

future trends in vehicle design

Presented by:

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Agenda:

- **Introduction**

- What Drives Future trends?

- **The Automotive Environment**

- Global Population
- Oil Production
- The Age Demographic
- Lifestyle
- Low Cost Country Vehicle Production
- Global Production

- What does it mean for Australia?

- **Summary**



Future Trends – Introduction

What will future cars be like?



In order to predict future trends in vehicle design we must first research predict the trends in the **‘Automotive Environment’**

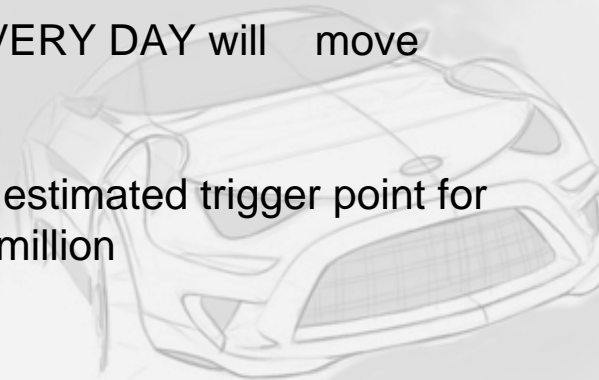


Future Trends - Global Population

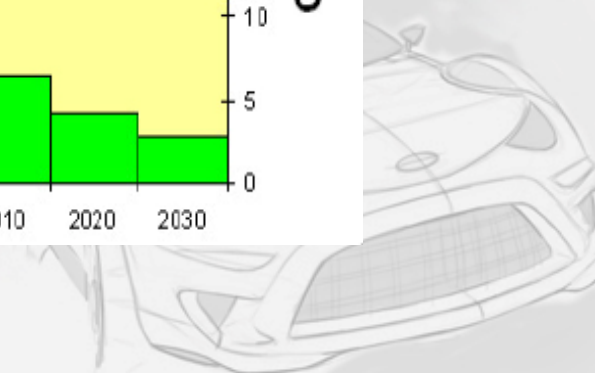
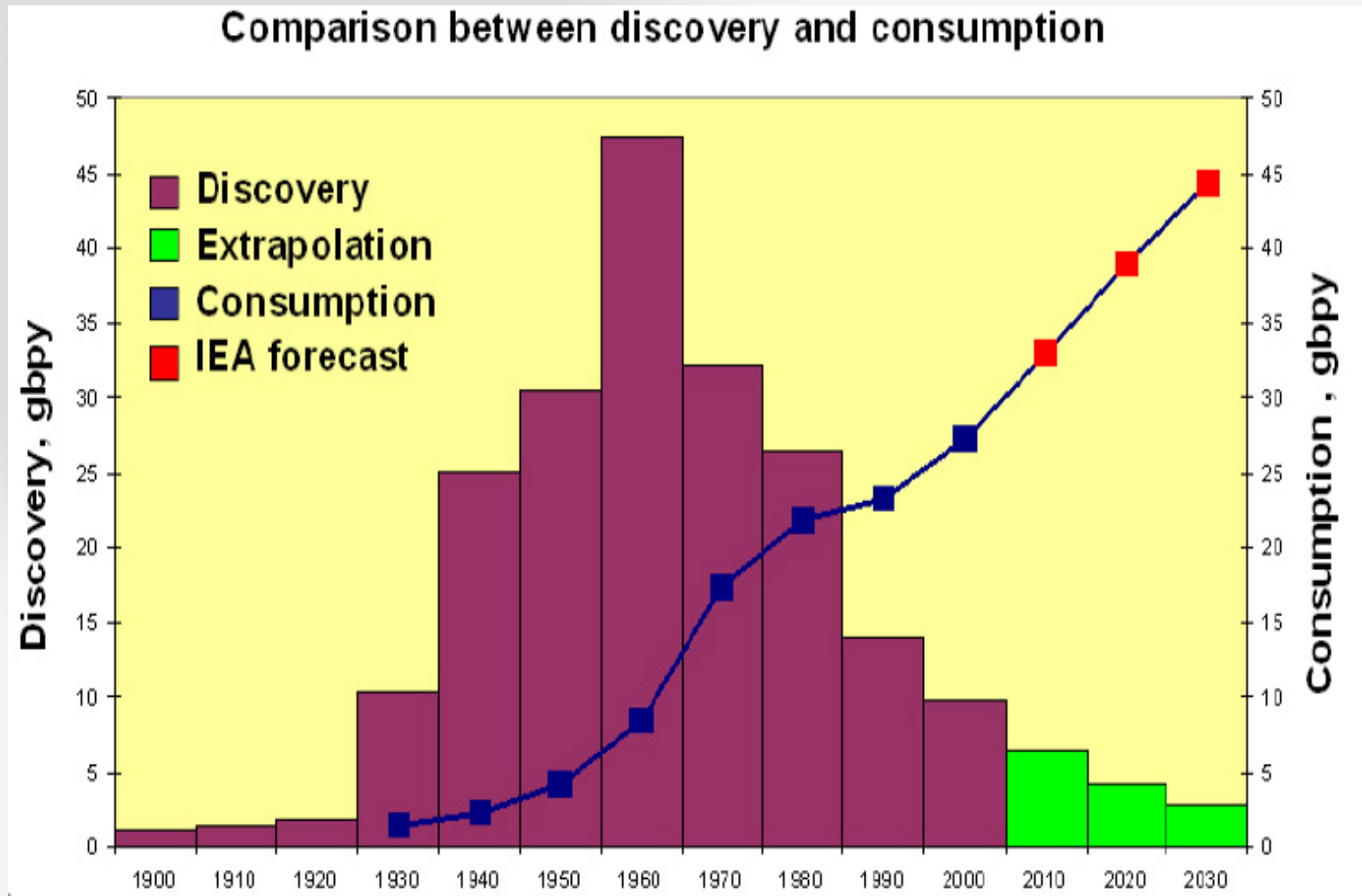


