



MOBIQ 2021 Annual Mobility Survey

Insights into Mobility

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MOBIQ Group

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2. Executive Summary

The past year has brought about unprecedented change in our economy, our ways of working and the future business landscape. Mobility - so key to how people live and work - is no exception to this rapid adjustment. It is perhaps fair to say that the global crisis has accelerated challenges and opportunities alike.

MOBIQ undertook this survey, one of the most comprehensive in the post Covid mobility landscape, to understand how operators, authorities, and business owners/investors have reacted to the events of the past twelve months – and how they are planning to move forward in the year ahead.

The strong response tells us several key things; that those in the mobility sector are feeling positive about the future (52% said they were optimistic about the outlook for 2021); that most businesses in the sector will re-organise their structure, staffing and working practices and that, overwhelmingly, the investment in the future of mobility will be focused on innovations in technology and Electric Vehicle (EV) solutions.

These trends existed pre-Covid of course, but the profound change brought about by the pandemic has accelerated the mobility sector dramatically, and what once seemed like it would take 5-10 years to come about is happening right now, with investors, operators and regulators alike knowing that a rapid response toward new mobility models is no longer a luxury, it is a necessity.

The Mobility sector is inherently one about moving forward, of change, of embracing new technologies, new business models and working in more agile and dynamic ways.

It is the mobility sector that will facilitate a new global way of working. Everyone from large corporations to the public sector, from self-employed individuals to SME businesses and everything in between will need new ways of moving around our cities, blending work, life, and travel in convenient, sustainable ways.

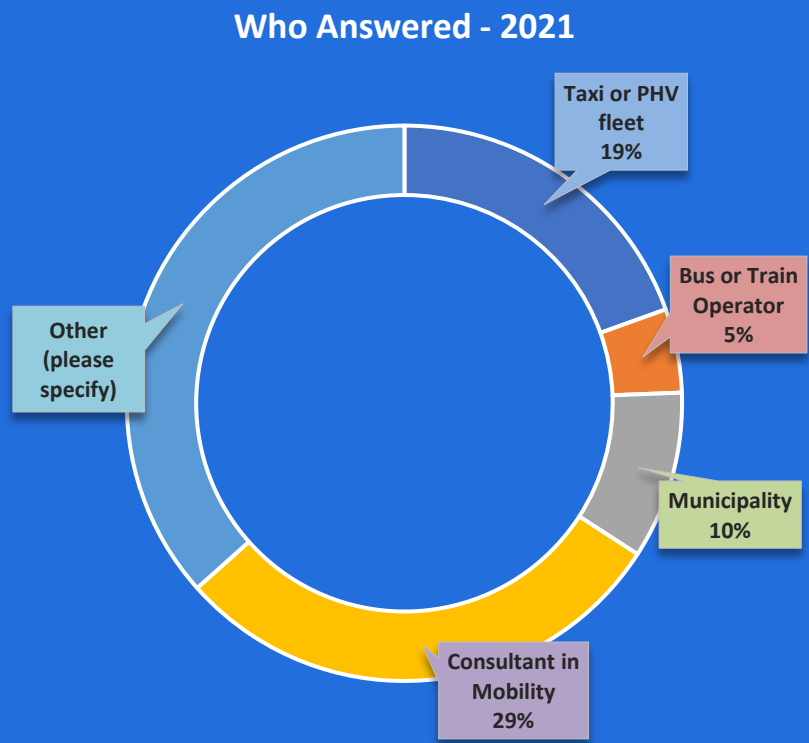
We think this report is a useful insight into mobility and its future. We hope you do too.

