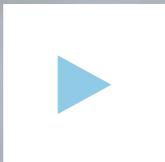




Ministry of Infrastructure  
and Water Management

# Has COVID led to a structural change in travel behaviour?

Initial insights based on a follow-up measurement with the Netherlands Mobility Panel (MPN)



KiM | Netherlands Institute for Transport Policy Analysis

Mathijs de Haas, Marije Hamersma and Roel Faber

# Highlights

Corona has had a major impact on society, as well as on mobility. We are currently in a phase in which almost all measures have been scrapped. In the current situation (May 2022) people are less likely to report that the pandemic has had a major negative personal impact than in previous periods during the pandemic. A smaller percentage than in previous periods (still a majority of 55%) also expects the pandemic to have a major impact on society in the longer term (previous periods between 80% and 90%). The most important insights based on a new measurement with the Netherlands Mobility Panel (MPN) in May 2022 are:

## Work

### Working from home

- In May 2022, respondents are working an average of 6.5 hours from home. This is less than at the peak during COVID (12h), but more than pre-COVID (approx. 3h). Over the longer term, respondents expect to continue working from home for an average of 6 hours. This expectation is on average the same as in the previous year (April 2021), when we also asked respondents about the long-term forecast for a situation without COVID measures.
- The increase in hours working from home compared to pre-COVID is higher than average in some groups, e.g. among highly educated people (from 5h to 11h) and among those travelling to and from work by public transport (from 4h to 14h).
- In May 2022, around 50% of workers indicate that their work was not suitable for working from home. Of the other workers, the majority indicate that they are currently free to decide for themselves whether to work from home or at the workplace.
- Approximately 14% of workers report that their employers have improved facilities for hybrid meetings as a result of COVID and working from home, compared with 30% of those in office functions.
- Homeworkers are slightly more positive about working from home than they were during previous periods of the pandemic. Colleagues are less missed when working from home and fewer physical and psychological complaints are experienced.
- 67% of those who have experience with online meetings are positive about this, which is comparable to April 2021. 55% are positive about hybrid meetings. In April 2021, this was 48%.



- Approx. 50% of workers with experience with digital meetings also expect to meet physically less often in the longer term than pre-COVID.

### Work-related travel

- Workers make work-related trips on fewer days than pre-COVID, and expect this situation to continue. As pre-COVID, Tuesday and Thursday are the days with the most work-related trips.
- Even after COVID, the car remains the most important mode of transport for commuting (about 50% of workers). The share of public transport has decreased slightly compared to pre-COVID; the share of bike use has increased slightly. The growth of bike use is mainly due to the growth of the e-bike.
- 2.5% of homeworkers indicate that they have decided on, or are considering, working from home to take up a job further away. Approx. 4% have decided on, or are considering, moving to a home further away from the workplace due to working from home.

## Education

### Home education

- Those in secondary and tertiary education have almost all returned to education either entirely on location (almost 70%) or partly on location and partly at home (almost 25%). In higher professional education (HBO/WO), students are more likely to attend (part of) their education at home than in secondary education and senior secondary vocational education (MBO).
- Some of those in secondary and tertiary education indicate that their institution has set up more facilities for hybrid education. In addition, extra rooms for digital consultations have been created at HBO/WO, and some rooms are more geared towards meetings.
- Just over 40% of those in secondary and tertiary education find home education pleasant. This picture has not changed since the August 2021 measurement.
- Only theoretical lessons are considered suitable for home education by a majority (65%) of students and schoolchildren. Students find other forms of education less suitable for home education. For example, almost none of them find practical lessons suitable for home education. Group work is considered to be suitable by 10-15%, consultations with fellow students by 40% and with lecturers by 45%.
- In the longer term, there is likely to be less home education for secondary education and secondary vocational education (MBO) than those in secondary and tertiary education would like. At HBO/WO, students would prefer to attend home education more often than they expect to be able to.

### Education-related travel

- Those in secondary and tertiary education expect to make fewer educational-related trips than they did pre-COVID, especially on Wednesdays and Fridays. On Mondays and Thursdays, the expected difference is very limited.

### Outdoor activities

- The frequency with which various activities outside the home are undertaken is slightly lower than the frequency before the pandemic in May 2022. In particular, the percentage of people who (almost) never shop (from 7% to 14%) or (almost) never go out for a day (from 6% to 16%) has risen sharply in relative terms.
- Almost one in five people in the Netherlands order groceries online more often (18%) or have meals delivered to their homes more often (20%) than before the pandemic. A slightly larger group (25%) shops more often online.

- Approximately 17% of Dutch people have meals delivered to their homes at least once a month in May 2022. In April 2021, this was slightly higher at 23%.

### Travel behaviour

- Since January 2021, the percentage of people who do not leave their home on an average day has been falling. This share is currently still about 4% higher than before the pandemic (now: ±24%, October 2019: ±20%).
- Dutch people are currently travelling even less often than before the pandemic. However, the number of trips every three days is the same as in October 2021 and is higher than in previous periods during the pandemic. The distance travelled is also lower than before the pandemic. However, the distance has increased since October 2021. The Dutch therefore visit destinations further away from home more often than in October 2021.
- Travel by public transport in particular is less frequent than before the pandemic. Although the use of the normal bike is also lower, the use of the e-bike has been higher since April 2021 than before the pandemic.
- Since the start of the pandemic, people have been less positive about the train and bus, tram and metro. With regard to the car, they became a little more positive, while the judgement about the bike and walking remained almost the same. Although people are still less positive about public transport at the moment, there has been a rising trend in the assessment since January 2021. People are now as positive about the car as they were before the pandemic.
- Almost 20% of Dutch people who have ever used public transport expect to use public transport less frequently than before the pandemic. A smaller group expects to do so more often (9% for the train, 6% for the bus, tram or metro (btm)). Cycling and walking is expected to increase by around 19% of people, while only 3% expect a decrease. With regard to car use, the group that expects a decrease in car use is as large as the group that expects an increase. These expectations cannot be translated directly into an effect on mobility. To this end, several factors must be taken into account, such as the frequency with which the mode of transport was used before the pandemic and the extent to which that use has changed.
- Around a quarter (25%) of Dutch people with experience of flying for personal reasons expect to do so less in the future than pre-COVID, while around 5% expect an increase. In October 2021, 20% expected a decrease and 13% an increase compared to pre-COVID.

# Reason, purpose and approach

## Reason and purpose

In 2020, measures were taken for the first time in the Netherlands to combat the spread of the coronavirus. The fear of infection with the virus and the measures introduced have had a strong impact on mobility for two years. At the end of March 2020, the Netherlands Institute for Transport Policy Analysis (KiM) carried out a first measurement with the Netherlands Mobility Panel (MPN) to clarify the consequences for mobility experience and behaviour and expectations for the future. This was followed by seven measurements among the same group of respondents during different phases of the COVID pandemic. Since mid-March 2022, virtually all measures have been scrapped. Now the question arises to what extent the behaviour of Dutch people has already changed structurally as a result of COVID and to what extent expectations have (already) been fulfilled. In order to give an indication of this, the KiM has again carried out a measurement.

## Approach

The study was carried out on a sample of around 2,000 panel members of the Mobility Panel Netherlands (MPN). The MPN consists of a representative group of Dutch people who have been surveyed annually since 2013 about their travel behaviour. All panel members who also participated in the previous measurements during the pandemic were invited to participate in this study. This makes it possible to compare the travel behaviour in the current period with the travel behaviour of the same group of Dutch people both before and during the COVID pandemic.

In the period from 11 May to 22 May 2022, the panel members were asked to complete a 'travel diary' for three consecutive days, supplemented by a personal questionnaire. The questionnaire focuses on mapping current travel behaviour, related experience aspects and expectations for the future (as long as no new COVID measures are in place). By repeating a large part of the questions from the previous measurement, it was investigated how these different aspects have changed in recent times.

At the time of the data collection, virtually all measures taken by the government to limit the spread of the new coronavirus (COVID-19) had been relaxed. However, until 20 May, the Netherlands still required a mask to be worn at the airport. In addition, the basic recommendations to prevent the spread of the virus are still valid: washing hands, coughing and sneezing into the elbow, staying at home and (self)testing in case of complaints, obtaining fresh air and getting a vaccine or booster or repeat injection.

We asked respondents about their current behaviour. In some cases, we asked participants to compare this behaviour with their behaviour before the pandemic had had an effect on their personal situation (retrospective questions). We also asked about the prospects for the longer-term future (as long as there are no new COVID measures) on a number of topics. The response was 1,743 completed diaries and 1,930 completed questionnaires, a net response of 80% and 88% respectively.

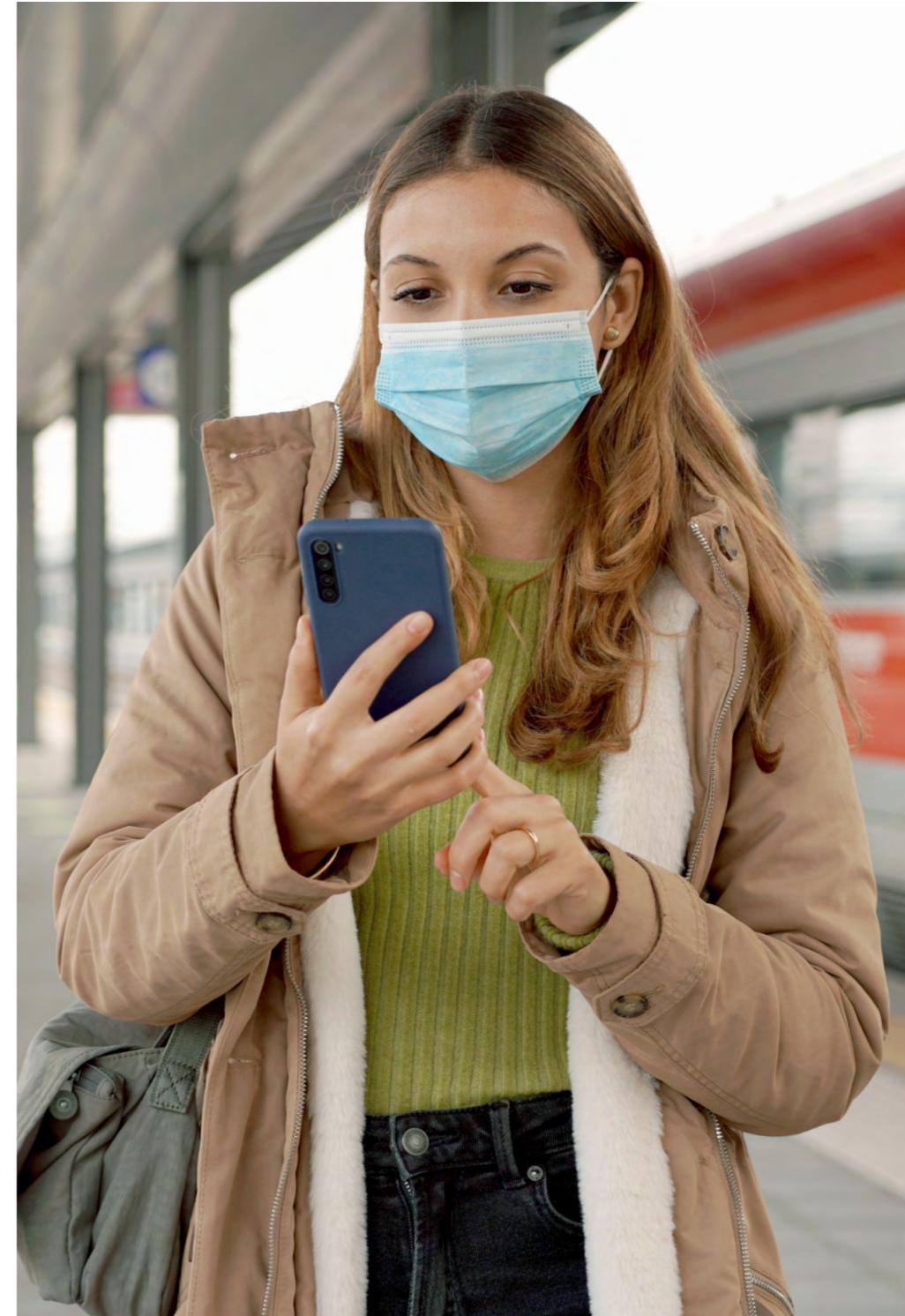
This is now the eighth measurement in the context of corona. For each new measurement, we always ask the same group of respondents who also participated in previous measurements to participate in a new measurement. This has two consequences, which can influence the results. Firstly, the sample dilutes each measurement, as about 10% of the invited respondents do not participate in a subsequent measurement. This attrition is not completely random. By using a weighting, we try to correct this. Secondly, there is outflow from this sample, but no inflow. This means that the average age in the sample increases with time. More than two years have passed since the start of these corona measurements. At that time, the effects for most subjects are not yet so great. However, this is the case with young people and education in particular: many of those in secondary and tertiary education have taken a step in their educational careers: they have passed the final examination and are going to study, graduate from their bachelor's degree or study programme. A logical consequence of this is that the (travel) behaviour of these people changes in any case, irrespective of any effects of corona. Not all changes in (travel) behaviour are therefore attributable to the pandemic.

## Contents of this document

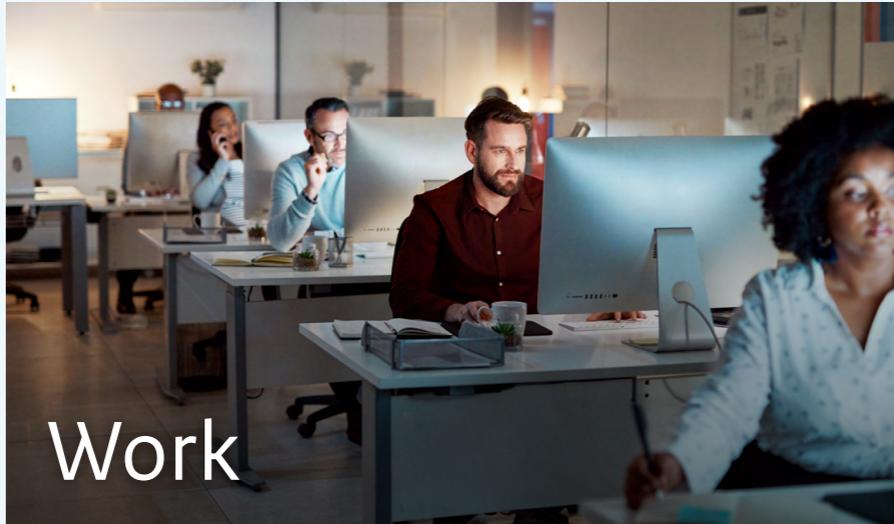
This document presents the most important insights from the research. It has been achieved with the help of descriptive analyses. Here and there, a distinction is made according to relevant background characteristics such as age or region. Sometimes the current situation is compared with the situation during and pre-COVID. Because some of the respondents have dropped out of the panel since previous measurements, the sample is not exactly the same as that of previous measurements. We generally focus on respondents who have participated in all relevant measurements. As a result, results from previous measurements do not always correspond exactly to the publications on this previous measurement(s). In this document, we explore the extent to which current behaviour is structurally different from pre-COVID. Any changes could be a consequence of the COVID pandemic, but could also be influenced by other developments, such as the recent rise in energy prices (due to the situation in Ukraine). Fluctuations in the weather, changes in the personal situation (such as life events) and non-weather-related seasonal effects can also cause variation between measurements. No adjustment has been made for these effects.

## Bookmark

We discuss the findings on the basis of five themes. First, we will look at work and education, after which we will outline the changes in the activity pattern. The changes in travel behaviour are then discussed. The document concludes with the respondents' attitudes towards current (mobility-related) social developments.



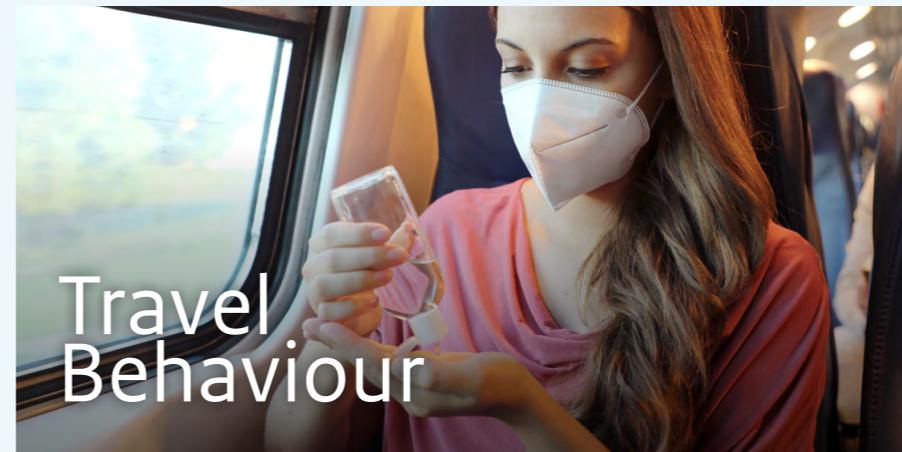
# Contents



Work



Outdoor activities



Travel Behaviour



Education



Social developments



# Work

## Degree of working from home

- Just over 40% of working respondents is working from home at least one hour a week in May 2022. This is more than pre-COVID (about 30%), and slightly less than at most times during the COVID pandemic (between 40 and 50% varying over time periods). In May 2022, approx. 24% of the working population worked 1-49% of working hours from home; 17.5% worked 50-100% of working hours from home (Figure 1).
- In the longer term (as long as there are no new COVID measures), workers expect to continue to work from home slightly less than they do now, but more than pre-COVID. In particular, the group that works 25-74% of the time from home seems to be at a structurally higher level than pre-COVID; the group that works 1 to 25% of the time from home is decreasing.
- The expectations for the longer term in May 2022 and April 2021 correspond fairly well; for about 75% of workers, the longer term expectation of the percentage of time working from home in May 2022 is the same as that of the previous year.

Figure 1: Percentage of time worked from home during various measurements

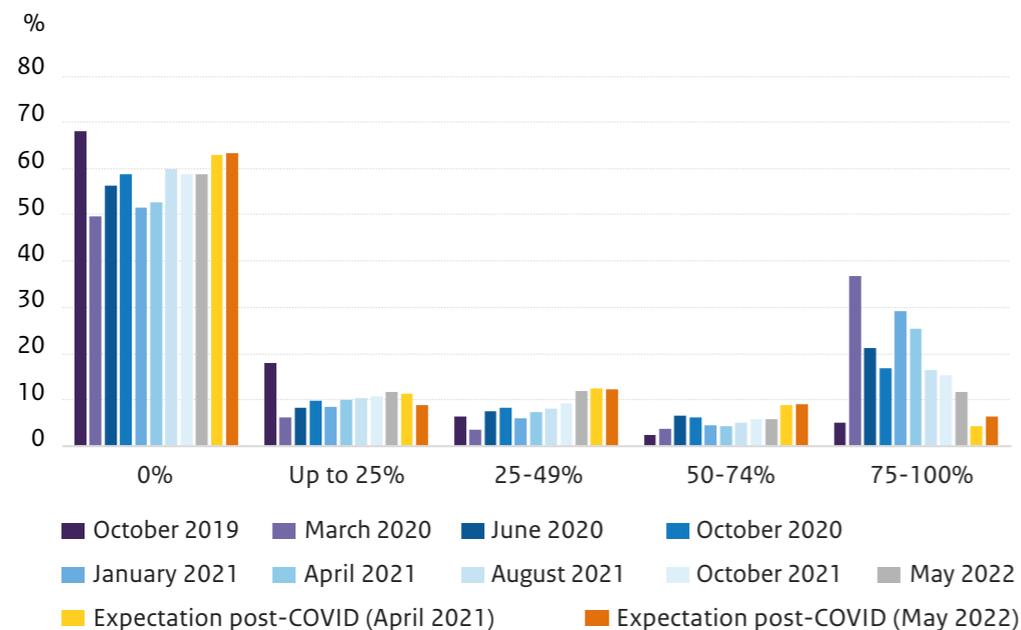
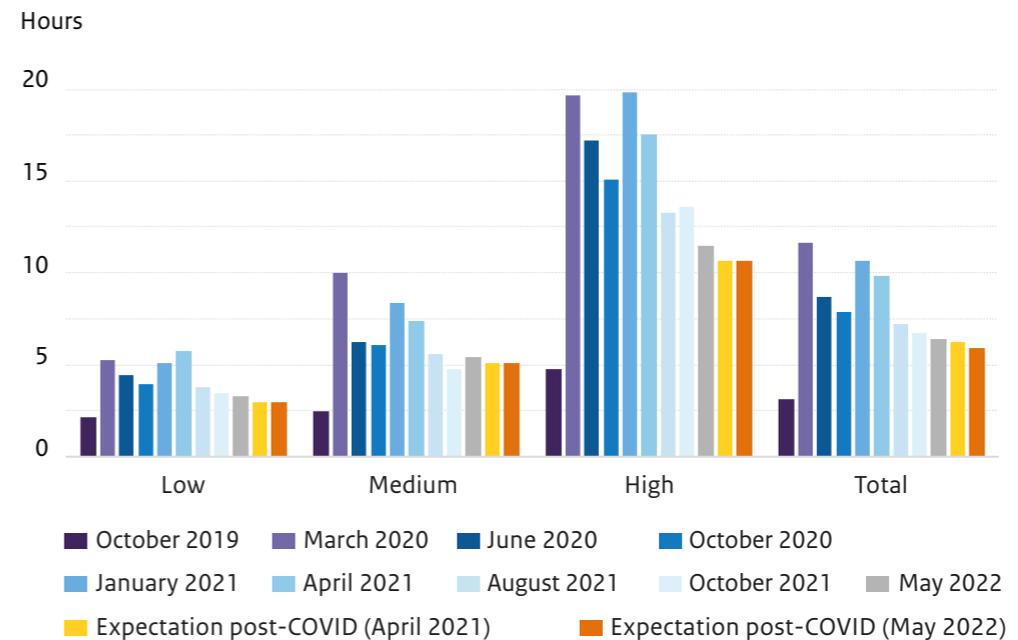


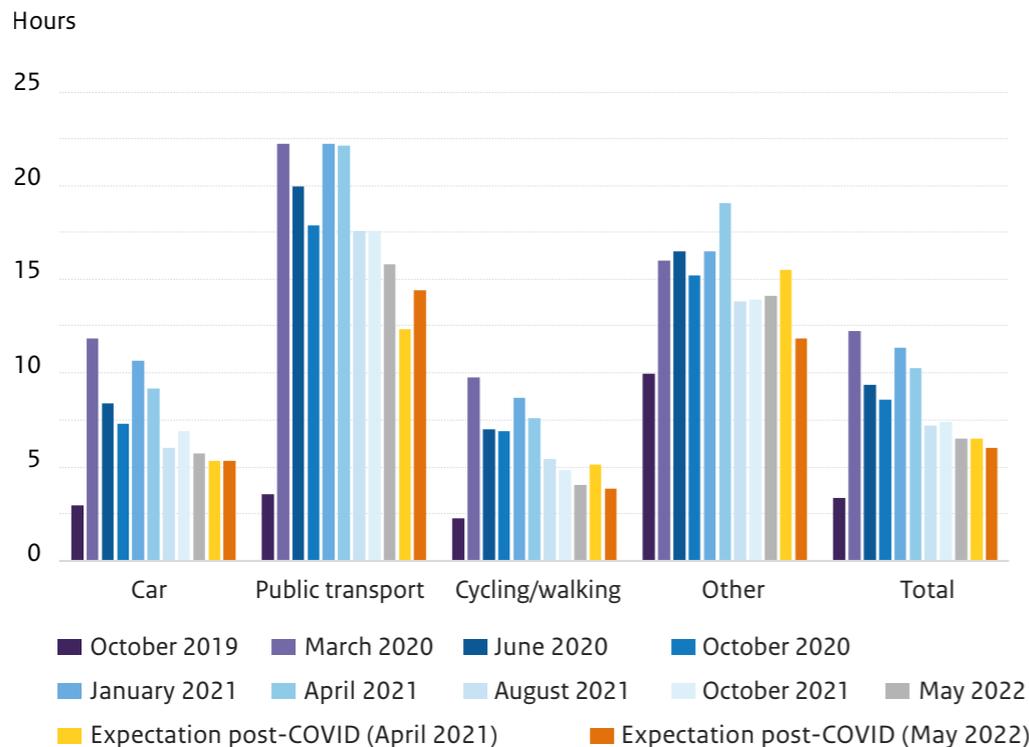
Figure 2: Average number of hours working from home before, during and expectation post-COVID according to education level



- The average number of hours working from home per week in May 2022 is approximately 100% higher than before the start of the COVID pandemic (then: 3h, now 6.5h). According to workers, this will be reduced somewhat in the coming period, to an average of 6 hours (Figure 2).
- The (expected) increase compared to pre-COVID is greater among those with an HBO/WO degree (from approx. 5 hours to 11 hours) (Figure 2). We also see more marked increases among those living in urban areas (from approx. 3 hours to 6.5 hours) and among those with an office function (from approx. 4 hours to 12 hours) or management function (from 4 hours to 9 hours). The difference in hours working from home before and after COVID measures is also significantly greater for those who travel to work with public transport (from approx. 3.5 hours to 14.5 hours) (Figure 3).

- People currently working an average of 4 working days work approx. 1 day a week all day at home and 2.5 days entirely at the workplace. The remaining 0.5 days are spent working partly from home and partly at the workplace.

**Figure 3:** Average number of hours working from home before, during and expectation post-COVID according to mode of transport for commuting

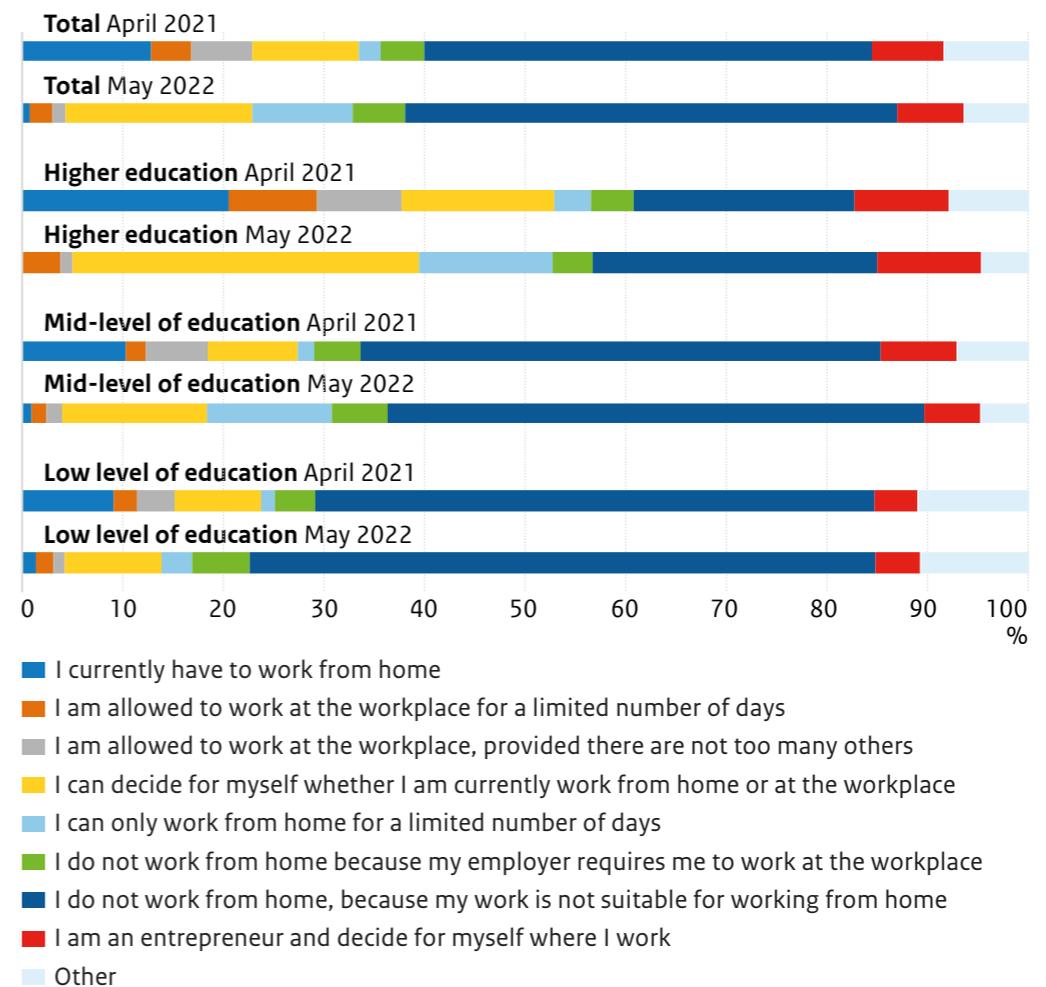


### Employer policy

- Approx. 49% of workers indicated in May 2022 that their work is not suitable for working from home; this is slightly higher than in April 2021 when we also submitted this question to respondents (then: 44%) (Figure 4). The slight increase can be due to a change in work, or because home working opportunities for the position with the employer have decreased.
- Among workers with an office function or with a management function, the percentage that indicates that the work is not suitable for working from home is significantly lower (18% and 32%, respectively) than other job types; the same applies to workers in companies with more than 500 workers (40%) and to those with a higher professional education (HBO/WO) (28%) (see Figure 4).