In the next decade...

- Global population will increase by 234 million people
... 70% will be in India
- India will have a higher population than China
... china's population limited by 'one child' policy
- Children (under 15) will decline by 76 million.
- > 60 years old will increase by 121 million
- The average age in China will increase from 33.4 to 43.9
- In China, 72,000 people PER DAY, EVERY DAY will move from rural to urban environments
- Households earning >US\$10,000 (the estimated trigger point for vehicle purchase) will increase by over 10million

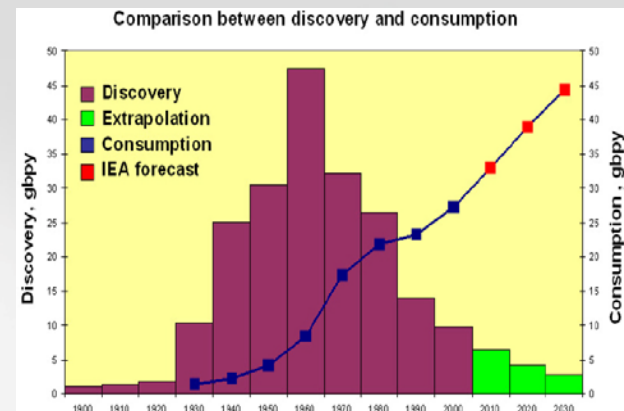
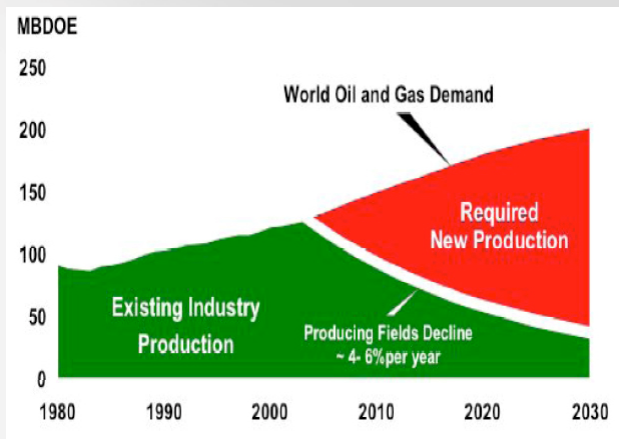


