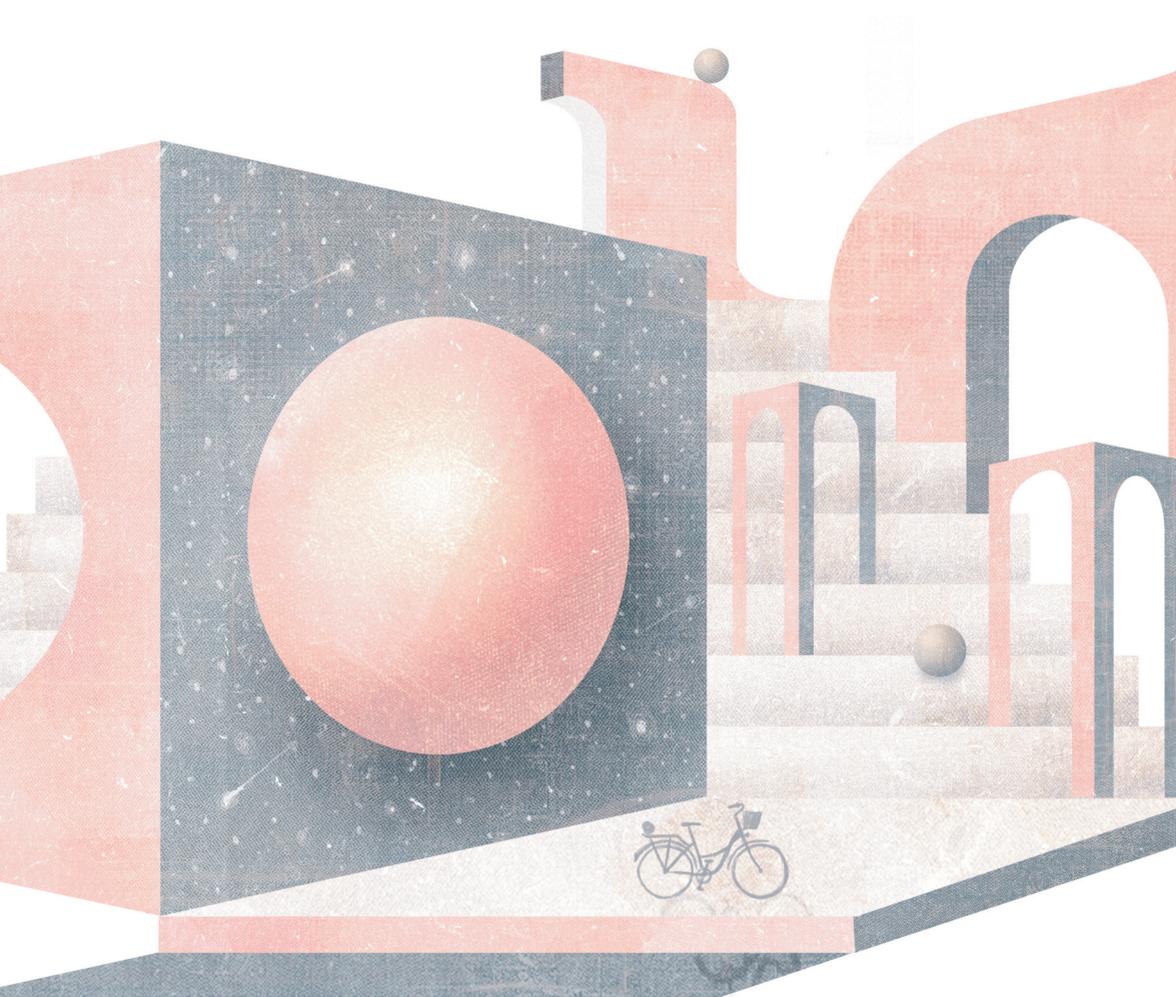


DESIGNING BEHAVIOURS FOR WELL-BEING SPACES

How disruptive approaches can improve living conditions

edited by Annalisa Dominoni and Francesco Scullica



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Contents

Foreword

by Annalisa Dominoni, Francesco Scullica pag. 7

Part I – Sustainable cities and urban transformation

1. **Care and design of places in the urban context,**
by Anna Anzani, Francesco Scullica » 13
2. **Designing public spaces and transportation planning: a multilevel approach towards slow and sustainable cities,**
by Agnese Rebaglio, Barbara Di Prete, Fabio Borghetti » 32