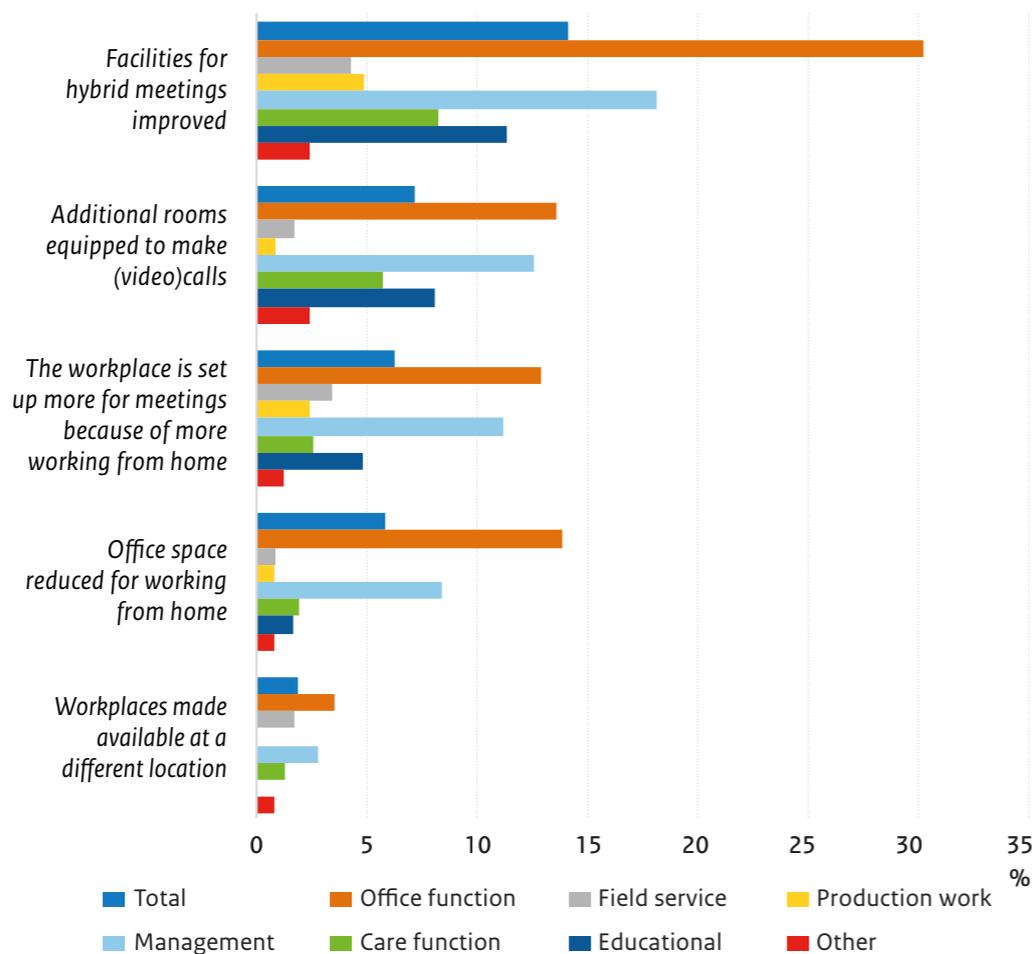
- Of those with a job that (according to them) lends itself to working from home, the majority indicate that they are currently able to decide for themselves whether they work from home or at the workplace (19% of all workers). Approximately 10% of workers indicate that they are currently allowed by their employer to work from home for a limited number of days.
- Whereas around 13% of working respondents still had to work from home in April 2021 on the instructions of their employers, this is no longer the case for virtually all respondents in May 2022.

**Figure 4:** Employer's policy on working from home, total and according to education level



- A minority of workers indicate that their employer has made changes to the workplace with a view to working from home. On average, around 14% of the working population indicated in May 2022 that their employer had improved facilities for hybrid meetings. 7% indicate that the employer has created more rooms for video calls and 6% indicate that their employer has reduced office space. In addition, 6% indicate that their employer has rearranged the workplace more for meetings. Only about 2% of all workers indicate that their employer has made workplaces available at a different location (Figure 5).
- Workers with an office function or a management function clearly indicate more often that their employer has made changes (Figure 5).

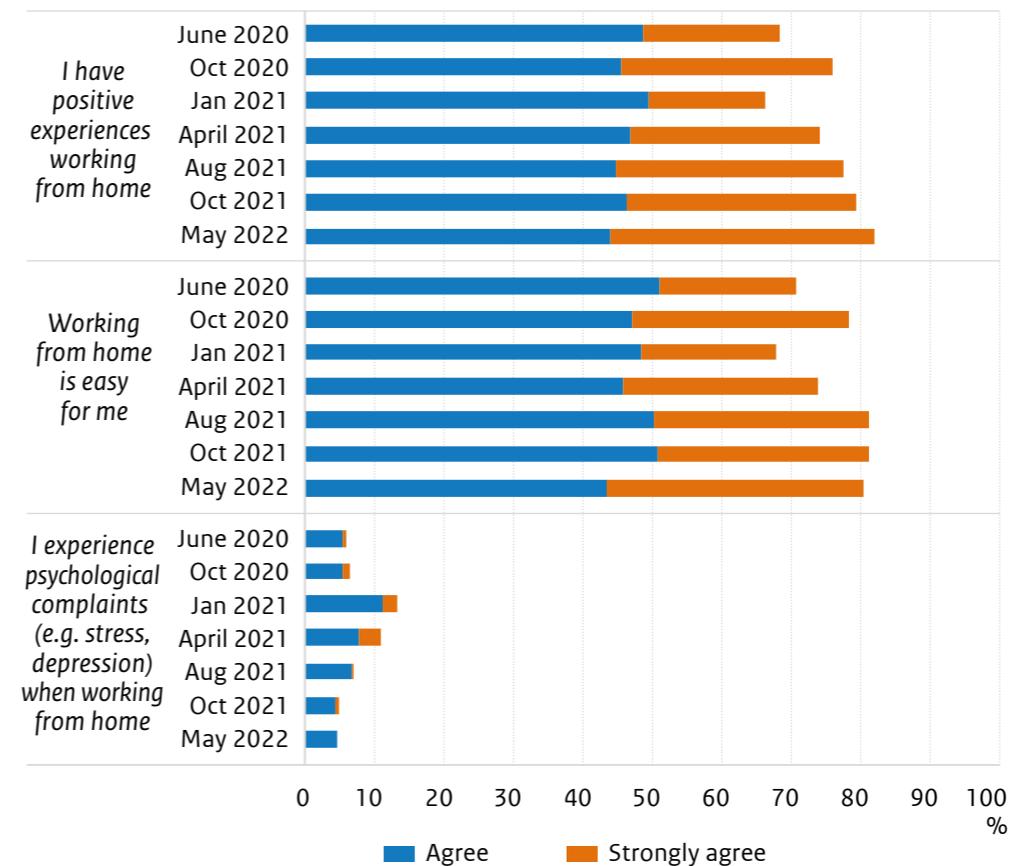
**Figure 5:** Degree to which, according to the workers, their employer has made the above changes to the workplace, according to function



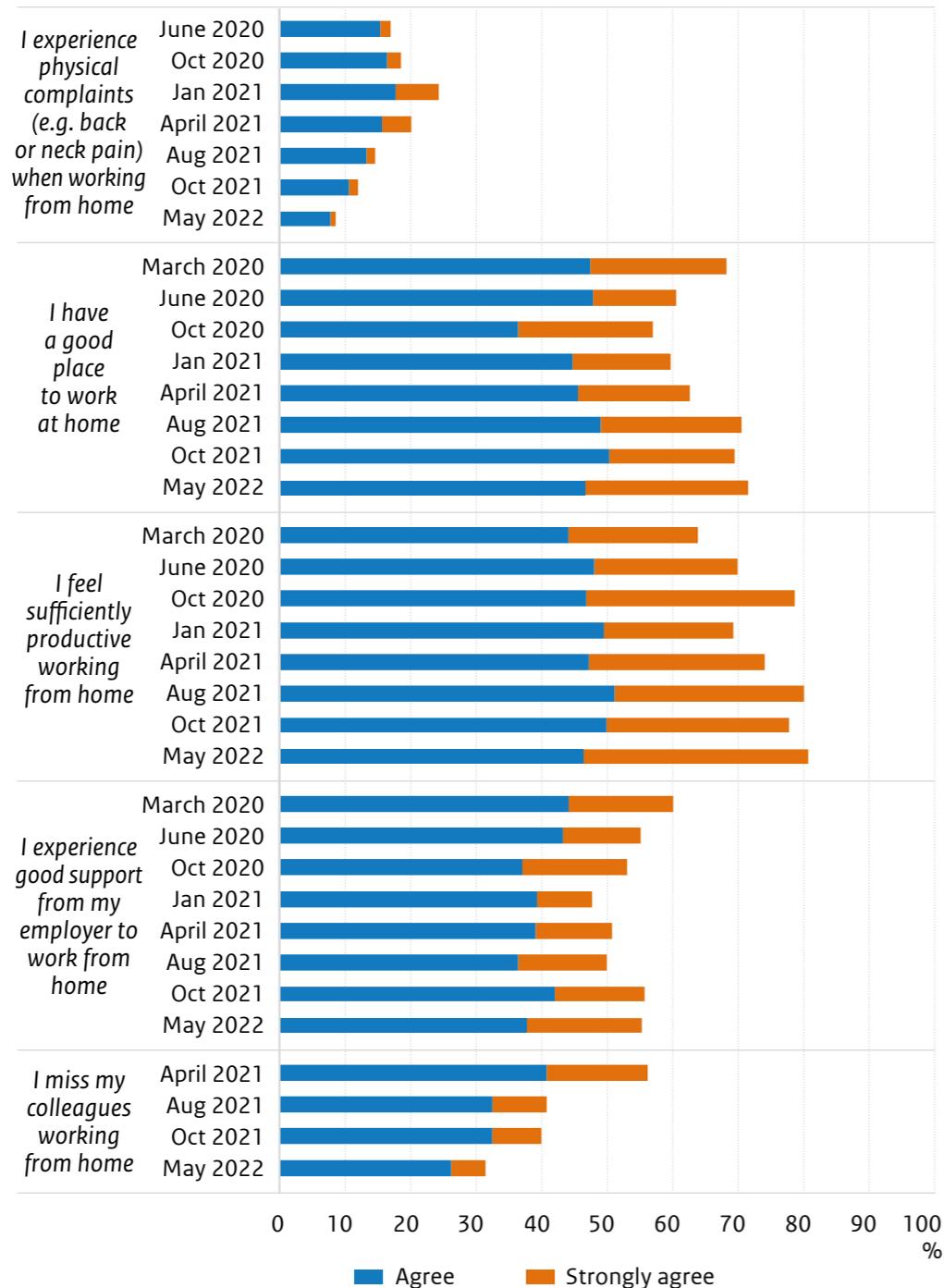
### Working from home experiences

- Workers who work from home in May 2022 are to a certain extent generally positive about working from home (Figure 6a and b). The positive experiences are also (still) slightly higher than among those who worked from home during COVID. The expiry of the (mandatory) recommendation may play a role in this. The percentage of homeworkers experiencing psychological and/or physical complaints due to working from home is (also) lower than during COVID. Also striking is the lower percentage that misses colleagues when working from home; those who miss colleagues have more opportunities to go to the workplace due to the absence of recommendation for working from home.

**Figure 6a:** Experiences with working from home during different measurements (based on those who work from home to a certain extent per measurement)

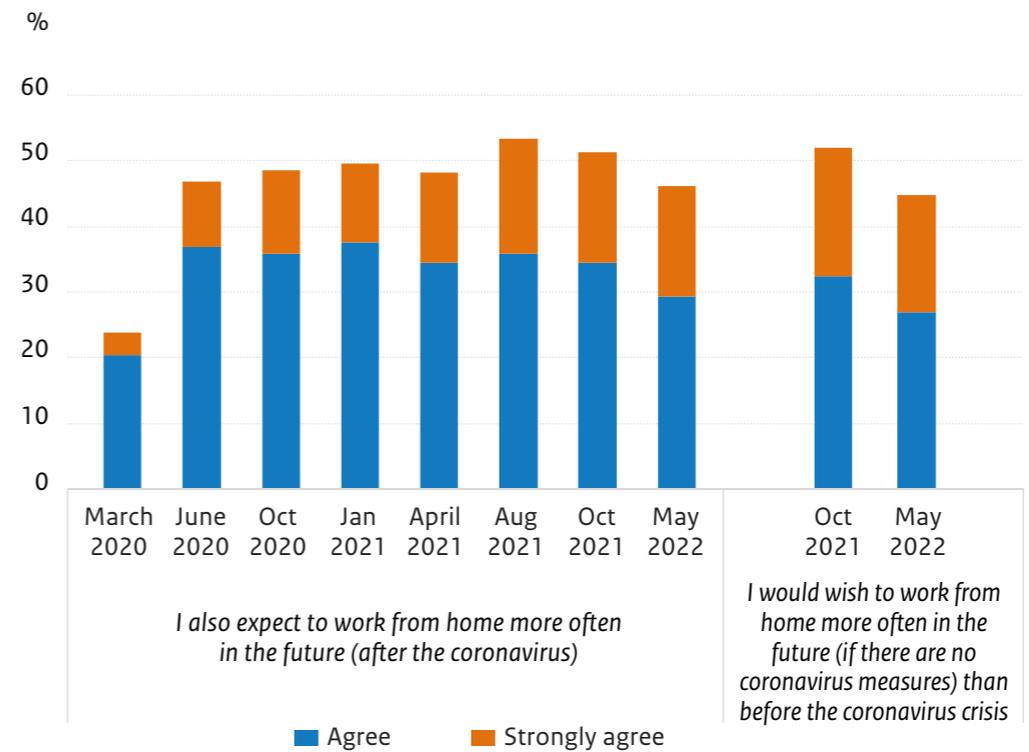


**Figure 6b:** Experiences with working from home during different measurements (based on those who work from home to a certain extent per measurement)



- We asked respondents at various points in time about their expectations and wish to work more often from home after the scrapping of COVID measures compared to pre-COVID. Respondents' wishes and expectations appear to be closely aligned (Figure 7). However, there is a slight decrease in May 2022 compared to the measurement in October 2021 in both the expectation and the wish. People may rediscover the workplace and adjust their wishes accordingly.

**Figure 7:** Wish and expectation of working from home in the longer term (if there are no coronavirus measures) compared to pre-COVID



I also expect to work from home more often in the future (after the coronavirus)

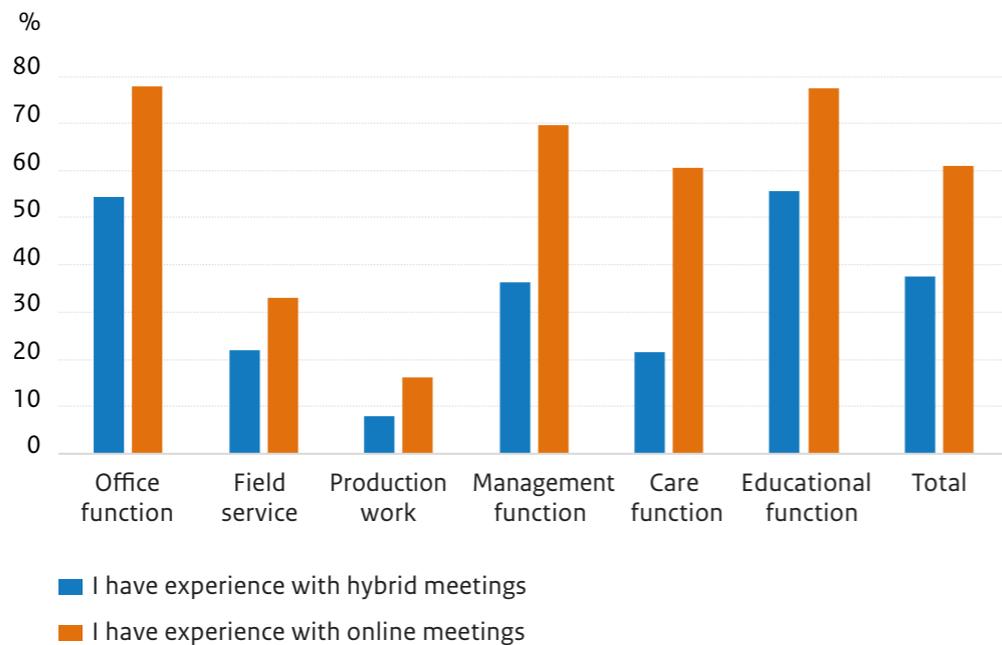
I would wish to work from home more often in the future (if there are no coronavirus measures) than before the coronavirus crisis

■ Agree ■ Strongly agree

### Experience with digital meetings

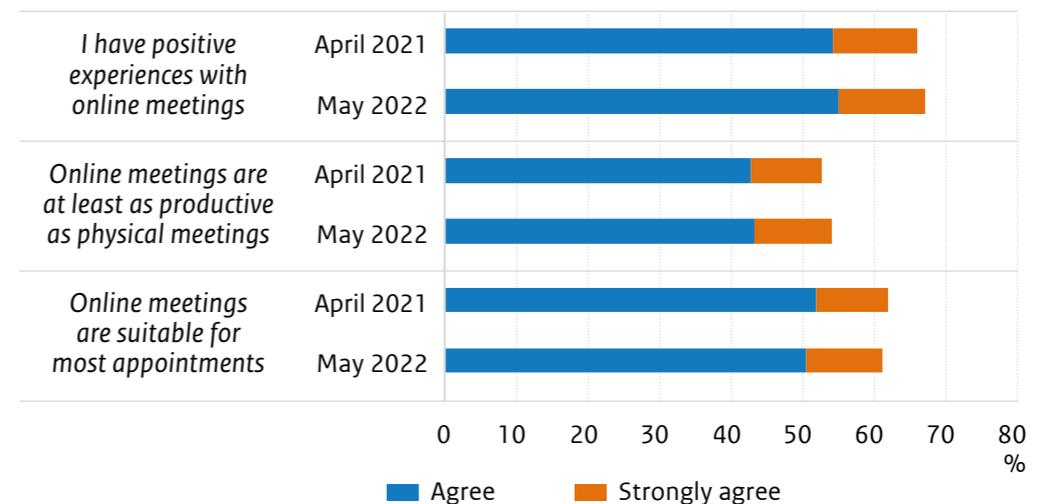
- COVID has also boosted digital meetings. Approx. 60% of workers already have experience with online meetings in May 2022 (with everyone participating online). 38% do so with hybrid meetings (with some participating online and some from the workplace) (Figure 8).
- The amount of experience with digital meetings in May 2022 differs between groups of workers. For example, those with an office function, a management function or an educational function generally have more experience with online and hybrid meetings than those with other types of functions (Figure 8). Workers in larger companies and those with an HBO/WO education level also have more experience (gained) with digital meetings.

**Figure 8:** Degree to which workers have experience with online and hybrid meetings

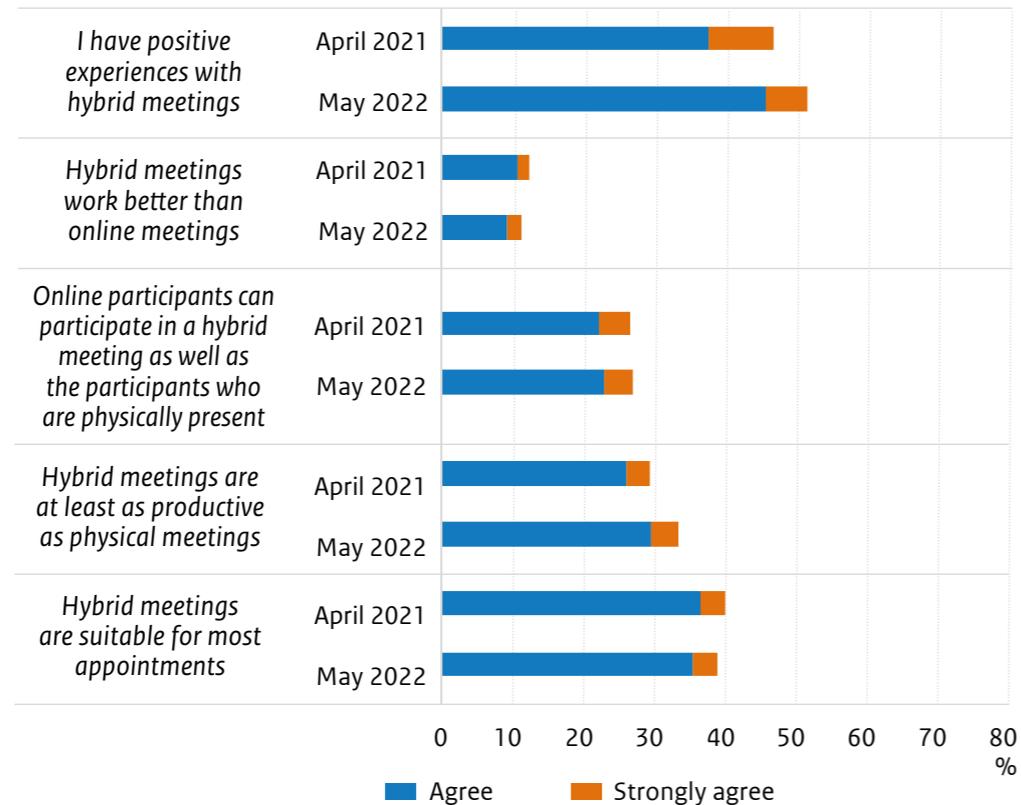


- The majority (67%) of those with experience of online meetings are positive about such meetings (Figure 9). This is comparable to the situation in April 2021.
- The experience with hybrid meetings seems somewhat more negative than the experience with online meetings (Figure 10), although here too a narrow majority of those who are familiar with this type of meeting appear to be positive (51%). It is striking that respondents are somewhat more positive about hybrid meetings than in April 2021; they may have gained more experience with this in recent times.
- Just over half of respondents who are familiar with online meetings find them at least as productive as physical meetings. This is clearly lower for hybrid meetings (approx. 35%).

**Figure 9:** Statements about experience with online meetings



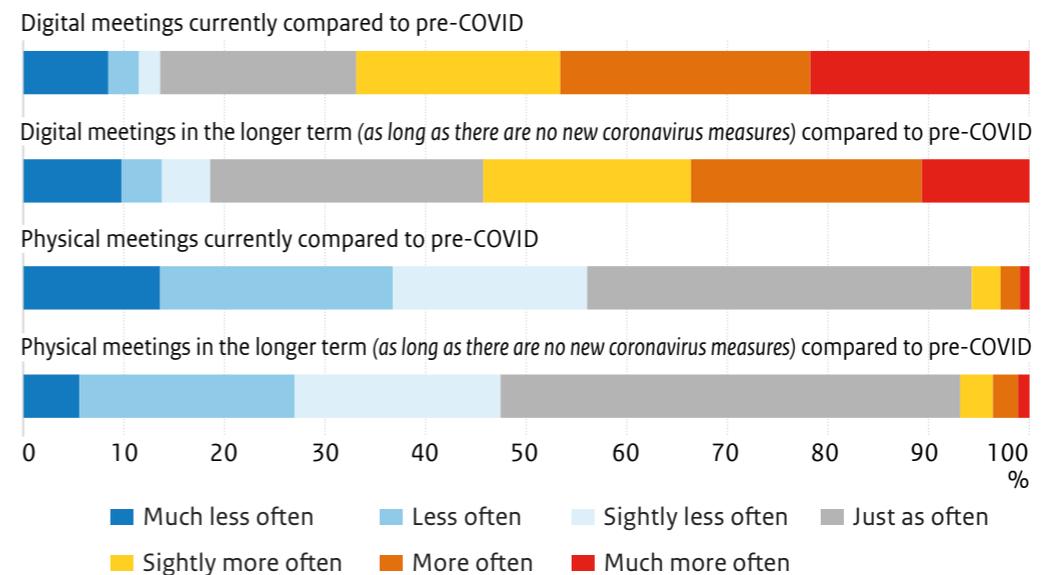
**Figure 10:** Statements about experiences with hybrid meetings



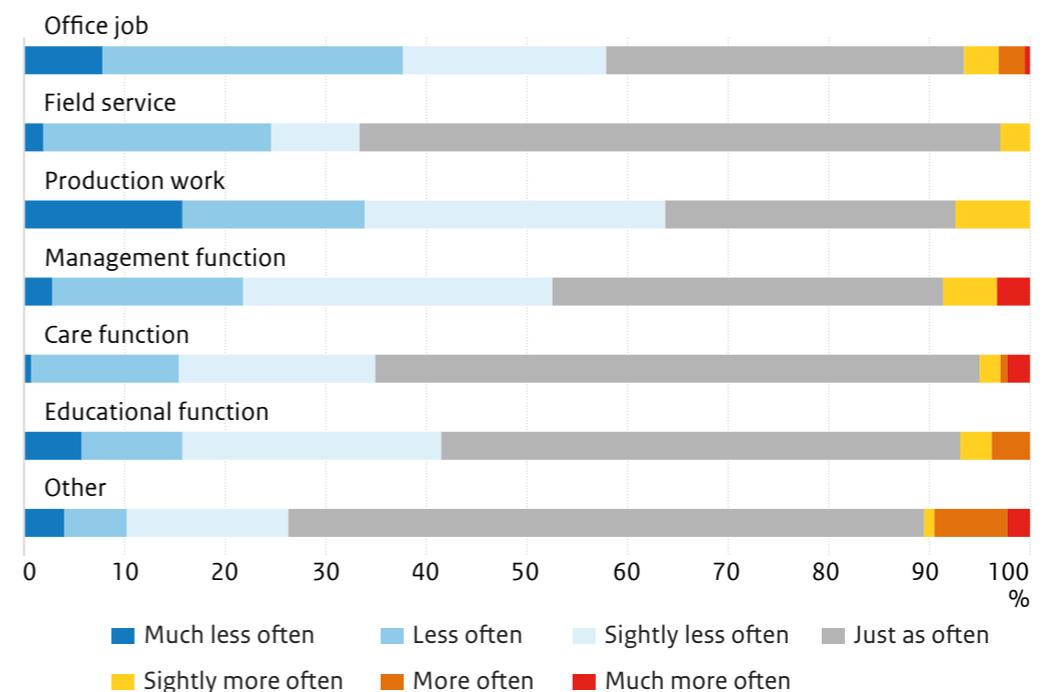
### Degree of digital versus physical meetings

- Almost all workers with experience with digital meetings indicate that they are currently (increasingly) more likely to hold digital meetings than pre-COVID. In addition, more than half expect to continue to hold more digital meetings in the longer term (Figure 11).
- Approx. 55% of workers with experience with digital meetings also indicate that they currently have fewer physical meetings than pre-COVID. In the longer term, 48% expect to continue to hold fewer physical meetings. This suggests that digital meetings seem to at least partially replace physical meetings.
- Workers with care functions and positions in the field have reduced the number of physical meetings less often than the other different function types (Figure 12a). In larger companies, the percentage of workers who have reduced the number of physical meetings is higher than in smaller companies (Figure 12b).