Future Trends – the oil situation



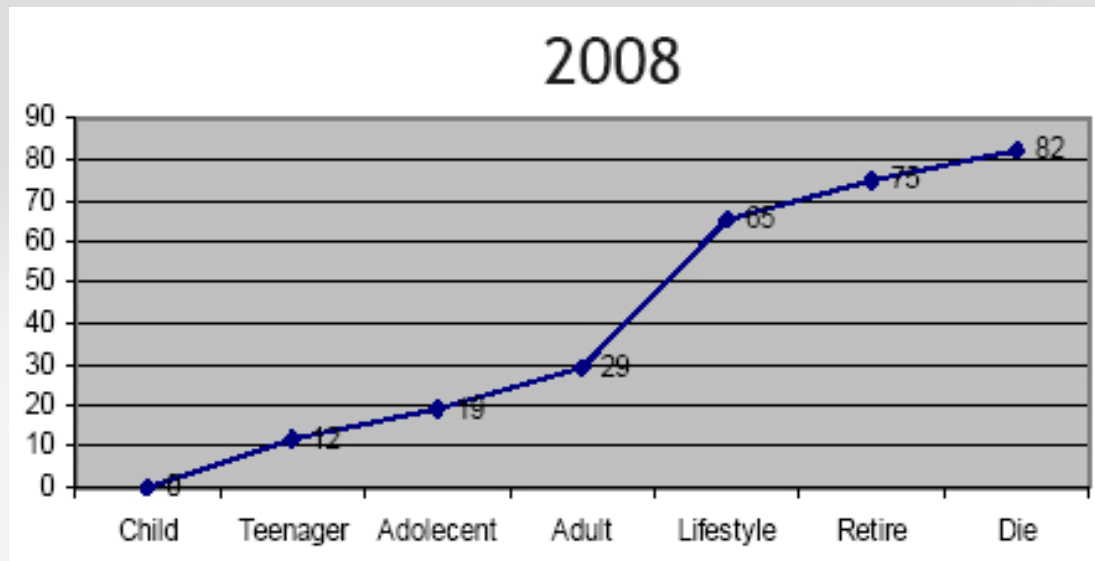
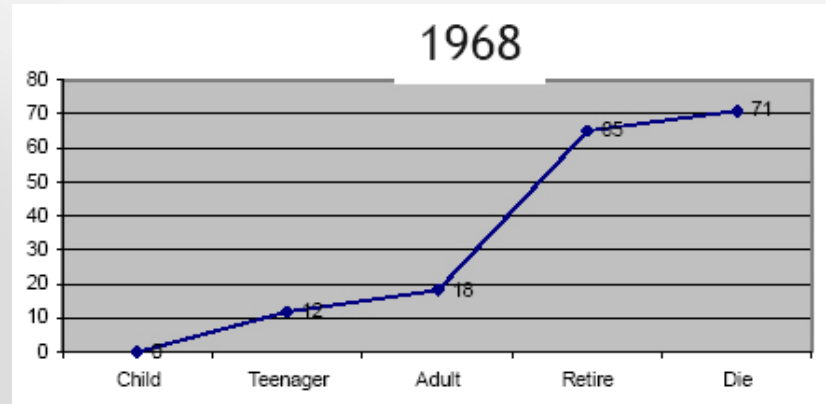
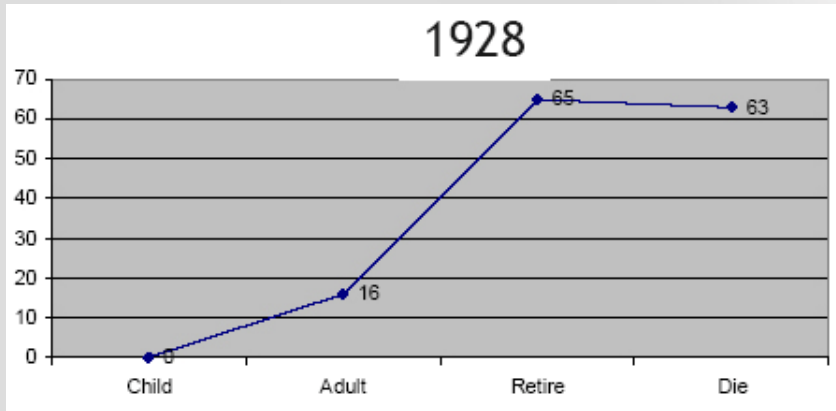
Future Trends – the oil situation

