EVtalk

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Selling battery recycling

The CSIRO has already begun detailed investigations into how electric vehicle batteries can or could be recycled in a long-term sustainable future not too far away.

Speaking to *EVtalk* at Nissan Australia's charging infrastructure trial announcement in Melbourne this month, CSIRO's **Christopher Munnings**, the team leader for electrochemical energy systems and high efficiency thermal technologies says the organisation is working hard on establishing such an ecosystem.

"We're starting to look at battery recycling in detail – a lot of it depends on their chemistry because a lot of EV batteries contain high amounts of cobalt and that's quite a valuable commodity," he begins.

"The cost therefore is less than throwing it away, you make money off the scrap, and when you look at other technologies there's less value; but essentially a battery is a big box of aluminium and copper, metals that are profitable to be recycled," Munnings explains.

Together with research director for low-emission technology, **Dr David Harris**, Munnings says the challenge is

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Solar EV charging project under way

Nissan Australia is hosting a joint solar EV charging research project, funded through a $210,000 grant from the Victorian Government's New Energy Jobs Fund (NEJF).

The solar charging stations from Delta Electronics, which include advanced technologies developed by the Commonwealth Scientific and Industrial Research Organisation (CSIRO), are installed at Nissan Australia's national headquarters in Dandenong South, Melbourne,



Lily D'Ambrosio

They will be used to evaluate off-grid EV charging using solar power and battery back-up in all conditions.

The aim is to confirm and enhance the environmental advantages, and cost savings, which come with owning an EV by maximising the use of renewable energies, Nissan says.

Once the full study is complete, it paves the way to have solar power chargers installed without requiring updates to grid connections - and in areas that don't have access to grid power.

Delta Electronics developed the

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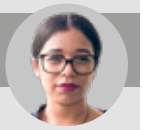
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Selling battery recycling

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helping recyclers develop a systematic approach to removing those components in a similar way to the recycling of old lead-acid batteries or tyres.

"We need to help recyclers come up with novel ways of collecting those batteries, being quite big helps so you're only collecting one or two components," he says.

"How do they maximise the value in removing those materials – graphites at the moment aren't recycled because they're difficult to remove," Munnings reveals.

Graphite is one of three naturally occurring carbon materials on Earth and is used 40 times more in an EV Li-ion battery's production than lithium. Graphene is a single-atom sheet of carbon which was only discovered and developed as early as the mid-2000s and is the focus of significant research because it it's unique ability to help batteries charge quickly and sustain that charge for longer – Samsung announced in early 2018 it would use the material in its phone batteries.

Graphene is unfortunately difficult to harvest and the purification process produces waste, but it is 40 times stronger than diamond, 100 times lighter than aluminium and is 140 times more electrically conductive than lithium – which is why it has the potential to revolutionise EV battery energy density.

"Graphites are valuable, not as a raw material but in a battery it is, and we have a very active programme looking at all those challenges," Munnings adds.



L-R: Christopher Munnings, Dr David Harris, CSIRO

Harris says they need to establish who and what the recycled components are being recycled for; the process needs a second-life demand.

"Are you recycling it back to the battery manufacturers who make the same thing, or are you recycling the components to other opportunities which can vary depending on where you are in the world," he asks.

"The other side is whether these materials are the things you recycle straight away into their next second-life use," Harris adds.

"Before you get to the point of pulling the battery apart, you need to know what the next purpose is, and potentially whether it needs to be pulled apart at all," he explains.

According to the CSIRO, Australia produces roughly 3300 tonnes of lithium-ion battery waste, of which only 2% is recycled and growing by 20% per year; it's expected our lithium-ion battery waste will exceed 100,000 tonnes by 2036. ■

Solar EV charging project under way

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cabinets that combine a solar system with battery storage and EV charging, while the CSIRO focused on the module that integrates with solar and battery systems to help charge multiple vehicles quickly, regardless of the weather.

Infrastructure for the research has been installed at Nissan, including a 5kW solar system to power the two solar charging units at the front of Nissan Australian's head office, and another two charging units connected to a 10kW solar system positioned at the rear of the property.

Victorian energy, environment and climate change minister **Lily D'Ambrosio**, who approved the NEJF grant, emphasises the project's importance.

"We know we need to reduce emissions in the transport sector and one of the best ways we can do that is to support partnerships like this one," she says

"By encouraging electric vehicle take up, we reduce greenhouse gas emissions, improve air quality and increase job opportunities in Victoria.

"This battery smart storage platform means electric vehicle drivers can travel more confidently and enjoy the drive."

Nissan Leafs are used in the testing; the new Leaf launched in Australia in early July.

"Nissan is committed to helping innovate the way all its customers access EV charging, while a study of this nature will enable greater EV adoption both here and around the world, reducing the impact on the grid," Nissan Australia managing director **Stephen Lester** says.

Delta Electronics and the CSIRO will gather the test data and present their findings and announce further steps mid-2020. ■



OEM Audio backs EV market

Paul O'Connor's OEM Audio supplies model ranges for new and used car dealerships throughout Australasia.


Paul O'Connor

OEM Audio makes cables for electric vehicles. It also produces type two and type one EV leads so owners can charge their EVs from a public station.

"It's rapidly becoming a popular product," O'Connor says. "With positive environmental, financial and convenience reasons, it's the obvious way forward."

Since 2016, OEM Audio have been supplying equipment for electric vehicles in New Zealand, Australia and the South Pacific.

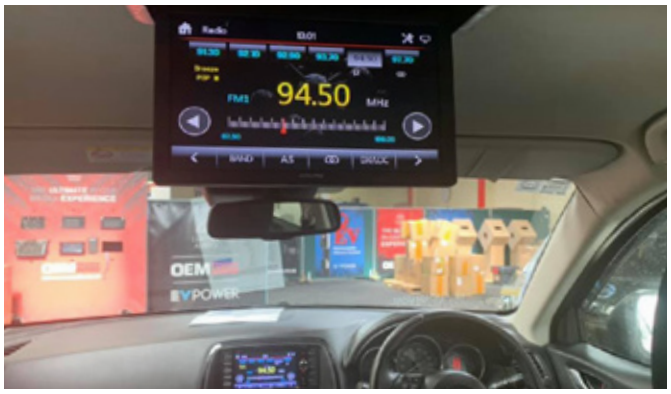
Over 50 used dealerships throughout New Zealand purchase OEM Audio EV equipment.

