Work from Home: From pandemic necessity to the concept of multi-locational work – an empirical study of employees' experiences for the future of distributed workplace environments

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Management summary

The world of work is undergoing a serious transformation process. One of the main changes is the transformation of the physical organisation of work. Whilst work had to be done primarily from home due to the COVID-19 pandemic in the past years, knowledge workers are increasingly free to choose the place where they perform their work. The return of employees to company offices, the simultaneous continued use of work from home and the experimentation with third places of work are giving rise to a new concept of the physical organisation of work: multi-locality.

Based on a survey of 1,136 German knowledge workers, this study examines the status quo of work from home, working in the office as well as a third-place location and analyses how employees' work success is generated in the different places. In addition, change management processes are examined. This helps identify the necessary conditions that must be created in order to successfully complete the transition from one-dimensional work in the office or at home to a multi-local working world. Based on a discussion of the empirical results on the potentials and challenges of the transformation of the world of work, implications are derived for the necessity of state regulation for employees, companies and real estate industry stakeholders.

The results illustrate the gigantic scale of the changes that multi-local work is causing in the world of work and other areas of social life, such as transport and the environment, or in relation to social welfare. For employees, the freedom of mobile working has become indispensable. The study shows how each employee adapts individually to multi-local work and makes the best possible use of the work from home concept, offices and third places. In addition to the great social value, another key finding is that the new concept of multi-local working also has great economic potential, which, however, has not yet been fully realised. Employers experience great benefits through the correct use of multi-local work. On the one hand, they benefit from higher work success and the improved health of their employees and from the positive effect on their attractiveness as an employer. It is corporate real estate management's duty to make use of these potentials. Companies are currently confronted with the challenges of a softening corporate culture, complicated communication between employees and management as well as the constant need to balance individual success and team success. This is why companies require an individual strategy for shaping the new concept of distributed workplaces. In this context, investments in work from home equipment, improved information cultures and further training opportunities help make mobile working successful. Finally, there will be a change in the demand for company real estate in the future. A pros and cons list to support decision-making can help indicate how companies can react to the dynamic world of work with their real estate. The decisions involve considerations regarding quantitative space adaptation as well as possible approaches to the qualitative improvement of offices and the use of third locations as a supplement to the office strategy.

In conclusion, the results show that changing the office space requirements of companies requires adjustments to the business models and strategies in the real estate industry.

However, the office of the future cannot yet be clearly outlined, especially with a view to the working world of tomorrow.

Keywords: Work from home, Office, Coworking Space, Workation, Multi-locality, Transformation

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List of abbreviations

BDSG	Bundesdatenschutzgesetz
DSGVO	Datenschutzgrundverordnung
cf.	confer
Eds.	Editors
e.g.	example given
esp.	especially
et al.	et alii
etc.	et cetera
Gen	generation
Hrsg.	Herausgeber
i.e.	id est
n	number of observations

1 Introduction

1.1 Research problem

For some time now, the economy and society have been undergoing a transformation process. The megatrends of growing environmental awareness, digitalisation, globalisation, (re)urbanisation, sociodemographic change and increasing state and geostrategic intervention are forcing companies to adapt quickly to changing environmental conditions. This transformation also includes, to a particular extent, the real estate resources of companies (Pfnür and Wagner, 2018; Pfnür, 2019), the housing supply of private households (Pfnür et al., 2023; Pfnür et al., 2023; Pfnür et al., 2023) and the added value system of the real estate industry (Pfnür, 2019; Pfnür, 2020). As a result, the space requirements of companies and private households are changing at a rapid pace. Pfnür 2019 shows that within ten years, companies will have adapted 60% of their operational real estate to changing conditions through market transactions and project developments. The price developments on the housing markets in recent years also indicate a very dynamic demand.

This was the phase during which the COVID-19 outbreak happened in 2019. Social and societal structures changed drastically, and around 80% of office work took place from home. In their study, “Homeoffice im Interessenkonflikt” [Home-office in Conflict of Interest], Pfnür et al. (2021), among others, show how strongly the change in the physical organisation of work influences work success. Furthermore, it is shown how strongly the synergy between those factors has been perceived socially since then. On average, there is a clear increase in work success. Job satisfaction and productivity have increased measurably. For example, employees stated that they had increased their work productivity by an average of 13% through work from home. On average, work–life integration is functioning noticeably better in society. However, the results also show that in addition to about 60% winners in society, there were also about 40% losers due to work from home. The debate in society over the last three years has been very much characterised by the discussion about winners, losers and a ‘new normal’ of the working world through work from home.

Now, after the COVID-19 pandemic has subsided, many questions arise as to what the working world of the future will look like. If one follows the public debate, then it is striking that there are clearly still more answers than questions. Answers are often contradictory and follow gut feelings rather than causal connections derived from data. It is obvious that decision-makers as well as journalists are very much influenced by their own personal, individual experiences in their perception of the situation and the assessments that follow from it. This is quite natural. Every office worker, from apprentice to CEO of a Dax corporation or from simple party member to federal minister, has had his or her own experiences with work from home and has reflected on these in his or her daily exchanges with the world around him or her. Yet, what is missing and slowly becoming necessary after three years of experience with work from home, is a systematic, data-based and unbiased analysis of the current state of the physical organisation of knowledge work, and the advantages and disadvantages of different configurations of people, work tasks and work locations. Nonetheless, it is obvious that one of the greatest changes in knowledge-related working environments has taken place through the work from home, which is also colloquially referred to as the “home office”.

In the last few years of the transformation of the world of work, it has become increasingly apparent that the office is not only a place for carrying out knowledge work. In other words, employees have been given alternatives through work from home. In recent years, work from so-called “third places” (e.g. Gauger, 2021) has increased as well. Third places describe any place outside the office (second place in the sociological typology according to Florida) or the home (first place according to Florida). Studies such as Gauger et al. (2022) show that third places of work can have considerable influence on work success, depending on the situation and individual.

Since the pandemic, a special form of third work place, the so-called “workation” (Voll et al., 2022), has assumed great importance. Depending on the specific arrangement, third places of work such as hotels or cruise ships or (holiday/weekend) homes—almost in the sense of a first place—can count as workations.

Overall, it can be said that work from home along with third place and workation concepts offer new, very effective instruments for the transformation of companies and private households in the real estate economy. Their use shifts the boundaries between life and work remarkably. The future task for all stakeholders involved will be to realise the benefits and gains of multi-local work whilst minimising the disadvantages and losses. This study aims to make an initial contribution by creating transparency in this process. In particular, the following study will be about creating an information baseline for solving the following practical problems:

- **Transformation of working worlds:** How can the pandemic emergency solution of work from home become a new work concept in companies? What role do alternative workplaces and third places play in this? How will the efficient allocation of people, work tasks and work locations be handled in the future? How can the change management process succeed? How should companies and employees interact during this process? Should there be standardised regulations or individual agreements?

- **Individual work success and health:** How can mobile work contribute to increasing work productivity, job satisfaction and occupational health among knowledge workers? How can the risk of employee burnout and boreout be reduced?

- **Regulation:** Mobile work has hardly been regulated legally so far. What does an effective legal framework that creates solutions for a fair balance of interests between the collective bargaining parties as well as work-health and work-safety look like? The results of this study will be incorporated into the policy workshop, "Mobile Work - Safe and Healthy", which is currently discussing a possible legal framework at the Federal Ministry of Labour (BMAS).

- **Effects on the office portfolios of users, investors and financiers:** How will demand for office space change in terms of quantity, quality and location? What are the consequences for price and value developments on the real estate markets and the portfolio strategies of investors and financial backers?

1.2 Objectives and structure of the empirical study

The world of work, in a phase of expansive transformations, is increasingly characterised by new working models, so-called "New Ways of Working" (Blok et al., 2011; Nijp et al., 2016). While research and practice have been primarily concerned with work in offices over the past decades, the focus is increasingly expanding across alternative workplaces. Recently, following the COVID-19 pandemic with repeated lockdown phases, the topic of work from home has become a central social concern and frequently discussed topic in Germany.

Through mobile work, i.e. location- and time-flexible work en route or from a location other than the company office, the distribution of work locations is becoming more diverse and the complexity of the organisation for companies is increasing. Currently, there is no standardised and binding legal framework for mobile work and it can be offered voluntarily by companies. However, within the framework of a policy workshop process of the Federal Ministry of Labour and Social Affairs (BMAS), experts are currently developing proposals for structures and conditions for time- and location-flexible working over a period of one year (BMAS, 2023).

Reporting on work from home reached a temporary peak during the COVID-19 pandemic. During this time, the first home office study was created by the TU Darmstadt research team led by Prof Dr Andreas Pfnür: Homeoffice im Interessenkonflikt (Pfnür et al., 2021). The study pursues the goal of analysing the framework conditions of home office in the special and, for many employees, new situation. As a result, conflict lines and threatening distribution struggles in the decisions of companies and the public sector as well as recommendations for action for a sustainable success of work from home are shown. Figure 1 shows a comparison of the focal points of the first and second studies.

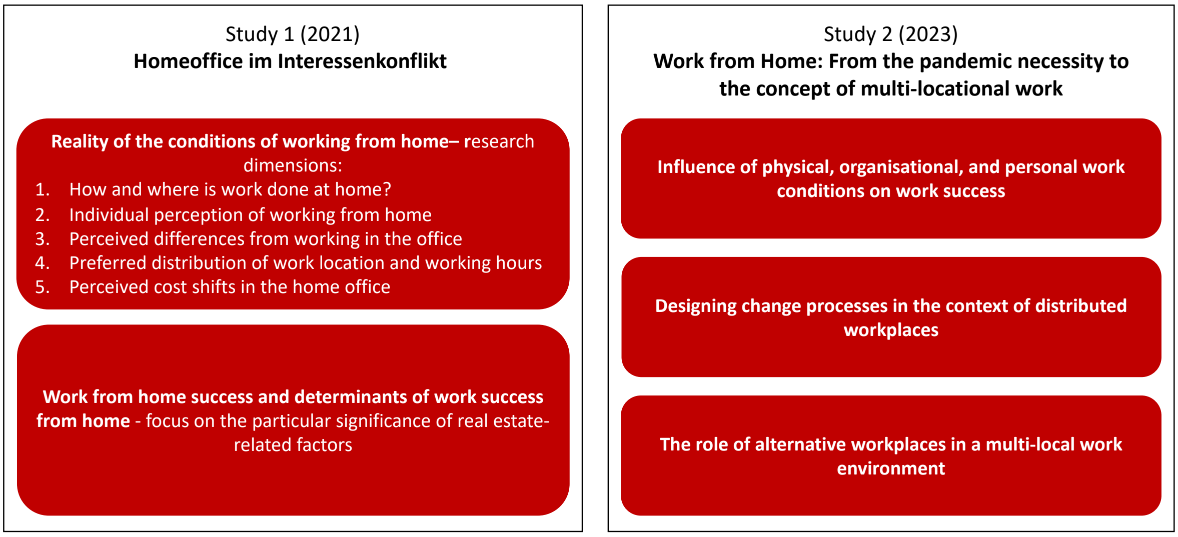


Figure 1: Focus of each study

With the findings and limitations of the first study in mind, the second study focuses on three main points. This study contributes to examining the status quo of work from home as the pandemic situation subsides in order to provide an information and decision-making basis for answering the most important questions on future office development. The aim is to measure the success of work from home and to present a picture of the future multi-local working world.

The first focus of the second study is on the question of how physical, organisational and personal conditions of work influence work success. In contrast to the first study, this time, the clarification and examination of the correlations will take place outside the pandemic peak phase. The basic design of the study is the implicit and explicit comparison of the different workplaces—the office, at home and in third locations—based on their characteristics and effects on success. This approach has the goal of improving the ability to plan for a future of work in distributed workplaces as conclusions can be drawn about general success factors of workplace development for knowledge workers.

Examining change processes in the context of distributed workplaces is the second focus of the study. The first study, conducted in 2021, made it clear that without an active change process, the risks of work from home threaten to get out of hand while change management and thought structures had not yet caught up during the pandemic. For this reason, this second study focuses on change processes involving all stakeholders. In doing so, it goes into detail about the necessary preconditions that need to be created in order to complete the transition from one-dimensional work in the office to a multi-local working world successfully. Thereby, the worst consequence of unsuccessful change processes, the loss of employee potential, can be avoided. The report also addresses the question of whether the change to the 'new normal' is already in full swing as well as how employees want to be involved in change and what willingness they show to accept change. It also examines the level at which decisions on distributed working should be made and what support services are useful for employees in distributed working.

The third focus is on the role of alternative places of work such as coworking spaces. In the study from 2021, the importance of third places of work was already addressed and the experiences and wishes of employees in relation to these were highlighted. What was striking here was the fundamentally low level of experience with these forms of work. Nevertheless, responses among the users were positive. This study will once again analyse the level of experience that employees have with alternative places of work. The goal is to become aware of real estate's economic potential of these working forms, which, according to scientific literature, offers flexibility and opportunities for more efficient organisational solutions. Special attention will also be paid to the relatively new trend of combining work and leave (workation). In view of the increasing competition for young talent on the labour market ('war for talent'), workation could possibly become an attractive working model. In addition, the real estate industry, which initially has the task of providing workplaces in the form of offices, must deal with the new stakeholders entering this market, such as the hotel industry, which offer facilities for workations. The study provides initial empirical results on employees who have already gained experience with this work model and their workation.

The report is divided into five chapters. After discussing the problem and presenting the objectives of the study in Chapter 1, a literature review follows in Chapter 2. Following the explanation of the methodological procedure and the presentation of the sample in Chapter 3, the results of the study are presented in Chapter 4. The fifth and last chapter summarises the most important results of the study and provides first-derived implications for the necessities of state regulation, for employees, for companies and for real estate industry actors.

The study has been generated at the public institution of the Technical University of Darmstadt and is, as far as possible, free of individual interests. The underlying empirical survey is primarily intended for further scientific utilisation. The scientists involved initiated and designed this study. It is not contract research. The work is predominantly financed by public funds. The companies Art-Invest Real Estate and the Zentrale Immobilien Ausschuss ZIA are represented as sponsors and expert sounding boards.

2 Literature review

2.1 Workplace development and definitions

The physical organisation of work is subject to constant change. It is influenced by various factors, such as the continuous development of IT and telecommunication technologies, demographic change resulting in a shrinking workforce, or exogenous shocks, such as the COVID-19 pandemic, which quickly turned the home into the place of work for many Germans. As a result of these and other aspects of working life, flexible forms of work are becoming increasingly important.

Since industrialisation, so-called 'knowledge workers' usually go to work in an employer's office, the so-called 'second place'. For decades, work organisation processes and the management of the organisation of work have focused on this type of workplace. In this study, the term "office" is used to refer to the employer's premises, but no statement is made about ownership (rent/ownership). It is only a question of the space provided at one or more fixed locations, which is made available to employees for working.

During the COVID-19 pandemic, this trend changed abruptly. Suddenly, as in the times before industrialisation, life and work took place in private premises, the so-called 'first place', even for employees with knowledge-intensive activities. As the pandemic situation continues and begins to subside, it can be observed in Germany that the interest in work from home seems to be maintained. In the following, the expression "work from home" is used synonymously with "working from home" where the home office is the main place of residence.

Another trend that has been emerging for some time is a general flexibilization of the place of work. So-called 'third places' represent an alternative to the office workplace for some office workers through decentralised, institutionalised workplaces. Common examples of flexible workspaces are coworking spaces, business centres or satellite offices. In scientific discourse, the classification already goes beyond third places. Fourth places, such as hybrid multi-local work and augmented reality in the digital workspace, as well as fifth places like work at holiday locations ("workation") are mentioned. "Workation" describes location-flexible work in which the domains of work and leisure/holiday merge.

In simple terms, this report, based on the definition of different functional spaces in the 1990s, uses the term "third places" as a general term for the following (work) places in public life: lounges, trains, aeroplanes, catering establishments (e.g. cafés), corporate coworking spaces such as satellite offices, public coworking spaces and workation.

In Chapter 4.2, a special focus is placed on the work success of employees in different workplaces. Work success can generally be described as the interplay between employee attitudes and work outcomes (Yalabik et al., 2013). This report investigates satisfaction, burnout (stress), boreout (boredom) and productivity.

The many changes and innovations in the world of work require companies to manage them carefully in order to support their employees in the best possible way. Change management is an ongoing process concerned with adjusting an organisation's direction, structure and capabilities to meet the ever-changing needs of external and internal customers (Moran/Brightman, 2001; By, 2005). In essence, change management is concerned with the strategic orientation of the organisational unit in order to remain competitive in the future and to successfully guide employees through the changes.

2.2 State-of-the-art work from home studies

The matter of work from home can be viewed from several different perspectives. In addition to employees and decision-makers in the company, consulting firms, works councils, institutions and research facilities as well as health insurances also analyse the topic. Table 1 provides an overview of the most important German language studies on home office, as work from home is often referred, that have been published since the first study. The table also contains selected studies on hybrid work distribution from the years 2021–2023.

Table 1: Study overview on the topic of work from home since the first study in 2021

Editors / Commissioners / Authors	Study Design	Title/Focus/ Key topics	Key Findings
PWC (Rauch et al., 2021)	Renewed survey with the aim of comparing the first and second year of COVID-19	Home remains office: focus on space requirements and quality of space in terms of economy, sustainability and wellbeing	- Increasing desire for home office - Productivity better than expected and employees are satisfied at home - Companies plan implementation of new concepts - Reducing office area can be economical
Deloitte (Wolfsberger et al., 2022)	Flexible Working Study 2022	Work in transition: hybrid work, workation and the office of the future	- The biggest change in the world of work in recent decades; Home office is here to stay - Crucial factor in labour market competition; Flexible working is now a prerequisite for many talented people - The other side of the coin; Team spirit and communication suffer in a permanent virtual setting - Key role of leadership; Managers in the focus of change - Workation as a trend; Remote working from abroad increasingly popular

JLL (Pradère et al., 2022)	Survey of 5,300 office workers from 15 countries	Analyses of how workers use office space in a hybrid context and how they organise their time between different workplaces	- The office of the future has a broader purpose than suspected - Even if employees can choose between different work locations, they have difficulties in dividing their weekly activities between the office and their home - The post-pandemic office must accommodate the need for targeted individual work - Hybrid workers are not adequately supported in their new working style today
JLL (JLL, 2022)	Survey of 1,100 CRE decision-makers in 13 countries	What users in Germany expect from the office of the future after COVID 19	- German decision-makers are encouraging measures in the multitude of CRE priorities (1st place: sustainability) - Hybrid working models have become established and will continue to shape the world of work in the future - High-quality office space will continue to be crucial in the future - Although ESG is a key corporate goal, investments in Germany are not accelerating as quickly as in the global competition - German CRE managers strive to expand efficiency and performance gains through external partnerships - Decision-makers plan to accelerate their investments in smart CRE technologies
Capgemini (Capgemini, 2022)	Survey of 2,250 respondents from 750 organisations	Focus on employees as a company's most important asset	- Companies need to take more care of their employees - Benefits of positive employee experience confirmed - Currently under a third of respondents satisfied at work, but 80% of leaders think they have satisfied employees - 10-point plan for organisational leadership (e.g. coaching for leaders; cultural change and building a continuous learning environment)
EY (Taapken, 2021)	Online survey based on a fully structured questionnaire with 1,000 interviews	Working world of the future	- Most professionals are currently satisfied with their own workplace - Home office arrangements have long since ceased to be a corona-bound transitional solution - Companies should adapt to changing needs: Digitalisation and mobile working are part of a modern working world
Accenture (Smith, 2022)	Survey of 9,326 employees in 11 countries	Examining the future of work and its dependence on workers and management	- Companies are under pressure due to external influences such as the war for talent - Pressure on employees increases - Companies use this situation to drive forward decisions on working models and ignore the dissatisfaction of many employees - Companies promise some degree of flexible working, but many of their employees are not equipped with the technology, tools and empowerment they need to be healthy, happy and productive at work - There is a need to rethink traditional working models

Institut für Arbeitsmarkt und Berufsforschung (IAB) und ZEW Mitfinanziert durch das Bundesministerium für Arbeit und Soziales (BMAS) (Grunau et al., 2021)	Part of the project "Quality of Work and Economic Success", based on data from the Linked Personnel Panel (LPP)	Mobile work from home	- Heterogeneous distribution of home office use among employees - Advantages of working from home: better work–life balance, greater flexibility for employees and greater subjective job satisfaction - Companies and employees report an increase in productivity - The following speak against working from home: lack of suitability of the activities, technical change management obstacles and the supervisor's wish to be present
Institut für Arbeitsmarkt und Berufsforschung (IAB) (Frodermann et al., 2021)	Survey "Living and Working in Times of Corona" and the Corona Supplementary Survey of the Linked Personnel Panel (LPP)	Home office in times of COVID-19: use, obstacles and future wishes	- 81% of employees subject to social insurance contributions have the option of working from home - Large majority of home office users are satisfied with the current scope of work - Technical obstacles could be removed to a limited extent in the short term; however, the culture of presence, or the lack of separation between work and private life, as well as difficult cooperation with colleagues were quickly improved - Two-thirds have a fixed workplace at home while one-third spend most of their time working at a dining table or kitchen table. - Flexibilization remains a wish for the future, in contrast to the return to in-person operation
ZEW – Leibniz-Zentrum für Europäische Wirtschaftsforschung (Erdsiek, 2021)	Business survey based on ZEW Business Survey Information Economy (Information Economy and Manufacturing)	Home office after COVID 19: expected use continues to rise	- Some of the companies have adjusted their own expectations regarding home office use upwards after the pandemic - Larger companies additionally equipped further parts of their workforce with mobile, digital end devices
Wirtschafts- und Sozialwissenschaftliches Institut (WSI) (Ahlers et al., 2021)	Data from the labour force survey conducted on behalf of the Hans Böckler Foundation in four waves using computer-assisted online interviews (CAWI) (7,677 labour force members)	Home office: what can be learned from the pandemic for the future design of home offices	- Positive home office experience if: 1. companies that already have experience with home office and have regulations in place in advance to provide mobile equipment and remote access to internal networks and databases 2. prevention of the dissolution of working hours by company regulations on home office 3. tolerable workloads at the workplace at home 4. there is a suitable living situation for the home office
Ifo Institut München und Immowelt (Dolls/Lay, 2023)	Population-representative survey of 12,000 people in Germany	Effects of home office and strain of rising housing costs on the choice of residence	- Employees with a home office share are 10% more likely to have made basic changes of residence since the outbreak of the pandemic - After the outbreak of the pandemic, inhabitants of large cities have predominantly moved to the suburbs of large cities or to smaller cities - No evidence of rural exodus due to corona pandemic - Increased housing costs are increasingly perceived as a financial burden

Fraunhofer-Institut für Arbeitswirtschaft und Organisation IAO (Bockstahler et al., 2022)	Study carried out as part of the Office 21® joint research project (following on from the 2020 study); survey of 1,700 people in private companies and public organisations from Germany and abroad	Home office Experience 2.0 - Changes, developments and experiences of working from the home office during the corona pandemic	- Exchange with colleagues as motivation to return to the office - Perceived productivity when working from home continues to increase - Home office strengthens work–life balance - Ergonomics and technical equipment influence willingness to return to the office - Employees' willingness to return to the office is independent of age - Good connections and good food are the biggest incentives to return to the office
Fraunhofer-Institut für Arbeitswirtschaft und Organisation IAO In Kooperation mit DGFP (Hofmann et al., 2022)	Survey on the hybrid working world based on 215 datasets	Working in the Corona Pandemic: shaping the "new normal" on the key topics of productivity, breaking down boundaries, working time flexibility and leadership	- Mobile work and shared workplaces are the concepts of the future - Time flexibility in decentralised coordination as a megatrend - The pandemic is a booster for self-organisation as well as new management and performance measurement concepts - Technology is not everything - but without technology everything is nothing - And what about other equipment for workplaces beyond the office? More and more employers are taking the lead with pragmatic subsidy models - Employer attractiveness and productivity are the key drivers of hybrid forms of work - Company partnership in shaping the hybrid world of work is essential and culture-shaping - How do we avoid a 'two-class society' in companies? Not every advantage can and must therefore be compensated one-to-one
Institut der deutschen Wirtschaft (IW) (Flüter-Hoffmann/Stettes, 2022)	Systematic literature review of the experiences of employees and companies with analysis based on the BIBB/BauA employment survey	Looking back on home office after two years of having the pandemic; retrospective and outlook on the spread and structure of the spatial and temporal flexibilization of work in Germany	- Working from home will become more common as justified by positive experiences - Contrast between employees' wishes and home office plans of some companies due to different interpretations and deductions of experiences - Constructive balancing process between operational necessities and individual concerns must not get out of balance in a contractual relationship

Bitkom Research Im Auftrag des Digitalverbandes Bitkom (Berg, 2022)	Representative telephone survey of 1,502 employed persons aged 16 and over	New Work - the new working world after the pandemic: Perceptions and experiences of working from home and the future perspective	- COVID-19 brings image boost for digitalisation and drives cultural change towards New Work: Mobile working should become the standard - Nine out of ten see their future of work in the home office and two-thirds are allowed to work at home; already half of the respondents work more from out and about than in the office - Six out of ten jobs are suitable for the home office and those who are not allowed, but could, would also like to work on the move - The desire for flexibility is also growing in jobs where the employee's presence is required - Reasons for not working at home: Internet problems, in-office culture and lack of social contacts are the biggest disadvantages - Two-thirds are equipped with notebooks - Half have clear rules for mobile working - Productivity highest in the office and at home - Nine out of ten are satisfied in the office and at home - Less stress, more time and better work–life balance at home
Bayerisches Forschungsinstitut für Digitale Transformation (bidt) (Stürz et al., 2021)	Analyses based on primary data from eight cross-sectional surveys using Google Surveys, March/June 2020 and February/May 2021	Digitalisation through COVID-19?	- Further increase in home office use - Clear desire for a home office after COVID-19 - Home office offer important when changing jobs - Almost one-quarter of home office users do not work at a fixed workplace at home - High satisfaction with home office, partly dependent on workplace situation
Bertelsmann Stiftung in Zusammenarbeit mit Ipsos (Feinstein et al., 2021)	Survey of 1,000 employees	Home office and corporate culture - Changing perceptions of the home office after one year of the pandemic	- Good adaptation of employees to the conditions of mobile working - Flexibility brings many advantages - There is a risk of hairline cracks in the corporate culture; There is a danger that companies overlook the need for action in the design because of the positive assessment of the 'new normal'
Institut für Mitbestimmung und Unternehmensführung (I.M.U.) (Wirth, 2022)	Explorative study based on guided interviews with workers' councils from five companies in four industries	Home office workers alone at home; study on workers' councils' practice on home office work	- For a long time, the reason for the low number of home offices was management's interest in direct control of the workforce - The pandemic needed the government-imposed learning process of management that employees are also productive in the home office - Works councils play an important role in the spread of home office work and interest representation is in a collective learning process - Home office work contributes to the erosion of occupational safety and health standards - Central challenge: widespread collapse of classic communication channels of workers' councils; however, handling is constructive and innovative

Weizenbaum-Institut für die vernetzte Gesellschaft – Das Deutsche Internet-Institut Gefördert durch das Bundesministerium für Bildung und Forschung (BMBF) (Krzywdzinski, 2022)	Survey of 1,516 employees	Team Collaboration and Productivity: Experiences of Agile, Hybrid and Traditional Home Office Teams during the COVID-19 Pandemic	- More than 50% of the respondents have worked longer than the regular working hours in the home office in some cases (shifting work even to late nights or the weekend) - About 25% complain about the lack of rules for working in a home office - Working in a home office poses challenges for teams, e.g. decrease in social contacts and informal encounters/communication flows due to virtual communication, requiring new communication patterns - Agile teams slightly increase teamwork and productivity in the home office; the opposite is true for more traditional teams
Internationale Hochschule (IU) (Internationale Hochschule, 2022)	Survey of 1,030 people from Germany	The new normal? Home office check: perceptions after two years of pandemic and expectations for the future	- Home office is popular among respondents with previous experience and newcomers - Self-determination is more important to the majority than social aspects, whereby the advantages mentioned also include social aspects - but in the private leisure sector - Disconnecting and switching off is hardly a problem and working at home is no more exhausting or stressful than working in an office - Because of COVID-19, home office remains a must-have and flexible working models are desirable
Universität Konstanz (Kunze/Zimmermann, 2022)	Long-term study with 699 participants, continuously supported by the DFG Cluster of Excellence "The Politics of Inequality" (EXC, 2035)	The transformation to a hybrid working world; Effects of working in a home office	- Mobile working becomes a matter of course (central factor for employer attractiveness) - Home office opportunities: increased commitment and higher productivity - Home office risks: exhaustion, loneliness and reduced innovative capacity and identification - Central task for managers and organisations: Finding the mix ('hybrid') of presence work and mobile work for the individual work context and tasks (individual vs collective tasks) - Systematic development of a corporate and leadership culture towards more trust and flexibility including continuous evaluations recommended
Universität Kassel (Berzel/Schroeder, 2021)	Systematic overview and perspectives for design, funded by the Hessian Ministry for Social Affairs and Integration	Home office - a transformation of the working world	- Strategy of good work in a hybrid work culture should be fixed by concrete fair agreements of conditions and needs - Importance of gathering more experience on the reasons for untapped home office potential in order to remove obstacles on the way to fair and good home office solutions - Co-determination as part of the path to better home office experience: positive effects such as job satisfaction and productivity are promoted if regulations on occupational health and safety, time recording, data and insurance protection, tax deductibility and company co-determination are considered - Hybrid work culture needs 'spaces' to enable social inclusion - New work can also be understood as part of a sustainable reorganisation of economy, society and work

Bergische Universität Wuppertal, Institut für Unternehmensforschung und Organisationspsychologie (WIFOP) (Wieland/Groenewald, 2021)	Book chapters	Designing work in the home office as a hybrid work location model	- Home office work is only as good as office work - Majority of home office studies are based on subjective judgements of respondents - Design framework: Man-Technology-Organisation (MTO) approach - Presentation of a socio-technical system approach for holistic consideration: Business-Office-Home-Office model (BOHO model)
Universität Bielefeld; Beuth Hochschule für Technik, Berlin und Wissenschaftliches Institut der AOK (WidO) (Backfisch et al., 2021)	Analyses in the context of the Absenteeism Report 2021 of respondents who switched to a coworking space after a certain time in the home office	Workplaces of the future - health-promoting design of coworking spaces and home offices	- Reasons why respondents switched to coworking space after time in home office: Disengagement, lower work output, distraction, isolation and expectations, structures, focus and community at and in coworking spaces - Health promotion should be supplemented by a social level
DAK-Studie – Update (DAK-Gesundheit, 2021)	Survey of 7,040 participants with the purpose of obtaining a panel of 4,814 respondents (2019–2021) for longitudinal analyses	Digitalisation and home office in the corona crisis	- Home office is becoming more and more established - Digital forms of work continue to grow - Home office advantages outweigh the disadvantages: Work–life balance, work productivity, time savings and flexibility - Disadvantages of working from home are the lack of contact with colleagues and superiors
Deutscher Gewerkschaftsbund (DGB, 2021)	Special evaluation of the question of 'flexible working' with 6,297 employees in a survey by the DGB Good Work Index 2020	Home office in the public sector (during normal operation and not during COVID-19)	- Home office does not automatically lead to good working conditions - Home office can put additional strain on employees - What is needed is a good interplay between individual rights to organise and reliable collective regulations
Deutscher Gewerkschaftsbund (DGB, 2022)	Special evaluation of a random sample of 6,407 employees on the focus of dissolution of boundaries and recreation in digital and mobile work from a survey by the DGB Good Work Index 2021	Work of the future in the 'new normal'?	- New challenges of work design in location-flexible work: flexibility of work desired, but often followed by performance at atypical times, overtime and accessibility beyond regular working hours - Health hazards due to shortened recovery and rest periods - Proven standards of occupational health and safety must also apply to the 'new normal'; legal regulatory framework for mobile working can help here

3 Methodology

For a better classification of the study, the study concept and procedure are presented, and the sample is described before the results are displayed. Particular attention is paid to representativeness. In addition, the evaluation concept and the methods of analysis are shown.

3.1 Study design and research approach

The present study is connected to the findings of Pfnür et al. (2021) with the aim of verifying and expanding the knowledge level on work from home and on multi-locality of work in general. The process of the two studies is visualised in Figure 2.

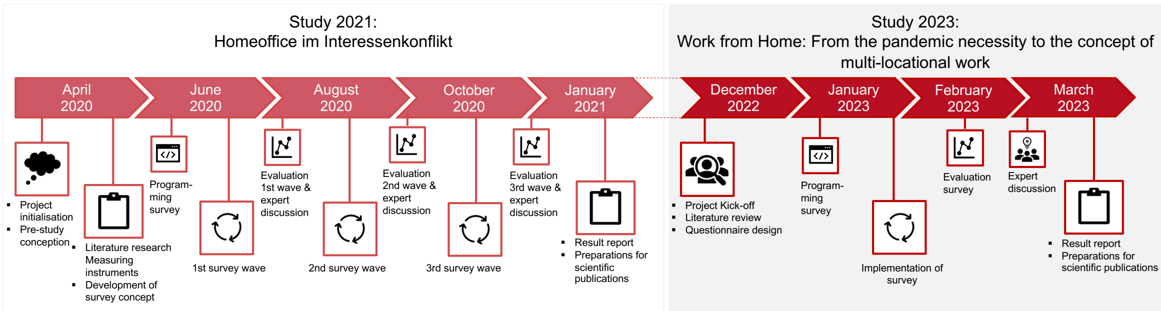


Figure 2: Scientific approach in the course of time

The present study was conducted in the period from December 2022 to March 2023. In a first step, scientific literature, market reports and discussion papers were collected. With the help of a systematic literature analysis, relevant information was then synthesised by structuring and consolidating thematic areas. The results of the literature analysis were used to develop propositions about the presumed relationships. These were discussed with a panel of experts in order to combine the theoretical findings from the literature with practice-related topics and to create the questionnaire on this basis. The questionnaire consisted of a total of six sub-areas, which are presented in Table 2.

Table 2: Subject areas within the questionnaire

I	Sociodemographic data
II	Details regarding current employment
III	Status quo and work success in work from home
IV	Status quo and work success in the office
V	Status quo and work success at third workplaces (esp. coworking spaces and workation)
VI	Information on change management

The questions are predominantly answered on a seven-point Likert scale (“strongly disagree” to “strongly agree”). This is due to the higher sensitivity, reliability and validity of a seven-point Likert scale compared to a five-point Likert scale (Cummins/Gullone, 2000; Preston/Colman, 2000).

This is an empirical study. The survey was explicitly directed at office workers in Germany. The online survey was conducted with SoSci Survey, a German-speaking provider that guarantees data protection-compliant online surveys according to DSGVO and BDSG (SoSciSurvey, 2022). Conventury GmbH was involved in the implementation of the study and the preparation of the dataset. The sample was generated via the online platform Clickworker.de. Clickworker.de is a crowd-based community, which, according to its own information has about 400,000 German-speaking clickworkers. In addition to integrated control questions, quality is ensured in the best possible way by eliminating bots and automated response behaviour. This community's advantage is the high availability of suitable survey participants. They pre-qualified for the study by registering and becoming eligible with Clickworker.de. Clickworker.de has already proven its worth in other market studies and scientific research in recent years (Pfnür et al., 2021; Gottschewski et al., 2022; Pfnür et al., 2022). After completion of the survey, the participants received an incentive. It was initially 5.00 euros per participant and was later increased to 6.00 euros. After several pretests, the survey ran for 25 days from 27.01.2023 to 20.02.2023. The insights gained were discussed in expert rounds with the project participants and representatives of corporate practice.

3.2 Data sample

The sample includes office workers who live and work in Germany. The initial gross sample contains n = 1,170 observations. To begin with, comprehensive data preparation was carried out (cf. Figure 3) in order to guarantee the quality of the observations and, thus, the quality of the following analyses. The IBM SPSS software was used to prepare and analyse the dataset.

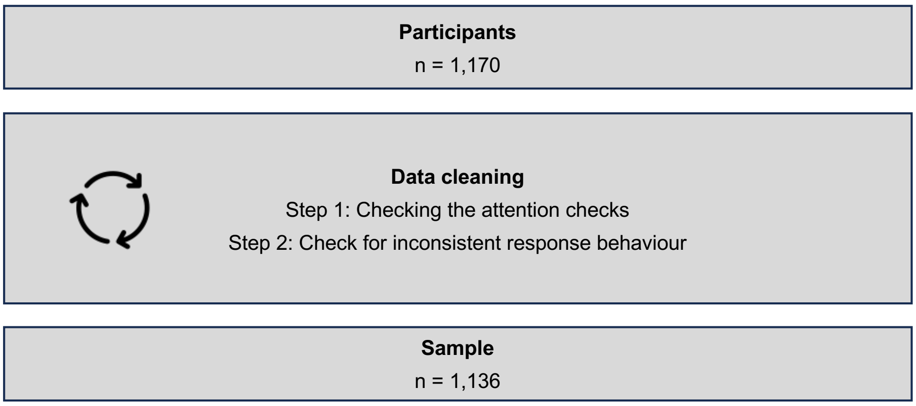


Figure 3: Data preparation process

While creating the questionnaire, two attention checks were integrated, which were evaluated and checked in the dataset of the gross sample. If both attention checks failed, then the observation was removed from the dataset. The next step was a check for inconsistent response behaviour, which was essentially based on the socio-demographic information of the respondents. Respondents who were under 18 and over 70 were removed. Other variables included in the data preparation process were the number of people per household or the number of children, for example. In total, 34 observations were eliminated.

The net sample comprises n = 1,136 observations. Further down, this sample is described by personal, household-related and work-related characteristics. An overview of the personal characteristics is provided in Figure 4.