- Since 1980, the world has used more oil than it could find
- Ethanol – if we took the entire wheat crop from Australia every year it could only supply 9% of the oil needed for Australia each year.
- It is generally believed that we are reaching the peak of oil production, and decline is expected as major reserves have been exhausted.
- New production required in 2020 is nearly equivalent to replacing all of today's production.
- With demand outstripping supply since 1980 and the gap widening it is clear that the impact to society will be great. With the predicted trends by 2030 the shortfall = 6000 nuclear reactors + 500 new reactors each year after. ... Not that cars can use nuclear power ... at least not yet!?



the automotive environment

Future Trends – the age demographic



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Future Trends – the age demographic / Lifestyle

– Aussie buyers

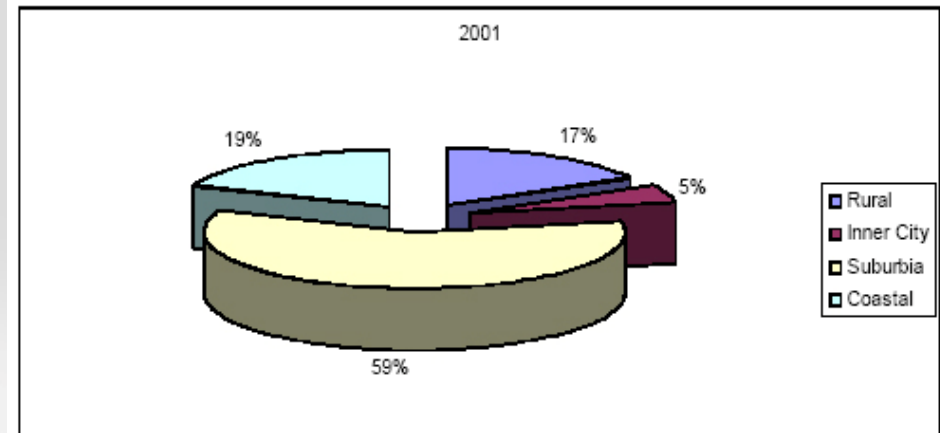
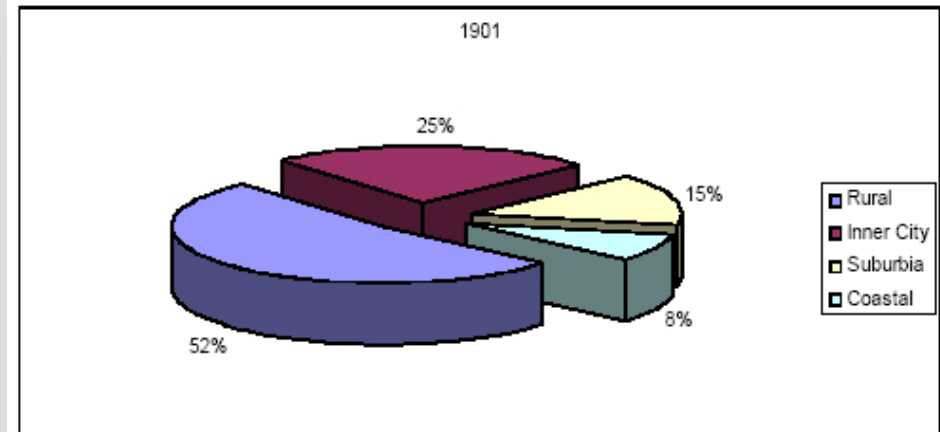
- For the last decade or so, 30-35,000 65yr olds were added every year
- By 2012, 135,000 65 yr olds will be added every year, trends show this will be sustained for 15yrs
- Age Tsunami ... the baby boomers at retirement age.
- Many have built retirement savings through superannuation
- Some still funding Gen Y 'Kippers'
 - 'Kids in Pockets Eroding Retirement Savings'
- Retiree's being fit & healthy are showing lifestyle changes
- Single / Couple adolescents with funding / security that can afford to be more selective about their purchases.



