

A close-up photograph of a person's hands gripping a black steering wheel. The background is out of focus, showing several bokeh light spots in red, white, green, and purple. The text is overlaid on the upper right portion of the image.

VEGAN VEHICLES: THE FUTURE OF CARS

2022

The automotive industry is taking some steps in a more ethical direction, but products from animals can still feature heavily throughout the manufacturing process. We wanted to understand the public's perception of how animals are used in the industry and to see if there is a consumer demand for a fully vegan car in the future. To produce this research, we surveyed 750 people in the UK, asking them a variety of questions about cars, the use of animals and sustainability. The findings demonstrate a strong consumer desire to remove animals from car manufacturing and for the industry to make sustainable changes.

This report is a valuable resource for people working in car manufacturing who are looking for evidence to inform ethical industry developments. The report also serves as an important educational tool for anyone interested in sustainability and the use of animals in car manufacturing. We hope that this report inspires car manufacturers to make responsible, sustainable and ethical changes.

CONTENTS

Introduction	1
The use of animals in the automotive industry	2
The future is electric	3
The use of animals in electric energy supply chains	4
Our research and panel	5
Do you know what's in your car?	6
Sustainability	8
Are consumers interested in vegan cars?	10
The Vegan Trademark	13
Conclusion	14



INTRODUCTION

The concept of a vegan car has been of interest to drivers and car manufacturers for a number of years.

Veganism is defined as seeking to exclude the exploitation of animals as far as is possible and practicable. This part of the definition is crucial, as at the time of writing (March 2022), there is no completely vegan car on the market. The road to this is complex, as discussed throughout this report, though some steps are being taken, such as manufacturers now offering non-leather* interiors.

DEFINITION OF VEGANISM

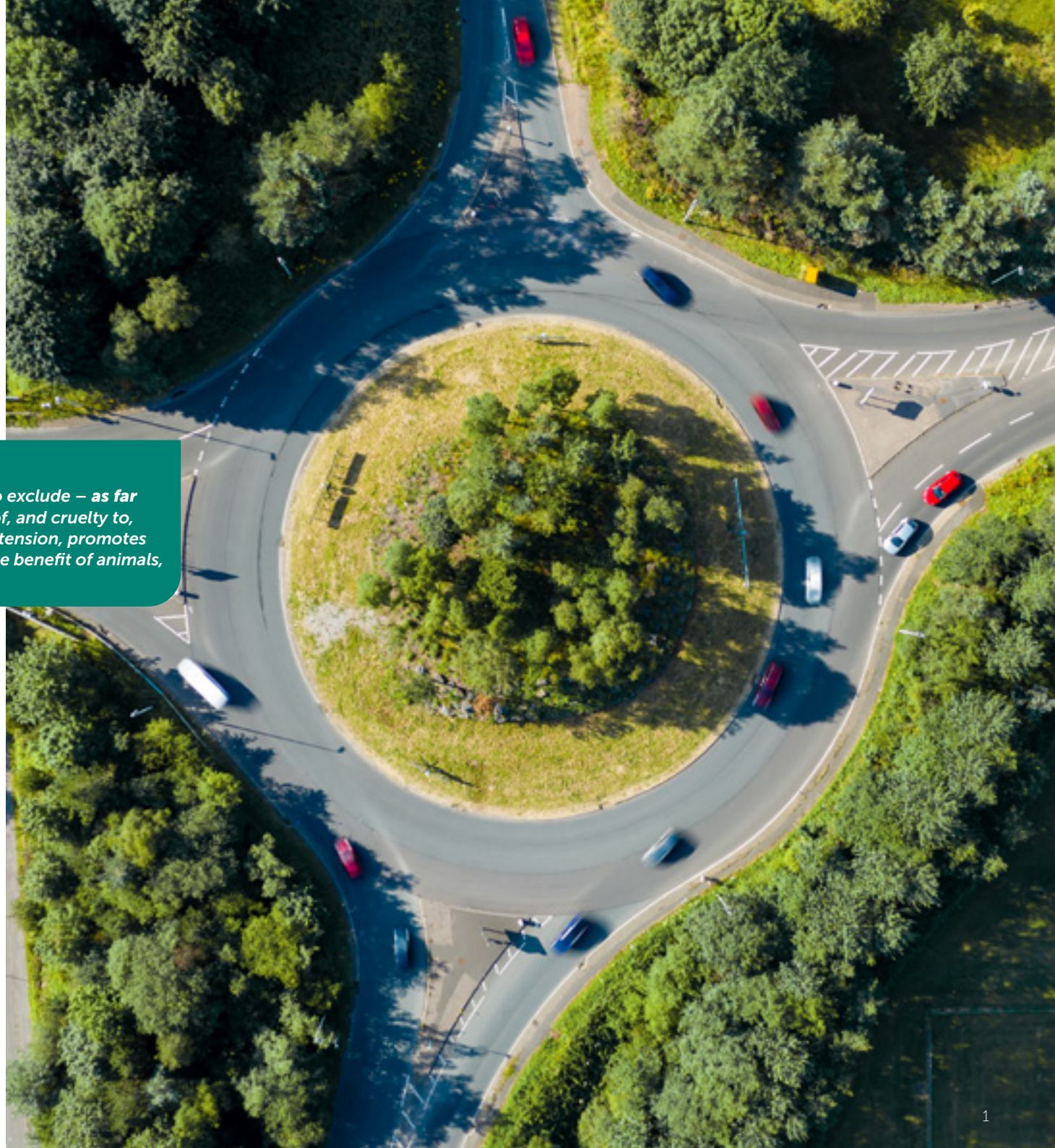
"Veganism is a philosophy and way of living which seeks to exclude – as far as is possible and practicable – all forms of exploitation of, and cruelty to, animals for food, clothing or any other purpose; and by extension, promotes the development and use of animal-free alternatives for the benefit of animals, humans and the environment."


