

# Board Query:

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Provide further data on the impact of 1-2 star safety rated cars on different groups of people, and the costs associated with keeping those cars on the network.



## Questions:

- Can you provide further data on the impact of 1- and 2-star safety rated vehicles on different groups of people?
- What is the spread around the country of 1- and 2-star vehicles?
- Do we know how many 1 and 2 star vehicles are registered but not warranted?

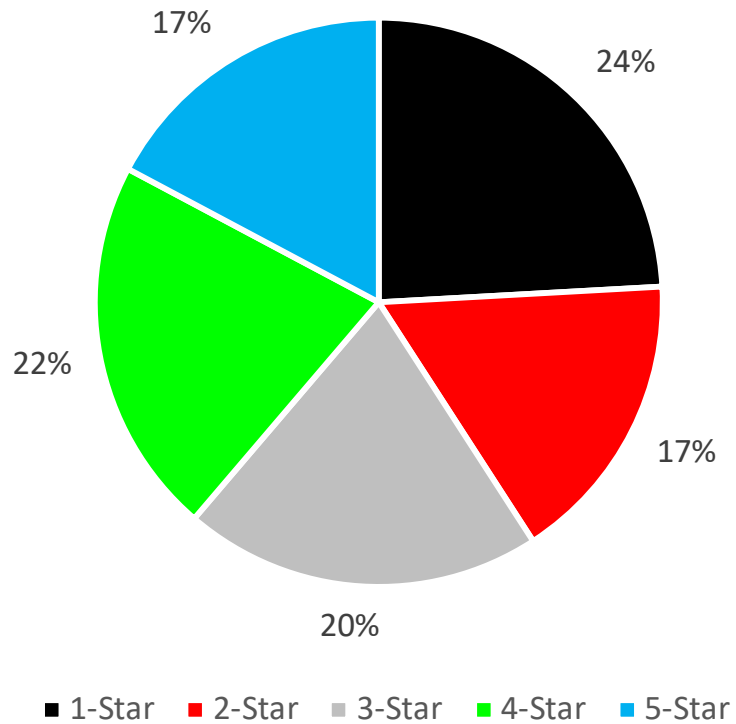
## Presentation Outline:

- Numbers and proportions of light passenger vehicles throughout the New Zealand fleet (2019) by safety rating
- Numbers and proportions of deaths and serious injuries (2014 – 2019) throughout New Zealand by safety rating
- Warrant of Fitness status (2020) of vehicles in the New Zealand fleet and status of vehicles involved in DSI crashes



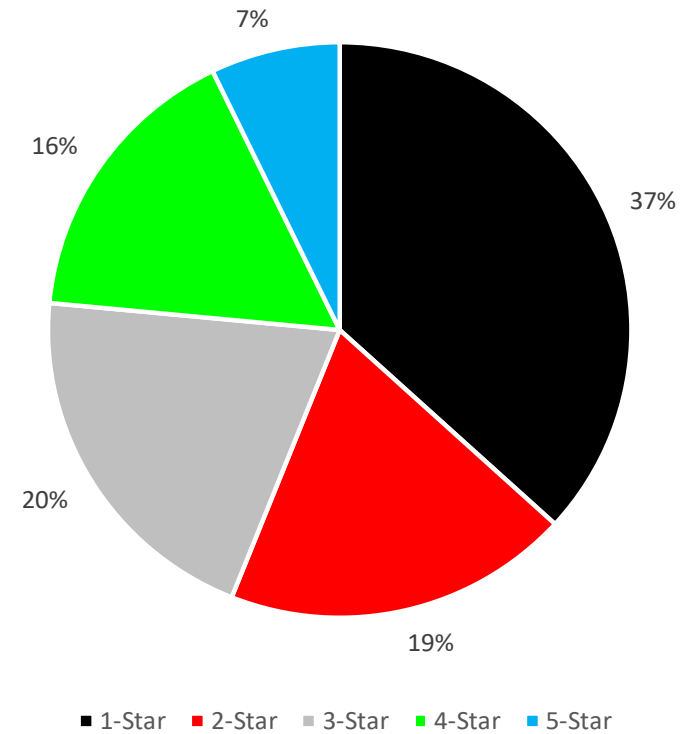
# Safety Performance of the New Zealand Light Passenger Vehicle (LPV) Fleet

## Light Passenger Vehicle Fleet 2018



**41% of LPVs are 1- and 2- stars**

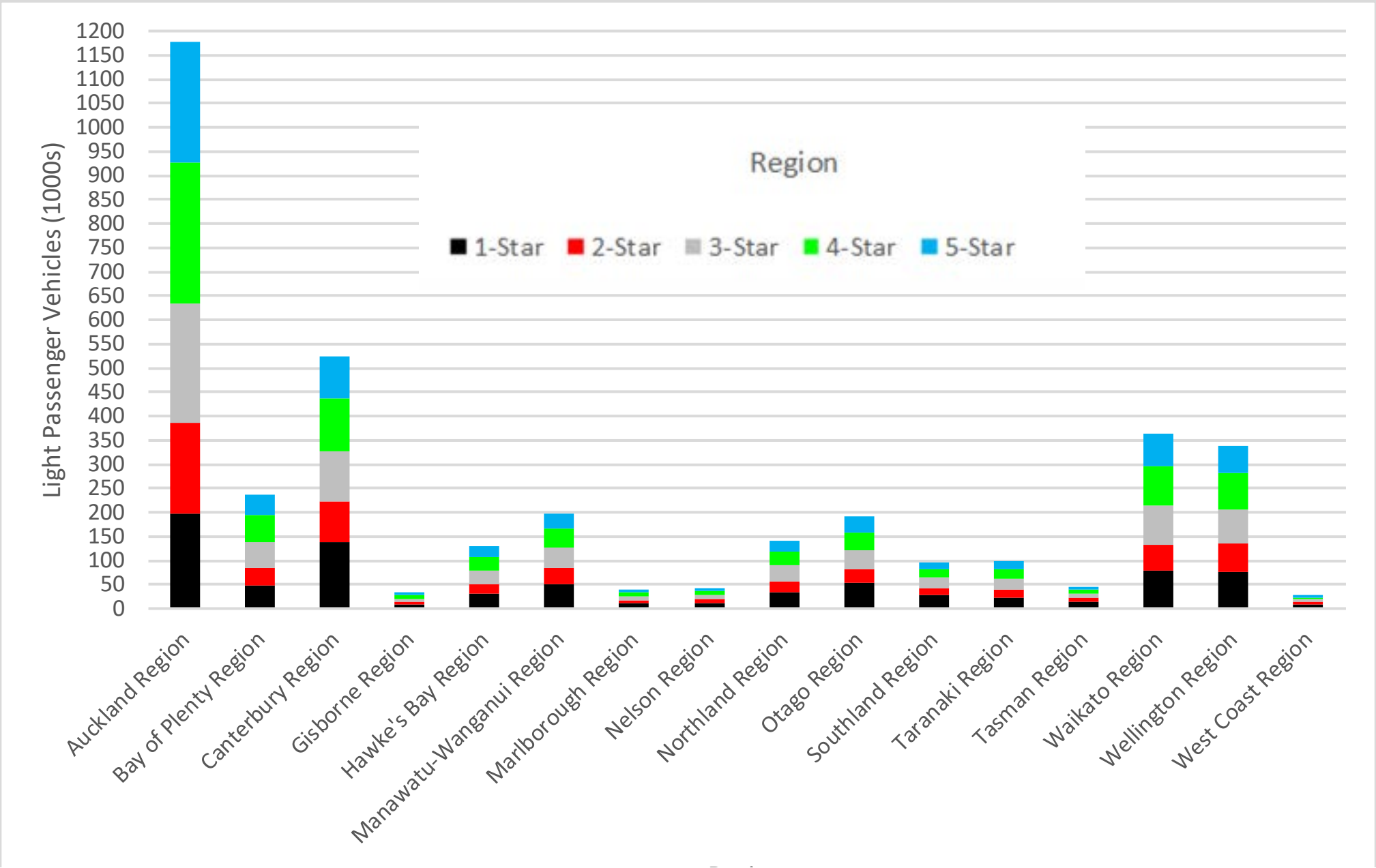
## DSIs in Light Passenger Vehicle Fleet 2014-2019