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FEBRUARY 2021

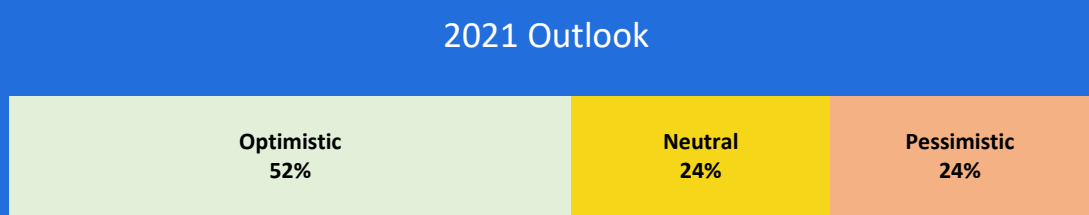
3. Findings

3.1. Who answered?



Inside the 'other' group, we had representatives from Transport Management, Energy Utility, MaaS and aggregators, SaaS providers, Technology Entrepreneurs, Automotive Import / Retail and OEMs. The findings below therefore give a broad overview of the entire mobility sector.

3.2. Outlook



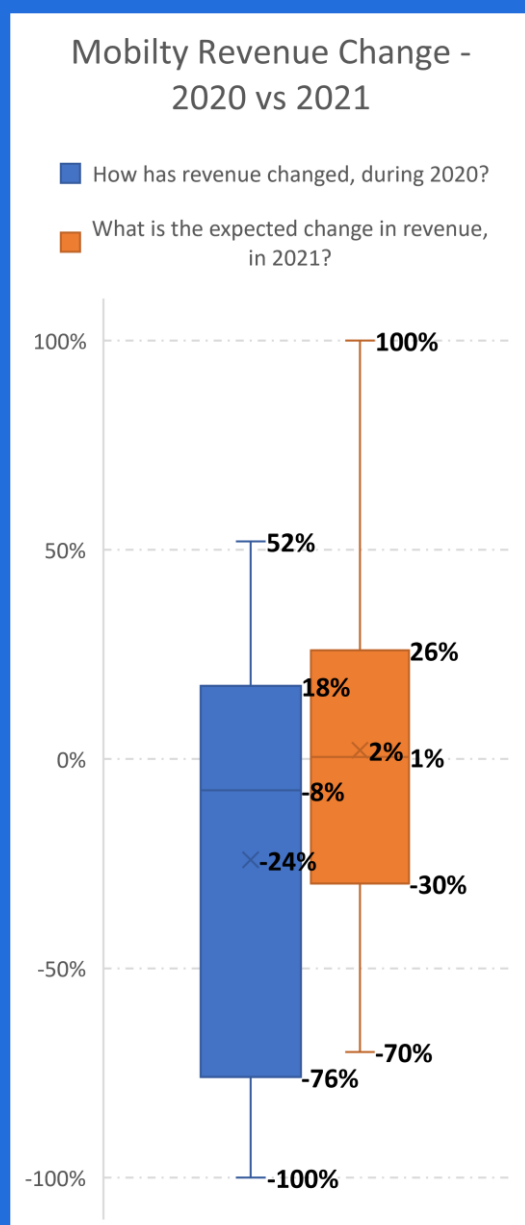
52% of all respondents are optimistic about 2021.

Generally, the mobility sector is optimistic about 2021, with 52% of respondents answering in the positive. The remaining 48% are split between a neutral or negative outlook towards 2021. The pessimistic are represented by some taxi operators, municipalities, and consultants, while in the optimistic group we find many consultants, and some utility providers and one taxi fleet.

The MOBIQ View:

Being the first survey of its kind, we do not know what good looks like. Having 52% optimistic, however, is a good sign, and must imply investments are planned for 2021. The taxi industry has been under pressure for quite some time, having fought long and bitter fights with Uber and other disrupters, while also being challenged in de-regulation and taxation, and inevitably looking into a driver-less future with autonomous cars. The general marketplace view is that circa 30% of the pre-Covid taxi market will never return; a consequence of a permanent shift in approaches to commuting and business travel. A taxi operator cannot just sit and wait for better days, once Covid is gone things will not be going back to where they were. Others might have taken up the space, so better prepare now for tomorrow.

3.3. Revenue Changes



On average, the mobility sector has seen revenues drop by 24% (8% median losses), but on aggregate revenues are expected to return to roughly normal levels in 2021 with an average of 2% growth expected. Although this normality appears to spread widely between some segments performing well, and others performing poorly. The large 2020 spread also indicates that some segments have been hit harder by the pandemic than others.

