

FUTUREPROOF

→ HOW TO CREATE OFFICES
FOR UNPREDICTABLE TIMES

strategic partners:

workplace

SKANSKA



MUTE.

NAIREINA

FUTUREPROOF

→ **HOW TO CREATE OFFICES
FOR UNPREDICTABLE TIMES**

**think
co**

Tomasz Bojęć
Karolina Bondar
Aleksandra Leciej
Katarzyna Siermińska
Aleksandra Świstek

substantive support

Bogusz Parzyszek
Zofia Kurczych
Barbara Majerska
Aleksandra Piotrowicz

graphic design:

Aleksandra Dobrzyńska

data design:

Zuzanna Karczewska
Julia Skiepmo

Warszawa 2025

strategic partners:

workplace

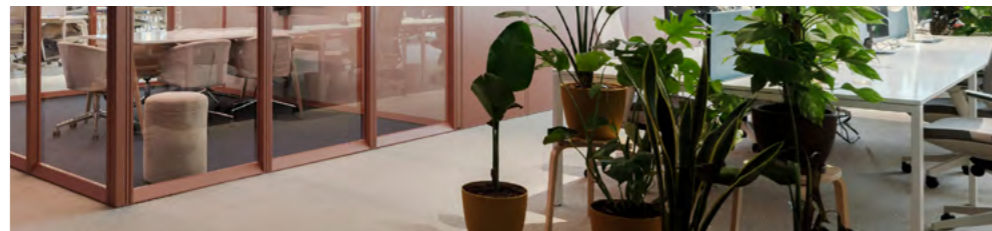
SKANSKA



MUTE.

table of contents

the story of the offices 8

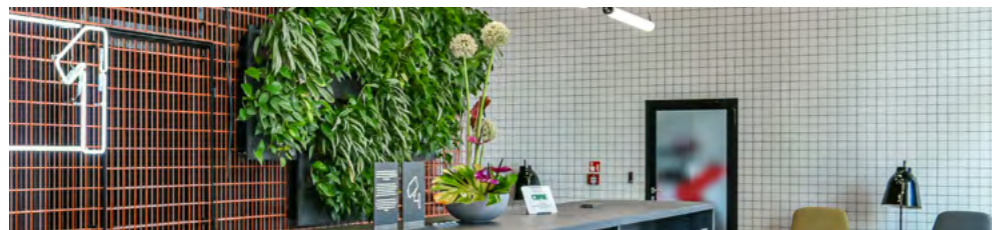


flexibility and circularity 19

less but better 20

quieter over the desk 34

beyond green 42



adaptation to technology 65

very thoughtful offices 66

communication technologies 82

technological certificates 90

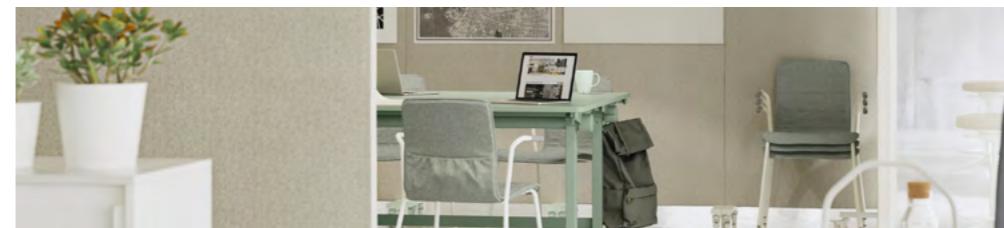


evidence based - design 103

everyone different, everyone equal 104

different states of concentration 124

the increasing role of cooperation 140



selection and formation of the office 169

tribalism of the workplace 170

office formation processes 190

strategic partners 202

notes 204

about us 214



introduction

Tomasz Bojęć
General Manager, ThinkCo



I remember the first time I came across the concept of "work like home." It was 2013, and I was in my mid-twenties. While looking for interesting projects, I stumbled upon photos of Evernote's new headquarters in Redwood City, designed by O+A. Intrigued by the architects' approach, I spent the next few days researching similar projects and reading about comparable case studies. In my mind, that moment marks the symbolic beginning of modern workplaces appearing in Poland as well—shortly after, I heard about the first such developments along the Vistula.

From that point on, over the next several years, I watched as study after study

confirmed the effectiveness of this approach and as the trend of "domesticated" offices became more widespread. I observed how, in our own way, we began turning the office into a home—and over the past five years, driven by the pandemic, how we've started turning our homes into offices. This only further confirmed that a friendly, intimate atmosphere can positively impact both our well-being and the quality of our work.

However, even before 2020, this approach had come under criticism from those who saw the "transformation of the office into a home" as a violation of an allegedly permanent and timeless status quo—because, after all, offices had "always looked like this," typically referring to one trait of so-called traditional workplaces. Yet both productivity metrics and historical reality show that these critics are mistaken in their assessments. Still, the criticism itself is entirely valid. Without questioning, there can be no progress—and there's no doubt that our offices must evolve and keep pace with the changing nature of work in the 21st century.

These are the issues we explore in the following report. The domestication of offices is merely the beginning of a much broader transformation that workplaces will undergo in the coming years. With the advancement of technology—both the kind that simplifies our lives and the kind that distracts and complicates them—our expectations and needs related to the office are also changing. What was once relatively fixed is becoming fluid, and what was temporary is becoming embedded through circulation. Simply adapting to current technology is no longer enough—we must be prepared for what is yet to come. Moreover, the office is no longer just a place to work; it is becoming the essence of the organization, a space for building identity. Above all, it must be a place that supports our focus during individual work and fosters creativity in group work—so that these activities unquestionably benefit from our presence in the office.

We spent six months thoroughly studying all these aspects. To ensure a deep understanding, we consulted with the interior architecture studio Workplace, who shared their insights based on their design experience. This is how ThinkCo's most comprehensive report to date came to be—and I warmly invite you to explore it.

think
co

1 story of the offices

The origins of modern offices date back to ancient Rome, where the term *officium* referred to official duties rather than physical space. The breakthrough came in 18th-century England with the creation of the first dedicated office buildings. In 1729, the British East India Company erected the monumental East India House in London, creating the prototype of modern administration – within its walls, thousands of officials coordinated global commercial operations.

The industrial revolution brought another stage of development: offices began to emerge as logistical back-up facilities for factories, although at the time they

played a purely utilitarian role, often located in industrial halls or warehouse annexes. The form we recognise today as the most 'office-like' had its origins much later, only a little over a century ago, at the beginning of the 20th century.

traditional offices

The most 'typical' office typology is still recognised today as open space, an idea that originated in the early years of the 20th century. Frederick Taylor is considered to be the main developer of open-plan office space thinking¹. Taylorian spaces were inspired by production lines in factories and involved maximising the use of space. Densely arranged rows of desks were designed for ordinary workers. Such space was surrounded by enclosed offices for managers, who could easily control the work of their subordinates^{2,3}.

The concept was humanised and refined by one of the most eminent architects of the 1920s, Frank Lloyd Wright, who saw in the Taylorian concept above all the advantage of the absence of walls, described by him as a barrier to innovation and free communication between employees. Wright's ideas presented in this way, however, only gained practical development in the 1950s, when the German company Quickborner presented a system of modular desks with movable partitions



source: Yale Center for British Art, Thomas Malton the Younger, East India House.



source: Combine, Das Quickborner Team und die Bürolandschaft, Stadtwerte Karlsruhe.

HISTORY OF OPEN PLAN OFFICE SPACE

type	date	nature of the space
Taylor-type offices	early 20th century	<ul style="list-style-type: none"> • pattern transferred from production lines in factories • open spaces densely packed with rows of desks that allowed for the control of superiors • maximum use of space • management had separate, closed offices
Bürolandschaft offices	1950 - 1960	<ul style="list-style-type: none"> • organisation of the office in an organic manner, irregular layout • desks spaced according to the needs of the teams • separation of workspaces by plants and lightweight partitions • objective: strengthening cooperation and a more natural workflow • elimination of hierarchies, employees at all levels in one space
office cubicles	since 1960	<ul style="list-style-type: none"> • extensive open spaces • offices divided into individual cubicles • ensuring privacy and promoting concentration • reduced interaction and isolation • high staff density

– a compromise between the collective nature of work and the need for intimacy. Thus was born the concept of the 'office landscape' (Bürolandschaft), which introduced greater flexibility by separating teams with plants and light walls⁴. In its concept and form, this vision was not significantly different from what we recognise today as 'domesticated' offices.

In the following decades, attempts were made to develop the concept through personalisation and ergonomics of workstations, for example in 'Action Office' projects. Unfortunately, due to the high cost (and lack of necessity), the system was not introduced on a large scale, and simplification of the idea led to cubicle farms – small cubicles limiting comfort⁵. Thus, it should be considered true to say that 'work like home' is in fact an older concept than what we commonly recognise as the so-called traditional office.

In Poland, open space only became popular in the 1990s with the political transformation⁶.

Over the years, the disadvantages and disadvantages of working in a crowded open space have been recognised, but economic considerations have invariably prevailed. Cost optimisation has always meant densifying workstations at the expense of employee comfort. Unfortunately, it is still possible to find offices in which the key objective is not so much functionality as maximising the use of available space. The individual needs of employees in such places have a low priority. Standardised solutions for workstations and environmental parameters – such as lighting, ventilation or temperature – dominate, leaving no room for personalisation of working conditions.

Additionally, in traditional open-plan offices, specific desks are usually permanently assigned to individual employees, making it difficult to adapt the space to changing tasks and needs. The formal décor and rigid structure of such offices often exclude less formal areas that could foster relationships between

colleagues. Although open space is sometimes praised for facilitating the flow of information and better accessibility of employees, it usually lacks spaces that allow for spontaneous team meetings without the need to book a conference room in advance. All this means that the open space model increasingly needs to evolve towards more flexible and diverse solutions.

modern offices

In the modern office, there is a move away from maximising workstation density to creating spaces that support efficient work and employee wellbeing. Contemporary evidence shows that rest and relaxation foster creativity and innovation, which is why many offices have meditation and relaxation rooms, gyms, fitness rooms or informal areas for spontaneous interaction. These often resemble home interiors to create a sense of comfort and greater freedom.

Changes in the approach to shaping office space are also linked to the emergence of new working models and the growing popularity of remote and hybrid working. These factors have increased the demand for flexible and adaptable solutions. Many employees are not permanently assigned desks – instead, they are allowed to choose where they work according to their current needs, giving them more freedom to organise their tasks. In addition, the ability to personalise workstations according to individual or group preferences has also become important. Attention to ergonomics and employee health is also becoming standard.

At the same time, it is crucial to provide zones conducive to concentration and privacy. Support for individual work is provided by dedicated rooms, acoustic booths and mobile sound-isolating panels and walls.



source: Dwell, The History of the Modern Workspace.

NEW WORKING MODELS

- **Activity-Based Working** – a working model based on the division of space into zones corresponding to different activities, such as individual, team or creative work.
- **Agile Workplace** – an office designed with flexibility in mind, allowing employees to choose where they work depending on the task at hand
- **Work like Home** – an office inspired by the home environment to enhance the working experience
- **Neighbourhood concept** – combines features of all of the above and helps build relationships

Modern workspaces are inextricably linked to ecology and sustainability. An increasing percentage of office buildings are certified for their environmentally friendly solutions and attention to user comfort and safety. Equally important elements of modern offices are modern technologies that not only improve building management, but also support the work of teams and individual employees.

The direction of modern offices remains relevant, with all the elements described above becoming standard for more and more companies. Indeed, companies are recognising that a well-designed office space not only increases productivity, but also strengthens the organisational culture.

offices ready for the future

Traditionally, offices were planned in advance without taking into account the needs that might arise afterwards. The division of space was related to the

number of employees and the size of the premises. The number of tables and necessary spaces were determined on this basis. New working models have allowed us to return to the concept of the 'office landscape' – so we create spaces that are still highly functional, but more human, diverse and open. This helps, but it is still not enough in the long run. The offices of the future need to offer more flexibility. Therefore, a modular approach, which allows spaces to be shaped according to the current needs of the company and employees, is becoming crucial.

The offices of tomorrow, those ready for the future, must respond not only to today's challenges, but also to those not yet known. Enable the fulfilment of needs that the traditional office, the 'office-home' or simply the home does not give us. Capitalism is based on continuous growth in production and this will not change in the coming years. However, our understanding of productivity, and our knowledge of what actually influences it, has changed dramatically in the last decade or so.

Today, we know that an office divided into rows of identical cubicles, where, as in a 19th century factory, only the time spent at the desk counts, does not increase the efficiency of either people or companies. However, the creation of a 'home office' is not a priori a universal solution either. We are different as individuals, even if we do the same job – and sometimes our needs change during the week; because we may have different requirements on Thursday than on Tuesday.

Productivity support must take this variability into account and offices should adapt to it. Numerous studies over the past five years indicate that simply being in an office does not directly translate into our productivity – however, a well-designed working environment that allows for flexible organisation and adaptation to individual needs can already significantly increase our productivity.

fot. Adam Grzesik, projekt: Luxmed, design: Workplace.pl



factors currently shaping the future of offices

TECHNOLOGIES

They are constantly evolving, changing the way workspaces are designed and used. The dynamic development of technology also means that deployed solutions are aging rapidly, forcing designers and organisations to choose flexible and scalable systems. In this context, the offices of the future appear as integrated platforms that connect people, data and devices to support innovation and organisational growth.

PRODUCTIVE INNOVATION

Combining creativity with productivity in everyday work. In a dynamic business environment that requires rapid response to change and the development of new solutions, offices need to foster innovative thinking. Moreover, organisations that prioritise innovation in the workplace are more productive and demonstrate sustainability⁷.

CIRCULARITY

The selection of environmentally friendly materials, energy-efficient design and recycling of infrastructure are key aspects that respond to climate and social challenges. However, it is also about ensuring that the chosen finishing materials, furniture and office equipment allow for re-use due to the pace of a changing world. Although today ESG issues are mainly a cost, in this context they will soon mean savings.

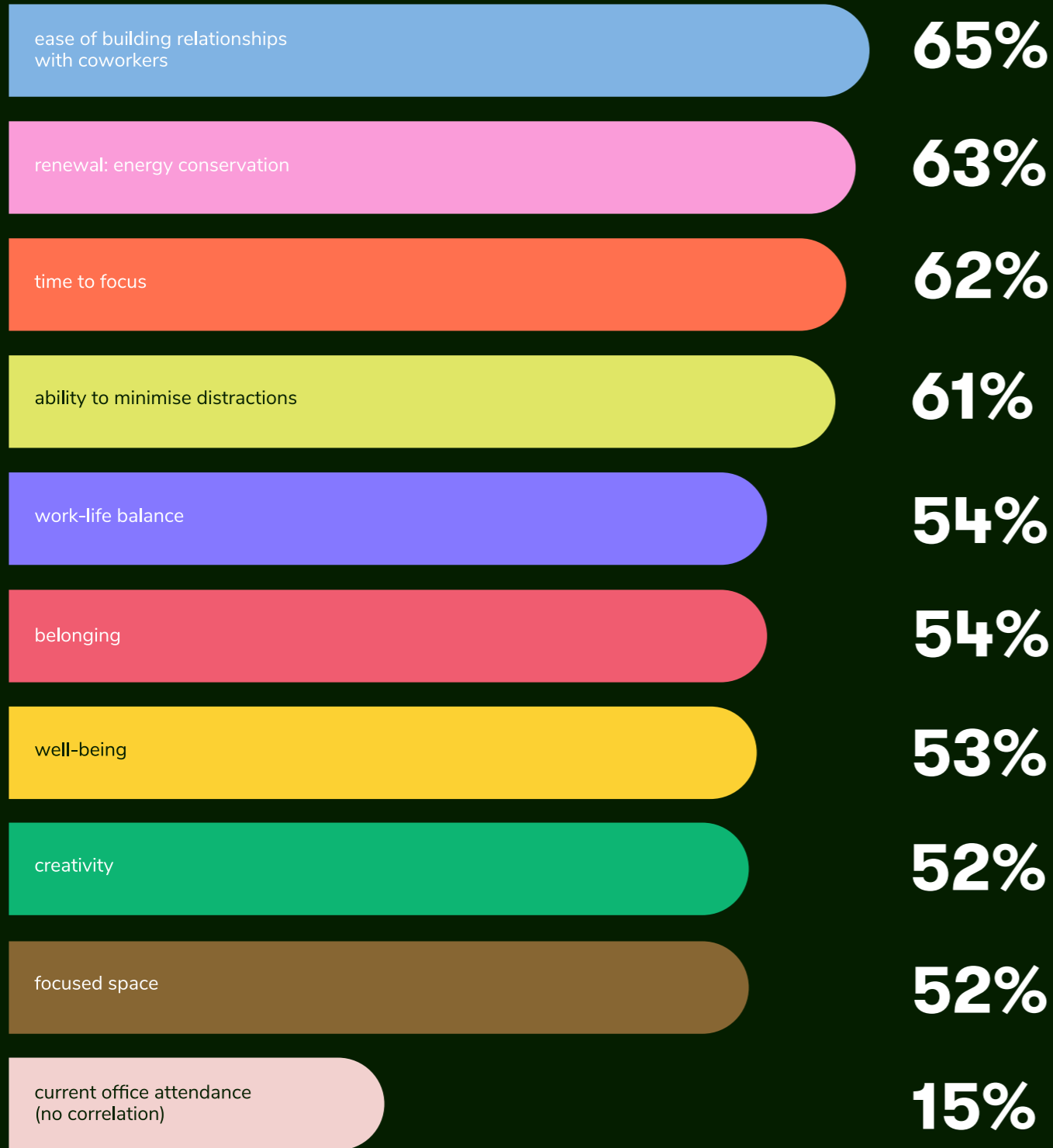
WELL-BEING

Both the physical and psychological comfort of employees is crucial. The importance of designing spaces with the diverse needs of workers in mind is growing. At the same time, the importance of inclusion is growing, ensuring that the workplace meets the needs of all workers, regardless of their age, background or neurological differences.

further details can be found in the report: "friendly offices"

FACTORS AFFECTING PRODUCTIVITY AT WORKPLACE

stronger correlation with productivity →



source: Cushman & Wakefield, EMEA Office Fit-Out Cost Guide 2024, 2024.

HIGHER CORRELATION TO PRODUCTIVITY

REMOTE AND HYBRID WORKING

The experience of the last few years has had a significant impact on the decentralisation of office space. Offices are less and less a permanent workplace, becoming more a space for meetings, knowledge exchange and collaboration. At the same time, a dynamically changing reality requires offices to be more flexible – they must be ready to adapt quickly to new challenges or potential crises.



“

For the past few years, the office segment has been undergoing major changes – from workplaces to spaces for collaboration, exchange of ideas and relationship building. This is not just a matter of trends, but of real challenges that companies have to solve. Companies in the market have tried remote working and are now increasingly moving towards hybrid working and the offices themselves are ceasing to be everyday workspaces and becoming more flexible, requiring a new approach to their design. In turn, the growing expectations of employee wellbeing are not just about ergonomic chairs, but also spaces that support mental and physical comfort. It's no longer just fruit Thursdays, but deeply considered work and collaboration spaces.

At IKEA for Business, we try to respond to these changes in a simple way – we help entrepreneurs create offices that are practical, welcoming and tailored to their needs. Our solutions are flexible and scalable, because we know that today's office needs to be ready for rapid change. It's not just about furniture – it's about understanding how space affects people and their work. We believe that a well-designed office is a tool to support the growth of a company and its employees.



Damian Łuczkowski

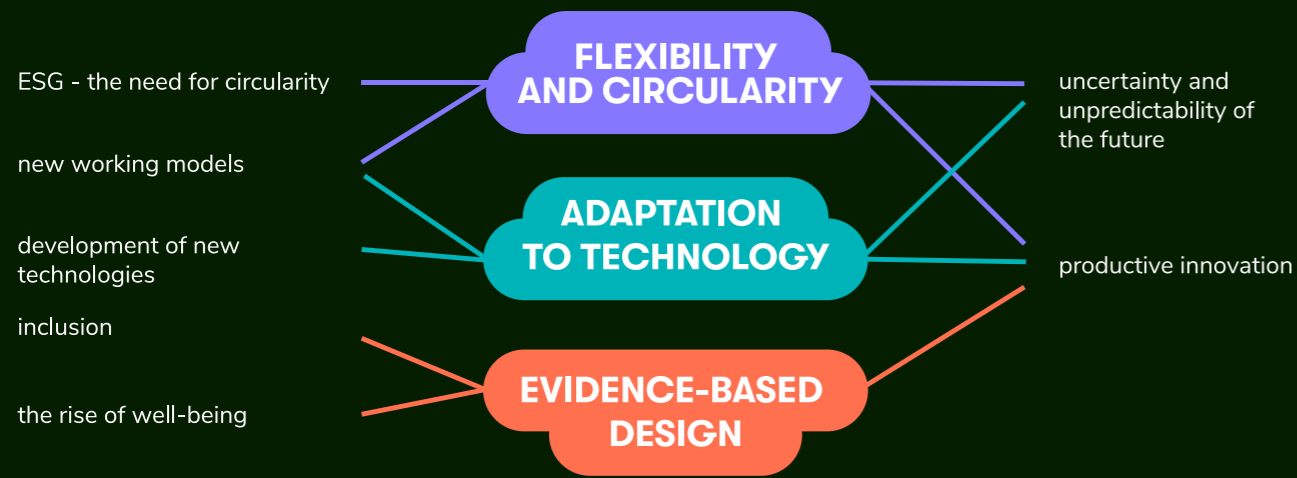
IKEA for Business Manager

FACTORS SHAPING THE FUTURE OF OFFICES

factors shaping the future of offices

the directions in which the future of offices is developing

factors shaping the future of offices



↑
(essential to bring all these elements together)

ADVICE IN THE SELECTION AND FORMATION PROCESS OF THE OFFICE

CHARACTERISTICS OF TRADITIONAL, MODERN AND FUTURE-READY OFFICES

traditional offices	modern offices	offices ready for the future
<ul style="list-style-type: none"> open spaces formal decor formal spaces dominate a permanently assigned post standardised workstation, no personalisation possible no possibility of adapting the workstation to the type of task being performed low level of privacy standard lighting, ventilation, temperature - no customisation possible fully stationary work 	<ul style="list-style-type: none"> work like home diversity of space, possibility of adapting the place to current needs possibility to personalise the space flexibility and adaptability ergonomics and worker comfort taking care of the wellbeing of employees inclusiveness focus on sustainability and ecology security and privacy use of technology to support the work remote/hybrid working 	<ul style="list-style-type: none"> productive innovation / workplace innovation space and office design tailored to the needs of the organisation adaptability to technology, tech savvy circularity flexibility tailoring to employee needs - evidence-based design

foto: Toa Heftiba, unsplash





phot. Emontenegro Architectural Photography, Mute Modular w biurze Uphill Health, Lizbona

flexibility and circularity

In every home, something out of the ordinary sometimes happens, such as a family party. Then we set up a table and extra chairs - or, on the contrary, we push it against the wall and fold out the sofa. And when it comes to renovation, we don't throw out all the old furniture, but keep most of it, sometimes renovating it. Flexibility and circularity are part and parcel of living in our homes; it's time for them to apply to our offices too.

2 less but better

A global study conducted in 2023 showed that 80% of offices have reduced their space since the pandemic. One might suspect that this is the aftermath of the first two years of the pandemic and that the office market has been steadily improving since then. However, the same study showed that the number of companies that have reduced their space

has increased by 20% in the last year – indicating that also in post-pandemic 2023, many companies have decided to reduce space and try to make better use of a smaller office⁸.

The survey which presents companies' intentions for 2025 is slightly more optimistic. Total office occupancy globally has risen for two years (from the end of 2022 to 2024) from 30% to 60%, as a result of a strong push by employers to return to offices and desk-based working. In doing so, the number of companies planning to downsize dropped from 75% to 46%⁹. However, this data should be viewed as inflation – the trend curve is less aggressive, but the direction has not changed. There are still significantly more companies planning to reduce space than to increase it.



96% of companies in Poland declare operating in a hybrid model¹⁰. Most of them do not intend to change the way they operate, but the percentage of those satisfied with the current scope of remote working has dropped from 73% to 67% in a year¹¹

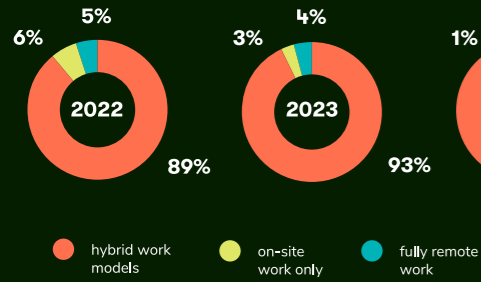
fol. Kinga Skalik, CreoConcept

source: WeWork, Grzybowska 60

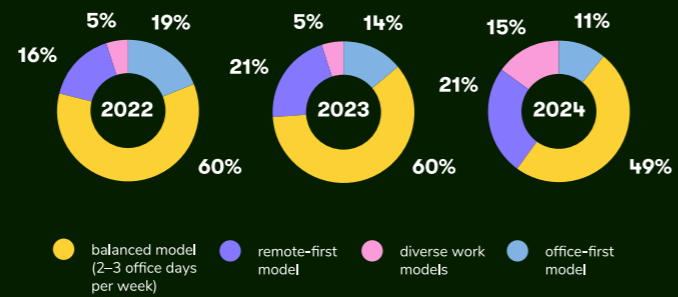


WORKING MODELS IMPLEMENTED IN POLISH COMPANIES

Implemented model



What hybrid work models are being implemented in organizations?



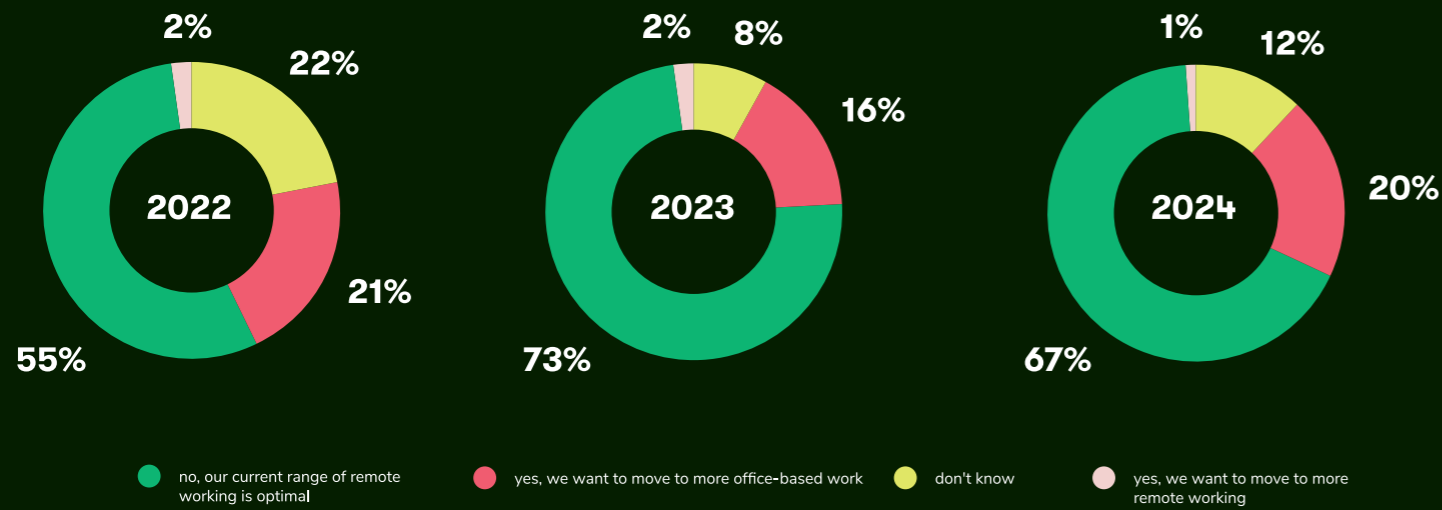
Source: Colliers, Hybrid and beyond, 2024.

flexibility matters

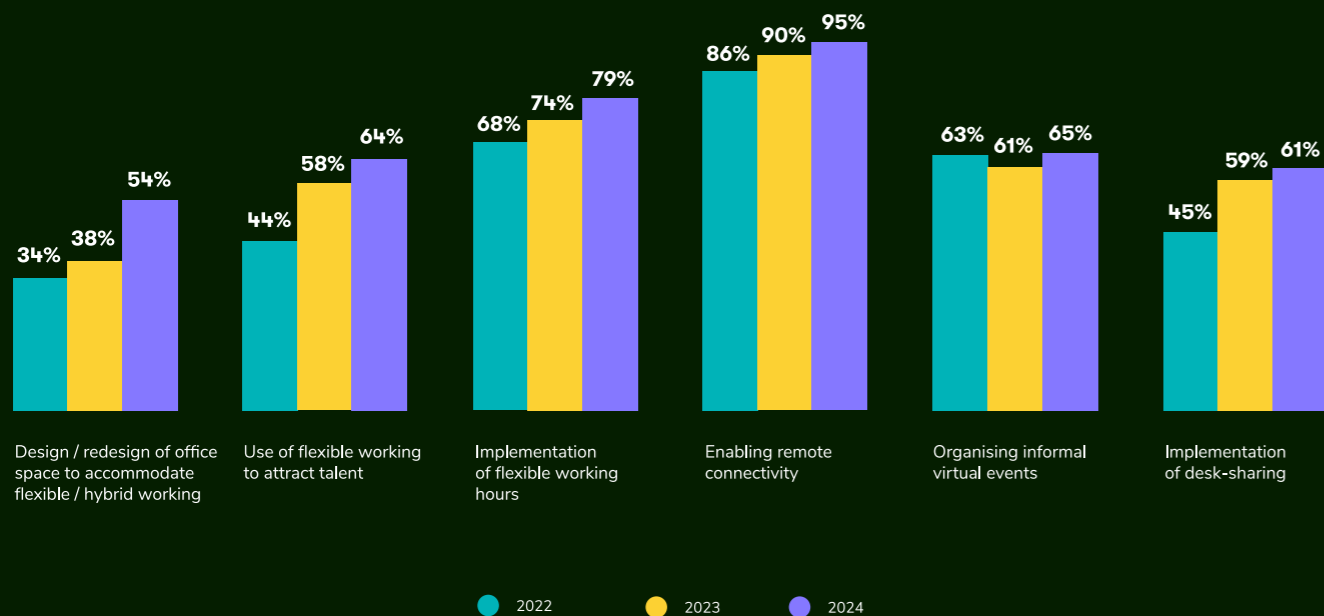
With the trend towards a reduction in leased space, expectations of the form and quality of office space are increasing. Modern facilities, especially those adapted to hybrid working, are in greater demand due to their functionality and high quality¹². At the same time, there is a growing need to adapt office space to the changing needs of employees and the expectations of tenants. 89% of companies are changing their office layout or design to meet new employee demands¹³. Changing team priorities and business directions require office spaces to be more flexible.

A space based on choice is important for companies, as it allows employees to access different zones, supporting concentration, collaboration, recovery and relationship building¹⁴. This contributes to the development of solutions that not only allow offices to accommodate different ways of working, but also to easily make changes to the layout and purpose of different parts of the office¹⁵. Modular layouts of spaces allow for quick modifications without the need for costly renovations, increasing functionality.

DO YOU PLAN TO CHANGE THE SCOPE OF YOUR REMOTE WORK IN THE NEXT 12 MONTHS?

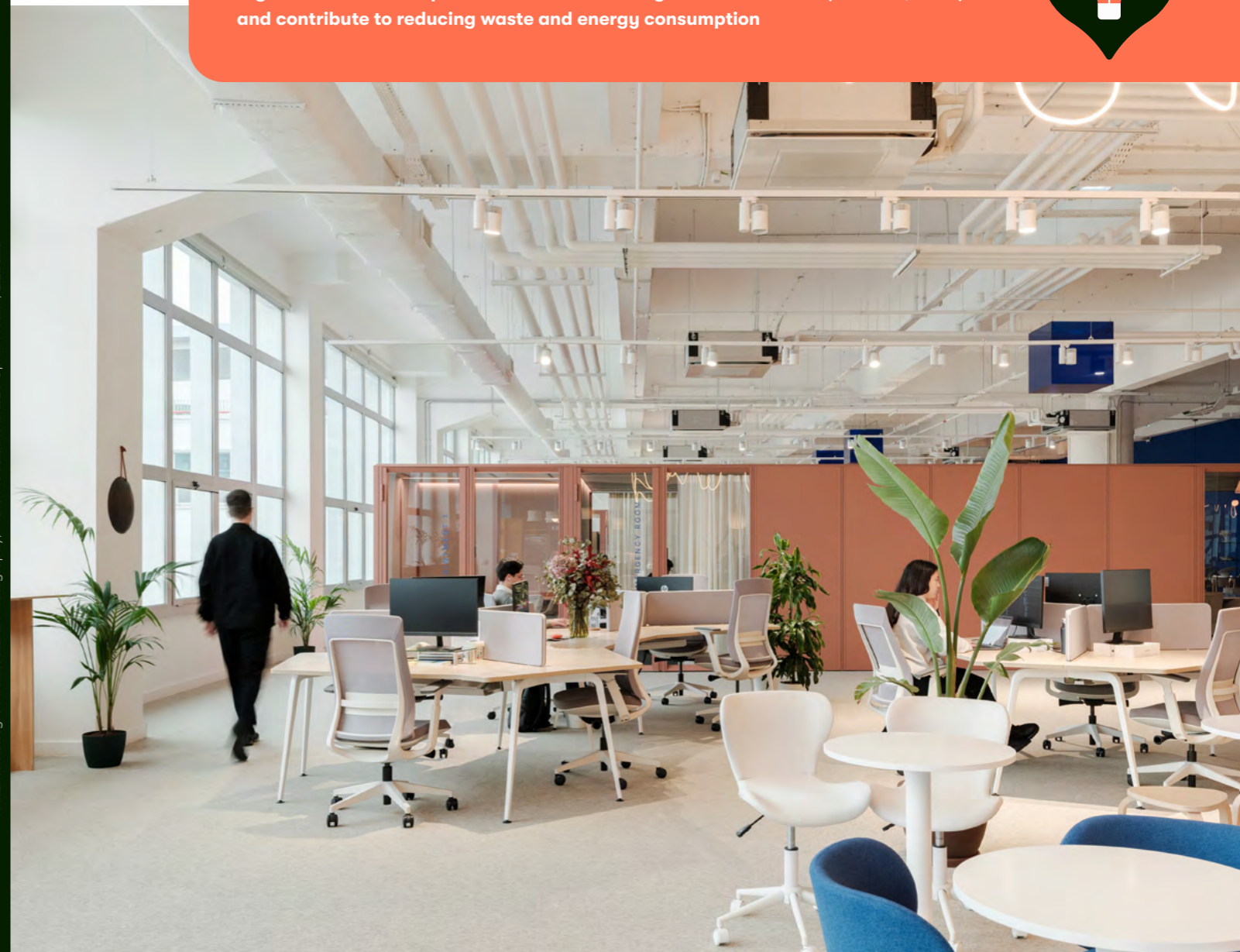


MEASURES IMPLEMENTED TO IMPROVE THE WORK OF HYBRID



phot. Emontenegro Architectural Photography, Mute Modular w biurze Uphill Health, Lizbona

flexible solutions promote sustainability by facilitating the implementation of green technologies. This is important in the context of tightening environmental regulations. Flexible spaces can also facilitate green certification (BREEAM, LEED) and contribute to reducing waste and energy consumption

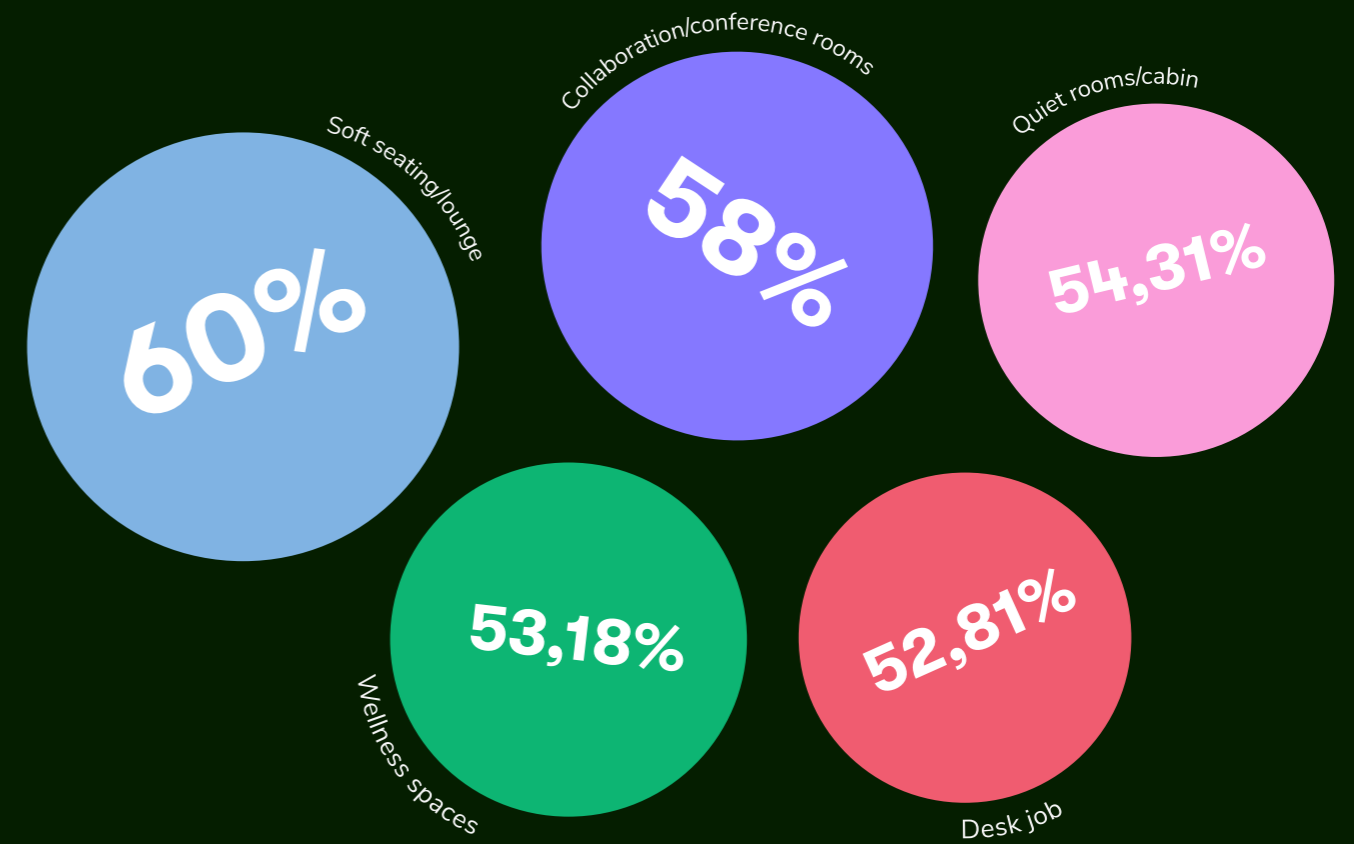


KEY ELEMENTS IN THE DESIGN OF MODERN SPACES

Diversity	areas for concentration, cooperation, creativity or relaxation
Flexibility	furniture and layouts easy to modify
Autonomy	space can be adapted freely to suit working style
Multifunctionality	zones that can fulfil different roles

source: compiled by ThinkCo from Office Principles, What is flexible working, Adaptable office design, 2024.

KEY FACILITIES OFFERED AT THE OFFICE



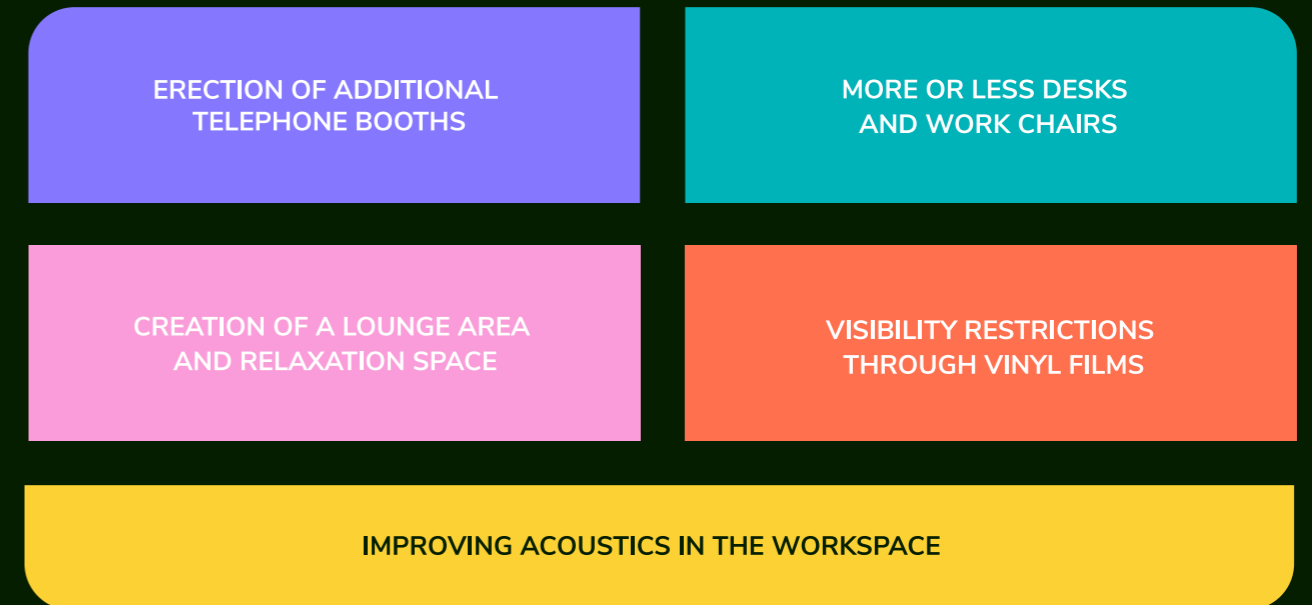
source: ThinkCo compilation based on Robin, The Office Space Report 2023, 2023.

DIMENSIONS DEFINING THE CAPACITY TO ADAPTATION



source: Adaptable Architecture, Theory and practice, Robert Schmidt III and Simon Austin, 2016.

THE MOST COMMON REQUESTS FOR CHANGE IN A FLEXIBLE



source: ThinkCo compilation based on Wevork, The Dynamic Office Why flexible work models require dynamic office designs, 2024.

it started with coworking

Traditional offices have struggled for years with limited adaptability. They are designed to last 3–5 years, which means that changes are only made at the end of this cycle, often as part of refurbishments on lease extensions. Until a few years ago, it was hard for us to imagine that things could be different. However, this situation has been changed by the emergence of flexible offices and, in particular, coworking spaces, which emerged two decades ago.

The first coworking spaces appeared as early as 1999, although the start of the movement is taken as the creation of Citizen Space in San Francisco in 2005, and the launch of the WeWork brand in 2010 as a key moment of development. Initially aimed mainly at freelancers and small businesses, offering access to a desk and shared spaces. In just a few years, however, they evolved to adapt their offering to the needs of larger entities¹⁶. It soon turned out that coworking spaces were a kind of remedy for the problems of the outdated and somewhat ossified traditional market, as the spaces rented by companies, even in the case of corporate brands, were subject to much faster, cheaper and simpler adaptation than spaces created for their needs in the traditional model¹⁷.

As a result, companies renting even large offices in coworking spaces were

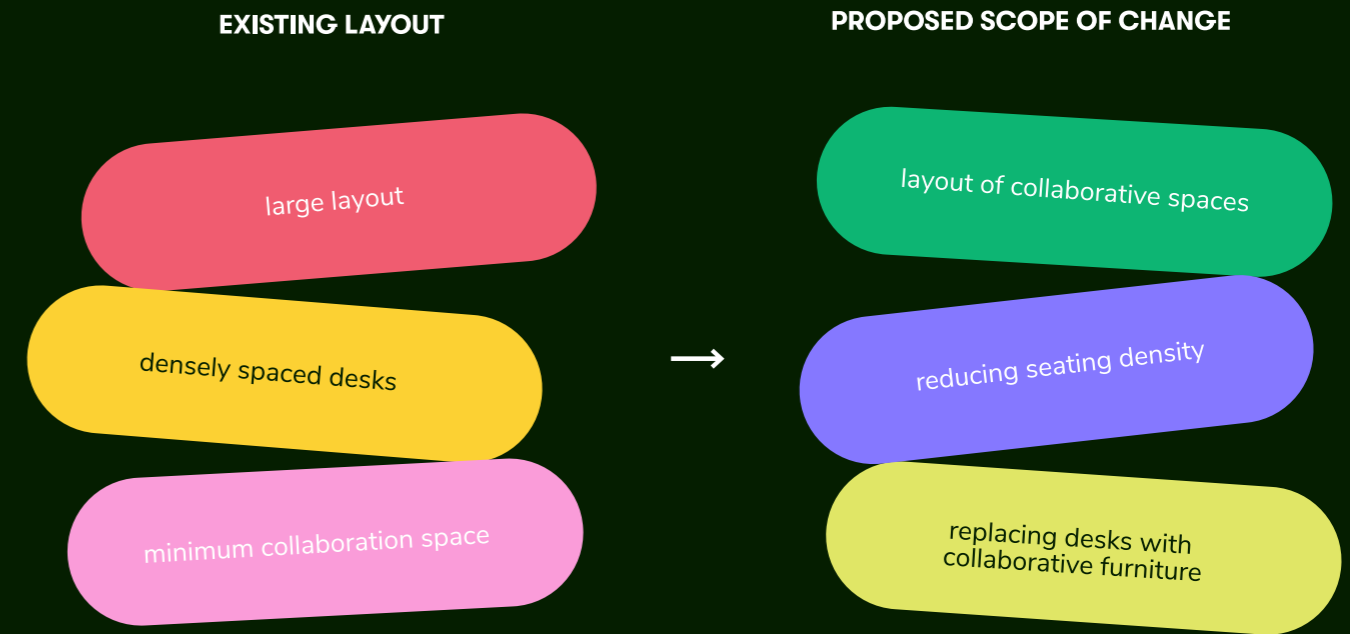
able not only to change the size of the rented space quickly, but also to reorganise it at low cost and adapt it to the needs or stage of the project at hand. This became particularly important in the post-pandemic period of hybrid working, when the concept of workspace underwent a revolutionary change. During this period, it began to become commonplace to transform the office with different arrangements, also by targeting collaboration and lower seating density.

multifunctional spaces

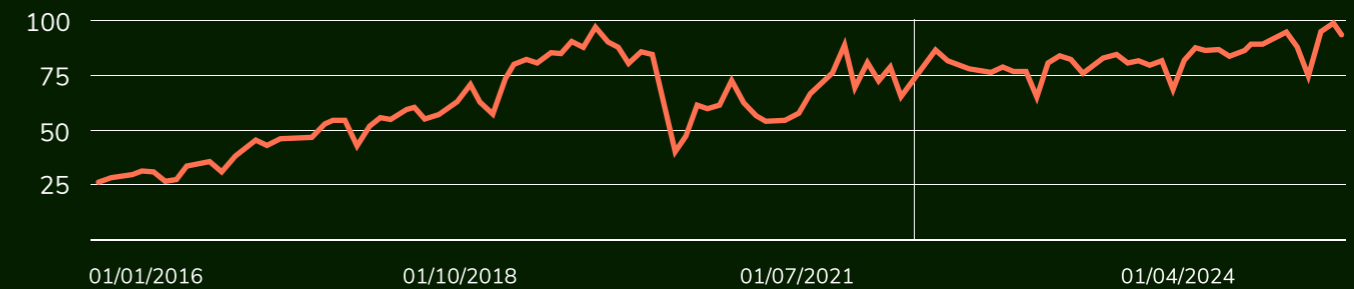
Observing the development and operation of coworking, the traditional office market has begun to adapt these best practices. Coworking has shown how to effectively create multifunctional spaces that can be quickly adapted to the changing needs of users, combining different functions and working styles in one place. This lesson has proved invaluable in the context of the growing demand for flexibility in traditional offices.

Adapting the space to meet the requirements of the team can include rearranging furniture, optimising acoustics, implementing technological tools or creating zones that encourage both collaboration and concentration. This approach helps to increase work comfort, improve communication and strengthen team bonds, which ultimately translates into better results and employee satisfaction. The basic

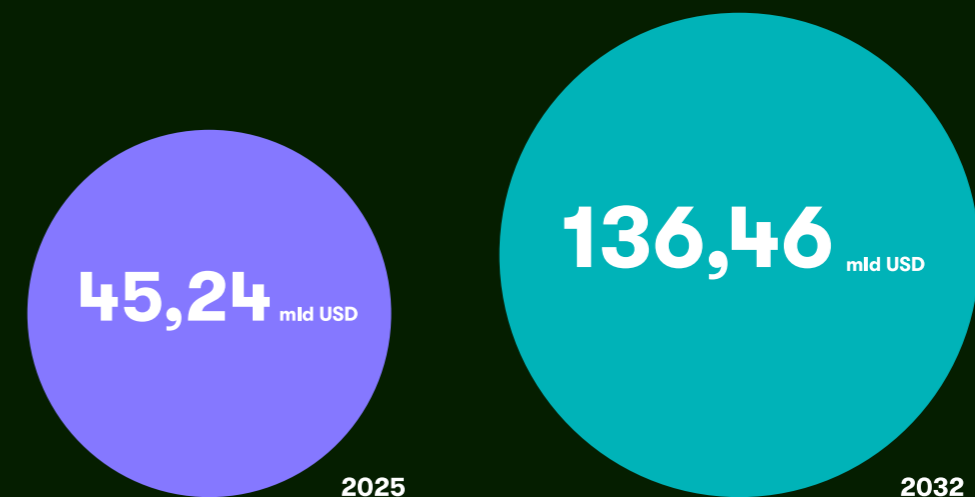
ADAPTATION OF SPACE IN A COWORKING ENVIRONMENT



KEYWORD "COWORKING" IN GOOGLE TRENDS



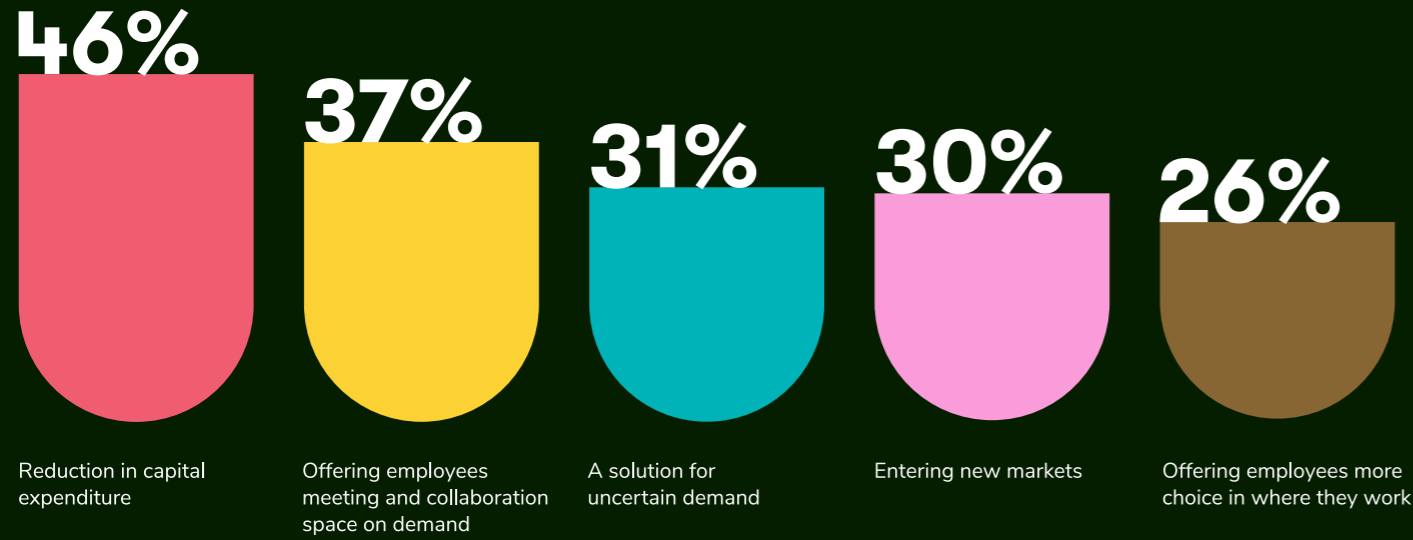
GROWTH OF THE GLOBAL MARKET FOR FLEXIBLE OFFICES



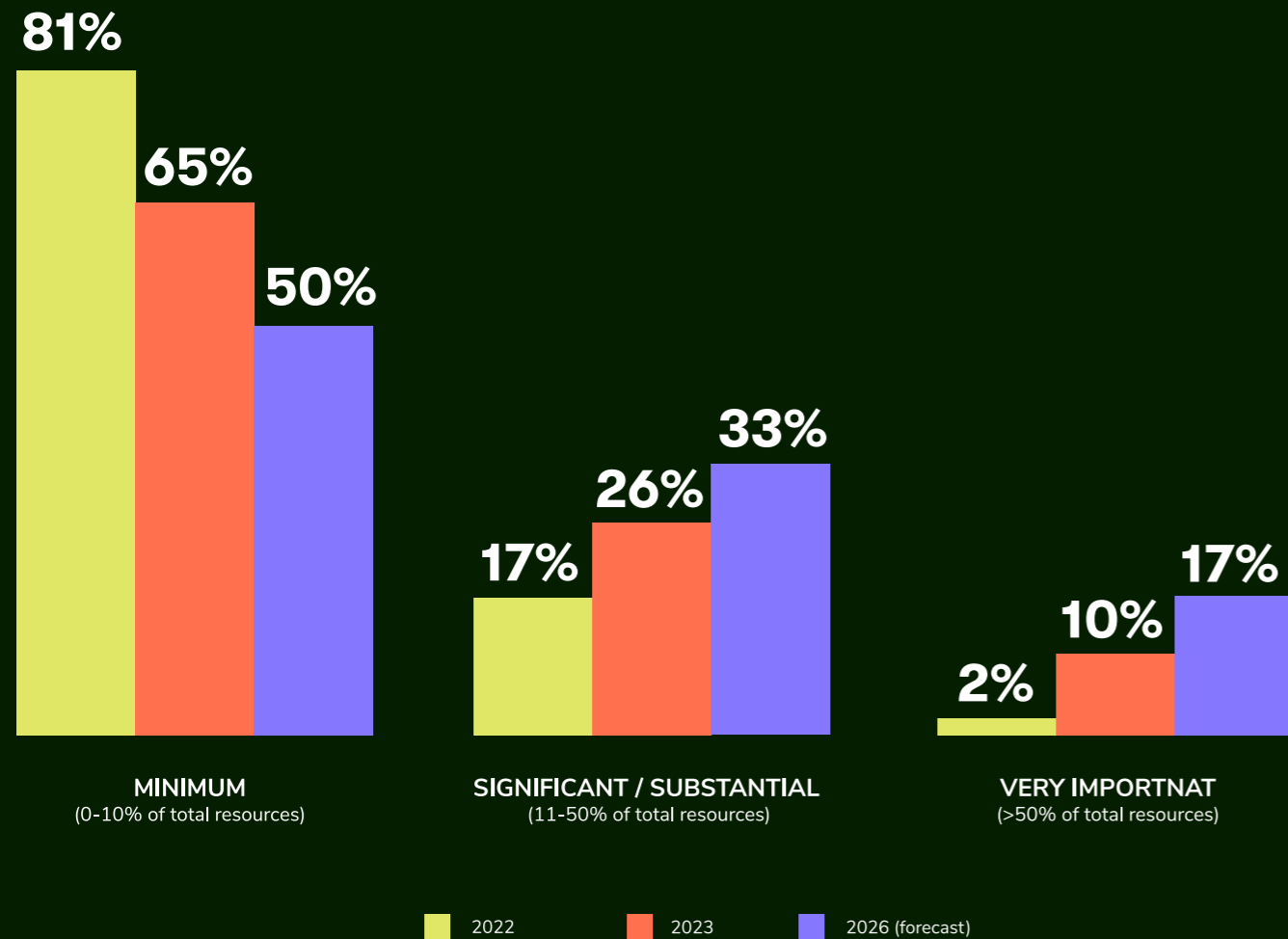
choice in the serviced office market in Poland is increasing. Since 2023, 11 new locations have opened in Warsaw alone, supplying around 4,000 workstations to the market. 74% of organisations leasing a serviced office in 2024 have chosen to do so with the intention of introducing rotational working. At the same time, the contracts signed by companies to lease serviced offices cover an increasingly long period. The average length of time for which companies decided to rent such an office in 2023 was over 12 months, while in 2024 it exceeds 13 months¹⁸



TENANTS' MOTIVATIONS FOR RENTING FLEXIBLE SPACE



SHARE OF FLEXIBLE OFFICES IN LEASED SPACE



source: CBRE, What's Next for Flex: Rising Demand Supports Viability of Flexible Office Industry, 2023.

solution to achieve this is to provide a multifunctional space in the office, designed for maximum flexibility and efficiency¹⁹.