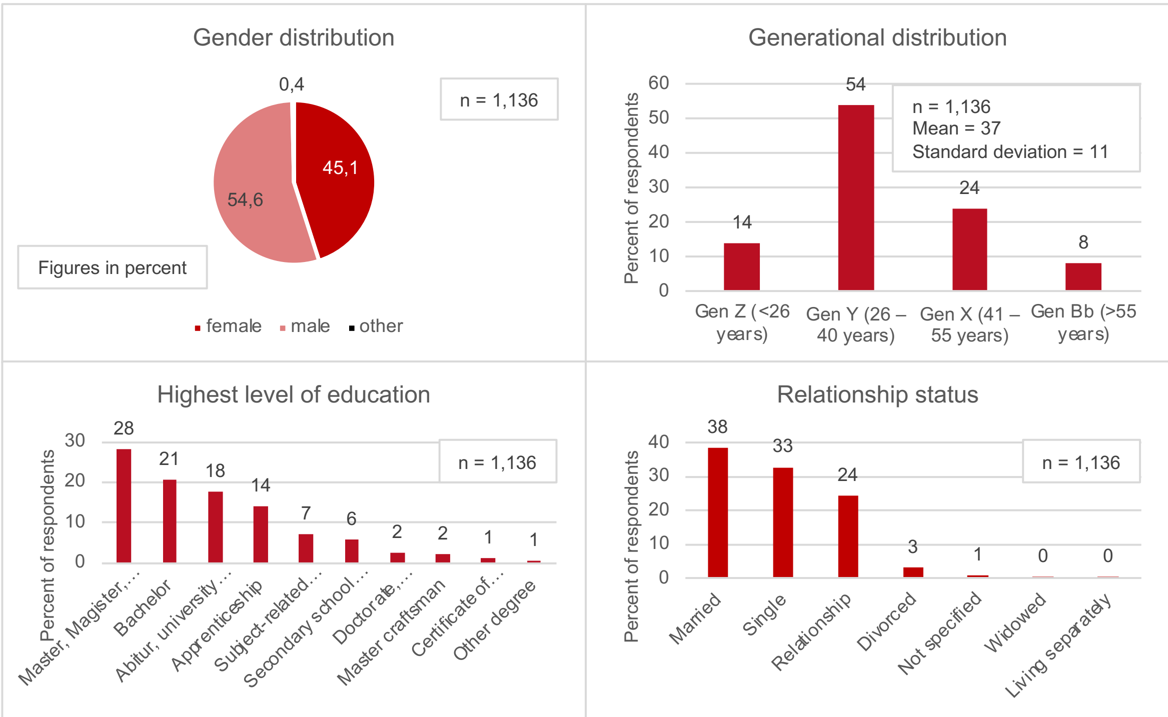


Figure 4: Personal characteristics of the respondents

The sample consists of 54.5% male and 45.1% female respondents while 0.4% of the respondents indicated “other”. On average, respondents are 37-years-old with a standard deviation of 11 years. The youngest respondent is 18-years-old and the oldest is 68-years-old. For easier classification, a breakdown of the age-frequency distribution by generation is provided below in this report. The report refers exclusively to respondents of certain age groups and not to common imprints. Fourteen percent of the respondents are 18–26-years-old (Generation Z); 54% are between 26- and 40-years-old (Generation Y); 24% are between 41- and 55-years-old (Generation X); and 8% are older than 55 years (Generation Baby Boomer).

The results indicate that the sample is somewhat academic because 28% of the respondents have a Master's degree, Magister or Diploma while 21% indicate a Bachelor's degree as their highest current level of education and 2% have a doctorate or habilitation.

The proportion of office workers in Germany (regarding the whole population) has risen continuously in recent years. It is estimated that 36.7% of all employed people now work in an office (Hammermann and Voigtländer, 2020). The respondents in the sample are younger compared to the general population. Around 10% of all employed people in the population belong to Generation Z, 31% to Generation Y, 34% to Generation X and 25% to the baby boomer generation (Destatis, 2022a). Although the information on the highest level of education indicates a rather academic sample, it is quite representative for the population of German office workers.

Furthermore, 62% of the respondents state that they are married or in a committed relationship. In contrast, 33% of respondents classify themselves as single. The geographical distribution of respondents in Germany is illustrated in Figure 5.

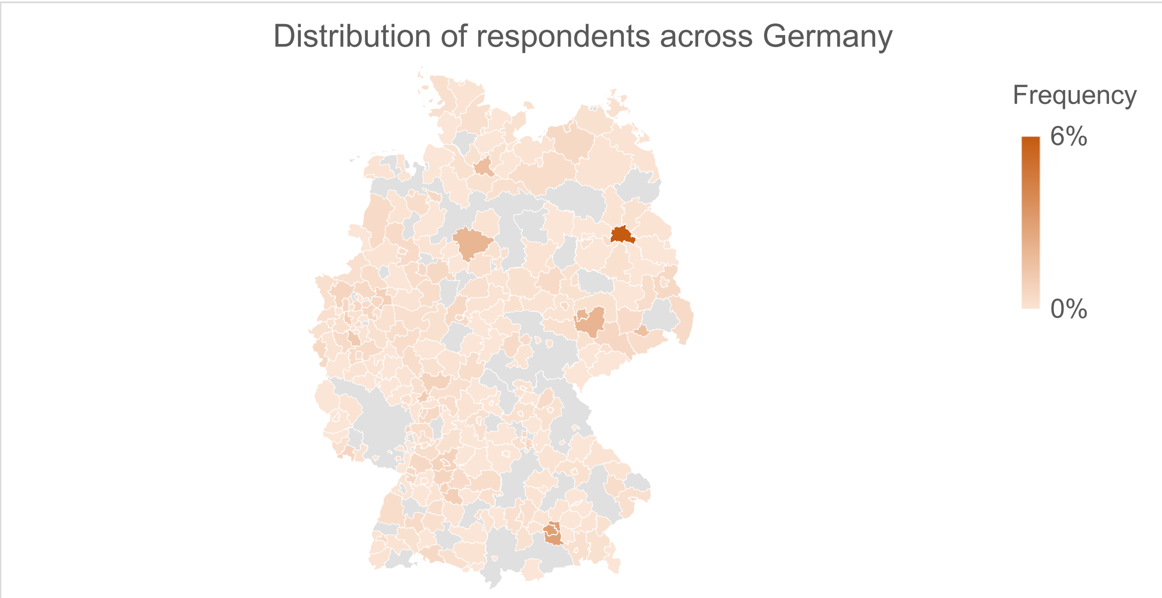


Figure 5: Geographical distribution of respondents

This study surveyed office workers throughout Germany. There are some geographical concentrations in Berlin (6.3% of respondents), Munich (3.2% of respondents), Leipzig (2.3% of respondents) and the Hannover region (2.2% of respondents). Slight differences in the regional distribution between the basic population and the sample can hardly be prevented. Despite that, a roughly representative picture of the respondents' places of residence for the basic population becomes apparent.

In addition to personal characteristics, participants in the survey were also asked to provide some household-related information (cf. Figure 6). The average household size is 2.5 persons with a standard deviation of 1.2. While about one in five respondents lives alone (23%), 35% of respondents say they live in a two-person household, 20% live in a three-person household, 17% in a four-person household and 5% live in a household with 5 or more people. In addition, 66% of respondents say they have no children.

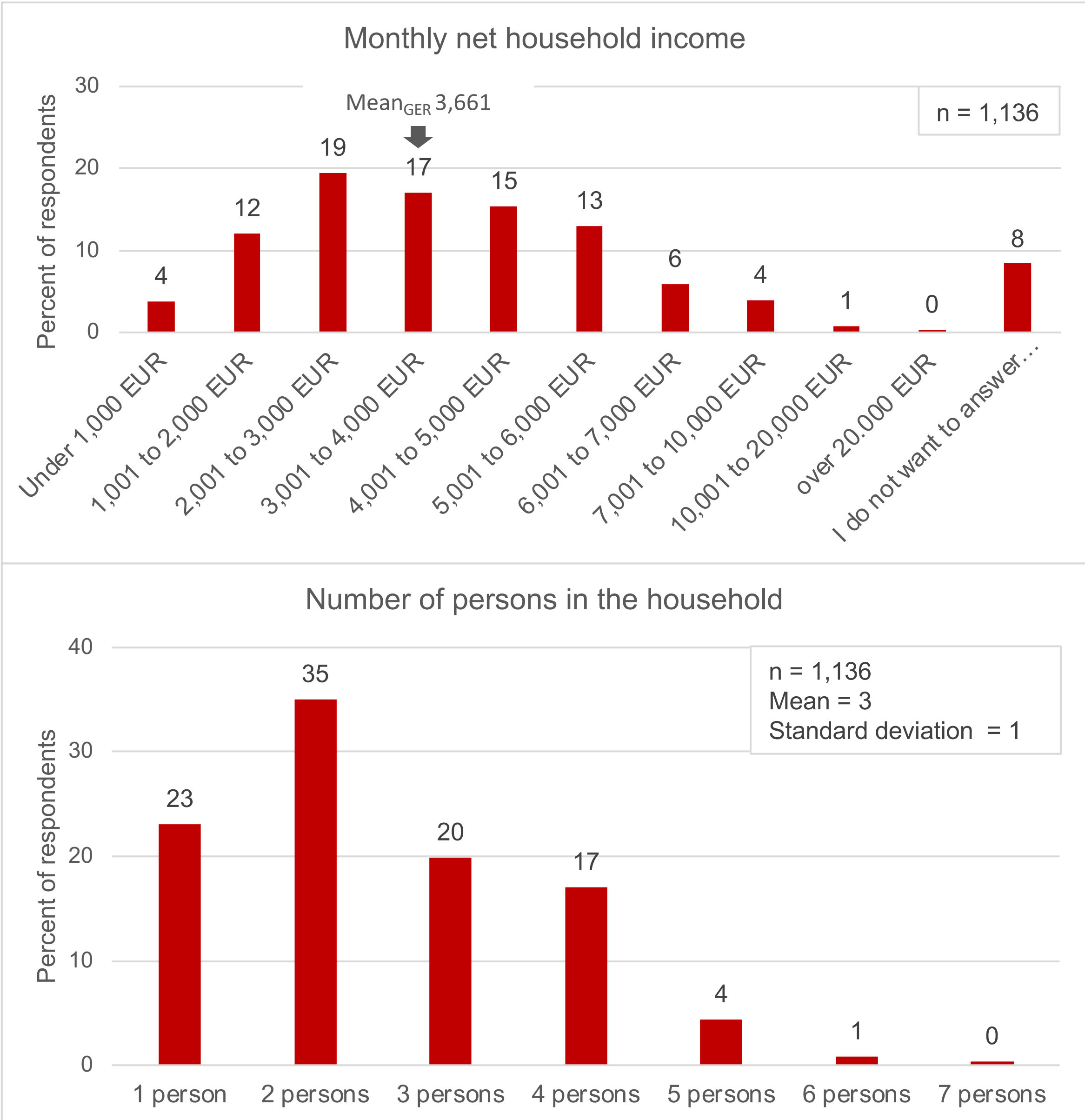


Figure 6: Household-related characteristics of the respondents

The median net household income is between 3,001 and 4,000 euros. Around 19% of the respondents have a monthly net household income of 2,001–3,000 euros. Seventeen percent of the respondents earn 3,001–4,000 euros, 15% earn 4,001–5,000 euros and 13% earn 5,001–6,000 euros per household per month.

The average household in Germany consists of two people, which is slightly lower than in this sample. In Germany, there are around 42% one-person households, 33% two-person households, 12% three-person households and 13% four-person or more households (Destatis, 2021). Accordingly, fewer one-person households are represented in the present sample, with three- and four-person households above the national average. According to the Federal Statistical Office, the average monthly net household income is 3,813 euros (Destatis, 2023). The median of the sample is between 3,001 and 4,000 euros, and is thereby positioned in the national average. The work-related characteristics of the respondents conclude the presentation of the sample (cf. Figure 7).

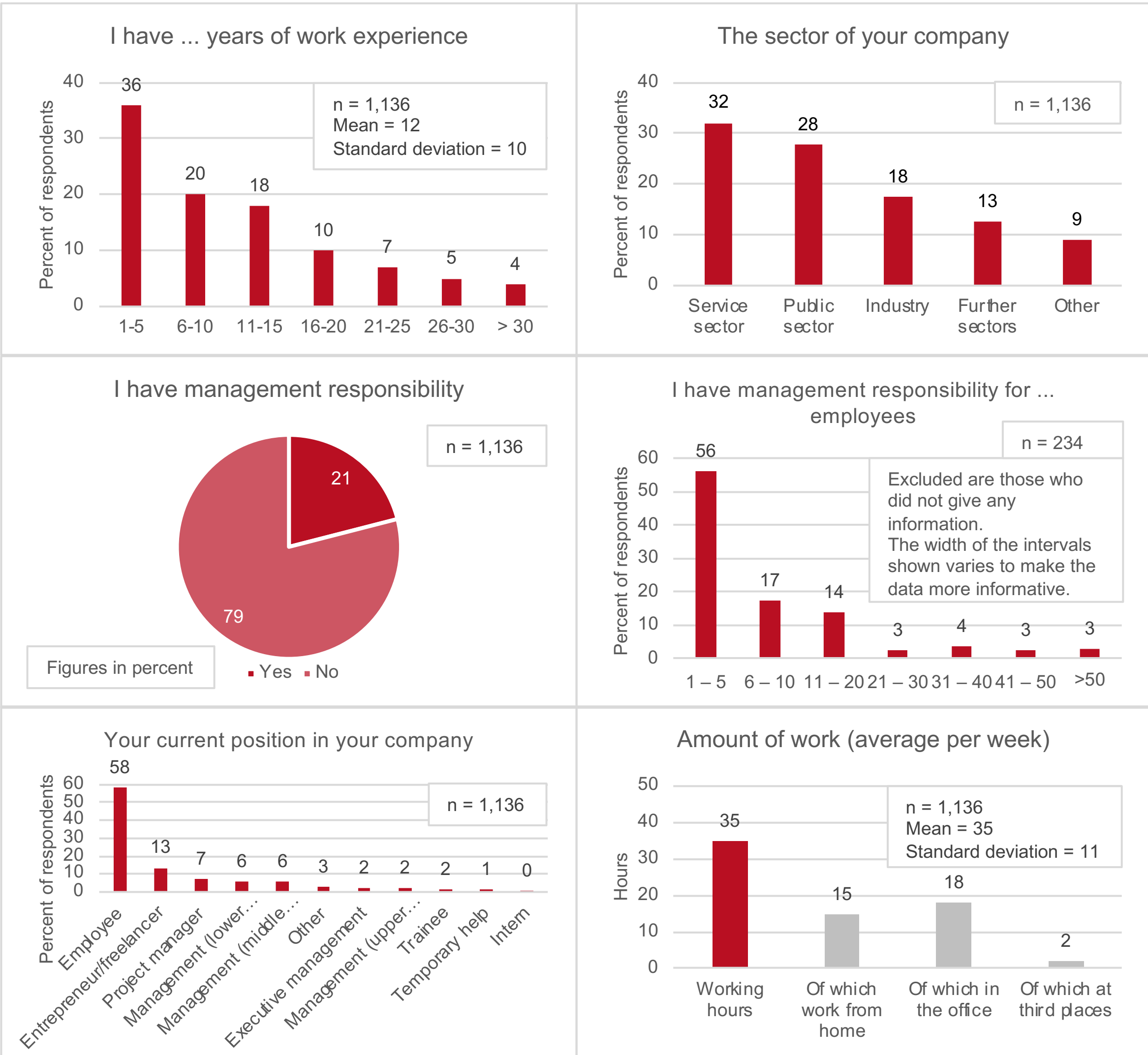


Figure 7: Work-related characteristics of the respondents

The average work experience is 12 years with a standard deviation of 10 years. Around 36% of respondents have 1–5 years of professional experience. This means they are at the beginning of their professional career. In contrast, 16% of respondents can look back on more than 20 years of professional experience. It is also evident that the respondents work in a wide variety of sectors: 32% of the respondents work in the service sector (finance/insurance, management consulting, IT services, telecommunications, etc.), 28% in the public sector (health care, education, energy supply, social services, public services/administration, etc.), 18% in industry (electrical industry, mechanical engineering, automotive, etc.), 13% in further sectors such as logistics, transport, pharmaceuticals or trade and 9% in other sectors. Out of the 1,136 respondents, 234 respondents—around 21%—state that they have management responsibility for employees. More than every second person with management responsibility manages 1–5 people. Fifty-eight percent of the respondents state that they are employees in their company while 13% are entrepreneurs or freelancers and 14% work in management. Figure 8 shows the percentage of different activities in the average weekly working time of the survey participants.

The employment status of the sample is very similar to that of the population of employees (Hammermann and Voigtländer, 2020). The respondents in the sample have an average workload of 35 hours per week. The median is 40 hours per week, which indicates that more full-time employees were surveyed. The Federal Statistical Office gives an average weekly working time of 34.7 hours for all employed persons (Destatis, 2022b).

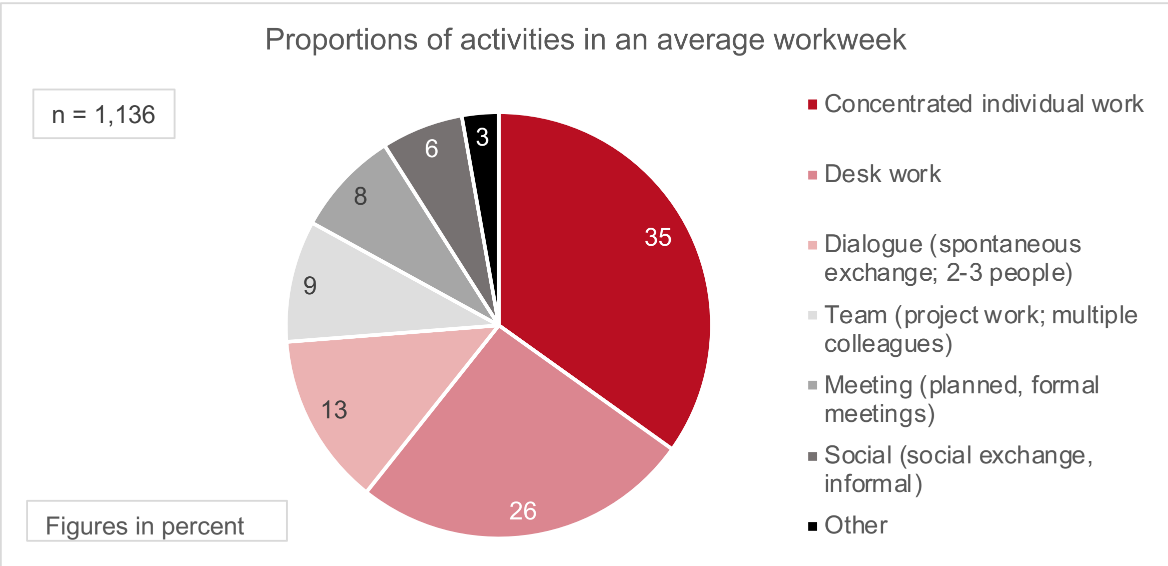


Figure 8: Distribution of work activities

On average, respondents spend about 35% of their time on concentrated individual work. This includes tasks that require a high level of concentration and are best done undisturbed, quietly and alone in order to focus. An additional 26% of their time is consumed by desk work, i.e. individual work that requires a medium level of concentration, but where a slight distraction by colleagues is not problematic (e.g. [video] telephone calls, writing or reading e-mails). A share of 36% of the average working time per week is spent on dialogues, teamwork, meetings and social exchange.

3.3 Remarks on the evaluation concept

In this study, the collected data are analysed using descriptive, univariate and bivariate evaluation methods. In the graphical presentation of the results, the answer options of a seven-point Likert scale (1 = “Not at all true”; 4 = “Neutral”; 7 = “Completely true”) are summarised into top and bottom 3-box values (see Figure 9).

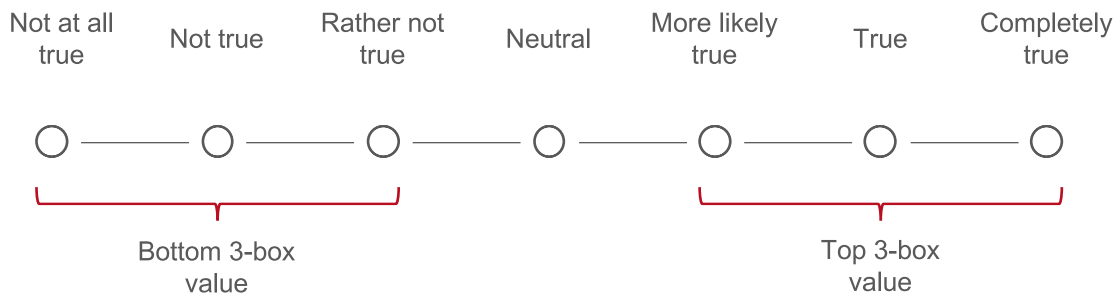


Figure 9: Summary of response values into top/bottom 3-box values

Top 3-box values stand for a clear agreement with a certain statement while bottom 3-box values stand for a clear rejection of the statement (Morgan and Rego, 2006). In addition to frequency distribution, positional measures such as the arithmetic mean (average), the median or the modal value and dispersion measures such as standard deviation are also used. In order to capture perceptions and self-assessments of respondents, sometimes several items are merged into one construct. The reliability and validity of the construct is measured with the help of Cronbach’s alpha. Subgroup analyses and correlations are used to make differences in the individual characteristic values recognisable. Subgroup analyses make it possible to consider differences between different characteristic values in the analyses. A Pearson correlation shows an undirected linear relationship between the examined variables, a so-called ‘bivariate relationship’. Positive correlations mean that a high level of one variable is associated with a high level of another variable and vice versa. Significances of the correlations are marked with * at a significance level of 5% and with ** at a 1% level.

4 Results

The results of the study are divided into four parts. At the beginning, the work situation is examined in more detail by reviewing the status quo of work from home and office. Then, the employees' choice of work location is analysed and the work success at the different work locations is considered. The following chapter is dedicated to change management processes before the results are concluded with a look at work in third workplaces, especially coworking spaces and workation.

4.1 Work from home and office workplace

In the following, the current work environments in the home office and at the office are outlined.

4.1.1 Status quo of work from home

Office workers were asked to indicate whether and to what extent they had work from home experience prior to the COVID-19 pandemic: 46% of respondents report having such work from home experience. Figure 10 shows the percentage of working time already performed from home before the pandemic.

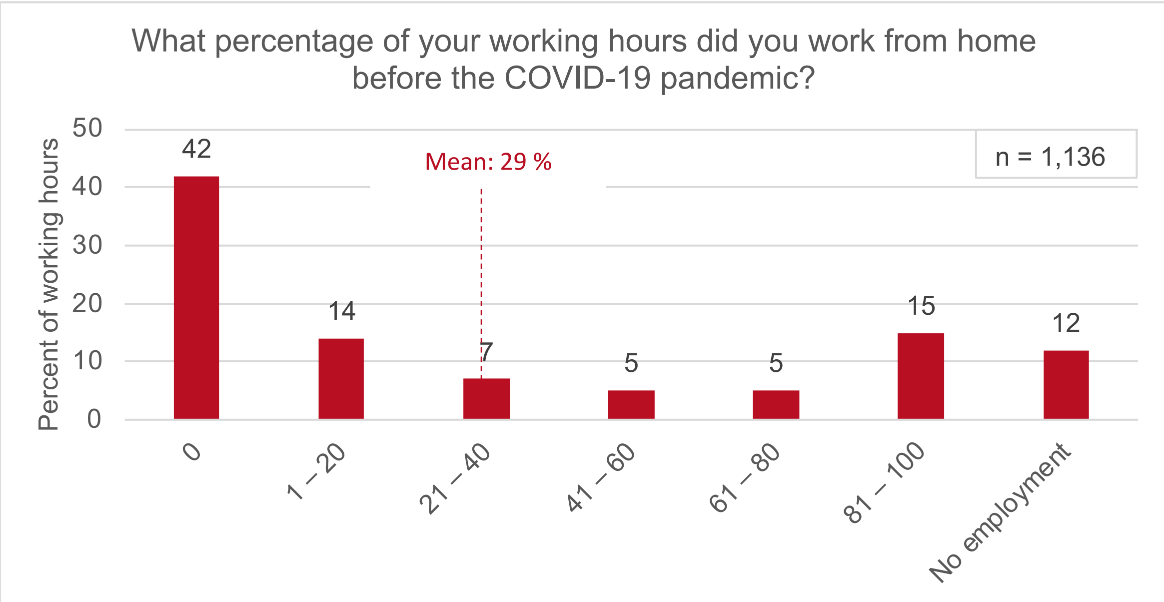


Figure 10: Work from home experience before the COVID-19 pandemic

Respondents with experience in work from home were particularly likely to have worked at home for between one and five days prior to the pandemic. On average, respondents spent 29% of their time working from home. The proportion of work from home is surprisingly high compared to the study results of other surveys. The study design is obviously noticeable here. It can be assumed that in surveys conducted by or in connection with employers, the respondents may not be telling the truth. For reasons of labour law, or for organisational reasons, they may not want to reveal the full extent of their work from home in such surveys.

Most respondents have a separate study at home

The description of the home office reveals two main circumstances regarding the spatial work situation of the respondents in work from home (cf. Figure 11).

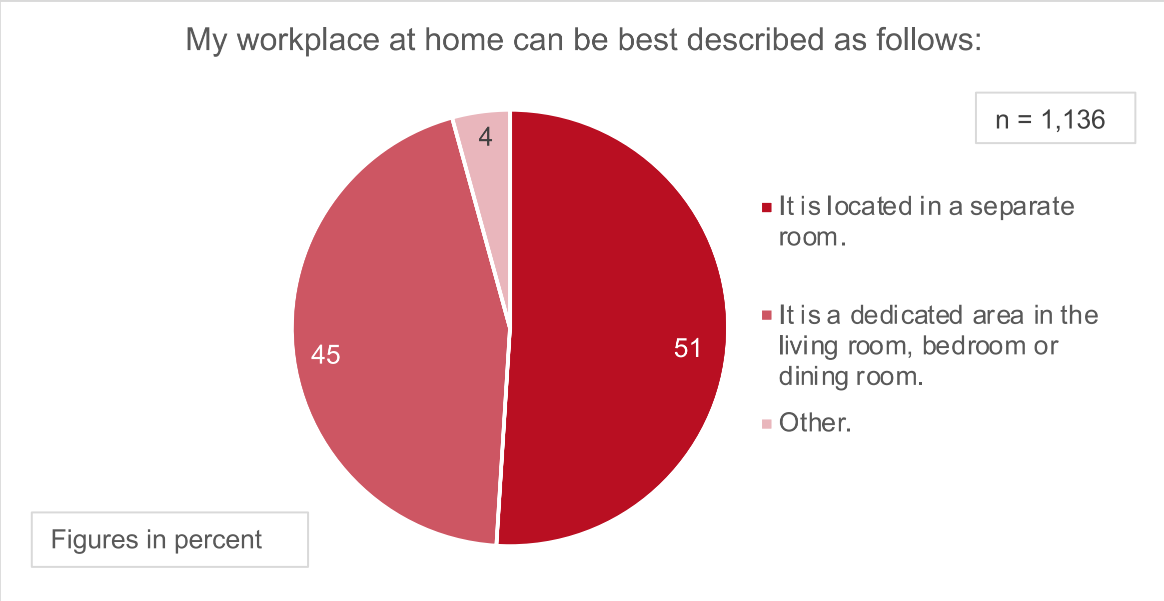


Figure 11: Respondents' home workplace

Fifty-one percent of employees report having a separate room at home where their workplace is located while 45% work in a dedicated area in the living room, bedroom or dining room.

> The proportion of respondents who work in a separate room has slightly decreased, whereas the proportion who use a dedicated area in living rooms, bedrooms or dining rooms has slightly increased compared to the results of the study conducted in 2021.

One in three without a proper workplace at home

In addition to the basic classification of their home office, respondents were also asked about their equipment for working from home. Figure 12 gives an overview of the equipment status.

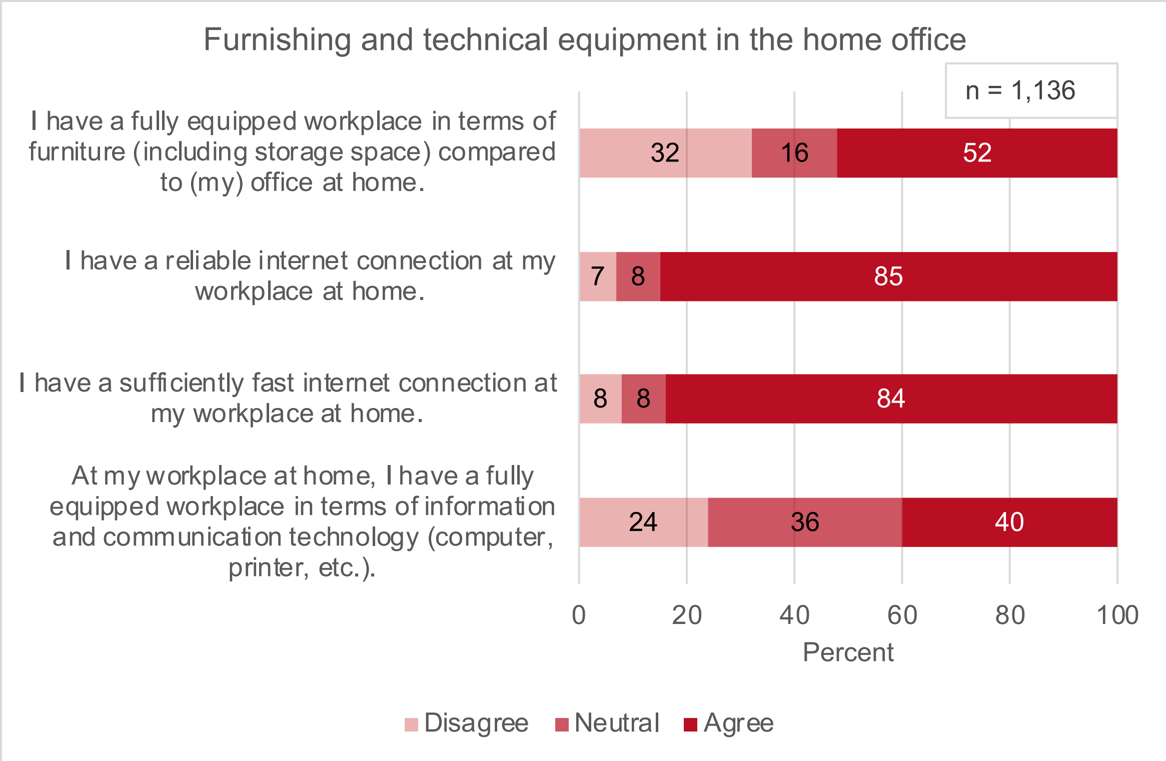


Figure 12: Furnishing and technical equipment in the home office

Every second respondent states that they have a fully equipped home office in terms of furniture. At the same time, every third person states that they do not have a fully equipped workplace compared to the office. Currently, and not least because of the dangers to occupational health, a reorganisation of the legal regulations for mobile work is being discussed.

The internet connection at the home office is perceived as not fast enough by 16% and as not reliable by 15%. In addition, one in four respondents lacks full information and communication technology equipment. Only 40% of respondents say they are fully equipped with information and communication technology at home for work.

Work from home still not regulated in a standardised way

The respondents also answered questions on the institutionalisation of work from home in their company. Initially, they were asked to state whether there is a regulation on working from home in their company (cf. Figure 13).

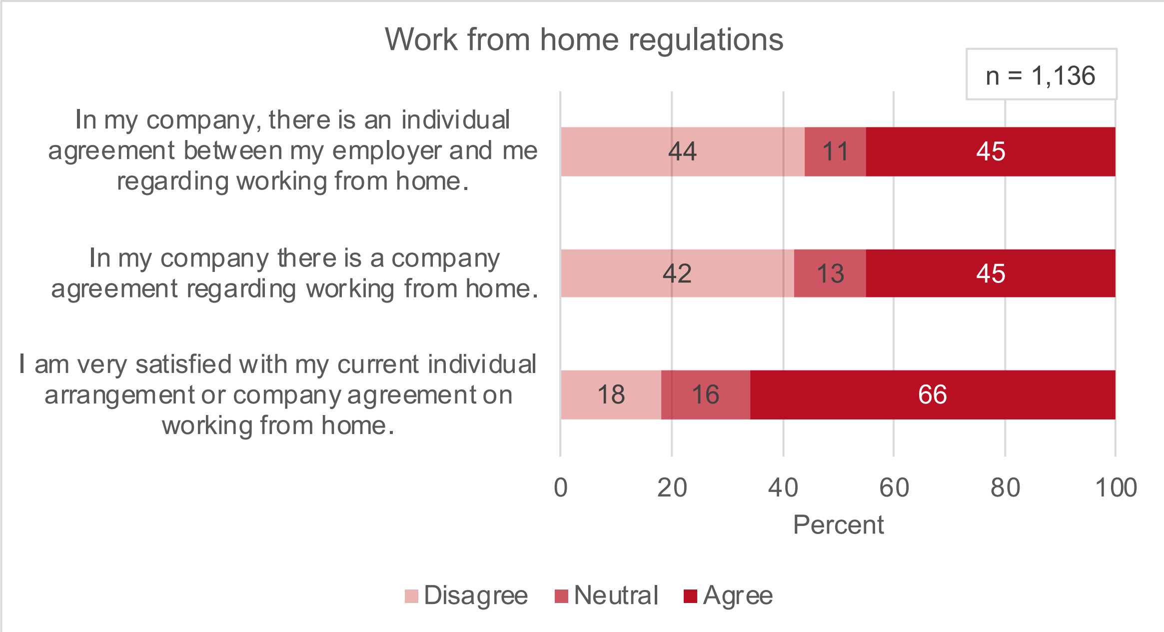


Figure 13: Regulation and satisfaction regarding the issue of working from home

Forty-five percent of employees state that there is an individual agreement between them and their employer about working from home in their company. The same proportion of respondents state that a company agreement regulates work from home in their company. Around 23% of respondents state that neither an individual nor a company agreement on work from home exists. Furthermore, two out of three respondents are satisfied with the existing arrangement.

Figure 14: Work from home regulation by company size and sector

The formation of subgroups according to company size shows that the larger the company, the more often there is a company agreement regarding work from home (cf. Figure 15). While the proportion of respondents from micro-enterprises with a company agreement on work from home is 17%, six out of ten respondents from large companies have such an arrangement. The sector with the highest approval rating for the existence of a company agreement is the industrial sector (61%).

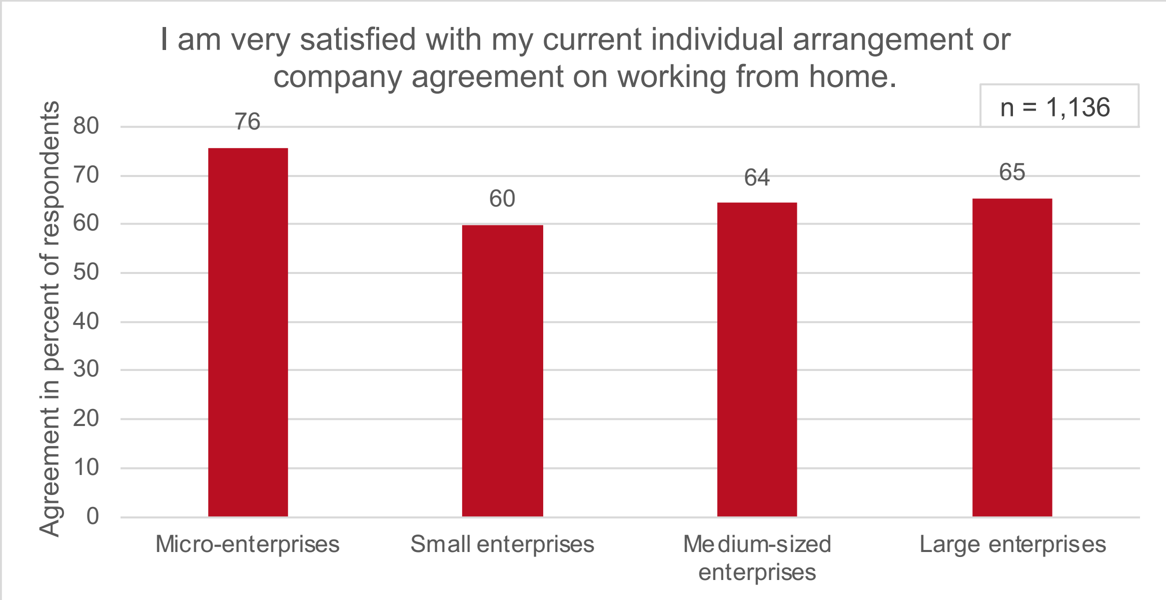


Figure 15: Satisfaction with work from home arrangements by company size

Employees in micro-enterprises are the most satisfied with the regulations currently in place: three out of four respondents from micro-enterprises agree with this statement. In the other company size categories, about two out of three respondents say they are satisfied with their work from home arrangements (see Figure 15).

Mixed views on the provision of work equipment and the assumption of costs for work from home

Another aspect of the status quo on work from home—in addition to the regulations on working from home—is the equipment provided by the employer for the home workplace (Figure 16).

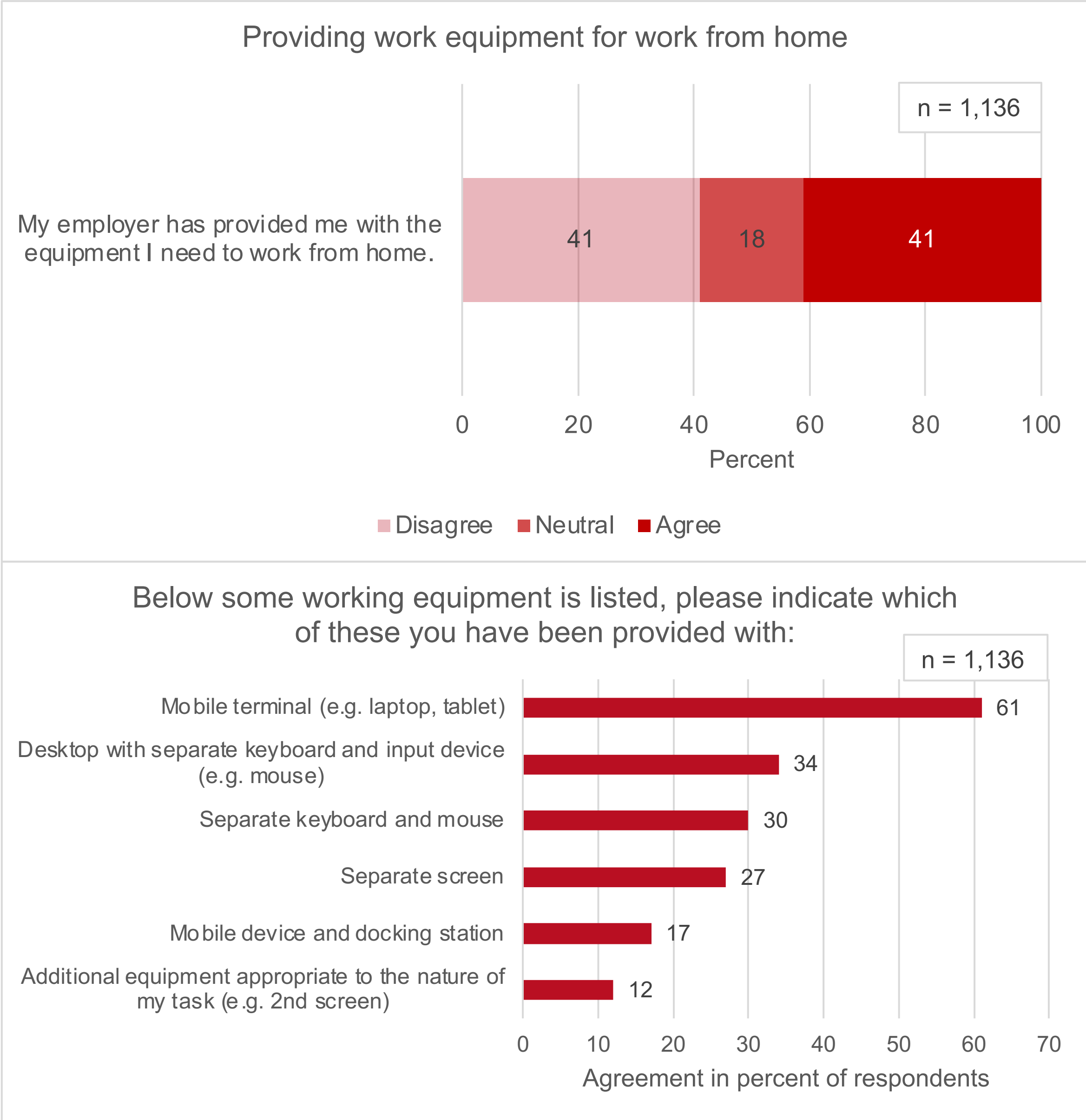


Figure 16: Work equipment provided for work from home

Forty-one percent of respondents say that their employer provided them with the necessary work equipment to work from home. But also, forty-one percent say that they did not provide them with equipment. The highest level of agreement on the provision by companies concerns mobile devices. For example, 61% of respondents have been provided with a laptop to work from home. One in three has been provided with input devices such as a mouse and keyboard. An external monitor provided by the employer was used by 27% of respondents.

