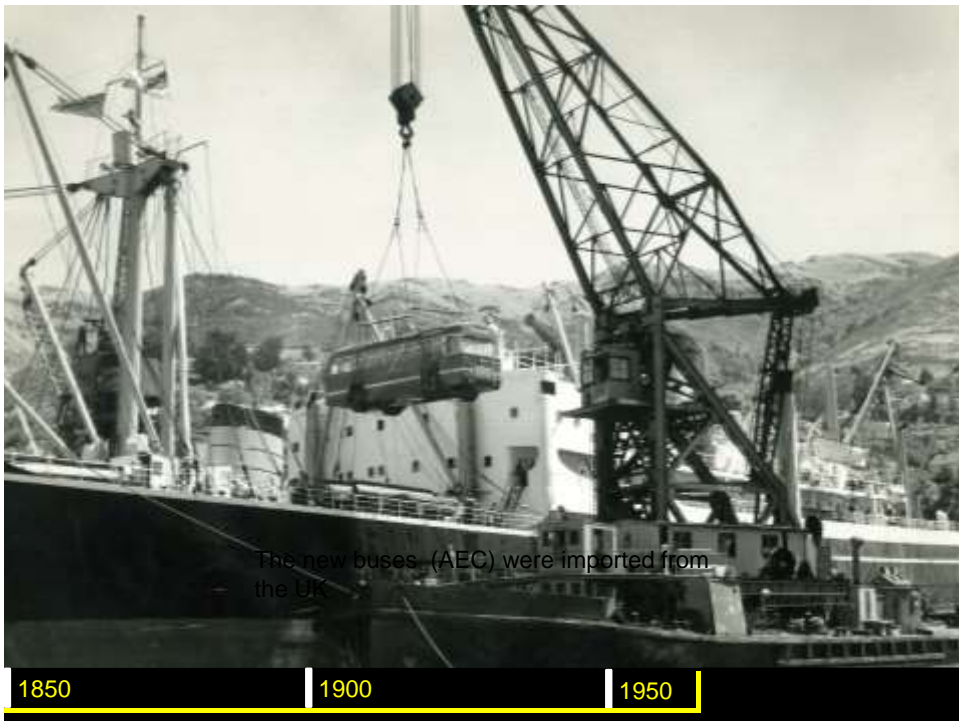




1850 1900 1950



1850 1900 1950





1850

1900

1950



1850

1900

1950







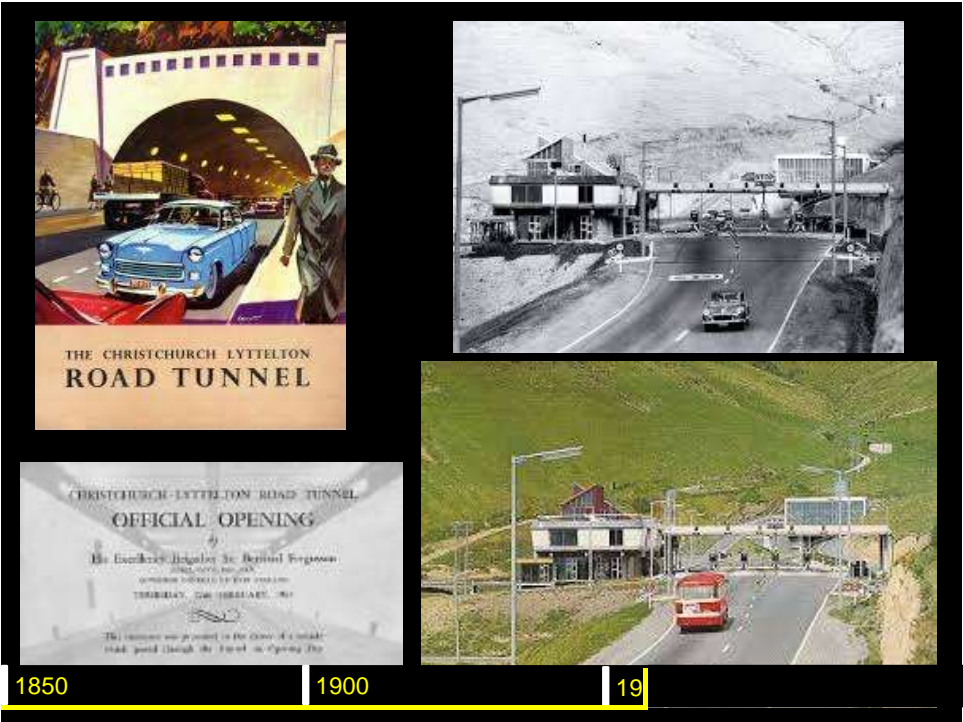












Meanwhile back to the buses...

The writing was on the wall for Cathedral Square as the great outdoor bus stop.

Desire to make the Square more of a great pedestrian space.

