The Future of Transport

LEVEL 5 DESIGN

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Managing Director

Tuesday 19 November 2019

LEVEL
5
DESIGN

Our cities will transform…

LEVEL
5
DESIGN

LEVEL
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Imagine the future
...rapid evolution

Navigating the Hype

Complimentary technologies…

Complimentary technologies…

Shared

Autonomous

Connected

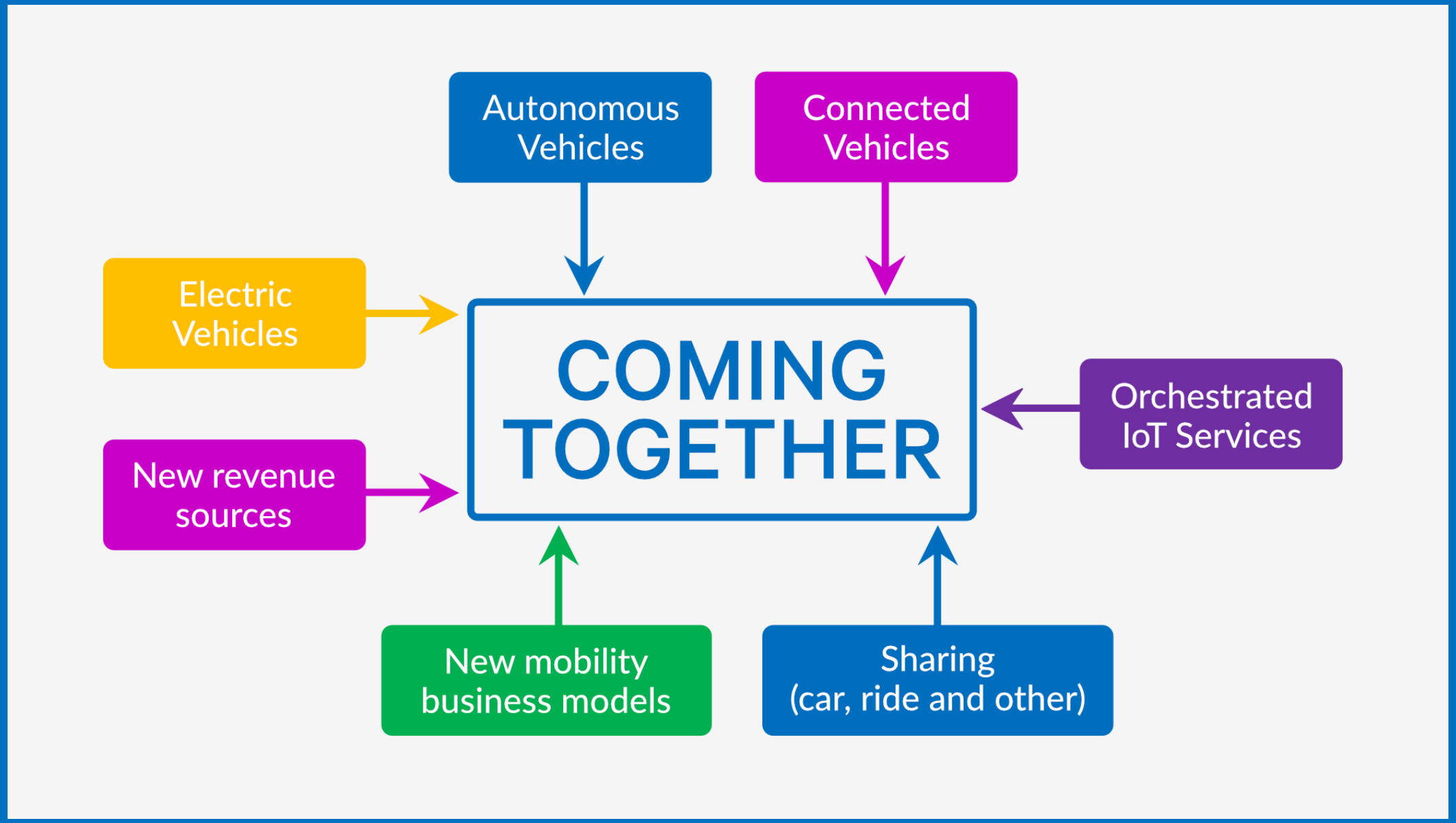
Electric

Services

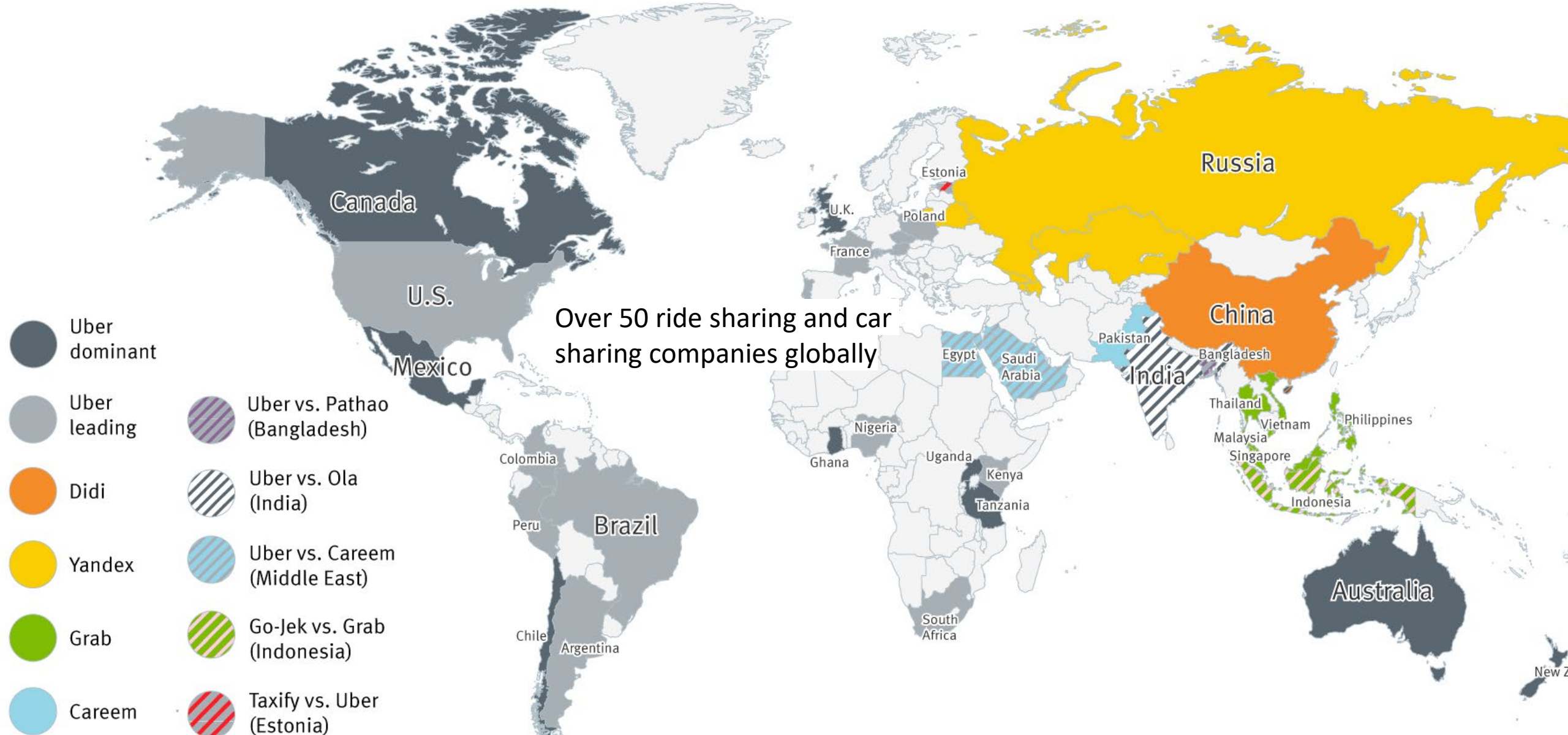
Hydrogen Electric

Battery Electric

Convergence



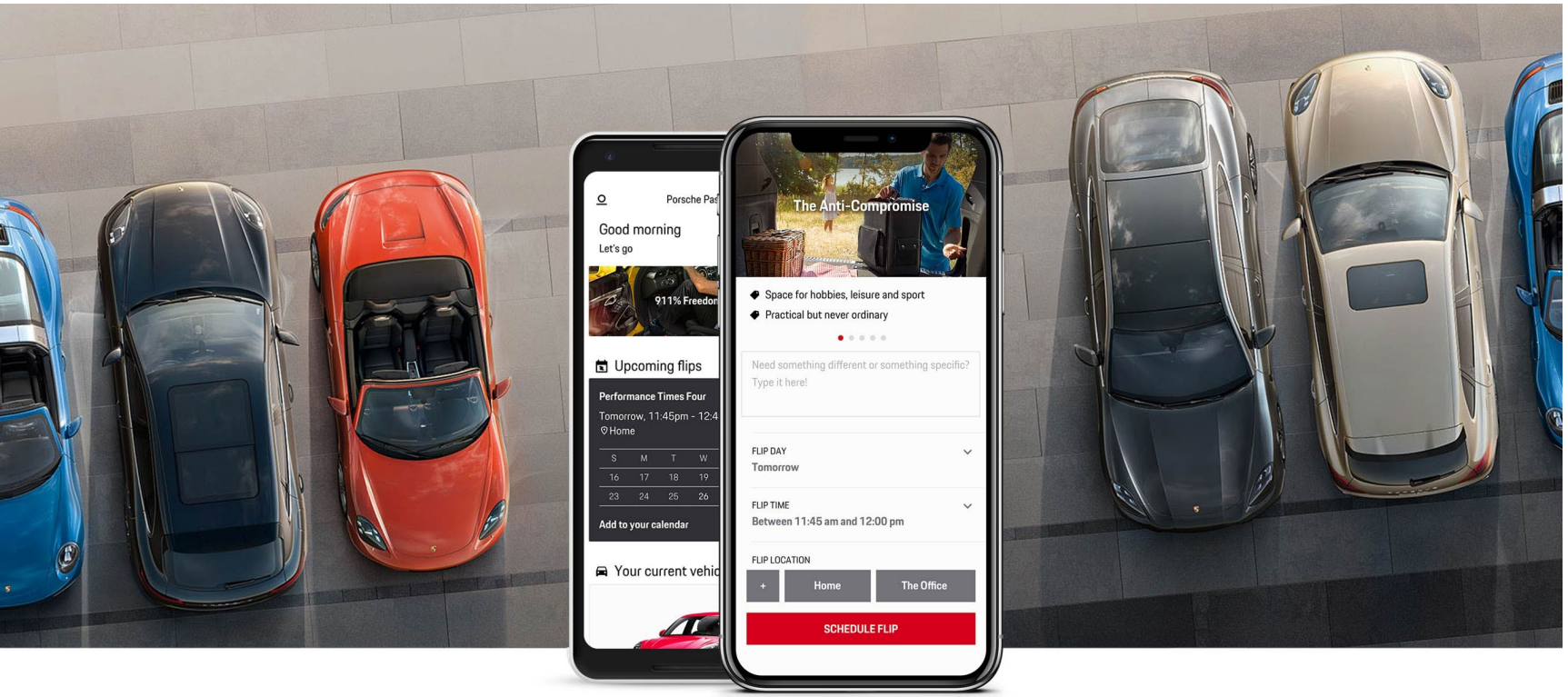
The Sharing Phenomena



Over 50 ride sharing and car sharing companies globally

Sharing on demand

Accessing vehicles differently



LAUNCH

$2,000 / month

with $500 joining fee

- $1 million liability insurance policy