Part II – New spaces for health and well-being

3. **Rethink the design of care looking at Outer Space. How art and design role can improve the living conditions of hypersensitive people and the whole society,**
by Annalisa Dominoni » 63

4. Spaces as thresholds. New design approaches for mental well-being, <i>by Anna Cornaro, Annamaria Lambri</i>	pag. 75
5. Post-pandemic scenarios of office workplace: new purposes of the physical spaces to enhance social and individual well-being, <i>by Marco Bencivenga, Barbara Camocini</i>	» 90
6. Color and lighting in the new healthy domestic landscape, <i>by Maurizio Rossi</i>	» 112
Authors	» 138

5. Post-pandemic scenarios of office workplace: new purposes of the physical spaces to enhance social and individual well-being

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Abstract

The hybrid working model, that allows employees to co-locate and work remotely (at home or elsewhere), seems to be prevailing, according to recent studies and the future projections developed in the post-pandemic new normality. The assessment of the two models has revived the debate over the new meanings of the office workplace and the experimentation on its spatial design.

This paper aims to identify the values and features that make the office space attractive and ensure its survival. It begins by analysing the creative experience of remote work gained by workers during the lockdown, identifying both issues and benefits given by the acceleration in the use of advanced digital technology and the innovations in the management of remote work. Then, the study retraces the debate on the design of office spaces and services in recent decades and the processes that have accompanied it, involving more and more employees.

Besides a certain continuity detected between the issues addressed before and after the pandemic, the study emphasises an emerging perspective that assigns a new centrality to the human being, understood in its complexity which goes beyond the user-centred approach, involving physical and mental well-being¹. The paper will also

1. Among the multiple attempts to define the meaning of well-being (Dodge *et al.*, 2012), the UK Office for National Statistics has produced a model where the domain most relevant to the workplace is “personal well-being”. Personal well-being can be thought of as “*life satisfaction based on an individual’s perception of their health, happiness and sense of purpose*” (Cooper *et al.*, 2014). It is this perspective of personal

present the sustainability perspective, specifically the awareness on the impact of human behaviours and design choices on an urban and global scale.

5.1 Premise

The Covid-19 lockdown and the gradual reduction of the pressure of the pandemic emergency have offered an unprecedented opportunity to conduct a grand experiment that could accelerate the progress of projects and processes for future working models. They can help to implement design studies on the workplace, specifically on the co-located ones, in terms of quality of service and space, and testing their impact on people's lives.

The pandemic lockdown has led to a massive increase in home telework activities² thanks to the opportunities offered by the spread of ICT and the expansion of the applications of this technology in the working models. Afterward, the new normal condition, although not in a safe and permanent form, has allowed employees to return to work in their original workplace, full or part-time. Alternatively, they have chosen to work in a 'third place', other than their office or their home, taking advantage of the models of co-working spaces, previously reserved mainly for self-employed workers (Reuschke, Ekinsmyth, 2021). One of the main requirements linked to the success of this third format is its proximity to the workers' homes or other places that are part of their daily routine (school, supermarket, gym, etc.), resulting in savings on commuting time and cost, and representing a safety factor in times of pandemic, because it has allowed a reduction in the use of public transport.

This study analyses benefits and drawbacks linked to the different working models related to the above-mentioned places, trying to recognise specifically the new characters, in both spaces and services terms, of the 'co-located work' mode that motivates the re-existence, the

well-being, and its interaction with work and community, which will be considered throughout this paper.

2. In contemporary specialised literature, the expression 'working-from-home' includes both service and goods production. Therefore, this study adopts the expression 'home teleworking' meaning with 'telework' the ICT-based mobile work – TICTM – performed by employees who work remotely, away from their premises or fixed location, using digital technologies and the internet (Samek Lodovici *et al.*, 2021).

success, and the smooth functioning of the business company office space. This ‘in presence’ mode can even be integrated with teleworking, considering that hybrid forms will probably be the successful ones in the future. Therefore, the final objective of this study is to determine the purposes that could be assigned to the office workplace in the future, adopting the point of view of the involved stakeholders (workers, companies, designers, etc.) and embracing an analytical perspective that puts the human being at the heart of these design strategies.

The issues of health protection and safety in workplaces add to the already growing attention (with respect to the spread of the virus) on the impact of ICT on the well-being of workers, understood more and more holistically, both as physical and psychological factors, with specific attention to workers’ sociability. Indeed, part of the ongoing studies related to the 8th Sustainable Development Goal adopted by the United Nations dedicated to ‘promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all’ (UN, 2015) show great attention to ICT-based work and to workers’ well-being. Coherently, EU institution’s activities support strategies to enhance existing legal and policy instruments to consider the specificities of teleworkers, including their rights.