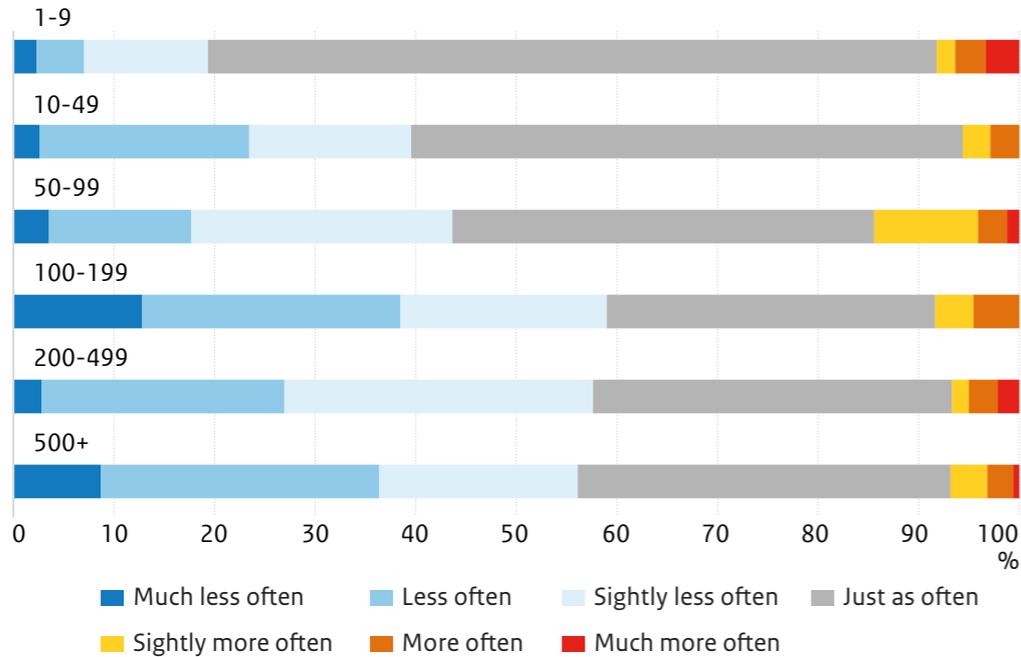
**Figure 11:** Degree of digital and physical meetings: current and expected in the longer term (as long as there are no new corona measures) compared to pre-COVID



**Figure 12a:** Expected degree of physical meetings in the longer term (as long as there are no new corona measures) compared to pre-COVID, by job type

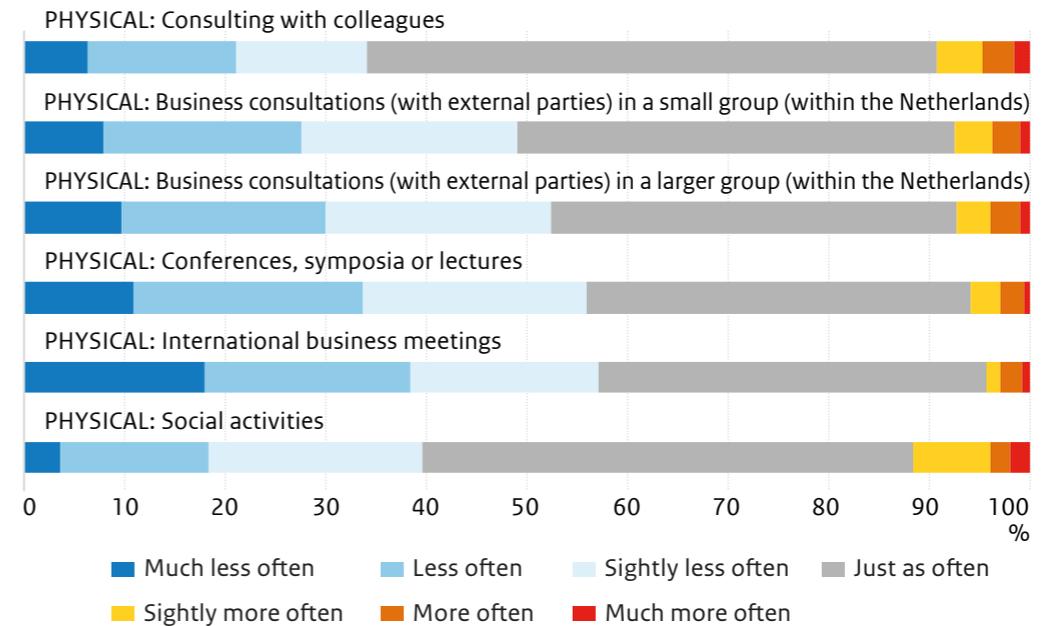


**Figure 12b:** Expected degree of physical meetings in the longer term (as long as there are no new coronavirus measures) compared to pre-COVID, by company size (number of workers)



- We also asked those with experience with digital meetings about the extent to which different types of meetings and activities (where applicable) are currently done more or less physically than pre-COVID. This shows that physical social activities are relatively the least often reduced compared to pre-COVID, followed by physical consultations with colleagues. In particular, (international) business meetings/consultations and conferences and symposia indicate that workers (insofar as they are applicable) are less likely to do so physically than pre-COVID (Figure 13).
- In any event, approximately 70% indicate that international business meetings do not apply to their situation; approximately 40-50% indicate this for conferences, symposia or lectures or business meetings (in the Netherlands). Consultations with colleagues and social activities apply to most workers (with experience of digital meetings); 5-10% indicate 'not applicable'.

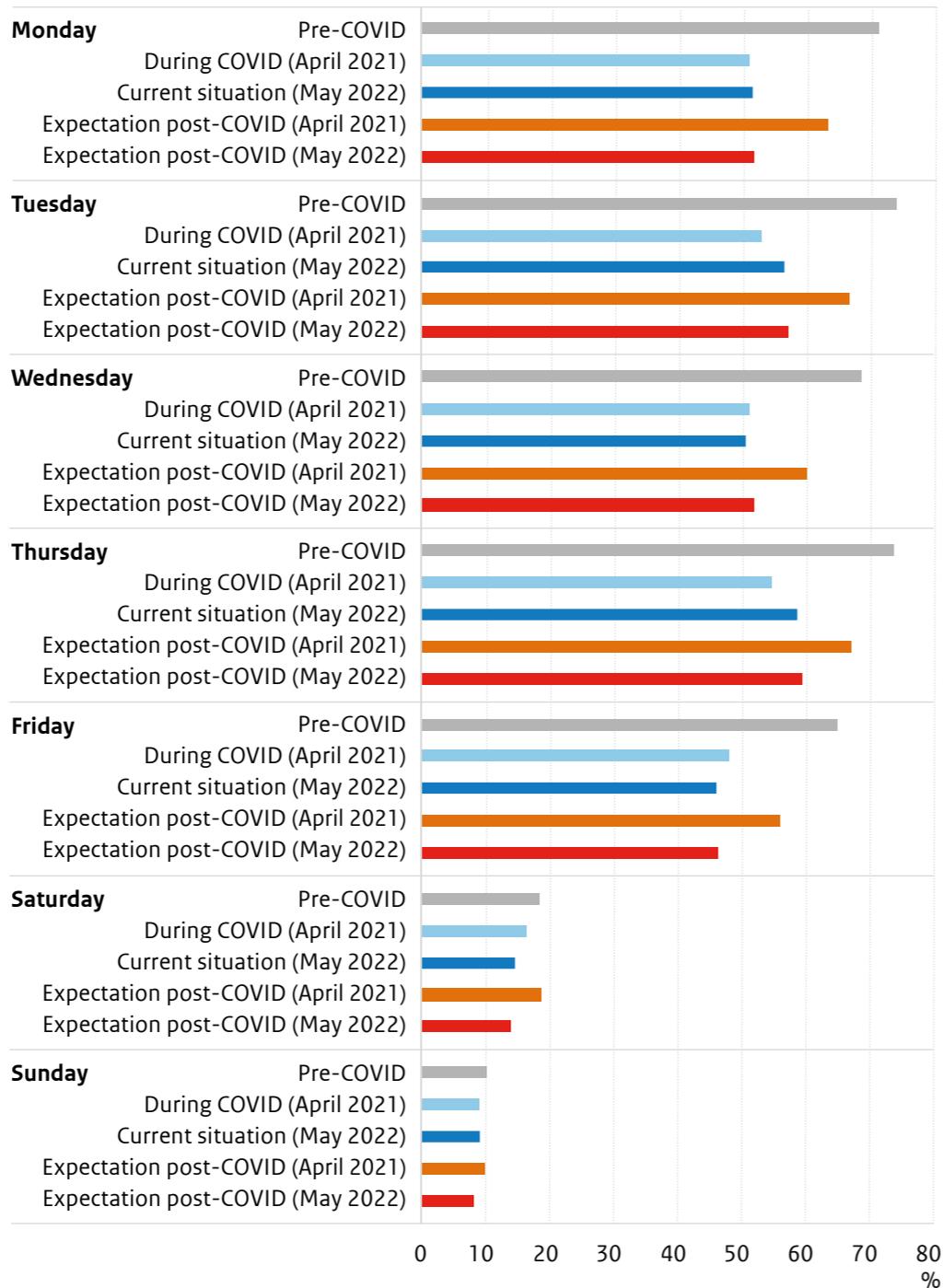
**Figure 13:** Degree to which there are more or fewer physical meetings compared to pre-COVID, by type of meeting. Note: The figure refers only to the respondents to whom these types of meetings apply. Those who indicated 'not applicable' to a type of meeting are not included



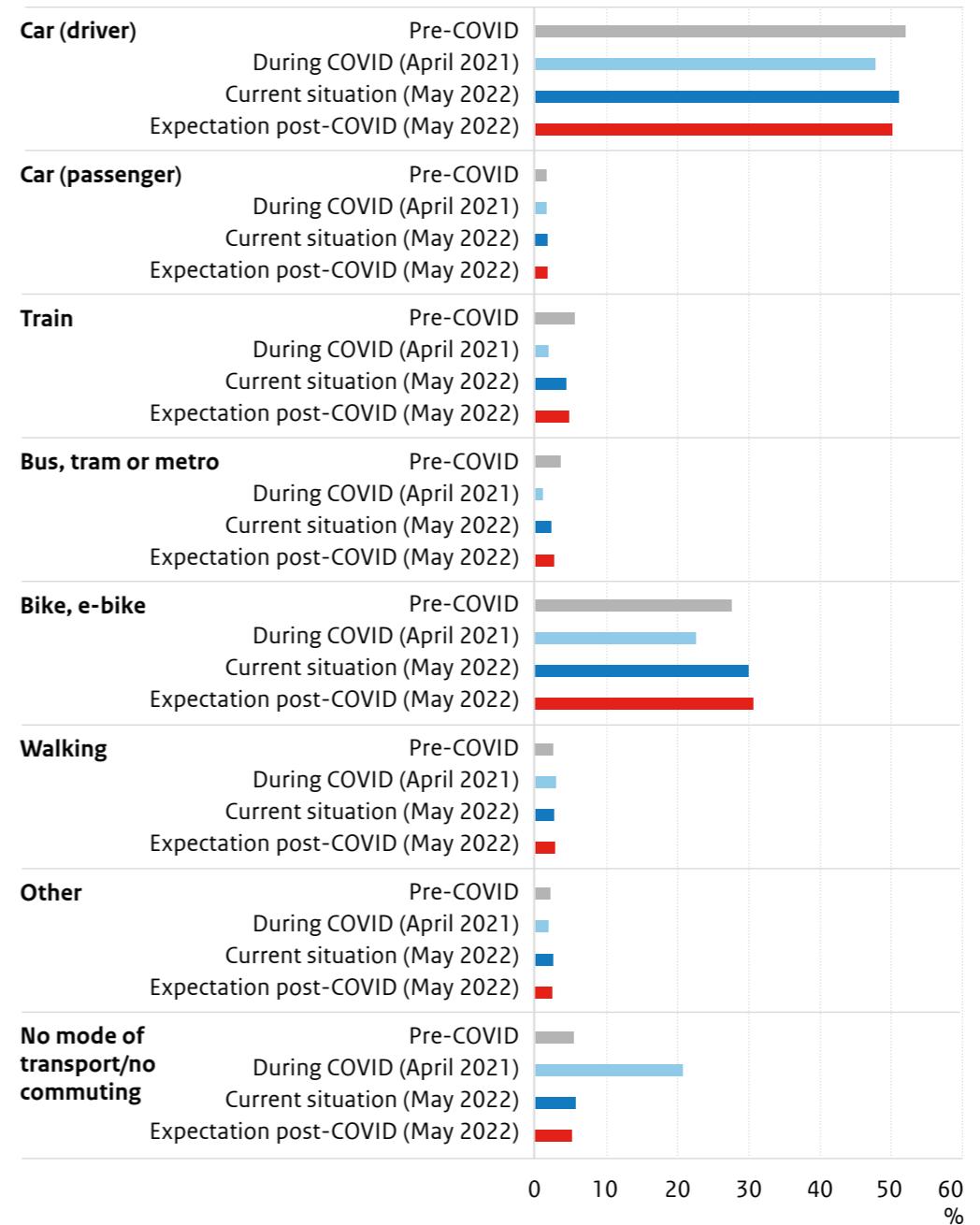
### Work-related travel

- Pre-COVID, workers relatively often went on work-related trips on Tuesdays and Thursdays. Based on the current situation and expectations for the longer term, these remain the busiest days in relative terms (Figure 14).
- In general, however, a decrease in the number of days with work-related trips is visible compared to pre-COVID. In addition, it is striking that fewer work-related trips are currently being made than had been estimated in April 2021 for the situation after the scrapping of COVID measures. The longer-term expectation is similar to the current situation.
- In May 2022, most workers still opt for the same mode of transport for their commuting as they did pre-COVID. In general, use of a bike seems to have increased slightly; the car and public transport show a slight drop. Further analysis shows that the increase in the number of bikes is mainly due to the growth of the e-bike. Even after the pandemic, the car remains the most important mode of transport for commuting (Figure 15).

**Figure 14:** Degree of work-related trips: pre-COVID, Current situation (May 2022) and the forecast for the longer term (based on the April 2021 and May 2022 measurements)



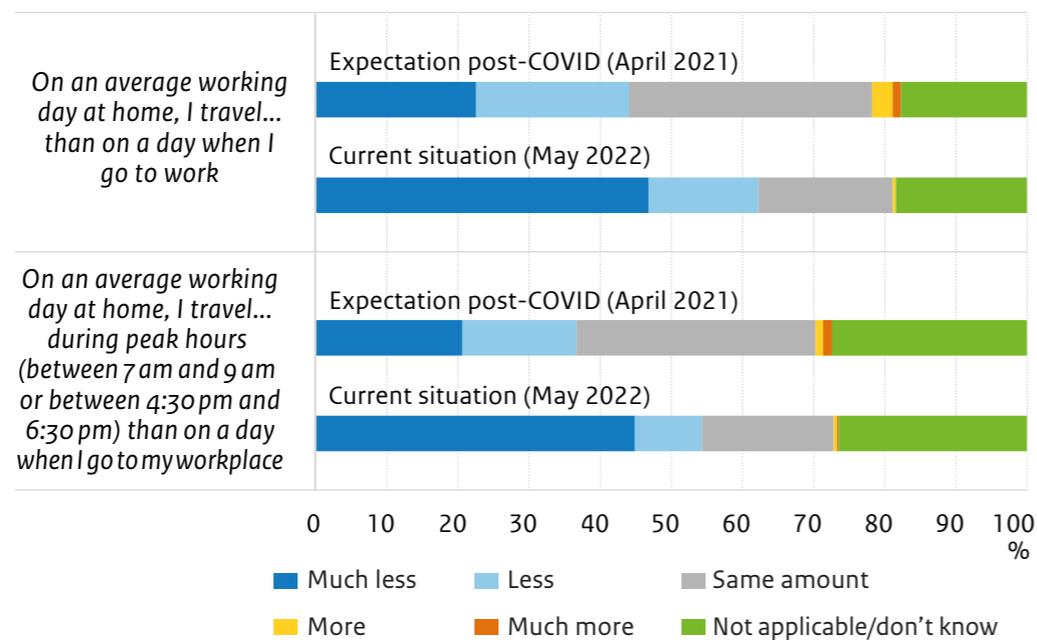
**Figure 15:** Choice of transport mode for commuting before, during and expected for the longer term (without COVID measures) at two measuring moments (April 2021 and May 2022)



### Travelling on a home working day

- Approximately 62% of those who work from home to some extent indicate that they will be travelling less on an average working day at home in May 2022 than on a day when they go to work. A group of about the same size (55%) also travels less in the rush hour. The percentage indicating less travel on home working days is higher than expected in April 2021. At that time, approximately 44% expected to travel less on home working days after the abolition of COVID measures (Figure 16).

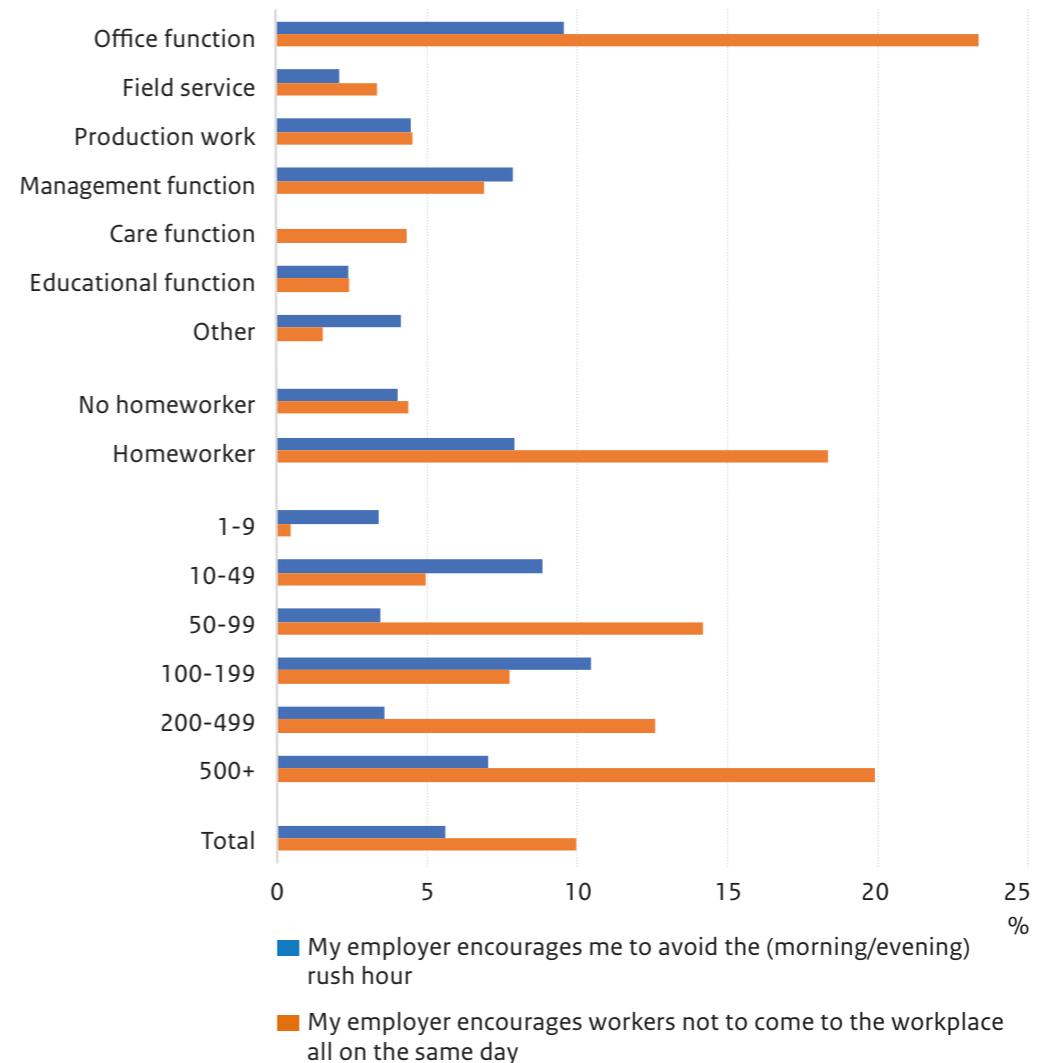
**Figure 16:** Degree to which workers travel on an average home working day in total and during peak hours, compared to a day on which they go to the workplace



### Role of employer in avoiding congestion and rush hours

- Most respondents do not have the impression that their employer pays active attention to spreading crowds at the workplace or avoiding rush hour (Figure 17).

**Figure 17:** To what extent, according to the respondent, the employer encourages workers to avoid crowds at the workplace or at rush hour

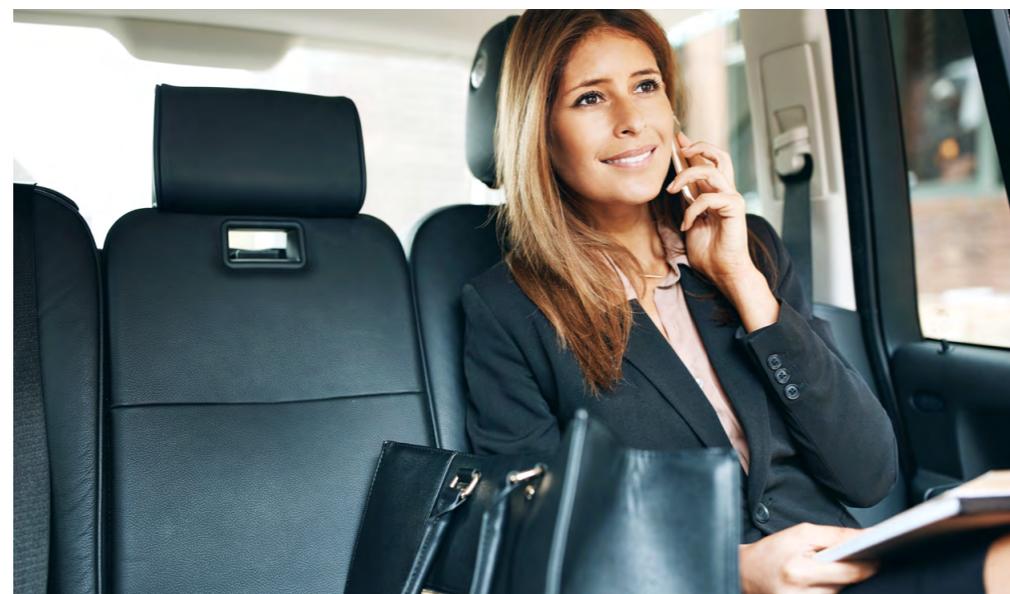
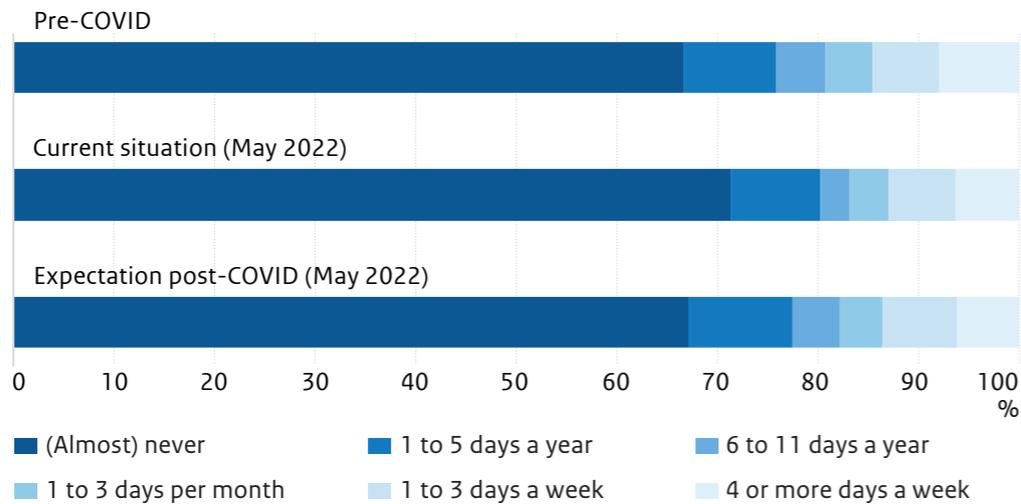


- 10% indicate that the employer actively encourages workers not to come to the workplace all on the same day. Workers in larger companies indicate slightly more often that their employer tries to prevent workers from coming to the office too much on the same days (20%). Even those with an office function report this relatively often (23%).
- Approx. 5% have the impression that the employer is actively working towards avoiding rush hour. This percentage is higher for homeworkers, and for those with an office or management function.

### Business trips

- Workers generally report slightly less frequent business trips than pre-COVID (Figure 18). The group that travels 4 or more days a week for business purposes is in May 2022 and is expected to be slightly smaller in the longer term than pre-COVID. The percentage of workers who hardly ever travel for business purposes is currently slightly higher than pre-COVID, but is likely to develop to the pre-COVID level in the longer term.

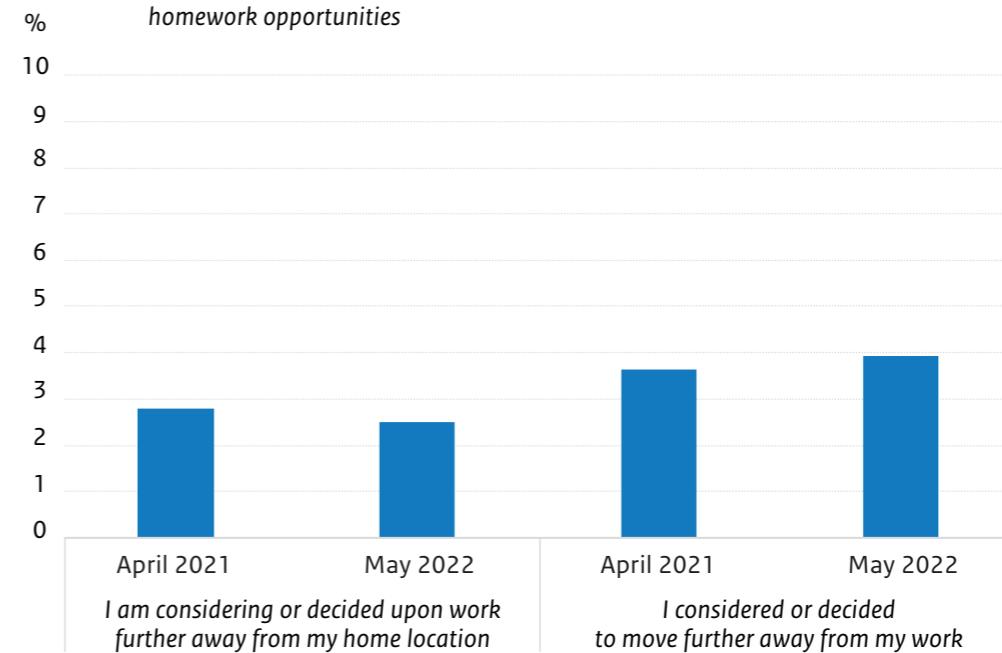
**Figure 18:** Number of business trips pre-COVID, current situation (May 2022) and expectation for longer-term



### Working from home and choosing a location

- The percentage of workers who indicate that they have searched for work further from their homes as a result of homeworking opportunities, or are considering doing so, is slightly lower in May 2022 than in April 2021 when we also inquired about this (Figure 19). The percentage indicating or considering moving further away from work has slightly increased, but is still limited.