1850

1900

1950



1850

1900

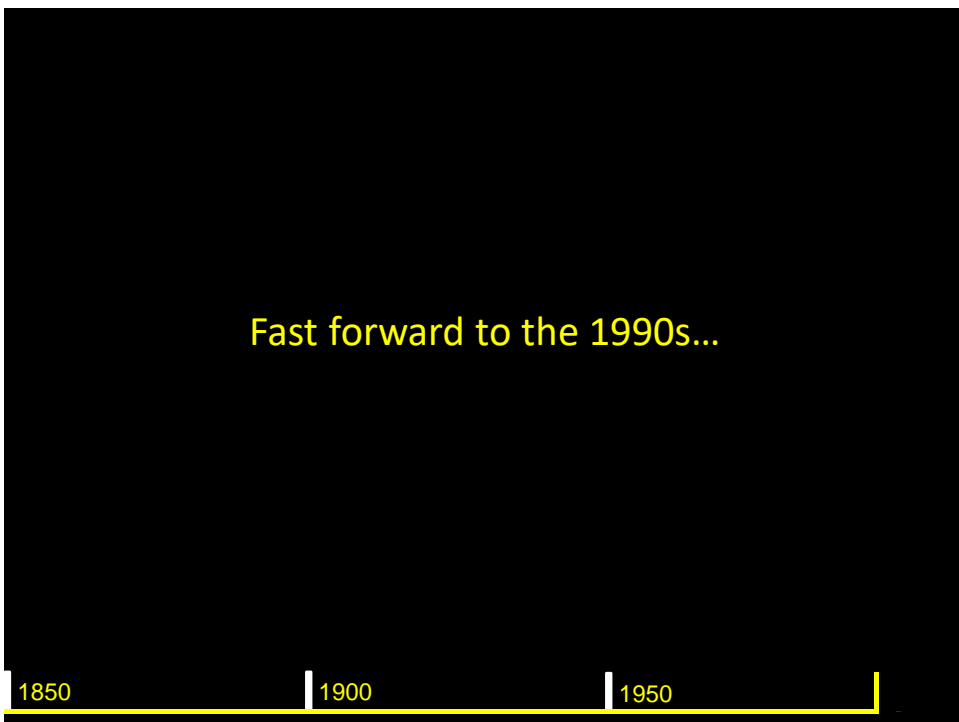
1950

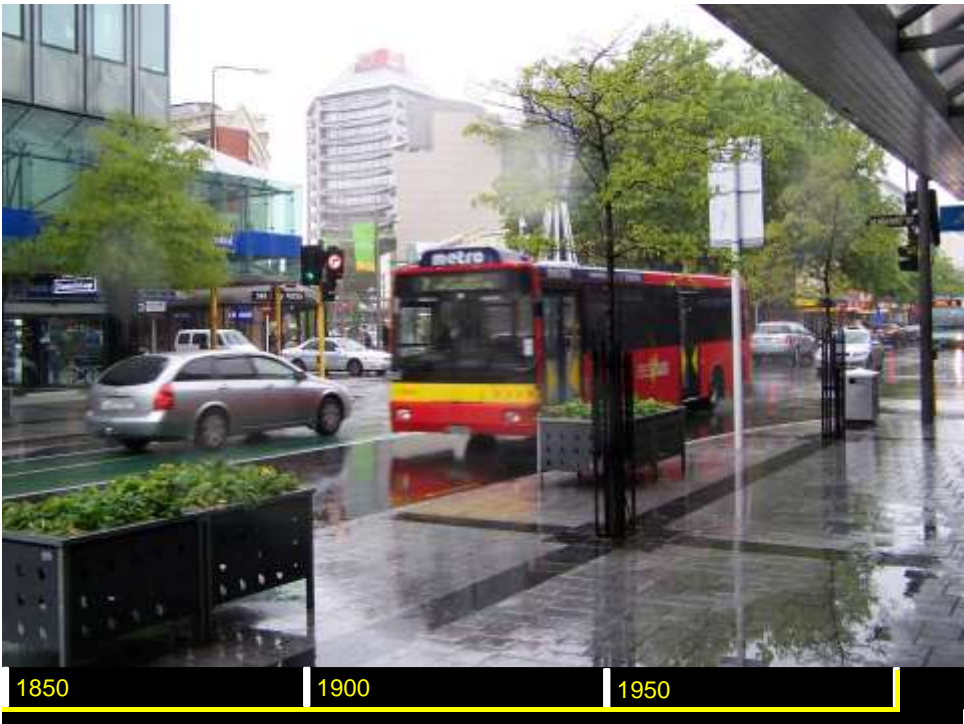




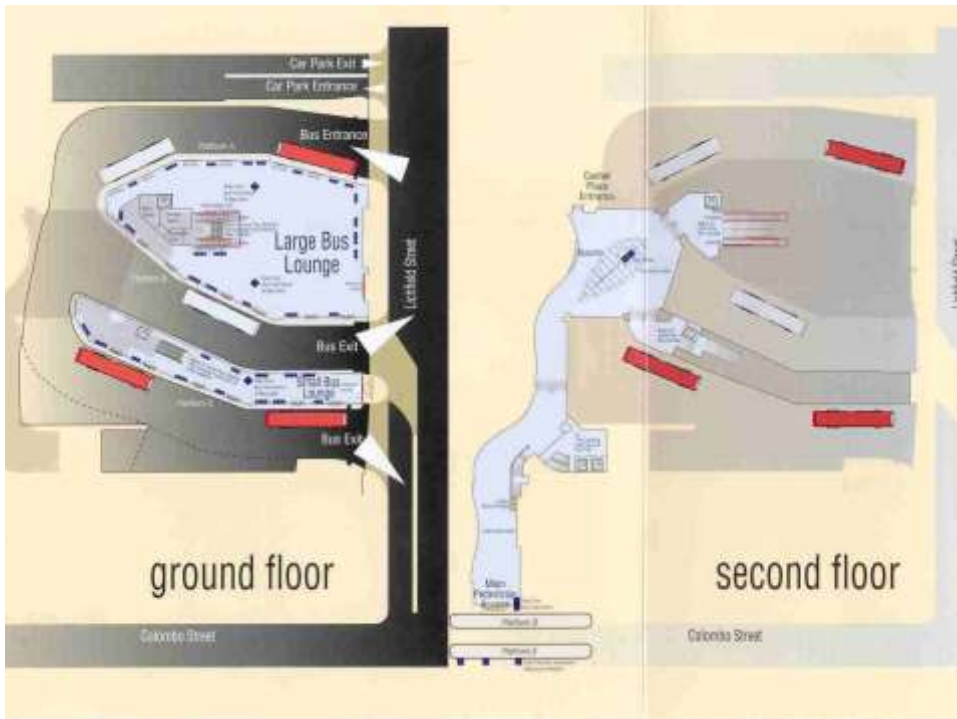
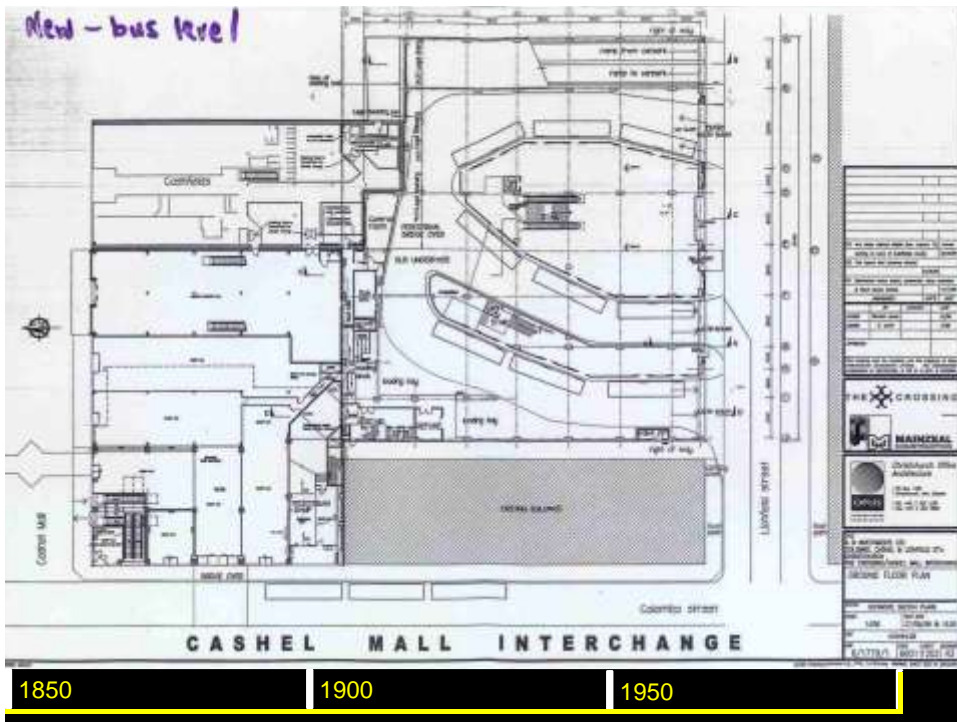


Fast forward to the 1990s...





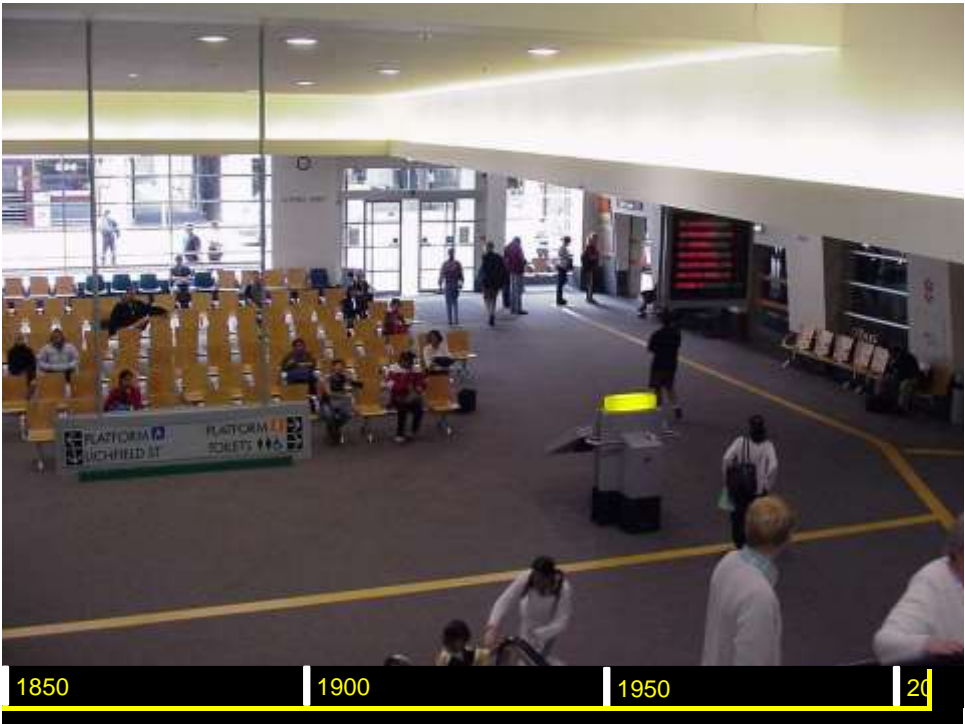








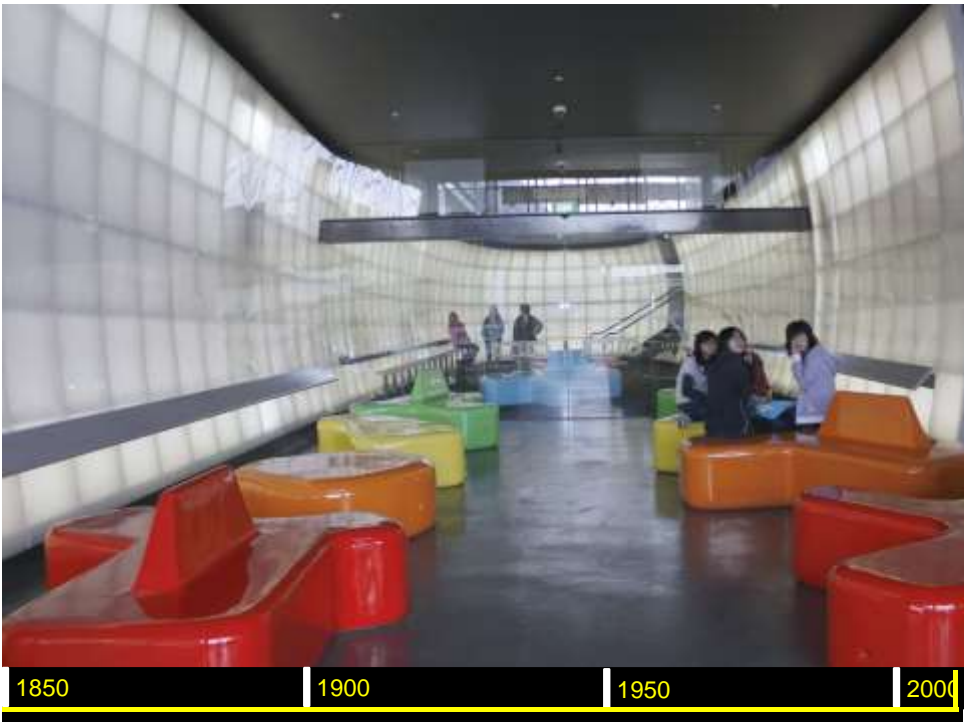














- Meanwhile - tram resurgence was beginning in other parts of the world
- And in Christchurch as part of the re-imaging of Worcester St into Worcester “Boulevard”, a tourist transport facility to attract custom and link various attractions



