
Niche Vehicle Manufacturing in the UK – A Sector Mapping Study



Niche Vehicle Network Sector Mapping Study

March 2020

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This study has been researched and delivered by the independent UK consultancy, InnConA Ltd, under contract to the Niche Vehicle Network (NVN), and on behalf of the Dept for Business Enterprise and Industrial Strategy (BEIS).
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Foreword

The UK niche vehicle sector is widely regarded as a vital part of our innovation ecosystem, with a reputation for pioneering development and early adoption of emerging technologies. It is also incredibly diverse, manufacturing a host of specialist vehicles in limited volumes, to meet the needs and wants of end users whose utilisation is typically different to those of mainstream vehicles.

The sector produces every conceivable type of vehicle, from e-bikes and motorcycles, urban delivery vans, taxis, emergency response vehicles, refuse collection and utility, niche sports and supercars, to tractors, buses, coaches and autonomous pods. The majority of these vehicles are produced from scratch to a unique design, for a specialist purpose; others are conversions, taking OEM base vehicles and adapting them to meet the particular needs of market niches.

The OEMs and converters represent the top tier of the industry, the tip of the iceberg. To succeed as businesses, these companies rely on two vital sub-sectors – the specialist supplier base, and the design/engineering sector. Because the sector includes all these elements of specialism, collaborative R&D is vital not only to maintaining a competitive position, but also serving as a stepping stone for new technologies to find an initial route to market.

With the emergence of vehicle electrification as the primary vehicle propulsion technology of the future, and the need to develop a wide range of new low carbon technologies in support of this objective, the importance of the UK niche vehicle sector in accelerating the rate of innovation is now greater than it has ever been.

Recognising the need to quantify and characterise the UK's niche vehicle industry, we have commissioned an independent mapping study, which focuses on this top tier of OEMs and vehicle converters. Whilst future work may include an in-depth analysis of the specialist manufacturing supply base and the technology-focused organisations which are vital to niche vehicle development and production, this report is an important first step in understanding the size, shape, diversity and dynamics of the sector. We hope you find it both interesting and informative.

*Dr Viv Stephens, Network Director,
Niche Vehicle Network*

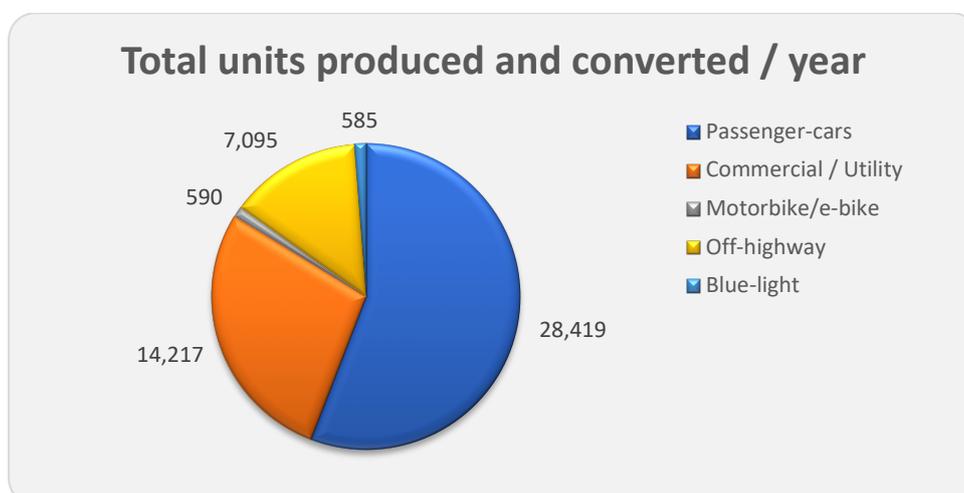
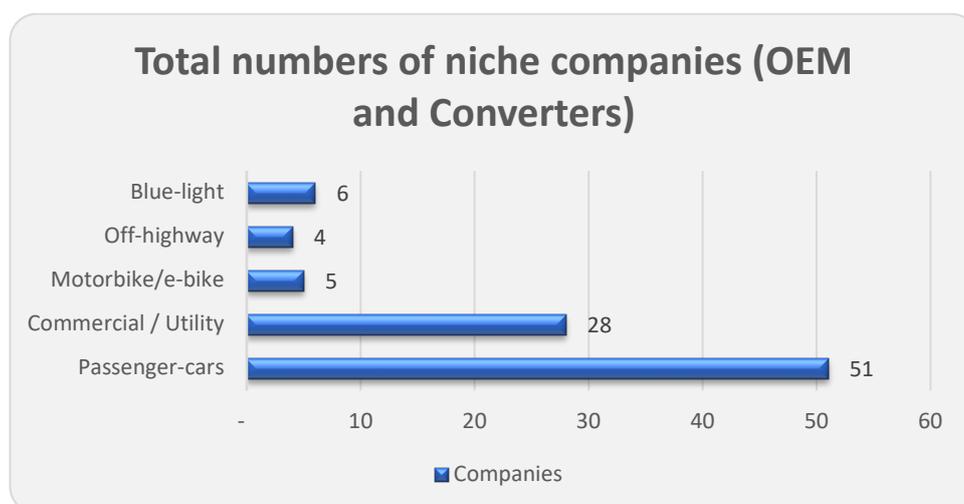


Executive Summary

Following a period of thorough research, this sector mapping study of the niche Original Equipment Manufacturers (OEM) and vehicle conversion companies has established that the sector is extremely active in both development and manufacturing, as well as seeking to grow its level of business activity in the existing product areas and innovations such as electrification, e-bikes, and autonomous operation.

