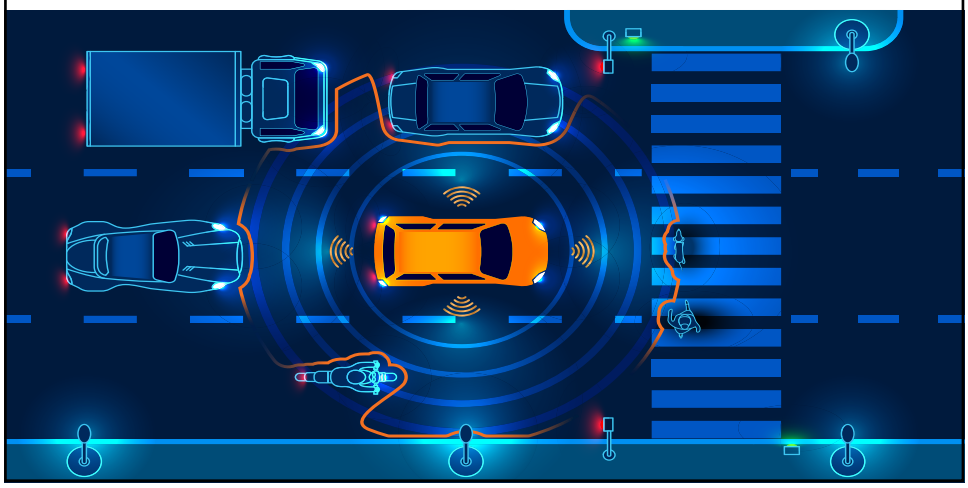
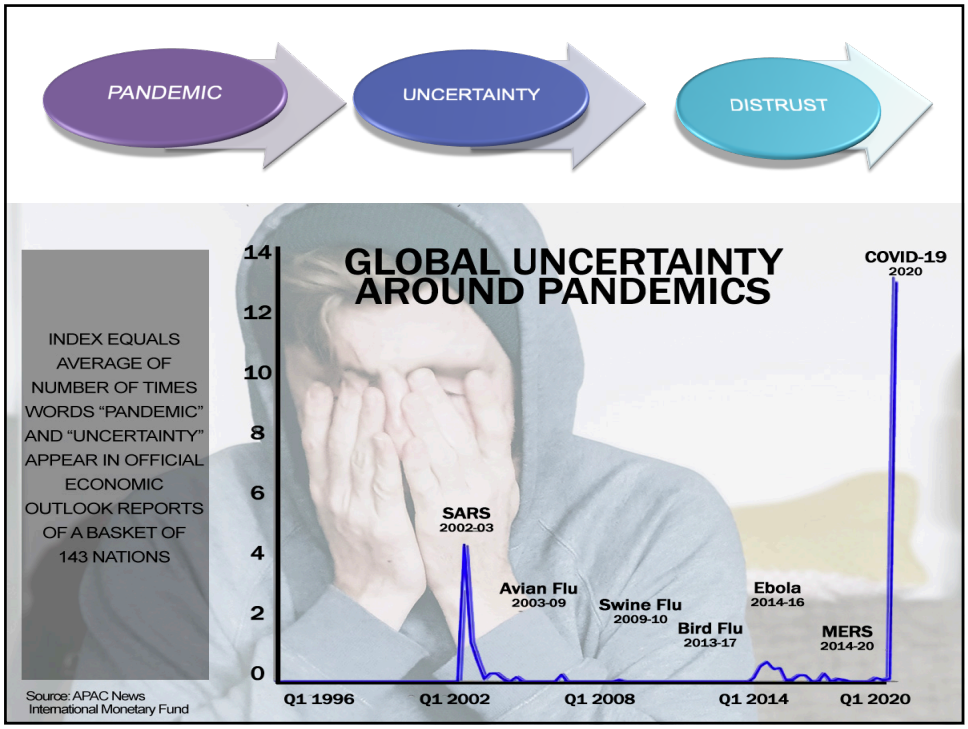
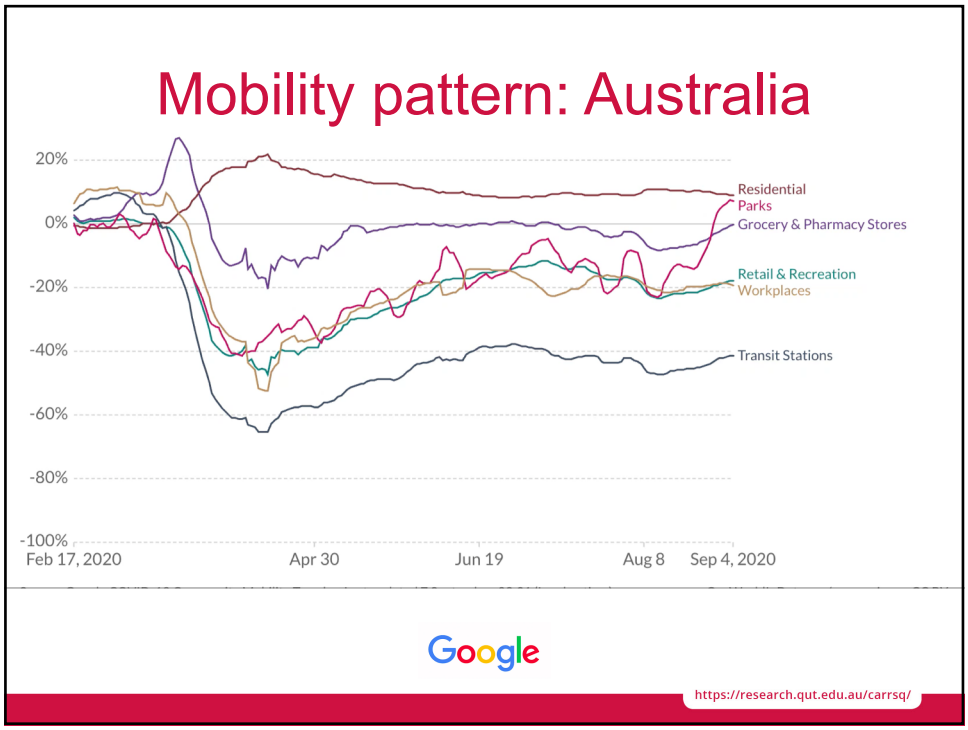
Tsunami of new technologies, data and business models

