

# Digital Transformation and Work Flexibility

## Transformação Digital e Flexibilização do Trabalho

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The present and future of work, as well as (the present and the future of) productive processes and of interactions between people signal, increasingly, a life mediated by digital technologies—computers, internet networks, mobile devices, and applications. This allows connectivity, access to information, storage, processing, and transmission of data in real time. As the Internet and digital devices become more and more common, there is a growing expectation of a significant transformation in our work environments and organizational processes.

Digital transformation, synthetically defined as the massive incorporation of digital technologies in all aspects of an organization, aims to install and improve work management processes and procedures based on algorithms and decision flows aligned with organizational strategies (Gong & Ribiere, 2021). This process involves the use of advanced digital technologies, such as automation and artificial intelligence (Vial, 2021).

In the 21st century, digital transformation, driven by the Internet and technological advances, has played a fundamental role in redefining opportunities and work modalities. A global interconnection, provided by the Internet, allows instant communication and facilitates access to a variety of technical resources and solutions, generating, at the same time, innovations and imbalances in the way organizations operate and how professionals perform their functions (Hanelt et al., 2021). The rise of social networks transcends their initial role of connectivity between people, and emerges as platforms catalyzing the generation of work and income, the expansion of businesses, rises in the circulation of benefits and services, and also individual entrepreneurship (Cruz et al., 2022).

Automation and robotics—increasingly present in production processes, logistics and distribution of materials, and people management—promote innovation in nature and in the methods of execution of work. The vision is to promote efficiency in operational flows, induce speed in decision-making processes, and reduce the performance of arduous and repetitive tasks. On the other hand, automation and robotics processes are impacted by the redefinition of professional functions and the search for specific technical skills in the labor market (Vrontis et al., 2022).

Artificial intelligence (AI), used in different contexts, is intensified in information generation, scientific research,

data analysis and professional work assistance, increasingly consolidating itself as a driving force in the development of automated systems. It is important to consider, therefore, that one of the main characteristics of AI lies in its adaptive potential and in its ability to process and analyze large volumes of information, as well as produce specialized information, diagnoses, and solutions. That is, learning and typically performing cognitive tasks and making decisions (Wisskirchen, 2017).

The advances in communication technologies and the emergence of more robust digitalization infrastructures for work may make it possible to increase the availability of telework and finally begin to gain more access and effective implementation. This change is evidenced by the increasing number of organizations that adopt flexible work models, allowing workers to perform their functions remotely.

Teleworking, a form of work carried out remotely, arose in the context of the economic recession and the oil crisis in the 1970s, in response to the need to contain operational costs, whilst reducing energy consumption and use of transport (Figueiredo et al., 2022). The expression ‘teleworking’ (telework or telecommuting) was disseminated by Nilles et al. (1974) based on the idea that employees can carry out their professional activities in a physical location other than the employer’s central desk, with the same productivity or efficiency (Nilles et al., 1974; Pratt, 1984).

In the 1980s, the discussion on flexibility in non-work gained ground in organizations, union proposals and the academic world, especially in more economically developed countries (Lindén & Oljemark, 2018). The concept of flexible work has become directly associated with technological advances, the globalization process, and human mobility. Toffler (1980), in a futuristic discourse, supports the fact that work, from that moment on, will no longer necessarily be carried out in desks or factories.

Despite anticipation of a scenario of substantial growth in the adoption of teleworking, this was still not the case in the twentieth century. Some arguments can explain this, with the main ones being that the technological infrastructure available at the time was not sufficient to effectively support the widespread implementation of teleworking (Bailey & Kurland, 2002); concerns related to management with a possible lack of control over activities carried out remotely by employees; and

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organizational culture and work practices supported by the face-to-face model offered resistance to the adoption of telework (Golden, 2009; Lindén & Oljemark, 2018).

Over the following decades, there has been a process of expanding telework. Advances in telecommunications and electronic devices make it possible to intensify the growth of teleworking centers (call-centers), driven by the ability to perform tasks remotely, connecting to systems and clients through advanced communication networks. These advances also allow greater flexibility for workers, through itinerant work and mobile work, in which professionals move regularly between different locations, such as client sites, remote desktops, or different organizational affiliations; and professional tasks only performed by means of devices mobile devices, such as laptops, tablets and smartphones (Athanasidou & Theriou 2021; Figueiredo et al., 2021).

The COVID-19 pandemic, which spread rapidly between 2020 and 2022, significantly accelerated the adoption of flexible work in organizations and individual businesses. With isolation and social distancing measures in place, remote work (from any location) and home office setups became crucial for survival and adaptation to the new reality of the working world. Additionally, the pandemic scenario accelerated the necessity of flexible work in various sectors and the need to improve technical skills to handle computerized processes and digital languages (Rymaniak et al., 2021).

In this context, we observe new forms of production and marketing of products and services that come directly from computerized environments to cyberspace, with significant implications for the time and effort spent by individuals. Some work processes, referred to as “collective work,” “collaborative work,” or even “microwork,” involve fragmented, interconnected activities (through electronic devices, platforms, and applications), engaging workers with diverse professional backgrounds and remuneration structures.

It should be noted, however, that these changes also entail an increasing tendency towards precarious employment, with less potential to foster strong bonds between workers and companies (Cherry, 2016; Strunk & Strich, 2023). Cherry (2016) emphasizes the importance of paying attention to these evolving processes from both social and legal perspectives, as there is a risk of creating new “online Taylorist working environments” without recognizing them.

