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Hybrid profiles for knowledge workers – flexible workplace and time

Suvi Nenonen¹ and Inka Sankari²

ABSTRACT

Background and aim – As a result of Covid-19 pandemic many organizations have adopted more flexible and mobile working arrangements. Knowledge workers have been able to choose significantly more freely than before when and where they work, hybrid work has generalized. As organizations move into the post-pandemic period, they will re-evaluate what workplace solution serves their needs in the future. This paper aims to construct a framework for hybrid knowledge worker profiles.

Methods / Methodology – The exploratory research process was conducted in two steps. Step one was a framework proposition about hybrid work profiles based on literature and step two included framework testing in eight workshops for 185 persons.

Results – The identified eight hybrid work profiles are based on space and time used in fixed or flexible manner. The context of space and time varies from home-based to office-based network of places. The descriptive framework provides insights to the new user needs of hybrid work.

Originality – The proposed framework builds on previous workplace user profiles related research and practice. It complements previous knowledge, particularly by focusing on understanding the different hybrid workplace user preferences.

Practical or social implications – Hybrid knowledge work profile -classification can be used to identify the types and quantities of hybrid workers' organizations must support the design and updating of the workplaces.

Type of paper – Research paper (full).

KEYWORDS

Workplace development, user profiles, user preferences, hybrid work, higher education.

INTRODUCTION

Covid-19 pandemic has changed the way we do knowledge work. Many organizations have adopted more flexible and mobile working arrangements. On a global scale, knowledge workers have been able to choose significantly more freely than before when and where they work. Flexible way of working has been commonly called hybrid work. Hybrid workspaces are an important feature of the post-pandemic world (Gratton, 2021) and they are understood as 'multiply located' (Halford, 2005, p. 22), with people working more 'flexibly' thanks to information and communication technology (ICT), splitting their time across different places (e.g. home, corporate offices, coworking spaces). Flexible Work Arrangements (FWA) can be implemented through various types of workspaces. The new type of workspaces emerged from FWA include Flex Office (FO), Co-Working (CO), Total Home Office (HOT) and Partial Home Office (HOP). The combination of these new workspace type and flexible working time are the new features of the job satisfaction and high performance (Davidescu et al., 2020).

¹ University Services, University of Helsinki, Finland, corresponding author, suvi.z.nenonen@helsinki.fi.

² University Services, University of Helsinki, Finland.

The question that arises is what workplace strategies are most effective - how much flexibility around where and when people do their job is best (Gratton, 2020). Employers are expected to check and if necessary, re-design their physical and digital workplaces to offer solutions that support flexible working and hybrid collaboration in an optimal way. (Bababour *et al.*, 2021). In this paper, we focus on hybrid knowledge workers and their profiles on the multi-locational workspaces. This study also tests these profiles in the context of academic workplace development in higher education.

THE FLEXIBLE WORK ARRANGEMENTS

Organizations must evaluate what workplace solution serves their needs in the future. These solutions can range from work from any location to a full return to office-based work, with a whole range of fixed and flexible working arrangements in between (Gratton, 2020). Traditional work practices are transforming towards Flexible work arrangement (FWA) concerning work environment and schedule. FWA offers time and location flexibility for employees to engage in work-related tasks. FWA includes flexitime, contractual working, work shifts (Gill & Siddiqui, 2020), job sharing, telecommuting or remote working and a compressed workweek, while the most common one is work from home (WFH), where employees work full-time from their home (Kossek *et al.*, 2014) The future challenge is to manage inconsistent occupancy rates and impact of the FWA approach. The hybrid and flexible working style and culture is set towards the added value of the companies. Chua *et al.*, (2022) adds on the significance of FWA approach in synchrony with the Global Agenda 2030: Sustainable Development Goals by United Nations.

The possibility to work remotely from home is typically offered in connection with activity-based office (ABO) concept (van den Berg *et al.*, 2020.) Once the pandemic has subsided, organizations are updating their considerations about what kind of workplace solution and (ABO) will best support their goals. Falkman (2020) states that ABO concepts will be even more popular from now on, since they are designed to be flexible depending how many choose to come into work, and the work these spaces most encourage is work done together. The fixed location in the office in comparison with a multi-locational work environment is now more common to a larger group of knowledge workers. Many of them will clearly prefer for continuing with at least some working from home in post-pandemic period, indicating high levels of satisfaction for many who have been working from home (Sailer *et al.*, 2021).