Future Trends – Lifestyle

- Australian Habitation

- The Gold Coast has been the fastest growing region for the last 29 years running
- From BUSH to BURBS to BEACH
- 3.9 Million people out of the population of 21 million live along the coast.



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Future Trends - Will there be an influx of China Vehicles?

S21 sedan



A21 sedan



B21 sedan



M11 sedan



M12 coupe

no picture
allowed

M14 sports



A0 sedan

no picture
allowed



Future Trends - Will there be an influx of China Vehicles?

“Not so fast”, says GM chairman Rick Wagoner. “Yes, Chinese cars and trucks are coming. But maybe not as soon as you might think.”

1. The Chinese market is too large.

- 24 vehicles for every 1000 people in China
- 300 vehicles for every 1000 in Europe
- 765 vehicles for every 1000 in USA.
- China to reach 40 vehicles per 1000 people in 2010 – 67% increase.

2. The Chinese government are still in control

- Chinese manufacturers are government controlled
- China is 2nd largest holder of US dollars (Japan 1st)
- U.S. Trade deficit with China (\$232.5 billion last year)

3. The Chinese don't want to make the same Korean errors

- Korean makers 15-20 years to regain enough trust to enter an upmarket vehicle.

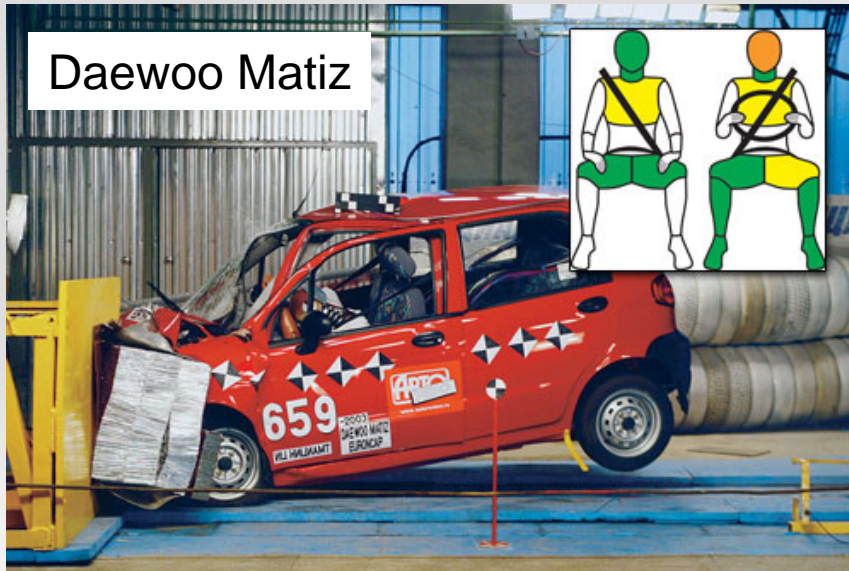
4. Cost is down, but technology is not up!