He says a lot of people are trying to enter the EV market but don't have any background. "They seem to think that anything will work, we have tried a lot of gear and some will burn your house down.

"All of our products are TUV approved, which is the most reputable testing organisation in the world. We spent the money to get TUV approved, and our products meet the latest International Electrotechnical Commission (IEC) standard. We are not some guy in his garage hoping for the best."

OEM have made a long-term commitment to the EV industry.

OEM Audio has a range of WallChargers coming, with some even having a Wifi app that allows you to see and set the time, speed, and kilowatt on the charge.







Around 75% of O'Connor's products go to car dealers, both new and used dealers, for different projects.

"There is a good trade allowance. The margin sold is good, even for its low retail price, there's a margin in the product."

The company is happy to deal with customers who call the 0508 free phone number. English manuals and YouTube channels are also available for the customer.

O'Connor says they are happy to take the customers' calls, so dealers don't have to handle all the queries.

In the next few days, dealers will be able to log in from the OEM Audio website and buy straight from there. Products will arrive the next day provided the order is done by 5.30pm that evening.

OEM Audio is supported by two technicians, **Kyle** and **Stu**, who O'Connor says are two of the best audio technicians in New Zealand.

To contact OEM Audio, free phone **0508 OEM AUDIO (0508 6362 8346)** or email **sales@oemaudio.co.nz**

Big plug for commercial EV fleets

A new software platform designed to make it easier for commercial fleet managers to switch to electric vehicles is expected to bring "tens of thousands" of new EVs to Australia during the next five years.

The new digital platform from Australian e-mobility start-up Evenergi provides a revolutionary fleet software-as-a-service (SaaS) being released as part of a national fleet electrification program - *Charge Together Fleets.*

The aim is to make vehicle fleet electrification simpler, more affordable, and more accessible.

Next year, Evenergi will also launch an online platform and smartphone app for private consumers, allowing them to find the most suitable EV, arrange a test drive and set up home charging infrastructure.


Daniel Hilson

Evenergi chief executive officer **Daniel Hilson** says *Charge Together Fleets* is about offering Australian businesses, councils, and organisations real choice.

"We've spent two years in development, engaged in two rounds of angel investment, and attracted public funding via ARENA (the Australian Renewable Energy Agency). So, it's exciting to see the first version of this ground-breaking service launched," he says.

"On current projections we anticipate this program will help deliver tens of thousands of EVs on to Australian roads over the next five years. Future versions will include the ability to seamlessly acquire charging infrastructure."

Hilson says fleet managers should be able to clearly understand the options they have and proceed from that basis.

The $1.05 million project has also received support from the New South Wales and South Australian Governments, Ausgrid, and NRMA.

The program is jointly led by the Electric Vehicle Council (EVC) and Evenergi, and its pilot period has been hailed a runaway success.

More than 100 Australian fleets, including those of the NRMA, Curtin University, Charles Sturt University and Ausgrid, have signed up, the project also supported by the New South Wales and South Australian governments.

Along with the SaaS platform, the *Charge Together Fleets* program will provide Australian organisations interested in transitioning to EVs with an extensive knowledge base, peer-to-peer learning opportunities, a national EV procurement initiative, and a webinar series.

"EVs are no longer some experimental novelty and we know fleet managers want to explore the electric option, but managing that shift can be daunting," EVC chief executive officer **Behyad Jafari** says.

"Making the call to transition to an electric fleet currently requires complex, costly, and time-consuming analysis. Charge Together Fleets changes that to a free service, accessible in minutes.

"Obviously the natural human inclination is to stick with what you know. But we're confident once we demystify the process of switching to EVs, many



Australian fleet managers will consider them irresistible."

Evenergi is also developing an Australia-wide planning tool for electricity distributors to plan for and manage the potential impact of EVs on the electricity system. This forecasting framework will consider current EV electricity capacity, network constraints, travel data, future charging infrastructure, local renewable generation, and capacity management options.

The planning tool will be launched in early 2020 with Ausgrid as the first user. It will enable energy networks to better plan for EVs on their network, ultimately improving grid reliability.


Behyad Jafari

ARENA has provided $469,380 in funding to Evenergi to help businesses and consumers to make informed choices about EVs and help electricity networks to plan for the potential impact of EVs.

Fleets comprise more than half of all new vehicles sold annually in Australia, and the new platform will significantly reduce the time and cost required for fleets to make procurement decisions, ARENA says.

ARENA chief executive officer **Darren Miller** says Evenergi's online platforms would help inform those who wished to purchase EVs.

"*Charge Together Fleets* is a free, practical way for fleet managers and businesses to make commercial decisions about the future of their fleet and how they can best transition to EVs with minimal impact on their operations.

"Taken together, Evenergi's online platforms will help businesses, consumers, and electricity networks make informed decisions about switching to electric vehicles and managing the potential impact."

Last year, ARENA and the Clean Energy Finance Corporation (CEFC) published a report which predicted the uptake of EVs would increase significantly over the next decade.

The report said EVs would reach price parity with petrol cars by the early to mid-2020s when looking at upfront cost, and sooner than this on a total cost of ownership basis.

A lack of fast charging infrastructure was identified as a barrier to EV uptake.

ARENA has also committed $21 million in funding to Chargefox and Evie Networks, providing two ultra-rapid EV charging networks along major interstate highways around Australia.

Going emissions-free starts with free admission

Nothing's for free, as our grandparents and parents have probably told us at some point in our lives, but that doesn't necessarily make it right.

The Australian Electric Vehicle Association (AEVA) is holding an expo in Sydney from October 26-27 where admission is genuinely free.

Regardless of your stance on climate change, its effects will impact us all, including the deniers and their kids, and their kids.



Bryce Gaton

And granted, the emissions generated from manufacturing electric vehicles has to be addressed as part of the cost-of-ownership and whole-of-life considerations for turning away from internal combustion.

