McKinsey Mobility Consumer Pulse investigates global consumer perceptions around core future mobility trends

**Regular MCFM consumer survey**
5+ years of historic data

**200+**
Questions on the industry-shaping mobility trends & disruptions

30,000+ respondents who regularly use mobility allowing for detailed consumer profiling and segmentation

15 countries since 2021 across the globe, covering more than 80% of global sales volumes

The most comprehensive view on mobility consumer trends...

Mobility consumer segments
Mobility trends & outlook
EV charging customer insights
Bicycle rider insights
Automotive aftersales customer insights
Corporate mobility benefits
Used car buyer insight

Shared autonomous mobility
Car owner journey insights
Urban mobility infrastructure & regulation
ADAS technology insights
Connectivity & digital car experience
Shared mobility insights

Two-wheeler mobility insights
Mobility ownership & financing
Mobility consumer insights
Customer experience benchmarks

Source: MCFM Mobility Consumer Insights Solution
10 key numbers from the 2024 McKinsey Mobility Consumer Pulse

Global insights

38% Of respondents who do not have an EV yet, consider a BEV\(^1\) or PHEV\(^2\) as next car

29% Of electric vehicle owners consider to switch back to a traditional combustion engine car

27% Of European EV buyers open to considering a Chinese brand for next purchase

9% Consider current electric vehicle charging infrastructure to be sufficient

29% Would like to replace their private vehicle completely with other forms of transport in the next 10 years

21% Of car buyers consider autonomous driving functionalities as key buying factor for their next car

59% Of EV buyers want to use more digital connectivity services in the future

37% Of electric vehicle buyers consider to get their next car online

1. BEV = Battery electric vehicle
2. PHEV = Plug-in hybrid electric vehicle

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954
Data available for:
Over the past 12 months market cap of mobility companies has grown mostly with OEMs

Market capitalization
$ Billions

Top 10 OEMs

Source: S&P Capital IQ

New Mobility

Top 10 suppliers

Market capitalization

Source: S&P Capital IQ
Contents

Electrification intent and EV buying
- EV charging
- Connectivity
- Autonomous driving technologies
- General mobility patterns, urban and micromobility
Global purchase intent for electric vehicles continues to rise, however more slowly

Powertrain consideration for current non-EV owners
Share of respondents who do not have an EV yet, globally

<table>
<thead>
<tr>
<th>Powertrain Consideration</th>
<th>December 2021</th>
<th>December 2022</th>
<th>February 2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next vehicle is BEV</td>
<td>14</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Next vehicle is PHEV</td>
<td>17</td>
<td>21</td>
<td>20</td>
</tr>
<tr>
<td>One more new ICE</td>
<td>14</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>One more used ICE</td>
<td>18</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>A few more ICE before switching to EV</td>
<td>12</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Do not want to switch to EV</td>
<td>24</td>
<td>21</td>
<td>21</td>
</tr>
</tbody>
</table>

Countries

Additional Insights
Top reasons given by people who don’t want to switch to EV:
- Too expensive: 45%
- Charging concerns: 33%
- Driving range concerns: 29%

Interest in BEV from respondents who drive premium/luxury segment vehicles ~2x higher than from those who drive volume/entry level cars

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954
Data available for: 🇨🇳 🇺🇸 🇩🇪 🇮🇹 🇧🇷
27% of European consumers say they are likely to consider a Chinese electric vehicle brand

Likelihood to consider purchasing an electric vehicle from a Chinese brand

Share of European respondents who own an EV or consider to do so in the future stating (very) likely

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954

Data available for:

- EV considerers
- EV owners
- Older consumers
- Young consumers
- Volume brand owners
- Premium brand owners

How likely are you to buy an electric vehicle from a Chinese car brand some time in the future?
EV buyers are younger, more urban and more tech-savvy

Buyers who **consider an electric vehicle** at next purchase...