Amid the pandemic, the mindset of activity-based working (ABW) seems to be already adopted and implemented although many organizations and workers do not know it by this name. Many of the negative aspects related to the human and physical environment in the current body of literature in relation to ABW concept might diminish as ABW evolves into its new shape. Having control over the work environment, satisfaction with IEQ, privacy, being able to complete focused work and higher productivity rates have already been reported in recent studies on work from home arrangements (Marzan *et al.*, 2022).

The interest to make some pandemic period mobile workplace practices permanent requires from the organizations adaptive and flexible workplace management regarding employees' individual needs and work/life strategies. The hybrid work environments require changes in the HR-policies but also often in the level of physical work environments, available ICT tools and their use. There is a need to redefine user profiles. Organisations will have to consider remote policies and practices in the post-pandemic future to gain many consequential benefits and to address increasing remote work expectations. This will require a review of organisational practices, and cultural and physical support for work-from-home arrangements based on the diversity in work tasks, individual possibilities to work from home as well as both individual and social productivity and wellbeing. (de Klerk *et al.*, 2021).

The traditional user profiles consider e.g., mobility of employees (Lilschkis, 2003; Greene and Myerson, 2011), digital competencies (Rantala, 2016) and the motivation of workers to implement new ways of work practices (Dau, 2017). The four knowledge worker user profiles by Greene and Myerson (2011) have been widely applied both in the research and practice: office-based (1) *anchor* and (2) *connector*, and widely afield working (3) *gatherer* and (4) *navigator* have helped to understand the variety of spaces and tools that knowledge workers can adjust based on their individual preferences and the tasks in hand. The digital profiling of Rantala (2016) focused on different demands, attitudes and goals related to technology use of knowledge workers. Profiling helps the designers to target digital services to certain user groups and be assured about the real demands and effective use. (Petrolaitiene *et al.* 2018.) Dau (2017) investigated what drives individuals towards mobile work elsewhere than office. Her research concentrated on the workplace in social, physical, and virtual contexts where autonomy, relatedness and competence can be supported. (Petrolaitiene *et al.* 2018.) The traditional user profiles do not build on the fact that the work from home can be option more knowledge workers than ever, see e.g. Sailer *et al.*, 2021).

Gratton (2021) states that organisations must put more attention to the shift made along the time axis, from being time-constrained (working synchronously with others) to being time-unconstrained (working asynchronously whenever they choose). Pandemic period made the shift from being place-constrained (working in the office) to being place-unconstrained (working anywhere). These space and time dimensions are presented in the Figure 1.

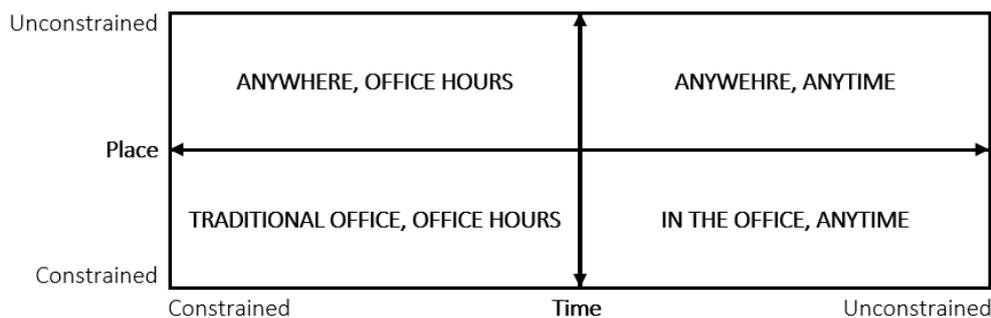


Figure 1 Work arrangements in space and time (applied from Gratton, 2021).

Before Covid-19, most companies offered minimal flexibility along both dimensions. The traditional user profiles are also articulated in this limited context. This put them in the lower-left quadrant, with workers in the office during prescribed hours. Some firms had begun to venture into the lower-right quadrant, by allowing more-flexible hours. The traditional user profiles are also articulated in this limited context. Some companies were experimenting in the upper-left quadrant, by offering workers more flexibility in where they work, most often from home. Very few firms, however, were moving directly into the upper-right quadrant, which represents an anywhere, anytime model of working—the hybrid model. (Gratton, 2021.) Flexible Work Arrangements connect both time and place, which has been described in individual level by Falkman (2020). She proposes four different core strategies for dealing with individual work and life in the digitally set work-life. They are (1) total integrator, (2) place separator, (3) time separator and (4) total separator and illustrated in the Picture 1.