Four out of ten respondents have to cover the costs of work from home themselves

Thirty-eight percent of respondents say that their companies do not cover the costs of their home office. The most common cost to be covered by the employer is the cost of mobile devices (48%). Sixty-two percent of employees demand that the employer should pay a share of the ancillary costs of employees at home. Assuming the reduction of office space, 40% of respondents see the need for the employer to pay a share of their rental costs for workspace provision. The same number of respondents disagrees with this demand (Figure 17).

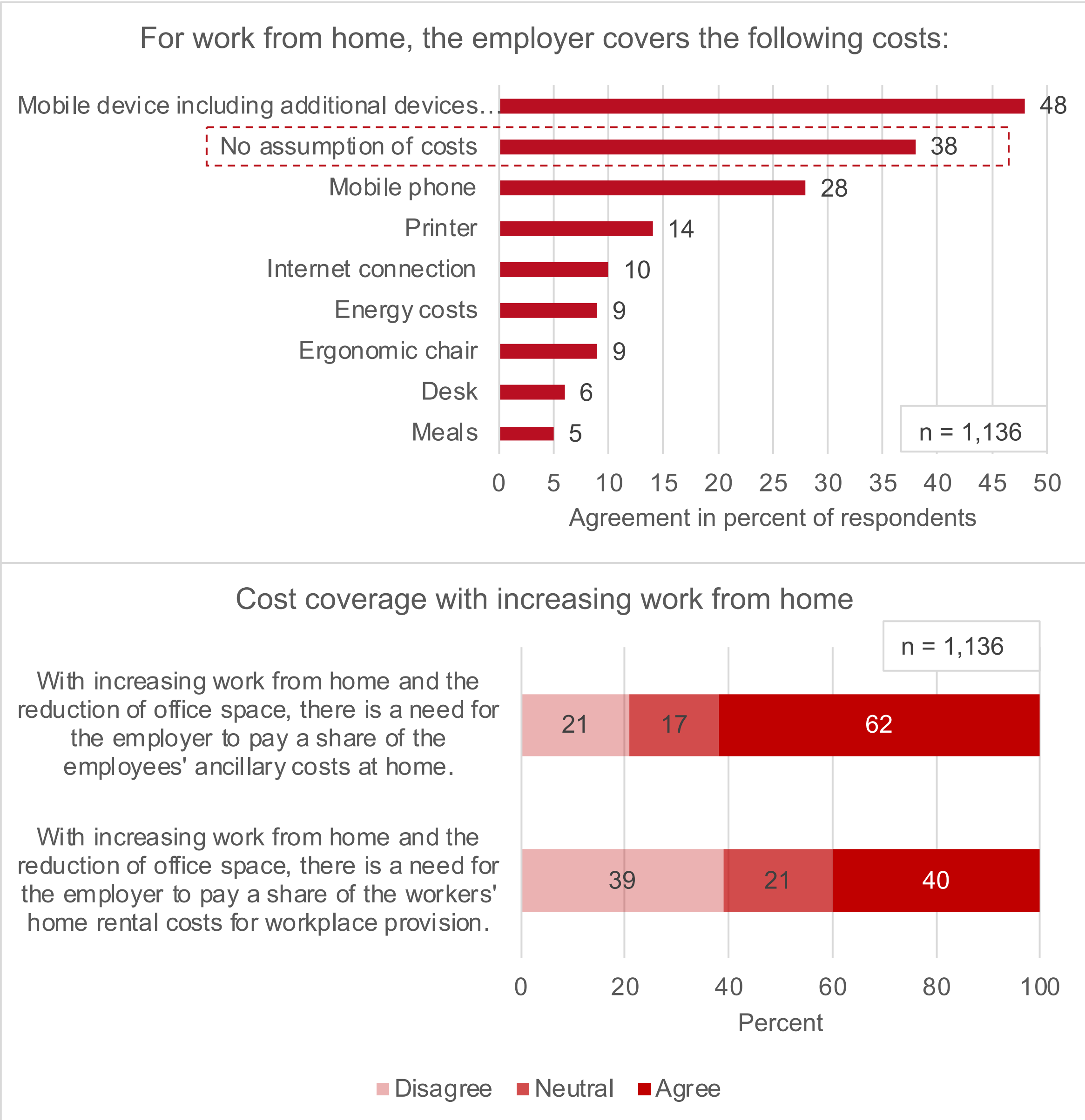


Figure 17: Cost coverage for work from home

Home office setup mostly independent

In addition to the question of assuming the associated costs, it should also be examined to what extent companies ensure that the employees' workplaces at home meet ergonomic standards and are adequately equipped (Figure 18).

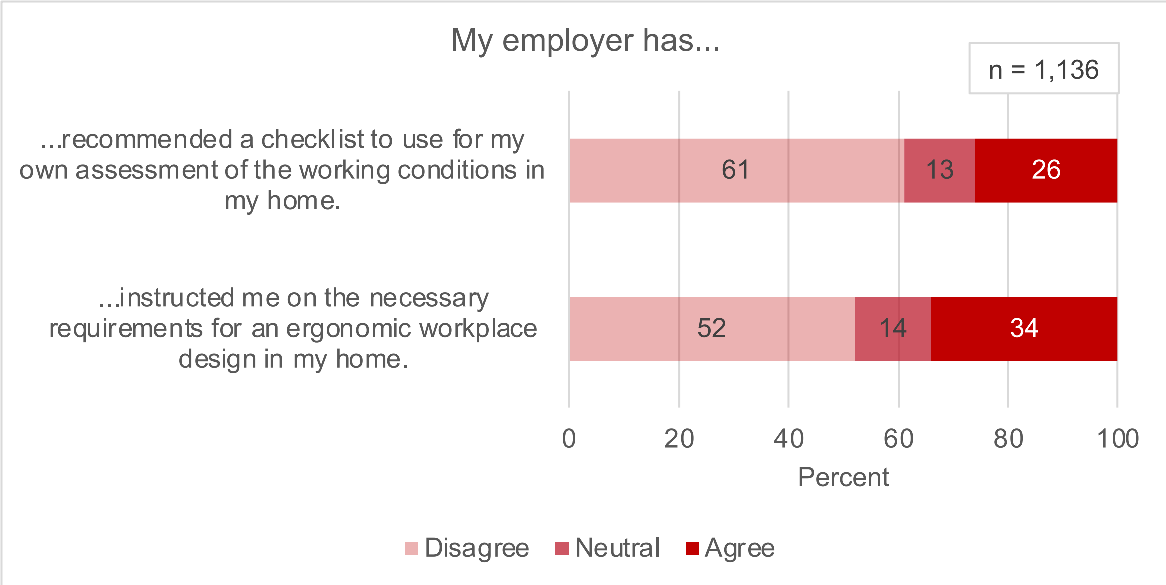


Figure 18: Home office setup

Thirty-four percent of respondents have been instructed by their employer about the necessary requirements for an ergonomic workplace design in their home. Half of the respondents have not received such instruction. For 26% of the employees, the employer recommended the use of a checklist for their own assessment of the working conditions in their home while six out of ten respondents disagree with this statement.

Work from home employees work more in terms of time and quantity

After the questions on the institutionalisation of work from home in the companies, study participants were asked about their quality of work at home (cf. Figure 19).

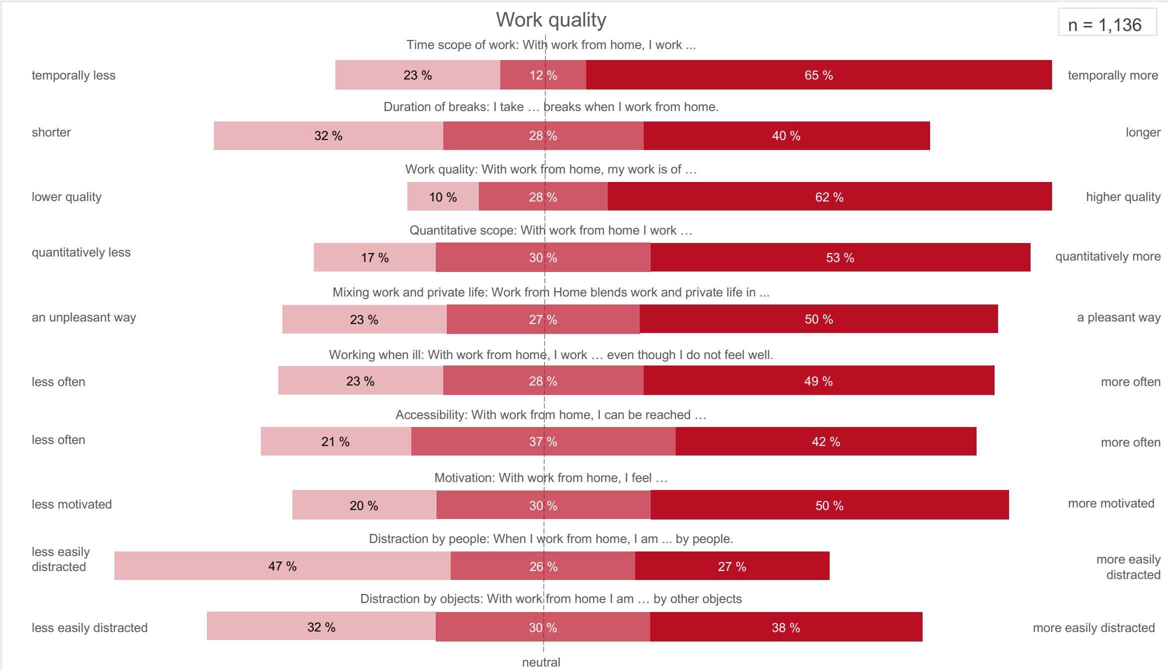
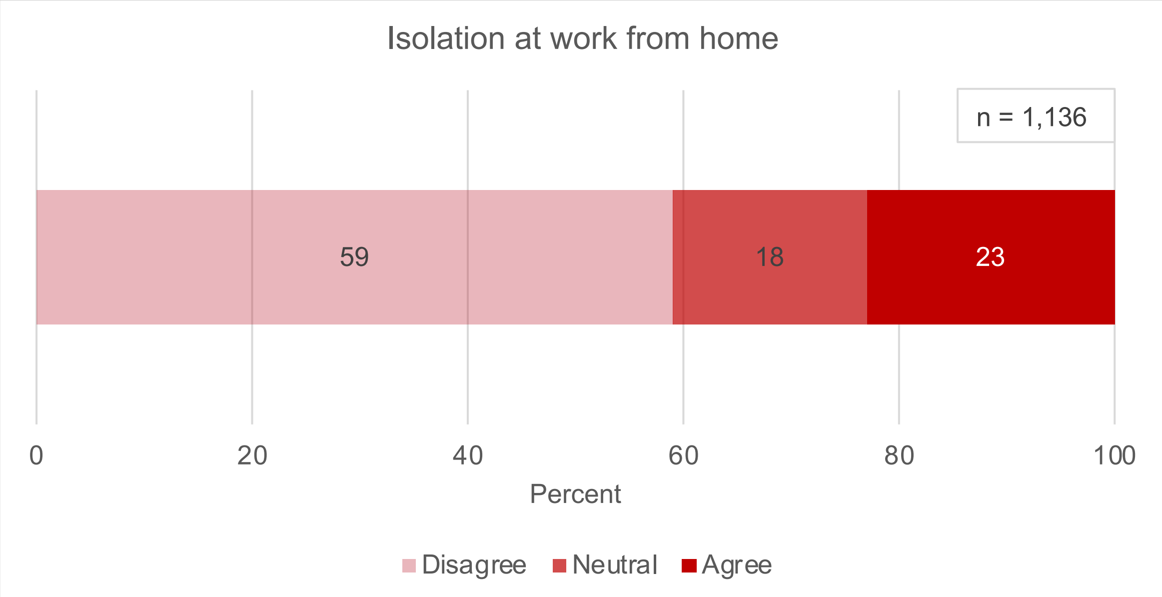


Figure 19: Quality of work at home

More than half of the respondents rate the amount of time (65%) and quantity (53%) of their work as higher when working from home compared to when they work in the office. Sixty-two percent of respondents rate the quality of their work at home as better while 50% feel more motivated when working from home and just as many find the blend of work and private life through work at home pleasant. Forty-seven percent of respondents say they are less easily distracted by other people at home while 49% of respondents say that they work more often when working from home and even if they do not feel well health-wise.

One in four respondents also feels isolated at work from home (Figure 20). The more important team dynamics are perceived to be in the company the higher the level of agreement.



In order to be able to evaluate isolation, the respondents were asked to rate the following statements:
1. At my workplace at home, I feel lonely.
2. At my workplace at home, I feel isolated.
3. At my workplace at home, I lack opportunities to socialise during and after work.
The Cronbach's alpha is 0.839.

Figure 20: Isolation at work from home

In the 2021 study, it was already revealed that individuals value personal contact as well as social relations at the workplace, but that neighbourly cohesion as a substitute for social support at the office workplace is weak and can therefore only poorly replace communication with work colleagues at the office.

Work–life balance is the most important reason for wanting to stick with work from home

The analysis of the status quo of work from home is concluded by looking at the reasons for stopping work from home instead of returning to the office (cf. Figure 21).

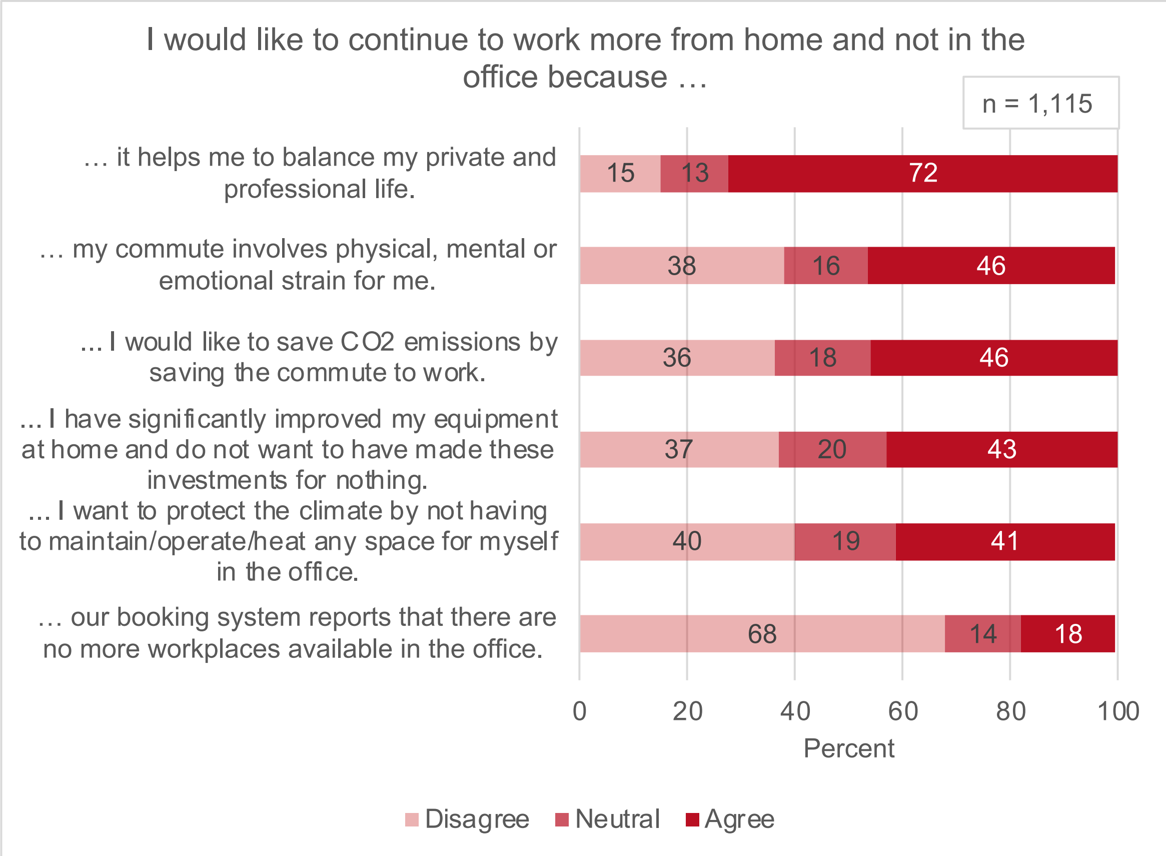


Figure 21: Reasons for continued work from home

Work–life balance is cited as the most important aspect for increased work at home. Seventy-two percent of respondents agree with this reason for preferring work from home over the office. Climate protection aspects (less office space utilisation or CO_2 savings), the fact that a suitable workplace has been set up at home and emotional stress on the way to work are reasons for 41–47% of respondents to want to continue working from home. For only 18%, a lack of workplaces in the office (indicated by the booking system) is a reason for not going back to the office. For seven out of ten respondents, however, this is not an obstacle.

4.1.2 Status quo of working in the office

Now that the current conditions of work from home in Germany have been presented, the focus below is on the current situation of what work in the office is like. This information of great value. Additionally, it can be used as reference when comparing work situations in different places. It can be assumed that the assessment of work from home depends on how the workplace in the company's office is designed.

Group office with a fixed workstation is the most common type of office

The study participants assessed a range of statements regarding workplace circumstances at their office. Figure 22 shows the existing office forms and concepts.

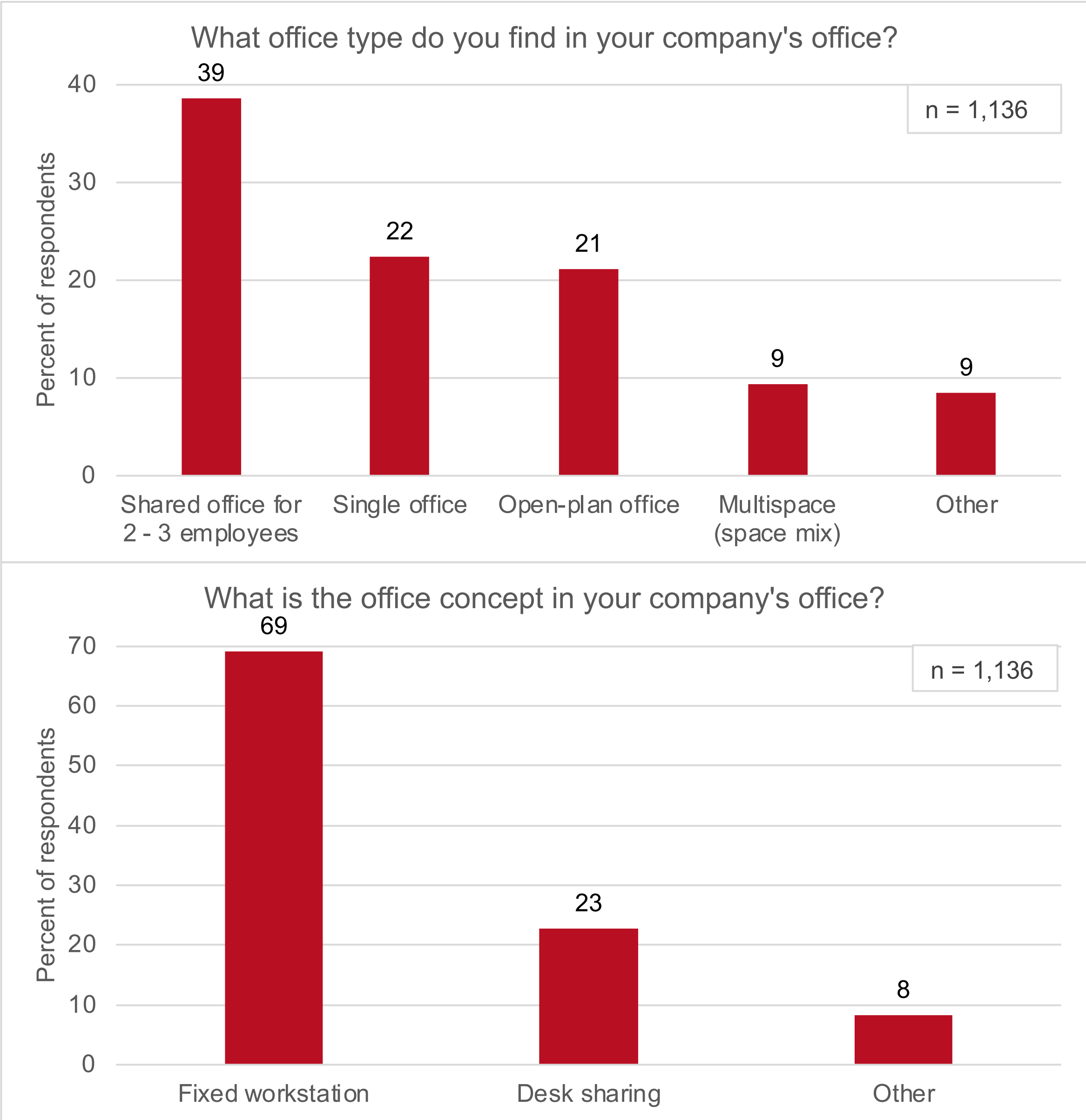


Figure 22: Respondents' office form and office concept

The most common type of office is the shared office for 2–3 employees. Thirty-nine percent of respondents state that they work in one of these. Twenty-two percent of respondents use a single office and about six out of ten respondents work in cellular offices. Thirty percent have a workstation in an open-plan office or multi-space while 69% have a fixed workstation and 23% use desk sharing concepts. Eight percent of participants have other office concepts in their company.

Diverse incentives for returning to the office

Next, respondents were asked about their motivation for returning to the office. They were asked to indicate from a list of given reasons whether these were an incentive for them to go back in to the office more. Figure 23 shows an overview of possible incentives for returning to the office.

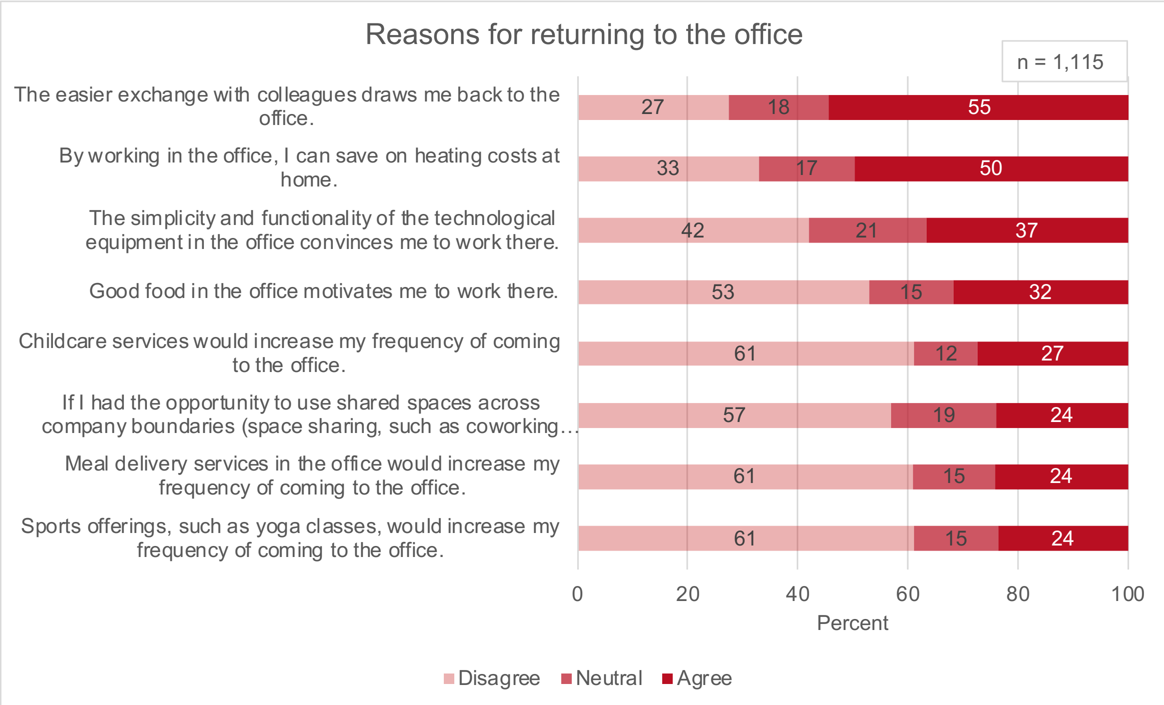


Figure 23: Reasons for returning to the office

More than half of the employees state that communication with colleagues is simpler in the office and is, therefore, a reason to go back. At 55%, this is the reason that receives the highest approval. Every second person says they want to go to the office to save on heating costs. Technology that is easier to use in the office or good food motivate around one-third of all respondents to work more in the office again. Childcare services are also a reason for three out of ten respondents to return to the office. Twenty-four percent of respondents say they would like to use shared space to work across company boundaries (space sharing, such as coworking spaces) if they could. Just as many respondents see additional services such as meal delivery services or on-site sports facilities as a reason to work in the office more often.

Teamwork and social exchange are the most popular activities during office visits

After examining the incentives for going to the company office, respondents were asked to indicate which activities they would like to do in the office and which they would rather do at home (Figure 24).

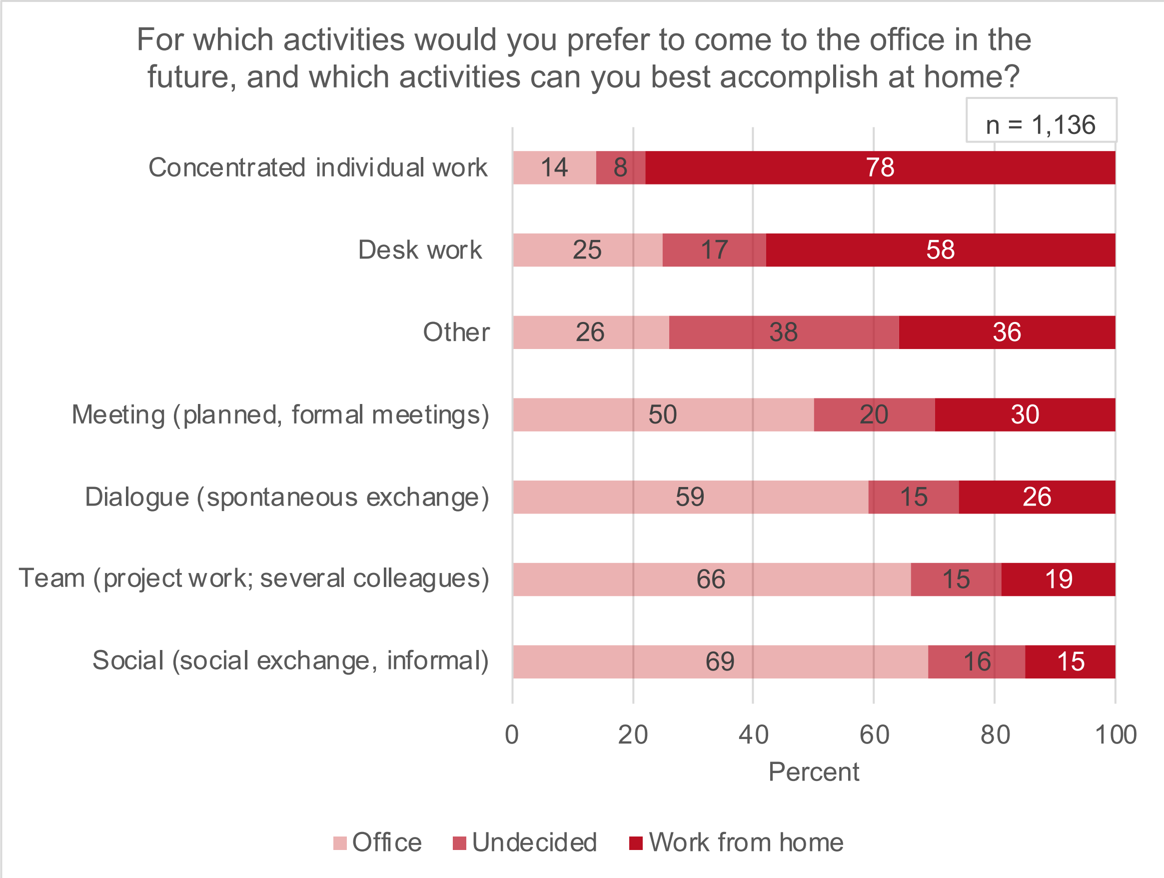


Figure 24: Desired distribution of activities depending on place of work

The vast majority of respondents (78%) say they would rather go to their home office for concentrated individual work. More than half also want to do desk work from home. By contrast, most respondents want to do communicative and collaborative activities that require interaction with others, such as meetings (50% in favour of the office), spontaneous exchanges in small discussion groups (59%), teamwork (66%) and social exchanges (69%) at the office.

No peak time: Weekdays for office visits almost equally popular

Now the reasons for returning to the office and the activities to be performed there are known. The preferred days of the week for working at the company location are highlighted below. For this purpose, respondents were asked to indicate how likely they were to visit the office on each day of the week. Figure 25 shows the average probability of visiting the office on the different days of the week.

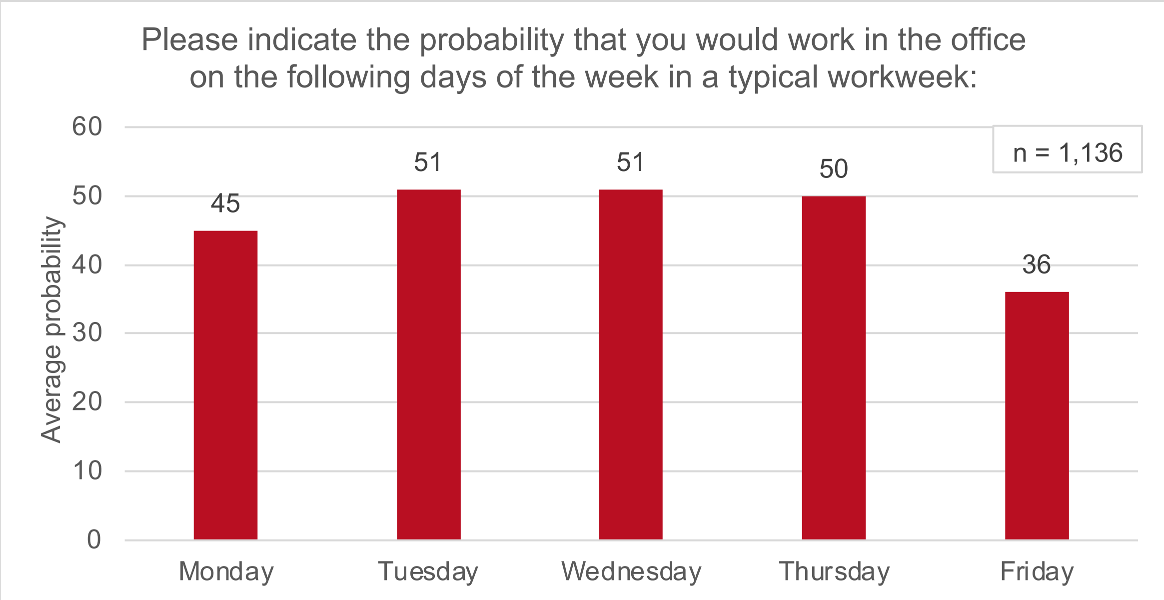


Figure 25: Weekdays spent at the office

According to the respondents, all days of the week are approximately equally popular for an office visit. On Tuesdays, Wednesdays and Thursdays, the average respondent is 50% likely to work in the office. Employees are almost as likely to work in the office on Mondays (45%) while Friday is the day with the lowest probability of being in the office (36%).

The team's influence on the choice of work location

The decision to go to the office to work could be significantly influenced by the expectations of superiors and colleagues. Therefore, respondents were asked to indicate to what extent their choice of work location is influenced by their team (Figure 26).

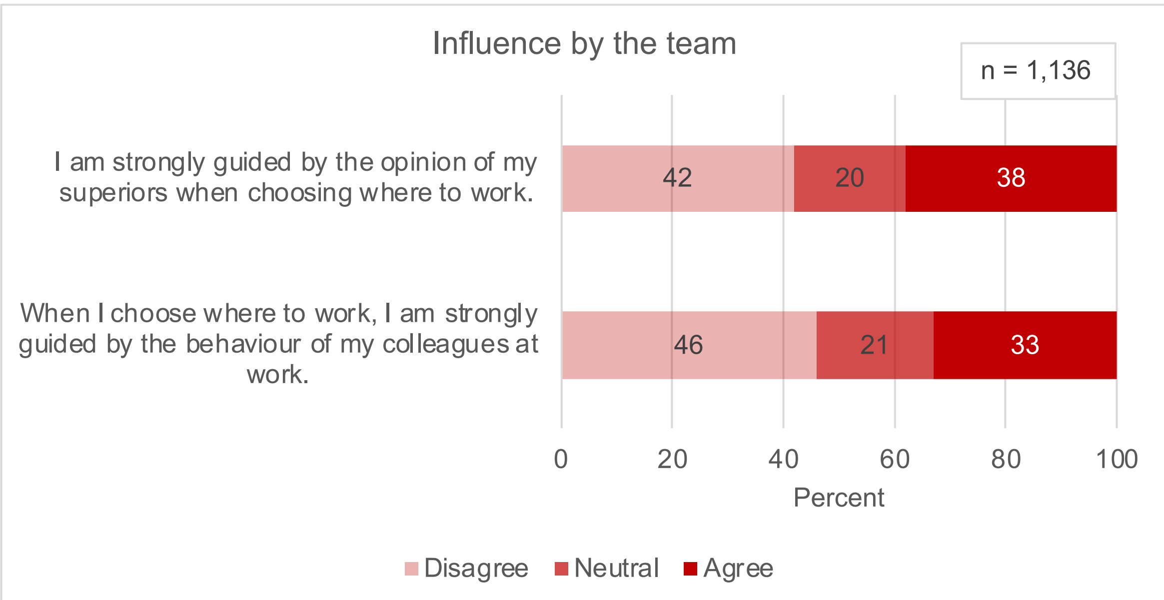


Figure 26: The team's influence on the choice of work location

Thirty-eight percent of respondents state that they are influenced by the opinion of their superiors when choosing a place of work while 42% deny being influenced by the opinion of their superiors. There was less agreement on being influenced by the behaviour of colleagues at work. One in three respondents say that they were influenced by their colleagues when choosing their place of work while 45% of respondents say they were not.

4.2 Work location choice and success at the different work locations

After having presented the status quo of work from home and in the office in Chapter 4.1, the next part of the study will examine how the respondents distribute themselves among the different work locations and what work success is achieved.

4.2.1 Respondents‘ choice of work location

Due to the possibility of performing their work flexibly through digital technologies, knowledge workers have their home and third places of work (for a definition see Chapter 2.1) available to them in addition to the company office. Before being able to examine how successful knowledge work is at the various locations, the proportion of office workers in Germany who are currently active at the various work locations and the extent to which this current situation differs from the respondents’ wishes regarding the distribution of work locations must be investigated.

Desire and reality of work location distribution diverge

First, the survey participants were asked to indicate how much of their weekly working time they currently spend at the different places of work and how they would like to distribute their working time between the places in the future. The results are shown in Figure 27.

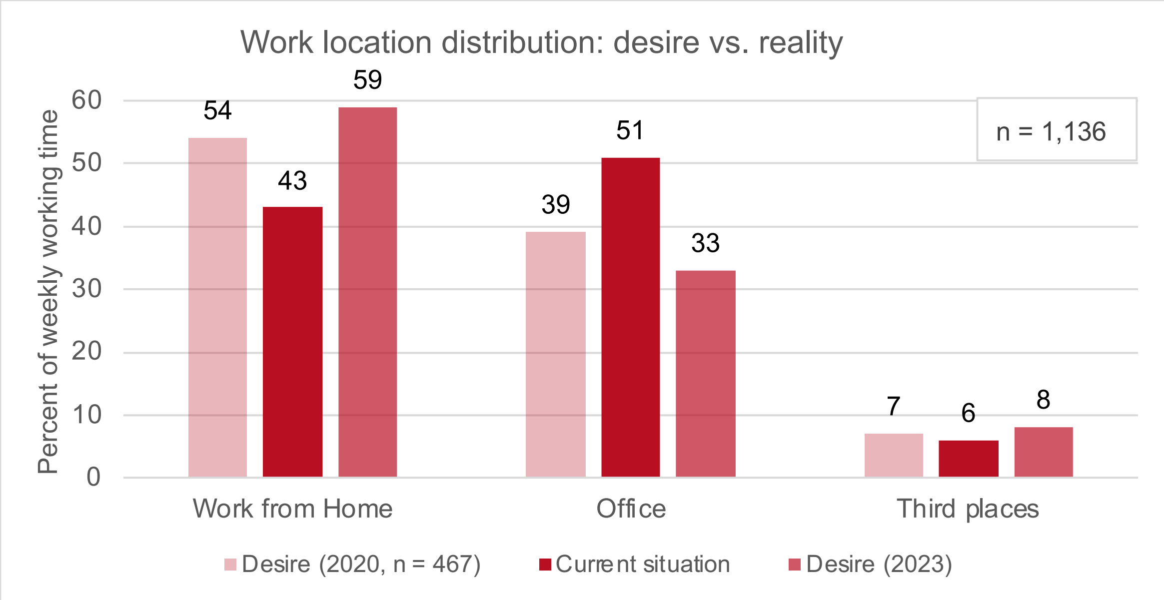


Figure 27: Desire and reality of work location distribution in 2020 (Pfnür et al., 2021) and 2023

According to the study, German knowledge workers currently spend an average of 51% of their time in the company office and around two days per week working from home. Third places of work have only played a minor role so far. In the future, respondents would like to work from home on three out of five days on average. The desire to work from home even increased by 5% compared to 2020 at the expense of time spent in the company office. Thus, German knowledge workers currently spend more time in the office than they wanted to in 2020 and intend to in the future. For better classification of the results, subgroup analyses examine the extent to which differences exist with regard to the actual and desired distribution of work locations according to various characteristics of the respondents.

