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# The Changing Vehicle Fleet

## Implications for learner drivers

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# Some Perspective

## What is this Figure?

0.18%



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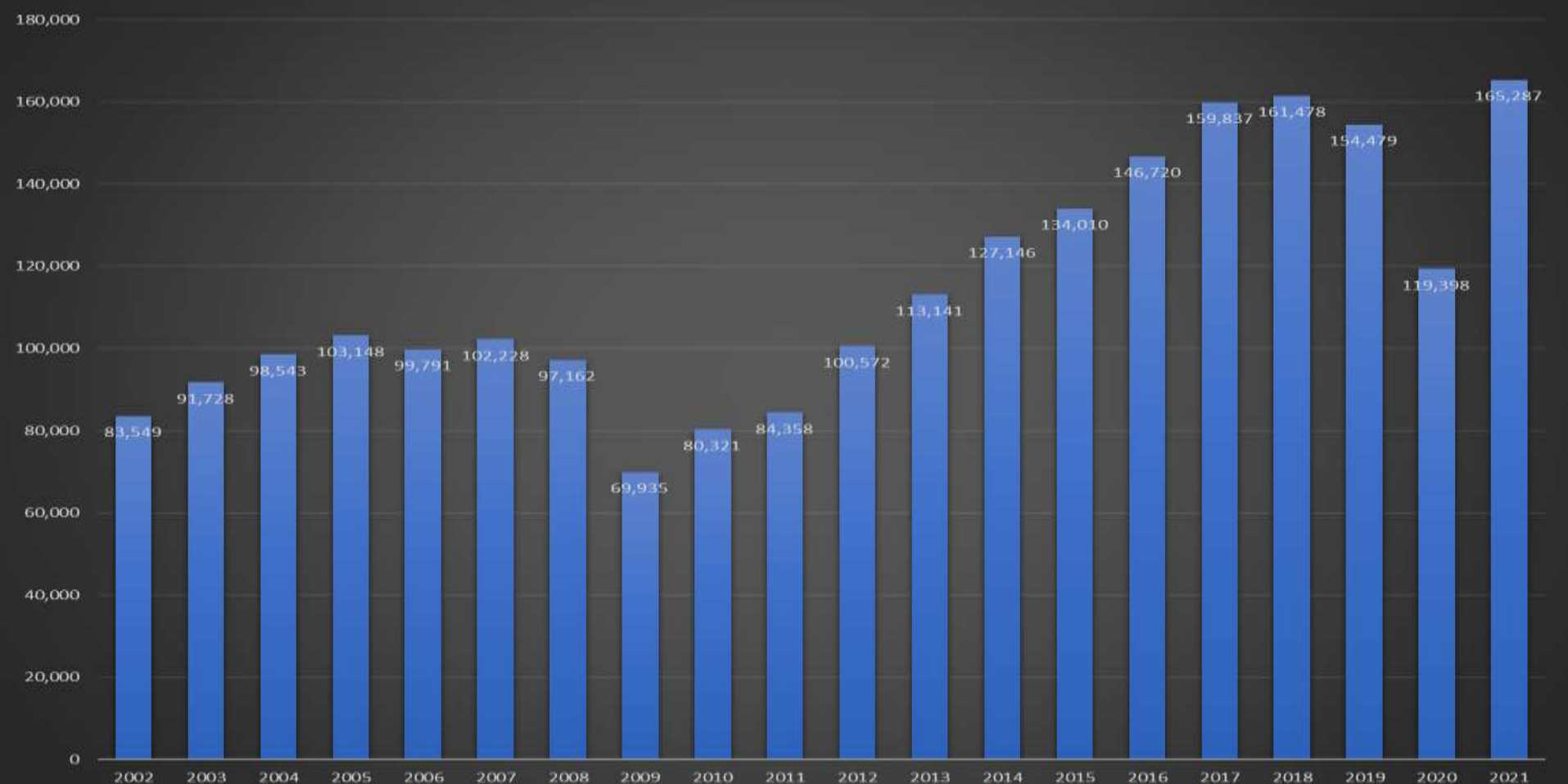
NZ's annual new market = 0.18% of  
annual worldwide production of new  
vehicles



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# Annual Sales in NZ

Annual Totals - 2002 Onwards





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# What is changing?