This essay analyses the mentioned topics in three paragraphs. The first one traces the recent changes in the working models, previously cited, generated and empowered by the lockdown and the intermittent post-pandemic recovery, considering the consequences in the organisation of time and space between public and private, and the repercussions on individual sociability. The second one aims to highlight the state of the art before the pandemic on the design models of the office workplace and the progress on the process strategies related to this activity. The third paragraph focuses on the office workplace. Starting from the previous highlights, it presents new horizons and learned lessons – consolidated by the experience of the pandemic – that might generate new scenarios.

The study is based on qualitative and quantitative information resulting from an academic literature review, and on the analysis of case studies integrated with interviews with stakeholders (office design companies and representatives of large businesses) invited to academic seminars, who contributed to illustrate the state of the art in workplace design culture.

5.2 Pandemic and post-pandemic lessons learned experimenting new working modalities

The forced isolation aimed to reduce the circulation of the virus in the most intense phase of the pandemic and, later, the timid resumption of economic activities, with the return to in-office work, have highlighted different approaches in the search for solutions on the work activity and its spaces. The ‘stay-at-home’ period has resulted in the experimentation of tactics, with a degree of improvisation, to solve urgent critical issues, testing self-made projects carried out with the use of easily available resources, in response to a disruptive situation of exceptional gravity, however temporary it was considered. On the other hand, with the perception of the beginning of a turn towards a new normal, the need to manage change emerges with greater awareness, evaluating benefits and drawbacks, also to guarantee certain stability and resilience while facing possible changes in the international health situation.

5.2.1 Lockdown and teleworking from home

The domestic confinement measures have stimulated the spread of teleworking from home, made possible by using digital tools, which have been key enablers in this process. The study on telework requested by the European Parliament’s Committee in 2021 (Samek Lodovici *et al.*, 2021), allows us to frame the contents described in the previous paragraph, supporting them through scientific contributions and data collected by internationally recognised Observatories.

A Eurofound survey (Eurofound, 2020) conducted among the 27 member countries of the EU reports that in the early Covid-19 pandemic phase, 36,5% of people started working from home (compared to 15,8% pre-Covid-19) and 46% of them were teleworkers with no previous experience of remote working. Furthermore, Sostero and Milasi identify, through the concept of ‘teleworkability’, the working sectors in which teleworkers are concentrated: financial services, ICT sector, real estate, professional, scientific, and technical activities, public administration, and the education sector (Sostero *et al.*, 2020). The digitisation process, which was already underway pre-Covid-19, has therefore accelerated

important consequences on the behaviour of workers and their time and space at home.

The time factor and its management have undergone a densification process. If one of the benefits of telework is the elimination of time for commuting, on the other hand the working time becomes longer and more irregular. The computer platforms system for remote work manages breaks, inputs, and outputs typical of co-located work using machine rhythm, no longer marked by the rituals shared with colleagues in presence. In addition, the private ‘domestic’ time is much more than before, but less defined and often contaminated by work. The term ‘Autonomy Paradox’ clarifies how the value of working time flexibility, presented as one of the first benefits in interviews with teleworkers, is at the same time a reason for causing higher stress levels and a disrupted work-life balance (Mazmanian *et al.*, 2013). In fact, one of the increasingly urgent policies regarding the protection of teleworkers is the ‘right to disconnect’.

In the same way as the time factor, teleworking space overlaps with the domestic one, in teleworking from home. Its organisation is densified and enriched with equipment – activity-based settings – permanent or temporary, bringing to the foreground critical issues on a domestic scale, generated by promiscuity with family members and privacy management.

Finally, the office workspace was also the elected place for relationships, collaboration, and sharing. Therefore, the shift to teleworking has caused profound changes in these factors, too. On the one hand the intensive use of ICT has generated relevant advantages in collaborating across physical and organisational boundaries, overcoming new confines, on the other hand it has significantly affected the nature of social relations, reducing the opportunities for emotional and direct social interactions with colleagues. It has increased the feeling of being isolated, causing stress and impacting work satisfaction and the perception of remote work productivity (Toscano, Zappalà, 2020). Here too, therefore, we can retrace a paradox similar to the one described above.