- $1,000 deductible for drivers
- Roadside assistance and maintenance
- Personal concierge
- Full detail washes with every flip
- Includes base and S models

Cayman

Boxster

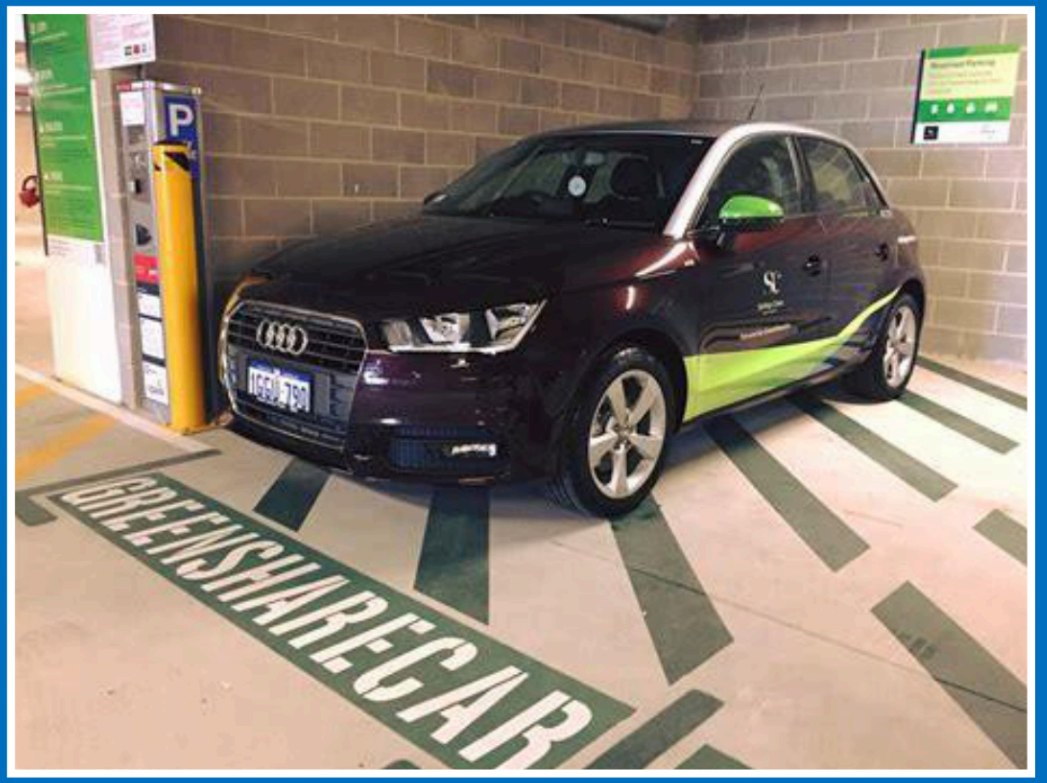
Macan

Cayenne

Car sharing

Reduce the demand by between
5 and 15 times saving $$$

Supportive local government policies
Increase drop off/pick up space
Eliminate parking minimums