The niche vehicle sector continues to be lithe, innovative, fast to market, and productive as befits a sector dominated by technology-driven Small Medium Enterprises (SME). Its contribution to the UK Gross Value Add (GVA) is arguably more resistant to the headwinds and vagaries of business in the automotive sector than the large multi-nationals due in no small part to the UK-based owner-operator nature of most of these agile businesses.

Having researched the UK specialist OEM and vehicle conversion sector, the headline figures are of **94 active niche companies** (as defined by those producing or converting less than 10,000 units/year) creating around **51,000 niche vehicles annually** by a **workforce exceeding 22,000**, whilst generating a grossed-up **turnover of nearly £7bn**. Nearly three-quarters of these products are exported earning valuable foreign currency and opening the door to further sales of service parts, training, etc, in the future. Please refer to “Appendix 1: Method” for an explanation of how the metrics have been derived.



Some companies, and some entire sectors, have not been included in this study because either the companies are too large to be included as “niche”, such as CNH Tractors, or the sectors’ vehicles are not considered to be production road vehicles, such as Military vehicles, Kit-cars, and track-cars.

Nevertheless, the whole niche vehicle production sector is serviced by a vibrant supply-chain whose contribution to the Bill of Materials (BOM) averages at 71%¹ of the finished products with both the suppliers and the niche OEMs keen to increase that percentage as far as possible. This compares very favourably with mainstream UK car manufacturing which contains 44%² UK content. Anecdotal feedback suggests that Brexit is not being seen only as a potential disrupter to exports of finished product and the import of parts into the UK, but more positively as a motivation to source more parts from within the UK and/or vertically integrate more of the componentry production into the OEMs/Converters themselves for continuity of supply, cost and quality control. This in-housing of parts production will also benefit skills development within these UK SMEs and broaden the palette of their own capabilities & offerings.

In conclusion, the study has produced a very positive picture of the current state of the sector and an optimistic outlook as these nimble and innovative companies face the new challenges of the wider automotive and transport space with drive and enthusiasm.

The authors would like to hereby acknowledge the valuable support received from the following organisations in providing assistance and information for this study –

- Niche Vehicle Network (NVN) members and other niche company respondents
- Construction Equipment Association (CEA)
- Off-Highway Research (OHR)
- Driver & Vehicle Standards Agency (DVSA)
- Society of Motor Manufacturers and Traders (SMMT)
- The Niche Vehicle Network Executive

¹ Calculated from the niche road vehicle respondents who provided UK supply chain values

² <https://www.smmt.co.uk/wp-content/uploads/sites/2/SMMT-Motor-Industry-Facts-May-2019.pdf>

Overview of this Niche Sector Study

Background to study

The Niche Vehicle Network has been supporting the UK SME vehicle manufacturing and conversion sector, and its supply-chain, for over 15-years. In that time, it has supported an extremely wide variety of innovation projects from feasibility & conceptual design studies through to technology that is near production-ready.

In that time, the membership has grown to over 1,100 organisations and the benefits enabled by NVN's network and grant-support work has extended well beyond the SMEs themselves into the wider automotive sector and into other technology & transport sectors, such as aerospace and autonomous operations.

To ensure the network is delivering good value for the public money it is utilising, an overview of the sector was needed to illustrate the number of active UK organisations, the breadth of activity they are involved with, and the considerable contribution these small, but highly innovative and productive, companies make to the wider UK economy.

Objectives of this study

This sector study seeks to provide an objective analysis of the niche vehicle manufacturing sector at OEM level and demonstrate the importance of the network's support to the SME vehicle manufacturers, converters, and their supply chains.

What this sector study has covered

The study has documented the level of activity across the niche vehicle manufacturing and conversion sector, using CY2018 figures where possible for consistency and 2019 where available and appropriate. This has provided an overall picture of the level of economic activity, levels of vehicle production/conversion & employment in the UK, and also a narrative of the sector's general direction of travel.

Importantly, the research for the study also took the opportunity to uncover good opportunities for the UK supply-chain to replace imported componentry (particularly in the newer technology areas such as electrification) and make these indicators available for consideration for future innovation support programmes by NVN, Innovate UK, and the Advanced Propulsion Centre (APC).

What has been excluded from this study

The study only researched companies considered to be producing vehicles or conversions which were destined for, or would at least be capable of, use on-road.

To clarify some borderline cases:

- Organisations engaged purely in race-car technology are excluded from the study, however those engaged in both race and road car production will have the figures for their road-vehicle activity included.
- Off-highway vehicles were included if they have the capability to go on-road so, for example, agricultural vehicles have been included but dedicated mining equipment such as boring vehicles which will never travel on-road under their own power, have not.

- Kit-cars have not been included if they are shipped as kits but have been if they are assembled in the factory and sold as complete running vehicles.
- Other vehicle groups also excluded were Fork-lift trucks and Military vehicles not approved or intended for on-road use.

Also excluded from this study were any detailed strategic considerations, as well as analysis of the sector’s R&D spend and Return on Investment (ROI) of the NVN support activity. These are valuable follow-on activities which can be considered for a future study phase.