**56% of DSIs in LPVs are 1- and 2- stars**



# New Zealand Light Passenger Fleet (2019) by Region and Crash Worthiness Rating (CWR)

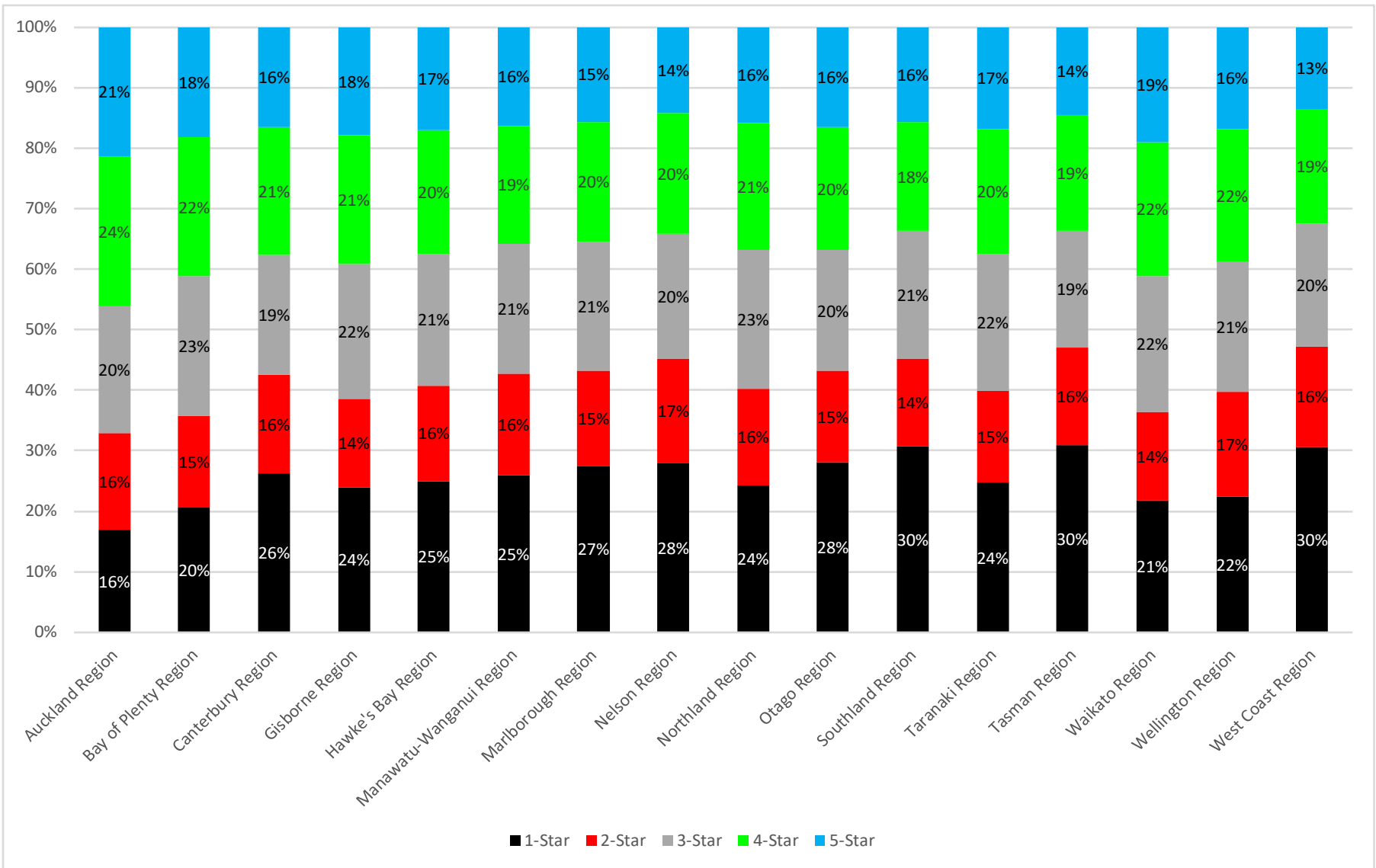


Shows the fleet is generally distributed evenly by population



# Proportion of New Zealand Light Passenger Fleet (2019) by Region & Crash Worthiness Rating (CWR)

(Light Passenger Vehicles; where Region and CWR confirmed)



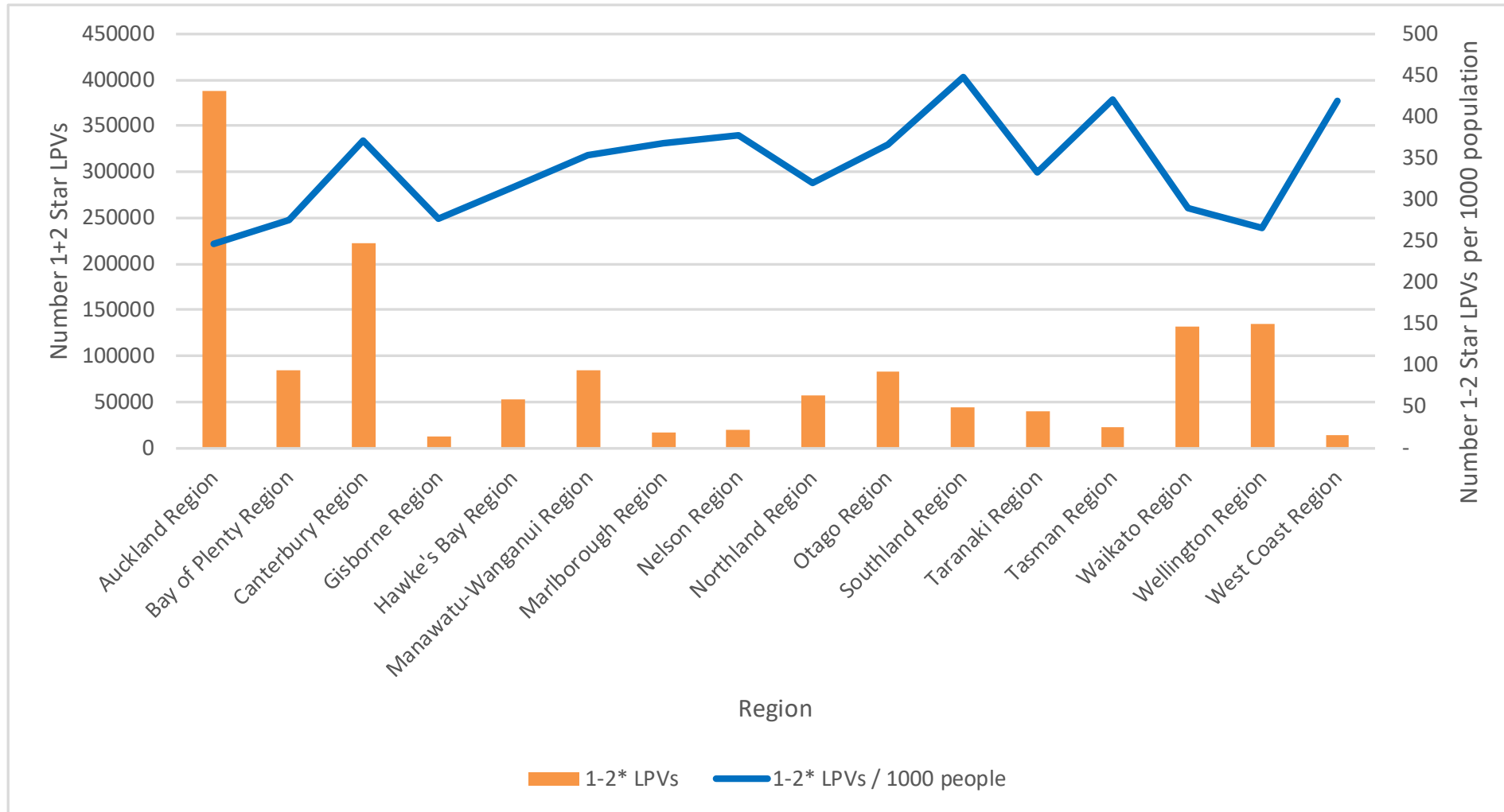
Some regional differences in proportions of 1 & 2 star vehicles.

