The global automotive market is experiencing a number of disruptions that influence consumer, retail, and services strategies including hybrid/electric cars, autonomous vehicles, decreased car ownership in younger urban consumers, car/ride-sharing, and environmental and sustainability concerns.

The Australian automotive market, estimated at $62.8 billion in revenue\(^1\) is facing domestic changes to government subsidies and tariffs, in addition to shifts in consumer behaviours and preferences, including younger Australians foregoing their driver’s licence;

\[\textit{the number of under 25-year-olds in Victoria without a licence increased from 10\% to 35\% in the last ten years.}\]\(^{\text{ii}}\)

While new technologies and competitors such as Uber and Tesla are transforming the automotive industry, they also present new opportunities.

Considering these disruptions and the rapid advancement of technology, ACRS has prepared this white paper to address current trends and the future of the Australian automotive industry.
OVERVIEW

WHAT'S NEXT?

THE DISRUPTED FUTURE

ABOUT ACRS

WHAT'S HAPPENING NOW?

Consumer Decision Making

The purchase and upkeep of a car is a significant consumer decision as it represents 5% of average annual household expenditure or $77 per week. The ACCC identifies three types of costs consumers consider when purchasing a new car:

- purchasing costs (i.e. the price of a car);
- running costs (i.e. petrol, registration); and
- depreciation costs (i.e. sale price after use).

These are compared to the relative tangible and intangible benefits a consumer gains when purchasing a particular model, such as status and lifestyle. Other considerations for consumers when purchasing a car include city type, where population density, parking availability, and public transportation infrastructure influences the need for a car. For example, in cities like Canberra, where there is little public transport infrastructure and residential areas are spread over a wide area, cars will remain a necessary part of life. However, inner-city areas of Melbourne may rely less on vehicles due to heavy traffic, expensive car ownership, and readily available public transport. These considerations are reflected in the high volume of small passenger vehicles sold in 2017, representing 18.5% of the total amount of vehicles sold. Consumers are becoming increasingly informed on car models before purchasing:

55% of consumers spend between one to four weeks researching brands and models to identify cars of interest.

There are two critical touchpoints during the information search phase:

- the physical dealership, and
- online resources.

The physical dealership (particularly information from salespeople) influences consumers’ decisions, with consumers typically visiting two dealers before purchasing a car. Online (desktop and mobile) is the second critical touchpoint, with 65% of consumers using manufacturer websites to source information before purchasing a car.

Fifty per cent of consumers also use their mobile phone to research models while at dealerships. In response, dealerships are incorporating more digital aspects into physical spaces. For example, Audi launched its virtual reality (VR) showroom in August 2017, integrating it into consumer experience. Dealers can present the complete range of models to consumers, including add-ons and customisation options. The experience encompasses an entire 360-degree view of the vehicle, sound effects, lighting, and the ability to explore the interior and mechanics. The VR showroom is currently available in the United Kingdom, Germany, and Spain, with Australia expected to follow suit.
Sharing Economy

In the past many consumers had to forego experiences and products they could not afford due to the high initial purchasing price and ongoing ownership costs, such as maintenance. However, this is shifting over recent years with companies providing access to experiences and products without the exorbitant cost of ownership – this phenomenon is known as the sharing economy. For example, Airbnb provides consumers with the opportunity to experience living a different lifestyle – whether this is the high-life in a luxury apartment or experiencing the day-to-day life of residents.

The automotive industry has also felt the impact of the sharing economy, with companies such as Ford and Mercedes-Benz opening car-sharing services across Europe. While the initial thought is that there may be a decline in car sales, it is not necessarily the case – the individual purchasing the car may instead change. For example, car rental providers such as Hertz may purchase more cars to fulfil demand, while individual consumers may buy a vehicle for ride-sharing service use rather than household use.

Regardless, higher usage of vehicles will result in greater wear-and-tear, changing what consumers require from a car – fuel-efficiency and high durability (including the potential to update the car as new technologies are released).

Electric Cars

Environmental and product sustainability concerns have been on society’s radar for some years. Companies such as Starbucks and H&M are incorporating sustainability into their core principles, ensuring their operations and products have little to no impact on the environment. The automotive industry has also recognised the need to produce sustainable vehicles with minimal environmental impact, resulting in the development of electric and other fuel-efficient models.

Electric cars are the way of the future, with many countries implementing policies and infrastructure to support their adoption.

The Netherlands and Norwegian governments will ban the sale of new petrol- and diesel-operating cars by 2025. The United Kingdom and France have committed to banning the sale of petrol- and diesel-operating cars by 2040.

Electric cars are becoming more affordable for consumers internationally – the latest Tesla Model 3 can be purchased for upwards of AUD 45,000. However, electric vehicle accessibility in Australia is limited, with 13 of the 16 models available in 2016 costing upwards of AUD 60,000, and the remaining three restricted by stock levels, specific purchase arrangements, and availability timeframe. Despite this, a number of institutions such as the CSIRO, Australian National University, and the Department of the Environment and Energy predict that the adoption of electric vehicles in Australia is to increase significantly by 2030, assisted by the increasing number of models available on the market.

This is supported by a 2016 survey of Victorians that indicated 50% would consider purchasing an electric car, with price and lack of infrastructure identified as key barriers to purchasing. Results were similar in a study of electric car adoption in Queensland.
Tesla Model 3 – smaller, simpler and more affordable, and the world's first mass-market electric vehicle.

Engine into the car, Snap uses a removable ‘skateboard’ engine which can be updated with new technology as necessary. The concept considers additional concerns such as autonomous vehicles, ride-sharing, and productive interiors through the use of a separate passenger pod that may be owned, leased, or shared while the engine remains for public use.