<p>TOTAL INTEGRATOR Integrating work and space: working anywhere, anytime</p>	<p>PLACE SEPARATOR Integrating time, separating space: working anytime, but only in the office</p>
<p>TIME SEPARATOR Separating time, integrating space: working anywhere, but only during office hours</p>	<p>TOTAL SEPARATOR Separating time and space: working office hours at office</p>

Figure 2 Four strategies for dealing with digitally set work-life (applied from Falkman, 2020).

A time separator works only during office hours, while a total integrator can work anytime such as weekends, evenings and vacations. A place separator only works at dedicated spots such as a desk at home. A total integrator works wherever; for instance, in the bedroom, the kitchen, living room and bathroom. Most people combine or switch strategies due to workload, family life or personal taste. This might be the way to understand how organizations can develop the office of the future. By customizing the configurations to the specific workplace, we will see a renewed interest in workplace design and health (Falkman, 2020).

To construct a framework of different hybrid work profiles of workplace users, four strategies for dealing with digitally set work-life (Figure 1) and four work arrangements in space and time (Figure 2) were integrated. As Baygi et al. (2021) state that the task of researchers is to locate bounded actors spatially in space and time to get hold on fluid and dynamic life and work. The integration provides a compass with eight compass points – this is a framework for hybrid work profiles.

The basic elements are space and time. They can be fixed or flexible. Eight different employee preferences can be identified (Table 1).

Table 1 Framework of space and time to hybrid profiles.

Basic element	Basic quality	Employee preference	Clarification	Justification examples
Space	Fixed	Home	Home as a prior workplace	Many of knowledge workers will clearly prefer for continuing with at least some working from home in post-pandemic period, indicating high levels of satisfaction for many who have been working from home (Sailer <i>et al.</i> , 2021) ABO concepts will be even more popular from now on, since they are designed to be flexible depending how many choose to come into work, and the work these spaces most encourage is work done together (Falkman 2020)
		Office	Office as a prior workplace	
	Flexible	Home orientated	Using office while home is the prior workplace, integrates office to home	Flexible Work Arrangements (FWA) can be implemented through various types of workspaces. The new type of workspaces emerged from FWA include Flex Office (FO), Co-Working (CO), Total Home Office (HOT) and Partial Home Office (HOP). Davidescu et al., 2020).
		Office orientated	Using home while office is the prior workplace,	

Time	Fixed	Home	Office	
			integrates home to office	
			Works only during office hours at home	Employees work full-time from their home (Kossek et al., 2014)
			Works only during office hours	Work from any location to a full return to office-based work, with a whole range of fixed and flexible working arrangements in between (Gratton, 2020).
	Flexible	Home orientated	Integrates time in the office with the time worked at home	FWA includes flexi-time, contractual working, work shifts (Siddiqui, 2020),
		Office orientated	Integrates time at home to the time worked in the office	Job sharing, telecommuting or remote working and a compressed workweek (Kossek et al., 2014) People working more 'flexibly' thanks to information and communication technology (ICT), splitting their time across different places (Halford, 2005)

The preferences of workplace vary from fixed home (1) or office (2) setting to twofold flexibility: (3) using office while home is the prior workplace, integrates office to home or (4) using home while office is the prior workplace, integrates home to office. The preferences of worktime vary from fixed office hours at office (5) to fixed office hours at home (6). Preferences about flexible time use are also twofold: employee integrates time at the office with the time worked at home (7) or employee integrates time at home with the time worked at office (8). The office use from the perspective of new member in the organisations is considered in the profiles as a notable profile.

METHOD

This paper aims to construct a framework for hybrid knowledge work profiles by two steps and follows the exploratory case study method in the empirical step two. The method aims to prove tested propositions by investigating distinct phenomena characterized by a lack of detailed preliminary research, in this case the hybrid profiles of knowledge workers (Seaton and Schwier, 2014). Exploratory case study attempts to answer questions typically framed by the pronoun what (Yin, 2014). It seeks to define research questions of a subsequent study or to determine the feasibility of research procedures. (Hancock & Algozzine, 2011)

Step 1 was a conceptual proposition of eight hybrid knowledge worker profiles based on the literature review. The latest research of flexible work arrangements was investigated. Two frameworks from 2020 and 2021 were integrated and the basic elements of space and time were categorised at first according to flexible and fixed work arrangements. Then eight different user preferences were identified. The method used was based on literature review, but the profiling is seeking also support from ethnographic techniques of creating personas. Such techniques help to identify patterns which differ between different users (Goodwin, 2008).