There's not a free ticket out of our energy and transportation conundrum – we're going to have to burn fossil fuel and produce hydrocarbons in order to wean ourselves off and save our planet, nay ourselves.

Doing so is literally a potential life and death situation.

Without getting too dark and depressed about what lies ahead, it's an important time for dealers to start understanding the electric vehicle market, because it's coming whether you believe it or not.

If you don't believe it, consider how quickly Tesla has changed the trajectory of the global automotive industry - a start-up which 10 years ago barely existed beyond an over-hyped plastic sports car which **Jeremy Clarkson,** the icon of petrolheaded speed and power, ridiculed.

Free admission is not only to get bums on seats, but to make it easier to experience the reality check of electric vehicles.

In order to sufficiently engage with the auspices of an EV, the AEVA expo is also being held across two days in order to give attendees time to get acquainted, while also having an opportunity to hear from experts on various presented content.

AEVA organiser **Bryce Gaton**, a journalist and EV enthusiast, has recently committed to – and completed – an epic road trip around Victoria to truly test the strengths and weaknesses of endurance electric car travel.

"In travelling roughly 2400 kilometres, the only moment of brief concern for range was the downhill run from the Alpine Road down to Myrtleford," he begins.

"I had 10km less indicated range than I needed to travel, but by the time regenerative braking had charged up the battery for about 30km of downhill driving, I gained about 15km more than I needed," Gaton concedes.

"Some people may think that's not acceptable, but the reality is the vehicle I used was under a strict set of rules which included not being allowed to charge during the day – only at night – and if I had got into a situation like running out, I could've plugged in at any 240V outlet," he says.

Gaton says the convenience of electric vehicles is greater than what most people realise.

"No internal combustion vehicle can simply plug into the electrical grid of poles and wires which people already pay to maintain, they need a million-dollar service station which requires trucks to deliver fuel," Gaton says.

"I drove a Hyundai Kona Electric as far as Bairnsdale in Victoria's east, over the Great Dividing Range, north to Mildura, south to Hamilton and Geelong, then eventually back through Melbourne out to the Yarra Valley – not once did I use a DC fast charger during the day, only charging with 240V, 15-amp outlets during the nights when staying at caravan parks, and in hotels or B&Bs," he explains.

In talking about electric vehicles, it's difficult to discuss their place in the transport ecosystem without getting political. But those are creases the AEVA expo hopes to iron out.

"If **Scott Morrison** wants to tells us how impractical EVs are as a means to negate the federal government's responsibility to encourage emission-free driving, then the reality of my trip proves him dead wrong," Gaton says frankly.



"The EV Expo is about trying to get ordinary people to touch, smell and learn about electric cars without being hit with advertising or feeling like they need to sign themselves up to something – we want people to introduce themselves in their own time without coercion," he says.

"Because a lot of the stigma attached to electric cars is simply a myth; range anxiety is as realistic as the myth that hydrogen fuel cell cars are mini Hindenbergs," Gaton points out.

"We also want to see people within the automotive industry to take part and get involved, especially people who work within dealerships because ultimately, you're going to end up selling electric cars, if not already," he says.

AEVA in fact offers free dealer EV information seminars – which are being taken up by EV dealers. Gaton himself has developed and runs the Victorian version, while colleague **Clive Attwater** develops and runs the Tasmanian equivalent, with a national programme due to roll out soon.

"Nissan, Hyundai, Toyota, BMW and Jaguar dealerships all have models on sale right now, and Volkswagen, Kia and Audi have models in-bound for Australia – so there's no shying away from the fact people will continue to buy them as range increases with improvements in battery technology," Gaton concludes. ■

Canadians, gender finance and selling aftersales

Gumtree Cars has commissioned a survey of 1000 people to establish both dealer and consumer perspectives on a range of topics while shopping in the new car market.

Research firm BrandSpark and vice-president **Mark Baltazar,** a proud Canadian, draws on both the parallel and perpendicular experiences within the Canadian dealership universe especially in a slow sales climate.

He spoke to *AutoTalk* exclusively following his presentation at the Australian Automotive Dealer Association convention in Melbourne last month.

"The Canadian experience is that warranties are longer, cars are getting so much better and lasting longer, so the OEMs are creating the sales issue as well, so the turnover isn't as high as what it might've been," he says.

"But take solace, Canadian dealers also switch to used cars when new sales are tough, focus on aftersales."

While the Australian BrandSpark study didn't specifically delve deeply into finance and insurance per se, some fascinating data it did pull related to gender.

"Interestingly enough [55% of] women were more likely to get financing from the dealership than from banks, compared with men [44%]," Baltazar reveals.

"I thought it would've been the other way around."

Daley also found 46% of men and 44% of women used finance, be it from dealers or a bank. Whereas in Canada, he says, it's more like 80-90% of either gender opting for finance, suggesting Australians are twice as likely to purchase outright than to choose finance.

Transversely, some 54% of men would prefer bank finance over the dealer, versus 39% of women.

The Gumtree Cars research also reveals dealerships are leaving money on the table by failing to invest in their own websites.

Baltazar suggests dealers' websites remain under-utilised in a world where 86% of customers, according to their study, use a digital platform in researching what car to buy.

The same data found only 58% of dealers spend the majority of their marketing budget on enhancing their digital media.

"We've interviewed over 100 dealers across the country, including nine in-depth face-to-face interviews ... and some top-line observations include consumers spending their research time online.



Mark Baltazar

"So many people are making their decision before entering the dealership, but once they're in, knowing exactly what they want, pricing transparency and professional sales staff are critical in that process," Baltazar explains.

However, he says, in trying to establish a connection with the customer – the first stage out of three – it's crucial dealers start looking at their digital shop front.

"Dealers spending all their time re-shuffling cars in the forecourt or positioning them in the showroom need to be focusing on their online showroom, because that's where consumers are trying to establish a connection," Baltazar highlights.

"How much time do you think consumers spend researching before they enter your dealership?" he asks.

"Six weeks – they're going online, doing a lot of the legwork at home – and digital is a major path to purchase, so to increase return on investment, dealers are lagging behind in investment in digital," he says.

The research found nine out of 10 buyers use digital mediums to research their next vehicle purchase over older forms such as print, TV, radio.