Overall numbers, exceptional cases, and outliers

Grossed-up metrics for the companies surveyed:

Totals for all UK niche companies in this study		
Number of companies included in this study	94	
Units produced/converted per annum	50,906	
Full-Time Equivalent (FTE) direct jobs	22,638	(Including contractors)
Total turnover (£Bn)	£ 6.66	bn
UK supply chain value (£Bn)	£ 2.9	bn
Export - European Union (EU) in units per annum	10,523	= 74% of all units produced
Export - Rest of World (RoW) in units per annum	20,084	by the exporting companies

The 94 companies have been categorized as follows:

By company size:

- SME
- Large

And by product type (application):

- **Passenger car** (including sports, luxury (such as limos), fun vehicles, commuters, and continuation classics)
- **Motorbike/e-bikes** (including motorbikes, e-bicycle and other pedal/electric vehicles)
- **Commercial/Utility** (including taxis, buses (all sizes), refuse & municipal vehicles, vans, trucks, and hearses)
- **Blue-light (including all emergency and rescue vehicles)**
- Off-highway (including construction and agricultural)
- Military and others – again, not considered in this study

Of these, the first four groups (in bold) are considered to be primarily “road vehicles” whereas the other groups’ primary purpose is off-highway, as discussed in the Executive Summary

The split across the 94 company’s primary applications/markets are:

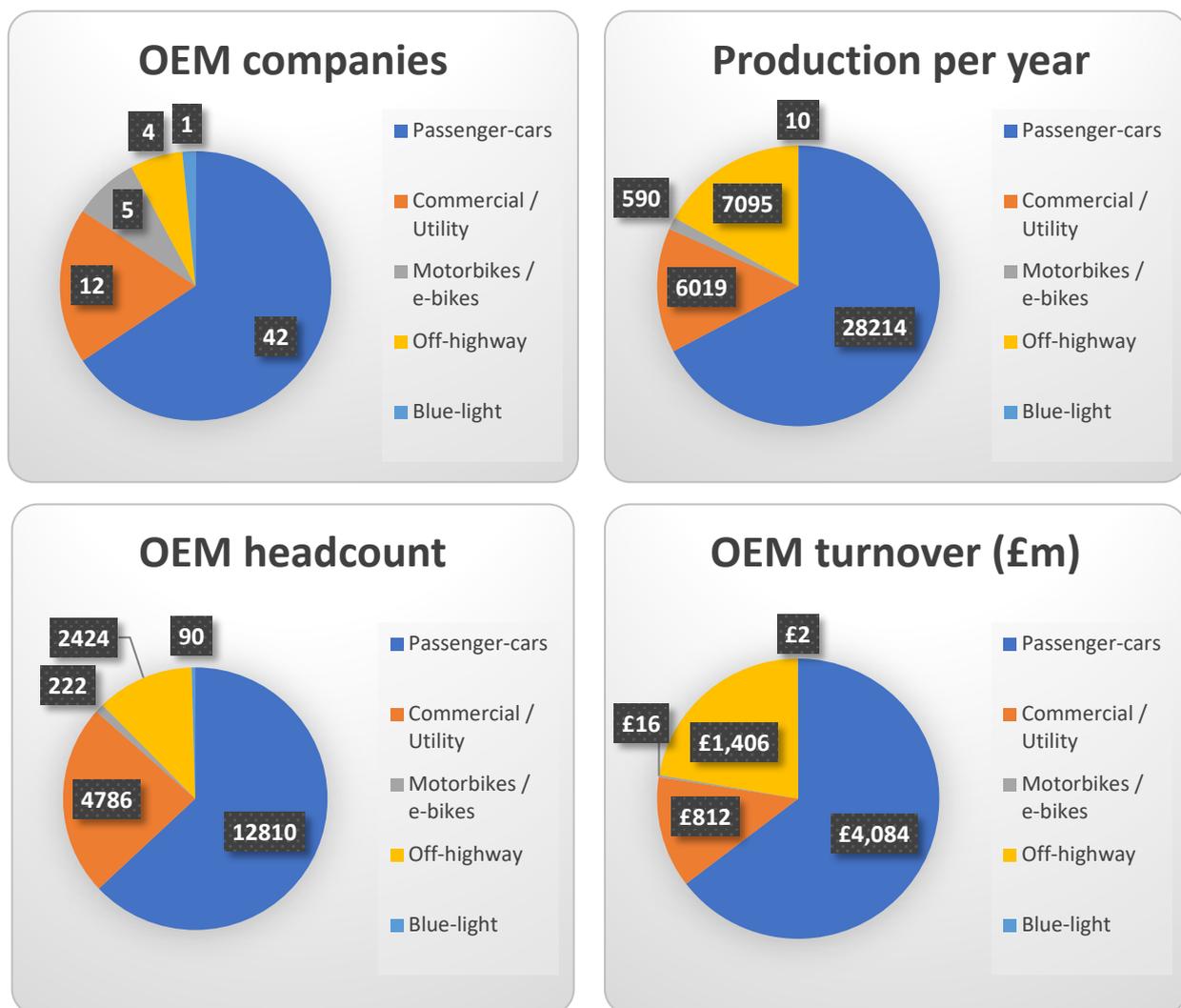
- Road vehicles (as defined above): 90 companies
- Off-highway: 4 companies