The MOBIQ View:

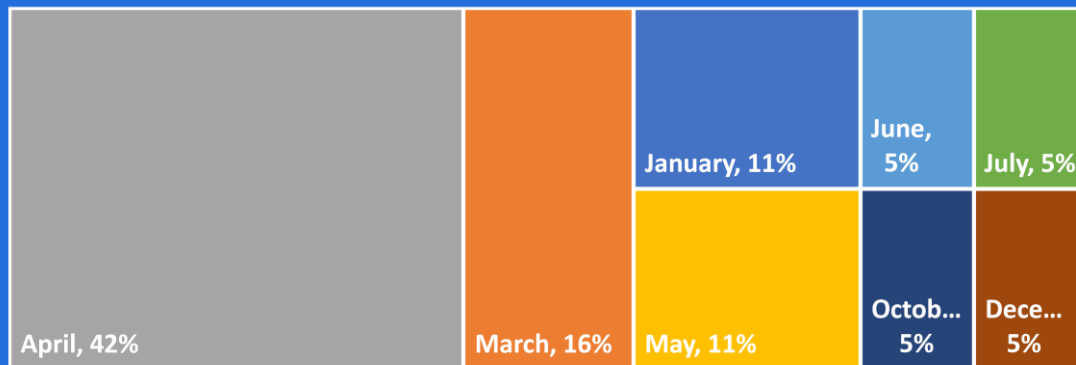
2021 looks more promising than 2020 but the coronavirus entails more losers than winners.

Who are the winners? E-mobility providers, energy utilities, and some consultants.

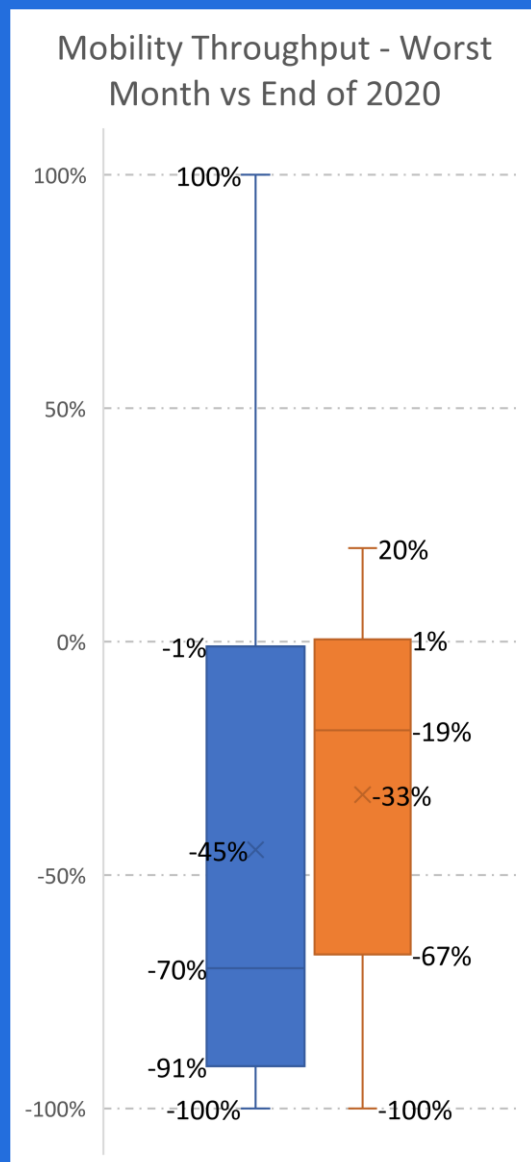
Who are the losers? Taxi and bus operators have experienced the worst reduction.

Not surprising that customers are scared away from chauffeured and public transport. And similar to e-commerce expansion, we also see e-mobility growing under the pandemic.

Which Month Was The Worst?