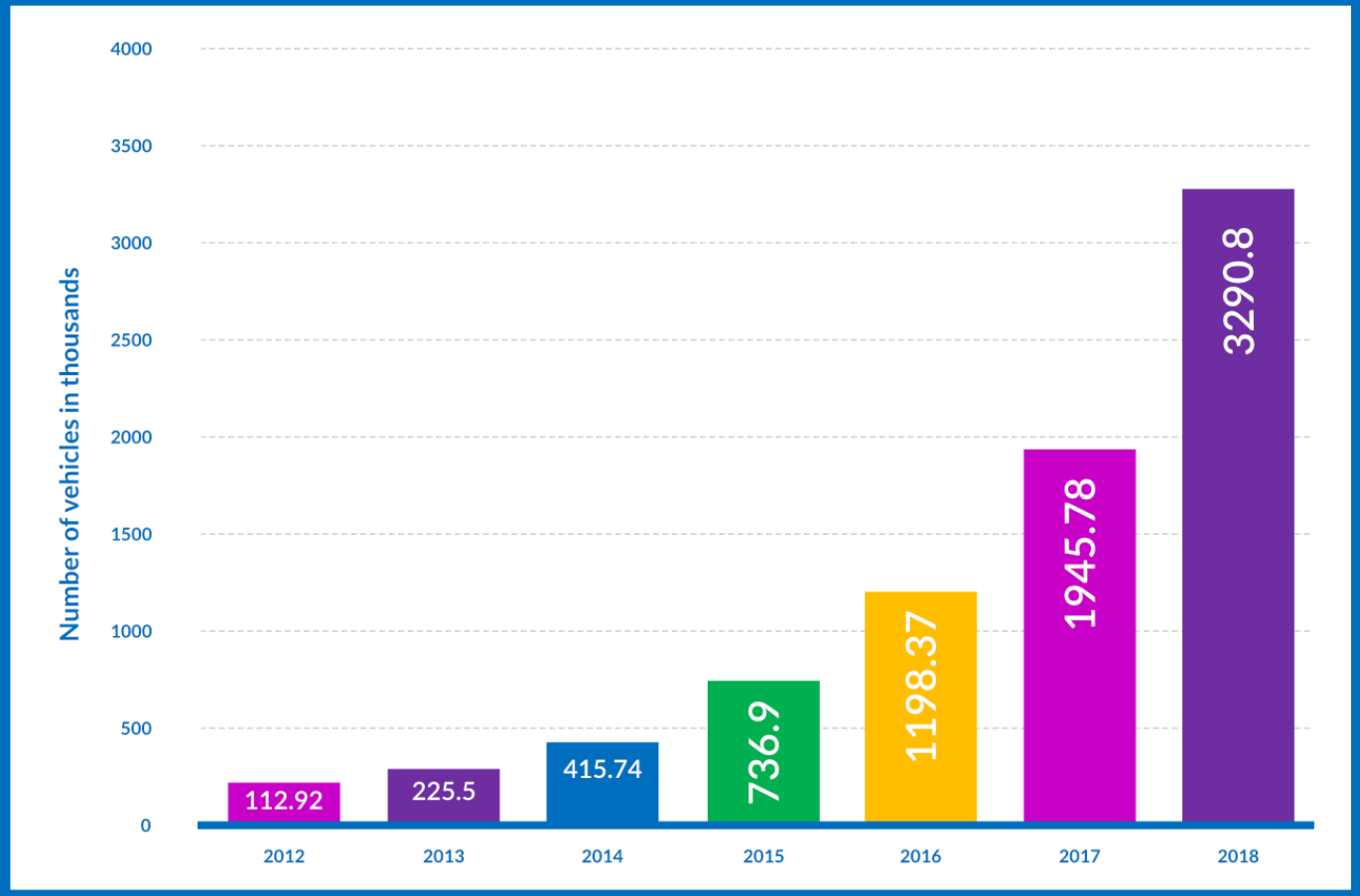
Tackling Transport Emissions

“Transport is Australia’s third largest source of greenhouse gas emissions, with emissions from transport increasing nearly 60% since 1990, more than any other sector.”

- Climate Council 28.09.17

Electric Uptake has been slow in Australia

Worldwide number of battery electric vehicles in use:



1.42
billion cars
in operation worldwide

1.06
billion passenger cars

363
million commercial vehicles

3.3
million EVs

7.5
thousand FCEVs

EVs in Australia in 2019

Mitsubishi iMiEV

Nissan Leaf

BMW i3

Renault ZOE

Tesla Model S

Tesla Model X

Tesla Model 3

Tesla Roadster

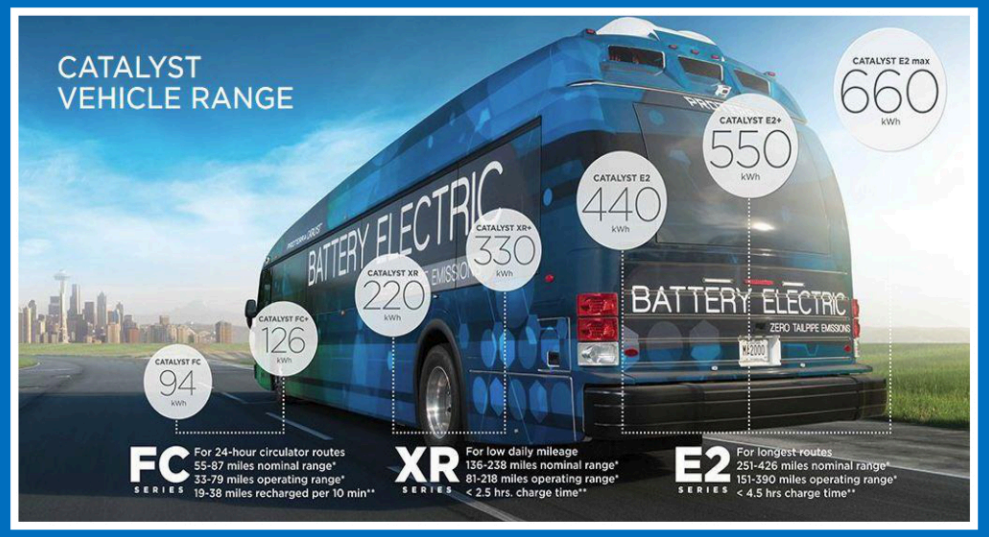
Jaguar I-Pace

Renault Kangoo

Hyundai Ioniq

Hyundai Kona

Electric Trucks and Buses



Proterra Hypermiling
Record 2017
1770 km
on single charge

Nikola Two
up to
1,200 km
range fuel cell

Tesla Semi
800 km
range

SEA
Electric
Garbage
Truck

Commercial Fast Chargers

Veefil 350kW & 475kW

XCharge C6EU Smart DC Charger 60-160kW

250kW V3 Supercharger

Raption 250kW Charging Station

EV Charging Stations: How Do We Compare?

Source: Plugshare.com

Electric getting cheaper

Battery prices have dropped from $US290/kWh two years ago to just $US180/kWh on average

BNEF – May 2019

NIKOLA

Hydrogen Refueling Stations

Zero Emission Highway

= H2e Zero Emission Highway

LEVEL
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DESIGN

cruise

F / GB USA MEX
ONE SIZE
DOES NOT
FIT ALL
30°C
Von links bügeln/ Iron inside out
repasser sur l'envers

The Sweet Spot

INNOVATIVE
HAULAGE
KOMATSU

DFDS

27100
cosco
WAN HAI
KONECRANES | NOELL
CIT

Automated long-haul trucking

Automated drone distribution

Highway Pilot

FUNCTION.

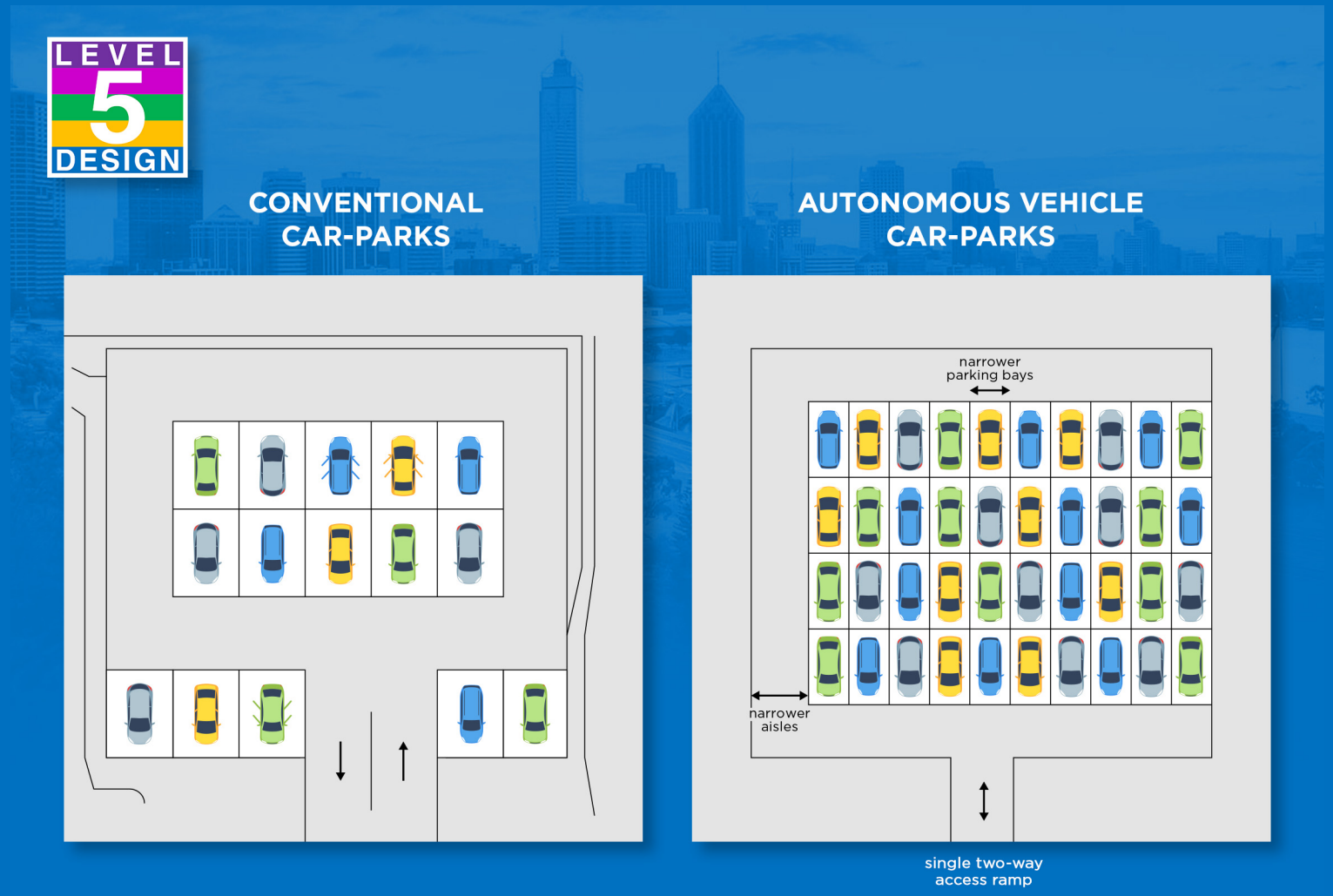
- Observes all traffic rules.
- Speed 0 – 80 mph (130 km/h).
- Remains in the lane.
- Overtakes slower vehicles.
- Cooperative characteristics at merging entrances to the motorway.
- Highly automated changes between motorways.
- In appropriate situations the driver can delegate all driving tasks to the car.