The possibility of accessing information and performing tasks at any place and time revolutionized the traditional concepts of the workplace, by promoting work in remote mode; whether it is carried out occasionally, partially, or fully based on the needs of the organizations or the characteristics of the economic enterprise (Athanasidou & Theriou, 2021). . In the context of teleworking, independent workers benefit from the flexibility and digitalization of work, gaining autonomy in managing their work processes (Li, Sekiguchi, & Qi, 2020). On the other hand, as we move away from working in traditional organizational contexts or locations, we may negatively impact professional development dynamics, experience exchanges, and access to organizational structures and support services (Stefano, 2016; Taylor & Joshi, 2019).

The relationships between digital transformation, work flexibility, and their impact on human behavior in work environments remain dynamic. In the field of organizational and work psychology, the evaluation and interpretation of these relationships with recent impacts are crucial for understanding the effects of technological changes on the development of technical competencies, mental health of workers, and strategies

to manage remote and in-house teams amid organizational changes.

## References

- Athanasidou, C., & Theriou, G. (2021). Telework: systematic literature review and future research agenda. *Heliyon*, 7(10). <https://doi.org/10.1016/j.heliyon.2021.e08165>
- Bailey, D. E., & Kurland, N. B. (2002). A review of telework research: findings, new directions, and lessons for the study of modern work. *Journal of Organizational Behavior*, 23(4), 383-400. <https://doi.org/10.1002/job.144>
- Cherry, M. A. (2016). Beyond misclassification: the digital transformation of work. *Comparative Labor Law and Policy Journal*, 37(3), 544-577. <https://core.ac.uk/download/pdf/234182396.pdf>
- Cruz, R. M., Borges-Andrade, J. E., De Andrade, A. L., Moscon, D. C. B., Viseu, J., López-Núñez, M. I., Abacar, M., Kienen, N., Barros, S. C., Knapik, J., Cassiano, S., & Porto, J. B. (2023). O Direito ao Trabalho Decente. *Revista Psicologia: Organizações e Trabalho*, 23(2), I-III. <https://doi.org/10.5935/rpot/2023.2.editorial>
- Figueiredo, E., Ribeiro, C., Pereira, P., & Passos, C. (2021). Teleworking: contributions and challenges for organizations. *Revista Psicologia Organizações e Trabalho*, 21(2), 1427-1438. <https://doi.org/10.5935/rpot/2021.2.21642>
- Golden, T. D. (2009). Applying technology to work: Toward a better understanding of telework. *Organization Management Journal*, 6(4), 241-250. <https://doi.org/10.1057/omj.2009.33>
- Gong, C., & Ribiere, V. (2021). Developing a unified definition of digital transformation. *Technovation*, 102, 102217. <https://doi.org/10.1016/j.technovation.2020.102217>
- Hanelt, A., Bohnsack, R., Marz, D., & Antunes Marante, C. (2021). A systematic review of the literature on digital transformation: Insights and implications for strategy and organizational change. *Journal of Management Studies*, 58(5), 1159-1197. <https://doi.org/10.1111/joms.12639>
- Li, J., Sekiguchi, T., & Qi, J. (2020). When and why skill variety influences employee job crafting: Regulatory focus and social exchange perspectives. *Employee Relations*, 42(3), 662-680. <https://doi.org/10.1108/ER-06-2019-0240>
- Lindén, A., & Oljemark, S. (2018). *Managing Telework: Investigating Possibilities of Telework for Modern Organizations* (Tese de Mestrado). KTH Royal Institute of Technology.
- Nilles, J. M., Carlson, F. R., Gray, P., & Hanneman, G. (1974). *Telecommunications-transportation tradeoffs* (Final report). University of Southern California, Los Angeles
- Pratt, J. H. (1984). Home teleworking: A study of its pioneers. *Technological forecasting and social change*, 25(1), 1-14. [https://doi.org/10.1016/0040-1625\(84\)90076-3](https://doi.org/10.1016/0040-1625(84)90076-3)
- Rymaniak, J., Lis, K., Davidavičienė, V., Pérez-Pérez, M., & Martínez-Sánchez, Á. (2021). From stationary to remote: Employee risks at pandemic migration of workplaces. *Sustainability*, 13(13), 7180.
- Stefano, V. (2016). The rise of the “just-in-time” workforce: On-demand work, crowdwork, and labor protection in the gig-economy. *Comparative Labor Law & Policy Journal*, 37, 471-503. <https://doi.org/10.3868/s050-004-015-0003-8>
- Strunk, K. S., & Strich, F. (2023). Building professional holding environments for crowd work job crafting through online communities. *Information Systems Journal*, 33(5), 1239-1274. <https://doi.org/10.1111/isj.12451>
- Taylor, J., & Joshi, K. D. (2019). Joining the crowd: The career anchors of information technology workers participating in crowdsourcing. *Information Systems Journal*, 29(3), 641-673. <https://doi.org/10.1111/isj.12225>
- Toffler, A. (1980). *The third wave*. Morrow.
- Vial, G. (2021). Understanding digital transformation: A review and a research agenda. *Managing digital transformation*, 13-66.
- Vrontis, D., Christofi, M., Pereira, V., Tarba, S., Makrides, A., & Trichina, E. (2022). Artificial intelligence, robotics, advanced technologies, and human resource management: a systematic review. *The International Journal of Human Resource Management*, 33(6), 1237-1266. <https://doi.org/10.1080/09585192.2020.1871398>
- Wisskirchen, G., Biacabe, B. T., Bormann, U., Muntz, A., Niehaus, G., Soler, G. J., & von Brauchitsch, B. (2017). Artificial intelligence and robotics and their impact on the workplace. *IBA Global Employment Institute*, 11(5), 49-67. <https://doi.org/10.1080/09585192.2020.1871398>
- Wong, S. I., Fieseler, C., & Kost, D. (2020). Digital labourers' proactivity and the venture for meaningful work: Fruitful or fruitless? *Journal of Occupational and Organizational Psychology*, 93(4), 887-911. <https://doi.org/10.1111/JOOP.12317>

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