Multifunctional spaces are designed to provide comfort for a variety of tasks, such as individual work, team work or meetings²⁰. Desks are grouped together in team configurations (e.g. islands or clusters), while introducing individual workstations, often acoustically separated (e.g. by phone boxes). This solution allows teamwork to be combined with the ability to focus on tasks that require concentration²¹.

The share of open-space in office space in Poland has fallen from 54% in 2019 to 34% in 2025. Projections for 2032 show a further decline to 22%. They are being replaced by:

- **Shared closed workspaces** – today they take up 50% of office space multi-purpose rooms for meetings and for working in smaller teams,

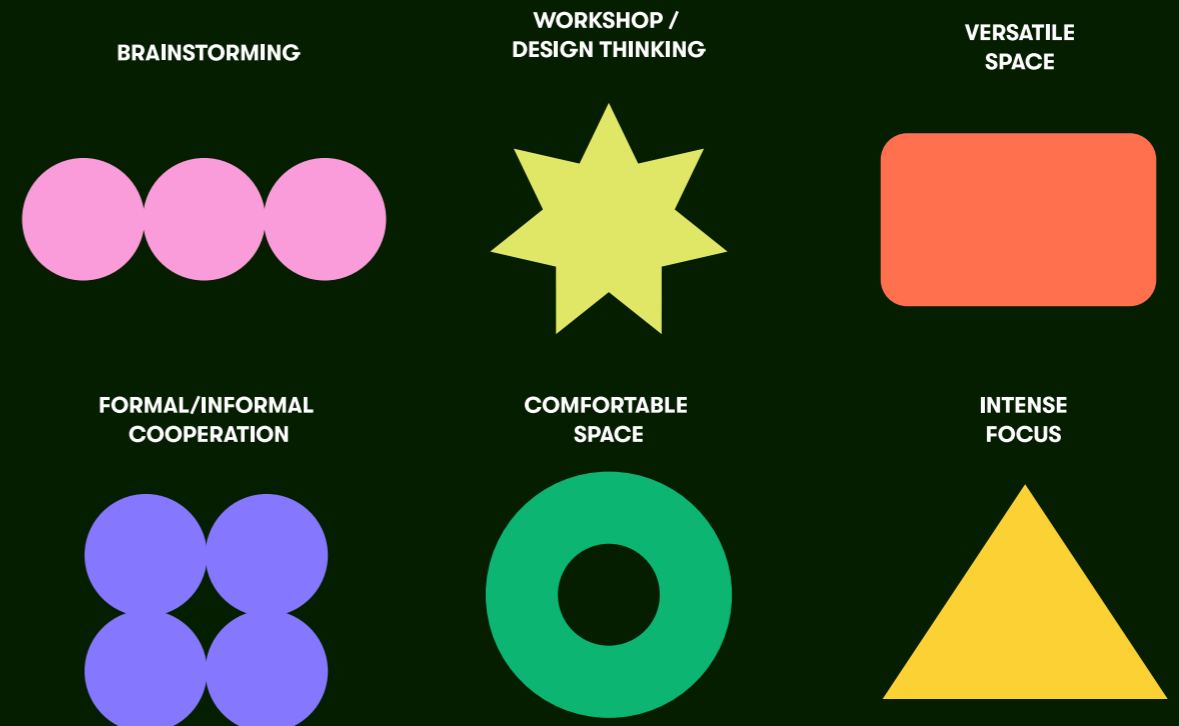
including rooms suitable for project work – increase of up to 40% by 2032

- **Company kitchens and canteens with a cafeteria area** (social spaces) – their share will increase to 13%.

adaptation offices

Offices that are best prepared for the future are those that are capable of making significant changes with as little time and cost as possible – i.e. not restricted by a fixed layout. The concept is that much of the office space, especially the multifunctional space, is built using modular elements. Walls can be moved, added or removed and furniture can be rearranged, allowing modification according to current needs and team dynamics. The aim is to create a conducive collaborative environment and to comfortably adapt the space to the preferences of employees²².

TYPES OF SPACE IN A FLEXIBLE OFFICE



source: workplace.co.uk, Agile workplace | Space of options, 2018.



flexible office design is also applicable in the context of property management. It enables space to be more easily adapted to the requirements of subsequent tenants, and therefore allows space to be rented and re-fitout more quickly. This approach can reduce vacancy times and reduce the costs associated with traditional construction work

This approach promotes efficient use of resources, which contributes to the reduction of waste resulting from office refurbishment²³. Flexibility also maximises space utilisation, which translates into lower property costs by delaying not only remodelling but also moving to a larger space²⁴. These spaces are often designed to be open and easily reorganised, making them more resilient to market changes. Unlike traditional solutions, which can be limited by specific functions, flexible offices offer greater versatility of use²⁵.

elements of flexible offices

MODULAR WORKSTATIONS

Modular solutions with adjustable systems allow employees to adapt workstations to the type of tasks they perform. Combining desks into configurable work zones (e.g. tables and bench-type workstations) and using height-adjustable desks allows ergonomic adaptation to different positions, including standing work. Such adaptability translates into increased productivity and employee engagement through increased control over the organisation of space²⁶.

MOBILE PARTITION WALLS

In an era of increasing flexibility in office space arrangement, partition walls play a key role in creating functional and team-appropriate working environments. With the ability to separate different zones, such as areas for individual work, collaborative spaces or relaxation zones, partition walls enable efficient management of the available space. Such solutions not only promote flexibility,

but also improve acoustics, privacy and comfort, resulting in a higher quality of employee experience in the workplace. They can be made of various materials, including glass²⁷.

FLOORBOXES EVERYWHERE

Commonly used floor sockets are small electrical devices mounted in the floor that allow various devices to be connected to the electrical grid and other installations, such as a computer or telephone network. The box can contain electrical sockets, internet sockets, telephone sockets, as well as USB ports²⁸. For flexible offices, the number of these should be greater, ensuring that changes to the interior layout do not affect its usability from the point of view of access to power sources.

MODULAR SUSPENDED CEILINGS

In an office space, managing sound levels is key to productivity and comfort. Suspended ceiling tiles help to absorb sound, reducing background noise and making spaces quieter, which is crucial for breakout areas or meeting rooms²⁹. However, the level of acoustic protection does not have to be the same everywhere. The possibility of using a specific type of tile on a surface therefore contributes to the flexibility of the office. The modular design of the ceilings makes it easy to change the layout of the office to suit changing needs³⁰.

INTELLIGENT LIGHTING

Intelligently designed lighting systems that take into account the diverse needs of the workplace offer adjustable and adaptable solutions to meet changing needs. Dynamic lighting must be evenly distributed to create a space suitable for both informal meetings and productive work³¹. Maintaining equal distances between light sources ensures that light is evenly dispersed throughout the space, providing maximum flexibility in desk layout and size, allowing desks to be easily rearranged according to company requirements³².

source: Terminal 33 - Studio de Créations Visuelles; Clémence Bargoin, Mute Modular w showroomie RBC



“

The famous architect Carl Elefante said: 'The most environmentally friendly building is the one that has already been built'. The same principle applies to offices, especially when you consider that the construction industry is responsible for 40% of the world's waste. Therefore, a key element of modern office design is adaptability. Spaces must evolve to meet changing business needs and conditions, while being mindful of the environmental impact.

For this reason, many modern companies are moving away from traditional office construction methods based on plasterboard structures. Instead, they are increasingly opting for modern space design solutions based on mobility or modularity. As a result, they are always ready for change – whatever the situation, they can quickly adapt their space to new requirements. The results are lower renovation costs, less waste and a healthier working environment. The adaptable revolution also benefits owners of commercial spaces. Modular spaces can be reconfigured and reorganised without costly labour and materials, making it easier to adapt them to the requirements of new tenants. In addition, they support the achievement of certifications such as BREEAM and LEED, improving key indicators including occupant wellbeing and long-term environmental performance.

Mute has developed Mute Modular, an innovative adaptable office system for the construction of meeting rooms, acoustic booths, collaboration zones or photocopying points. The system is based on prefabricated, interchangeable modules that can be freely combined to create individual room configurations. The rooms can be combined with each other and can also be modified to suit changing needs.



Andrzej Smoliński

Associate Area Sales Director
Mute

our goal is timeless office spaces

Skanska and Business Link are renowned for creating spaces that go beyond the traditional understanding of an office. What is your approach to designing timeless workspaces?

Łukasz Kwiecinski (Skanska): Skanska has always been committed to sustainability and innovation. Our philosophy is based on creating spaces that are not only functional, but also environmentally and user-friendly. We believe that what is good for people, society and the environment is also good for business. That is why our projects comply with the highest certification standards, such as LEED and WELL.

Ewelina Kalużna (Business Link): At Business Link, we focus on flexibility and adapting the space to the dynamically changing needs of our clients. Our serviced offices must therefore reflect all the classic functions of an office, but also offer something more – coworking or networking spaces are just a slice of the bigger picture. Flexes today also fulfil another important function, which is integration that is multidimensional – both at the level of the teams and the different organisations that use Business Link offices at the same time. Proper management of the relationship between them is high on our agenda, so we put a lot of effort into preparing those spaces where integration as a process can, in a sense, happen on its own – these include games rooms, open kitchens with tables, but also specially designated spaces where a 1:1 conversation can easily take place. Customers also increasingly expect smaller spaces, such as call boxes or simply quiet rooms. We respond to all these needs, with a focus on high-quality simple, natural design and greenery to create a harmonious and comfortable environment.

The pandemic has changed our perception of offices. What key lessons have you learnt from recent years?

Łukasz: Of course, the pandemic highlighted the importance of the health and wellbeing of office workers, which for us at Skanska has been a so-called 'must-have' for a long time. We quickly adapted to the new realities by advising our clients on how to go through the process of returning to the office. Then we started to put more emphasis on workspace consultancy and flexible offers for clients. The hybrid working model has accelerated the popularisation of flex solutions, but traditional rental still has its place. We have the advantage of being able to offer both solutions in our buildings.

Ewelina: That's right. Flexibility has always been synonymous with flex offices, but today we see that it is also the most important need for clients. The pandemic has accelerated certain processes, and the changes that are its aftermath can also be clearly seen today. We are talking, for example, about the hybrid working model, which has become entrenched in many organisations and is also reflected in expectations regarding office space. In response to this, we have introduced a product called 'hybrid team' in Business Link offices, which allows our clients to use the space flexibly – both in a rotational and hybrid model. To make such solutions possible, we provide the option to choose the type of space our clients want to use (including single and small offices, sectors or, for example, open space), and we have also digitised access to the booking system. The key for us is to diversify the space so that the client can choose what best suits their team and current needs. Remember that creative departments will work differently from HR or sales. On the other hand, we

design our offices to be easily adaptable to the client's expectations with relatively low costs associated with secondary adaptation of the space, in addition to reducing energy consumption.

Is it fair to say that flexibility is the foundation of modern offices?

Łukasz: Absolutely. Today, spaces need to respond to the changing needs of companies. We are seeing a growing demand for spaces that can be converted quickly, for example, a kitchen and canteen area, which is used for dining and integration on a daily basis, can be transformed into a townhall-type meeting space where employees can attend meetings, presentations or other corporate events. Our approach takes these needs into account from the design stage through to implementation, making the most of every square metre.

Ewelina: At Business Link, flexibility has a slightly different face – with us it's about being able to quickly choose the right type of space and adapt it to the team's working style. We have a variety of options: from call boxes, open space, sectors, further small offices to dedicated spaces that can accommodate up to 30 people. Digitalisation is also key – everything from booking to access management is done online.

What trends are dominating office design?

Łukasz: One of the most important trends is the integration of ESG principles throughout the building lifecycle. Tenants expect us to help them reduce their carbon footprint and optimise energy costs. In addition, we are investing in technologies that support wellbeing, such as advanced HVAC systems or optimal lighting.

Ewelina: From our perspective, the ergonomics and sensoriality of the space are key. The quality of the materials and textiles we use is increasingly important, as is the introduction of elements of nature. Community-building activities cannot be overlooked either – spaces such as communal kitchens or relaxation areas are equally important.



How do you see the future of the office market in Poland?

Łukasz: We see an increasing focus on the quality and functionality of spaces. Offices will not only be a place to work, but also a platform to support the development of the organisation. The sharing of knowledge and technological solutions between tenants and developers will also be important.

Ewelina: At Business Link we believe that flexible offices, i.e. offices where the size of the office is adapted to the people actually using the space and the length is adapted to the client's actual needs, will play an increasingly important role. Companies want to manage space and costs effectively, so comprehensive, convenient solutions are needed. And we are ready to deliver them at the highest level.

3 quieter over the desk

Open layouts, collaborative spaces and a growing emphasis on flexibility present both opportunities and challenges, particularly in the area of sound management. Office acoustics is not limited to noise reduction, but is about creating a balanced environment in which employees can perform tasks without distraction. Inappropriate acoustic conditions can reduce productivity, increase stress and have a negative impact on job satisfaction³³. In contrast, an acoustically well-designed environment fosters creativity, encourages teamwork and improves employee wellbeing³⁴.

The optimum noise level for mental work is 25–48 dB. This is the range that corresponds to quiet background noises, such as the sound of the wind or a quiet conversation in the distance³⁵. Achieving this level requires the use of sound-absorbing materials such as acoustic panels, carpeting or suspended ceilings³⁶. The use of white noise technology (monotone, monotonous sounds of a certain intensity and frequency) can further mask distracting sounds. However, overexposure to white noise can cause fatigue, irritability and other health problems such as headaches and insomnia, or can lead to hearing damage and impaired sound perception³⁷.

Investing in acoustic solutions improves comfort and concentration, especially in open-space areas³⁸. The key is to ensure a balance between openness and privacy by zoning noisier areas and those for concentration³⁹. Equipping offices with soundproofing materials and comfortable workspaces enables employees to withdraw from noisy environments and focus on demanding tasks⁴⁰.



fot. Paulina Zięcik, Mute Modular w biurze LuxMed, Warszawa



fot. Adam Grzesik, CreoConcept

flexible acoustic solutions

acoustic cabins

ready-made, mobile boxes that do not interfere with the structure and can be set up anywhere. You can find solutions on the market dedicated to individual work, but also to meetings for small teams (4–6 people). Such cubicles usually have 2 fully glazed walls that allow visual integration with the environment to avoid a sense of claustrophobia. In addition, they are equipped with ventilation, lighting and access to electricity.

acoustic curtains

a solution for separating spaces in offices while providing sound insulation. They effectively reduce noise, working well in both open spaces and individual work or meeting areas. The curtains can be easily moved, rolled up or rearranged, allowing the space to be quickly transformed according to the current needs of the team. Their lightweight design makes them the perfect tool for creating temporary work zones or relaxation spaces, without the need for permanent changes to the office layout.

acoustic walls

mobile walls allow the space to be quickly divided into zones for individual, collaborative or conference work. They are easy to rearrange and allow the space to be flexibly adapted according to the needs of employees or the type of projects⁴¹.

desk walls allow greater concentration while working, increase the feeling of privacy and at the same time, due to their low height, do not impede eye contact and communication when needed⁴².

freestanding office walls are a good solution in areas where space is frequently modified. They can create spaces for working in silence, separate workstations to provide privacy and improve acoustics, and can also be used to visually separate different zones in open office spaces⁴³.

acoustic furniture

specialised furnishings designed to improve acoustic comfort in offices. Using fabrics, acoustic foams, felt or wool, they effectively reduce noise, absorb sound and reduce reverberation. They also often have a practical function, creating privacy zones and quiet areas for individual work or meetings. Examples of such furniture include telephone booths, upholstered poufs and sofas, and tables with sound-absorbing elements.

permanent acoustic solutions

acoustic panels

placed on walls and ceilings effectively reduce reverberation. They create a quieter working environment, which encourages the exchange of ideas and effective discussions in creative teams. Acoustic panels or furniture with sound shields improve working comfort and eliminate echo effects in offices finished with hard materials such as concrete or glass⁴⁴.

carpets and rugs

can be a simple way to solve the problem of echoes and sound reflections created by hard surfaces in workplaces. By absorbing sound, these soft materials prevent sound waves from bouncing off objects. Careful placement of carpets in high traffic areas and the addition of rugs in open spaces and lounge areas significantly increases sound absorption⁴⁵.

background music

used in relaxation areas, supports regeneration and stimulates creative thinking. In spaces for intensive project work, however, noise should be minimised so as not to distract the team⁴⁶.

intelligent sound masking systems

use sensors, algorithms and speakers to self-optimize background noise as occupancy patterns change. Adaptive AI-based solutions adjust subtle levels of background noise to improve speech privacy when needed, allowing employees to focus in the optimal listening environment. AI helps predict noise interference and recommend interventions based on real-time monitoring, enabling personalisation of audio for each employee based on tasks and habits⁴⁷.



noise can lead to two main types of health problems: hearing damage (partial or total loss of hearing) and non-auditory effects. The non-auditory effects are related to physiological aspects are similar to the body's response to other stressors. Performance-related effects, on the other hand, can include difficulties in verbal communication or concentration disorders⁴⁸

IN A NOISE LEVEL OF 65 DB

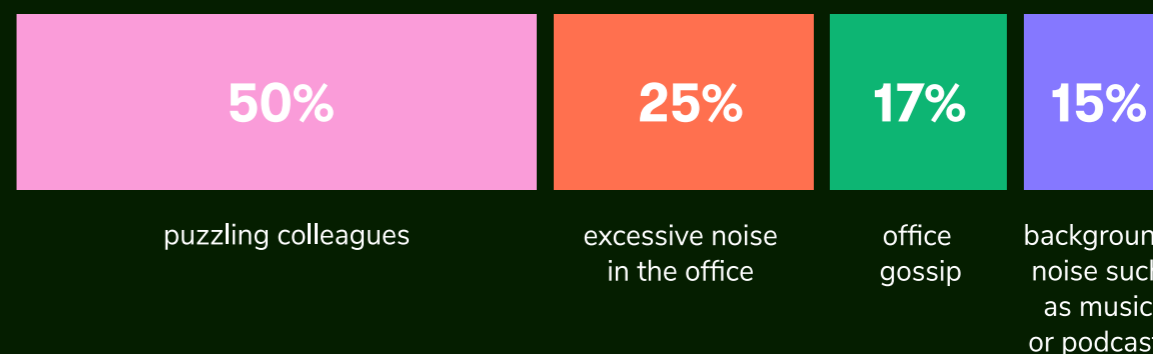
→ there is a decrease in the efficiency of cognitive processes of up to **20%**

→ performance in tasks requiring logical thinking is reduced by **50%**

→ the number of sick leaves of employees is increasing

→ there is a **66%** decrease in worker productivity at background noise levels > 45 dBA

FACTORS THAT AFFECT PRODUCTIVITY AND LEAD TO EMPLOYEE FRUSTRATION



scandinavian-style flexibility and functionality in office design

Designing modern office spaces is the art of combining work function with comfort. With hybrid working becoming increasingly popular, it is becoming crucial to create spaces that respond to the diverse needs of employees, whether they prefer to work individually in a quiet environment or find themselves in dynamic team meetings.

A perfect example of this approach is the office project that IKEA carried out

for an international sports company. The approximately 300 m² office space was completely furnished with the Scandinavian company's products, from the built-in reception counter, office furniture, kitchen annexes to the terrace. Attention to functionality as well as aesthetics was a priority, and the use of conference tables from the MITTZON series of office furniture was an effective response to the needs of hybrid and remote working, becoming the centrepiece of the office space.

In response to the increasing need for privacy and comfort, the design involved abandoning the popular open-plan spaces in favour of a number of separate glazed office spaces. This made the space more intimate, facilitating full concentration while working, while maintaining the feel of an open office. The relaxation zones, in which the main role is played by comfortable armchairs in saturated colours, act as an oasis of relaxation, supporting team integration while taking care of the social well-being of the employees. Such soft touches not only improve the aesthetics of the office, but also create an atmosphere conducive to creative conversations.

Another important element in this project is the zones dedicated to standing work and the adjustable workstations. Set up in one of the rooms, they can serve a variety of functions from conferences to individual focused work. These workstations have been separated by acoustic screens to ensure privacy and comfort in different working conditions. The MITTZON conference tables, in this arrangement suitable for laptop work, are distinguished by a cable connection system, which significantly improves the

foto: IKEA



foto: IKEA

organisation of work and enhances the aesthetics of the space.

Increasingly, accents characteristic of domestic spaces are also appearing in offices—soft textiles, cosy armchairs and subtle decorations. These aspects also apply to kitchen spaces, which, by creating a comfortable and welcoming atmosphere, not only enable regeneration, but also help to build relationships within the team, encouraging joint interaction with colleagues, which in the age of hybrid working becomes invaluable. As part of the comprehensive fit-out, IKEA has prepared two different concepts for the design of the kitchen annexes, which are a key part of the office ecosystem. The first annex is separated by glass, creating a space conducive to individual breaks, while the second annex is open, conducive to integration and quick meetings over coffee.

A well-organised office that takes into account the diverse needs of employees – including those of neurodiverse workers – promotes a more comfortable

working environment, reduces stress and supports efficiency by providing the right spaces for concentration, relaxation and collaboration. With the popularisation of remote working, such an office is becoming a key element that not only supports efficiency but also attracts employees, making them more likely to choose to work in this inspiring, flexible environment. This type of space fosters team integration, improves the working atmosphere and becomes a place where you want to spend time.



Panattoni's modern office: a comprehensive realisation of CreoConcept

Three floors. Three different design concepts. Many micro-zones with different character. One goal – a modern and comfortable office designed with the users in mind. This is how the Massive Design assumptions can be briefly described, which we had to meet when deciding to realise a complex project: the Panattoni office in Warsaw Spire. The assumptions were in line with the CreoConcept philosophy, so we knew from the very beginning that we would rely on our best solutions as well as acoustic products and new technologies.

Already at the stage of the first discussions about the interiors of the Panattoni office, we were aware that it would be crucial to create a space that would support various forms of cooperation – from individual focused work, through team brainstorming, to formal business meetings. We therefore selected aluminium and glass systems that would, on the one hand, complement the style of the chosen floor and, on the other, be fully functional

One of our flagship solutions is the PURE system for walls with single glazing and very slim profiles. Thanks to its high transparency, a lot of natural light enters the interiors, which promotes the well-being of employees and minimises electricity consumption. Minimalist glass walls were not an option in this project either, which is why we opted for different variants of the PURE system.

At CreoConcept, we start from the premise that the offices of the future should support dynamic teams, connect and integrate people and be comfortable. Glass partition walls and glazed doors certainly support this vision, especially if they are properly matched to the design. With aesthetically pleasing glazing, it is possible to separate conference rooms, offices or areas for full-focused work, so that the effect of an open, spacious office space can be maintained.

SILENCE walls, which provide exceptional acoustic comfort, have also found their way into Panattoni's office, as have fireproof walls, increasing the level of safety for all users of this office. Each of the three floors of the Panattoni office presented a separate challenge. The different colours, materials and layouts of the space required

foto: CreoConcept



foto: CreoConcept

an individual approach and close collaboration with the architects from Massive Design. The most important thing, however, was that the office should respond to the flexible needs of the users and at the same time be designerly. We therefore proposed SILENCE bent walls, which combine functionality with high aesthetics. Using this highly acoustically insulating solution, we separated spaces for business meetings, and additionally installed our Optitex intelligent LCD film with variable transparency on the glazing. In this way, we facilitated the management of privacy, which is very important in large offices.

To support the acoustic comfort of employees, we have also designed dedicated furniture built-ins of our own brand WeReact and ecoPET material

solutions such as ribbed ceilings and ceiling tiles of our BAFE0 brand. These elements not only effectively dampen noise, but also complement the modern look of the interiors. When designing them, we made sure, among other things, that some elements were coloured to match Panattoni's corporate identity. With these solutions, the office space is adapted to the different needs of the users – working in full concentration, creative meetings or business talks in elegant conference rooms.



beyond green

Focusing solely on media coverage, it is easy to get the impression that the whole atmosphere around sustainable development is extremely negative and everything related to it is being imposed on us pusillanimously by a legalism that is insensitive to social expectations. In reality, however, the situation is much more complex, because environmental issues – under one name or another – have many supporters whose perspective has a real impact on the functioning of business.

Indeed, the pace of change is dictated not only by legislation, but also by the expectations of employees, especially those of generation Z, for whom

environmental values are not an add-on to business practices, but a fundamental element of them⁴⁹. At the same time, conscious organisations, the more far-sighted ones, treat sustainability not just as a cost or legal obligation, but as a strategic investment that can give them a competitive advantage and tangible savings in the future⁵⁰.

green jobs

Two in three respondents are more likely to apply (67%) and accept (68%) job offers from organisations they consider environmentally sustainable⁵¹. One in three job changers have taken a job with



fol. Li-An Lim, unsplash



fol. Matt Seymour, unsplash

PRIORITY FOR STAFF AND MANAGEMENT

98%

CEOs of leading organisations believe sustainability is critical to their company's long-term success

92%

CEOs said their company can continue to grow while reducing greenhouse gas emissions and meeting climate change targets

69%

employees said they want their companies to invest in sustainability measures, including reducing carbon emissions, using renewable energy sources and reducing waste

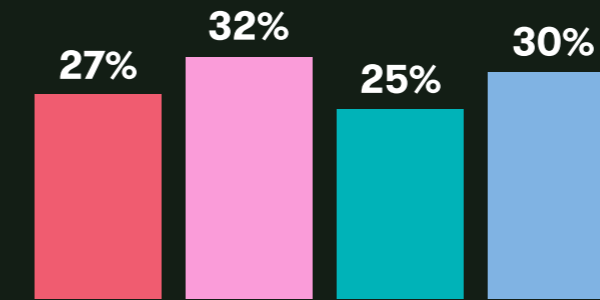
50%

believes that by achieving these goals the world can experience global economic growth

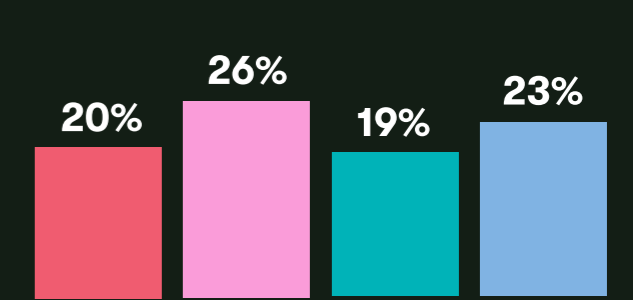
Source: ThinkCo compilation based on Deloitte, Engaged employees are asking their leaders to take climate action, 2023; United Nations Global Compact, The 12th United Nations Global Compact-Accenture CEO Study, 2023.

HOW GENERATION Z AND MILLENNIALS ARE INFLUENCING CLIMATE CHANGE THROUGH THEIR DECISIONS PROFESSIONAL

checks the company's environmental impact and policy before accepting a job offer

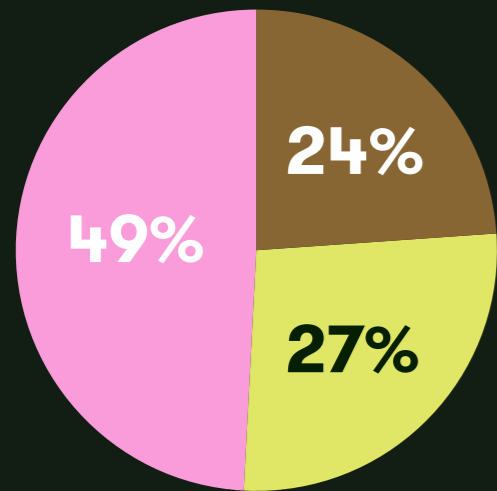


change of job due to environmental impact concerns



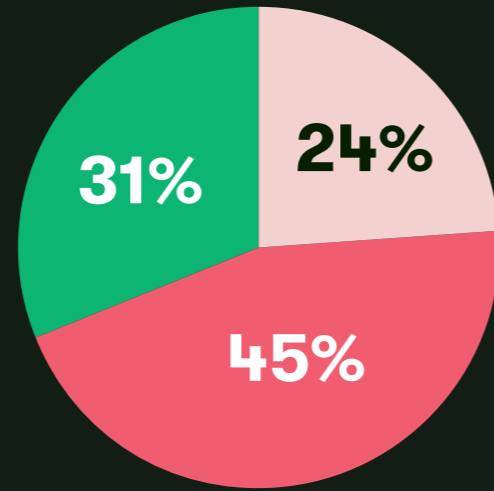
● Z already do or have done so ● Z plans to do so ● Y already does or has done so ● Y plans to do so

THE COMPANY'S POSITION ON SUSTAINABILITY VS. DECISION TO ADOPT WORK



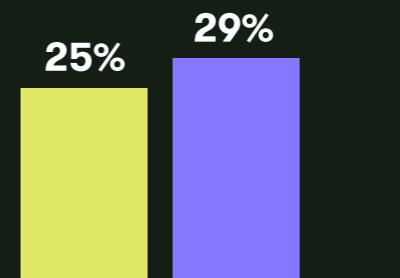
● have no influence
● have an impact
● difficult to say

ARE YOU CONSIDERING CHANGING YOUR JOB TO A MORE SUSTAINABLE COMPANY?

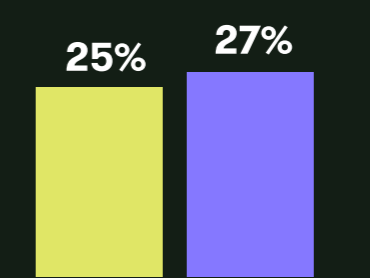


● I am considering
● I am not considering
● difficult to say

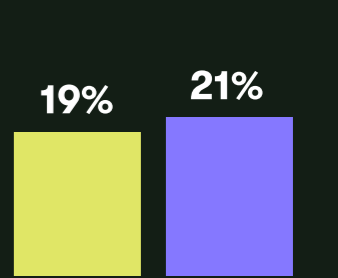
ACTIVITIES IN WHICH RESPONDENTS WOULD LIKE TO SEE GREATER INVESTMENT TO TACKLE CLIMATE CHANGE



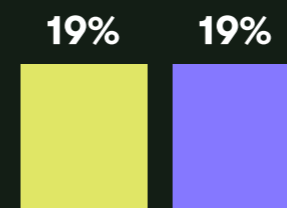
Education and training of employees on sustainable development



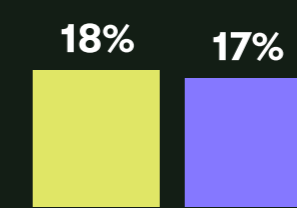
Provide employees with subsidies or options for sustainable choices



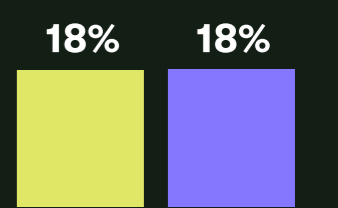
Upgrading offices to make them greener



Transforming the business model to a more sustainable one



Commitment to achieve zero greenhouse gas emissions within a decade



Working closely with governments on sustainable development initiatives

● Gen Zs ● Millennials

Source: Deloitte, Engaged employees are asking their leaders to take climate action, 2023.

Source: Deloitte, 2024 Gen Z and Millennial Survey: Living and working with purpose in a transforming world, 2024.

an employer they consider sustainable (35%). In addition, one in three people (34%) accepted a job in a position where they could directly influence sustainability performance. 27% say they pay attention to their employer's position on sustainability before accepting a job⁵².

The 2024 Global Survey of Millennials and Generation Z showed that nearly half of Generation Z (54%) and Millennials (48%) said they put pressure on their employers to take action on climate change. This trend has been growing steadily since 2022, when 48% of Generation Z and 43% of millennials expressed a similar view. If they cannot drive change in their organisations, some are prepared to change jobs and even industries⁵³. Conversely, when they see an organisation actively engaging in social responsibility 11 times more likely to remain loyal to their employer⁵⁴.

Work spaces should also reflect sustainability values. Offices become a physical manifestation of an organisation's commitment to the environment – from the use of recycled materials to energy-efficient solutions to conscious waste management.

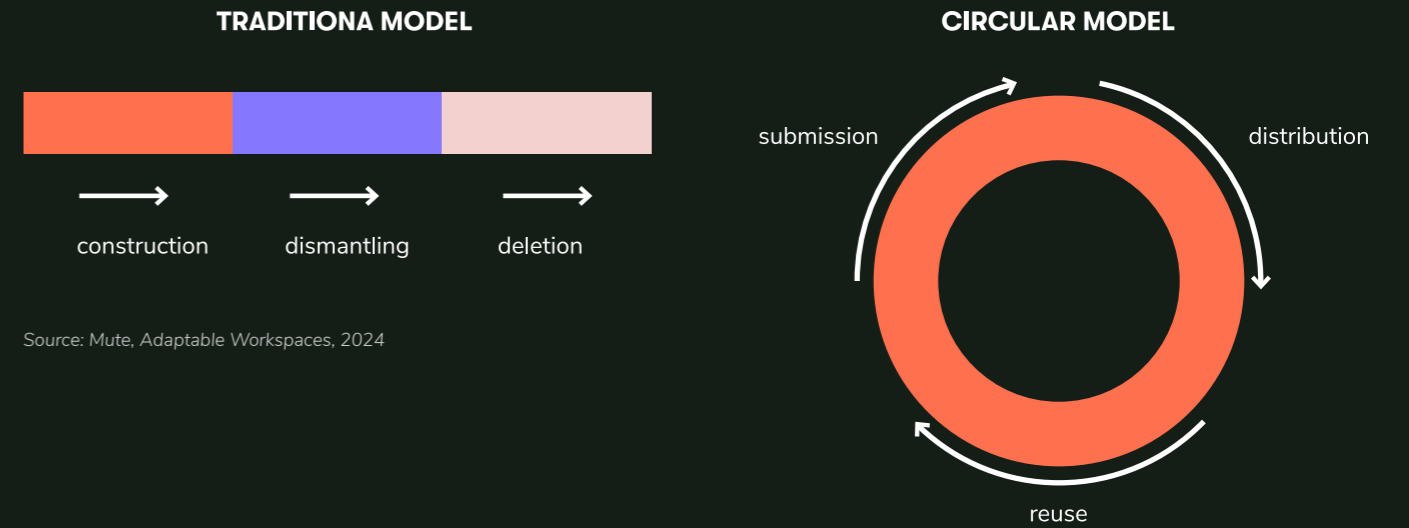
A workspace designed to minimise the carbon footprint not only supports sustainability, but also communicates to candidates and employees that the company shares their values⁵⁵.

circularity in offices

96% of Fortune 100 companies published sustainability reports in 2022, with 58% (56 reports) directly addressing circular practices – 12% more than in 2021. (50 reports)⁵⁶. In 2023, the percentage of companies including circularity in their reports increased to 60%, while 86% mentioned ESG. For the Fortune 10, circular practices are even more clearly embedded in their business models: mentions of the circular economy appear 230 times in their documents, while ESG is mentioned only 130 times⁵⁷.

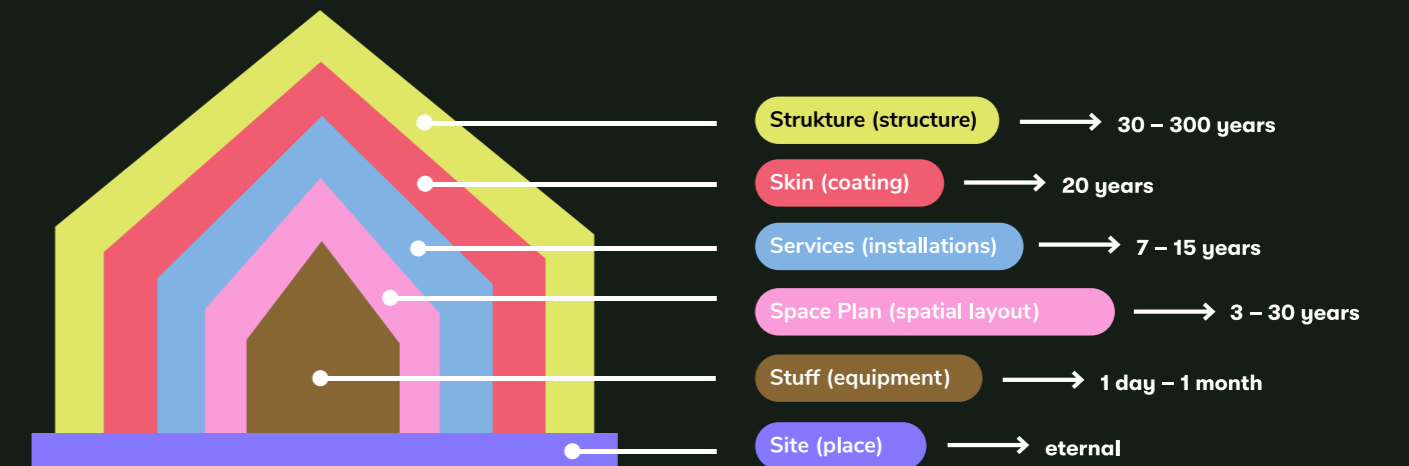
In the context of offices, this means a drastic change in approach to what fit-out is and how long it will serve us. Office interiors have a significant impact on carbon emissions. Frequent refreshing of spaces means that furniture, fixtures and equipment (FFE) can match the emission levels of the building structure⁵⁸. Including FFEs in life cycle assessments

TRADITIONAL VS. CIRCULAR MODEL



Source: Mute, Adaptable Workspaces, 2024

LIFE CYCLE ASSESSMENT BUILDING



Source: Stewart Brand, How Buildings Learn: What Happens After They're Built, 1994.

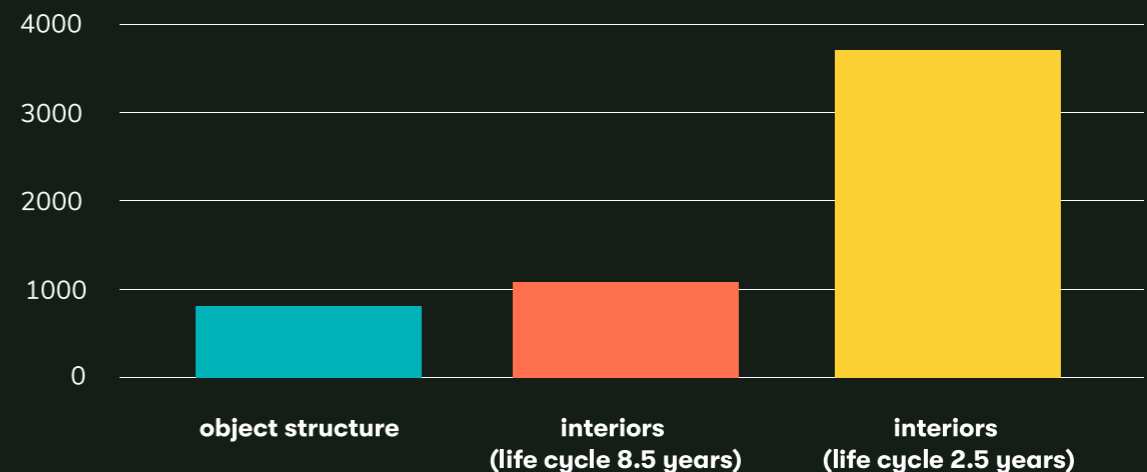
THE IMPLEMENTATION OF CIRCULAR WORKPLACES INVOLVES SEVERAL KEY DESIGN STRATEGIES:

Design with adaptability in mind – where the use of modular furniture systems and flexible partitions that allow easy reconfiguration of spaces without generating waste is key.

Design for disassembly – equipment components are joined in such a way that they can be separated without damage, making it easy to repair, replace parts or recycle.

The use of recycled elements – both in the area of furniture and finishing with materials obtained from demolition. This approach is complemented by design with sustainability in mind, where the selection of high-quality materials and timeless design play a key role.

THE IMPORTANCE OF CARBON EMISSIONS FROM INTERIOR FINISHES



Source: REST, Raefel, Wallis, Embodied Carbon and Circularity for Office Interiors, 2022.



in Norway, up to 65% can be achieved through reuse and redesign cost savings on some furniture and a significant reduction in CO2 emissions⁶⁵

is key to fully understanding the sources of emissions⁵⁹. Almost 8 million tonnes of office waste is sent to landfill every year. Trends such as office downsizing and space sublocation only exacerbate this problem.

In response to these challenges, the concept of the circular workplace, an approach to organising offices and workspaces in line with the principles of the circular economy, has emerged. The idea is to shape offices as spaces that reduce waste to a minimum, maximise the value of products through reuse, refurbishment or recycling, and regenerate the natural and built environment. The aim is to eliminate the take-make-waste approach in favour of a reuse system⁶⁰.

The implementation of circular workplaces involves several key design strategies:

Design with adaptability in mind – where the use of modular furniture systems and flexible partitions that allow easy reconfiguration of spaces without generating waste is key.

Design for disassembly – equipment components are joined in such a way that they can be separated without damage, making it easy to repair, replace parts or recycle.

The use of recycled elements – both in the area of furniture and finishing with materials obtained from demolition. This approach is complemented by design with sustainability in mind, where the selection of high-quality materials and timeless design play a key role.

challenges and the future of circularity in the workplace

commitment at all levels

...from designers to manufacturers to end users. Regulatory changes, education and a change in the way companies approach resource and space management are key.

change in thinking about waste management

...waste management thinking is still dominant, instead of focusing on circularity and eliminating waste at the design level.



a by-product of office fit-out projects is often waste from discarded materials. For every 100 m2 of office space, the fit-out process can generate more than 5 tonnes of waste, from dismantling, demolition and construction debris, as well as packaging and damaged or unused materials⁶¹

lack of technical knowledge

...in many cases there is a lack of knowledge regarding design for circularity at the planning stage. In future, offices should be designed with long-term use in mind, with an emphasis on materials that can be recycled and renewed many times over.

traditional office thinking

...misperceptions of used products as being of lower quality are significant obstacles. In the future, circularity requires a change in thinking among both producers and customers to see value in products that can be reused

closed loop furniture

The path to circularity in the furniture industry focuses on creating products that are durable, repairable and can be effectively reused. By focusing on reconfigurable design, minimising waste and building infrastructure for a circular economy, the industry has the opportunity to significantly reduce its carbon footprint while delivering sustainable value to consumers⁶².

The increased interest in recycling office furniture is linked to the growing environmental awareness and willingness of companies to meet ESG standards, even though the process is

IMPLEMENTING CIRCULARITY IN OFFICES

	things that are already happening in the area of circularity	things that individual groups should implement	how to remove potential obstacles?
PRODUCERS	introduce sustainable solutions, extending the life cycle of products through resale and donation schemes and incorporating sustainable design principles.	actively promote the circular economy (GOZ), aiming for its implementation and understanding throughout the supply chain.	aiming to increase industry cooperation and introduce regulations to support the closed loop economy (GOZ).
DEALERS AND RENOVATORS	respond to societal changes, responding to the growing demand for renewed products.	see the revival of the local industrial market as an opportunity to develop their business.	focusing on reducing operating costs, increasing market attractiveness and promoting proven solutions.
ASSOCIATIONS AND EXPERTS	provide comprehensive analyses and concrete recommendations for the implementation of circular solutions.	advocate the expansion of circular practices and a move away from traditional waste management towards closed-loop models.	identifying social change as a key barrier to GOZ uptake, focusing on overcoming it.
TECHNOLOGY PROVIDERS AND SERVICES	offer tools to support the circular economy – from furniture exchange platforms to IT remanufacturing systems.	highlight the benefits of implementing GOZ solutions in advance of regulation, allowing clients to future-proof their business operations.	emphasising that GOZ is a systemic transformation, requiring comprehensive education campaigns and awareness building among stakeholders.
CONSTRUCTION COMPANIES AND DESIGN	actively support clients in transforming circularity theory into practical building solutions.	revise strategies, focusing on minimising the scale of investment, innovative delivery methods and optimising the use of resources.	calling for the implementation of regenerative design principles, based on the reuse of materials.
OWNERS AND LESSEES OF SPACE	ocus on sustainable procurement, reusing resources within the organisation and engaging teams in green initiatives.	respond to the growing expectations of employees by introducing flexible and sustainable office solutions.	prioritising space flexibility, collaboration with certified suppliers and cross-departmental integration in resource management.

KEY APPROACHES TO ON-SITE WASTE TREATMENT AND REDUCTION

elimination of waste generation at the design and construction stage	planning for circularity: offices are designed with a view to the subsequent dismantling, conversion or recycling of elements such as furniture, partitioning modules or lighting systems
	modelling tools (e.g. BIM – Building Information Modelling) make it possible to plan materials accurately, avoiding overfilling during construction
	instead of demolishing and removing existing elements, it is advisable to restore them and incorporate them into new projects (e.g. retrofits). This minimises the amount of rubble and construction waste
on-site treatment of waste	organic waste treatment facilities: offices can be equipped with composters for organic waste, reducing the amount of waste going to landfill.
	integrated waste segregation systems: designed segregation zones at office level allow for the separation of recyclable materials such as paper, plastic or glass, facilitating on-site processing of waste or its transfer to appropriate recycling facilities.
	partnerships with local recycling facilities allow materials such as wood, metal or electronics to be processed without the need for long-distance transport.
minimising waste during the office use phase	replacing disposable products, such as plastic bottles or paper towels, with reusable items.
	avoiding 'white boxing', i.e. the complete emptying and redecoration of office space, in favour of the adaptation of existing materials and equipment.
	waste monitoring and management: through, for example, digital asset management platforms that enable tracking where redundant items are and how they can be reused rather than thrown away.
waste management for decommissioning offices	donating surplus items for reuse e.g. furniture and furnishings to charities or selling them, thus avoiding landfill.
	decomposition into recyclable parts: processes such as dismantling furniture and equipment into components (e.g. wood, metal, textiles) allow them to be recycled or remanufactured into new products.
	local recycling of electronics: this waste contains valuable materials such as precious metals. This reduces the need to extract virgin raw materials.
innovative approach to space design	'less is more' design: minimising redundant resources and space, which reduces both the initial consumption of materials and the generation of waste in the future. This approach promotes the use of fewer resources and greater flexibility of space.
	increasing circular aesthetics: promoting an aesthetic that celebrates elements that are not new but restored and recycled is gaining ground in office design as proof that circularity can be aesthetic.

CHALLENGES AND THE FUTURE OF CIRCULARITY IN THE WORKPLACE

1

commitment at all levels

...from designers to manufacturers to end users. Regulatory changes, education and a change in the way companies approach resource and space management are key.

change in thinking about waste management

...waste management thinking is still dominant, instead of focusing on circularity and eliminating waste at the design level.

2

3

lack of technical knowledge

...in many cases there is a lack of knowledge regarding design for circularity at the planning stage. In future, offices should be designed with long-term use in mind, with an emphasis on materials that can be recycled and renewed many times over.

traditional office thinking

...misperceptions of used products as being of lower quality are significant obstacles. In the future, circularity requires a change in thinking among both producers and customers to see value in products that can be reused

4

66

We are seeing a transformation of the market. Initially, this trend of a circular approach in office spaces was the domain of innovators – consultancies such as JWA, who were the first to talk to investors about introducing sustainable design concepts and environmental certification for buildings. Today, the market has clearly shifted towards the early mainstream.

The first customers interested in circularity, were primarily looking for innovation and competitive advantage. They accepted higher initial costs in exchange for positioning themselves as sustainability leaders. Today's are primarily looking for solutions that have already proven themselves in the market. They are not only concerned with environmental sustainability, but also with lower operating costs, compliance with regulations and greater attractiveness of facilities to potential tenants and employees.

We are now entering a phase when circular solutions are reaching widespread acceptance. The key to success is their standardisation, clearly lower costs and ease of implementation in the daily operation of buildings. The market expects ready-made, affordable measures that can be implemented without a major business transformation. Circularity in terms of commercial interiors and entire buildings meets these requirements and is easily achievable if properly planned and embedded in a longer-term operational strategy.



Błażej Szymczyński

Principal Expert
Sustainability Advisory
JWA

time-consuming⁶³. However, market analyses in recent years indicate that it is beginning to have a clear effect, as the growing awareness of the benefits of circular economy principles is contributing to the growing popularity of recycled office furniture. In addition, the savings resulting from the purchase of recycled furniture have also begun to attract small and medium-sized enterprises⁶⁴.

A special place in the area of circularity is given to remanufacturing, which involves bringing office furniture back into use by repairing, refurbishing and reusing it. Studies show that this process uses around 18% of the energy compared to the production of new furniture, which means a reduced environmental impact. In the case of several remanufacturing cycles (restoring the same furniture for a second, third time, etc.), the environmental impact decreases even further⁶⁶.

A new form that is developing today – one that meets the needs of offices of the future even better – is adaptive remanufacturing, which differs in that it not only refurbishes furniture, but also adapts it to changing needs and users. Research indicates that it does not bring significant additional environmental benefits compared to traditional remanufacturing, but it also does not lead to major negative environmental impacts, which means that it can be an attractive option in terms of long-term use and flexibility of furniture in offices⁶⁷.

phot. Adam Grzesik, CreoConcept



how can the circularity of furniture be promoted?

rental and leasing

Office furniture rental and leasing models increase the flexibility of space arrangements. At the end of the contract, the furniture is collected by the supplier, reconditioned and put back into circulation, allowing it to be used by subsequent tenants. In this way, they function in a closed loop, reducing the need to invest in new equipment.

modularity and adaptability

Modular furniture allows for modernisation and transformation in response to changing user needs. In the event of office expansion or space reorganisation, existing elements can be adapted to meet new requirements, eliminating the need to purchase additional equipment.

on-site renovation

Furniture refurbishment services directly at the customer's premises minimise disruption and reduce transport costs. They also allow furniture to be refreshed quickly without any negative impact on the environment.

monitoring the condition of furniture

The use of sensor technology makes it possible to track the wear and tear of furniture in real time. This makes it possible to plan refurbishment or replacement of parts in advance, preventing total damage and ensuring continuity of work.