Automated
Valet Parking
Fast, safe, driverless
Automated
Valet Parking
S MB 2412

A new experience

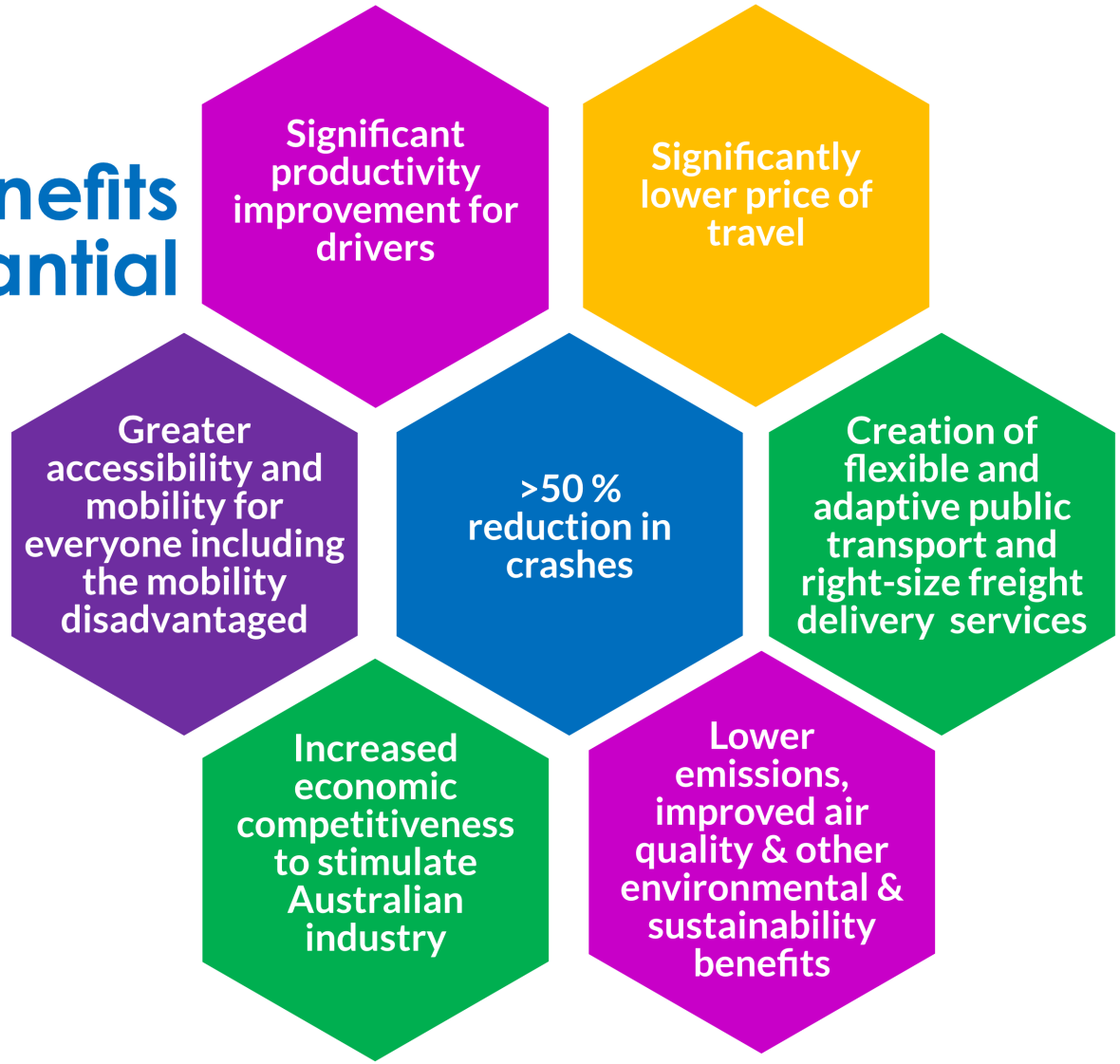
Automated self-parking

- Parking garages specifically designed for self-parking cars can take **up 60% less space** than traditional lots
- Savings on footprint, ceiling heights, finishes, stairs, elevators, lighting, security, boomgates



Why embrace these emerging transport technologies?