...have **higher disposable income**

<table>
<thead>
<tr>
<th></th>
<th>EV considerers</th>
<th>EV skeptics</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD</td>
<td>6,230</td>
<td>4,235</td>
</tr>
</tbody>
</table>

...tend to live **urban/downtown**

- **Urban**
  - EV considerers: 51%
  - EV skeptics: 20%
- **Suburban**
  - EV considerers: 34%
  - EV skeptics: 47%
- **Rural**
  - EV considerers: 15%
  - EV skeptics: 34%

...are significantly **younger**

- **EV considerers**
  - Average age: 42.0 years
- **EV skeptics**
  - Average age: 50.8 years

...**drive longer distances**

<table>
<thead>
<tr>
<th></th>
<th>EV considerers</th>
<th>EV skeptics</th>
</tr>
</thead>
<tbody>
<tr>
<td>km</td>
<td>14,735</td>
<td>10,035</td>
</tr>
</tbody>
</table>

...are more **tech-savvy** customers

- **EV considerers**
  - Share of respondents who like diving into new technical systems: 68%
- **EV skeptics**
  - Share of respondents who like diving into new technical systems: 30%

...**can charge at home**

- **EV considerers**
  - Share of respondents who are able to charge at home: 84%
- **EV skeptics**
  - Share of respondents who are able to charge at home: 49%

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954
Highest barriers for electric vehicle adoption are low familiarity with the technology and high perceived cost

Reasons for consumers not wanting to buy an electric vehicle...

- **Range anxiety**: More than 1 in 4 EV skeptics have concerns around insufficient range or charging infrastructure – in China 42%
- **Cost of ownership**: 45% of EV skeptics perceive cost of ownership as too high, except for customers in Norway (29%) and China (9%)
- **Familiarity with EVs**: 1 in 2 EV skeptics have never heard about EVs or don't think they can explain what it is, with lowest familiarity in Japan and France
- **Ability to charge at home**: 28% of EV skeptics say they have no ability to charge at home, highest in Japan (43%) and lowest in Brazil (15%)
- **Technology skepticism**: More than half of EV skeptics say they don't like to occupy themselves with new technology, in Australia even 63%
- **Petrol heads**: 14% of EV skeptics just enjoy driving a combustion engine car, mostly in Germany (28%) and US (18%)

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954

Data available for: ⚡️
29% of EV owners globally likely to switch back to ICE, mostly because of difficulties with charging

Share of EV owners (very) likely to switch back to ICE

Likelihood of current EV owners to switch back to ICE

Reasons to switch back to ICE

Global respondents

- Charging infrastructure in public not yet good enough for me: 35%
- Total costs of ownership too high: 34%
- Driving patterns on long distance trips too much impacted: 32%
- Cannot charge at home: 24%
- Needing to worry about charging is too stressful: 21%
- Changing mobility requirements: 16%
- Do not like the driving experience: 13%

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954

Data available for: 🇦🇺 Australia, 🇺🇸 USA, 🇧🇷 Brazil, 🇨🇳 China, 🇩🇪 Germany, 🇳🇴 Norway, 🇸🇪 Sweden, 🇬🇧 United Kingdom, 🇮🇹 Italy, 🇫🇷 France, 🇮🇱 Israel, 🇨🇱 Chile, 🇧🇷 Brazil
The current economic situation is heavily impacting car purchase behaviors – online buying is becoming more important

Expected adjustments to next car purchase given current economic situation
Share of respondents (very) likely

<table>
<thead>
<tr>
<th>Postpone switch to electric vehicle</th>
<th>Extend holding period of current car</th>
</tr>
</thead>
<tbody>
<tr>
<td>44%</td>
<td>58%</td>
</tr>
</tbody>
</table>

Preferred purchase channel for next electric vehicle
Share of US respondents who consider to own an electric vehicle in the future

- ~80% prefer to order online
- 50% prefer to order online
- 50% prefer to test drive

Trade down at next purchase

<table>
<thead>
<tr>
<th>ICE buyer</th>
<th>EV buyer</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>53</td>
</tr>
</tbody>
</table>

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954, US N = 4,112

Data available for:
- Configure
- Search
- Test drive
- Negotiate/clear questions
- Order
- Schedule service
Electric vehicle buyers consider in-car technology more important than the average car buyer

Key decision factors for next car purchase
Relative importance of factor indexed to 100