But what would make a car fully vegan? Is there a demand for this? And what practical steps do manufacturers need to take?

The automotive industry is ripe for innovation, as the rapid rise of electric vehicles has shown (page 3). We look forward to seeing how the industry adapts to changing consumer demands, which run in parallel with an overall rise of more ethical buying practices and increasing pressure from environmental and animal rights groups.

CLARIFICATION ABOUT OUR USE OF THE TERM LEATHER

The Vegan Society does not support the use of the term "leather" for animal skin. However, to ensure clarity to wider audiences and for clearer comparison to vegan leathers, the term will be used throughout the report.





The rubber and plastic used to make tyres and tubing may be vulcanised and toughened using tallow (sheep fat).

THE USE OF ANIMALS IN THE AUTOMOTIVE INDUSTRY

How are products from animals used in cars?

When we think of car manufacturing, what products from animals come to mind? Animal leather from cows and bulls is the most obvious component, often used for interior furnishings such as car seats, dashboards, gear sticks and doors. Often, it takes the skins of several cows to line the interior of a single car. Depending on the car model, this number can be [as high as 14](#). But this is the tip of the iceberg, as products from animals are commonly used throughout the entire car manufacturing process. It has been reported that media displays often found on dashboards contain [liquid crystals](#) that may be based on cholesterol taken from animals. The rubber and plastic used to make tyres and tubing may be vulcanised and toughened using [tallow](#) (sheep fat). Paintwork may contain animal-derived pigment, plus, the steel used for a car's frame may have been [lubricated](#) with animal fat.

Towards a vegan car

Please note, by clicking on external links you may access distressing images.

In 2019, Lewis Hamilton, F1 driver and high-profile vegan, [entered talks with Mercedes](#) to remove animal products from the interiors of the cars. His negotiations seem to have been successful and [Mercedes announced in 2020](#) that it is planning to incorporate environmentally friendly materials throughout its vehicles.

In 2020, [PETA](#) published its first-ever vegan car interior survey, which found 14 car manufacturers offering vegan-friendly interiors either as standard or on request. In 2021, UK car dealer [Dick Lovett](#) used this resource and stated that it considers Ford to be the most vegan-friendly car manufacturer in the industry, with 28 car models featuring vegan-friendly detail. Other car models with vegan-friendly features include Honda, Nissan, SMART, and Chevrolet.

Also in 2020, BMW revealed that the seats in its 5-series cars will soon be made with "vegan leather". The "vegan leather" will also feature in BMW's new luxury electric SUV, the iNext. At the time, car journalist [Thomas Majcharzak](#) said: "[It's] a big win for all animals, humans harmed in the tanning process, the environment and for our years-long effort to change the industry for the better".

As of 2022, manufacturers are experimenting with a range of materials to replace products from animals and plastic, including recycled fishing nets, cork, glass, ceramics, hemp and paper.

THE FUTURE IS ELECTRIC

Sustainability is emerging as a major trend in the automotive industry, with consumers increasingly interested in more environmentally friendly cars. Over the last few years, these have become both a realistic option and appealing for consumers, with all major car brands investing in fully electric technology. In the [UK](#), 2021 was the best year for new electric car sales, and in the European Union, the proportion of electric vehicles sold between 2019-2020 jumped from 3% to 10.5%.

Electric cars are not perfect but do have around [half the climate impact](#) over their lifetime compared to an average EU car today. This is one of the reasons why many say that the industry has an obligation, particularly post-COP26, to transition to 100% zero emission cars. Numerous prominent members of the automotive industry such as Ford, Mercedes-Benz and others, are signatories to the [COP26 declaration](#): transition to 100% zero emission cars and vans. Under this declaration, signatories are obligated to:

- Work towards reaching 100% zero emission new car and van sales in leading markets by 2035 or earlier.
- Encourage all holdings to decarbonise their fleets in line with science-based targets.
- Make capital and financial products available to enable this transition for consumers, businesses, charging infrastructure and manufacturers.
- Acknowledge that a sustainable future “requires wider system transformation”.

The Vegan Society believes that zero-emission cars should consider the entire manufacturing process of the vehicle and work towards removing animals from the industry. The animal agricultural industry, of which animal leather is largely a by-product, is one of the biggest contributors to the climate crisis and environmental degradation more broadly. As such, removing animal products from vehicle manufacturing must be a key consideration for the industry as it makes efforts towards true sustainability.

Car manufacturers are taking the issue of “vegan leather” interiors seriously, but there’s no evidence to suggest that they are making efforts towards removing animals from the rest of the manufacturing process. Ultimately, this means we are a long way off seeing a fully vegan car.