Compare Auckland (32%) to Tasman and West Coast (46%)



# Number of 1-Star and 2-Star Light Passenger Vehicles by Region and Population

(Light Passenger Vehicles; where Region and CWR confirmed)



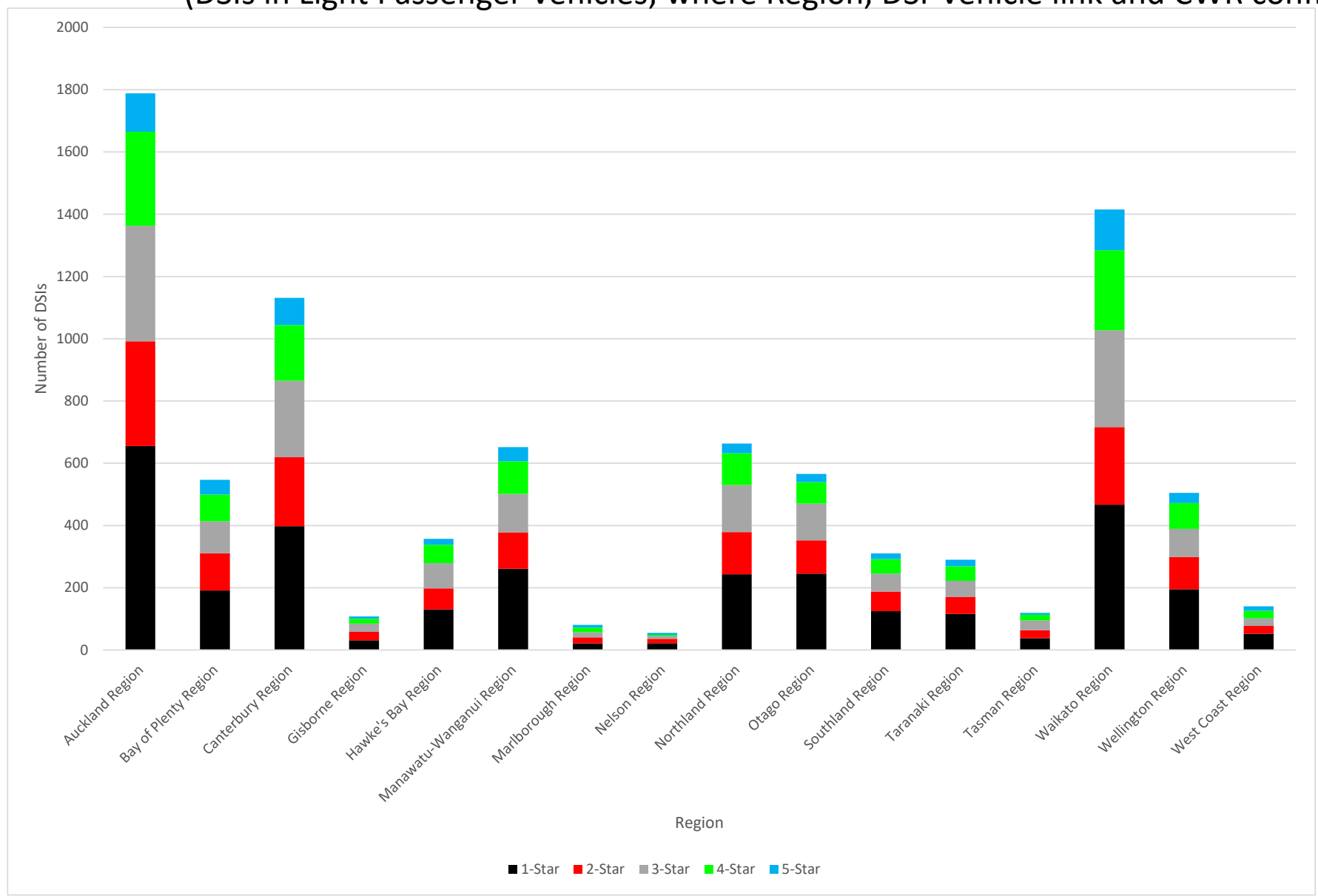
Blue line shows 1- and 2- star vehicles adjusted for population. Note Auckland (246) compared to Southland (448)

Note also that Wellington and Waikato are about the same



# Death and Serious Injuries (DSIs) 2015 – 2019 by Region and Crash Worthiness Rating (CWR)

(DSIs in Light Passenger Vehicles; where Region, DSI-Vehicle link and CWR confirmed)