Step 2 was about framework testing. Eight workshops performed in university administration groups in Finland. Total number of participants was 185. The group size varied from 8 persons to 49 persons. The groups were existing administrative units, which wished to join to the workshops connected to returning to the office. So, the participants knew each other and discussed about the topics in the context of their own team. Data collection was conducted between November 2021 and April 2022 and

involved three types of workshops. Two of them was conducted as face-to-face workshops, 6 remotely, using MS Teams and a digital facilitation tool called Flinga and one in a hybrid way: part of the participants was present and part of them joined remotely, using Flinga. The structure of each workshop was similar: 1. Description on proposed profiles. 2. Individual silent task to choose and mark the own profile: everyone individually chose the profile, which was the most descriptive. They indicated it by setting a sticker (in face-to-face workshop to the paper and in digital workshops to Flinga board) under the chosen profile. 3. The group-discussions focused on identifying the diversity in the flexible ways of working and exploring the needs of different profiles.

The participants were from different administrative units from university administration with some jobs that are mainly onsite and some that can be performed remotely (planning, administration, meetings, etc.), both during and after the pandemic restrictions were in force. The organisations had devised a post-pandemic strategy for remote and on-site work at the time of data collection. In total, workshops involved 196 participants, who worked part- or full-time from home due to the pandemic. The topic of the workshops was about the return to office and identification of new workstyles and hybrid work profiles. One workshop was connected to identification of the new workstyles and hybrid work profiles in relocation of the office and one in refurbishment of the office. Workshops are summarised in Table 2.

Table 2 Workshop details.

Number	Date	Duration (h)	Participants	Workshop topic
1	Oct 2021	3	13	Return to office
2	Nov 2021	1	16	Return to office
3	Dec 2021	2	16	Return to office
4	Dec 2021	1,5	12	Return to office
5	Jan 2022	1,5	7	Return to office
6	March 2022	3	40	Return to office
7	March 2022	2	32	Relocation
8	April 2022	1,5	49	Refurbishment
Total			185	

The workshop notes about discussions were transcribed and anonymized. The content from the Flinga boards was analyzed together with the transcriptions. The content analysis was based on a bottom-up coding strategy. The collected data from eight workshops were analyzed and discussed in a framework development group. Summaries of the workshops were provided for the participants. The workshop outcomes were analyzed from two angles. Firstly, they were analyzed from the viewpoint of what kind of fit for hybrid knowledge work profiles were found among participants. Secondly, they were examined to see what kind of topics emerged in terms of physical, digital, and social work environment as well as work time. To increase the reliability of the results the analysis was conducted simultaneously by two researchers. One has joined the workshops and the other was analysing the data without participation in the workshops aligning the transcript material more to the proposed framework.

RESULTS

Proposed hybrid work profiles

Combining space and times categories systematically different employee preferences conceptually provided eight different hybrid knowledge work profiles (Table 3).

Table 3 The hybrid work profiles.

Space		Time						
Fixed	Flexible	Fixed	Flexible	Fixed	Flexible			
Home	Office	Home orientated	Office orientated	Home	Office	Home orientated	Office orientated	
○				○				8 Mostly at home all week
○						○		7 Flexible use of multiple places, flexible time
		○		○				6 Dropping in the office unfrequently
		○				○		5 When needed in the office by agreement
			○				○	4 Flexible times in the office during the week
			○		○			3 Frequently in the office part of the week
	○						○	2 Constantly in the office as a beginner in the organization*
	○							1 Mostly in the office all week

The short profile descriptions are the following emphasizing the mindset of time and place in different profiles.

(1) *Mostly in the office all week*

Office is the primary workplace and the fixed office hours are setting the rhythm to the workday and week.

(2) *Constantly in the office as a new face in the organization*

Office is the primary workplace because the person is new in the organization and the physical workplace is one way to get to know the culture of the organization. Later the person can be reset based on the work task requirements and the life situation of the person.