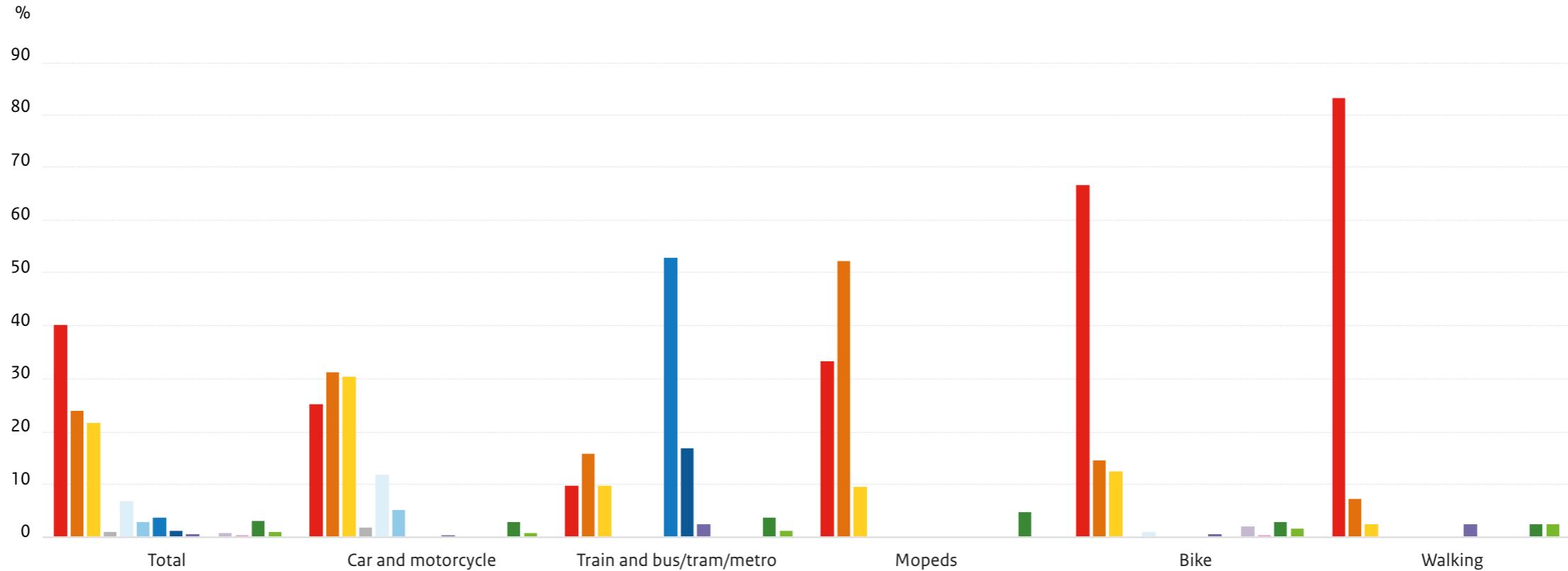
**Figure 19:** Percentage of homeworkers who decided or considered looking for work further away from the home location (left) or moving further away from work (right) as a result of homework opportunities



### Travel allowance

- There is variation in the extent to which workers receive travel allowance. Approximately 40% indicate that they do not receive any compensation; 60% do receive some form of compensation (Figure 20).
- Approximately 30% of those who travel to and from work by car or motorcycle receive a fixed amount and an equal percentage receive compensation per kilometre travelled. Approx. 25% of them do not receive any allowance. The majority of those who travel by public transport receive a full reimbursement of the public transport costs. For cycling and walking, the majority do not receive any travel allowance.

Figure 20: Type of travel allowance, total and per mode of transport for commuting



- No reimbursement
- Fixed amount per period (e.g. month or quarter)
- Allowance per kilometre actually driven
- Reimbursement of fuel costs (e.g. fuel card)
- Leased car or company car.
- Parking costs for cars, motorcycle, etc.
- Reimbursement (in full) of a public transport subscription or of the trips made by train, bus, tram or metro
- Reimbursement (in part) of a public transport subscription or of the trips made by train, bus, tram or metro
- I use a mobility budget
- Reimbursement (in full) of cost of purchasing the means of transport
- Reimbursement (partial) of cost of purchasing the means of transport
- Reimbursement of storage costs for bikes, mopeds, etc.
- A different fee
- I don't know



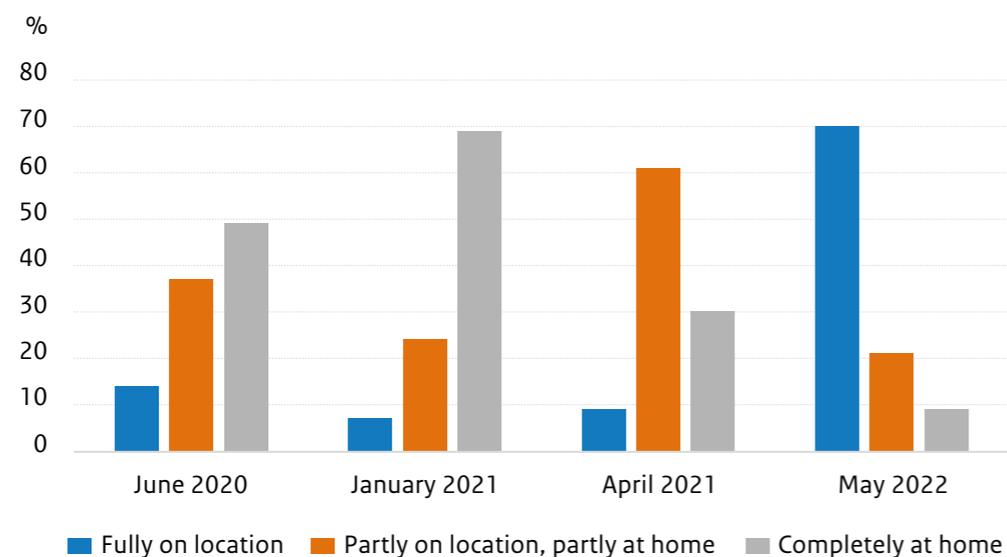
# Education

The number of those in secondary and tertiary education in our sample who have participated in all MPN measurements since October 2019 is limited ( $\pm 150$  respondents). A larger group of them participated in the regular annual measurement of the MPN in October 2021. The responses of this larger group in October 2021 are very similar to those of those in secondary and tertiary education in our current sample. We therefore assume that the insights in this chapter accurately represent the reality.

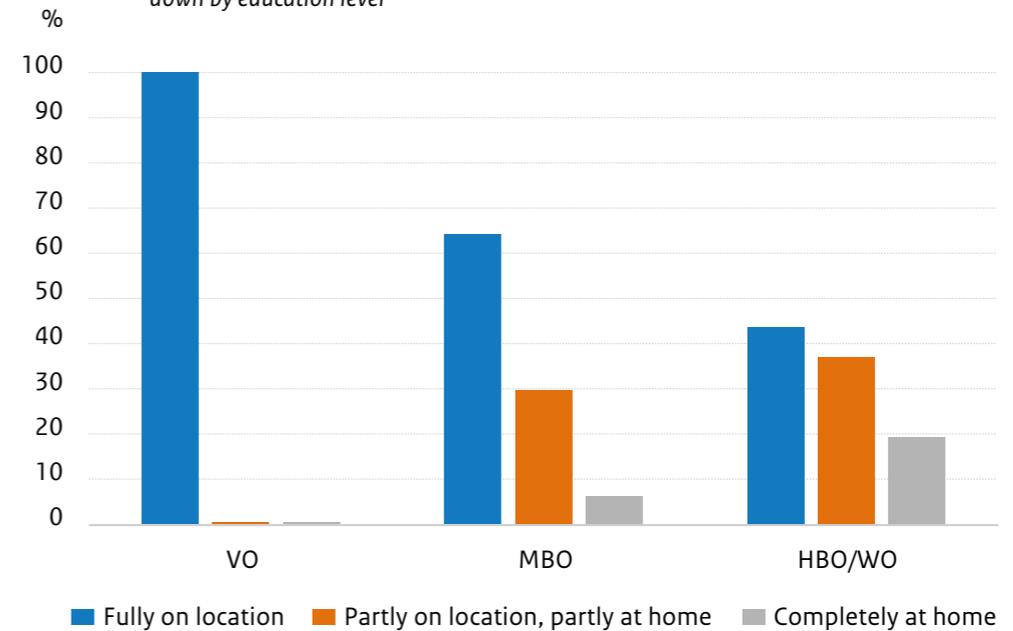
## Degree of home education

- The vast majority of those in secondary and tertiary education returned fully to following education on location in May 2022 (almost 70%; Figure 21). We see a big difference with previous periods during the pandemic, in which those in secondary and tertiary education followed education mainly at home or partly at home and partly on location. However, a considerable percentage (around 25%) currently still follows the education partly on location and partly at home.

**Figure 21:** The location where those in secondary and tertiary education attend education



**Figure 22:** The location where those in secondary and tertiary education attend education, broken down by education level

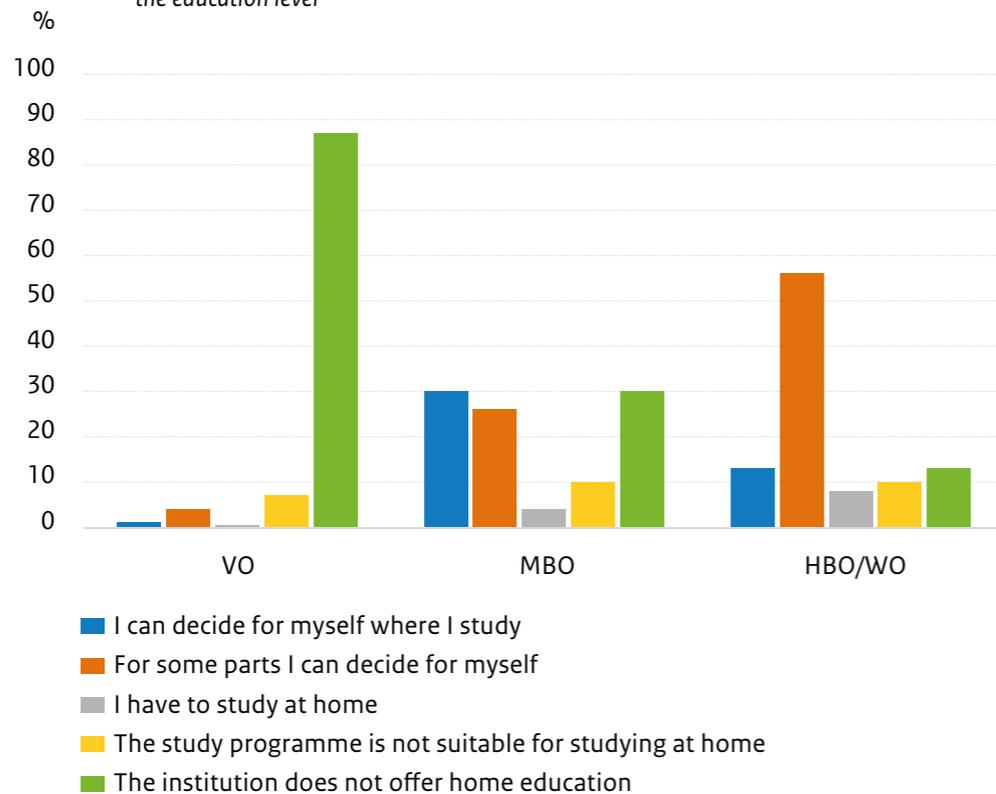


- The location of education varies greatly depending on the type of education level (Figure 22). In secondary education (VO), all pupils now receive education entirely on location. Around 60% of MBO students receive education on location. At HBO and WO level, this is just over 40%. The other students often receive education partly on location and partly at home.

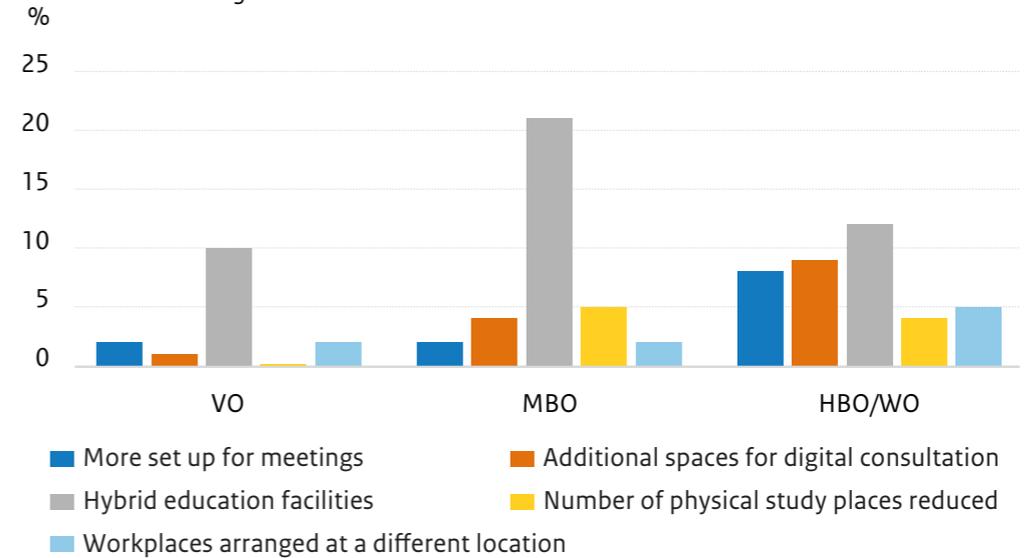
### Educational institution policy

- Respondents currently in secondary education indicate in most cases that their school does not currently offer home education, as can be seen in Figure 23. In higher education, students are largely free to decide for themselves where to follow certain components of their studies. For other components, the educational institution has already determined whether they will receive education at home or on location.

**Figure 23:** The policy of the educational institution with regard to working from home, according to the education level



**Figure 24:** Adjustments made by educational institutions as a result of home education, broken down according to education level



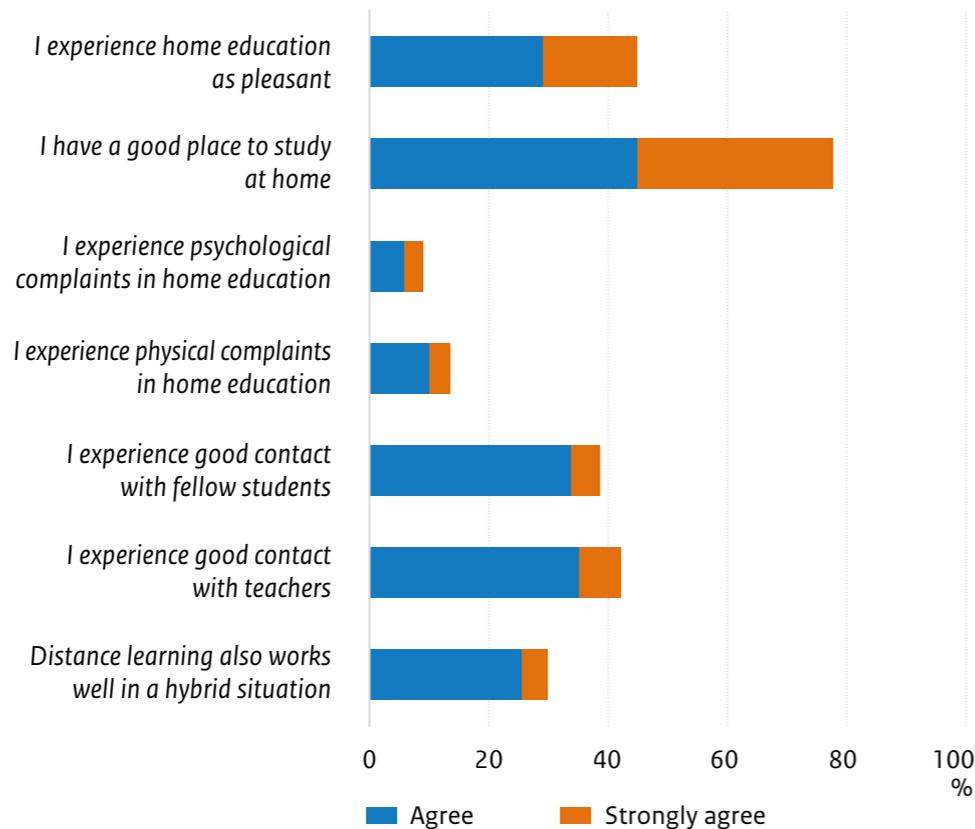
- Those in secondary and tertiary education indicate that their institutions have made limited changes through home education (Figure 24). Those at VO and MBO level are primarily concerned with offering or improving facilities for hybrid education. Some students at HBO and WO level indicate that the number of physical study places has also decreased and that rooms are more geared towards meetings.



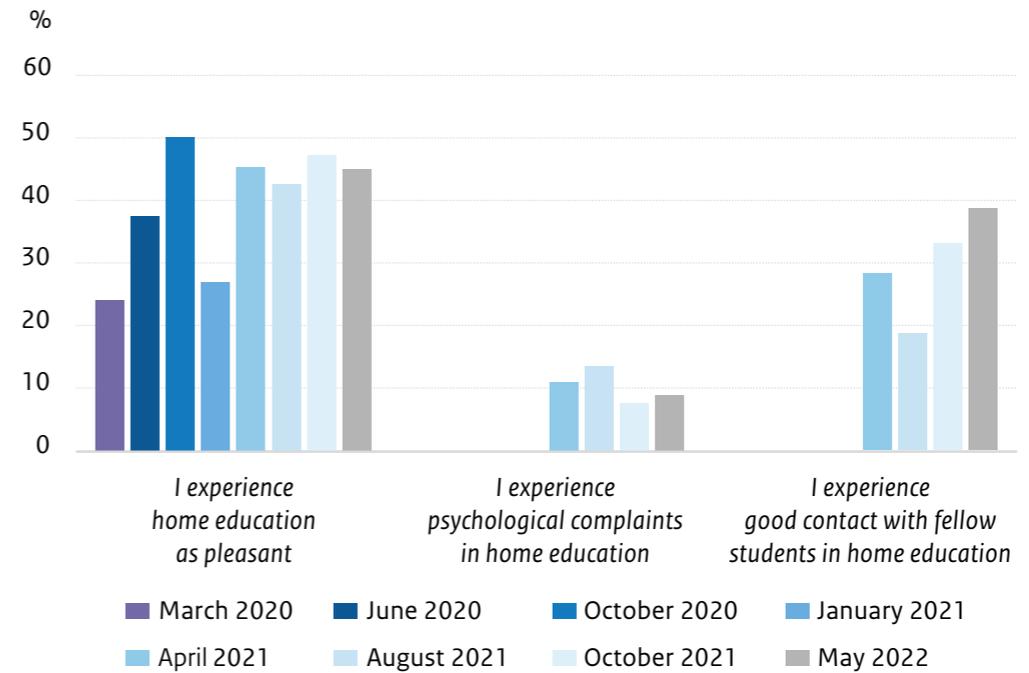
### Home education experiences

- A large majority of students consider that they have a good place to study at home (Figure 25). The picture drawn from the other statements is less positive: a minority feels comfortable following home education and the contact with both fellow students and lecturers is often not perceived as good.

**Figure 25:** Experiences of those in secondary and tertiary education with home education



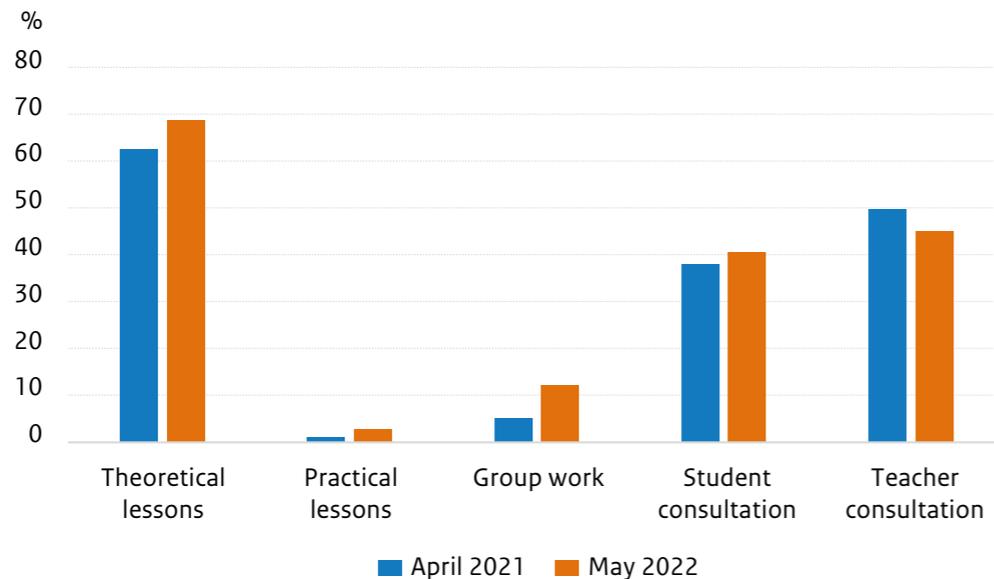
**Figure 26:** Experiences with home education over time



- Students who have gained experience with home education are currently about as positive as in August 2021 (Figure 26), but that percentage remains relatively low at around 45%.
- The percentage of students who say they suffer from psychological complaints in home education has decreased slightly since August 2021 (from almost 15% to just under 10%). In addition, many more students indicate that they have good contact with fellow students. This may be because students now have more flexibility to alternate home education with education on location.

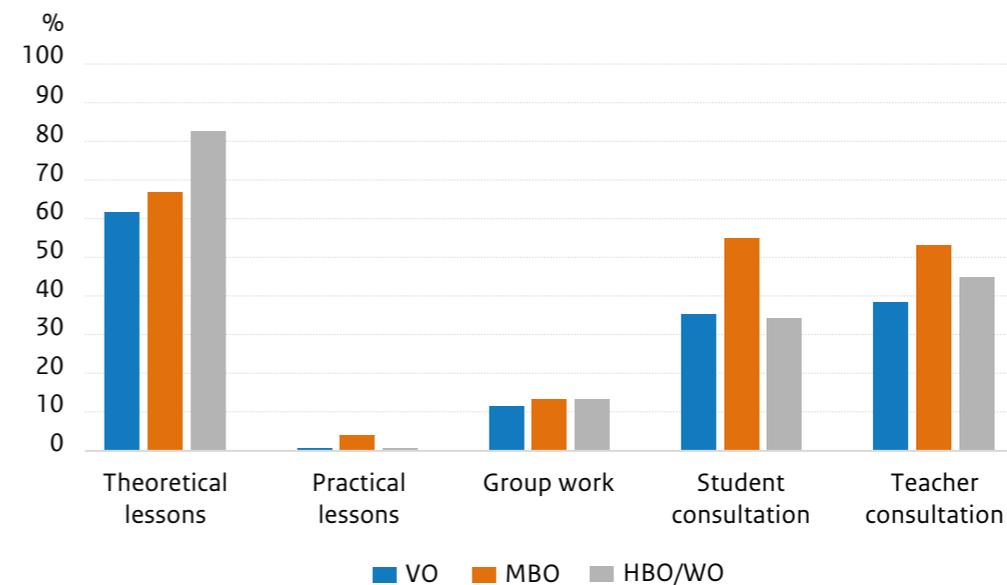
- Those in secondary and tertiary education indicate that theoretical lessons are particularly suitable for home education (Figure 27). Almost none indicates that practical lessons are suitable for home education.
- Approximately 40% of students indicate that home education is suitable for consultation with a fellow student or a lecturer.
- The picture has changed little since April 2021. However, students have become somewhat more positive about the suitability of theoretical lessons and group work for home education. However, they seem to be slightly more negative about the suitability for consultation with a teacher.

**Figure 27:** Suitability of certain components of education for an alternative home



- Students at WO and HBO level find home education more suitable for theoretical lessons than students at MBO level or secondary school students, as can be seen in Figure 28. At WO level, 90% of students find home education suitable for this purpose; in secondary education, this is slightly more than 60%.
- WO students find group work and consultation with a lecturer less suitable for home education than those at MBO and HBO levels.

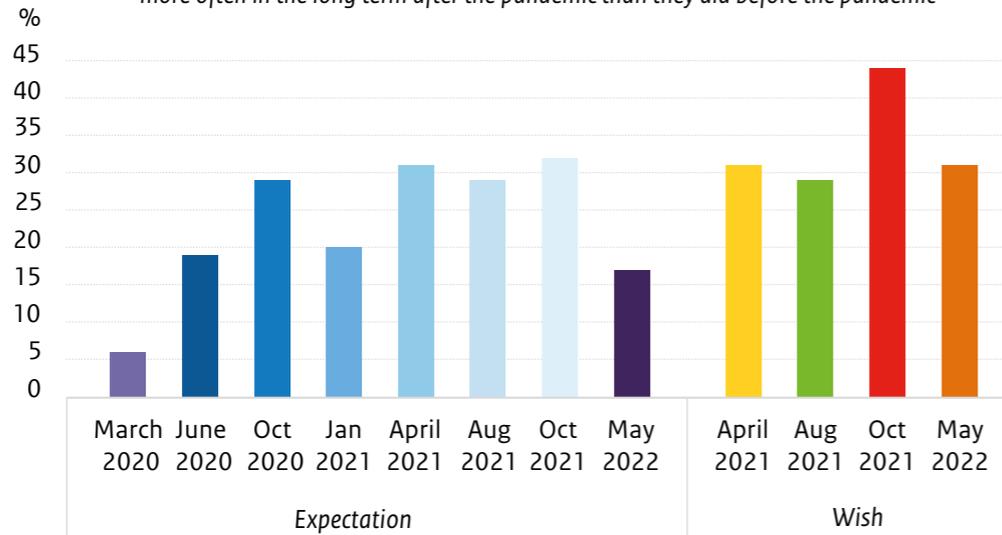
**Figure 28:** Suitability of certain course components, broken down according to education level



### Expectations for home education

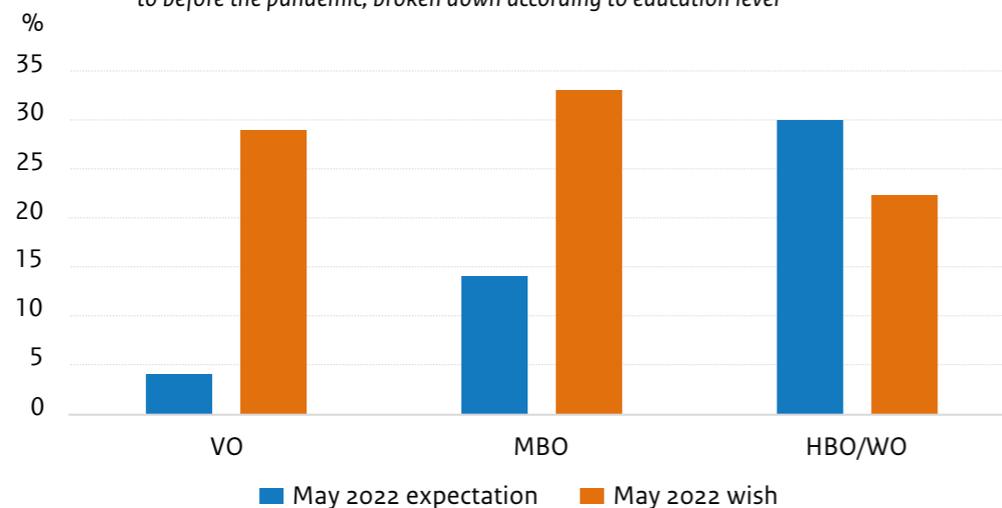
- Figure 29 shows that only about 15% of those in secondary and tertiary education now expect to receive more home education in the longer term than they did before the pandemic. This share has dropped sharply, from around 30% in April and August 2021.
- The difference between these expectations and the wishes of those in secondary and tertiary education is also striking. While expectations have fallen, the desire to pursue more home education remains around 30%. On average, those in secondary and tertiary education therefore want to take more home education than they expect to receive.