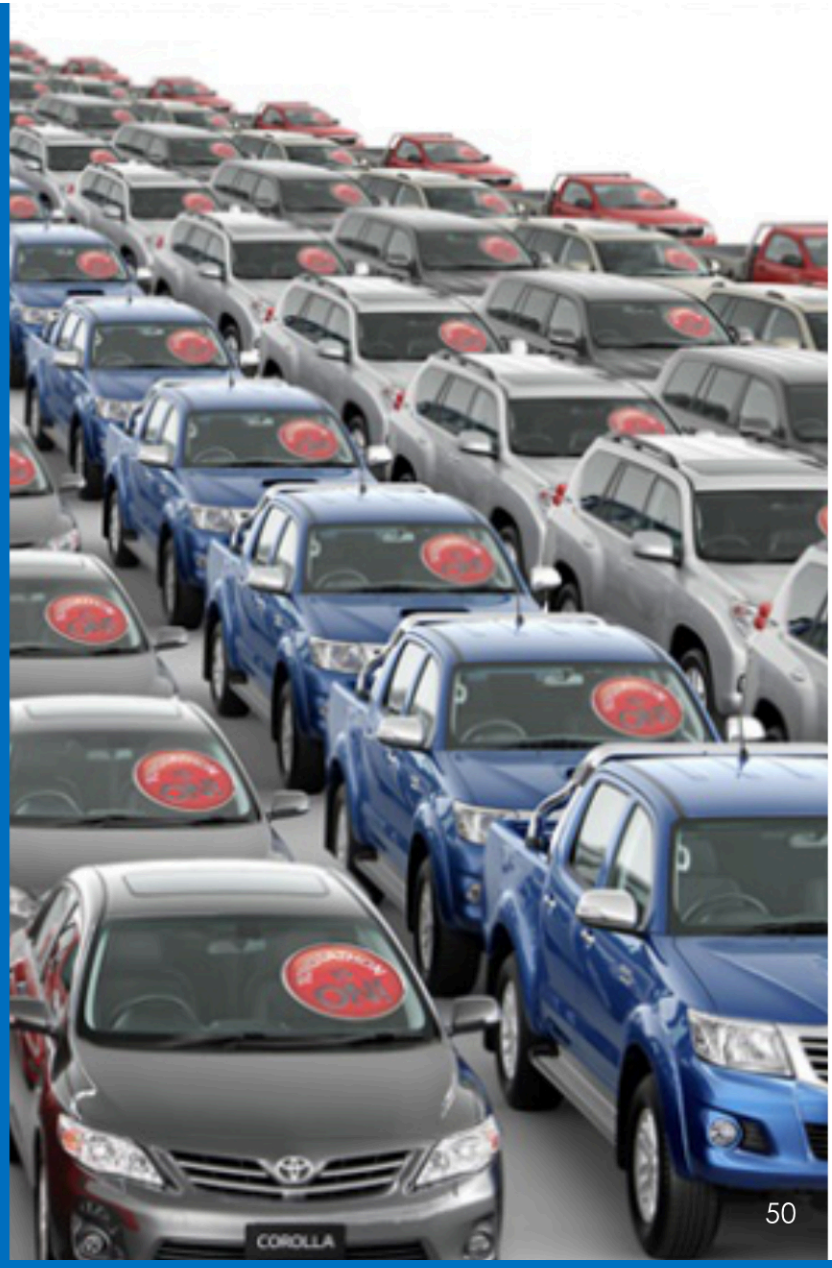
The benefits are substantial



So what should local government do about it all?