*The Vegan Society believes that **zero-emission cars should consider the entire manufacturing process of the vehicle and work towards removing animals from the industry.***



THE USE OF ANIMALS IN ELECTRIC ENERGY SUPPLY CHAINS

With the future automotive industry looking fully electric, the global reliance on electrical energy will surge. Whilst on the surface this may appear like a good thing, there is another, more hidden issue to uncover, which is the use of animals in energy supply chains. In this section of the report, we will be talking through some uncomfortable truths regarding the lived reality of farmed and hunted animals. **This content is upsetting, so please skip to section five if it will affect you.**

Energy created from biomass is often thought of as renewable, as it uses waste materials such as household waste, wood, and agricultural waste to create energy. But agricultural waste can also mean "[fallen stock](#)" (an industry term for dead farmed animals) and "animal by-products". In this instance, this is defined by our [Government](#) as "animal carcasses, parts of animals, or other materials which come from animals but are not meant for humans to eat ... [This] ... can be used to make compost, **biogas** or other products." Biomass can create biogas through burning or bacterial decay. Biogas can then be used to produce electricity, which is either used locally or is exported to the National Grid.

The National Fallen Stock Company (NFSCO), which runs a "fallen stock" scheme, defines fallen stock as "animals which were killed (euthanasia with or without definite diagnosis) or have died (including stillborn and unborn animals) on farm and which were not slaughtered for human consumption. This does include animals killed by routine culling as part of normal production arrangements."

If you are interested in learning more about this process, a Northern Irish energy company, Linergy, explains this in more detail on their [website](#).

There is no doubt that animal casualties occur on farms, and for health and safety reasons these must be removed as soon as possible. But our use of animals in energy supply chains clearly runs deeper than this. This is just one of the reasons as to why the journey towards a fully vegan car is more complex than it may initially seem.

The Vegan Society is keen to understand consumer demands in all industries and product categories – including vegan cars. There are unanswered questions regarding demand – is this something people want, is this only interesting for vegans, are people willing to pay extra for this and how aware are people of the animal products involved in the manufacturing of cars? Our survey results shed light on the answers to these increasingly important questions.

A rescued dairy cow and her calf, allowed to stay together after being rescued by Farm Sanctuary.

Credit: Jo-Anne McArthur / We Animals Media



In February 2022, an investigation by [Ecotricity](#) * (Vegan Trademark certified vegan energy company) released shocking footage, following a six month undercover investigation, that showed puppies and dogs from hunt kennels were being sent to rendering facilities and then onto electricity plants to power the national grid. Healthy dogs are killed by hunt kennels if they are deemed too old or not good enough to join the hunt. According to Ecotricity, this could be as many as **6,000 hunt dogs per year** in England which are then used to make electricity. The footage also showed the bodies of foxes, badgers and partridges being sent off to be converted into electricity. According to Ecotricity, several energy suppliers are using this process to supply electricity to British homes including British Gas and Eon.

* The footage from this investigation was released shortly after our research was conducted. Further research is required to fully understand the role of animals in our electricity supply chain and how this relates to electric vehicles.

A beagle who has been rescued from use in medical research enjoys sniffing out and eating wild blueberries in a forest in Finland.

Credit: Jo-Anne McArthur / #unboundproject / We Animals Media



OUR RESEARCH AND PANEL

The Vegan Society's research partner Attest has access to millions of consumers worldwide. On 7th February 2022 we used Attest to ask 750 UK drivers their view on vegan cars.

The final panel consisted of the following demographics:

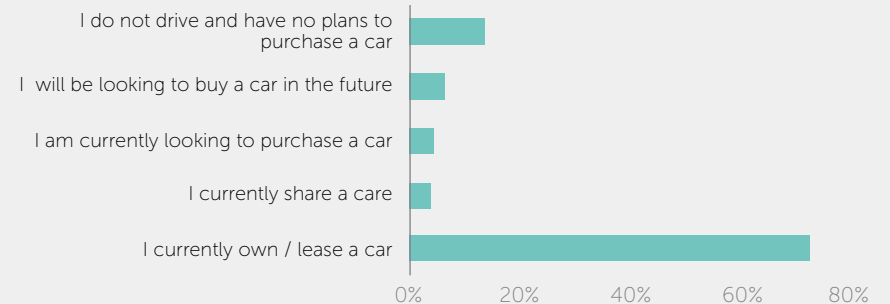
Age groups: 17-24 (8.7%), 25-34 (39.68%), 35-44 (26.8%), 45-54 (14.7%), 55-64 (11.7%), 65+ (6.3%)

Gender: Female (56.9%), Male (43.1%)

Home region: East Midlands (8.8%), East of England (12.1%), London (7.7%), North East (9.5%), North West (11.3%), Northern Ireland (2%), Scotland (5.7%), South East (13.7%), South West (8.5%), Wales (6.8%), West Midlands (9.3%), Yorkshire and Humber (4.4%).

Household earnings: Less than £25,000 (37.2%), £25,000-£34,999 (19.7%), £35,000-£44,999 (14.5%), £45,000-£59,999 (13.9%), £60,000+ (14.7%).

Which of the following best applies to you?



Respondents who said that they did not drive and had no plans to purchase a car were excluded from the rest of the survey. Meaning 88.1% of our final panel either own or share a car and the remaining 11.9% of the panel are either currently looking to buy a car or plan to buy a car in the future.



55.3%
said they would prefer a material that didn't use animals.