<table>
<thead>
<tr>
<th>Factor</th>
<th>All car buyers</th>
<th>EV buyers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle consumption / efficiency</td>
<td>100</td>
<td>99</td>
</tr>
<tr>
<td>Driving performance and handling</td>
<td>98</td>
<td>90</td>
</tr>
<tr>
<td>Purchase price</td>
<td>96</td>
<td>89</td>
</tr>
<tr>
<td>Total cost of ownership</td>
<td>80</td>
<td>82</td>
</tr>
<tr>
<td>Driving range of the vehicle</td>
<td>79</td>
<td>75</td>
</tr>
<tr>
<td>Technology-enabled safety</td>
<td>79</td>
<td>88</td>
</tr>
<tr>
<td>Size and functionality of the vehicle</td>
<td>79</td>
<td>78</td>
</tr>
<tr>
<td>Sustainability</td>
<td>78</td>
<td>75</td>
</tr>
<tr>
<td>Discounts/subsidies received</td>
<td>58</td>
<td>64</td>
</tr>
<tr>
<td>Cutting-edge technology in vehicle</td>
<td>57</td>
<td>65</td>
</tr>
<tr>
<td>Vehicle brand</td>
<td>55</td>
<td>57</td>
</tr>
<tr>
<td>Experience this vehicle type/ brand</td>
<td>50</td>
<td>49</td>
</tr>
<tr>
<td>Zero-carbon car</td>
<td>49</td>
<td>49</td>
</tr>
<tr>
<td>Exterior design, look and colors</td>
<td>47</td>
<td>56</td>
</tr>
<tr>
<td>Maturity of driver assistance systems</td>
<td>47</td>
<td>53</td>
</tr>
<tr>
<td>Premium materials used</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Interior design</td>
<td>46</td>
<td></td>
</tr>
<tr>
<td>Connectivity offerings</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>In-car assistant / voice control</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>Reputation and status</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>Size of on-board multimedia screens</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>Discount/subsidies received</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>In-car assistant / voice control</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Reputation and status</td>
<td>28</td>
<td></td>
</tr>
<tr>
<td>Size of on-board multimedia screens</td>
<td>22</td>
<td></td>
</tr>
</tbody>
</table>

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954

Main purchase factors
Most important factors for car purchase decision, often driven by external constraints such as budget (price/ cost of ownership) and needs (vehicle size, range)

Rounding out factors
Factors that influence the purchase decision, after basic requirements are met → central playing field for differentiation

Non-essential factors
Elements that do not influence car purchase decision
Contents

Electrification intent and EV buying

**EV charging**

Connectivity

Autonomous driving technologies

General mobility patterns, urban and micromobility
Satisfaction with charging availability has improved slightly, but still has a long way to go

**Perception of charging infrastructure readiness**
Share of respondents globally

<table>
<thead>
<tr>
<th></th>
<th>EV considerers</th>
<th>EV owners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Along highways</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and main roads</td>
<td></td>
</tr>
<tr>
<td>Well set up in terms of charge points</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>Getting close to having enough charge</td>
<td>24</td>
<td>27</td>
</tr>
<tr>
<td>Enough charge points for today but not future</td>
<td>20</td>
<td>21</td>
</tr>
<tr>
<td>Still missing chargers</td>
<td>49</td>
<td>44</td>
</tr>
</tbody>
</table>

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954

Data available for: Global insights

Global insights

↑ ↓ Trend since 2022
Battery range expectations have been increasing over time – up 30% over last 5 years

BEV battery range expectations historically and by segment
For respondents considering to get an electric vehicle, in miles

<table>
<thead>
<tr>
<th>Year</th>
<th>Entry &amp; Volume</th>
<th>Premium &amp; Luxury</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>221</td>
<td>289</td>
</tr>
<tr>
<td>20</td>
<td>230</td>
<td>306</td>
</tr>
<tr>
<td>21</td>
<td>249</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>271</td>
<td></td>
</tr>
<tr>
<td>Today</td>
<td>291</td>
<td></td>
</tr>
</tbody>
</table>

Range expectations are similar across segments and approx. 30% above real-life average range on market today

What are the minimum range expectations (based on one full charge) for you to consider getting yourself an electric vehicle?

1. Real life range with assumed mix of city, country and highway driving

Additional Insights

Range expectations have been increasing over time (+ ~30% in the past 5 years) and are outpacing actual range improvements: Since 2022 consumers demand 5% more range, while actual range increased by only 2%

Consumers who want to buy an EV as a secondary vehicle have almost identical range expectations as those who are looking for a primary vehicle

47% of EV considerers say that current EV driving range prevents them from purchasing one

Source: MCFM MEM, IHS, MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954
Data available for: ~220 miles avg. range¹

¹ Real life range with assumed mix of city, country and highway driving
EV skepticism and age are strongest influencing factors for battery range expectations