The worst month reported overall was April 2020. Throughput across the sector was reported as being -45% median. However, things were starting to recover by the end of 2020, with throughput recovering to only -19% median.



The MOBIQ View:

This is as expected given that Covid lockdowns have grounded people from March 2020. For taxi operators, January is often a quiet month while things pickup over the spring. But the pandemic created a double-dip situation. The later months are better, either due to subsidies, or because business picked up again over the summer. We know some taxi operators that have been down by 50% over the entire year, and some that are still down by 90% in beginning of 2021.

3.4. Challenges

Contributing to the average losses reported, the most common inter-segment challenge was difficulty adapting to the unique challenge of Covid-19. Adaptation challenges manifested as difficulties in shifting to remote working / labour forces, changing behaviours, and regularly changing operating conditions imposed by governments. The stop-start approach taken by some governments means that firms modus operandi changes to each next new operating context (for example: rules, customer habits, organisation of labour), and each context switch brings additional costs. In this sense it may have

been better for governments to impose longer term restrictions. Although restrictions are a necessary evil to stem the spread of a largely unknown and potentially fatal disease, having one set of rules for a longer period may be beneficial from an uncertainty reduction point of view and prevent excessive costs from regular context switching. Other than adapting to new operating models, the mobility sector in general has been hard hit with customer losses.

Looking to the future, adaption is also a perceived challenge. Especially where adaptation requires letting go of traditional business models and changing to the new demand profile post-Covid. Trust in public transport is also a concern – especially for municipalities -, both from the perspective of ensuring traveller health, but also in terms of climate change response.

The MOBIQ View:

For this section we will lend the microphone to these curated responses:

Our biggest challenge in 2020 was:

“Adapting to the ever-changing operating conditions that are very much under Government control”.

“Government indecision lack of control. Costs involved in stop start”.

“Too much clean up to prepare for future/scaling”.

“To survive”.

The challenges for 2021 are somewhat different:

“Scaling - unpredictability - competition increase”.

“Restoring confidence in the safety of modes of travel as the pandemic subsides”.

“Business travellers won’t come back”.

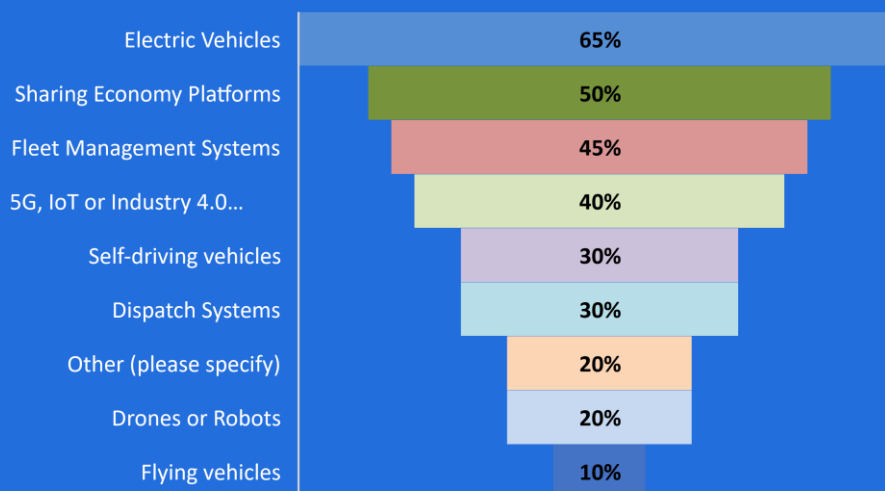
“Moving from diesel to data”.

“To survive”.

3.5. Technology

3.5.1. Investments 2021

Technologies Worth Investing In - 2021



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Topping the list of most interesting technologies worthy of investment came electric vehicles, sharing economy platforms and fleet management systems. Sharing economy and fleet management systems make sense, with the consensus that mobility in future will be substantially different than pre-Covid mobility. Less steady medium-length business commuters (one repeat route to and from one place - work) and more fractured personal (many routes to and from many places) trips would lend itself well to sharing economies. New developments within battery technology – such as solid-state batteries proposed by Toyota – are extending the range of electric vehicles significantly. Shortly the range of these vehicles will be on par with their fossil fuel counterparts. With range anxiety gone, one could expect more consumers to make electric their choice of fuel – and opt for an electric vehicle.