**Figure 29:** Those in secondary and tertiary education who expect (or wish) to receive home education more often in the long term after the pandemic than they did before the pandemic



- The difference between wish and expectation varies greatly per education level (Figure 30). At VO and MBO levels, the expectation is much lower than the wish. The opposite is true for HBO and WO levels, where students expect to study at home more often than they would ideally like to.

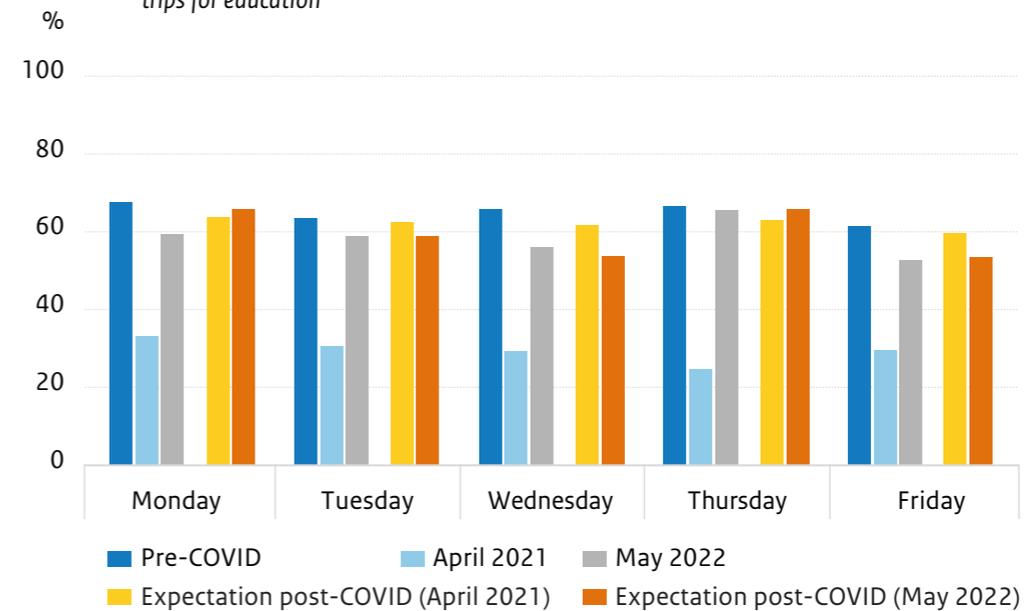
**Figure 30:** Expectation and wish to receive home education more often after the pandemic compared to before the pandemic, broken down according to education level



### Travel for education purposes

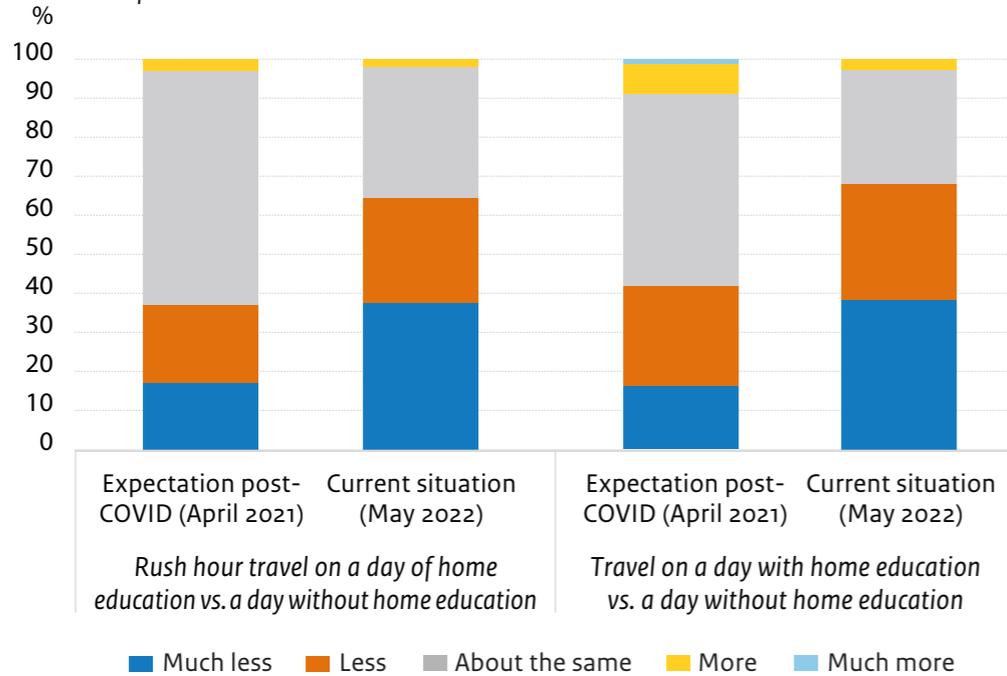
- Those in secondary and tertiary education expect to make fewer trips for education purposes than they did before the pandemic, especially on Wednesdays and Fridays (Figure 31).
- Currently, students make even fewer trips for education than they did before the pandemic. On Mondays, Wednesdays and Fridays, this amounts to a decrease of between 10 and 15%. On Tuesdays and Thursdays, the decrease is much smaller.
- In the longer term, those in secondary and tertiary education expect to make more frequent trips for education than they do at present. These expectations are also somewhat lower than pre-COVID, especially on Wednesday and Friday.

**Figure 31:** Days of the week on which those in secondary and tertiary education (expect to) make trips for education



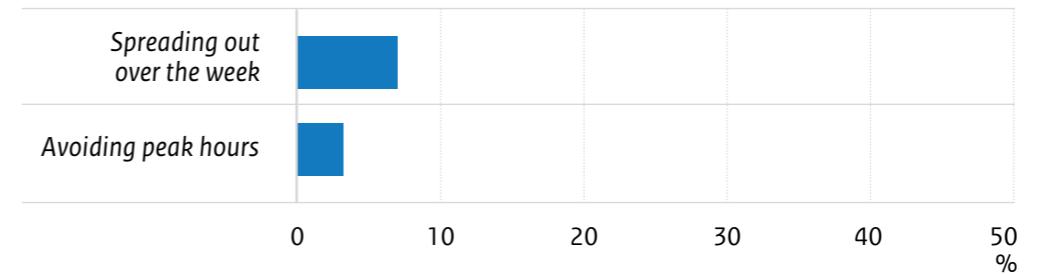
- A significant percentage (about 40%) of those in secondary and tertiary education make fewer trips on days when they receive home education (Figure 32). They often travel less in rush hour. These percentages have increased compared to the expectations of those in secondary and tertiary education in April 2021.

**Figure 32:** Expectations of the effects of home education on the total number of trips and at peak times



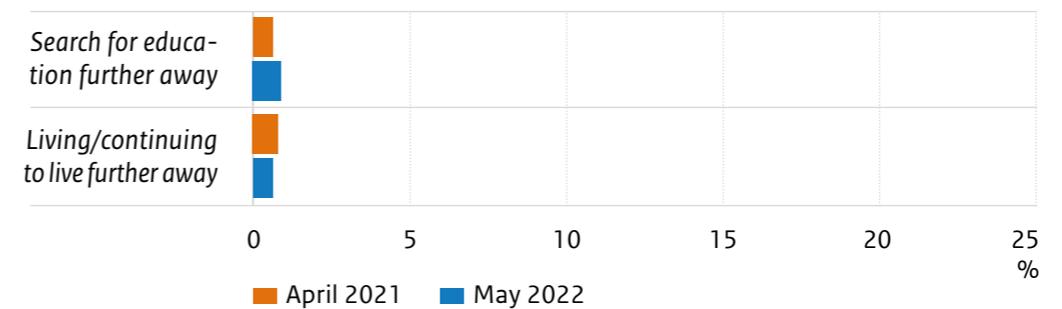
- Those in secondary and tertiary education indicate that few educational institutions encourage avoidance of peak hours (<5%) or spreading out over the week (5 to 10%) (Figure 33).

**Figure 33:** Percentage of those in secondary and tertiary education who indicate that the educational institution encourages them to spread out over the week or to avoid peak hours



- Only a very small percentage of students expect to seek education further away or to move further away from the place of education or to continue to live where they are as a result of home education (Figure 34).

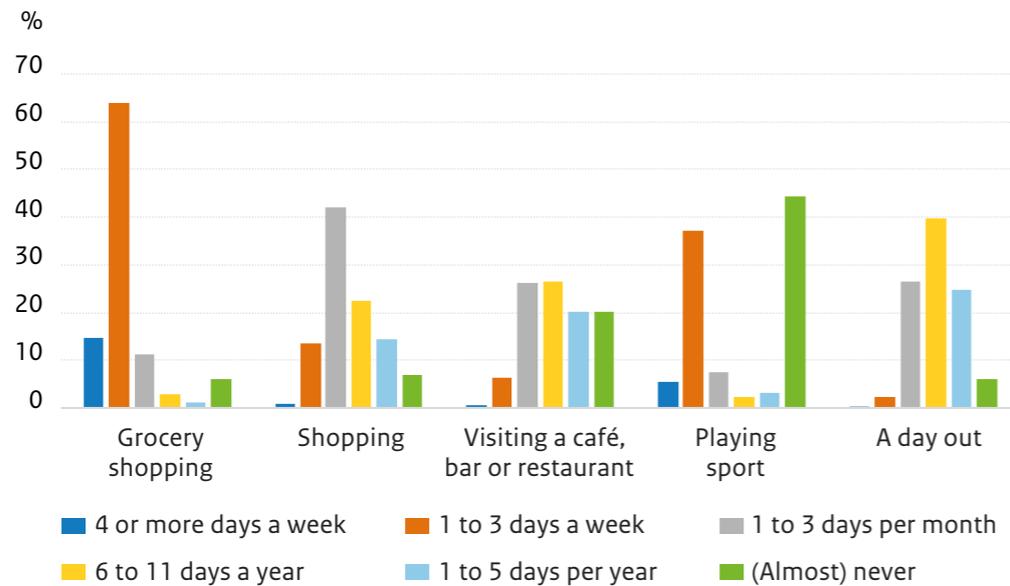
**Figure 34:** Percentage of students who indicate that they expect to continue move further away from the place of education in April 2021 and May 2022



# Outdoor activities

- In May 2022, the frequency with which various activities are pursued outside the home is still slightly lower than the frequency before the pandemic (see Figures 35 and 36). In particular, the percentage of people who (almost) never shop or go out for a day has risen sharply in relative terms. There is also a small increase in the number of people who (almost) never shop outside the home. The latter presumably has to do with the increase in online shopping (see Figure 37).

**Figure 35:** Frequency of outdoor activities (October 2019)

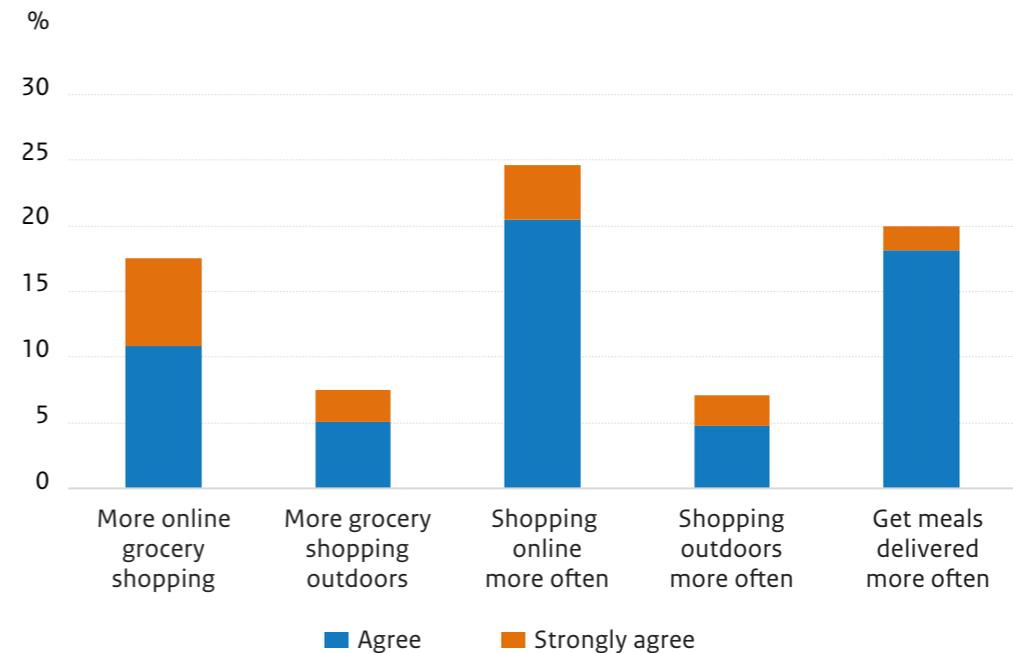


- Almost one in five Dutch people order groceries online more often (18%) or have meals delivered to their homes more often (20%) than before the pandemic (see Figure 37). A slightly larger group (25%) shops more often online. The increase in online shopping is greater among 25-45 year olds (32%) than among 65+ year olds (19%).

**Figure 36:** Frequency of outdoor activities (May 2022)

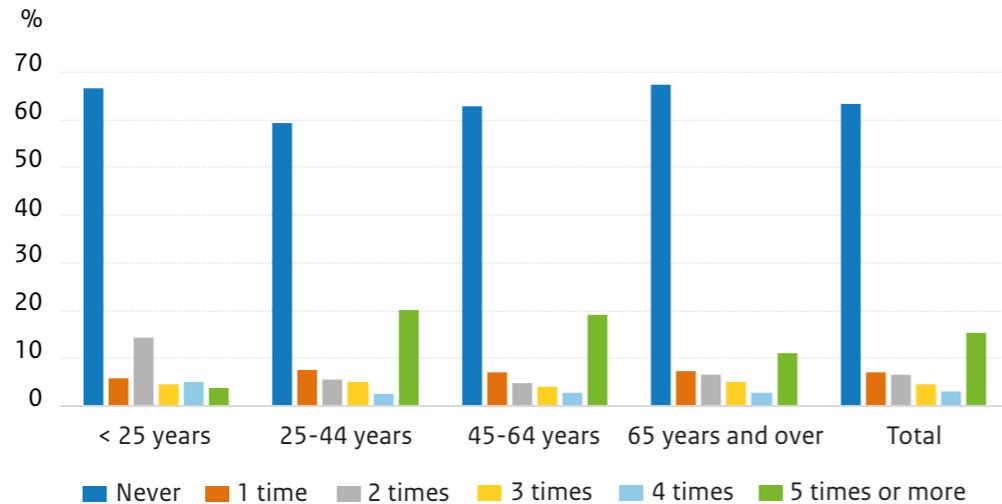


**Figure 37:** More frequent grocery shopping, other shopping and meals delivered (May 2022)



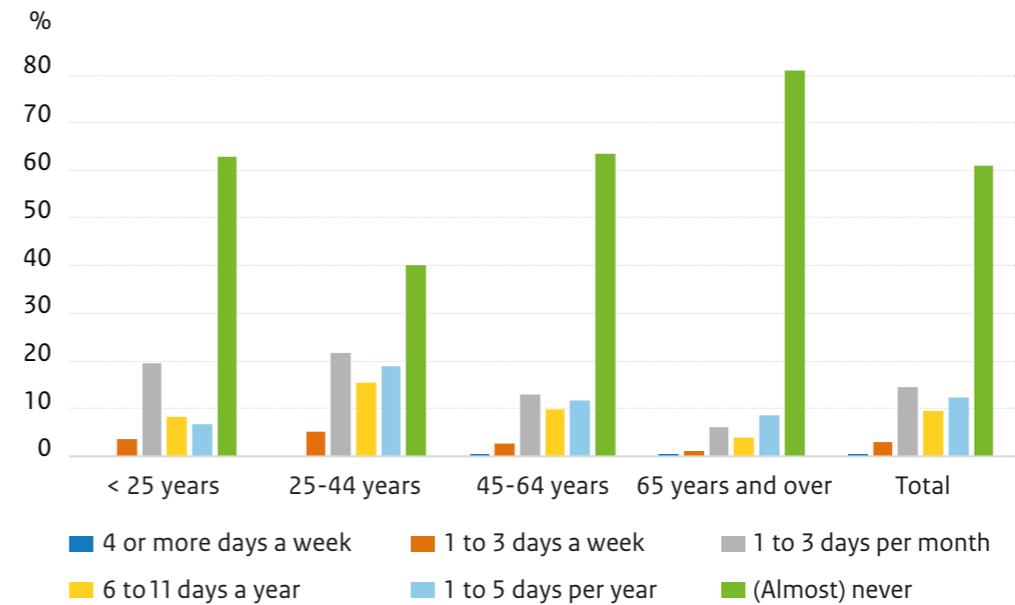
- In particular, 25 to 65-year-olds regularly order groceries online (see Figure 38). Around 20% have done this at least five times in the last three months. This percentage is lower among young people (<25) and older people (65+).

**Figure 38:** How often groceries have been purchased online in the past 3 months by age (May 2022)

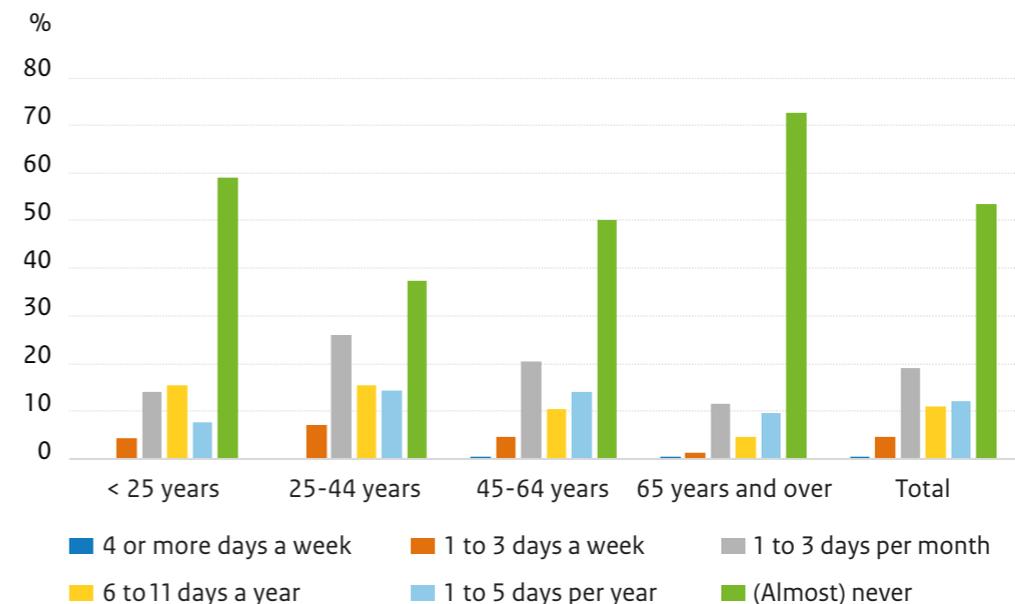


- Approximately 17% of Dutch people have meals delivered to their homes at least once a month in May 2022 (see Figure 39). In April 2021, this was slightly higher at 23% (see Figure 40). Meal delivery is the least popular among the elderly (65+). Approximately 80% of the elderly never have meals delivered to their homes.
- In highly urbanised areas, meals are delivered at home more often than in low-urbanised and non-urban areas. In highly urbanised areas, around 54% of people (almost) never deliver meals at home, compared to 72% in low-urbanised and non-urban areas.

**Figure 39:** Frequency of meals delivered to the home broken down according to age (May 2022)



**Figure 40:** Frequency of meals delivered to the home broken down according to age (April 2021)

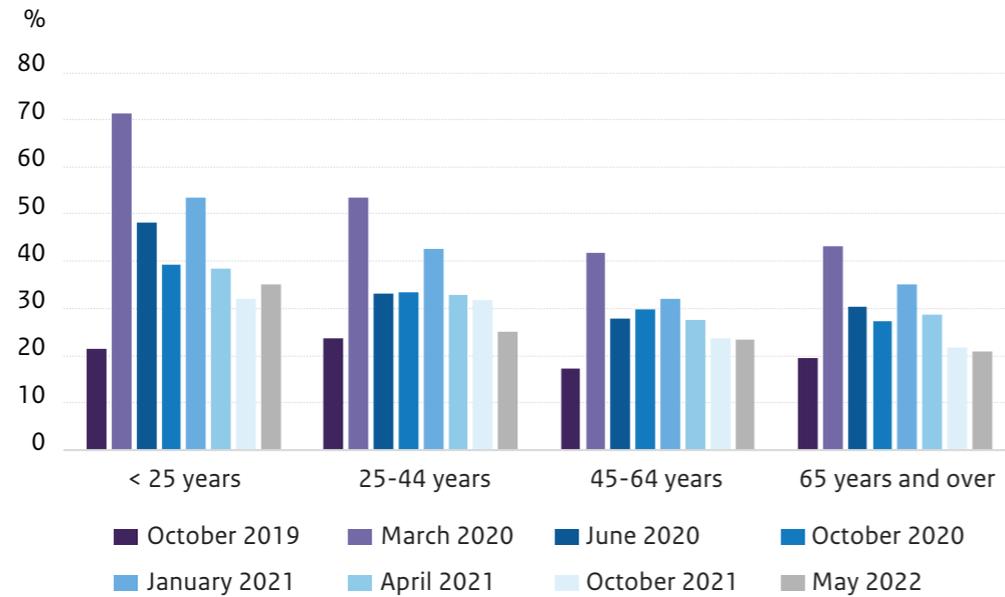


# Travel behaviour

## Share of people who do not leave their homes

- Since January 2021, the percentage of people who do not leave their home on an average day has been falling (see Figure 41). This share is currently around 4% higher than before the pandemic.
- In particular, young people (<25 years) and 45-65 year olds are even less likely to go outside than before the pandemic.

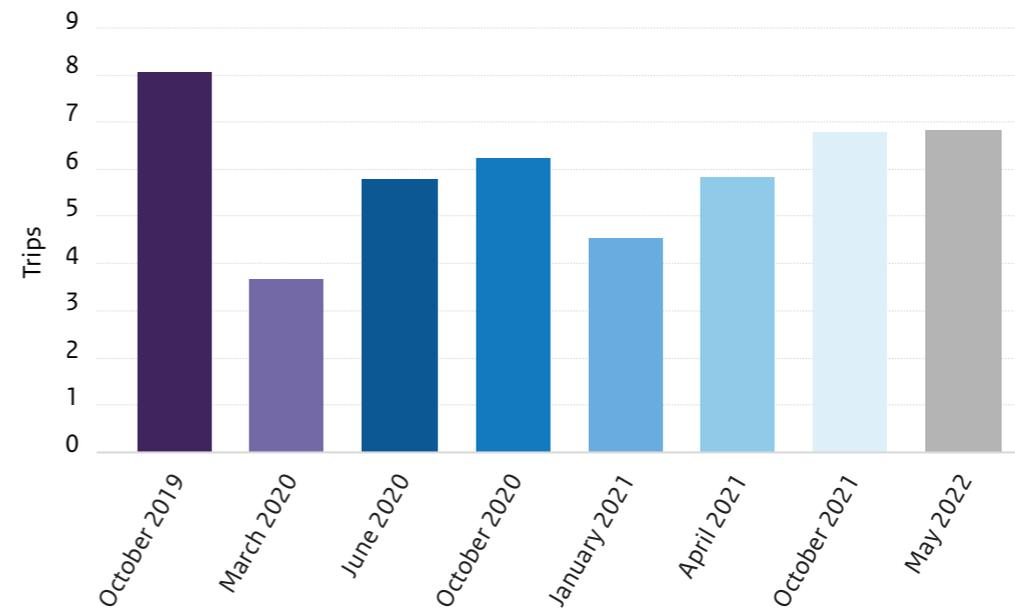
**Figure 41:** Percentage of people who do not make any trips on any given day broken down according to age



## Trips and distance travelled

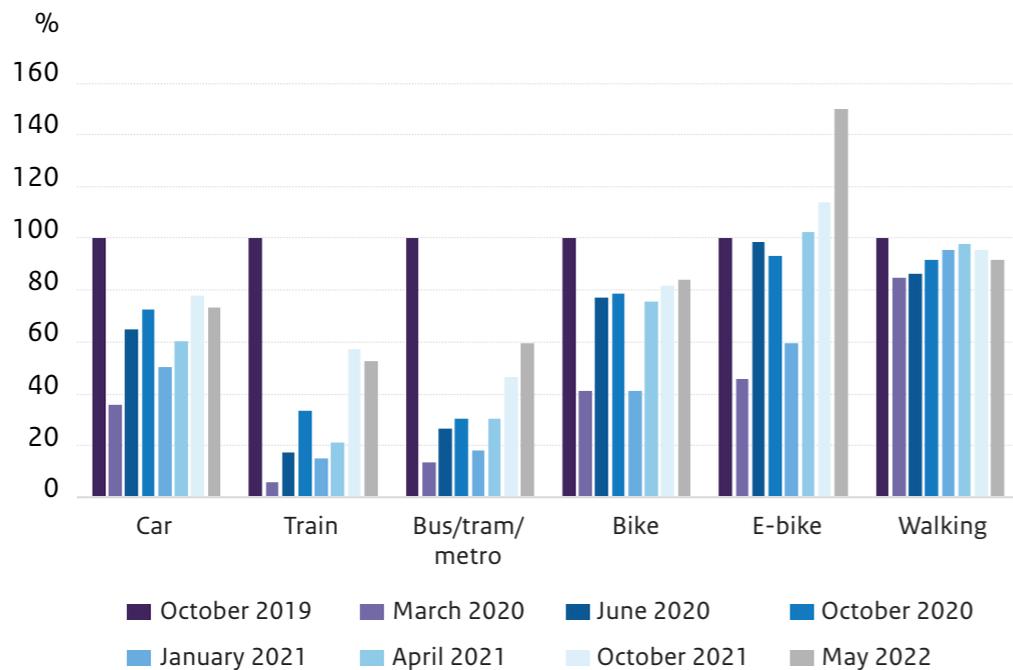
- Dutch people currently travel even less often than before the pandemic (see Figure 42). However, the number of trips made every three days is the same as in October 2021 and is higher than in previous periods during the pandemic.

**Figure 42:** Average number of trips per person per three days



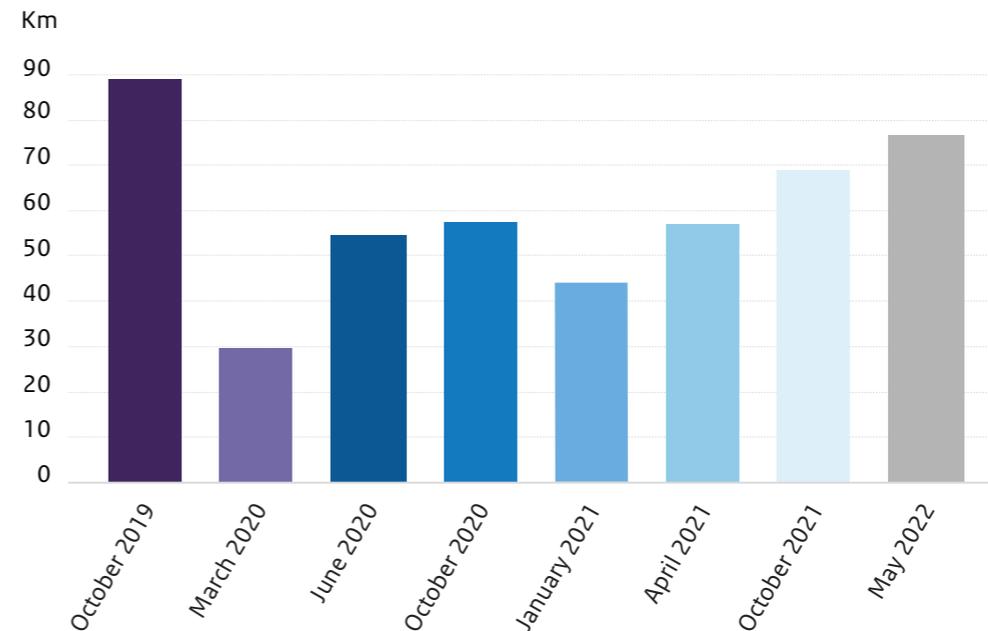
- Public transport use in particular is less frequent than before the pandemic (see Figure 43). Although the use of the normal bike is also lower, the use of the e-bike has been above the level before the pandemic since April 2021. The number of trips by foot in each period is slightly below the level of October 2019. However, this is not the case in terms of distance travelled. In each period, except in June 2020, the distance travelled by foot was above the level of October 2019.