5.2.2 Starting experiences of new normality

The gradual lifting of the state of emergency caused by the pandemic, and the increase in the number of vaccinated individuals, have favoured the partial reopening of offices in compliance with social distancing policies. However, both employees and companies have recognised the benefits of remote working. In fact, even if teleworking from home suffered a reduction in the intermittent post-pandemic period, a percentage of workers keep working from home or have chosen to alternate remote and presence-based working. A significant number of workers prefer to look for the already mentioned ‘third place’ which is increasingly characterised by urban proximity to the place of residence, and that is offering advantages such as the provision of shared facilities and services, removal from domestic distractions, and the implementation of social relationships. Therefore, the office workplace is facing a spatial fragmentation and re-location, also in this case accentuating a process that was already underway. In fact, the thematic literature reports expressions like ‘extended workplace’ and ‘multi-location work’ (Hislop, Axtell, 2009; Martins, 2015) bringing forward implications about the workers’ experiences on how the workplace is conceptualised. Some private companies take advantage of these solutions to de-localise their office spaces by creating dedicated local hubs. The representatives of the European Trade Union Confederation (ETUC, 2021) reported two opposite views by companies on teleworking: one group fears a loss of individual productivity and wishes to return to a pre-Covid-19 situation. Instead, the other has seen an increase in productivity and seeks to implement an even wider use of teleworking, by integrating the equipment for home workstations and offering welfare support through courses. Moreover, internal teams of experts can be charged with managing actions, increasingly integrated into the company routine, to ensure the workers’.

The approach of the Municipality of Milan is very interesting in this respect because it has taken the pandemic as an opportunity to start renewing the way of inhabiting the city and using its services, basing its interventions precisely on processes and places related to the work activity. The experience of teleworking, strengthened during the pandemic through Extraordinary Agile Work – *Lavoro Agile*

Straordinario – by the employees of the Municipality of Milan³ resulted in a high degree of satisfaction (shown by approximately 5,800 questionnaires) and the desire not to regress (Tajani, 2021a), representing a strong transformative potential at different levels with repercussions both within the workplace and on the urban scale. In fact, the second observation raising from the previous one, brings to the fore the debate on the ‘city of 15 minutes’, the opportunity to invest in projects that satisfy proximity-based needs rather than in large infrastructure (Moreno, 2019), through the contributions of businesses, administrations, and associations, based on the concepts of polycentrism, proximity, and hybridisation. This position is supported by a number of studies developed by Politecnico di Milano and Università Cattolica del Sacro Cuore, in cooperation with the Municipality⁴; they show that the distribution of co-working spaces is already increasing in the city’s outskirts, getting closer to workers’ houses, and that the transformation of co-working, although reduced in the number of workstations for independent workers, is increasing in the number of employees, especially in large co-working places. The Municipality of Milan, with the enhancement of the ‘smart working’ experience, combined the previous two perspectives of analysis defining (through informal terminology) the concept of *near-working* (Tajani, 2021b), allowing its employees to work remotely at decentralised offices, placed in dismissed spaces or existing co-working ones, and setting precise policies for ‘smart working’, range of coexistence and connection with the work team, flexibility in working hours, and the right to disconnect. Finally, in May 2021, as part of the Milan Smart City alliance, workspaces adhering to the ‘Smart Work Community’ and available to employees of the Municipality in ‘agile work’ were identified.

3. In Italy the terms ‘smart working’ and ‘agile work’ are used interchangeably. They refer to the same organisational and working model of telework, as defined at the beginning of this essay: working as an employee of a company from a place other than its headquarters, with equipment provided by the company and in close relationship with it.

4. The research projects and the results of the surveys are available at the ‘Osservatorio Smart Working’ of the Department of Engineering Management of Politecnico di Milano, the Transformative Actions Interdisciplinary Laboratory – TRAILAB – of Università Cattolica del Sacro Cuore, the Department of Architecture and Urban Studies – DASTU – of Politecnico di Milano, and specifically in Mariotti I., Akhavan M. (2020), “Gli spazi di coworking a Milano: localizzazione ed effetti sul contesto urbano”, in Aa.Vv., *Costellazione Milano. Contributi di ricerca per un’ esplorazione del campo urbano*, Milano: Fondazione Giangiacomo Feltrinelli, 146-165 (in Italian).

The result that emerges from these surveys is that the changing of spatial-temporal working patterns, the new spatiality of workplaces, and the multilocation work have an urban impact connected with research on health, job quality and well-being.

5.3 Pre-pandemic debate on design projects and processes of the workplace

The pandemic has boosted unprecedented changes in the rethinking of processes and projects of workplaces, and their purpose. However, these changes were already happening pre-Covid-19 time, though with a less determined approach.