Battery range requirements for customers to be willing to switch from ICE to EV

Battery range in miles, global average battery range requirement of 291 miles

- **BEV intender**
  - Rural: 286
  - Urban: 292

- **PHEV intender**
  - Rural: 291

- **One or a few more ICE Skeptics**
  - Rural: 322

- **BEV intenders**
  - Less battery range overall

- **Volume/Entry**
  - BEV: 289

- **Premium**
  - BEV: 306

- **Premium brand buyers**
  - ~6% more battery range

- **GenZ**
  - 290

- **Millenials**
  - 289

- **GenX**
  - 305

- **Boomers**
  - Substantially less battery range

- **Primary HH car**
  - 297

- **Multi-car households**
  - ~4% less battery range

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954

Data available for: Global insights

1 of 2

of EV considerers says they are anxious about buying an EV because of limited driving range
Contents

Electrification intent and EV buying
EV charging

Connectivity

Autonomous driving technologies
General mobility patterns, urban and micromobility
Consumers looking to increase usage of digital services in their car significantly – yet only 20% are satisfied with today’s offering

Future usage of in-car connectivity solutions
Share of respondents

<table>
<thead>
<tr>
<th></th>
<th>Traditional car buyer</th>
<th>Electric vehicle buyer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use more than today</td>
<td>48</td>
<td>59</td>
</tr>
<tr>
<td>Use similar to today</td>
<td>40</td>
<td>29</td>
</tr>
<tr>
<td>Use less than today</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>

only 20%

of consumers are satisfied with their current in-car connectivity offerings

Pain points of digital car solutions and connectivity offers
Share of respondents

- It distracts me from driving: 26%
- It's too complicated to use: 22%
- I'm happy with connectivity on my car: 20%
- I don't use the features often: 16%
- Missing features on my vehicle: 14%
- Dealer didn’t show me the features: 13%
- Not familiar with existing features on my car: 13%
- I feel reluctant to the technology: 13%
- Smartphone is more than enough: 13%
- Feel it's a trick from manufacturers: 9%
- The connectivity feature doesn’t have any value to me: 8%

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954

Data available for: 🇺🇸 🇺🇦 🇦🇺 🇨🇳 🇫🇷 🇩🇪 🇮🇹 🇸🇪 🇫🇮 🇤🇪 🇧🇷
Majority of car buyers anchors on smartphone integration systems as default connectivity experience

1 out of 3 car buyers **would not buy a car without smartphone integration**, another 20-30% is open to pay for it

Only **35% of customers** would **switch to using native system** if smartphone integration was cut – **14% at risk for switching brand**

Would you buy a car that has no automatic smartphone integration interface as part of its base vehicle specification?

- **Yes - buy without**
  - **EV buyers**: 42
  - **Traditional car buyers**: 47

- **Yes - if configurable against a fee**
  - **EV buyers**: 29
  - **Traditional car buyers**: 17

- **No - would not buy without**
  - **EV buyers**: 30
  - **Traditional car buyers**: 35

What would you do, if smartphone integration was no longer available in your car to project your smartphone content?

- **Switch to using native systems**
  - **35%**

- **Keep using smartphone only**
  - **52%**

- **Switch to other brand at next purchase**
  - **14% at risk**

- **Keep current brand**

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954
Contents

Electrification intent and EV buying
EV charging
Connectivity

Autonomous driving technologies

General mobility patterns, urban and micromobility
**Driver assistance features as core purchase factor for 21% of global car buyers**

Importance of driver assistance features for car purchase
Share of respondents

<table>
<thead>
<tr>
<th>Country</th>
<th>Fans</th>
<th>Considerers</th>
<th>Agnostics</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>51</td>
<td>34</td>
<td>15</td>
</tr>
<tr>
<td>Japan</td>
<td>38</td>
<td>44</td>
<td>18</td>
</tr>
<tr>
<td>Brazil</td>
<td>17</td>
<td>63</td>
<td>20</td>
</tr>
<tr>
<td>Italy</td>
<td>17</td>
<td>57</td>
<td>25</td>
</tr>
<tr>
<td>Australia</td>
<td>13</td>
<td>44</td>
<td>43</td>
</tr>
<tr>
<td>Norway</td>
<td>10</td>
<td>46</td>
<td>44</td>
</tr>
<tr>
<td>Germany</td>
<td>11</td>
<td>51</td>
<td>38</td>
</tr>
<tr>
<td>France</td>
<td>9</td>
<td>51</td>
<td>40</td>
</tr>
<tr>
<td>USA</td>
<td>9</td>
<td>43</td>
<td>48</td>
</tr>
<tr>
<td>Global</td>
<td>21</td>
<td>48</td>
<td>31</td>
</tr>
</tbody>
</table>