(3) *Frequently in the office part of the week*

Office is the primary workplace, but the time used in the office is organized externally e.g. in shifts. This person tends to spend a defined period in the office and the periods might be fixed. The rest of time is working at home.

(4) *Flexible times in the office during the week.*

Office is the primary workplace, but also home is used for working. This person tends to spend a few days a week in the office and the days are chosen in a flexible manner.

(5) *When needed - in the office by agreement*

Home is the primary workplace, but the person is coming to the office when needed for meetings or other tasks.

(6) *Dropping in the office unfrequently*

Home is the primary workplace, but the person is visiting the office occasionally e.g., in organised social events for the team, unit etc.

(7) *Flexible use of multiple places with flexible time*

Home is the primary workplace, but also the other locations, such places can be cottage, satellite office, library nearby and, which are determined by the individually.

(8) *Mostly at home all week.*

Home is the primary workplace and time is fixed to office hours.

The profile testing in the workshops

The most popular profile was the profile “Flexible times in the office during the week”. The second profile “When needed - in the office by agreement”. Table 4 is summarizing the choices.

Table 4 Frequency of the profiles in the data.

Profile description	Choices
1 Mostly in the office all week	18
2 Constantly in the office as a new face in the organization	3
3 Frequently in the office	4
4 Flexible times in the office during the week	75
5 When needed - in the office by agreement	47
6 Dropping into the office unfrequently	19
7 Flexible use of multiple places, flexible time	13
8 Mostly at home all week	6
In total	185

When comparing the office as a primary workplace -orientated profiles (1-4) to home as the primary workplace -orientated profiles (5-8), the former group includes 100 choices while the latter one includes 85 choices. The dissemination of the profiles indicate that all profiles were recognizable from the sample. The network of places in multilocal work can be home-based or office based.

These eight profiles provide a tool to discuss the working from home -preferences in balance with the working from office-preferences. The choice of the profile was mentioned to be challenging because the organization is still in the transition of hybrid working culture and the limited experience of the hybrid work mode effect to the choice. The descriptions were clear enough and the role of working from home aspect was appreciated. The academic year and its requirement might change the weight in some profiles as well as the circumstances at home e.g., the surrounding noise due to infrastructure renovation can affect occasionally the user preferences of multilocal work.

The outcome of discussion about the diversity in the flexible ways of working and the needs of different profiles are summarized to the Table 5.

Table 5 The different needs of different profiles.

Profile	Work environment		
	Physical	Social	Digital
1 Mostly in the office all week	Alternatives to choose e.g., in the furniture: individual and social work processes and spaces for them	Joy of meeting people Separating the work from leisure time	Amount and size of screens Digital meetings and space for them
2 Constantly in the office as a new face in the organization		Meeting people – learning the culture	Learning the digital culture

3	Flexible times in the office during the week	Using meeting facilities	Informal social time important New ways of planning the time use with the team	Digital meetings and space for them
4	Frequently in the office	Sharing workstations	Easy to agree meetings to the office	
5	When needed - in the office by agreement	More emphasis on social work processes and spaces for them	Using booking systems for collaborative spaces New ways of planning the time use with the team	
6	Dropping into the office unfrequently		Informal social time important	Carrying the essentials with
7	Flexible use of multiple places, flexible time	Diverse places with diversity in ergonomics	Working along together with the people outside the work community	Easy to move around technology
8	Mostly at home all week	Homestudio	Socially depending on digital community	Importance of hybrid meeting practices

Common themes for all the hybrid work profile were:

- The inclusiveness: the hybrid work profiles in one organisation causes situations for hybrid events: some are physically present and some on-line. One need to pay attention to inclusiveness so that everyone can feel the sense of belonging to the community.
- The workplace with add-on's: The office environment is not only about meeting and working facilities but also about little issues along the workplace user journey: storage for different purposes during the day is important, the needs are diverse for different hybrid profiles.
- The unity: It is important to ensure that the house rules of physical place in the office but also in digital behaviour e.g., in Teams-meetings are aligned in large scale while the work will be more multilocational.

Summary of the results

The value of eight hybrid work profile is in enhancing the discussion about the different orientations to time and place as part of the hybrid work. It is not only one individual working in hybrid way with own choices – the individual choices effect to the team and work community. The hybrid work requires the dialogue with fixed and flexible orientation to time and physical, social and digital place and its use.