DO YOU KNOW WHAT'S IN YOUR CAR?

Respondents were shown this message: "In some parts of the car manufacturing industry, animal products are used. Some of these animal products are more obvious than others as they may be on display, whilst others are hidden" and then asked the following open-text question.

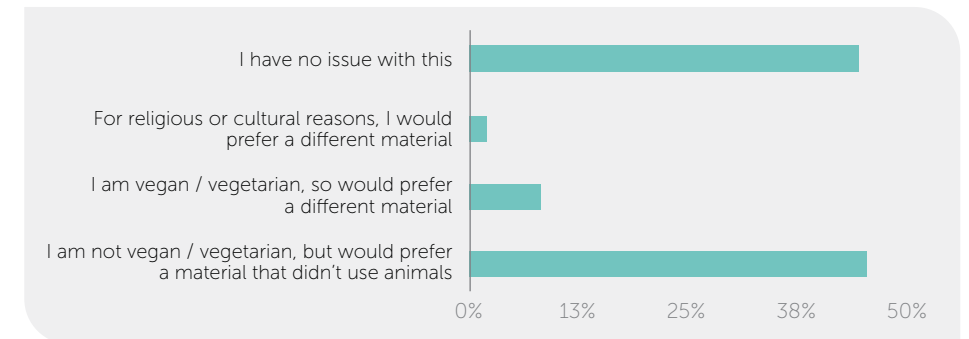
Question two: Thinking about all aspects of a car – from steering wheels, paint, seats, tyres, and so on – which parts of the car do you think often contain animal products? – 28 respondents skipped this question.

Overall, respondents were both well informed and curious to know more. The inside of the car was more accurately guessed than the outside, most probably due to the use of leather.

- 69% identified the seating/upholstery as potentially containing products from animals (combination of those responding with either "leather", "seats", "upholstery" or "interior") (497).
- 30.3% said "steering wheel" (219).
- 16.3% (118) of respondents identified the tyres as potentially containing animal products.
- 6.2% identified paint (45).
- Approximately 7% of respondents said they don't know/have no idea (53).

Respondents were then shown this message: "Animal leather is often used for car seating, interiors, and so on. This leather often comes from cows, and sometimes bulls" and then asked the following question.

Question three: Which of the below describes your thoughts on using cow and bull leather for cars?



The majority of the panel (55.3%) said that they would rather a material that didn't use animals. Within the group, a large proportion (45.3%) said that they were not vegan

or vegetarian but would prefer vegan materials for their car. The remaining 10% of this group would either prefer non-leather materials because they are vegan or vegetarian (8%) or for religious or cultural reasons (2%). Additionally, 44.4% of the total panel said that they have no issue with the use of cow and bull leather in cars.

There is a notable gender gap in these results: 66.5% of women would rather a material that didn't use animals, compared to 40.6% of men. Similarly, 58.8% of men have no issue with using animal leather compared to 33.5% of women who had no issue with this. This gender gap is understandable and reflects the gender divide over animal ethics, as [research has shown](#) that women are more concerned with animal rights and more likely to be vegan or vegetarian.

Location-wise, respondents from all over the UK were keen to see non-animal materials used in cars. Those based in the East of England, East Midlands and London were most likely to select this option.



There were also notable differences within age demographics. Younger respondents also showed stronger demand for non-animal materials. As the age groups increase, we see fewer people that would prefer a material that did not use animals and more people who have no issue with this. This is indicative of younger people considering issues of sustainability and animal rights more important, and helps to forecast future purchasing trends in this industry.

Gen Z (17-25) (11.6% of respondents):

- 78.2% (68) said they would prefer a material that did not use animals.
- 21.8% (19) said they have no issues with this.

Millennials (26-41) (52.8% of respondents):

- 59.3% (235) said they would prefer a material that did not use animals.
- 40.7% (161) said they have no issue with this.

Gen X (42-57) (22.9% of respondents):

- 45.3% (78) said they would prefer a material that did not use animals.
- 53.5% (92) said they have no issue with this.

Boomers and Silent Generation (58-82) (12.7% of respondents):

- 35.8% (34) said they would prefer a material that did not use animals.
- 64.2% (61) said they have no issue with this.



66.5%
of women would
rather a material
that didn't use
animals, compared to
40.6%
of men.

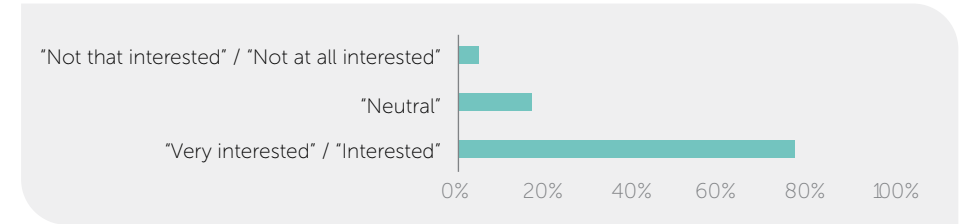


84.8%
"agree" /
"strongly agree"
the automotive
industry has a
duty to be more
sustainable.

SUSTAINABILITY

Respondents were then shown this message: "Plant leathers' are textile materials made from plants such as apples, pineapples, etc. 'Plant leathers' often begin as fruit fibre, which is a by-product of the fruit juice industry and often discarded. 'Plant leathers' look, act, and feel like animal leather, and are currently used in many industries" and were then asked the following question.