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954

Data available for:

- Location
- Importance of driver assistance features for car purchase
- Share of respondents

**3 groups of car buyers regarding driver assistance features**

- **Fans**: Mature driver assistance features are among main purchase factors
- **Considerers**: Driver assistance features are rounding out purchase factors, car purchase decision is determined by other factors
- **Agnostics**: Driver assistance features are non-essential purchase factors
Overall readiness to adopt autonomous driving technology varies across markets, safety is the biggest concern

Agreement to government legalization of fully autonomous cars on the roads
Share of respondents

<table>
<thead>
<tr>
<th>Country</th>
<th>Yes, already today</th>
<th>Yes, but only in a few years</th>
<th>No, never</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>31</td>
<td>66</td>
<td>3</td>
</tr>
<tr>
<td>Brazil</td>
<td>29</td>
<td>64</td>
<td>8</td>
</tr>
<tr>
<td>Italy</td>
<td>17</td>
<td>60</td>
<td>23</td>
</tr>
<tr>
<td>Japan</td>
<td>15</td>
<td>62</td>
<td>23</td>
</tr>
<tr>
<td>France</td>
<td>12</td>
<td>57</td>
<td>31</td>
</tr>
<tr>
<td>Germany</td>
<td>11</td>
<td>54</td>
<td>34</td>
</tr>
<tr>
<td>USA</td>
<td>11</td>
<td>48</td>
<td>41</td>
</tr>
<tr>
<td>Australia</td>
<td>10</td>
<td>58</td>
<td>32</td>
</tr>
<tr>
<td>Norway</td>
<td>9</td>
<td>64</td>
<td>28</td>
</tr>
<tr>
<td>Ø 16</td>
<td></td>
<td>Ø 59</td>
<td>Ø 25</td>
</tr>
</tbody>
</table>

Main roadblocks to adopt autonomous driving technology
Share of global respondents

- Safety has to increase
- Improved road infrastructure
- More regulations
- Need to test it myself
- Flexible operating system where I can still intervene if needed
- Car manufacturer to give more information on technology
- I need to read more about it in the news
- Pilot AV project with 1 million miles
- Pilot AV project with 1000+ customers
- Friends/family test it
- Companies/employers allowing it
- Entirely different car designs (e.g., car as cinema on wheels)
- Other players should offer autonomous driving

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954

Data available for: [List of countries]
Majority of urban mobility users is open to using shared autonomous shuttles

Consideration to use shared autonomous shuttles
Share of urban respondents

- Yes
- No - privacy concern
- No - travel time concern

<table>
<thead>
<tr>
<th>Overall</th>
<th>Yes</th>
<th>No - privacy concern</th>
<th>No - travel time concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>72</td>
<td>14</td>
<td>15</td>
<td>14</td>
</tr>
<tr>
<td>14</td>
<td>9</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>17</td>
<td>11</td>
<td>12</td>
<td>17</td>
</tr>
<tr>
<td>22</td>
<td>22</td>
<td>12</td>
<td>10</td>
</tr>
<tr>
<td>16</td>
<td>16</td>
<td>15</td>
<td>15</td>
</tr>
</tbody>
</table>

Mobility mode replaced by shared AV shuttles
Share of global urban respondents who consider using AV shuttles

<table>
<thead>
<tr>
<th>Transport Mode</th>
<th>Consideration to use</th>
<th>Mobility mode replaced by shared AV shuttles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public transit</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Micromobility</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>Car sharing</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td>Walk-hailing / Taxi</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Private vehicle</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Walking</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>New trips only</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Would you share a Robo-shuttle service with 4-8 passengers if it would add not more than 10-15% to your travel time and saved you 50% of the cost?

Which transport mode are you currently using for the trips that you plan to use a robo-shuttle for in the future?

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954
Data available for: McKinsey & Company 24
Consumers are open towards autonomous taxi services and most expect to pay less than for a traditional taxi

Consideration to use autonomous taxis
Share of respondents

<table>
<thead>
<tr>
<th>With operator on board</th>
<th>Completely driverless</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Very) likely</td>
<td>27</td>
</tr>
<tr>
<td>Rather likely</td>
<td>41</td>
</tr>
<tr>
<td>Not likely</td>
<td>48</td>
</tr>
</tbody>
</table>

Provided the technology is safe and service operations are reliably established, how likely are you to use autonomous taxi services?