Only six out of 10 dealers are spending the majority of their marketing budget on digital.

"We asked dealers if they're planning to spend more on digital in the future and most said yes, but it shows they are making the move, but probably not fast enough," he adds.

"Try just shifting a little from the traditional spending into the digital bucket and see how it goes."

Baltazar also touched on key aspects of the consumer's purchasing journey in relation to how dealers are - or aren't - communicating with their customers before, during and after the sale.

He highlights the need for dealers to make a deliberate point of asking customers how and how frequent the dealership should be keeping in contact when the deal is done.

"It's very easy for people to unsubscribe to your emails, but it's important to figure out the right thing to send or say at the right time," he divulges.

"Primarily it's through email people want to receive communications [in general], and there's a few ways of asking customers how they want to be communicated with.

"The phone call, I think, is appropriate to make maybe once every quarter; not so frequent - it's annoying - but enough to find out how things are going," he suggests.

Aftersales also continues to be an area of great remiss for dealers. In a hyper-competitive consumer landscape where all the buying information a potential customer could want is at their fingertips, Baltazar urges dealerships to focus on selling their post-sale attributes.

"We found about 35-37% of customers [in our study] wanted to bring their vehicle to the dealership for aftersales service," he kicks off.

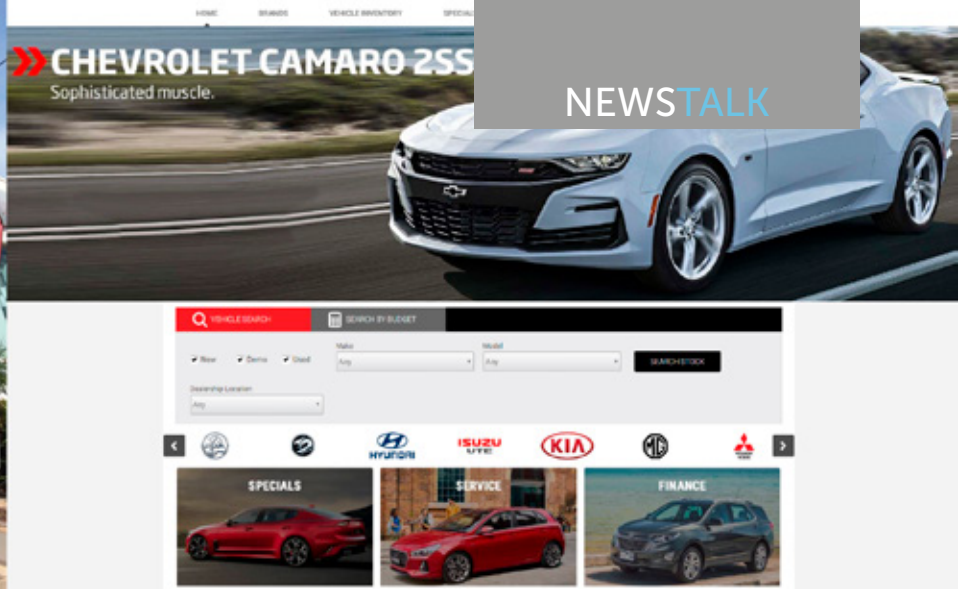
"Everyone else wanted to go somewhere else. We didn't ask why, whether it was distance-related, location – perhaps people are okay with driving that far for purchase but not service," he adds, suggesting dealers and OEMs shouldn't fear-monger about the aftermarket and independent workshops of the world.

One of the models BrandSpark says dealers are considering is satellite servicing locations to address distance issues and fill in gaps.

Depending on a dealer group's size and capacity, satellite servicing could also be a business bridge-building exercise between multiple dealership operations.

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Tale of two showrooms

We're already headlong into the digital age and for consumers, the old conventions of buying and selling through a dealership have changed.

There are two primary points of contact between a potential customer and a dealer, but the power now rests in the palm of the former's hand.

But your tiled floors and double-glazed foyer are not the place for first contact.

E-Commerce company SpinCar says dealers need to take a more aggressive approach to their virtual presence entering the new decade.

Speaking at the Australian Automotive Dealer Association convention in Melbourne last month, chief executive **Devin Daly** says dealerships are a missing link in the digital advertising arms race.

"We think one of the biggest misses in automotive [retailing] is that today's consumers are used to spending the vast majority of their time in hyper-curated platforms," he says.

"Yet dealers are selling a very emotionally connected product, often costing $50-$60,000, and yet in a lot of times there's a very flat, static experience on OEM-branded dealer websites," Daly explains.

He says Australian consumers spend about five hours per day online.

"This is almost a third of the average consumer's waking time, spent online; so, the days of creating relationships and driving consumer interaction via face-to-face engagements are pretty much gone.

"The key to creating consumer loyalty today is providing that significantly more relevant, personalised and transparent educational experience online," Daly highlights.

He reveals in the US market, 93% of consumers started their car-buying process online, suggesting the first impression for a dealership is not the physical one with lights and tiles.

"You have two showrooms and in nine out of 10 cases, the first impression for your dealership, is no longer the physical one, so you need to make that first impression count," he adds.

SpinCar says vehicle visualisation


Devin Daly


Kane Hocking

comprises 82% of dealer website interactions, and with competing dealers "just a click away", online inventory is essential.

"Some dealers prefer not to face the harsh realities of the changing landscape ... the online showroom will make or break your business," Daly says.

"I see a future where virtual vehicle tours are a standard part of online shopping," he adds, referring to the old ways of packing the family up on a weekend, to visit several dealers to test drive multiple cars and eventually decide on one of them, are also assigned to history.

Carsales senior commercial analyst **Kane Hocking** says dealers need to remember

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Canadians, gender finance and selling aftersales

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"It's a business-model thing, if a dealer's not able to set up their own satellite workshop, a co-op joint venture, vetted by both dealers could work," Baltazar points out.

Improving the way dealers communicate with customers in aftersales by asking what they want, means engaging with customers by solving their next set of grievances such as servicing, and could lead to more long-term satisfaction, repeat customers and referred business.

"A lot of dealers are not putting a lot of effort into their aftersales service, so changing that could shift that percentage to 40% or 45% perhaps," he adds.