- Type (shape/function) of vehicles purchased
- Increased Safety
- Increasing Levels of Autonomy
- Low Emission Vehicles significantly on the increase

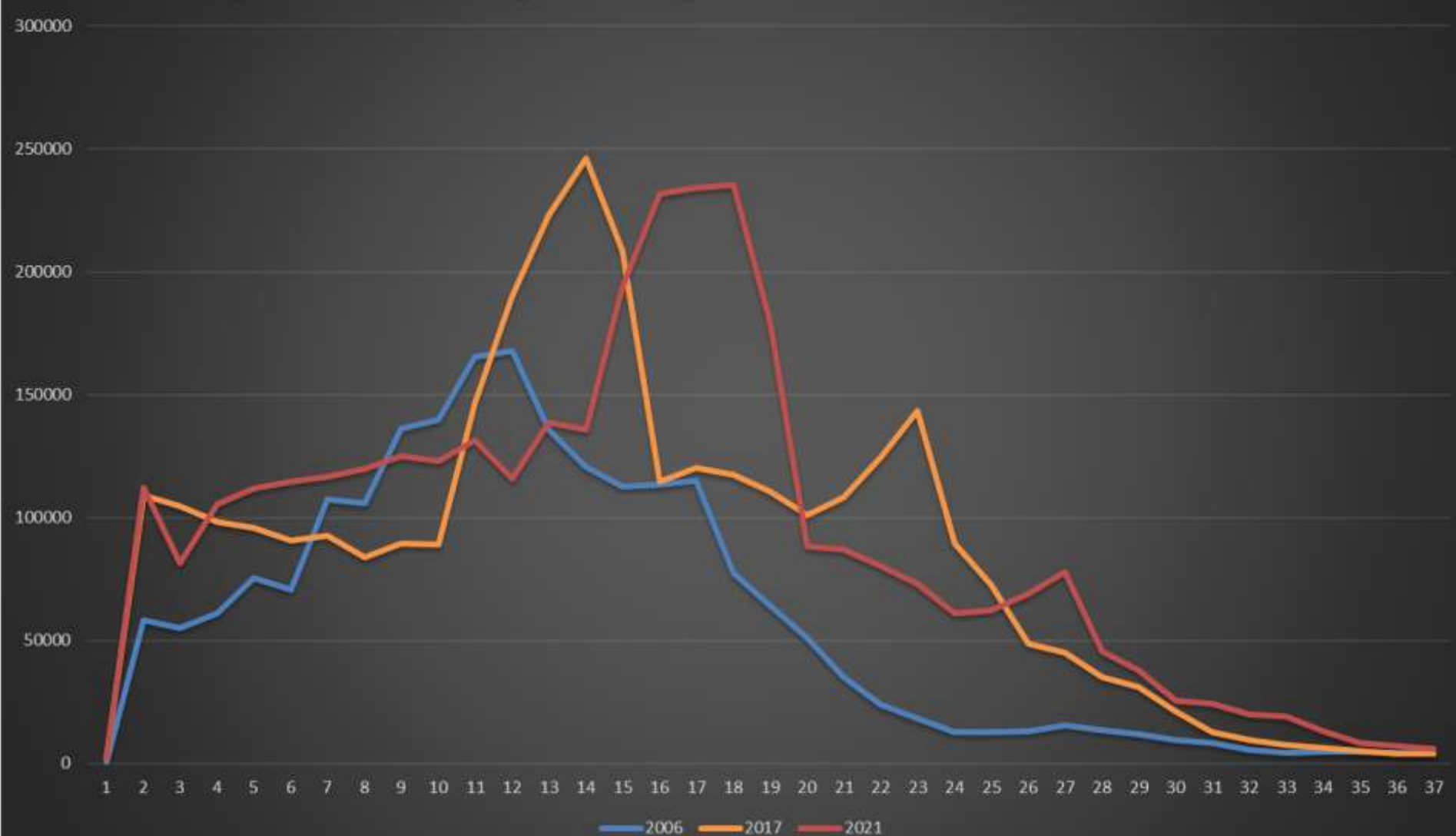
Each of these have relevance to the in which people learn to drive their vehicle



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# But first, what is not changing?