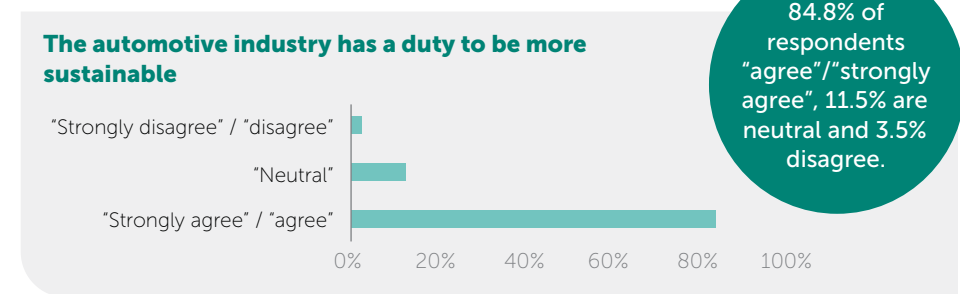
Question four: How interested or disinterested would you be in seeing plant leather instead of animal leather used in cars? (i.e. for car seats, interiors, etc.)



The majority of the panel (77.3%) said that they are either "interested" or "very interested" in seeing "plant-based leather" being used in cars instead of animal leather, 17.1% of the panel were neutral, and just 5.6% of respondents are "not that interested" or "not at all interested". Interest increased slightly for female respondents (81.5%) and decreased slightly for male respondents (71.8%). All age groups overwhelmingly displayed interest in seeing "plant-based leather" in cars instead of animal leather.

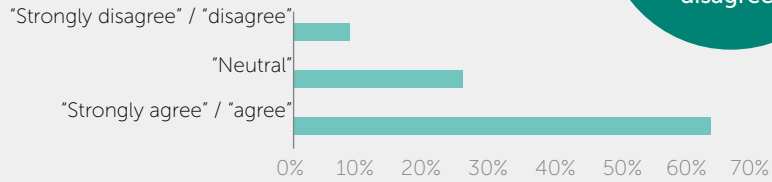
Respondents were then shown this message: "Recently, multiple governments, businesses, and other organisations have declared that they will work towards all sales of new cars and vans being zero emission / fully-electric globally by 2040, and by no later than 2035 in leading markets. This is a step towards making the automotive industry more sustainable" and were then asked the following question.

Question five: How much do you agree or disagree with the following statements?



84.8% of respondents "agree"/"strongly agree", 11.5% are neutral and 3.5% disagree.

I'm excited by the opportunity to purchase a sustainable car

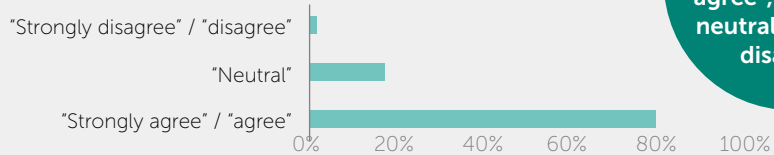


64.3% of respondents "agree"/"strongly agree", 26.5% are neutral and 9.1% disagree.

A substantial number of respondents are keen to see "plant leathers" used in cars.

Pinatex: a textile made from waste pineapple leaf fibre which can be used as an alternative to leather and other synthetic materials

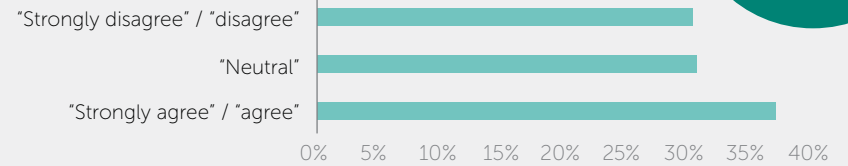
If plant leathers are more sustainable, then new cars should use plant leather as a standard.



79.7% of respondents "agree"/"strongly agree", 16.7% are neutral and 3.3% disagree.

The overwhelming majority of drivers say that the automotive industry has a duty to be more sustainable, plus, there is excitement and interest from consumers to invest in environmentally friendly options. A substantial number of respondents are keen to see "plant leathers" used in cars, but less say they would spend a premium on them. Interestingly, respondents viewed manufacturers with green credentials and manufacturers with animal-free options nearly as favourably.

I would be happy to pay a premium on a car that uses plant leather

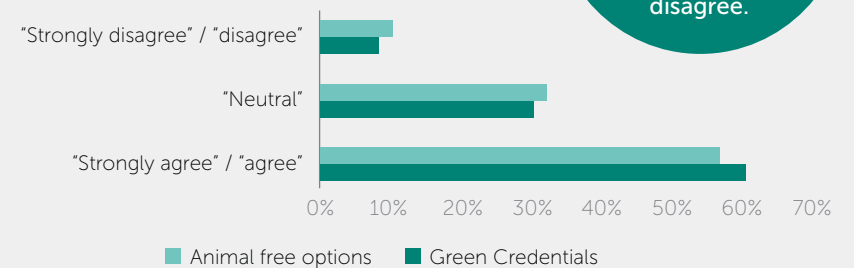


37.7% of respondents "agree"/"strongly agree", 31.2% are neutral and 30.9% disagree.