"We found that less than 33% of dealers think it's extremely important to offer useful aftersales service which, given the profitability attached to that, surprises me."

Consumers put all their time and effort into researching, haggling, visiting the dealership, but it's still an easy aspect to forget that aftersales is also crucial to the life-cycle of buying a car.

Warranties increase, service intervals widen, and trying to add value to aftersales could be money left on the table, or more pertinently, benefits not being advertised by a dealer.

Thinking outside the square is something of a dealer's forte, especially in tough market conditions.

It's now a question of just how far and how effectively a dealership can stretch that metaphor.

Two of us: Customers and dealers on F&I



L-R: Chris Mandile (Deloitte), John Chandler (Toyota Financial Services), Michael Winter (Allianz), Malcolm Tilbrook (Eric Insurance), Peter Jones (Nissan Financial Services).

It's safe to say the dealer's finance and insurance department is not what it used to be.

Dealerships and their respective distributor brands now have a drastically different set of rules under which to turn a profit in 2019 and beyond.

Major players in the finance and insurance sector have spoken candidly about the prospects for vehicle lending.

A five-strong panel at the AADA convention last month consisted of insurance company representatives, one big-four bank, and the respective financing department heads at two top-10 OEM brands.

Eric Insurance chief executive **Malcolm Tilbrook** says understanding what retail insurance holds for dealers in the future means accepting what's happened in recent history.

"Customers in the past have not been put at the centre of the F&I journey, and so firstly the construct of products and their price did not meet that community expectation or our regulators," he begins.

"You've got to put a line through the past and acknowledge that the industry has done the wrong thing, and governments have been clear about not necessarily banning these products, but focus on the consumer," Tilbrook divulges.

"Governments have asked the industry to focus that the features and benefits are valuable to the consumer, look at the price by not over-inflating it by paying the distribution channels too much, and they've also looked at the selling process by looking inside dealerships and said it was too convoluted," he concedes.

Tilbrook is also frank in describing how customers were treated.

"Regulators have said customers have not understood what they were buying in

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the demographic they're selling to as the Millennial generation – born 1981 to 1996 – reach 39 to 24 years of age in 2020.

"As the first generation to grow side-by-side with social media, millennials are highly influenced by what they see posted online," he says.

"Online posts are dedicated to showing the best and most premium products, services and customer experiences," Hocking explains.

Carsales *Auto Market Watch* report cites research conducted by Allianz in the US which found 57% of millennials spent money, unplanned, on an item they saw online.

Hocking says a quick observation at the trend in sales for premium cinema tickets, expensive shoes and the newest gadgets suggests a trickle down into the prestige new car segment.

"The share of luxury brand new car sales nearly doubled in Australia between 2012 and 2018," he explains.

According to VFACTS sales data quoted from the Federal Chamber of Automotive Industries, prestige and luxury sales in those six years jumped from 6.5% to 11% - roughly 60,000 cars.

"Keep in mind there is an aspirational vehicle for millennials at every price point," Hocking advises.

But he warns there are greater forces affecting the market than just social media and cashed-up 30-somethings.

"Value for money in terms of specs and features has never been better," he says.

"However, record levels of student debt in the US, higher utility and insurance costs ... have pushed the new car purchase down the priority list," Hocking highlights.

He says easing the sticking points in transacting with the dealership are one way of building trust and allowing a stress-free environment.

"Multiple, long paper forms and drawn-out negotiation is not how this generation is accustomed to transacting," Hocking says.

"A lot of the millennial lifestyle has been funded via Alternative Payment Lenders which have burst on to the scene in recent years," he continues.

"These firms are not regulated as a credit provider ... allowing them to capitalise on the need for immediate gratification.

"The customer experience a millennial expects from a bricks-and-mortar retailer is the same frictionless transaction they're accustomed to from pure online retailers – easy, fast and transparent," Hocking says.

Thinking like a millennial in the digital age and sharpening a dealership's e-commerce tools are not just necessary to do business in 2020, they're key to a

Two of us: Customers and dealers on F&I

Continued from page 8

the past," he says.

"The regulator has effectively said 'produce or offer good products and we'll leave you alone' and that's where I think the future lies ... The days of ordering the hamburger with the lot are gone.

"Insurers are now obliged and regulators have greater powers. With all the media around junk insurance and poor customer outcomes, we've seen dealers turn away from that and we're getting back to the point where dealers need to put customers at the centre of everything they do," Tilbrook adds.

Allianz Australia chief general manager **Michael Winter** says he understands everybody is looking for answers and expects to find some in its new $40 million investment toward giving consumers the same retail experience as what's available to business managers.

"It's really important because we now have consumers who need choice," he says.

"We're looking at how we assist the dealer through to the manufacturer with that purchase journey so they and us are well placed to take advantage of that [lead]."

With OEMs moving to increasingly long warranty periods, Winter was asked about Allianz and its role for those warranty products the company offered once upon a time.

"We think over time the warranty periods will graduate to the outer limits, which will make it harder to effectively sell warranty on new cars, asking a customer to make a commitment to something which might start in seven years' time," he explains.

"Used and pre-owned cars is a definite opportunity and we're working closely with our partners to figure out the relevance of the product, and how to get the right product construct in place; so customers can buy a pre-owned car with confidence, and if something goes wrong they'll have an insurer behind them."



Nissan Financial Services Australia/New Zealand managing director **Peter Jones** reflected on the new car retail market for F&I in the post-Royal Commission era, which resulted in banning flex commission, point of sale exemptions and neutered add-on insurance.

He says the Nissan 1% finance offer for example still has strong resonance with consumers.

"Since November 2018, we've all had conditions that have probably been the hardest you can remember since the GFC.

"Our numbers of approvals haven't dropped; we run a relatively conservative brand so we have probably 81% of applications A or B rated," Jones says.

"I think dealers may be pre-judging what may or may not be approved – when we do the 1% finance we usually have about 79% penetration and most are being approved.

"It might take a bit longer to get an answer, but what has changed is the customers we're seeing; if they are a C or D customer we've not really seen those [customers] previously," he adds.

Toyota Financial Services president and chief executive officer **John Chandler** also says the state of affairs is similar, but emphasises the conditions regarding vulnerable customers.