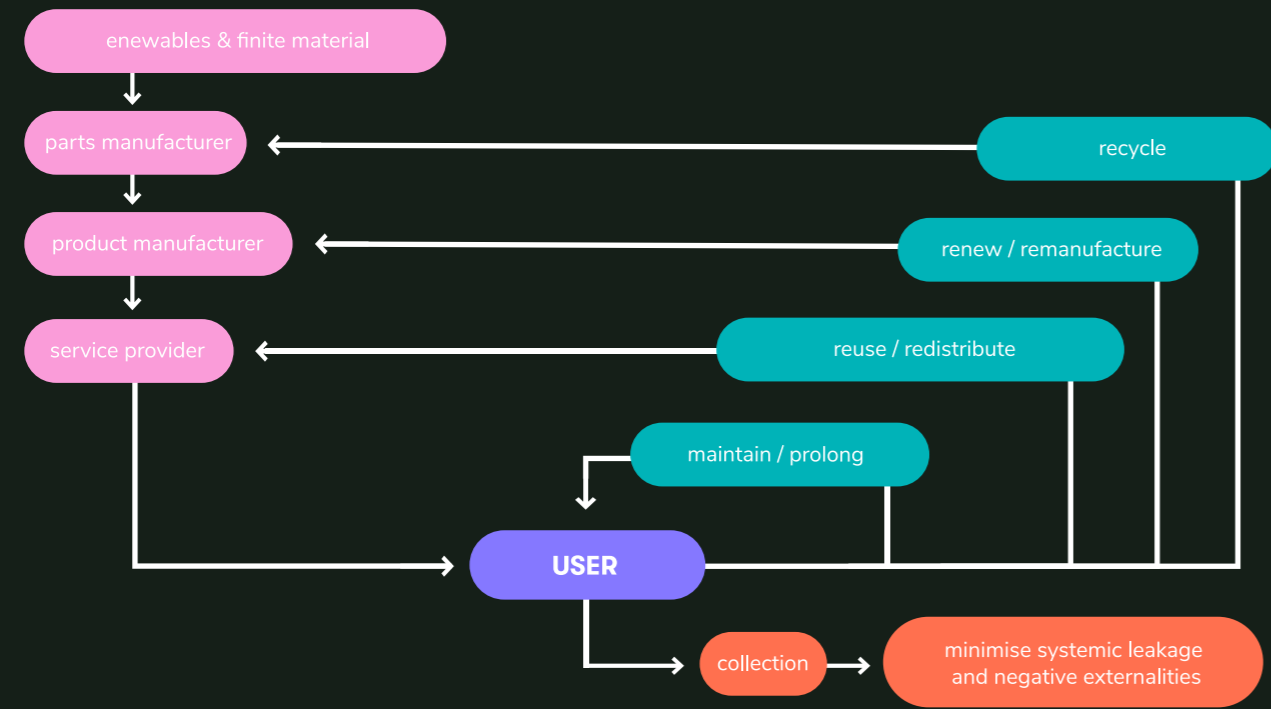
use of renewable materials

The use of bio-renewable materials (e.g. certified wood, recycled fabrics) allows the production of office furniture that is more environmentally friendly and can be more easily recycled or composted at the end of its life cycle. These materials can become key for office clients with a strong emphasis on sustainability⁶⁸.

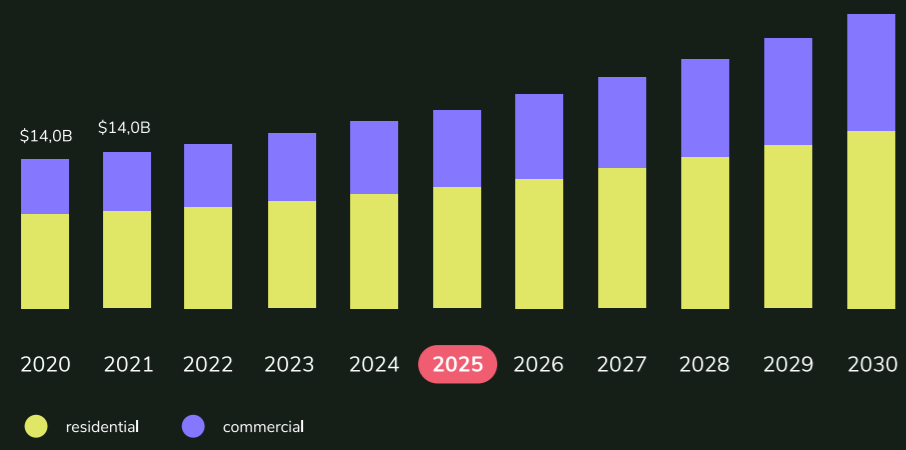
ensuring ease of recycling

This approach includes avoiding permanent adhesives, using common fasteners and providing clear disassembly instructions to simplify the recycling process and make it more cost-effective. Designing with the end of a product's life in mind is key, so it makes sense to design components from the same type of plastic that require less disassembly, which will increase their recyclability⁶⁹.

SCHEME OF A CIRCULAR ECONOMY CLOSED SYSTEM



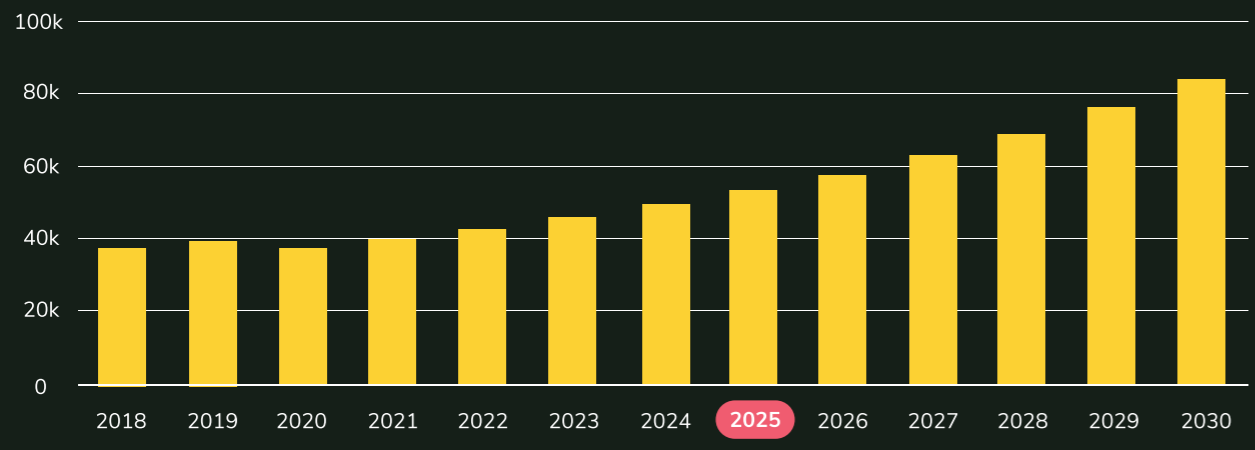
ORGANIC FURNITURE MARKET SIZE IN THE USA 2020–2030 (BILLION USD)



7,5%

the average cumulative annual growth rate of the sector between 2023 and 2030

GLOBAL MARKET FOR ENVIRONMENTALLY FRIENDLY FURNITURE, 2018–2030 (IN MILLION USD)



New Office Building Carbonera



foto: Marco Cappelletti, archdaily

name: New Office Building Carbonera
location: Italy, Vascon di Carbonera
designer: Carlana Mezzalira Pentimalli
year: 2025
surface area: 13.255 m²

events. The upper floors house adaptable offices with mobile walls and modular elements that allow the space to be quickly reconfigured. Glass and textile partitions provide both division and openness to the interiors. The flexibility of the layout supports a variety of working styles and meets the individual needs of employees, while allowing rapid adaptation to changes in the market or workforce. Every architectural detail of the facility has been created with adaptability in mind, ensuring that the building can evolve over time.

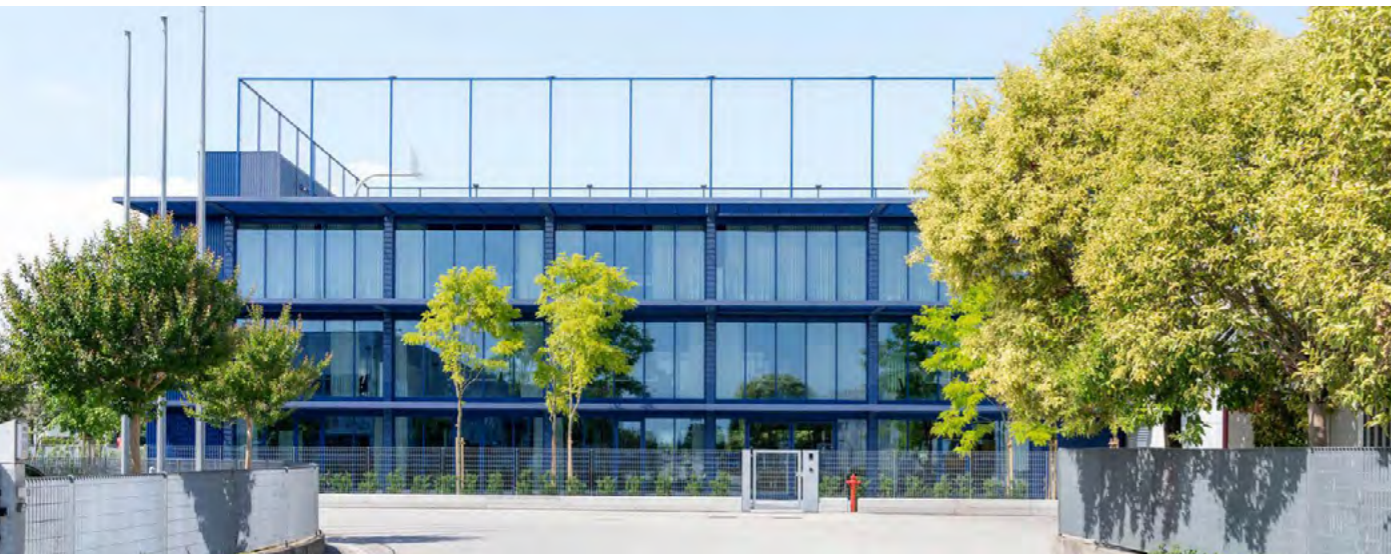


foto: Marco Cappelletti, archdaily

Wangchao Center Office

name: Wangchao Center Office
location: China, Hang Zhou Shi
designer: say architects
year: 2024
surface area: 960 m²

The space, based on a 300× 300 mm grid, is divided into three zones: two offices and a central public area. The interior is characterised by flexibility – modular walls allow the layout to be reconfigured, from traditional offices to open collaboration spaces. In their normal configuration, the partitions define different areas, including flexible offices, meeting rooms and a tea room. In open-plan mode, the panels can be dismantled to create a shared space to suit current needs.



source: Wen Studio

urselmann Circular Office

name: Circular Office

location: Germany, Düsseldorf

designer: urselmann interior

year: 2022

surface area: 74 m²

This tiny office is the workplace of urselmann interior. On a micro scale, it brings together all aspects of flexibility and circularity as if through a lens. The space functions as a studio, co-working space, showroom and test laboratory. It was designed with the circular economy in mind, using biodegradable, upcycled or reutilised materials. Furniture and structures are mechanically assembled (without adhesives), allowing for disassembly and reuse. The flexibility of the space is due to the modular layout, and circularity is confirmed by the introduction of a 'material passport', recording the composition of the interior with a view to future recovery. Some of the equipment was sourced through Concular, a platform offering recycled building materials.



foto: Magdalena Gruber, archdaily

Demountable Office Building Omega



foto: Sebastian van Damme, archdaily

name: Circular and Demountable Office Building Omega

location: Netherlands, Hendrik-Ido-Ambacht

designer: EVA architecten

year: 2023

surface area: 1600 m²

The building is fully demountable, with the exception of the underground car park. Structural components, installations and materials can be separated and reused. PVC, adhesives, gaskets and composite materials were avoided in the design. The building structure is based on timber CLT columns, beams and floors, reinforced with a concrete core for stability. A flexible floor plan was created around the core, with an open podium and auditorium staircase, allowing for any arrangement of workspace. The building generates more energy than it consumes, storing CO₂ through the use of timber.



foto: Sebastian van Damme, archdaily

Fortum Post-pandemic



foto: Adam Grzesik, projekt: Fortum, design: Workplace.pl

name: Fortum Post-pandemic
location: Poland, Wrocław
designer: Workplace.pl
year: 2023
surface: 1800 m²

The key assumption of the project was to promote the principles of sustainable development by using existing elements of the interior, such as glass walls, doors and ceilings. The aim was to adapt the space to the hybrid reality of work, combining the needs of on-site employees with those working remotely. Reducing the size of desks allowed space to be freed up for new functions, such as an exercise room, a relaxation room with a salt lamp and nature sounds, a library and a relaxation area with an anti-depression lamp. The central social area, previously occupied by the management, has been transformed into the heart of the office, promoting integration and knowledge exchange.



foto: Adam Grzesik, projekt: Fortum, design: Workplace.pl



foto: Adam Grzesik, design: Workplace.pl

Confidential Client

name: Confidential Client – modular office
location: Poland, Wrocław
designer: Workplace.pl
year: 2022
surface area: 650 m²

The aim of the project was to create a flexible space that supports cooperation, socialisation and individual needs. The space has been divided into two zones: employee and guest, with the possibility of combining or separating them depending on needs. The modular design allows for quick transformation of the office layout, e.g. combining three modules into an open space or creating a meeting room. A grid of lintels with built-in installations was used, allowing for easy adaptation of the space without the need for major construction work. Modern technologies supporting hybrid work were also introduced, such as room and desk booking systems and advanced audio-video solutions.

we have imagined a world of flexible and easily reconfigurable offices



Szymon Rychlik

CEO Mute

Mute wants to redefine office design through adaptability. What does this mean? Why is adaptability so important?

Szymon Rychlik: Because modern offices need to evolve with rapidly changing business needs. Today, office space design faces two key challenges. Firstly, both employees and organisations expect more from offices – offices need to attract employees and make them want to come back. They should support teamwork, stimulate creativity, look after the wellbeing of users and provide space for focused work. Secondly, the business environment is changing faster than ever before and offices need to adapt to new working styles, changes in team sizes and even relocation.

So what is your response to these challenges?

SR: As companies grow and change, their office spaces should evolve too. Therefore, we have imagined a world where offices are flexible and easy to reconfigure – without the high costs, long lead times and the negative environmental impact associated with traditional renovations. This is how we came up with Mute Modular – our latest product innovation.

What exactly is Mute Modular and what makes this solution so innovative?

SR: Mute Modular is an adaptable 'room-in-room' system that allows you to build all the key spaces of a modern office: meeting rooms, acoustic booths, lounge areas, coffee or photocopying points

from high-quality prefabricated modules. Each space can be configured to suit the specific requirements of a particular office – both in terms of size and style. Most importantly, however, each room can adapt to a company's changing needs, as the layout can be easily modified – unlike traditional, plasterboard constructions.

The days when companies occupied the same office for 10 years are over. According to research by the Financial Times, long-term leases have fallen by 70% since 2019, while short-term leases have risen from 15% to 48%. At the same time, office fit-out costs are rising by 10% a year. Offices therefore need to remain flexible while avoiding costly refurbishments – and Mute Modular makes this possible.

How has the market reacted to your innovation?

SR: When we introduced the Mute Modular a year and a half ago, we were sure it was a solution the market needed. However, because it was a completely new and complex concept, there were some doubts.

A great confirmation of the direction we had taken was when, after one of the first trade fairs at which we presented the product, the ELCA – a leading Swiss IT company – decided to abandon their original plans and create a space based on Mute Modular instead of a traditionally built office. They implemented our modular rooms on all five floors, making them the foundation of the entire project. This was the moment when we became convinced that we had taken the right direction.

Since then, everything has gathered pace. Mute Modular has won numerous awards in prestigious industry competitions such as the Dezeen Awards and Fast Company's Innovation by Design. But even more exciting is that our solution is being implemented in their offices by leading innovative brands such as LinkedIn, Meta, Airbnb and Gensler. These are companies that have always been at the forefront of workflow change. Their choice of Mute Modular is a clear signal that the offices of the future need to be more flexible.

Which project based on Mute Modular fills you with the most pride?

SR: The project for Gensler in their Washington office. They are one of the leading architectural firms in the world – they believed in our solution so much that they wanted it at home, even before we officially launched in the US market. They loved the idea of flexible, customisable spaces and used Mute Modular to create a 'creative zone' with 12 areas for teamwork, meetings and focused work.

What are your product plans for the coming months?

SR: We are working on our next launch. As one of the first manufacturers of acoustic booths, we plan to revolutionise the category by introducing the largest collection of booths ever.

Does more models mean more choice? How do you define the booth concept?

SR: Acoustic booths have become an indispensable part of modern offices. Although they have been on the market for a decade, they have changed little – acoustic performance has been improved, new colours have been added and designers are introducing increasingly extravagant designs.

However, all booth manufacturers seem to agree on one thing: a product line should only have 2 to 6 variants, which is supposedly enough to satisfy customers' needs. We disagree – with such a limited



foto: emontenegro/architectural photography, Mute Modular w biurze Uphill Health, Lizbona

choice, it is impossible to perfectly tailor a booth to the specifics of each project and the needs of a particular team. We think it's time for a change.

How many sizes do you plan to introduce?

SR: Modular Pods will offer 40 unique models in 11 sizes. What's more, each booth will be customisable – right down to the smallest details. Thanks to a dedicated collection of system furniture, a single booth model can be arranged in many ways – for example, as a meeting room or a spacious focus area for one person. This gives companies much more freedom to optimise their office layout. Finally, it is the space that will adapt to the needs of the company, not the other way around.

MUTE.



II. adaptation to technology

We have been used to, at least since the Matrix, that everything around us is becoming technological. In recent years, our homes, schools and offices have been adapting to the digital world. The new challenge, however, is becoming not so much about 'keeping up' as about being one step ahead. At the current rate of industrial development, it is impossible to predict what new technologies will emerge in the coming years – for this, the real intelligence of offices lies in tech savvy, i.e. preparing the infrastructure in advance, for challenges we do not yet know

5 very thoughtful offices

The concept of smart buildings has been evolving for decades, and it has evolved as a result of both technological advances and environmental challenges. Key moments such as the invention of the transistor, the first computers and the development of the Internet have shaped the modern approach to smart buildings. In turn, the environmental disaster in Santa Barbara in 1969 and the ensuing rise in environmental awareness, which contributed to the Green Building movement, brought energy efficiency and sustainability to the forefront of the commercial real estate sector.

In the 1980s, the term 'intelligent buildings' was first introduced, which

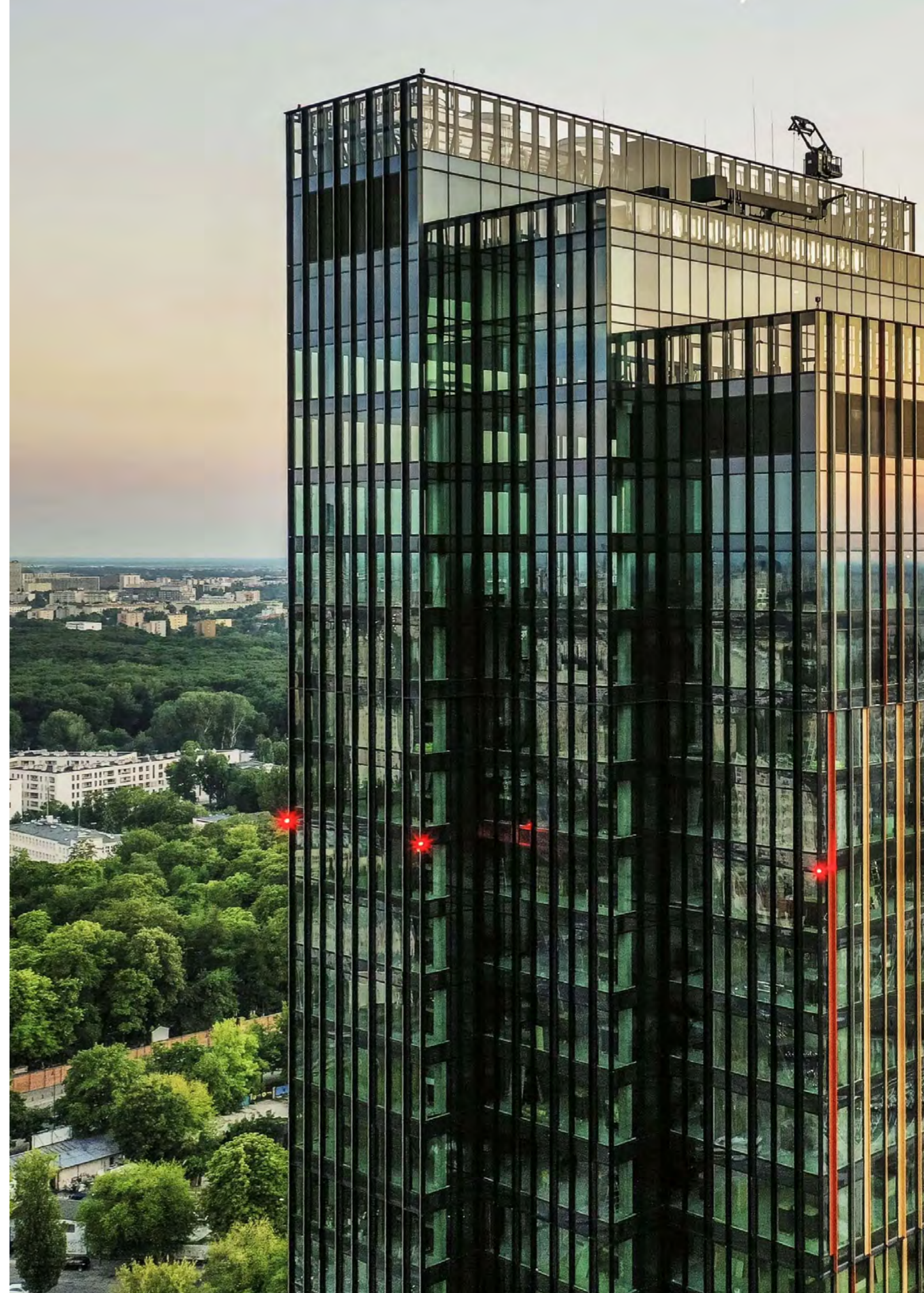
initially meant the integration of centrally controlled HVAC systems to optimise energy consumption. Today's intelligent buildings offer much more – they are high-tech facilities that, through automation and analytics, increase occupant comfort, reduce costs and improve energy efficiency. They enable real-time monitoring and management of many aspects, from security systems to users' interactions with the space. The focus today is on the needs of users, providing convenience while supporting efficient building management by owners⁷⁰.

systems to support building management

Offices of the future must be designed to adapt efficiently to new technologies. A modern approach to facility management plays a key role in this process. Facility management using advanced digital technologies and automation supports office flexibility, enabling optimum space utilisation, cost reduction and adaptation of the working environment to the changing needs of users. Through precise monitoring and data analysis, offices can dynamically respond to new technological challenges, increase operational efficiency and enhance employee satisfaction.

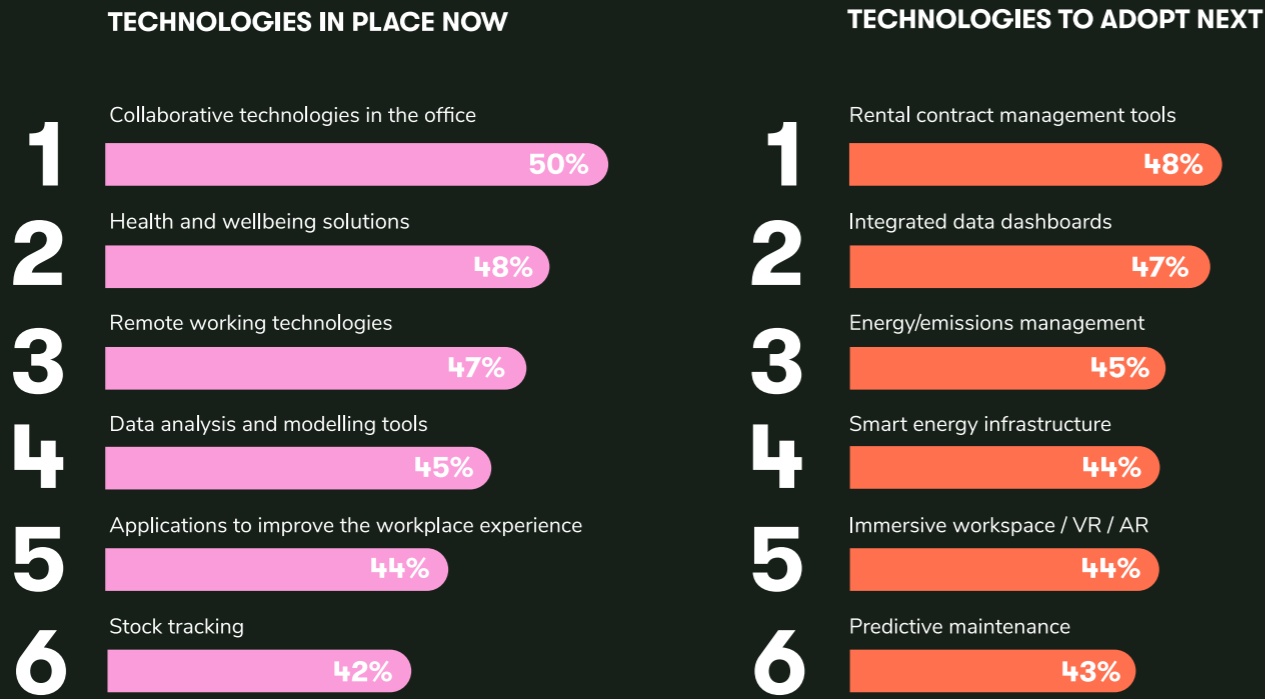


source: Bloomberg.com, 1969 Santa Barbara



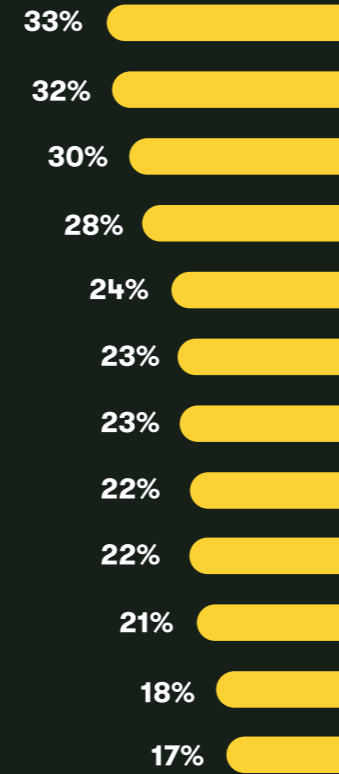
source: HB Reavis

THE MOST IMPORTANT OFFICE TECHNOLOGIES FROM THE POINT OF VIEW OF TENANTS

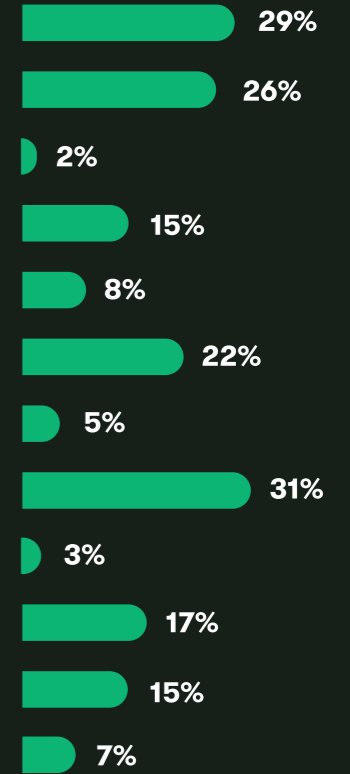


TECHNOLOGY PRIORITIES OF TENANTS AND PROPERTY OWNERS OFFICES

WHAT TENANTS EXPECT MOST



WHAT PROPERTY OWNERS PRIORITISE



MOTIVATING FACTORS FOR IMPLEMENTING TECHNOLOGY IN PROPERTIES

TODAY vs. KEY PRIORITIES FOR THE NEXT THREE YEARS



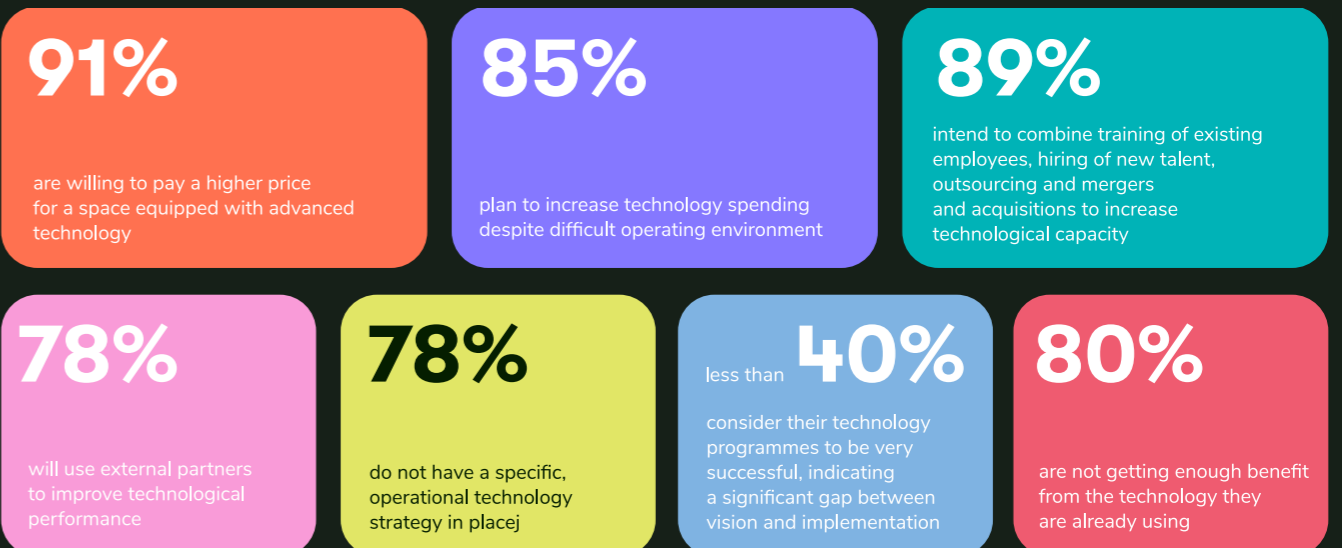
QUESTION FOR TENANTS

Which of the following technologies will be the most important that landlords should provide when moving into a new space?

QUESTION FOR INVESTORS

Which of the following technologies do you prioritise for inclusion in your future investments or when renting property?

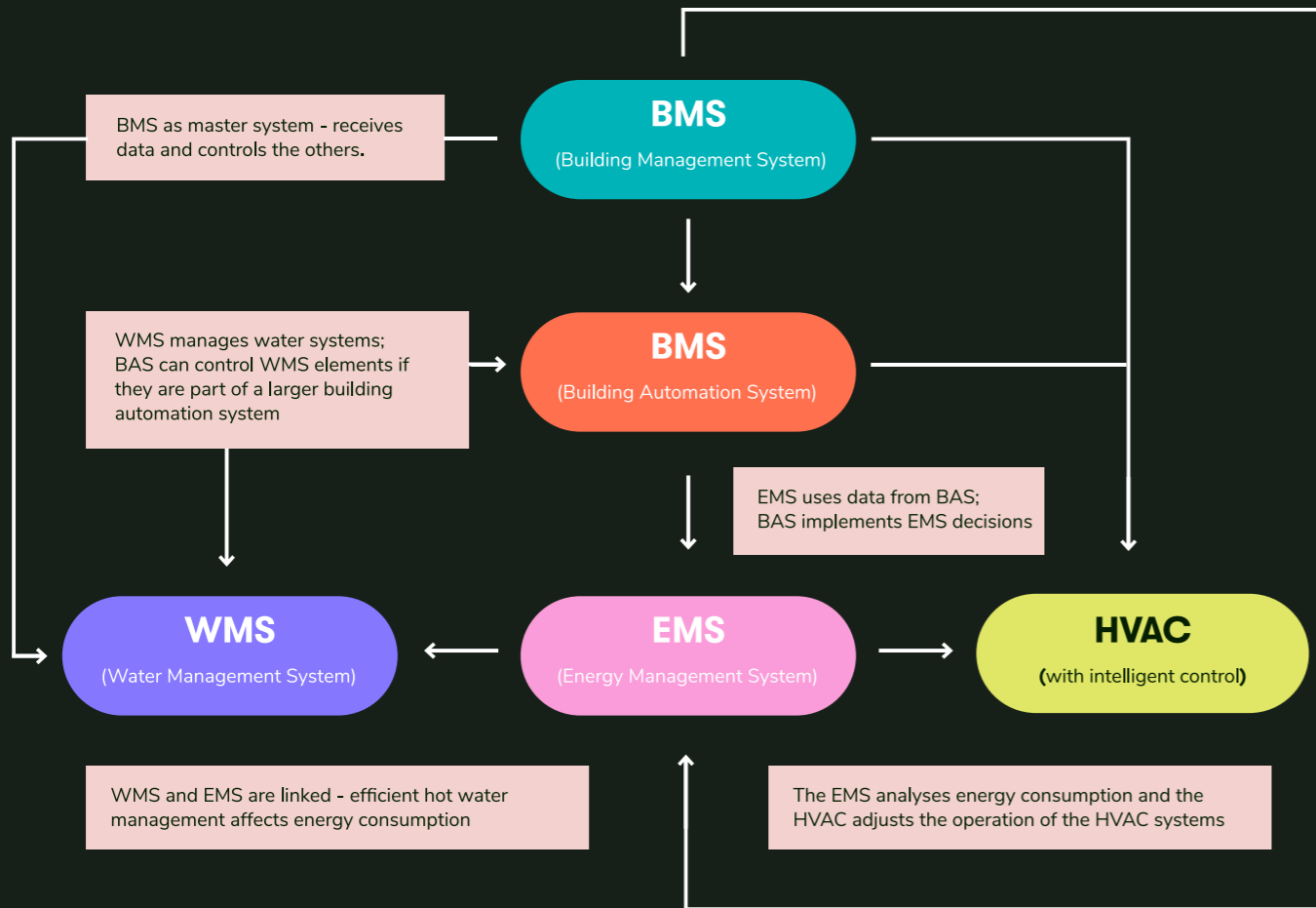
TECHNOLOGICAL AMBITIONS OF COMPANIES IN THE OFFICE SPACE



QUESTION → What are the three biggest drivers of technology adoption/implementation in the commercial real estate (CRE) sector today vs. three years from now?

Source: compiled by ThinkCo based on Integra Controls, BAS vs. BMS: What's the Difference?, 2023; FSG Smart Buildings, What is the difference between EMS and BAS?, 2023; Know Your Building, Top Benefits of Water Monitoring in a Building Management System, 2023.

BUILDING MANAGEMENT SYSTEM



Energy Management System

An energy management system (EMS) is an advanced tool that monitors, controls and optimises energy consumption in buildings. It integrates key systems, including HVAC (heating, ventilation, air conditioning), lighting and renewable energy management (RES). The EMS analyses data on energy consumption, costs and CO2 emissions, identifying areas of inefficiency and suggesting improvements. It supports energy strategy planning by defining KPIs, tracking progress and forecasting consumption. Enables the generation of reports on energy consumption, emissions and potential savings^{75 76}.

Water Management Systems

The water consumption monitoring system is an intelligent solution that enables precise control of water system parameters such as consumption, flow, temperature and volume. Thanks to its integration with sensors and meters, the system allows real-time monitoring

of data, detection of anomalies and generation of reports. It ensures better water resource management, cost reduction and supports environmentally friendly measures. In addition, remote access to data and automatic alerts enable rapid response to potential problems⁷⁷.

HVAC systems with intelligent control

Intelligent HVAC control is a system that automatically manages the temperature, humidity and air quality in a building to increase comfort and energy efficiency. It uses sensors, machine learning algorithms and the internet to optimally control heating, air conditioning and ventilation equipment. Key elements include smart thermostats, motion sensors, mobile apps, automatic scheduling and integration with voice assistants. The system adapts to user habits and weather conditions, saving energy⁷⁸. Today, HVAC control is based on digital direct control (DDC), where a digital controller controls actuators such

Building Management System

A building management system (BMS) is an integrated technological solution for the automatic and central control of technical functions of a building and its surroundings. The BMS collects data from various systems, responding in real time to changing conditions, helping to optimise efficiency, comfort and safety.

In office buildings, the BMS controls air conditioning, heating, ventilation and lighting and monitors security systems. It makes it possible to track parameters, define schedules and automatically control installations, which reduces operating costs and increases user comfort^{71 72}. The BMS integrates software, a server with a database and intelligent sensors. It monitors building parameters, analyses the data and presents them on dashboards. In the event of abnormalities, it generates alerts, enabling a rapid response. By linking

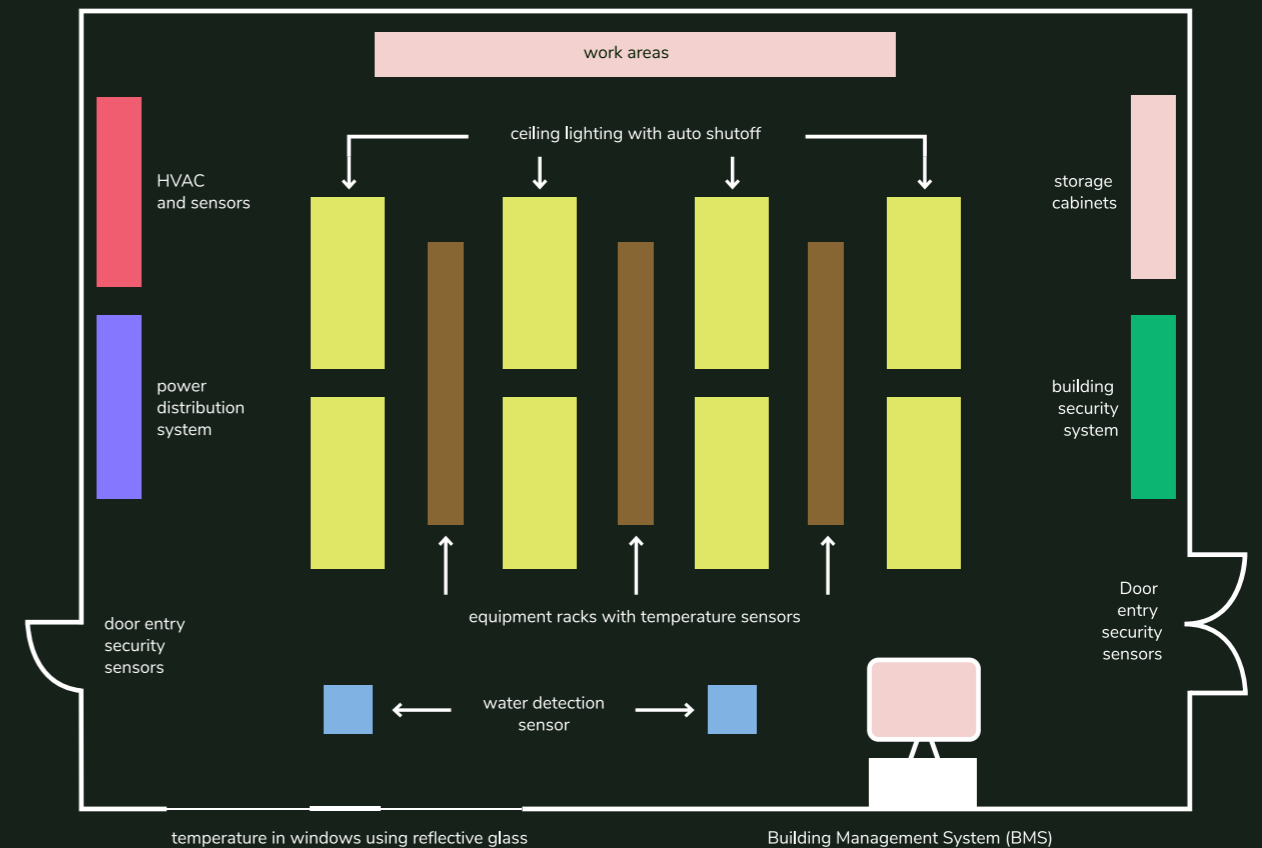
the various systems, it ensures their efficiency and energy savings⁷³.

Building Automation System

The BAS building automation system is a state-of-the-art solution that monitors and manages building installations such as lighting, ventilation, heating and cooling to optimise their operation and reduce running costs. BAS also enables integration with security systems, such as closed-circuit television (CCTV), anti-theft systems (EAS), access control (ACC), intrusion alarm systems (SSWIN), providing centralised management and quick access to information.

Thanks to automatic notifications, technical supervisors can respond immediately to irregularities. The implementation of BAS also ensures easier plant maintenance, communication and user safety by eliminating the risk of errors resulting from manual operation⁷⁴.

BMS OPERATING DIAGRAM



as valves and dampers. Groups of DDC controllers can operate independently or in a network, often integrated into a building automation system (BAS). In smart buildings, automation systems are increasingly working together, e.g. combining HVAC with the BMS for efficient management⁷⁹.

space management systems

Space management systems are tools for the efficient management of space in commercial buildings. They make it possible to optimise spatial layouts, plan room utilisation and monitor parameters such as occupancy and energy consumption. Space management helps companies tailor spaces to meet current needs, support business and sustainability goals, and increase occupant comfort and satisfaction

by tailoring the environment to their preferences and working styles.

Computer-Aided Facility Management (CAFM)

enable digital visualisation of spaces and assets. Space planning software offers detailed floor plans and layouts, facilitating effective planning and management. These systems allow you to track occupancy, manage maintenance and obtain up-to-date space utilisation data⁸⁰.

Computerised Maintenance Management System (CMMS)

automates the documentation and planning of maintenance tasks. It provides technicians with access to maintenance history and checklists, facilitates work order management and communication. Built-in reporting functions and dashboards support monitoring and decision-making. In addition, mobile CMMS applications allow

BMS AND BAS COMPARISON

	BMS	BAS
managed systems	HVAC, lighting, security and access control, energy management, fire alarm and security systems, Building Management and Control System (BMCS)	HVAC, lighting, ventilation/air purification systems, safety, air handling equipment, sterilisation/disinfection systems, sustainable environments
functions	Complete package to monitor and control HVAC, security, lighting and all major systems	Monitors and controls the mechanical and electrical equipment of the building
level of integration	High; integrates multiple systems for advanced central management	Medium; control of individual systems, but less comprehensive

Source: compiled by ThinkCo based on MACC, What is a Building Automation System? 2023.

foto: Angela Compagnone, unsplash



the tool to be used anywhere, increasing flexibility and efficiency⁸¹.

Integrated Workplace Management Systems (IWMS)

consolidates property and facility management on a single platform. It processes data on costs, energy consumption, maintenance and space plans. It enables occupancy reporting and scenario planning to support future space allocation decisions. This data helps companies to reduce costs, adapt space to users' needs, make informed decisions about the working environment and meet sustainability goals⁸².



source: EY

Internet of Things sensors

enable real-time data collection on space use, monitoring parameters such as occupancy levels, temperature and energy consumption. Analysis of this data provides valuable information about how the space is used and helps identify areas that can be optimised⁸³. Examples of sensors in offices:

1. **temperatures** – monitor conditions in different zones of the office. E.g. south-facing spaces require more cooling during the day when north-facing spaces may need reheating.
2. **humidity** – control humidity levels to prevent mould and mildew and. When humidity exceeds the recommended level, the HVAC system automatically dehumidifies the air.
3. **carbon monoxide** – they monitor the level of this toxic gas in the office. They inform you if the permissible concentrations are exceeded, minimising the risk of poisoning.
4. **motion** – support the automation of lighting and air conditioning, switching on devices only in actively used rooms. They increase efficiency and convenience.
5. **contact** – detect the opening or closing of windows and doors. They help with energy management and enhance security by monitoring access to key spaces.
6. **infrared** – used for motion and distance detection. They are also used in security systems to track the movement of people and objects.
7. **smoke** – they detect fire hazards before the flame appears, locating the source of the smoke. This speeds up the response and minimises the risk of a fire spreading.

COMPARISON OF SYSTEMS

	CAFM	CMMS	IWMS
purpose	focuses on a wide range of property management functions.	primarily serves to keep the infrastructure operational.	manages all aspects of the workplace, including facilities, real estate and workplace resources.
features	<ul style="list-style-type: none"> • property management • space management • space planning and analysis • management of removals • tracking and planning of equipment maintenance • reservation of places/rooms • management of external contractors 	<ul style="list-style-type: none"> • reporting • maintenance planning • easy access to information for technicians • asset management • integration of sensors to enable advanced maintenance strategies such as predictive and prescriptive maintenance 	<ul style="list-style-type: none"> • reporting • maintenance planning • easy access to information for technicians • asset management • integration of sensors to enable advanced maintenance strategies such as predictive and prescriptive maintenance • integration of data from different sources
advantages	<ul style="list-style-type: none"> • extended asset life • reduced operating costs • increased productivity and time management • improved communication and easy access to data • integration with CAD and Building Information Modelling (BIM) 	<ul style="list-style-type: none"> • more effective planning of maintenance work and carrying out maintenance • streamlining administration • accurate and up-to-date information on resources • reduction in maintenance costs • reduction in planned and unplanned downtime costs 	<ul style="list-style-type: none"> • comprehensiveness – integrating the many functions available in CAFM and CMMS • offers a comprehensive view of asset, facility and property data • improved data management, workflow and automation • advanced reporting and analytics • better integration with building management systems (BMS), energy management software (EMS), workplace management tools, sensors and building information modelling (BIM)
defects	<ul style="list-style-type: none"> • the system stores large amounts of confidential data that are vulnerable to cyber threats • requires regular maintenance and updates in order to function properly • requires consideration of how the system can be upgraded in the future and when new updates will be introduced • may not integrate seamlessly with other internal business systems such as HR and finance 	<ul style="list-style-type: none"> • high costs of user licences and implementation fees • complexity of configuration and data migration 	<ul style="list-style-type: none"> • high cost • personalised IWMS software may require more time to set up and future upgrades may be more difficult and expensive • due to the vast amount of confidential information they hold, IWMS software requires robust cyber security measures

Source: ThinkCo compilation based on Limbe, What is a Computerised Maintenance Management System (CMMS)? 2025; Limbe, What is CAFM software? 2024; SFG20, CAFM vs IWMS, Which is Right For Me? Your Ultimate Guide, 2024

8. **audio** – monitors noise levels in offices and regulates white noise generators to reduce unwanted sounds and improve the acoustic comfort of the space⁸⁴.

digital signage & room signage

modern solutions to replace paper signage in offices. They use e-paper or e-ink displays to manage bookings and update room availability. Integration with calendars increases information transparency and relieves administration. They optimise space utilisation, simplify bookings and increase management efficiency, improving work comfort and space organisation⁸⁵.

AI & Machine Learning

support space management by analysing large datasets and identifying patterns. Based on historical data, AI can forecast future space needs, allowing companies to plan better and reduce unnecessary costs. ML algorithms can streamline space layout, increasing productivity and employee satisfaction⁸⁶.

beacon technology

small Bluetooth wireless devices that emit a radio signal. Each beacon is assigned to a specific object, allowing location tracking, recording movement and triggering actions such as opening gates. They are used in access control, time monitoring, control of the number of people in a room, evacuation support and incident reporting. They can also monitor environmental parameters with built-in sensors⁸⁷.

shy tech

technological solutions that subtly integrate with their surroundings, supporting users in their daily activities while remaining almost invisible. In offices, they are used in intelligent systems such as whiteboards that digitise notes and enable real-time translation, automatically adjust lighting and temperature to individual preferences, manage conference room bookings, analyse the habits and schedules of teams to optimise the use of office space⁸⁸.

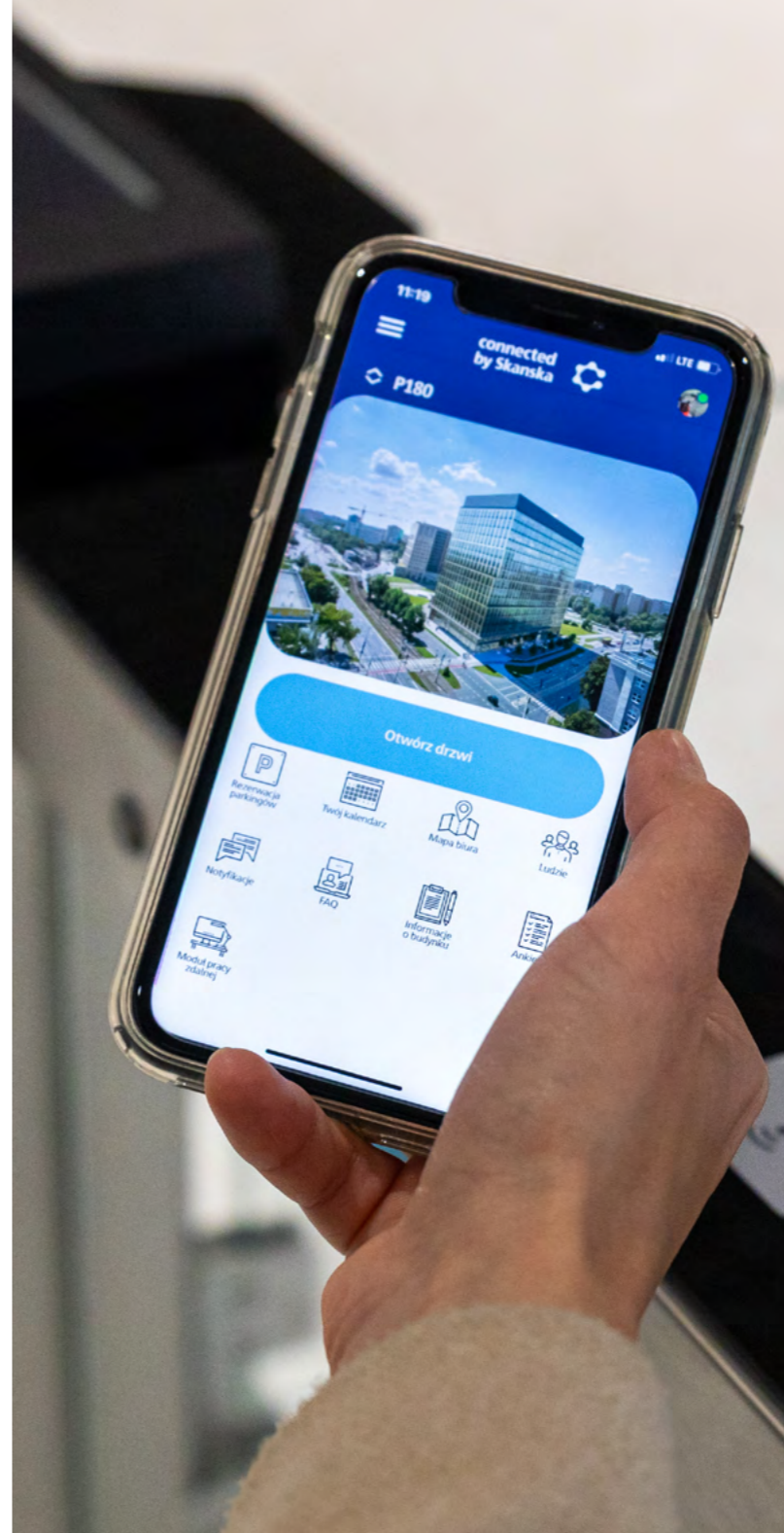
ai in smart office buildings

Artificial intelligence (AI) plays a key role in improving the energy efficiency of buildings, supporting facility managers to optimise systems such as HVAC. By analysing data from a variety of sources, AI makes it possible to develop algorithms for predictive maintenance and set parameters that balance energy efficiency with tenant comfort. AI tools also create benchmark energy models, allowing building owners to use existing data to identify possible savings without costly audits.

AI integrates information about location, climate conditions, energy sources and external data to model energy consumption and support operators in applying advanced energy technologies. In energy planning, AI can suggest combining renewable energy with traditional sources and energy storage, making systems more resilient to price spikes and power outages.

foto: Andras Vas, unsplash

source: Skanska



With advanced energy models, AI also supports building retrofit processes by creating detailed digital twins that simulate energy demand under different design parameters. Furthermore, these models help property owners meet long-term decarbonisation targets, supporting the transformation of property portfolios towards net zero emissions⁸⁹.

“

The .KTW office buildings are our vision of the office of the future – thought through in every detail and based on a synergy of innovation, sustainability and care for users. Designed from the outset with advanced technology in mind, the complex uses BMS, HVAC and IoT systems to create a smart, adaptive working environment. Thanks to them, .KTW not only manages energy consumption in real time, but also learns the needs of its users, increasing efficiency and comfort for our tenants.

It is also a space that supports ESG goals – powered by 100% green energy, certified according to BREEAM and WELL Health & Safety, equipped with accessibility and safety solutions. For tenants, this means not only meeting high ESG standards, but also lower costs and better working conditions for teams. In addition, the between.KTW app allows users to manage the space from their phone, making the office not only smart, but also simply convenient.

With the future in mind, .KTW combines technology, comfort and responsibility to become one of the symbols of modern Katowice.



Marta Jełowicka-Gabor

Senior Manager, Property Portfolio Management
TDJ Estate

comprehensive ESG support in sustainable offices

With the increasing ESG (Environmental, Social, Governance) expectations of companies and the new reporting requirements under the CSRD regulations, the need for comprehensive solutions for effective office space management is arising. In response to these challenges, Skanska has developed a comprehensive 'ESG by Skanska' offering that ranges from consultancy to implementation and tools to support ESG reporting and implementation.

The offer is not limited to sustainable building concepts. ESG approaches, fit-out consultancy and opportunities to manage space in an environmentally friendly way are discussed at the interview stage with clients. As part

of our support, we educate tenants on how to use the space efficiently and implement systems such as BMS Care – which monitors utility consumption – and Waste Tracker, which records the amount of waste generated and converts it into CO2 emissions. These solutions enable full control over key ESG indicators.

Another element is designing offices with long-term use in mind. Skanska focuses on ensuring that the space is flexible and adaptable to changing needs. Among the solutions implemented are optimised ventilation systems, raised floors and modular installations that allow the space to be reorganised in the future without over-consuming resources. These design consultations make it possible to



create offices that respond to a variety of working styles, including the needs of neuroatypical people, by providing relaxation zones and quiet areas for focused work.