In recent years, investments have increased towards the reshaping of the physical work environment (McCoy, 2005; Goldhill, 2013), and the demand for better workplaces with a greater awareness and knowledge about the impacts of indoor spaces on psycho-physical well-being (Anthes, 2020). Organisations have experimented with temporary solutions, pilot projects, and at the same time by exploring new ways of working (Brownson, 2004) for short and long-term scenarios, since workplaces can become drivers to enable values such as employee engagement, company's feeling of belonging, talent attraction.

Interesting results have emerged from studies that focussed on the relationship between office characteristics and employees' behaviour (Oldham *et al.*, 1983). Surveys and studies have monitored and evaluated the pros and cons of the impacts of office layouts typologies and the effects of processes on people (Vischer, 2008). Indeed, characteristics such as productivity, satisfaction, and mental well-being of users are significantly influenced by design factors such as desk location, furniture, lighting, finishes (Kwon, Remøy, 2020).

5.3.1 How user needs can shape the spatial layout

De Been and Beijer (2014) already revealed that the type of office is a significant predictor for employees' productivity, concentration, communication. In fact, during the past decades, many layout models have been implemented, often named with acronyms, that companies

have adopted for their spaces with low testing of the solutions with user's needs.

From the Cellular Office, where one person occupies a room, to the 1960s when the Open Plan Office – OPO – configurations spread around the world, a layout preferred mostly for reducing overhead costs and footprint, with characteristics such as openness, flexibility, and few interior boundaries (Bodin Danielsson, Bodin, 2009). Several studies have identified some negative factors associated with open-plan offices, such as noise, lack of privacy, loss of control over work, that are considered responsible for a decrease in work efficiency (Ayoko *et al.*, 2020).

To counteract the weaknesses of these configurations, companies started shifting from OPO to spatial layouts focussed on the employees' activities, such as the Activity-based Working offices – ABWs – where employees choose their workstation according to the work activity carried out at any one time, and the so-called work settings provide support to a variety of working activities (Appel-Meulenbroek *et al.*, 2011; Seddigh *et al.*, 2014).

A clear difference between OPOs and ABWs is the office use. The OPO applies assigned workstations while the ABW applies a non-territorial workplace concept with flexi-desking (van der Voordt, 2004; Rolfö *et al.*, 2018). Studies have shown that satisfaction increases in ABW compared to OPO, though there are still some unsolved issues, such as workstation shortage, nesting, lack of auditory privacy, and difficulties in finding colleagues. These results have led to a variation of ABW concept into Agile workplaces – AW – constantly transforming, adjusting, and responding to organisational learning (Joroff *et al.*, 2003; Keeling *et al.*, 2015).

Companies have also mixed some models, for example KPMG Australia moved their Sydney-based employees to an OPO site (Evans, 2015) that combines ABW and AW principles (i.e., to break down physical barriers and promote cooperation and collaboration across divisions). With the spread of coworking spaces, companies have approached hybrid models, such as the “Hub model” which promotes multi-location work; Pinterest ended a lease obligation in San Francisco to boost new ways of working and a “more distributed workforce” (The Economist, 2020).

In order to enhance the employees' well-being, specialised spaces have been integrated into the workplace, such as the “Energy hub” by

Generali, in Milan, where an entire floor of the Zaha Hadid tower is dedicated to “cocoon” for solitude and restoration and spaces for free courses, training, and to practice meditation. This model can promote new testing activities to respond to the specific needs of individual users and the community.



Fig. 1 – Energy Hub of Generali Group in Milan, designed by Design Group Italia, 2019.

5.3.2 Space planning as an engaging process

More and more frequently designers’ approach to workplace projects integrates participatory processes, able to translate insights from the end users into tangible solutions. This is achieved by listening to them, capturing their impressions via surveys, focus groups, data collected by qualitative and quantitative methods, real-time observations.

Following this approach, the end users have to be engaged also in the decision-making process. Several studies demonstrate how user participation in the design process has a positive effect on people’s responses on their workplace (Lee, Brand, 2005; Veitch, Newsham, 2000). People who participate in decisions about the space, are more likely to have feelings of belonging and ownership (Vischer, 2008). A 2016 Gallup Poll notes that teams with high employee engagement rates are 21% more productive. User involvement decreases misuse of the workplace (Appel-Meulenbroek, Groenen, Janssen, 2011) and supports shared understanding of why it is necessary to implement a change (Nielsen, Randall, 2013). Case studies, such as Studio TILT Spitfire Audio project, show a design process based on codesign methodology

as described in the 2013 book, ‘Codesigning Space’ (Egan and Marlow, 2013); the process led to a design that is inclusive and responds specifically to the needs of different groups of employees.