1850

1900

1950

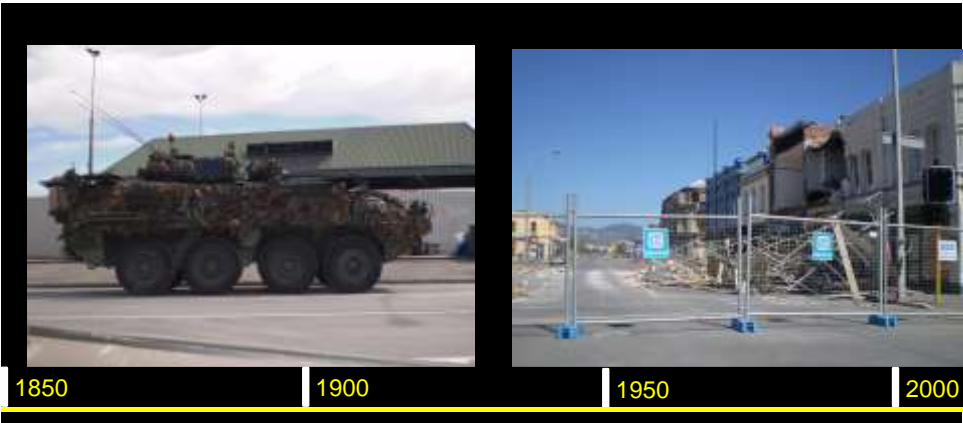
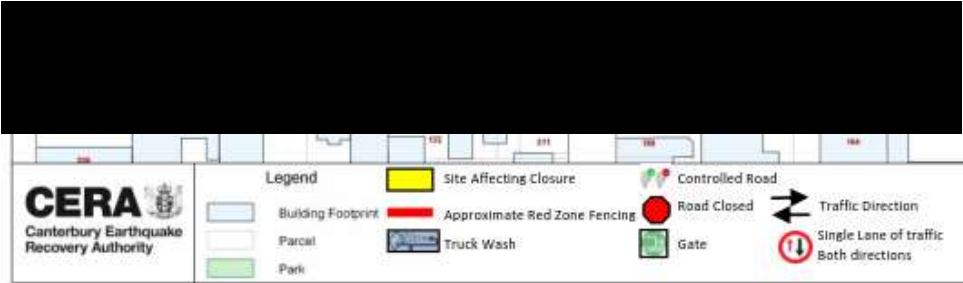
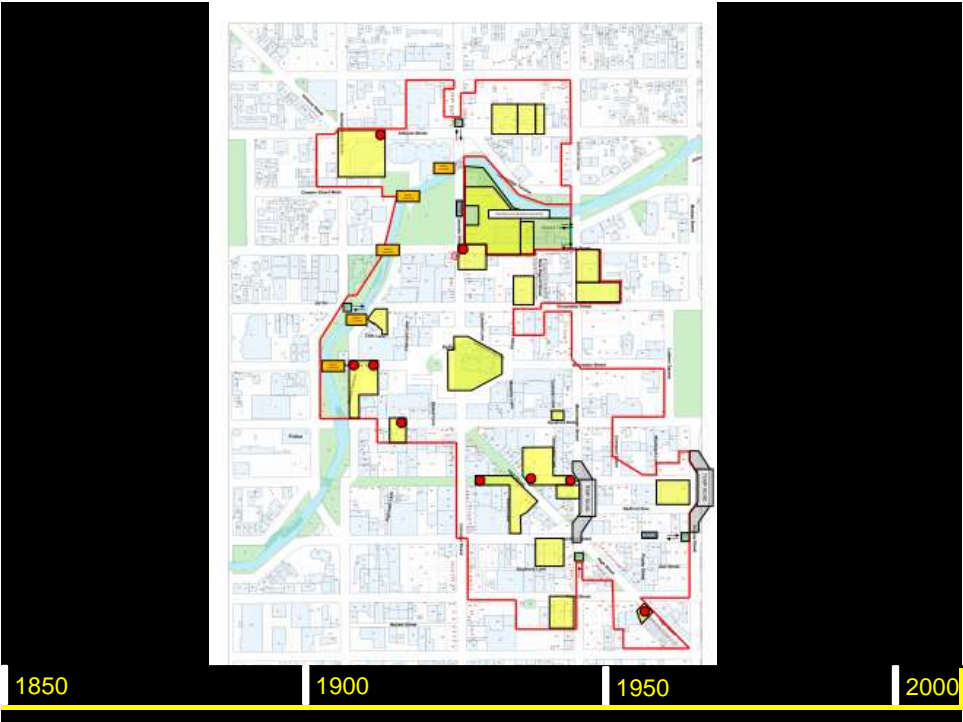


1850 | 1900 | 1950

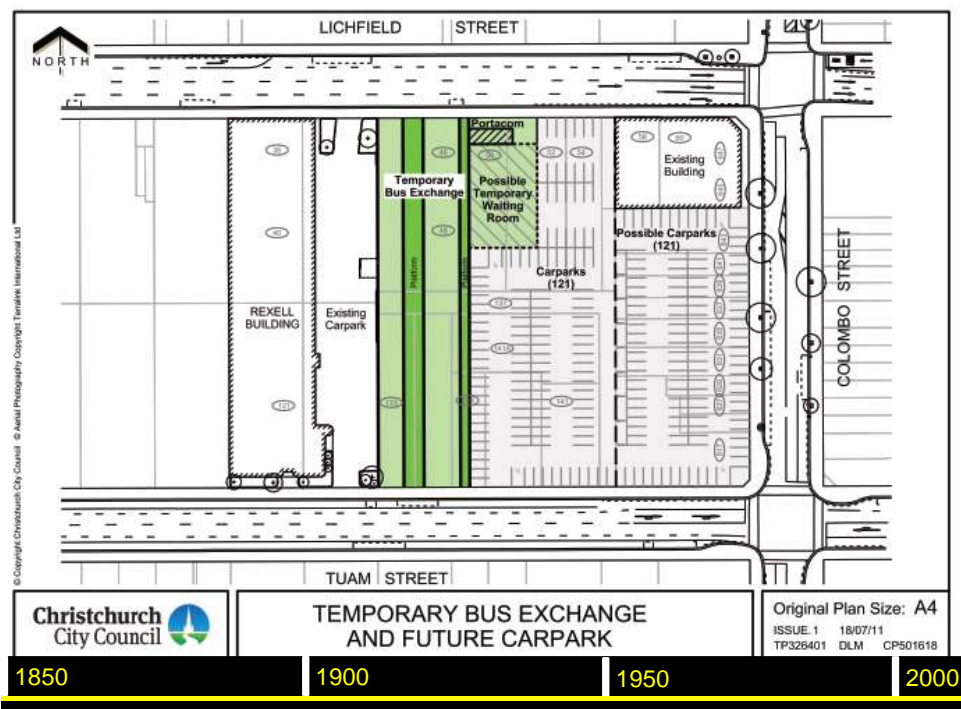


1850 | 1900 | 1950







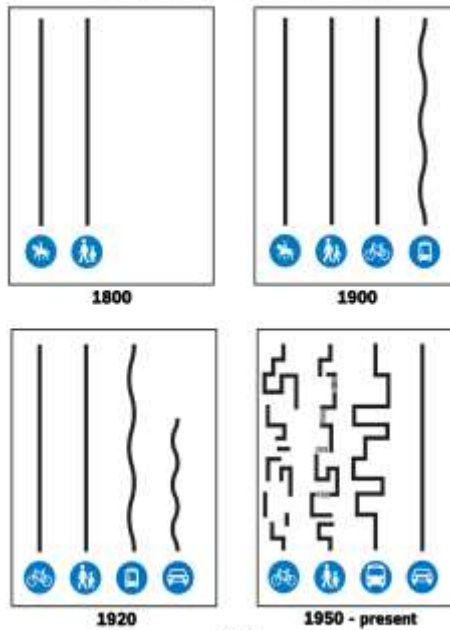




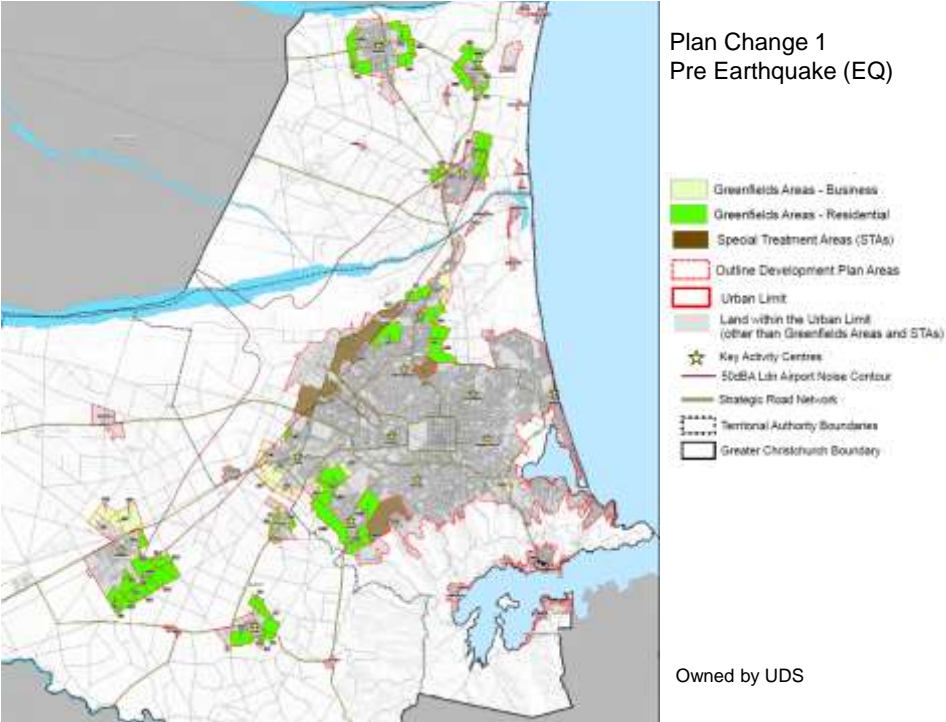
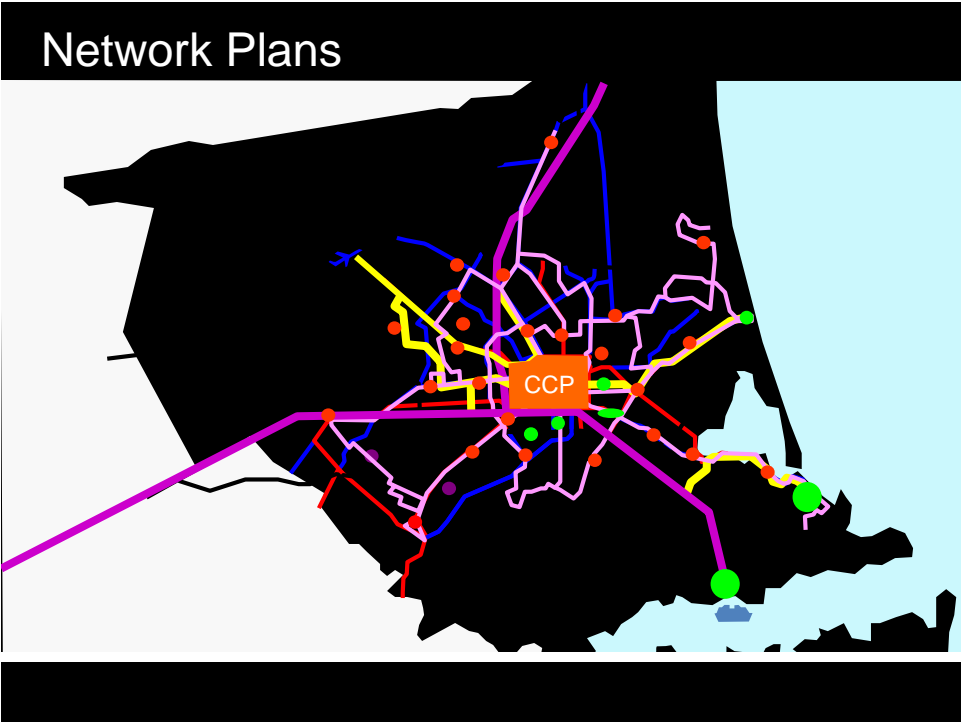