Animal free: 57.1% of respondents "agree"/"strongly agree", 32.4% are neutral and 10.4% disagree.

Green credentials: 60.7% of respondents "agree"/"strongly agree", 30.7% are neutral and 8.4% disagree.

I would opt for a manufacturer who had...



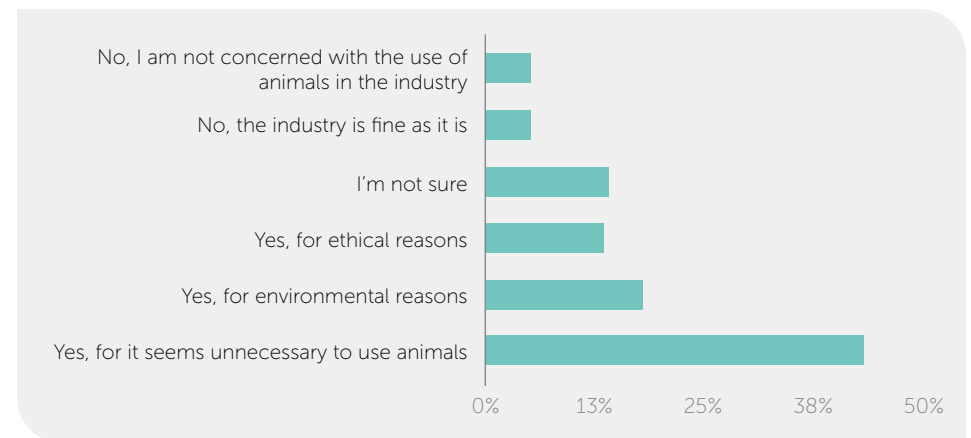


The majority of respondents in all age groups said they would like to see the removal of animal products from cars and vehicles.

ARE CONSUMERS INTERESTED IN VEGAN CARS?

Respondents were then shown this message: "As mentioned, animal products can be found in several other areas in cars. Media displays often found on dashboards contain liquid crystals that may be based on cholesterol taken from animals. The rubber and plastic used to make tyres and tubing may be toughened using tallow (sheep fat), and the steel used for a car's frame may have been lubricated with animal fat" and asked the following question.

Question six: As car manufacturing is moving into a more sustainable industry, would you like to see the removal of animal products from cars and other vehicles?



The majority of the panel (75.2%) said that they would like to see the removal of animal products from cars and other vehicles: 43.6% said they thought it is unnecessary to use animals, 17.9% stated environmental reasons and 13.7% for ethical reasons. Just 10.7% of the panel said "no" to this question.

Within age groups, once again, younger respondents felt most strongly about this, and were more motivated by ethical reasons. Although, the majority of respondents in all age groups said they would like to see the removal of animal products from cars and vehicles.

Gen Z (17-25) (11.6% of respondents)

- 87.4% (76) would like to see the removal of animal products from cars

- 4.6% (4) said no, the industry is fine/they have no issue with this
- 8% (7) were not sure

Millennials (26-41) (52.8% of respondents)

- 78.5% (311) would like to see the removal of animal products from cars
- 9.1% (36) said no, the industry is fine/they have no issue with this
- 12.4% (49) were not sure

Gen X (42-57) (22.9% of respondents)

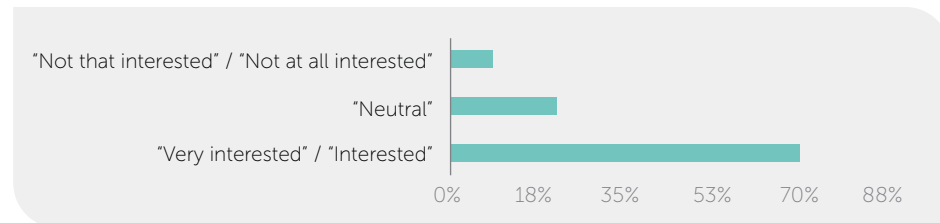
- 70.3% (121) would like to see the removal of animal products from cars
- 15.1% (26) said no, the industry is fine/they have no issue with this
- 14.5% (25) were not sure

Boomer and Silent Generation (58-82) (12.7% of respondents)

- 58.9% (56) would like to see the removal of animal products from cars
- 14.7% (14) said no, the industry is fine/they have no issue with this
- 26.3% (25) were not sure

Finally, female respondents were more likely to answer “yes” to this question (80.6%) compared to male respondents (68.1%).

Question seven: How interested or disinterested would you be in buying a car that is proven to be entirely free from animal products?



The majority of the panel (69.7%) were either “interested” (41.6%) or “very interested” (28.1%) in purchasing a car that is proven to be entirely free from animal products. Interest remained high amongst all age groups. Just 8.7% said they are “not interested” or “not at all interested”.