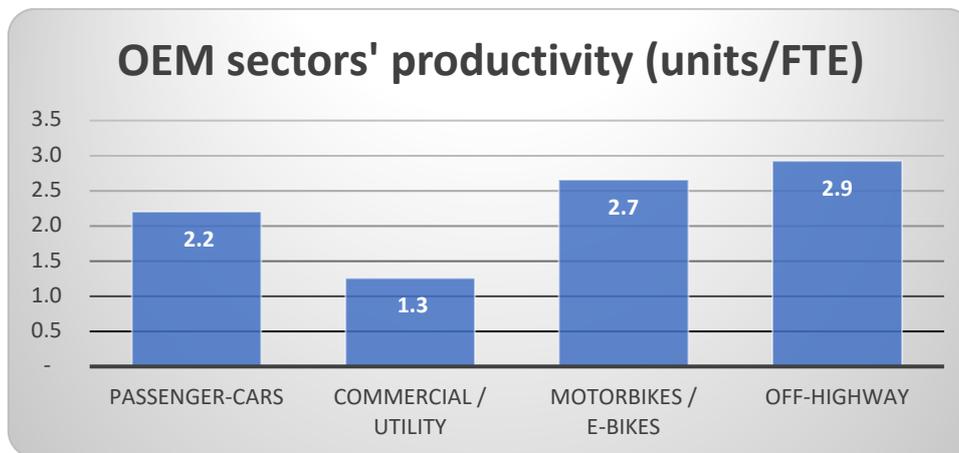
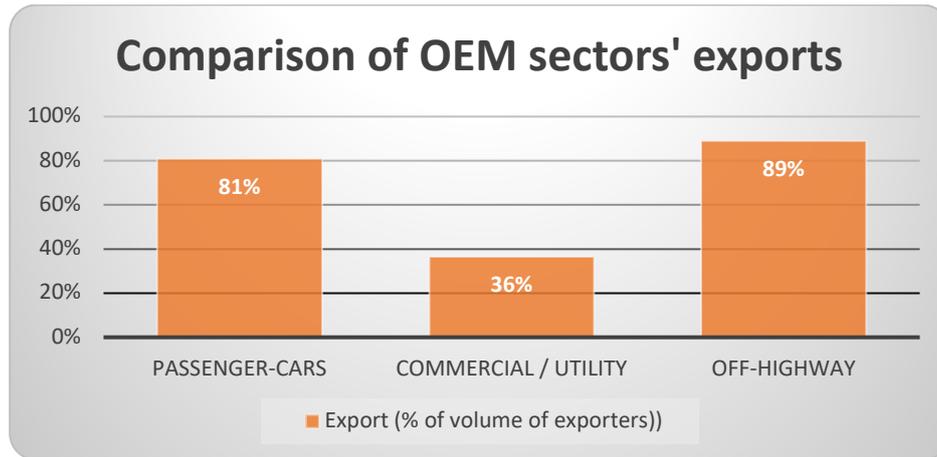
Of those companies, it is interesting to note how those producing off-highway vehicles tend to be far larger than those producing vehicles primarily for the road. Some of the largest companies producing vehicles for market niches have been excluded from this study if they are producing in excess of the 10,000 vehicles/year – the ceiling set to define a niche product. This prevents their figures swamping those of the other, smaller companies studied here, and distorting the overall trends of the niche companies.

Examples of those excluded are:

- Case New Holland (CNH) – producing 22K tractors in Essex, employing 1100 people directly, and turning over approx. £2.2bn annually.
- JCB – producing nearly 29K off-highway vehicles in the UK, primarily for the construction industry, and exporting nearly 90% of that volume whilst employing 10K people in the UK across their various sectors, and turning over £3.3bn
- Leyland trucks (DAF) – producing nearly 20K units in the UK, employing 1000 production staff and turning over approx. £1.5bn

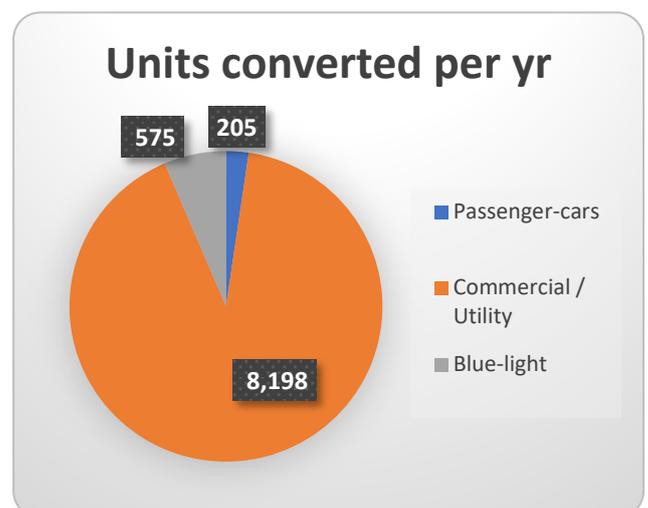
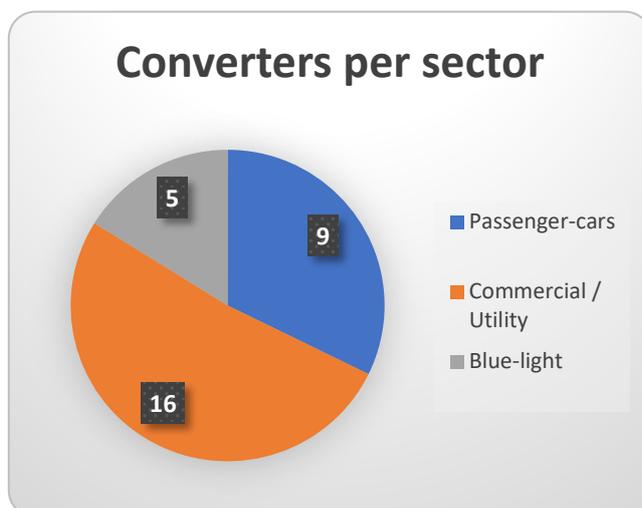
Of the 94 niche companies studied, there were 64 OEMs of which 50 are SMEs. Comparison of all 64 niche manufacturers (listed in “Appendix 2: List of Niche OEMs by volume and sector”) by their primary sub-sector reveals the following distributions:





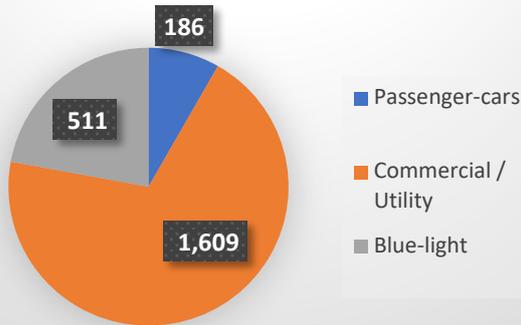
Compared to these productivity numbers for the niche manufacturers, the large mainstream OEMs in the UK produced an average of 8.6 units/FTE in 2018³. This reflects the predominantly hand-built nature of niche vehicles rather than any lack of their efficiency. For comparison, Rolls Royce, who has access to the resources of a large parent company (BMW) and produce in a similar hand-built fashion, manufacturers at a similar rate, i.e. 2.1 units/FTE.

Of the 30 niche vehicle converters, 27 of them are SMEs. Comparison of all 30 niche converters, the majority of whom are coachbuilders (listed in "Appendix 3: List of Niche Converters by volume and sector") by their primary sub-sector reveals the following:

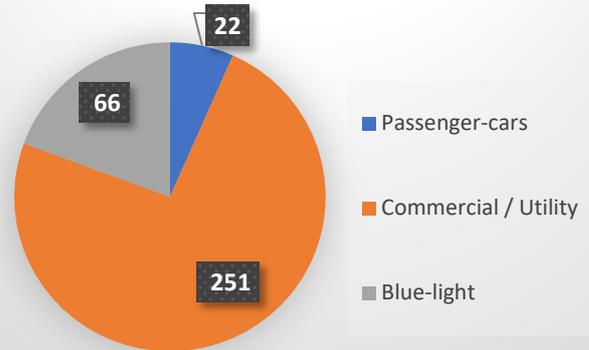


³ <https://www.smm.co.uk/wp-content/uploads/sites/2/SMMT-Motor-Industry-Facts-May-2019.pdf>

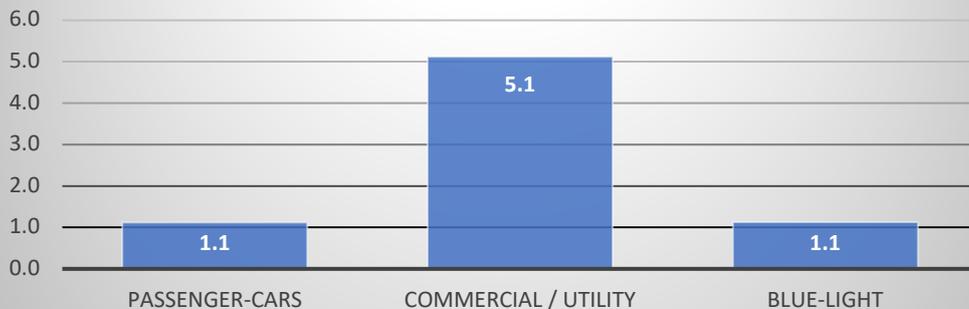
Converters' headcount



Converters' turnover (£m)



Converter productivity (units/FTE)



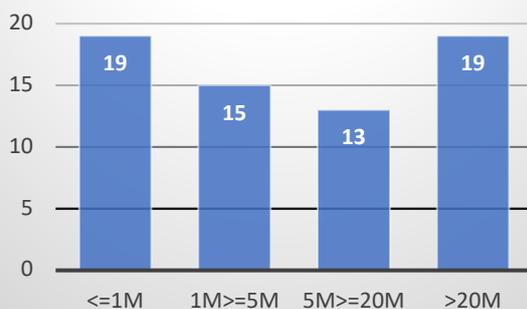
Trends and indicators that can be drawn from the data

It is, perhaps, unsurprising that the majority of niche companies are SMEs, and they reported having less than £5M annual turnover, producing less than 50 vehicles per annum, and employing 50 FTEs or fewer.

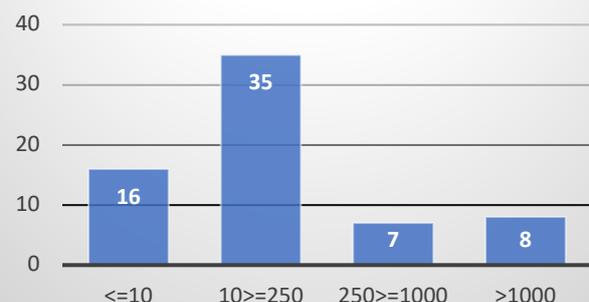
The spread of turnover, production, and headcount is shown in the graphs below, for those OEMs and Converters who returned data.