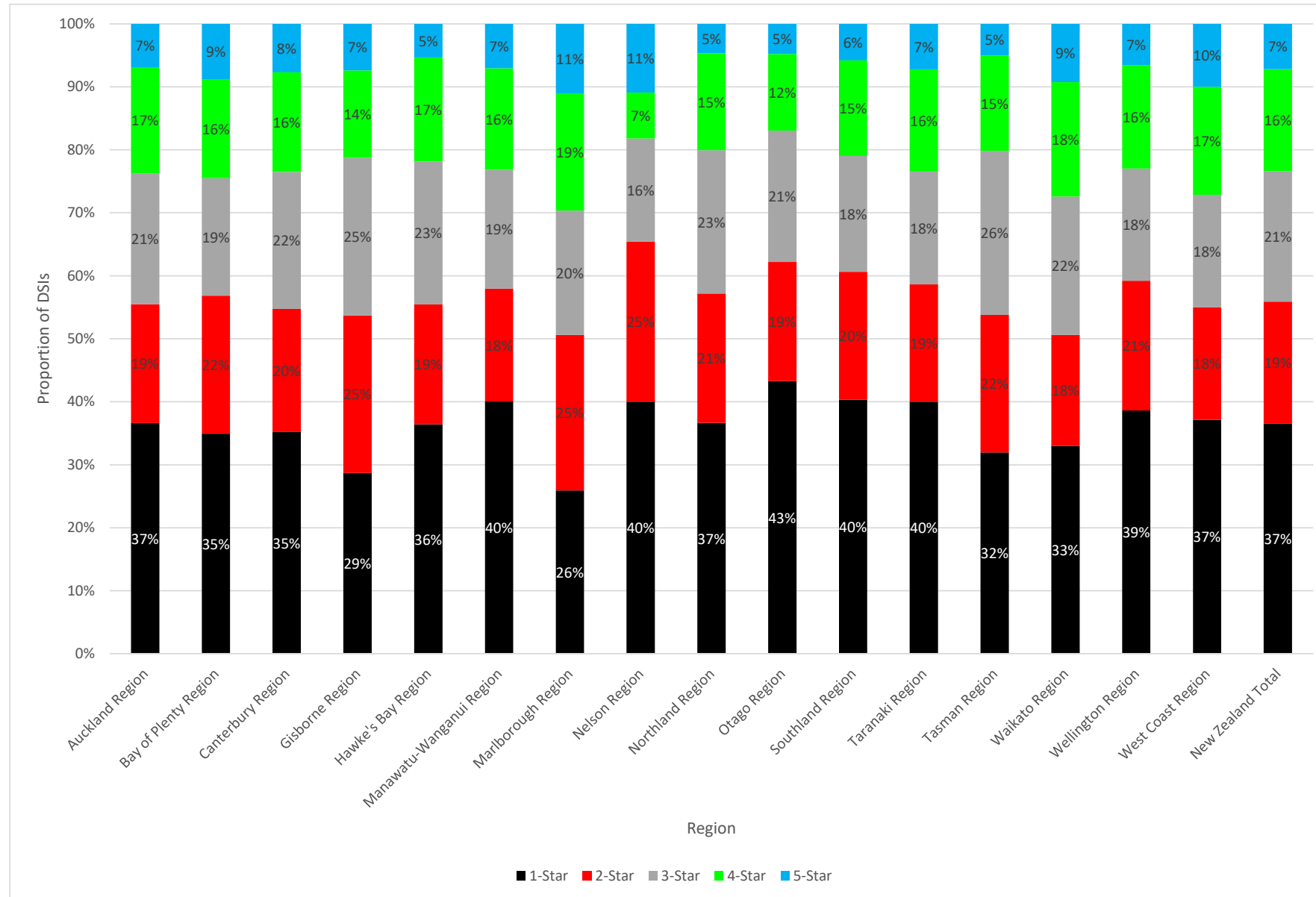


DSI distributions are not the same as vehicle distribution.

Note Waikato is much higher than Wellington, possibly indicating other factors such as proportion of traffic exposed to less safe roads

# Proportion of DSIs 2015 – 2019 by Region and CWR

(DSIs in Light Passenger Vehicles; where Region, DSI-Vehicle link and CWR confirmed)



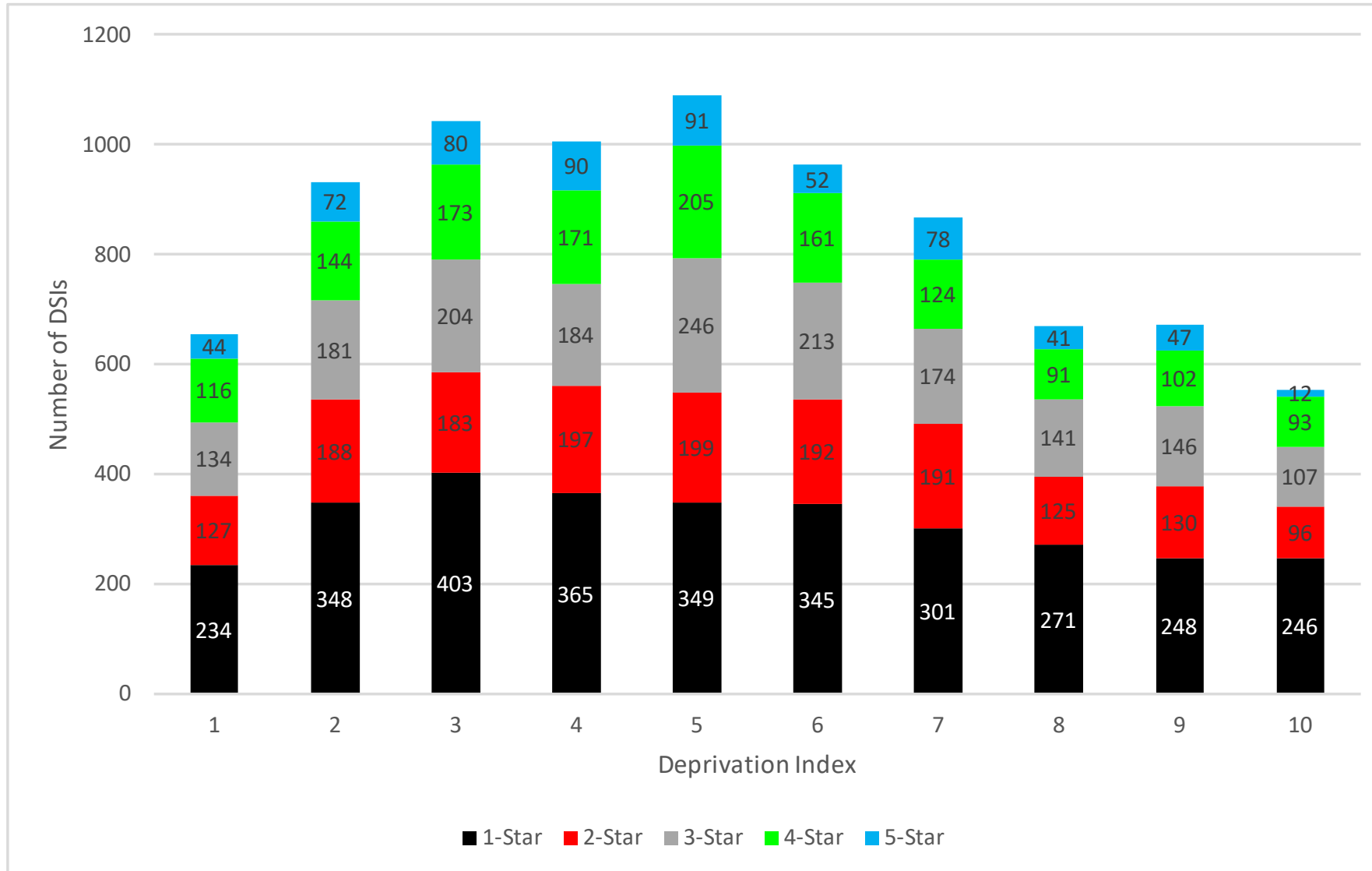
Proportion of DSIs in 1 & 2 star vehicles appear fairly constant across NZ; 56% avg (Marlborough 51% to Nelson 65%)



# DSIs 2015 – 2019 by Deprivation Index and CWR

(DSIs in Light Passenger Vehicles; where Region, DSI-Vehicle link and CWR confirmed)

(Deprivation Index 1 = Least Deprived / Affluent, Deprivation Index 10 = Most Deprived / Impoverished)