"We've got similar outcomes to Peter and we know we're not seeing everything, but I think it's clear in relation to regulatory changes there's a carving out of more vulnerable customers – that's actually happening," he says.

"You look at people on government benefits, in remote locations, all those categories are under massive scrutiny and we have to find out whether there's a suitable category for them or not," Chandler explains.

"Everyone's under the same conditions, you can't say you're an online provider and you don't have to do something; with a credit license, you do."

Chandler also says the used car market is also a likely segment to take a hit as a result of changes.

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Outlander still great - but showing age

I have driven the Mitsubishi Outlander PHEV so many times now that it is almost an old friend. And despite seven years on the market Mitsubishi continues to tweak and improve it.

And why wouldn't they. It is already the top-selling PHEV in the market, and continues to sell in reasonable volumes. Only the Leaf has converted more people to the electric lifestyle in New Zealand.

The latest update boosts the battery size, it is now a 13.8kWh lithium-ion unit over the old 12kWh one. In news *EVtalk* should probably ignore, the 2-litre four-cylinder petrol has been upsized to 2.4-litres.

Still, power to the wheels is usually provided by the two electric motors, with the petrol motor acting only as a generator. It can step in at higher speeds when it is considered efficient to do so.

Claimed range goes up from 54km to, (cough), 55km. Real world expect 35-40km, though keeping in mind the average NZ commute is 22km, that means many users manage mostly electric travel with the model.

A more powerful rear motor means power output is now up to a total of 130kW. Still, performance feels adequate rather than sporting, which suits this relatively tall and narrow family SUV.

Being this old means pricing and specifications have been sharpened to the point where even the battery Outlander is undercutting some petrol and diesel competitors.

An 8" Smartphone Link display audio system is now standard across all models, featuring updated PHEV info screens. Dual-zone air-conditioner control units allow all passengers climate of choice, and the instrument panel button layout has been revised.

Both XLS and VRX models get driver assist systems like adaptive cruise control, lane keeping and autonomous emergency braking, while the XLS gets a sunroof, full-leather and a power tailgate.

The XLS is now $A49,327 and the VRX $A53,981.

The Outlander is practical, but its slab-like dash design and piano black finish is dating a little. The gauges show your power or region balance, and there is a centrally-mounted trip computer for showing your usage.

The front seats are very comfortable, with a soft cushion, yet enough side bolster to be supportive. The leather feels nice and thick. The rear seat offers good leg and headroom, although there is not enough width for three adults to be comfortable.

The boot is spacious - the PHEV lacks the third row of the petrol models - at 463 litres.

On the road, the Outlander feels much like any other SUV of its age, the steering is light, the ride is soft and comfortable, and there is body roll, though not to an uncomfortable level.



The electric drive feels particularly smooth, though you do need to drive a little gently to avoid kicking in the petrol motor. When it does, it revs high for efficiency, so declares its arrival with a buzzy note.

In 2017 the new Outlander joined import models with DC fast charging - though it comes with a catch.

While it is Chademo and technically 50kW capable, in reality the small capacity and comparatively low voltage means it is hardly rapid.

Chargenet indicated to us you are really only charging at around 16kW - better than the onboard charger and AC, but not enough to make extended distances of electric travel viable.

Still - and as I said earlier - the Outlander PHEV is a pretty appealing package. It offers a lot of specification for the money, and for most it offers just enough range to avoid the gas station in daily use.

Wagga mayor to drive EV to Sydney

Wagga Wagga mayor **Greg Conkey** intends driving his council's all-electric Hyundai Ioniq about 460km to Sydney after being challenged to do so by sceptical councillors.

That's about double the Ioniq's range but, by using DC fast chargers along the way, Conkey could do the "business trip" in around 6.5 hours when it normally takes about four hours and 37 minutes non-stop.

The $54,000 Ioniq was bought by the Wagga Wagga City Council in late July, which expects it to save an average $1500 annually in operating costs, along with zero exhaust emissions and reduced carbon emissions.

But some councillors reportedly questioned the value of the EV purchase and recommended Conkey drive the car to Sydney to prove its worth.

Conkey says the Ioniq is not a mayoral car as he has another issued for that purpose.

"The car was purchased as part of council's fleet of vehicles to be used by staff on their daily duties such as attending meetings, community events, consultation sessions, inspections or other tasks," he says.



Greg Conkey

"The vehicle is ideal for the numerous short distance trips made by staff each day and is about 70% cheaper to power per kilometre than a standard combustion engine."

Conkey says the EV is part of the council's commitment to the Cities Power Partnership Program, which it joined in December 2017.

"All councillors agreed to join this program. The report was unanimously passed at the 18 December 2017 council meeting."



Wagga Wagga's Hyundai Ioniq

"On Tuesday 12 June 2018, council adopted the five pledge items for the Cities Power Partnership program which included the budget for the electric fleet vehicle as an additional car pool vehicle for staff."

Conkey says he was requested by the council to use the EV on a trip to Sydney for any council business, and report back on a number of findings about the car.

"I was not present at the meeting when that decision was made. However, I have agreed to consider this request. I will plan a business trip to Sydney and will investigate when and how that happens with the assistance and advice of council staff."

Conkey has yet to determine when the trip will happen, adding it could be in "a month or so".

He understands he can use fast chargers if required along the M31, possibly at Jugoing, near Yass, Goulburn, and in the Southern Highlands.

His trips to Sydney are usually by aircraft – such travel possibly eventually involving carbon offsets.

He hopes to use his trip and the Wagga Wagga trial experience to help encourage other councils to make the switch.

Using LED lights and solar power, Conkey expects the city to substantially reduce its electricity costs.

The city council also voted on a climate change emergency, later rescinded, but Conkey expects that issue could return for council debate in about 12 to 18 months among a raft of other sustainability measures it would ask city residents and businesses about. ■

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EVs and hybrids soar while petrol/diesel plunge



EVs have picked up the pace in Australian new vehicle sales.

Electric vehicles and hybrids continue to sell at an increasingly rapid rate while fossil fuel vehicle sales are generally falling.

That's according to the latest new vehicle sales figures released by the Federal Chamber of Automotive Industries (FCAI) for September 2019.