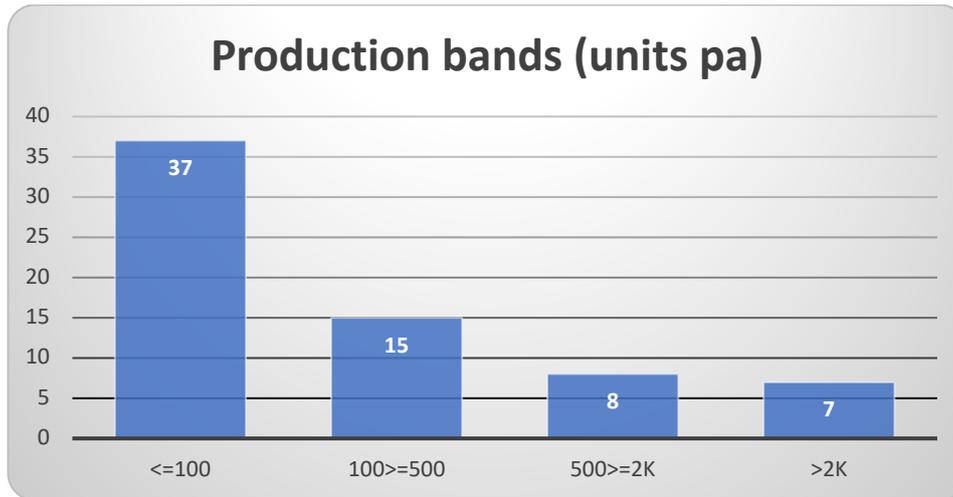
(Y-axis on all graphs is "Number of companies")

Turnover bands (£m)



Headcount bands (FTEs)





A number of other trends were noted from the study research gathered, both in the numerical terms and in the anecdotal feed-back from the respondents. These can be grouped into:

- New growth opportunities
- Aspirational market areas to reach into, and
- Upcoming legislation and standards requiring the niche companies to abide by.

Just as several companies have recently begun offering e-drivetrain repowering solutions for classic cars, and similar retrofit for other vehicles, most notably vans, these have shown a trend to become more professionally converted, with componentry that is more tailored to the host vehicles, or at least sourced to be more appropriate, to offer better performance (primarily range) and reliability.

An interesting development on from this sub-sector has been companies who are setting out to convert whole fleets for commercial vehicle operation organisations for whom Total Cost of Ownership (TCO), reliability, and cost/performance are essential operational requirements and cannot be compromised simply because the converted vehicle is now an Electric Vehicle (EV). These conversion companies usually have very good relationships with their e-drivetrain component suppliers to ensure the suitability, quality, cost, and reliability of the componentry or they are vertically integrated to include e-drivetrain production in-house having often started life as a component producer themselves and having “grown” into vehicle systems integration.

This trend is being driven by the suppliers, converters, and end-users sharing a vision of a new, profitable market as EV’s move from being a niche product themselves into the preferred solution for road vehicles.

Another trend observed during the study has been the rise in manufacturer interest for new product areas, notably -

- e-bikes, for domestic/leisure use
- Ultra-lightweight “last mile” delivery vehicles, and
- Connected Autonomous Mobility (CAM), either as additional vehicle functionality or as entirely driverless vehicles.

Often, niche OEMs are looking to combine some of the above new ideas to create more appealing vehicles, such as creating autonomous lightweight electrified vehicles for last-mile goods deliveries. This is tapping into skills and experience already existing in the niche OEMs and their technology/engineering partners, and rapidly extending that capability as the urgent need for clean mobility solutions, in all forms, outstrips the large manufacturers ability to design and produce solutions quickly enough, leaving the field open (at least in the short term) to the niche vehicle sector organisations.

As found with the emergent e-repowering sector, commercial success in these three new areas will only be possible if solutions are professionally engineered with all the attributes of quality, TCO, reliability, etc, usually expected by the fleet users and large operators. Evidence that the large operators are interested and keen to adopt such new technologies can be found, such as the recent ordering of 10,000 electric delivery vans by UPS from the UK e-van startup, Arrival⁴.

The trends described above further illustrate the UK Niche vehicle sector's ability and determination to carve out, cultivate, and service new areas of business which build on their own capabilities to accomplish an early market entry and seize a lead from the foreign and larger vehicle providers.

Narrative of opportunities uncovered

Through discussion with the niche companies, a number of common needs and opportunities emerged for the UK supply-chain. These have centred around the push by the niche OEMs into drivetrain electrification but, interestingly, were not confined to that single area.

There were also some areas of opportunity which were seen by the respondents as forthcoming areas where no supply-chain has yet been established – these can be classed as opportunity areas for UK suppliers to move into with new products & services to be supplied to both the UK and for export markets.

Other opportunity areas were ones where the respondents were using foreign suppliers after searching for, and in some cases initially using, parts produced in the UK, but were reluctantly “forced” to use the foreign option due to either price, availability, security of supplier (reliability of the supplier), or other reasons. In almost all cases, the respondents voiced their keenness to source as much of their BOM from UK suppliers as they possibly could, provided that the above price/availability/reliability performance areas were equal or better than the foreign sourced alternatives.

Brexit was also mentioned a few times as a driver for companies to look more eagerly for UK suppliers and/or as reasons why they are investigating (or actually investing in) vertical integration of parts supply into their own organisation.

⁴ <https://www.commercialfleet.org/news/van-news/2020/01/31/ups-orders-10-000-arrival-electric-trucks>

With regards to the electrification componentry, respondents reported firm demand for electric traction motors (EM), “matched” power electronics (PE), High-voltage (HV) batteries, HV interconnects, and integration expertise. The term “matched” above for PE (AKA inverters) is important because, until now, only high-volume OEMs have had the purchasing leverage to buy a matching EM and PE pair (in one housing or two) or the engineering resource to ensure that separately sourced EM and PE would work well together. However, with an ever-increasing understanding of electrified powertrains inside the niche OEMs, and the push for maximum energy efficiency of the whole powertrain system, the niche OEMs are now also looking for electric propulsion systems comprising matched EM and PE, whether sourced from a single or two separate suppliers.