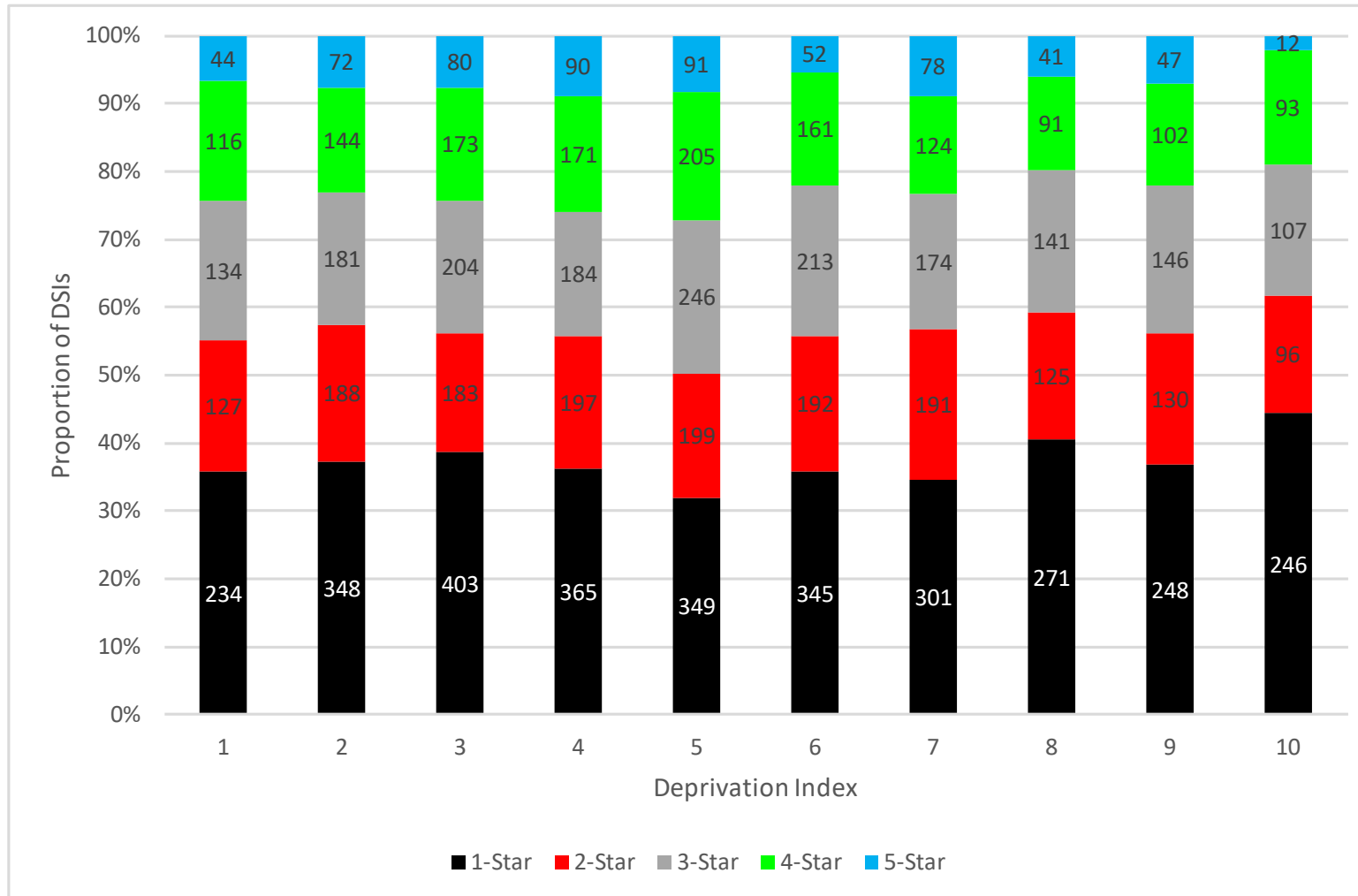
Number of DSIs by Deprivation Index is variable with highest number of DSIs in 1 & 2 star vehicles in Dep Index 3 (586)



# DSIs 2015 – 2019 by Deprivation Index and CWR

(DSIs in Light Passenger Vehicles; where Region, DSI-Vehicle link and CWR confirmed)

(Deprivation Index 1 = Least Deprived / Affluent, Deprivation Index 10 = Most Deprived / Impoverished)

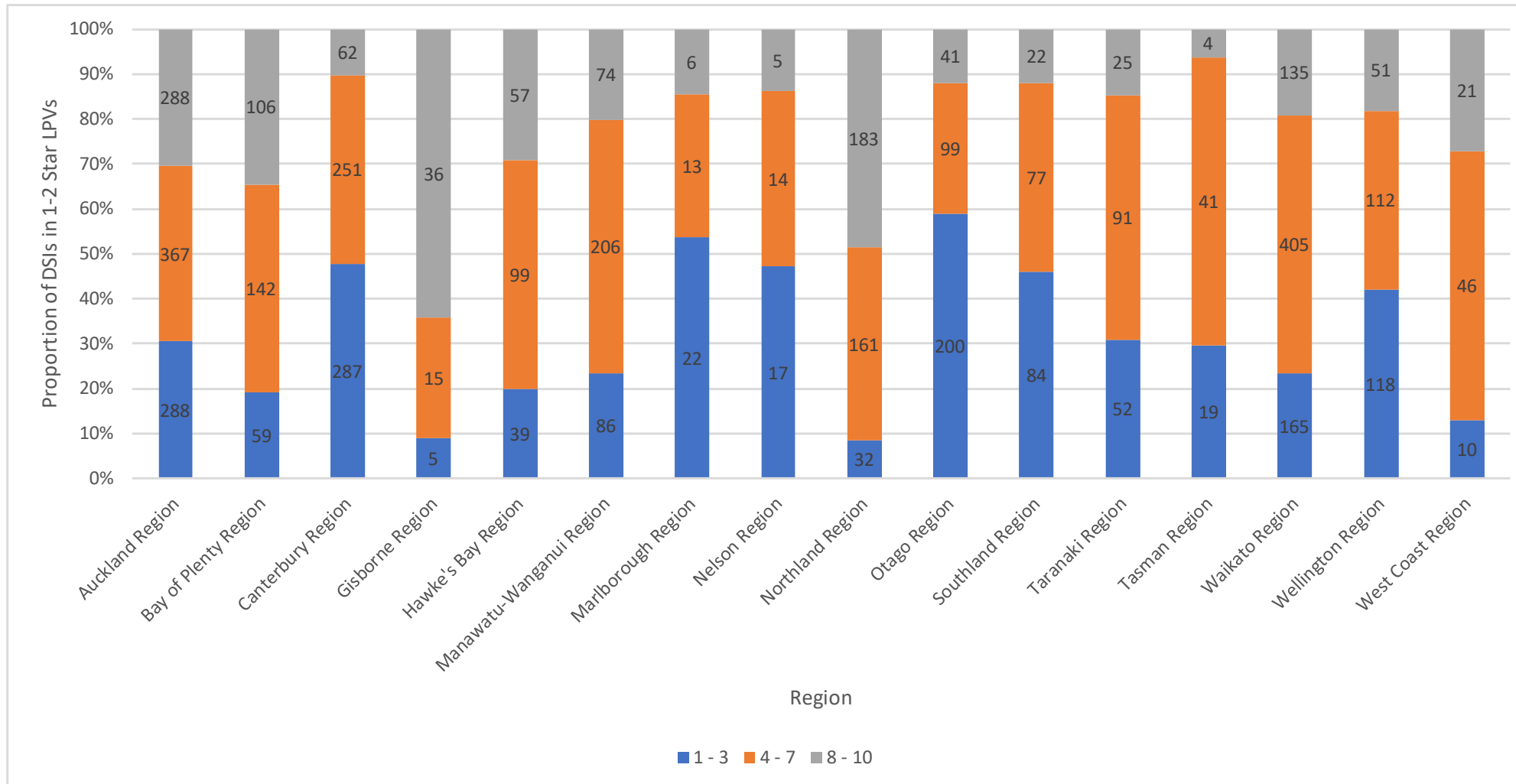


Proportion of DSIs in 1 & 2 star vehicles is reasonably even across each Deprivation Index

# DSIs 2015 – 2019 in 1-2 Star CWR LPVs by Deprivation Index and Region

(DSIs in Light Passenger Vehicles; where Region, DSI-Vehicle link and CWR confirmed)

(Deprivation Index 1 = Least Deprived / Affluent, Deprivation Index 10 = Most Deprived / Impoverished)