Differences in the distribution of places of work in an intergenerational comparison

For this purpose, the current distribution of working time among the different work locations as well as the desired distribution of working time among the work locations for the future are set in relation to the age of the respondents. This, in turn, is classified by generation.

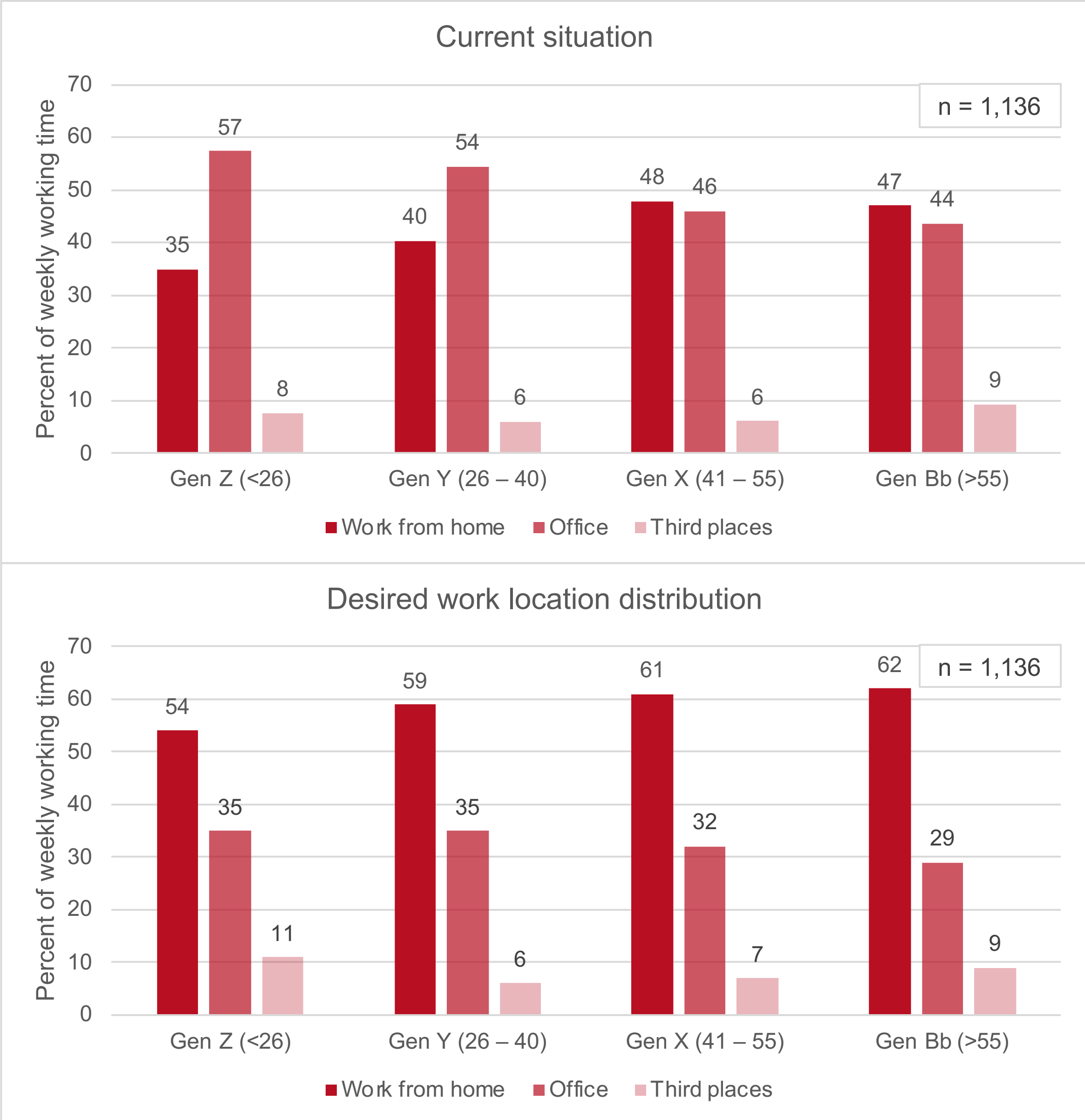


Figure 28: Actual and desired distribution of work locations by generation

In terms of the proportion of the total weekly working time currently spent in the office, Figure 28 shows that there is a decreasing trend with increasing age. While members of Generation Z spend 57% of their time in the office, employees belonging to the baby boomer generation only spend about 44% of their time in the office. The same trend is visible when observing the desired proportion of time spent in the office (Generation Z: 35%; Generation Baby Boomer: 29%). With regard to the actual and desired share of work from home time, there is an opposite trend: the older the respondents, the higher the actual and also the desired work from home share. However, the generations have in common that they currently spend more time in the office than they would like to. This happens at the expense of the desired work from home shares. The greatest discrepancy in this respect exists within the Generation Z group (22 percentage points).

Slightly lower desire of work from home in central residential areas

Furthermore, the study examines to what extent the location of the home influences the desire for work from home time.

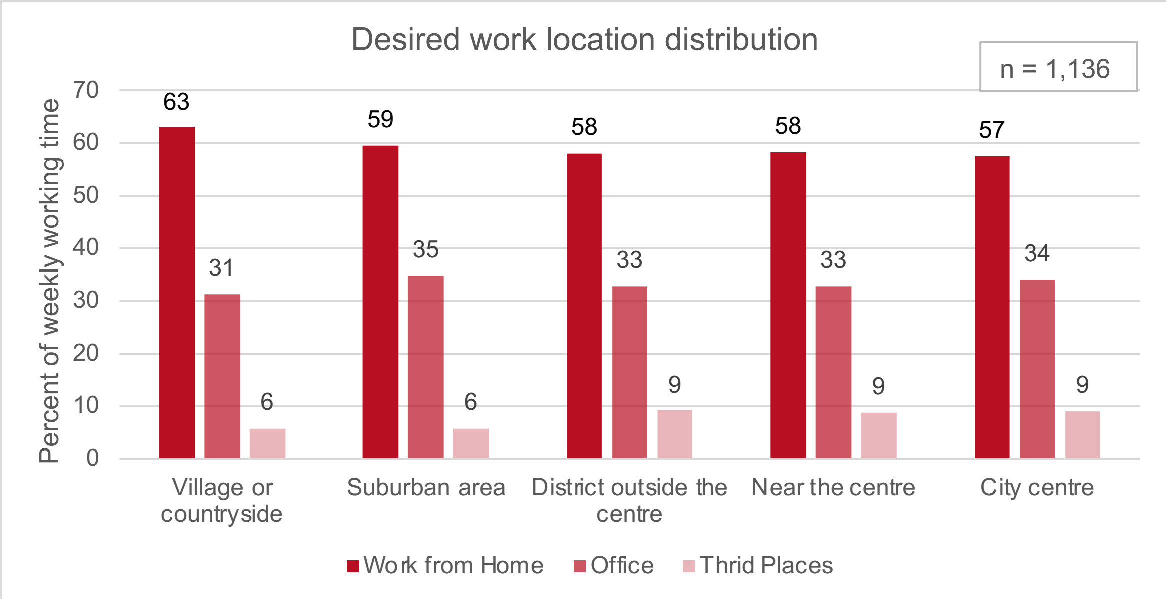


Figure 29: Desired work location depending on location of residence

Figure 29 shows a slight trend of decreasing work from home preferences as the proximity of one's home to the city centre increases. Thus, respondents who live in the village or in the countryside want to spend an average of 63% of their working time at home. Respondents who live in the city centre would like to spend 57% of their working time at home. Their location of residence has no obvious influence on the preference of working at the office. The desire to work at third places of work is somewhat stronger if the respondents indicate that they live in locations close to the city centre.

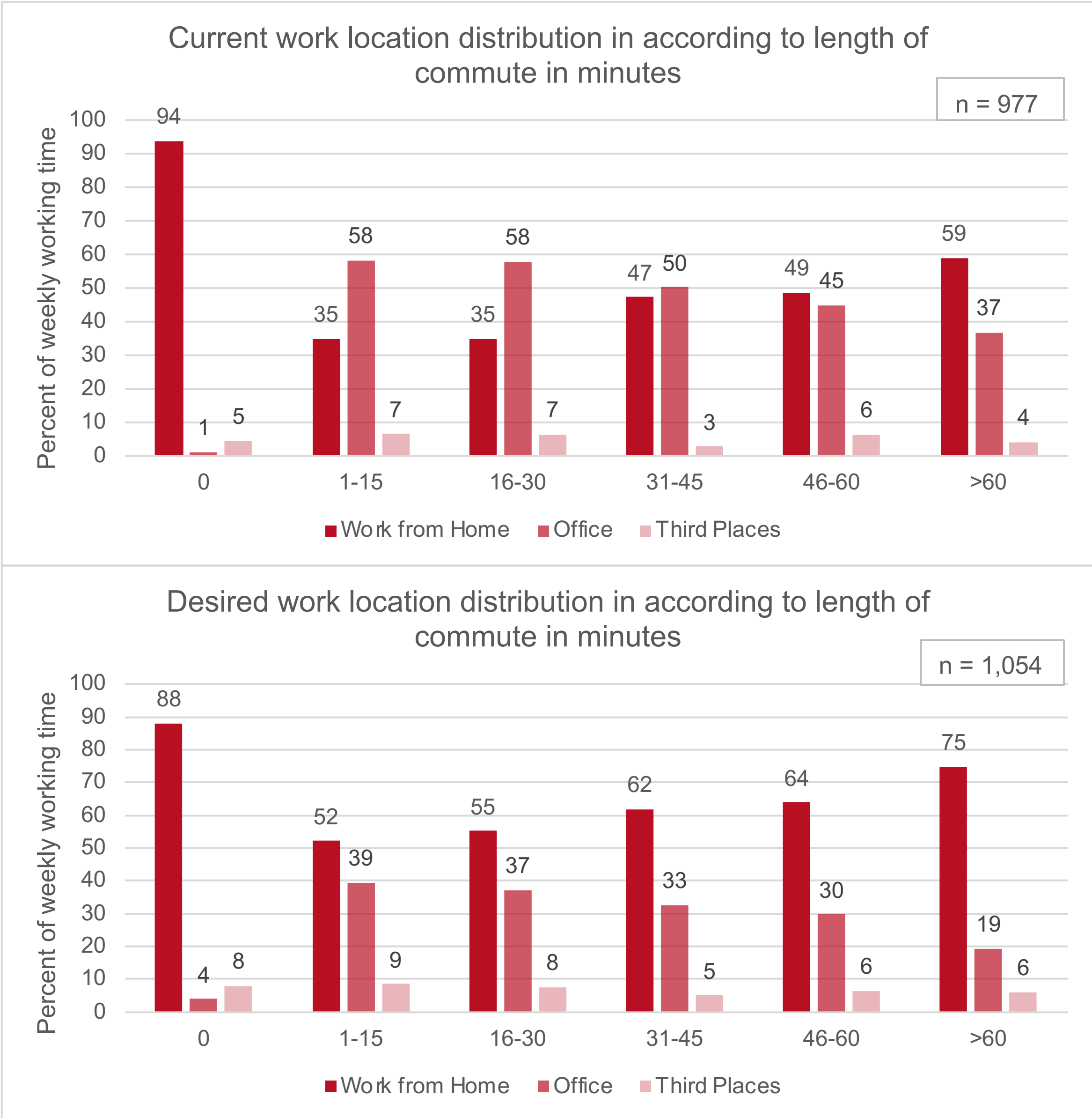
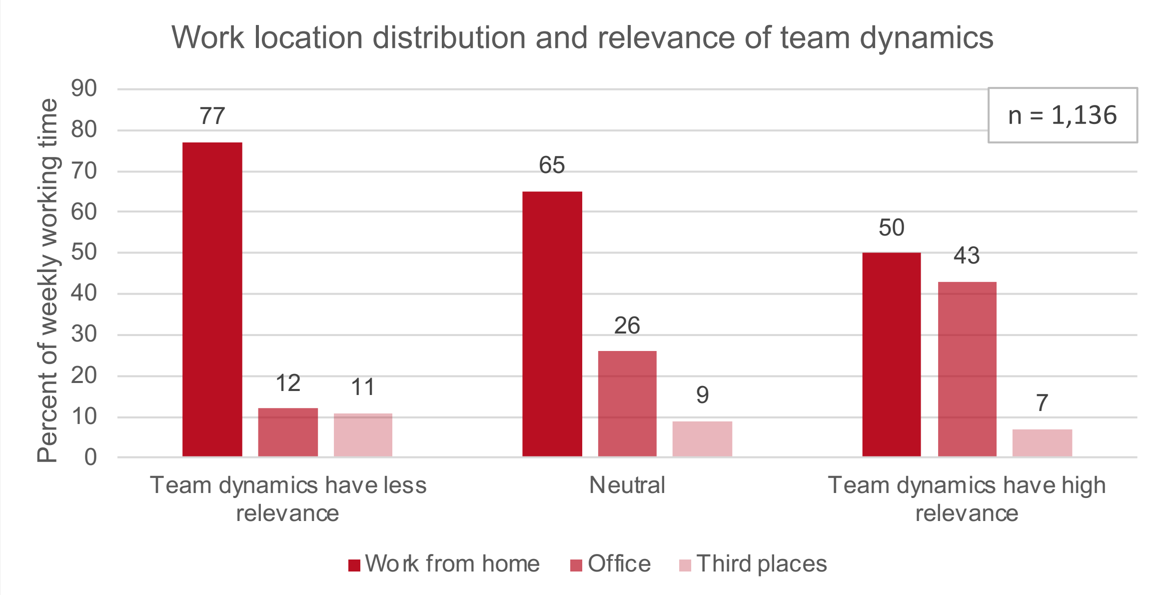


Figure 30: Current and desired work location distribution according to length of commute

Regarding the distribution of the work location depending on the distance between respondents' home and office, the tendency that working at home becomes more attractive with increasing distance of the home from the place of work can be seen. For the office, the opposite is the case: the shorter the distance to the office the greater the actual and desired shares to work in the office (Figure 30). Excluded from this analysis are respondents who report a commute of 0 minutes. They often do not have a workplace in the company's office, so their work is often completely remote.

Higher office shares with increasing importance of team dynamics in the company

The importance of team dynamics in companies could have an influence on the desired working time in the office. To test this assumption, the desired shares of work locations in the distribution of working time are compared to the construct team dynamics (cf. Figure 31).



To evaluate the importance of team dynamics, respondents were asked to rate the following statements:
1. Teamwork in my company is successful.
2. Teamwork is an important contribution to my work success.
3. My (direct) superiors prefer it when I come to work in the office.
4. My work colleagues come to the office to work.
5. It is part of the company culture to go to the office to work.
The Cronbach's alpha is 0.784.

Figure 31: Desired work location distribution according to relevance of team dynamics

The results illustrate that the importance of team dynamics in a company and the desired proportion of work in the office increase at the expense of work from home. While respondents who state that team dynamics are only of low relevance in their companies would like to spend only 12% of their working time in the office, the share is more than three times higher (43%) among respondents with a high internal relevance of team dynamics.

Individual factors, satisfaction and productivity influence choice of work location

After having previously examined and presented the actual and the desired distribution of work locations, the aspects that influence the respondents' choice of work location are analysed below. For this purpose, the respondents were asked to evaluate the influence of input- and output-related aspects on their choice of work location (cf. Figure 32).

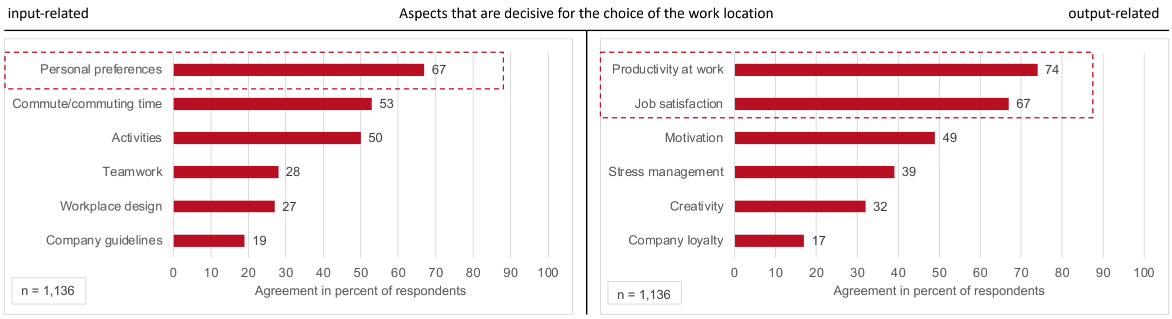


Figure 32: Influence of in- and output-related aspects on the choice of work location

The input-related aspects are considered by the respondents to have the greatest influence on the choice of work location. This includes individual factors such as personal preferences (67% agreement), commuting time (53%) and activities (50%). According to the respondents, environmental factors, such as teamwork, the design of the workplace or company guidelines, play a secondary role (28–19%).

Among the output-related factors, productivity (74%) and job satisfaction (67%) stand out in their influence on the choice of work location. The other aspects of motivation, stress management, creativity and company loyalty, follow with a gap of almost 20%. The second most important output-related aspect, job satisfaction, is perceived as equally decisive for the choice of work location as the most important input-related aspect (personal preferences), which underlines the importance of productivity and satisfaction for the employees' choice of work location.

4.2.2 Work success at the different places of work

After examining the respondents' choice of work location in Chapter 4.2.1 and finding that the determinants job success, job satisfaction and productivity have a significant influence on the choice of work location, these factors and their determinants are examined in more detail in the following part of the study.

Knowledge workers are by far the most satisfied with work from home

Following Cammann et al. (1983), survey participants' satisfaction with their work at the different work locations (work from home, office and third places) was measured. In addition, they were asked about their general life satisfaction (cf. Figure 33).

To evaluate satisfaction at the different locations, respondents were asked to rate the following statements:
1. All in all, I am very satisfied with my work from home/office/third places.
2. In general, I do not like my work at home/office/third places.
3. In general, I like working at home/at the office/at third places.

The Cronbach's alphas are 0.850 (work from home), 0.843 (office) and 0.788 (third places).

Figure 33: Satisfaction with work locations

Respondents indicate that they are most satisfied with work from home out of all work locations. Only 6% of respondents say they are dissatisfied with work at home. In comparison, only 57% of respondents say they are satisfied at the office. One in five is dissatisfied with working in the office. Among respondents who have experience of working in third places (for example, coworking spaces), 44% say they are satisfied with their work there. Every fifth person is also dissatisfied working in third places. Regarding their general life satisfaction, 72% of the study participants say they are satisfied.

Older respondents tend to be more satisfied with work from home than younger ones

For a better understanding of the satisfaction of office workers at the different places of work, subgroup analyses are carried out. For this purpose, the satisfaction at the home office and in the company office is examined depending on the age of the respondents (cf. Figure 34).

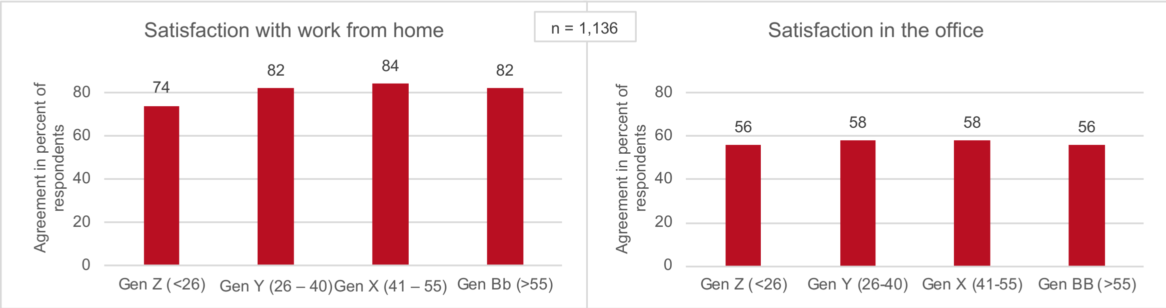


Figure 34: Satisfaction by work location and age

Satisfaction with work from home varies with the age of the respondents. Young people, in particular members of Generation Z, are still much more satisfied with working at home than in the office, but with an approval rate of 74% they fall somewhat behind the other generations. The highest satisfaction with the home workplace is documented by Generation X (84%). In respect of satisfaction with work in the office, no differences are discernible in the intergenerational comparison.

Satisfaction with work from home increases in peripheral locations

In addition to the comparison according to age groups, it was also examined whether differences exist depending on different real estate criteria. For this purpose, satisfaction at the various places of work is examined dependent on the residential location of the employees (cf. Figure 35) before being examined dependent on the length of the commute (cf. Figure 36).

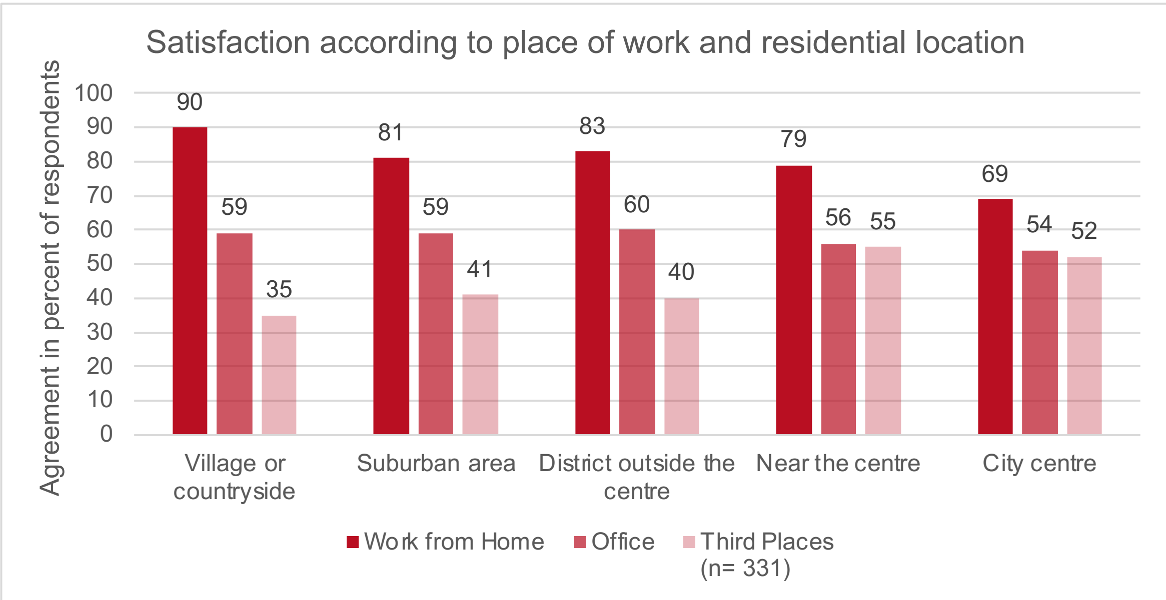


Figure 35: Satisfaction by place of work and residential location

The results show that satisfaction with work from home decreases with increasing centrality of the residential location. Ninety percent of respondents with homes in the village or in the countryside state that they are satisfied at the work from home place. Among the survey participants who live in city centres, the approval rate is only 69%. In contrast, satisfaction with working in a third location tends to increase as the centrality of the residential location increases. Only 35% of respondents who live in the village or in the countryside are satisfied with third places of work. Among respondents who live near the centre or in city centres, more than half are satisfied with working there, for example in coworking spaces. No differences are observable concerning the influence of residential location on satisfaction with working in the office.

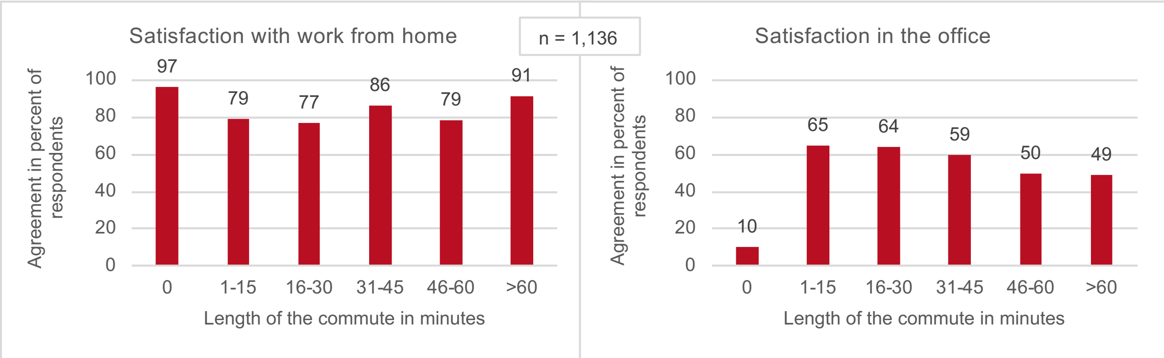


Figure 36: Satisfaction with work from home and in the office depending on commute

With respect to the length of the commute, there is no clear inclination towards satisfaction in the office. It is only noticeable that respondents with a commute of more than 60 minutes are the most satisfied (91%). However, satisfaction in the office tends to decrease with the distance of the office from the respondent's home.

Office workers tend to be more satisfied in cubicle offices

Satisfaction in the office could significantly depend on the design of the office space in the company of the respondents. For this reason, is must be investigated whether there are differences in the satisfaction of the respondents with regard to floor plan design and office concept.

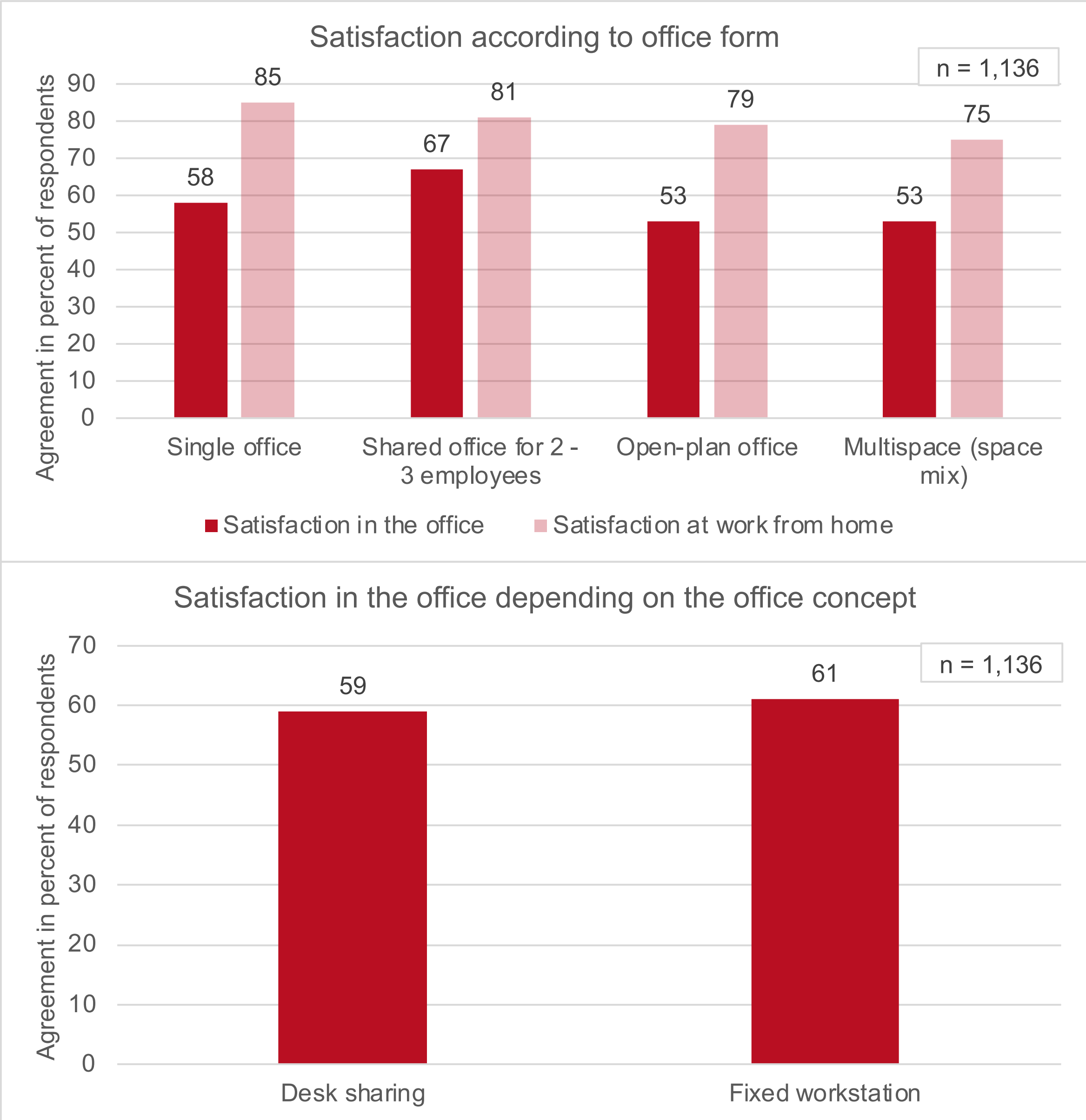


Figure 37: Satisfaction in the office by office form and office concept

As shown in Figure 37, office workers in who work shared offices with one or two colleagues are the most satisfied. Two out of three respondents who indicated this type of office are happy working in the office. The 58% of respondents who work in single offices and state that they are satisfied is also slightly higher than the average satisfaction in the office. By contrast, only about every second respondent is satisfied in open-plan offices and multi-spaces. There are no differences in office satisfaction when distinguishing between fixed workstations and desk sharing concepts.

Spatial conditions particularly influence satisfaction with work from home and at third locations

After taking a closer look at satisfaction at the different places of work, the determinants of satisfaction at the places of work are still unclear. Therefore, the influencing conditions are considered below. A distinction is made between spatial, social and work-related conditions (Figure 38).

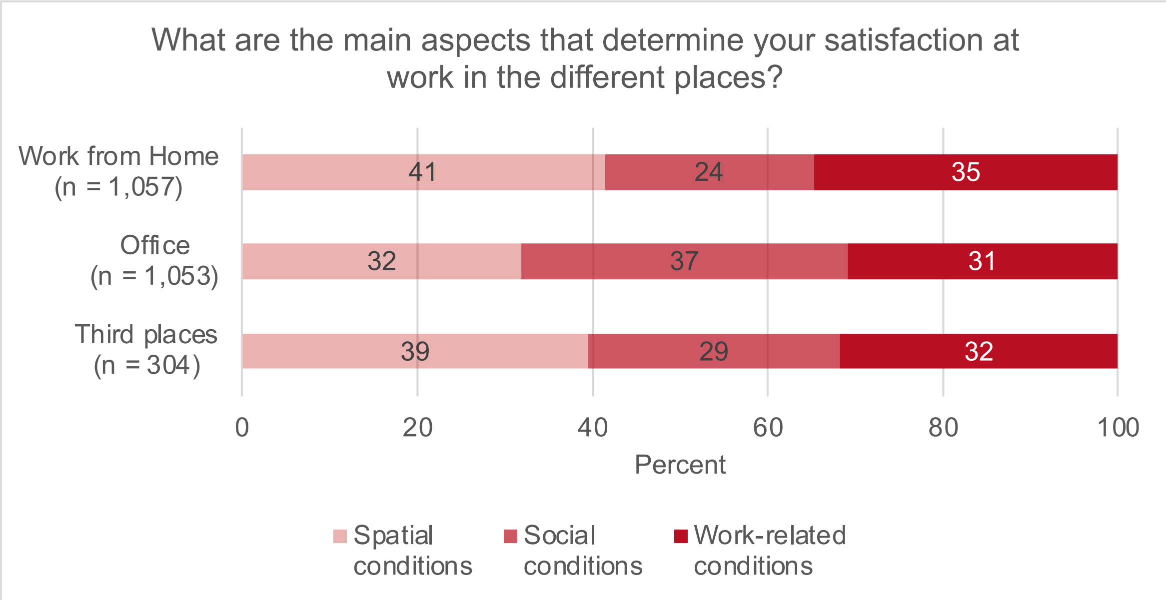


Figure 38: Factors influencing satisfaction at the places of work

The spatial and real estate conditions have the greatest influence on satisfaction with work from home and at third locations. Around 40% of the respondents state that these were the main factors determining their satisfaction at the work locations. In both places, work-related conditions follow in second place. In comparison, satisfaction in the office is most strongly determined by social conditions (37%).

Spatial conditions at the home office are of increasing importance with increasing age

The significance of the various areas of influence on satisfaction at the places of work is also examined in more detail by subgroup analyses. This is why, the significance of the three areas depending on age for the work from home and office workplaces will be examined in more detail (see Figure 39).

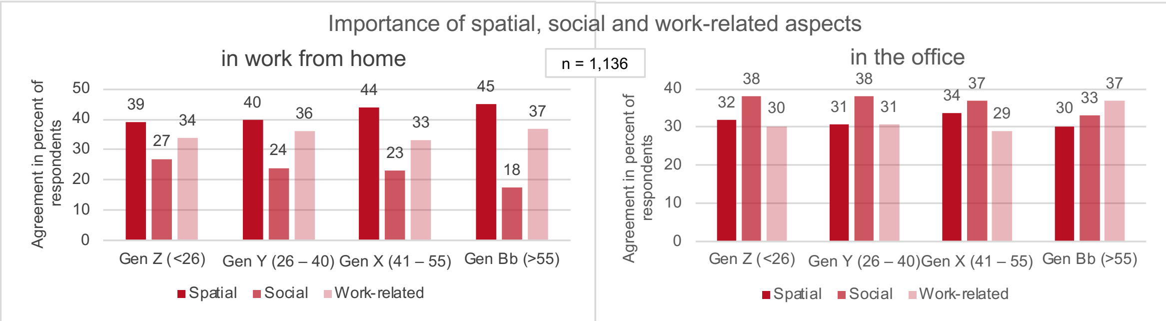


Figure 39: Influencing conditions on satisfaction at workplaces according to age

In work from home, the importance of spatial conditions for satisfaction increases with age, from 39% (Generation Z) to 45% (Generation Baby Boomer). At the same time, the importance of social circumstances decreases, from 27% (Generation Z) to 18% (Generation Baby Boomer). Only minor changes can be observed regarding the importance of work-related circumstances. For job satisfaction in the office, no significant differences in the importance of spatial, social or work-related factors can be identified in the intergenerational comparison.

Knowledge workers are most productive when working from home

In addition to respondents' satisfaction at the different work locations, their productivity was also considered. The comparison of productivity at the different work locations was based on Krupper (2015) and is shown in Figure 40.

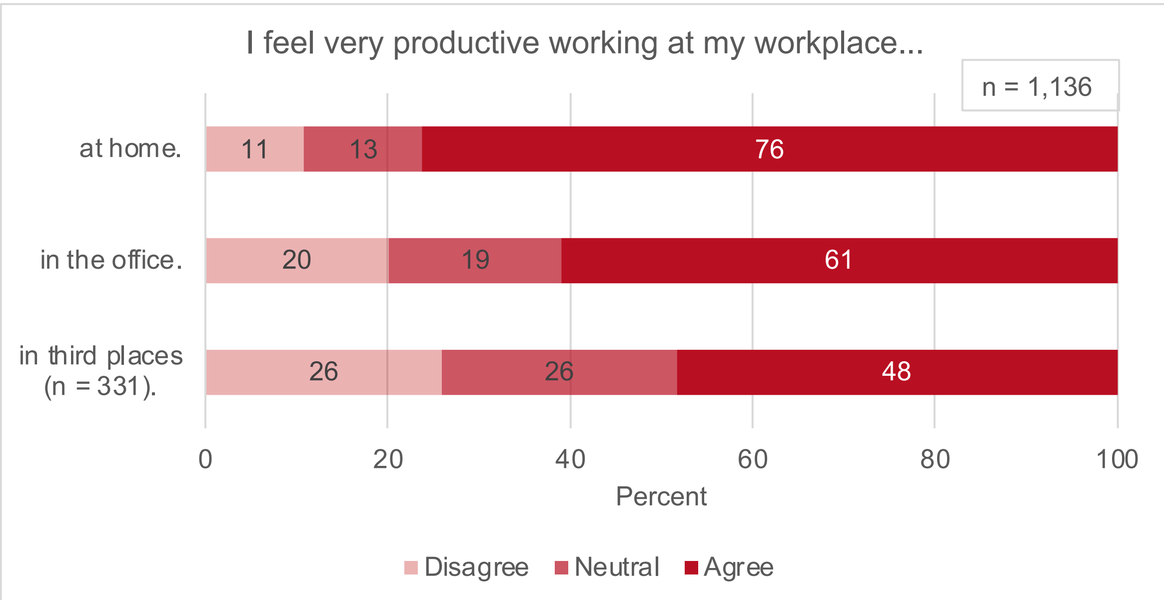


Figure 40: Productivity by place of work

Respondents are most productive when working from home. Seventy-six percent of study participants say they are very productive working at home. Merely one in ten of the participants disagree. Only around 60% of respondents are productive in the office and one in five even say they work unproductively in the corporate office. About half of the respondents with experience working in third places say they can work very productively there, whereas one in four is unproductive. These statements are also examined in more detail through subgroup comparisons.

Older people are more productive than younger people when working from home

First, the respondents' statements on their productivity at the various places of work are broken down by generation (see Figure 41).