- Cherry – crash results prevent sales in Europe

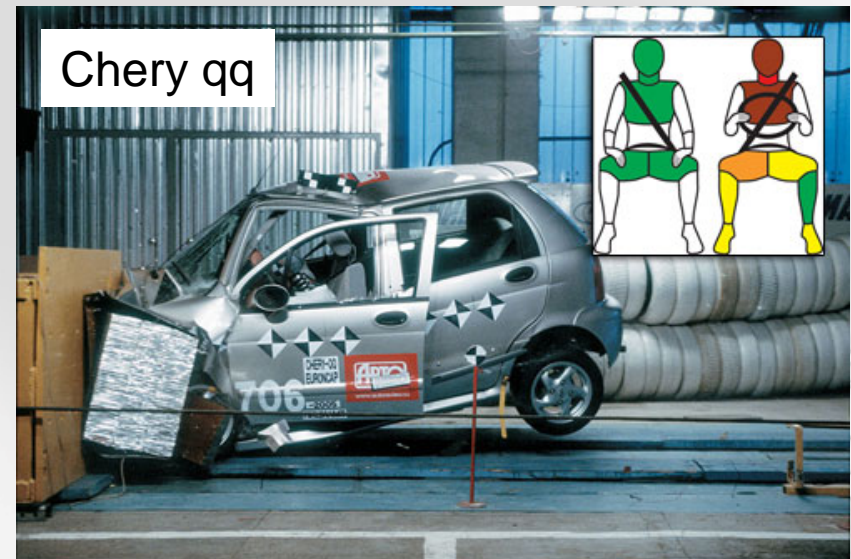


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Future Trends - Will there be an influx of China Vehicles?



Are the copies as good?



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	GOOD
	ADEQUATE
	MARGINAL
	WEAK
	POOR

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Future Trends – the global situation

Compound Growth Rate:

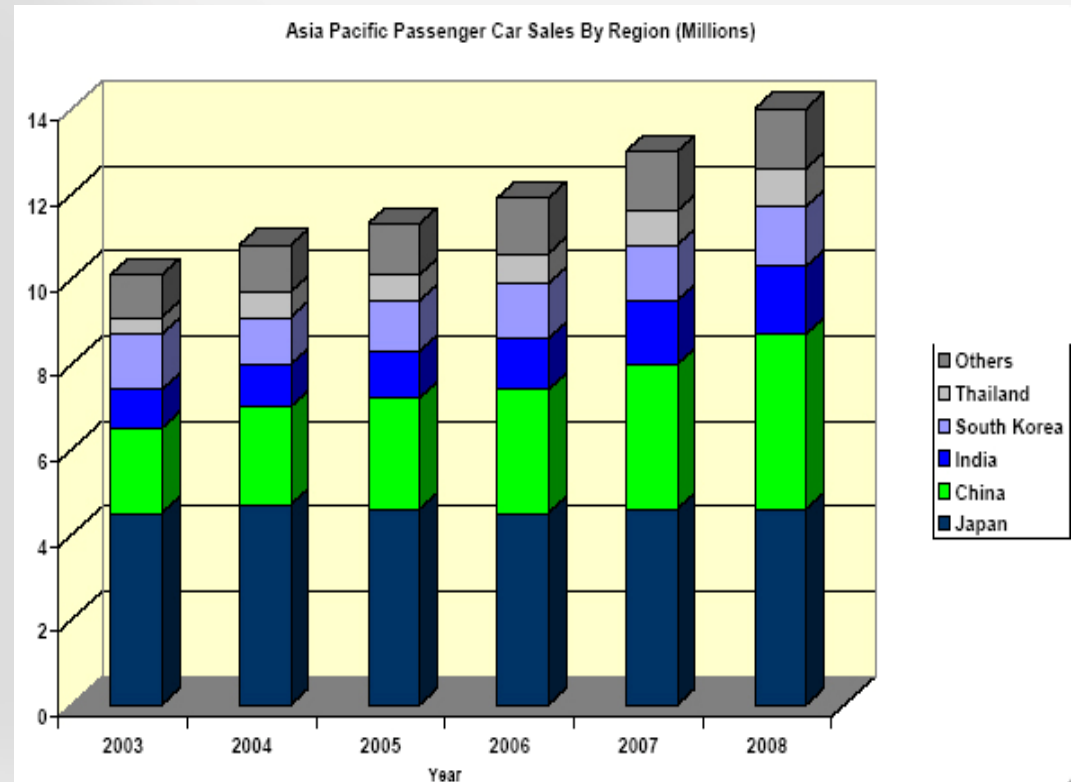
China	9.0%
SEA / India	8.6%
Europe	6.5%
Middle East / Africa	5.3%
USA	1.6%