The process of implementing ESG solutions also includes user education, which is a key element of effective building management. Our clients benefit in numerous ways from the solutions implemented in Skanska's office buildings. With the available technology and advice, they can reduce operating costs, increase energy efficiency and reduce CO2 emissions. ESG education adds value to our clients by supporting them in achieving their sustainability goals and managing resources efficiently. We believe that sustainability is the

key to the future," says Eliza Jamrozik, Leasing and Building Value Management Manager at Skanska Commercial Development Europe in Poland.

Skanska not only offers support and education, but also implements responsible solutions in its own business operations. Architectural accessibility is particularly important. Office buildings are created inclusively, with a view to people with disabilities, parents with children and cyclists, with the aim of ensuring comfort and safety for all users, thus making the daily use of the space convenient and safe.

SKANSKA

6 communication technologies

Today's organisations rely on modern technologies for effective communication, enabling the efficient flow of information between employees, regardless of where they are. This increases both the

efficiency of teamwork and the flexibility of operations, which is particularly important in remote and hybrid teams that must respond dynamically to changing project needs. By integrating the right hardware solutions, the quality of collaboration can be maintained and communication barriers minimised, which is crucial for the efficiency of organisations in distributed settings.

hybrid meetings

Despite the return of many workers to the office after the pandemic, hybrid and remote working remains more popular than before the pandemic. Debates about their benefits and challenges highlight the key role of technology, which is seen as both a source of problems and a tool for opening up new perspectives. There is a growing emphasis on personalisation and improving the hybrid worker experience by implementing flexible and open working environments⁹⁰. Collaborative and decision-support technologies are being designed to use real-time data to tailor tasks to employees' strengths, while nurturing their wellbeing.

The sustainability of the hybrid working model depends largely on the development of technologies that enable such a system to function effectively. Currently, 40% of office interactions



source: Skanska



source: IKEA

During hybrid encounters, Generation Z feels the most excluded, while the baby boomer generation feels the least excluded. In contrast, the responses of Millennials and Generation X are very similar. Their degree of exclusion is almost twice as low as that of generation Z and almost twice as high as that of the baby boomers.⁹²

involve remote participants, with as many as 1 in 4 people experiencing technological difficulties in collaborating with team members who work remotely. Modern solutions need to bridge technological and organisational barriers, ensuring that all employees have equal access to tools and information, regardless of where they work. It is also crucial to adapt methods such as access systems or collaboration platforms to meet the dynamically changing demands of the hybrid working environment⁹¹.

the future of hybrid meetings

Advanced role for artificial intelligence: AI will support real-time

meetings by automatically transcribing conversations, summarising key points and suggesting personalised actions based on the discussion.

Virtual and engaging 3D spaces:

Developments in VR and AR technology will create immersive virtual environments that blur the boundaries between physical and digital encounters, providing more interactive experiences.

Hyper-personalisation: meetings will be tailored to the individual preferences of participants, offering asynchronous participation options, personalised agendas and dynamic content tailored to the needs of each team member.

THE FUTURE OF HYBRID MEETINGS

Advanced role for artificial intelligence: AI will support real-time meetings by automatically transcribing conversations, summarising key points and suggesting personalised actions based on the discussion.

Virtual and engaging 3D spaces: Developments in VR and AR technology will create immersive virtual environments that blur the boundaries between physical and digital encounters, providing more interactive experiences.

Hyper-personalisation: Meetings will be tailored to the individual preferences of participants, offering asynchronous participation options, personalised agendas and dynamic content tailored to the needs of each team member.

Data analytics for better management: The use of meeting analytics will enable monitoring of team dynamics, participant engagement levels and efficiency to optimise future meetings.

Targeting results: Meetings will cease to be just a routine part of the job and their value will be measured by their real impact on the achievement of goals and key tasks.

TECHNOLOGICAL PREPARATION FOR HYBRID COMMUNICATION

the global videoconferencing equipment market was worth

6,09 mld USD, in 2024 and is expected to reach **12,46 mld USD** by 2029

76% of employees believe that meeting rooms are ineffective in increasing productivity

72% of employees agree that their organisation needs new tools or technologies to support remote working

only 48%

of meeting rooms are equipped with audio and video capabilities

Source: compiled by ThinkCo from Mordor Intelligence, Video Conferencing Hardware Market Size & Shape Analysis - growth trends & forecasts, 2024; Webex by Cisco, Work has changed. Why hasn't the office?, 2024; zoom, Zoom survey reveals hybrid work reigns supreme and delivers unexpected value to global organisations, 2024; Owl Labs, State of hybrid work 2023, 2023.

80% of employees report that the performance of their meeting rooms needs improvement

75%

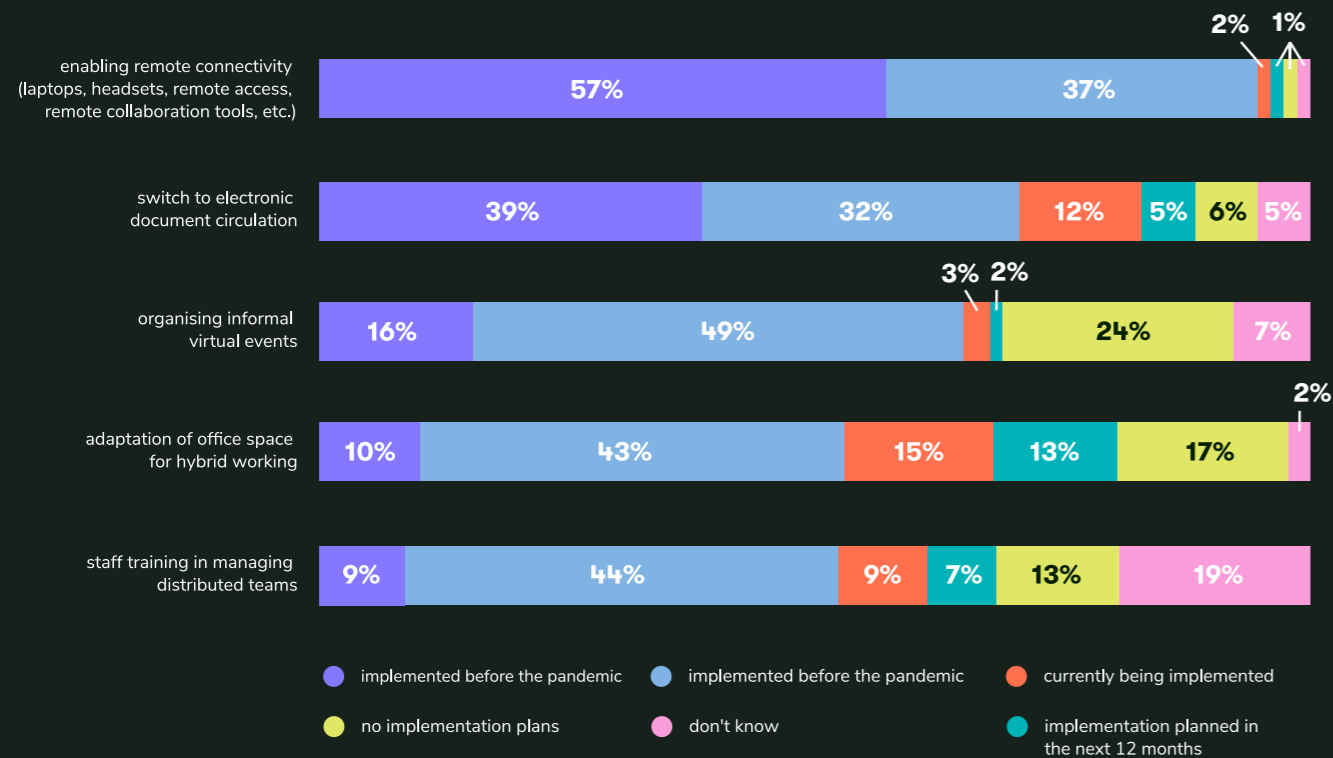
of employees agree that the current tools and technologies in their organisation that enable remote working need to be improved

87% of employees report that current collaboration tools do not integrate seamlessly

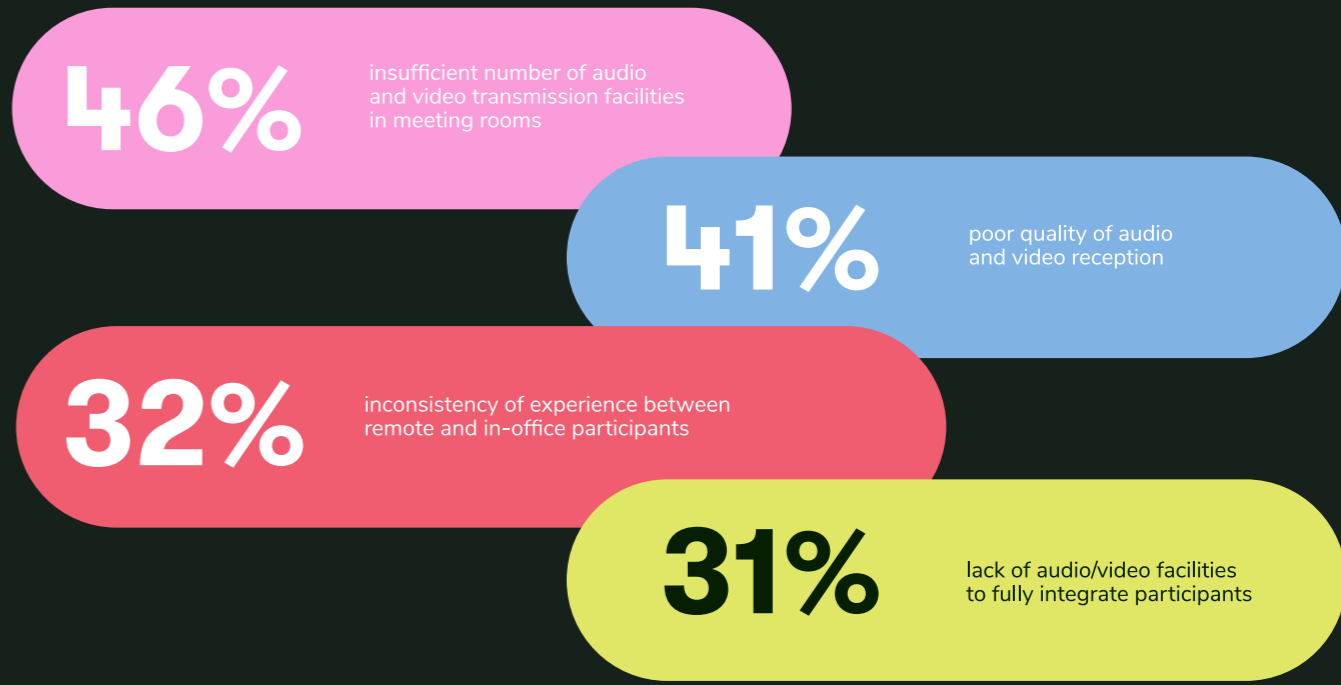
59% believe that current collaboration tools are ineffective

only 28% of companies have improved their meeting technology in 2023

IMPLEMENTATIONS RELATED TO REMOTE AND HYBRID WORK



WHY MEETING ROOMS ARE INEFFECTIVE FOR EMPLOYEES

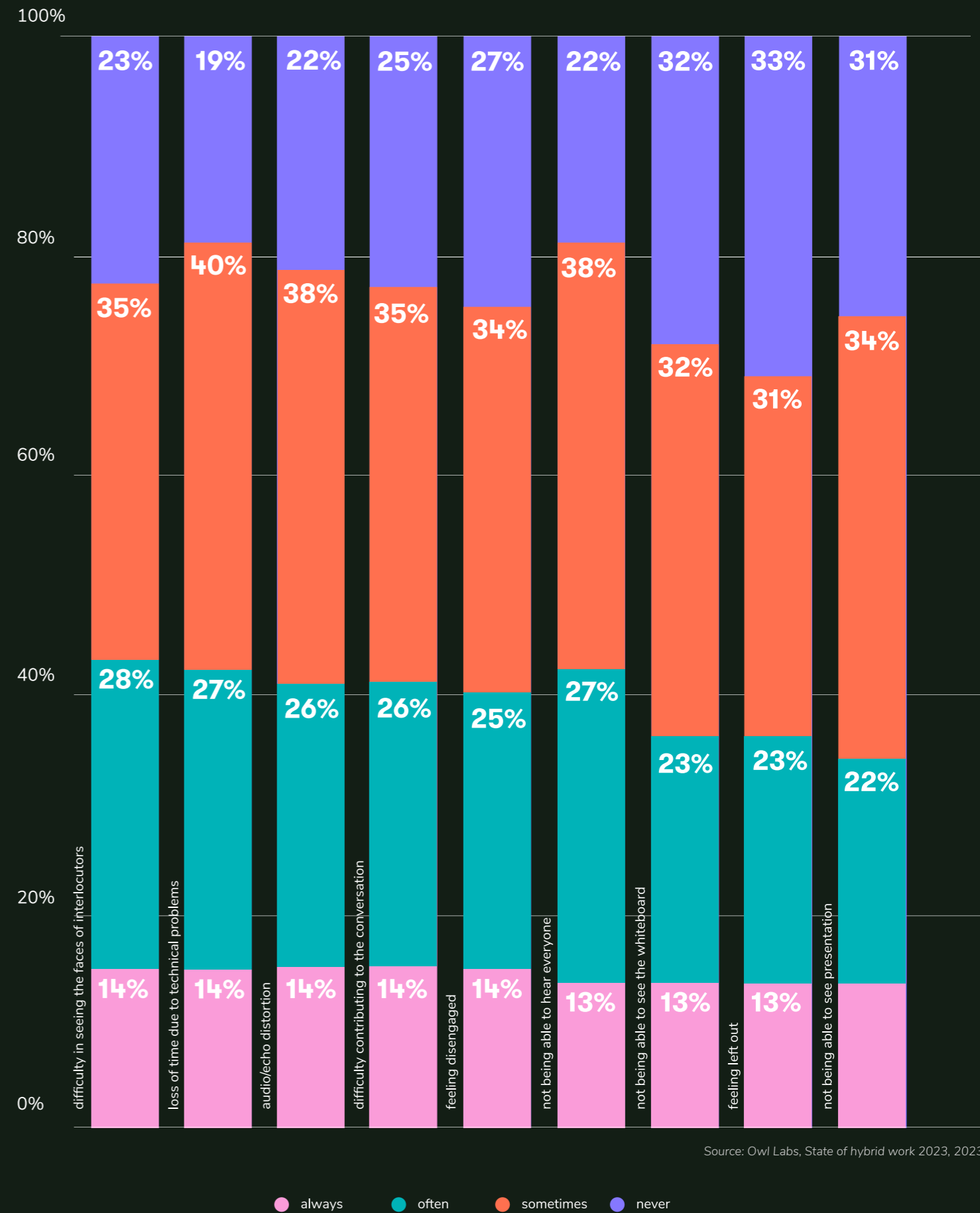


STAFF ATTITUDES TO HYBRID MEETINGS

- ➔ **only 42%** think that the office is fully prepared to support the hybrid working model
- ➔ **31%** are reluctant to attend meetings in a conference room because they feel less comfortable than using their own laptop – Poland's corresponding figure is close to 24% of employees
- ➔ **only 15%** say that all meeting rooms in their office are equipped with video facilities
- ➔ **30%** are hesitant to attend meetings in a conference room because the technology is not as convenient for them as using their own laptop
- ➔ **86%** said that at least one remote participant attends their meetings
- ➔ **81%** encountered problems during online and hybrid meetings and 78% reported not being able to hear all participants

foto: Adam Grzesik, design: Workplace.pl

MAIN CHALLENGES OF MEETINGS HYBRIDS



Source: compiled by ThinkCo based on Webex by Cisco. Work has changed. Why hasn't the office? 2024; Jabra. The state of meetings in hybrid work. 2023; Owl Labs. State of hybrid work 2023, 2023.





foto: Adam Grzesik, projekt: Maersk, design: Workplace.pl

Data analytics for better management:

The use of meeting analytics will enable monitoring of team dynamics, participant engagement levels and efficiency to optimise future meetings.

Targeting results: Meetings will cease to be just a routine part of the job and their value will be measured by their real impact on the achievement of goals and key tasks .

tools to support communication

videoconferencing kits

are a key component of offices, enabling collaboration regardless of location. They consist of a camera, microphone and speakers, ensuring seamless communication. Kits vary in sophistication, from simple models for small groups to elaborate systems for large teams, with noise reduction and automatic image quality adjustment features.

VoIP system

is a technology that transmits voice over the Internet, eliminating the need for traditional telephone networks. It enables calls from anywhere, which is ideal for remote working and international teams. It offers integration with business applications, video conferencing and advanced analytics. With its flexibility and low cost, VoIP is suitable for both small businesses and large corporations, streamlining communications and reducing costs⁹³.

360° cameras

facilitate hybrid meetings by capturing full-range video and automatically tracking speakers thanks to AI. Equipped with omni-directional microphones and speakers, they provide high quality audio and video. Features such as framing and meeting recording make them a key tool for modern communication, increasing

efficiency and engaging participants. They work well in both small offices and large meeting rooms.

interactive screens and whiteboards

allowing direct interaction with the material displayed. With touch screens, participants can modify presentations together, create charts or notes in real time. They encourage creativity and make it easier to discuss complex issues visually, which is particularly useful for project teams. Thanks to the content sharing function, they allow remote access to materials, which increases the engagement and interactivity of meetings⁹⁴.

mobile headsets and hands-free car kits

allow you to move freely during conversations, even in noisy offices. They support team meetings and group work, increasing the comfort and efficiency of communication. The flexibility of these technologies promotes multi-tasking in a variety of working conditions. A special type is ceiling microphones, which collect the voice from the entire room, eliminating the need for additional equipment on conference tables.

servers and network equipment

are the backbone of the IT infrastructure, ensuring data stability and security and the smooth operation of systems. Servers store data and applications, while network devices manage data traffic, enabling the rapid transfer of information. As a business grows, it is necessary to implement high-bandwidth solutions and advanced security to protect against cyber-attacks⁹⁵.

wireless communication systems

encompasses technologies that enable data transfer without the need for physical cables, increasing the flexibility of work organisation. Examples include Wi-Fi, Bluetooth, as well as dedicated technologies that support various forms of wireless communication⁹⁶. They also facilitate the monitoring and management of remote devices.

7 technological certificates

Technology certifications are formal assessments that measure the level of technological sophistication of buildings, highlighting their innovation and adaptability in the face of future change. The certification process distinguishes investments that not only meet current technological standards, but are also characterised by flexibility and readiness for new challenges. As a result, certified buildings are perceived as modern and forward-looking, increasing their value and attractiveness for investors and users.

The most widely used certifications are SmartScore and WiredScore, which set the most important standards for the technological assessment of buildings. The WiredScore certification, developed in 2013 in New York, responds to the needs of office tenants who are looking for confirmation of high quality teletechnical infrastructure. In 2021, the SmartScore certification was created in response to the digital transformation of the development industry and the need to standardise assessment standards for smart buildings. Since 2022, both certification systems have been available on the Polish market, enabling a comprehensive technological assessment of office buildings⁹⁷.

WiredScore

WiredScore is a technical certification that supports the planning of a building's infrastructure with future technology needs in mind. It defines the requirements for cabling, the layout of tele-technical risers and space for additional power supply. It provides a valuable knowledge base for the design of new and retrofit of existing facilities. The certification process includes a systems audit, pre-certification, expert recommendations for possible improvements, evaluation against comprehensive criteria and



source: Skanska, Studio



source: Q22



promotion of the achieved certification level in the market.

The WiredScore rating system is based on an analysis of the resilience of buildings and their ability to adapt to new technologies. It takes into account the needs of users in terms of digital connectivity quality and mobile network availability. The certification enables tenants to compare buildings in terms of connectivity quality. Developed using data from 75 million square metres of properties already certified, WiredScore supports building owners in planning technological developments⁹⁸.

SmartScore

SmartScore is a certification that ensures the comprehensiveness, security and flexibility of smart building systems. It provides a detailed guide for property owners and managers, pointing out areas that are worth developing, such as tenant platforms or building automation systems. This allows these systems to operate efficiently and enables accurate reporting, including detailed monitoring of energy consumption.

SmartScore allows energy use to be monitored on a building-wide basis, broken down by floor and different sources of consumption, such as heating, cooling, lighting and individual tenant

consumption. Management of this data is supported by intelligent software that can automatically make changes, such as adjusting the temperature in parts of the office or turning off lighting in unused spaces. The experience of the pandemic highlighted the need to respond flexibly to changing building usage conditions. SmartScore therefore helps not only to save energy, but also to prepare buildings to respond to future challenges⁹⁹.

other certificates

Other certifications that assess buildings in terms of technology include the BEST Smart Building Certification, introduced by BOMA Canada in 2021, and the Smart Building Certification (SBC), developed in 2022.

BEST certification considers six key areas: analytics and AI, cyber security, data management, connectivity, user health and sustainability. The certification process begins with a detailed questionnaire on security, governance, network integration and user experience, before the building undergoes third-party verification. The programme is designed with older buildings and projects with limited budgets in mind – it prioritises efficiency regardless of the age, size or condition of the building¹⁰⁰.

SBC certification assesses smart buildings in six key areas. It analyses building use and performance, matching space to occupant needs and optimising systems. Assesses the indoor environment, including air quality and comfort. It considers physical and digital security and occupant health. It explores collaboration and social interaction, supported by modern technologies. The final area is systems integration and reliable connectivity, eliminating operational silos and increasing operational efficiency¹⁰¹.

In Poland, BEST and SBC certificates are not yet in use, but global interest in these standards is growing, which may influence their future presence on the Polish real estate market.

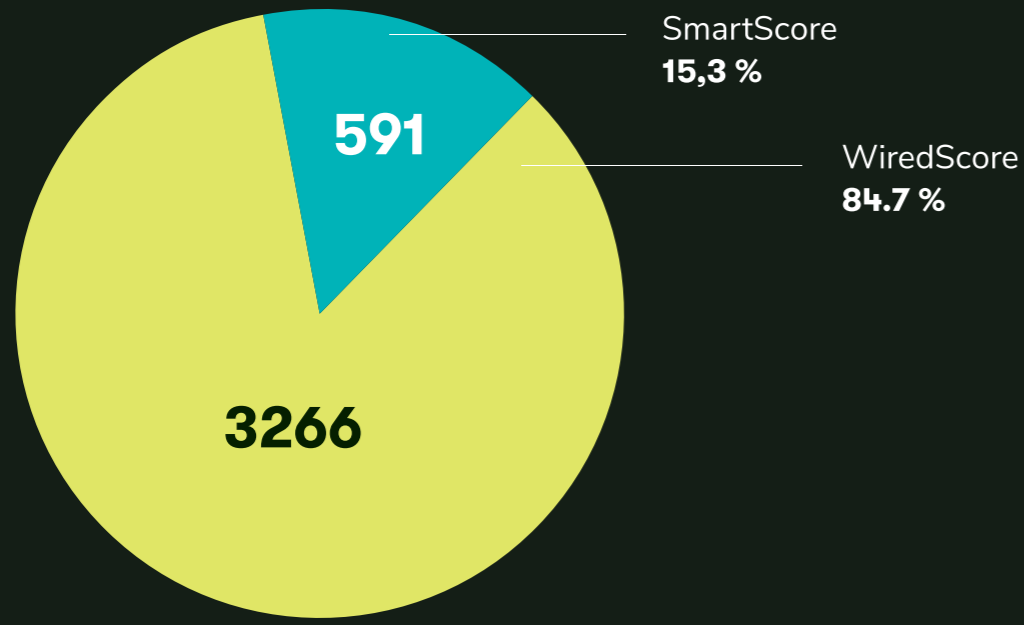
COMPARISON OF WIREScore AND SMARTScore CERTIFICATES

	WiredScore	SmartScore
Types of certification	<ul style="list-style-type: none"> WiredScore Office Development WiredScore Office Occupied 	<ul style="list-style-type: none"> SmartScore Office Development SmartScore Office Occupied
Categories (for offices)	<ul style="list-style-type: none"> Connectivity – an assessment of the building's regulations, which provide access to a wide choice of service providers, including major fibre providers and wireless services, and the ability to support multiple network operators simultaneously. Infrastructure – assessing the quality of the technical infrastructure and the physical flexibility of the building, as well as its capacity, i.e. its ability to accommodate both new tenants and advanced technologies in the future. Future-readiness – an assessment of how easy it is for tenants to move into the building and quickly set up their internet connections, which affects their convenience and adaptation time. Innovation – an assessment of the modernity of the technologies used and additional features that enhance the comfort and efficiency of the building's users 	<ul style="list-style-type: none"> User Functionality – assessing the impact of implemented technologies on individual and team working, health, wellbeing, community, sustainability, maintenance and operations, and safety and security. This category takes into account the needs of all potential users, including employees, visitors, managers and facility owners. Technology foundations – assessing digital user connectivity, building systems, owner integration networks, facility management, cyber security and data sharing. This category assesses the performance of systems and policies in place, including cybersecurity and building data management policies
Highest scoring category	for Office Development – Infrastructure for Office Occupied – Communications	User functionality
Certification levels	Certified – 45/100 points Silver – 63/100 points Gold – 77/100 points Platinum – 90/100 points	<small>Source: compiled by ThinkCo based on PLGBC, Explore WiredScore and SmartScore certifications, 2024; Colliers, SmartScore will confirm the level of technological sophistication of real estate, 2022.</small>

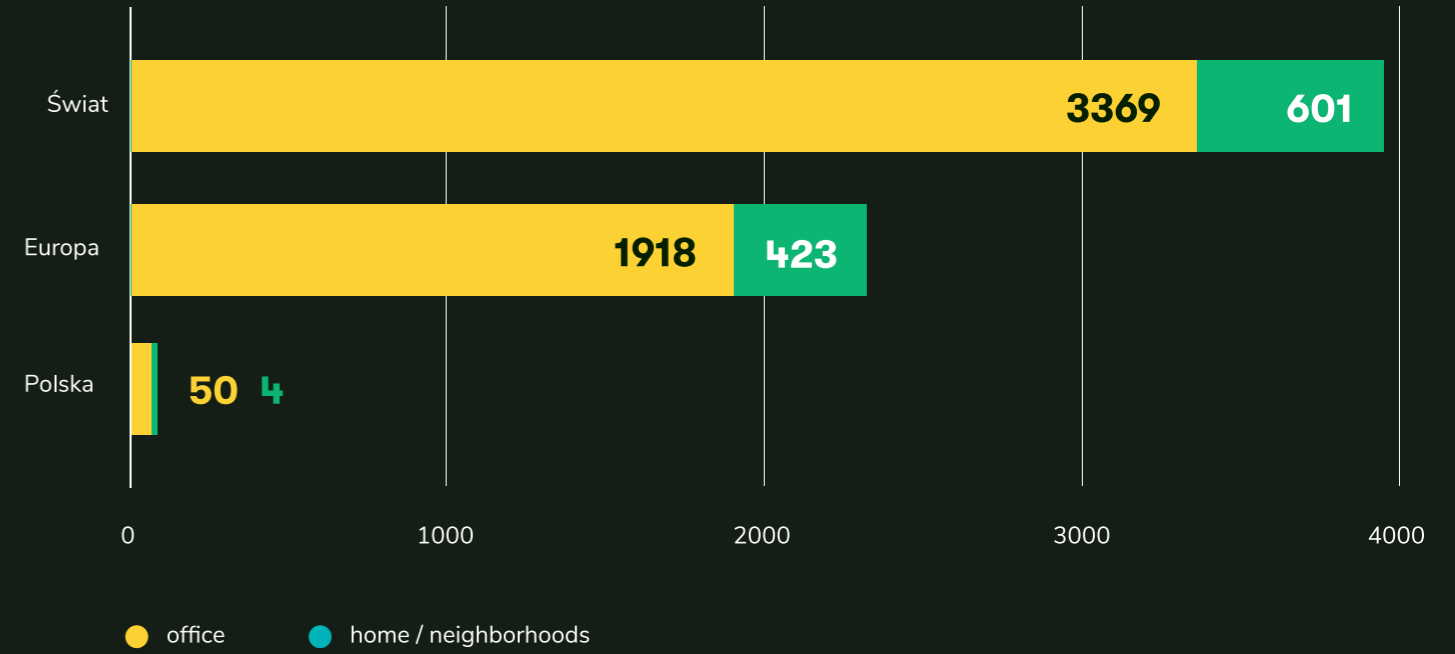


source: HB Reavis, Varso Tower

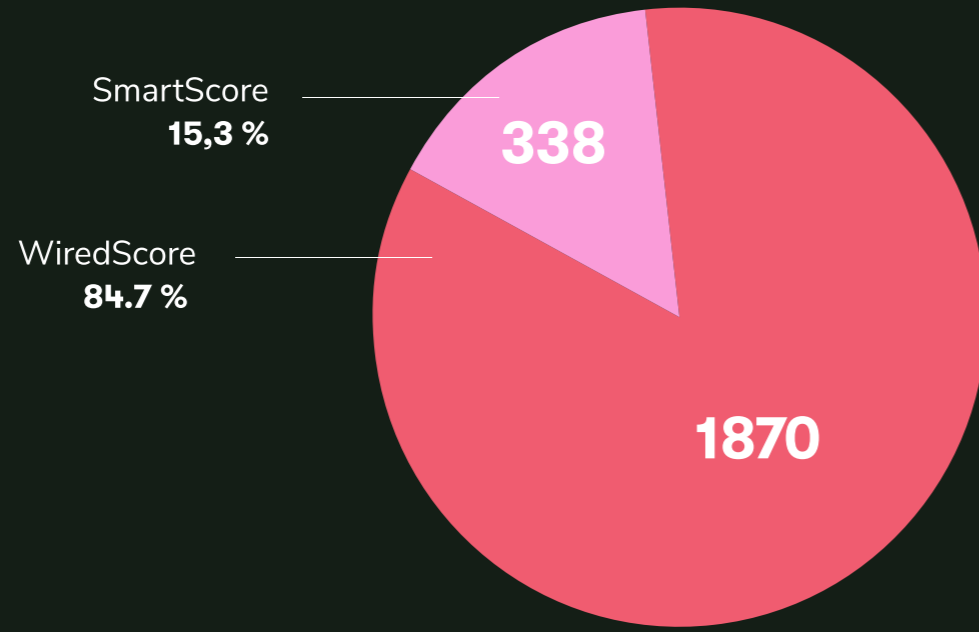
NUMBER OF OFFICE BUILDINGS CERTIFIED OR IN THE PROCESS OF BEING CERTIFIED WORLDWIDE



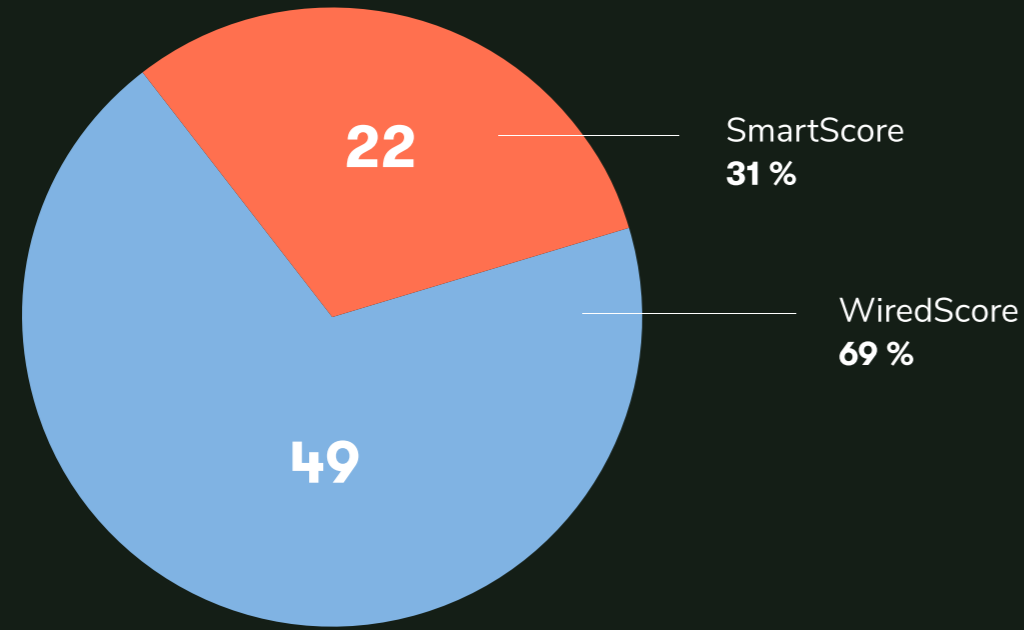
NUMBER OF WIREScore AND SMARTScore CERTIFIED FACILITIES BROKEN DOWN BY OFFICE AND HOME/NEIGHBORHOOD



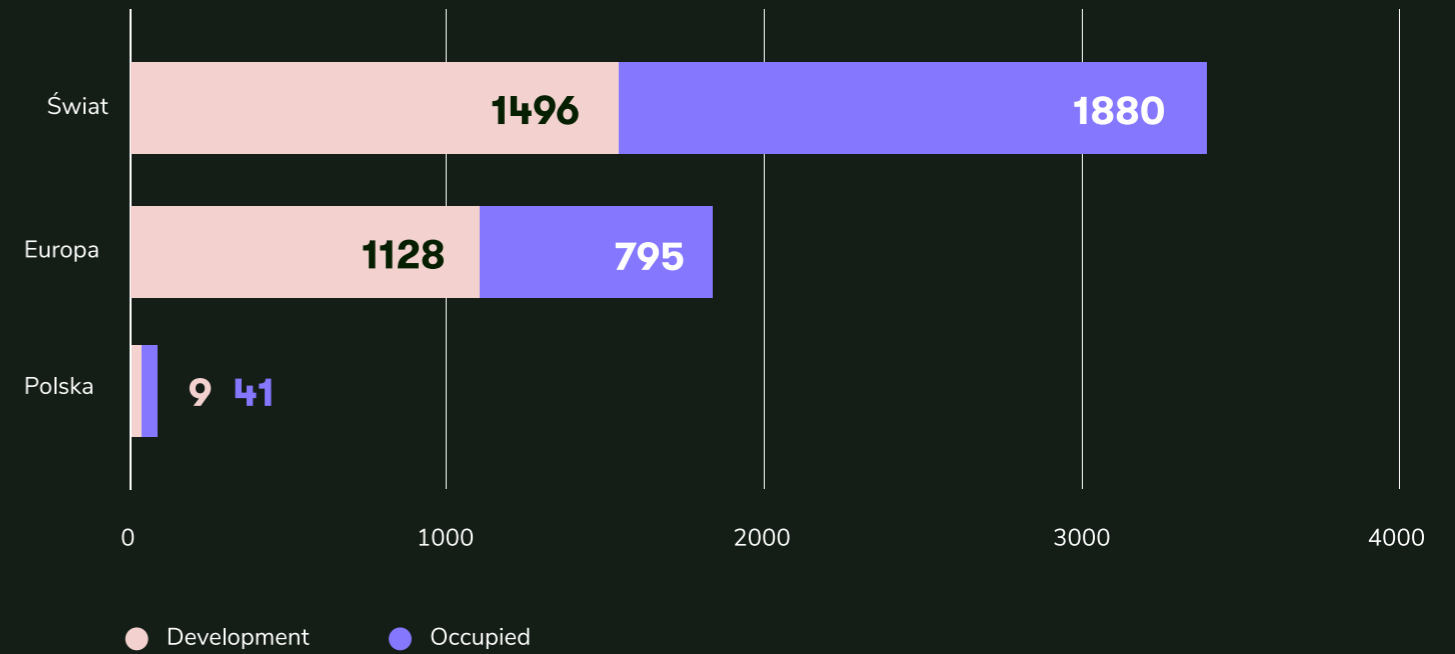
NUMBER OF OFFICE BUILDINGS CERTIFIED OR IN THE PROCESS OF BEING CERTIFIED IN EUROPE



NUMBER OF OFFICE BUILDINGS CERTIFIED OR IN THE PROCESS OF BEING CERTIFIED IN POLAND



NUMBER OF OFFICE BUILDINGS CERTIFIED OR IN THE PROCESS



Source: ThinkCo compilation based on WiredScore data, <https://tiny.pl/ypzr685b> (accessed 29.11.2024).

11 Belgrave Road, Londyn



foto: Dirk Linder

name: 11 Belgrave Road
location: United Kingdom, London
designer: Eric Parry Architects
year: 2024
surface area: 13.935 m²

The 11 Belgrave Road redevelopment project has retained and adapted 35% of the existing building materials for new purposes. The building has achieved BREEAM Outstanding, WELL Platinum, WiredScore Platinum and SmartScore Platinum certifications. The upgrade included intelligent building management systems to monitor energy consumption, lighting and air conditioning. A façade based on state-of-the-art panels makes it possible to regulate light flow and improve thermal efficiency. Remote diagnostics and automation systems support ongoing maintenance, and the modular design allows for future modifications.



foto: Dirk Linder

2Amsterdam

name: 2Amsterdam
location: Netherlands, Amsterdam
designer: KCAP Architects
year: 2021
surface area: 21.000 m² / office area: 50.000 m²

The building was converted from two 1980s office towers. It has achieved SmartScore Platinum, WiredScore Silver, and BREEAM Excellent certifications. The mixed-use function integrates office spaces with the hotel, providing access to common areas. It uses bGrid technology to monitor the building's climate and manage energy in real time, controlled by a dedicated app. Thanks to this app, it is possible, among other things, to book a meeting space, a parking space or order a coffee. The building is powered by solar energy. One of the first projects registered for SmartScore certification.



source: provast.nl

Corning Optical HQ



source: Corning Optical

name: Corning Optical Communications Headquarters

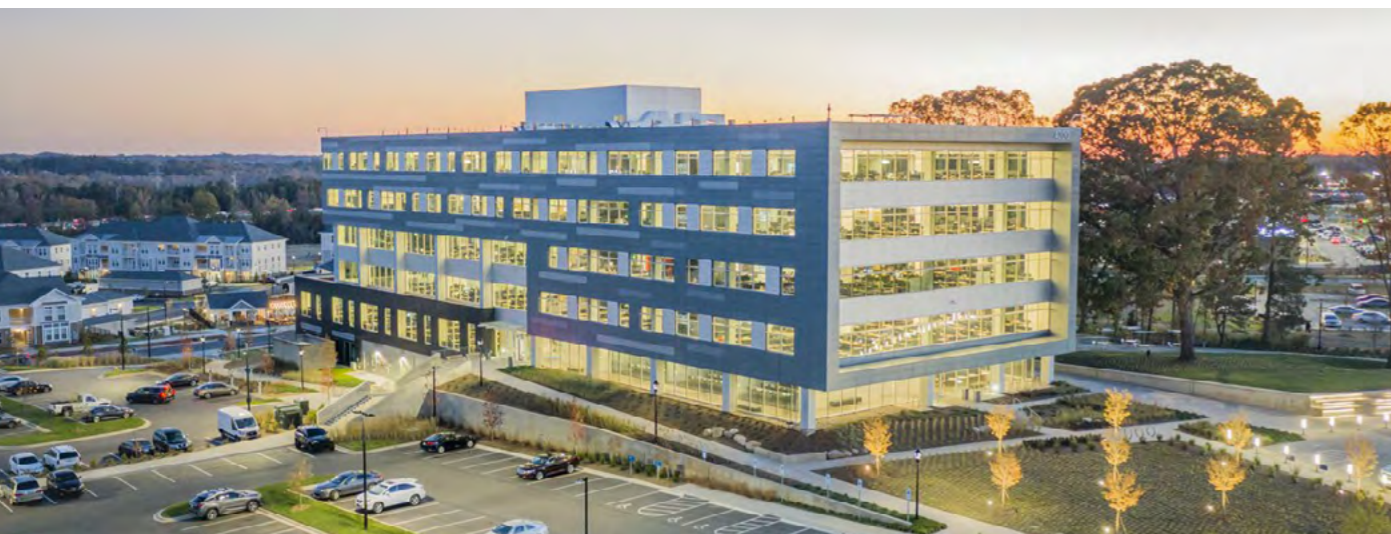
location: USA, Charlotte

designer: Gensler

year: 2019

surface area: 16.722 m²

The space offers a wireless operating environment based on dense Wi-Fi and advanced cellular infrastructure, enabling seamless connectivity. With a fibre-optic architecture, IoT, security, multimedia and power management systems are integrated, reducing cable usage and providing scalability for 5G. Open work zones, supported by power-to-the-edge technology, promote mobility and collaboration, eliminating traditional wired workstations. The office uses IoT sensors to ensure employee safety and wellbeing. Systems monitor air quality, congestion levels and temperature at the entrance to help maintain safe working conditions.



source: Corning Optical



źródło: central-one.de

C1 - Central One Midtown Offices

name: C1 - Central One Midtown Offices

location: Germany, Berlin

designer: Faber & Faber Architekten

year: 2024

surface area: 12.175 m²

The building has received SmartScore Platinum and WiredScore Platinum certification, confirming the highest technological standard. The facility is equipped with 2 Gbps fibre optic and redundant data lines with full WLAN coverage. The systems meet the digital readiness standard, enabling plug-and-play integration. The management centre is the Smart Building application – an interface for booking rooms and workspaces. Automation includes electronic access, LED lighting with motion sensors and AI algorithms analysing performance data. These solutions reduce costs and CO₂ emissions, while redundant power supply and heat recovery ventilation ensure system stability.

Nordea Horizon

name: Global Command & Control Centre Nordea Bank

location: Poland, Warsaw

designer: Workplace.pl

year: 2020

surface area: 2 500 m²

The space has been designed to support the work of IT teams responsible for the automation and security of banking operations, while creating an inspiring work environment. Advanced technologies have been used throughout the office, such as programmed lighting scenarios that adapt to the rhythm of work, mobile AV structures, and visual identification and wayfinding systems. A key element of the design is the Experience Hub, an interactive zone showcasing the technological capabilities of the space. Entering it triggers an audiovisual sequence that transports the user to the Horizon space station with a view of Earth.



fot. Adam Grzesik, projekt: Horizon, design: Workplace.pl



fot. Adam Grzesik, projekt: Horizon, design: Workplace.pl



fot. Adam Grzesik, projekt: Horizon, design: Workplace.pl



foto: Adam Grzesik, projekt: RASP, design: Workplace.pl

III. evidence based-design

Evidence-based design (EBD) is an approach to creating spaces that is based on sound scientific research and verified data. The aim of EBD is to design environments that make a real difference to the health, well-being and efficiency of their users. In practice, this means analysing research findings and taking them into account in the design process, rather than relying solely on intuition or aesthetic preferences. The individual topics that we address in the following chapters are not separate themes, but interlinked themes that form a coherent whole of the office experience.

8 everyone different, everyone equal

Inherent in the development of civilisation, especially in the industrial age, is the concept of unification. The entire period of the past 250 years can be seen as a kind of large-scale quantitative study that has allowed us to identify the optimal solutions for very many areas of life. By learning about these proportions, dimensions and characteristics inherent in most people, we have created a more democratic world, because it is cheaper to produce repeatable products based on efficiently designed matrices. It is a success that we have been able to develop a vision of the optimum cut of trousers or shoes, as well as the right form of glasses, bicycle and telephone. We have also built workplaces on unification by defining what the right size and proportions of a desk or chair are, as well as determining how much space an employee should optimally have.

Nevertheless, in a world where unification has reached every corner of our lives, it is worth recognising that optimal solutions help us to reach a median state, but nothing more. Unification allows mediocrity to spread, which is better than no mediocrity – but real success, and the key to it, lies in the detail. And in the detail, it can't be 'optimal', because our averaged needs can differ drastically from the individual – if only because of the natural variation of the human mind, which includes the full spectrum of the ways in which our nervous system operates and develops¹⁰². Not everyone wants to or can wear the same trousers. Not everyone works effectively at the same desk, or at a desk at all. Moreover, not everyone is served by the same light. What's more, all of this impinges on our wellbeing and efficiency. Fortunately, offices even in an optimal world can effectively respond to the need for diversity.

what is neurodiversity

The term 'neurodiversity' emphasises the natural differences in the functioning of the human brain, resulting from both genetic conditions and environmental and developmental influences. Neurodiversity implies that these different ways of processing information, perceiving stimuli



foto: Andrew Stiffkin unsplash



or concentrating should not be seen as disorders requiring correction, but as integral parts of human identity, enriching society with their uniqueness¹⁰³.

Neurotypicality refers to individuals whose neurological development and functioning fall within the range considered to be standard. This means that their characteristics are within the

range characteristic of about 68% of the population, which means that in various aspects of life their competence is maintained at an average level¹⁰⁴. As a result, neurotypical people tend to adapt more easily to the demands of the educational system, working life or social norms that are considered typical in society¹⁰⁵.

15–20% of the world's population is neuroatypical¹⁰⁶, meaning that their way of thinking, perceiving the world and processing information deviates from standard patterns¹⁰⁷. This group includes people with autism spectrum disorder, ADHD, dyslexia, dyscalculia, dyspraxia or synesthesia and other diverse neurological profiles¹⁰⁸. Often their sensory experiences are more intense or atypical, which makes them perceive reality in a different way from the majority of society¹⁰⁹.



3.1% of the world's adults are living with ADHD – that's the conclusion of one of the largest global studies of 2024, including data from more than 21 million people¹¹⁰. This global prevalence is similar to an earlier estimate for the US of 4.4% according to a 2006 study¹¹¹

INCIDENCE OF NEUROATYPICAL CONDITIONS WORLDWIDE

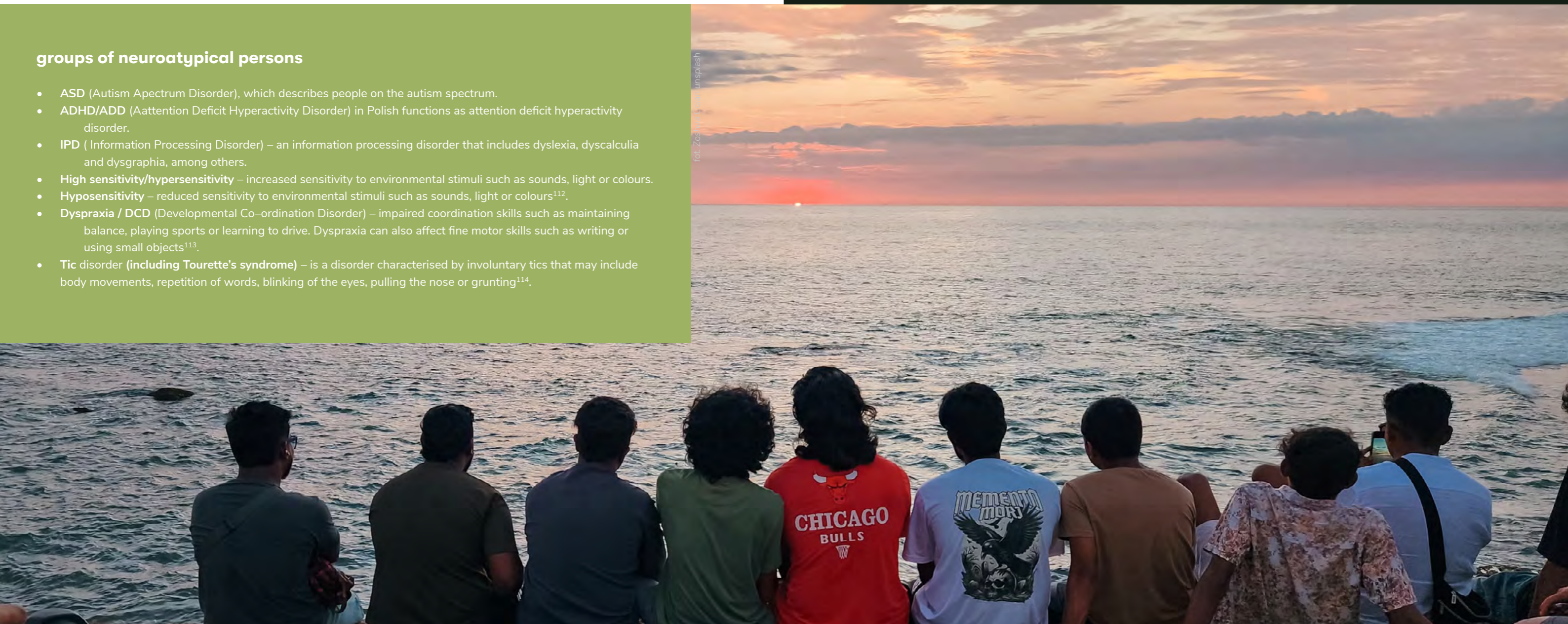


source: SHL, Assessing Neurodiverse Talent, 2022.

groups of neuroatypical persons

- ASD (Autism Spectrum Disorder), which describes people on the autism spectrum.
- ADHD/ADD (Attention Deficit Hyperactivity Disorder) in Polish functions as attention deficit hyperactivity disorder.
- IPD (Information Processing Disorder) – an information processing disorder that includes dyslexia, dyscalculia and dysgraphia, among others.
- High sensitivity/hypersensitivity – increased sensitivity to environmental stimuli such as sounds, light or colours.
- Hyposensitivity – reduced sensitivity to environmental stimuli such as sounds, light or colours¹¹².
- Dyspraxia / DCD (Developmental Co-ordination Disorder) – impaired coordination skills such as maintaining balance, playing sports or learning to drive. Dyspraxia can also affect fine motor skills such as writing or using small objects¹¹³.
- Tic disorder (including Tourette's syndrome) – is a disorder characterised by involuntary tics that may include body movements, repetition of words, blinking of the eyes, pulling the nose or grunting¹¹⁴.

foto: Zosia / iStock / unsplash



neurodiversity in the office

The neurodiversity movement, based on a social model, is changing the perception of neuroatypicality in the workplace. Instead of treating neurological differences as handicaps, they are recognised as part of diversity, just like racial or gender diversity. Additionally, neuroatypical people are seen not as imperfect, but as fitting into different roles or skill sets, which can be beneficial in the right work environment¹¹⁵. According to global trends, 61% of recruitment leaders are investing in initiatives to hire neurodiversity candidates¹¹⁶.

At the same time, companies are not universally prepared to implement

practices that support neurodiversity in the organisation. Research conducted in 2023 in the UK shows that although 92% of respondents reported that their companies had an Equality, Diversity and Inclusion policy, only 22% included a focus on neurodiversity¹¹⁷. This seems surprising, as another survey conducted in the same year and geographic region found that 36% of organisations considered having resources to support neuro-inclusivity very important, and 35% had one or more senior leaders who acknowledged being neuroatypical¹¹⁸. The difficulty in implementing support mechanisms is therefore not in underestimating the problem, but in the complexity of these implementations and the fear of bad decisions.

source: unsplash



the benefits of neurodiversity in the office

development of innovation and creativity

The inclusion of neuroatypical employees in teams fosters new perspectives, which supports innovation¹¹⁹. Combining different ways of thinking creates out-of-the-box solutions that translate into increased efficiency and better financial performance¹²⁰.

increasing the diversity of talents

Teams with neurodivergent members are 30% more productive than those without them¹²¹. Neurodivergent individuals bring unique skills such as:

- attention to detail, ability to analyse data and focus on details.
- exceptional mathematical skills and systems thinking.
- creativity, associative thinking and aptitude for routine tasks¹²².

increased empathy and interpersonal skills within the team

the presence of neurodiverse employees influences the development of social sensitivity and empathy among neurotypical colleagues. Such collaboration builds more supportive relationships and raises team morale¹²³. The employment of people with autism promotes their social and professional rehabilitation¹²⁴.

improving the quality of work and commitment

A friendly and open working environment increases employee satisfaction, commitment and productivity¹²⁵. For example, people on the autism spectrum are characterised by reliability, strict adherence to rules¹²⁶ and low absenteeism rates¹²⁷, which positively affects the quality and stability of teams. In addition, neuroatypical people can solve problems up to 40 % faster¹²⁸.



source: Skanska



source: unsplash

the benefits of neurodiversity in the office for the organisation

increasing management efficiency

managing teams with neurodiverse people requires a personalised approach, which develops flexibility and empathy in managers. This approach fosters a more inclusive and supportive working environment¹²⁹.

image benefits and competitiveness of the organisation

employing neurodiverse people has a positive impact on a company's image as a socially responsible employer. Such measures make the organisation more attractive to potential employees and business partners¹³⁰.

social and economic integration

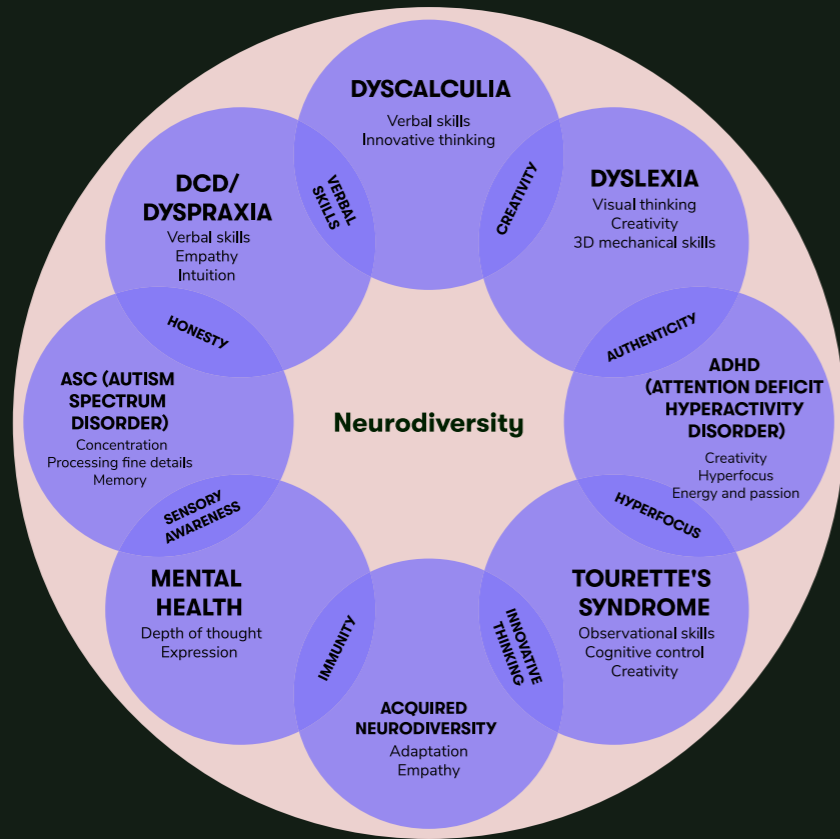
employing neurodiverse people supports their social and professional integration, reduces public expenditure on social benefits and increases potential economic growth¹³¹.