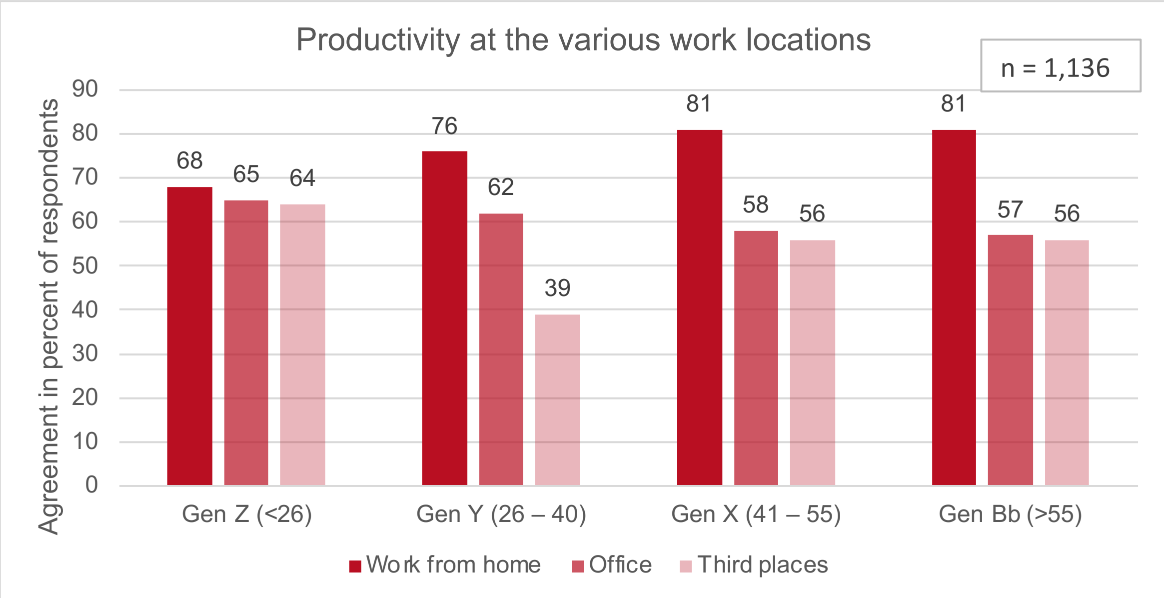


Figure 41: Productivity by place of work and age

Concerning work from home productivity, an increasing tendency can be observed with the age of the respondents. Among members of Generation Z, 68% say they work productively at home. Among members of Generation X and the Baby Boomers, four out of five work productively at home. Regarding productivity in the office, a slightly opposite trend can be seen. While 65% of Generation Z respondents can work productively in the office, only 57% of the Baby Boomers can do so. Concerning productivity at third locations, no clear trend can be discerned in the intergenerational comparison.

Increasing productivity with work from home among higher positions in the company

Figure 42 compares hierarchy levels to examine the correlations between company position and productivity at the various work locations.

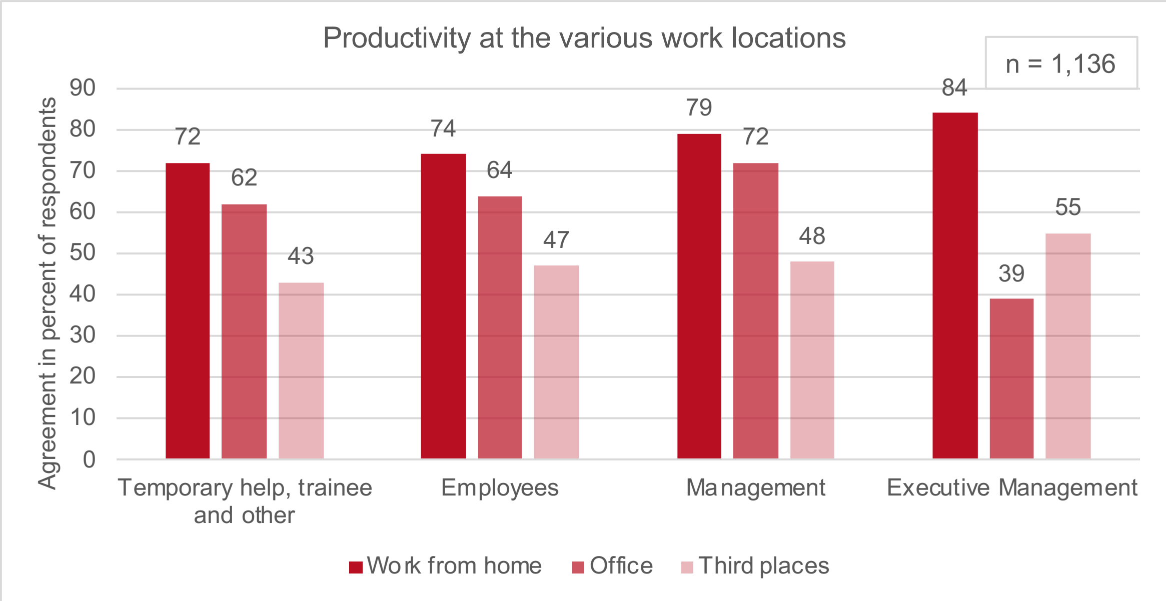


Figure 42: Productivity by work location and hierarchical level

Work from home productivity increases with a hierarchical level from a high to a very high value. Seventy-two percent of the temporary help and trainees say they work productively at home. At management level, this figure is 84%. With regard to productivity at third locations, there is also a slight trend towards higher productivity with increasing hierarchy level. The proportion of those who can work productively at the office increases across the hierarchy levels from 62% among temporary help and trainees to 72% among members of management. Despite that, it drops to 39% among the executive management group.

Work from home productivity is higher in peripheral residential locations

Because it has already been established that satisfaction with work from home is higher in peripheral residential areas, a subgroup analysis is also carried out regarding productivity. Figure 43 shows productivity by residential location.

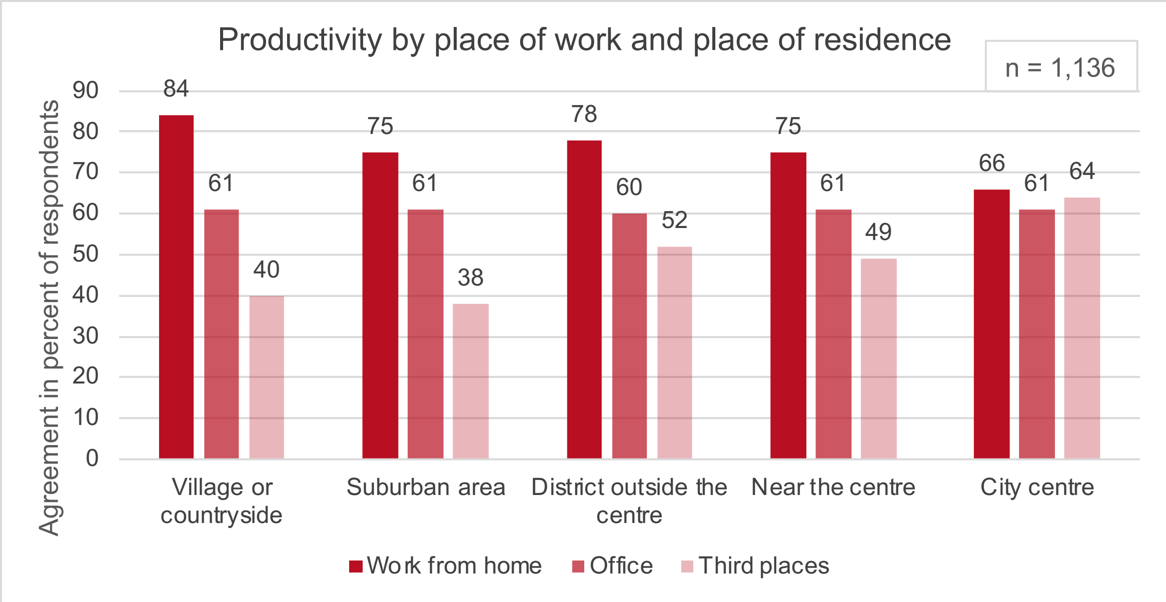
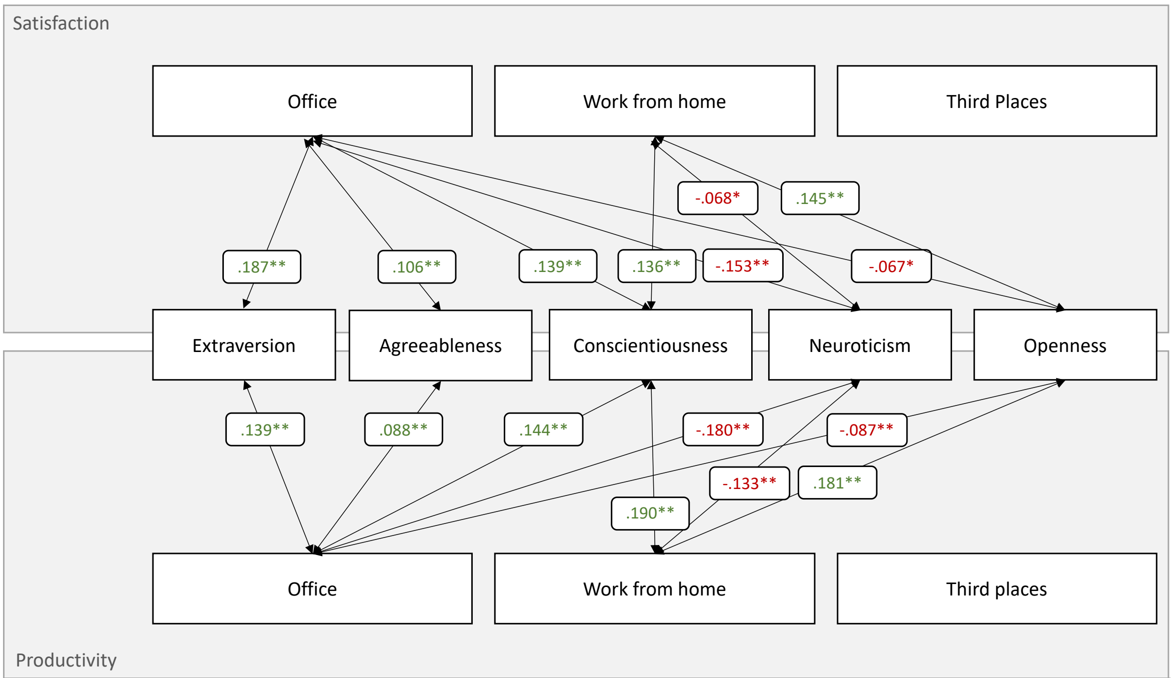


Figure 43: Productivity by place of work and place of residence

Eighty-four percent of respondents who live in a village or the countryside say they are productive when working from home. Work from home productivity decreases as proximity to the city increases. Among study participants living in city centres, only two out of three respondents report working productively at home. The location of the residence does not appear to affect productivity at the office. At third locations a slight tendency is visible: the closer employees live to the centre, the more productive they are at third locations.

Personality significantly influences work success

Having established that satisfaction and productivity largely depend on the respondents' individual determinants, Figure 44 examines the influence of personality on their success at work. To this end, the correlations between the personality characteristics of the Big 5 Inventory (Rammstedt et al., 2014) with satisfaction and productivity at the various work locations are examined.



The personality traits were measured with the scale of the Big 5 Inventory according to Rammstedt et al. (2014). Only the statistically significant correlations are shown. 2-sided significance level: ** 0.01; * 0.05

Figure 44: Work success and personality traits

The three personality traits, extraversion, agreeableness and conscientiousness, are statistically significantly positively correlated with satisfaction and productivity in the office. Concerning conscientiousness, there is also a significant positive correlation between satisfaction and productivity at work from home. Neuroticism is significantly negatively correlated with satisfaction and productivity in the office and at work from home. Regarding the personality trait openness, there is a significant negative correlation between satisfaction and productivity in the office, but a positive correlation with both success factors of work from home.

Agile work increases satisfaction and productivity with work from home and office

Figure 45 shows the relationship between respondents' work-related agility (measured following Sherehiy and Karwowski, 2014) and their work from home and office success.

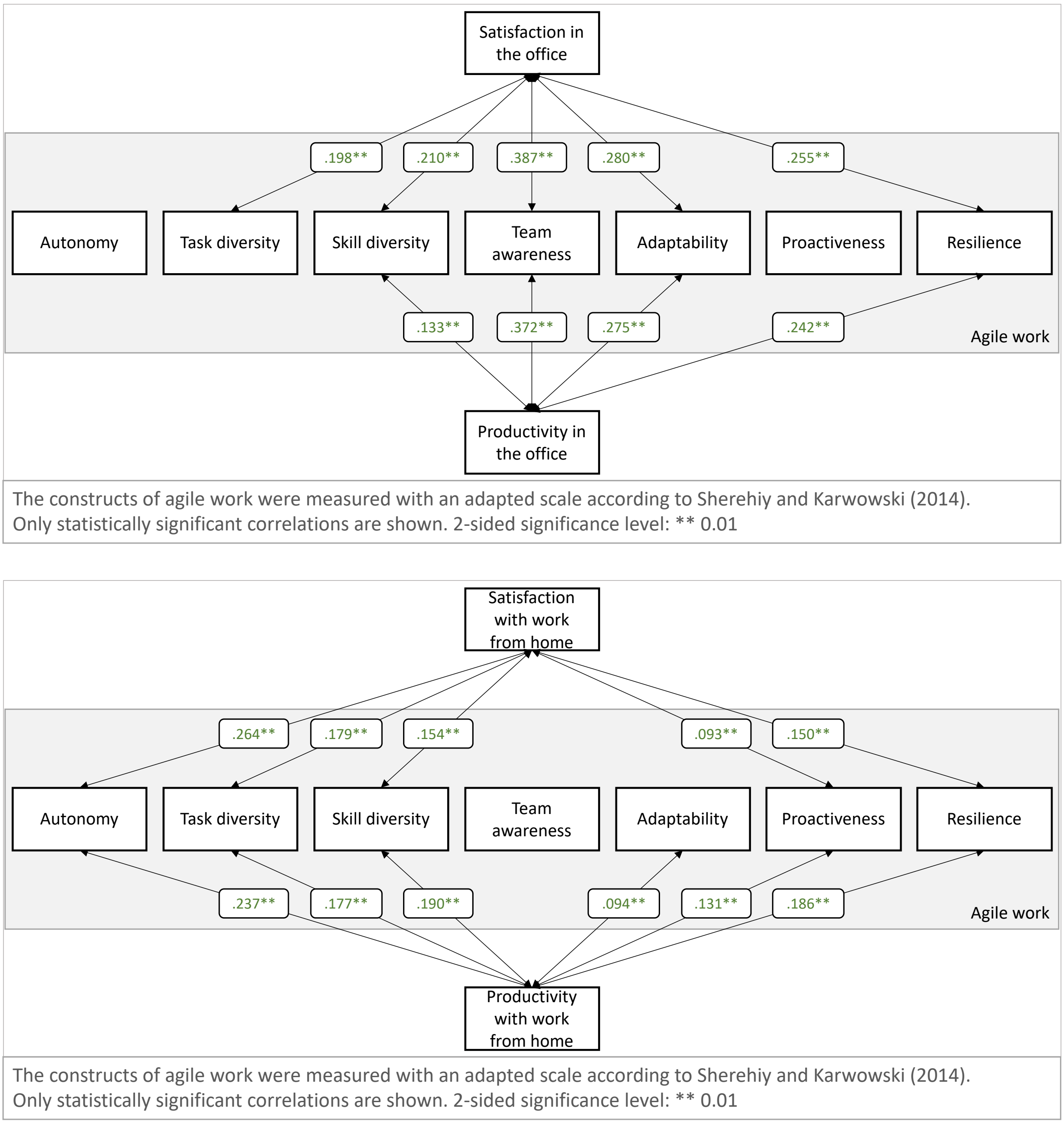


Figure 45: Work success and agile work

The high work-related agility of the respondents positively influences work success both at work from home and in the office. In the office, task diversity, skill diversity, team awareness, adaptability and resilience positively affect respondents' satisfaction. Productivity is influenced by respondents' skill diversity, team awareness, adaptability and resilience. In the home workplace, respondents' autonomy, demand and skill diversity, proactiveness and resilience affect their job satisfaction. Productivity is influenced by the same characteristics as well as respondents' adaptability.

Satisfaction and productivity are highly correlated

After similar correlations between satisfaction and productivity of the respondents could be observed repeatedly in the previous part of the study, the relationship between both work success indicators is examined in more detail below using correlations.

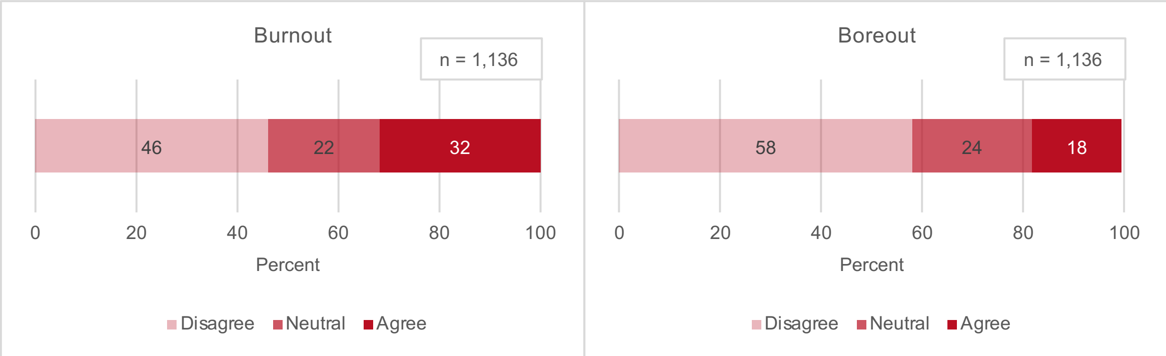
Satisfaction / Productivity	Office	Work from home	Third places
Office	.594**		
Work from home		.653**	
Third places			.660**
** Correlation is significant at the 0.01 level (2-sided)			

Figure 46: Correlation of productivity and satisfaction by place of work

Figure 46 shows the correlations between satisfaction and productivity at the various work locations. There is a significant positive correlation between the two characteristics of job satisfaction at all three work locations.

Burnout and boreout risk is greater in the office than at work from home

In addition to the inquiry about productivity and satisfaction, respondents were asked about the emotional burden of their work, perceived stress and boredom in order to obtain a comprehensive picture of their work success. Perceptions of stress and boredom were measured on scales based on Maslach et al. (1986) and Reijseger et al. (2013).

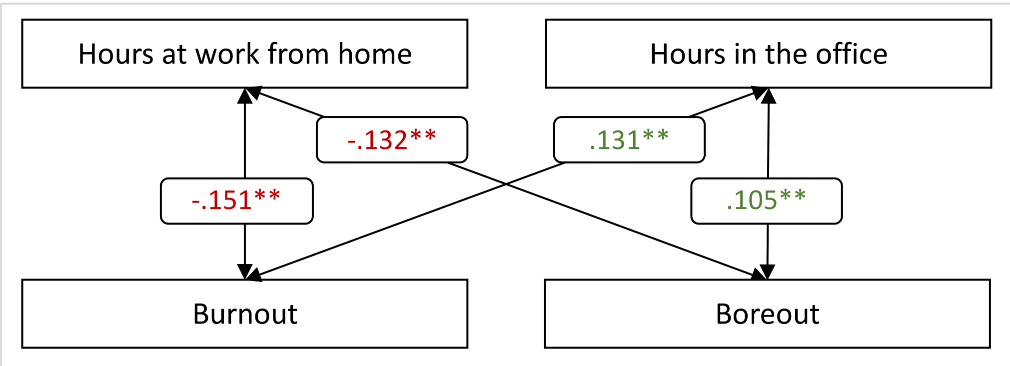


To evaluate stress at work, respondents have been asked to rate the following statements:
1. I feel emotionally drained by my work.
2. I feel burnt out by my work.
3. I feel exhausted at the end of the working day.
The Cronbach's alpha is 0.880.

To evaluate boredom at work, respondents have been asked to rate the following statements:
1. I feel bored by my work.
2. I am frustrated by my work.
3. I am not able to concentrate.
4. I am not fascinated by my tasks.
The Cronbach's alpha is 0.807.

Figure 47: Burnout and boreout at work

Figure 47 shows that one in three respondents state that they suffer from stress at work. Around one in five of the respondents feel bored by their work. Figure 48 illustrates that these negative effects could be related to the choice of work location. For example, significant negative correlations exist between hours spent working at home and burnout and boreout. The more hours respondents spend working from home the lower the sensation of burnout and boreout. The opposite effect is the case in the office.



** The correlation is significant at the 0.01 level (2-sided).

Figure 48: Correlation between work from home, office hours, burnout and boreout

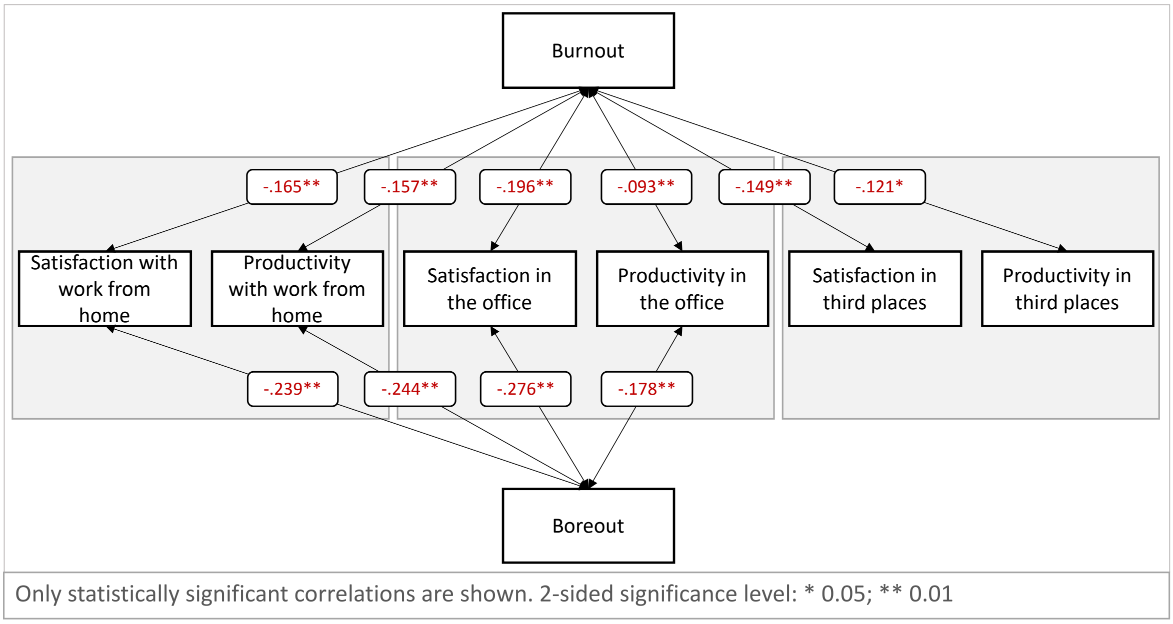


Figure 49: Correlation of work success of different work locations with burnout and boreout

In addition, Figure 49 shows that higher mental workloads due to stress and boredom are associated with reduced work success at various work locations.

Figure 50, on the other hand, clearly shows that high levels of the agile work characteristics autonomy, adaptability and resilience on the one hand, and autonomy, diversity of requirements, diversity of skills, team awareness, adaptability, proactivity and resilience on the other hand, are significantly negatively correlated with burnout and boreout.

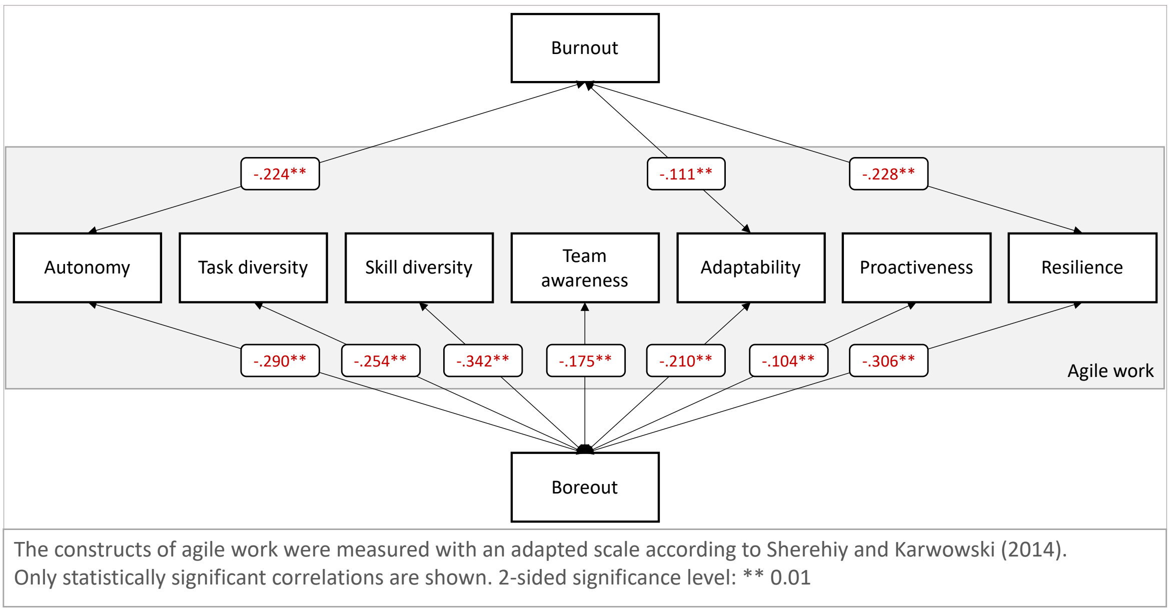


Figure 50: Relationship between burnout, boreout and agile work

4.3 Change management

Work from home, and thus multi-local work, is no longer inconceivable. The new spatial organisation of work is a challenge for companies as well as for individual employees. The question of "how" in the change process massively interferes with the fundamentals of life and work. Not everyone enjoys work or performs equally as well in every location. For overall success, a careful approach to new arrangements is required. The conscious design of change processes in the context of distributed work locations is the foundation for a successful transition to the New Normal. Establishing rules for mobile working and putting them into practice is undoubtedly one of the most significant challenges in the coming years. The rules are already being discussed in the context of the policy workshop on *mobile working* at the Ministry of Labour. Therefore, this section deals explicitly with these change management processes.

A low percentage of respondents have fixed working hours and an even lower percentage record working hours

Regardless of the place of work, the respondents were first asked whether there are fixed regulations in their company concerning the allocation of working hours and breaks (cf. Figure 51).

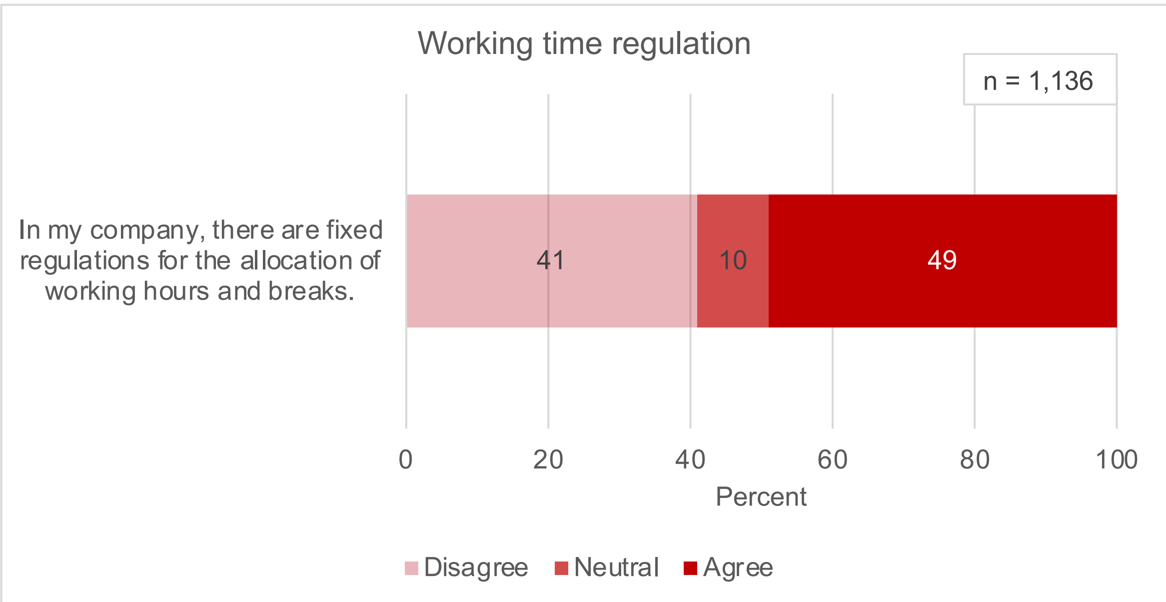


Figure 51: Existence of working time regulations

The results show a very heterogeneous picture. While 49% of respondents agree that they have fixed rules for allocating working hours and breaks, 41% disagree with this statement. This strong dispersion in the data allows the assumption that certain work-related characteristics play a role in the existence of working time regulations. The subgroup analyses in Figure 52 offer a way to understand the strong dispersion in the data better.

Figure 52: Existence of working time regulation by company size and sector

The existence of regulations on allocating working time and breaks depends on the size of the company and the sector. The existence of working time regulations increases with increasing company size. For example, only 19% of respondents in micro-enterprises say they have working time regulations, whereas 60% of respondents in large enterprises agree with this statement. Furthermore, two-thirds of respondents who work in industry have working time regulations. In contrast, only 37% of respondents working in the service sector have working time regulations.

In addition to regulating working time, the working time recording in companies is also examined. The results are shown in Figure 53.

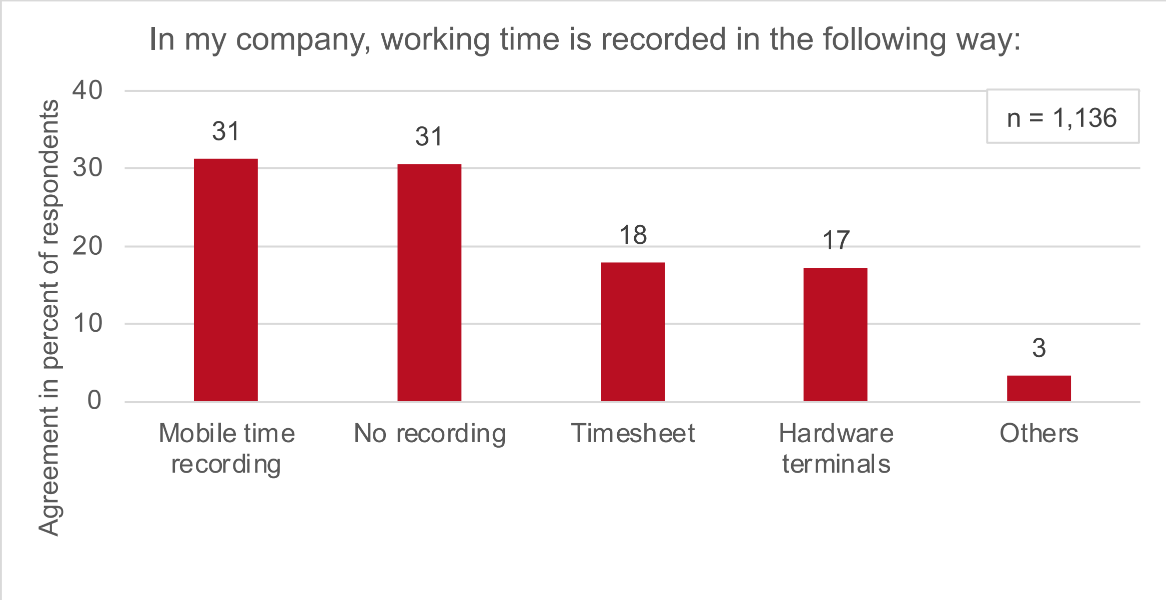


Figure 53: Method of recording working time

Around 31% of respondents do not currently record their working hours. With 14.8 million office workers (Hammermann and Voigtländer, 2020), this means that 4.6 million office workers do not currently record their working time. In contrast, 31% record their working time remotely (e.g. via a smartphone), 18% with the help of a timesheet and 17% through hardware terminals (e.g. stationary readers). Again, there are apparent differences when looking at subgroups. For example, 63% of respondents who work in microenterprises do not record their working hours. In contrast, 82% of respondents who work in large companies record their working time.

In the future, respondents expect to be more involved in the change management process when making decisions about mobile working

The current status quo shows that only a small proportion currently influences the development of targets for the organisation of mobile working in companies (cf. Figure 54).

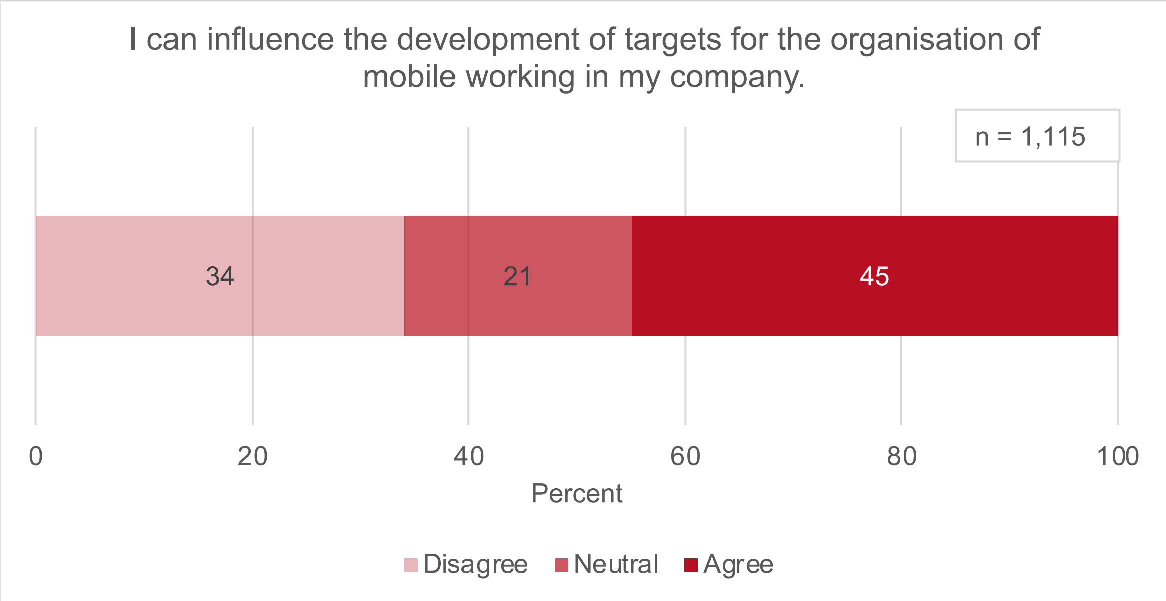


Figure 54: Influence of employees in change processes for mobile working

Around 45% of respondents state that they can influence the development of targets for the organisation of mobile work. At the same time, 34% state that they cannot influence the targets. Therefore, it can be assumed that there must be one or multiple characteristics that lead to data scattering here. The subgroup analyses in Figure 55 can explain the scatter to some extent.

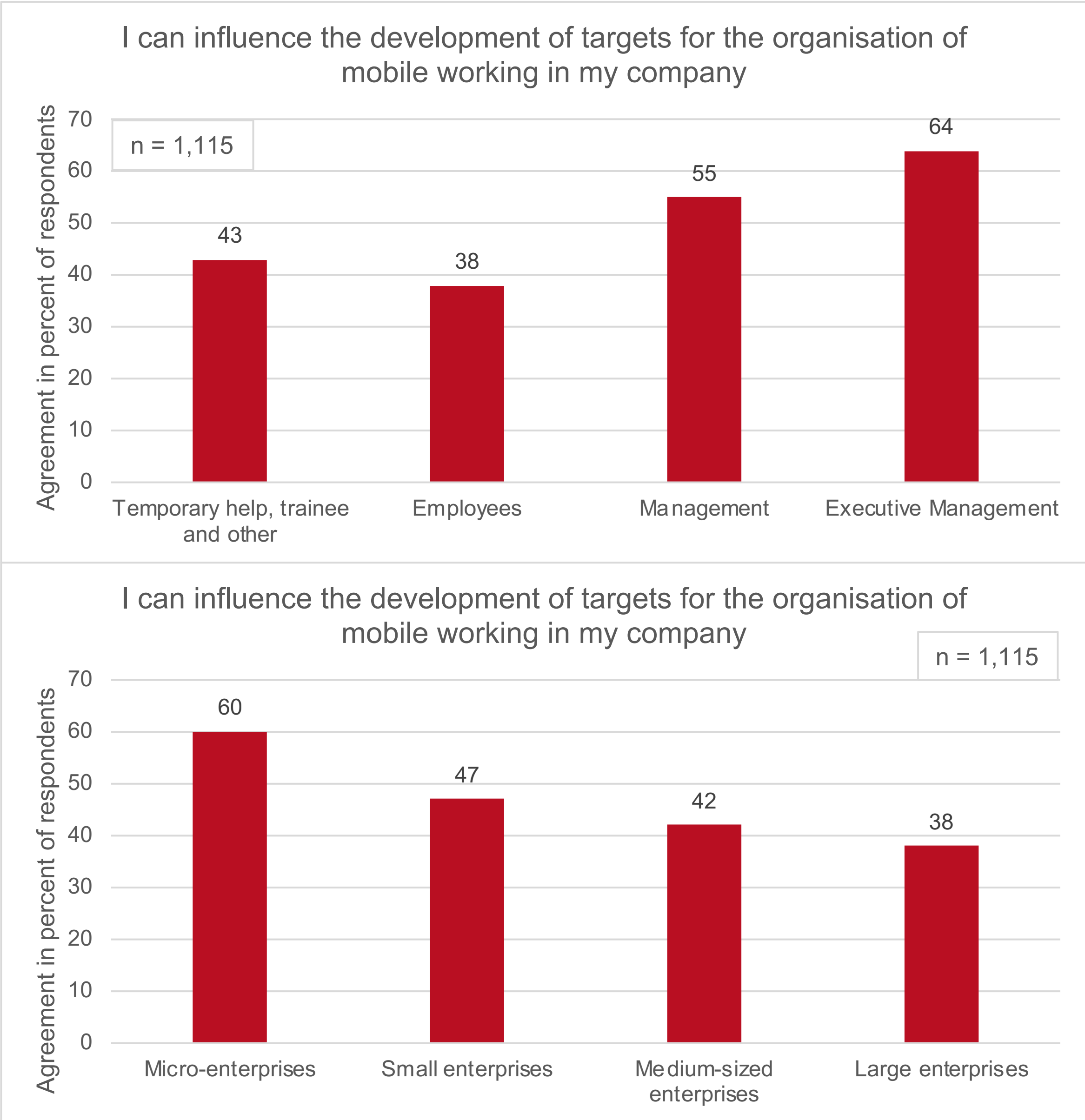


Figure 55: Influence of employees on change processes for mobile working by hierarchical level and company size

According to the survey, employees' influence on the targets for organising mobile work depends on the respondents' hierarchical level and the company's size. Around 64% of respondents who work in executive management and 55% of respondents who work in management can exert influence in the development of targets. At the same time, there is a negative correlation between exerting influence in the development of targets for the organisation of mobile work and company size. This means that employees in small enterprises are more likely to have influence on target employees in large enterprises.

Even if the influence of employees in change processes for mobile working is currently relatively low, they expect to be more involved in the future (see Figure 56).