5G, IoT and Industry 4.0 technologies are key puzzle pieces in the pursuit of data-driven initiatives. Quality data can lead to unique insights, but data must come from somewhere. IoT and Industry 4.0 means sensors – data collection devices. Other free suggestions included AI for ticketing systems.

The MOBIQ View:

Not surprising that electric vehicles are No. 1 on people's minds in terms of technology. More interesting is No. 2; sharing economy platforms as a technology worth investing in. The winners are public e-scooter fleets and especially car-sharing. Towards the other end, drones, robots and flying vehicles are still considered to be further out in the future.

From another study we know that e-bikes are peaking these days. In Denmark alone we saw 60,000 new e-bikes on the road in 2020. If we had to put money into anything in 2021 it would be electrified micro-mobility such as e-bikes – combined with a sharing perspective. We also trust electric vehicles will be the next wave in the dynamic and converging mix of new technology, OEM investments, government regulations and global sustainability.

3.5.2. Tech-dreams

One common theme for tech-dreams across all segments was the ideal of green solutions and smarter cities. Respondents also commented that smart solutions should be centralised in execution and tied to the greater mobility initiatives of city planners.

“The sector would benefit from a joined-up approach pulling in one direction as opposed to fragmented compartmentalised services competing in the same space. If ever there was justification for unification and standardisation it’s now”

- ‘Consultant’ 2021

Other dreams include proliferation of electric vehicles – more selection, lower costs, and more charging. This is largely unsurprising given the high interest shown in electric vehicle investments. The signals are strong: Has the time come for the electric vehicle?

Open data platforms are also a dream. An open data platform of aggregated mobility data could be the first steps in supporting smart city initiatives. Yet, with data considered as a strategic resource – it is unlikely to be given away for free.

The MOBIQ View:

Investment in electric vehicles, their infrastructure and technological eco-systems is continuing at ever-higher levels. This is supported by increased government regulation across the globe in favour of phasing out non-EV vehicle production in the coming years. Surrounding this comes an increased need for technology to support fleet utilisation, charging and optimisation and scheduling. It is clear that many cities across Europe will see a rapid shift towards a smart city approach, with infrastructure that supports EV aspirations becoming an ever more familiar sight. Autonomous vehicle developments seem to take a back seat to the rush for electrification.

3.6. Growth and shrinkage

3.6.1. growth

Suggested growth areas for mobility include:

- Additional fleets
- New business models and creative solutions
- More Data-Driven approaches to maximise fleet utilisation.

Given the overall downturn in business across the sector, it is understandable respondents call for new business models and creative solutions. If demand of mobility has changed forever, then supply of services will need to change too. Incumbent firms tend to favour smaller, iterative developments over riskier pivots – which is what we find in the data-driven suggestions. Small changes to maximise efficiency of existing business models vs creating new business models entirely. It was surprising to see additional fleets being suggested – especially if working-from-home becomes a new norm.

The MOBIQ View:

The clearest trend seems to be that anything electric will grow. We currently experience a tsunami within micro-mobility (e-bikes and e-scooters) and expect an even bigger wave of electric cars. During Covid we have seen private car ownership increase – however we expect this trend to fade out once Covid is under control.

Delivery has grown considerably during Covid and this trend will continue. Online shopping has irreversibly changed the retail sector.

Sharing is also a trend but growing from a low base. Corporates will adopt preferences for sharing to live up to CSR and UN sustainability goals. Private consumers are more price sensitive and will turn to sharing to save money.

A sector to keep an eye on is anything welfare related. School runs, special needs, patients, on-demand rural transport. You might be able to pick up lost business in these areas.