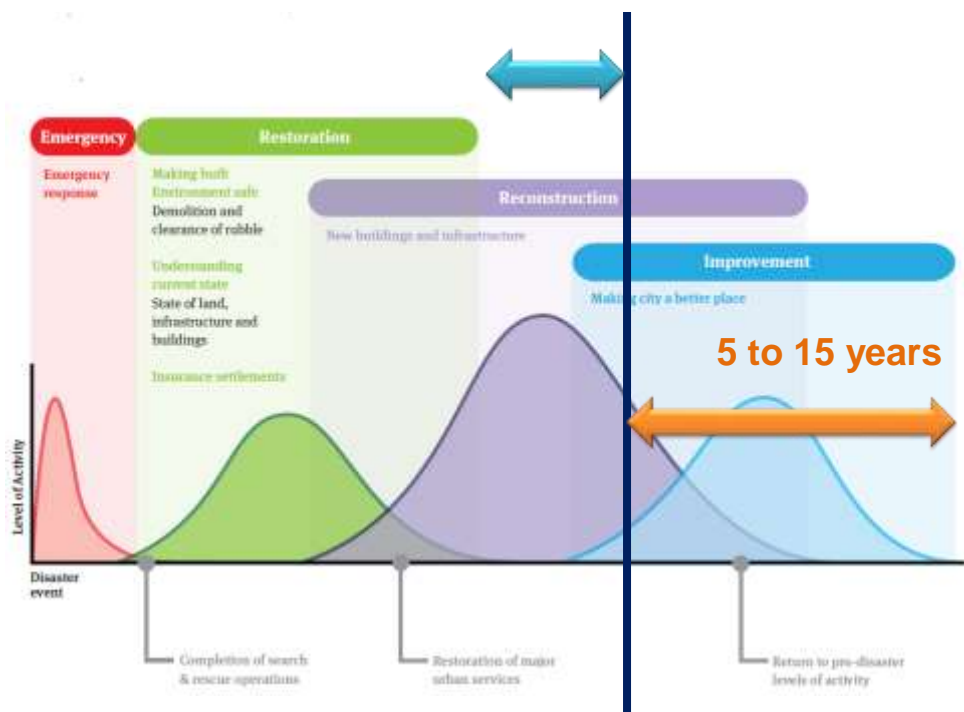
A Short History of Traffic Engineering



Copyright
2013
Copenhagen Design Co.

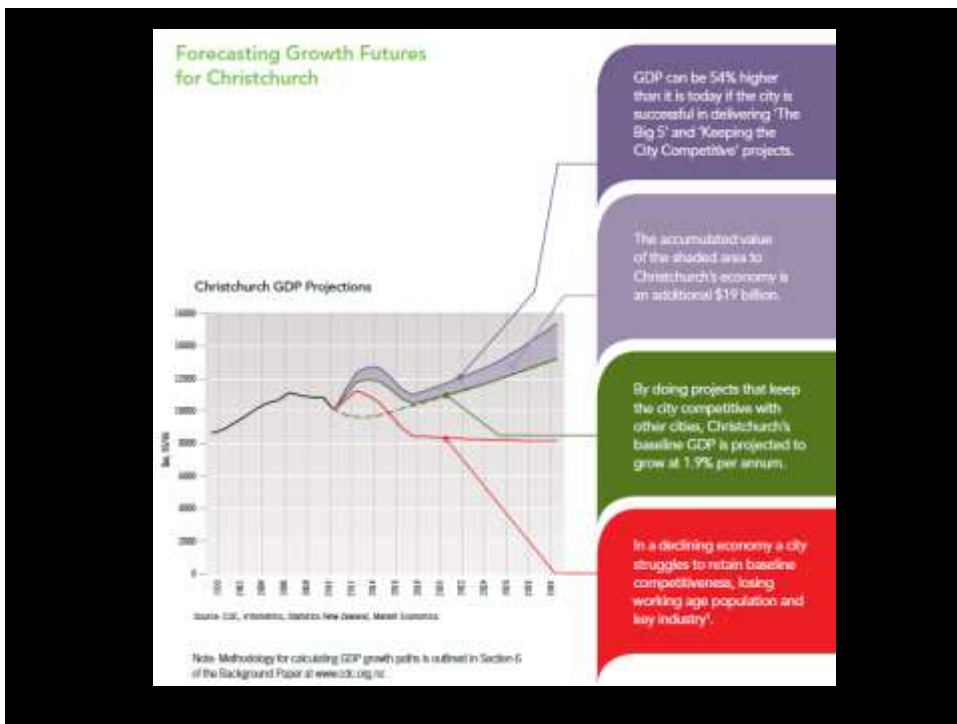






TEMPORARY ART INSTALLATIONS

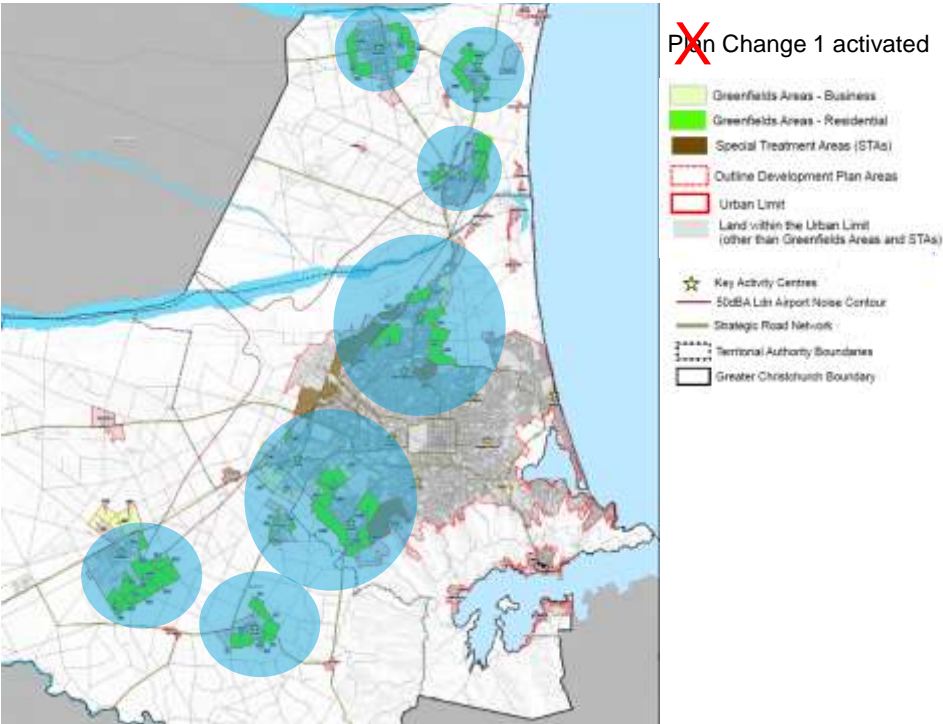
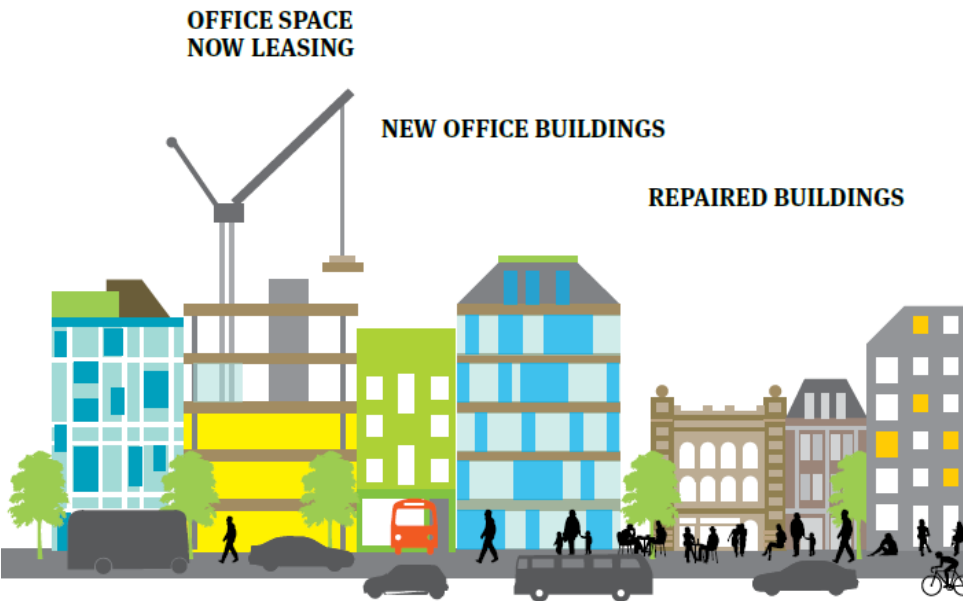