**Figure 43:** Relative number of trips per mode of transport compared to October 2019

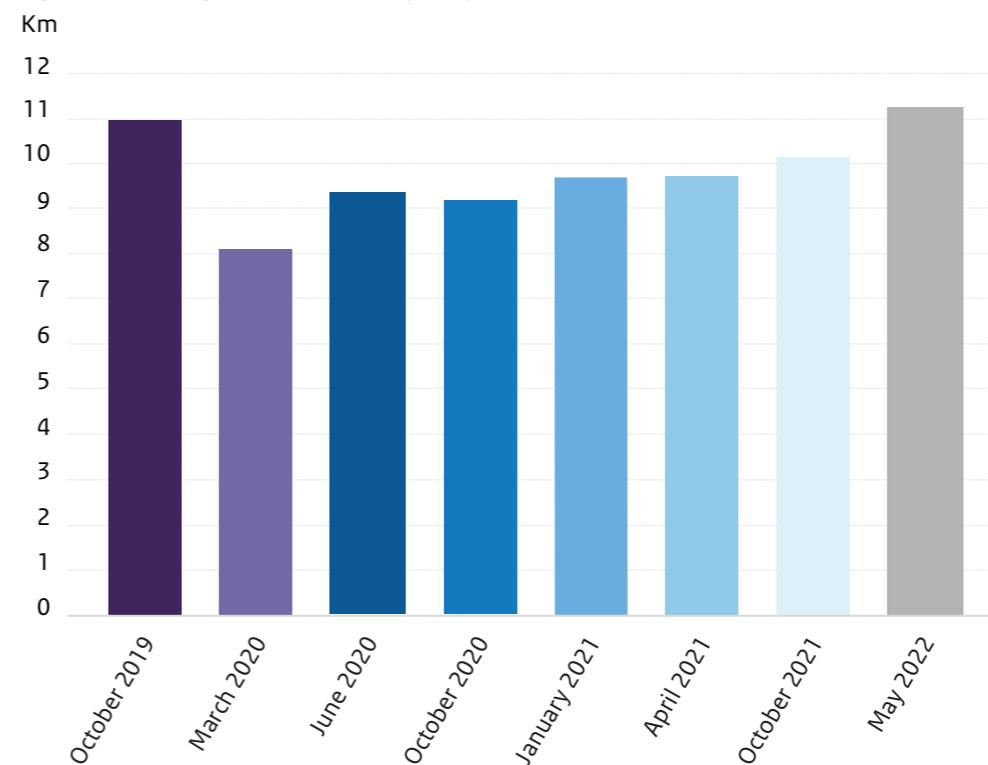


- In addition to fewer trips, Dutch people travel less distance (see Figure 44). Although the distance travelled is still lower than before the pandemic, the distance has increased since October 2021. Because the number of trips remained the same, this means that Dutch people visit destinations further away from home more often than in October 2021.
- The average distance travelled per trips has increased since the scrapping of the coronavirus measures and is at a similar level as before the pandemic (see Figure 45).

**Figure 44:** Average distance travelled per person in three days (in km)



**Figure 45:** Average distance travelled per trip (in km)



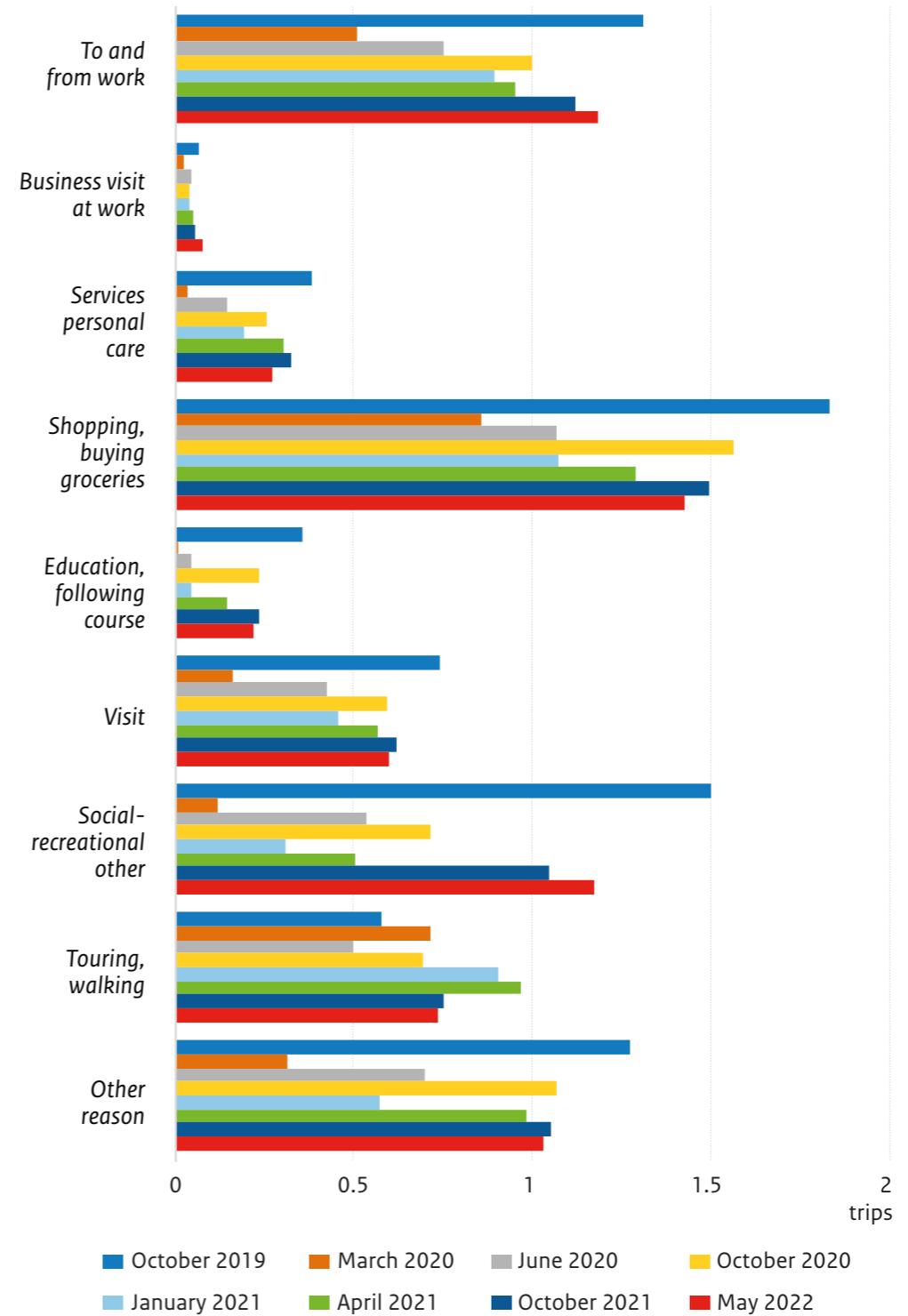
### Trip motive

- Dutch people travel less frequently for all reasons except touring and walking (see Figure 46). For the purposes of services/personal care and education, the decrease compared to before the pandemic is the largest.<sup>1</sup>



<sup>1</sup> Because we use a fixed sample in this study, the decrease in educational trips is partly explained by respondents who have graduated since the outbreak of the pandemic.

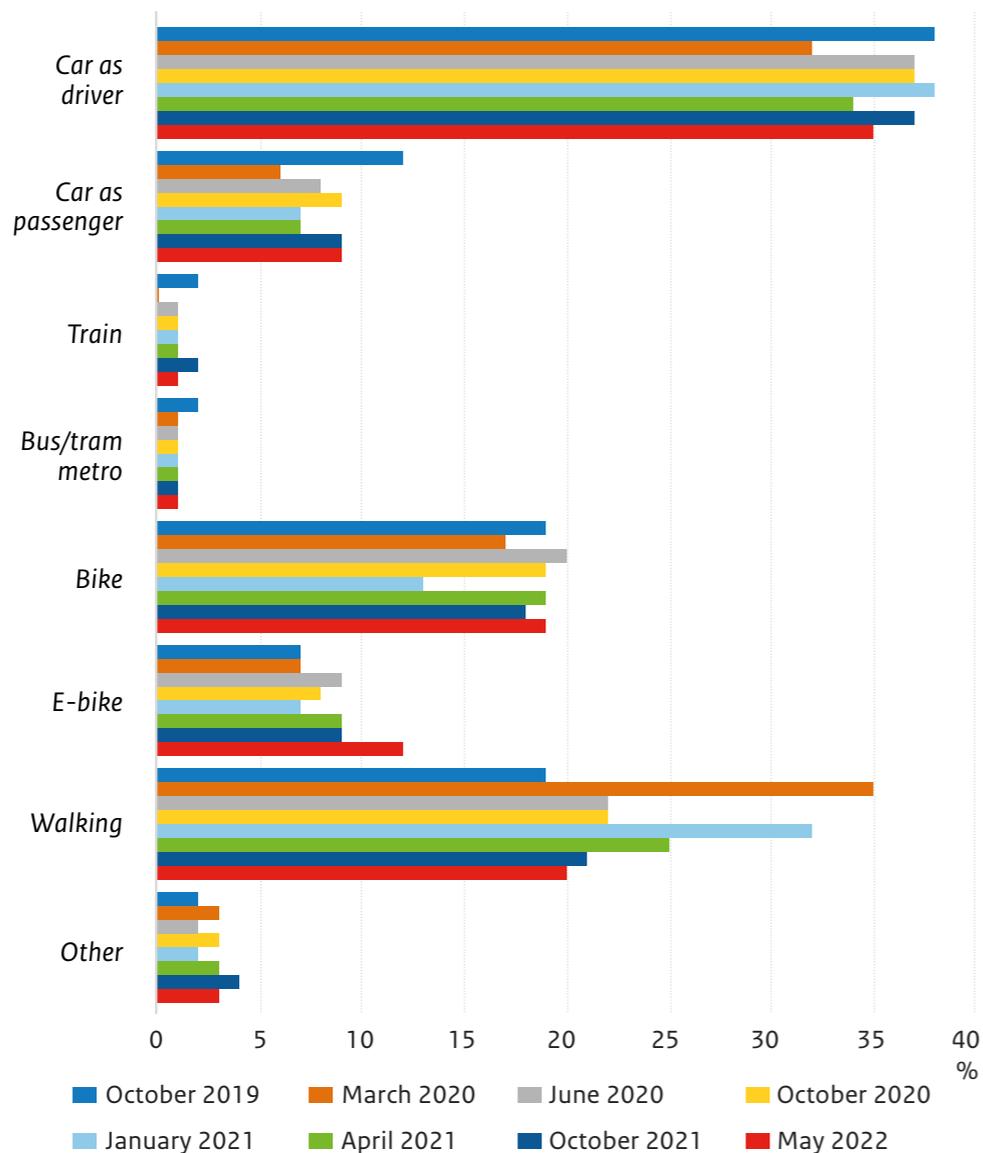
Figure 46: Number of trips per person per three days broken down according to trip motive



### Shares modes of transport (modal split)

- The share of cars (as a driver) in trips is slightly lower than before the pandemic (see Figure 47). However, the shares of trains and buses, trams and metros has declined more sharply in relative terms. By contrast, the share of e-bikes has risen sharply, while the share of normal bikes has remained virtually unchanged.

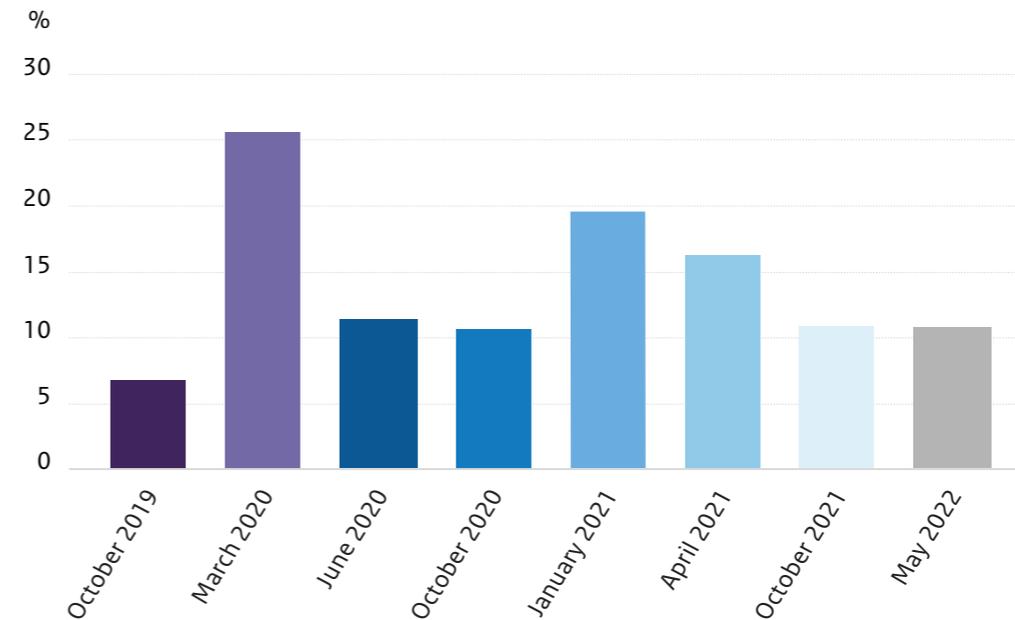
Figure 47: Percentage use of modes of transport in trips



### Round trips

- More than 10% of the trips made by Dutch people involve round trips, such as walking around or walking the dog (see Figure 48). This percentage is higher than before the pandemic, but has remained unchanged since October 2021. During the lockdowns (March 2020 and January and April 2021), the percentage of round trips was higher.
- The increase in round trips is mainly due to walking around, cycling around or running. In addition, there is a slightly higher frequency of walking the dog.

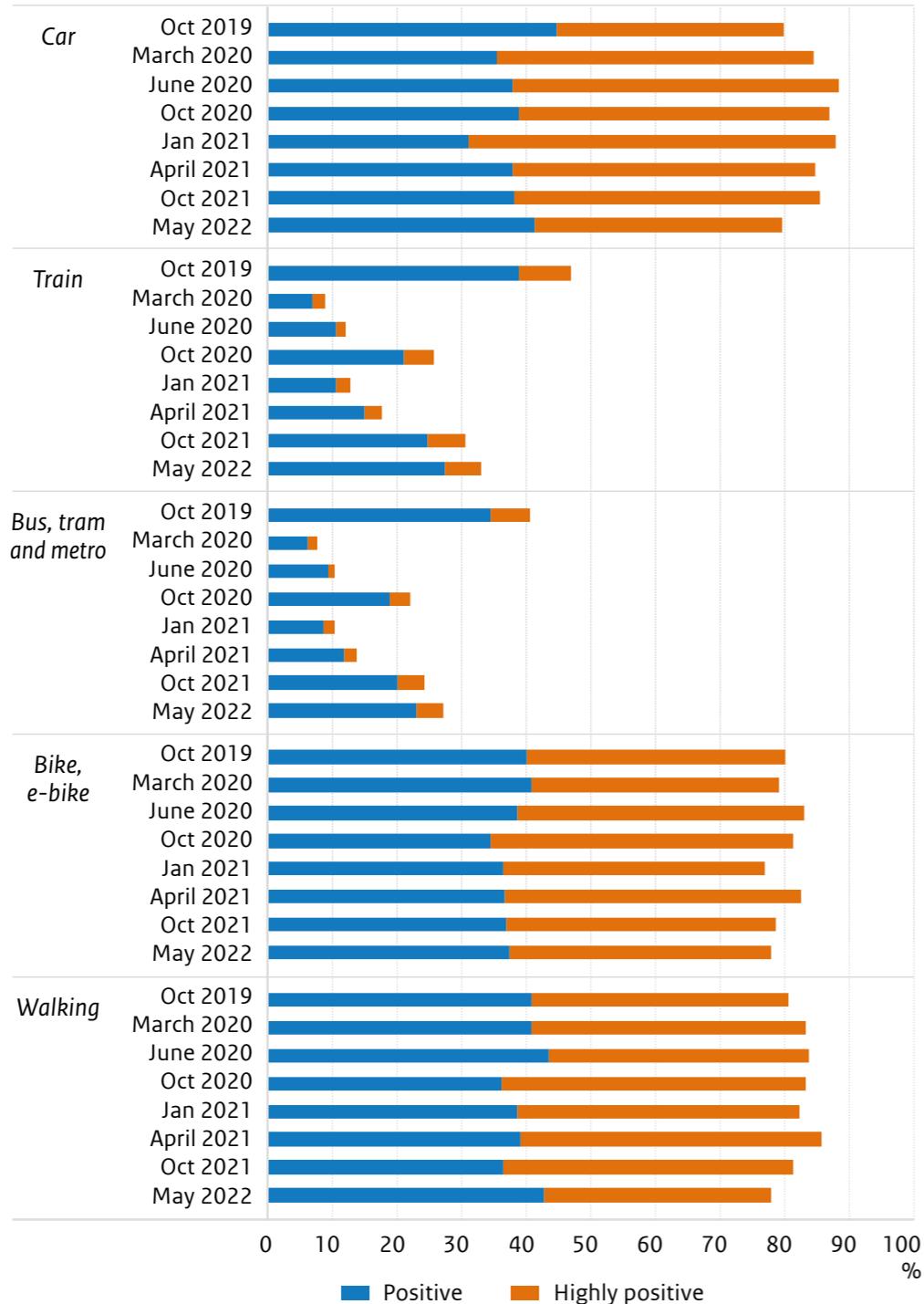
Figure 48: Percentage of round trips



### Assessment of modes of transport

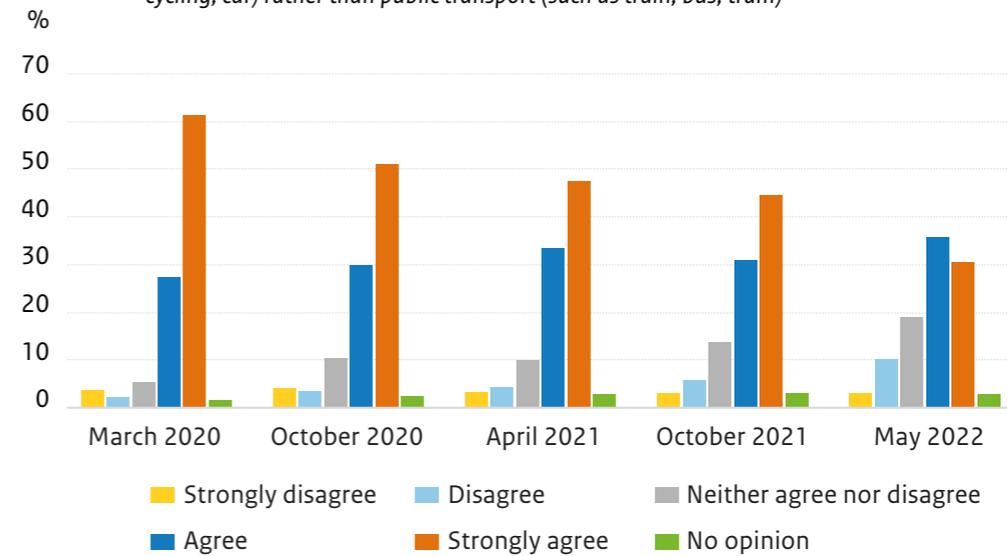
- Since the start of the pandemic, people have been less positive about the train and bus, tram and metro (see Figure 49). They became a little more positive about car use, while their opinion about the bike and walking remained almost the same. Although people are still less positive about public transport at the moment, there has been a rising trend in the assessment since January 2021. People are now as positive about the car as they were before the pandemic.

Figure 49: Assessment of modes of transport



- The strong preference for individual transport (such as walking, cycling or car) instead of public transport declines over the course of the pandemic (see Figure 50). In particular, young people (<25 years) are still least likely to prefer individual transport instead of public transport.

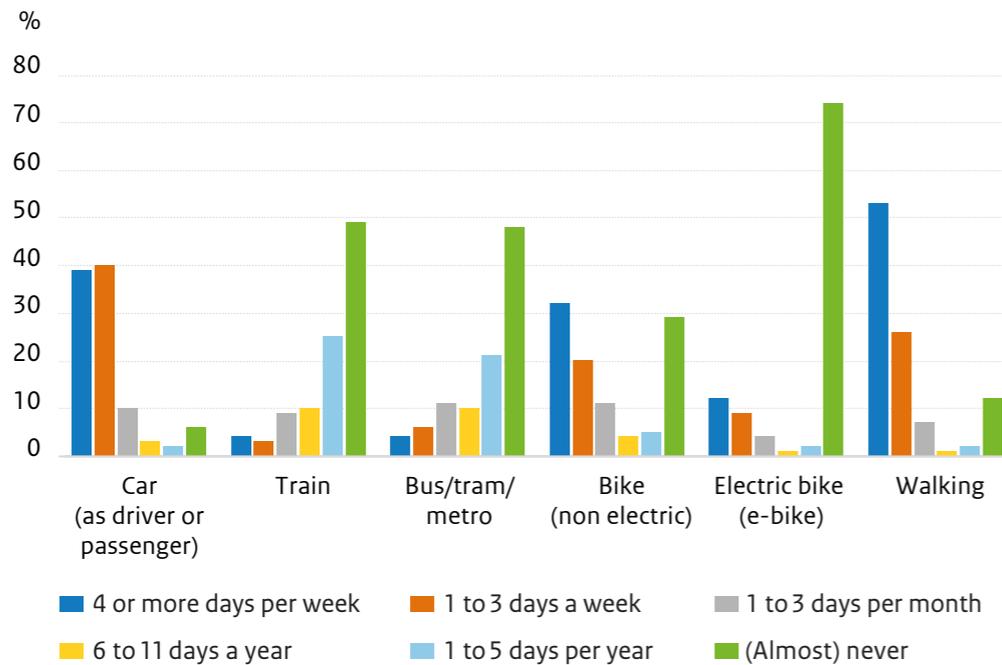
Figure 50: Answer to the statement 'I currently prefer to use individual transport (such as walking, cycling, car) rather than public transport (such as train, bus, tram)'



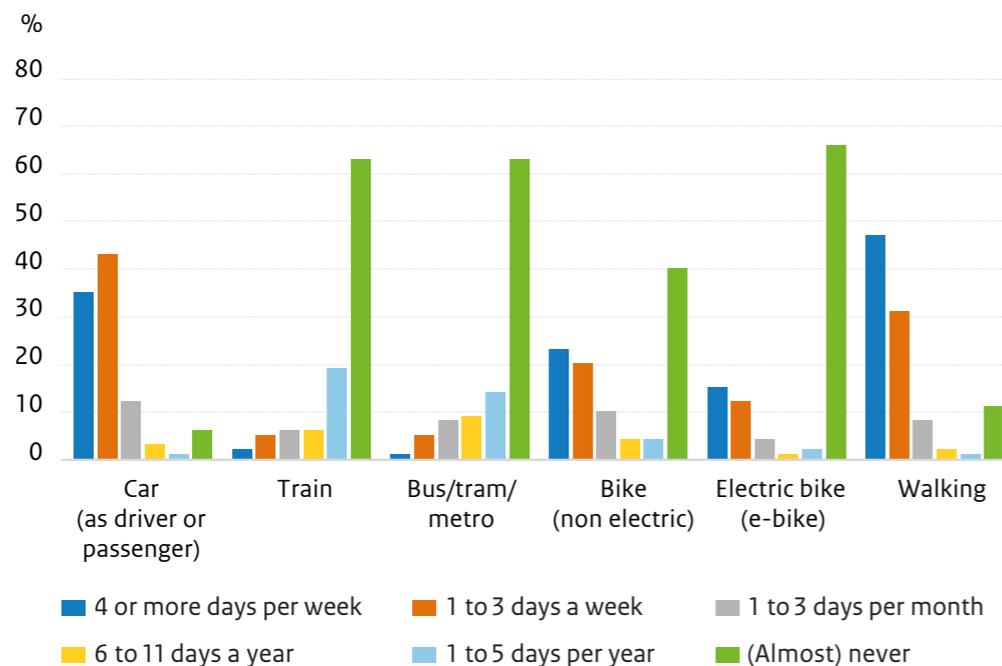
### Frequency of use of transport modes

- While before the pandemic about half (almost) never used public transport, this share has risen sharply: now about 63% indicates this for both the train and btm (see Figure 51 and Figure 52). We see a small decrease in the percentage that people use a car almost daily and an increase in the percentage of people that use a car 1 to 3 days a week. A clear exchange can be seen between the normal bike and e-bike. The group of people who (almost) never use the normal bike increased by 11 percentage points, while that percentage of e-bikes decreased by about 8 percentage points.