3.6.2. Shrinkage

Suggested shrinkage areas:

- Staff
- Office space

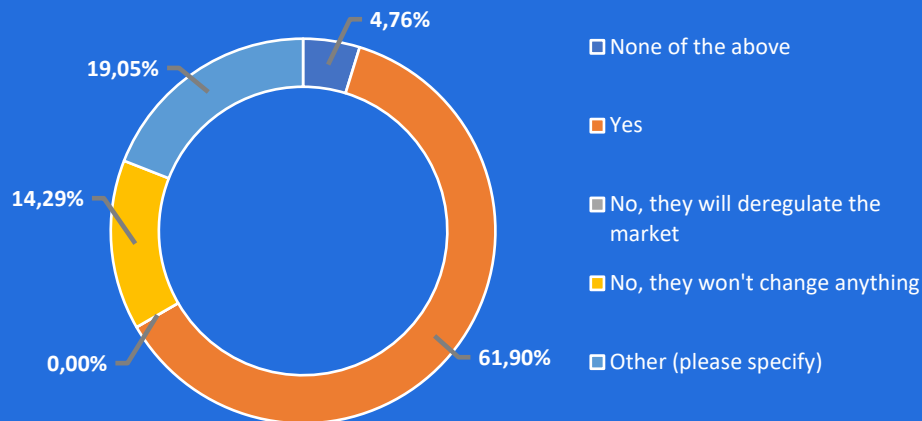
Overwhelmingly, staff cuts are high on the agenda for 2021. Coinciding this with increases to data-driven approaches, the mobility sector looks to be chasing increased efficiencies to make up for the loss of business. Data is supposedly the ‘new oil’ – but data alone has limited usefulness, the true value of data is in the insights gained. Staff restructuring might be more appropriate than staff cuts – with a shift towards acquiring more data analysts.

The MOBIQ View:

We expect corporates to shift to more work-from-home and reduce overall transport needs, for short-term. During Covid public transport has lost many passengers, some of whom have acquired a car and may be lost for a long time. It will take time before air traffic resumes, and many corporates will have moved to online meetings for good. Chauffeured airport transfers will suffer for a long time and maybe never reach the level from pre-Covid.

3.7. Government

Will Governments Regulate More In 2021?



Most of the sector believes that 2021 will bring more regulations to the market, with comments suggesting regulations concerning emissions from cars or technology concerns such as cyber security. Governments that have signed on to the Paris Agreement will be looking to execute their various strategies, and regulating industries viewed as polluters is certainly to be expected.

The MOBIQ View:

Some governments have gained an appetite for regulation under Covid and might hang on to it. We also see huge amounts of subsidies being pumped out to keep the companies afloat and reignite the post-Covid economy. The opportunity is to position one-self to the money-flow which would likely be within sustainable, electric, and shared transport.

3.8. Taxi and PHV

Taxi and PHV fleets were hard hit during the pandemic losing almost 100% of their revenues in certain months of 2020. We have a Danish company reporting revenue at 50% during the entire year of 2020. And we a Dutch taxi company still (Jan 2021) only running at 10% of the pre-Covid activity.

On the other hand, we have a taxi company in Germany reporting “business as usual” since they are busy in the health care sector, and due to Covid the patients are allowed private taxi trips (subsidised) rather than using public transport.

Another taxi company has reported almost 100% normal business due to close relationship with corporate customers not impacted by Covid.

Airport transfers are gone for the moment but should pick up shortly, however maybe never reach the levels they enjoyed previously.

Taxi and PHV fleets are particularly interested in electric vehicles, fleet management systems, dispatch systems and sharing economy platforms.

Taxi and PHV should continue looking into service improvements and become more customer centric.

Finally, our advice to any taxi and PHV company is to prepare for the autonomous future by building a robust customer base and adopt fleet management capabilities.

3.9. Bus and Train Operators

Bus and train operators were also hard hit by the pandemic, losing around 90% of their revenues in the worst months of 2020, and although they do expect things to return to normal in 2021, they are extremely concerned about their financial situation.

Will the fallen customers come back? Some would have acquired a private car and thereby lost for a foreseeable time, others – who are just concerned about health risks – might come back earlier.