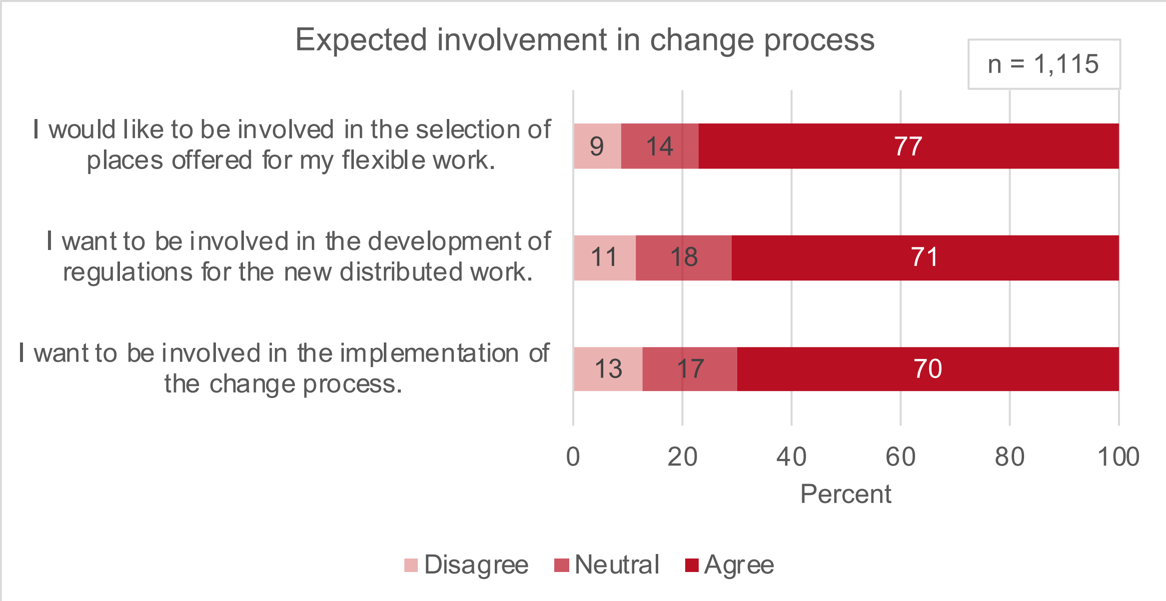


Figure 56: Expectations regarding involvement in change processes

Around 77% of respondents would like to be involved in selecting work locations offered for mobile work. Moreover, 71% of respondents state that they would like to be involved in developing regulations for distributed work and 70% would like to be involved in implementing the change process. Together, these results show that the design and implementation of change processes have long since ceased to be purely management tasks and must instead be carried out through the interaction of the management and the employees. This statement is also underlined by Figure 57.

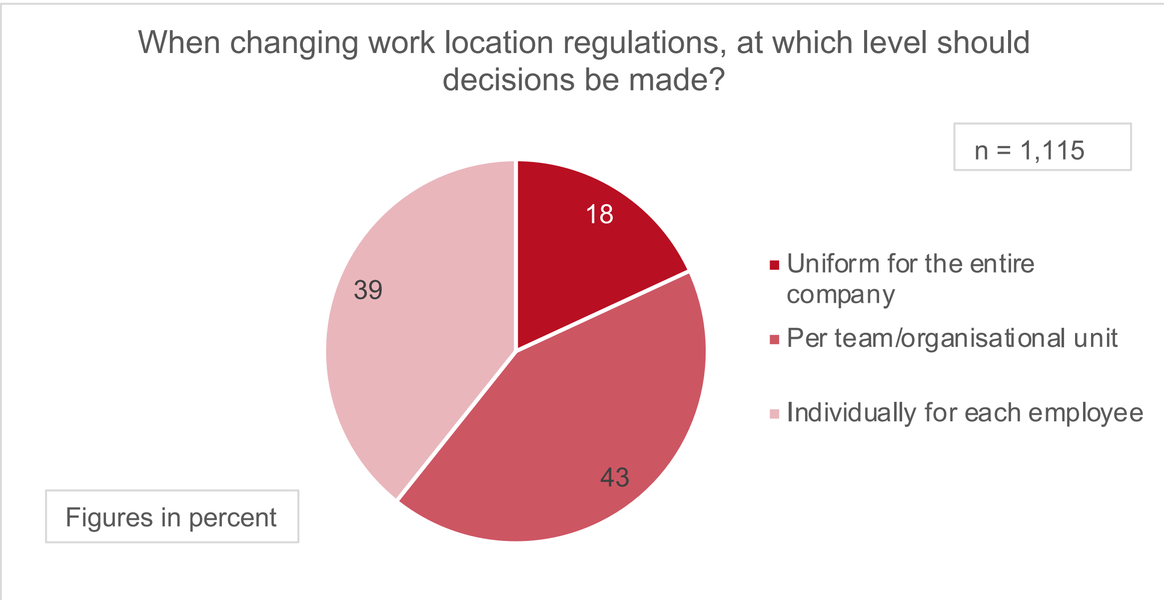


Figure 57: Levels of decision-making in change management

Forty-three percent of respondents indicate that decisions regarding changes to work location regulations should be made at the team level while 39% state that individual regulations for each employee are the best level of decision-making. Only 18% of respondents indicate that decision-making should be uniform for the entire company.

Mobile working is becoming increasingly important for employees and is becoming the new normal of the working world

Flexible work in terms of location has become established and will be indispensable in the future for many respondents (see Figure 58).

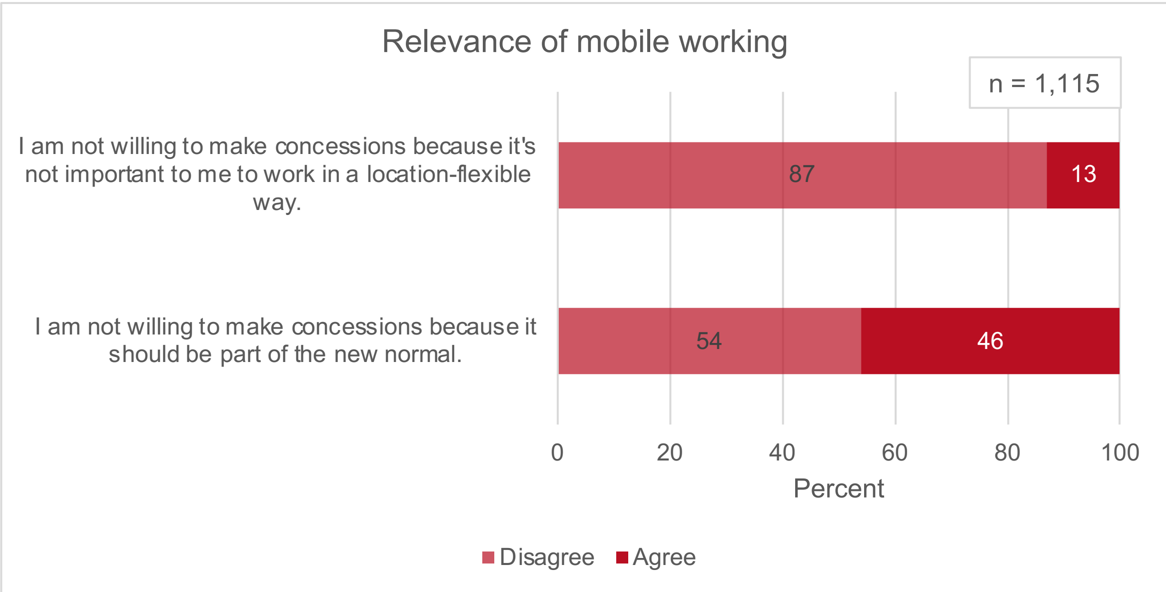


Figure 58: Relevance of mobile working

For 87% of respondents, it is essential to be able to work flexibly in the future. They would even be prepared to accept a certain amount of sacrifice in other aspects of work. At the same time, 46% state, slightly contradictorily, that they would rather classify multi-local working as the new standard and would, therefore, not be prepared to make concessions in other work areas. Accordingly, the respondents appreciate the possibility of mobile working and would even accommodate the employer in this respect. In particular, the respondents would be willing to make concessions regarding office quality, salary and vacation days, but not all of them (see Figure 59).

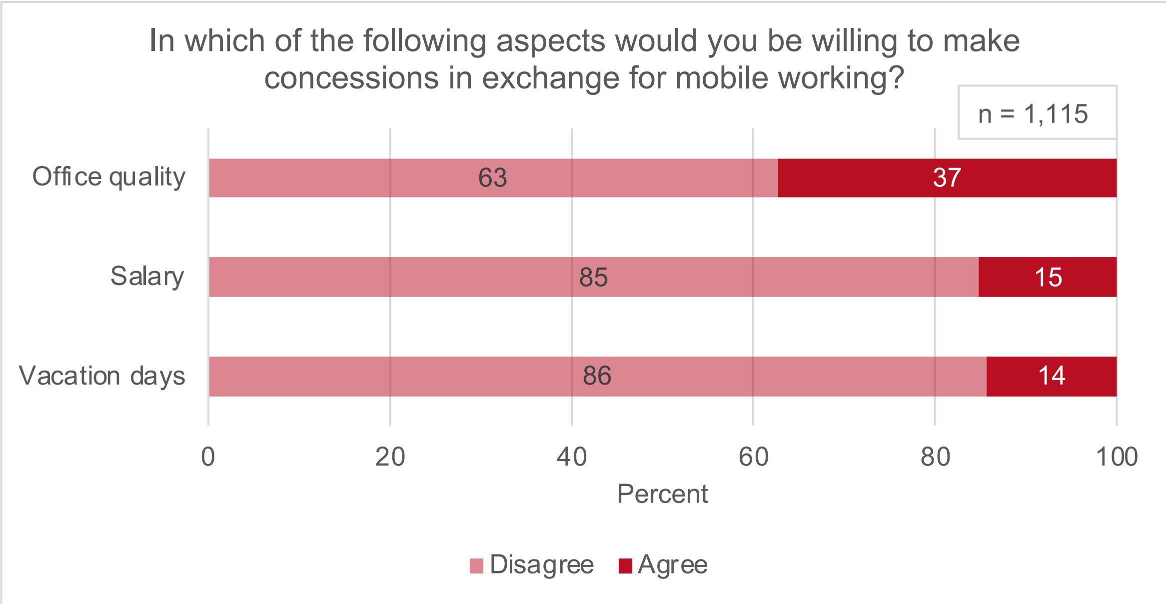


Figure 59: Countervalue to the possibility of working flexibly in terms of location and time

More than one in three respondents would be willing to accept a reduction in office quality in exchange for the right to work remotely. Fifty-eight percent of respondents would forego a fixed workstation and accept the desk sharing concept in exchange for the right to work remotely. Furthermore, 39% of respondents are willing to pay for a workstation at home (e.g. an external monitor) to be able to work remotely (see Figure 60). In addition to compromising on office quality, around one in seven of the participants are prepared to accept a salary reduction or vacation days to be able to work remotely. On average, the salary sacrifice limit to be allowed to work flexibly in the future is 2.5%. The results make it clear that mobile working is important to many office workers and that in some cases they would be prepared to accept cuts in office quality, salary or vacation days.

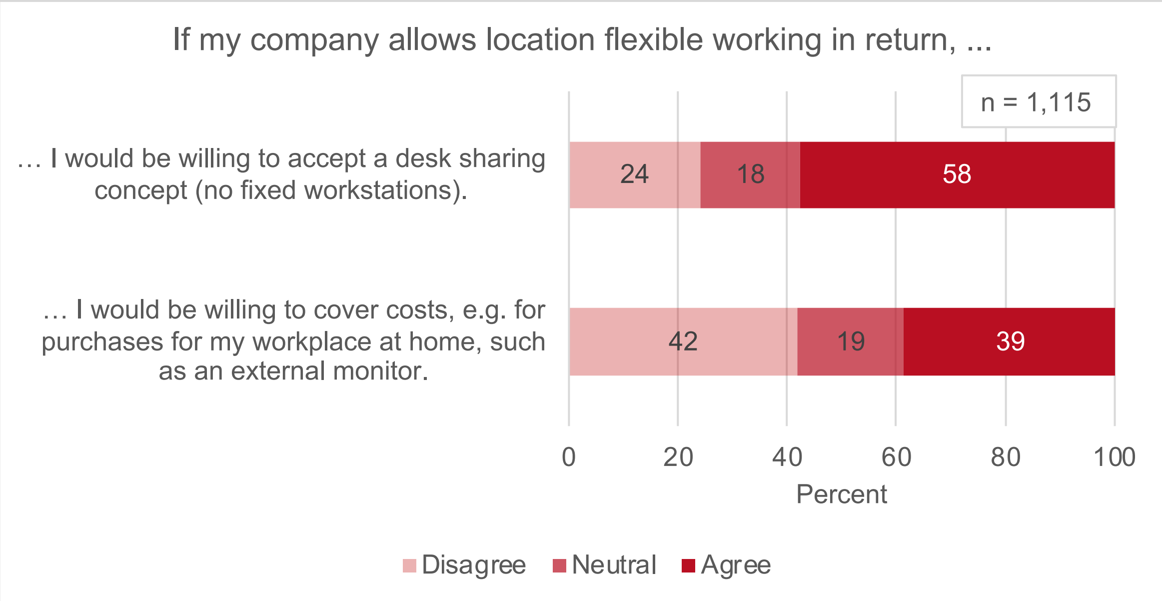
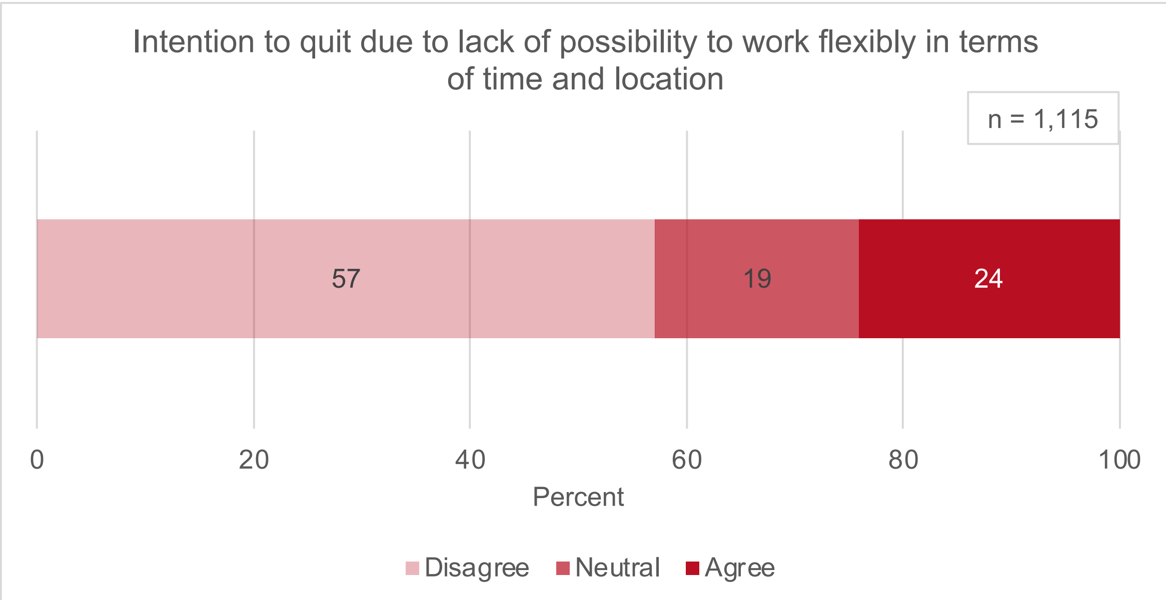


Figure 60: Employees' accommodation for mobile work

Mobile working thus appears to be a decisive criterion for many office workers when choosing a job or, to put it another way, the lack of the possibility to work on a mobile basis can be a reason for an intention to quit (see Figure 61).



To evaluate the expectations of change management, respondents were asked to rate the following statements:
1. I will actively look for a new job in the next 6 months if I am not allowed to choose my workplace flexibly.
2. I am thinking about leaving my job in the next 6 months if I am not allowed to choose my workplace flexibly.
3. I am likely to work for another organisation in the next 6 months if I am not allowed to choose my workplace flexibly.
Cronbach's alpha is 0.952.

Figure 61: Increased intention to quit due to lack of opportunity for mobile working

Around one in four respondents say they would quit if the company did not offer the option of mobile working. The intention to quit depends on the generation to which the employee belongs. For example, 26% of Generation Z (< 26 years), 23% of Generation Y (26–40 years), 17% of Generation X (41–55 years) and 12% of Generation Bb (> 55 years) say they would quit if mobile working was not possible in the company. Mobile working thus seems to play a unique role in the war for talent.

High relevance of support services (training and technical support) of mobile working for respondents

The survey results show that the desire for training on mobile working topics exceeds the current supply (cf. Figure 62).

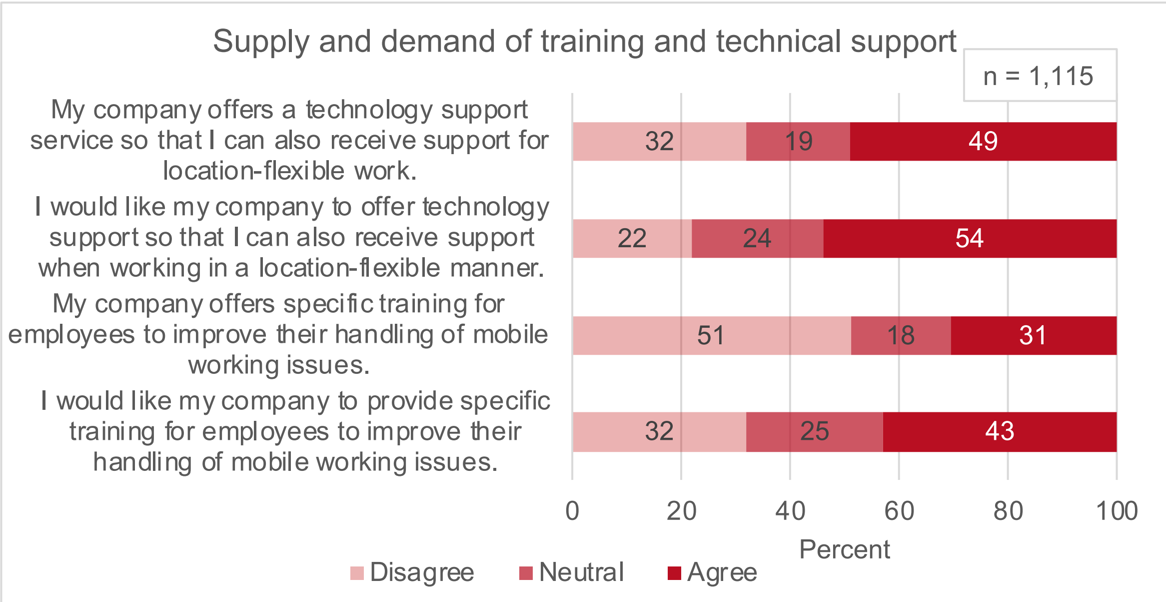


Figure 62: Need for training and technical support in mobile working

Thirty-one percent of respondents state that their company offers specific training to improve how they deal with mobile working issues and 43% would like to see this in the future. Furthermore, 49% of respondents state that their company offers technology support for mobile work. In the future, 54% of respondents would like technology support.

4.4 Work at third work places

In the context of multi-local work, the topic of third places is particularly worthy of investigation as this will presumably continue to grow in popularity in the future. As already introduced in Chapter 2.2, this study uses the term “third (work) place” as an umbrella term for lounges/trains/airplanes, catering establishments (e.g. cafés), in-house corporate coworking spaces (e.g. satellite offices), public coworking spaces and workation.

Around one in three has experience working in third places

First, the study participants were asked if they already had experience working in third places. Of the 1,136 respondents, approximately 29% indicated they had experience working in third places. In absolute terms, 331 respondents have experience; hence, the following analyses focus on this sample. With the help of subgroup analyses, respondents with experience in third places can be better classified (Figure 63).

Figure 63: Experience at third places of work by generation

It is particularly striking that 53% of respondents with experience in third places can be assigned to Generation Y (26–40 years). In addition, 18% of respondents with experience in third places can be assigned to Generation Z (< 26 years) and another 22% to Generation X (41–55 years). Only 7% of respondents with experience in third places belong to the Baby Boomer generation. It also shows that white-collar workers and civil servants are underrepresented in contrast to the overall sample, and self-employed people as well as freelancers are more likely to have experience in third places of work.

Willingness to use third work places is high

Many respondents with work experience in third places are willing to use them more often (see Figure 64).

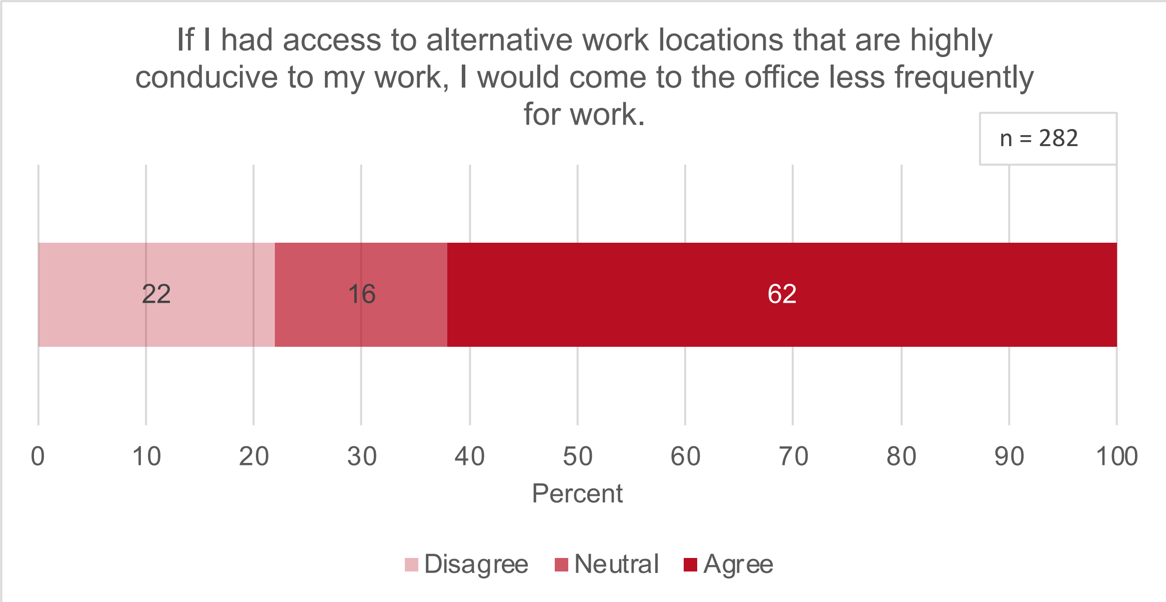


Figure 64: Willingness to use alternative work places

Around 62% of respondents with experience working in third places would use alternative work places if they were available and suitable for their work and, therefore, would come to the office less often. However, it is also clear that more than one in five of the respondents are not convinced about alternative work places.

Financial burdens of alternative work places are discouragement to employees

Respondents were asked to assess whether the financial burden of using a work place was a reason to work at that place less often. Figure 65 illustrates the result.

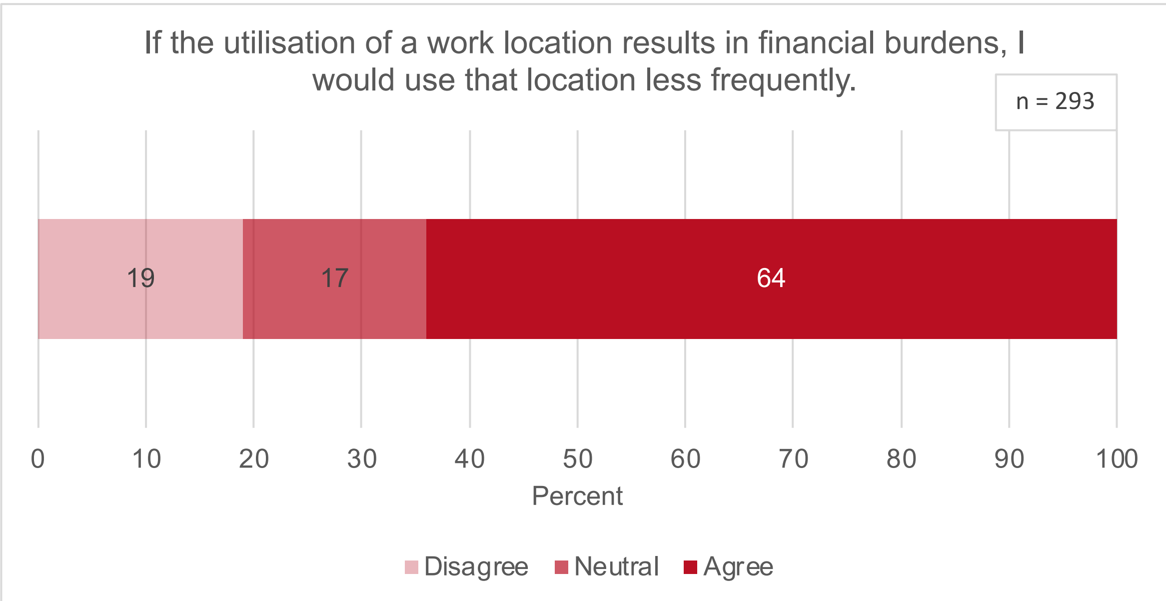


Figure 65: Financial burdens from work places are undesirable

Around 64% of respondents with experience in third work places are less likely to use a place for work if it results in financial burdens. This means that 36% of respondents would accept a financial burden in exchange for being able to work at a particular work place.

Because it is quite conceivable that employees use several different types of third places over a work year, the desired distribution of working time at the various alternative work places is broken down below (see Figure 66).

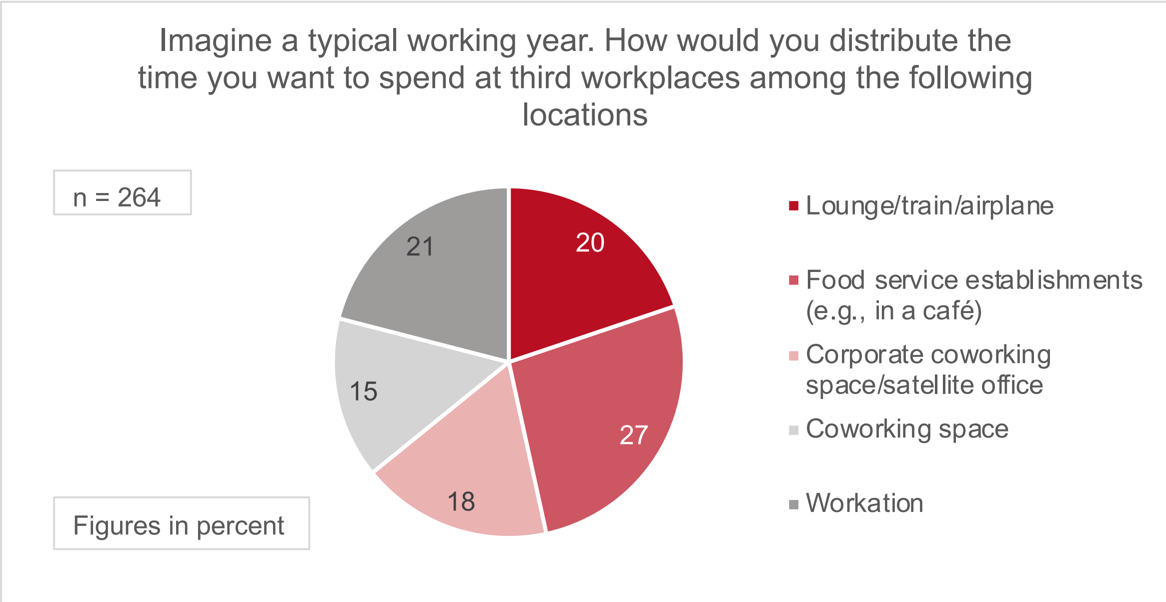


Figure 66: Distribution of working time in third places

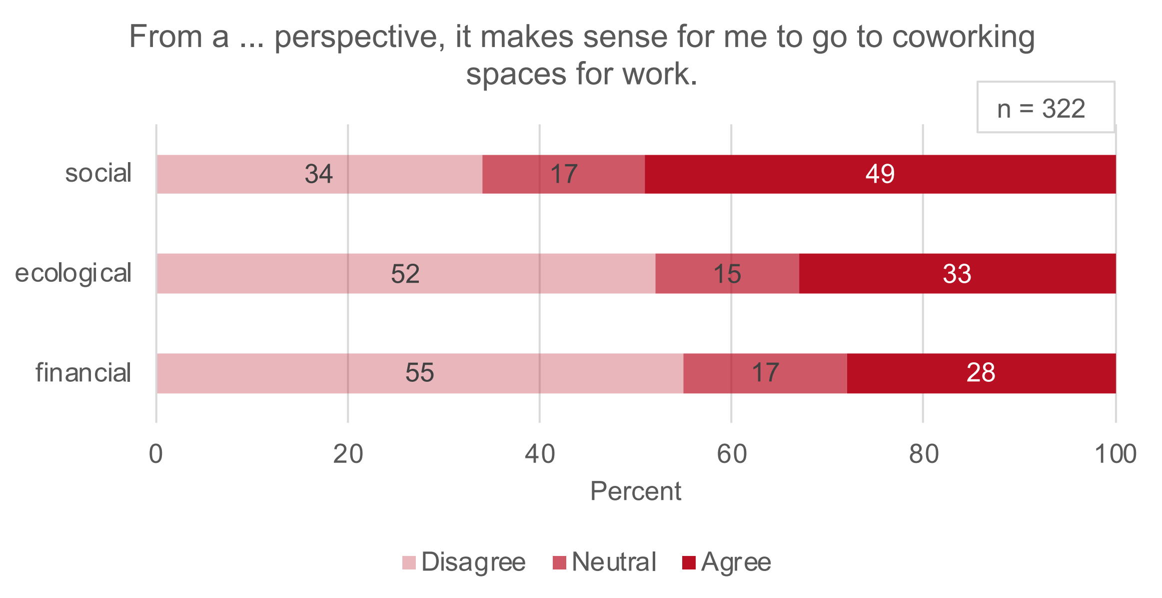
If respondents were free to allocate the time they spent working in third-party locations as they wished, then lounges, trains, and airplanes would account for 20% of their work time, food service establishments 27%, corporate coworking spaces 18%, public coworking spaces 15% and workation 21%.

4.4.1 Coworking spaces

The Department of Real Estate Management and Construction Management at the Technical University of Darmstadt has already conducted intensive research on work in third places recently. This report subsequently focuses on coworking spaces and workation to derive statements on the status quo and the development of these work places, which are increasingly gaining interest.

Especially from a social perspective, it makes sense for respondents to go to coworking spaces

Coworking spaces are flexible workspaces that offer individual or institutional users flexible and autonomous use of office and social spaces. Guided by the idea of community, direct interactions between users enable an environment for cultural and business exchange (Bouncken and Reuschl, 2018; Wagner et al., 2021). The original focus of traditional coworking spaces is on creating a community. For the respondents of this study, the social perspective is a key reason for going to coworking spaces to work (Figure 67).



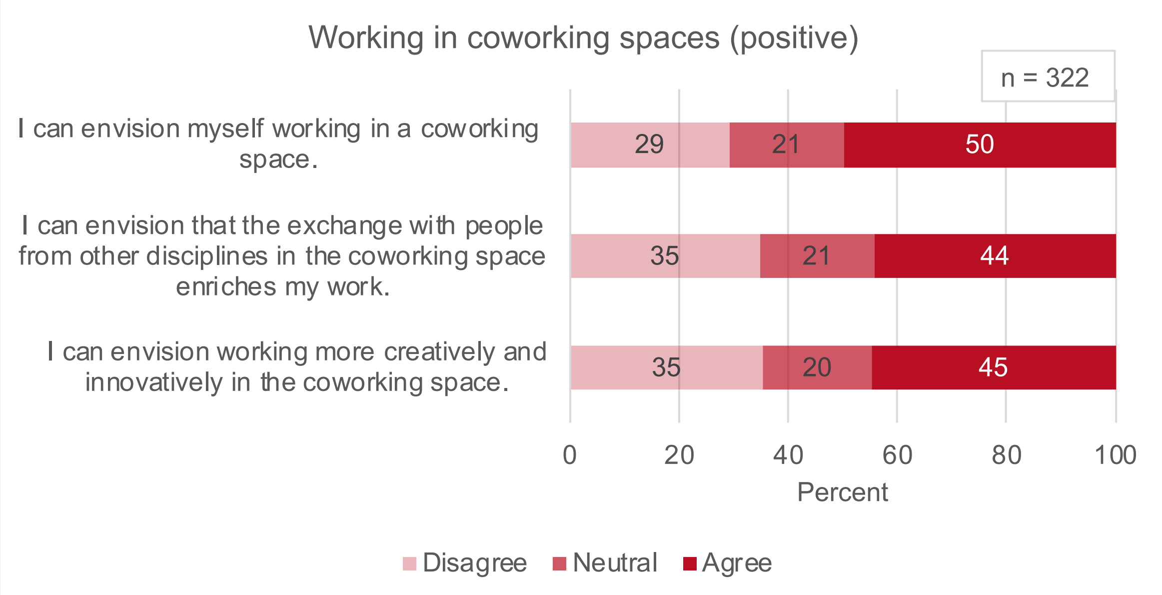
Excluded from the sample size (n) are respondents who selected "Cannot answer" for each statement.

Figure 67: Sustainability perspectives on coworking spaces

For around 49% of respondents, working in coworking spaces makes sense from a social viewpoint. However, 34% of respondents disagree with this statement. This means that social exchange is not a reason to go to coworking spaces for many respondents. Every third respondent thinks it makes sense to go into a coworking space from an ecological perspective while 28% think it makes sense from a financial perspective.

Respondents see the advantages and disadvantages of working in coworking spaces as roughly balanced

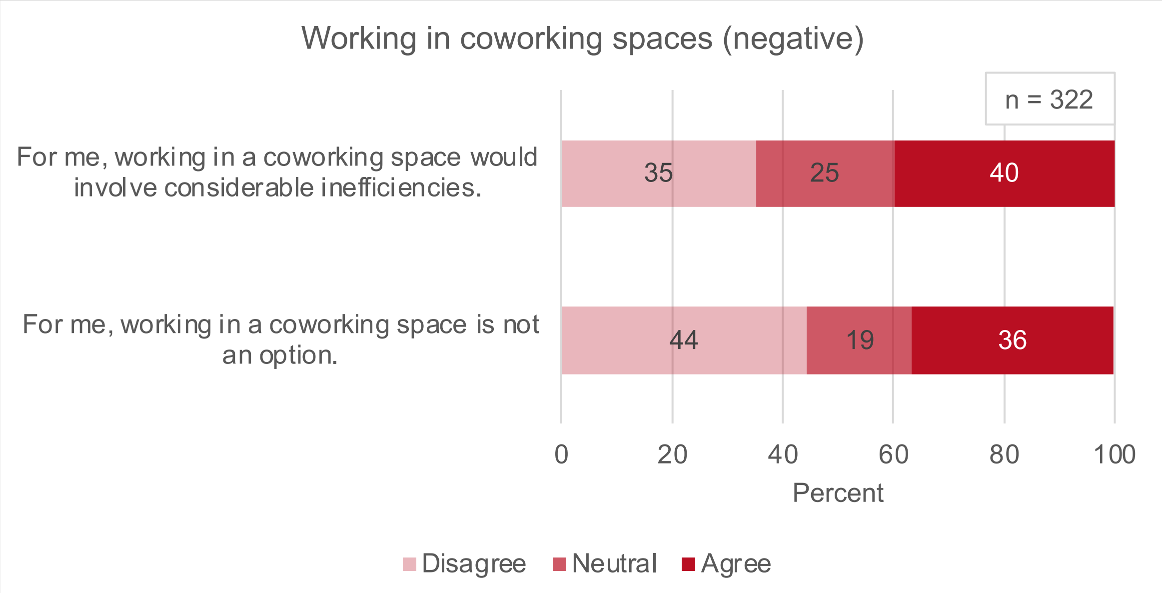
Part of the survey was to assess positive and negative statements regarding working in coworking spaces. The results regarding the advantages of coworking spaces are shown in Figure 68.



Other frequently mentioned reasons for working in coworking spaces:
- Working atmosphere despite different activities/culture
- Networking/people experience

Figure 68: Advantages of working in coworking spaces

Of the respondents with experience in third workplaces, one in two can imagine working in a coworking space. This, in turn, also means that 50% of respondents would disagree with this statement. Forty-four percent of respondents can imagine the exchange with people from different job fields in coworking spaces enriching their work (35% of respondents disagree) and 45% of respondents can imagine working more creatively and innovatively in a coworking space (35% of respondents disagree). According to the respondents, other advantages of working in coworking spaces include the better working atmosphere and networking. Figure 69 shows the disadvantages of working in coworking spaces.