Segment Growth Rate:

B (sub-compact)	26%
C (compact)	30%
D (midsize)	26%
FF (large luxury)	-2%

Total Car Manufacture

2006 - 62.0 million cars / annum
2012 - 73.7 million cars / annum



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Future Trends – what does it all mean for Australian manufacturers?

- In Australia since 1990 the share of imported cars sold has risen from 25% to 75%
- Hyundai Sonata now has a better JD Power rating in the USA than Toyota, Lexus, & VW
 - They are the new benchmark!
- Cherry Sells a QQ in China for under \$5,000 AUD
- Tata in india is developing a car with a target sell cost of \$3,250
- Now only 1 in 10 private buyers purchase a locally produced car
- Of the locally produced cars, approximately 1/3 are exported



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Future Trends – what does it all mean for Australian manufacturers?

- ACIS (Automotive Investment & competitive Scheme) may finish in 2012
- The Aussie dollar is strengthening on the back of the resources boom – less competitive to export, more competitive imports
- FTA's – Thailand, USA, Singapore, soon China, ASEAN, Mexico
- Environmental changes are impacting large cars
- Australia densely populated with brands

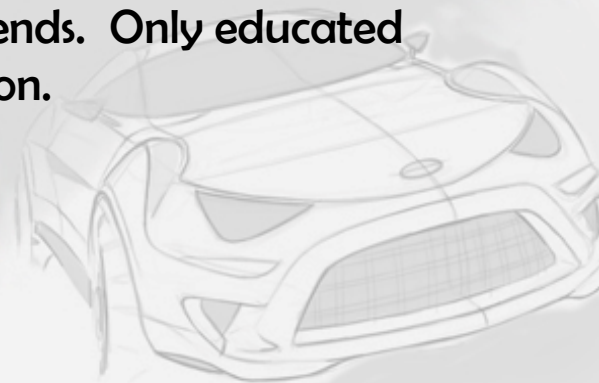
	Brands	Sales (millions)	Ratio - Sales for every Brand
Australia	55	1	18182
USA	32	17.3	540625
Japan	33	5.8	175758
Europe	70	17.8	254286

Future Trends – A Summary of What Drives Future Trends?

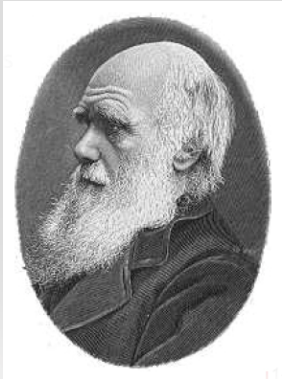
The 'Automotive Environment' is a continual state of change.

- Oil prices
- Population
- Environmental Issues
- Lifestyle Changes
- Technology advances
- Styling changes such as Architecture / Furniture design
- Cost factors – O/Seas competition
- & many many more

The reality is that no-body can truly predict future trends. Only educated guesses based on related trends will 'suggest' a direction.



Future Trends – A Summary of What Drives Future Trends?



“It is not the strongest of the species that survive, nor the most intelligent, but the one most responsive to change.”

Charles Darwin



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