CDC expect growth in five key areas

<p>Maximising earthquake recovery opportunities</p> <p>Earthquake recovery spending on new infrastructure, facilities and buildings is efficient and effective * (~\$30b between 2011-2018)</p> 	<p>Effective water resource management</p> <p>Increasing irrigation potential and productivity in the Canterbury Plains but not at the expense of the environment * (~\$1-2b paid from 2018)</p> 	<p>Improving productivity through innovation</p> <p>Businesses using new ideas, the latest technology, new buildings and modern working techniques to improve productivity and develop a competitive edge * (~\$135m per annum from 2015 and continuing to improve)</p> 	<p>Successful central city design and build</p> <p>Creating a culturally attractive and vibrant city centre that attracts new businesses and people, and improving productivity in a more condensed CBD * 8% productivity gain within the CBD from 2018</p> 	<p>Increased import & export distribution networks</p> <p>Meeting the Government's China export growth targets * (~\$40m per annum from 2018)</p> 
--	---	--	--	--

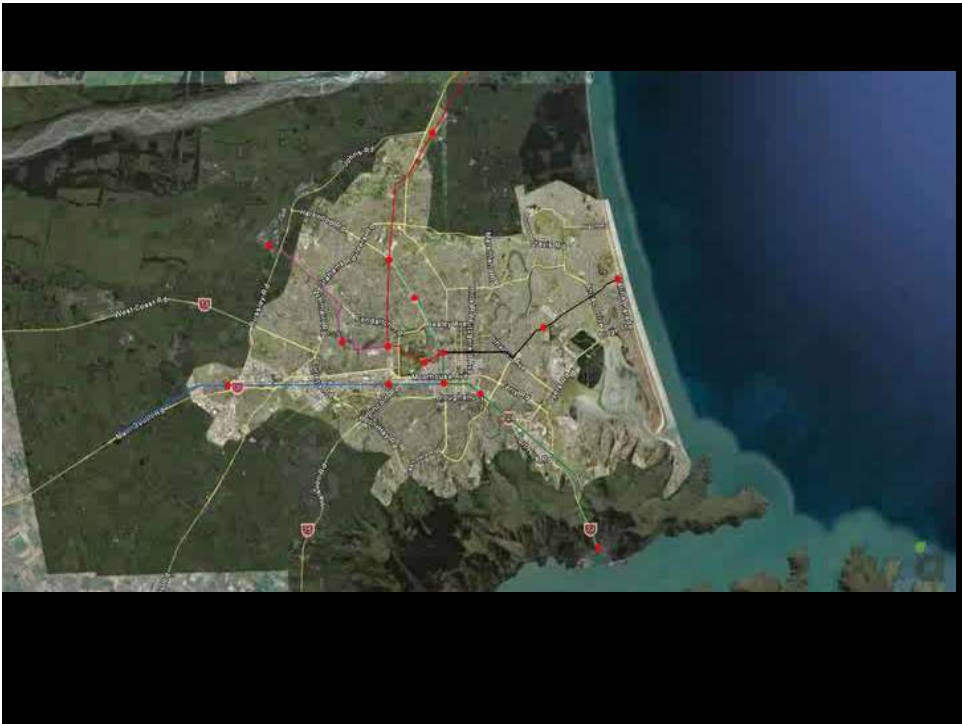
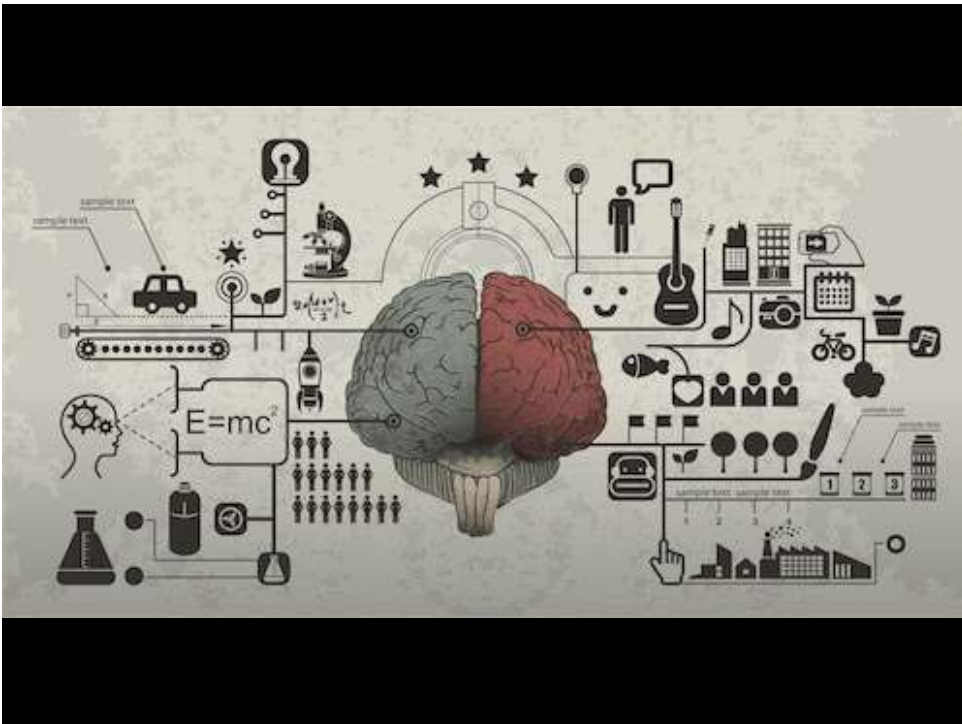
Alignment with mobility ?

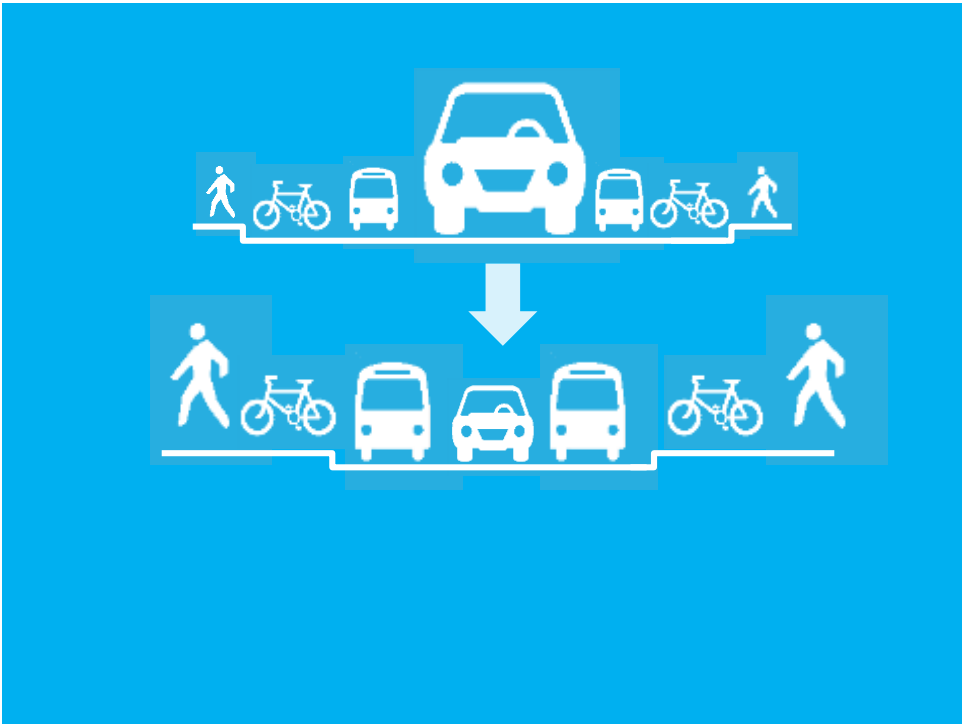
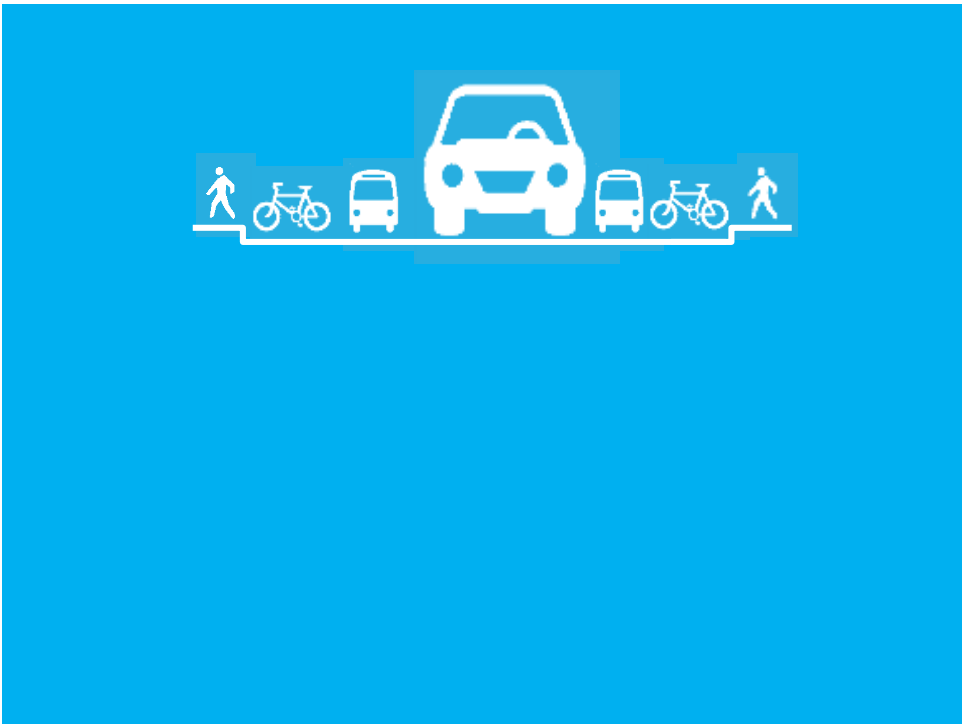