STRENGTHS AND CHALLENGES OF SELECTED NEUROATYPICAL GROUPS OF WORKERS

strengths	challenges	conducive environment
AUTISM		
<ul style="list-style-type: none"> Attention to detail and sensory differences; the ability to notice inaccuracies or errors that others overlook (O'Riordan & Passetti, 2006; Eigsti & Fein, 2013; Baron-Cohen et al., 2009) The ability to focus on tasks that others find monotonous (APA, 2013; Murray, 2018) Impressive memory for facts (Firth & Happé, 2005) People with autism are distinguished by their honesty, reliability and regularity. they have exceptional analytical and memory skills, which works well in tasks that require precision and repetition. They bring stability and order to processes in the organisation (Tomczak, 2022) 	<ul style="list-style-type: none"> Social interactions; difficulty reading social cues and following norms, poor eye contact (APA, 2013) Repetitive behaviour/focus on one topic; rigidity in routines (APA, 2013) Hypersensitivity to sensory stimuli (APA, 2013) 	<ul style="list-style-type: none"> Can excel in technical fields such as science, engineering, computing and technology (APA, 2013)
ADHD		
<ul style="list-style-type: none"> Exceptional creativity and enthusiasm; ability to generate innovative solutions and ideas (Baird et al, 2012; Batey & Furnham, 2008; Carson et al, 2003; De Dreu et al, 2008; Zabelina et al, 2016) Abundant attention and hyperfocus in situations of pressure or interesting stimuli (Hallowell & Ratey, 2021) Respond quickly to change and seize opportunities as they arise. The ability to think outside the box (Crook & McDowall, 2023) A high degree of social sensitivity and fairness makes such individuals likely to push for changes that improve working conditions or help others, which can contribute to the development of the organisation (Crook & McDowall, 2023) 	<ul style="list-style-type: none"> Difficulty maintaining attention; easily distracted when not interested in a topic or activity (APA, 2013; Castellanos et al., 2006) Difficulties with time management and organisation (APA, 2013; Carnes & Holloway, 2009; Nadeau, 2005) Procrastination tendency (Gray et al., 2016; Hallowell & Ratey, 2021) Impulsiveness and risk-taking propensity (Lerner, Verheul & Thurik, 2019) 	<ul style="list-style-type: none"> Find themselves in a fast-paced work environment that values creative thinking and allows for flexibility/autonomy. ADHD can be particularly useful in entrepreneurial activities
DYSLEXIA		
<ul style="list-style-type: none"> A holistic processing style (Geiger, 2008; von Karolyi et al., 2003), allowing one to see the "bigger picture" (Shaywitz, 1996) The ability to understand at a conceptual level; the ability to see connections that others cannot see; simplifying complexity (Shaywitz, 1996) Innovative and creative thinking (Majeed et al., 2021); solving problems in ways that others cannot 	<ul style="list-style-type: none"> Relative deficits in sequential processing leading to difficulties in 'basic' skills (e.g. decoding written text; von Karolyi & Winner, 2004; Shaywitz, 1996) Poor working memory/memory for detail (Breux & Eichstadt, 2017) Slower processing speed; slower reading and writing (Facoetti et al., 2010) Difficulties with spelling (Breux & Eichstadt, 2017; APA, 2013) 	<ul style="list-style-type: none"> Thrive in environments that value creativity, new connections and problem-solving, rather than routine tasks or memorising material

source: compilation by ThinkCo based on R. LeFevre-Levy, A. Melson-Sillimon, R. Harmata, AL. Hulett, NT. Carter, Neurodiversity in the workplace: Considering neuroatypicality as a form of diversity, Industrial and Organizational Psychology, 2023.

PATTERNS IN NEURODIVERSITY



“spiky profile” skills

Neuroatypical individuals are characterised by a so-called “spiky profile” – a marked variation in abilities, where some areas of functioning are below and others significantly above average. This unique profile can be both challenging and a source of unique contributions to the team¹³².

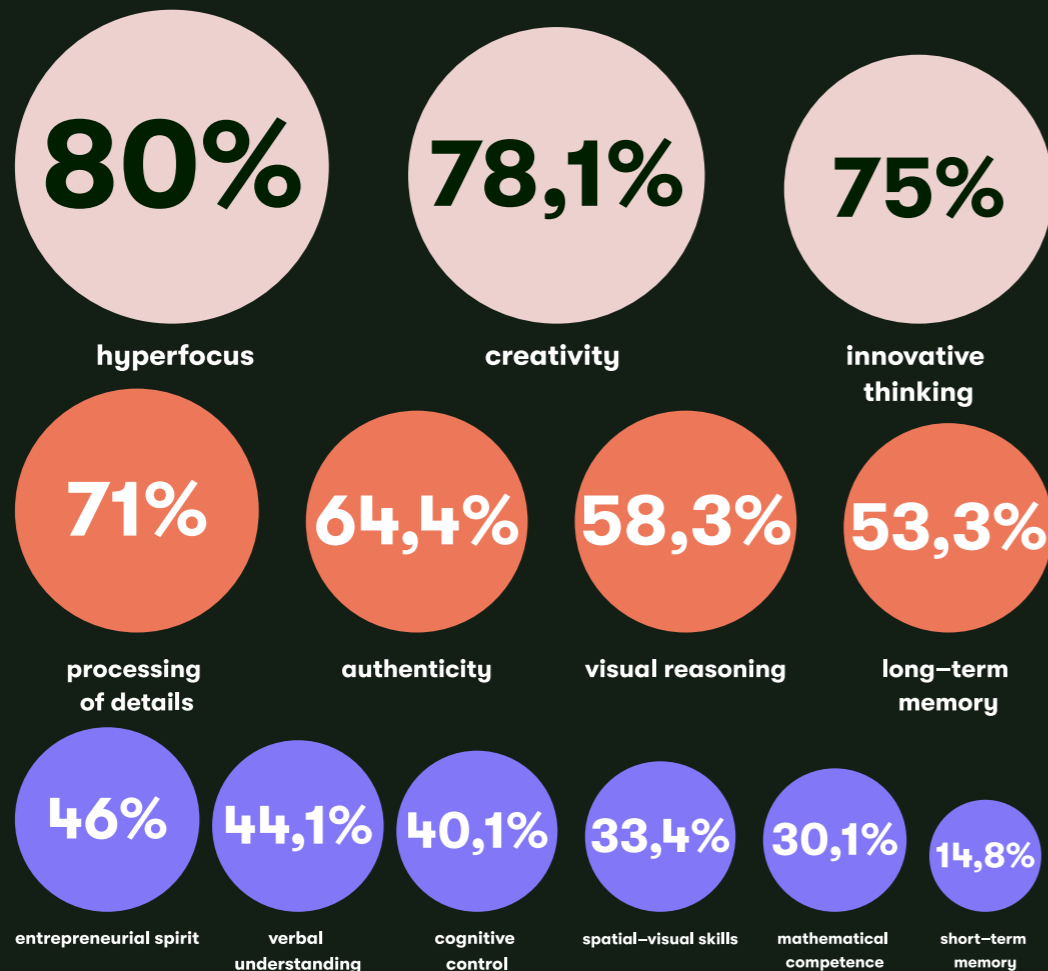
ASD – possible difficulties in social interactions, but exceptional memory, analytical or specialist skills.

ADHD – problems maintaining concentration, but at the same time creativity, energy and the ability to generate innovative solutions.

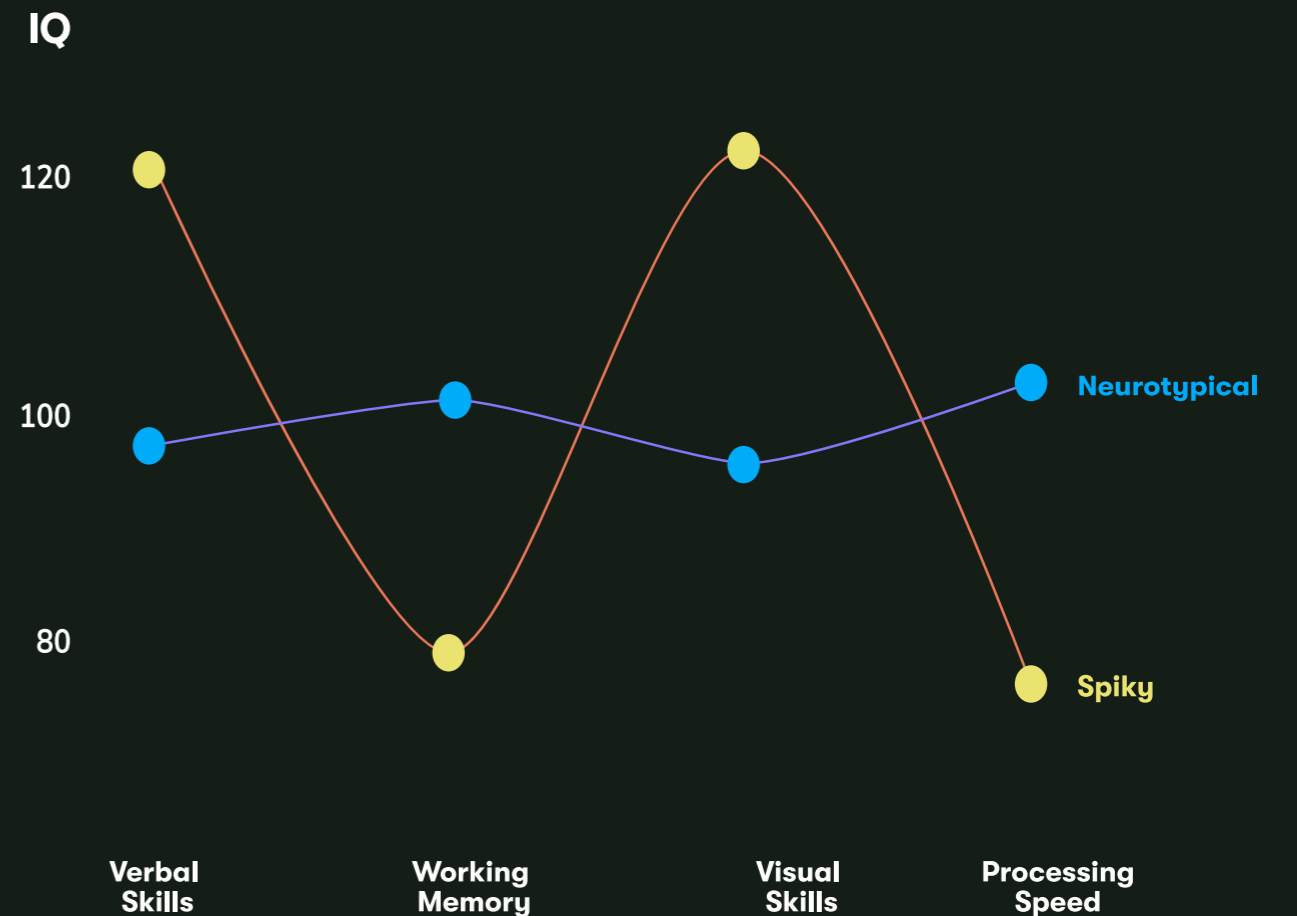
IDP – difficulties in writing or reading, but excellent visual, spatial and strategic thinking skills.

People with motor coordination disorder, may excel in verbal skills¹³³.

STRENGTHS REPORTED BY NEUROATYPICAL PERSONS



GRAPH SHOWING DIFFERENCES BETWEEN NEUROATYPICAL AND NEUROTYPICAL





fol. Adam Grzesik, Wokplace.pl



good neuro-inclusive design practices already fit into some of the tenets of WELL certification and are scored in ESG reports. So while gaining points in these certifications and reports, it is possible to create neuro-inclusive sensitive spaces at the same time¹³⁶

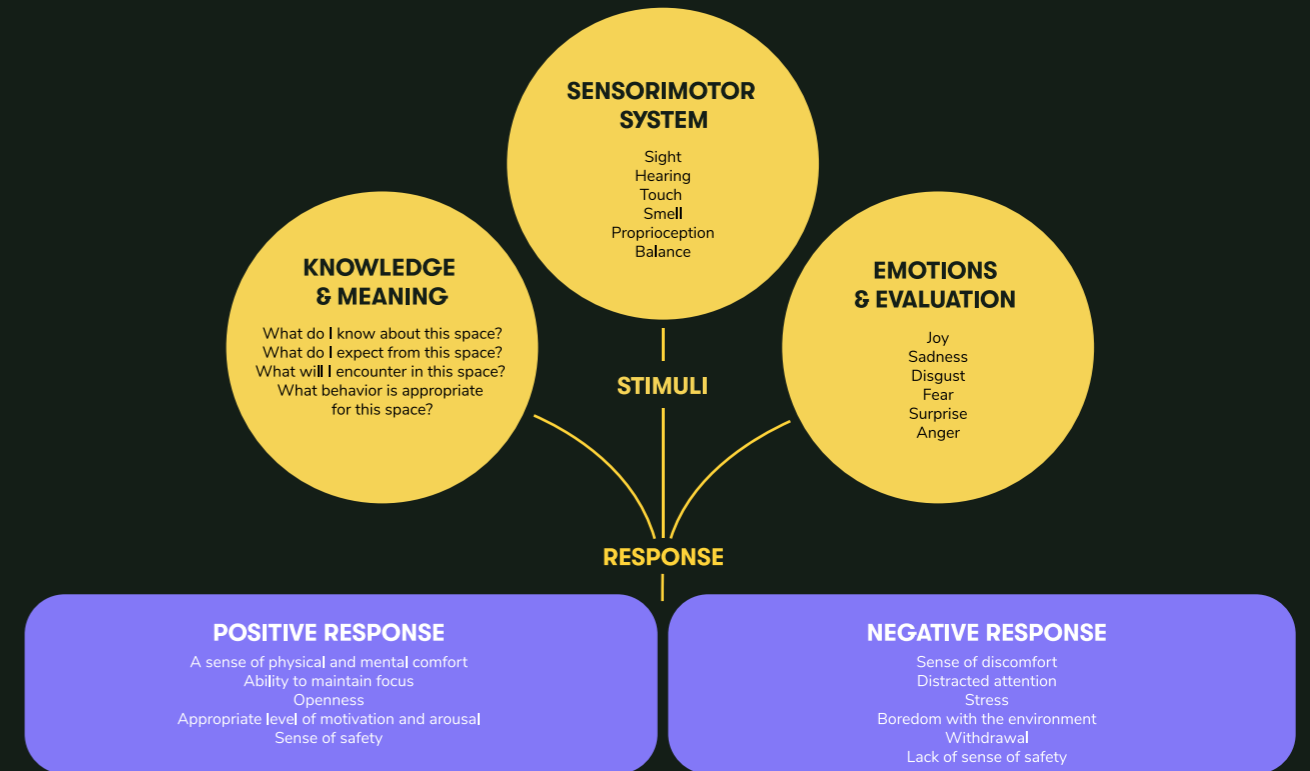
neuro-inclusive space

The same issues that affect implementations at the DEI policy level also apply to the organisation of the space. Indeed, the design of a neuro-inclusive office should take into account a number of factors and analyses – but there is no single design recipe. Instead, there are general recommendations based on past research and observations that should be followed. The most important of these is to create a space that is intuitive and understandable to its users. A logical arrangement of functions and their clear labelling is crucial. It is also advisable to eliminate elements that may interfere with the perception of the space, including an excess of stimuli and information leading to sensory overload¹³⁴.

For most users, including neurotypicals, a space that is bright, in neutral colours, clean, quiet and organic will be most beneficial. At the same time, the office should not exclude hypersensitive people who need more sensory stimuli – contrasting colours and visual elements, a space where they can move and squirm, accompanied by the hum of conversation or background music.

Interestingly, these opposing needs may apply to the same person on different days of the week, times of the day, or simply depending on the type of task being performed at the moment. Therefore, neuro-inclusive offices must provide for the presence of clearly separated sensory zones, responding independently to the needs of the sensory hypersensitive and sensory undersensitive¹³⁵.

EXPERIENCE OF SPACE



INCLUSIVE OFFICE SCHEME

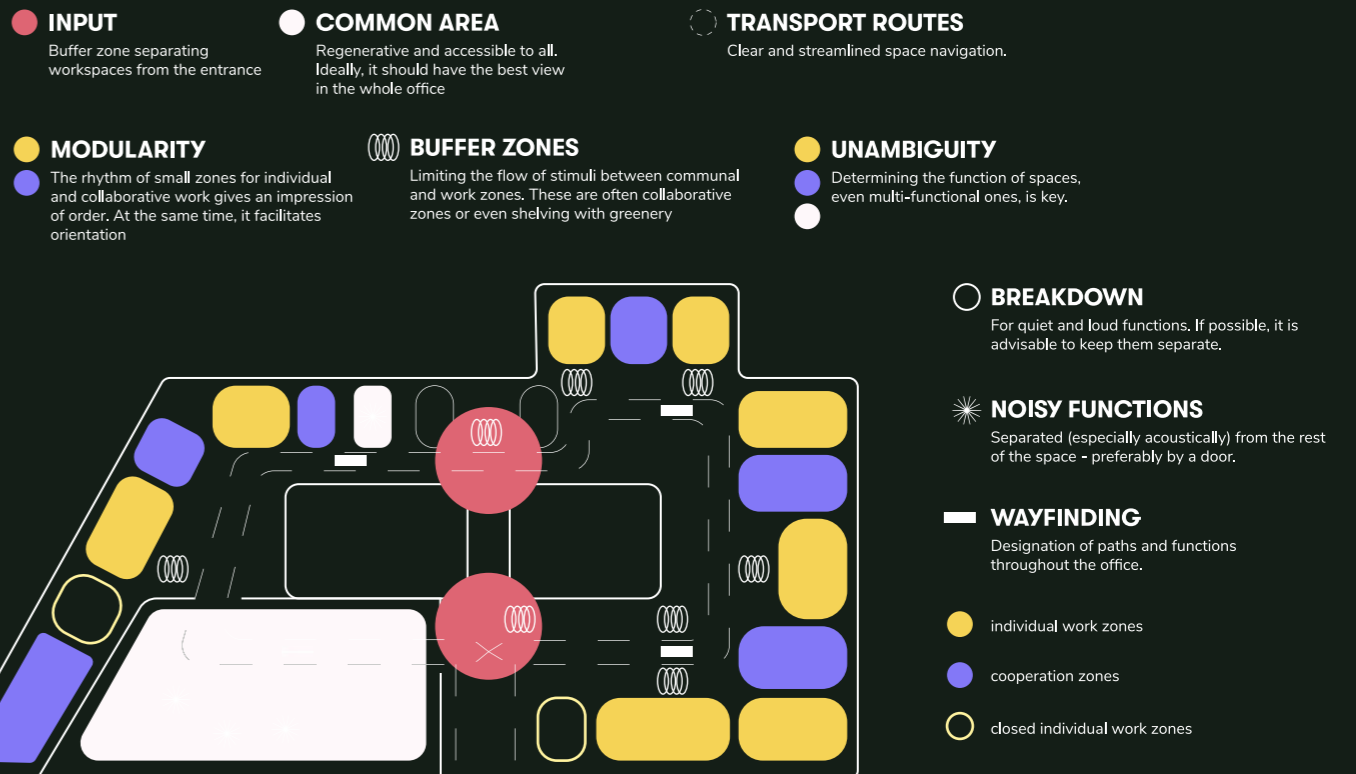




foto. HGEsch Photography, Mute Modular w biurze Gensler, Waszyngton DC

introducing accommodations for sensory sensitivity

- eliminating so-called sensory-information pollution, i.e. using solutions with optimal and imitating natural daily and annual stimulus intensity (natural for humans and the surrounding nature)
- solutions that both support the need for privacy and individuality (e.g. individual workstations) and support communication and social contacts
- ceation of relaxation spaces in the office, "quiet rooms"
- layout of the space with regard to specific sensory stimuli, i.e. gradation in sensory intensity
- logic and legibility of space planning and signage
- avoiding solutions that stigmatise the user or user group, such as descriptions: "quiet zone for people on the autism spectrum"¹³⁷

reducing the excess of external stimuli

- soundproofing of rooms
- provision of headphones with active noise cancellation
- "silent" computer keyboards
- adjusting the monitor settings¹³⁸
- use of natural lighting instead of fluorescent lighting
- avoiding intense odours and colours in the workspace
- moderate temperature and humidity
- possibility of self-adjustment of parameters¹³⁹

neuro-inclusive solutions in offices

- rooms/areas for individual work requiring a high level of concentration in silence
- sensory calming rooms/relaxation zones
- rooms/areas for sensory stimulation and psycho-physical activities
- booths/rooms for telephone calls and individual online meetings
- cosy meeting rooms
- creative zones/rooms for brainstorming, collaboration and meetings, so-called think labs
- optimum number of offices/closed spaces available for use by all staff upon prior booking
- multifunctional social regeneration zones
- an appropriately designed open space area that allows for privacy
- individuality, sensory comfort and providing choice and flexibility
- use of living vegetation and biophilic design¹⁴⁰

ELEMENTS OF THE NEUROINCLUSIVE OFFICE



greeting

Recepcja i strefy oczekiwania powinny być łatwe do zlokalizowania. Reception and waiting areas should be easy to locate and have low visual and audible noise levels.



telephone booths

Space for private phone calls and online meetings..



storage and vegetation

Pomagają w zachowaniu prywatności i redukcji hałasu.



total focus

Cubicles fitted with acoustic panels, height-adjustable desks and lighting.



focus

Tables for short work sessions in focus areas, equipped with lighting and acoustic partitions.



meet or retreat

An enclosed acoustic cabin or room with adjustable lighting and airflow.



sit-stand desks

Provision of a large number of desks allowing both sitting and standing work and dual monitors to aid concentration.



rest and relax

A quiet, flexible room that allows employees to relax from sensory overload. Consider adjustable lighting, storage space, soft furnishings and nature paintings.



workstation

The use of built-in plant cabinets along walkways is recommended to increase privacy and reduce distracting visual stimuli.



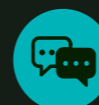
collaboration space

Provide a variety of spaces with varying degrees of stimulation.



integration and collaboration zone

Located away from the quieter focus areas, with active furniture to allow movement.

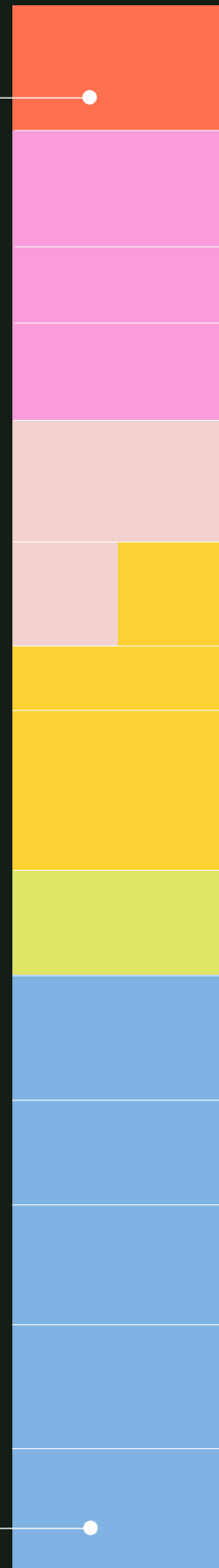


meet or retreat

Semi-enclosed cabins for collaboration or relaxation.

INCLUSIVE OFFICE ZONING BASED ON ACTIVITIES AND SENSORY INPUT

High social activity, higher levels of stimulus.



Silence, focus, lower stimulus levels.

Socio-collaborative zones

Secondary collaboration space and movement zone. Offers a variety of interaction options such as tactile furniture, writing walls, acoustic panels, swaying and balancing chairs. Customisable levels of stimulation.

Tea area

A visually separated social space, a dedicated area where staff can prepare meals. Located amidst active areas and away from areas requiring concentration to avoid disturbance from noise and odours.

Cabinets and collaborative spaces

Located in active areas, away from areas requiring quiet and concentration.

Semi-closed meeting room

Located away from workstations, equipped with AV equipment and a canopy for privacy. Can share space and provide better acoustics.

Reception

It is located opposite the entrance and acts as a welcome point for all visitors and staff. It is a quiet space, free from visual noise and excessive sensory stimuli.

Workstations

Situated close to windows, they provide access to natural light. Equipped with double screens, height-adjustable desks, active stools and footrests.

Socio-collaborative zones

Calm, inclusive and low-stimulating spaces for collaboration and free movement.

Rest area

A semi-enclosed niche, allowing a short break from the open office space. Can be a temporary stopping place when walking along a corridor or along larger office spaces. Consideration should be given to the needs of wheelchair users.

Printing, copying, scanning

Preferably located in a separate room, at a reasonable distance from workstations and areas requiring concentration.

Meeting rooms

Fully enclosed and adaptable group work spaces equipped with adjustable lighting, AV screens and ventilation systems. Low-stimulation interiors aid long-term focus.

Zones of focus

They are located at the furthest point from the social and tea areas. They offer the opportunity to work individually and are equipped with acoustic panels and adjustable lighting.

Room of recollection

An enclosed, structured space equipped with acoustic panels, adjustable lighting and ventilation. A space designed to work in full concentration, without distractions.

Telephone booths

Enclosed, single-person booths, equipped with adjustable lighting and ventilation. Acoustically isolated and low stimulation space – ideal for private telephone conversations. Equivalentents should be provided that are accessible to people with limited mobility.

Wellbeing

A dedicated relaxation area and a separate rest room. It should function as a quiet space as well as a calm, relaxing area, adapted to the different sensory needs of the users.



how to support neuroatypical people

involvement of neuroatypical persons

- organisations should adopt the principle of 'nothing about us without us', ensuring that neuroatypical people have a seat at the table when decisions are made about themselves. This approach can lead to more inclusive practices and increase the effectiveness of the¹⁴¹
- promoting two-way communication, empathy and reflexivity in management¹⁴² e.g. through a collaborative management model between supervisor and employee (synergistic supervision)

flexible approach to working time

- allowing 4-hour working instead of 8-hour working
- openness to working part-time when full-time commitments are too exhausting
- move to hybrid or remote working¹⁴³

reducing information noise

- introducing clear responsibilities
- ensuring work structure especially at the beginning of employment, they may need clearly defined routines and tasks and changes in their schedule can lead to stress
- structural support such as mentors, career coaches
- precise wording of job advertisements and unambiguous statements during interviews¹⁴⁴

education and training

- training for all employees can help to overcome stereotypes and create a fairer and more understanding working environment¹⁴⁵
- building Collaborative Intelligence (CQ) by learning to adapt communication styles and support other group members¹⁴⁶
- help with skills assessment, planning and goal achievement through the 'Learning Circle' tool. It helps neuroatypical individuals to identify their strengths and use them in team projects
- using tools such as PRISM Brain Mapping to help employees understand their strengths and preferences¹⁴⁷. By identifying behavioural preferences based on neuroscience
- developing in neurodiverse people autonomy, competence and a sense of belonging

development of mentoring and internship programmes

- support for neuroatypical people through the opportunity to gain experience in a friendly environment with access to mentoring and support¹⁴⁸
- highlighting the abilities and talents of neuroatypical workers, rather than focusing on their limitations¹⁴⁹

inclusive work culture

- leadership action, through an inclusive environment, mentoring, impartiality and staff support the actions of colleagues, by genuinely implementing respect, understanding and mutual support in their daily work
- the organisation's activities, through the creation of policies and standards that aim to create a welcoming culture free of discrimination¹⁵⁰

why are such measures important?

(96%) of people with ADHD in the UK are afraid to bring up the subject of their diagnosis at work. According to the survey, around 73% of respondents indicated that this is due to fear of being judged. In addition, half (49%) of respondents are concerned that disclosing their ADHD diagnosis could be used against them, for example making it difficult to get promoted¹⁵¹.

source: Skanska

66

Our mission at Skanska is to create spaces that are not only functional and sustainable, but above all inclusive.

Neurodiversity is not just an important topic today, but a real need for change. An integral part of today's reality – and the key to building working environments where everyone can act in accordance with their potential Source: Skanskapotential. This is why we have developed the 2023 report 'Neurodiversity in the office', which was created with a view to educating the market and providing real support for companies facing the challenge of creating inclusive workplaces. In the publication – created in collaboration with Workplace – we included not only expert knowledge, but also specific design tips to facilitate the creation of neurodiversity-friendly spaces.

Today, as neurodiversity is becoming more and more present in HR strategies and ESG policies, we support our tenants in implementing this – by providing knowledge, sharing best practices and designing solutions to suit different styles of cognitive functioning. We believe that this approach to office design is not only an expression of social responsibility – it is an investment in building better, complementary and more effective teams within companies.



Anna Marciniak

EVP HR, Skanska
Commercial Development Europe

the research process benefits everyone involved

Workplace has identified itself as a research and design studio from the very beginning. What are the research processes you carry out?

Barbara Majerska: Research is a bit like going to the doctor. Quite often, we encounter clients who expect a prescription right away—before they've even told us who they are or what's bothering them, not to mention their lifestyle. For the past thirteen years, Workplace has approached every project by starting with the research phase. This holistic process of getting to know the client allows us to diagnose how their work environment should be designed. It covers a wide range of areas and decisions—from whether it even makes sense to move offices at all, to the characteristics and location of a potential new building, how many desks are needed, and how much space should be allocated.

What tools do you use to make this diagnosis? What kind of involvement does it require from the client?

BM: We work in a multidisciplinary way, using the evidence-based design methodology. That means basing our decisions on evidence supported by scientific research. At the same time, we analyze the client's organization. We act like a lens—focusing specific information and applying it where needed. Often, clients don't realize how burdensome and stressful the entire investment process related to changing the work environment can be. It's typically a massive undertaking for a company—one with a large budget and a big impact on the working habits of the entire team. It's natural that such a major change brings fear and discomfort. What matters most

is guiding the client through the process, and making sure employees have a say in shaping their future workplace.

Zofia Kurczyk: We then hand all the insights we've gathered over to the design team.

How do the insights from the research phase translate into the final design of the space?

ZK: The design process is a broad concept that I'd break down into several elements that guide our work. Even while research is still ongoing, we begin working on the functional layout—that is, how the future workspace will operate. Proper zoning allows us to create diverse spaces tailored to the organization's needs. These may include areas for focused work, creative collaboration, and, just as importantly, rest and regeneration. Thanks to the research phase, we understand how diverse the users are—this includes neurodiversity. We have to be very mindful to offer a variety of solutions that stimulate the nervous system and all the senses appropriately.

Next, we incorporate these insights into the technical and material layer, which ensures workplace comfort. We're talking about properly designed lighting, high acoustic comfort, ergonomics, and greenery. Overall, we focus on the sensory experience—how users will feel based on textures, materials, and colors. On top of that, we add the aesthetic layer: specific material and color solutions that express the client's identity and strengthen their chosen messaging. We always aim to use solutions that are as sustainable and environmentally friendly as possible.

Do you often discover things in the research phase that you wouldn't have come up with on your own?

BM: I think in every research project we uncover a wealth of insights that we couldn't have learned any other way.

ZK: Recently, in one project, we developed the idea of an internal parcel locker for the IT department. It turned out to be a smart way for them to exchange repaired equipment between the helpdesk and employees.

BM: Yes, lately, working often with IT companies, we've been talking about the real purpose of the office for them. Employees are very honest about what might actually make them come into the office—and what functions they don't need at all. Some need a certain level of social interaction, while others won't come in no matter how modern the office is. It's a completely different scenario than, for example, in consulting or shared service firms.

What are the benefits of this approach for your clients? Why is it worth investing in?

ZK: Quite often, a client comes to us when the construction work is about to begin. But during our conversations, it turns out that it would actually be best to take a step back and diagnose what is really needed—how the workspace should be organized in that specific organization. This process is also a great opportunity for clients to get to know themselves better.

BM: The research process saves a huge amount of time in the later stages. It helps us avoid many mistakes and revisions, which ultimately means fewer delays and reduced costs. Not to mention the stress! A well-executed research process benefits everyone involved, supports the health of users, and protects the budget. And we have scientific evidence to back that up.



Barbara Majerska

Research & Strategic
Design Director | Senior
Architect



Zofia Kurczyk

Design Director | Senior
Architect

interview by:
Igor Łysiuk
Senior Architect &
Research Analyst



source: Workplace

workplace

different states of concentration

When we were locked out of our homes in March 2020, we very quickly had to adapt to this situation and come to terms with the fact that we would be working from home for some time. This time was not only the 'great test of remote working', but also the period in which the narrative of the end of the office market was born. Its emergence was by no means due to a belief that the pandemic itself was so threatening to our habits – but the reason was non-prosaic. After all, a significant group of employees claimed that this new situation suits them because they save time on commuting, they don't waste it on meaningless, from their perspective, meetings "that could have been emails" and no one is walking over their heads, so in sum they get their work done faster and more efficiently. Importantly, research has confirmed this increase in efficiency so questions about the future and the rationale for offices have become pertinent¹⁵².

Remote working has, in its own way, highlighted problems that researchers have been writing about for at least 20 years. This is because advances in technology have meant that the need for physical contact with colleagues has decreased significantly. Most people only need two hours a day for face-to-face collaboration, and too much collaboration can lead to distraction and isolation¹⁵³. Even before the pandemic, 31% of employees were taking work home because they couldn't focus in the office¹⁵⁴ and this is not surprising, as analysis shows that the lack of privacy and quiet in the office was causing employees to lose an average of 1.5 hours a day¹⁵⁵. To make matters worse, it's not just about efficiency. Research from the University of California, Irvine, has shown that disruptions at work cause more stress, frustration and a sense of pressure and strain¹⁵⁶.

back to offices

Unfortunately, what appeared to be the best solution proved problematic after a while. Working remotely in the short term has no negative consequences for physical or mental health – but already during the first wave of the coronavirus, experts warned that in the long term, working exclusively from home would



already 20 years ago, studies showed that in 40% of cases a task interrupted by a disturbance was not resumed immediately after the interruption¹⁵⁷ – and the number of distractors then was considerably lower than today



foto: Annie Spratt unsplash

become problematic. As early as 2020/2021, WHO research indicated that a lack of regular interpersonal contact and ongoing support from supervisors contributes to feelings of isolation and stress, with consequences for workers' mental health¹⁵⁸.

The lack of contact with colleagues, the blurring of work-life boundaries and the constant stress of having to organise tasks independently can increase the risk of job burnout, depression and anxiety. However, during the first years of the pandemic and immediately afterwards, employees were focused on the benefits of working remotely¹⁵⁹ and did not yet feel these negative consequences in a measurable way, and thus reacted badly to the news that they were returning to their offices. A significant proportion even rebelled against hybrid models. However, the aforementioned negative consequences are becoming tangible and the disruption to work-life balance is also starting to affect our efficiency.

finally focused

Work requiring technical, repetitive tasks can indeed be done from home without loss of quality, but in such cases, the possibility to interact directly with the team at the workplace helps to make repetitive tasks more bearable, which translates into an overall higher work comfort and a lower mental workload¹⁶⁰. In contrast, for tasks that require focus, the situation is the opposite – being in the office seems counterintuitive, after all, we don't miss disturbing colleagues. However, focusing on difficult tasks requiring concentration, in a home environment, is one of the biggest challenges.

48% of American respondents said that the main reason they want to return to the office is precisely to be able to focus on their work¹⁶¹. Interviews with Polish employees indicate the same motivations. However, we need offices that enable people to work in a focused way, minimising the factors that have made

remote working so attractive to people. Offices that support employees in their tasks and protect them from distraction. To create them effectively, however, we need to understand exactly how to bring the organism into a state of deep focus.

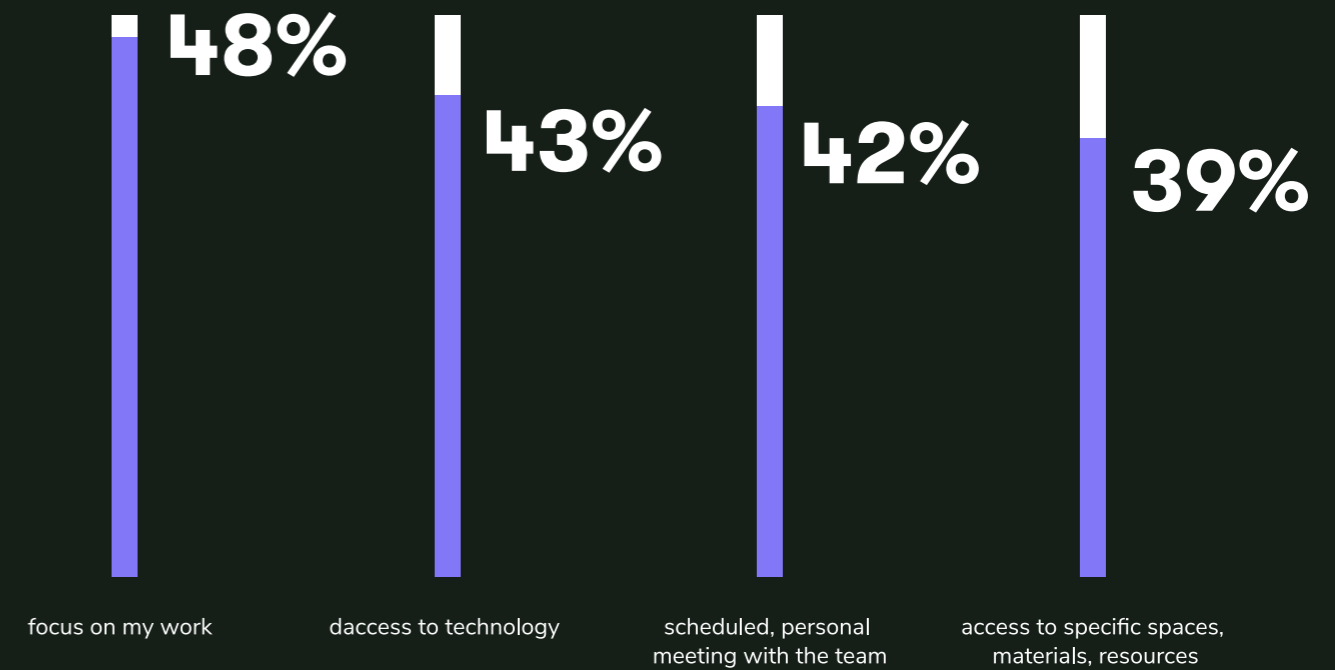
Deep focus, or deep work, is a concept developed by Cal Newport. It defines the ability to focus intensely on demanding tasks for an extended period of time without becoming distracted. The method enables you to be as productive as possible and produce high quality results in less time. It is particularly relevant for tasks such as research, data analysis, content creation or strategy development¹⁶².

environmental difficulties

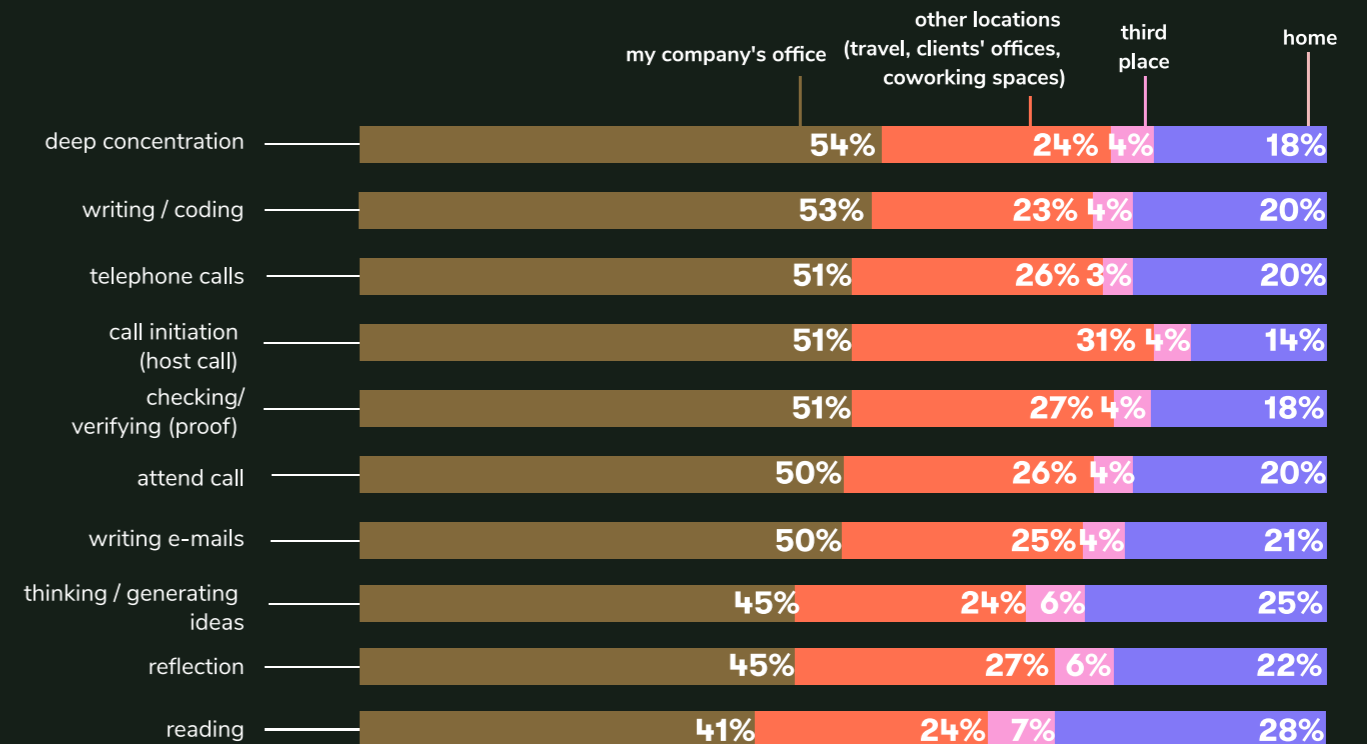
80% of employees cannot work for a full hour without being distracted. At least 11% are distracted every 5 minutes, while more than 59% are distracted every 30 minutes or less¹⁶³. 63% of respondents need about 10 minutes to regain concentration after being distracted. 21% need up to 30 minutes and 11% more than 1 hour to get back on track¹⁶⁴. Achieving deep work requires about 15–20 minutes of deep focus, but each distraction resets this process¹⁶⁵. The average worker is pulled from their tasks as many as 31.6 times a day and spends just 11.2 hours a week on productive work¹⁶⁶.

Gloria Mark, professor of computer science at the University of California, Irvine, points out that the ability to focus attention has been declining for decades across all age groups. In 2004, the average screen attention span was 2½ minutes. By 2022, it had dropped to just 47 seconds. In his book (Attention Span: A Groundbreaking Way to Restore Balance, Happiness, and Focus) and research, he points out that the human brain is unable to perform two cognitively demanding tasks at the same time, and trying to do so results in a decline in efficiency¹⁶⁷.

THE MAIN REASONS WHY EMPLOYEES CHOOSE TO WORK IN AN OFFICE



PREFERRED LOCATION FOR EACH LISTED ACTIVITY



TYPES OF DEEP WORK

Monastic – is based on total concentration and the elimination of all distractions. Involves giving full attention to a single task for the necessary time. It requires isolation from distractions, such as by designating an entire morning for concentrated work. This style requires full commitment and discipline.

Bimodal – combines long periods of deep focus with stages of superficial work. Fosters better adaptation to teamwork. Involves regularly setting aside a whole day (or several days) exclusively to work on a specific task, eliminating all distractions and other responsibilities.

Rhythmic – involves setting aside a specific block of time (e.g. an hour or two) each day on a regular basis for focused work. The key is to maintain a consistent routine at the same time each day. It particularly suits those who value a predictable schedule and regularity.

Journaling – uses every free moment to engage deeply with a chosen project. Ideal for people with irregular schedules who can weave intensive work into different moments of the day. Every available moment becomes an opportunity to work creatively and effectively.

DIVISION OF DEEP AND SHALLOW WORK

DEEP WORK

strategic
development
and planning

learning
new skills

carrying out
tests

problem
solving

SHALLOW WORK

e-mail
management

status
meetings

reply
to messages

managing
your tasks



constant access to information, notifications and the pressure of multitasking make it difficult to maintain attention. Multitasking can reduce productivity by 40%, so instead of multitasking, consciously manage attention to improve efficiency and energy¹⁶⁸

benefits of deep work

- **better quality:** deep focus allows you to achieve better results, creating valuable and thoughtful output. This is particularly important in creative and analytical work.
- **increased efficiency:** Working in full concentration enables tasks to be completed faster and more precisely, eliminating the losses resulting from constant interruptions and context changes.
- **competence development:** Deep work allows the development of difficult and valuable skills that require long-term commitment.

- **improving mental health:** Eliminating distractions and the pressure of constant availability reduces stress and feelings of overload, improving overall wellbeing.
- **innovation and accuracy:** Deep work maximises creativity and innovation potential, while reducing the risk of errors through increased levels of concentration.
- **improving self-awareness:** Deep work teaches you to focus on what is important and helps you reach your full human potential.

heavy vs. tile

Not every task requires entering a state of deep focus, and a well-planned working environment should also take into account the needs we have for shallow work. Shallow work involves activities of a routine and administrative nature, such as managing email, running daily reports or holding status update

meetings. Although these types of tasks do not require such intensive cognitive effort, they are crucial for the smooth running of the organisation and for keeping operational processes running smoothly¹⁶⁹.

It is also important to ensure regular rest. Breaks increase productivity and allow the mind to recover – using blocks of time tailored to an individual's rhythm helps avoid fatigue¹⁷⁰. Breaks in between should include physical activity, such as stretching, and a change of environment to refresh the mind¹⁷¹. It is also important to understand an employee's individual preferences and capabilities to optimise recovery strategies at work.

what hinders deep focus

noise not only reduces work efficiency, but can also lead to fatigue and stress, especially

when an employee has to struggle for hours to get quiet in order to focus on tasks that require concentration¹⁷². For both continuous and intermittent noise, higher noise levels lead to greater stress and mental strain¹⁷³. Which, in the long term, can translate into reduced efficiency.

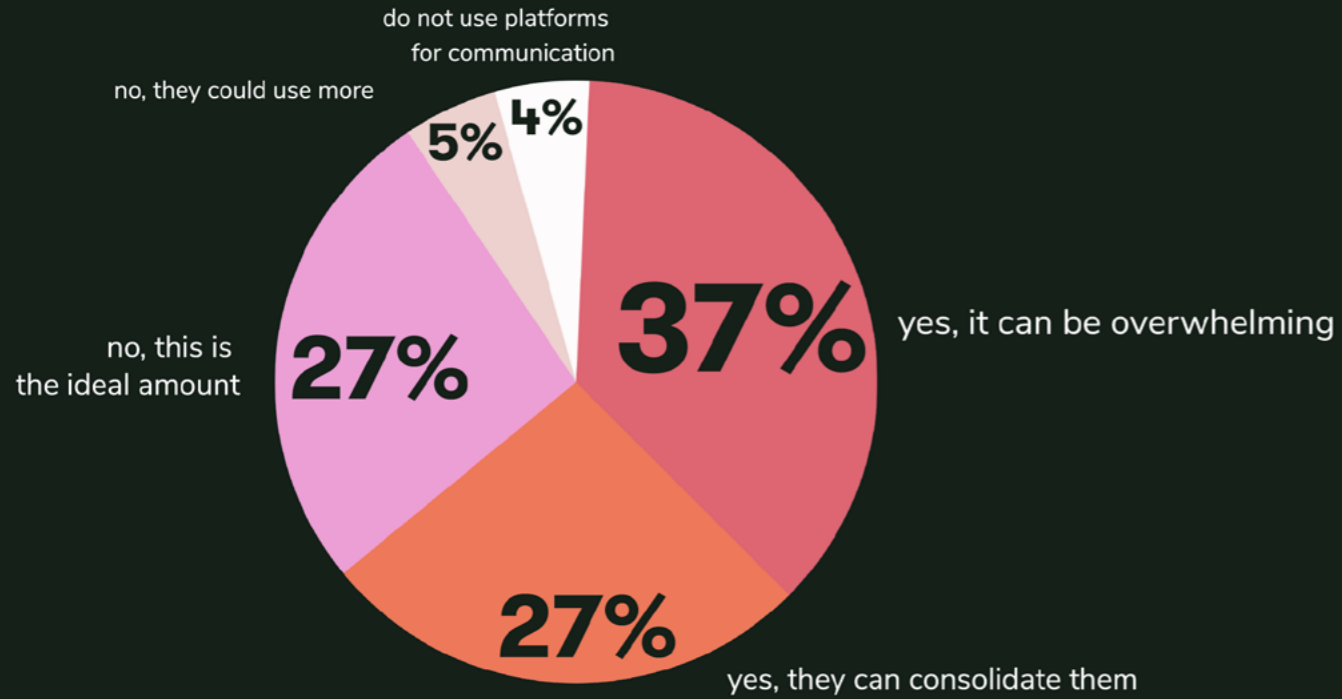
distractors

technologies such as smartphones, social media and emails are constantly competing for our attention, making it difficult to concentrate on demanding tasks. Individual employees spend an average of 2 hours a day on unproductive work (answering emails, browsing Slack, task lists)¹⁷⁴.

time thieves

Unplanned meetings, phone calls, checking emails or browsing the internet distract us from our main tasks. Many employees spend 32% of their time on 'phantom work,' and 43% of meetings could be eliminated without negative

DOES YOUR COMPANY USE TOO MANY COMMUNICATION PLATFORMS AT

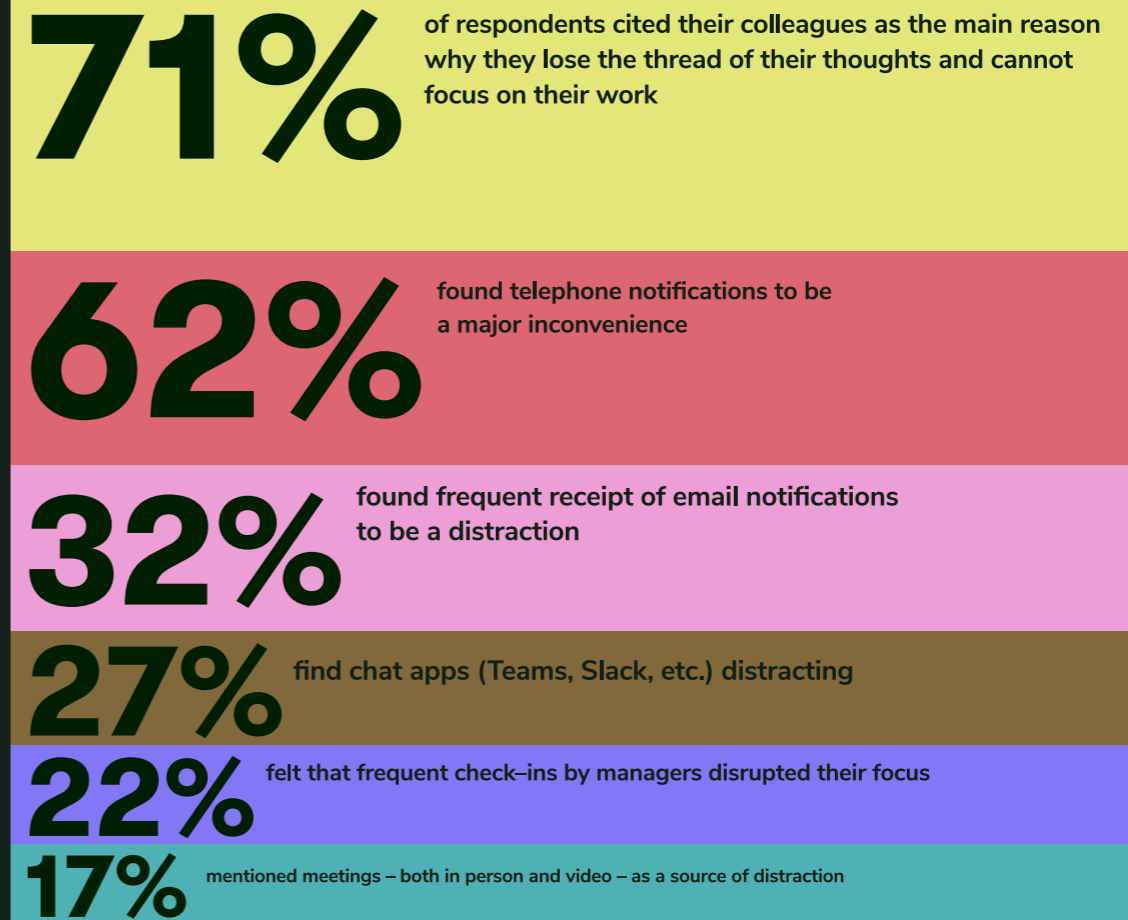


source: Owl Labs, State of hybrid work 2023 United States, 2023.