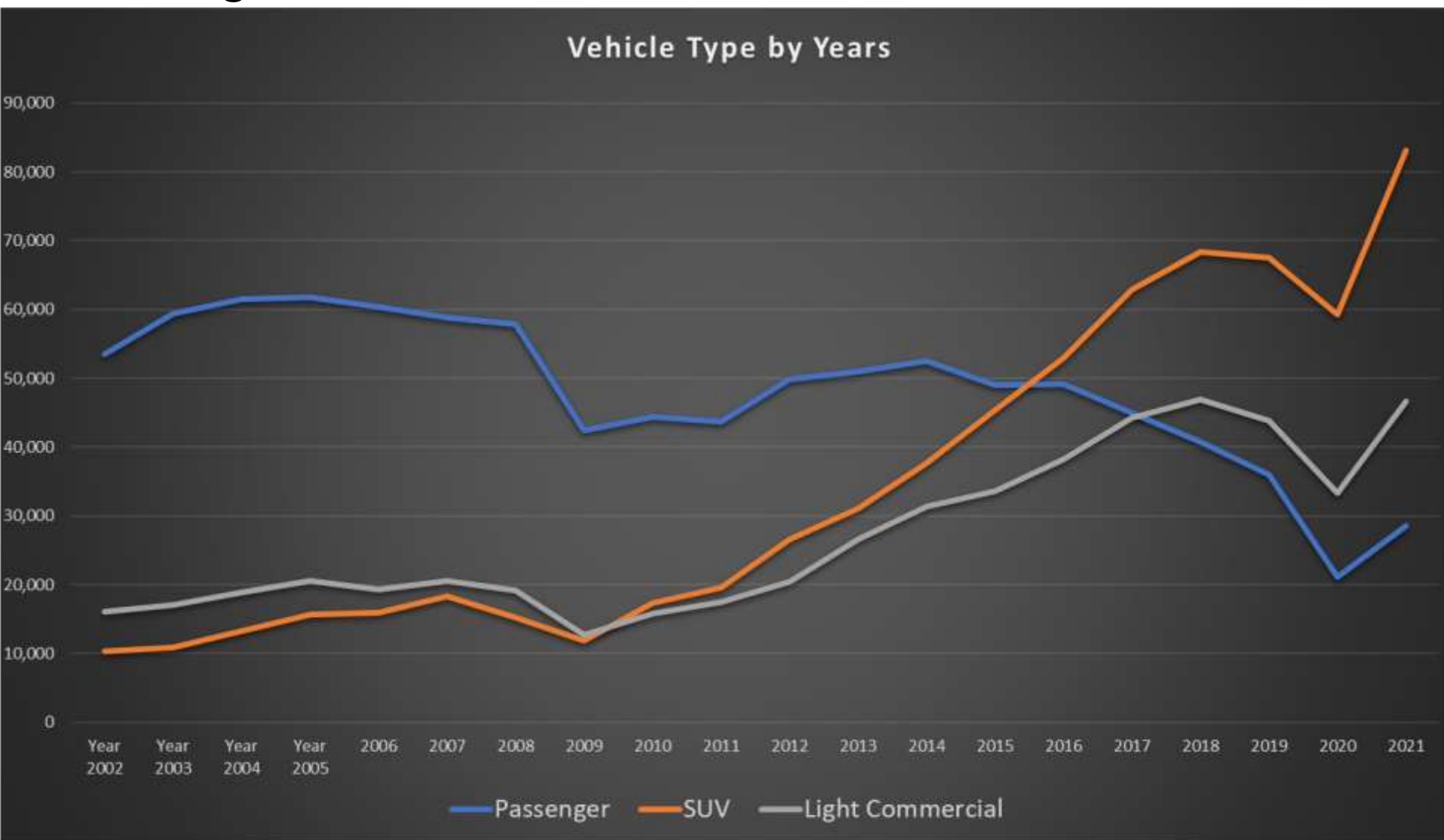
Age Profile of the Light Passenger Vehicle Fleet 2006, 2017 and 2021





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## Long run new vehicle trends – NZ's love affair...