**Figure 51:** Frequency of use of transport modes (October 2019)



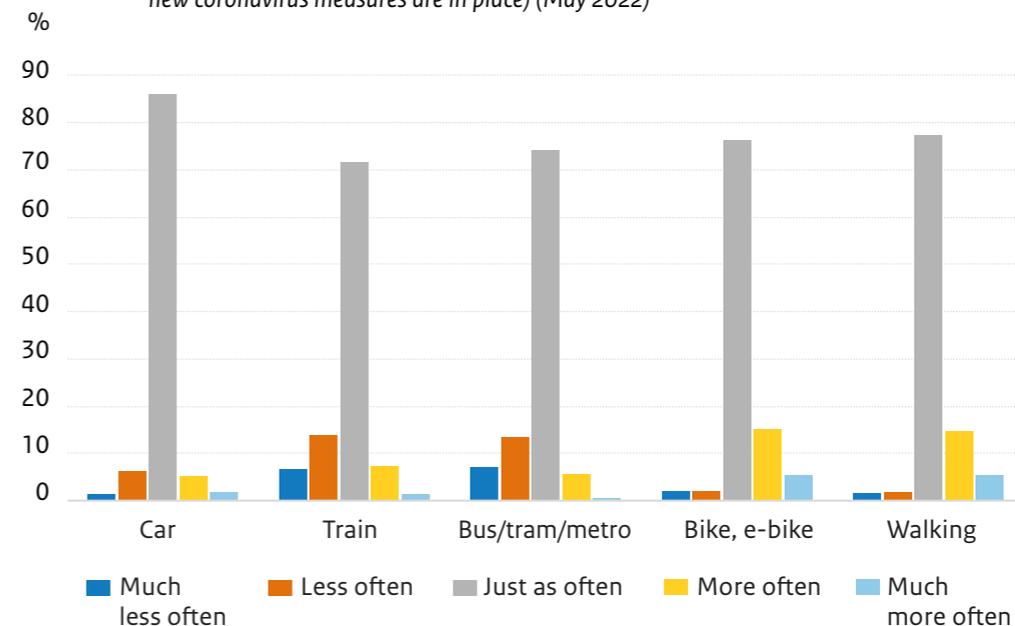
**Figure 52:** Frequency of use of transport modes (May 2022)



### Expected use of transport modes

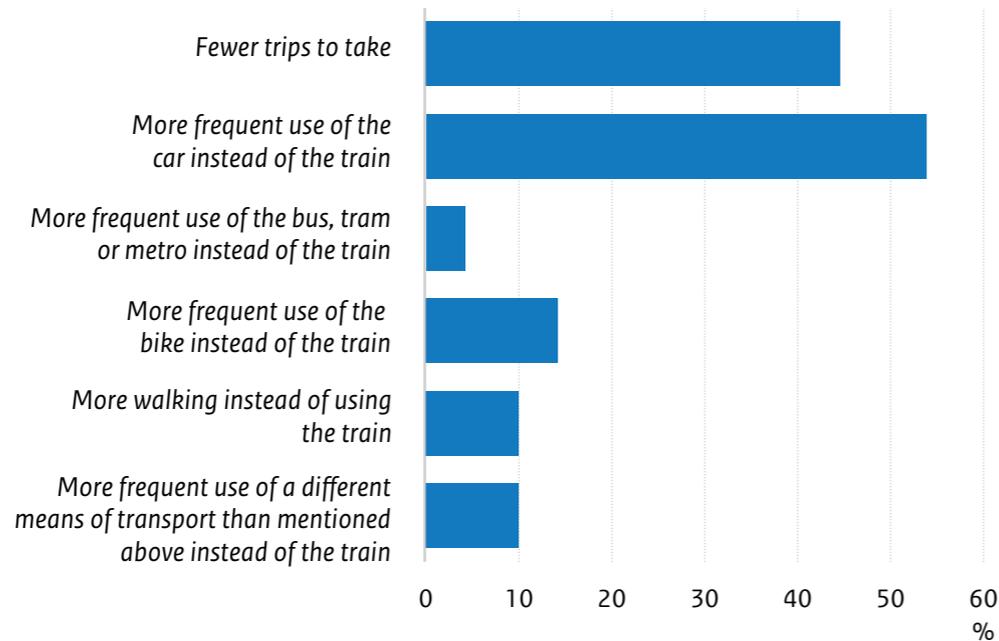
- Almost 20% of Dutch people who did use public transport expect to use public transport less than before the pandemic (see Figure 53). A smaller group expects to do so more often (9% for the train, 6% for btm). With regard to car use, the group that expects a decrease in use and the group that expects an increase are about equal. Cycling and walking is expected to increase by around 19%, while only 3% expect a decrease. These expectations are broadly in line with what we found during previous periods in the pandemic. There has been a change in respect of car use, however, because in earlier periods a larger group expected to use this mode of transport more often than before the pandemic. For example, in January 2021, around 19% expected to use the car more often, compared to 7% who currently expect this. The share that expects to use the car less remains relatively constant (both in January 2021 and currently around 7%). These expectations cannot be translated directly into an effect on mobility. To this end, several factors must be taken into account, such as the frequency with which the mode of transport was used before the pandemic and the extent to which that use changes.

**Figure 53:** Expected use of transport modes in the long term compared to pre-COVID (as long as no new coronavirus measures are in place) (May 2022)

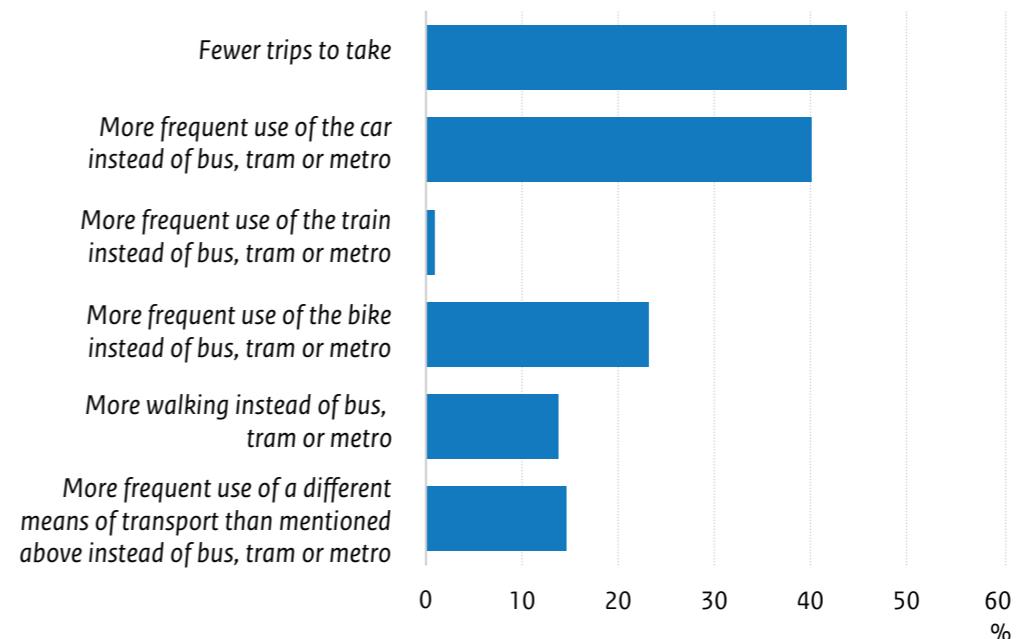


- Slightly less than half of the people who expect to travel less by public transport indicate that this is the result of making fewer trips (45% for the train, 44% for btm) (see Figures 54 and 55). This has to do, for example, with working from home more often or a change in personal circumstances. More than half (54%) expect to use the train less because they use the car more often. For btm, this is slightly lower (40%) Almost a quarter (23%) expect to travel (or continue to travel) less often by bus, tram and metro because they use the bike more often. With train travel, the exchange with the bike is lower (10%).
- About a quarter of the people who expect to travel less with public transport indicate that they expect this because they do not want/prefer not to sit next to a stranger. A slightly smaller group (19% for btm, 13% for train) indicates that this has to do with fear of infection while travelling. In relative terms, both reasons are mentioned more frequently by people over 65.

**Figure 54:** Use of other modes of transport or making fewer trips if less train use is expected (only respondents who expect to use the train less in the future)



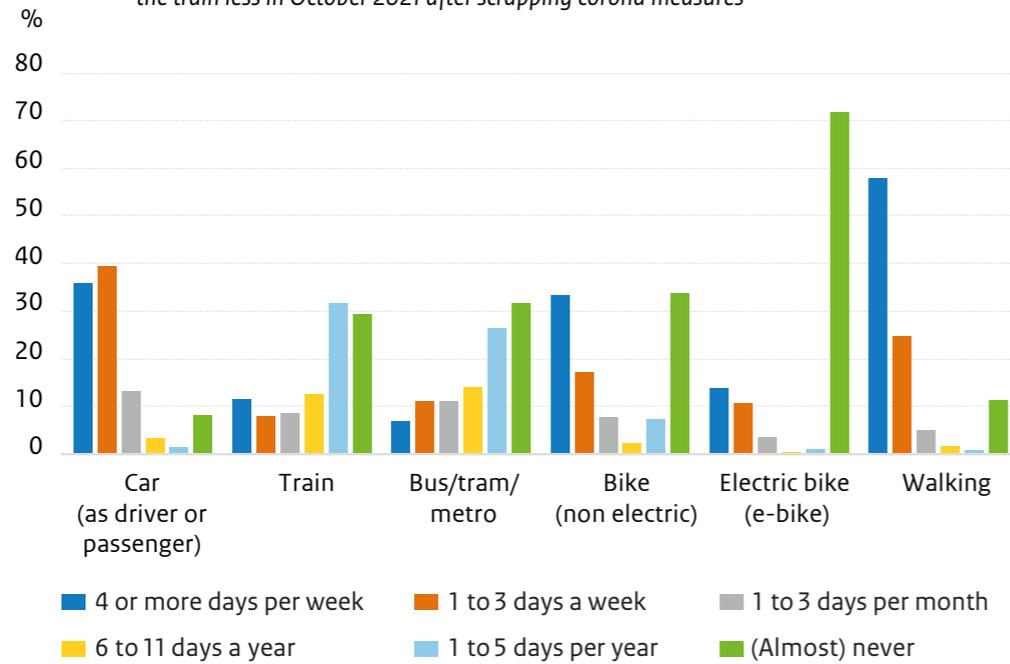
**Figure 55:** The use of other modes of transport or making fewer trips if less bus, tram or metro is expected (only respondents who expect to use the bus, tram or metro less in the future)



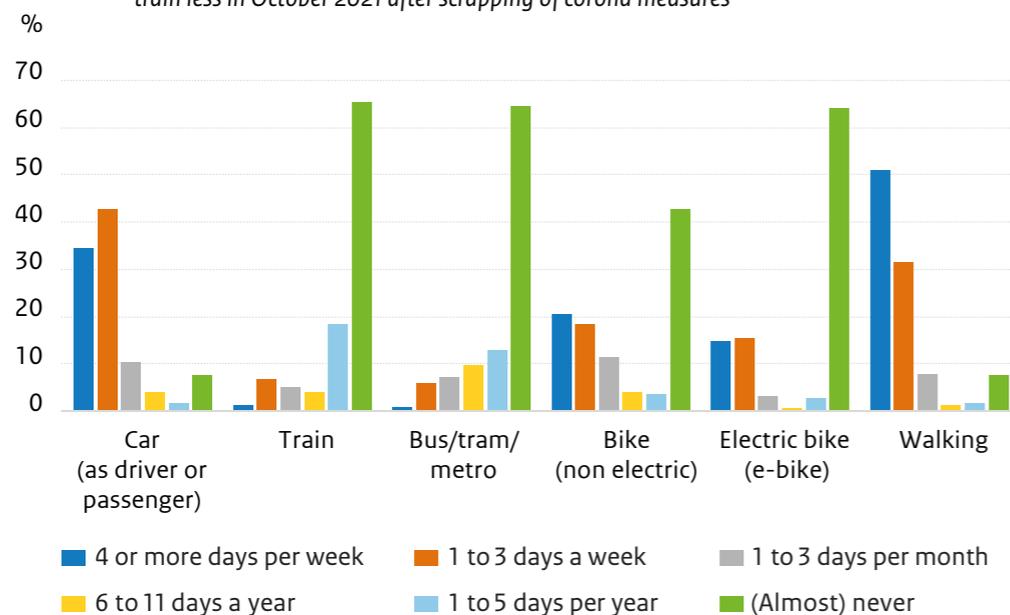
### Expectations in relation to actual change

- Also in October 2021, we asked people if they thought the use of transport modes would be different from the situation before the pandemic if all corona measures were lifted. Among the people who expected to use the train less at the time (about 16%), there was indeed a sharp drop in the use of the train (see Figures 56 and 57). It is true that even among the groups who expected to use the train as often or more often at the time, there is a decrease in train use, but this decrease is (much) less pronounced. Although a large percentage of these people are expected to use the train less due to an increase in car use, this figure only shows this in part. The number of people using the car for 1 to 3 days has increased slightly, although there is a (slightly smaller) decrease in the number of people using the car every day. The reduced use of public transport therefore appears to be primarily the result of fewer trips. For the bus, tram and metro the same picture applies.

**Figure 56:** Frequency of use of transport modes October 2019 by respondents who expected to use the train less in October 2021 after scrapping corona measures



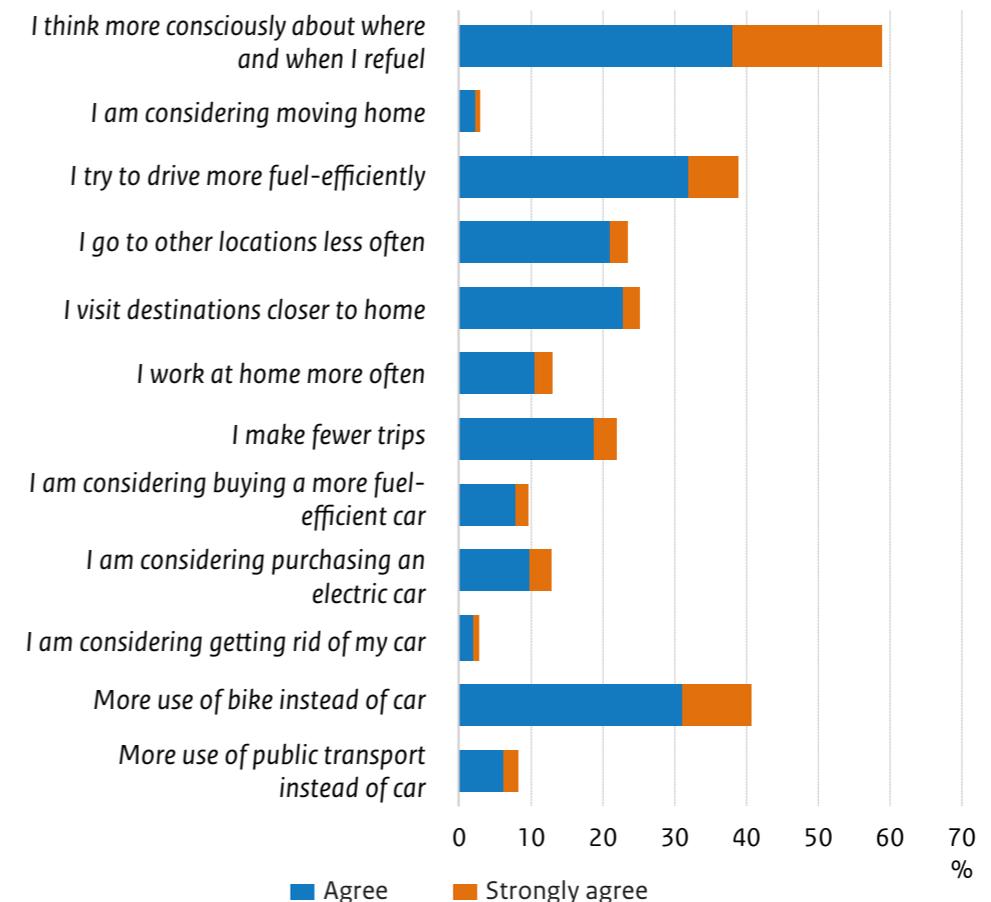
**Figure 57:** Frequency of use of transport modes May 2022 of respondents who expected to use the train less in October 2021 after scrapping of corona measures



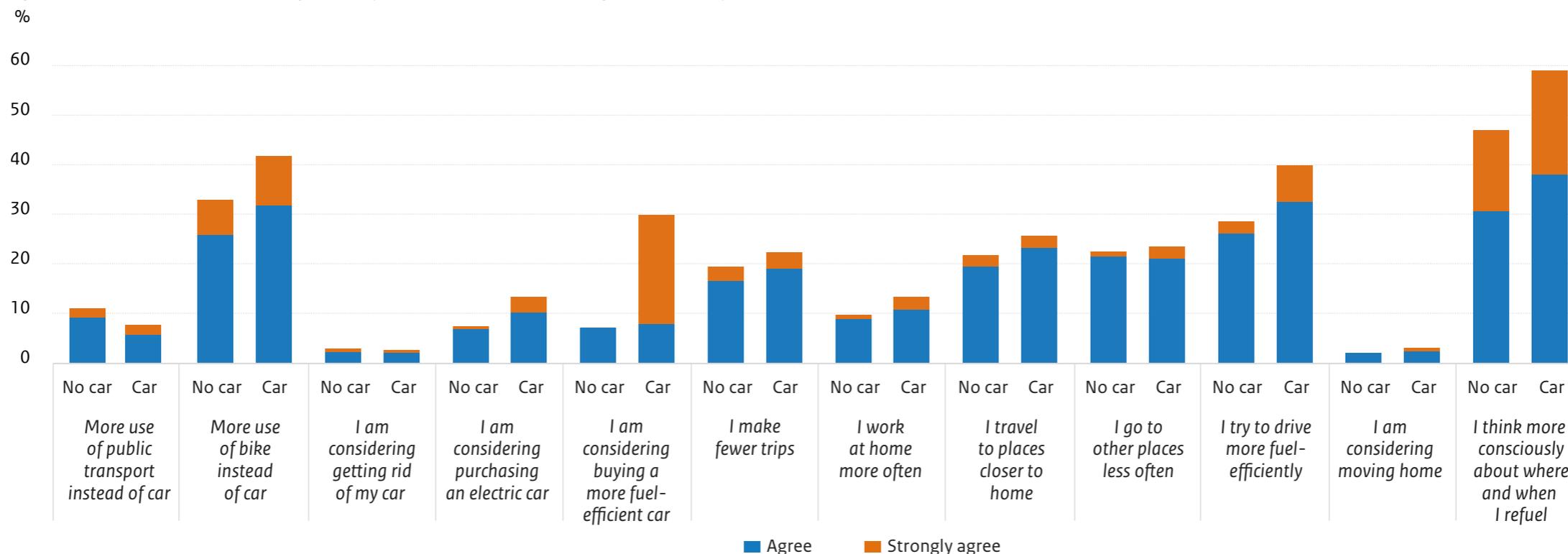
### Fuel prices

- People mainly report making relatively easy adjustments to reduce the impact of rising fuel prices (see Figure 58). It is then about finding out better information about where to refuel, to drive more fuel-efficiently, or to take the bike more often (probably especially for short trips).
- More long-term decisions, such as moving home or getting rid of the car, are only addressed by a very small percentage of respondents. The purchase of a more fuel-efficient or electric car is being considered by about 10% of respondents.
- A relatively large minority of around 20% expects the activity pattern to change, for example by going out less often or staying closer to home.

**Figure 58:** (Potential) behavioural changes due to the high fuel price



**Figure 59:** (Potential) behavioural changes due to fuel costs, broken down according to car ownership

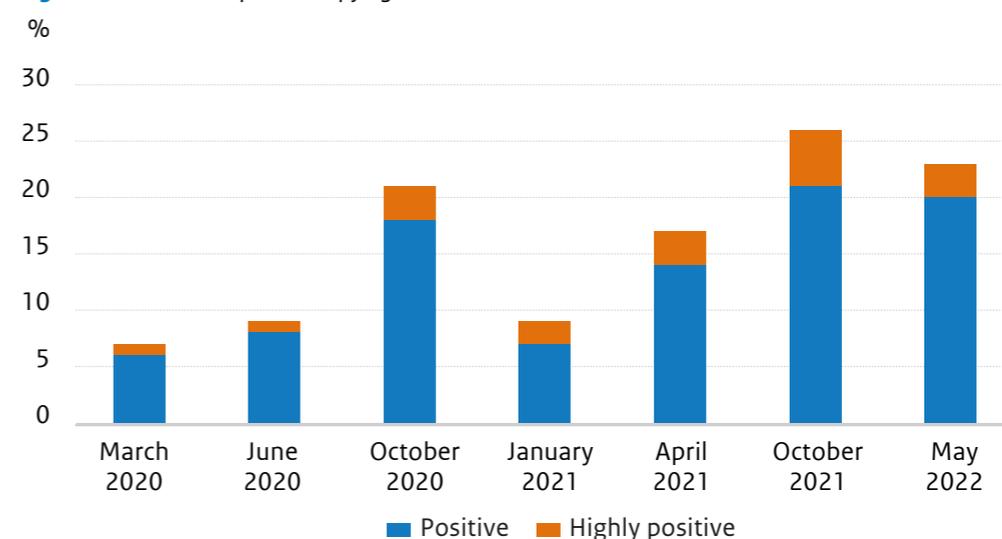


- Because of the higher fuel costs, people who do not own a car more often take public transport instead of the car than car owners (Figure 59). By contrast, people with a car often travel by bike instead of the car.

### Aviation

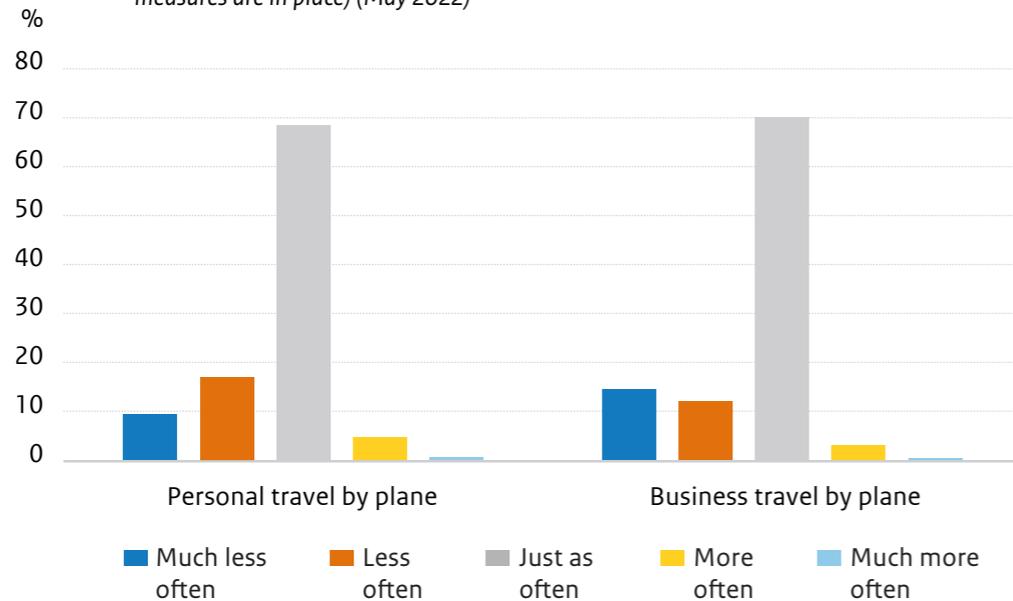
- Opinions on flying are currently clearly more positive than at the beginning of the pandemic (see Figure 60). However, opinions are slightly less positive than in October 2021. The extent to which this is related to the current problems at Amsterdam Schiphol airport is not known.<sup>2</sup> Because we have only been collecting opinions on flying since the outbreak of the pandemic, we do not know what these opinions were before the pandemic.

**Figure 60:** General opinion on flying



<sup>2</sup> During the May holiday, extensive media attention was paid to the issues surrounding long waiting.

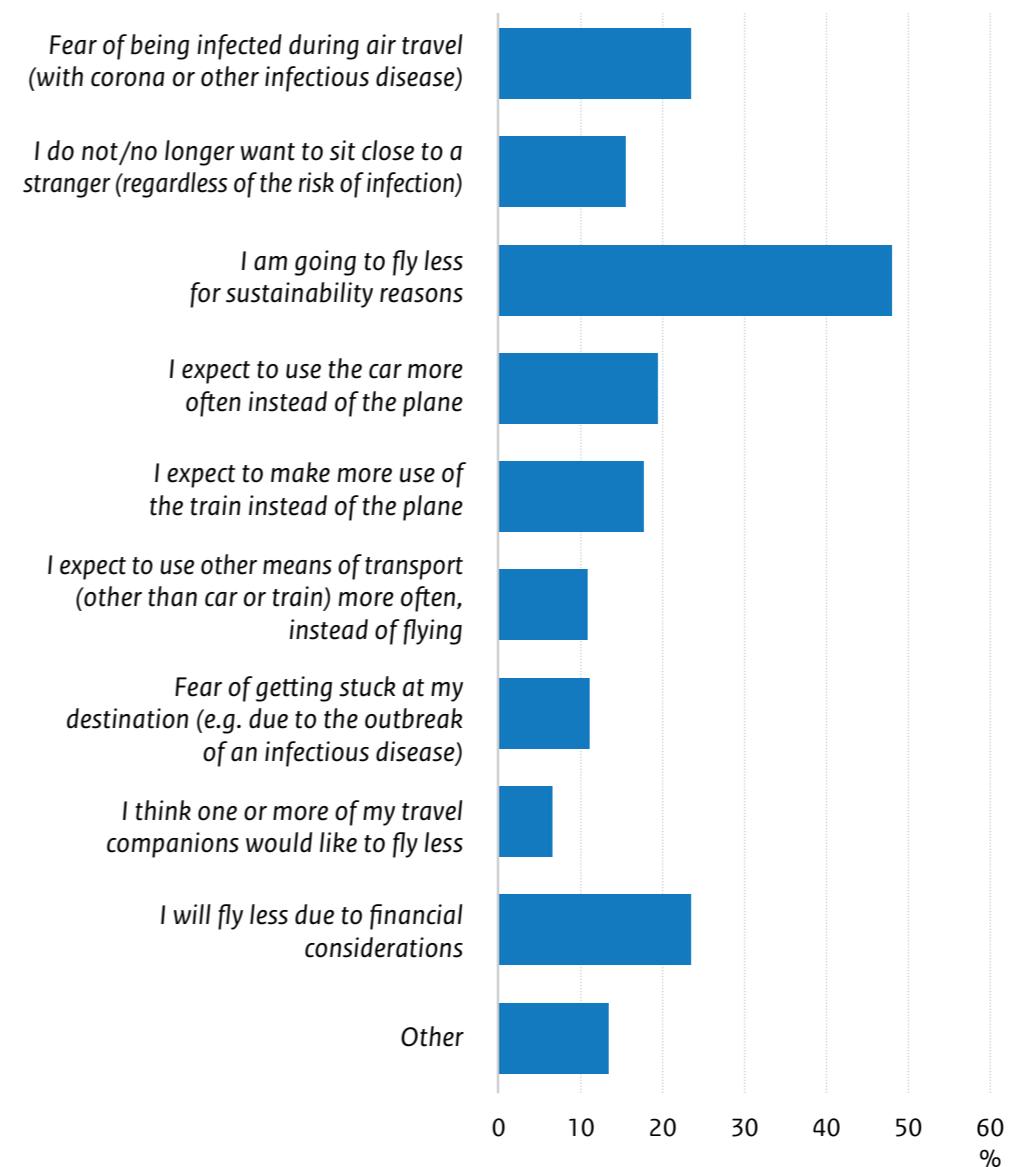
**Figure 61:** Long-term expectation for air travel compared to pre-COVID (as long as no new coronavirus measures are in place) (May 2022)



- Around a quarter (25%) of Dutch people with experience of personal travel by plane expect to fly less in the future than pre-COVID, while around 5% expect an increase (see Figure 61). In October 2021, 20% expected a decrease and 13% an increase. The extent to which this change in expectations is related to the current problems at Schiphol is unknown. Also for business travel, a larger group expects a decrease (26%) than an increase (4%). These expectations are almost the same as in October 2021.

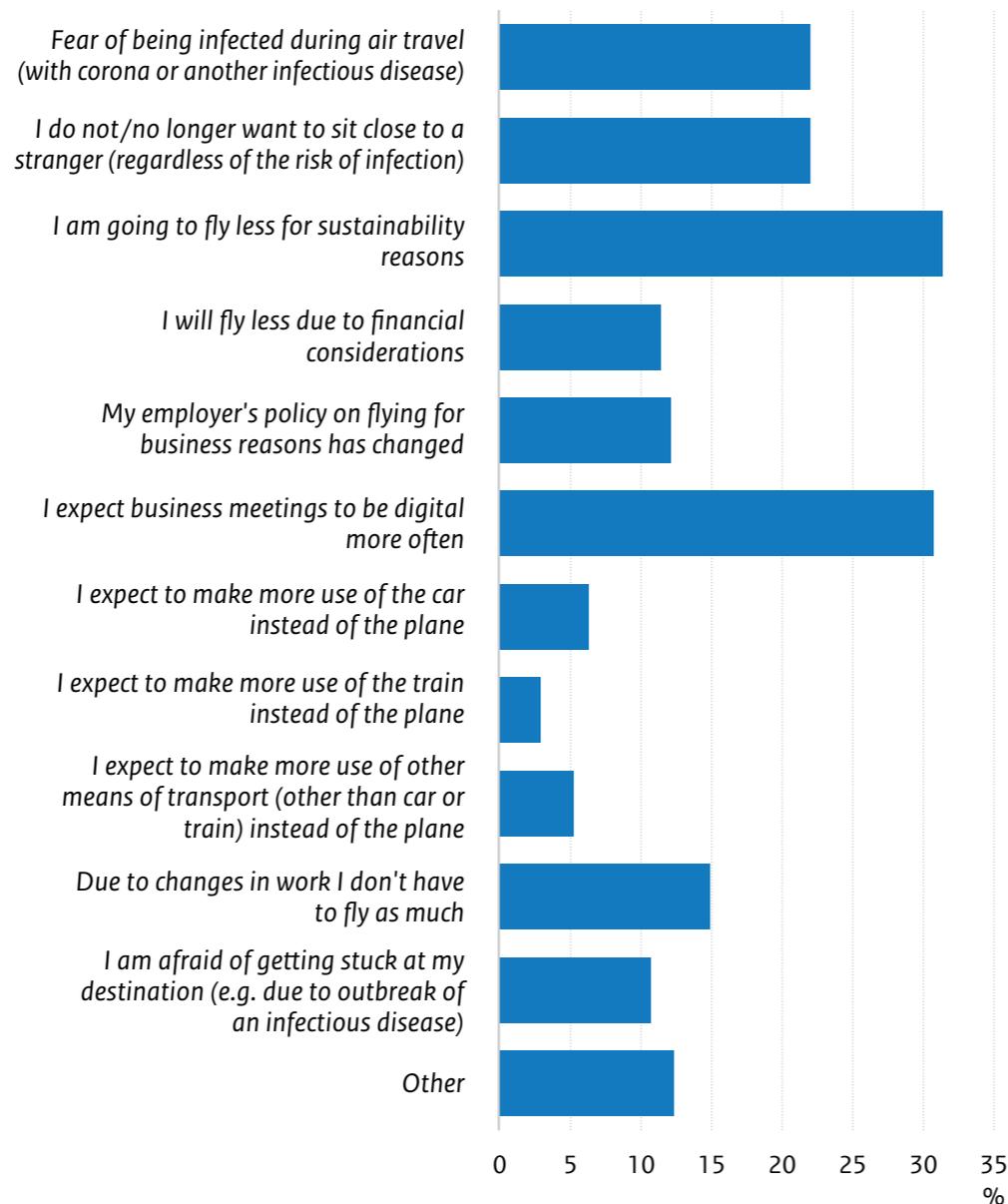
- Almost half (48%) of Dutch people who expect to fly less for personal reasons indicate that sustainability considerations play a role in this (see Figure 62). In addition, they expect to do this primarily due to financial considerations (23%) and fear of becoming infected during air travel (23%).