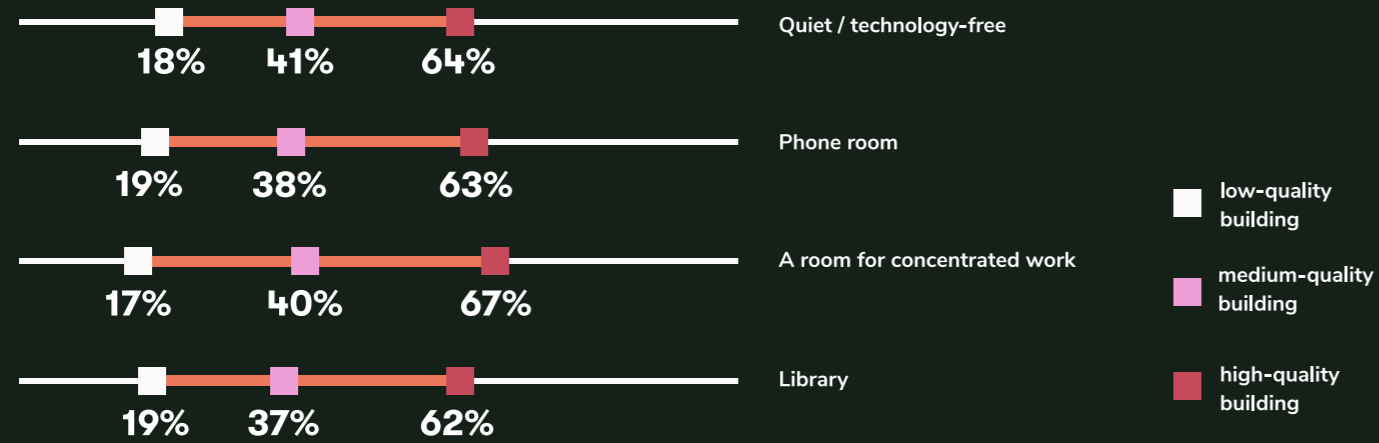


for Adam Grzesiek, design, Workplace.p

SIGNIFICANT SOURCES OF DISTRACTION FOR EMPLOYEES



ACCESS TO SPACE IN BUILDINGS OF VARIOUS CLASSES



source: Genster, Global Workplace Survey, 2024.

source: Owl Labs, State of hybrid work 2023 United States, 2023.

consequences¹⁷⁵. 15% of employees also admit to losing 3 to 5 hours a day checking phone notifications and social media feeds, and nearly 30% admitted to spending 2 to 3 hours online for non-work related purposes¹⁷⁶.

culture of full accessibility

the constant need to be online, the expectation of immediate replies. 53% feel pressure to respond quickly to messages, even if they are sent after working hours. In contrast, half of employees feel obliged to prove to colleagues that they are present at work and performing their duties effectively¹⁷⁷.

elements supporting deep work

quiet zones and individual work

reduce noise and external stimuli, allowing concentration on individual work. These can be enclosed rooms, acoustic cabins, or clearly demarcated areas in larger spaces¹⁷⁸. It is advisable to design such spaces away from communal areas such as kitchens or meeting rooms.

examples of quiet zones

- quiet “bays” in the open office plan – spaces hidden behind furniture or plants
- small, enclosed rooms that can be easily reserved for individual work
- focus rooms, i.e. small meeting rooms for up to two people, which minimise external stimuli and allow you to work in concentration
- “dead zone” – a special space for working in full concentration, acoustically muted, without telephones or Internet access

acoustics

the optimum noise level for mental work is 25–48 dB – corresponding to quiet background noises such as wind noise or quiet conversation¹⁷⁹. To achieve this level, sound-absorbing materials are used – e.g. acoustic panels, carpets, suspended ceilings) and white noise technology, which masks distracting sounds¹⁸⁰.

lighting

influences mood and productivity. The cold light colour of 5000–6500K is close to daylight and promotes concentration and stimulation¹⁸¹. LED lamps with adjustable intensity and appropriate light diffusion minimise eye fatigue. The combination of artificial light and access to natural light is an optimal solution¹⁸².

temperature and humidity

21–22° C is the optimum range for thermal comfort in mental work. Higher temperatures can lead to fatigue and lower temperatures reduce the ability to concentrate. Humidity should be around 40–60%, which reduces the risk of dry mucous membranes and improves wellbeing. HVAC systems with temperature and humidity control are key to ensuring comfort¹⁸³.

work zone ergonomics

furniture, such as adjustable desks and chairs, supports correct posture, reducing the risk of back and neck pain. Comfortable furniture reduces physical fatigue, minimises distraction and improves efficiency. In addition, the use of footrests, wrist rests or monitors at the right height increases comfort¹⁸⁴.

zoning the space

creating a variety of spaces in the office (e.g. quiet zone, collaboration zone, relaxation zone) gives employees the flexibility to choose the right space depending on the type of work they do. This allows the space to be better suited to the needs of deep work¹⁸⁵. In addition, small shared rooms promote social wellbeing¹⁸⁶.

plants in the office

the presence of plants in the workplace improves air quality, reduces stress and promotes concentration. Plants improve employee engagement, which has a positive impact on their job satisfaction, concentration and perception of air quality¹⁸⁷.

psychology of space and colour

the right choice of colours in the office enhances working comfort and improves

concentration and productivity. Using stimulating colours can help you to work creatively, while cool and comfortable colours will allow you to relax and focus more. It is advisable to avoid bright colours on walls and ceilings and to use light colours on ceilings, increasing the sense of spaciousness¹⁸⁸.

concentration-friendly design

cozier rooms allow you to relax between work, while minimalism prevents visual clutter and keeps you more organised¹⁸⁹. Soft textiles and rounded furniture shapes give the interiors a cosy feel

the concept of the eudaimonia machine

the search for a spatial layout that improves entering and staying in a state of deep work without distractions has been going on for some time. The key is to create a layout that not only allows us to be focused when we need to be, but also doesn't detract from other important areas, so it doesn't come at the expense of a welcoming atmosphere, office flexibility, the creativity that comes from well-organised teamwork and a sense of belonging. One of the most interesting proposals has been made in recent years by David Dewane, an architecture researcher from the Illinois Institute of Technology.

The concept of the 'Eudaimonia Machine' is based on a sequential spatial arrangement that leads the user from more open, social spaces to increasingly private zones conducive to deep concentration¹⁹¹. The successive zones gradually reduce external stimuli, allowing the employee to move from team interaction to quiet individual work. This approach aims not only to improve efficiency, but also to increase psychological wellbeing by allowing the choice of an environment tailored to the specific tasks at hand. In this way, even if the tasks are routine, being present in a space designed according to the principles of the 'Eudaimonia Machine' can reduce perceived stress and information overload, resulting in better wellbeing and higher job satisfaction¹⁹².

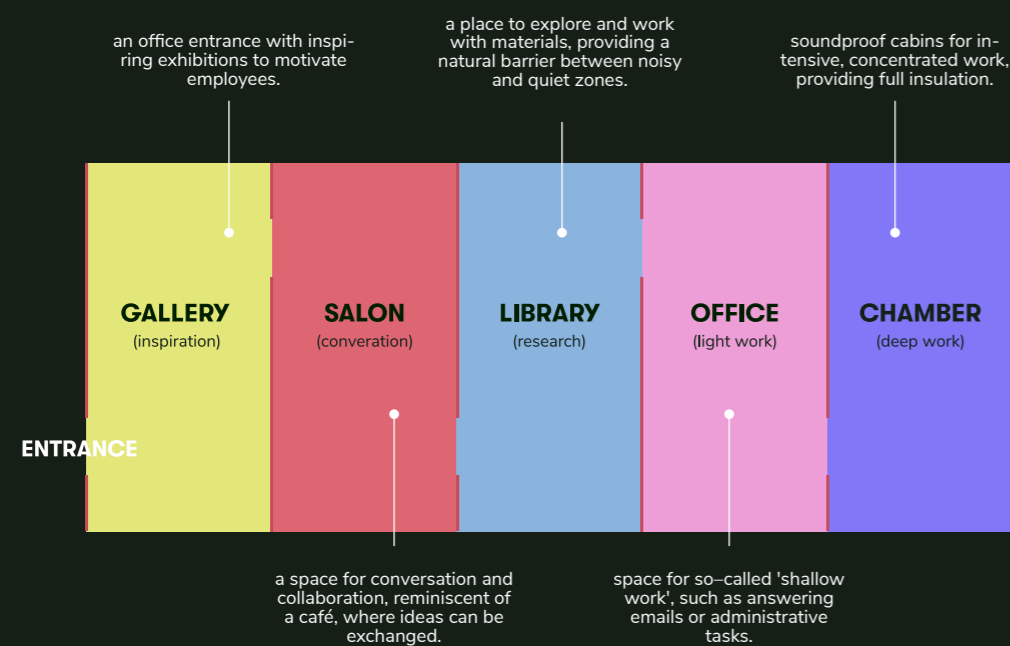


96% of global respondents working in a high-performance work environment said they had easy access to a space conducive to focused work. In comparison, in a low productivity environment, only 26% of respondents declared such a response¹⁹⁰



source: WeWork, Hotel Europejski

ELEMENTS OF THE EUDAIMONIA MACHINE



“non-traditional” office spaces have become the new preferred amenity for business leaders. 68% of enquiries for ‘non-traditional’ spaces were aimed at improving productivity, such as adapted meeting rooms or focus rooms¹⁹³. In coworking offices, focus booths accounted for 50% of new queries about space arrangements¹⁹⁴



Dividing the office space into zones with different levels of focus allows the advantages of an open plan to be combined with the need to work efficiently. In order for the division to work, there must be defined rules for the use of each zone, which helps to maintain order and improve working comfort:

- **High focus** – designed for tasks requiring maximum concentration, it includes soundproof rooms, a ‘library’

and individual workstations.

- **Medium focus** – for those who need to focus, but in an environment with limited noise. There are sound-absorbing partitions, collaborative and creative spaces, conducive to meetings and workshops.
- **Low focus** – spaces such as the lounge, reception area, open space and cafeteria, designed for looser work, conversation and short breaks¹⁹⁵.

good practices to support deep work

web blockers

Freedom – allows you to block access to distracting websites and applications on computers and mobile devices¹⁹⁶

Cold Turkey – a more advanced blocking application that allows you to restrict internet access for a set period of time¹⁹⁷

StayFocusd – a browser extension to reduce time spent on distracting websites¹⁹⁸

time managers

time stream – application to help implement Pomodoro (25 minutes on, 5 minutes off) with performance tracking¹⁹⁹

Toggle Track – time tracking tool with Pomodoro integration²⁰⁰

Clockify – a time tracking app for teams to track time spent on projects and analyse productivity²⁰¹

Pomodoro timer – tool for dividing work into sections 25 min work, 5 min break

specialised music

Brain.fm – generates sounds adapted to brain waves, such as alpha and beta waves, to aid concentration or relaxation²⁰²

Noisli – a platform for mixing environmental sounds (e.g. rain, forest noise) to create individual acoustic environments²⁰³

Focus@Will – a music library designed specifically for work, based on research into cognitive responses to sounds²⁰⁴

Noizio – generates a wide range of frequencies, masking unwanted noise to help you fall asleep or relax or concentrate²⁰⁵

platforms for planning and organising work

Notion – a project management, task planning and content organisation tool to integrate different areas of work in one place, using artificial intelligence²⁰⁶

Trello – Visual boards for task and project management according to Kanban methodology (visualisation of tasks and optimisation of work)²⁰⁷

Asana – A tool to track tasks in teams and set priorities, minimising organisational chaos. Supported by artificial intelligence²⁰⁸

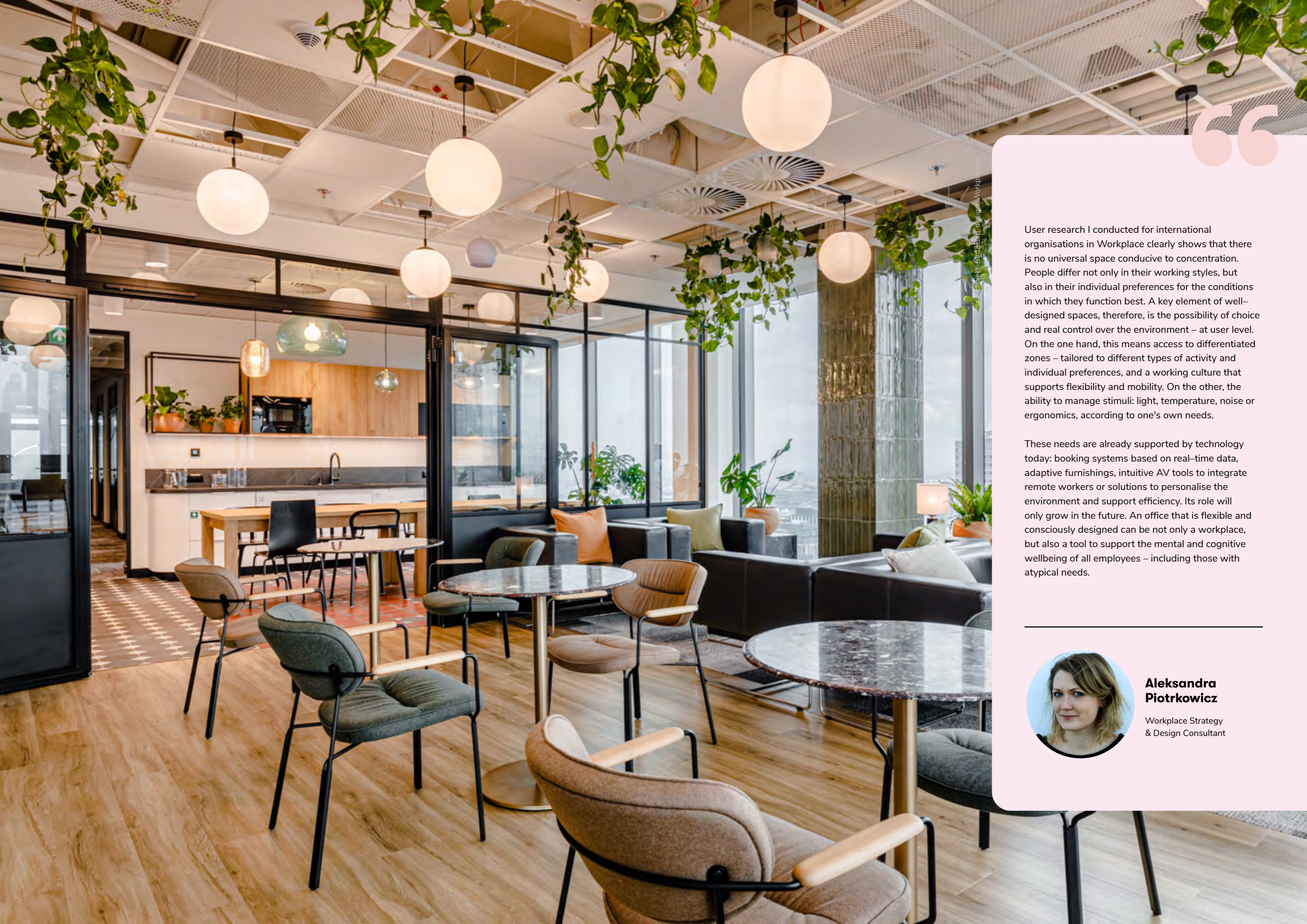
FocusList – is a daily planner and focus app based on the Pomodoro technique. It helps you plan your day, stay focused and keep track of time²⁰⁹

applications minimising digital stimuli

Forest – An application that motivates focus through the mechanism of planting a virtual tree that only grows during uninterrupted work²¹⁰

Minimalist – An application for the simple management of task lists, avoiding an excess of functions²¹¹

Zen Mode (focus) – A feature available on many systems (e.g. Android, Windows) that turns off notifications and irrelevant applications



“

User research I conducted for international organisations in Workplace clearly shows that there is no universal space conducive to concentration. People differ not only in their working styles, but also in their individual preferences for the conditions in which they function best. A key element of well-designed spaces, therefore, is the possibility of choice and real control over the environment – at user level. On the one hand, this means access to differentiated zones – tailored to different types of activity and individual preferences, and a working culture that supports flexibility and mobility. On the other, the ability to manage stimuli: light, temperature, noise or ergonomics, according to one's own needs.

These needs are already supported by technology today: booking systems based on real-time data, adaptive furnishings, intuitive AV tools to integrate remote workers or solutions to personalise the environment and support efficiency. Its role will only grow in the future. An office that is flexible and consciously designed can be not only a workplace, but also a tool to support the mental and cognitive wellbeing of all employees – including those with atypical needs.



Aleksandra Piotrkowicz

Workplace Strategy & Design Consultant

modular solutions for the LinkedIn office

When designing LinkedIn's new Tel Aviv office at Alon Towers, which is one of the tallest and most recognisable buildings in the city, designers from Gindi Studio, together with specialists from My Desk, faced a common challenge – to create multiple quiet spaces for meetings, collaboration and focused work, while making the best use of the office space.

After a complex tender process, the designers decided to use the adaptable Mute Modular office system and to insert three hubs, each consisting of 2 or 3 different rooms. Thanks to the excellent acoustic insulation of the Mute Modular

rooms, they were placed in central parts of the office freely adjacent to the work zones.

The Mute Modular rooms were individually configured. The designers adapted every detail and functionality of the modular rooms to the client's needs. For example, the design included meeting areas with doors on both sides of the room, so that a semi-open, inviting space for less formal meetings could quickly become an enclosed meeting room providing complete privacy.

fot. Shai Epstein, Mute Modular w biurze LinkedIn, Tel Aviv



The adaptable Mute Modular office system allowed the space to be configured down to the smallest detail. The high level of configurability allowed us to design meeting spaces as freely as bespoke rooms, but without the hassle of complex construction work. Instead, as a plug-and-play solution, everything was assembled efficiently and quickly. And it was ready to use from day one. What's more, each Mute Modular is fully adaptable, so if we ever need to change the layout, whether by extending or modifying existing spaces, the process is just as easy, says Ofer Eitan, CEO of My Desk.

In addition to Mute Modular's high level of personalisation, its sleek, minimalist design was a big selling point in the eyes of the designers and the LinkedIn team.

The versatile nature of the Mute Modular allows the product to blend seamlessly into the office layout. The subdued aesthetic of the Mute Modular blends easily into the space. Finally, the Ink Blue colour beautifully complements the LinkedIn brand colour.

Of the many spaces that comprise a LinkedIn office, the Mute Modular's rooms are some of the most appreciated by users. 'The acoustics inside are amazing, so if employees need a moment of quiet to focus on a task or have a Zoom conversation, this is the best place,' emphasises Ofer Eitan, CEO of My Desk.

MUTE.

10

the increasing role of cooperation

As a rule, office work is defined by the performance of administrative and mental tasks, generally in a sitting position. So we naturally associate it with individual work, performed in concentration at a computer. However, white-collar jobs involve both individual and team work. At the same time, technological progress is making repetitive administrative tasks faster and easier, while the role of teamwork, to which employees already devote most of their time, is increasing²¹².

The benefits of teamwork include faster problem solving, higher productivity, a sense of belonging, and a potential increase in organisational competitiveness. Research indicates that, as a result of the current technological

revolution brought about by AI, it is the ability to solve problems and creativity that is becoming the highest value because it is irreplaceable by digital tools²¹³. Therefore, a particularly important solution in the offices of the future is to create a healthy balance by organising space for both individual and collaborative work.

Particularly important here is the opportunity to realise group work in the model of so-called creative collaboration – a dynamic process in which two or more people combine their unique skills, resources and ideas to jointly develop new, often unconventional solutions. A key aspect of this form of collaboration is the synergy effect. A result that surpasses what any one person could achieve individually²¹⁴.

agile working methods

The term Creative Collaboration does not have a single, well-defined origin, as it derives from several research streams and practices focusing on creativity and collaboration in the work environment. Alex Osborn's introduction of the concept of brainstorming in the 1950s is considered a watershed moment in thinking about creativity²¹⁵. Also highly influential was the emergence of

EMPLOYEES ABOUT TEAMWORK IN ORGANISATIONS

- 78%** believe that leaders could have done more to promote collaboration in the organisation and 27% indicate that their company has not invested in the right collaboration tools
- 70%** believe that better collaboration can have a positive impact on productivity and time savings
- 42%** of their working time on average is spent collaborating with others, nothing else takes up more of their time
- 41%** have either left the company or are considering leaving because of poor collaboration in the workplace

Source: compiled by ThinkCo based on Geniesler, Global Workplace Survey Comparison, 2023; Covid, State of Collaboration Survey, 2022

source: unsplash





source: Echo Investment, Midpoint Wrocław

methods such as Design Thinking and Agile, which emerged in the late 1990s and early 2000s²¹⁶.

Instead, Vera John–Steiner’s work ‘Creative Collaboration’, published in 2000, in which the researcher analysed the dynamics of collaboration in the context of creativity, can be considered a defining moment. The book focuses on the analysis of co–creation processes in different fields such as science, art, literature and other creative fields, emphasising the importance of collaboration for innovative outcomes.

The areas of use of this process are wide and dependent on the business profile. In art and design it can involve combining different styles and techniques, in business it can involve collaborative strategy development, and in technology it can involve product innovation resulting from the technical knowledge and ingenuity of the participants. Collaboration between different sectors is also an important example, where, for example, technology companies collaborate with artists or designers to create products that are not only functional, but also aesthetically appealing and tailored to consumer expectations^{217 218}.



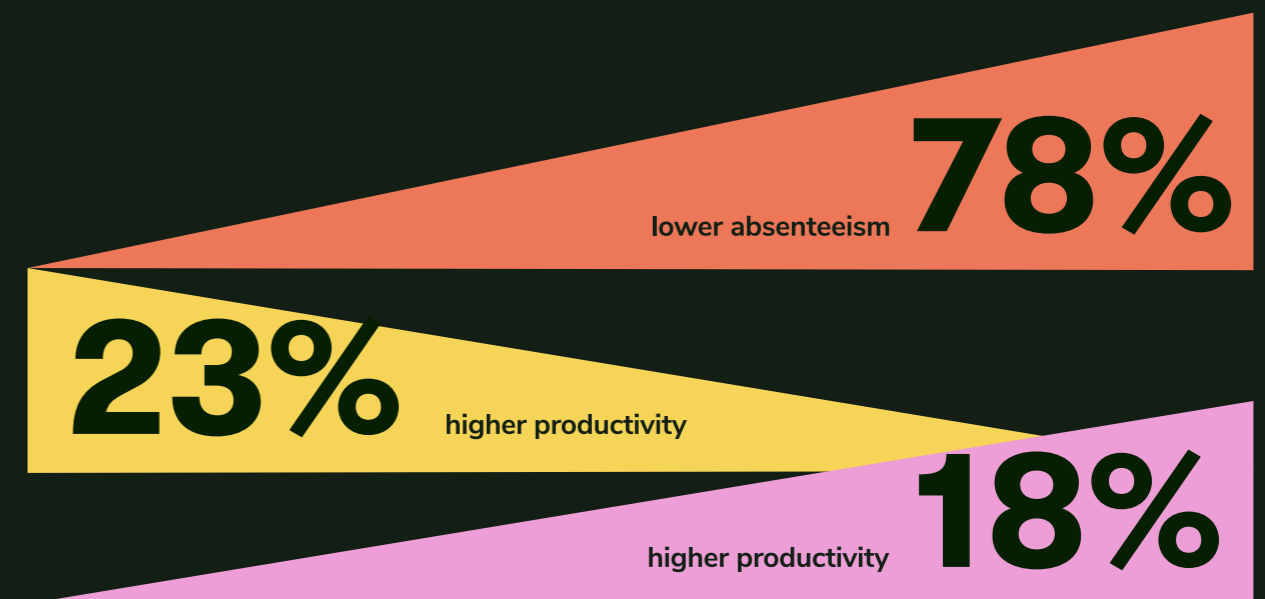
creative collaboration is more effective when there is a balance between freedom and structure. A flexible approach to managing collaborative processes supports the autonomy and critical thinking of participants²¹⁹

HOW DOES CREATIVE COLLABORATION DIFFER FROM TRADITIONAL COLLABORATION?

	traditional cooperation	creative collaboration
purpose and nature of cooperation	pursuing well–defined tasks and objectives using proven methods that minimise risk and unpredictability	the desire to create something new and innovative, which requires greater flexibility, creative freedom and acceptance of risk and variability in the process
work structure	is often based on clearly defined roles and tasks, which are carried out in a linear manner	is more organic and fluid, allowing for iterative change and adaptation as the project develops; this makes it possible to adapt to new ideas and develop them as the work progresses
experimentation and risk	is usually based on tried and tested solutions	allows for experimentation and testing of ideas, making the process more chaotic, but also more inspiring; encourages out–of–the–box thinking and stepping out of one’s comfort zone
psychological comfort	particularly in highly hierarchical structures, may not be conducive to such openness, limiting creative freedom	participants to feel comfortable sharing ideas and accepting criticism without fear of evaluation

source: compiled by ThinkCo based on Bryan Kitch, 7 Creative Collaboration Challenges & Solutions, 2023

A HIGHER LEVEL OF TEAM INVOLVEMENT RESULTS IN



source: compiled by ThinkCo based on Gallup, How to Build Better Teams in the Workplace, 2022.

from whom creative collaboration can be learned

creative sector

companies in industries such as advertising, media, design or fashion, where innovation is key to success, naturally use creative collaboration to create unique products and services ^{220 221}

technology sector

companies developing software, artificial intelligence or digital solutions require intensive collaboration between interdisciplinary teams, combining technical, business and application competences. Creative collaboration supports the creation of innovative products and the improvement of technological processes²²²

start-ups and innovative companies

Organisations focused on introducing market breakthroughs benefit from the open exchange of ideas and dynamic collaboration between specialists from different disciplines. The joint generation and iterative testing of ideas allows rapid adaptation to changing market conditions and effective scaling of innovations

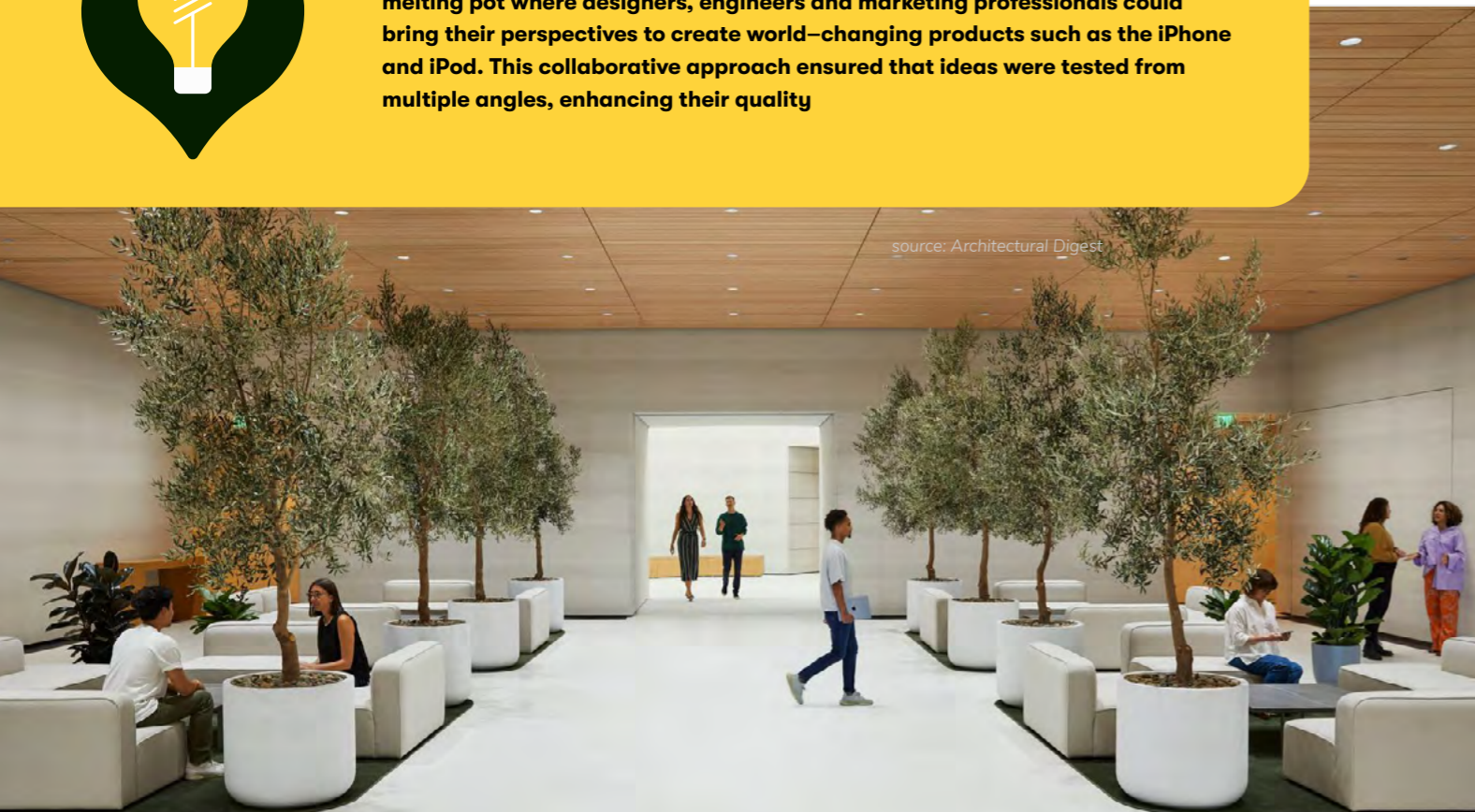
scientific and research sector

Academic institutions and research centres base their activities on cooperation between experts from different fields. Interdisciplinary approaches and the exchange of ideas accelerate scientific discovery, enable the development of innovative technologies ^{223 224}



by encouraging cross-functional collaboration at Apple Inc. Jobs created a melting pot where designers, engineers and marketing professionals could bring their perspectives to create world-changing products such as the iPhone and iPod. This collaborative approach ensured that ideas were tested from multiple angles, enhancing their quality

source: Architectural Digest



benefits of creative collaboration

1

diversity of perspectives and innovative solutions

uses a diversity of experience to find innovative solutions and create more tailored products and services.

2

increased efficiency and faster implementation of projects

enables the division of tasks according to strengths, which increases efficiency and speeds up project implementation, enabling solutions to be brought to market more quickly.

3

learning and skills development

fosters learning and competence development, enriching professional and interpersonal skills. Feedback accelerates development, enabling skills improvement based on feedback.

4

increased motivation and job satisfaction

strengthens team bonds, increases motivation and job satisfaction. Working together towards goals creates a positive working environment, such as a team working on an environmental campaign.

challenges for creative collaboration

1

different personalities and working styles

Team members have different working styles, which can lead to tensions. Differences in approach to tasks can hinder harmonious cooperation

2

communication challenges

Effective communication is crucial, but difficult in teams with different backgrounds and communication styles. The lack of a common language and clear channels of information leads to misunderstandings, especially in hybrid environments.

3

inconsistent priorities and objectives

Team members often have different visions and priorities, which can lead to divergent strategies and decisions, making it difficult to achieve consistent results

4

limited resources and time pressure

Creative projects often lack resources, such as time, budget or tools, which limits the team's capacity. Time pressures and limited resources can lead to frustration and lower morale.

5

information silos

Information is often held in separate departments, limiting the flow of data within the team. In remote working, the lack of complete and timely information hinders decision-making and innovation.

6

lack of trust and autonomy

Trust within a team is crucial for open communication and the sharing of ideas. In remote environments, a lack of trust and autonomy can limit engagement and willingness to experiment.

7

time and task management problems

In a creative team, difficulties in time management can lead to delays and chaos. Overlapping deadlines and excess work disrupt the flow of tasks and reduce the quality of output.

HAVING A HYBRID COOPERATION PLAN RESULTS IN

29%
lower risk of professional burnout

66%
more likely to be engaged at work

2.2x
times higher level of satisfaction with teamwork



foto: Vlad Hillitanu, unsplash

PATTERNS OF CREATIVE COLLABORATION

The concept of patterns of creative collaboration was developed by Vera John–Steiner in her book *Creative Collaboration* (2000). The researcher identified four main patterns of creative collaboration, which describe the different ways in which people work together to achieve creative goals.

	DESCRIPTION	EXAMPLES	KEY FEATURES
Distributed Collaboration	takes place within 'communities of thought' or loose networks of collaborative groups, where ideas and practices are shared and used for both individual and collective purposes	<ul style="list-style-type: none"> scientific communities open–source platforms networks of artists working independently 	<ul style="list-style-type: none"> lack of strong organisational structures cooperation is based on shared values and objectives freedom to share knowledge
Complementary Collaboration	is based on the recognition and use of complementary expertise, disciplines, roles and temperaments in pursuit of a common goal	<ul style="list-style-type: none"> multidisciplinary research teams film production 	<ul style="list-style-type: none"> mutual recognition of individual talents and contributions clear roles and responsibilities working towards a common goal
Family Collaboration	is characterised by strong, long–term relationships that are based on a sense of belonging, trust and mutual support. These relationships may change over time depending on needs and tasks	<ul style="list-style-type: none"> cooperation between life partners in artistic projects family businesses 	<ul style="list-style-type: none"> a high level of mutual trust and loyalty. adaptability of roles according to the situation. strong emotional bonds between group members.
Integrative Collaboration	involves collaborative efforts to bring about transformative change, where colleagues work together to create innovative syntheses that redefine their fields or disciplines	<ul style="list-style-type: none"> creating breakthrough technologies social movements 	<ul style="list-style-type: none"> long–term commitment creation of new structures, systems or models high level of interdependence

source: compilation by ThinkCo based on Gallup, *How to Boost Productivity in Hybrid Teams*, 2023.



design solutions

While creative collaboration is possible in organisations operating remotely, its effectiveness is significantly increased in properly designed office spaces. Research shows that teams working in person are more creative than those working solely online. What's more, remote teams that have met face–to–face at least once achieve better creative results in later stages of work, even when it is only done remotely²²⁵.

The quality of the working environment is crucial in this. Offices combining open areas that foster spontaneous communication with flexible layout solutions and modern technology create optimal conditions for effective collaboration. Such an environment makes it possible to adapt the space to the changing needs of the team, which increases productivity and stimulates creativity.

Dividing the office into different zones corresponding to different tasks allows employees to choose the working environment that best suits their current needs, which improves comfort and team performance²²⁶. In addition, consideration of factors such as lighting, acoustics, colours and ergonomics influences creativity, concentration and collaboration. Research published in the *Journal of Facility Management Education and Research* indicates that the right working conditions can increase productivity by up to 12%²²⁷, and creativity by 15%²²⁸.

A. ENCOURAGING SOCIAL INTERACTION

- relaxation and creative breakout areas are spaces for informal meetings and small group work. Their purpose is to provide a stimulus to the imagination and to create an atmosphere that supports creativity, which translates into better team performance²³⁰

B. PROMOTION OF CREATIVITY

- vibrant colours, artwork and unique design elements can create a more stimulating atmosphere²³¹

C. FACILITATING COOPERATION

- open zones promote spontaneous communication, the exchange of ideas and team collaboration. Large tables, sofas and flexible furniture that can be easily moved around are ideal. However, it is important to strike a balance – open spaces encourage communication, but can also create noise and distraction²³²
- flexibility allows the space to be reconfigured according to the needs of the users. Furniture should be modular, lightweight and easy to move so that people can change spaces as needed²³³

D. ENCOURAGING BREAKS

- relaxation zones – i.e. areas for regeneration, such as relaxation rooms with comfortable furniture, vegetation and subtle lighting – promote stress reduction and the restoration of creativity
- 82% of leaders and 72% of employees state that a lack of time



81% of people who have a positive experience of the workplace have a choice of office space. This includes a variety of spaces, such as areas for creative teamwork, individual work, reflection and recovery, and networking and recharging energy²²⁹

between meetings makes it difficult to complete important tasks²³⁴, so in addition to organising space, it is also crucial to manage the employees' calendar properly

E. STIMULATION OF THE SENSES

- lighting and contact with nature have a key impact on working comfort and efficiency. The office should be designed to provide maximum access to daylight

- introducing vegetation into the office improves air quality and has a relaxing effect. Green walls and plants in pots promote concentration and reduce visual fatigue

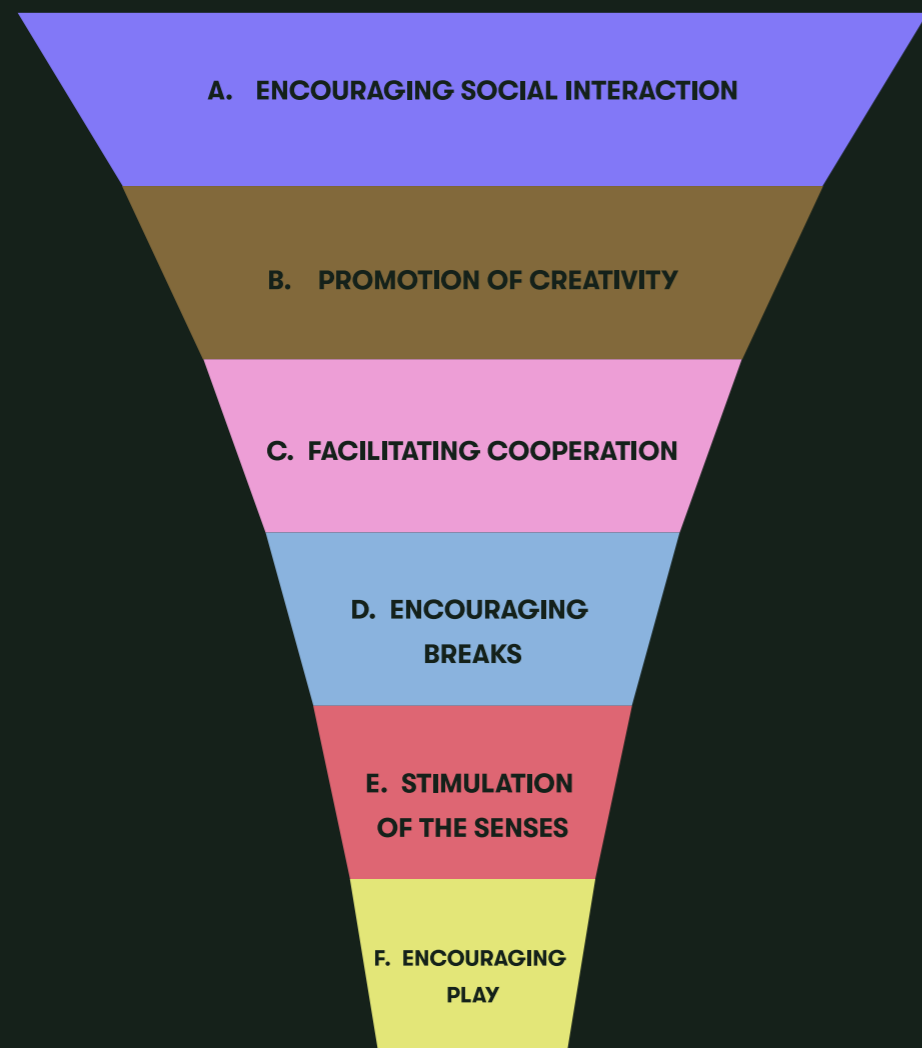
F. ENCOURAGING PLAY

- can include games rooms, appropriately designed social spaces that allow for team-building activities and/or the use of the office building's outdoor spaces such as squares and terraces

source: WeWork, Grzybowska 62



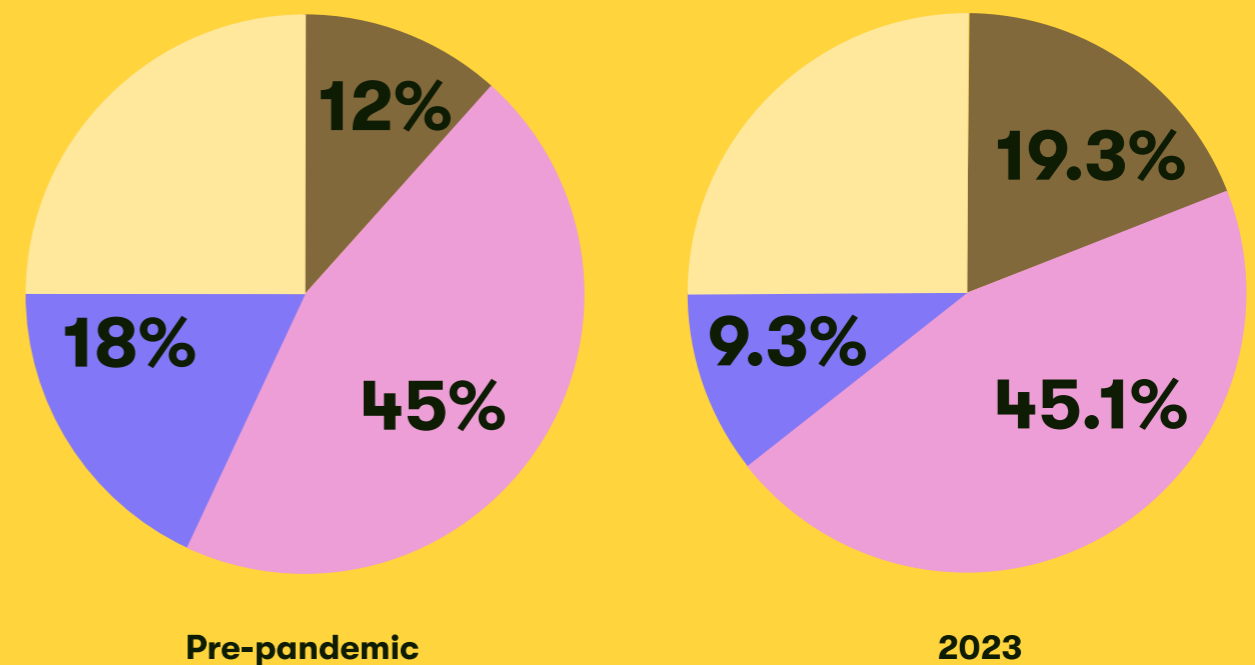
HOW TO DESIGN AN OFFICE THAT ENCOURAGES CREATIVITY AND COLLABORATION



source: Faoster Capital, Design an office that fosters creativity and collaboration, 2024.

WeWork found that spaces designed to foster collaboration in private offices, such as common areas and 'lounge' space, have increased by 60% – to 19.3% of leasable space in 2023, compared to 12% before the pandemic. Many companies have chosen to repurpose space previously used as executive offices into lounge, conference or workspace; emphasising the office's new focus on collaboration, social interaction and connection²³⁵

SPACE UTILIZATION



■ Lounge space ■ Work space ■ Meeting space

source: WeWork, The Dynamic Office: Why flexible work models require dynamic office designs, 2024.

66

Over the past few years of the coworking market's development, we have observed a significant change in attitudes towards office work. Today, people coming to our Warsaw locations do so for two clear reasons, which are repeated in the reports of community managers. Firstly, to work away from home and everything that distracts us from work. However, this is a smaller group and a secondary reason.

The primary, recurring reason for using WeWork is the opportunity to work in a group of other people. On the one hand, conversations indicate that teams achieve faster and better results when they can meet and talk. Often, the best ideas come up during lunch or even during breaks and games of table football. On the other hand, even independent entrepreneurs and employees who do not hold creative meetings draw energy from so-called body-doubling. This means that they find it easier to work when they are surrounded by people who are doing the same thing. Interestingly, this applies equally to introverts and extroverts.



Paweł Strzemecki

Head of Leasing
Northern Europe
WeWork

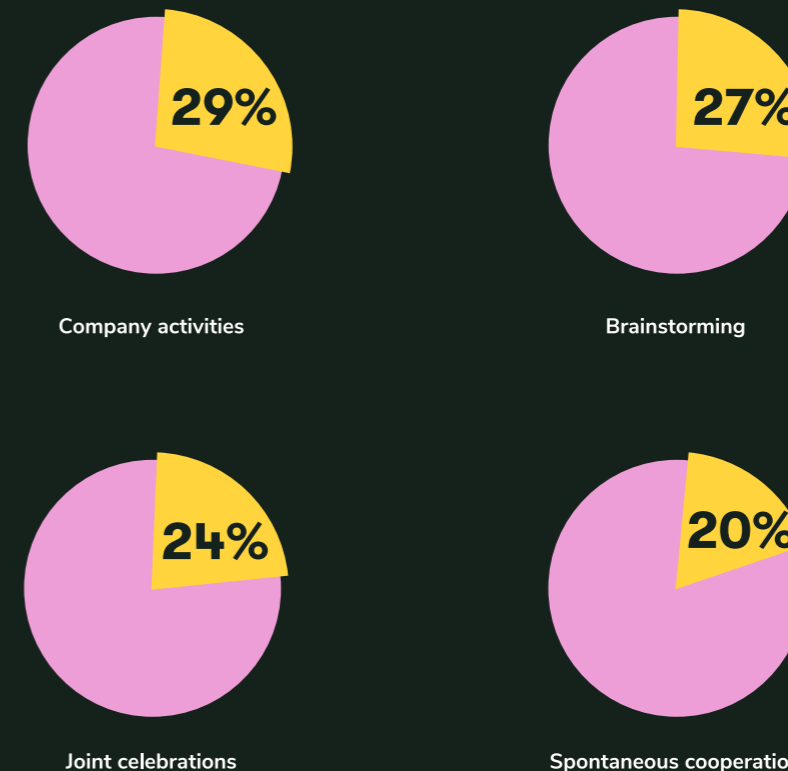
furniture and accessories to support creativity

- **large worktops** – allows free arrangement of materials, computers and other accessories, which is important in professions requiring simultaneous work on different tasks
- **modular and configurable furniture** – allow for quick adaptation of the space to the needs of the team. They allow dynamic layouts to be created, making it easy to adapt the office to changing needs, such as brainstorming²³⁶
- **magnetic and dry erase boards** – allow ideas to be visualised, diagrams to be created and information to be exchanged quickly in a way that is visible to the whole team. They can be used both for individual conceptual work and during team meetings²³⁷
- **interactive screens and digital tools** – support the visualisation of projects and remote collaboration. Among other things, they allow interactive presentations to be created and connect with remote teams, enabling ideas to be exchanged efficiently regardless of location
- **flipcharts and mobile whiteboards** – allow dynamic note-taking of ideas during meetings and workshops. They improve communication in hybrid environments, facilitating the exchange of ideas between teams²³⁸

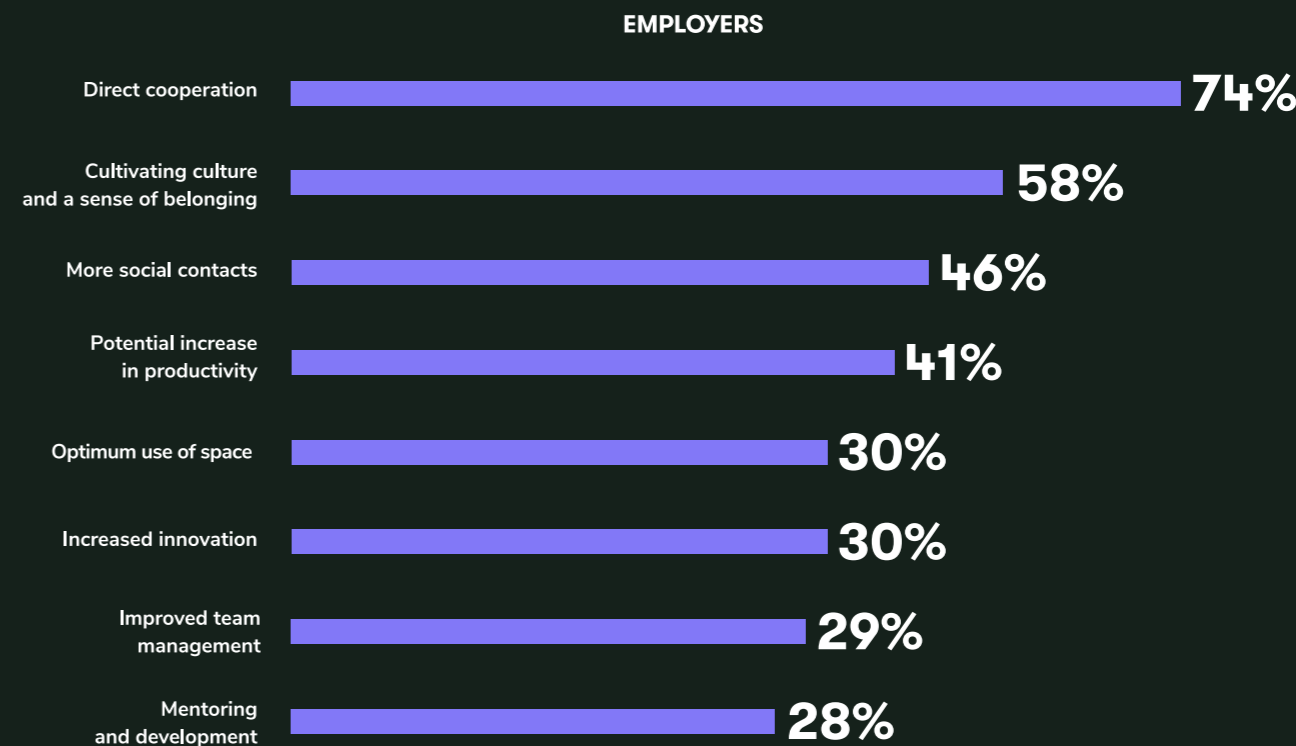
together together

In addition to the right conditions for individual focused work and the higher efficiency of group creative work, the primary reason why employees should, and sometimes want to, return to the office themselves are the social aspects and the subconscious psychological need for contact with others, which translates into our health.

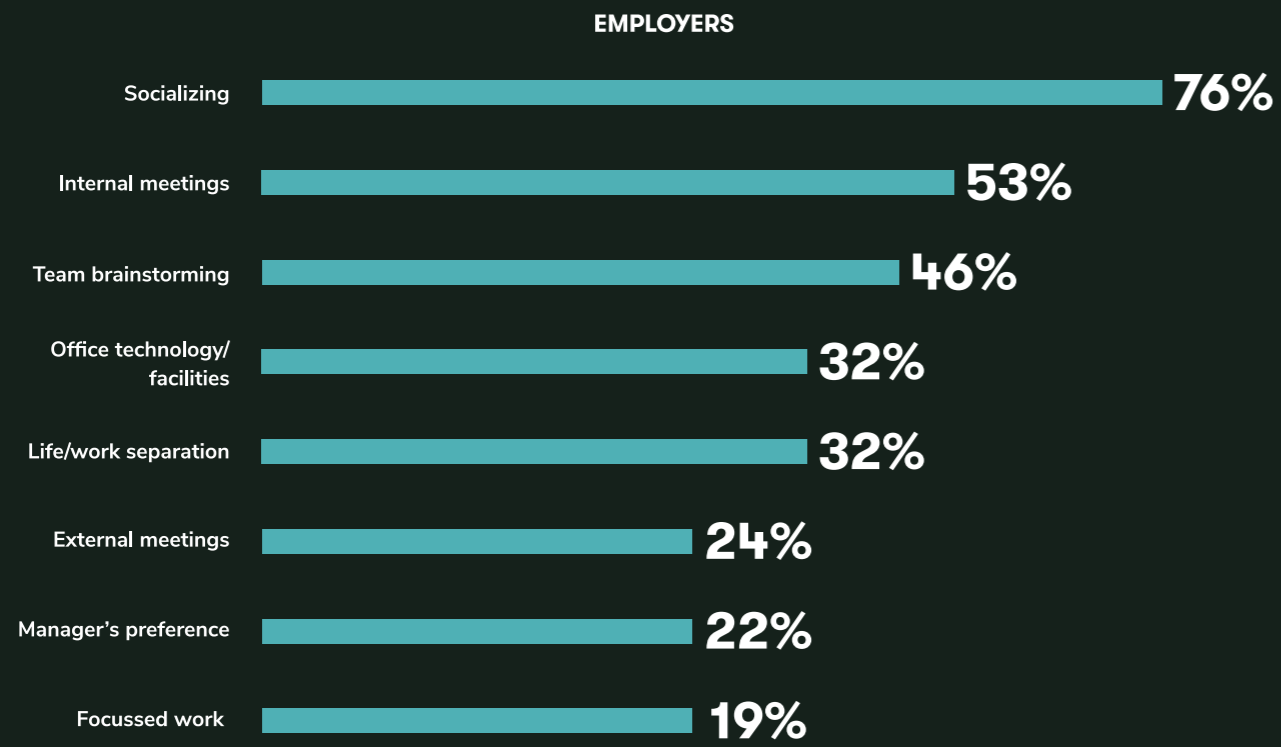
TYPES OF CONTACT THAT ENCOURAGE TO COME TO THE OFFICES



TOP REASONS WHY EMPLOYERS ENCOURAGE OFFICE WORK



TOP REASONS WHY EMPLOYERS ENCOURAGE OFFICE WORK



Research indicates that face-to-face interactions in the workplace have a significant impact on employees' mental health²³⁹. Regular face-to-face contact fosters social connections, which are key to emotional wellbeing. Results also indicate that face-to-face communication is a stronger predictor of mental health than digital communication, highlighting the value of physical presence in the workplace²⁴⁰.

In addition, strong social relationships at work contribute to increased job satisfaction and engagement. Employees who have the opportunity to interact regularly with colleagues are more likely to feel more attached to the organisation. Attachment style in the workplace correlates with various occupational aspects such as job satisfaction and engagement²⁴¹. The opportunity to

socialise in the office not only satisfies the natural need to connect with others, but also has tangible benefits for mental health, sense of purpose and engagement.

what is biophilic design?

Biophilic design is a concept based on man's natural connection with nature. The history of the development of the human species points to a long-standing relationship with nature, so our instinctive desire for contact with our natural surroundings stems from a biological memory that has a direct bearing on physical and psychological wellbeing. Recreating this fundamental connection in the working environment becomes not only an aesthetic choice, but also a response to a deep-seated human need.



source: IKEA

aesthetically pleasing and functional interiors that support business



Anna Maliszewska

IKEA Interior designer

What benefit do you see for the customer in the Design for Business service offered by IKEA?

Anna Maliszewska: We introduced an interior design service for businesses, recognising how important a properly designed environment is to business success. Over the years we have gained experience in designing office spaces, cafes, shops or flats for rent. Our philosophy is to create interiors that respond to the specific needs of the client. We strive to ensure that our designs are not only aesthetically pleasing, but above all functional and ergonomic. Thanks to this, the service is aimed at companies that expect solutions perfectly tailored to their specific requirements, regardless of the scale of their business.