## Increased Safety Technology – typical model list, not the longest...

### Safety:

Airbags	Frontal Airbag (Driver) Frontal Airbag (Passenger) Head Protecting Side or Torso/Head combination Airbags (Front Seats) Head Protecting Side or Torso/Head combination Airbags (Second Row Seats) Side Torso Airbags (Front Seats) Side Torso Airbags (Second Row)
Crash Protection	3-Point Seat Belt for Centre Rear Seat 3-Point Seat Belts in All Seating Positions Automatic Emergency Call (eCall) Head Restraints for all Seats ISOFIX Child Restraint Anchorages Pre Crash Systems
Staying In Control	Antilock (ABS) brakes Autonomous Emergency Braking Electronic Brakeforce Distribution (EBD) Electronic Stability Control (ESC) Hill Hold/Launch Assist Traction Control Tyre Pressure Monitoring System
See And Be Seen	Automatic Headlights Blind Spot Monitoring System Daytime Running Lamps Lane Keeping Support System LED Headlamps Parking Assistance System Rear Vision Camera Reversing Collision Avoidance System
Reinforcing Good Driving	Seat Belt Interlock Reminder
Other Safety Features	
Frontal Impact Standards	Yes





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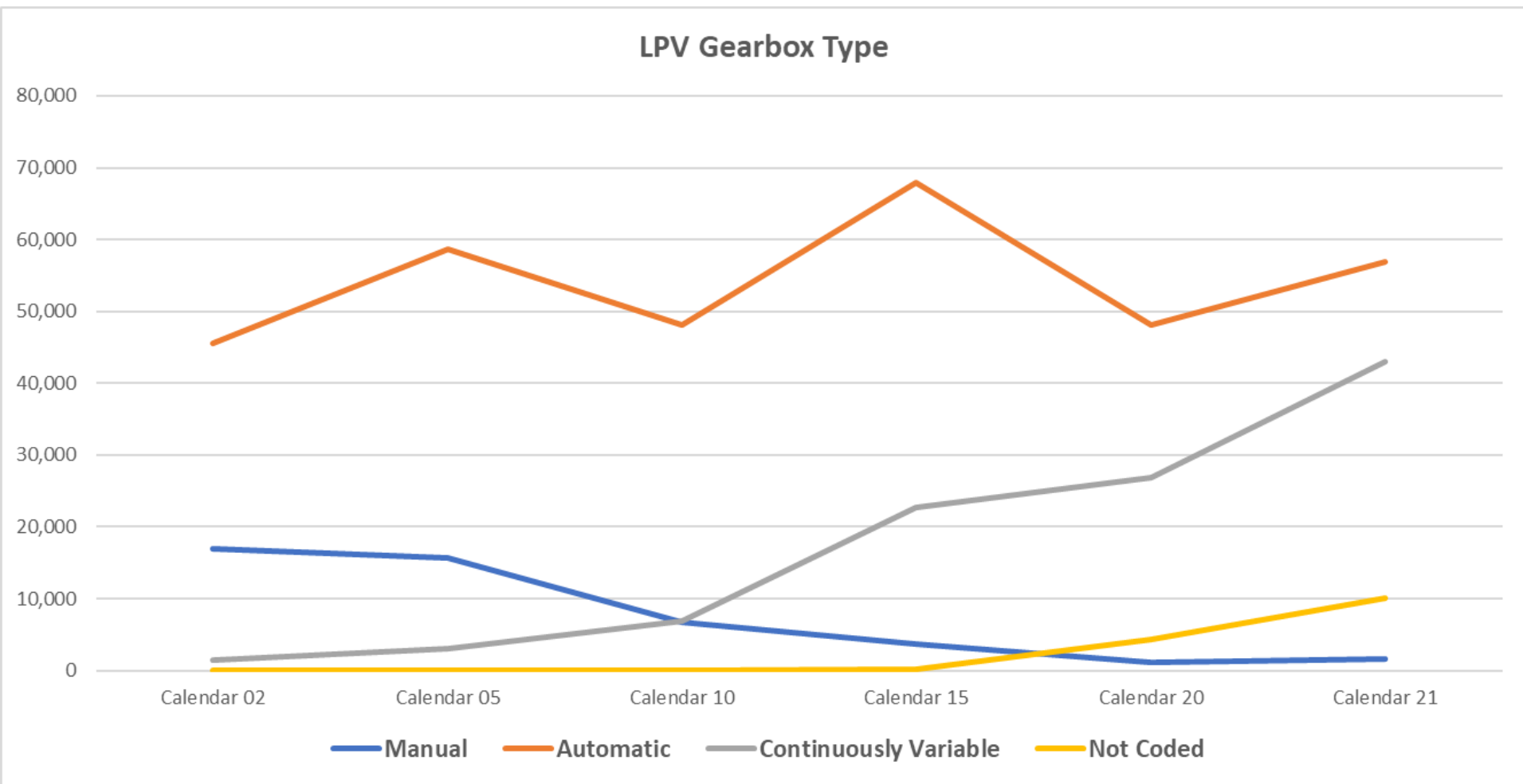
## Technology that is changing the way we drive