Highest proportions of DSIs in 1 & 2 star vehicles in Dep Index 8-10 in Gisborne and Northland though much smaller numbers in Gisborne compared to Northland (refer slide 9)

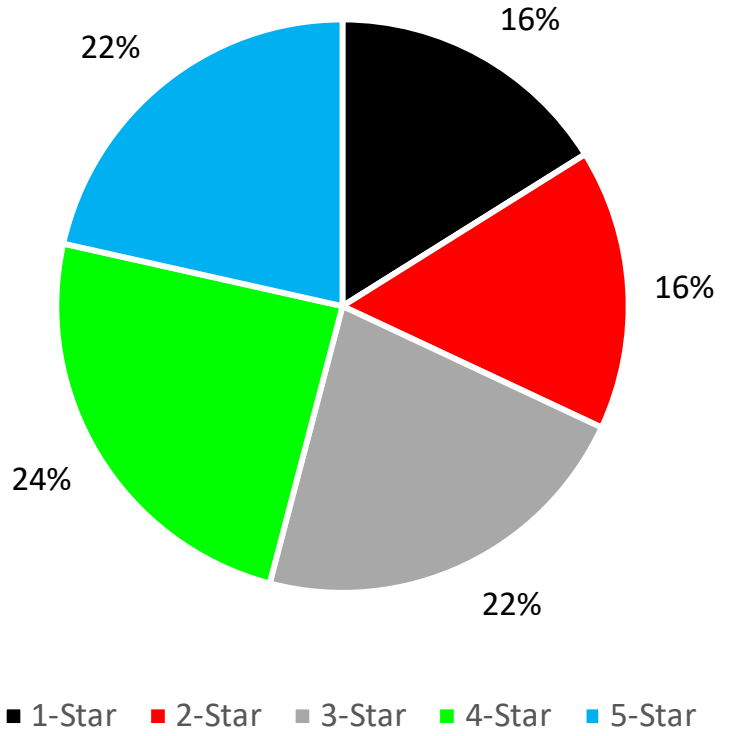


# New Zealand Light Passenger Fleet 31 March 2020 by CWR – WOF Status

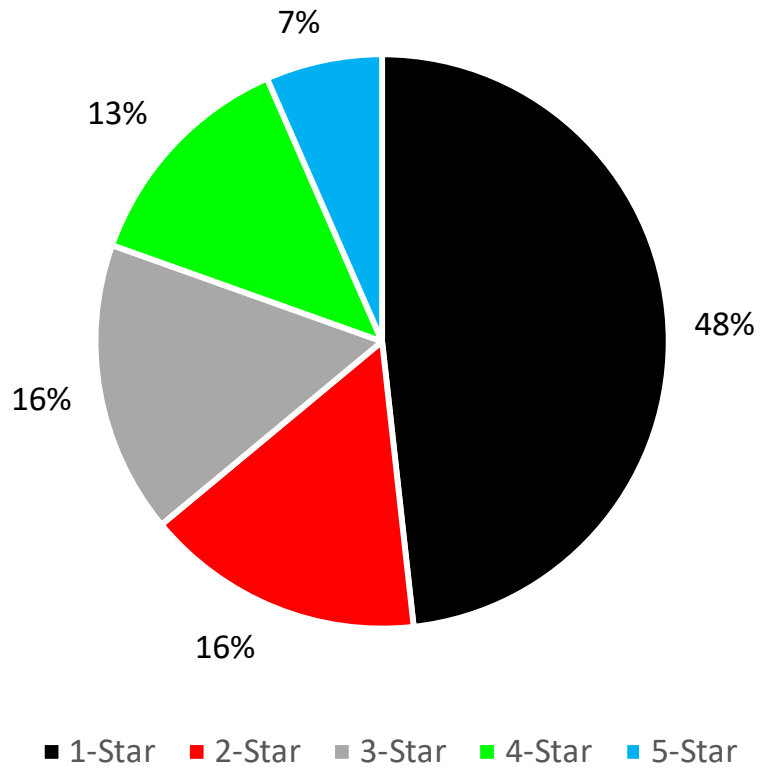
(Light Passenger Vehicles; where Region and CWR confirmed. Compared to Fleet and DSIs)

Approximately 18% of the fleet has no WOF with 64% being 1 and 2 star vehicles

**Light Passenger Vehicles with WOF 31 March**  
**3,292,286 Vehicles (82%)**



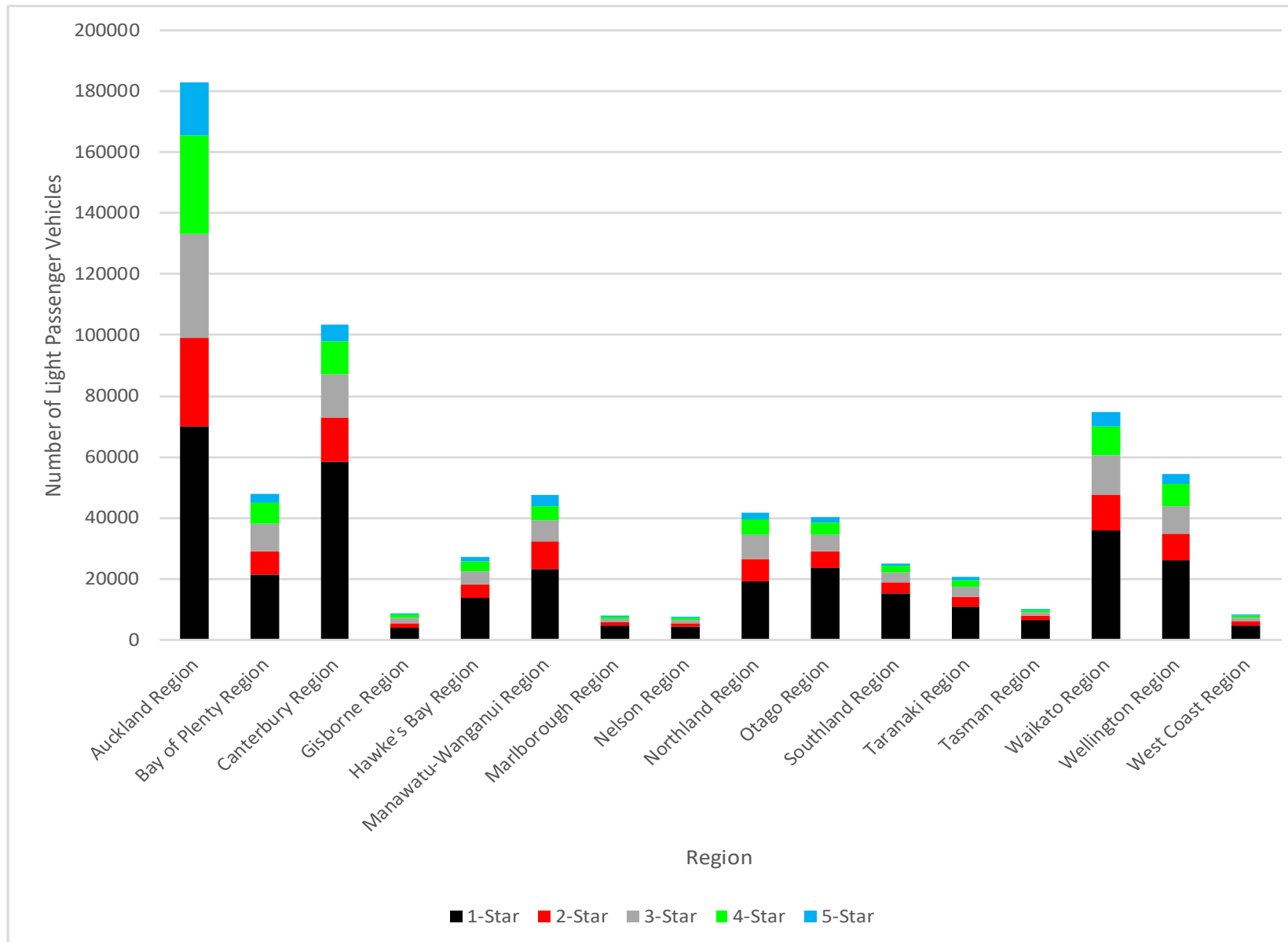
**Light Passenger Vehicles with No WOF 31 March**  
**709,332 Vehicles (18%)**