PRACTICAL IMPLICATIONS

The hybrid workplace development is driven much more than before by the workplace users' individual preferences especially in terms of flexible use of time and home. This is related to organizations' interpretations and decisions of the most effective way to organize the work, time, and place. The proposed framework provides a tool for discussions about the diversity of requirements for the hybrid workplace, which is multi-locational.

Hybrid knowledge work profile -classification can be used to identify the types and quantities of hybrid employees in the organization. The profiles are outlines rather than accurately distinctive definitions. The profiles may to some extent overlap with each other. The profile is also context dependent and can

change e.g., according to the changes in the work tasks. The profiles may evolve over time. In this study, the eight hybrid work profiles were tested with staff of university administration, while the hybrid working culture was just about to start to develop. However, this framework can be also applied to investigate the user profiles of other knowledge work environments such as students in academic context or user of coworking space in the context of multi-tenant office environments.

In practise, the profile investigation could be conducted as a survey, or as in the empirical data gathering by using digital collaboration platform (e.g. Miro or Mural). The framework can be especially useful in the needs assessment phase of a project - it is a tool to gather initial information when updating current activity-based offices and developing new ones. This information can also be useful when discussing and agreeing in the organization, unit, or team level about how the workplace is used and should be used.

CONCLUSIONS

The hybrid and flexible work arrangements increase the dimensions of work time and workplace. The traditional office hours can now be conducted at home. The fixed use of time has traditionally set the requirements for the office and its services. The flexibility in time and place transforms our work practices, our mindset, and our physical, digital and social work environment.

This research aimed to understand the balance between different hybrid knowledge work profiles. The sample of this research was limited to a single university and group of its administration employees in a single country. This directly influences the generalizability and reliability of the results. However, this research can be seen as a starting point for future research. Future research is needed to verify and refine the framework and its profiles. Following studies could focus for instance on applying the framework in workplace workshops for different user groups. In the context of higher education these could be students or academic personnel. The hybrid workscape with physical, digital, and social flow is the entity for hybrid individuals, teams and organisations to develop further.

REFERENCES

- Babapour, C. M., Hultberg, A., & Bozic, Y. N. (2022). Post-pandemic office work: perceived challenges and opportunities for a sustainable work environment. *Sustainability*, 14(1), 294, doi:10.3390/su14010294
- Baygi, R. M., Introna, L. D., & Hultin, L. (2021). Everything flows: studying continuous socio-technological transformation in a fluid and dynamic digital world. *MIS Quarterly*, 45(1), 423-452, doi:10.25300/MISQ/2021/15887
- van den Berg, J., Appel-Meulenbroek, R., Kemperman, A., & Sotthewes, M. (2020). Knowledge workers' stated preferences for important characteristics of activity-based workspaces. *Building Research & Information*, 48(7), 703-718, doi: 10.1080/09613218.2020.1726169
- Bergman, A., Rosengren, C., & Palm, K. (2020). Digitala strategier för att hantera relationen mellan arbete och övrigt liv. In B-I. Keisu (Ed.), *Att arbeta för lika villkor – ett maktperspektiv på arbete och organisationer*. 273-288. Lund: Studentlitteratur.
- Chappell, D., Sheikh, Z., Broderick, T., Konstand, S., Koncar, K. & Krueger, E. (2021). Workforce segmentation: Connecting workplace supply and demand. *Corporate Real Estate Journal*, Volume 11, Issue 1.
- Chua, S.J.L., Myeda, N.E. & Teo, Y.X. (2022). Facilities management: towards flexible work arrangement (FWA) implementation during Covid-19. *Journal of Facilities Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JFM-09-2021-0101>
- Dau, K. (2017). *The individual drivers of the new way of working in Finland and Vietnam*. Master's thesis. Aalto University School of Engineering, Department of Built Environment: Aaltodoc. Permanent link: <http://urn.fi/URN:NBN:fi:aalto-201706135536>