Public transport has a risk of falling behind while electric and autonomous cars develop rapidly.

Bus and train operators are particularly interested in electric vehicles, self-driving vehicles, 5G, IoT and Industry 4.0 (especially concerning gathering data on infrastructure) and Artificial Intelligence tools – especially for ticketing, forecasting, and maintenance.

3.10. Municipalities

Municipalities are particularly interested in electric vehicles, dispatch systems, and fleet management systems. The context here is that they wish to integrate data from various transport providers into a single platform, so they can use the data for planning.

Will MaaS succeed? There is a lot of interest and positive vibe from municipalities and consumer groups to see more MaaS implementation. However, operators and the private transport providers prefer to own their own customer facing applications. So, it is a constant dilemma how to move forward with common API's and open platforms while also welcoming private investments and initiatives.

Should MaaS be a public or a private matter? Brussels has decided for a public ownership while Antwerp prefers a private, market-oriented model for MaaS ownership. It will be interesting to follow the development in these two contrasting implementations.

3.11. Consultants in Mobility

Consultants fared relatively well through the pandemic, some reported losses, but others reported growth. On average, consultants only lost 5% of revenue and many expect conservative growth in 2021. They are still split between optimism and neutral outlooks for 2021, however.

Electric vehicles, sharing economy platforms, and - to a lesser degree – dispatch and fleet management systems are considered interesting to mobility consultants. Other technologies like IoT or robots are more curiosities than serious investments.

3.12. 'Other'

Electric vehicles are especially interesting to the 'other' category, indicating that across all segments, electric will be the way of the very near future. IoT and fleet management systems are also interesting to this segment. Indicating that data-driven approaches are especially sought-after in the sector.

4. About MOBIQ

4.1. About the Survey

The survey had 41 respondents, from a mix of industry contacts and direct MOBIQ contacts. A range of respondents from operators across taxi, bus, EV and new mobility, municipalities and other stakeholders in the sector such as consultants and service partners.

4.1. About Us

MOBIQ is the leading specialist consultancy on smart mobility and on-demand ground transport in Europe. With decades of experience in the sector, MOBIQ brings together expertise in operations, technology, business growth and strategic change across the passenger transport and mobility sectors.

We work with coach, taxi, bus, private hire, freight and micro-mobility operators and investors, licensing authorities, regulators, vehicle manufacturers, technology and SaaS providers, and end-user groups across the private, corporate, and public sectors.

4.2. About the Authors

4.2.1. Niels Kaae

Niels Kaae is currently based in Copenhagen after several years in London, Paris, and Dublin. Niels is specialised in micro-mobility, EV car sharing, taxis, and private hire business. His experience includes leading the business development for Copenhagen based GreenMobility, global business development for the ground transport platforms Karhoo and eCab, as well as running one of Denmark's largest taxi companies TAXA 4x35. Some of Niels's recent assignments include a 2030 mobility strategy for an insurance company, expansion of US/LatAm-based Cosmic's micro-mobility activities across Europe and helping mobility tech companies to successfully expand to new markets.

4.2.2. Nathaniel Golding

Nathaniel is one of the up-and-coming next generation of consultants, with a background in engineering, business, economics, and information technology. Nathaniel is now continuing his education with a Master of Science in Business Administration and eBusiness at Copenhagen Business School.

4.2.1. Malcom Paice

Malcolm Paice has over 25 years' experience in operations, technology, and business development in the ground transport sector. Malcolm holds several non-executive directorships, has mentored a range of new start-ups, mostly in the technology sector, and is a Member of the Institute of Directors and a Freeman of the City of London. He is Past Master of The Worshipful Company of Hackney Carriage Drivers and a school governor.

4.2.1. Simon Haynes

Simon Haynes has spent over 15 years in the ground transport sector in senior roles spanning coach, taxi, private hire and corporate services. Simon has managed a high number of new business strategies and handled complex acquisitions, mergers, and joint ventures for a number of businesses.

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