**Figure 62:** Reasons for less personal travel by plane in the future (only respondents who expect to fly less for personal reasons in the future)

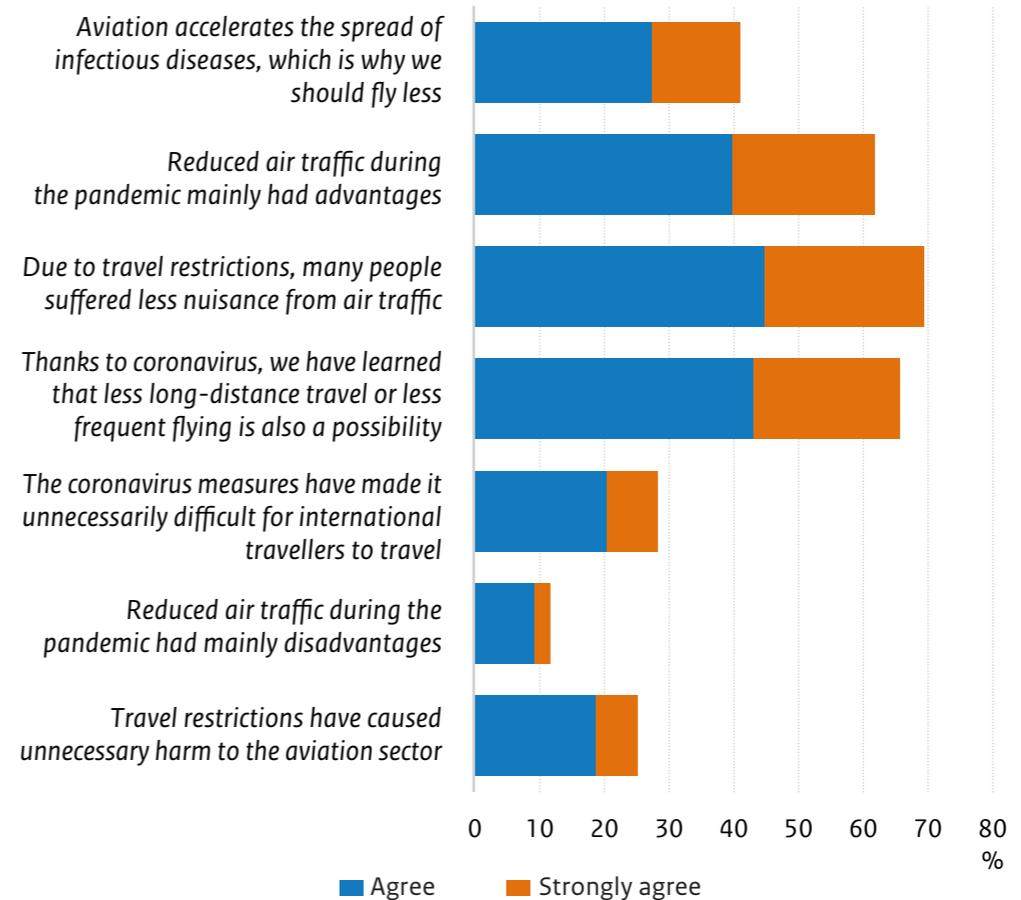


- Business travellers also expect to travel less by air for sustainability reasons (31%) (see Figure 63). An almost equally large group (31%) expects to fly less because they expect business meetings to go digital more often.

**Figure 63:** Reasons to fly less for business purposes in the future (only respondents who expect to fly less for business purposes in the future)



**Figure 64:** General statements about coronavirus and aviation



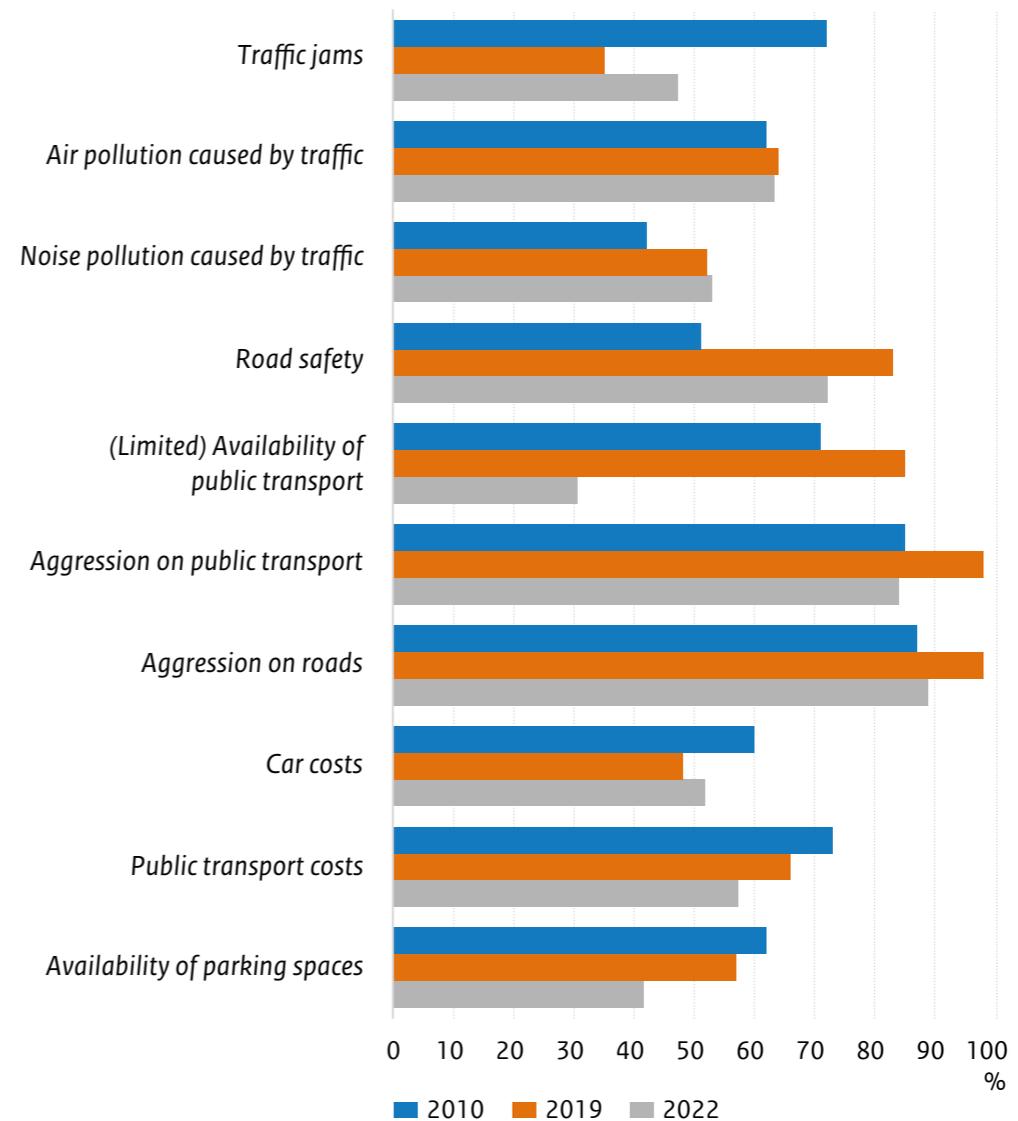
- More than 60% of Dutch people believe that reduced air traffic during the pandemic has mainly had advantages, while a much smaller group (12%) mainly saw disadvantages (see Figure 64). A slightly larger group (66%) think that thanks to corona, we have learned that less long-distance travel or less frequent flying is also an option. About 40% of Dutch people believe that we should fly less because aviation accelerates the spread of infectious diseases.

# Social developments

## Social problems

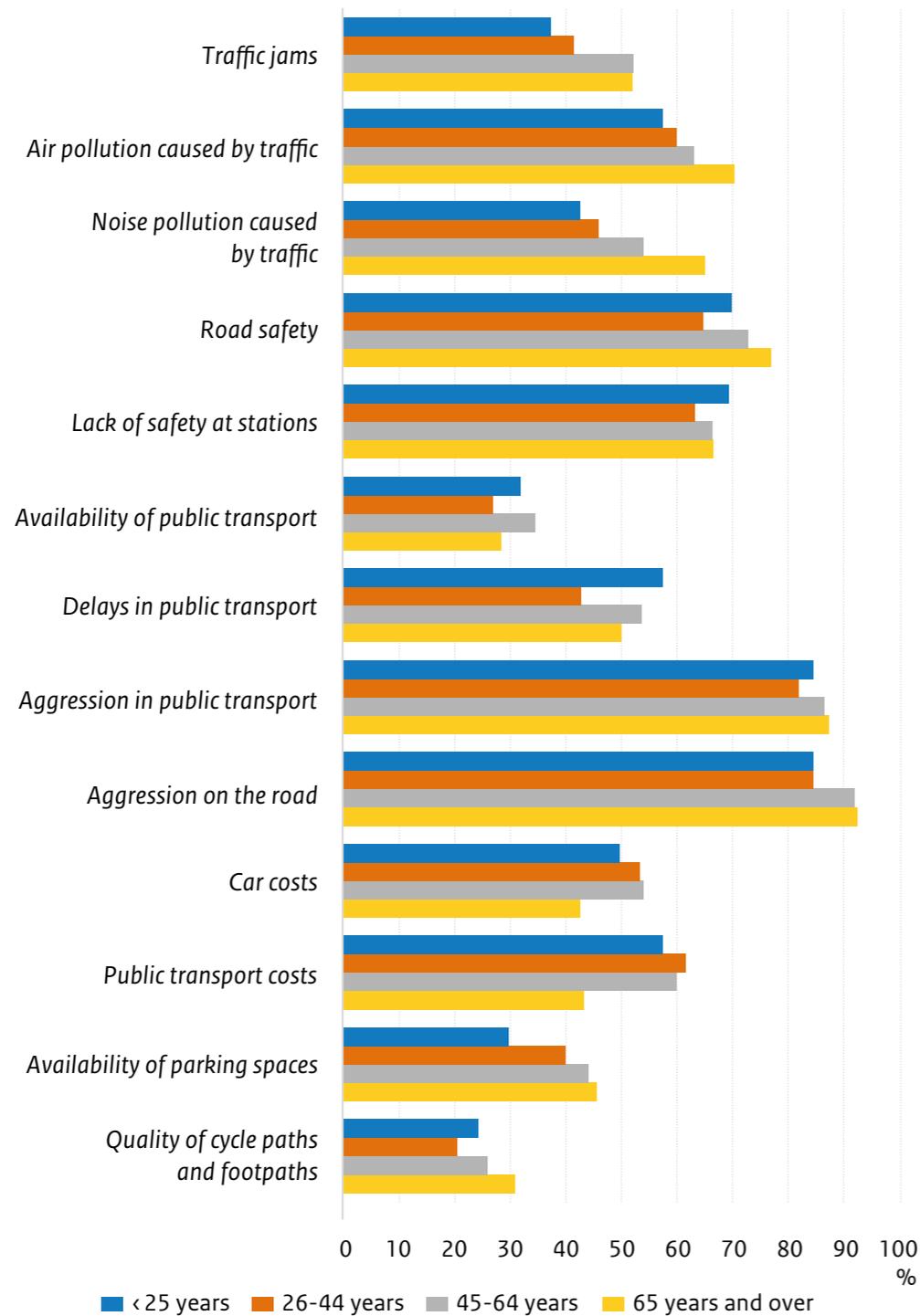
- We asked for the perception of a number of social problems related to mobility among the panel members. These same questions were asked earlier in 2010 and 2019 in another study.
- In general, we see small differences over the years. The major exception is the availability of public transport: in 2019, 85% of respondents still indicated that this was not acceptable; in this sample, this was only 30% (see Figure 65).<sup>3</sup>
- Most people find aggression unacceptable in public transport (85%) and on the road (90%). Although they are less negative about this than in 2019, these social problems still score the worst.
- People have started to find traffic jams and the cost of the car more acceptable than in 2010. Compared to 2019, these social problems are less acceptable. Furthermore, there is less negativity about the availability of parking facilities.

Figure 65: Percentage of respondents who find a social problem unacceptable



<sup>3</sup> The statement regarding the availability of public transport was expressed differently in 2022 than in the previous measurements. In 2010 and 2019, the question concerned 'limited availability of public transport'. In 2022, the word 'limited' was omitted from the question. This may affect the interpretation of the statement.

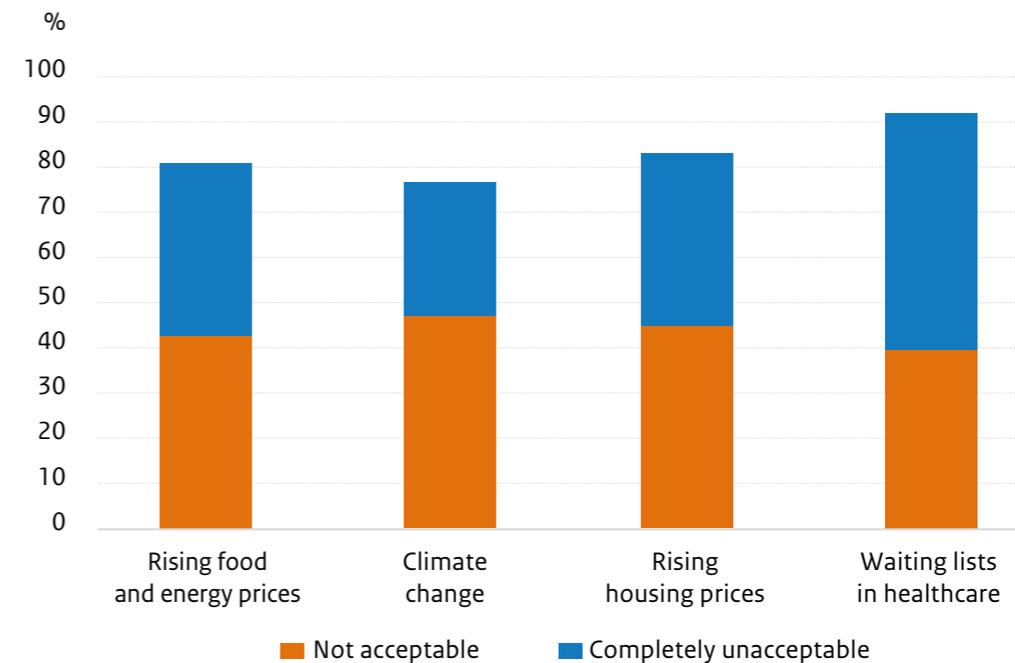
**Figure 66:** Percentage of respondents who find a social problem unacceptable, broken down according to age



- In 2022, we distinguished the (un)acceptability of the social statements broken down according to age group, see Figure 66.
- The older age groups find congestion, air and noise pollution, and the availability of parking facilities a greater problem than the younger age groups.
- In particular, younger age groups find the costs of cars and public transport less acceptable than older age groups.

We also asked about four more general societal problems, in addition to those related to mobility, namely rising food and energy prices, climate change, rising housing prices, and waiting lists in healthcare.

**Figure 67:** More general societal problems

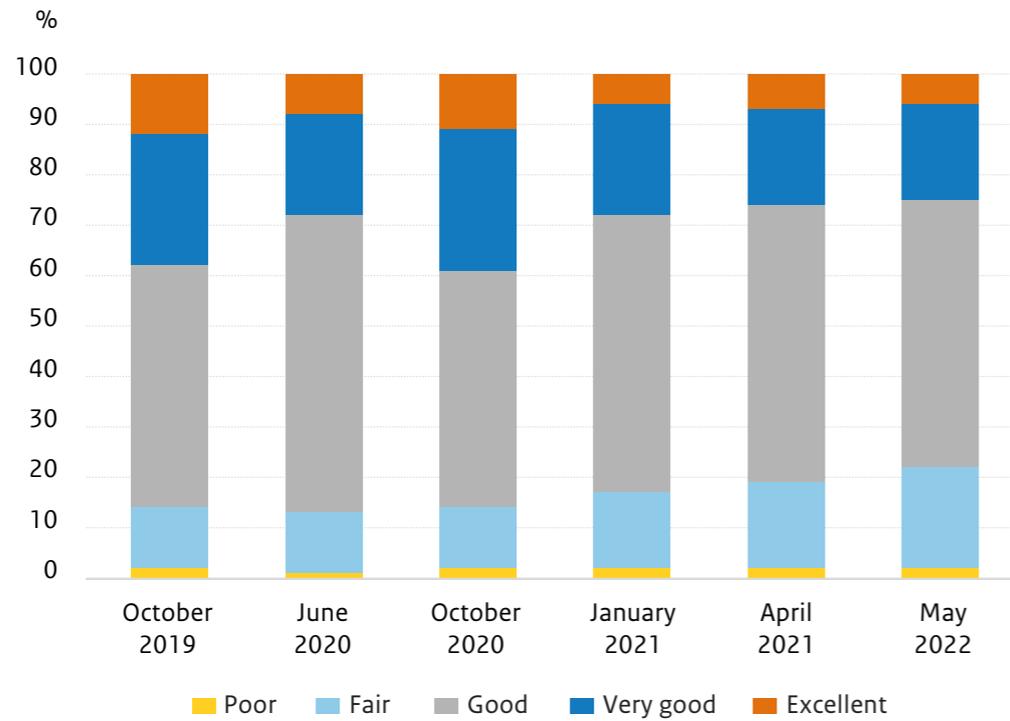


- People generally indicate that they find these four social problems unacceptable or not at all acceptable than the social problems discussed above in the area of mobility (see Figure 67).
- They find waiting lists in healthcare the most problematic, although the other three problems (rising food and energy prices, climate change, and rising housing prices) do not make much difference.

### Health

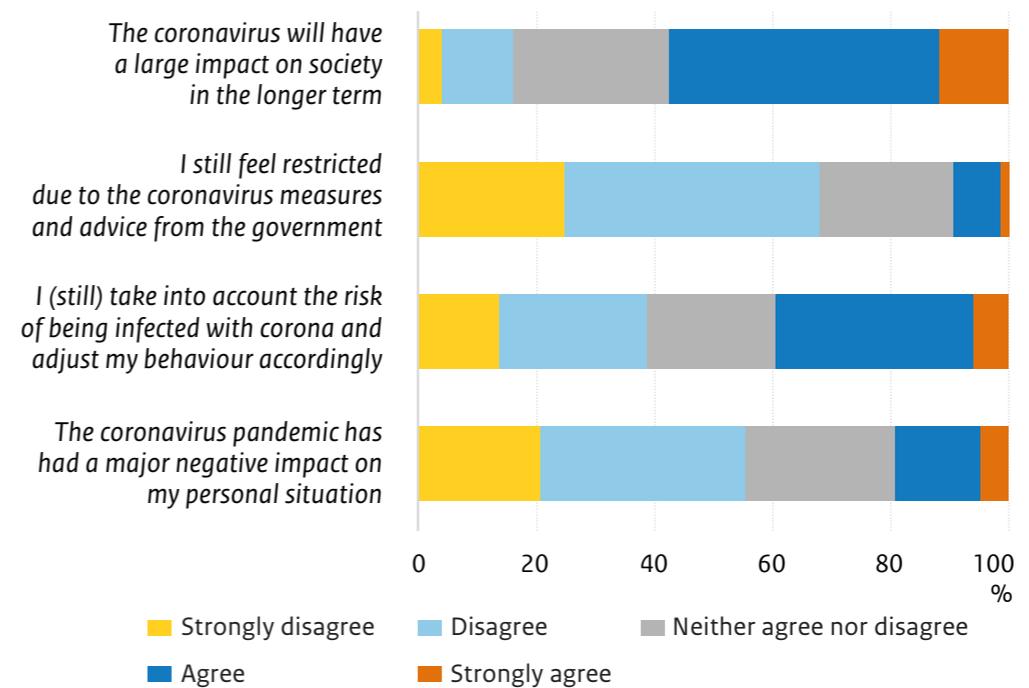
- Approximately 85% of people reported good to excellent overall health between October 2019 and October 2020 (see Figure 68). This share has since fallen to just under 80% in the last measurement in May 2022.

**Figure 68:** The general impression of one's own health



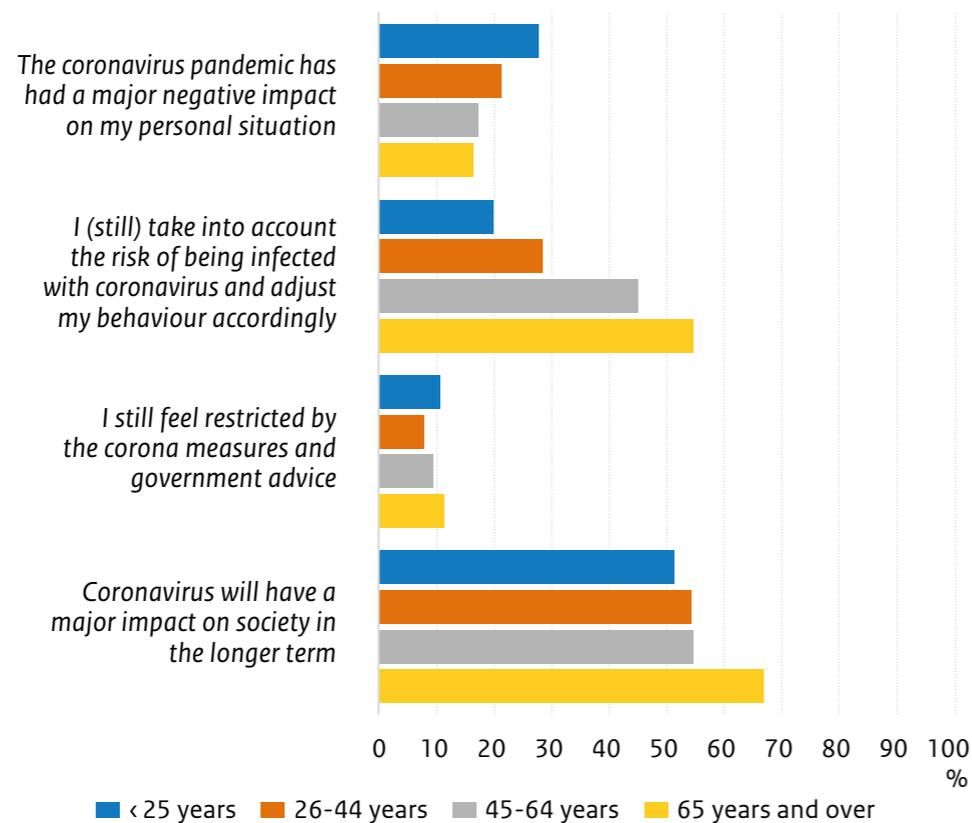
- A majority of respondents believe that the coronavirus will have a major impact on society in the longer term (see Figure 69).
- 20% of respondents believe that the pandemic has had a major negative impact on their personal situation. 10% still feel restricted by the government's coronavirus measures and recommendations.

**Figure 69:** The impact of corona on one's own situation and on society



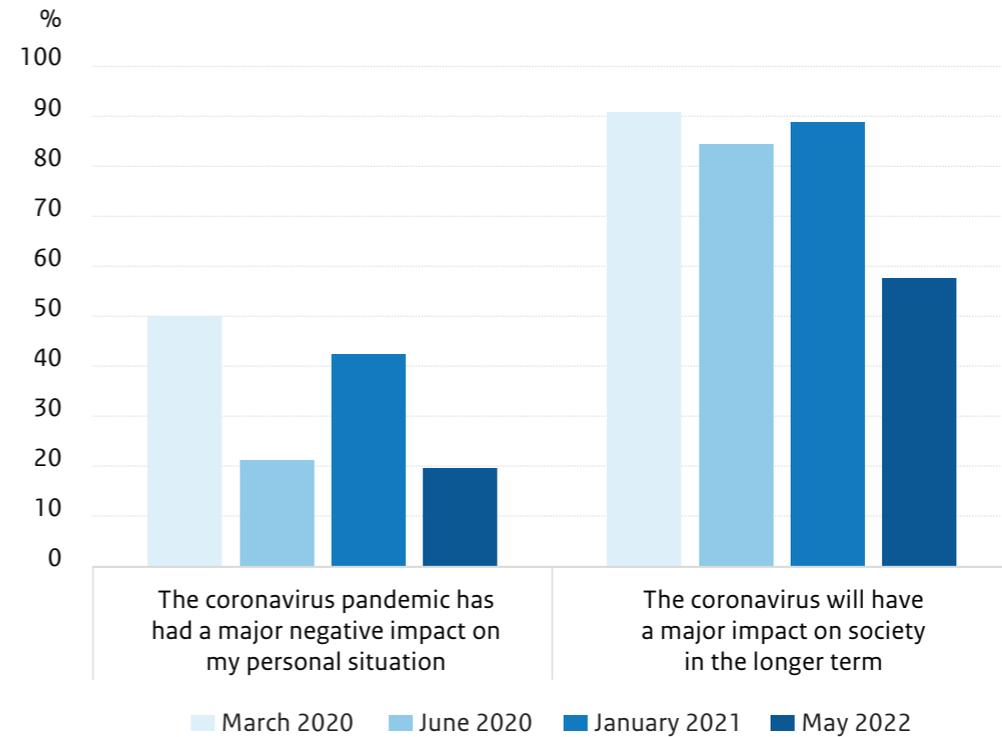
- There are large differences between the age groups with regard to the impact of corona (see Figure 70). Young people more often than elderly people find that corona has (had) a major negative impact on their situation. On the other hand, older people still adapt their behaviour much more than young people in order to reduce the risk of infection. Older people are also more likely to think that coronavirus will also have a major impact on society in the longer term.

Figure 70: The impact of corona, broken down according to age group



- The assessment of the personal and social impact has changed during the corona period. We see that people experienced a personal negative impact less often in May 2022, and also that they less often assume that there will be a major impact on society in the longer term (see Figure 71).
- It is possible that people have overestimated the long-term impact in earlier periods, for example due to the (higher) infection rates and contact-limiting measures in those periods.

Figure 71: The impact of corona during a number of MPN measurements during the pandemic



# Colophon



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