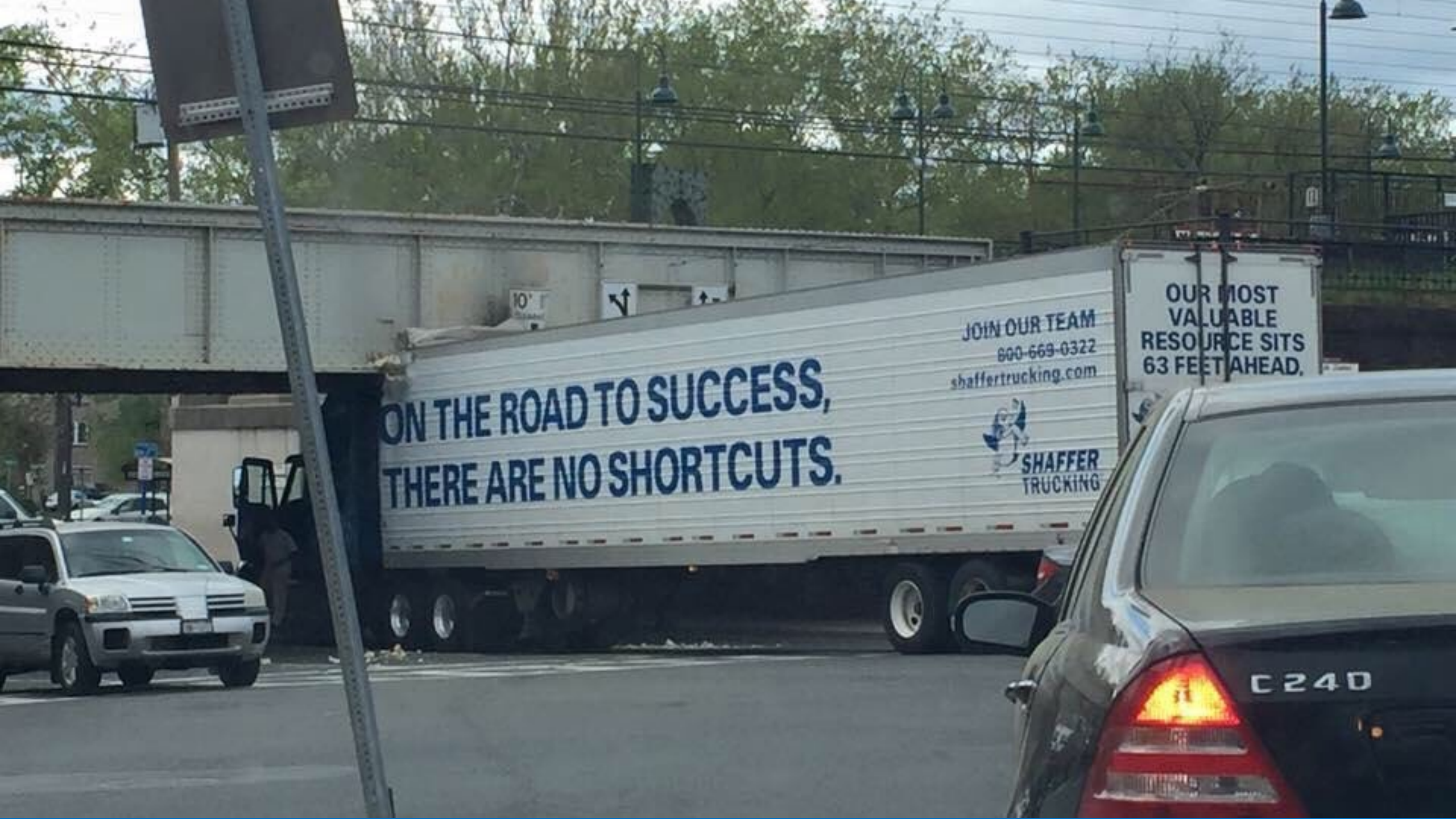
Local government getting prepared

- Establish active policies
  - Proactive electric vehicle fleet procurement policy
  - Electric vehicle charging / refueling policy
  - Consider incentives scheme
  - Car sharing and ride sharing policy
  - Alter parking policies to reduce the supply of parking
  - Explore regional hubs / service centres
- Change the approach to development approvals
  - More drop off and pick up space
  - Less dedicated parking on site
  - Encourage active transport options
  - All parking bays capable of electric charging and self-parking
  - Design for re-purposing / to be futureproof



Local government getting prepared

- Sponsor / support a refuelling station and superfast battery charger using solar
- Assumptions, parameters and goals built into regional and town planning schemes must be updated
- Identify long term needs and then develop and act on infrastructure plans that are smart, adaptable and resilient
- Linemarking: centre lines and edge lines
- Support projects like the Zero Emissions Highway
- Start planning for it now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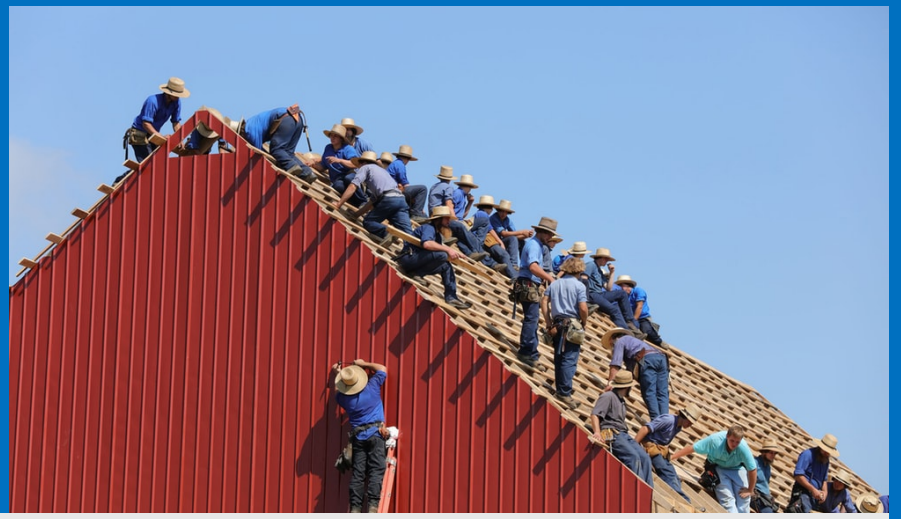
Amish Barn Construction



Thank you

LEVEL 5 DESIGN

Inspiring Innovation in Parking and Transport

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