- Davidescu, A., Simona-Andreea, A., Andreea P. & Ionut C. (2020). Work Flexibility, Job Satisfaction, and Job Performance among Romanian Employees—Implications for Sustainable Human Resource Management. *Sustainability* 12, no. 15: 6086. <https://doi.org/10.3390/su12156086>
- de Klerk, J. J., Joubert, M., & Mosca, H. F. (2021). Is working from home the new workplace panacea? Lessons from the COVID-19 pandemic for the future world of work. *SA Journal of Industrial Psychology*, 47, 1883. <https://doi.org/10.4102/sajip.v47i0.1883>
- Falkman, L. L. (2020). Covid-19 and activity based workplaces - time for a renewed interest. In M. Carlsson-Wall, G. Lindqvist, S. Rosengren, A. Werr, and F. Wijkström, F. (Ed.), *Sweden Through the Crisis*. Falun: Stockholm School of Economics Institute for Research (SIR). Retrieved from SIR website: <https://www.hhs.se/contentassets/07a585d0b473420385b0fc5336db4f79/a63.pdf> (accessed 5th March 2022).
- Gill, A. & Siddiqui, D. (2020). How Flexible Work Arrangements Affects Affective Organizational Commitment, and Work-Life Enrichment in Pakistan's Service Industry: The Role of Time Planning, Work-Life Conflict, and Engagement. *Human Resource Research*. 4. 269. 10.5296/hrr.v4i1.16894.
- Gratton, L. (2021). How to do hybrid right. *Harvard Business Review*, May-June 2021.
- Goodwin, K. (2008a). Getting from research to personas: Harnessing the power of data. [www]. Retrieved 30.3.2020 from https://articles.uie.com/research_to_personas/
- Gratton, L. (2020). Four principles to ensure hybrid work is productive work. Retrieved from *MITSloan Management Review* website: <https://sloanreview.mit.edu/article/four-principles-to-ensure-hybrid-work-is-productive-work/?og=Home+Editors+Picks> (accessed 5th March 2022).
- Greene, C., & Myerson, J. (2011). Space for thought: designing for knowledge workers, *Facilities*, 29(½), 19-30, doi: 10.1108/02632771111101304
- Halford, S. (2005). Hybrid workspace: re-spatialisations of work, organisation and management. *New Technology, Work and Employment*, 20(1), 19–33, doi:10.1111/j.1468-005X.2005.00141.x
- Hancock, D., & Algozzine, B. (2011). *Designing case study research: A practical guide for beginning researchers* (2nd ed). New York, NY: Teachers College Press.
- Kossek, E., Hammer, L., Kelly E. & Moen P. (2014). Designing Work, Family and Health Organizational Change Initiatives. *Organ Dynamics*. 43(1):53-63. doi: 10.1016/j.orgdyn.2013.10.007. PMID: 24683279; PMCID: PMC3964677.
- Lilschkis, S. (2003). More yo-yos, pendulums and nomads: trends of mobile and multi-locational work in the information society, issue report n. 36. *European Union's Fifth Framework Programme for Research and Development*, IST-programme, Socio-Economic Trends Assessment for the Digital Revolution project STAR. Retrieved from: <https://visionarymarketing.com/wp-content/uploads/2015/05/rapportstar2003-141119060039-conversion-gate01.pdf> (accessed 7th March 2022).
- Marzban, S., Candido, C., Mackey, M., Engelen, L., Zhang, F. & Tjondronegoro, D. (2022). A review of research in activity-based working over the last ten years: lessons for the post-COVID workplace. *Journal of Facilities Management*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/JFM-08-2021-0081>
- Petrolaitiene, V., Korba, P., Junnila, S., Nenonen, S., Vasell, T., Jääskeläinen, A., & Horstia, J. (2018). *Palvelu korvaa tilan (PATI) final report*. Aalto University & Tampere University of Technology: Aaltodoc. Permanent link: <http://urn.fi/URN:NBN:fi:aalto-201806253506>
- Rantala, M. (2017). *Tietotyöntekijän digitaaliset profiilit*. Master's thesis. Tampere University of Technology, Faculty of Business and Built Environment: Trepo. Permanent link: <https://urn.fi/URN:NBN:fi:tty-201708241795>
- Sailer, K., Thomas, M., Pomeroy, R., & Pachilova, R. (2021). The innovation deficit: the importance of the physical office post COVID-19. *Corporate Real Estate Journal*, 11(1), 79-92.

Seaton, J. X., & Schwier, R. A. (2014). An exploratory case study of online instructors: factors associated with instructor engagement. *International Journal of E-Learning and Distance Education*, 29(1), 2–16.

Yin, R. (2014). *Case study research: Design and methods* (5th ed.). Thousand Oaks, CA: Sage.