Based on data collected through a series of collaborative workshops performed across all stages of the project, Studio TILT provided design solutions to facilitate the company culture and its ways of working. The project consisted not only of a spatial design, but also resulted in the creation of a series of bespoke workstations to match the requirements of each of the very varied Spitfire teams. Quiet and loud zoning, different types of enclosed and semi-enclosed spaces, differentiation of the types of furniture following the collaborative/focused scale, indoor plants, were all thought through to best respond to the users’ well-being.



Fig. 2 – Collaborative Workshop performed in all stages of the project of Spitfire Audio Office, designed by Studio TILT, 2013 (Photos by J. Tate and J. Donovan).

Despite the benefits of user engaging processes, companies’ space planning approach often seems more based on top-down corporate policies than on a thorough analysis of the advantages and disadvantages of alternative models. As mentioned before, issues related to the adoption of non-ad hoc layout models and processes raise questions that still have to be explored, that affect the users’ well-being at different levels (Wineman *et al.*, 2018) and become opportunities to be challenged by addressing design solutions in terms of space planning and processes, whether it is about headquarters or third places (any other spaces where work is done) to rebalance productivity and well-being.

5.4 Relaunching the office as a space where people want to go

The office is still considered the strategic location with spaces where “meanings are constructed” (Courpasson *et al.*, 2016), able to enhance feelings of belonging and to facilitate different working experiences (Brown, 2009). Indeed, results from interviews with decision makers demonstrate that the physical spaces of the office will still be “very important” in the future and companies such as Netflix and Yahoo still conceive the traditional way of working (in presence) as the only possible efficient model if compared to remote working experiences (The Economist, 2020).

Nowadays, the design of the office space is a key element to frame the employee value proposition since satisfaction and happiness are strictly related to the quality of spatial experiences (as cited in the previous paragraphs). Its functions deserve to be challenged to create purposes that bring people in, a place people want to travel to.

5.4.1 The office as a “listening” space

As mentioned before, participatory processes improve user satisfaction, and the importance of focusing on people as individuals has improved, as a consequence of the pandemic. Addressing the right solutions to meet all the different users’ needs is hard due to many uncertainties, such as varied human behaviour, change of workforce, and lifespan of projects and processes. Data-driven recommendations about the design (or renovation) of office spaces and sharing the process including the end-users can minimise the negative effects and support employees’ well-being. A fruitful planning process to engage people can involve design thinking as a human-centred approach, in particular those strategic activities to gather feedbacks, test and prototype design solutions. Data collection can be performed through quantitative methods such as online surveys, and qualitative methods such as observation studies, shadowing, interviews, ethnographic studies (Reeves *et al.*, 2008). These last and hands-on activities should take place in dedicated office spaces, to get deeper insights, to prototype and test design solutions together. Having a physical space to engage

users, to listen to them, speeds up the process of the definition of needs, desires, and expectations. In-presence activities, with a high level of engagement required, are more effective than those attended remotely, that make people less likely to ask quick questions and share ideas. In-person meetings are also a way to combat the “zoom fatigue” (Wiederhold, 2020).

5.4.2 An equipped space to manage a new hybrid model between physical and virtual

The hybrid in-presence and remote working format will prevail in the future (Grzegorzczuk, 2021) since employees will not agree to go back to five days of commuting (Gensler, 2020b). They prefer the experienced flexible working conditions, visiting their office only for specific reasons and to provide working support. Leaving aside the reasons related to the value of office relationships, the co-located working space can in fact offer services, infrastructure, equipment, high technology and fast internet that sometimes cannot be found in the remote workspace.

Setting the stage for the hybrid working format requires particular attention in the design and management of space to ensure and provide for a sufficient quantity of individual in-presence workstations every day (also following the pandemic safety requirements) and keeping track of on-site employees. The adoption of a hybrid working format leads companies to manage a number of people in the office space that can vary from day to day. Multipurpose rooms, equipped with movable and modular furniture, analogue and digital tools, can act as diaphragmatic spaces. Architectural elements such as bifold doors and sound-absorbing curtains can adjust the size of these space according to the number of people and the activities they host.

The search for models of spatial design to enhance and exploit this respiratory expansion and reduction movement of the environment, through new advanced spaces and services, will constitute one of the main future issues in the real estate sector.