Electric cars also present a tremendous opportunity for Australian manufacturers. NRMA estimates that electric vehicle battery manufacturing will become a $240 billion industry within 20-years, an industry that Australia is well-positioned to enter with its abundance of essential minerals.

Technology is advancing rapidly, with new models outclassing existing models sometimes within a year or two. Electric vehicles, in particular, are seeing rapid advancements, resulting in second-hand electric vehicles retaining less of their original value than the traditional model. Manufacturers will need to consider how they will adjust designs to account for these rapid changes, as it may be difficult for consumers to purchase new models as they are made.

Some manufacturers such as Rinspeed have considered this, creating a concept car called Snap that addresses the shortening lifespan of vehicles. Rather than building the engine into the car, Snap uses a removable ‘skateboard’ engine which can be updated with new technology as necessary. The concept considers additional concerns such as autonomous vehicles, ride-sharing, and productive interiors through the use of a separate passenger pod that may be owned, leased, or shared while the engine remains for public use.

Electric cars also present a tremendous opportunity for Australian manufacturers. NRMA estimates that electric vehicle battery manufacturing will become a $240 billion industry within 20-years, an industry that Australia is well-positioned to enter with its abundance of essential minerals.
3D Printing

Like other technologies, 3D printing has become cheaper and more accessible over the past few years. Retailers are beginning to incorporate 3D printing into product prototyping and beyond, offering consumers high-levels of personalisation. A number of industries are exploring the potential to 3D print spare parts, the automotive industry included. For example, in early 2017 Ford introduced a 3D printing system into its Dearborn, Michigan, research and innovation centre. With the increasing affordability of 3D printing and use of light-weight materials, Ford hopes to cut costs and improve fuel-efficiency in all its vehicles. 3D printing can also be used to test prototypes, allowing changes before the part is sent into mass production.

Autonomous Driving

Autonomous driving technology is being tested around the globe, and Australia is no different. Major brands such as Mercedes-Benz have completed tests in Sydney and Melbourne, and passenger trials for autonomous buses commenced in Perth in early 2017. A recent study ranked Australia 14th overall in autonomous driving preparedness, with our laws, lack of technology and innovation, and general consumer scepticism regarding autonomous vehicles as areas to improve. Currently, Australian laws require a human to be the driver of all vehicles and take responsibility for incidents that occur, limiting the opportunities for autonomous vehicles.
WHAT’S NEXT?

Productive Interiors

Car manufacturers based in China are rethinking the idea of the car. Byton, a start-up based in China, has created a self-driving concept car that aims to act more like a luxury leisure space than a vehicle, including revolving front seats and digital capabilities. Rather than a regular dashboard, the car has a wide gesture-controlled digital screen that provides entertainment and connectedness. Other brands such as ClearMotion are exploring the possibilities of productive interiors by utilising technology, while Uber filed a patent for a sensory simulation system to make the car ride more comfortable and productive by reducing motion sickness and light interference.

Health and Wellness

Even the automotive industry is unable to escape from the health and wellness trend, with Nissan creating a concept car that tracks hydration of the driver. The seats and steering wheel are fitted with a special material that responds to sweat, changing colour from blue to yellow, with blue signalling well-hydrated and yellow signalling dehydrated. While this concept is a one-off for Nissan to raise awareness of dehydration while driving, there are other companies such as Byton looking to implement health tracking technology as a standard feature in their cars.

Flying Cars?

A Slovakian start-up is blurring the lines between car and plane with the AeroMobil, the world’s first flying car. The vehicle makes a smooth three-minute transition between land and air and can travel up to 750kms by air at 75% of its speed capacity. Drivers will require a pilot’s license to fly the vehicle. The company is currently taking pre-orders, with the vehicle expected to be in full production by 2020.

Aeromobil’s unique combination of car and aeroplane is expected to be in full production by 2020.

Byton’s autonomous, electric concept car aims to bridge the gap between tradition and vision by blending bespoke lounge experience with digital provisions.
THE DISRUPTED FUTURE

Disruption is becoming the status quo. Once unchanging industries are now faced with a range of new technologies and innovation that are accelerating the global market into the future. Trends that in the past may have evolved separately are now converging – electric cars, autonomous vehicles, and the changing way people view car ownership are prime examples of this evolution. It is no longer enough to keep up with the market – manufacturers need to be constantly innovating to stay ahead in the increasingly competitive automotive industry.

ACRS offers a range of research services to uncover opportunities in a rapidly changing market. As part of the Monash Business School’s Department of Marketing, we have access to and experience with a range of research methods and technologies designed to extract actionable insights that inform business decisions. In conjunction with the Monash Business Behavioural Lab, ACRS can offer a number of research methods and technologies such as testing vehicle interiors with our eye-tracking capabilities to determine what stimulates a consumer, performing segmentation analysis to provide a detailed understanding of the Australian market and test virtual reality showrooms.
ABOUT ACRS

The Australian Consumer, Retail, and Services (ACRS) Research Unit assists retail and services organisations seeking to better understand consumers, traverse global trends, identify best-practice, or employ marketing as a source of competitive advantage. Positioned within the Monash Business School’s Department of Marketing, ACRS has a 35-year history as a globally respected source of retail, services, consumer and marketing knowledge. ACRS combines the latest academic research advances with business relevance, practicality, and strategy.

Department of Marketing
Monash Business School
Monash University
Level 6, Building S
26 Sir John Monash Drive
Caulfield East, VIC 3143

TELEPHONE
+61 3 9903 2869

EMAIL
acrs@monash.edu
monash.edu/acrs