Price expectation for autonomous taxis vs. traditional taxi
Share of respondents who consider using

<table>
<thead>
<tr>
<th>Expect to pay less than for traditional taxi</th>
<th>Expect to pay more than for traditional taxi</th>
<th>Same price</th>
</tr>
</thead>
<tbody>
<tr>
<td>48</td>
<td>30</td>
<td>22</td>
</tr>
</tbody>
</table>

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954
Data available for: 🇺🇸 🇩🇪 🇳🇴 🇮🇹 🇫🇷 🇪🇸 🇧🇷
Consumers are open towards autonomous taxi services and most expect to pay less than for a traditional taxi

### Consideration to use autonomous taxis

Share of respondents

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Very) likely</td>
<td>Rather likely</td>
<td>Not likely</td>
</tr>
<tr>
<td>With operator on board</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completely driverless</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>41</td>
<td>44</td>
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<td>33</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>20</td>
<td>28</td>
</tr>
</tbody>
</table>

Provided the technology is safe and service operations are reliably established, how likely are you to use autonomous taxi services?

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954

Data available for: 🇺🇸 🇩🇪 🇫🇮 🇫🇷 🇬🇧 🇦🇷 🇧🇷
Contents

Electrification intent and EV buying
EV charging
Connectivity
Autonomous driving technologies
General mobility patterns, urban and micromobility
29% want to replace their car by other forms of transport in the future – driven by cost and sustainability concerns

“Within the next 10 years, I will replace my private vehicle completely with other forms of transport.”

Share of respondents, who own a car

<table>
<thead>
<tr>
<th>December 2021</th>
<th>December 2022</th>
<th>February 2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>14</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

Groups with highest rate
- Electric vehicle owners: 34%
- Urban car owners: 37%

Main reasons to replace car entirely in the future

- Car becomes too expensive
- Live a more sustainable lifestyle
- Switch to home office, no commute any more
- Car will be obsolete by then
- Expect shared mobility available at scale
- Don’t feel safe driving anymore
- Use ride hailing services instead
- I do not like driving
- Expect regulatory car bans in cities

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954
Stop counting cars and start counting users – classical ownership shifts to an access and usership mindset

Consumer sentiment on flexible mobility ownership
Share of respondents

Do not agree  Rather agree  (Completely) agree

**Within the next 10 years, I want flexible usership models to be in place so that I only pay for the rides I take with a private vehicle.**

<table>
<thead>
<tr>
<th></th>
<th>Overall</th>
<th>Younger generations</th>
<th>Older generations</th>
<th>Traditional car buyer</th>
<th>EV buyer</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not agree</td>
<td>38</td>
<td>46</td>
<td>27</td>
<td>23</td>
<td>50</td>
<td>23</td>
<td>50</td>
</tr>
<tr>
<td>Rather agree</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>27</td>
<td>34</td>
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<td>23</td>
<td>50</td>
<td>26</td>
</tr>
</tbody>
</table>

Source: MCFM Mobility Consumer Insights, Annual MCFM Mobility Consumer Survey 2024, dated February 2024, global N = 36,954
Data available for: USA, Germany, France, Italy, UK, Spain, Brazil
The McKinsey Mobility Consumer Pulse listens to the consumer heartbeat across the main future mobility themes

**On-demand mobility consumer insights**

100,000+ consumer data points each year to gauge future mobility consumer sentiment

- **Regular global mobility consumer pulse**
  - Regular primary consumer research using online panels: thematic deep dives every two months, one big annual survey
  - Collecting more than 100,000 consumer data points each year – covering wide range of mobility topics across B2C/B2B ecosystem
  - Working together with world-class consumer research agencies

- **Integrated MCFM consumer data lake**
  - One data lake with harmonized data structure and labeling across the best of our MCFM consumer knowledge
  - Central access to historic trajectories of more than 5 years on selected dimensions to capture consumer trends and speed of mobility evolution

- **Tableau-based analytics interfaces for rapid data access**
  - Tableau Workbench tools as flexible data exploration and analytics interface to rapidly work with mobility consumer data

**McKinsey Mobility Insights Portal**