- Adaptive cruise control
- Rear view cameras
- Side mirrors being replaced by camera views
- Lane assist/keep and blind spot monitoring
- Demise of the manual
- Different gear boxes
- Decarbonisation of the drive train
  
- BUT...



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# Different gear boxes

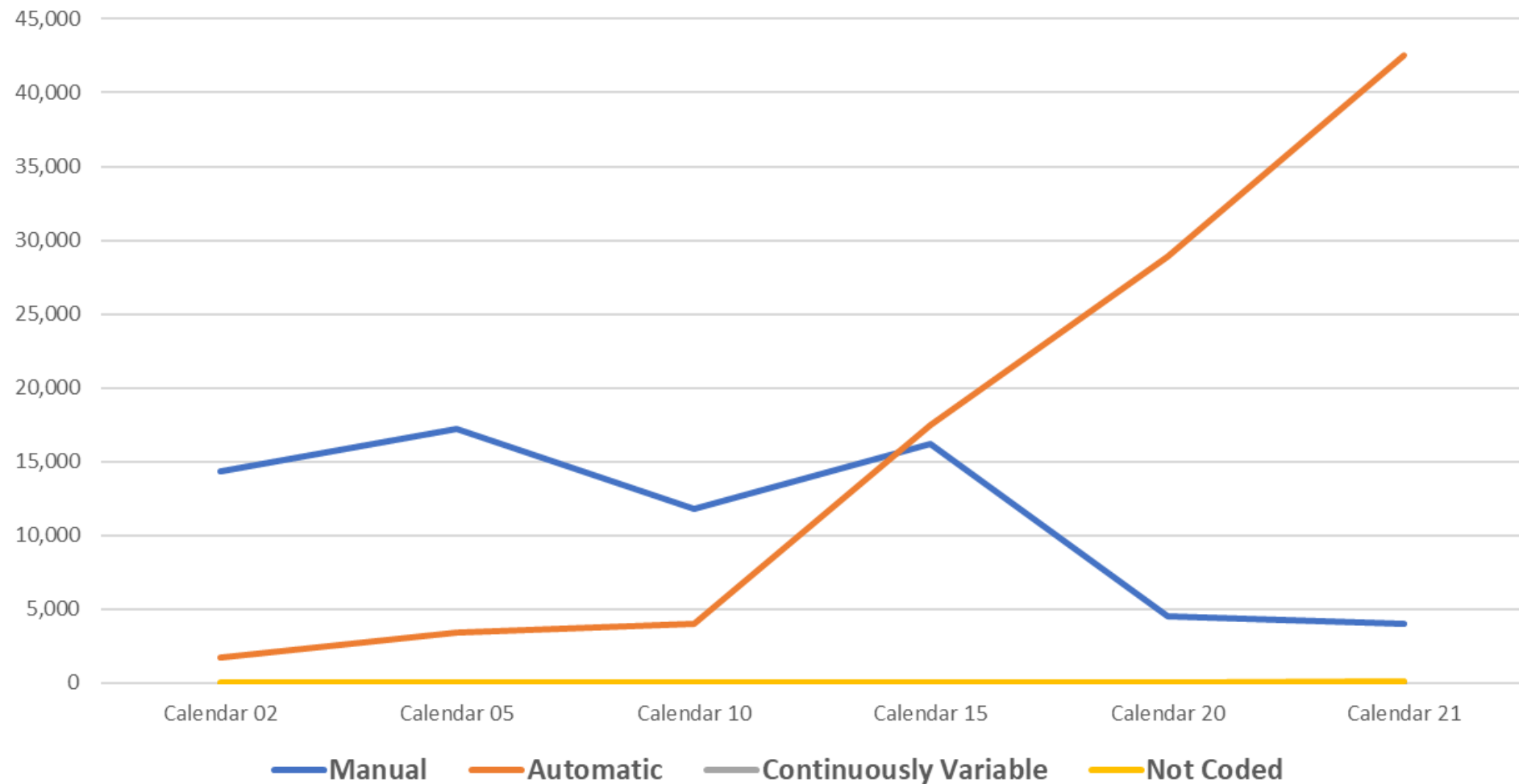




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# Different gear boxes

## LCV Gearbox Type





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## Technology that is changing the way we drive