Where does the commercial interior planning process start?

Anna: The first step is to find out exactly what the client needs. Every space is unique and the expectations of its users vary, so face-to-face meetings are extremely important, during which we gather information about individual stylistic and functional preferences. This approach enables us to create a design ideally suited to a given situation. Among other things, we analyse conditions such as the direction of light, the proportions of the room and optimal storage solutions. We do all this while taking care to comply with current legal standards.

What is the value of using the IKEA service in terms of time and cost savings?

Anna: The benefits for the client are significant. The end-to-end approach makes the design and implementation process fast and convenient. Working with IKEA eliminates the need to search for different suppliers – from design to order to after-sales service, everything is done in one place. 3D visualisations help to see the final result already at the conceptual stage, making it easier to determine the details of the project. In addition, the availability of a wide range of furniture and accessories means that customers do not have to wait weeks for their order to be fulfilled, which is particularly important in a dynamic business environment. Once the project is complete, we provide comprehensive support, including transport, installation and service. In addition, we offer financing options for purchases, which is an additional advantage of our offer.

Doesn't using popular IKEA products in an arrangement make interiors repetitive? How do you avoid this problem?

Anna: The modular design of our furniture systems allows us to flexibly adapt solutions to the specifics of any space. As a result, we are able to create unique arrangements that are also functional. Seasonal collections and cooperation with renowned designers allow us to enrich our designs with original elements. What is more, refreshed versions of classic models, which are continually appreciated by independent decorators for their exceptional design and attractive value for money, periodically return to our offer.

What makes the IKEA interior design service different?

Anna: Our solutions are characterised by a comprehensive approach and flexibility towards the client's needs. We combine the experience of a global brand with in-depth knowledge of local conditions. We offer not only interior design, but also full support at every stage of implementation – from concept, through the selection of furniture and accessories,



source: IKEA

to transport and professional installation. Whether the project is for a small office or a large corporate space, our designers are involved in every detail, ensuring that both the aesthetics and ergonomics of the interior are conducive to effective work and the well-being of the users.



source: IKEA

what is biophilic design?

Biophilic design combines elements of nature with interiors to create environments that support employee wellbeing and productivity. It strategically integrates natural materials, greenery, daylight and organic forms to create functional offices that support users physically and emotionally. The process goes beyond the visual aspects, engaging various senses such as sight, touch, hearing, smell and sensations of movement and time.

benefits of biophilic design in offices

improving well-being and mental health

Elements of nature, such as plants, daylight and views of greenery, significantly affect mental wellbeing and contribute to a better working environment²⁴³. The University of Technology in Sydney found that plants reduce tension and anxiety by 37%, depression and despondency by 58%, anger and hostility by 44% and fatigue by

than 120 employees in Dutch offices was analysed for nearly seven months. People who worked in a space with more greenery achieved about 10 per cent higher productivity on their tasks compared to a control group²⁴⁵. The results of a global study indicate that biophilic design supports an increase in productivity by 6% and creativity by 15%²⁴⁶. The key is to reduce stress, allowing employees to operate more efficiently.

better air quality and health

Some plants absorb air pollutants, reducing the symptoms of so-called sick building syndrome. According to a study by the Norwegian University of Agricultural Sciences in Oslo, plants effectively remove harmful VOCs such as formaldehyde and benzene from the air, which are found in the paint, carpets and furniture of most buildings²⁴⁷. Plants also reduce carbon dioxide levels by 10 per cent in air-conditioned offices and by as much as 25 per cent in buildings without air conditioning²⁴⁸.

less absenteeism at work

A healthier environment means less sick leave. Biophilic design can reduce employee absenteeism by up to 10%, increasing motivation and attendance at work²⁴⁹. In Poland in 2023, respiratory diseases were the cause of 14.5% of absenteeism at work²⁵⁰.

greater job satisfaction

Integrating biophilic design principles not only improves the physical environment, but also has a positive impact on employees' emotional attachment and job satisfaction. The presence of biophilic elements can induce feelings of pleasure, comfort and fulfilment, contributing to overall job satisfaction among office employees²⁵¹.

38%. Some researchers suggest that the calming effects of plants may be related to their colour²⁴⁴.

increased productivity and creativity

The presence of nature in the office improves concentration and stimulates creativity. In 2016, the behaviour of more

noise reduction

Vertical gardens can act as noise reducers, as the dense foliage helps to absorb and reflect sound. Plants absorb sound (rather than insulate from noise), reducing disturbance from office background conversations. Strategic placement of larger pots at the edges and corners of rooms has great benefits²⁵².

enhanced aesthetics

An indoor garden adds natural beauty and energy, enhancing the visual appeal of an office space. Such thoughtful landscaping can transform the working environment, making it more welcoming and inviting for both employees and visitors²⁵³.



in coworking offices, 70% of companies surveyed chose plants as an additional feature²⁵⁴



fot. Adam Grzesik, projekt. Horizon, design. Workplace.pl



people who work surrounded by natural elements report 15% greater well-being, 6% higher productivity and 15% greater creativity compared to those who do not have such elements in their work environment²⁴²



Phot. Sofia Kang, unsplash

ENVIRONMENTAL STIMULI AND THE AUTONOMIC NERVOUS SYSTEM RESPONSE



Source: Naava, Science behind Naava 3.0, 2021.

IMPACT OF LIVE PLANTS ON WORKERS

94%

felt satisfied with the number of plants after installation of the vertical gardens

94%

felt the aesthetics of the office had improved

88%

want to have plants as close to the workplace as possible, up to 2 metres

86%

confirmed that the introduction of plants in the office has improved their working comfort

84%

noticed an improvement in wellbeing and stress reduction after introducing plants into the office

80%

experienced improvements in air quality and humidity after introducing plants into the office

62%

noticed an increase in work efficiency after introducing plants into the workplace

Source: compiled by ThinkCo based on 4naturesystem, Impact of living plant systems on office workers, 2019.

Etsy Offices – Dublin



foto: Ruth Maria

name: Etsy Offices
location: United Kingdom, London
designer: Gensler
year: 2024
surface area: 1133 m²

The main idea behind the design was to use elements created by local craftsmen. As a result, a lot of natural materials were used in the interior, which fits in with the biophilic design spirit. In addition, care was taken to ensure good access to daylight and to enrich the space with potted plants and green walls. Floral motifs were even used on the large carpets and ceilings in the meeting rooms. Also included in the design are relaxation spaces that can be completely separated from their surroundings by curtains and sliding panels, creating a cosy refuge. The calming indoor environment is extended by an outdoor terrace, providing an additional relaxation zone



foto: Ruth Maria

Clubhouse for Creativity

name: Publicis Groupe, Clubhouse for Creativity
location: USA, New York
designer: Architecture Plus Information (A+I)
year: 2023
surface area: 2790 m²

The project focuses on developing the creative potential of the entire organisation. It goes beyond traditional structures by focusing on Publicis Groupe's individual creative process. Based on an analysis of the creative action stages, a layout of the space was developed that allows the environment to be flexibly adapted to each project. The space is divided into a variety of zones (from quiet corners to bustling auditoriums), which are distinguished by their unique colours, lighting, scale and functions.



foto: Magda Biernat

Health & Beauty Office Space



source: Shang Interior Architects

name: CHealth & Beauty Office Space
location: China, Shanghai
designer: Shang Interior Architects
year: 2024
surface area: 298 m²

The interior has undergone a major refurbishment with the aim of supporting collaboration and the exchange of ideas. The design combines open workspaces with a central area dedicated to collaborative working. The open layout and movable furnishings allow the space to adapt to changing needs. Storage units simultaneously serve as spatial partitions, maintaining visual clarity throughout the office. The lack of clear zones eliminates hierarchy, encouraging direct communication and free interaction between employees.



source: Shang Interior Architects



phot. Noshe

Relaxound Offices

name: Relaxound Offices
location: Germany, Berlin
designer: Ester Bruzkus Architekten
year: 2023
surface area: 490 m²

In this space, acoustics and colour play a key role. Specific colours are assigned to different areas to support the various tasks, along with matching acoustics. Spaces located closer to the windows, dedicated to socialising and collaborating, are lighter, more spacious and have vibrant colour accents. Focused work areas, on the other hand, are smaller spaces with low ceilings, dominated by a dark blue colour palette. The muted colours together with the reduction of distractions are intended to promote concentration. Gentleness throughout the interior is built through the rounded shapes of the furniture and vegetation.

Workplace Strategy Based on Research and Design

13,000 m². 1,500 users. A hybrid work model and wellbeing focus.

The new LUX MED headquarters in the Lakeside building in Warsaw is a standout project by the Workplace studio. It consolidated previously scattered departments under one roof. This was the company's first relocation in 15 years, completed in Q3 2024. In January 2025, the project won the award for Best Office Design at the Property Design Awards 2025.

The process began with an extensive research phase: over 50 interviews and employee workshops were conducted to develop a workplace strategy. These insights, along with the spatial program, were translated into a modular layout tailored to the varied needs of different departments—and ready to adapt to future changes.

In the new space, team zones for 6–18 people were created, supplemented and acoustically separated from corridors by focus rooms and small meeting pods. Including all collaborative zones, 44% of the workplace consists of such areas—more than double the amount in the previous headquarters. Work zones make up 41%, while social and regeneration spaces account for 15%.

Each floor features comfortable social zones with park views, while the fifth floor—with a terrace—serves as the "heart of the office." It includes coworking and event spaces, along with key regeneration amenities like a solar lamp and a mineral water bar. The interiors are styled in beige, soft and light greys, and greens, with organic wall forms and undulating ceilings, designed to create soft and inviting atmospheres.

Design intensity is tailored to each area's function to prevent overstimulation. The fit-out reflects the 3R philosophy – Reduce, Reuse, Recycle: furniture from the previous office was refurbished, while new items were sourced from local suppliers. Natural and recycled materials were used, including cork panels, felt-and-paper ceilings, and mosaics made from construction waste.

Psychophysical regeneration was supported through workout zones with treadmills and bars, hydration points on every floor, and the aforementioned mineral water bar at the reception. A light therapy room was also created—equipped with spectrally-tuned and infrared lighting controlled via an app designed in collaboration with mood.farm—to support circadian rhythm and reduce stress. Additionally, 114 artworks depicting nature were installed in meeting rooms and work zones to help calm overstimulated minds.

Selected classical paintings were chosen to positively influence users, offering inspiration and a sense of peace. The entire investment was completed with 20–30% lower costs than standard market benchmarks for projects of this scale, thanks to process optimization and negotiation support from the company Reina. The process was also supported by a comprehensive change management program, also led by Workplace.

A hybrid work model was implemented: 50 change ambassadors participated in workshops to develop principles for desk booking, meeting room usage, and workplace etiquette. A few months after the move, the space was reviewed and adjusted to better meet user needs—both current and long-term.

workplace

source: Workplace



source: Workplace





IV. selection and formation of the office

the time when a place was chosen on the basis of two factors and proposed in a repetitive manner. Today, selecting and shaping an office is a complex, multidimensional process that involves researching the organisation, complex analysis and a comprehensive design process – all with the aim of creating not only a workplace, but also a space that, through architecture and design, becomes an extension of the company's strategy by reflecting its mission, vision and purpose.

11 tribalism of the workplace

Strengthening employees' sense of belonging has been one of the most important trends in the HR landscape for several years now. 79% of organisations see this area as an important element that positively influences company performance and success, and 93% agree with the statement that enhancing employees' sense of belonging drives organisational performance²⁵⁵. This is reasonable, as employee belonging is one of the key drivers of organisational success. 45% of employees who feel a sense of belonging believe they are able to achieve the highest productivity in their work.

In addition, 40% of employees with a strong sense of belonging rarely think about looking for another job, and 51% of those feeling a sense of belonging say they would recommend their employer to others.

The declarations are confirmed in reality. Employees with a strong sense of belonging are twice as likely to receive a raise and 18 times more likely to be promoted²⁵⁶. This is because a strong sense of belonging at work increases productivity by 56 per cent, reduces the risk of turnover by 50 per cent and reduces sick leave by 75 per cent, resulting in significant savings for the company²⁵⁷. In addition, employees with a strong sense of belonging are more engaged, resulting in higher performance and lower absenteeism. Organisations with high employee engagement report an 81% reduction in absenteeism²⁵⁸. And it all starts in the head – the higher the psychological comfort a company gives employees, the more strongly they identify with it (95% vs. 69%) and the less constrained they are, behaving authentically, remaining themselves at work (95% vs. 75%)²⁵⁹.

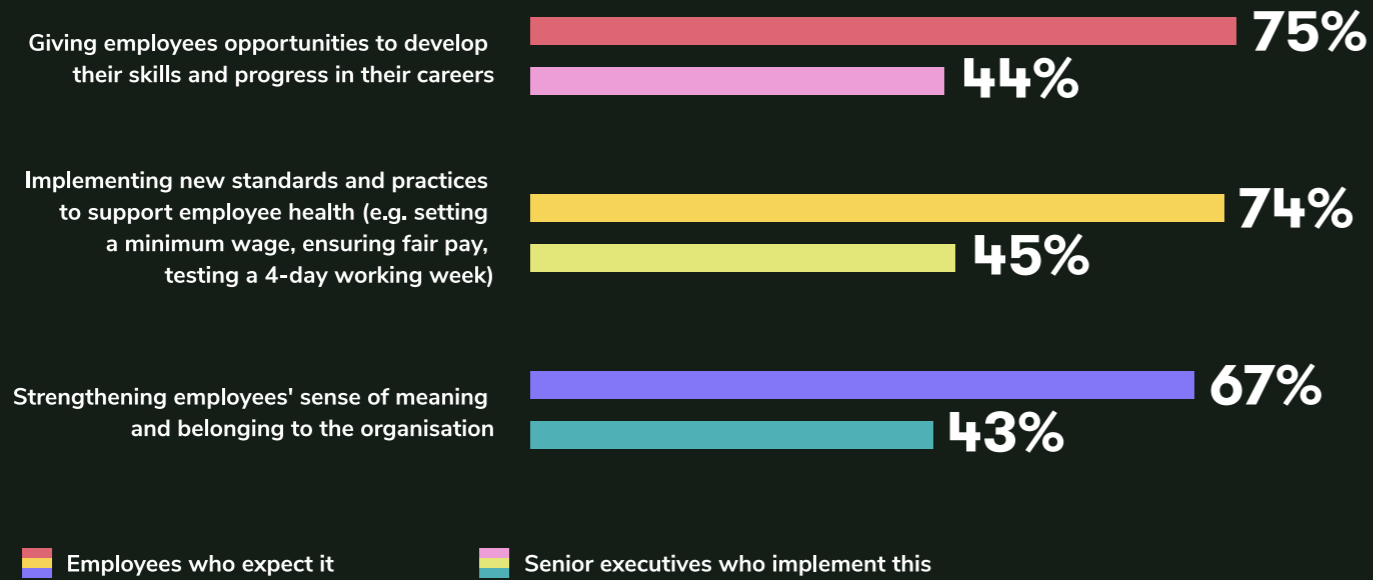


for 60% of people, being able to be themselves in the workplace is a key factor in their job satisfaction and happiness. Lack of opportunities to be authentic can negatively affect open communication, collaboration and productivity. In such cases, instead of focusing on doing their job, employees spend their energy on fitting in with the expectations of others, which limits their effectiveness and comfort in the workplace



source: unsplash

MOST EMPLOYEES EXPECT THEIR EMPLOYERS TO PROMOTE SUSTAINABLE HUMAN DEVELOPMENT, BUT COMPANIES FAIL TO MEET THESE EXPECTATIONS



BENEFITS IN COMPANIES WHERE EMPLOYEES CAN BE THEMSELVES AND FEEL AT EASE



affiliation as a derivative

A sense of belonging in the workplace is crucial as it allows employees to identify with the team and the organisation, which increases motivation and commitment, which are associated with a number of benefits for the organisation, such as job satisfaction levels, employee loyalty and positive attitudes towards the organisation²⁶⁰.

Research indicates that what particularly influences employee engagement is an inclusive work environment that fosters team integration²⁶¹. Diversity, Equality and Inclusion (DEI) has therefore become fundamental to building a sense of belonging in organisations. By ensuring representation, equity and inclusion of people from diverse backgrounds, DEI

creates a space where employees feel accepted, valued and supported. This approach not only fosters diversity, but also strengthens team bonds, increasing commitment and loyalty to the company²⁶².

At the intersection of these three areas, a space is created where diversity introduces new perspectives, equality guarantees equitable access to resources and inclusion builds a culture of full participation and development. However, DEI alone is not enough to achieve a strong sense of belonging. True belonging occurs when DEI evolves into DEIB – when organisations not only support diversity and inclusion, but also nurture the emotional and social connection of each employee to the workplace²⁶³.

DEIB (diversity, equity, inclusion, belonging)

(Diversity, Equality, Inclusion and Belonging) is an evolving philosophy and set of practices aimed at creating a safe, fair and inclusive work environment. These activities focus on building an organisational culture that supports diversity and acceptance, ensures equality of opportunity and promotes a sense of belonging. Employers are implementing this through initiatives such as flexible working models, diversity education campaigns and recruitment aimed at broadening the composition of leadership teams.

DEIB goes beyond existing legal requirements, offering measures that are designed not only to protect employees from discrimination, but also to create an environment where each person can bring their full identity to work without fear of judgement or prejudice. Implementing DEIB principles allows organisations to ensure that all team members feel valued, respected and have opportunities for equal development and advancement. In doing so, companies create a work environment that fosters engagement and value creation for both employees and the organisation as a whole²⁶⁴.



Phot: Rinesh Kumar Chinnai, unsplash

Source: compiled by ThinkCo from RedThread Research, Creating a DEIB Culture, 2021; EY, Belonging Barometer 3.0, 2023; Glassdoor, Your Talent Is Talking, 2022.

IMPACT OF DEIB FACTORS ON ORGANISATIONS

81%

of organisations using DEIB see increased customer satisfaction. They are twice as likely to report that they have been successful in meeting their business objectives and are optimistic about achieving future goals

73%

among generation Z and 68% of millennials said they would choose a company that puts DEIB first than one that does not

72%

of companies see themselves as more innovative thanks to DEIB

63%

of employees surveyed would choose a company that prioritises DEIB over one that does not, and 74% say their company's DEIB priority influences their choice of workplace

45%

of respondents said that flexible working, including autonomy in choosing hours and location, was their main motivator for implementing DEIB in their own teams

41%

of employees surveyed are dissatisfied with communication regarding DEIB targets and progress towards them



not: Mika B. Umstaedter, unsplash

DIVERSITY, EQUALITY, INCLUSION AND BELONGING (DEIB)

employees who work in a fair environment perform 26% higher than those who do not – and only 18% of employees say they work in a fair environment²⁶⁵

DIVERSITY

Diversity in terms of background, values, beliefs, identity and other characteristics.

BELONGING

Individual employees' sense that they are safe, accepted and seen as valued members of the community.

EQUITY

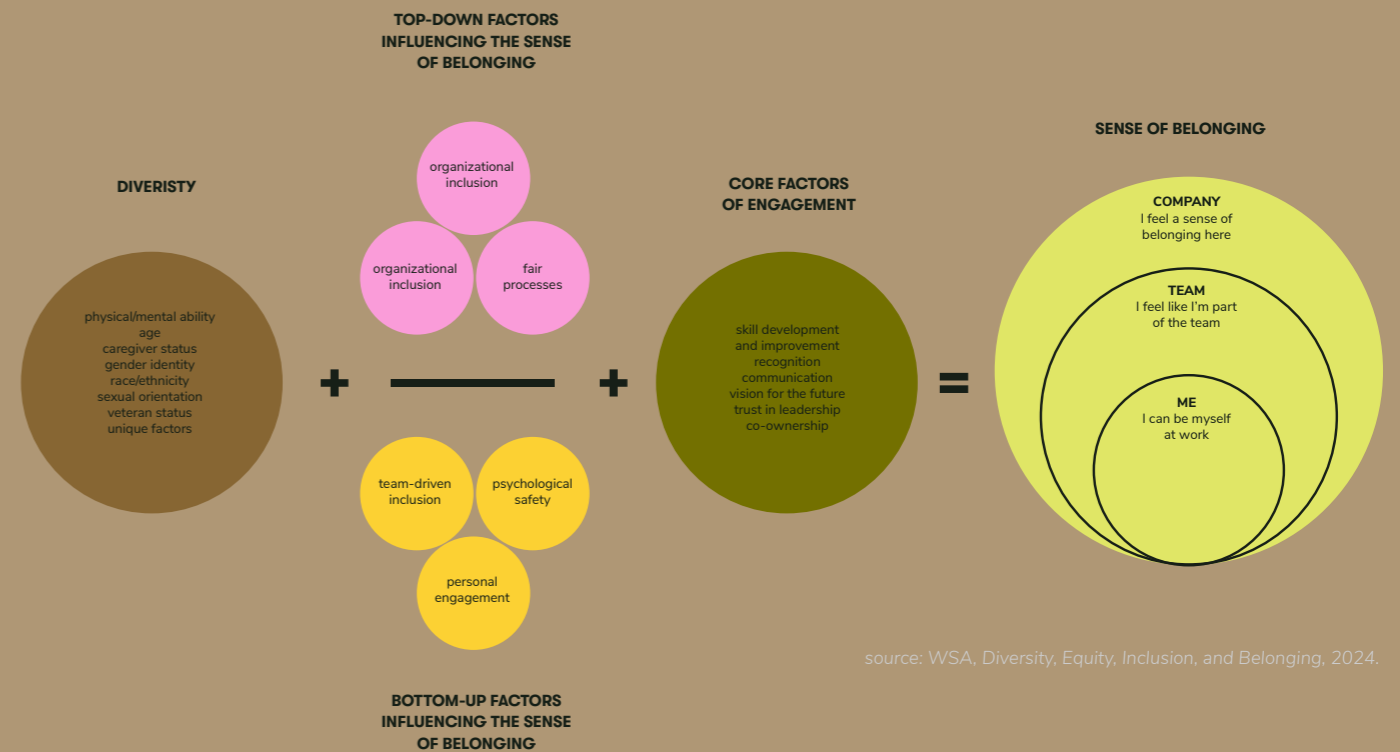
Ensuring that the way people are treated takes into account their unique backgrounds, needs and values and leads to the desired outcomes from their perspective.

INCLUSION

An environment where the voices of all employees are heard and valued, and where each person has access to the same opportunities.

Source: Visier, DEIB: Opportunities and Best Practices for Businesses of All Kinds, 2023.

FRAMEWORK FOR BUILDING A SENSE OF BELONGING



source: WSA, Diversity, Equity, Inclusion, and Belonging, 2024.



source: Skanska / Workplace

DIVERSITY

helps hold leaders accountable and nurture representation to build systemic equity. To foster a sense of belonging, the wider social context and the real experiences of employees must be taken into account. Psychological safety is key, which promotes openness. Employees are more likely to share their concerns and ideas about how to improve their experience in the organisation, which can support a sense of Net Better Off (NBO), i.e. that working for a company makes life better in real terms. However, the lack of universal methods makes building belonging difficult to scale²⁶⁶.

EQUITY

is to ensure that every employee has fair access to resources, training and development opportunities – regardless of identity or background. It means assessing on the basis of skills rather than formal criteria, and tailoring working conditions to individual needs. Flexible schedules, offering training during working hours or support for neuroatypical people are practices that build an environment based on respect and equal opportunities. Everyone's needs are different, and an equitable employer seeks to take these into account by creating a work environment that supports development and accommodates diversity²⁶⁷.

INCLUSION

is to create an environment where everyone – regardless of differences – feels respected and valued. It is not only inviting people to the table, but also ensuring that everyone can eat the meals prepared. A lack of inclusion leads to exclusion and limits the potential of the team. Companies that create an inclusive environment are more effective at recruiting, retaining talent and supporting the development of all employees, resulting in higher motivation, innovation and engagement²⁶⁸.

BELONGING

is an individual's subjective feeling of being accepted and valued as part of a team. At work, it signifies identification with the organisation, a sense of security and connection with others. It influences motivation, commitment and job satisfaction. A sense of belonging is an emotional response that arises from cognitive stimuli and manifests itself in behaviour. It is a feeling that has three key dimensions: cognitive, affective and behavioural, which together define how a person feels, thinks and acts. Although it is an individual experience, it is also influenced by external factors – organisational climate, company structure or structural social issues (racism, homophobia, sexism, etc.). As with employees, organisations also shape belonging through their decisions, culture and priorities, which support or constrain how the team functions²⁶⁹.

ELEMENTS DEFINING THE SENSE OF BELONGING



01 Being Seen

Employees feel appreciated, respected, and rewarded for their efforts by coworkers and supervisors.



02 Being in Relationship

Authentic, positive social interactions with colleagues, managers, and senior leadership that foster an atmosphere of trust and collaboration.



03 Receiving Support

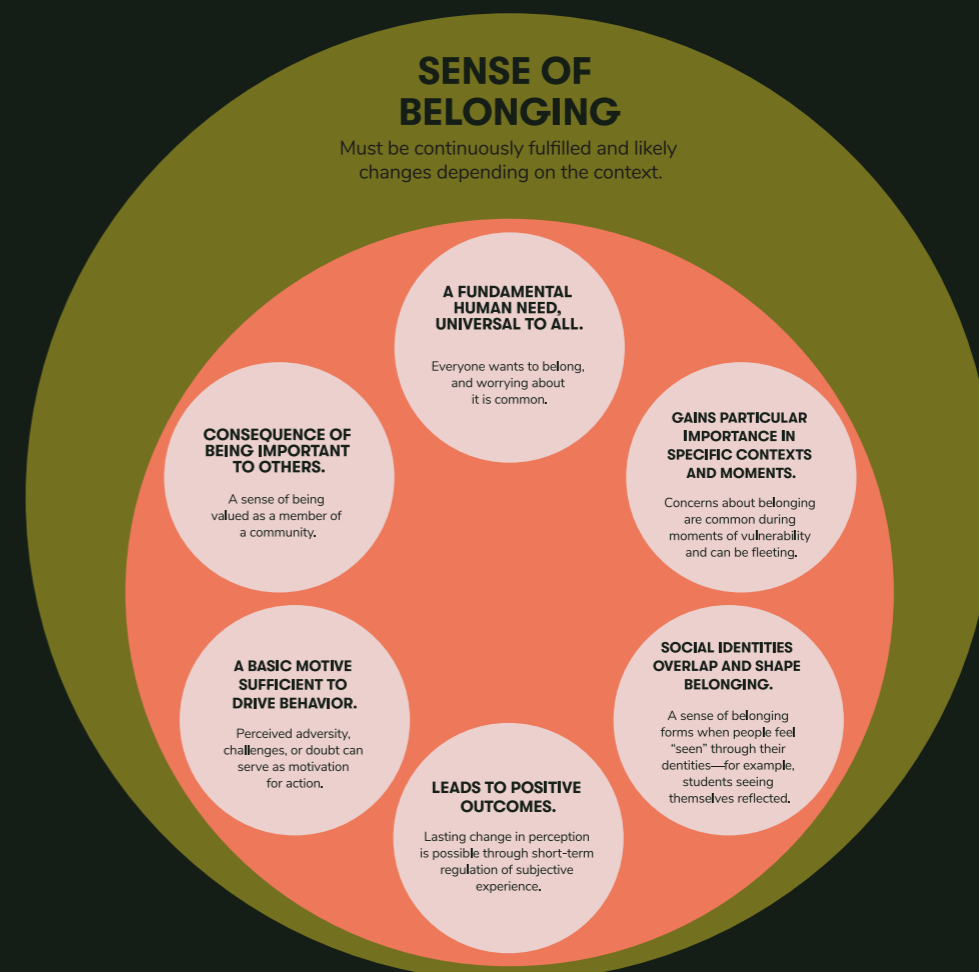
Help and engagement from both coworkers and leaders to ensure employees have everything they need to perform their duties effectively.



04 Being Proud

A sense of alignment with the organization's mission, values, and vision, making employees feel they are part of something meaningful and important.

SENSE OF BELONGING



PRACTICES PROMOTING AFFILIATION



attachment through branding

In addition to the implementation of relevant workplace policies, creating a sense of belonging to a company is primarily done by appropriately addressing the company's values, mission and vision in its brand strategy and encoding them in branding. Many people think that branding is primarily associated with the visual attributes of a brand, i.e. its logo, colours and the entire language of communication. However, in reality it is a much broader concept and primarily touches on the strategic characteristics, the purpose of existence and the role that the company (or its local branch) wants to fulfil in the economic environment, while the visual and communication aspects are – or rather should be – solely derived from these characteristics²⁷⁰.

Because of the peculiar tangibility of the visual aspects, branding is considered to be an activity aimed at building external image, recognition and positive associations with the brand in the minds of its audience, especially customers.

However, this true belief does not reflect the full strategic role, which, in addition to visual communication, is also aimed at emotional communication – both with external and internal audiences. Therefore, branding can include a company's name, logo, slogan or ID, as well as the design and quality of its products, the nature of its services, its organisational culture, its values, its working environment, the acceptable dress code of its employees, the equipment they work with, the flexibility of its schedule, the way it activates its team, and the location and appearance of its office²⁷¹.

Aspects that fall into the category of internal image are generally separated into the category of employer branding and managed independently. There is a rationale for this, as it should be under the care of HR departments rather than marketing²⁷². The problem, however, is that often the external and internal image are created so independently that they do not find enough common ground, which makes the brand inauthentic – and this affects both customer and employee loyalty²⁷³.

branding in the office

Even with coherent strategies in both areas, creating platforms where the external and internal image can naturally intersect is relatively difficult²⁷⁴. An exception to this is office space, which, when well designed, can both respond appropriately to the needs of employees and create opportunities to build relationships with the company, as well as effectively present brand values, which naturally translates into image consistency. A space that reflects the company's values builds a sense of belonging and pride²⁷⁵.

A personalised, aesthetically pleasing office interior with a clear reference to the company's identity enhances working comfort and makes the working environment more inspiring. Employees feel more connected to a place that expresses the organisation's values, which builds commitment and loyalty. For example, companies with a focus on sustainability may introduce eco-friendly design elements, while technology companies may introduce advanced audiovisual systems. This approach reinforces a sense of belonging among employees, who can identify with the values evident in their surroundings.

Brand identity in the office helps companies stand out from the competition by building an emotional connection between employees and the workplace. By expressing company values and consistent design in the office space, organisations foster a culture of unity, inspire their employees and create an environment that encourages collaboration and innovation. As a result, brand identity becomes not only a showcase for the organisation, but also a key element in creating a sense of belonging and commitment within the team²⁷⁶.



fot. Adam Grzesik, projekt: S42, design: Workplace.pl

STAFF ATTITUDE TO IMAGE BUILDING

75%

said they liked to be involved in their company's wider community. Among those who have access to a range of cultural and social events, the percentage was higher (84%)

70%

consider it extremely or very important that the management team actively promotes the company's values and culture

69%

say it is extremely or very important that their employer has a brand they can proudly identify with

components of branding by design

When the work environment expresses the company's values, vision and ethos, employees feel more connected both to the organisation and to each other. Such a space fosters bonding and common purpose, which has a positive impact on collaboration and team morale. Office space can also be a narrative tool – its layout, design and materials can tell a company's story, highlighting its unique character. By subtly infusing the company's values and culture into the space, employees can better identify with the organisation. This, combined with an aesthetic that promotes comfort and inspiration, makes them feel more connected to the team and the place where they work.

layout and flow of space

The organisation of the office space is how people move around the office and how they find themselves in it. The office layout should reflect the company's work culture. An organisation that values collaboration may opt for open spaces, communal areas and meeting rooms, while a company that relies on individual work will opt for more enclosed offices and privacy areas.

colour psychology

Each colour carries unique associations and can be used to reinforce brand identity. Red symbolises energy and passion, while blue is associated with trust and reliability. Green alludes to nature and development, and yellow to optimism and joy. In doing so, they have a significant impact on the emotions and behaviour of the people in the office space. In this way, colours become a tool for creating the image and culture of an organisation²⁷⁷.

brand symbols

Logos, mission statements or inspirational quotes – if well planned – can enrich office design. For example, a mural depicting a company's history reminds employees of values and aspirations. The 'propaganda' posters in Facebook's headquarters remind employees of the organisation's goals²⁷⁸. Such elements personalise the office and reinforce employees' sense of belonging.

lighting

A space full of natural light symbolises openness and transparency, while warmer light can encourage creativity and relaxation. Aligning lighting with company values, such as using energy-efficient technologies or highlighting brand colours, can enhance an organisation's image²⁷⁹.

brand-free spaces

Relaxation areas, such as cafés, breakout rooms or lounges, should be designed as neutral and welcoming places where people can relax, recuperate and relate to others in a break from the corporate environment. They help to maintain a work-life balance. The neutrality of these zones in terms of brand identity demonstrates a concern for the wellbeing of the team and creates a work environment that promotes inclusivity and support²⁸⁰.

space branding

It involves the use of architectural and graphic details to give the space a unique character that reflects the company's culture, values and history. It is a visual complement to office design, aiming to create a working environment that promotes employee comfort and engagement. The key elements of space branding – colours, shapes and forms – do not have to relate directly to the company's corporate identity book. Instead, they are dedicated to employees, aiming to stimulate imagination, enhance wellbeing and increase job satisfaction²⁸¹.

source: Fuzja / Echo Investment



the design of a space should be based on a leitmotif that gives direction to the narrative of the place. A holistic approach requires coherence between the graphic elements and the overall architectural concept. Incorporating elements such as neon signs, light installations or scenographic decorations can further emphasise the main theme and enliven the space. These types of solutions make it possible to create an office that not only fulfils its practical functions, but also evokes emotions and strengthens the bond with users²⁸²

66

In a world of hybrid working models, the office needs to support inclusion, reinforce company culture and build community. Well-designed office spaces are a tool to support the emotional engagement of teams, which is one of the biggest challenges for employers post-pandemic and in the face of generational shifts in the labour market. Because after all, it is in the office that people come together to collaborate – to share experiences, values and foster a sense of being part of something bigger beyond the digital realm as well – rather than just doing chores.

At Echo Investment, we have been taking a holistic approach to office design for years – taking into account not only functionality and aesthetics, but above all the needs of the users, including those related to building a sense of belonging. We are helped in this by the idea of destinations, which has broken with the mono-functional approach to building planning, proposing instead, multifunctional quarters that live in the rhythm of the city. As a result, our office buildings have become part of a wider whole – inspiring meeting places in an environment that is both downtown and green, such as Browary Warszawskie, Lodz's Fuzja or the emerging Towarowa22.



Agnieszka Krawczyńska

Head of Key Account Fit-out Team
Echo Investment

Legal & General Offices



source: Oktra

name: Legal & General Offices
location: United Kingdom, London
designer: Oktra
year: 2023
surface area: 20.439 m²

The office spaces are harmoniously permeated with elements of corporate branding. The design was intended to bring the outside world into the interior through the use of raw concrete and natural vegetation, which was enhanced by a neutral palette of muted brand tones present in furniture finishes and artwork. The distinctive umbrella logo was subtly adapted on various design elements, including embossed on the glazing of the meeting rooms and added to the room description plates.



source: Oktra

PepsiCo WECA Offices

name: PepsiCo West, East, and Central Africa (WECA) Offices
location: South Africa, Johannesburg
designer: Tetris Design & Build
year: 2024
surface area: 560 m²

PepsiCo's South African headquarters interweaves African culture with brand values. The office design is based on a central structure imitating a tree, which divides the space into collaboration and individual work zones, referencing the layout of traditional African settlements. The interior combines the rawness of materials, such as concrete and wood, with the simplicity of furniture upholstered in fabrics decorated with local patterns, whose colours allude to the brand's colours. In addition to the details, the company's branding is presented directly in the form of murals depicting the PepsiCo logo and products.



fot: Graeme Wylie

Google's New York HQ



foto: Mark Wickens

name: St. John's Terminal, Google's New York Headquarters

location: USA, New York

designer: COOKFOX Architects, Gensler

year: 2024

surface area: 944.000 m²

Google's new headquarters builds a sense of belonging on many levels. First and foremost, it strengthens the connection to the city through the adaptation of the historic train station and the use of details in the interiors that relate to the culture of New York. In addition, up to 95% of the plants used in the project are native species that support the local ecosystem. What's more, the design was developed in response to the real needs of the teams – the spaces were organised in the form of 'neighbourhoods' that promote collaboration, a sense of community and daily interaction. This is complemented by interior details that make subtle use of the brand colours and logo, reinforcing the corporate identity and visual coherence of the entire office.



foto: Mark Wickens



foto: Jasper Sanidad

Evernote Office

name: Evernote Office

location: USA, Redwood City

designer: Studio O+A

year: 2012

surface area: 7432 m²

The Evernote office is an example of how, with limited time and financial resources, to create a space consistent with the brand identity. Instead of classic branding, the company invited artist Dana Tanamachi to create a large chalk illustration on one of the walls, incorporating the slogan 'Remember everything' and the brand logo. A sculpture of an elephant's head – a symbolic sign of Evernote – also appears in the office space. Next to the reception area is a café with a doughnut bar, reflecting the idea of turning everyday impulses into lasting habits. The bright colour scheme, natural light and soft materials encourage informal collaboration and support employee wellbeing.

Bird & Bird

name: Bird & Bird
location: Poland, Warsaw
designer: Workplace.pl
year: 2023
surface area: 2200 m²

At the Bird & Bird office, a key feature is the central networking zone. Designed as the heart of the workspace, it is intended to encourage both spontaneous and planned interactions, strengthening employees' sense of belonging. The zone includes swings, soft sofas, and abundant greenery that filters the air and creates a welcoming, relaxing environment. Plants are placed on floors, walls, and ceilings, giving the space a natural character and supporting user wellbeing. The design combines the law firm's minimalist aesthetic with bold color accents—deep navy blues, wine reds, earthy tones, and muted pinks. Wooden elements complete the space, creating a harmonious and inspiring work environment.



fot. Adam Grzesik, design: Workplace.pl

Kraft Heinz Tasty Office



fot. Adam Grzesik, design: Workplace.pl

name: Kraft Heinz Tasty Office
location: Poland, Warsaw
designer: Workplace.pl
year: 2025
surface area: 2000 m²

The new Kraft Heinz office in Warsaw is a space where branding, identity, and the company's heritage have been subtly and elegantly implemented. The design—referred to as the Tasty Office—blends aesthetics with functionality to create a work environment that is both inspiring and comfortable. Visual elements reflecting the brand's essence—flavor, quality, and global recognition—are thoughtfully woven into the interior. Rather than overwhelming the space with logos, the design conveys a quiet sense of pride in being part of the company. The office features a high level of aesthetic refinement, a harmonious color palette, and sensory-rich details that engage both visually and emotionally. It's a place where branding serves as a backdrop to everyday work, not a dominating presence.



fot. Adam Grzesik, design: Workplace.pl

community as part of a global coworking network

In a rapidly changing world where flexibility and innovation are key, coworking has evolved from a trend into a real necessity. Short-term contracts and a variety of office options allow businesses to adapt their workspaces to shifting needs. Coworking is not just about having a place to work—it's a platform for building relationships and exchanging experiences. By design, it is meant to inspire and spark creativity.

WeWork, a pioneer of this revolution, has been redefining how we perceive office space and community for years. Its network integrates diverse workspace formats—from hot desks to fully equipped private offices—into a unified

offer tailored to users' evolving demands. Thanks to its All Access service, members can use any WeWork location under a single subscription, supporting a mobile and hybrid work style. The network spans nearly 600 locations across 120 cities in 37 countries, offering a total of 4.5 million square meters of flexible office space.

The global nature of the network ensures consistency in both standards and design across all locations. Whether you're in New York, London, or Warsaw, users can expect similar amenities and a work-friendly atmosphere. These include high-speed internet, conference rooms suited to various activities, fully equipped kitchens, relaxation areas with



source: WeWork

barista services, and even pet-friendly policies. All of this is aimed at supporting both productivity and comfort while fostering a sense of belonging to a global community.

Community is, in fact, a key pillar of the WeWork model. Every location regularly hosts networking events, workshops, and themed gatherings that help members connect and share knowledge. These events are promoted through the mobile app, which also serves as a booking platform. Investment in technology and innovation, commitment to community-building, global reach, high design standards, and a wide range of additional services—such as IT support, administrative assistance, and help with organizing personalized events—are what make WeWork stand out among coworking providers.

The market for flexible office spaces is growing dynamically. The share of flex offices in the total supply of office space continues to increase year by

year, confirming the rising demand for flexible solutions. As a result, coworking is becoming a permanent element of the office leasing mix. The hybrid work model—combining remote and in-office work—further strengthens its role, as coworking spaces are far better equipped to swiftly adapt to the changing needs of both employers and employees.

The Polish market is still developing, and WeWork's presence in prestigious Warsaw locations highlights its commitment to the growth of the local flex office sector. Across the CEE region, WeWork offices in Warsaw and other key cities attract both local companies and international corporations, drawn by the flexibility, high standards, and strong sense of community the network provides.



source: WeWork

12 office formation processes

this chapter was prepared together with

NAIREINA

The choice of office location and interior design was relatively simple until a few years ago. The basic deciding factor was the rental rate and the main differentiator was prestige. In other words, to put it simply, size and price were what mattered, and for those companies with greater financial capabilities and for whom image is an important element of both marketing and employer branding, it was also crucial whether the building, its location and the interior design were indicative of their reputation. However, this situation began to change markedly as early as the second decade of the 21st century, and as we entered the third decade and the pandemic that accompanied us at that time, these changes accelerated geometrically²⁸³.

The importance of price has, of course, remained a priority, but the significance has at least halved – not least due to the fact that, due to the gradual hybridisation of work as a result of technological developments, the need for increased space has decreased²⁸⁴. Companies still need quality offices in good locations and good-value buildings, but with even a proportionate budget as a decade ago, today they can afford a better standard because they need far less space.

Quantity has been replaced by quality. On the other hand, what is becoming increasingly important, and this is not changing with the economic climate, is the nature of this space and how it fits with the needs of employees – both those who want to walk to the office and those who only drop in from time to time.

This is because in a dynamically changing work environment, office space plays a key role in shaping efficiency, innovation and employee satisfaction. Choosing the right location and creating a functional office design is becoming not only a strategic decision, but also a tool to support the achievement of business goals and build a competitive advantage. Therefore, over the last few years, it has become a multi-stage process that requires the consideration of many factors – from organisational and financial needs, to cultural and demographic aspects, to sustainability requirements.

analysis process

Co-creation, an innovative process in which different stakeholder groups jointly develop products, services or solutions, is used to better understand the needs and



fot. Adam Grzesik, projekt: Maersk, design: Workplace.pl

specificities of an organisation. A key role in this is played by the active involvement of all participants enabling the exchange of experiences and perspectives²⁸⁵. In the context of office space creation, co-creation involves a close collaboration between a consultancy firm and the organisation for which the office is being created, allowing for a detailed examination of employee habits and preferences, an analysis of the efficiency of current space use and the identification of key challenges. The data obtained enables the development of an office concept that can respond to all user needs.

Each party involved in the process brings key elements necessary for success. The office-seeking organisation contributes information about past experiences and the nature of daily tasks. Employees contribute their insights to identify specific expectations and challenges. Consultants and designers provide expertise, analyse data and implement best practices, recommending solutions tailored to the organisation's specificities. Through co-creation, the concepts developed are likely to respond much better to the real needs of users than if they were developed without their input²⁸⁶.



co-creation can also be carried out through qualitative and quantitative research. Co-creation starts with an interview with a decision-maker who presents strategic goals and key challenges. Selected groups of employees at different levels of the organisation participate in interviews or individual surveys to capture the specifics of their work and expectations of the office. Surveys covering all employees can also be an important part of the process, providing a broad overview of their preferences and experiences

BENEFITS OF CO-CREATION

- ➔ **better adaptation of the designed space to the users' needs**
By involving employees in the design process, it is possible to create an office that meets their real needs and preferences, taking into account the specifics of their work and the organisational goals of the company.
- ➔ **increased innovation and creativity**
The diverse perspectives brought by different stakeholder groups foster the generation of unique, innovative ideas that can significantly enhance the quality of the designed work environment.
- ➔ **increased efficiency**
When multiple parties work together, the chances of improving efficiency by saving resources and time increase. Co-creation also allows a better understanding of how the current space is being used, enabling optimised solutions.
- ➔ **increase commitment and acceptance of change**
Co-creating a space builds a sense of shared responsibility among employees. When they participate in shaping the office, they accept changes more easily and feel more satisfied with their new working environment.



the design thinking method

a structured approach implemented through a series of workshops, often preceded by research and surveys. At the start of the process, an interdisciplinary team with a variety of competences is formed, allowing the problem to be viewed from multiple perspectives and generating innovative ideas. The method is based on five phases that are iterative – meaning that, if necessary, the phases are repeated to refine the solution and meet the expectations of the organisation.

→ empathy – a deep understanding of the user's needs and problems

It involves collecting data on experiences and preferences through workshops, interviews and surveys. In addition, behavioural observation is used, as well as simulated use scenarios – which involve recreating everyday situations that employees encounter in the office to better understand their needs, challenges and use of the space.

→ defining the relevant problem – synthesising the information gathered

Based on the information gathered, challenges and areas for change are identified. Techniques used here include a SWOT analysis, which helps to identify not only the strengths and weaknesses of the organisation, but also the opportunities and threats associated with the planned changes to the office space.

→ idea generation – as many possible solutions as possible

Creating creative solutions in the form of brainstorming. Its aim is to spontaneously generate as many ideas as possible in a short period of time, without evaluating or criticising them during the creation phase. This phase is followed by their verification, analysis and selection of those ideas that best meet the identified needs.

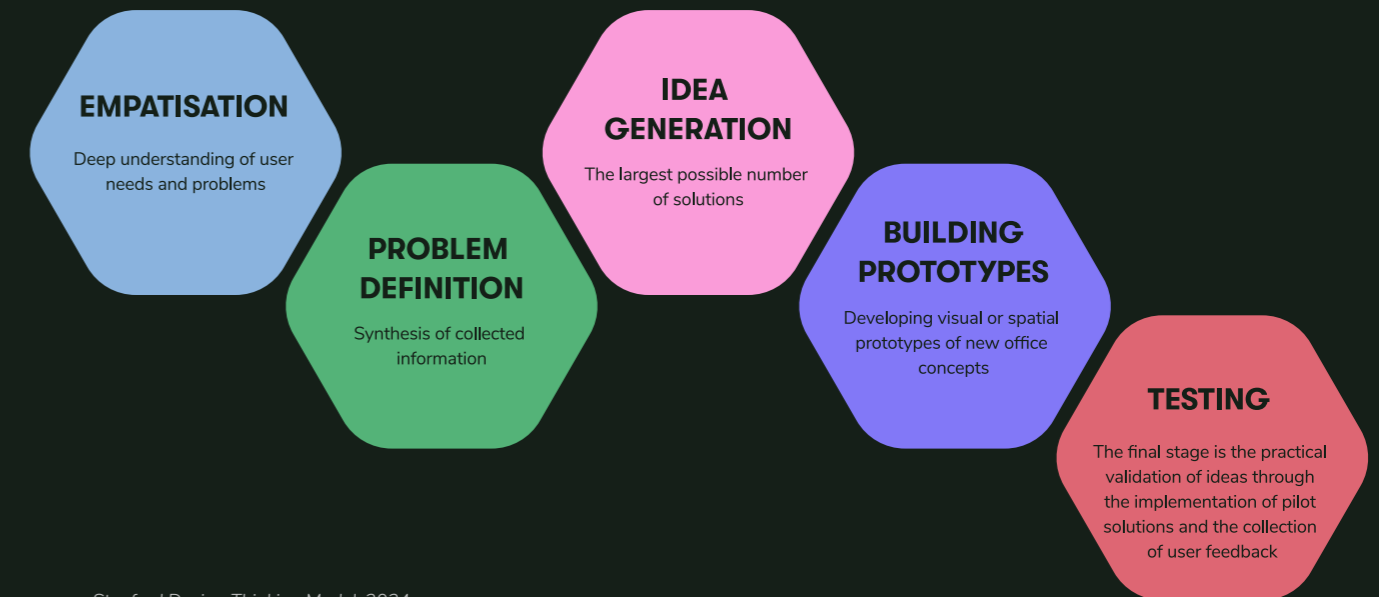
→ building prototypes

Developing visual or spatial prototypes of new office concepts. The most important thing is to be able to visually present the idea to users and quickly gather feedback on the solution. The prototype does not have to be a physical object. It can be, for example, a moodboard or a schematic 3D model.

→ testing

The final stage is to validate ideas in practice by implementing pilot solutions and collecting user feedback. In the digital world, testing is mostly an iterative process with regular returns to the prototyping stage – in the case of creating an office space, empirical testing is relatively limited, so it is extended to the implementation of flexible solutions.

STAGES OF DESIGN THINKING



source: Stanford Design Thinking Model, 2024.



source: unsplash

“

With changes in the labour market, including automation and AI, it is possible to build an office that meets the needs of constant change for years to come. A well-thought-out workplace remains the hallmark of self-respecting companies. As well as a dream and pride, it is a deep human need to work in an inspiring and ergonomically designed environment. In turn, the key to success in the office leasing process is the ability to respond to changes in customer demand and supply turbulence. Therefore, creating the right demand base at the beginning of the process is key.

NAI REINA's fiduciary role eliminates a common conflict of interest in the industry, focusing entirely on the needs of clients. NAI REINA's advisors sometimes have to risk long-standing relationships in order to make decisions in line with tenants' expectations. Today, outstanding organisational skills combined with partner relationships count, and NAI REINA's role and industry coordination will be crucial in the coming years.



Robert Z. Karniewski

CEO & Founder
NAI Reina

the selection process

Once we know what our employees' needs are, we need to choose the right place to fulfil them. The factors that determine the right office location are not only the macro environment – i.e. where in the city the office is located – but also the micro environment, i.e. the immediate neighbourhood and what can be found there. The prestige of the location and the communication possibilities are therefore key, as well as the functions and services that can be experienced both within the office building and in the neighbourhood.

Therefore, choosing the right location requires a detailed analysis of various aspects, such as costs, availability of transport infrastructure, potential of the local labour market, as well as development plans for the area. A well-connected office is usually located at major transport hubs, surrounded by a large number of tram and bus stops or located close to the metro. An increasingly important factor is the proximity of cycle paths, which are appreciated especially during the spring and summer seasons.

In addition, the presence of a gym (both in the building itself and in the immediate vicinity) is important, as is the available service and retail offer, particularly the catering facilities. The possibility of running a certain catalogue of errands, such as drugstore and pharmacy shopping, a hairdresser, beautician or even a nursery in the building makes us more willing to choose to work from an office and, above all, an employer who offers a workplace that takes into account our non-work needs. This makes us value the quality of our lunch all the more – and the multiplicity of choices even more.

Buildings in which there is scope for growth by increasing the leased space if necessary are also more attractive. An appreciated solution is the presence of coworking space in the building, which allows even temporary growth of the company, without the risk of a long-term lease of more space.

KEY DECISION-MAKING ASPECTS OF OFFICE SELECTION



rental process

Selecting a space, comparing potential offers and negotiating suitable terms is a complex process that should be the responsibility of a dedicated person. For smaller organisations that need 'a few desks', these issues can be dealt with in-house by ultimately opting for flexible office space rental. This is a good way to get a great location and an attractive range of facilities relatively cheaply. However, if our needs and organisation are greater and thus we are looking for a permanent space for our office, we will need professional support, which is best taken care of by a specialised consultancy firm.

Such tenant representation includes the comprehensive management of the entire office leasing process. From the identification of the market offer and presentation of offers tailored to the company's needs, through the negotiation of commercial, technical and legal terms of the lease, to the final signing of the agreement. Transactional consultancy, which uses modern technologies, proven analyses and up-to-date market data, should be the basis for action. The aim, on the other hand, is

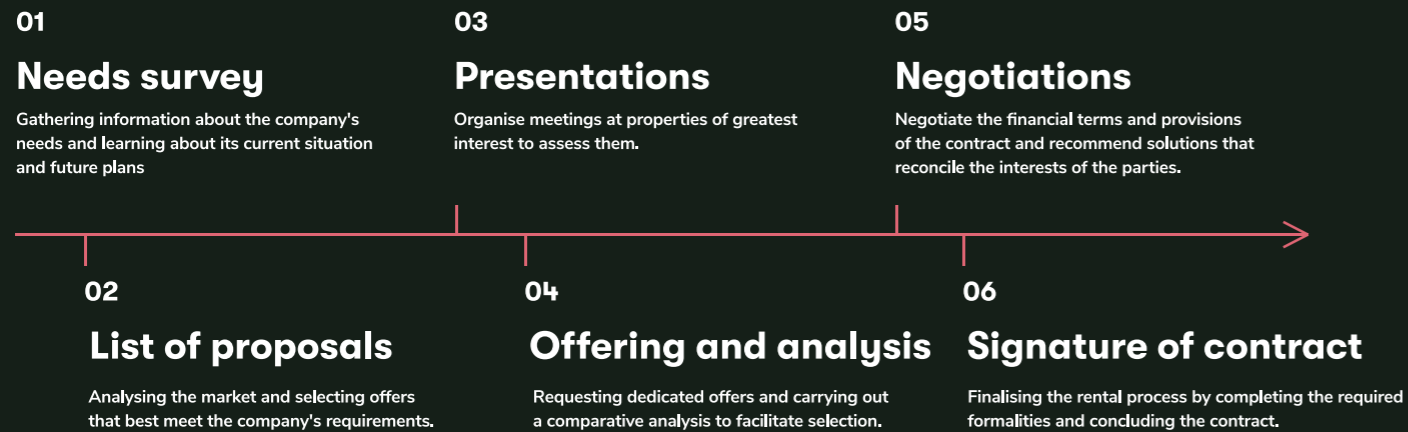
to reduce costs and manage risk, as well as to develop a lease strategy tailored to the client's needs.

preparation process

With an office already selected, we are one step ahead of the design – this is where the optional but extremely valuable preparation process comes in, which consists of several stages. If we have not had an office before, its full implementation will be difficult, but even then it is worth giving it our attention. This is because the purpose of preparation is to draw up a working environment strategy that enables us to tailor the space to the needs of the organisation, which we have already examined in the analysis processes, and to eliminate potential problems in the later phases of the project.