BUT…

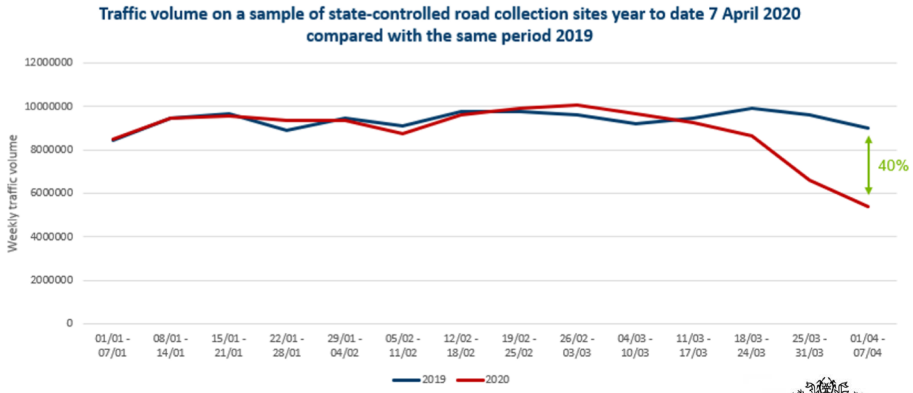
Digitalisation alone, will not spontaneously improve road safety




PANDEMIC
UNCERTAINTY
DISTRUST
INDEX EQUALS AVERAGE OF NUMBER OF TIMES WORDS "PANDEMIC" AND "UNCERTAINTY" APPEAR IN OFFICIAL ECONOMIC OUTLOOK REPORTS OF A BASKET OF 143 NATIONS
Source: APAC News International Monetary Fund
GLOBAL UNCERTAINTY AROUND PANDEMICS
14
12
10
8
6
4
2
0
SARS 2002-03
Avian Flu 2003-09
Swine Flu 2009-10
Bird Flu 2013-17
Ebola 2014-16
MERS 2014-20
COVID-19 2020
Q1 1996
Q1 2002
Q1 2008
Q1 2014
Q1 2020