# New Zealand Light Passenger Fleet 31 2020 by Region and CWR – With NO WOF

(Light Passenger Vehicles; where Region and CWR confirmed) (Total No WOF = 709,332 or 18% of Fleet)

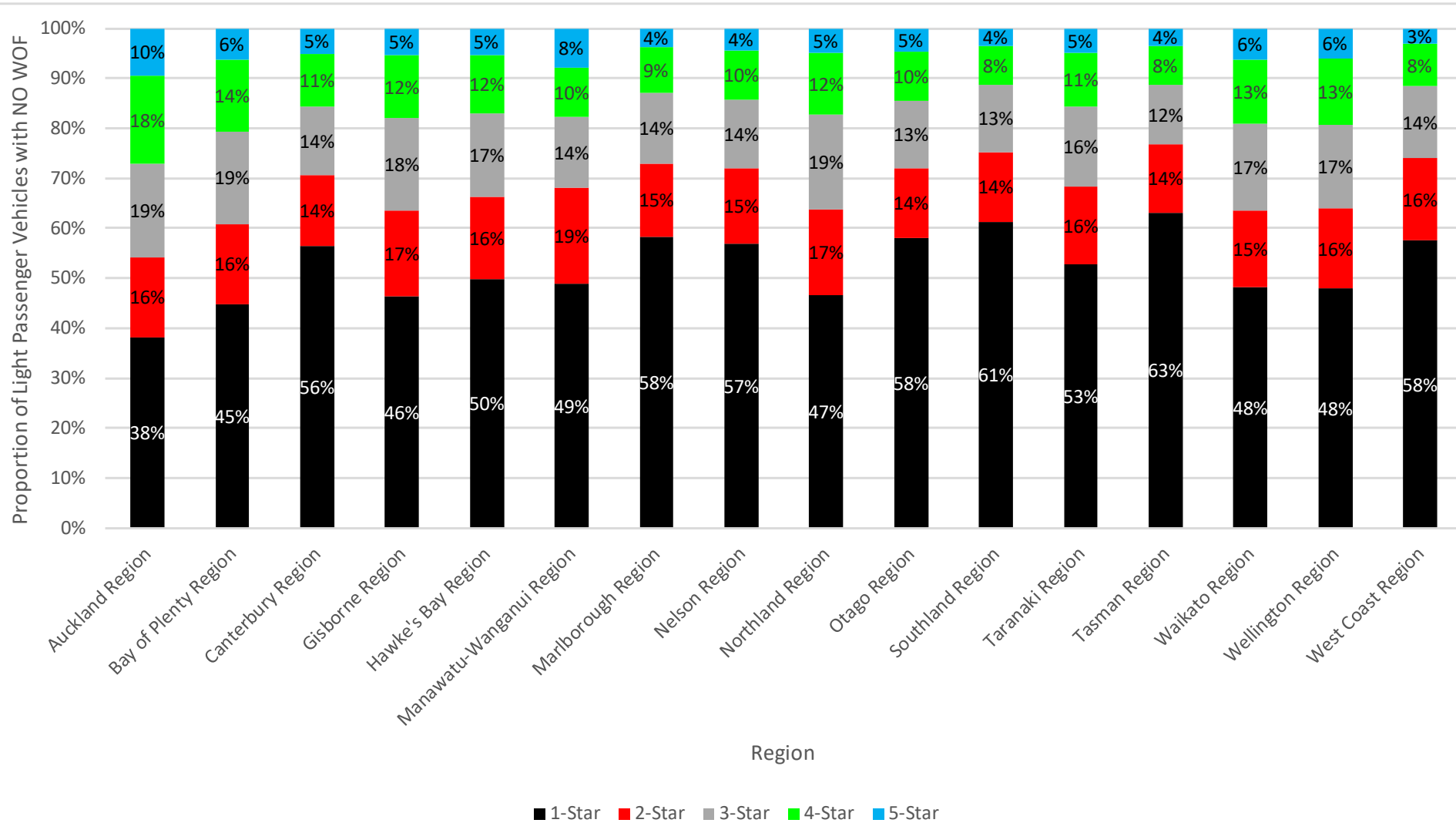


Vehicles with no WOF skewed towards 1 & 2 star vehicles across all regions



# New Zealand Light Passenger Fleet 31 March 2020 by Region and CWR – With NO WOF

(Light Passenger Vehicles; where Region and CWR confirmed)



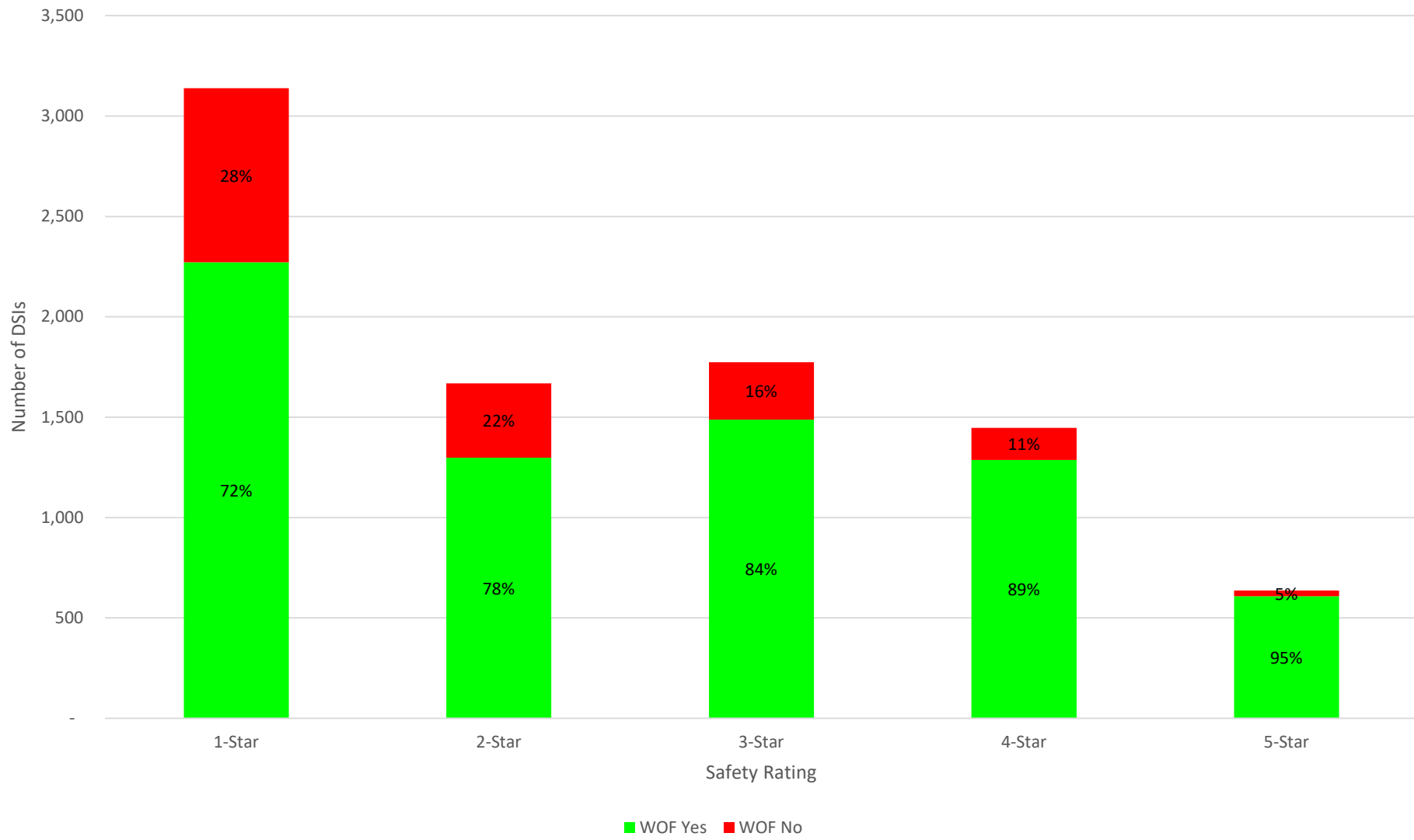
64% of vehicles with no WOF are 1 & 2 star vehicles with the highest proportions in Tasman and Southland (70%)