In fact, one of the main challenges in designing new office spaces in presence is to use technology as a bridge between physical and digital. The level of maturity of technological developments, the hyper connec-

tivity, the intensive research on augmented reality, Internet of Things and artificial intelligence can offer an accurate ‘phygital’ experience (Zurlo *et al.*, 2018) – a neologism that results from the synthesis of the terms “physical” and “digital” often applied in the field of retail design – suitable for different business models and stages of remote working implementation and supporting a wide variety of mixed remote and physical working strategies. They can shape interconnected environments, human computational interface experiences, improving experiences both at the office and in workspaces at home (Averno, 2020), reducing the risk to put remote workers at a disadvantage.

5.4.3 Rebalancing territoriality and individuality

As previously introduced, privacy, territoriality, and communication affect the occupants’ satisfaction and performance (De Croon *et al.*, 2005). In particular, a lack of privacy and personal territory can cause overall dissatisfaction in workplaces (De Been, Beijer, 2014). Indeed, according to the 2020 research conducted by the ‘Osservatorio Smart Working’ of the Politecnico di Milano, socialising (68%), encounters with external visitors (58%), strategy meetings (43%) and training (32%) are some of the activities that will be most likely to be found in the office of the future.

A growing demand for tailored design solutions is raising, where strategic balance between territorial (team) and individual spaces, and proximity among those, should be sought.

Recently, many companies have been adopting hot desking models, a non-territorial strategy that became popular with the spread of coworking spaces. This choice, where no desk is assigned, influences the way people interact within their team, and teams with others. Spaces should match workflow and user needs with zones able to respond to various levels of concentration and teamwork (Kaarlela-Tuomaala *et al.*, 2009). If teamwork is a prominent activity of the company, team zones should be located (Wohlers, Hertel 2016). Hot desking models could be applied to the teams’ assigned areas, that can change, or be relocated, from time to time on a project basis. This way territoriality is kept for a certain amount of time, and collaboration is facilitated among team(s).

In addition, overlapping functional transition spaces and intentional high traffic areas can drive communication and encourage cross-teams' interactions. To avoid separations and spatial boundaries, proximity of team areas can be considered, and in-between spaces can be located strategically between team areas to create informal "collisions" and non-scheduled encounters. These can be highly beneficial as a source of idea generation, of spontaneous interactions, creating and sharing opportunities also for those who are introverted. They support those non-work activities (drinking coffee, breaks that can be imported from the working from home experiences without altering the effectiveness of the workplace, and actually improving communication.

Aside from being a place where teamwork is fostered, the office has also to embrace the needs on a personal sphere, related to privacy. Surveys and research results, as already presented, reveal that individual spaces for concentration and focus activities will be highly demanded in the future. Closed soundproof rooms, designed to provide single-oriented activities, can also avoid the noise level of other office spaces.

Nowadays, with flexible policies, people can choose to work from home and remotely. However, providing environmental experiences like home ones at the office, decreases the feeling of being isolated, lowers stress levels; at the same time being at the office allows people to increase the opportunities for emotional and direct social interaction with colleagues (Toscano, Zappalà, 2020).

5.4.4 High quality environments to strengthen the employees' sense of belonging and unique experiences

Social isolation, a sense of loneliness, and uncomfortable workstations, linked to working from home, increase the demand for high quality physical spaces, able to provide unique working experiences and to strengthen feelings of belonging, well-being at work, and ownership.

User control over lighting, thermal comfort, noise (Kwon *et al.*, 2019) creates a level of agency which makes people feel in a familiar environment with degrees of experience customisation according to their needs. This can be achieved by providing movable fixtures such as acoustic panels, dimmable lighting system, smart HVAC controls. Since people have sensory experiences, and design affects all of five

senses, the office could offer a variety people can choose from; ergonomic furniture to provide different postures during the day to achieve physical comfort, various work settings to meet work tasks' requirements. This will allow creating a quality space that works for the majority of people.

As noted in the previous paragraph, one of the main activities in the future of the office will be meeting with external visitors. In fact, the office space can be a brand ambassador, designed also to enable clients and visitors to understand the brand, and employees to feel a part of it, to connect people to purpose on a deeper level. Objects as storytellers, embedded in the workspace such as personal items and physical elements (trophies, teams' memorabilia, branded items) help to inspire individuals and unite communities to communicate the company's values. Since 1970 Hiscox introduced art to its offices as a way of offering its employees something that stimulates, excites, interests them, the presence of such objects impacts on people's tasks, and creates a unique experience everyone has access to.