Gen Z (17-25) (11.6% of respondents):

- 80.5% (70) are “interested”/“very interested”
- 3.4% (3) are not that interested/not interested
- 16.1% (14) neutral

Millennials (26-41) (52.8% of respondents):

- 71.5% (283) are “interested”/“very interested”
- 8.1% (32) are not that interested/not interested
- 20.5 (81) neutral

Gen X (42-57) (22.9% of respondents):

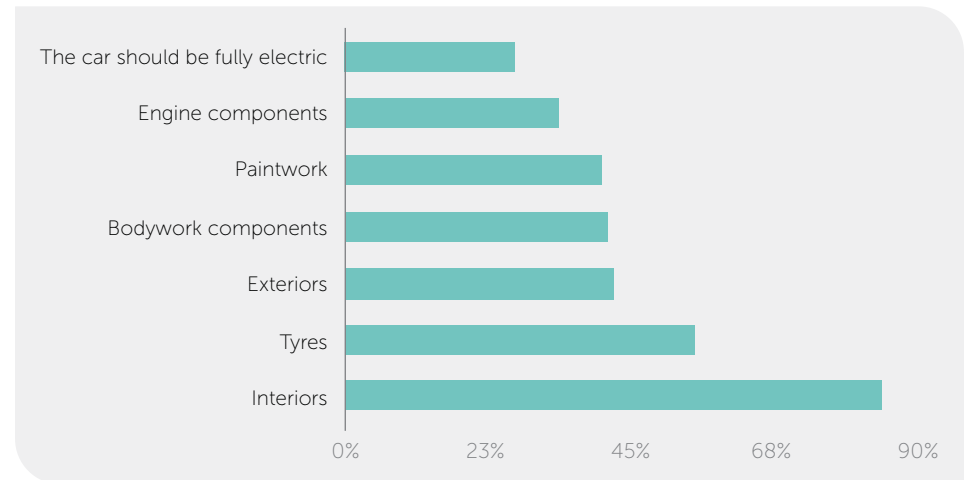
- 66.9% (115) are “interested”/“very interested”
- 9.3% (16) are not that interested/not interested
- 23.8% (41) neutral

Boomer and Silent Generation (58-82) (12.7% of respondents):

- 57.9% (55) are “interested”/“very interested”
- 14.7% (14) are not that interested/not interested
- 27.4% (26) are neutral

Once again, females showed a slightly higher interest (73.8%) compared to males (64.4%)

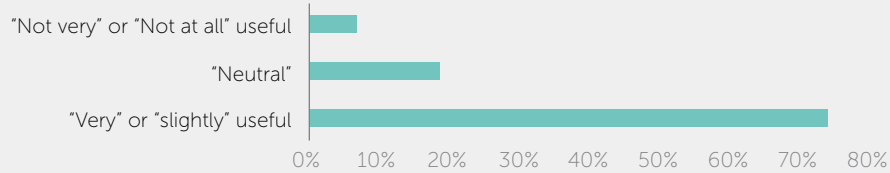
Question eight: If a car was to be marketed as being free from animal products, which areas of the car would you expect to be checked?



- 25.6% selected every car component
- 14.4% selected every car component and also said the car should be fully electric
- 84% chose interiors
- 54.9% said tires
- 42% said exteriors

- 41.2% said bodywork components
- 40% said paintwork
- 33.6% said engine components
- 26.6% said the car should be fully electric

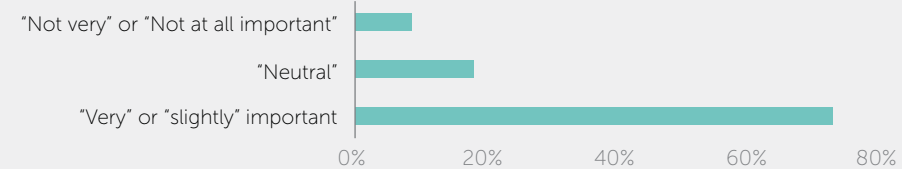
Question nine: When purchasing a car, there is often the option to build it on a website. To what extent would you find it useful for a manufacturer to highlight options that are free from animal products?



The majority of the panel (74%) said that they would find it very (41.3%) or slightly (32.8%) useful for manufacturers to highlight options that are free from animal products, 19% of the panel were neutral on this question, and just 6.9% said this would be not very useful or not at all useful.