While the VFACTs statistics show new internal combustion engine (ICE) sales declining for the 18th consecutive month in Australia, the opposite is true for EVs and hybrids.

However, the statistics don't appear to include Teslas – nowhere mentioned in any of the tables – despite the reported delivery of more than 2400 Models to Australia in September, which would make it one of the top selling cars for the month.

Tesla Australia doesn't provide official figures, the Electric Vehicle Council of Australia usually giving a "Tesla estimate" at the end of each year.

Often, Tesla guesstimates are provided by other sources including those involved with shipping.

Even if the Model 3 isn't included, the latest vehicle sales for EVs and hybrids are impressive.

They indicate a swing away from ICE vehicles without much in the way of federal government incentives, the drive for EVs and hybrids led by buyers despite high up-front purchase costs – many probably realising the ongoing huge savings in fuel and maintenance costs.

Electric and plug-in hybrid (PHEV) vehicle sales in September just gone are more than double what they were in September last year in nearly all categories apart from electrics in the non-private SUV sector.

For instance, private passenger EVs (include PHEVs) were up 100% in the September comparisons (21 to 42) and more than 60% higher on year-to-date comparisons (194 in 2018 to 312 in 2019).

In the non-private passenger segment, EVs rocketed 161.5% on September comparisons (13 in September 2018 to 34 in September 2019), but increased just 10.3% in YTD totals (340 to 375).

Hybrids continue to well, but don't have the same leaps. In the private passenger market hybrids went up 15.3% in the September comparisons (307 September 2018 to 354 September 2019) but were up 73% on YTD (2822 to 4883).

Non-private passenger hybrids went up nearly 65% in the September comparisons (576 to 950) and nearly 64% in YTD figures (5832 to 9556).

It's an even bigger rise in the private SUV sector where EVs were up 269.6% in September comparisons (23 to 85) and 433.6% YTD (113 to 603).

Here, hybrids recorded a massive 747.1% jump in monthly comparisons (51 in September 2018 to 432 September 2019) and 600.4% in YTD (503 to 3523).

The story is similar for non-private SUV hybrids. Increases of nearly 421% and 234.2% were recorded for this segment on monthly (67 to 349) and YTD (737 to 2463) respectively.

However, the non-private SUV electric vehicle and PHEV category struggled in September comparisons, recording a 6% drop (100 to 94), but a high 102.5% YTD increase (397 to 804).

Light commercial non-private EVs went from three in September 2018 to 11 in September 2019 – a 266.7% rise, and from 11 YTD in 2018 to 24 in YTD 2019 – up 118.2%.

Among the biggest drop offs in fossil fuel vehicles were a nearly 50% decline for diesel in the non-private passenger segment in the September comparisons and a nearly 39% decline in the private passenger category.

YTD comparisons in petrol and diesel figures across all categories ranged from about 3% declines to 42.8% with the only rises in petrol figures in the private light commercial and private SUV segments.

FCAI chief executive **Tony Weber** continues to blame Australia's economic climate for the overall decrease in new vehicle sales.

"Of particular concern to the industry is the restrictive regulatory lending conditions currently facing consumers."

Light commercial vehicles and SUVs still dominate the best sellers' list..

NEW VEHICLE SALES BY BUYER TYPE AND FUEL TYPE — SEPTEMBER 2019

	Month		YTD		Variance +/- Vol. & %			
Total Market	2019	2018	2019	2018	MTH	YTD	MTH	YTD
ELECTRIC								
Passenger Private	42	21	312	194	21	118	100.0%	60.8%
Passenger Non-Private	34	13	375	340	21	35	161.5%	10.3%
SUV Private	85	23	603	113	62	490	269.6%	433.6%
SUV Non-Private	94	100	804	397	-6	407	-6.0%	102.5%
Light Commercial Non-Private	11	3	24	11	8	13	266.7%	118.2%
Sub Total	266	160	2,118	1,055	106	1,063	66.3%	100.8%
HYBRID								
Passenger Private	354	307	4,883	2,822	47	2,061	15.3%	73.0%
Passenger Non-Private	950	576	9,556	5,832	374	3,724	64.9%	63.9%
SUV Private	432	51	3,523	503	381	3,020	747.1%	600.4%
SUV Non-Private	349	67	2,463	737	282	1,726	420.9%	234.2%
Sub Total	2,085	1,001	20,425	9,894	1,084	10,531	108.3%	106.4%
TOTAL	**2,351**	**1,161**	**22,543**	**10,949**	**1,190**	**11,594**	**50.6%**	**105.9%**

EVs have greatest transport emission reduction potential

A combination of new vehicle technologies and behavioural changes could reduce New Zealand's transport emissions by up to 90% of 2015 levels by 2050.

So says a report presenting four future visions for New Zealand which show that vehicle technology - such as switching to electric vehicles, biofuels and hydrogen fuel cells - will likely play the most significant role in decarbonising transport.

But the Thinkstep Australasia report also suggests changes in the way we think about mobility will help to drive down carbon emissions further, while also reducing congestion, promoting healthier lifestyles and increasing fuel supply security.

"There are two complementary courses of action: Technology [switching from petrol and diesel vehicles to electric vehicles, biofuels and/or hydrogen fuel cells], and behavioural change [ridesharing and public transport]," the report summary says, noting both paths can be pursued together to increase the rate and scale of change.

The report says technological change will be the biggest win, but will take time to roll out.

"Much of the transition to low-carbon transport can be met through vehicle technology alone. Over the next 30 years, New Zealand will undergo significant technological changes across the vehicle fleet through the introduction of battery electric vehicles, drop-in [second generation] biofuels, and hydrogen fuel cell vehicles.

"Electric vehicles offer the greatest potential for emissions reductions in the New Zealand context, particularly if we can move our electricity grid close to 100% renewable over the next few decades.

"Biofuels and/or renewable hydrogen are also likely to play an important part in the transport energy mix, particularly for heavy and commercial vehicles where range, refuelling times and cost may be the deciding factors.

"For ships and planes, drop-in biofuels seem to be one of the few technologies currently capable of offering equivalent performance to fossil fuels."