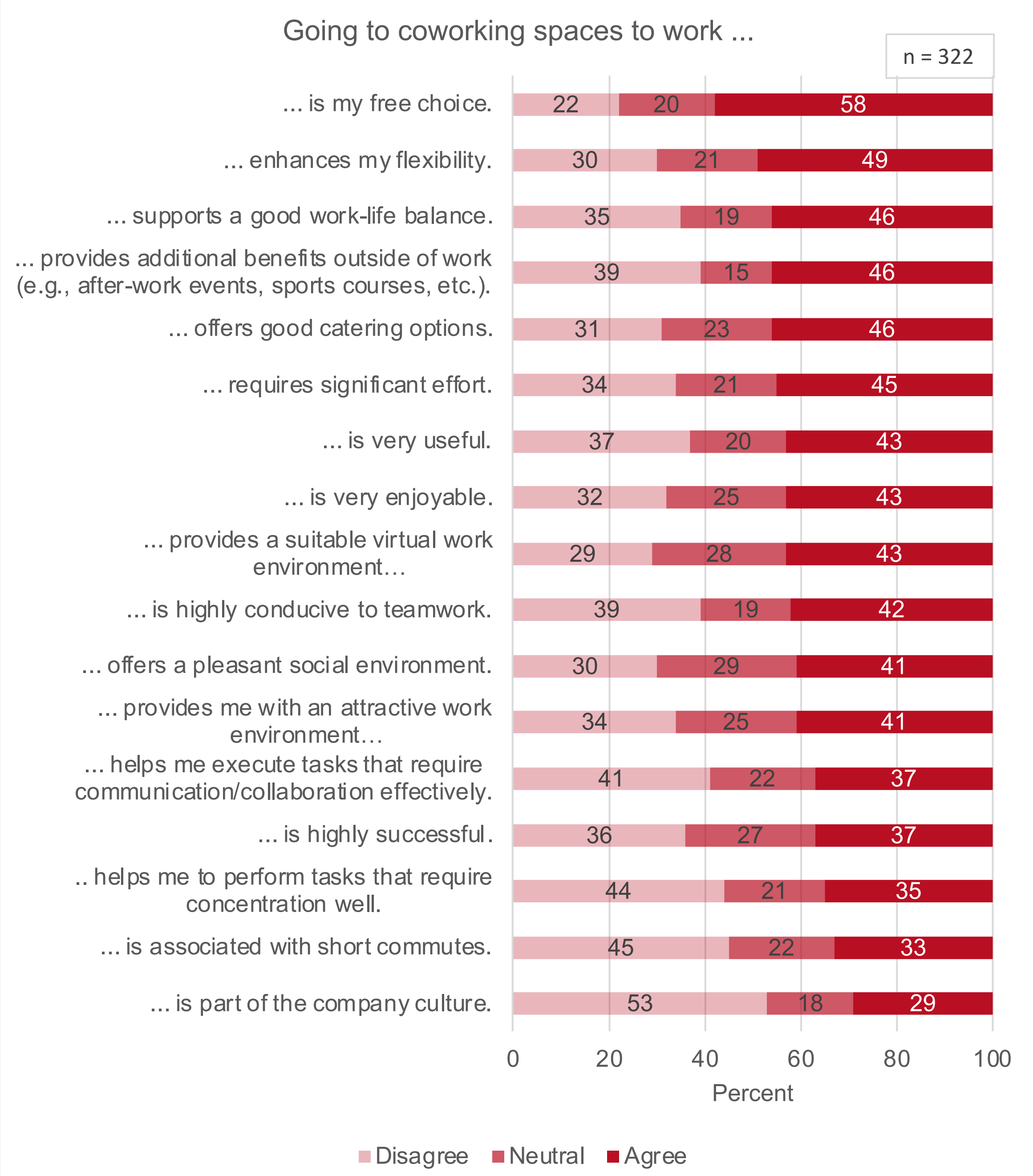
Other frequently mentioned reasons against working in coworking spaces:
- Data privacy/security/confidentiality
- Distraction/disturbance/noise

Figure 69: Disadvantages of working in coworking spaces

It is clear that 40% of respondents agree with the statement that working in coworking spaces is associated with significant inefficiencies. More than one in three respondents with experience in third work places even state that working in coworking spaces is not an option for them. Other frequently mentioned disadvantages associated with working in coworking spaces are the lack of data privacy and data security as well as distractions or loudness.

The reasons for working in coworking spaces are diverse

The perception of working inefficiently in coworking spaces may be due to performing the wrong activities at these workplaces. In the following, aspects of working in coworking spaces are examined in more detail (see Figure 70).



Excluded from the sample size (n) are respondents who selected "Cannot answer" for each statement.

Figure 70: Work in coworking spaces

Around 58% of respondents with experience in third workspaces state that it is their free choice to work in coworking spaces. Forty-nine percent of respondents state that working in coworking spaces promotes flexibility (30% disagree) and 46% agree on the fact that working in coworking spaces supports a good work–life balance (35% disagree). In each case, 46% of respondents indicate that additional benefits outside of work (e.g. after-work events) and good catering options are reasons for working in coworking spaces. The results regarding the success of working in coworking spaces are surprisingly dichotomous. Thirty-seven percent of respondents agree that working in coworking spaces is very successful and 36% would disagree with this statement. Furthermore, it seems that especially activities requiring a high degree of concentration cannot be carried out successfully in coworking spaces. Only about one-third of respondents agree with the statement that working in coworking spaces is beneficial to the performance of tasks that require concentration.

4.4.2 Workation

Workation is understood as a relatively new form of mobile work, which developed as a response to increasing digitalisation and flexibilization. Employees appreciate flexible work practices because of the possibility of combining their private and business life. Temporary work at a vacation location enables them to achieve a high level of work–life–leisure integration. In addition to the impact on the working lives of knowledge workers, companies in different industries are also experiencing new needs and opportunities because of workation (Voll et al., 2022).

Workation is already actively exercised by some employees and will be even more interesting in the future

The respondents with experience in third places were also explicitly asked about their experience with the new trend of mobile work, called "workation". This revealed an exciting picture because exactly half (50%) of the employees with experience in third places have already gained experience with workation. Figure 71 shows the experience with workation broken down by company size.

Figure 71: Experience with workation by company size

In comparing the groups of respondents with workation experience and those without workation experience, significantly more respondents with workation experience work in micro-enterprises (7% difference) and significantly fewer in large enterprises (10% difference). It is also clear that the experienced group includes a comparatively large number (19%) of Generation Z respondents (less than 26 years of age). In addition, respondents with workation experience report a higher net household income than their comparison group without workation experience.

Interest in workation overtakes the desire for sabbatical

Among respondents with experience in third places, a clear majority show openness to workation (see Figure 72).

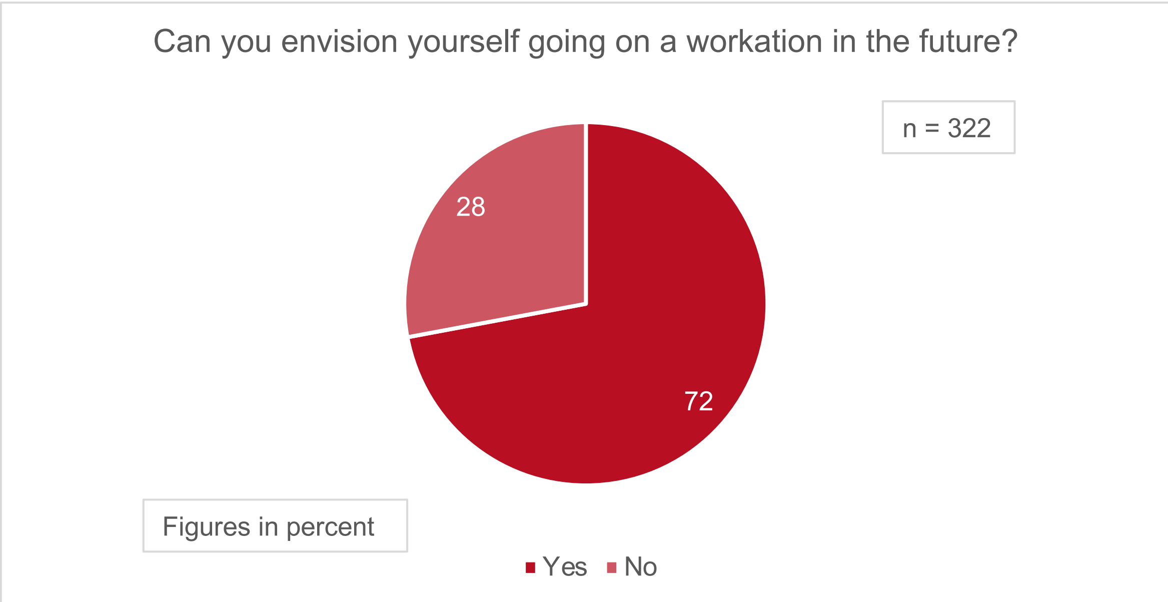


Figure 72: Openness to workation

More than two-thirds (72%) of respondents with third place experience could imagine doing workation (again) in the future. If the respondents were given a choice between a sabbatical and a longer leave in addition to the annual leave, or workation, then 46% would opt for workation, 39% for a longer leave and 15% are indifferent. Figure 73 is a direct comparison showing that workation is more important to respondents than the option of a sabbatical.

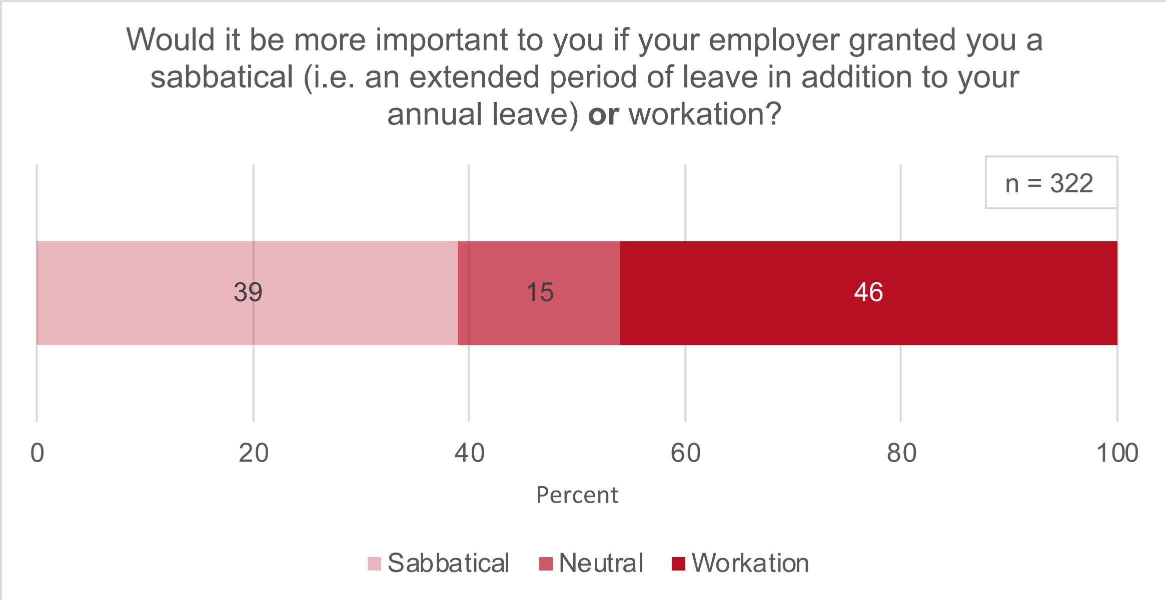


Figure 73: Importance of workation compared to a sabbatical

Combination of work and vacation is the main reason for workation

The reasons for workation are diverse. Respondents were offered 19 choices, which were derived from the literature plus the option to provide additional reasons. It was possible to select more than one reason. Figure 74 lists the reasons in descending order of relevance.

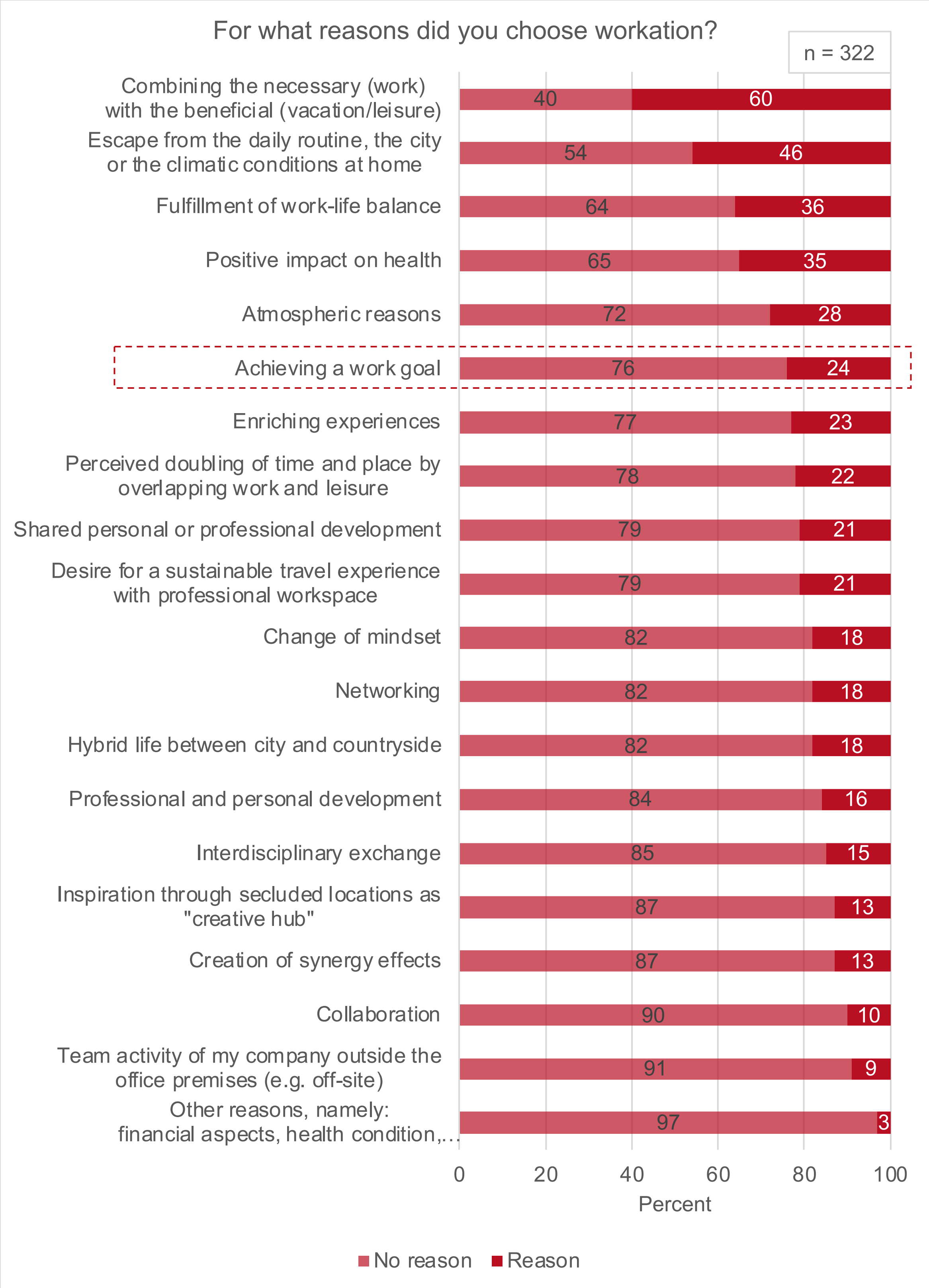


Figure 74: Reasons for workation

The most frequently named reason for workation is the combination of the necessary work with beneficial vacation and free time (60% agreement). All the other reasons apply to less than half of the respondents with workation experience. It is worth highlighting that almost one in four (24%) do workation to achieve a work goal. Nine percent say they have done workation as a team activity with their company, for example, in the form of offsite events outside the office premises.

On average, employees spend about two weeks per year on workation

Employees were asked to indicate how long they had spent on workation. Figure 75 shows that a clear majority of workation lasted up to one week per year.

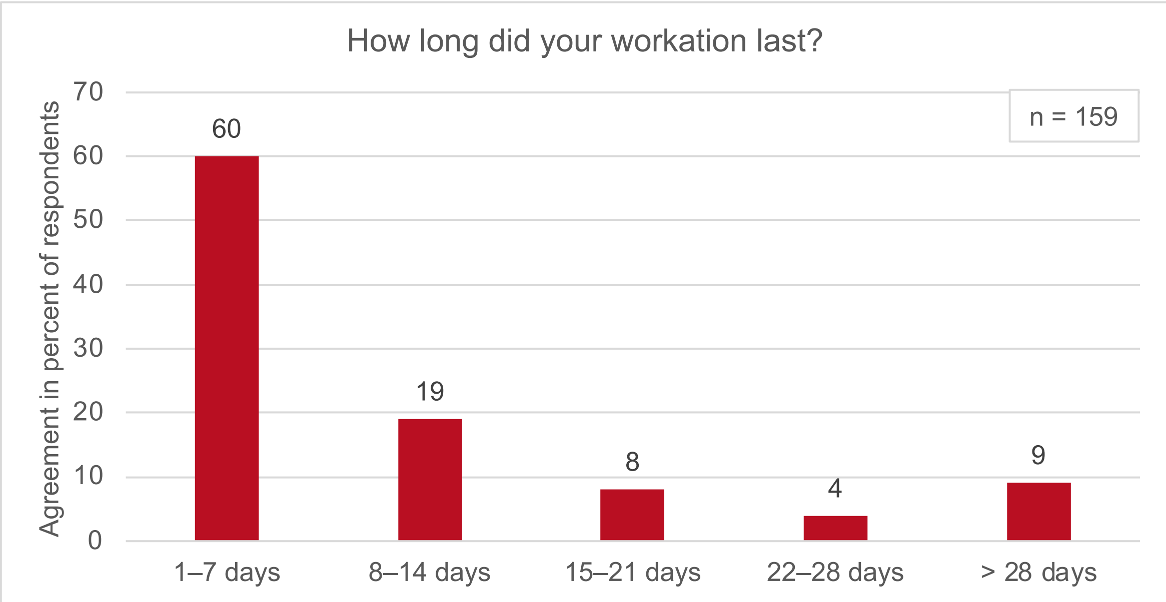


Figure 75: Workation duration

The median duration of workation for the group of workation-experienced people is 12 days. It is noteworthy that 9% indicate more than 28 days of workation. Within the 9% with the longest length of stay, workation lasted 46 days on average.

Other European countries are popular workation destinations

Those 149 respondents with workation experience provided information about their location. The results were divided into three groups: Germany, other European countries and other countries worldwide (see Figure 76).

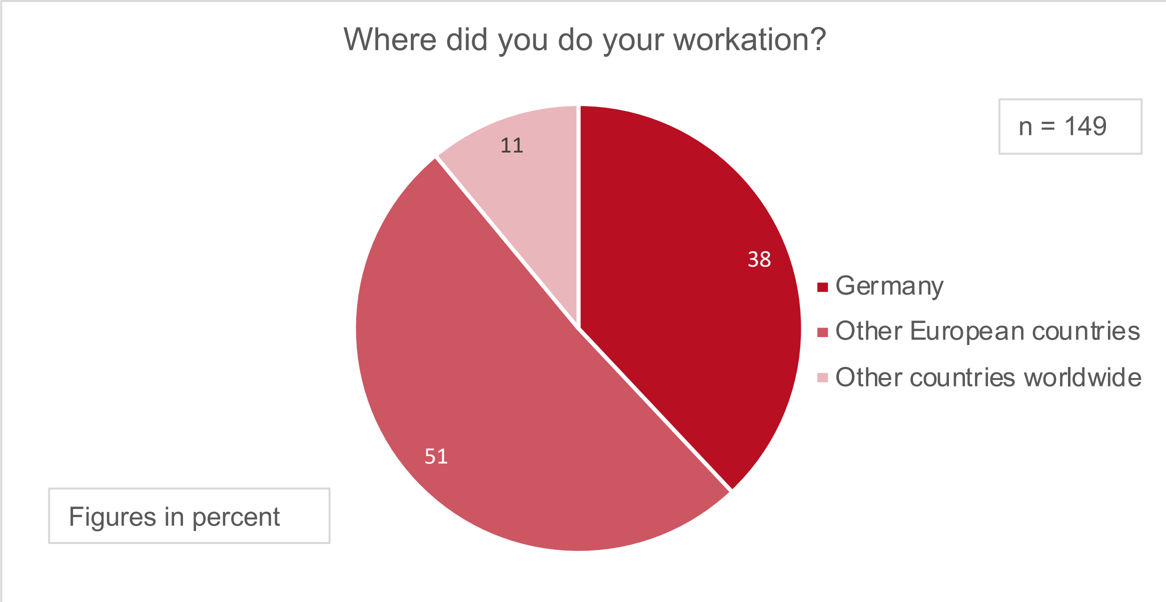


Figure 76: Workation locations

The most popular destinations for doing a workation among respondents are other European countries. Half of the respondents (51%) say they have already been on workation there while 38% stayed in Germany during their workation and 11% travelled to other countries in the world.

The car serves as the most common means of transportation for workation travel

Travelling to the workation site can be by public or individual means of transport. Figure 77 shows an overview of the means of transportation used by the respondents. The selection of multiple options was possible.

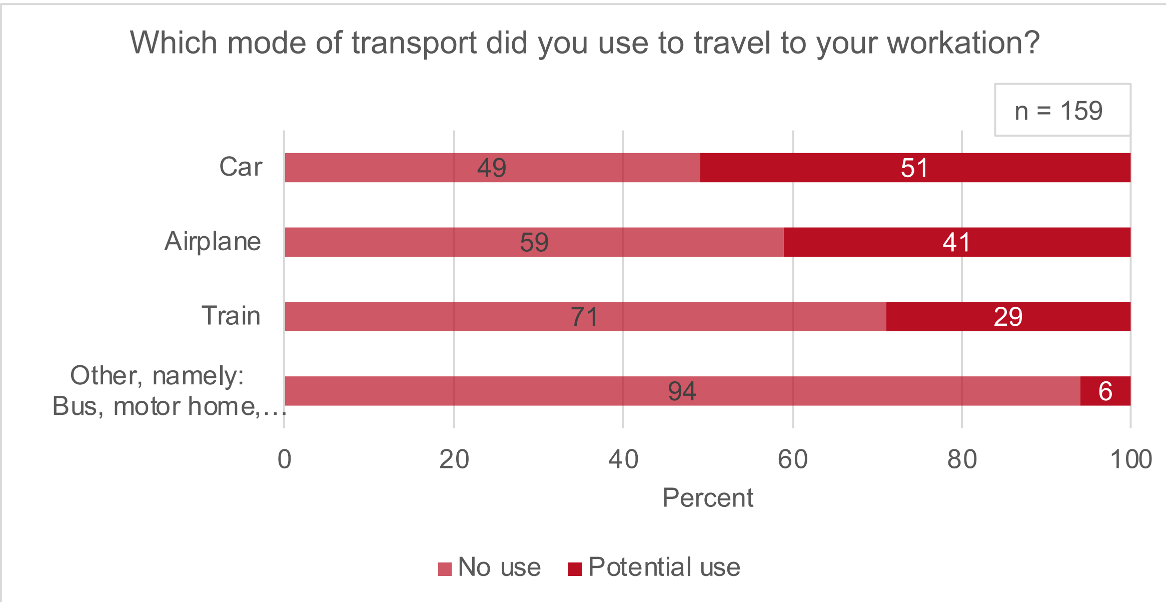


Figure 77: Workation journey means of transport

Half of the respondents (51%) travelled to their workation by car while 41% used an airplane and less than a third (29%) took the train. A further 6% used other means of transport to get there. Other respondents indicate that they had travelled by bus, motor home, boat or motorcycle.

Every second person is in favour of workation at a hotel

Workation can be done in a variety of accommodations. Figure 78 shows the results for respondents with workation experience. It was possible to select multiple types of accommodation.

Figure 78: Workation accommodation

Every second respondent (51%) has already stayed in a hotel or hotel complex during their workation. The second most common type of accommodation is a rented holiday home, where 44% of respondents spent their workation. One in four of the respondents (25%) owns a holiday home or second home where these respondents have stayed during their workation. Hostels, campsites, farms or boats were used much less frequently as accommodation for a workation.

5 Conclusion and practical implications

The study results in Chapter 4 show that since the COVID-19 pandemic, work from home has come to stay. Above all, this has implications for the physical organisation of work or, in other words, the question of where knowledge-based work will be performed in the future. Overall, the study results make it clear that the world of work is currently undergoing a development: A new concept of physical work organisation is being developed prompted by the emergency working solutions due to the pandemic. But who is actually initiating the development? The study results answering this question are exciting and, in some way, irritating at the same time. The most obvious party involved are the employees who do not intend to give up their freedom gained during the pandemic. During that time, they were able to work from wherever they wanted as long as it was in accordance with the legal requirements of the pandemic. What has remained after the pandemic is the realisation that work success, satisfaction, health and, above all, the more effective integration of life and work can be increased quite significantly if the rigid regulations of the office work location are abandoned. The authors of this study, driven by the results of the Pfnür et al. (2021) study, expected employees longing to return to the office after an extensive period spent working at home. Yet, surprisingly, with the expiration of the pandemic this effect did not occur—at least until now. Instead, the results show that the need for freedom in the place of work and for multi-locational work has increased. According to the authors' observations, the effect of work from home was probably overestimated in the short term during the COVID-19 pandemic. However, the long-term consequences are currently in danger of being underestimated. The knowledge workers' extensive freedom to choose their own place of work after the pandemic is of central importance for the future development of multi-local work. Whereas in pandemic times around 40% of employees suffered silently in work from home (Pfnür et al. 2021), they can now perform their work productively and satisfactorily again at the office or from a third work place. Therefore, the average 13% increase in work productivity recorded in the first study will have increased massively once again. After all, 40% of respondents state that their productivity in the home office had deteriorated, in some cases very significantly, compared with the situation before the pandemic. The same applied to job satisfaction. Now that these "home office losers" have returned to the office or can seek out third places to work, their work success has improved in the long term as many individual results of the second study indicate. The newly discovered individual freedom in the place where work is performed is of fundamental importance for the economy and society, and it seems hard to overestimate. Here are a few examples:

- Better compatibility of family and work in general, the possibilities in child care and the care of seniors in the private environment in particular.

- Living in the residential neighbourhood and the resulting improvement of neighbourhood relationships and social relationships in the private sphere. Growing opportunities for social integration in a lonely society.

- Growing demand for restaurants, services, medical care, educational institutions, etc., in the cities' neighbourhoods and periphery, with a simultaneous decline in demand at the previous office locations, especially in the city centres.

- Increasing the attractiveness of rural areas.

- Opportunity for a decrease in commuting.

- Opportunity to increase the labour supply of the national economy through more part-time employees (see above for arguments) through the extension of effective working lives.

- Opportunity to improve occupational health, especially in the psychosocial area.

- Opportunity for companies to achieve higher life and work satisfaction among employees and, thus, potential for improving work results, corporate culture, employee identification, employee commitment, etc.

Overall, the world of work is transforming as never seen before due to the new opportunities for multi-local work. Further optimisation of the physical organisation of work will also contribute to this in the future. In this study, the focus is extended to two aspects besides work from home and the office: work at third places (especially coworking spaces) and vacation locations (workation).

In the next chapter it will be examined how the transformation of working environments towards a new concept that best uses the potential outlined above can succeed. In the following sections, initial implications for the necessity of laws concerning employees, companies and stakeholders in the real estate industry are presented. The interpretations have been formulated carefully as this is a new research area and, to date, the number of empirical studies is limited.

5.1 Multi-locality of the working world - the development of a concept for a better spatial integration of life and work

Multi-local work is changing working environments and social life on a gigantic scale

A planned process is needed at the societal and, in particular, the political level to use the consequences of the change in working environments for the better. In addition, it is also necessary to initiate the necessary transformation of office buildings that goes hand-in-hand with multi-local work. In this context, the increased possible inclusion of third places in the workspace concept of companies and employees' everyday working lives also plays a role. Effects in many areas of society accompany the change in the world of work. Some examples of this, derived from the data of the current study, are shown below:

- Traffic: The continuing desire for work from home and increasing work at third places may reduce traffic. This assumption is based on several findings. First, for 53% of respondents, the commute to work or commute time is the deciding factor in their choice of work location. Not surprisingly, working at home becomes more attractive as the distance between home and work increases. Concerning the office, the opposite effect can be seen. With shorter commutes to the office, the current and future desired proportions of work from there are greater. Particularly among respondents with a commute of more than 60 minutes, it is evident that more than 90% of them are satisfied working from home and, thus, presumably happy to forego the long commutes.

In addition, just under half of employees state that their commute is physically, mentally or emotionally stressful. More than 45% of those surveyed would like to avoid this strain and the CO_2 emissions caused by their commute, which should further reduce the traffic volume. If we also look at the days on which more employees would like to go to the office to work in the future, we find that the probability of going to the office on individual days of the week is roughly the same, at around 50% in each case. Only on Fridays is the probability somewhat lower. As a result, it would be possible for commuting flows to be equalized or at least shifted.

The possibility of working in third places, for example, in coworking spaces, also enables short commutes for 33% of those who already have working experience in such places. Thus, an additional reduced traffic volume could be possible with an increase in coworking space users.

- **Environment:** As already recognised, one concern of employees is to reduce CO_2 emissions by working from home. Around 41% of respondents also want to work more at home to protect the climate by not having to maintain, heat and operate an office space. Also, one-third of employees who have experience working in coworking spaces indicate that it makes sense for them to work in these locations from an environmental perspective. As a result, multi-local work can directly serve to help employees individually contribute to environmental sustainability. However, it is also up to the companies to react to a possible vacancy through suitable space adjustments, such as renting out surplus office space and supplementing the portfolio with third places close to their employees, not slowing down the positive effect.

- **Health:** Multi-local work and especially work from home have an extremely positive effect on the health of office workers. The study shows a clear negative correlation between the amount of time spent working from home and the levels of stress (burnout) and boredom (boreout). An opposite effect has been identified in the office. Company representatives say that a higher proportion of work from home is associated with lower sickness rates among employees. Workplace reintegration also arguably runs more smoothly. Moreover, more than half say they work more at home in terms of time and quantity, and more often, even if they don't feel well health-wise. Nevertheless, knowledge workers are by far the most satisfied with work from home when comparing work locations. Nevertheless, it is vital for work from home to be intensively discussed in reorganising the legal regulations on mobile work, especially from an occupational health perspective. Finally, the indications of the positive effect of work from home on the psychographic stress of the respondents should not be replaced by other health risks.

- **Social integration:** The study's results clarify that work from home enables better work–life integration for many employees. Seventy-two percent of respondents would like to continue working from home more often as this allows them to balance their private and professional lives better, and they find this pleasant. The employees' creativity even goes so far as to use the private premises for physical meetings with colleagues, which clearly shows that social interaction is also promoted with work from home.

- **Prosperity**: The desire to work from home has increased even further over the last three years. Compared to the survey in 2021, instead of an average of 54%, employees want to work from home as much as 59% of the time per week in the future. The reasons for this are varied, but the bottom line is that work from home enables a higher perceived standard of living through potentially more individual quality of life. Eighty-one percent of office workers are satisfied with working at home. Working in coworking spaces is also perceived as conducive to a good work–life balance for just under one in two with work experience there. Employees have experienced the freedom of choosing their place of work according to their own requirements and needs, and would no longer like to do without this prosperity. Neither the office, nor work from home, nor third places can serve the varying needs of office workers alone in the future. The potential of each individual location unfolds in a multi-local working world through the added value of a free choice of work location.

The importance of work from home for society has hardly been recognised to date

The reduction of traffic volume, positive environmental impact, positive effects on employees' health, greater social integration and increased job and life satisfaction: work from home offers unimagined social benefits. At the same time, however, there is also a societal risk in expanding work from home shares, namely, the division into population groups with a high work from home share on the one hand and the group of those with a low share on the other. If only selected employees enjoy the aforementioned benefits, such as improved health, greater (life) satisfaction and a better work–life balance, then work from home will become more of an elite issue than ever before and not only the team structures in companies will be at risk of becoming unbalanced.

Therefore, when establishing a multi-location concept, special attention must be paid to the question of how potentials can be realised and risks avoided. The way out could be the transformation to truly multi-local working in which each office worker can individually select the solution that maximises benefits for him or her within the constraints of the corporate context. Work from home is promising but is currently only used for 43% of working hours on average. The office also offers advantages for certain types of work and third places, such as coworking spaces, can be a helpful addition. Employees' individual (work and) life situation requires solutions to be developed for the design, which can be adapted to the situation and are not based on a rigid structure. A uniform solution for mobile work is challenging to derive and inevitably threatens to stifle any potential. Accordingly, in the interests of employees, employers and legislators should strive for regulations that allow a high degree of freedom in choosing a suitable location.

For policymakers, the inevitable result is the need to give the “new” work a legal framework. The goal should be to support companies and their employees in the transformation process of a changing world of work. However, this should allow flexibility for companies to make arrangements at the organisational unit or individual employee level in order to incorporate the individual needs of employers and employees in the event of changes to the regulations governing the choice of work location.

Multi-local work has great economic potential, which is already being realised to a considerable extent, but not yet to the full extent

Working at distributed locations enables economic growth as seen by the high productivity of work from home. Around 76% of respondents find their work at home productive. In addition, work success at third-party work places, whether in-house coworking spaces, e.g. in the form of satellite offices, outside the company, or at workation, is rated positively by 50% of respondents with experience. Already in the first survey, an increase in productivity with work from home compared to the office workplace of an average of 11–14% could be recognised. Under the condition of self-determination of the choice of work location in a multi-local working world, an increase in work from home and work at third places will, according to the results of this study, noticeably increase the productivity of employees. As a result, economic growth is generated. In addition, there is a potential expansion of the workforce: easier reintegration into the workplace, access to workers even over greater geographical distances and easier reconciliation of life and work with the associated lowering of barriers to taking up part-time work could expand the pool of workers for companies. Multi-locality as a concept of the world of work and the associated free choice of place of work are, therefore, to be welcomed from an economic point of view.

Conversely, restricting the freedom to choose where to work has economic disadvantages. Although one in ten people say they do not work productively at home, significantly fewer (61%) are productive in the office. If knowledge workers are forced to return to the office for their entire working hours, then their productivity will decline. Accordingly, it is important to avoid such an obligation.

Another economic disadvantage that must be avoided is not expanding the share of remote work beyond the share of tasks that can be successfully performed on the move. According to the results of this study, the respondents indicate that they could perform a large part of their work tasks on a mobile/remote basis, with an average of 57%. A comparison with the first part of the study from 2021 (60% remotely capable tasks) shows a stability of this mean value. However, the mean values should be viewed cautiously as the information provided by employees varies considerably (relatively high standard deviation of 33%). One-fifth of respondents can perform a maximum of 20% of their tasks remotely, whereas one-third can perform at least 80% of their work tasks remotely. The finding gives rise to the assumption that it is difficult to derive a uniform solution for mobile work for the entire workforce. In addition to work from home and the office, other work locations are essential for everyone to complete their work tasks as efficiently as possible and subsequently achieve economic benefits.

Regulations must also clarify equipment issues. Here, further potential for increasing work success for employees and companies is revealed. Legal regulations to protect employees and their equipment at home are necessary because work success is currently based to a large extent on the goodwill of employees, not on support from employers. However, many respondents would like to see more significant support. Adequate provision of work equipment is not only in the interest of companies. Policymakers must also understand the potential of work from home to maintain Germany's competitiveness as a business location in international comparison and contribute to its expansion.

As part of considering possible economic risks, it is also essential to discuss how to deal with possible asset losses from vacant office space that is no longer needed and cannot be put to any other use.

5.2 Implications of multi-local work for employees and employee representation

While some employees clearly prefer increasing the work from home-share, others prefer the office or working in third places. The very high dispersion in the data illustrates that performing work efficiently requires individually appropriate work locations. Workers' choice of locations depends on their situational and individual decisions. Employee representatives must represent the interest in being able to work multi-locational—as long as it increases the work's success—to the companies wherever possible.

From the employees' point of view, the question arises as to whether and how they can use the new freedom they may have gained for themselves

Knowledge workers in Germany are increasingly consciously questioning their choice of work location. This inevitably raises the question of what the ideal local distribution of work among different work locations should look like.

The results of both studies show that the desire to work from home has increased even more over the last three years. Compared to the survey in 2020, employees want to work from home in the future for as much as 59% of the weekly working time instead of an average of 54%. Similarly, there is a trend across all generations to want to spend less time in the office in the future (33%) than they currently do (51%). The most significant discrepancy between the actual and desired situation exists among the youngest employees, Generation Z. For many employees, working in different locations is an integral part of the new world of work. The consideration of multi-locality goes beyond work from home development and the office's role in the future working world. At present, just under one-third of those surveyed use third locations for work.

The respondents not only state that they want to work more at home but also that, on average, they actually want to be able to do a large part (57%) of their work on the move. It is clear that the desired proportion of work from home is almost identical to the proportion of tasks that can be performed remotely. As other studies have already shown (Höcker et al., 2022), this finding also suggests that respondents are, on average, well able to assess what the individual local distribution of work among different locations should look like. Multi-local work creates a gain for employees that should not be underestimated as they seem to be aware of the individual benefits of the respective work locations.

If the focus is shifted to the criteria respondents use when choosing a place of work, then the results show two clear trends:

1. First, work success is the decisive factor for the choice of place of work. Productivity is by far the most frequent factor according to which employees choose their place of work (74%). This is accompanied by satisfaction, which also influences the choice of work location for 67% of respondents. Motivation, stress management and creativity are also confirmed as relevant factors by one-third to one-half of the respondents.
2. Second, the choice of the workplace is significantly influenced by personal preferences (67% of respondents agree). In addition, for more than half of the respondents, the commute and the activities also influence the choice of workplace. The choice is thus primarily determined by the work success achieved and other personal influencing factors.

For employee representatives, these results provide an important insight. There appears to be a fundamental equality of interests between employee and employer. The concept of multi-local work opens up advantages for both sides in equal measure. If employees choose their place of work mainly based on their own productivity and satisfaction, then the benefit of both the individual employee and the company will be maximised. It is, therefore, an essential task of employee representation to achieve the greatest possible freedom of choice for employees when introducing regulation of mobile work.

Employees must adapt individually to multi-local work in the best possible way

The results of this study provide employees with a knowledge base about the benefits and suitability of working in different locations. Knowledge of these opportunities and risks enables them to make the best use of the concept of multi-local work. In the following, it is shown for the respective work locations at home, in the office and in third places how the balance of benefits turns out on average for the respondents. On this basis, employees can look at their individual situation and identify suitable work locations for themselves to emerge as winners of multi-local work.

1) General conditions of an efficient work from home

On average, the individual success of working at home is of outstanding importance for the respondents. For the majority of employees, working at home is associated with a high level of satisfaction.

- Influence of age

Just 6% say they are unhappy with work from home. However, the younger respondents, in particular (Gen Z: < 26 years), tend to be among the more dissatisfied.

- Influence of the centrality of the residential location

In addition, satisfaction strongly depends on the residential location. While 90% of respondents who live in the village are satisfied, only 69% of those who live in the city centre are satisfied with work from home. The majority also rate productivity higher at home than at other work locations. It is striking that productivity for work at home is highest for residences in peripheral locations. Here, 84% of respondents are productive in work from home, whereas the value decreases with increasing proximity to the city; in the inner city, only 66% of employees are productive at home.

- Influence of spatial conditions

Satisfaction with work from home is determined first and foremost by the spatial conditions, for example, the size and quality of the workplace. So what should the efficient workplace at home look like?

A look at the workspace shows that only every second respondent has a separate study at home. To be able to perform individual tasks at the desk, which are often better done at home, well, a work environment conducive to concentration is required for work from home. Most respondents achieve high success and good quality of work at home to date although they do not currently receive sufficient support in setting up the home office; indeed, 38% of the respondents have not received any cost sharing from their employer. About 40% of study participants also report that they have not received the equipment needed to work from home from their employer. Around 15% of respondents do not have a sufficiently reliable and fast Internet connection, one in three does not have adequate furniture, and only 40% of respondents have fully equipped information and communication technologies at home. If employees would like to further increase their work success at home or make working at a home office possible at all, then the employer should provide adequate furnishings. To ensure that employees do not have to bear the costs of these investments alone, employee representatives are called upon. In the policy process for developing a mobile working guideline, the interest of employees must be represented such that employers finance a minimum level of equipment.