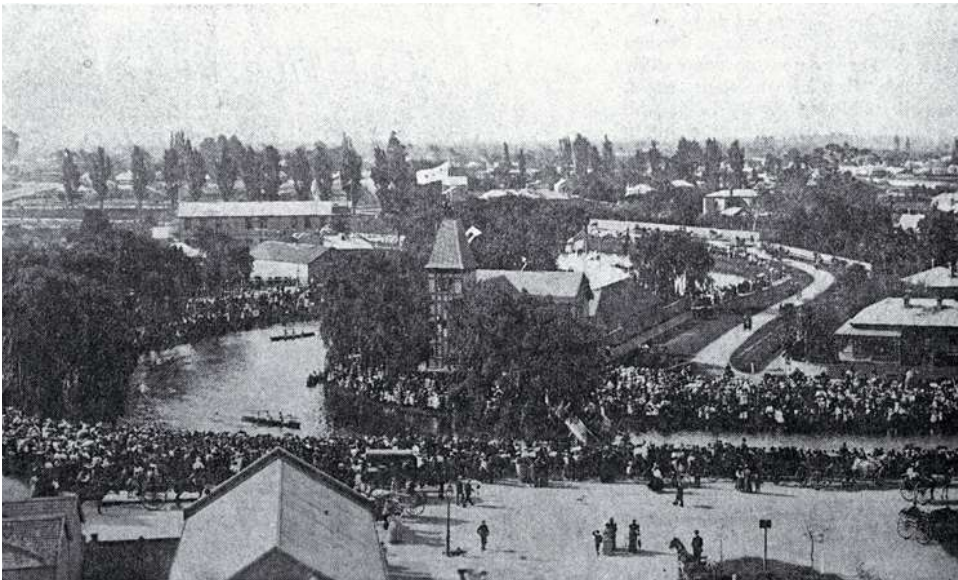
*No! I can't be bothered with any of this....
Can't you see? I've got a battle to fight....*







.....An opportunity



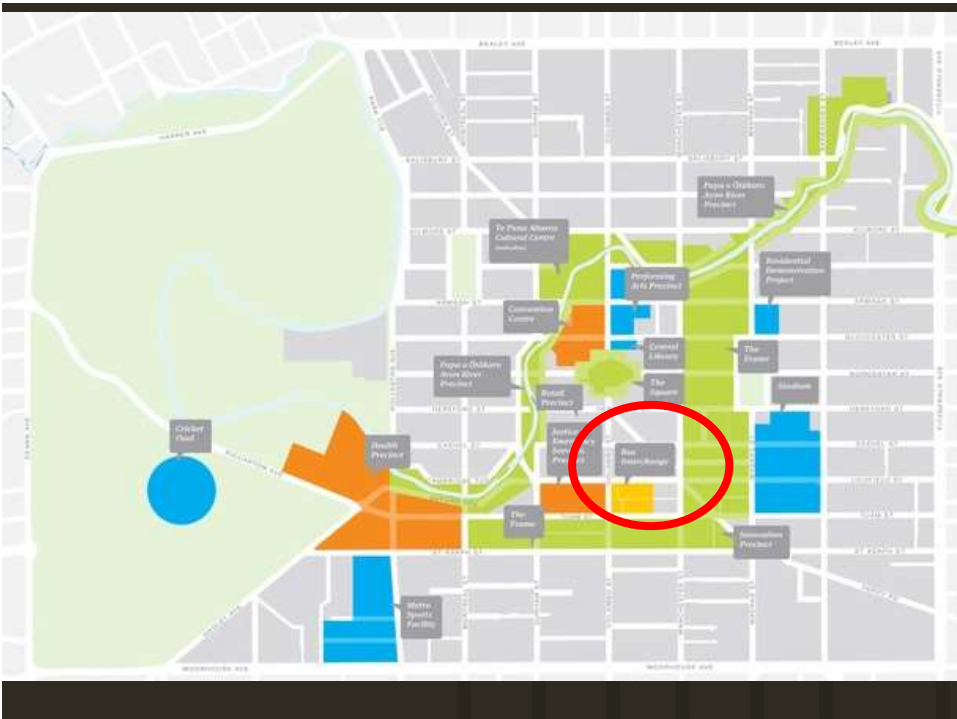
1850

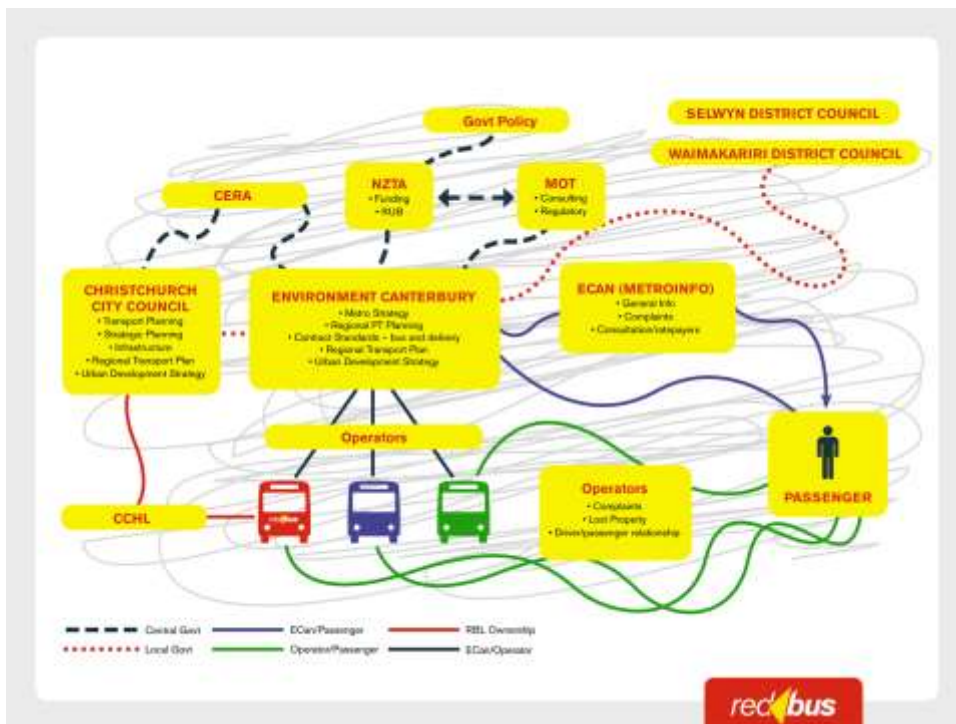




Nice seeing
someone to play
something different







Bus Interchange

Key Partners & Stakeholder Consultation



- Christchurch Metro Bus Operators
- Taxi Federation
- Christchurch Youth Community
- Inter-city Coach Operators Association
- Passenger Transport Advisory Group
- Retail Neighbours



Customer Focus

- Understanding the facility
- Movement and Circulation
- Comfort and Attractiveness
- Safety and Security
- Accessibility and Inclusiveness

Urban Focus

- Integration with context
- Design Quality
- Sense of Place

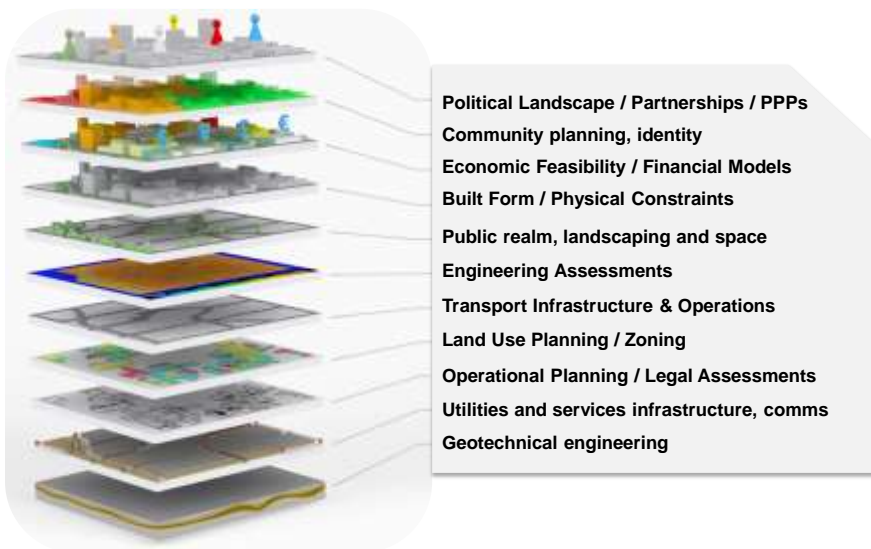
Public Transport Focus

- Modal Strategies
- Bus Operations
- Management and Maintenance
- Adaptability, Flexibility and Scalability