This maturity in their approach has attracted some traditional niche suppliers, as well as some recent startups, to look to fill these supply gaps. However, the niche OEMs report a wide gap still exists between their requirements (including manufacturing maturity, cost, and performance) compared to the offerings from these new niche suppliers. The main reason for this gap is that the variety of requirements coming from the various niche OEMs are sufficiently different that there is no economically high volume of one variant, i.e. size/power/voltage/torque, to make production economic.

This all points towards the opportunity of a harmonization of requirements or, at least, a Pareto approach towards common componentry. One such approach might be to agree a set of requirements across the niche OEMs who are producing most of the volume of similarly sized vehicles. If the common requirements could cover the most expensive aspects of the e-drivetrain components, such as EM/PE physical size, voltage, speed, and maximum torque, then the other aspects could potentially be adapted to match different needs.

Similarly, for componentry which lends itself to being modularized and ganged together for larger applications, such as HV batteries then, again, a solution could potentially be engineered which would satisfy most of the requirements across the similar niche OEMs.

An alternative approach, suggested by several respondents, would be to establish a coordinated approach to mature Tier 1 suppliers of e-drivetrain componentry to adapt solutions being produced for high-volume OEMs for use by the niche OEMs. This would benefit from the Tier 1's established manufacturing quality, their continuous product improvement, and cost-down activity. This approach would also have the advantage of being able to replicate the currently existing “crated engine” supply model for ICE, whereby semi-dressed engines are supplied tested and crated to niche OEMs for them to build into their vehicles. A similar arrangement can be envisioned for crated e-drivetrains comprising EM, PE, and Controls, being provided along with a defined electrical & controls interface.

Whichever path is taken, the opportunity for UK suppliers to fill these gaps has been made all the more pressing with the recent announcement of all new ICE vehicles being banned for sale beyond 2035⁵ and possibly sooner.

⁵ <https://www.gov.uk/government/news/pm-launches-un-climate-summit-in-the-uk>

Summary

This study has focussed only on companies supplying finished vehicles to end-users in volumes of less than 10,000 per year, which represents only about 10% of the current NVN membership. The other 90% comprise of design/technology engineering companies; component & sub-system suppliers; kit-car manufacturers; military; track cars; dedicated off-highway vehicles; and larger organisations, all of whom are also vital parts of the UK niche vehicle business sector.

Detailed analysis of the UK supply-chain is an area that has been excluded from this study, however some of the respondents did provide figures for the UK content in their finished vehicles. This data suggests approximately 71% of UK content in all the finished niche vehicles, equating to a £2.85bn if extrapolated across all 94 companies in the study.

An alternative view of the broader value generated can be obtained by using a standard Office for National Statistics (ONS) estimation method for the manufacturing sector of a x1.68 headcount multiplier to include directly induced supply-chain employment. This would suggest the following:

Reported niche sector headcount across 94 companies	22,638
Total headcount including supply chain using x1.68 multiplier	60,670

It can be seen through this study of the niche OEMs and Converters, that the UK niche sector continues to provide a significant and valuable level of employment and value-add to UK Plc. The added benefit of that activity being spread across so many individual organisations of different backgrounds and capabilities is that it gives the sector a level of immunity to the many challenges facing the sector. Where size would help, the network can assist by grouping members' needs together to achieve better leverage and access for member organisations.

The niche sector is no stranger to ever-changing market & regulatory needs & demands but the next decade will require the vehicles to change more significantly, and in ways not usually associated with niche vehicles, than ever before. International legislation and standards will demand that all vehicles carry extra safety systems and other intelligent features, imposing significant investment costs on all manufacturers. The likelihood of exemptions for the smaller volume producers is low and so they will need to find inventive ways to reduce their individual investments which have to be amortised across each vehicle produced. This suggests pooling of investment, where possible, and a market for common systems for low-volume producers present new opportunities for the niche engineering solutions providers.

There have been some high-profile cases recently of companies struggling with the headwinds of change and the need to innovate quickly to survive & grow, but there has also been an upswelling of new companies either starting up from scratch or migrating across into the vehicle sector to take advantage of the needs & appetites for new technologies.

In summary, the niche vehicle sector, in all its forms and variants, continues to contribute significantly to the overall economic benefit of the UK as well as its pool of innovation, creativity, and diversity.

--- End ---

Appendix 1: Method

Given the aims of this study, it was clear that accurate data that would be comparable across the companies was of primary importance. For that reason, and to account for different companies using different reporting years, it was decided to collect data based on CY2018 wherever possible. Where information for 2019 was available, it was gathered and fed in to the findings if it added value, for example if it showed a noteworthy trend or useful hint to supply-chain growth for the UK suppliers.

Given that the data collection method employed might have a bearing on the quality of the data, for example if having to use public domain data which might vary across sources, the methods of data collection from each company were (in order of preference):

1. Direct interview conversation (phone call or face-to-face)
2. Direct email Q&A
3. Companies House and filed reports (some include production figures and headcount)
4. Company's own websites
5. Media and news reports (two independent sources required to corroborate numbers)

The questions asked of the OEMS and Converters were:

Relating to your latest complete year (calendar year or financial year and ideally CY2018)

1. *Number of vehicles built / converted per annum?*
2. *What % of this production is exported into the EU and RoW*
3. *UK headcount at year end*
4. *UK turnover*
5. *Approx. UK content in the vehicles by percentage and value, and finally*
6. *Any other updates, numbers for 2019, or useful info about company growth, activity, near-term aspirations*

The companies to be included in this study were chosen based on the following criteria (in order):

1. All vehicles must be capable of on-road driving under their own power
2. SME or large UK-based specialist vehicle
 - a. Manufacturer (OEM), or
 - b. Converter, as defined as being where the vehicle is changed considerably, value is added, and/or the name on the vehicle is changed.
3. Can be two-wheeled, not just four or more
4. Can be autonomous pods

Any companies that were operating in 2018 but are now in administration have still been included but any that dissolved during or before 2018 have been excluded.