Mobility pattern: Australia
20%
0%
-20%
-40%
-60%
-80%
-100%
Feb 17, 2020
Apr 30
Jun 19
Aug 8
Sep 4, 2020
Residential
Parks
Grocery & Pharmacy Stores
Retail & Recreation
Workplaces
Transit Stations
Google
https://research.qut.edu.au/carrsq/

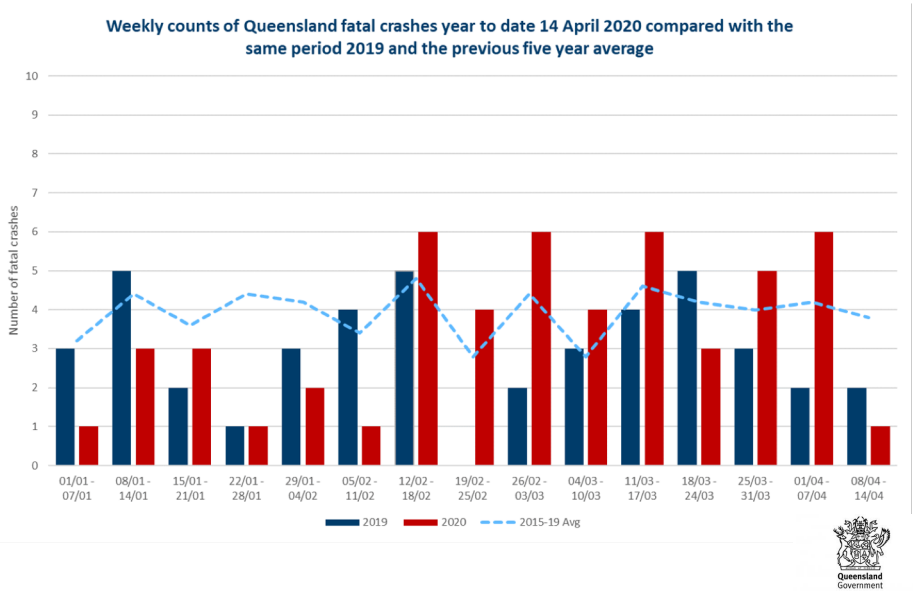
Qld traffic volume



Queensland Government

https://research.qut.edu.au/carrsq/

Qld Fatalities



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Trends transport research: DIGITAL

- New technology, methods, experimentation tools
- Increasing numerical modelisation, simulation, big data
- Pervasiveness of information, communication, automation, ☞ complex systems
- Transport sector continues to be driven by technology
- Pressure to evaluate health/ethics/ safety impacts of new technology

Digital mobility: Artificial Intelligence

- The collection and analysis (AI) of big data is shaping mobility ecosystem.
  - How can I trust an AI system ?
    - Safety, security, fairness, privacy
  - How to train an AI about safe behaviour
  - Can I trace the steps that led to a decision e.g. AV crash ?
    - Ethics, biais …
- Too difficult and too little incentives to verify claims or report AI problems

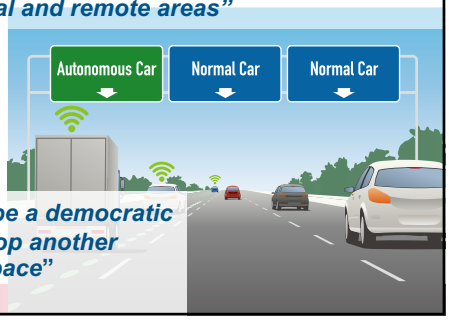
New era for mobility

Safety
Sustainability
Equity

Automation
Connectivity
Decarbonisation
Sharing

Influence mobility demand & user's behavior

"For transport system to be safe and equitable we should NOT forget regions, rural and remote areas"



"For active transport to be a democratic practice, we must develop another philosophy of sharing space"

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THANK YOU !!

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