Value Focus

- Four Pillar Model of Sustainability
- Design for Change

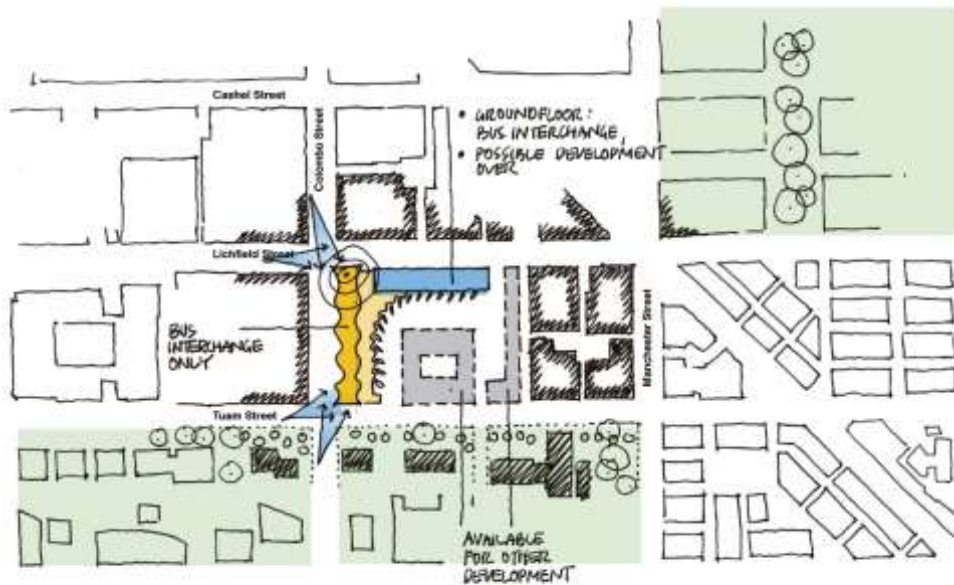
Interchange principles and requirements





~~Facility for vehicles ?~~

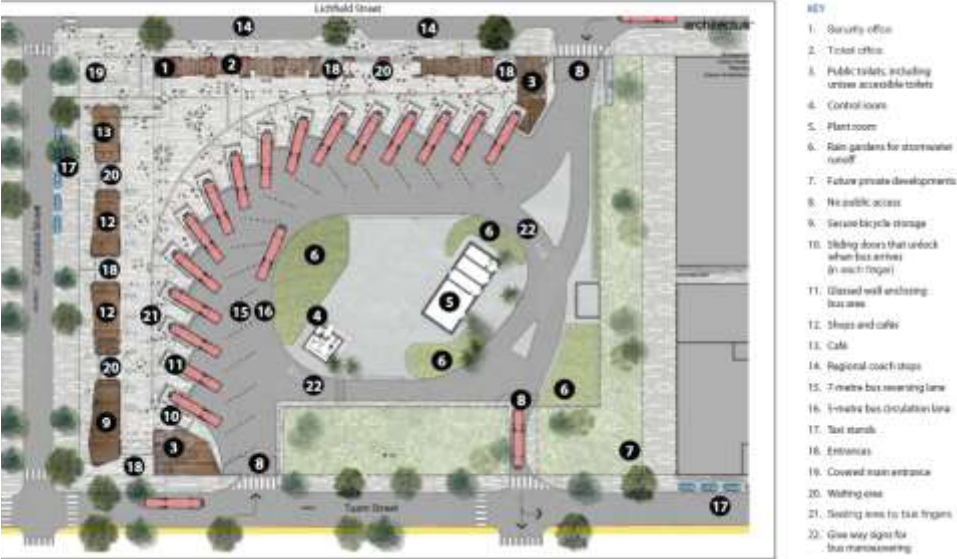
A place for people !



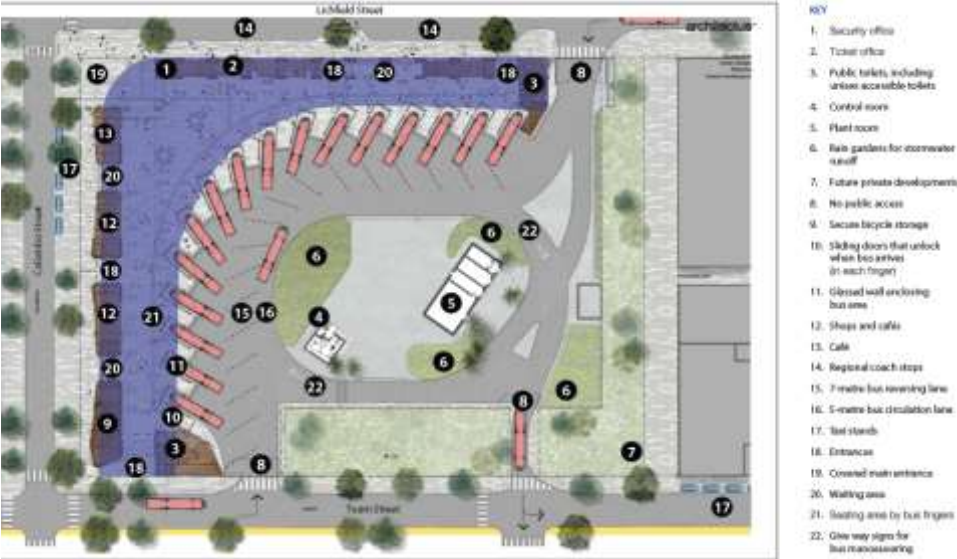
Summary - Site strategy

“It will never work.
 Seriously.
 Christchurch bus
 drivers, do not
 reverse buses.
EVER.”