5.5 Conclusion

The reduction of the pressure of the pandemic emergency has revealed the importance of the experience gained with remote work and the desire to consolidate a hybrid way of working between remote and in-presence, considered as a more sustainable and harmonious solution for both the daily life of human beings and for the well-being of the planet. Therefore, this study aimed to identify the reasons that could allow the office space to confirm its usefulness and renew its role in a hypothetical future scenario of a return to normality.

The study has been carried out trying to retrace the factors emerging from the different perspectives of the stakeholders involved, thus including surveys reporting the opinions of workers and company leaders and the debate carried out by designers and companies engaged in the office interiors design and production.

The first part is dedicated to the transition from in-presence work, lockdown, and the gradual return to the so-called new normality, tracing benefits and issues. The second part describes the pre-pandemic state of the art concerning the debate on the design of

office spaces and its processes. The third part is dedicated to trying to connect the factors that emerged in the previous phases, thus combining the existing contents concerning office interiors projects and the new values that emerged during and after the pandemic. Some guidelines originated from these analysis activities that could each constitute a starting point for further analysis on the value of office space in future scenarios:

- engaging employees, according to a human-centred approach, since physical space and in-presence activities produce more effective results in defining the users’ needs and expectations;
- fostering relationships, supporting informal encounters through collision spaces and advanced team-working in equipped locations to encourage in-presence and remote cooperation;
- supporting individuals, providing privacy for single-oriented work tasks through controlled workspaces and extra addressed services
- implementing technology, enabling interaction and management, through equipped ‘phygital’ services smart spaces, a hybrid between physical and digital-services and smart spaces
- exploiting spatial capability, including extra services to foster active sociability through multipurpose environments;
- designing experiences, fostering the employee perception of the company identity, opportunity for leaders to reinforce the employees’ loyalty through the high quality of the environment.

ENGAGING EMPLOYEES	to better define users’ needs and wishes	on-site activities
FOSTERING RELATIONSHIPS	to promote advanced hybrid teamwork	dedicated smart environment
SUPPORTING INDIVIDUAL WORK	to support individual-oriented work	high quality environments and addressed services
IMPLEMENTING TECHNOLOGY	to enable interactions and management	equipped phygital settings
EXPLOITING SPATIAL CAPACITY	to include extra services	multipurpose environments
DESIGNING EXPERIENCES	to foster a brand community	controlled spatial quality

Fig. 3 – Summary of crucial guidelines for the post-pandemic office workplace resulted from this paper analysis.

The pandemic and post-pandemic working experience seem to have fostered a transition to a new role and value of the office workplace, which places human well-being as a factor that generates innovative meaning in the office interior. In this sense, the office space is no longer interpreted in a competitive sense in respect to the remote workspace, but as complementary. The office space tends to have a lesser connotation of control, acquiring more and more a supportive and enriching function, considering human beings in their complexity, including physical and mental factors, and their insertion in a cultural and territorial context.

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Spaces and their views are changing. The perception of physical and mental well-being is also shifting, especially because of the pandemic. We are experiencing a transitional time where new needs and requirements emerge, affecting human behaviour and the space definition at macro and micro level. New dynamics and perceptions are recognized, leading architects and designers to focus on studying and applying innovative methods.

The book explores the radical transformation of living and working spaces, in which the hybridization of interior and exterior requires a new vision able to interpret renewed people's behaviours and needs, a challenging issue for the design discipline that has a multidisciplinary nature as well as a multiscale approach for both research and practice.

Many examples today demonstrate the importance of the therapeutic contribution of architecture and design, to redevelop places of hospitality and care, and create environments in which there is a deep harmony of space, light, and beauty. The interest in research concerning the quality of life has also increased a lot of studies on the complex question of the environmental perception and the importance of natural stimuli for health in interiors, in which the physiological effects of light and colour are fundamental to balance the of human beings' equilibrium.

In the book we present testimonies of international researchers and designers who propose disruptive scenarios and methodologies to improve well-being and mental health conditions overall life quality at urban and personal living level through several examples: the city and the relations with the environment, commercial and hospitality areas, personal spaces, as well as outer space, in microgravity and confined environment, where the astronauts' experience living in confined environments can be compared to the domestic space and office interiors.

Our ambition is to re-launch an aesthetic, sustainable, design-based approach to improve dwelling conditions, trying to implement care into different well-being dimensions – mental, physical, social, and global – looking at the new people's behaviours, or even, generating new behaviours, through design.