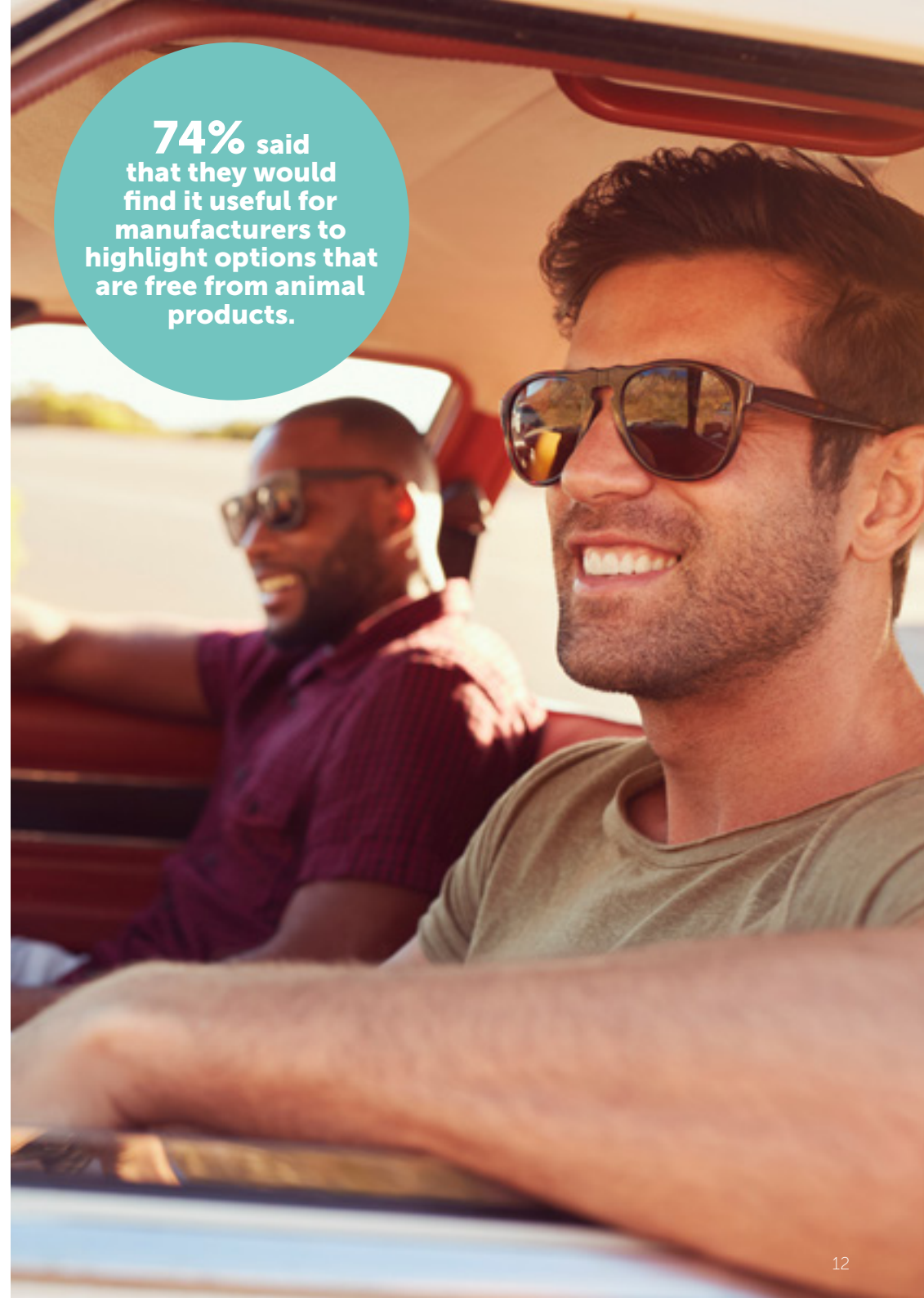
Respondents were then shown this message: "Products which are completely free from animal products are also vegan. In all industries, including food, cosmetics, and cars, there is no legal definition to the term 'vegan', so brands are free to use the word without this being by any authority, meaning some may contain animal products" and asked the following question.

Question ten: To what extent do you find it important that cars marketed as "vegan" are checked by a third-party authority to ensure they are completely free from animal products?



The majority of the panel (72.8%) said it was either "very" (42.4%) or "slightly" (30.4%) important for cars marketed as "vegan" to be checked by a third-party authority, 18.3% of the panel were neutral on this, and just 8.9% said it was "not very important" or "not at all important".

74% said that they would find it useful for manufacturers to highlight options that are free from animal products.





THE VEGAN TRADEMARK

Since 1990, the [Vegan Trademark](#) has been helping users identify that a product is free from animal ingredients. At the time of writing, over 60,000 vegan products are registered under the Vegan Trademark's robust standards. Though the majority are within the cosmetic, toiletries, food and drink categories, the Trademark team are increasingly registering more niche products as vegan such as [violins](#), [boxing gloves](#), [mattresses](#), and [packaging](#).

As vegan ethics continue to ripple through all industries, including the automotive industry, The Vegan Society is also learning as the movement develops. So, what would it take for a car to be fully vegan?

Currently, a fully certified Vegan Trademark car is not possible under our standards as manufacturing components come from multiple suppliers. But singular components such as interiors, tyres, paints and other materials can be registered with the Vegan Trademark. This means customers could potentially choose a vegan component if desired, which, as this research has shown, there is a demand for.

We encourage automotive brands, manufacturers and suppliers to work towards supplying vegan materials for vehicles, and to ensure these vegan claims are verified under the Vegan Trademark. This would allow consumers to make confident purchasing choices when building a car to their specification.



CONCLUSION


Though the automotive industry has taken some steps in the right direction, the industry is ripe for more ethical innovation. This has come at a time when electric vehicles are becoming more popular (and perhaps more necessary) than ever, as consumers are thinking more broadly about how their purchases impact the environment and other living beings. Our research has shown that there is a demand to remove animal-derived materials and processes from automotive supply chains, but the road there may be more complex than initially thought.

Car owners and drivers

If you are interested in seeing a vegan car on the market sooner rather than later, you can contact brands and let them know the Vegan Trademark is here to help. Showing demand increases the chances of making this a reality.

Professional institutions and businesses

As this report has highlighted, car manufacturers have a responsibility to do their part in tackling the climate crisis by investing in electric vehicle technology and exploring other innovative ways to be more sustainable. We call upon businesses involved in car manufacturing to take on board the findings of this report and transition away from using animals in car manufacturing supply chains. It is crucial, for ethical and sustainable reasons, to invest time and money into alternatives so that a vegan certified vehicle can one day be a reality.



If you require more information about this report, would like more information about the data, or if you are interested in personalised research for your business or research collaborations, please contact insights@vegansociety.com.

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