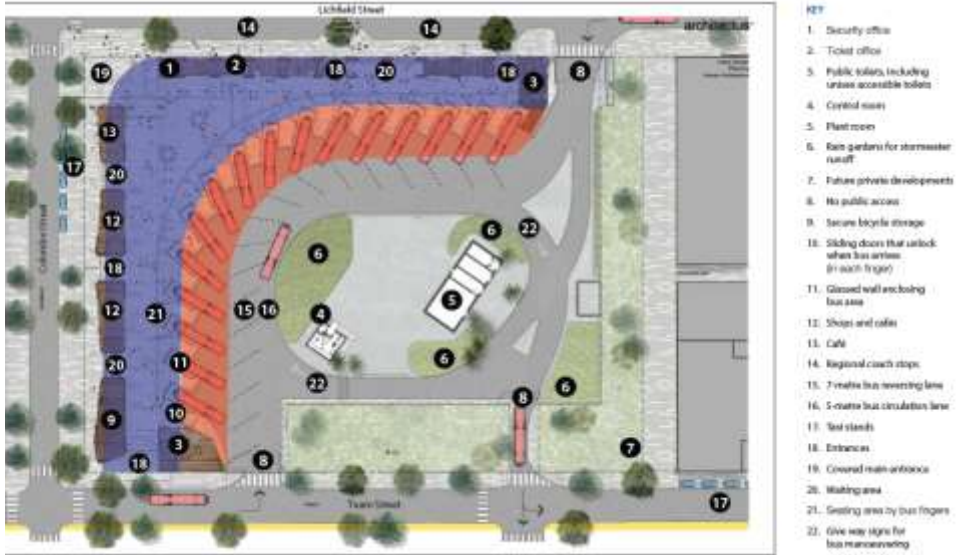
Site Plan



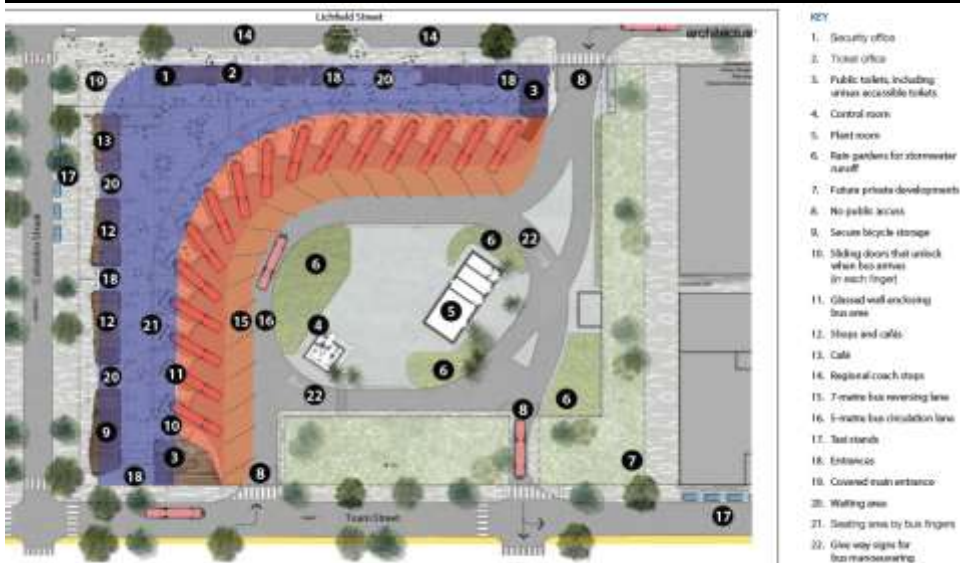
Site Plan – Pedestrian flow



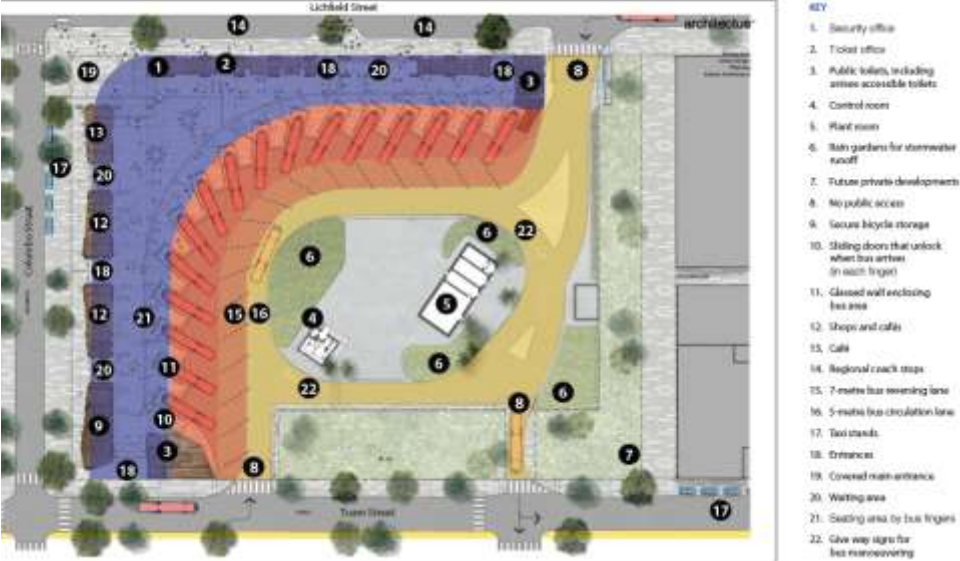
Site Plan - *Buses*



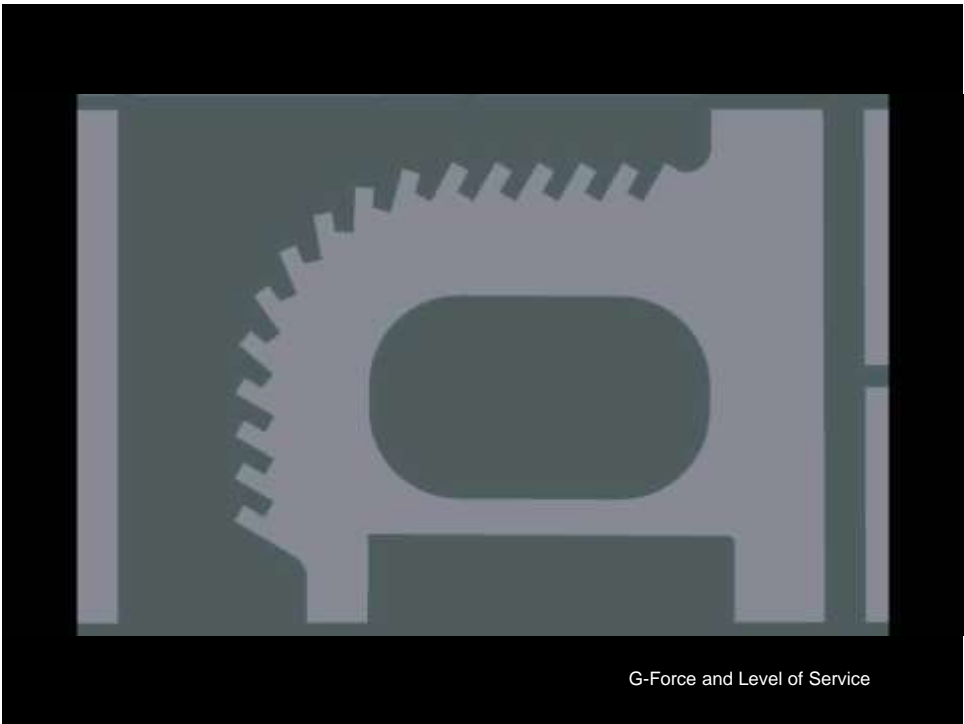
Site Plan – *Buses reversing*



Site Plan – *Buses manoeuvring*







G-Force and Level of Service





one news now

NEW ZEALAND

Christchurch bus drivers learn to drive in virtual reality

May 29, 2015

Share

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Source: **one news**



Christchurch bus drivers are using a virtual reality program which mimics the new bus interchange.
Source: ONE News



Customer Focus

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- Movement and Circulation
- Comfort and Attractiveness
- Safety and Security
- Accessibility and Inclusiveness

Urban Focus

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- Sense of Place

Public Transport Focus

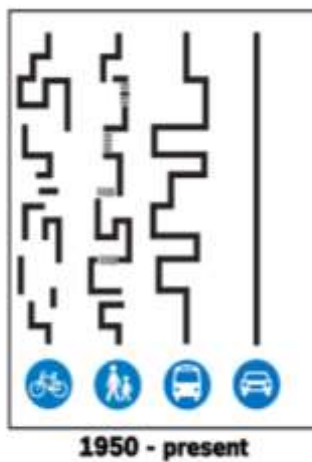
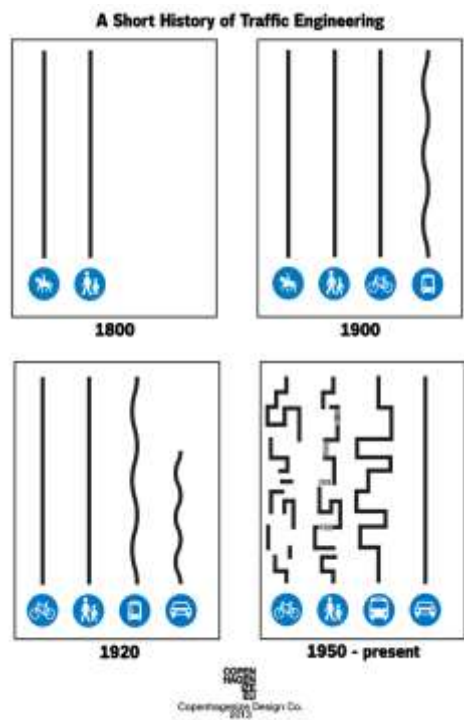
- Modal Strategies
- Bus Operations
- Management and Maintenance
- Adaptability, Flexibility and Scalability

Value Focus

- Four Pillar Model of Sustainability
- Design for Change

Interchange principles and requirements





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ROADS
DESIGN
Co.
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2013

Mobility as a Service

Automated vehicles

Jet cars

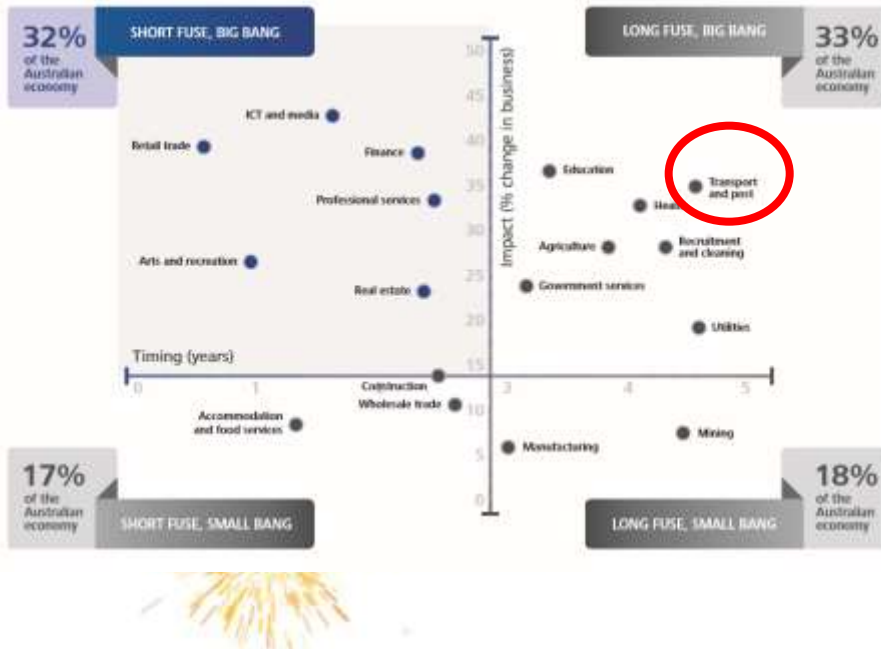
Self driving buses

On demand buses

Future

UBER

Deloitte.



World's largest **taxi** company owns no taxis



Fastest Growing Banks have no actual money



Largest accommodation provider owns no hotels



World's most valuable **retailer** has no inventory



World's largest **movie house** owns no cinemas

Driverless Buses Begin Test Runs in Switzerland

They look pretty cute

BY LAUREN RO · JUN 23, 2016, 5:00P



This smart bus will shuttle passengers at a time

Photo courtesy of EPFL

The Swiss Federal Institute of Technology in Lausanne (EPFL), in partnership with the Mobility Lab Sion

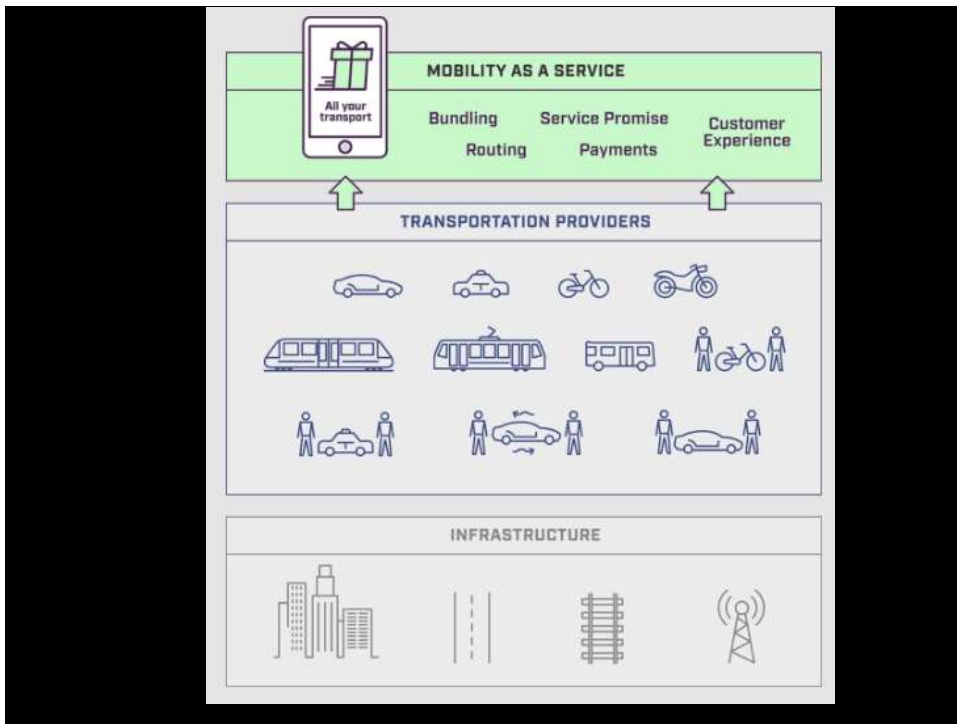
Thanks for the feedback! [Go](#)

We'll review this ad to improve it in the future.

Help us show you better ads by [adjusting](#)

Driverless Pods







?

1. Land use and transport together
2. High mobility corridor protection
3. Retro enabled infrastructure to leverage disruption

?

Vision

Champion

And to conclude....

Where to the central city tram?