The lowest is Auckland (51%). Wellington and Waikato are both same but there are significantly more DSIs in Waikato.



# Number DSIs 2015 – 2019 in Light Passenger Vehicles by WOF Status at time of Crash

(Light Passenger Vehicles; where WOF status confirmed, Average with WOF = 80%)

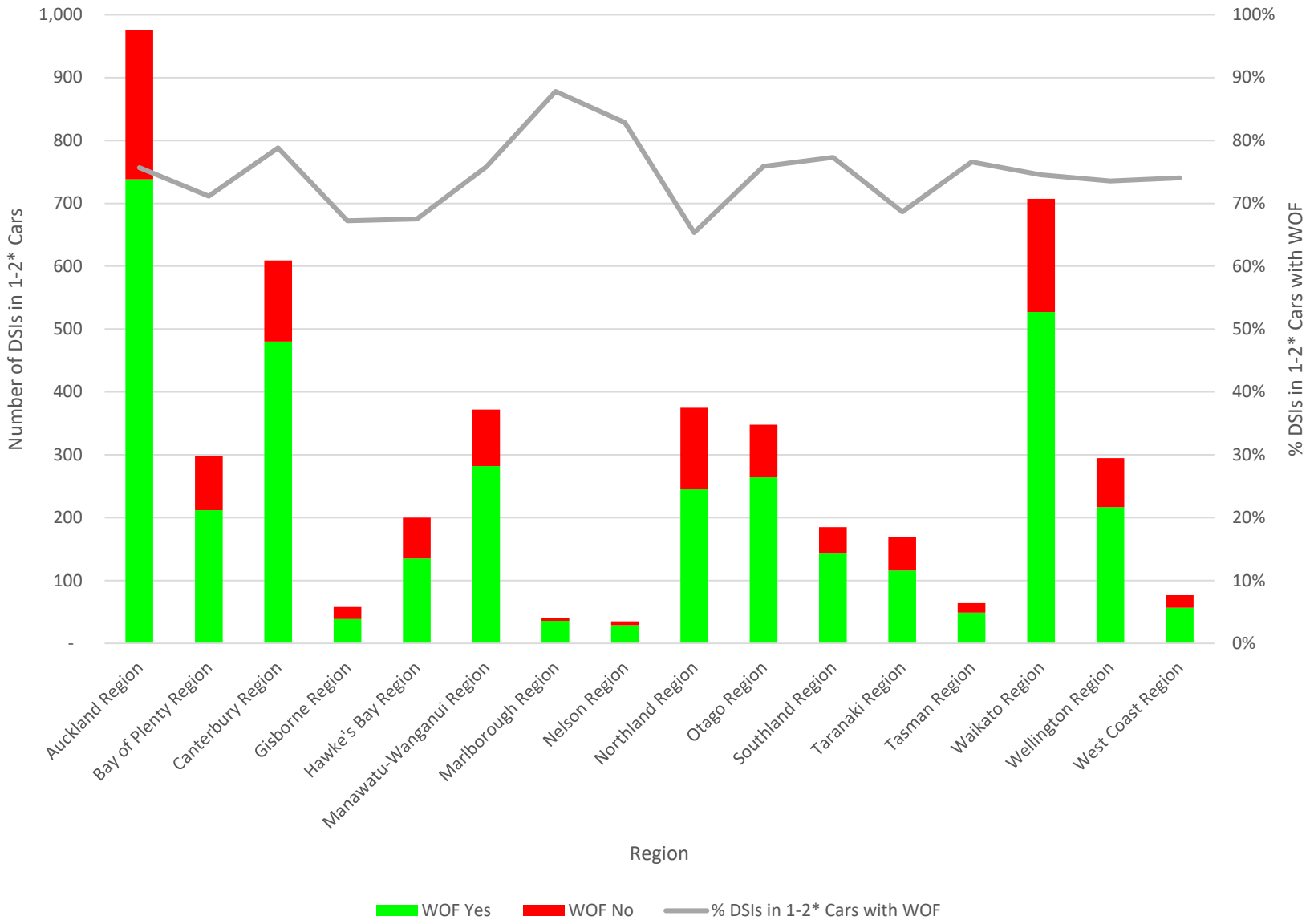


20% of **all** DSIs (1,715) occurred in Cars with No WOF

50% of DSIs in vehicles with no WOF (868) occurred in 1-Star vehicles

# Number DSIs 2015 – 2019 in 1+2\* Cars by Region and WOF Status at time of Crash

(1+2\* Light Passenger Vehicles; where WOF status confirmed, Average 1-2\* Cars with WOF = 74%)



Grey line indicates proportion of DSI in 1 and 2 star vehicles with a WOF at the time of crash.

65% of DSIs in 1 and 2 star vehicles in Northland had a WOF compared to 75% in Waikato



## Summary

- DSIs in 1-2 star cars is disproportionately high compared to proportion of 1-2 star cars in the fleet
- Proportion of 1-2 star cars varies within regions (low - Auckland 32%, high - Tasman 46%, avg - NZ 41%)
- Some variation in number of 1-2 star cars in relation to population (low - Auckland 246 / 1000 people, high - Southland 448 / 1000 people, avg - NZ 299 / 1000 people. Note Wellington/Waikato the same)
- DSI distributions are not the same as vehicle distribution (e.g. compare Wellington/Waikato = more than double the number and rate of DSIs in 1-2 star cars in Waikato than Wellington)
- Proportion of DSIs in 1-2 star cars is fairly constant (low - Marlborough 51%, high - Nelson 65%, avg - NZ 56%)
- DSIs in 1-2 star cars by region compared to number of 1-2 star cars by region indicates over-representation in Waikato, Northland, Manawatu-Wanganui and Otago
- DSI numbers lower in Deprivation Index 1,8,9,10, but higher in Indexes 3,4,5
- Proportion of DSIs in 1-2 star cars similar across Deprivation Indexes
- Highest proportions of DSIs in 1 & 2 star vehicles in Dep Index 8-10 in Gisborne and Northland
- **Of the 709,332 (18%) of vehicles in the fleet that had no WOF, 64% of those were 1 or 2 star vehicles**
- Vehicles with no WOF skewed towards 1 & 2 star vehicles across all regions