The first step in the preparation process is an audit of the space previously occupied. It enables a thorough analysis of the current use of the office and the identification of areas for improvement. User behaviour mapping, analysis of interaction patterns and direct observation of employees are used

STAGES OF THE RENTAL PROCESS



to better understand how employees move around the office space, how they use different areas and which areas need to be more efficient. These are complemented by a workflow assessment, or *workflow*. This involves looking at how information and documents flow between employees.

The second stage of the process is the cost consultancy, which provides an understanding of the typical expenses involved in finishing an office. The cost of furnishings, building work, professional services or audio-visual installations can significantly affect the project budget. Before starting the project, it is therefore important to create a detailed cost estimate that takes into account all the expenses involved. This document makes it possible to make adjustments to the assumptions that will make the vision of our office more realistic in relation to the financial possibilities of the organisation.

On the basis of the data and analysis gathered, the consultants develop an appropriate strategy and draw conclusions that allow us to implement the best solutions tailored to the individual needs of the organisation. The

final outcome of these two stages that make up the preparation process allows us to create a detailed project brief that takes into account both the needs of the organisation and its budget capabilities.

design process

Once we have carried out the complete processes of analysis, decision-making and preparation, we have a set of data and guidelines to create a workplace that is tailored to the needs of our organisation and ready for the future. The creation of an office space design is the moment when all previous analyses and research are transformed into concrete spatial and material solutions. At the beginning of this process, designers often use visual forms of presentation to help illustrate the overall direction of the project and how it addresses each of the needs in the guidelines. A properly executed design process requires several steps that lead to a well-fitted space.

functional and utility programme

The first stage is to develop a programme based on the space plan. At this stage,

the locations of the communal and individual work spaces are indicated, as well as their number and the relationship between them. The size of the common space and the functional characteristics of the various minor office functions are also determined. This stage should be based on effectively conducted analyses, so if for some reason this process has been previously omitted, a well-prepared design studio will try to fill in the gap.

moodboards

In the second step, aesthetic decisions need to be made, which moodboards help with. They are a collection of inspirations, samples of selected materials and photographs, reflecting the desired atmosphere and ambience of the office. Moodboards help both designers and the client to better understand what elements will dominate the space, and allow the style and character of the office to be pre-defined.

design concept

The next stage is the development of the conceptual design, which is also presented in the form of detailed 3D models and visualisations. These are an important communication tool, making it easier for clients to envisage the end result and make informed decisions about the implementation of the project. They can also act as spatial prototypes, allowing concepts to be tested and evaluated in a virtual environment, especially where physical testing of solutions is difficult or impossible before implementation.

detailed design

Once the concept has been approved, detailed designs are drawn up, which form the basis for the implementation of the project. They include technical drawings, material specifications, guidelines for electrical, plumbing and HVAC installations, as well as IT and audiovisual systems. They also take into account ergonomics, acoustics and lighting, ensuring that the space

complies with functional and aesthetic requirements. Correctly prepared, they eliminate the risk of errors and make it possible to control costs and work schedules.

construction management

The final stage is the implementation of the project, including construction, renovation or interior finishing. Construction management, which is a key aspect of the implementation process, involves the ongoing coordination of execution activities, control of the quality of the work and compliance with the design. This stage can be carried out by a separate contracting company, although it requires the presence of designers in the scope of author's supervision, which ensures that the project remains consistent with the original aesthetic and functional assumptions. Such supervision makes it possible to react quickly to any changes or unforeseen situations during implementation.



source: IKEA

advice for the third decade of the 21st century

In recent years, the adviser function has evolved in response to the changing demands of the commercial property market. Today, advisers combine comprehensive subject matter expertise with the ability to manage both internal and external communications. The work includes knowledge of financial, operational and strategic issues, as well as areas such as working environment research, architecture and change management. Advisors lead processes that require the coordination of dozens of people, especially in the initial stages when several properties with different leasing segments and technical aspects of the lease are being analysed.

The adviser's work is based on precise schedules and constant monitoring of time. The efficiency of this activity is reflected, among other things, in

the technical appendices to the lease agreements, where the quality of information from numerous sources is verified. Continuous upgrading of competences and the acquisition of new knowledge is the basis for successful practice of this profession.

high-profile targets

The fundamental task of the adviser is to identify the subject of the lease by matching the office space and lease provisions to the actual needs of the organisation. This process requires an in-depth understanding of the client's structure, development plans and expectations of the new space. A key element is the selection of suitable industry partners, with both technical competence and psychological aspects taken into account. At the outset of the



collaboration, the operational group is defined, both on the advisor's side and on the client's side, which facilitates further stages of the process.

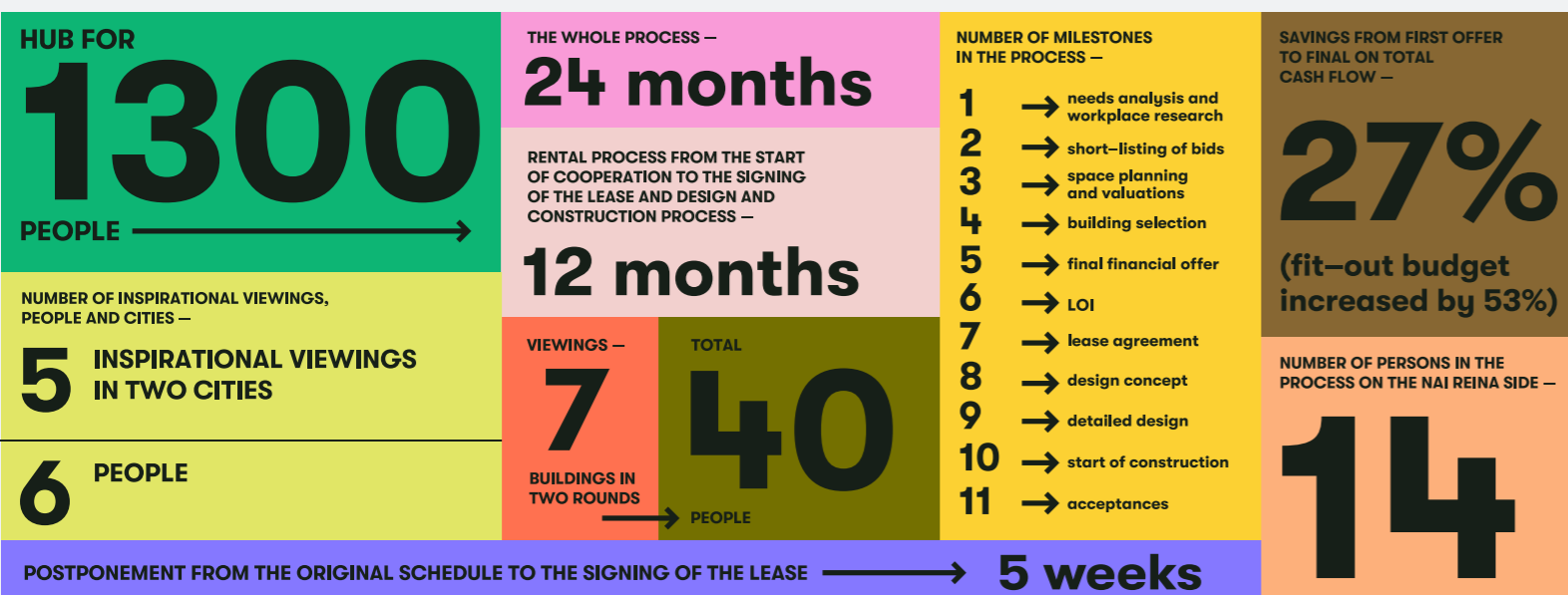
The appointment of management and decision-making staff and the selection of a team consisting of architects, work environment specialists or project managers is fundamental to the achievement of objectives. Flexibility to manage changing project assumptions and the ability to adapt strategies to current market conditions are important elements of a consultant's work. In dynamic market conditions, such as in the centre of Warsaw, when the availability of prime space is limited, accelerating decision-making processes becomes an additional challenge. In this context, the ability to present the value of a lease and to understand the market context play a key role in finalising a transaction, emphasises Robert Karniewski, CEO & Founder NAI Reina.

interdisciplinary and efficient

The role of a commercial property advisor goes beyond interdisciplinary expertise – it also includes managing the relationship between the parties and building trust. Negotiations are not just about agreeing numbers or contractual terms, but require an accurate assessment of the participants' needs and a quick response to the changing dynamics of the discussions. The counsellor also often acts as a mediator, seeking cooperative solutions in situations of sudden change. Interpersonal competence and a high level of empathy enable effective negotiation, which translates into successful transactions.



FIGURES IN THE SAMPLE RENTAL PROCESS



partners of the report

workplace

Workplace is a multi-award-winning research and design studio specializing in creating work environments tailored to the real, individual needs of organizations. Founded in 2012, it brings together expertise in research, strategy, architecture, and technology to design spaces that are not only beautiful but also intelligent. The studio employs 20 people and primarily works on large-scale projects for well-known brands—yet never forgets that every project begins with a single good conversation.



IKEA's vision is to create a better everyday life for the many people. We offer well-designed, functional home furnishings that combine quality with affordability. Our operations are aligned with the principles of sustainable development and guided by our long-term sustainability strategy. Currently, there are 11 IKEA stores in Poland, 12 Planning and Order Points, and over 50 Order Collection Points (including Mobile Collection Points), all managed by IKEA Retail. The company also owns 4 shopping centres operated by Ingka Centres Poland and a Distribution Centre located in Jarosty near Piotrków Trybunalski, which supplies IKEA stores across Central and Eastern Europe. The Ingka Group also owns 7 wind farms in Poland, generating more renewable energy than the total annual energy consumption of IKEA's operations on the Polish market.

foto: Nastuh Aboutelebi, unsplash



SKANSKA

Skanska is an innovative developer of sustainable, timeless buildings in the office and living sectors. Present in the Polish market since 1997, the company creates open, vibrant spaces where people feel good at work. Skanska's office projects are certified under the LEED and WELL Core & Shell systems, as well as the WELL Health-Safety Rating. In addition, new developments in Poland hold the "Building without Barriers" certificate, confirming their accessibility for people with diverse needs—including individuals with disabilities and parents with young children. The company operates in seven major markets across Poland: Warsaw, Wrocław, Poznań, Łódź, Kraków, Katowice, and the Tricity area.

MUTE.

Mute specializes in designing and manufacturing innovative solutions for creating comfortable office spaces. Its products—such as acoustic pods, panels, and room-in-room systems—deliver both comfort and flexibility to the workspaces of companies like Netflix, LinkedIn, Meta, and Microsoft. Mute's adaptable room-building system, Mute Modular, was recognized as one of the Top 10 Most Innovative Office Products in the "Innovation by Design" competition organized by the U.S. magazine Fast Company.

notes

- ¹ Magazif, Evolution of office spaces part I: origins, <https://cutt.ly/sejJGb1> (accessed 14.11.2024).
- ² New Standards, Taylorism, <https://cutt.ly/jeJlsuzs> (accessed 14.11.2024).
- ³ Medium, Workplace Evolution: A Retrospective on Office Design from the Industrial Revolution to the Knowledge Economy, <https://cutt.ly/yeJk1z0s> (accessed 14.11.2024).
- ⁴ Medium, Workplace Evolution: A Retrospective on Office Design from the Industrial Revolution to the Knowledge Economy, <https://cutt.ly/yeJk1z0s> (accessed 14.11.2024).
- ⁵ Medium, Workplace Evolution: A Retrospective on Office Design from the Industrial Revolution to the Knowledge Economy, <https://cutt.ly/yeJk1z0s> (accessed 14.11.2024).
- ⁶ Mikomax Smart Office, Open space – how has it evolved over the years? A history of open office space, <https://cutt.ly/SeJzAf0y> (accessed 14.11.2024).
- ⁷ EIPA, How to increase employee productivity and performance with Workplace Innovation, <https://cutt.ly/JeJTvS8j> (accessed 15.11.2024).
- ⁸ Robin, The Office Space Report 2023, 2023.
- ⁹ Robin, The Office Space Report 2025, 2025
- ¹⁰ Colliers, Hybrid and beyond, 2024.
- ¹¹ Colliers, Hybrid and beyond, 2024.
- ¹² Deloitte, 2024 commercial real estate outlook, 2024.
- ¹³ Robin, The Office Space Report 2023, 2023.
- ¹⁴ Office Principles, What is flexible working: Adaptable office design, <https://tiny.pl/kkc46h-9> (accessed 18.12.2024).
- ¹⁵ Optima Systems, Adaptable Workspace, <https://tiny.pl/6rsgycq7> (accessed 18.12.2024).
- ¹⁶ Colliers, Flexpansion, 2024.
- ¹⁷ CBRE, What's Next for Flex: Rising Demand Supports Viability of Flexible Office Industry, <https://cutt.ly/2rop6TE8> (accessed 19.03.2025).
- ¹⁸ CBRE, Companies choose coworking spaces to optimise hybrid working, <https://cutt.ly/sroicGXc> (accessed 19.03.2025).
- ¹⁹ Rethinking The Future, Designing for Flexibility: Adaptable Office Spaces and their Impact on Business Agility, <https://tiny.pl/bccqm3ff7> (accessed 15.11.2024).
- ²⁰ Strong Project Redefining Workspaces: The Comprehensive Guide to Hybrid Workplace Design, <https://tiny.pl/25wf4bnz> (accessed 15.11.2024).
- ²¹ Mikomax smart office, How to set up desks in the office so that everyone feels comfortable and works efficiently, <https://tiny.pl/yrb-sbv2> (accessed 19.12.2024).
- ²² Getofficely,, Designing Flexible Office Spaces: The Benefits of Flexible Workspace Design, <https://tiny.pl/zmrnrvj> (accessed 18.12.2024).
- ²³ Green Standards Who's Who in the Circular Workplace, 2024.
- ²⁴ Getofficely,, Designing Flexible Office Spaces: The Benefits of Flexible Workspace Design, <https://tiny.pl/zmrnrvj> (accessed 18.12.2024).
- ²⁵ Northspyre, Everything You Need to Know About Adaptable Design For Offices, <https://tiny.pl/w8q69zk9> (accessed 18.12.2024).
- ²⁶ Magazif, Together and apart, low and high. Flexible desk layouts, <https://tiny.pl/8n4bn6gd> (accessed 19.12.2024).
- ²⁷ Office Work Design, The Latest Trends in Office Partition Design, <https://tiny.pl/7rhy4vjd> (accessed 20.12.2024).
- ²⁸ el12.com, Socket in the floor – how to install it?, <https://tiny.pl/k3w3nsc0> (accessed 19.12.2024).
- ²⁹ BSC Interiors, The Importance and Benefits of Suspended Ceiling Tiles, <https://tiny.pl/rkfgbj-8> (accessed 23.12.2024).
- ³⁰ Redditch, The Benefits of Incorporating Suspended Ceilings into Your Office Design, <https://tiny.pl/2xn5-jrz> accessed 19.12.2024).
- ³¹ Wework, The Dynamic Office Why flexible work models require dynamic office designs, 2024.
- ³² Green Standards Who's Who in the Circular Workplace, 2024.
- ³³ R.D. Astuti, B. Suhardi, P. W. Laksono, N. Susanto, Investigating the Relationship between Noise Exposure and Human Cognitive Performance: Attention, Stress, and Mental Workload Based on EEG Signals Using Power Spectrum Density. Appl. Sci. 2024
- ³⁴ Alpha, Why Office Acoustics Matter: Designing a Space for Focus and Collaboration, <https://cutt.ly/veBWZleH> (accessed 16.12.2024).
- ³⁵ J. S. Bradley, The acoustical design of conventional open plan offices. Canadian Acoustics, 2003.
- ³⁶ A. Kaarlela-Tuomaala, R.Helenius, E. Keskinen, V. Hongisto, Effects of acoustic environment on work in private office rooms and open-plan offices – longitudinal study during relocation. Ergonomics, 2009.
- ³⁷ doz.co.uk White noise – what is it and why does it calm children? <https://tiny.pl/y0hb2vbn> (accessed 18.11.2024).
- ³⁸ M. Kwon, H. Remøy, A. Van Den Dobbelsteen. User-focused office refurbishment: a review into user satisfaction and the potential for improvement, 2019.
- ³⁹ Getofficely,, Designing Flexible Office Spaces: The Benefits of Flexible Workspace Design, <https://tiny.pl/zmrnrvj> (accessed 18.12.2024).
- ⁴⁰ Forbes, Creating Workplace Flexibility For Today's Dynamic Professionals, <https://tiny.pl/g2v3pwt1> (accessed 13.12.2024).
- ⁴¹ Mikomax smart office, Flexible office tailored to employees' needs, <https://tiny.pl/shvrx5mc> (accessed 15.11.2024).
- ⁴² Mikomax smart office Noise in the office environment – how to tackle it, <https://tiny.pl/12n6sqnx> (accessed 15.11.2024).
- ⁴³ Mikomax smart office Noise in the office environment – how to tackle it, <https://tiny.pl/12n6sqnx> (accessed 15.11.2024).
- ⁴⁴ Cubi, Acoustics, <https://tiny.pl/qbfm3b2p> (accessed 15.11.2024).
- ⁴⁵ Upscale Interiors AG, Acoustic Solutions in the Workplace: A Comprehensive Guide to Cultivate Productivity, <https://tiny.pl/8pm45q4h> (accessed 30.12.2024).
- ⁴⁶ What:spot, How does the office environment affect creativity?, <https://tiny.pl/5-k67gr7> (accessed 18.11.2024).
- ⁴⁷ Office Principles, Office acoustics: Understanding acoustic design in the workplace, <https://tiny.pl/yn2j34mt> (accessed 30.12.2024).
- ⁴⁸ CCOHS, Noise <https://tiny.pl/3qhfkkp0> (accessed 10.12.2024).
- ⁴⁹ Deloitte, 2024 Gen Z and Millennial Survey: Living and working with purpose in a transforming world, 2024.
- ⁵⁰ Grant Thornton, Grant Thornton International Business Report (IBR), 2024.
- ⁵¹ IBM, Global Consumer Study: Sustainability Actions Can Speak Louder Than Intent <https://tiny.pl/ht647vcs> (accessed 04.02.2025)
- ⁵² Deloitte, ConsumerSignals survey, September 2023.
- ⁵³ Deloitte, 2024 Gen Z and Millennial Survey: Living and working with purpose in a transforming world, 2024.
- ⁵⁴ Great Place To Work, Workplace ESG: How Environmental, Social, and Governance Factors Impact Employee Experience https://tiny.pl/n_qk2v3h (accessed 03.02.2025).
- ⁵⁵ Nuvalu Polska, SW Research, EKObarometer – Green in the Office, 2023.
- ⁵⁶ Green Standards State of the Circular Workplace, 2023.
- ⁵⁷ Green Standard, Who's Who in the Circular Workplace, 2024.
- ⁵⁸ Green Standard, Who's Who in the Circular Workplace, 2024.
- ⁵⁹ Green Standard, Who's Who in the Circular Workplace, 2024.
- ⁶⁰ Green Standards State of the Circular Workplace, 2023.
- ⁶¹ Better Building Partnership, Construction Waste, <https://tiny.pl/5xzvwpk9> (accessed 03.02.2025).
- ⁶² Green Standards Who's Who in the Circular Workplace, 2024.

⁶³ CoStar How Office Furniture Recyclers Divert a Growing Pile From Landfills <https://tiny.pl/4-0t2bty> (accessed 16.11.2024)

⁶⁴ MarkWide Research, Recycled Office Furniture market Analysis– Industry Size, Share, Research Report, Insights, Covid–19 Impact, Statistics, Trends, Growth and Forecast 2025–2034, 2025.

⁶⁵ LCA.no, Resirculation in office furniture – a growing market, <https://tiny.pl/rg44xc9v> (accessed 03.02.2025).

⁶⁶ M.Krystofik, A. Luccitti, K. Parnell, M. Thurston, Adaptive remanufacturing for multiple lifecycles: A case study in office furniture. Resources, Conservation and Recycling, 135, 14–23, 2018.

⁶⁷ M.Krystofik, A. Luccitti, K. Parnell, M. Thurston, Adaptive remanufacturing for multiple lifecycles: A case study in office furniture. Resources, Conservation and Recycling, 135, 14–23, 2018.

⁶⁸ T. Bosch, K. Verploegen, S.N. Grösser, G. van Rhijn, Sustainable furniture that grows with end–users (pp. 303–326). Springer International Publishing, 2017.

⁶⁹ Green Standards Who's Who in the Circular Workplace, 2024.

⁷⁰ WiredScore, Smart Buildings: A Brief History, <https://tiny.pl/yt2c9r62> (accessed 9.11.2024).

⁷¹ BMS, BMS – Building Management Systems, <https://tiny.pl/9h7k33tk> (accessed 10.11.2024).

⁷² social.estate, Building Management Systems, <https://tiny.pl/ch2w4n-j> (accessed 10.11.2024).

⁷³ techtarget, building management system, <https://tiny.pl/8bmcprwh> (accessed 11.12.2024).

⁷⁴ SPIE, Building management systems, https://tiny.pl/11d_qhm0 (accessed 10.11.2024).

⁷⁵ gbi, Property management – new technologies and the future of the industry, https://tiny.pl/zn08_rmr (accessed 11.12.2024).

⁷⁶ codibly, What is an Energy Management System?, <https://tiny.pl/tgyndffhm> (accessed 11.12.2024).

⁷⁷ Know Your Building, How a Smart Water Monitoring System Can Help Conserve Resources in Buildings, <https://tiny.pl/bympgq8h> (accessed 18.12.2024).

⁷⁸ M.WENT, Intelligent control of HVAC systems: How to increase comfort and savings, <https://tiny.pl/497mx5k4> (accessed 10.11.2024).

⁷⁹ Bogdan Szafranski, Modern HVAC control systems, <https://tiny.pl/8vmvnp1r> (accessed 10.11.2024).

⁸⁰ Limbe, What is CAFM software?, <https://tiny.pl/x5fm7tjv> (accessed 11.12.2024).

⁸¹ Limbe, What is a Computerised Maintenance Management System (CMMS)?, <https://tiny.pl/jd9q-z4c> (accessed 11.12.2024).

⁸² SFG20, CAFM vs IWMS: Which Is Right For Me? Your Ultimate Guide, <https://tiny.pl/wpmf0zb7> (accessed 11.12.2024).

⁸³ IBM, What is space management?, 21.12.2023, https://tiny.pl/n_t2tkgt (accessed 10.11.2024).

⁸⁴ arrow.com, Top 8 sensors used in smart office IoT applications, <https://tiny.pl/g755ftsh> (accessed 10.12.2024).

⁸⁵ e–shelf–labels, Space management, <https://tiny.pl/xrzm6w-g> (accessed 10.11.2024).

⁸⁶ IBM, What is space management?, 21.12.2023, https://tiny.pl/n_t2tkgt (accessed 10.11.2024).

⁸⁷ AutoID, What is Beacon technology? What opportunities does it offer?, 24.11.2022, <https://tiny.pl/fj2c34yb> (accessed 10.11.2024).

⁸⁸ JLL, Is hidden technology the new luxury?, <https://tiny.pl/tbs34m55> (accessed 14.12.2024).

⁸⁹ JLL, How AI is boosting efforts to cut buildings' energy use, <https://tiny.pl/vvs8hcw4> (accessed 14.12.2024).

⁹⁰ Webex by Cisco, Work has changed. Why hasn't the office, 2024.

⁹¹ Kingston Technology, 2024: predictions from technology experts, <https://tiny.pl/ksxtf39t> (accessed 30.11.2024).

⁹² Focus on Business, Generation Z and Millenials feel most excluded in hybrid meetings,

<https://tiny.pl/sb7j39bj>, (accessed 5.02.2025).

⁹³ zoom, What is a VoIP phone?, <https://tiny.pl/4541xfrc> (accessed 10.12.2024).

⁹⁴ BCS Consultant, 8 best video conferencing hardware tools to use in meetings, <https://tiny.pl/Onsq-3cg> (accessed 18.12.2024).

⁹⁵ bestmicro, Server Administration: Effective IT infrastructure management, https://tiny.pl/z3_8gtym (accessed 14.11.2024).

⁹⁶ Moko Lora, LoRa versus Zigbee: Which is the better technology for IoT connectivity, <https://tiny.pl/kykxytbw> (accessed 18.12.2024).

⁹⁷ Colliers, SmartScore will confirm the level of technological sophistication of real estate, <https://tiny.pl/y1j2qgmt> (accessed 8.11.2024).

⁹⁸ WiredScore, WiredScore certification: office, <https://tiny.pl/9606s6zs> (accessed 10.12.2024).

⁹⁹ Adam Roguski, Certification raises the value of buildings, 08.07.2024, <https://tiny.pl/6rtv8yr2> (accessed 08.11.2024).

¹⁰⁰ Betsy Conroy, Smart building certifications move with technology and the times <https://tiny.pl/nz3hd9z6> (accessed 9.11.2024).

¹⁰¹ Smart Building Collective, SBC Framework. How it works, <https://tiny.pl/f7r9vb43> (accessed 9.11.2024).

¹⁰² SKANSKA, workplace Neuro–inclusive in the office How to design neuro–inclusive workspaces, 2023.

¹⁰³ EY, Neurodiversity in the workplace, 2024.

¹⁰⁴ Lawrence K. Fung. Neurodiversity: From phenomenology to neurobiology and enhancing technologies. American Psychiatric Pub, 2021.

¹⁰⁵ trainbrain, Neurodiversity at work: How to create inclusive organisations <https://tiny.pl/qdtw4f-k> (accessed 19.11.2024).

¹⁰⁶ DCEG Staff. Neurodiversity–NCL. National Cancer Institute, 2022.

¹⁰⁷ trainbrain, Neurodiversity at work: How to create inclusive organisations <https://tiny.pl/qdtw4f-k> (accessed 19.11.2024).

¹⁰⁸ EY, Neurodiversity in the workplace, 2024.

¹⁰⁹ SKANSKA, workplace Neuro–inclusive in the office How to design neuro–inclusive workspaces, 2023.

¹¹⁰ Ayano, Getinet, et al. Prevalence of attention deficit hyperactivity disorder in adults: Umbrella review of evidence generated across the globe. Psychiatry Research 328, 2023.

¹¹¹ ADHDadvisor.org, 24 ADHD Statistics for 2024 <https://tiny.pl/Od960hpr> (accessed 30.11.2024).

¹¹² SKANSKA, workplace Neuro–inclusive in the office How to design neuro–inclusive workspaces, 2023.

¹¹³ NHS, Dyspraxia (developmental co–ordination disorder) in adults, <https://tiny.pl/nnf4b5mq> (accessed 13.03.2025).

¹¹⁴ mp.co.uk, Tourette syndrome – symptoms and treatment. What is Tourette Syndrome? <https://tiny.pl/87fv5mvn> (accessed 30.11.2024).

¹¹⁵ R. LeFevre–Levy, A. Melson–Silimon, R. Harmata, AL. Hulett, NT. Carter, Neurodiversity in the workplace: Considering neuroatypicality as a form of diversity, Industrial and Organizational Psychology, 2023.

¹¹⁶ HireVue, Global Trends Report, 2023.

¹¹⁷ A. McDowall, N. Doyle, M. Kiseleva, Neurodiversity at Work 2023, Birkbeck University of London, <https://tiny.pl/7s8ykrq1> (accessed 30.11.2024).

¹¹⁸ City & Guilds, Championing and supporting neurodiversity in the workplace, 2024.

¹¹⁹ SKANSKA, workplace Neuro–inclusive in the office How to design neuro–inclusive workspaces, 2023.

¹²⁰ A. Krzeminska, RD. Austin, SM. Bruyère, D. Hedley, The advantages and challenges of neurodiversity employment in organisations. Journal of Management & Organization, 2019.

¹²¹ Robert D. Austin and Gary P. Pisano, Neurodiversity as a competitive advantage: Why you should embrace it in your workforce, Harvard Business Review, 2017; Angela Nelson, Neurodiversity in the workplace , eParent.com, 2018.

¹²² M. Wiater, Challenges of employing neurodiverse people in Poland. HRM [ZZL], 154(5),

80–92, 2023.

¹²³ A. Krzeminska, RD. Austin, SM. Bruyère, D. Hedley, *The advantages and challenges of neurodiversity employment in organisations*. *Journal of Management & Organization*, 2019.

¹²⁴ M. T. Tomczak, *How can the work environment be redesigned to enhance the well-being of individuals with autism?* *Employee Relations: The International Journal*, 44(6), 1467–1484, 2022.

¹²⁵ SKANSKA, *workplace Neuro-inclusive in the office How to design neuro-inclusive workspaces*, 2023.

¹²⁶ M. Wiater, *Challenges of employing neurodiverse people in Poland*. *HRM [ZZL]*, 154(5), 80–92, 2023.

¹²⁷ E. Rollnik-Sadowska, V. Grabińska, *Managing Neurodiversity in Workplaces: A Review and Future Research Agenda for Sustainable Human Resource Management*. *Sustainability*, 2024.

¹²⁸ ibe.edu.co.uk, *Why employ people on the autism spectrum and create a neuro-friendly work environment*, <https://tiny.pl/rt8jrgkc> (accessed 30.11.2024).

¹²⁹ A. Krzeminska, RD. Austin, SM. Bruyère, D. Hedley, *The advantages and challenges of neurodiversity employment in organisations*. *Journal of Management & Organization*, 2019.

¹³⁰ SKANSKA, *workplace Neurodiversity in the office How to design neuroinclusive workspaces*, 2023.

¹³¹ M. Wiater, *Challenges of employing neurodiverse people in Poland*. *HRM [ZZL]*, 154(5), 80–92, 2023.

¹³² LeFevre-Levy R, Melson-Silimon A, Harmata R, Hulett AL, Carter NT. *Neurodiversity in the workplace: Considering neuroatypicality as a form of diversity*. *Industrial and Organizational Psychology*. 2023.

¹³³ A. Kawalec, M. Janas-Kozik, *Neurodiversity – definition, concept development* <https://tiny.pl/wm04vmrf> accessed 30.11.2024).

¹³⁴ EY, *Neurodiversity in the workplace*, 2024.

¹³⁵ Atkins Realis, *Neuroinclusive Office Design, 2024*, <https://tiny.pl/dy8czyc3> (accessed 30.10.2024).

¹³⁶ EY, *Neurodiversity in the workplace*, 2024.

¹³⁷ EY, *Neurodiversity in the workplace*, 2024.

¹³⁸ M. T. Tomczak, *How can the work environment be redesigned to enhance the well-being of individuals with autism?* *Employee Relations: The International Journal*, 44(6), 1467–1484, 2022.

¹³⁹ M. Wiater, *Challenges of employing neurodiverse people in Poland*. *HRM [ZZL]*, 154(5), 80–92, 2023.

¹⁴⁰ EY, *Neurodiversity in the workplace*, 2024.

¹⁴¹ A. Krzeminska, RD. Austin, SM. Bruyère, D. Hedley, *The advantages and challenges of neurodiversity employment in organisations*. *Journal of Management & Organization*, 2019.

¹⁴² T. Stenn, A. R. Lalor, Jan Coplan, D. A. Osterholt, *Managing Neurodiversity Inclusion in Today's Entrepreneurial-Styled Workplace* 2023.

¹⁴³ M. Wiater, *Challenges of employing neurodiverse people in Poland*. *HRM [ZZL]*, 154(5), 80–92, 2023.

¹⁴⁴ M. Wiater, *Challenges of employing neurodiverse people in Poland*. *HRM [ZZL]*, 154(5), 80–92, 2023.

¹⁴⁵ A. Krzeminska, RD. Austin, SM. Bruyère, D. Hedley, *The advantages and challenges of neurodiversity employment in organisations*. *Journal of Management & Organization*, 2019.

¹⁴⁶ T. Stenn, A. R. Lalor, Jan Coplan, D. A. Osterholt, *Managing Neurodiversity Inclusion in Today's Entrepreneurial-Styled Workplace*, 2023.

¹⁴⁷ K.Domagała-Szymonek, *Autism, ADHD, Tourette. How to work with neurodiverse people*, <https://tiny.pl/w1586> (accessed 25.11.2024).

¹⁴⁸ A. Krzeminska, RD. Austin, SM. Bruyère, D. Hedley, *The advantages and challenges of neurodiversity employment in organisations*. *Journal of Management & Organization*, 2019.

¹⁴⁹ A. Krzeminska, RD. Austin, SM. Bruyère, D. Hedley, *The advantages and challenges of neurodiversity employment in organisations*. *Journal of Management & Organization*, 2019.

¹⁵⁰ SKANSKA, *workplace, Neuro-inclusive in the office How to design neuro-inclusive*

workspaces, 2023.

¹⁵¹ hrmagazine.co.uk, *People with ADHD mask condition at work*, <https://tiny.pl/6-2fgn9y> (accessed 12.12.2024).

¹⁵² EY, *Organising work during a pandemic. Challenges for HR in 2021*, 2021.

¹⁵³ holtbyturner.co.uk *Deep Work In Open Offices?* <https://tiny.pl/56qntttt> (accessed 16.11.2024)

¹⁵⁴ Ipsos/Workspace Futures Team. *The Privacy Crisis*. https://tiny.pl/hhjv_yx9

¹⁵⁵ Ipsos/Workspace Futures Team. *The Privacy Crisis*. https://tiny.pl/hhjv_yx9

¹⁵⁶ G. Mark, D. Gudith, U. Klocke, *The Cost of Interrupted Work: More Speed and Stress*, 2008.

¹⁵⁷ O'Conaill Brid & David Frohlich. *Timespace in the workplace: Dealing with interruptions*. Conference companion on Human factors in computing systems. 1995.

¹⁵⁸ G.Sawhney, C. Jimenez-Gomez, P. Cook, K. Albert, *Isolated and Stressed? Examining the Effects of Management Communication in Alleviating Mental Health Symptoms during COVID-19*, 2022.

¹⁵⁹ Deloitte, Hays Poland, *The new face of normality. A candidate's perspective*, 2020.

¹⁶⁰ Psychiatrist Plus, *'When I don't want to... go to the office' –hybrid working model*, <https://tiny.pl/yp075r-q> (accessed 4.04.2025).

¹⁶¹ Gensler, *U.S Workplace Survey*, 2022.

¹⁶² workjoy.co *4 Strategies from the Deep Work Book to Achieve Hard-to-Replicate Results*, <https://tiny.pl/8xbycxt4> (accessed 16.11.2024)

¹⁶³ insightful, *Lost Focus: The Cost of Distractions on Productivity in the Modern Workplace*, <https://tiny.pl/z4s0jb8y> (accessed 10.12.2024).

¹⁶⁴ Workamajig, *Top distractions at work killing productivity in 2023: Statistics*, https://tiny.pl/wsys_p32 (accessed 10.12.2024).

¹⁶⁵ verywell mind, *How to Achieve a State of Flow*, <https://cutt.ly/QeCLyTzT> (accessed 10.12.2024).

¹⁶⁶ reclaim.ai *Deep Work: Ultimate Guide to Time Focus in 2024* <https://tiny.pl/w82vjqj> (accessed 16.11.2024)

¹⁶⁷ thisisyourbrain.com, *Our Incredible Shrinking Attention Span, with Dr. Gloria Mark*, <https://tiny.pl/jb0my7d2> (accessed 10.12.2024).

¹⁶⁸ American Psychological Association, *Multitasking: Switching costs*, 2006.

¹⁶⁹ workjoy.co *4 Strategies from the Deep Work Book to Achieve Hard-to-Replicate Results*, <https://tiny.pl/8xbycxt4> (accessed 16.11.2024)

¹⁷⁰ A. Ariga, A. Lleras, *Brief and rare mental breaks keep you focused: Deactivation and reactivation of task goals preempt vigilance decrements*. *Cognition*, 2011

¹⁷¹ J. P. Trougakos, I.Hideg, *Momentary work recovery: The role of within-day work breaks*. *Research in Organisational Behavior*, 2009

¹⁷² gowork.pl *Open-plan offices – convenience or a curse? Advantages and disadvantages of working in open space* <https://tiny.pl/bpf92nf8> (accessed 16.11.2024)

¹⁷³ R.D. Astuti, B. Suhardi, P. W. Laksono, N. Susanto, *Investigating the Relationship between Noise Exposure and Human Cognitive Performance: Attention, Stress, and Mental Workload Based on EEG Signals Using Power Spectrum Density*. *Appl. Sci.* 2024

¹⁷⁴ reclaim.ai, *Task Management Trends Report: +200 Stats on Managers vs. Individual Contributors* <https://tiny.pl/szq-hcy4> (accessed 03.12.2024).

¹⁷⁵ Slack, Qualtrics, *The State of Work 2023*, 2023

¹⁷⁶ Workamajig, *Top distractions at work killing productivity in 2023: Statistics*, https://tiny.pl/wsys_p32 (accessed 10.12.2024)

¹⁷⁷ Slack, Qualtrics, *The State of Work 2023*, 2023.

¹⁷⁸ B. P. Haynes, *The impact of office comfort on productivity*. *Journal of Facilities Management*, 2008

¹⁷⁹ J. S. Bradley, *The acoustical design of conventional open plan offices*. *Canadian Acoustics*, 2003

¹⁸⁰ doz.co.uk *White noise – what is it and why does it calm children?* <https://tiny.pl/y0hb2vbn> (accessed 18.11.2024).

¹⁸¹ Kanalux, *Effects of light on human wellbeing*, <https://cutt.ly/SeCJ05yd> (accessed

9.12.2024).

¹⁸² C. Cajochen, Alerting effects of light. *Sleep Medicine Reviews*, 2007.

¹⁸³ O. Seppänen, W. J. Fisk, Q. H. Lei, Effect of temperature on task performance in office environment. Lawrence Berkeley National Laboratory, 2006

¹⁸⁴ A. Hedge, *Ergonomics and Health in the Workplace*. Cornell University, 2016

¹⁸⁵ J. Dul, C. Canan, Work environments for employee creativity. *Ergonomics* 54.1 (2011): 12–20.

¹⁸⁶ S. Colenberg, J. Tuuli, A. Monique, The Relationship between Interior Office Space and Employee Health and Well-Being – a Literature Review. *Building Research & Information* 49 (3): 352–66, 2020.

¹⁸⁷ M. Nieuwenhuis, C. Knight, T. Postmes, S. A. Haslam, The relative benefits of green versus lean office space: Three field experiments. *Journal of Experimental Psychology: Applied*, 20(3), 199, 2014.

¹⁸⁸ A. Khazaali, L. L. K. Kadhum, A. Ki, *Psychology of Color and Its Health Benefits in Office Buildings*, 2020

¹⁸⁹ LinkedIn, You're struggling to focus at work. How can you design your workplace to help you concentrate? <https://tiny.pl/5rzpbqm9> accessed 19.11.2024).

¹⁹⁰ Gensler, *Global Workplace Survey*, 2024.

¹⁹¹ mute.design Eudaimonia Machine – What Does an Ideal “Deep Work” Office Look Like? <https://tiny.pl/txysdydv> (accessed 18.11.2024).

¹⁹² C. Newport, *Deep Work*, 2016.

¹⁹³ Robin, *The Office Space Report 2023*, 2023.

¹⁹⁴ Wework, *The Dynamic Office Why flexible work models require dynamic office designs*, 2024.

¹⁹⁵ infoarchitekta.co.uk How to create a workspace conducive to concentration? <https://tiny.pl/809g8mnb> (accessed 19.11.2024)

¹⁹⁶ freedom Be Incredibly Focused & Productive <https://freedom.to/> (accessed 18.11.2024)

¹⁹⁷ Cold Turkey Your future self will thank you. <https://getcoldturkey.com/> (accessed 18.11.2024)

¹⁹⁸ StayFocusd <https://www.stayfocusd.com/> (accessed 18.11.2024)

¹⁹⁹ my.timestream.app <https://my.timestream.app/> (accessed 18.11.2024)

²⁰⁰ toggl track Where teams and time tracking data meet <https://toggl.com/> (accessed 18.11.2024)

²⁰¹ clockify The most popular free time tracker for teams <https://clockify.me/> (accessed 18.11.2024)

²⁰² brain.fm Music Powered By Science <https://www.brain.fm/> (accessed 18.11.2024)

²⁰³ Noisli What is Noisli? <https://www.noisli.com/> (accessed 18.11.2024)

²⁰⁴ focus@will How We Improve Concentration with Scientifically Designed Music <https://www.focusatwill.com/> (accessed 18.11.2024)

²⁰⁵ App Store, Noizio – Calm, Meditate, Sleep <https://tiny.pl/jzh6qz6c> (accessed 18.11.2024)

²⁰⁶ Notion The happier workspace <https://www.notion.so/> (accessed 18.11.2024)

²⁰⁷ Atlassian Trello Trello brings all your tasks, teammates, and tools together <https://trello.com/> (accessed 18.11.2024)

²⁰⁸ asana The only work management platform designed to scale https://tiny.pl/r5_p50x3 (accessed 18.11.2024).

²⁰⁹ focuslist Do more deep work <https://focuslist.co/> (accessed 18.11.2024).

²¹⁰ Forest, Forest Stay focused, be present <https://www.forestapp.cc/> (accessed 18.11.2024).

²¹¹ App Store MinimaList – To do list & Task <https://tiny.pl/d5twnqk5> (accessed 18.11.2024).

²¹² Gensler, *Global Workplace Survey Comparison*, 2023.

²¹³ I. Mete, P. Debjit, A. Bosselut, L. van der Plas, *Creativity in AI: Progresses and Challenges*, 2024.

²¹⁴ John–Steiner Vera, *Creative Collaboration*, 2000.

²¹⁵ Regent University, *The Journey of Brainstorming*, <https://tiny.pl/1c0q3g85> (accessed 12.03.2025).

²¹⁶ Many Requests, Your 5–Step Guide To Creative Collaboration, <https://tiny.pl/ycc1cjwy> (accessed 12.03.2025).

²¹⁷ Justin Welsh, *Creative Collaboration*, <https://tiny.pl/krcp-bdy> (accessed 15.11.2024).

²¹⁸ Theodora Gawrilut, The definitive guide to effective creative collaboration, 8.03.2024., <https://tiny.pl/3jj8yvdy> (accessed 15.11.2024).

²¹⁹ Teresa Varela, *The Enhancement of Creative Collaboration through Human Mediation*, 2020.

²²⁰ Chinweizu Oham, Onyinye Gift Ejike, *Creativity and collaboration in creative industries: Proposing a conceptual model for enhanced team dynamics*, 2024.

²²¹ James Graham and Alessandro Gandini, *Collaborative Production in the Creative Industries*, 2017.

²²² MoldStud, *Interdisciplinary Collaboration – The Key to Success in Application Engineering*, <https://tiny.pl/wm82sx5g> (accessed 01.04.2025).

²²³ John–Steiner Vera, *Creative Collaboration*, 2000.

²²⁴ Yuxiao Dong, Hao Ma, Jie Tang, Kuansan Wang, *Collaboration Diversity and Scientific Impact*, 2018.

²²⁵ Ch. Grund, Ch. Harbring, L. Klinkenberg, IZA DP No. 17258: *An Experiment on Creativity in Virtual Teams*, 2024.

²²⁶ Galter, How to create an office space conducive to creativity, <https://tiny.pl/78kjrhrq> (accessed 18.11.2024).

²²⁷ P. Kegel, The Impact of the physical work environment on organisational outcomes: a structured review of the literature, 2017.

²²⁸ M. Nieuwenhuis, C. Knight, T. Postmes, A. Haslam, *The Relative Benefits of Green Versus Lean Office Space: Three Field Experiments*, 2014.

²²⁹ Gensler, *Global Workplace Survey Comparison*, 2023.

²³⁰ UNODESIGN, How to create a functional and creative office space, 23.01.2021, <https://tiny.pl/xz3d475p> (accessed 18.11.2024).

²³¹ All–Business Systems Design, *Office Furniture for Creative Spaces: Fostering Innovation*, <https://cutt.ly/peBzfT7M> (accessed 16.12.2024).

²³² Amazing Architecture, *The Future of Collaborative Office Spaces: How Design Shapes Teamwork*, <https://cutt.ly/geBk9Y4m> (accessed 16.12.2024).

²³³ Faster Capital, *Design an office that fosters creativity and collaboration*, <https://cutt.ly/teBkcsTO> (accessed 16.12.2024).

²³⁴ Zoom, *Global Collaboration in the Workplace*, 2024.

²³⁵ Wework, *The Dynamic Office Why flexible work models require dynamic office designs*, 2024.

²³⁶ Meraki Decoration, *The Growing Trend of Collaborative Furniture: Boost Teamwork*, <https://cutt.ly/veBzkl4z> (accessed 16.12.2024).

²³⁷ All–Business Systems Design, *Office Furniture for Creative Spaces: Fostering Innovation*, <https://cutt.ly/peBzfT7M> (accessed 16.12.2024).

²³⁸ Galter, How to create an office space conducive to creativity, <https://tiny.pl/78kjrhrq> (accessed 18.11.2024).

²³⁹ S. Stieger, D. Lewetz, D. Willinger, Face–to–face more important than digital communication for mental health during the pandemic, *Scientific Reports*, 13, 8022, 2023.

²⁴⁰ J. Lee, N. Sato, T. Ogata, K. Yano, Y. Miyake, Physical Engagement in Face–to–Face Interaction Is Associated with Depressive Symptoms of Interaction Partners in the Workplace.” *Behavioral Sciences*, 13(11), 1006, 2023.

²⁴¹ K.N. Warnock, Ch.S. Ju, I.M. Katz, *A Meta–analysis of Attachment at Work*, 2024.

²⁴² Human Spaces, *The Global Impact of Biophilic Design in the Workplace*, 2015.

²⁴³ A. Elantary, *Biophilic Design in Office Buildings: A Salutogenic Approach to Enhancing Well–being in the Built Environment*, 2024.

²⁴⁴ ciph.com B. Chignell Seven benefits of having plants in your office https://tiny.pl/dm8w0_cz (accessed 16.11.2024)

²⁴⁵ MIT Sloan, *Smart office for employee health*, https://tiny.pl/y9_87sbt (accessed 03.12.2024)

²⁴⁶ Human Spaces, *The Global Impact of Biophilic Design in the Workplace*, 2015.

²⁴⁷ innovativeos.com, *Incorporating Biophilic Design into Your Space*, <https://tiny.pl/0crt1y7f> (accessed 03.12.2024)

²⁴⁸ B. Chignell Seven benefits of having plants in your office https://tiny.pl/dm8w0_cz (accessed 16.11.2024)

²⁴⁹ Architecture Courses, Biophilic Office Design: Creating Healthier, Happier Workspaces. <https://tiny.pl/2dvsknkj> (accessed:16.11.2024).

²⁵⁰ ZUS, Sickness absence in 2023, https://tiny.pl/d5k1_hb7 (accessed 03.12.2024).

²⁵¹ A. Elantary, Biophilic Design in Office Buildings: A Salutogenic Approach to Enhancing Well-being in the Built Environment, 2024.

²⁵² ciphr.com B. Chignell Seven benefits of having plants in your office https://tiny.pl/dm8w0_cz (accessed 16.11.2024)

²⁵³ Greenest Works, The Green Workplace Revolution: Discover the Benefits of Indoor Gardens <https://tiny.pl/4sq0ggz9> (accessed:16.11.2024).

²⁵⁴ Wework, The Dynamic Office Why flexible work models require dynamic office designs, 2024.

²⁵⁵ Joanna Tymczyk, What is a sense of belonging and why is it so important?, <https://tiny.pl/b7fb2thz> (accessed 24.11.2024).

²⁵⁶ Harvard Business Review, The Value of Belonging at Work, <https://tiny.pl/sk8x-Oyz> (accessed 18.12.2024).

²⁵⁷ Harvard Business Review, The Value of Belonging at Work, <https://tiny.pl/sk8x-Oyz> (accessed 18.12.2024).

²⁵⁸ Gallup, Employee Engagement vs. Employee Satisfaction and Organisational Culture, <https://tiny.pl/py4rccgv> (accessed 10.04.2025).

²⁵⁹ American Psychological Association, U.S. workers adjust to the changing nature of employment, https://tiny.pl/7mm3q5_c (accessed 16.12.2024).

²⁶⁰ S. Steinerowska, Organisational commitment as a determinant of increased effectiveness of employee teams, University of Economics in Katowice, 2015.

²⁶¹ McKinsey&Company, What is diversity, equity, and inclusion, August 2022.

²⁶² Workhuman, Prioritizing DEI During Times of Economic Uncertainty, 2023.

²⁶³ EY, Managing diversity in organisations, <https://tiny.pl/ndf5whyc> (accessed 24.11.2024).

²⁶⁴ Visier, DEIB: Opportunities and Best Practices for Businesses of All Kinds, <https://tiny.pl/c5q-djgg> (accessed 24.11.2024).

²⁶⁵ Gartner, Gartner HR Research Reveals 82% of Employees Report Working Environment Lacks Fairness, <https://tiny.pl/t-3vryy2> (accessed 16.12.2024).

²⁶⁶ Blair Taylor, Better to belong, <https://tiny.pl/7mxx19kw> (accessed 25.11.2024).

²⁶⁷ Brita Long, What is Equity in the Workplace?, <https://tiny.pl/vsgppyf4> (accessed 25.11.2024).

²⁶⁸ INCLUSION in the workplace – what is it really about?, <https://tiny.pl/x2gdgz-k> (accessed 25.11.2024).

²⁶⁹ Terrell L. Strayhorn, Sense of Belonging: Changing Institutions, Not Just Individuals, <https://tiny.pl/f5vy5h8s> (accessed 25.11.2024).

²⁷⁰ M. Yu, S. B. Z. Abidin, N. B. Shaari, Effects of Brand Visual Identity on Consumer Attitude: A Systematic Literature Review, 2024.

²⁷¹ S. Bano, P. Singh, Impact of employer branding on employee performance and organisational success, International Journal of Creative Research Thoughts (IJCRT), 2023.

²⁷² K. Dua, Dr. R. Sharma, Employer branding: A Systematic Review on changing perspectives from then and now, 2022.

²⁷³ N.Pološki Vokić, A. Tkalac Verčič, D. Sinčić Ćorić, Strategic internal communication for effective internal employer branding, 2022.

²⁷⁴ D. Hope, Linking employer branding and internal branding: establishing perceived employer brand image as an antecedent of favourable employee brand attitudes and behaviours, Journal of Product & Brand Management, Vol. 27 No. 4, pp. 452–467, 2018.

²⁷⁵ Layer 10, Designing for the Human Element: Understanding Organisational Culture in Office Tenant Build-Outs, <https://tiny.pl/1g50rp84> (accessed 10.04.2025).

²⁷⁶ Penketh Group, Ensuring brand identity can shine through office design, <https://tiny.pl/ps5g07-m> (accessed 18.12.2024).

²⁷⁷ Verywell mind, Colour Psychology: Does It Affect How You Feel?, <https://tiny.pl/q4p14gkk> (accessed 18.12.2024).

²⁷⁸ Wired, Meet Facebook's Secret Propaganda Arm: The Analog Research Lab, <https://tiny.pl/nkfjs153> (accessed 10.04.2025).

²⁷⁹ Studio AsA, Branding through Design How Office Spaces Reflect Company Identity, <https://tiny.pl/bkfpmmwr> (accessed 18.12.2024).

²⁸⁰ OP, Integrating brand identity into workspace design, https://tiny.pl/0679z_v2 (accessed 18.12.2024).

²⁸¹ Workplace, Wayfinding & space branding | How to find yourself in the workplace, <https://tiny.pl/h8rfk1cw> (accessed 18.12.2024).

²⁸² Detonate, Crafting Culture: How Your Office Space Defines Your Brand Identity, <https://tiny.pl/qv3fx1bb> (accessed 18.12.2024).

²⁸³ Pap, Media Room, Pandemic changed the office space market, but didn't crash it, https://tiny.pl/6s_15qnk (accessed 15.04.2025).

²⁸⁴ McKinsey Global Institute, The future of work after COVID-19, 2021.

²⁸⁵ MIT Sloan, Co-creation: a powerful tool for organisations seeking greater innovation, <https://cutt.ly/peKuACiu> (accessed 19.11.2024).

²⁸⁶ W.D. Hoyer, R. Chandy, S.S. Singh, Consumer Cocreation in New Product Development, 2010.

about us

ThinkCo is a boutique studio focused on information.

We are a team of analysts, strategists, and designers working across real estate, technology, media, and advertising. We collect data, analyze it, draw conclusions, and present our findings—either as public reports or in the form of tailored strategic guidelines. Our work spans the intersection of media and marketing on one side, and strategy and consultancy on the other.

This approach enables our clients to gain a precise yet comprehensive understanding of their environment—empowering them to better grasp trends and phenomena, and to make more informed strategic business and marketing decisions.

We offer consulting grounded in deep research. Between client projects, we share our knowledge through reports and publications. By analyzing data, trends, and signals of change, we deliver sharp insights that help our clients across an exceptionally broad range of challenges.

Our work spans publishing, consulting, and service design. We've produced dozens of publications—both internal and external—as well as strategies for brands, products, and services. Our goal is to deeply understand and solve complex, non-obvious problems with clarity and purpose.

With experience across multiple industries, partnering with ThinkCo offers clients a wide range of flexible, insight-driven solutions.

Our core services include:

- Business model development
- New product and brand strategy
- Service design
- Market and competitor analysis
- Investment potential evaluation
- Market research, including qualitative studies
- Strategic and brand consulting
- Agency briefing and media strategy support
- Cross-sector mediation

think
co

think
co

Strategic partners:

workplace

SKANSKA



MUTE.