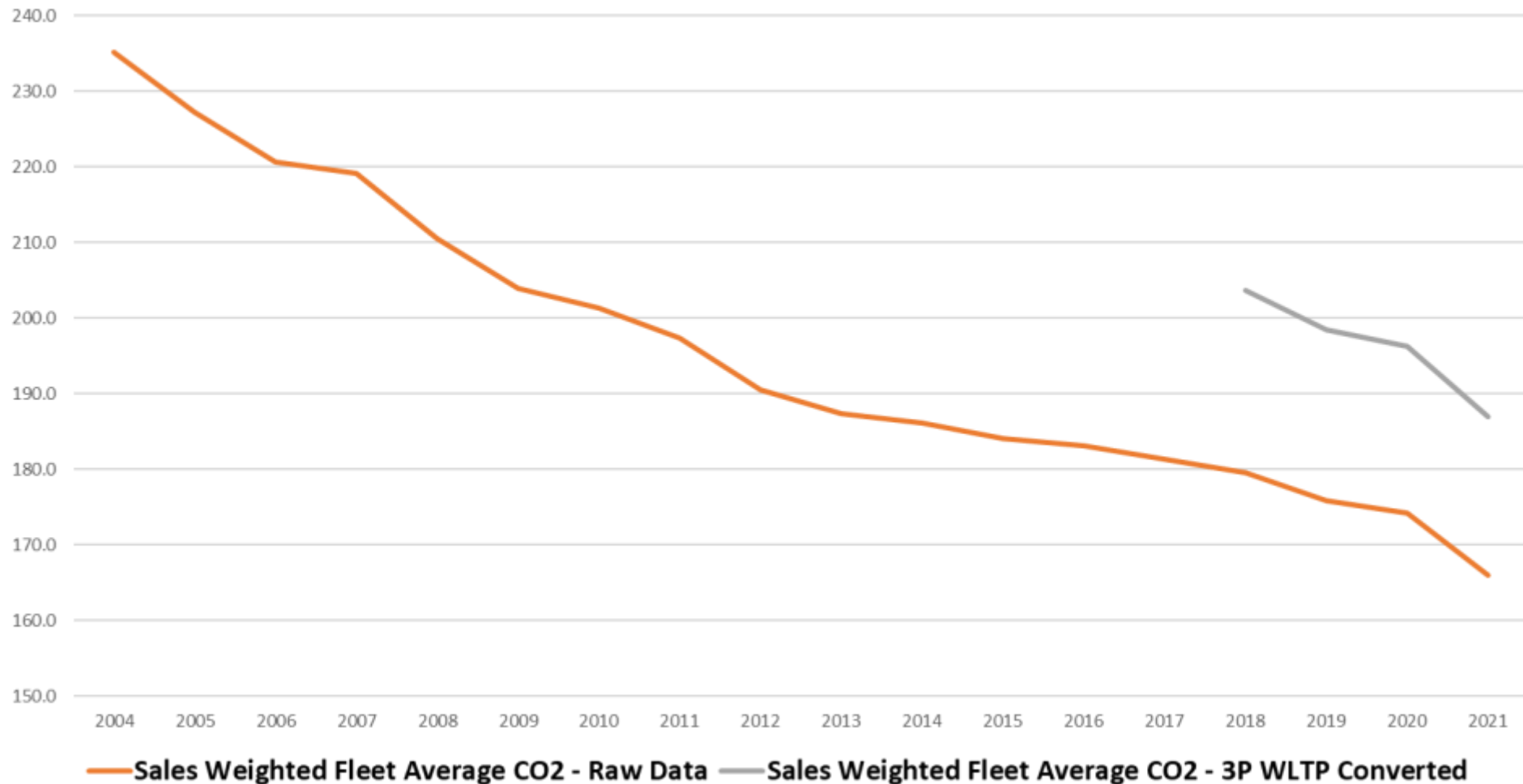
- Autonomous driving, hands free, is not coming as fast as some think, at least not outside of specific ringfenced geo-areas
- no matter what a gaggle of some so-called industry expert consultants say!
- Still mostly only at level 3 Autonomy (yes even Tesla)
- But – level 4 will come this decade.
- Not sure when level 5 will come.
- Updates to autonomous driving will be via software updates (in the main)