- Influence of work–life integration

The most important potential of working at home is said to be the better integration of life and work compared to working in the office. The fear that the subjective success of work from home is achieved at the expense of work performance can be dispelled based on the empirical results of this study. The employees state that they are more motivated when working from home, work more in quantity and time and are more frequently available for more extended periods. Sixty-two percent of those surveyed also rate the quality of their work higher at home.

- Influence of the activities

For activities at the desk, such as individual work that requires concentration, correspondence or (video) telephone calls, the results show that a large proportion of respondents can do these more efficiently at home. They seem to have enough peace and quiet there to maintain the necessary concentration—apparently even better than in the office.

In addition to the goal of increasing work success, i.e. productivity and satisfaction, employees should pay attention to reducing work failures, such as boredom or stress, to avoid experiencing health limitations.

- Influence of burnout and boreout risks

The results of the study show that there is a negative significant correlation between work from home hours and burnout and boreout. This means that a higher number of hours of work from home are associated with lower levels of burnout and boreout.

2) When do office workers still go to the office?

A number of reasons suggest that certain respondents would prefer to work in the office or that some activities are more successful in the office.

- Collaboration influence

In particular, collaborative activities, such as meetings or teamwork, can be performed better in the office by 50–69% of employees and more than half of those surveyed would like to return to their office more often in the future because of the easier exchange with colleagues. The extent to which team dynamics influence the desire to work in the office is made clear in the results by the desired proportion of work per week. If the relevance of team dynamics is high compared to low, then the interest in working in the office increases by just under one-third, thus increasing the weekly working time spent there.

- Influence of team dynamics

The finding that communicative activities and a high level of team dynamics influence the decision to work in the office is not surprising as the empirical results also show that social conditions, such as team composition or the relationship with superiors and colleagues, mainly influence satisfaction in the office. Regarding work satisfaction, however, the office currently lags behind work from home. Currently, only three out of five respondents are satisfied in the office. Sixty-one percent of respondents work productively in the office, which is less than with work from home.

- Influence of stress management options

Stress management also currently seems to be a challenge in the office for many respondents. Significant positive correlations occur between hours worked in the office and burnout and boreout, meaning that a higher number of hours worked in the office is related to higher boredom and stress, and vice versa.

3) The role of third places

In particular, young employees aged 26–40 years are already working in coworking spaces. More than half of the respondents with experience in third places can be assigned to Generation Y.

One of the primary purposes of coworking spaces is to maximise the benefits of coworker interaction. Innovative, collaborative work and social exchange are the main focus. The results show that it is primarily the social perspective and, thus, the core idea of a coworking space that is perceived by half of the users. Around 33% of respondents consider it useful to go to a coworking space from an ecological perspective and 28% from a financial perspective.

The potential of coworking spaces has not yet been fully exploited. One reason is the lack of experience working in coworking spaces. However, demand could increase in the future without restrictions due to the COVID-19 pandemic as more employees use these workspaces. Already, the results show that of those respondents with experience in coworking spaces, one in two can imagine working there in the future. Forty-four percent can also imagine that working with people from outside their field in coworking spaces is enriching, and 45% can imagine working there creatively and innovatively.

One challenge associated with working in coworking spaces is the risk of inefficiency. Around 40% of respondents fear that working there is associated with inefficiencies. However, this assessment could also be linked to the nature of work in the coworking space: communicative activities and creative exchange may be perceived as less productive in the true sense, i.e. as a feeling of 'having done something', but are not less important.

Workation, or location-flexible work in which the areas of work and vacation merge, plays a unique role. The motive of integrating life and work through workation seems to be a goal of the current society and life phase, which will also be of interest to many employees in the future (72%). Of the respondents with experience in third places, 50% already have experience with workation. Of those, 60% do workation to increase their life satisfaction. The goal of one in four respondents is to achieve a work goal during workation. One in four spends their workation in their vacation or second home. The survey makes it clear that a large number aspire to gain experience with this unusual work location model for the future.

Private social relations benefit from multi-local work

As already indicated, there is enormous potential for the social life of office workers. It is no coincidence that the greatest motivation for those surveyed to continue to work from home or to engage in workation is the resulting improved compatibility of life and work.

- **Work–life integration**
  Work–life balance becomes work–life integration. A certain softening of the boundaries between the spheres of life is apparently explicitly desired as the example of workation shows. Quite fundamentally, the shift towards multi-local working with more work from home offers the potential for expanding private social relationships; after all, more space is available for them.
- **Isolation**
  The downside, the threat of isolation at the home office, can be countered by transforming it into a true multi-location, where employees can choose their workplace according

to their needs. If the office becomes a place of encounter and communication, then there are also opportunities for exchange.

The question remains open as to how the change in the world of work towards multi-local working will affect employees' relationships with their companies.

- Willingness to terminate

The intention of around one-quarter of respondents to quit makes it clear that office workers are serious about the demand for mobile working. This also means that the form of work is becoming more important than the employer for whom this work is performed. Work itself is not the centre of employees' lives. Work–life integration is an essential goal for employees, especially to maximise the benefits of their private lives and reduce the "disruptive" influence of work. The debate about "quiet quitting", which is being conducted primarily in the United States, is an expression of the same change in mentality in the minds of employees.

Relationships with the company change and trigger an urgent need for action

Against this background, managers not only face the challenge of "leadership at a distance" but must also deal with their employees all the more sensitively in the process. Employee management must be rethought and suitable organisational structures must be formed for the multi-local working world. The remaining channels must be used all the more intensively. If the respondents indicate that the corporate office should primarily be a place of communication within the teams in the future, then managers must seize this opportunity. Last but not least, another motivation to work in the office could be personal development, e.g. young people, who are still at the beginning of their careers still want to acquire the necessary expertise for completing their tasks through exchanges with colleagues. Decision-makers' perceptions could also be part of the personal career calculus of younger office workers in particular. So companies will probably have to face up to the solidifying situation of multi-local working, adapt themselves and formulate suitable framework conditions that meet the needs of everyone, including those with a need for communication in the office. At the same time, there are indications that a certain degree of self-regulation within the workforce ensures that teams continue to come together at the company location as well. To be sure, there are still many unanswered questions about the design of organisation, leadership and communication in a multi-local working world.

Self-organisation in teams: How is the conflict of interests among employees managed?

The high dispersion of remotely capable work tasks illustrates the varying degrees to which mobile work is possible. This can lead to conflicts of interest among employees. Therefore, on the one hand, it is necessary to clarify at a higher level whether employees who can work remotely to a lesser extent should receive some form of compensation, for example, monetary compensation. On the other hand, conflicts can arise at the team level because work processes can be more challenging to carry out due to the different work locations or communication losses can occur. Multi-location work can also intensify challenges between employees and managers if it leads to management or control problems. By creating suitable regulations, it must be ensured that there is no imbalance between individual and team success.

The question of cost coverage of multi-local work remains unresolved so far

Last but not least, employees and their representatives are faced with the question of who should bear the costs of increased working from home and other locations. First of all, it is necessary to clarify what costs are incurred by working from home or other locations and how the amount of the costs compare to the costs incurred by working in the office. It could be assumed, for example, that the more mobile equipment and technical facilities of the home office the more intensive use of one's own home with resulting higher electricity, water and heat consumption, and the possibly necessary provision of living space to set up the home office and additional costs for home workers. This is balanced by the fact that commuting is no longer necessary, which is a frequently cited advantage of work from home in other contexts, resulting in cost savings.

This study is not suitable for quantifying the costs incurred by office workers. However, it does provide some initial indications. For example, around 40% of respondents say that their companies have not provided them with the equipment they need to work from home. The proportion of those who state that their employer does not cover any of the costs incurred with work from home is roughly the same. Only one in ten respondents report that they have been reimbursed for the cost of an Internet connection at home or energy costs. This suggests that office workers actually incur additional costs due to the increased use of work from home. This assumption is supported by the fact that half of the respondents state that they want to work more in the office again to save on home heating costs, probably in consideration of the current energy crisis.

The example of the motivation to go to the office to save on heating costs at home shows the presumably low willingness of employees to pay higher costs for working from home themselves. This is hardly surprising given the fact that while respondents spend on average about one-third of their disposable income on housing costs, at the same time more than two out of five respondents have to spend more than 33% of their income. From the employees' point of view, clarifying how costs are covered is thus still an open issue. Although around one-third of respondents state that employees are responsible for bearing the costs arising from increasing work from home, the majority of respondents (62%) demand that any potential cost savings from the expansion of mobile working should not be realised at the expense of employees and, consequently, want their employer to provide financial support for ancillary costs. Forty percent of respondents even want the employer to pay part of the rental costs, for example, for the necessary office at home. From the employees' point of view, it must therefore be clarified who will assume the costs incurred when working from home. They see a specific responsibility in this regard on the part of employers. In the future, employee representatives should work to ensure that potential productivity gains for companies through multi-local work are not generated on the backs of employees. Given the willingness to change employers documented in this study if mobile working is not implemented (satisfactorily), employers and politicians should take this demand seriously. This probably also applies to the assumption of costs incurred by working in coworking spaces.

5.3 Lessons learned for employers and corporate real estate management

Used correctly, multi-local work is a great asset for companies

In the context of introducing the multi-local workspace concept, each company needs to weigh up, from an operational perspective, the extent to which employees are granted freedom in their choice of work location. To be able to make this decision in a well-founded manner, it is essential to bring transparency to the opportunities and risks. The results of this study provide a benchmark of the average advantages and disadvantages that can be used as a basis for weighing up the options.

1) Potentials

On average, multi-local working offers great potential for the success of companies.

- Work success and health of employees

The results of this study show a clear positive correlation between the individual level of job satisfaction of employees, the impact of working from home on the work productivity of individuals and their decision to choose home as a place to work. The positive correlation between work from home and lower burnout also argues for expanding mobile work as this reduces sickness statistics. Consequently, the higher work success of employees also positively affects the company's success. This result is remarkable since there is per se no original conflict between employers and employees in the matter of work from home, but on the contrary, the free decision about the suitable place of work brings positive effects for both sides.

- Corporate loyalty

Another aspect of expanding multi-local work is strengthening the employer brand. The results show that the joy at the freedom gained goes so far that one in four is prepared to change employer for the opportunity of location-flexible working. The expansion of the concept of multi-local working is therefore highly relevant both for retaining existing employees and for better positioning in recruiting new employees.

2) Challenges

It is important to keep a close eye on some of the negative effects of multi-local work to be able to take targeted countermeasures on the part of the company.

- Corporate culture and loyalty

On the downside, there is the risk of a softening corporate culture due to employees being dispersed to different work locations. If employees are unable to achieve the necessary work-related communication through virtual tools, or if social exchange suffers, then this can also reduce company loyalty.

- Communication

Multi-local work can also make communication more difficult. The first study's results already showed that employees value personal contact and social relationships at the office and perceive them as supportive. Communication with work colleagues in the office can only be replaced virtually to a limited extent, which is why it is urgently recommended that the office or third places, such as coworking spaces, be maintained as a place of gathering, exchange and togetherness in the concept of multi-local work as well, or that the workplace strategy be rescheduled accordingly. Joint workation as an offsite event, as experienced by 10% of respondents with workation experience, can also positively counteract this challenge of loss of communication and corporate culture.

- Leadership and control of employees

The last possible challenge of multi-local work is assumed to be problems in the leadership and control of teams, i.e. in middle management.

Finally, two possible approaches are pointed out. Those are relevant for companies to actively identifying the individual strategy to be chosen by the respective company. An employee survey conducted within the company and focus group discussions can help identify the exact needs of the company's employees. In this way, the optimal level and appropriate design of the multi-local workspace concept can be developed beyond the benchmark provided.

Companies cannot simply let multi-local work happen but must develop an individual strategy

From the perspective of the current working world, the potential of work from home has not yet been exploited. Currently, respondents say they work 43% of their weekly hours from home although their desire for the future is a share of 59%. In contrast, the proportion working from the office looks the opposite where, currently, 51% of weekly working time is spent but only 33% is desired.

The ability to work on the move plays a vital role in the war for talent. This is because the proportion of employees willing to quit is even higher, especially among younger respondents. Companies that do not offer the option of mobile working risk losing out in the battle for skilled workers. However, the equality of interests between employees and employers has reached its limits, for example, regarding the spatial factors of the place of work and the workplace's equipment.

To show which strategy management in companies should strive for in order to reduce obstacles, which strategic adjustments the operational organisation needs and how the HR strategy could be adapted, the four most significant areas for action identified in this study are shown below:

1) Invest in equipment to promote successful mobile work for employees when working from home.

Around 40% of the study participants have not yet received the equipment needed to work from home from their employer. In addition, for 38%, employers have not contributed to the cost of work from home. For one in three, the furniture is not adequate. In addition, around 15% of respondents do not have a sufficiently reliable and fast Internet connection at home. For some employees, these diverse deficiencies result in low satisfaction and limited productivity when working from home. And although just 40% of respondents say they have complete information and communications technology equipment at home, many employees manage to work at home more successfully and with higher quality. These startling results nevertheless make it clear that improved equipment for the workforce is necessary and that an investment in it will certainly pay off in terms of even greater success for employees and the company.

2) Improve information culture and create training opportunities to educate employees to the required extent.

In addition to the inadequate equipment to date, there is a lack of important information on the part of employees regarding working from home. Sixty-six percent of those surveyed had not been sufficiently instructed by their employer about the necessary requirements for an ergonomic workplace design at home. Only one in two employees has a separate study at home, hopefully with a suitable desk and chair while the other half work in a dedicated area of the home, perhaps at the kitchen table, on the sofa or out of bed; hence, better ergonomic training is needed to support healthy and safe mobile working. For as many as 26% of employees, the employer has recommended at least one checklist to assess working conditions in their home for use. These results paint a frightening picture of the information culture and educational efforts on work from home by employers, where there is an urgent need for improvement. This topic is also already being intensely discussed in the context of the emerging regulatory framework for mobile work on the part of the Ministry of Labour in order to develop suitable solutions.

There is also an urgent need for improvement in specific training on dealing with mobile working issues and technology support for location-flexible work. Employee demand exceeds supply in both areas by as much as 12 percentage points in the case of continuing education offerings. In addition to improving the equipment of the workforce, companies should also invest in the employees themselves. They want to be empowered to survive in the mobile world of work and pay back to the company with tremendous success at work.

3) To give the possibility of flexible choice of work location to increase the work success of employees and the company's attractiveness.

In addition to higher satisfaction and productivity with work from home, i.e. an increase in work success, it became clear from the results that there is also a positive correlation with employees' health when working at home. The more hours provided with work from home the lower the expression of stress and boredom. Greater freedom for employees to choose to work from home subsequently ensures fewer sick days and protects against mental illness due to absenteeism. Accordingly, in the interests of employees, employers and legislators should strive for regulations that allow a high degree of freedom in choosing a suitable location. Due to the high willingness of almost a quarter of those surveyed to give notice if they are not allowed to work flexibly in terms of location and time, companies also almost have to offer a multi-location workspace concept if they want to remain competitive in the fight for the best talent in the future. Companies are, therefore, better positioned in the worsening shortage of skilled workers if they are open to mobile working. After all, a pleasant working atmosphere and a better work–life balance—both goals that can be achieved through mobile working—are also important reasons for changing jobs (Randstad 2021).

Current trends in strategic success research show that soft success factors around corporate culture and corporate identity are becoming increasingly decisive in global competition. On the one hand, constantly changing competitive challenges demand effective concepts with which companies can differentiate themselves from their competitors. In the battle for the best-skilled workers, only companies that reflect the general conditions of social change in their corporate culture in the best possible way can survive. As do marketing-related factors, production- and technology-related factors take a back seat. In a concept of multi-local workplaces, real estate and the physical collaboration that takes place in it thus become some of the potentially most important management tools for corporate management. The prerequisite, however, is that something changes in the current office planning to increase the employees' work success and motivate them to return to the office more often in the future. In increasingly fluid organisational structures, realising such culture-driven potential has been more difficult. But even with the knowledge of all these uncertainties, the goal of employers is and will remain to strive for attractive, competitive employment conditions.

Last but not least, it increases corporate attractiveness if the growing trend of workation is allowed and encouraged in companies. More than two-thirds of those surveyed who have already had the experience of working at third places are interested in doing workation in the future. Enabling workation is beneficial for companies to satisfy their employees or strengthen their employer brand as well as for the company's success. This is because one in four respondents with workation experience decided to do so in order to achieve a specific work goal.

4) Mastering the balancing act between individual and team success.

The results make it clear that multi-local work thrives on individual freedom of choice to select the place of work according to one's needs and the possibility of most successful work performance. Ultimately, a balance between freedom and leadership should be sought between employers and employees in which both work from home is extended as far as satisfaction and productivity gains are achieved, but the office or third places are also used for employee communication and collaboration. Operational processes must not be disrupted by distributed work. If the relationship tips and the absence of individuals reduce the company's success, then a line is crossed at which companies should intervene. If there is a danger that the proportion of work done at home by individuals will reach the limit of their remote capabilities, then it will presumably no longer be possible to complete the work there successfully. Consequently, either the proportion of remote-capable activities would then have to increase by adapting working methods, or it would have to be ensured that the proportion of work from home does not exceed the limits of what is possible. In addition, from the company's point of view, it is crucial to keep an eye on the perspective of successful group or project work. As long as digital tools promote work delivery and no physical interaction becomes necessary, company management can keep the degree of freedom of choice of the work location high. However, if deficiencies arise in teamwork or communication, it is essential to define joint regulations in the company's interests.

Multi-local work changes the need for operational real estate

At present, the framework conditions for future work are highly uncertain. This uncertainty must be taken into account in the future planning of the provision of operational real estate. At the present time, no one can give a clear answer to the pressing question of possible qualitative, quantitative and location-related changes in demand. However, based on the empirical results, an initial quantity balance will be drawn up to check which aspects argue for more and which for less space. In addition, a look will be taken at the qualities of space required in the future and demanded by employees. In addition to the question of whether and, if so, how workplace quality can be improved, the topic of (non-)territorial workspace design will also be discussed in connection with the suitability of different office forms. The aim of this study at the site is to use the survey results of office employees to provide a basis for decision-making on how future workplace design can be carried out in a multi-local working environment.

1) Quantitative adjustments - a quantity balance for decision support.

In some companies, the failure of employees to return to the office since the COVID-19 pandemic is currently reducing floor space requirements. An answer to the reasonableness of this approach goes beyond the study's results because the focus of the survey is the employees' perspective. Thus, no all-encompassing picture of the situation can be represented by the data. However, some results are presented below that balance the argumentation.

Arguing for space savings:

- Low frequency of use of office space

First, the continuing high proportion of work from home speaks in favour of a reduction in floor space. A comparison of the results from the two studies in 2021 and 2023 does not yet suggest that employees will want to return to their offices completely in the near future. Third places, which are still at a relatively low level, could also become more attractive as the pandemic subsides. Working in coworking spaces, particularly, is valued from a social perspective. It could serve as a substitute for traditional office space if used correctly and integrated into companies' workplace strategies.

- Cost savings in maintenance and operation

From an economic perspective, companies hope to achieve cost savings in the maintenance and operation of real estate by saving space. Especially in times of high energy prices, this is an aspect that should not be neglected.

- Even distribution without overload peaks

Furthermore, the empirical results of this study show that employees report the probability of an office visit to be the same for almost all days of the week. Except for Friday, an approximately equal distribution of office visit days can be expected and there is no need to worry about overload peaks. Particularly with the long-term prospect of a four-day week, the data do not speak in favour of holding back an unnecessarily large amount of space and leaving it empty. Around 41% of the employees offer the companies restraint because they already give as a reason for continuing to work less in the office that they would like to contribute to climate protection by not having to operate and maintain unnecessary space. This is another aspect that speaks for a reduction in office space.

- Leveraging employee readiness for new office concepts

At present, 69% of respondents say they have a fixed workstation in the form of a cubicle office. However, if employees are asked about their willingness to forego a fixed workstation in the company, just under 60% are open to doing so if, in return, they are also allowed to work in a flexible location in addition to their work in the office. According to the data, such an adjustment would not entail any risk of lower work success as satisfaction in the office does not differ between desk sharing and fixed workplaces, depending on the office concept. The willingness to adopt non-territorial office concepts can be used to provide functional workspaces in the office, even if space is reduced.

Arguments against saving space:

- Qualitative space adjustments require spacious floor plans

At present, the most common type of office is the shared office for 2–3 employees (39%) followed by the single office with 22%. Around 69% of respondents state that they currently have a permanently assigned workstation; at the same time, 78% say they prefer to do concentrated individual work and desk work (58%) at home. The offices of the future should offer space for communicative collaboration, exchange and collaborative work. These activities, in particular, may require spacious areas to still be able to separate from other groups and work together undisturbed. The social exchange also needs meeting areas if it is to occur in an unconstrained manner.

The first study in 2021 showed that the garden, terrace and balcony, in particular, improve the success of working from home. The results of the 2023 survey show that 84% of respondents who live in the countryside or a village are productive when working from home compared to only 66% living in the city centre. So why not integrate more nature into the office by creating open spaces where employees can work or enjoy the sun and fresh air during downtime and breaks?

This second study showed that employees would go to work in their office more often if they could use the sports facilities there. In the qualitative further development of offices, it may also be advisable to include a yoga or multi-functional sports room, for example.

The above examples offer just a few starting points for how companies can make their offices more attractive for the future. Generally, it becomes clear that even by breaking up rigid cell structures and creating open floor plans, a spacious overall footprint may still be necessary.

- Improved office qualities may lead to increased return to the office

Satisfaction with work from home is higher on average than with office-based work. Spatial factors influence office satisfaction by 32%. Once the idea is pursued that future offices will receive a qualitative upgrade by being more specifically oriented to the personalities and needs of the employees of each company, satisfaction could increase. The results of this study show that satisfaction, health and productivity are higher in work from home; hence, most respondents want to work more in this work location. Work success and personalities are also key reasons for choosing a work location. If success at work increases due to improved offices, then an increase in the use of the offices can be expected. In the medium term, this higher frequency would also mean that more space would be required; hence, companies need to weigh carefully whether they should reduce their space.

- Strengthening employer branding

The design of offices is said to have an increasing influence on employer branding campaigns. Attractive, employee-focused spaces can help attract young talent to a company. In this regard, large spacious offices with additional offerings, such as open spaces or sports rooms, probably outperform smaller ones with less space. If the office is seen as a meeting place, this is often followed by a strengthened team feeling and the frequency of office use increases as shown in the study data.

- High dynamics of the working world can change framework conditions of knowledge work in the medium term

The rapid development of technical innovations partly drives uncertainty about the working world of tomorrow. Due to the possibilities of carrying out certain activities with the help of AI as well as uncertainty about the speed of the changes in the organisation of work, it is not possible at present to predict the extent to which external influences will affect the world of work. By cutting back on areas at the current time, flexibility in the future scope of action for responding to developments will be restricted.

2) Qualitative adjustments make it possible to improve the usefulness of offices.

Above a certain proportion of work from home, the question quickly arises as to the whereabouts and usefulness of offices. But the results clearly show that office space continues to be needed on average for just under half of the tasks because they cannot be done on the move. However, the qualitative status quo of offices and their impact on work success and health show a staggering result. Current office real estate often does not seem to meet the needs of employees. One in five is dissatisfied with their office, regardless of age. Moreover, stress and boredom correlate with more hours worked in the office. Massive pressure to act and the failure to transform offices are becoming apparent.

- Investment in offices can generate work success for employees

For the future, investments in office real estate to improve their qualities seem indispensable to enable work success. Currently, 39% of respondents state that they cannot work productively in their office. This group tends to comprise the older respondents. Satisfaction in the office is determined first and foremost by social conditions, e.g. team composition and relationships with superiors and colleagues. The study results show that office satisfaction does not depend on the office concept (desk sharing or fixed workstation). The type of office—whether cellular or shared space—also has a minor influence on satisfaction.

- Redesign of spatial structures

Accordingly, a rethinking of office design and spatial structures may become necessary. Today, the office is seen more than ever as a place of social exchange. Interactive and collaborative work is at the forefront of the activities to be performed there. More than half of employees (54%) also cite the easier exchange with colleagues as a reason they would consider returning to the office. Facilitated communication is the main incentive for office use. At least half of the employees would like to come to the office for communicative and collaborative activities such as meetings, short conversations, teamwork or informal exchanges.

However, the present study suggests what experts confirm when reflecting on the results: the available spaces are often not suitable for this purpose.

- Enable collaboration and exchange

Offices with new concepts of use that promote collaboration could become more attractive and increase the frequency of use in changing work processes, with more teamwork or, for example, a higher degree of agile work. The results show that the greater the autonomy, adaptability and resilience of employees the lower their incidence of burnout. All aspects of agile working are also significantly negatively related to boreout. Particularly from the sub-aspect of agile working, team awareness has an incredibly high impact on office work success. An improved potential of offices through qualitatively suitable areas, which successfully enable teamwork, becomes the trump card of companies in an increasingly agile and interactive working world.

All in all, a qualitative transformation of office space is inevitable. Rebound effects to conditions as in the time before the pandemic are currently not foreseeable, also in the view of experts. Supplementary offers in gastronomy (32%), for childcare (27%) or sports courses (24%) can be created as further qualitative incentives for employees. Ultimately, the qualitative office planning of each company should be geared towards its employees; there are no blanket solutions. The data make it clear that in addition to the activity to be performed in the office, planning should in future be based much more on the personalities of the employees if companies are interested in their employees returning to the office. New utilisation concepts must be developed individually and balanced according to constructional possibilities and economic security. At the same time, the design of the offerings offers opportunities to convey the company's corporate culture. Especially in dynamic and uncertain times, it is crucial to maintain a high degree of flexibility.

3) Third places as complements to office strategy allow companies flexibility in space provision to remain reactive in a dynamic work environment.

The world of work is subject to various external influences such as demographic change with a decreasing labour supply, technological innovations, climate change and increasing need for environmental sustainability, changes in value and work culture and changes in the framework conditions of knowledge work through AI-supported software. Even if the results and implications of the study clearly represent the needs of employees for the present time of observation and indicate that work from home has found its place in the world of work and that the concept of multi-local work should be conventionalised, it remains uncertain what further need for adaptation for the design of working environments will be triggered by the high dynamics in the future.

The study results suggest a need for real estate changes due to the significantly higher satisfaction and productivity at work from home compared to the office. This is because despite the current lower level of work success in the office, on average, only slightly more than half of employees' tasks can be completed on the move. So, too, in the future, there will be a need for office space that can be adapted as flexibly as possible to changing requirements.

Employees' experiences with coworking spaces lead to the conclusion that the available spaces only partially fulfil their function as a place for social exchange or that too few employees have already worked in third places to gain experience. These hurdles must be addressed in the future if coworking spaces are to become a genuine alternative to work from home and the office. So far, these spaces are partial substitutes rather than alternatives in a multi-local work environment. However, they offer an opportunity to access more or less space than that of a company's own office properties in a relatively flexible manner, depending on demand.

For example, entire spaces or individual workstations can be rented in coworking spaces. Companies could also convert part of their own space into a coworking space so that the income generated by renting out workstations reduces operating costs, the space is more frequented again and additional added value is created for employees through exchanging information across company boundaries.

Alternatively, some providers of third places already offer the possibility of a type of membership that justifies the use of shared workspaces. By financing such memberships, companies could provide third workplaces for their employees in line with their needs and transfer the complete organisation to the individual users.

In the future, coworking spaces will offer employees even more functions if they are used appropriately. Spaces close to home can positively contribute to climate protection if they shorten commutes that would otherwise be made by car, or eliminate them altogether by switching to bicycles. Third places, such as coworking spaces, could also be an alternative for employees whose homes do not offer the opportunity for successful work.

Not only work from home but also the trend to combine vacation with work to do workation changes the spatial integration of life and work of employees. By supporting and further developing existing workation offerings, companies are opening up more popular work locations for their employees, which will reduce the required office space to a small extent.

Multi-local work requires not only a strategic adjustment but also a planned operational–tactical change process

1) Involve employees

The study results clearly show that employees demand to be included in change management processes to redesign workspace strategies. At present, only half of the respondents can influence the design of mobile work in their company or participate in developing targets for the organisation of work from home in their companies. The possibility of exerting influence depends, on the one hand, on position and, on the other hand, the company's size. Sixty percent of respondents in very small companies have the opportunity to influence the targets for organising mobile work. Only 38% of respondents in large companies have this opportunity. At the same time, around three out of four would like to be involved in the design of location- and time-flexible working. But how can companies involve their employees in the process towards a concept of multi-local work?

A first option is to involve employees in selecting places offered for flexible working. More than 70% of respondents would also like to be involved in developing regulations and the implementation process.

2) Shape the New Normal

Adjustments need to be made in a structured and thoughtful way to utilise the potential of multi-locality for the employer in the best way. Still, for employers, the urgent question is how to make multi-local work successful in times of high dynamism. To summarise once again, freedom of choice of work location enables greater job satisfaction and productivity among employees. In addition, absenteeism is reduced because employees can choose the work location where they are healthy, less stressed and not bored. It is also clear that respondents achieve better work–life integration when they can do work from home. Thus, the ability to work in a location-flexible manner could possibly also lead to an increase in the workforce by making part-time work easier or enabling longer working lives. One thing is certain: companies can only retain their employees and attract new talent if they promote mobile working, which 46% of respondents perceive as the 'new normal'. This is because 87% of those surveyed are not prepared to make any compromises as they need to continue to work flexibly in the future. At the same time, companies are strengthening their employer brand in this way. Based on the results, the first recommendation for action is that job success and personal preferences are the most decisive reasons for employees' choice of work location: labour and legislators should offer employees the most excellent possible and required freedom of choice when selecting their place of work.

3) Expand support services

Another recommendation for action relates to the need articulated by the respondents for more support offerings for mobile working in general and technical support, which currently exists only inadequately in the companies. By communicating directly with their employees, companies can identify their needs and further increase mobile work success through improved training opportunities.

4) Create individual solutions

Furthermore, the results clearly show that strict requirements affecting the entire company with regard to the design of mobile work are counterproductive. Only 18% of respondents said that changes to the rules governing the choice of work location should be made uniformly for the entire company. In contrast, 39% of respondents consider it sensible to make decisions per team or organisational unit and 43% even prefer individual regulations. Companies are therefore advised to set the level of decision-making as close to the individual level as possible. Through an initial exchange within the teams, it can be analysed whether the advantages of an individual regulation outweigh the disadvantages of the effort for the respective company and organisational unit. In the same process, it can be useful to discuss the organisation of employees on the team or project level to define common regulations/rules of the game that allow smooth cooperation despite multi-local locations.

5) Improve work from home equipment

As part of a planned change process, companies must also regulate the involvement of employers in the design of work from home for employees. As the study data show, there is an urgent need for action regarding equipping work from home workplaces. Currently, less than half of employees have a complete workstation compared to their office. The furniture and equipment necessary for information and communication technologies are inadequate for many. To guarantee good work success at home in the long term and promote employees' health, their goodwill should not be overstretched in terms of their willingness to make concessions for acquisition and maintenance costs.

The results of this study encourage us to trust employees and involve them in shaping the working world of tomorrow. Regulations involving employees should be created and communicated politically and within the company. The core element should be the highest possible degree of freedom in deciding where to work to achieve success for employees and companies.

5.4 Lessons learned for real estate stakeholders

Changing space requirements necessitate adjustments to the business models and strategies of real estate industry players

The fundamental change in the world of work with a qualitative and possibly quantitative change in the demand for office properties inevitably impacts the other players in the real estate industry such as project developers, investors and financiers. At the same time, the transformation can be seen as a challenge and an opportunity to develop their own companies further, especially when opening up new business areas and asset classes. These opportunities and challenges will now be examined.

The overarching question of project development: What is the office of the future?

For project developers, the question arises as to which areas they should still develop in the future. What office space will still be in demand in the future? How should floor plans be designed? Are the interests of companies and employees congruent if employees mainly want to work in cellular offices? What structural measures can be taken to promote communication in the office? Which locations will be in demand in the future? What makes work from home attractive and how can this be transferred to office planning? What are the implications for the residential asset class?

1) Involvement of the users

Project developers probably cannot answer these questions on their own. This makes contact with the potential tenants of their properties all the more critical. While previous studies have already established that the transformation of the real estate industry will be geared primarily to user needs (Pfnür and Wagner, 2018), this is truer today than ever. Thus, against the new backdrop of mobile working, the individual requirements of corporates for office space must be considered in the design even more than before so that they can provide space that promotes communication in the individual corporate context according to their ideas. In addition, however, the ability of the space to be used by third parties, as demanded by the capital market, must not be disregarded. The challenge for project developers is, therefore, to satisfy increasingly individual customer wishes as far as possible while at the same time meeting the requirements of standardisation. This question of balancing conflicting interests to a certain extent can probably only be answered on a case-by-case basis, i.e. depending on the building-related or rental agreement circumstances, for example.

2) Further development of coworking spaces

With the presumably increasing importance of coworking spaces, this segment may offer the potential for further development of the product range of project developers. Therefore, offers to coworking operators may have to be considered even more significant than today in neighbourhood projects or the development of mixed-use properties. Project developers are also faced with office properties that may no longer be required for their original use. Do new business opportunities possibly present themselves here as well? For example, many major cities have a considerable shortage of residential space. It would therefore be worth examining the extent to which office properties that are no longer needed could be put to new use, for example, in the form of residential buildings.

3) Extend the field of vision to the area of housing.

In general, the expansion of mobile working could lead to lasting changes in the requirements for residential real estate. The previous study from 2021 already showed that the success of working from home is also significantly influenced by the spatial conditions. Accordingly, planning a study room or technical equipment suitable for working from home could meet with demand among office employees, presumably making it easier to separate work and home life, for example. At the same time, other studies indicate that the demand for living space is shifting to other locations, namely, peripheral locations in the countryside (Pfnür et al., 2022). An expansion of work from home allows office workers with this desire to work in locations more remote from corporate offices. It is thus an enabler for the new housing desires of broader population segments. Project developers must adapt to these desires and adjust their offerings accordingly.

Investment in office real estate

From the perspective of office property investors, the results may not be surprising at first glance due to the documented restraint of corporates on the rental market but they are also no less dramatic. For them, the downsizing of office portfolios by up to 30% means that huge assets are up for grabs. Properties stranded due to changing user demands must be dealt with.

Office property investors will therefore have to examine their portfolios closely to determine the future viability of their investment properties. Pressure is looming not only from sustainability regulation but also very specifically from their customers, whose demand will focus on a specific type of office property. This study indicates that the future office property will be utility-maximising buildings that reinforce team communication. At this point, no statements can be made about the exact design. It is even questionable whether a 'one size fits all' approach will meet the high demands of different companies in their search for office space: The results suggest that the qualitative and quantitative demands placed on office space differ not only at the employee level but also from company to company on an individual basis. The exact demands of users on office real estate must be further illuminated in subsequent studies. To a certain extent, individuality demands can still be reconciled with the third-party usability required for the capital market through flexible building design. Nevertheless, higher costs could be associated with the higher demands of customers despite the background of increased rents. Investors may have an even greater interest in long-term leasing relationships with their clients over which this expense pays off. However, this could stand in the way of corporates' demands for flexibility. Outstanding client relationship management thus seems inevitable for successful investments in office properties.

On the other hand, the increased interest in work from home or in coworking spaces also offers potential; for example, apartments suitable for work from home must be offered and space must also be available for coworking spaces. This offers opportunities for investors to position themselves. Nevertheless, all-in-all, an extremely challenging market environment is revealed for real estate investors. Many investors are competing for a small number of attractive properties on the one hand while facing reduced demand from corporates on the other. At the same time, they have to identify office properties without prospects in their portfolios and try to preserve the assets tied up in them by selling or converting them. In a market environment that is already challenging, they have to be even more precise in their calculations. Long-term value-creation partnerships with developers and corporates appear to be the only effective means of countering these challenges.

5.5 Lessons learned for others

Effects of multi-local work on urban land use planning

Regional and municipal urban land use planning faces various challenges caused by the expansion of mobile working. Thus, it, too, must deal with the question of how to deal with office properties that are no longer needed. Because vacancies also negatively impact property boundaries, this is a pressing challenge for regional planning. Together with project developers, the legal framework for individually suitable solutions must be created in the form of corresponding urban land use planning. For the designation of areas for office use, urban land use planning faces the challenge of identifying suitable locations, i.e. locations for which office use is still a possibility.

Changing design needs in (inner) cities

Quite fundamentally, cities already have to deal with the question of how they can make their city centres more attractive again. Against the backdrop of the present study, the role that office use plays in this must be discussed meticulously. How is the decline of downtown corporate office work affecting the centres? What demands do office users place on their office and its surroundings? For example, this study indicates that additional offers such as childcare close to the workplace or attractive catering establishments can create incentives for more intensive office use, even in the mobile working world. To realise any potential, such offers in the vicinity of office properties are, therefore, suitable levers for increasing their frequency of use and, thus, revitalising city centres. The challenge in the context of inner-city development is, therefore, to offer an attractive environment for the location of office work.

Infrastructure and climate protection

Last but not least, the increase in working from home could also positively impact efforts to combat climate change thanks to the elimination of commuting times. A decrease in commuting could also relieve some pressure on the transport infrastructure. Nevertheless, this study shows that public infrastructure also faces challenges: The 15 percent of office workers who do not have an adequate Internet connection at home for mobile work are likely to be not only frustrated but also more dissatisfied and limited in their quality of life. Less productive work also results in an economic disadvantage that damages Germany as a business location.

5.6 Uncertainty about the working world of tomorrow

The results and implications of the study are precise for the present time of consideration. Work from home has found its place in the world of work and multi-local work should be conventionalised.

However, it is also essential to take into account the highly dynamic nature of this trend, which could lead to a further increase in mobile work in the medium to long term or despite an increase in the proportion of tasks that can be performed remotely, to the opposite effect with a renewed increase in office use. A variety of influences determines the course of events. First and foremost, the world of work is subject to external influences such as demographic change with a declining labour supply, technical innovations, climate change/environmental sustainability, changes in the culture of values and work and changes in the framework conditions of work, which trigger further adaptation requirements for the design of working environments.

In particular, the explosive topic of the digital transformation of working environments should be highlighted again. Technological developments, such as AI-supported software (e.g. ChatGPT, robotics), fundamentally change knowledge work. Employees will increasingly have different work-related framework conditions of work and seek a different physical organisation of their work. Conceptual work will increase and require more significant interaction if necessary because the software will take over standard processes. However, it remains uncertain whether this will result in work increasingly taking place in the office or third places again as improvements in collaboration technology (e.g. augmented reality and further developments in the direction of metaverse) are making virtual collaboration easier and enabling ever better collaboration at multi-local work locations.

The impact that distributed workplaces will have on the future of the office and the distribution of work shares in each location is difficult to predict but what is clear is this: The world of work is undergoing significant change.

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