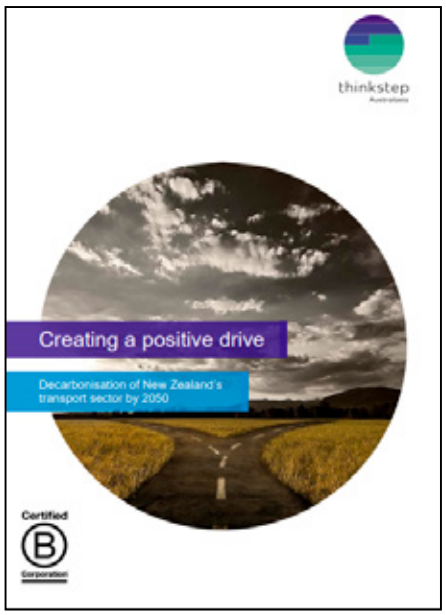
The report says operational greenhouse gas [GHG] emissions could be reduced by 56% to 95% if New Zealand had the ability to replace its entire vehicle fleet and fuel mix overnight.

It notes that transport is, on average, the leading contributor to Kiwis' carbon footprint.

"While New Zealand's electricity mix is about 80% renewable, the country's total energy mix is only 40% renewable, primarily due to the use of fossil fuels for transport."

Transport contributed 19% of all GHGs emitted in New Zealand in 2015.

"However, when accounting for the emissions embodied in exports [dairy, meat, etc] and imports [cars, trucks, clothes, etc], transport jumps to more than 40%, making it the single most important area where New Zealanders can reduce the national carbon footprint through purchasing decisions."



The Thinkstep Australasia report

Behavioural change will be most effective if it happens now, the report says.

Ridesharing has the potential to contribute to the greatest overall improvement in carbon footprint

from behaviour change, followed by increased public transport uptake.

"Investment in biofuels and renewable hydrogen, together with continued investment in renewable electricity generation, seem like logical next steps beyond this."

Tesla factor in NZ stats

The Tesla Model 3's arrival has had a big impact on September EV registrations in New Zealand.

It has helped push the number of new light pure electrics up by nearly 500 to 3400, and total EVs up by nearly 1000 to 17,026, latest Ministry of Transport figures show.

EVtalk earlier reported the Model 3 had 359 units registered in September – making it the third most popular passenger vehicle in New Zealand.

If the rate continues, it's possible New Zealand will have close to 20,000 EVs registered by the end of December.

That's nearing the 32,000 target set for the end of 2020 to achieve 64,000 EVs on our roads by the close of 2021.

Registrations of used light pure electrics also surged by 310 on August, up from 9134 to 9444 in September.

Plug-in hybrids (PHEVs) didn't fare quite so well but still climbed on the previous month with 2659 registrations recorded in the new light PHEV category – 106 up on August's 2553.


The Tesla Model 3 right-hand drive is popular in New Zealand too

Used light PHEVs reached 1365 in September – up 71 on the 1294 registered in August.

Heavy EVs continue their slow progress, September's 158 registrations nine up on August's 149.

NZ Government moves public service fleet EV goalpost

A target of having a zero-emission fleet by mid-2025 has been abandoned by the New Zealand Government, now aiming for after that date.

It has just 78 electric vehicles in the 15,473 fleet - less than 0.05%, *Newsroom* reports.

The Labour-NZ First coalition agreement established when it entered office in late 2017 stated the fleet would be emissions-free by mid-2025 where practicable.

The change to the Government's commitment, outlined its Climate Action Plan, has been slammed by Greenpeace climate and energy campaigner **Amanda Larsson**.

"The Government's quiet back down on electrifying its vehicle fleet is surprising and incredibly disappointing," she told *Newsroom*.

"This is a climate emergency and the Government should be leading by example to cut our dependence on the dirty fuels driving this crisis."

Transport minister **Phil Twyford** still believes nearly all Government vehicles will be emissions-free by 2025/26, where practicable.


Phil Twyford

He says some zero emission vehicles can't do the required job.

Twyford points out that the Government leases its fleet with vehicles replaced about every three to five years, meaning some internal combustion engine (ICE) vehicles could remain in service past 2030.

Associate Minister for Transport **Julie Anne Genter** has also signalled that Government agencies need to reduce fleet emissions at a faster rate than that proposed for the national fleet.

The previous National Government aimed to make a third of its fleet electric or hybrid by 2021 – with 514 hybrids now in the fleet.

Newsroom notes both targets would be difficult to achieve.

EVtalk has been covering New Zealand organisations committing to 30% EVs in their fleets where practicable by the end of 2019 and notes a number are struggling to reach their targets.

That's often attributed to the lack of suitable low to zero emission vehicles available – such as utes, trucks and off-roaders – and a lack of infrastructure in some areas to support EVs.

Vehicle scrapping scheme on the cards


A vehicle scapping project is being considered

A vehicle scrappage programme is being considered by the New Zealand Government as an option for lowering carbon emissions.

The scheme will encourage people to give up old cars, as New Zealand's vehicle fleet continues to age.

The average age of a light passenger vehicle fleet in New Zealand increased from 11.7 years in 2000 to 14.4 years in 2017. This compares to the US's 11.6 years in 2016, and Australia's 10.1 years. Canada and Europe only clocked 9.3 and 7.4 years respectively.

The NZ Government considered 11 policies as ways to reduce greenhouse emissions from vehicles – the policy proposed, a Clean Car plan which includes a feebate scheme, has generated controversy.

So, the search continues, and the vehicle scrappage programme is being investigated.

One of the policies, a ban on importing fossil fuel vehicles from 2035 onwards, was scrapped. Associate Minister for Transport **Julie Anne Genter** says the ban and seven other options "were investigated, but discarded due to being either ineffective, poor value for money, or regressive".

Genter told *Newsroom* the Government was interested in how a similar scheme to vehicle scrapping could be used as a transition from a higher-emission fleet to a lower-emission one.

"The scrappage scheme is in the hands of NZ Transport Agency and we're expecting an update in the next month"

If it continues, it will be trialled to see what the most effective way is to achieve lower emissions.

For more information on the Government's proposed policies, **click here**.

EV Charging Infrastructure