New entrants and start-ups have been included, even if they were still pre-production in 2018 and have added to the total number of niche companies but not the turnover or production numbers. Calculations such as export percentages and productivity have only used numbers from companies who have returned all the necessary metrics, so as to not weight one side of the calculation when some metrics – export % for example - were not returned by many respondents.

Appendix 2: List of Niche OEMs by volume and sector

OEMs grouped by production volume

1000-10K units/year

Alexander Dennis
 Aston Martin
 Bentley
 Caterpillar
 Johnston sweepers
 Komatsu
 LEVC
 Lotus Cars
 McLaren
 Rolls Royce

100-1000 units/year

Ariel Motor
 Bradshaw Electric Vehicles
 Caterham
 CCM Motorcycles
 Mecalac
 Morgan Motor Company
 Optare
 Plaxton
 Radical Sportscars
 Towrite
 Westfield (including Chesil)
 Wright Bus

Up to 100 units/year (or undeclared)

AC cars
 AK Sportscars
 Alvis Car Company / Red Triangle
 ARC
 BG Pavers
 Briggs Automotive Company

Bristol Cars
 Dare UK
 Elemental Automotive Group Ltd
 Gardner Douglas Sportscars
 Ginetta
 Gordon Murray Design
 Great British Sports Cars Ltd
 Grinnall
 Healey
 Javan
 John Dennis Coachbuilders
 Keating
 Lightning Cars
 MetroCab (Fraser Nash Research)
 Microcab
 Noble Automotive
 Norton Motorcycles (UK)
 Pashley
 Peddlesmart
 Proteus Sports & Racing cars
 RDM
 Riversimple Hub LLP
 Rumbler
 Sarthe Special Vehicles Ltd
 Smith Electric Vehicles
 Solar Transport Systems
 Stevens Vehicles
 Swindon powertrain
 Tomcat Motorsport Ltd
 Toniq
 Trident
 Ultima Sports
 Vanwall / Ronart
 Zero EV Ltd

OEMs grouped by sector

Passenger cars

AC cars
 AK Sportscars
 Alvis Car Company / Red Triangle
 Ariel Motor
 Aston Martin
 Bentley
 Briggs Automotive Company
 Bristol Cars
 Caterham
 Dare UK
 Elemental Automotive Group Ltd
 Gardner Douglas Sportscars
 Ginetta
 Gordon Murray Design
 Great British Sports Cars Ltd
 Grinnall
 Healey
 Javan
 Keating
 Lightning Cars
 Lotus Cars
 McLaren
 Morgan Motor Company
 Noble Automotive
 Proteus Sports & Racing cars
 Radical Sportscars
 RDM
 Riversimple Hub LLP
 Rolls Royce
 Rumbler
 Sarthe Special Vehicles Ltd
 Solar Transport Systems
 Swindon powertrain
 Tomcat Motorsport Ltd
 Tonic

Trident

Ultima Sports

Vanwall / Ronart

Westfield (including Chesil)

Zero EV Ltd

Commercial/Utility

Alexander Dennis

Bradshaw Electric Vehicles

LEVC

MetroCab (Fraser Nash)

Microcab

Optare

Plaxton

Smith Electric Vehicles

Stevens Vehicles

Towrite

Wright Bus

Motorbike/eBikes

ARC

CCM Motorcycles

Norton Motorcycles (UK)

Pashley

Peddlesmart

Construction/Agricultural

BG Pavers

Caterpillar

Johnston sweepers

Komatsu

Mecalac

Blue-light

John Dennis Coachbuilders

Appendix 3: List of Niche Converters by volume and sector

Converters grouped by volume

1000-10K units/year

Allied Vehicles
 Paneltex

100-1000 units/year

Emergency One
 Euromotive Kent UK
 Mellor Coachcraft
 O&H Vehicle Technology
 Penso
 Zytek Electric Vehicles

Up to 100 units/year (or undeclared)

Angloco
 Boniface Engineering
 Brahms (hearse)
 Coleman Milne (hearse)
 Connaught

CM Specialist Vehicle
 Electra Trucks
 Electric Classic Car Company
 JE engineering
 JLR SVO
 Kahn Design
 Lister
 London Electric Cars
 Magtec
 McAllister cars
 RBW Electric Classics
 Revolve Technologies / Ulemco
 Tevva e-vans
 Tiger Sportscars
 Vic Young
 Voyager MPV
 Warnerbus
 Wilcox Limos

Converters grouped by sector

Passenger cars

Connaught Motor Company
 Electric Classic Car Company
 JE engineering
 JLR SVO
 Kahn Design
 Lister
 London Electric Cars
 RBW Electric Classics
 Tiger Sportscars
 Zytek Electric Vehicles

Blue light

Angloco
 Boniface Engineering
 CM Specialist Vehicle
 Emergency One
 O&H Vehicle Technology

Commercial / Utility

Allied Vehicles
 Brahms (hearse)
 Coleman Milne (hearse)
 Electra Trucks
 Euromotive Kent UK
 Magtec
 McAllister cars
 Mellor Coachcraft
 Paneltex
 Penso
 Revolve Technologies / Ulemco
 Tevva e-vans
 Vic Young
 Voyager MPV
 Warnerbus
 Wilcox Limos

Appendix 4: Location of Niche OEMs and Converters





Department for
Business, Energy
& Industrial Strategy