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# How are we doing on CO2 Emissions

Light Vehicle Fleet Sales Weighted CO2 Reductions over time

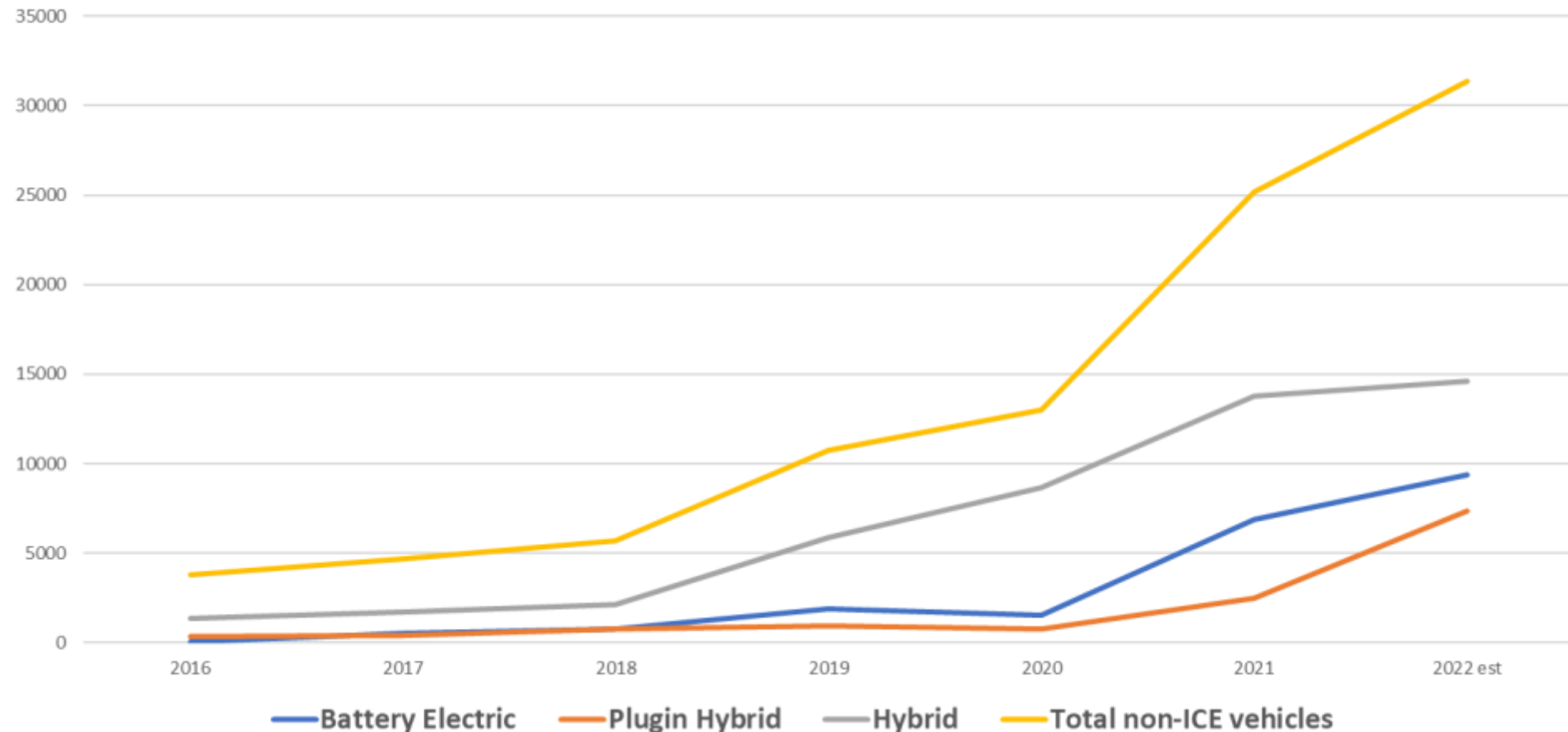




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# How many electrified vehicles are consumers buying

Growth in non pure ICE vehicles since 2016



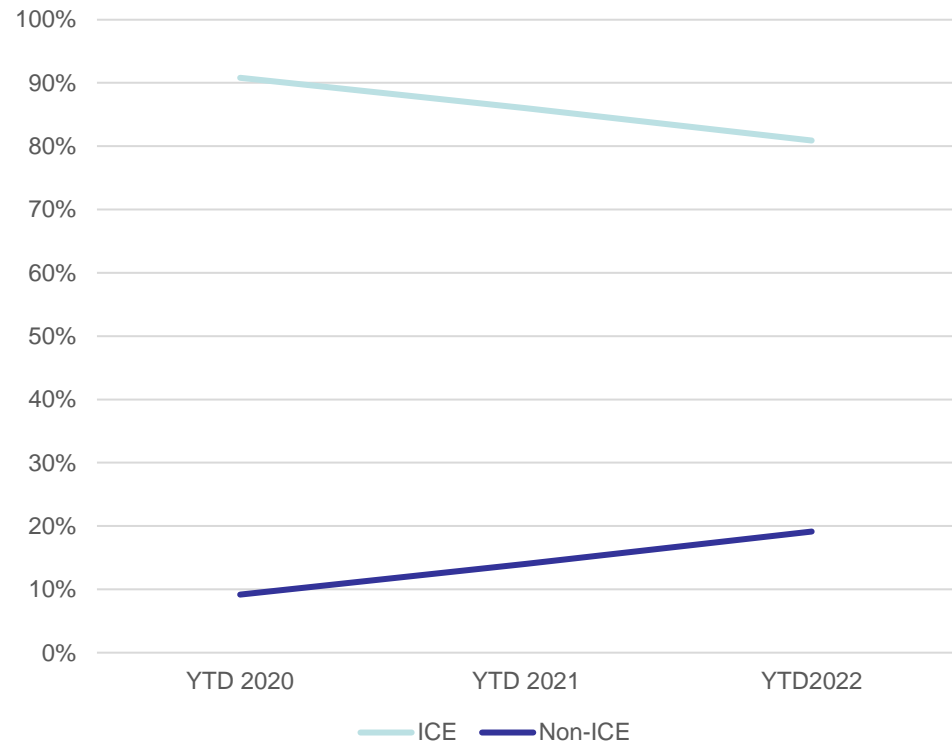


# How many electrified vehicles are consumers buying

Percentage change engine type 2020 - June 2022

	YTD 2020	YTD 2021	YTD2022
ICE	91%	86%	81%
Non-ICE	9%	14%	19%

Percentage Engine Type Change





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# NZ is a Technology Taker

- Remember that 0.18%...
- Going forward the rate of low emission vehicles available to the NZ market is determined by what happens in other countries
- Risks –
  - right hand drive market is not dominant but we're doing better than expected
  - Technology price increases (lithium)
  - Pandemics (production disruptions, parts and vehicles)
  - Geopolitical disruptions (Ukraine conflict)





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# Questions